3rd Quarter Commentary

October 2018
Preparatory Ruminations on Some Client Questions – Cognitive Limitations in Investment Analysis

We received some questions in advance of this review. A number were about inflation, including whether price increases, rather than being a risk, might be helpful to corporate earnings. Another referenced the federal tax cuts and whether—presumably because of a reduced ability to curtail the national debt—that will make the U.S. economy look more like Japan’s, with slower growth and lower inflation. Even if there were specific, definitive answers to each question, I would be loath to provide them, because the very idea that complex issues can be reduced to simple, singular variables is a dangerously misleading one.

In fact, the idea that there are easily defined mass-market answers in investing is fallacious on its face, almost by definition, even though this is the way most people invest. Because as soon as a sufficient plurality of investors has arrived at—or been helped by Wall Street investment firms to arrive at—the idea that a certain security or sector or style of investing is to be preferred, their incremental demand is sufficient, all on its own, to inflate clearing prices. That, in turn, will eventually reduce the expected returns and increase the future risk of that investment. The tired irony, though, is that the facts and statistics that will be gathered will not show this. Everything will look fine, in fact better and better. Until it isn’t.

This idea of simple answers to complex problems is so important and so fascinating that I would prefer to spend the hour entirely on this topic, for which there are innumerable and delightful examples. My own daughter grew weary when my answer to so many questions was “It depends.” I would say, “You know, the older I get, the more the answers to questions are shades of grey instead of black or white.” Which wasn’t appreciated either. But I can only give it a few minutes, as a backdrop to the rest of the discussion.

Perhaps the greatest challenge in investing is the stupendously overwhelming mismatch between the almost limitless volume of data available and the incapacity of the untrained human mind to know how to deal with this superfluous. There is data at the company financial statement level, at the industry sector level, analyst revenue and growth estimates, economist-level interpretations, raw security price activity, asset flow data that tells you what everyone else is doing, regulatory and political influences, the impact of changes in domestic interest rates versus foreign interest rates on currency exchange rates, alternative valuation methodologies, trading and investment style options such as momentum or value or growth or smart beta or portable alpha, trading tool alternatives such as common stocks versus options versus fund-based instruments, including commodities and statistical abstractions like volatility, and on and on and on.

People must be trained in how to approach such an unstructured mass of data, in the methods of problem identification and problem solving, which includes knowledge of the cognitive limitations and cognitive errors to which human beings are subject on a regular basis. Those limits are a function of our physiology.
In the face of overwhelming data, we make selections simply in order to function, without even being aware of it. You believe you’re multi-tasking even though any behavioral scientist can prove to you that your mind can only focus on one engaging task at a time, that you’re simply shuffling back and forth from one task to the other. You can prove it to yourself when you walk into a telephone pole while texting.

We were neurologically evolved to not be aware of much or even most of our decision-making processes. Professionals in the fields of logic, of intelligence analysis, of cognitive study, and even magicians, professional gamblers and swindlers have categorized the ways in which the mind naturally defaults or fails in various instances. These are described by terms such as availability error, confirmation bias, anchoring effect or consensus bias, misplaced concreteness, false pattern recognition or illusory correlation, inattentional blindness, the inability to differentiate between deductive and inductive reasoning, and so forth.

Even the trained mind is subject to these errors – it is well established that experts, from radiologists to statisticians to orchestra conductors overestimate their own ability to correctly assess problems presented to them in their own specialties. For instance, different approaches are necessary to evaluate data and make decisions when the information available is known to be incomplete or imperfect, versus when a reliable data set is being used. Too often, people – and that includes investors – are not even aware when they are dealing with incomplete data or need to think about the scope of information required or its quality. A common error in such a circumstance is termed “satisficing”—a combination of the words satisfy and suffice—for using the first information or course of action that seems to be good enough, rather than evaluating all courses of action. One can see how easy it is to opine and judge erroneously.

Even objective information is powerfully influenced by the observer’s own expectations and preconceptions. What did you see in the accompanying graphic? You might want to try again or see the footnote.

