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Integrity in Investing
Investing in Greatly Volatile Times

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PROFESSIONAL FINANCIAL
Purposeful Wealth Management

"The most important thing about an investment philosophy is having one you can stick with."
– **David Booth**, Founder and Chairman, Dimensional Fund Advisors

This is part of a series exploring integrity in professional wealth planning

Key takeaways:

- Capital markets have rewarded long-term investors using informed strategies.
- Staying disciplined in tough times requires having a philosophy and investment framework.
- Rebalancing to targeted allocations in volatile markets captures market returns.
- Dimensional strategies are engineered and managed for effective rebalancing.

Client response to their portfolios' Great Recovery after the recent Great Fall in stock markets worldwide brings to mind an event described in a crime novel by Dashiell Hammett. Sam Spade, the detective in *The Maltese Falcon*, recounts a story of a missing-person case. Flitcraft, an everyman, is nearly killed by a falling beam. Confronted with the apparent randomness of life, he decides–randomly–to vanish. After drifting for years, he settles into a new life much like his old: marriage, kids, and golf at four. "He adjusted himself to beams falling," flatly explains Spade, played in a movie of the same name by Humphrey Bogart. "And when no more beams fell, he adjusted himself to them not falling."

Without the vanishing part, clients seem to be adjusting to a mysterious virus widely feared as contagious that threatened death from the sky. After months of draconian government business shutdowns and house confinements—at least where their job or business was not lost—most have adjusted to a new world where steel beams, at least for now, are not falling. While the world is in recession and many are experiencing a financial nightmare, economic news (according to *The Wall Street Journal*) is encouraging. However, with nearly five trillion dollars of spending by Congress in 2020 to aid recovery, with civil unrest and riots in major U.S. cities, and unending political conflicts and social divisions, the familiar world we once knew seems to have vanished. Even going to the golf course is not the same, assuming that it has not been closed.

Historically low stock market volatility of large U. S. stocks during much of the last decade has been a frequent commentator topic, including these papers.[1] That encouraged the growth of index investing with U.S. stocks in 401k plans as well as multiplying stock-dividend strategies, as alternatives to owning CDs and bonds paying very low interest. Hedge funds borrow billions at historically low interest rates—effectively nearly zero adjusted for inflation—to leverage their trading with sophisticated computer algorithms. Those activities drove valuations of easily tradable U.S. large growth stocks to levels not seen since the Tech Boom years of 1998-1999. These outcomes were enabled by central bank "Quantitative Easing" where the U.S. Federal Reserve purchased trillions of dollars of government bonds to fix problems with mortgage lending that had caused the 2008-2009 Financial Crisis.

An Informed Investment Philosophy Anticipates Volatile Times

There are things you can control, and things you can't. That's true in life. That's true in business. That's true in investing. The bad news is that unpredictable events with costly negative consequences will drop upon us out of nowhere. Death, disability, divorce, disappearance, disengagement from employment are personal. Elections, calamities, wars, and natural disasters have economic consequences that impact whole countries or even the entire world.

The good news for those investing is that markets have rewarded informed investors over the long-term. But over the short term—as anyone who pays attention to media is aware—markets go up and markets go down, as we've seen in extremes throughout the first half of 2020.

For those noticing our unusual account trading activity, here are astonishing S&P 500 stock index data points for a better perspective of the market's singular "falling beam":

