ANALYTICS INVESTMENT ADVISORS, LLC

The Connectivity Revolution

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January 25, 2022

> *"The thesis I shall endeavor to establish is that the actual and prospective performance of the capitalist economic system is such as to negate the idea of it breaking down under the weight of economic failure, but that its very success undermines the social institutions which protect it and "inevitably" create conditions in which it will not be able to live, and which strongly point to socialism as the heir apparent."* [1]

What?

- We have witnessed during the first year of the Biden administration a consistent and seemingly diabolical implementation of policies antithetical to the capitalist doctrine, which if continued could very well result in the inevitability of socialism which Schumpeter predicted eighty years ago. [2]
- The United States social institutions Schumpeter references consists of fourteen departments [3], many of which have promoted programs and policies inconsistent with principles enshrined in the Constitution of the United States. [4]
- In his book, *In Defense of Liberal Democracy* [5], Salvadorian economist Manuel Hinds traces tyranny in Europe in the 20th-century to the economic disruption caused by the Second Industrial Revolution to better understand the nature of "… wars and conflicts…"; and, concludes that the outcomes, "…are only obliquely related to economics.", but rather "…are anchored in values and culture, which in turn give shape to institutions, economic and noneconomic." [6] Mr. Hinds opines that what he refers to as the *connectivity revolution*[7] of the 21st Century, has the potential to cause similar political upheaval in the United States, but that the narrative also applies to democracies everywhere.
- Examples of the maladies presently negatively impacting the United States are: open borders; cancellation of pipelines and drilling on federal properties; weak foreign policies exemplified by the rapid and unconditional withdrawal from Afghanistan; promotion of equity at the expense of

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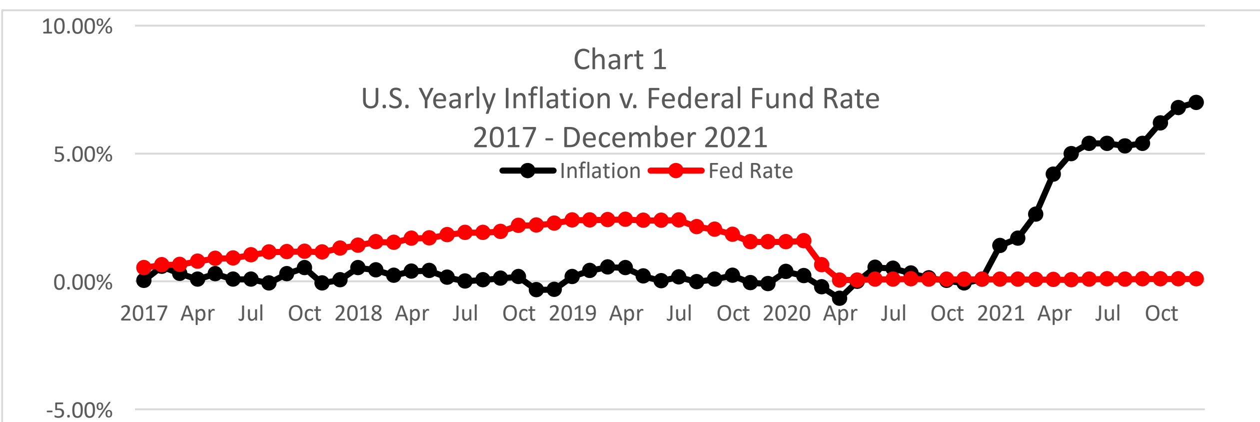
[1] Joseph A. Schumpeter, *Capitalism, Socialism and Democracy*, Harper Collins, 1950, Third Edition, p.61.
[2] First Edition published in 1942.
[3] Departments of Agriculture, Commerce, Defense, Energy, Health & Human Services, Homeland Security, Housing & Human Development, Interior, Justice, Labor, State, Transportation, Treasury, and Veterans Affairs.
[4] See Mary Anastasia O'Grady, "When Populism Turns to Tyranny", Opinion-The Americas, Dow Jones, December 26, 2021.
[5] Manuel Hinds, *In Defense of Liberal Democracy – What We Need to do to Heal a Divided America,* Charlesbridge, 2021.
[6] Ibid, p. 7.
[7] Ibid, p 6. Emphasis added. "The current crisis facing the United States, in fact the whole world is being driven by a technological revolution that is deeply altering the relationship between members and strata of society".

equality; unprecedented inflationary monetary expansion; attempts to raise individual, corporate and capital gain taxes, a strategy guaranteed to lower federal income; reducing productivity with federally mandated vaccinations; continued employment benefits without work requirements; and, attempts to end the filibuster rule and federalize elections.

