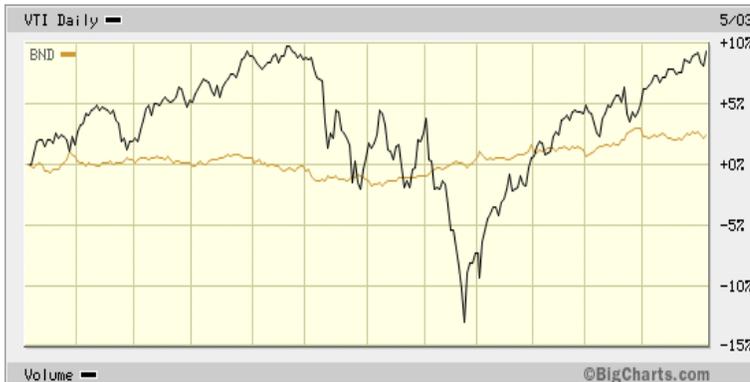


This chart shows the performance of the Vanguard Total Stock Market Index Fund ETF (VTI) and the Vanguard Total Bond Market Index Fund ETF (BND) for the year ending May 3rd. Two things to note from the chart. The first is the steady



performance of the bond fund. You don't own bonds for capital gain. Investment grade corporate bonds and US Treasury securities act as portfolio stabilizers. The second is that the 20% **plunge!** in stocks during the fourth quarter of 2018 was erased by the end of April. This was a pleasant surprise because stock market rebounds don't usually occur so quickly. On Christmas Eve, no one knew that the selloff was over and many talking heads were predicting that it would continue - because the default prediction of market forecasters is that recent trends will continue. It's disingenuous, but for their careers, it's the safest thing to say, since they have no idea what's going to happen next. Anyone who

appears on CNBC and says, "I don't know what's going to happen" or makes an outrageously optimistic or pessimistic forecast is unlikely to be invited back.

Although history provides some insights, the future is unknowable, so always be ready for the unexpected. This isn't what most investors want to hear but it's the truth. It's what happens tomorrow, not what happened today that will determine what stock prices do next. Since no one knows what will happen tomorrow, diversification is the only rational strategy to prepare for the unexpected. Although diversification helps manage risk, it doesn't eliminate it.

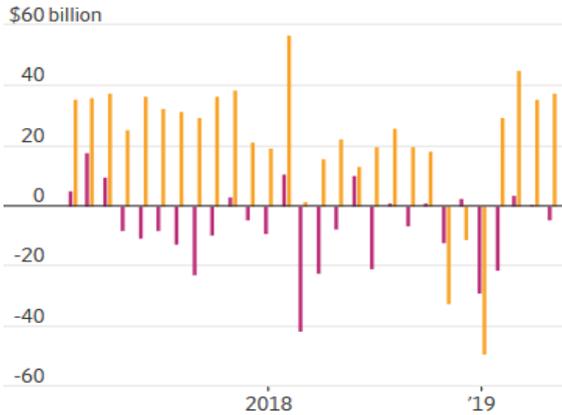
If you're a well-diversified, long-term investor, you don't need to be a consumer of the financial media since it tells you little, if anything, about how to reach your financial goals. The opinions and forecasts of financial pundits provide no value. If they did, the capital markets would take notice and respond accordingly. But they don't, and neither should you. The daily barrage of media noise confuses more than clarifies. There are too many conflicting viewpoints and too many sales pitches masquerading as financial advice. Daily market updates shrink your investment time horizon from decades to months. The financial media encourages market timing by emphasizing short-term trading and stock picking. Fortunately, market timing strategies are not necessary to achieve your financial goals. Consider the following -

Let's imagine that Curly, Larry and Moe annually invested \$1,000 in a total world stock market index fund beginning in 1977. Curly had perfect market timing and invested at the market low point each year. Larry had the worst timing imaginable and invested at the market high point each year. Moe paid no attention to the market and invested on the first trading day of each year. Fast forward to 2017 and Curly's perfect timing yielded an average annualized return of 9.3% and an ending value of \$430,000. Larry's dreadful timing yielded an average annualized return of 8.8% and an ending value of \$360,000. Moe's complete disregard of the stock market earned him an average annualized return of 9.1% and an ending value of \$410,000. Investing is one of the few activities in life where inactivity often trumps action.