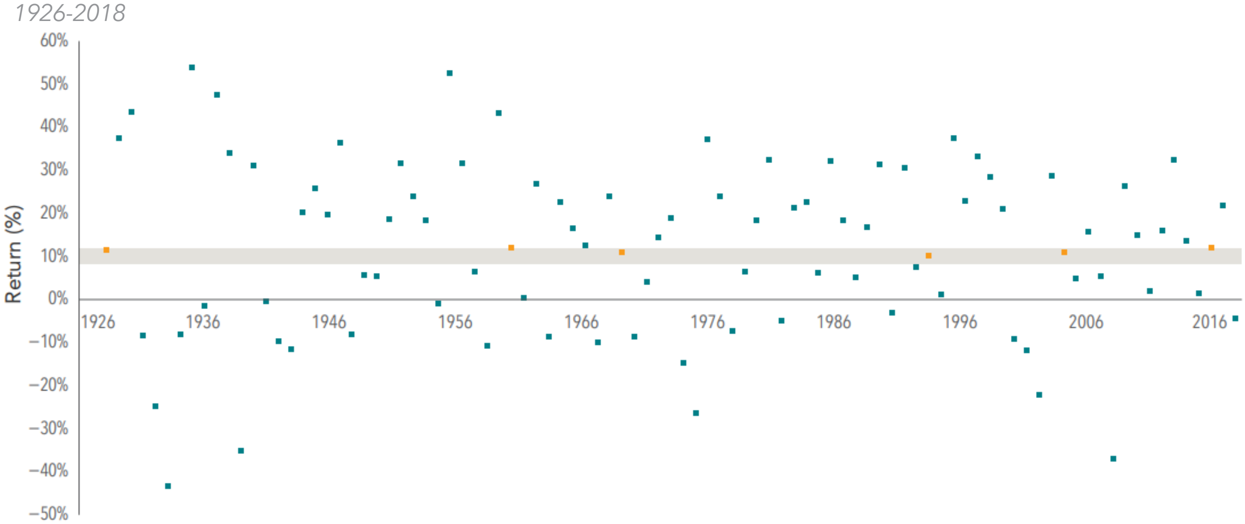
- As the fastest bear market in U.S. history, the S&P 500 closed 20% down from its peak in just 16 trading days and plummeted 30% in only 19 trading days.[2]
- Annualized daily market volatility through June was close to 50%. By comparison, daily standard deviation was 17% and 12% in 2018 and 2019, respectively.[3]
- 3 of the worst 25 daily losses and 2 of the best 25 daily gains occurred in U.S. history.[4]
- 35 daily gains or losses of 3% or more occurred in the five months ending in June. Over the past 5 years, there were only 11 similar 3% market moves.[5]
- 8 daily market moves of 4% or more occurred. 5 days had gains of 6% or greater. No moves of such magnitude occurred in the prior five years.

The extreme volatility during the recent Great Fall should not distract good planning but remind you of the wide range of potential outcomes and your need to look beyond the short-term. Since 1926, the U.S. large stock market has returned an average of 10% annually, but that road was bumpy. Returns ranged from as high as 54% to as low as -43%. In fact, returns within 2% *of the historical average* occurred in only 6 of the past 94 calendar years.[6]

Stock Returns are Related to Value

Benjamin Graham, a former economics professor at Columbia and a teacher of young Warren Buffett, is considered the father of what is called "value" investing. He did not advocate "out-guessing" the market or predicting performance of individual stocks. Graham had lost a fortune in the 1929 stock market crash from making bets. He recovered his fortune

Exhibit 1: S&P 500 Index Annual Returns
1926-2018



In US dollars. S&P data© S&P Dow Jones Indices LLC, a division of S&P Global. Indices are not available for direct investment. Index returns are not representative of actual portfolios and do not reflect costs and fees associated with an actual investment. Past performance is no guarantee of future results. Actual returns may be lower.

by the end of World War II through a system based on selecting stocks with low price-to-book or price-to-earnings ratios. Price determined in competitive markets scaled his accounting valuations of different companies.

In his classic book *The Intelligent Investor*, Graham compares two fundamentally different approaches for stock investing. Speculative investors devote substantial resources searching for mis-priced stocks they hope will out-perform. Defensive investors simply buy a grouping of out-of-favor stocks possessing low "valuations" and hold onto them until their true value is hopefully realized. Today indexed funds have made value investing simple and low-cost. However, "growth" stocks with high valuations have substantially out-performed "value" stocks as memories of the Tech Bust and the Global Financial Panic not-so-long ago have faded from the memories of newer investors.