- The most serious and immediate impact of current policies, however, has been inflation, which has reached a 40-year annual high of 7.0% as of December31, 2021, illustrated in Chart 1.

Why?

- When government spends more than it collects, it must print money which leads to inflation, a very insidious tax.
- Inflation reduces not only the value of every dollar one earns today, but diminishes the value of every dollar previously earned, and will earn in the future.
- Quantitative easing and multiple government stimulus packages tripled the money supply from $4.9 trillion in 2000 to $18.8 trillion in 2020, while the value of the dollar as measured by its ability to buy gold, has gone down 450% from $400 per ounce in 2000 to $1,800 per ounce today.
- Welfare programs and government spending cannot compete with such extravagance, thus negatively impacting the elderly, disabled, veterans and other persons on fixed income. Moreover, inflation's higher wages, concomitant with less purchasing power, push individuals into higher tax brackets.
- Politicians are using financial regulation to circumvent the legislative process to increase government spending by contending that the world climate will change so abruptly in the next five years that the U.S. economy will deteriorate causing a widespread cataclysmic systematic crisis such as 2008.[8] [9]



[8] See John H. Cochrane, "A Convenient Myth - Climate Risk and the Financial System", *National Review,* November *17, 2021.*

[9] The problem with this proposition is that there is absolutely nothing in even the most extreme scientific speculation to support this possibility. To the contrary, see: Ed Berry, Ph.D. *Climate Miracle-There is no Climate Crisis, Nature Controls Climate, ISBN 9798685359971*, Amazon, 2020*;* Steven E. Koonin, *Unsettled – What Climate Science Tells Us, What it Doesn't and Why it Matters,* BenBella Books, Dallas Texas, 2021; Bjorn Lomborg, *False Alarm - How Climate Change Panic Costs U.S. Trillions, Hurts the Poor, and Fails to Fix the Planet,* Hachette Books Group Inc. 2020; and, Michael Shellenberger, *Apocalypse Never - Why Environmental Alarmism Hurts Us All,* Harper Collins Publishers, New York, NY, 2020.

- The Federal Reserve does not have a good record of predicting economic data as demonstrated in Chart 1. For example, between 2017 and July 2020, the Federal Reserve was raising rates while inflation was essentially non-existent, but when inflation began rising from 1.7% in November 2020, to 7.0% December 2021, with no change in Federal Reserve monetary policy.
- This persistent dovishness is inconsistent with precedent, one explanation for which is a Federal Reserve official's proclivity to validate their own erroneous predictions of future behavior. [10]
- Moreover, it is apparent that the Federal Reserve's pronouncement that discontinuing bond purchases in March and three rate hikes in 2022 will normalize inflation around the 2% level by December 2022 is logically unrealistic, and inconsistent with private projections indicating an abnormally high interest rate environment will persist for several years. [11]

How?

- Given the professional, objective, and ultimately skeptical analysis rendered by world renowned global warming experts[12] of the high cost and uncertainty of climate solutions being pursued by the Biden administration, it would be more prudent to create thoughtful scenarios that emphasize GDP growth through technological innovation that improves labor productivity, full employment, free and fair global trade practices, all intended to encourage worldwide race and gender income equality. [13]
- Against a conspicuously pessimistic inflation back drop, the following paragraphs present proven methodological constructs, implementation guidelines, and recommended sector changes to help obviate what will likely be an uncertain and destabilizing investment future.
- Ken Berman, one of the most trusted stock advisors in the United States contends that a "simple trading system" is the secret to becoming a successful investor, [14] the elements of which are presented as they pertain to economic models that have been employed by Analytics Investment Advisors, LLC since 2012.
- "Begin with a Risk-First Approach" [15]
  Starting with the end in mind by utilizing specific risk criteria allows one to define optimal outcomes for different and varied risk profiles. In this context, Analytics Investment Advisors, LLC simulates, on a quarterly basis, portfolios using Morningstar Advisor Workstation to calculate Beta, Standard Deviation, R^2 (Coefficient of Determination), and Sharpe Ratios, consistent with alternative investment objectives and risk profiles. Stop loss orders are judiciously implemented for minimizing losses, which are most effective for tax advantages accounts not subject to capital gains taxes.