When a great deal of data is available – particularly when it’s more than people can comfortably integrate – they select that which fits their bias or the perceptual models they know. Two different people can create formidable opposing arguments from the same data set, just as knowledgeable readers of the bible can ‘prove’, through direct quotations, an argument for vengeance or for mercy, or for any diametrically opposed positions about a given human behavior. Like the scriptures, the financial markets contain and

---

6 This is a frequent example in the opening chapters of cognitive psychology textbooks. Most people do not notice the extra article “a” or “the” that is repeated in each of these well-known phrases. Instead of processing the individual words or data in this example, we link the stimulus to prior knowledge or experience—pattern recognition—to form an expectation of an assumed result. We perceive what we expect to perceive.
reflect an enormous amount of data, only more so. And that data is constantly in flux. The interpretations, therefore, are endless. So how to judge? We’ll resort to some legitimate tricks here.

The Top-Down Section

Questions

#1. You talk about inflation as a big risk. Couldn’t a bit more inflation be good for corporate earnings?

Fortunately, this is an intensively studied area, so one need not look far for interpretations. This question looks only at revenues during a period of rising prices. It presumes that sales would rise, and profits along with that. But there are many other facets of inflation at play.

The price of raw materials that comprise the final product might rise, too, depending on the industry. A sales-based business, like a brokerage firm, that depends almost exclusively on labor, might not suffer at all. But if operating costs like labor or office rents rise, it might also suffer. More important, the cost of capital would eventually rise, in the form of higher borrowing costs. And lower stock prices can also hike the cost of capital, since there would be competition for stocks from higher-yielding alternatives – earnings are diluted if a company raises money by selling shares at a low valuation. Some industries, particularly financials, might suffer from a decline in the prices of their longer-term assets, such as bond portfolios.

Like quoting from scriptures, here are two exhibits from a 56-page comprehensive attempt to answer that inflation question. It was by Lawrence H. Summers. If the name is not familiar, he is former Chief Economist of the World Bank and U.S. Secretary of the Treasury. This was a National Bureau of Economic Research study. As is evident from the typeface, this pre-dated such conveniences as Microsoft Word.

Mr. Summers points out an additional factor, that increased income from inflated inventory accounting profits resulted in a higher tax burden that detracted from company value. That can happen when a product in inventory at ‘old’ input costs is sold at ‘new’ higher prices. He noted that the real stock market return for the 8 inflationary years 1970 to 1978 was negative, whereas the average real return for the prior 52 years was 8.7%. Think about that – nearly a decade of negative real returns. He found that one-half of that short-fall was attributable to a combination of the effects of inflation, taxes and increasing investor awareness of the effects of inflation (a different way of saying that investors stopped paying as much for reported earnings).

7 http://www.nber.org/papers/w0824.pdf
As it relates to the stock and bond markets today, their vulnerability to rising input prices may be greater than at any time in the modern era. Bond yields remain near all-time lows, which is an obvious and severe price risk.

As to the stock market, it has a limited representation of inflation-beneficiary companies. The proportion of the S&P 500 Index represented by commodities based businesses such as oil and coal, mining, precious metals, materials, and real estate is about 9%. From such a low base, this segment of the market is unlikely to provide a significant counterbalance in an inflationary environment.

Another point-counterpoint exercise in data analysis: the CPI measure of inflation is promoted as being low, not much above 2%. Last quarter, we discussed how this index has been tinkered with to arrive at lower readings. Meanwhile, the S&P Commodity Index, which tracks 24 commodities ranging from energy to base metals and precious metals to agricultural products and livestock, though still way lower than in 2014, is 70% higher than its low in 2016, 20% higher than year-end 2016, and 8.7% higher this year to date.

So which one is the better measure of inflation risk, the CPI or the commodity index? Maybe they both have their limitations. If that uncertainty exists, maybe your portfolio structure should reflect that.


According to the USDebtClock.org website, the GDP of the U.S. is $20.5 trillion. That figure is accepted as the sum of the goods and services that we consume. While true, it does not tell the whole story. This is
another example of how we accept facts without necessarily thinking about whether the fact set is even complete or representative. Because the GDP figure is incomplete.

