

Economic & Market Outlook

Executive Summary

- ~ Financial markets were muted during the quarter. Fixed income markets posted marginal gains, while global equities delivered a minor loss.
- ~ The true value of any asset is dictated by the present value of its cash flows, but security prices and value frequently diverge.
- ~ Divergences between price and value can be the result of the market misestimating cash flows, the presence of speculators, and/or structural issues within the market.
- ~ Whenever price and value separate, it creates opportunities for the enterprising investor.

2021 Asset Class Returns

		Q1	Q2	Q3	YTD
Global Stocks	<i>MSCI ACWI</i>	4.7%	7.5%	-1.0%	11.5%
US Stocks	<i>S&P 500</i>	6.2%	8.6%	0.6%	15.9%
Int'l Developed Stocks	<i>MSCI EAFE</i>	3.7%	5.4%	-0.3%	8.8%
Emerging Mkt. Stocks	<i>MSCI EM</i>	2.2%	5.1%	-8.0%	-1.2%
Investment-Grade Bonds	<i>Barclays Agg.</i>	-3.4%	1.8%	0.1%	-1.6%

"I don't know what's the matter with people: they don't learn by understanding; they learn by some other way – by rote or something. Their knowledge is so fragile." Richard Feynman

What determines the price of a stock? Interest rates, the business cycle, revenue growth, the political climate, business profitability, earnings surprises, investor sentiment, price momentum, fund flows, seasonality, etc. The number of possible explanations is endless, and there is some level of truth to each of them. Furthermore, the answers from one investor to the next are varied. Here is a slightly different question: what **should** determine the price of a stock **and why**? We speak with investing peers daily and one thing has become clear, few investors think about basic questions like, "what determines a stock's price in terms of first principles?" Instead, the preferred framework is a mix of cause-and-effect reasoning, reasoning by analogy, and/or blind trust in what has been taught (at school or on the job). Rarely do investors ponder the most basic building blocks of financial knowledge, the foundational propositions and assumptions from which their investment philosophies and strategies are born. In this commentary, we will build a simple framework for thinking about security prices from the ground up and use that framework to discuss our investment philosophy and the current market environment.

Investing from First Principles

To begin this journey, we need to start with a set of conjectures, so basic and simple, that they are almost impossible to refute. Here are three. **First, the goal of any investor is to make money. Second, individuals prefer money today to an equal sum of money in the future.** This reflects the opportunity cost of money. **Third, the riskier an investment, the more compensation an investor will demand.** With these three assertions, we can begin to understand how financial markets **should** price securities (like stocks and bonds).

Consider a corporation looking to borrow \$1 million for one year. How should the market price this bond? We know from our first assertion that the interest rate demanded should be positive. Our second assertion tells us that investors

will demand to be compensated for the opportunity cost of their money. Instead of buying this bond, investors could invest in a risk-free alternative (like a 1-Year Treasury) and earn 0.09%, so we can deduce that the interest rate demanded will be at least that level. Our last assertion states that investors expect to be compensated for the risk of non-payment, i.e., default. For example, if investors, on average, viewed this offering as comparable to a BBB-rated credit (the lowest investment-grade rating) then investors would likely demand an incremental 0.39% in interest, based on current market data. The bond offering in our example would be priced to bear an interest rate of at least, 0.48% (0.09% + 0.39%).

The framework we just laid out is what underpins the concept behind discount rates. **The appropriate price for a stream of cash flows are those same cash flows discounted by the appropriate risk-free rate, to reflect the time value of money, plus an associated risk premium.** In finance, we refer to this as the present value of an investment, and to us, **it should act as a magnet for security prices.**

$$\text{Security Price} \approx \text{Present Value} = \frac{\text{Future Cash Flows}}{(1 + \text{Discount Rate})^n}$$

The beauty of the present value framework is its grounding in first principles. If our three conjectures truly are self-evident then this is how securities should be valued. Furthermore, any stream of cash flows can be analyzed with this framework whether you are buying bonds, real estate, minerals, private businesses, or even stocks.