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[10] Steil, Benn and Benjamin Rocca, "*The Fed Follows Misquided, Forward Guidance* - The central bank could bind itself to its own forecasts if it were good at predicting the future, but it isn't" Opinion – Commentary, WSJ, 09/16/2021.

[11] See for example, Jeremy Frankel, "Harvard Economist Warns of Two More Years of Inflation", *Newsmax*, January 20, 2022. Kenneth Rogoff predicts inflation will continue into next year based the rationale that policy makers need to stop run-away inflation by raising interest rates while avoiding a recession, which implies a cautious rate increase mentality not likely to have the desired impact.

[12] See Footnote 5.

[13] See Commentary "A Tale of Two Consequences", Richard C. Hoyt, April 7, 2021.

[14] David Evanson, "One Simple Trading System is all you need to Become Rich,", *Investor's Business Daily,* Week of December 27, 2021.

[15] Ibid.

- "Master Behavioral Psychology "[16]
  Relative Strength (RS, Momentum) was crowned by Eugene Fama, one of the original architects of the Efficient Market Hypothesis (EMH) [17] to be the "premier anomaly" to the EMH, in that by relaxing the rational investor assumption, mispricing opportunities can be identified and exploited. Moreover, independent research by AIA, LLC identified statistically significant relationships between Return and Relative Strength indicating that for every 10% increase in RS there was, on average between 2.4% and 3.3% increase in equity returns.[18]
- "Devour Stock Market History" [19]
  An effective technique to gain a healthy perspective on past trends and likely future outcomes is to employ a versatile charting system[20], the time series nature of which identifies comparative momentum and discerning patterns.[21]
- "Experiment Like a Mad Scientist" [22]
  Take advantage of the many advantages of Exchange Traded Funds (ETF)[23] to develop a trading system that is simple, flexible, easy to update and manage by comparing actual performance to established optimal outcomes.
- Tables 1 illustrates four ETF allocations developed using Relative Strength and ETFs to generate allocations consistent with return objectives, relative strength, and risk criteria.
- Table 2 summaries the top 10 issues in four ETFs that are used in different combinations for four strategic allocations, demonstrating that, there is: 1) essentially no overlap between ETFs, 2) good diversification; and, 3) discernable growth/risk identity across each allocation.
- With the presence and protracted potential of high inflation, three sectors, Global Energy, Regional Banks, and Rising Dividend ETFs were included with the expectation they will perform well as interest rate rise or remain elevated.
- And finally, the Nasdaq 100 heavy laden technology ETF, was replaced with SPY where eight out of the top ten companies (30% of ETF capitalization are currently technology companies to reduce volatility, while capturing additional diversification.

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[16] Ibid.
[17] Gray, Wesley R., and Jack R. Vogel, *Quantitative Momentum- A Practitioner's Guide to Building a Momentum-Base Stock Selection System,* John Wiley & Sons, 2016, p. 45.
[18] See Commentary, "Momentum Investing with Exchange Traded Funds", Richard C. Hoyt, July 3, 2018, and "Momentum Investing with Exchange Traded Funds – Recap & Update, Richard C. Hoyt, October 8, 2018.
[19] Ibid, Evanson.
[20] As an example, MarketSmith by Investor's Business Daily.
[21] Employ Relative Momentum of ETFs using cross sectional data, a concept developed by Roger Altman in, *Technical Analysis of Stocks and Commodities* magazine, February 1993, and discussed in detail by Gary Antonacci, *Dual Momentum Investing - An Innovative Strategy for Higher Returns and Lower Risk,* December, 2014.
[22] Ibid.
[23] Exchange Traded Funds are index funds that attempt to replicate the performance of specific indices which are low cost, diversified, have no hidden fees, and offer arbitrage options for investors.