In philosophy, this is called a vacuous statement: one that is true, but has no meaning. For example, “Every unicorn has a horn,” would be true by definition, because it is that animal that has a horn. Yet, unicorns do not exist except as fictional creatures. What does one say philosophically about a true statement about something that does not exist? Is it true or is it false? The answer is neither; it is a meaningless statement. One could argue that the figures cited for U.S. GDP amount to a vacuous statement.

Here is the reasoning. If we say GDP is $20.5 trillion, because the U.S. produces $20.5 trillion of goods and services, we ignore that it also must spend almost $3 trillion a year on interest expense. Surely there is a difference between a country with a $20.5 trillion GDP but pays no interest, and another with a $20.5 trillion GDP that must pay $3 trillion of interest. Wall Street analysts have no problem with that concept as it applies to individual companies: two radio station networks have the same level both of revenues — or radio station GDP — and operating income. One, though, is highly debt-leveraged and applies most of its earnings to interest payments and has no free cash flow. The other is debt-free and buys additional radio stations with its earnings so that its net worth continues to increase. One company will have a lower valuation. Which one would that be?

If we look at U.S. $3 trillion of interest payments, this interest expense is rising at about $600 million a day. The only way to grow the GDP figure is to outrun the interest expense, meaning that the economy must grow very rapidly. The trouble is that if the economy grows more rapidly because people, governments, and others are borrowing money to buy goods and services, that also increases the debt. We know that is what’s happening, because the federal budget deficit this year is expected to be $800 billion, 20% larger than last year. We can never outrun the interest expense that way. That is basically the problem.

It is a possibility, as some propose, that the tax cuts will stimulate investment and promote job growth and increase the GDP. But, it is a reality that debt as a proportion of GDP is expanding. Federal debt is now $21.6 trillion and exceeds 100% of GDP. This dwarfs previous cycle peaks. And this comes in the 9th year of an economic expansion -- the prior excesses and cyclical damage should have been repaired by now. What happens in the next downturn?

Some more point-counterpoint. The rejoinder by some is that federal interest payments amount to only 1.34% of GDP, whereas it had been as high as 3% in the early 1990s. In the early 1990s, though, the interest rate on the 10-year Treasury was in the 7% range, not 3%, and the federal debt was only 64% of GDP.

Let’s not even think about what would happen if interest rates return to 7%. Let’s just play around with a 1% point increase, which is an easy number to work with. What would that mean, in concrete terms? The U.S. has $71.3 trillion of total debt, including everything from a car loan and credit cards to a U.S. Treasury Bond\(^8\). If rates were to increase, across all instruments, by 1%, the additional debt service would be $713 billion.

\(^8\) Source: usdebtclock.org, as of 12:53pm on October 16, 2018.
The U.S. consumes about 20 million barrels of oil a day\(^9\). At roughly $70 a barrel, it costs $1.4 billion a day to pay for the oil, or $511 billion a year. So imagine, using the 1% increase in debt service as a reference point, if the country had to pay another $713 billion for its oil. That would be a 140% increase over what it is right now. That works out to an oil price of $168 a barrel.

Thus, it is safe to say that a 1% point increase in interest rates across the entire yield curve is the equivalent of an oil price shock, which is one of the reasons the planet’s central bankers are very reluctant to increase interest rates. They have it within their power to create the equivalent of an oil shock, the potential magnitude of which gets worse every day because the amount of debt outstanding rises every day.

Part of this discussion included some interplay between arguments made with different data selection choices, like a scriptures based argument. Except the data we’re using seem to consistently demonstrate that critical measures of the financial markets and economy are at extremes, even all-time historical extremes. That should make those the more compelling facts, and it should induce listeners to be more thoughtful about how their capital is allocated relative to the systemic risks those facts describe.

#3. And What if Our Reasoning for #1 and #2 is Wrong? It Doesn’t Really Matter.