Graham's philosophy recognizes that prices correspond to changes in value over time. Modern valuation theory equates asset prices with discounted expected cash flows. A "value" security for Graham would be one where the applicable discount rate is higher than for a "growth" stock. When stock prices decline substantially as they did during the Pandemic Panic, discount rates increased, so expected returns increased. While fearful investors tend to sell equities in declining markets to avoid "losing money," you actually want to purchase relatively "cheaper" assets after their prices have declined significantly.

Asset Allocation and Rebalancing

The theory behind discounted cash flows for stocks also applies to allocation strategy for investor portfolios. How much should be in fluctuating stocks and how much in stable bonds? The split depends on the returns necessary for achieving financial goals, the volatility of equities used in the portfolio, investor risk appetite, and investor risk capacity due to age or job status. Graham's simple answer is often used today: a 50-50 split between stocks and bonds, adjusted back to asset allocation targets as market prices (mostly for equities) change. Advances in economic theory would later term this concept as the "Separation Theorem."

The merit of Graham's allocation approach—or the 60-40 rule favored by pension funds today—is simplicity. Sticking to a simple, fixed-weights rule rather a complicated formula is more likely to work over the long run, especially in periods of highly volatile markets when critical adjustments must be timely. In ordinary times, annual rebalancing may keep weights constant. Our reviews begin at 5% change and may trigger at 10% intervals. Specific intervals depend on risk preferences and capacities of individual client situations.

Rebalancing is an essential risk management technique complementing asset allocation. Rebalancing helps you to maintain a more consistent expected return. It buys assets at lower prices whose expected returns have increased while it sells fixed income with reduced yields with a lower expected return when the underlying bonds have likely increased in price.

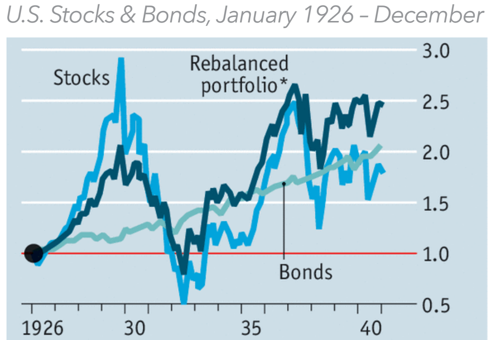
Rebalancing keeps portfolio risk more consistent over time. If stock markets boom and bond prices are stable, a 50-50 split can become 70-30 if unattended. Rebalancing simply sells equities and buys bonds to the original parity. Or where severe market declines have occurred, fixed income is sold in stages to progressively buy equities at lower market prices. This prevents the portfolio from taking more (or less) risk than its policy planned for longer than necessary.

The relative proportions of growth and value within an equity allocation or term and credit within a fixed income allocation are much less important for planning than the relative weighting between stocks and bonds. Equities and fixed income have fundamentally different risk characteristics. What matters most for risk management in the long run is using periodic rebalancing by some method to stay close to the chosen weights. And doing that requires an investor to stick to their investment philosophy as a long-term strategy.

Example from an Extended Volatile Market Period

Exhibit 2 illustrates how periodic rebalancing (assuming index funds had been available) would have worked during a highly volatile 15 years between 1926 and 1940. That period includes the infamous 1929 market crash followed by a

Exhibit 2: Advantage of Rebalancing in Volatile Markets
U.S. Stocks & Bonds, January 1926 – December 1940



Source: *Andrew Ang,* Asset Management *from Ibbotson data. Cumulative returns in USD. 100% U.S. equities, 100% bonds, and 60% equity/40% bond indexed portfolio rebalanced quarterly. January 1926 = $1. Indices are not available for direct investment.* ***Past performance is no guarantee of future results.***

prolonged Great Depression, finally book-ended by World War II. A $1 investment in a stock index in January 1926 was worth $1.81 by December 1940 (after some extreme ups and downs). A bond index did better, of course, since there was never a bond market crash, but interest rates were very low during most of those years.

