ANALYTICS INVESTMENT ADVISORS, LLC

Structure, Conduct and Performance In the U.S. Economy

Richard C. Hoyt
July 9, 2020

"We have experienced a welcome bounce-back in economic activity and have done so sooner than expected." [1]

Federal Reserve Chairman, Jay Powell

"The United States is well on its way to a strong opening of the economy, and we remain confident that the overall economy will continue to improve dramatically in the third and fourth quarter." [2] [3]

Treasury Secretary, Stephen Mnuchin

What?

- Year 2020 began with a solid and growing U.S. economy.
- The **S&P500 (SPX)** recorded a yearly gain of 28.9% in 2019.
- **Gross Domestic Product (GDP)** averaged 2.5% for the calendar year.
- **Discretionary Spending** by U. S. consumers was 3.5% Yr./Yr.
- **U.S. Homebuilding Sentiment** advanced in December to the highest level since 1999.
- The **Michigan Consumer Sentiment Survey** concluded that consumers expected annual inflation of 2.2% over the next five years; and, the December 2019 **Conference Board Consumer Confidence** remained an optimistic 126.5.
- **Capacity Utilization** was a healthy 77%.
- **Non-Farm Productivity**, **Personal Consumption Expenditures** and **Core Personal Expenditure(CPE)** averaged 2.0%, 1.5% and 1.6% respectively.
- The **Civilian Unemployment** rate was 3.5% (lowest in 50 years), and the **Labor Participation Rate** continued a steady 63.2.
- By just about every metric, this was the best economy and job market since the late 1990s. The economy added jobs for 110 straight months, while the employment rates for African Americans, Hispanics, Asian Americans with less than a high school education, were at the lowest levels since the Labor Department began keeping these statistics.

[1] Congressional testimony June 10, 30, 2020.

[2] Op. cit. Mr. Mnuchin also opined, "We are in a strong position to recover because the Trump administration worked with Congress on a bipartisan basis to pass legislation and provide liquidity to workers and markets in record time."

[3] The Congressional Budget Office (CBO) expects GDP to climb 12.4% in the second half of 2020, not enough to offset losses in the first half of 2020, but projects 4.8% GDP growth in 2021. A parallel analogy for earnings has Bloomberg Intelligence expecting S&P 500 companies to generate $133.10 per share in 2020, 21X earnings, but revert to a 17X forward price-earnings ratio in 2021, close to the historical average over the last half century.

- This all changed late January and early February of 2020 when unrelenting Covid-19 caused financial markets indices to decline suddenly, reaching a nadir on March 23, 2020. The Dow Jones Industrial Average ($DJI) dropped 23.2% (the worst first quarter in history) and the S&P500 ($SPX) declined 20%.
- Covid-19 was unexpected and cataclysmic in terms of the economic impact and human suffering. As of July 9th, 2020, there have been 3,133,965 confirmed cases in the United States with 133,160 recorded deaths; a 4.25% death rate.[4]

Why?

- The ability to understand the likelihood of a country achieving specific economic goals and outcomes requires a general familiarity with "industrial organization" and whether indigenous firms: 1) make the most efficient utilization of scare factors of production, 2) produce the best combination of goods and services desired by consumers, 3) contribute toward achieving a desirable rate of growth, and 4) do so in a manner that helps stabilize national income and employment.[5]
- **Market Structure** is important because it regulates the behavior of firms, the main elements of which are: 1) seller concentration, 2) product differentiation, 3) barriers to entry of new firms, 4) growth rate of market demand, 5) price elasticity of market demand, and 6) buyer concentration. Of these concepts, seller concentration, product differentiation, and barrier to entry are generally regarded as having the most practical influence.
- High market/firm concentration may lead to excess profits and misallocation of scarce resources, whereas product differentiation exists when consumers form different preferences among individual brands of a product, thus changing the form of price competition; while barriers to entry which pertain to conditions of entry, arise from scale economies and absolute costs features.
- **Market Conduct** consists of a firm's policies vis a' vis product markets and rivals in the context of determining, 1) product prices, 2) the quantity consumers choose to purchase, and 3) product quality.
- **Market Performance** is the assessment of how much economic output deviates from the best possible contributions it can make to society, in which context the following four performance traits take on special meaning i.e., the economy should be: 1) *efficient* by allocating scarce factors of production to yield the greatest real income, 2) *fully employed* to minimize personal hardships resulting from unemployment, 3) *progressive* by adding to its stock of production, raising quality and offering a variety of goods while striving to

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[4] An often cited favorable country comparison is Germany which for the same time period recorded 198,343 cases and 9.032 deaths; a death rate of 4.55%.

