ROCKBRIDGE INVESTMENT MANAGEMENT

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Our vision at Rockbridge is to provide our clients with unrivaled financial advice; building lifelong relationships and empowering them to fully enjoy their lives.

We believe the success we share with our clients is driven by a relentless focus on our culture and core values: Honesty, Curiosity, Discipline and Excellence.

Is the Stock Market Overvalued? *by Ethan Gilbert*

Many of our clients have been asking why the stock market has recovered so much in the last two months while the economy is shrinking, and unemployment is hitting record highs. Implied in the question is whether the stock market is "overvalued," and will drop in the near future. The stock market may drop in the future because of new information and events that have yet to happen, no different than any other day. Here we will try to put the market's actions into perspective and provide an explanation for current share price.

The best way to look at market valuation is through fundamentals. The price of a stock, or the market as a whole, is the value of all future earnings, from now until the end of time, discounted back to today. If you're retired and think "But I don't have forever," worry not because the market does and that's what prices stocks.

Our valuation equation consists of earnings (numerator) divided by a discount rate (denominator). Earnings will be less this year, though the degree of the drop and its longer-term impact are open to debate. According to FactSet Market Aggregates, analysts are expecting a 22% decline in earnings for 2020 (still positive, just smaller than 2019), with 2021 reverting to just shy of what 2020 was supposed to be. If this were to hold, and using a 12/31/2019 valuation baseline, the S&P 500 should be around 3,000 – a 2.7% discount from where it stands today. A larger decrease in earnings or a prolonged reduction in earnings growth would harm stocks further.

Earnings are only half the equation. Even a slight change to the discount rate can meaningfully alter equity valuations. Were the discount rate to drop from 8.2% to 7.7%, equities would increase 9.1% in value. The most indisputable thing affecting discount rates at the moment is the drop in inflation expectations and bond yields. If inflation is lower and you're getting a lower return from a safe investment like a treasury bond, it stands to reason the market will demand a lower return from the stock market, meaning a lower discount rate and higher stock prices.

Many think of stock market returns as an "equity risk premium" or the extra return you get by bearing the extra risk associated with the stock market. Since 1926, the S&P 500 has returned an annualized 7.3% more than inflation and 5.1% more than five-year treasury notes. At the start of the year, the 5-year treasury note was yielding 1.67%, which was about the same as 5-year inflation expectations. Now the five-year note is at 0.33% and five-year inflation expectations are 1.06%. If real bond returns are lower, you'd expect real stock returns to be lower which is manifested through a lower discount rate and higher valuations.

Some argue the market's increased volatility should mean a higher discount and lower stock prices. This argument has merit and may be partially responsible for lower equity prices.

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Is the Stock Market Overvalued? *Continued*

However, others argue the recent fiscal policy of the legislature and monetary policy of the Federal Reserve has been faster and more accommodating than previously expected. With the government quick to intervene to protect corporate profits and prevent bankruptcies, perhaps stocks are less risky than previously thought and the discount rate again should be lower.

Things that decrease future risk lead to a lower discount rate and lower expected returns.

Causes of Higher Current Valuation	Causes of Lower Current Valuation
Lower Discount Rate / Expected Return	Higher Discount Rate / Expected Return
Stable or Low Inflation	Risk of Higher Inflation
Low Market Volatility	High Market Volatility
Fiscal & Monetary Stimulus / Stable Economy	Pandemic / Unemployment / Economic Uncertainty

Some interesting observations:

- At the end of 2019, the price of the S&P 500 Index, projected earnings (analyst expectations in the near term and historical real growth in the long term, implied a discount rate/expected return of 8.2% over a 50-year window.
- A temporary reduction in earnings and a slight decrease in the discount rate can explain current market valuations.