A dollar invested in 1926 was worth $2.08 by 1940. A portfolio of 60% stocks would have been worth just $1.92. But a 60-40 portfolio, rebalanced every quarter, would have been worth $2.46, beating the returns of stocks or bonds separately. Rebalancing works because it reduces equities when their expected return is lower (when stocks have risen in price) and adds to equity allocation when their expected return has increased (when stocks have reduced in price). Rebalancing goes against our instincts to sell assets when they have fallen in price and buy when they are rising in price (for fear of "missing out").

The Graham approach goes against conventional market wisdom. Hedge-fund managers focus on short-term "directional" trades for returns. They want to cut losses quickly and let winners ride. If right, winners travel a long way. But in highly competitive markets, high-speed trading is often like picking up nickels laying in front of a steam roller. But then, many times hedge fund managers do not invest their own money that way. They usually invest the money of other people. That money is easier for them to lose. Graham promoted his strategy as a result of his success with restoring his own lost fortune.

A simple and specific management process keeps you on course over the long run. Adapting strategy for tax considerations or product enhancements is easier. Rebalancing is based on the belief that markets work and function in equilibrium. Extremes in pricing such as due to unusual liquidity demands will be self-correcting. Rebalancing works in reverse of the market's boom-bust cycle. But what matters most is not a specific process for rebalancing (some work better than others)—but whether you stick to it even when outcomes occasionally disappoint.

Rebalancing's Impact on Dimensional Premiums

Globally structured strategies allocated 50/50 between equities and fixed with Dimensional have had outcomes like U.S.-focused 50/50 allocations for the past year. For instance, U.S. stocks had about a 6.5% one-year return ending June 30 yet international stocks were -5.4% annualized. Despite that disparity, a globally dimensionally structured balanced return for the past year would have been similar.[7] This was true even though Dimensional U.S. and non-U.S. large value returns were low. Aggressive rebalancing both as markets declined and as markets rose explain how such a result is possible, where structured allocations to profitability, size, term and currency dimensions are also included as part of the portfolio.

The returns of U.S. growth stocks has been especially high during the past decade. Much of that out-sized performance is related to the series of "Quantitative Easing" money-printing stimulus by the Federal Reserve after 2008 following that Financial Panic.[8] How have premiums performed on average after declines in other periods?

Exhibit 3: Dimensional Equity Premiums for 1-, 3- and 5-Years Following Market Declines

	Small Minus Large			Value Minus Growth			Minus Low Profitability		
	1YR	3YR	5YR	1YR	3YR	5YR	1YR	3YR	5YR
10% Decline (N = 13)	6.31%	29.11%	49.11%	2.27%	20.82%	48.64%	4.46%	10.65%	21.88%
20% Decline (N = 5)	4.16%	4.83%	40.55%	7.49%	8.47%	29.82%	2.75%	13.21%	14.44%
30% Decline (N = 4)	13.79%	26.80%	77.60%	-2.47%	9.78%	46.00%	0.50%	8.16%	-5.23%

Returns are calculated for the 1-, 3-, and 5-year periods beginning the month after a downturn of 10%, 20%, and 30%, respectively, from a new all-time high for the market. There are thirteen, five, and four observations of downturns that compose each average return for the 10%, 20%, and 30% thresholds, respectively. Market represented by the Fama/French Total US Market Research Index. Small cap and large cap stocks represented by the Dimensional US Small Cap Index and the S&P 500 Index, respectively. Value and growth stocks represented by the Fama/French US Value Research Index and the Fama/French US Growth Research Index, respectively. High profitability and low profitability stocks represented by the Fama/French US High Profitability Index and the Fama/French US Low Profitability Index, respectively. Indices are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio. S&P data © 2020 S&P Dow Jones Indices LLC, a division of S&P Global. Descriptions of Dimensional and Fama/French index data available upon request. ***Past performance is no guarantee of future results.***

The table below, **Exhibit 3**, reports composite cumulative premiums over 1-, 3-, and 5-year periods following market downturns of 10%, 20% and 30% for U.S. stocks. For example, following a 20% market downturn, value outperformed growth by 7.5% on average over the subsequent one year. **Premiums generally have been very positive, except in periods of extreme declines.** While recent results are disappointing, we continue to expect equity premiums to show up. The evidence does not support extrapolating recent unusual past performance into the future.