[5] The subject of "industrial organization" applies the economist's model of profit maximizing to counties and industries to increase one's understanding of contribution price theory to economic welfare, as well as to help analyze the effectiveness of government policy toward business. The familiar tenants of Structure, Conduct and Performance are the basis for the yardstick comparisons presented in this commentary. Two important industrial organization volumes are: Joe S. Bain, *Industrial Organization* 2nd. Edition, (New York: Wiley, 1968) and Richard Caves, *American Industry: Structure Conduct and Performance,* 3rd Edition, (Prentice-Hall, 1972).

improve production techniques which organize factor inputs, and 4) *equitable* by distributing societal output and rewarding worker's productive efforts.

- At the end of 2019 the U.S. economy was structurally competitive because: 1) fewer barriers to entry reduced government regulations and increased product differentiation, 2) lower taxes created more efficient allocation of scare resources, 3) fairer trade practices, and 4) lower and stable inflation based on supply and full employment creating its own demand through creativity and incentive driven profits for millions of small businesses and entrepreneurs .
- These phenomenon, while dealt a temporary setback, are again palpable as the prospects for Covid-19 virus vaccines and treatments become more evident.

How?

- Given the rationale provided for the continued fundamentally strong and efficient economy in conjunction with representative improvements in: **Housing Starts** (+11.9% May to June), **Manufacturing** (-15.5 April, + 3.8% May), **Retail Sales** (-14.7% April, +17.7% May), **Industrial Production** (-11.2 April, +1.4 May), **Conference Board Consumer confidence** (85.9 April, – 98.1 May), **Personal Spending** (-12.6 April, + 8.2% May), **Labor Force Participation** (60.8 May, 61.5 June), **ISM Non-Manufacturing** (45.4 May, 57.1 June), **Michigan Consumer Sentiment Survey** (72.3 May, 78.1 June), and **Non-Farm Payrolls** (-20.7 April, +2.7 May, +4.8 June), along with state and local officials beginning to roll back their lockdown orders, give credence to the postulated and increasingly evident V-Shape U. S economic recovery. [6]
- Accordingly, the same conclusion presented in AIA, LLC's Commentary on April 7, 2020, "The U.S. Economy and Covid-19" is restated; "Remain optimistic... and stay fully invested in Exchange Traded Funds (ETFs) that are global in scope, emphasize sectors with outperforming U.S. companies[7], and have strong Relative Strength (RS).[8]

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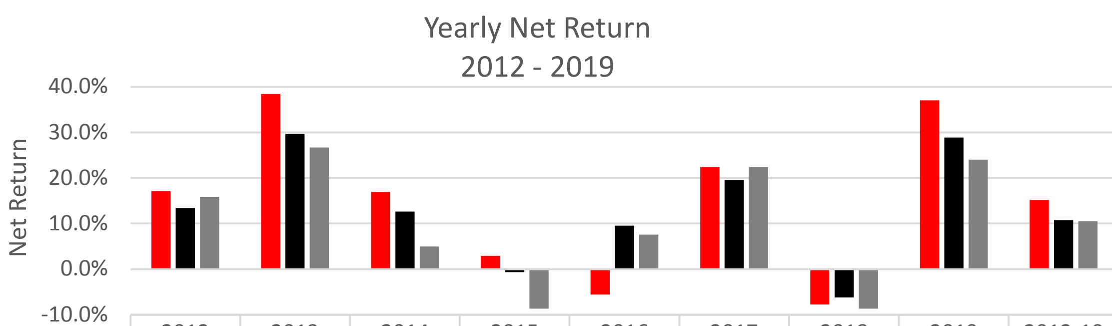
[6] A good example of which is a time series price chart of QQQ (ETF for Nasdaq 100) between February 19 (234.78), March 23 (164.93) and July 8 (259.99); depicting a decline of 29.81% and rebound of 36.6%.