The Crux

The actual relationship between present value and price is an approximate equivalence. Price tends to oscillate around value, but is often different. Every asset has a market where prices are set. Some markets are more liquid and transact more frequently than others, but there is almost always a market. In a marketplace, prices are determined when the price a buyer is willing to bid on an asset crosses the price a seller is willing to offer. Said differently, **market prices are simply the intersection of supply (sellers) and demand (buyers).** We argue that investors, using sound theory, should make buy and sell decisions solely based upon this present value framework, but in the real world, there are several factors that distort the relationship between price and value.

Distortion #1: Estimation Error

Theoretically sound or not, price and value will not converge if investors are, **on average**, inaccurate in their estimation of cash flows. **The size of the estimation hurdle varies by asset type and class.** For instance, the associated cash flow stream of a bond is known upfront. You know when the bond is set to mature and how much it should pay in coupons at given intervals. The possible future cash flows are a given and so is the maximum rate-of-return if held to maturity (or call). The only question an investor must ask is, is the discount rate appropriate, and if you view US Treasuries as near risk-free (subject for a future commentary), it is a question about default probabilities. To that end, you should expect the bonds of a highly profitable and overcapitalized company, like Apple, to track their present value better than you would a company whose default risk is harder to estimate, like an oil and gas services business.

Estimating cash flows gets much trickier as we move down the capital stack from debt to equity. Consider the difficulties estimating future cash flows if you are a minority stockholder with an ownership interest in an emerging growth business. For starters, the company is likely reinvesting everything back into the business for growth. The actual cash flows might be negligible or even negative. The investor in this situation is betting on what's to come. They might be valuing cash flows that won't materialize for ten or even twenty years. And even if their estimates materialize, what is to say the management won't waste them on a bad acquisition. In this example, correctly forecasting such cash flows is a virtually impossible task **for an individual investor.**

However, for a group of investors, the estimation hurdle is far less of an issue. It is well established that groups are far better at estimating outcomes than any single individual. Overly optimistic estimates are canceled out by overly pessimistic ones and, as a result, we arrive at a decent approximation. One of the most famous studies regarding

this phenomenon was conducted by a finance professor named Jack Treynor. He showed his class a jar that held 850 beans and asked that each student guess how many there were. The average of the students' guesses was 871 and only one of his 56 students guessed closer. There have been countless other studies and they arrive at similar conclusions, **the error associated with individual predictions is high, but when taken collectively, the errors cancel out resulting in a decent estimate.** This is one of the key tenants behind the Efficient Market Hypothesis.

“Observing correctly that the market was frequently efficient, they went on to conclude incorrectly that it was always efficient. The difference between these propositions is night and day.” Warren Buffett

There are of course times when even large groups of investors err. A few key conditions must be met for this “wisdom of crowds argument” to hold, two of which are of particular interest to us. **First, an individual’s opinion (or guess) must be made independently from others in the group.** In statistical speak, the errors must be random. If you introduce bias, like the ability for participants to see each other’s answers, the accuracy of the group’s prediction weakens. **Second, the group needs to have a diversity of opinions.** When it comes to financial markets, perfectly satisfying these criteria is difficult. Investors take their cues from other investors. The ticking of a stock’s price is akin to Professor Treynor announcing one student’s Jellybean guess before moving on to the next student. Furthermore, there are times when a narrative or story will dominate the collective opinions of the market.

Distortion #2: Speculators

By definition, the act of speculation distorts the relationship between price and value. The distinction between investment and speculation gets blurry, so let’s make this clear. Anyone who is not a speculator is an investor. Anyone who is not an investor is a speculator. The primary attribute of a speculator is a complete focus on price without any regard to cash flows. The speculator’s attention, is wittingly or unwittingly, dedicated to guessing what the next person might pay for an asset. **Ben Graham said it best, “Stock speculation is largely a matter of A trying to decide what B, C and D are likely to think – with B, C and D trying to do the same.”** The investor, on the other hand, is trying to ascertain the return an investment can generate regardless of the actions and views of others. Instead, the investor is focused on the present value of the asset’s cash flows.