Premiums can materialize very quickly. You want to be properly positioned to capture returns from premiums when they show up. At the start of the 21st century, after ten years of high U.S. large growth stock returns in the "new economy" years, from March of 2000 over the next one year, the out-performance of growth stocks for 1-, 3-, 5-, 10- and 15-years completely flipped.[9] Value stocks regained their advantage over every one of those periods. But if you were not positioned, you did not get those returns and your overall performance suffered for years after.

Discounted Prices Increases Expected Returns

Financial panics randomly falling from the sky are a fact of life for anyone's wealth or retirement planning. Business recessions sooner or later give way to recoveries, whether helped or hindered by government intervention. Not all distressed firms will go bust. The Federal government is going all-out to intervene in this election year. And while lost business profits will temporarily reduce wealth, the value of stocks is mostly from earnings that stretch many years into the future. The implied discount rate, however, is ever changing. Higher discount rates imposed by investors translated into lower market prices during March.

Securities are priced not only on information related to expected cash flows. The discount rate applied by the market to expected earnings also incorporates other information, including the collective risk preference of investors based on perceptions of current conditions. In principle, investors should not discount prices for holding stocks during a recession. But in practice they do. A virus of unknown virulence sensationalized by the media and politicians provoked heavy-handed response by local governments. Businesses arbitrarily were closed. People were not allowed to work and isolated at home. Children could not attend school. Uncertainty bred fear, ultimately leading to protests and rioting in major cities around the U.S.

The astonishing market decline over such a short time created a unique opportunity for investors. The market demanded liquidity at unprecedented levels due to distressed selling. Stocks typically fall for much more than expected profits lost when recessions begin. But automated algorithmic trading caused cascading market prices as multiple hedge funds, pension funds, mutual funds, and ETFs, all with huge positions, at once demanded liquidity to cover sales of highly leveraged positions as successive trigger points passed. Fearful investors were also selling out positions to simply hold cash. There were far more involuntary sellers (them) than voluntary buyers (people like you).

Informed investors with no leverage but with a disciplined rebalancing strategy can provide liquidity. For our clients, it was part of a planned (if highly accelerated) process of rebalancing. Rebalancing within a period of high liquidity demand translates into higher expected portfolio returns as discount rates soar. By adhering to a well-thought out investment management process specifically developed far in advance of any crisis was essential for success. By remaining committed to your planning during period of such great uncertainty, you made your successful investing outcome possible. If you didn't watch, so much the better.

The process of disciplined rebalancing takes advantage of lower stock prices effectively during a market decline. An investor who holds a portfolio split 50-50 or 60-40 between stocks and bonds sells bonds that have gone up in price, to buy relatively cheaper stocks that have fallen in price. Portfolio rebalancing helps relieve normal client stress in a constructive manner by "doing something," but "doing something" right. People are fearful of buy into declining markets without a clear purpose and direction. But an informed economic philosophy helps to overcome fear and take action that reduces the stress of the moment. "Black box" alternatives where the investor can "do nothing" disconnects their emotions from any actions they can see.

Transitioning to a New Normal

During the 2008-09 Financial Panic, the U.S. S&P 500 stock index fell by almost 50% over just a few months. Although that recession was brutal, worse declines occured in the past. This one shocked us by its speed. When a steel beam hit the pavement beside him, Flitcraft "felt like somebody had taken the lid off life and let him look at the works." Huge market declines have traumatic impacts. Suddenly, risk in varied forms is seen everywhere—in your job, in your business, in your health, and in your portfolio. Holding risky assets suddenly feels foolish.