There seems to be less media excitement about this year's rebound in stocks than last year's **plunge!** But this is nothing new. The stock market goes down and the financial media screams **plunge!** Then the market recovers to new highs and nobody seems to notice. From 2008 through March 2019, the S&P 500 Index endured a loss in 43 of 135 months - approximately one third of the time yet it still yielded an average annualized total return of 8.3%. Moe-like investors who were able to ignore the noise and stick with their investment strategy were rewarded with excellent returns.

Wall Street makes a fortune peddling the illusion that you can have all the upside offered by stocks while avoiding most of the downside. But investors must understand that any investment product or strategy that is designed to lower downside risk will lower upside potential. Conversely, any investment product or strategy that is designed to increase upside potential will also increase downside risk.

■ U.S. stocks ■ Bonds



Last year, there were 20 days in which the S&P 500 rose or fell 2% or more. On average, there have been 16 days with 2% moves in the index over the last 30 years. So, 20 volatile days wasn't that unusual. Perhaps the reason so many investors were unnerved is that 12 of those days occurred in the last three months of the year. According to Merrill Lynch, investors withdrew \$39 billion from stock mutual funds and ETFs in the first quarter of this year. This chart, from the *Wall Street Journal*, shows the monthly inflows and outflows of domestic stock and bond funds for the past two years. After two bear markets since 2000, many investors are spring loaded to flee stocks at the first hint of trouble. They promise themselves that they will return to the market once things settle down but, as the chart shows, few manage to do so. Perhaps this is because there's never a day that goes by in which financial journalism doesn't frighten them into believing that an imminent stock market collapse is just around the corner. By remaining out of the market until it seems "safe" to invest in stocks once more, many conservative investors have turned risk avoidance into gain avoidance.

If you're still in the accumulation stage of your investing years, last year's fourth quarter decline should have brought a smile to your face. In fact, it would have been a nice Christmas present if the decline continued into the New Year, since each month's salary deferral into your retirement plan would buy more shares at lower prices. By adding cheaper shares, your portfolio will recoup its pre-decline value before the stock market recovers. If you have many decades of investing ahead of you, buying when the market is down is almost always going to be a good decision and the greater the volatility, the more that the disciplined investor will benefit. For example -

You decide to invest \$1,000 per month into a total stock market index fund in your 401(k). The fund has a net asset value (NAV) of \$20 per share. As luck would have it, the fund declines 50 cents per share per month for the next 12 months and one year from today has a NAV of \$14 per share -- a 30% decline. Pessimistic reports about the US economy fill the media, your co-workers bemoan the market's decline and flee to bond funds for "safety". You ignore Wall Street and your co-workers and stick with your investment strategy. The market turns around the next year and the fund rises in value at the same 50 cents per share per month. The fund's price two years hence is the same as it is today -- \$20 per share. The fund's two-year average annual return is 0%. The question -- what is your personal rate of return?

By investing a fixed amount of money each month, you are utilizing a strategy known as dollar cost averaging. Since you will buy more shares when prices are low, and fewer shares when prices are high, your average cost per share will be less than the average price per share during the purchasing time period. During the 24 months in our example, the average price of the fund was \$17 per share but your average purchased price per share was only \$16.82. By the end of the second year, you own 1,427 shares worth \$28,538. After two years, you have invested \$24,000 and it has grown to \$28,538 - an average annualized return of 17.6%. Intellectually, we know that dollar cost averaging makes sense, but it can be difficult to stay the course when the headlines are screaming **plunge!**

One of the benefits of studying the history of markets is that you come to realize that there's nothing new under the sun. Louis Bachelier, a French mathematician at the turn of the 20th century, is known as the father of financial mathematics. In 1900 he published his PhD thesis, *The Theory of Speculation*. In it he stated, "*The mathematical expectation of the speculator is zero.*" An example might help clarify his assertion. You and I are engaged in a coin flipping contest. If the coin comes up heads you pay me \$1. If the coin comes up tails, I pay you \$1. Even if I am several dollars ahead during the contest, I expect no profit from our game because by the end of our contest I assume that we will each have an equal number of wins. So, as Bachelier posited, the mathematical expectation of the coin tossing speculator is zero.

Now let's move our contest into the arena of the financial markets. You and I each own one share of XYZ stock. Currently, each share is priced at \$50. I am more confident about XYZ's future than you are, so I buy your share. Soon thereafter XYZ announces better than expected earnings and the price jumps to \$60 per share. I own two shares, so my gain is \$20 -- \$10 from my original share and \$10 from the share that I purchased from you. My additional \$10 gain came at your expense. In mathematical terms this is called a zero-sum game -- one player's gain comes from another player's loss. Just like in the coin flipping contest, the mathematical expectation of the financial speculator is zero.