Table 1 – Optimal Allocations [24] [25]

Moderate

ETF	Average	RDVY	SPY	KRE	IXC		Date	Beta	R^2	Std	Sharpe
RS	93	90	85	97	98						
AIA Optimal		17.0%	50.0%	17.0%	16.0%		14-Jan	1.18	88	21.97	1.07

Assertive 1

ETF	Average	RDVY	SPY	KRE	IXC	SSO	Date	Beta	R^2	Std	Sharpe
RS	93	90	85	97	98	97					
AIA Optimal		20.0%	20.0%	20.0%	20.0%	20.0%	14-Jan	1.43	88	26.75	1.04

Assertive 2

ETF	Average	RDVY		KRE	IXC	SSO	Date	Beta	R^2	Std	Sharpe
RS	95	90		97	98	97					
AIA Optimal		23.0%		23.0%	24.0%	30.0%	14-Jan	1.53	98	28.47	1.36

Aggressive

ETF	Average	RVDY		KRE	IXC	SSO	Date	Beta	R^2	Std	Sharpe
RS	96	90	99	97	98	97					
AIA Optimal		17.0%		17.0%	16.0%	50.0%	14-Jan	1.72	93	31.11	1.19

Table 2 – Top 10 Companies[26]

	IXC	KRE	RDVY	SPY/SSO
	Global Energy	Regional Banks	Rising Dividends	S&P 500
Top 10	59%	20%	22%	30%
RS	98	97	90	85/97
1	Exon Mobil	Signature Bank	Popular Inc	Apple
2	Chevron Corp	Comerica	PNC Financial	Microsoft
3	Total Energies	Western Alliance	Bank or America	Amazon
4	Conoco Phillips	Citizen Financial	Met Life Inc	Alphabet A
5	BP PLC	M&T Bank	Cumming Inc	Tesla Inc
6	Royal Dutch A	Key Corp	Citigroup Inc	Alphabet C
7	Royal Dutch B	Peoples United	Allstate Corp	Meta Platforms
8	Enbridge Inc	Huntington Banc	Aflac Inc	NIVIDA
9	EDG Resources	First Horizon	American Express	Berkshire Hath
10	Canadian National	East West Banc	New York Mellon	United Health

[24] Relative Strength (RS) Source: ETFScreen.com, 1/10/2022
[25] Risk Statistics, Morningstar Advisor Workstation, 3 Year Average, 12/31/2021.
[26] Morningstar Advisor Workstation 12/31/2021.

Performance Summary

	2012-21 Avg.	YTD[27] 12/31/2021	AUM	Beta	R^2	SD	Sharpe Ratio
S&P500 ($SPX)	**14.97%**	**26.89%**					
Barclay US TR[28]	**2.95%**	**-1.29%**					
Moderate	14.89%	15.04%	6%	1.12	97	19.81	1.67
Assertive 1	17.44%	20.77%	26%	1.32	99	23.13	1.65
Assertive 2	26.34%	54.58%	29%	1.56	99	27.43	1.74
Aggressive	28.40%	40.47%	39%	2.05	99	36.33	1.53

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Avg
Assertive1	17.1%	38.4%	16.9%	2.9%	-5.6%	22.4%	-7.8%	37.0%	32.4%	20.8%	17.4%
SPX	13.4%	29.6%	12.6%	-0.7%	9.5%	19.5%	-6.2%	28.9%	16.3%	26.9%	15.0%
MSCI World	16.5%	27.4%	5.5%	-0.3%	8.2%	23.1%	-8.2%	28.4%	13.8%	20.3%	13.5%

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
S&P500	13%	44%	62%	61%	76%	110%	97%	154%	196%	275%
Assertive 1	17%	62%	89%	95%	84%	125%	108%	184%	276%	355%
Aggressive	23%	107%	111%	124%	98%	193%	152%	345%	507%	618%

[27] **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.

Net Average Return, Portfolio Center, Schwab Portfolio Technologies. Fees are negotiable and range between .5% to 1.0% per year for assets undermanagement. Risk Statistics, Morningstar Advisor Workstation; most recent 3 years, computed quarterly [27] 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).

[28] XIUSA000MC.