The stereotype of a modern speculator is this. A young millennial who recently opened a Robinhood account. He spends his time reading Reddit message boards trying to figure out what stock the hordes of meme investors are going to target next. When a target is chosen, he dutifully buys and hopes that he will sell his shares at a profit before the buying pressure subsides. He is the quintessential, greater fool. He is the gambler we hear and read about on the front pages.

We would argue **most speculative activity comes from a less obvious source: professional fund managers.** This isn’t meant to sound disparaging, many of these investors have been quite successful. Jim Simons of Renaissance Technologies has one of the greatest long-term track records and he fits our description of a speculator perfectly. There are armies of funds whose buy and sell decisions are based entirely upon price patterns, and the good ones are armed with plenty of computing power and data to support their strategy. **Our problem with speculative strategies is they work until they don’t, and we often have no means of identifying a broken strategy other than watching it incur losses.** How did you know the strategy stopped working? Because investors kept losing money.

There are even fundamentally-oriented firms engaged in speculation. We frequently see real estate opportunities where the investment thesis hinges on developing a property at a set cap-rate (multiple) and selling it back into the market at a lower cap-rate (higher multiple). The implied assumption being, that lower cap-rates (higher multiples) will still exist after the property is developed and stabilized, which could be years down the road. **So-called multiple arbitrage is wonderful, but if the outcome of the investment is entirely dependent upon arbitrage, it is speculation.** Intelligent speculation, but speculation nonetheless.

Measuring the impact speculators have on the market is hard, if not impossible. As we have already illustrated, speculations come in all shapes and sizes. Cataloging and taking inventory of all the speculative strategies is too daunting of a task. All we can say is, by definition, speculators distort the relationship between price and value

Distortion #3: Structural Issues

The final topic we wish to address involves the structural factors that drive a wedge between price and value. **These distortions arise when market participants transact for reasons that are not motivated by profit.**

A classic example would be the forced seller, an individual who is forced to sell his investment for reasons beyond his control. During market selloffs, individuals utilizing leverage may face a margin call. Additionally, many mutual funds, pensions, and insurance companies have policies that dictate the types of bonds they can and cannot own. When bonds are downgraded from investment grade to say junk, those individuals may have to liquidate the security to stay in compliance with their mandate.

Imbalances created by structural factors can sometimes be a function of investor preferences. Consider the state of the energy markets. Many university endowments will no longer fund energy investments due to environmental concerns and internal political pressure. The same can be said for many fund managers, pensions, insurance companies, and individual investors. Energy has become a dirty, six-letter word. As a result, there is a structural void where capital is undersupplied, which results in arbitrarily elevated costs of capital for the energy industry.

Imbalances can also arise due to the composition of investors. Passive investment vehicles like index funds now own 20-30% of the entire US market and they continue to take share. An index fund is indifferent to the present value of a company, its only goal is to replicate the market as it exists. If the market was comprised of three stocks, one weighing 50% and the other two 25% each, an index fund would try to replicate those weights. In other words, the fund's buy and sell orders mirror the current composition of the market. It was long believed that index funds were price takers and they had a negligible impact on the composition of the market. Recently, a few vocal individuals have argued that is not the case. Index funds are the investment of choice for most retirement plans. As a result, index funds benefit from steady inflows as individuals save money in 401ks or other retirement vehicles. Active funds (i.e. managers who try to outperform the market) are more likely to own smaller stocks than the index. Furthermore, active funds have consistently ceded market share to index funds. On the margin, dollars are flowing into index funds that own large companies, and out of active funds that own smaller companies. The implication is the index fund, which claims to be a passive investor, is actively influencing the composition of the market.