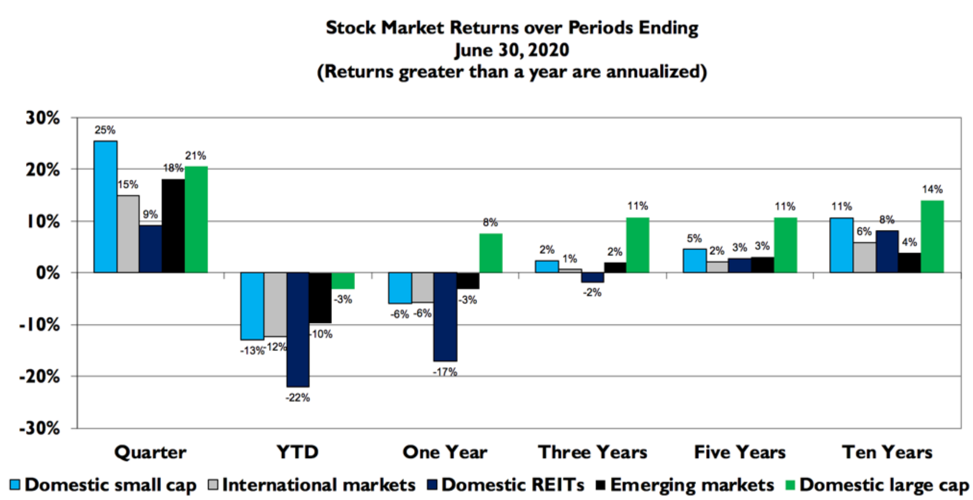
No one knows what the market will do in the coming months, but it's wrong to think the market must go down. Things like future earnings and discount rates are impossible to know and subjective to each person's point of view, but it is not difficult to get to current equity values under reasonable assumptions. The following are key takeaways:

1. Markets are forward-looking and move when events transpire differently than expected.
2. Earnings drive prices but one bad year will not make an enormous impact as long as future years' returns get back close to expectations.
3. The rate at which future earnings are discounted is very important. A lowering of the discount rate will cause market prices to increase substantially and there is good reason to believe the market's discount rate is lower today than it was six months ago. ◆

Market Commentary *by Bob Ryan*

Stock Markets

We have been dealing with a myriad of unique uncertainties over the past six months. Contributing, of course, a pandemic that is not only still spreading infections, but also precipitating economic upheaval that we are coming back from in fits and starts and a nationwide protest of police behavior associated with the "black lives matter" movement. In response, stocks fell dramatically in the first quarter but have snapped back nicely this quarter.



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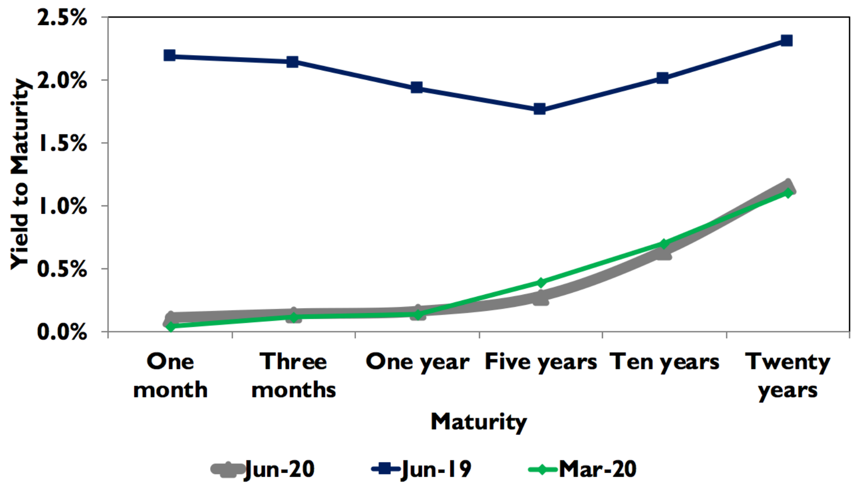
Market Commentary *Continued*

A global stock portfolio throughout this period is still down 10% - significant but not unreasonable in this uncertain environment. The Fed's actions help to explain this quarter's positive stock results. Its commitment to keep interest rates low and ensure market liquidity not only means low bond yields, making stocks attractive by comparison, but also improves the outlook for an economic rebound. Chairman Powell seems willing to accept immediate dislocations and put off worrying about any lasting impact until later – a reasonable position given the unique nature of today's uncertainties.

Bond Markets

Today's bond market is driven by the Fed. Additionally, the Fed has a multi-trillion-dollar deficit to maintain. These actions are affecting both the risk and expected return from bonds. Understanding the motivations of the Fed's Board of Governors, or more specifically its Chairman, is key to dealing with this environment. Since the Chairman has announced his intent to keep interest rates at zero to 2022, what we are seeing now is apt to continue for a while.

Yield Curves
June 2020, June 2019 and March 2020



The Yield Curve is a useful tool for observing what is happening in the bond market. It shows the pattern of observed returns from holding bonds to term across several maturities. Today's yields are low – running from essentially zero to a little above 1% for bonds across a twenty-year spectrum for US Treasuries. Look how yields have fallen over the past year. Additionally, interest rates at these levels implies a negative cost of capital, which reflects the Fed actions, but does not seem sustainable.