[7] Technology offers good value. For example, the top five firms in the QQQ, Alphabet, Amazon, Apple, Microsoft and Facebook have combined $587B in cash and $207B debt (see Eric Savitz, Big Tech – The Growth Play, *Barron's*, March 23, 2020). QQQ is a core holding in almost all of AIA, LLC's strategic allocations depicted in the following table.

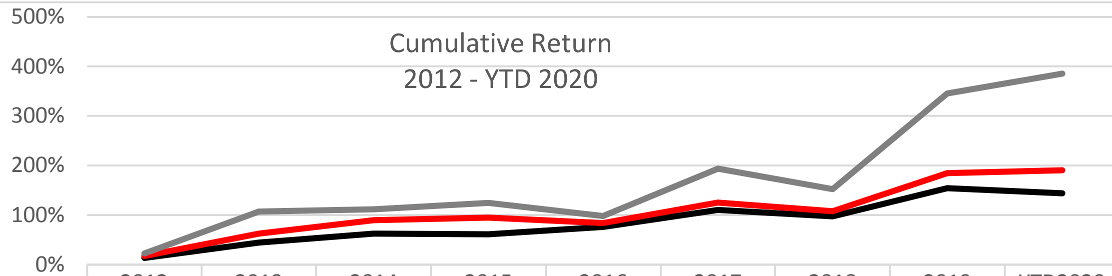
[8] A good rule of thumb is RS >=85. It has been demonstrated in four published research papers and an independent regression analysis by AIA, LLC that between 1930 and 2018 that for every 10% increase in RS there has been on average a corresponding 3% increase in yearly returns, the conversion of which would equate to an excess return of 6% when compared to the current RS of 66 for SPY (see www.AnalyticsLLC.net, Commentary, "Momentum Investing with Exchange Traded Fund, Recap and Update, October 8, 2018.

Performance Summary[9]

	2012-19 Avg.	YTD[10] 06/30/2020	AUM	Beta	R^2	SD	Sharpe Ratio
S&P500 ($SPX)	**10.70%**	**-4.04%**					
Barclay US TR	**2.16%**	**6.14%**					
Cautious	n.a.	n.a.	0%				
Moderate	13.26%	2.34%	9%	1.10	96	19.02	.92
Assertive 1	15.16%	2.22%	45%	1.23	97	21.05	.88
Assertive 2	20.35%	7.60%	22%	1.58	96	27.40	.99
Aggressive	24.84%	9.13%	23%	2.11	96	36.54	.93



	2012	2013	2014	2015	2016	2017	2018	2019	2012-19
Assertive1	17.1%	38.4%	16.9%	2.9%	-5.6%	22.4%	-7.8%	37.0%	15.2%
S&P500	13.4%	29.6%	12.6%	-0.7%	9.5%	19.5%	-6.2%	28.9%	10.7%
MSCI World	15.8%	26.7%	4.9%	-8.7%	7.5%	22.4%	-8.7%	24.0%	10.5%



	2012	2013	2014	2015	2016	2017	2018	2019	YTD2020
S&P500	13%	44%	62%	61%	76%	110%	97%	154%	144%
Assertive 1	17%	62%	89%	95%	84%	125%	108%	184%	191%
Aggressive	23%	107%	111%	124%	98%	193%	152%	345%	386%

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[9] **Cautious:** Investors seeking better than nominal returns, but with low risk and emphasis on wealth preservation. **Moderate:** Prudent investors desiring portfolios designed to accomplish medium long term return. Calculated risk is acceptable to achieve good returns. **Assertive 1 & 2**: Investors with sufficient income to invest mostly in capital growth. Higher volatility and more aggressive investments are acceptable to accumulate wealth in the long run. **Aggressive:** Investors intending to compromise portfolio balance in pursuit of higher long-term returns. Security of capital is secondary to potential wealth accumulation.

[10] Net Average Return, Portfolio Center, Schwab Portfolio Technologies. Fees are negotiable and range between .5% to 1.0% per year for assets under management. Risk Statistics, Morningstar Advisor Workstation; most recent 3 years, computed quarterly.

Beta	Expected change in portfolio return per 1% change in market index return.
R^2	Percent of variation in regression equation explained by the independent variable (S&P500).
SD	Standard deviation of the dependent variable (Net Return).
Sharpe	Reward-to-Variability Ratio; i.e., portfolio return above risk free rate of return divided by standard deviation (RVAR).