Regardless of the cause, there will always be structural dynamics that arbitrarily impact the supply and demand for securities. **If the underlying market lacks depth (buyers/sellers at different price points) then the resulting distortion between price and value can be amplified.**

Opportunistic Investments

Whenever the price of an asset falls below the present value of its future cash flows, an investment opportunity is presented. One of our jobs is to identify and capitalize on such mispricing. Truly great opportunities are rare. Some years we may find none and in a good year, we are unlikely to find more than a handful. For us to get excited about an investment, three basic criteria must be met. First, it must fall within our circle of competence. We must be able to form an educated opinion about the value of the investment. Second, the discrepancy between price and value must be large enough to justify our time and attention. The investment must be superior to the core equity and bond exposure we already hold. **Finally, we must be able to articulate why a certain distortion created the investment opportunity.** This is the classic question, "if the opportunity is so good why does it exist?"

Our best ideas tend to originate in niche private markets, which makes sense. **These markets are illiquid and often less efficient, which has the effect of amplifying the distortion. The other benefit of private markets is the ability to control cash flows.** When you control the asset's cash flows, you are no longer beholden to what the next investor is willing to pay. The need to speculate decreases. Lastly, in these markets we can frequently pinpoint the distortions creating the opportunity. **Often it is structural.**

Here is a real-world and timely example of our investment framework in action. We are about to invest in a fund that targets mineral rights in the Appalachian Basin. The strategy is simple, buy undeveloped minerals at attractive valuations and sell them after they have been developed (or hold them for cash flow). Several dynamics make this opportunity interesting. First, there are currently few competing funds in the market. As we indicated earlier, many institutional investors will no longer fund energy investments due to environmental concerns. This creates a void as the number of mineral owners looking to divest their assets has not changed, but the pool of potential buyers has decreased. Second, the general partner is employing an aggregation strategy that focuses on smaller transactions, on average \$200,000 to \$250,000. This further reduces the competitive landscape, as it is not scalable for most funds to transact at this size. Third, information asymmetry frequently exists between the fund and the seller. The manager of the fund has relationships with local operators and propriety tools for mapping drilling activity. The average seller is a layman whose daily life is focused on something other than oil and gas. Fourth, many transactions are motivated by uneconomic reasons. Various life events happen. Maybe the owner of the mineral rights needs cash to buy a house, or she simply wants to monetize an asset that currently produces little to no cash flow. Because of these dynamics, the average price the fund pays per royalty acre has hardly changed despite a considerable increase in natural gas and natural gas liquid pricing. In our estimation, price and value have diverged.

Core Equity Exposure

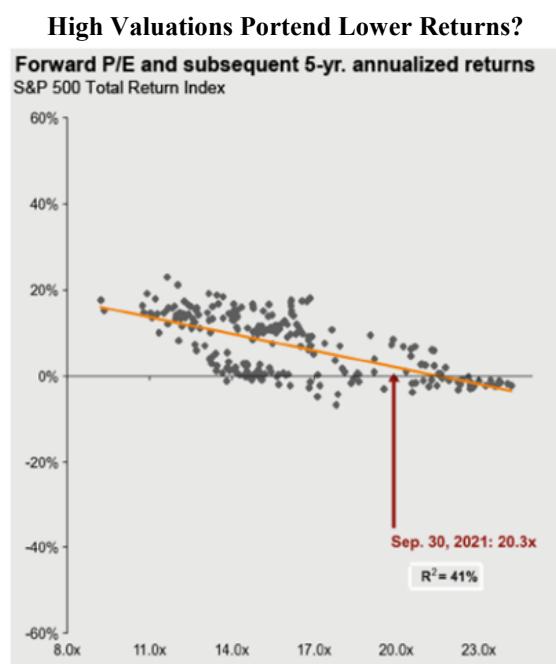
Our broad-based holdings of stocks are not as exciting as the opportunistic investments we make, but they are of equal, if not greater, importance. Since 1950, US stocks have compounded at an annual rate of 11.3%, an incredible unlevered return that is difficult for most assets to compete with. Even investors with the worst possible timing have fared well, so long as they remained invested. For instance, an individual who dumped his life's savings into the market in October of 2007 before the Great Recession has still seen his investments grow at a 9.9% annual rate (a 280.9% cumulative increase). Broad-based stock ownership has the added advantage of liquidity and avoids the pitfalls associated with reinvestment. It is far easier to start with a diversified portfolio of public stocks and then selectively layer in opportunistic investment than it is to build a portfolio of only opportunistic investments from the ground up.