Unlike our coin flipping contest, our stock speculating contest has a third participant -- the Wall Street intermediary who charged me \$1 to buy your XYZ share and you \$1 to sell it. So, my speculative gain isn't \$10, it's only \$9. Likewise, your loss is not \$10 it's \$11. Now, the net return for our speculation is not zero -- my \$9 gain and your \$11 loss yield a net \$2 loss. The \$2 went to the intermediary who risked no capital but still profited from the transaction. So, financial speculation is not a zero-sum game, it's a negative sum game. In any speculative transaction, we assume that there will

be one winner and one loser. But on Wall Street every transaction has two winners and one loser. One winner profits at the expense of the losing party on the other side of the trade. The second winner is Wall Street's intermediary who profits without taking any market risk.

One of the nasty things about speculating is that it is so easy to convince ourselves that we are acting upon a well thought out, prudent investment idea that gives us an insight or an edge over everyone else. But individual investors are, let's admit it, largely ignorant of economics and investing. We usually make investment decisions in response to short-term price fluctuations - often reacting emotionally to insignificant events. Far too often, we are mere crowd followers - buying because prices have risen or selling because they have fallen. In your attempts to outsmart the market, you'll be engaged in a negative-sum game that will transfer a portion of your assets to the croupiers who own the table and make the rules.

Is it any wonder then why Wall Street relentlessly promotes stock picking and market timing? The more investors who can be persuaded to make short-term speculative bets on future stock prices, the richer Wall Street becomes. And when I say Wall Street, I'm not talking about some monolithic entity lurking in the shadows. I am talking about everyone who advises clients to buy and sell securities based on predictions about what the economy or the stock market is going to do in the near term. There are tens of thousands of well-trained people who make their living doing this, most appear to be charming, friendly and claim to have your best interest at heart. Caveat emptor.

Every day there are sensible sounding reasons to delay investing in the stock market. There's always some talking head claiming that the market is too high - even if it just declined 30%. The secret to long-term wealth accumulation lies in a disciplined strategy of periodic investing into a prudently allocated, well diversified portfolio. Stick with a long-term view, capture 99.8% of the market's return by using index funds and, just like Moe, look at your portfolio once a year and let time work on your behalf.

Dave, Do the Math

All financial plans contain assumed values for stock and bond returns, inflation and taxes. In the financial plans that I create, I assume a 7% rate of return for large-cap stocks and an 8% return for small-cap stocks. Over the past 90 years or so, the actual average annualized returns have been about 10% for large-cap stocks and 12% for riskier small-cap stocks. We hope for returns closer to long-term averages but don't count on them.

It was reported in *Money* magazine this month that 15 million people tune in to Dave Ramsey's daily radio show each week. His show airs on more than 600 stations to an audience exceeded only by Rush Limbaugh and Sean Hannity. Last year, his podcast ranked 5th in total downloads at the iTunes podcast store and his YouTube channel had 35 million views. On his website, Ramsey states that his goal is to provide *"biblically based, common-sense education and empowerment that give HOPE to everyone in every walk of life."* Fair enough, and a worthwhile goal. Yet he has been criticized by many financial advisors for telling his audience that they can plan on a 12% annual rate of return for stocks. How does he come up with 12%? His website explains:

"When Dave says you can expect to make a 12% return on your investments, he's using a real number that's based on the historical average annual return of the S&P 500...The current average annual return from 1923 (the year of the S&P's inception) through 2016 is 12.25%."

Well, yes and no. When returns differ from one year to the next, there can be a big difference between the average annual return and the average annualized return. For example, let's assume that your portfolio yields the following returns for the next five years: 12%, 2%, -6%, 5% and 7%. Your average annual return would be 4% - the sum of the annual returns divided by 5. But your average annualized return - the rate at which \$1 in your portfolio would compound over those 5 years - is 3.8%. Investment performance is measure by the average annualized return (often called the internal rate of return), not the average annual return. The average annualized return of the S&P 500 has been 10.0% from its inception through 2016 - 18% less than Ramsey's claim and the upper end of what an investor should expect.

Dave Ramsey's advice on budgeting, spending, and avoiding consumer debt has helped many people over the years. But providing good budgeting and spending advice doesn't mean that he's qualified to give investment advice. If Dave Ramsey doesn't understand the difference between average annual returns and average annualized returns, perhaps his followers should seek investing advice elsewhere.

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