Here’s why I’m not impressed if an argument is made that corporate earnings will increase because of some factor or other, and that this will be sufficient for adequate stock market returns. I’m willing to debate those arguments, but it is not necessary. Because the stock market valuation has attained an all-time high. For clarity of analysis and to forestall debate, take the most direct method, a method that is least complex and least subject to manipulation or interpretation. The Wilshire 5000 index is the most complete measure of the stock market. The market capitalization of the Wilshire 5000 at the end of September was $30.25 trillion and the U.S. GDP is $20.4 trillion\(^{10}\). So the ratio of the market value of all stocks relative to GDP, which is to say relative to the productive capacity of the nation, is 1.48x. It is now higher than it has been in the past 50 years. Here’s a picture.

There have been other times when this ratio was high, though not this high, and the market had a lot of trouble thereafter. If you look at the chart, a lot of trouble. This statement is pure deductive reasoning, so it does not mean that the stock market cannot go higher; it certainly can. It just means that we have not

---

\(^9\) Source: https://www.eia.gov/tools/faqs/faq.php?id=33&t=6. In 2017, the United States consumed a total of 7.28 billion barrels of petroleum products, an average of about 19.96 million barrels per day.

\(^{10}\) https://fred.stlouisfed.org/series/WILL5000PRFC and https://fred.stlouisfed.org/series/GDP
seen an instance of it going higher and, therefore, it makes one uncomfortable to say that it could go meaningfully higher when it has never happened before. It is a valuation danger signal.

And to return momentarily to the debate about earnings growth, which many report has been quite robust recently, let us again use the most direct, least complex measure. The U.S. Bureau of Economic Analysis publishes a figure for U.S. corporate profits after tax. In 2017, the figure was $1.8 trillion. This only marginally exceeded the 2012 level and was less than the 2014 level. That is in stark contrast to gaudy accounting profit growth being reported by S&P 500 companies, which includes the impact of all sorts of short-term and complexifying factors.

Further, S&P 500 operating profit margins were near 12% in the second quarter this year, compared to peak profitability of less than 10% during the 2006/2007 cyclical peak, and are the highest they’ve been in at least the past 25 years. Here’s another picture.11

So we have a stock market that trades at a record high valuation relative to GDP and which has record high profit margins. That’s not good; that’s bad. The important point is that the opportunity set in traditional bond and stock investing has been narrowing. Recognizing this amongst all the noise is the first most important step. Then one can think about what to do with that insight.

The Bottom-Up Section

Diversification vs. Concentration

The accepted academic principle for reducing risk in a portfolio is a high level of diversification, by number of holdings as well as across industries and even across geographies. Hold just several ETFs and you easily own hundreds or even thousands of stocks. (That’s the principle; in practice, you’re not diversified, and you’ll see why later in this presentation.) While that diversification is intended to limit the company-specific risk in a portfolio, it cannot help but expose the portfolio to all of the overarching systemic risks, like recession or inflation, an interest rate shock, or investor flight from equities to bonds.

Paradoxically, perhaps a superior method to reduce portfolio risk could be to have no diversification. If you had only one holding, it would be possible for a portfolio to avoid whichever systemic risk will strike. With a conventional level of diversification, that would not be possible, because you own everything. Of course, you’d have more company specific risk in a one-stock portfolio, but perhaps that is more easily defended against with careful selection.

In prior webinars we reviewed one technique for locating such securities: look among the multitude that have been excluded from the indexation vortex and which might therefore be anomalously cheap, and which might have business models that are not exposed to the same risks. We described some marine shipping companies, even large-cap ones like AP Mollør-Maersk, some drilling service companies like Subsea 7, non-standard security types like Texas Pacific Land Trust, which is not even a corporation, and so on. They have excellent or even perfect balance sheets, so are not at risk from interest rate or credit market shocks, and they operate in cyclically depressed industries so that they have plenty of positive revenue optionality, as well as profit margin and valuation optionality. In the extreme, if you owned only one, you might not be exposed to any conventional systemic risk.

Concentration on the order of a handful of stocks or a dozen or two is unusual. But it’s not unheard of. It has been associated with some of the most successful investors in history. Warren Buffet is so well known for owning concentrated positions. He has been known to exhort college students to think about investing as if they were each allocated one ticket — like a train pass — with only twenty slots in it so that one had twenty punches that would represent the limit of the number of investments that could be made in a lifetime. And once the card is punched through, one could make no more investments.