The other added benefit to this approach is it introduces the concept of a hurdle rate at the onset of your investment. Said differently, you are no longer just asking if this a good rate of return, but instead, if this is a better rate of return than I can obtain from owning stocks. And is the incremental return I hope to achieve worth the additional headache and, potentially, lost liquidity? This is a high bar if you assume stocks will continue to compound around ~10 or 11% into the future.

Forward-Looking Return Expectations

Of course, assuming stocks will continue to deliver returns in line with their historical averages could prove dangerous. Future stock returns and equity valuations tend to be inversely related and right now public equity valuations are high. At quarter end, the S&P 500 traded at 20.3x next 12-months estimated earnings. The chart to the right plots the forward earnings multiple for the S&P 500 (x-axis) and compares it to the subsequent 5-year return (y-axis). As you can see, the inverse relationship is real and based on JP Morgan's regression, you would expect nominal stock returns to hover in the mid-single-digit range.

That said, we would caution against reading too much into this data. The JP Morgan study only dates to 1996 and as a result, encapsulates a limited number of market cycles. The data also fails to decompose the drivers of returns. When stocks traded at elevated valuations, was the subsequent

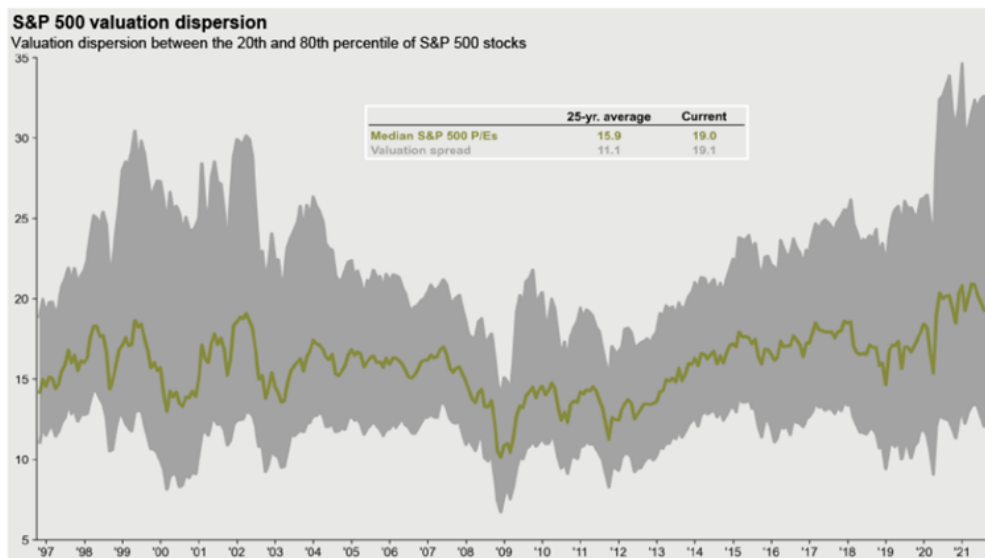


poor performance a function of below-average cash flows or was it the result of investors paying less for a dollar of cash flow? Our guess is most, if not all, of the underperformance results from the latter. This is a subtle but important point because the act of predicting what investors will pay for a dollar of cash flow in the future is impossible. Today's valuations are high relative to history, but how can we definitively say valuations won't be higher in 5-years. We cannot. We have no clue what the attitude of the market will be then.