Our economic philosophy is based on how markets work: Buyers and sellers willingly come to a marketplace and freely strike a price. The collective price struck for securities determines the cost of capital in equilibrium. The lower the prices paid, the higher is the cost of capital. And as you already know, the firm's cost of capital is the investor's return. And you are the investor.

Intuitively, this all makes sense. Times of high market stress are times of high expected returns. When extremely high market volatility occurs, the risk premium must be higher than normal. What made this situation better for you is that sellers were unwilling to sell but had no choice.

What you have learned again is why you should stick with your investment philosophy and process in tough times. Of course, there was enormous gloom and doom—stock volatility was extremely high. Frankly, with all the fear driven by media madness, no wonder markets dropped. Research and experience tell us that reacting emotionally in volatile times is usually more detrimental to long-term planning outcomes than any short-term decline. When a portfolio has already declined, and your strategy is informed, the only sensible thing to do is to stick around for the expected return. The rebalancing process enhances outcomes as you wait.

Conclusion

The COVID-19 virus dropped from the sky much like the girder that narrowly missed Flitcraft. People are overwhelmed, and still adjusting to a world of falling beams. It will be a while before they adjust to them not falling. The mistake for many investors is that their money vanished from the market much too soon.

Flitcraft was shocked to discover how random life can be. The hardboiled Sam Spade understood that already. Investors of the Spade kind know that beams can fall, and they quickly adjust to it. They know that beams will stop falling. Falling stock prices in a crisis hit pavement and stop falling. Fortunately, the market decline was not extended over months, and markets have largely recovered. For Sam Spade investors who stuck with their plan, likely you are better off now than when you started. And more confident going into a phase two for the economy and the market due to an extraordinary amount of debt that now burdens our country.

The reality is, because of your planning, you were already invested when the bad news of a virus came along. By the time you realized a crisis was underway, large market declines had already begun. That's called "market efficiency." Given all the uncertainly at the time and the economic shutdowns, more market declines were inevitable. But having paid the price for risk already—and having planned a well-informed portfolio strategy with a scientific perspective and approach—then your most sensible decision by that time was always to stick with your plan, follow a disciplined process, and wait for the expected returns to come.

Endnotes

1 Ed Easterling, "Volatility in Perspective," Crestmont Research, January 5, 2020. See Figure 1. Accessed at: https://www.crestmontresearch.com/docs/Stock-Volatility-Perspective.pdf

2 Beth Kindig, "Algorithms sped up selling, leading to the fastest bear market in stock market history", *Market Watch*, March 26, 2020

3 Ben Carlson, "The 2020 Stock Market By the Numbers", *A Wealth of Common Sense*, June 7, 2020

4 Ben Carlson, "Is This The Most Volatile Year Ever?", *A Wealth of Common Sense*, June 12, 2020

5 Ben Carlson, "The 2020 Stock Market By the Numbers", *A Wealth of Common Sense*, June 7, 2020

6 Dimensional Fund Advisors, "The Uncommon Average: Long-Term Context on Annual Returns", *MyDimensional*, May 2, 2019. LeBron James, a star basketball player, has averaged 27 points, 7 assists, and 7 rebounds a game during his entire career. He's played in over 1,400 NBA games in 16 years and has yet to finish a game with exactly 27-7-7.

7 For an interesting explanation, see www.visualcapitalist.com/understanding-the-disconnect-between-consumers-and-the-stock-market/.

8 *Global Market Review*, Professional Financial, Second Quarter 2020, p. 8.

9 "Value Judgments: Viewing the Premium's Performance Through History's Lens," Dimensional Fund Advisors, October 3, 2019. Accessed at: https://www.mydimensional.com/value-judgments-viewing-the-premiums-performance-through-historys-lens