It is less well known that his investment partner Charles Munger was chairman and CEO of the best-performing stock on the NY Stock Exchange in the 1990s. The company was Wesco Financial, an insurance company that was eventually acquired by Berkshire Hathaway. Its book value per share compounded at 32.4% per year for the six years ended 1998. How was this accomplished?

Wesco began with the distinction of being probably the most overcapitalized insurance company in the U.S.: it wrote premiums amounting to less than 1% of statutory surplus in 1999, versus about 90% for the average insurance company. Essentially, Mr. Munger was one of the most conservative investors it is possible to identify, willing to avoid commitments for many years until the precisely right business and price came along.
Paradoxically, he was then willing to undertake what seemed to be unusually, some would say irresponsibly, great risk. In 1988, Mr. Munger invested a major part of Wesco’s capital in one stock: Freddie Mac, the Federal Agency mortgage lender. It was a newly created business with no history, but it was one of the few government-granted monopolies, with a business structure formulated by federal regulation to insure consistent profits and, at the time purchased, had only a zero fraction of the market scale it was designed to ultimately achieve. My rough estimates, based on as-yet incomplete information, is that Wesco invested at least 25% of its shareholders’ equity in this one security, and perhaps much more. At its peak, in 1998, the $72 million investment in Freddie Mac stock was worth $1.9 billion, representing almost three-quarters of the company’s net worth.

There was also Peter Lynch, who ran Fidelity’s Magellan Fund. It was the world’s best performing mutual fund for over a decade under his management, and for the 10 years ended 1984 it had returned six times more than the S&P 500. During his 13 year tenure from 1977-1990, the Fund’s annualized return was 29%. The public presentation of the Magellan Fund profile always emphasized the huge number of stocks that Mr. Lynch bought, the number of positions often well exceeding 1,000. He would often regale with a story about how he and his 3 assistants visited 300 to 400 companies per year. But this is not what generated the results, and it is very difficult to find any serious discussion of what did. It was the concentrated positions. One of these was Chrysler, purchased in 1983, soon after Chrysler paid back the government-backed loans that prevented its bankruptcy in 1979. The shares appreciated by multiples from that point forward. As late as year-end 1995, Magellan held 99 million, or almost 14%, of Chrysler’s shares. Mr. Lynch had similar success with General Public Utilities, which also flirted with bankruptcy and which appreciated by multiples thereafter. Thus, despite the aura of extreme diversification, the excess returns were due to a handful of companies that were purchased as large positions and which dominated the returns.

Other Ways of Achieving Functional Diversification

In our portfolios, the concentrated holdings have been reviewed frequently enough, among them Texas Pacific Land Trust, Civeo Corp., and the marine-related sector. But distance from the typical systemic and business cycle risks need not always require owning esoteric or cyclically depressed companies like these. A couple of recent additions to some of our strategies, CACI International and Science Applications International, will illustrate. Both are in the same industry and essentially similar. A discussion of one tells you a lot about the other.

CACI is a defense electronics company that provides information technology (IT) and professional services predominantly to the U.S. federal government and federal agencies. Two thirds of sales are from the Department of Defense, which includes the various Armed Forces and classified Dept. of Defense customers. Another quarter are from Federal Civilian customers such as the Dept. of Homeland Security and the Department of Justice. CACI focuses on data integrity and information, command and control, cyber security, surveillance and reconnaissance, and intelligence. The demand for its services is mostly created by the increasingly complex network, systems and information environment in which governments

---

12 Although Peter Lynch had worked at Fidelity since 1965, he was not handed the Magellan fund until 1977.
and businesses operate, and the need to stay current with emerging technology while increasing productivity.

There are a handful of companies in this sector, most clustered in the Virginia area near the Pentagon, and often referred to as the “Beltway Bandits.” They have grown steadily over the decades, with a generous helping of strategic acquisitions. A not-small portion of their business is classified, and not clearly visible in the financial statements. A cyclical aspect of their environment is that many of the programs a company like CACI might work on were denied full funding during the prior two Washington administrations. The present one is increasing funding for defense.