A better way to think about future returns is to focus on the variables we know and the variables that can be reasonably approximated. Public stock returns have two key components: shareholder yield (dividends + buybacks) and price changes. The first component is known at the onset of an investment. For the S&P 500, it is roughly 2.9%, comprised of a 1.4% dividend yield and a 1.5% buyback yield. The second component is harder to approximate. The return from price changes is equal to the change in real earnings plus the change in the multiple ascribed to those earnings. We have already confessed predicting changes in stock multiples is impossible, so we simply ignore it, which leaves us with real earnings growth. Over the long run, real earnings growth has been quite stable. According to Robert Shiller, real earnings growth has been 1.7% over the past 150 years, and since 1980, it has averaged 2.6%. If for example, real earnings growth averages 2.0% going forward then we should expect real equity returns to average 4.9% (2.9% shareholder yield plus 2.0% real earnings growth). If we wished to convert this figure into a nominal return, like the data in the JP Morgan chart, we would tack on an estimate for the expected rate-of-inflation, most investors assume 2.0% to 3.0%, which gets us to 6.9% to 7.9% expected nominal returns.

To be clear, our expectations for US equity returns are muted given today's valuations. We think it is unlikely investors will achieve the +7.0% real equity returns (+10% nominal) that they have become accustomed to, but that should not come as a surprise. We live in a world where risk-free rates are near historic lows. The problem isn't prospective stock returns are muted, but rather the prospective return for most asset classes is muted. Public equity valuations are elevated. Private equity valuations are elevated. Treasury yields are low. Corporate and high-yield bond spreads, the yield offered above equivalent Treasuries, are tight. It is simply the reality of the market we live in, and it is our job to make the best of it.

Record Valuation Dispersions Exist Between Stocks



There is one small wrinkle to what we just said, which pertains only to the equity markets. The dispersion in equity valuations is wide (see above chart). Yes, the median stock trades at historically elevated valuations, but there are a lot of stocks that trade in line with their historical averages or even below them. Our domestic equity portfolio for instance, trades at just 15.4x next 12-months earnings, a 5-point multiple-discount to the market. Pipelines are our biggest industry exposure, and we find the opportunity set there to be quite compelling. All of this to say, it's a market of stocks and not a stock market.

Conclusion

We are investors first and foremost. The present value of an asset is our north star. While we will capitalize on speculative activity, we will avoid investments based on speculation alone. We cannot guess what the next person will pay for an asset. We will treat the market with reverence. We recognize that, on average, the market gets it right. When we do build the confidence to make an opportunistic investment or diverge from the market portfolio (like pipelines) we must be able to articulate why that opportunity exists. Often, these opportunities will arise because of structural dynamics in the marketplace. This approach has proven advantageous in the past, and we feel confident it will do so in the future.

Thank you for the trust you have placed in us. We look forward to reporting back to you next quarter.

IMPORTANT DISCLOSURES *This material is not intended to be used as a general guide to investing, or as a source of any specific investment recommendations, and makes no implied or express recommendations concerning the manner in which any client's account should or would be handled, as appropriate investment strategies depend upon each client's distinct investment objectives. This is not an offer or solicitation with respect to the purchase or sale of any security. Further information on any of the investments mentioned in this material may be obtained upon request. Before making any investment decision, prospective investors should carefully read all material provided. It is not our intention to state or imply in any manner that past results and profitability is an indication of future performance. The attached summary/prices/quotes/statistics have been obtained from sources we believe to be reliable, but we cannot guarantee its accuracy or completeness. Annandale Capital, LLC does not provide tax or legal advice. Please consult your tax or legal advisor.*