Value Markets

Growth stocks, such as Amazon, Microsoft, Google, and Facebook, have been providing outsized returns in recent periods and explain much of this quarter's results. The PE ratios of these stocks, which measure how much the market is willing to pay for $1.00 of earnings, are all north of thirty times – it's closer to fifteen times for value stocks.

The discount for value relative to growth stocks is especially pronounced in recent periods. The difference between the year-to-date return of the various stock indices and their value counterpart exceeds 10%.

Research over extended periods shows investors tend to overpay for expected growth resulting in a premium for value stocks. Whether we are in for a reckoning only time will tell. If so, it is reasonable to expect better results from value stocks once again.

Expected Returns from Sustainable Investing

Sustainable investing means considering environmental, social, and governance (ESG) factors in investment analyses. In the US, assets allocated to sustainable investing have grown at 14% compound annual growth rate for more than a decade. Yet, despite growing rapidly, sustainable portfolios as a percentage of total US investible assets are only half what they are in Europe, Canada, and Australia.

Market Commentary *Continued*

As these strategies become widespread a company's response to environmental risks will be reflected in expected returns and must be considered in constructing portfolios. These portfolios can be built using several publicly available measures of companies' sustainability practices and excluding certain companies and overweighting others. Over longer periods, it is reasonable to expect this process will have impact on companies' attitude toward sustainability factors. ◆

Returns from Various Markets

The following table shows the returns from various markets over periods ending June 30, 2020:

Market/Asset Class	Quarter	YTD	1 Year	3 Years	5 Years	10 Years	20 Years
FIXED INCOME							
3-Month US Treasury Bills	0.02%	0.60%	1.64%	1.77%	1.19%	0.64%	1.66%
Bloomberg Barclays US Agg Bond	2.90%	6.14%	8.74%	5.32%	4.30%	3.82%	5.14%
Bloomberg Barclays 1-5 Yr Credit	4.63%	3.35%	5.41%	3.85%	3.18%	3.08%	4.49%
DOMESTIC STOCKS							
S&P 500	20.54%	-21.15%	7.51%	10.73%	10.73%	13.99%	5.91%
S&P 500 Value	13.15%	-15.52%	-4.50%	3.74%	5.98%	10.88%	5.67%
S&P 500 Growth	26.23%	7.93%	17.75%	16.74%	14.62%	16.62%	5.85%
Russell 2500	26.57%	-11.03%	-4.69%	4.08%	5.41%	11.46%	7.75%
Russell 2500 Value	20.60%	-21.15%	-15.46%	-2.59%	1.86%	8.81%	8.19%
Russell 2500 Growth	32.87%	7.93%	9.16%	12.08%	9.56%	14.44%	6.41%
MSCI US REIT	11.70%	-18.45%	-12.87%	0.08%	4.08%	9.06%	9.36%
INTERNATIONAL STOCKS							
MSCI EAFE	14.88%	-11.34%	-5.13%	0.81%	2.05%	5.73%	2.91%
MSCI Emerging Markets	18.08%	-9.78%	-3.39%	1.90%	2.86%	3.27%	6.60%
U.S. Consumer Price Index	-0.67%	-0.23%	0.10%	1.53%	1.45%	1.64%	2.00%

Note: These results were developed by simulating past returns in the various markets included in each benchmark, assuming the reinvestment of dividends and other earnings. The BofA Merrill Lynch 3-Month U.S. Treasury Bill Index represents money market/cash; the Bloomberg Barclays US Aggregate Bond Index represents the total U.S. bond market; the Bloomberg Barclays 1-5 Yr Credit Index represents the U.S. corporate bond market; the S&P 500, S&P 500 Value Index and S&P 500 Growth Index represent the domestic large-cap market; the Russell 2500, Russell 2500 Value Index and Russell 2500 Growth Index represent the domestic small-cap market; the MSCI U.S. REIT Index represents the U.S. real estate market; the MSCI EAFE Index represents the developed international equity market; the MSCI Emerging Markets Index represents international emerging markets. Benchmark Portfolio returns include Real Estate and Emerging Markets allocations beginning in July 2011. Benchmark Portfolio returns do not include allocations to these asset classes prior to June 30, 2011. Benchmark portfolio returns include Corporate Bond Market as of January 1, 2019 and do not include an allocation to this asset class prior to this. This data is presented to show the long-term relationship between returns at various levels of investment risk. It is not intended to present performance results experienced by clients of Rockbridge Investment Management, but is intended to provide a benchmark against which actual performance might be judged. Also, readers should recognize that future investments would be made under different economic conditions. It should not be assumed that future investors would experience returns, if any, comparable to those shown above. The information given is historic and should not be taken as any indication of future investment results.

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