Knowing this, one would expect that, unlike the typical consumer products or industrial business, these companies are not subject to the generalized business cycle. This is not to say they are without cyclicality, but it is a different set of perturbations. That is one factor that makes them diversifiers in a portfolio. Also, because of the necessary secrecy surrounding these services, the government prefers to only deal with a handful of companies, which limits competition relative to what the average industrial or technology company faces.

One could say the same about any defense company. But there is a difference between the traditional S&P 500 defense contractors like Raytheon, General Dynamics, Lockheed Martin and United Technologies, all with market caps above $50 billion, and CACI and SAIC – $4 billion and $3 billion, respectively. There is a difference in the scalability of their businesses, in terms of market share expansion, and in terms of the preference for military programs that will be more effective for the dollars expended in the event of budget constraints—think unmanned drone program versus a new stealth bomber program. And in the capacity to expand through acquisition without regulatory anti-trust constraint.

If one wanted to see how a company like this might fare during a cyclical downturn, then the Credit Crisis is a handy reference. Between 2006 and 2009, the revenues of the S&P 500 declined by 4.6% on a per-share basis. CACI’s revenues rose by 59%. The S&P 500 earnings declined by 42% between 2006 and 2009. For CACI, the figure was up 8%.

On a longer-term basis, the 12-year revenue growth for the S&P 500, from the pre-crisis year of 2006 through 2018, was 2.7% per year, while CACI revenues expanded by 10.0% per year on a per-share basis. S&P 500 earnings were up 1.6% per year, and CACI’s by 13% per year.

For all of this, the shares trade at 17x the company’s free cash flow for the year ended June 2018. That is after deducting capital expenditures, and it is a trailing figure, and is still less than the stock market’s P/E ratio, much less the market’s free cash flow multiple.

As to SAIC, very much like CACI, 62% of its revenues are from the Department of Defense, and over a third from other federal government agencies. For a flavor of the types of new or expanded programs SAIC is engaged in, it was recently awarded $1.4 billion for the Army’s Software Engineering Directorate, a $621 million contract for network and telecommunications support for the U.S. Central Command, and a $620 million engineering contract with NASA, for which SAIC is the leading provider of IT services. This is a company with $4.4 billion of sales for the year ended February 2018. Its backlog in February was 28% higher than in 2017.
SAIC has a similar valuation to CACI, based on last year’s results. However, on September 10th, the company announced that it would acquire a competitor, Engility, for $2.5 billion. This is an all-stock transaction. So figures will change. The company makes reference to the various cost savings and operational and competitive benefits that will result. Of course, this is what companies say. Time will tell. The acquisition will, though, give SAIC substantially more business with NASA and space, and our president has stated that the U.S. should build a Space Force in addition to the Air Force.

The Market Structure Section

Here’s one snapshot of systemic risk and the false face of diversification. The pie chart on the left is of the S&P 500, but with this difference. One half of the chart is represented by 5 companies at the top of the index – Apple, Microsoft, Amazon, Google and Facebook. As of this past Tuesday, their combined market value was $4 trillion. The other half of the pie chart is comprised of as many companies from the bottom of the index as are necessary to also add up to $4 trillion. And on Tuesday, at least, that took 284 companies, which is over half of the companies in the index.

The chart on the right is the same exercise, except for the Russell 3000, which encompasses substantially all of the stock market value in the U.S. The same top 5 companies still add up, of course, to $4 trillion. But it takes 2,329 companies from the bottom of the index – over three-quarters of the holdings – to equal the market cap of those top 5.


Obviously, someone can be told that by owning the S&P 500 they have purchased broad exposure to the breadth, variety and, presumably, dynamism of the American economy as represented in the more substantial publicly traded companies. And someone can be told that by owning the Russell 3000 they
have almost comprehensive exposure to the American economy, from the smallest public businesses to the greatest. But that would be...what? ...misleading?

It’s misleading not only as to opportunity, since one’s exposure to the more diverse population of businesses is crowded out by the concentration at the top, but it’s also misleading as to the risk. Those 5 companies share some very similar regulatory and technological disruption and valuation risks among them, much more so than, say, the hundreds or thousands – think about that – of companies at the bottom of those two indexes. We can talk more about the impending displacement risks to companies like Facebook and Google and Amazon, but it’s a discussion for another time.

If that’s one picture of systemic risk, there are ways to improve one’s exposure. One sector that can benefit significantly, both from a cyclical recovery and from either inflationary pressures or credit market deterioration or dollar-weakening, is precious metals. The iShares Global Gold Miners ETF (RING) has a 5-year total return of negative 30%. It trades at book value. Virtually no index trades as low as book value. Here are some anomalies of this valuation. Despite the decline in gold prices these past several years, the large gold miners such as Newmont Mining, Barrick Gold, Newcrest Mining and Goldcorp are expected to remain profitable. They should not be trading at book value. And these four comprise 44% of the value of RING.

Second, a rise in the price of gold not only goes directly to the pre-tax profits, since the increase in revenues entails no additional cost, but would also spur more production and would also result in an increase in the amount of reserves that become economic to extract. There is great optionality in gold companies that is, most unusually, not being reflected in the pricing. I would suggest that this anomalous pricing is an indexation effect. Securities or sectors that manifest lower-than-market returns and/or higher-than-market volatility, which the precious metals companies do, are minimized or rejected by the indexes.

Newmont Mining, which is the largest gold company, amounts to only a 0.07% weight in the S&P 500. It exists, really, in name only, as far as exposure in the index. One could elect to buy RING or other mining ETFs or the companies themselves. However, gold mining companies are not the best long-term holdings as a hedge against inflation. In fact, they’ve been rather poor inflation hedges. The reasons are many. There can be a very long wait until circumstances favor them. When that circumstance does arise, the reward period can be rather short. During an extended inflationary period, their operating costs rise also – they all compete for additional properties, for labor, for machinery – which also means they have to raise more capital, which can become dilutive to earnings. All of this has had the effect, in the past, of markedly curtailing their hoped-for profitability.

We have made use of, as has been discussed in prior reviews, of a superior mechanism to be exposed to the earnings optionality of precious metals without the balance sheet risks or dormant asset risk of mining companies. This is through precious metals royalty companies like Franco Nevada, Royal Gold and Wheaton Precious Metals. They are simply discounters, whose assets are contracts. They buy future production from the miners at a present discounted value that typically works out to about a two-thirds discount to the price of gold and silver. They constantly generate ROE and they have long term optionality. None of those three companies, even with market values of $12 billion, $5 billion and $8 billion, will be found in the S&P 500.
We've made use of a similar improvement over existing market structure to be exposed to oil – since energy could be both a source of risk to the economy as well as a source of investment return – without the complexities and limitations of conventional oil producers. An ExxonMobil, for instance, must spend enormous sums of money, each and every year, to explore for new reserves to replace that which is depleted. Texas Pacific Land Trust, like Wheaton Precious Metals, is also a royalty company. Despite its $6 billion market value, it has only 47 employees. Its latest pre-tax profit margin, for the June quarter, was 89%. The only companies one might be able to identify with profit margins that high, and there are very, very few, are royalty companies.

There are ways to be invested in a thoughtful, balanced way that is not commoditized, not betting blind, that incorporates a valuation margin of safety and a reasonable expectation of rewarding returns, an expectation based on common sense quantifiable measures.

In this vein, next quarter, I believe we must return to the topic of blockchain, cryptocurrency mining and cryptocurrencies. For those of you who missed it, events are developing as we suggested they might. Some quarters ago we suggested that one or two institutions of sufficient gravitas would be required for the mainstream investment firms to be willing to commit themselves publicly to this area. This area which has every potential of rivaling or exceeding the emergence of the internet in its implications and scope. For those of you who missed it, here is some gravitas:

- **July 2018**: Northern Trust started developing a strategy to secure custody-held digital assets such as cryptocurrencies. Founded in 1889, is one of the largest custodial and asset management banks in the U.S. It has $19 trillion of assets under custody or administration, and $1 trillion of assets under management.
- **August 2018**: Intercontinental Exchange (the owner of the NYSE, and in partnership with Microsoft, Starbucks and BCG) announced Bakkt, a global platform and ecosystem for digital assets. The launch of a regulated, physical Bitcoin futures contract and warehouse is planned for November 2018. Starbucks intends to be the flagship retailer to develop applications for customers to convert digital assets into cash for purchases at their stores.
- **August 2018**: Bank of America filed a patent to offer crypto custody solutions catering to large-scale institutional investors and retail traders.
- **September 2018**: Citigroup created a Digital Asset Receipt, which works much like an American Depositary Receipt (ADR).
- **October 2018**: TD Ameritrade, in partnership with DRW Holdings, Virtu Financial and others invested in a new cryptocurrency exchange called ErisX.
- **October 2018**: the Endowments of Yale University, Harvard University, Stanford University, Massachusetts Institute of Technology, the University of North Carolina and Dartmouth University have purportedly invested tens of millions in both directly-held cryptocurrencies as well as in the equity in various cryptocurrency-focused companies.
- **October 2018**: Fidelity, in one of the most anticipated institutional custody announcements, announced the launch of a new company, Fidelity Digital Asset Services, that will shortly begin providing cryptocurrency custody and trade execution for institutional investors.
DISCLOSURES:

Past performance is not indicative of future results. The information contained herein is subject to explanation during a presentation.

Note that indices are unmanaged and the figures shown herein do not reflect any investment management fee or transaction costs. Investors cannot directly invest in an index. References to market or composite indices or other measures of relative market performance (a “Benchmark”) over a specific period are provided for your information only. Reference to a Benchmark may not reflect the manner in which a portfolio is constructed in relation to expected or achieved returns, portfolio guidelines, correlation, concentrations, volatility or tracking error targets, all of which are subject to change over time.

The S&P 500 Index ("SPX") is a broad based index widely considered as a proxy for overall market performance. It is the property of Standard & Poor’s ®. The Russell 3000 Index tracks the performance of the 3,000 largest U.S.-traded stocks which represent about 98% of all U.S incorporated equity securities. It is the property of London Stock Exchange Group. iShares MSCI products are the property of iShares®.

This material references cryptocurrencies, including bitcoin. Horizon Kinetics’ subsidiaries manage products that seek to provide exposure to bitcoin and other cryptocurrencies. The value of bitcoins is determined by the supply of and demand for bitcoins in the global market for the trading of bitcoins, which consists of transactions on electronic bitcoin exchanges (“Bitcoin Exchanges”). Pricing on Bitcoin Exchanges and other venues can be volatile and can adversely affect the value of the bitcoin. Currently, there is relatively small use of bitcoins in the retail and commercial marketplace in comparison to the relatively large use of bitcoins by speculators, thus contributing to price volatility that could adversely affect a portfolio’s direct or indirect investments in bitcoin. Bitcoin transactions are irrevocable, and stolen or incorrectly transferred bitcoins may be irretrievable. As a result, any incorrectly executed bitcoin transactions could adversely affect the value of a portfolio’s direct or indirect investment in bitcoin. Only investors who can appreciate the risks associated with an investment should invest in cryptocurrencies or products that offer cryptocurrency exposure. As with all investments, investors should consult with their investment, legal and tax professionals before investing, as you may lose money.

This is not an offer to sell or a solicitation to invest. Opinions and estimates offered constitute the judgment of Horizon Kinetics LLC (“Horizon Kinetics”) and are subject to change without notice, as are statements of financial market trends, which are based on current market conditions. Under no circumstances does the information contained within represent a recommendation to buy, hold or sell any security, and it should not be assumed that the securities transactions or holdings discussed were or will prove to be profitable.

Subsidiaries of Horizon Kinetics LLC manage separate accounts and pooled products that may hold certain of the individual securities mentioned herein. For more information on Horizon Kinetics, you may visit our website at www.horizonkinetics.com. The Core Value and Small Cap separate account strategies are managed by Horizon Asset Management LLC.

Not all investors will experience the same holdings, returns or weightings as the corresponding composite. No part of the research analysts’ compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed by the research analysts in this report.

No part of this material may be copied, photocopied, or duplicated in any form, by any means, or redistributed without Horizon Kinetics’ prior written consent.

©2018 Horizon Kinetics LLC ® All rights reserved.