KATHMERE CAPITAL MANAGEMENT INVESTMENT COMMENTARY

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OUR CORE PURPOSE:

To bring clarity and confidence to our clients about all aspects of their financial lives, and to help them achieve and maintain a secure financial future.

On Innovation, Investing, and the Paradox of Skill

In a recent article Don Boudreaux, an economics professor at George Mason University, argued that, contrary to what seems to be the conventional wisdom of the day, Americans' material standard of living is today significantly greater than it was 30 years ago. As support for his argument, Boudreaux described some of the amazing innovations that have taken place over the last 30 years that have improved our lives for the better, many of which we never pause to think about:

Yet ironically, Americans' immense prosperity in 2017 is revealed most vividly in riches that are difficult to see if you aren't look for them. Most of what makes Americans today far richer than Americans in 1987 are things that are so familiar now that we take them for granted. Consider just some of the goods and services that were unavailable to ordinary Americans 30 years ago: individual-serve coffee-makers ("Keurigs"), high-definition televisions, downloadable and streaming music, movies, and TV shows, Lasik surgery, Viagra, smartphones, GPS navigation, laptop computers, the Internet.

Each of these items was attention-grabbing when first introduced. But they all became so widespread so quickly that they are today part of our landscape.

Pretty remarkable stuff.

This investment commentary will take a look at another noteworthy phenomenon. Specifically, we note that innovation has also swept through the financial markets and investment landscape over the years, dramatically changing the way markets operate and profoundly impacting investors of all stripes. In his recently published book, The Index Revolution, Charley Ellis, a widely respected investment expert, documented how significantly financial markets have changed since he first entered the industry 50 years ago." A few of the individual changes he described are listed to the right.

Collectively, these changes have compounded upon one another to massively transform the financial markets. This extraordinary transformation confers immense benefits to us all, as open, transparent, highly competitive, generally well-regulated, and deep markets are a significant economic good.

As investors, however, it's also critical to consider the implica-

"... innovation has also swept through the financial markets and investment landscape over the years, dramatically changing the way markets operate and profoundly impacting investors of all stripes"

- "Trading volume of New York Stock Exchange listed stocks increased from 3 million a day to 5 billion, a change in volume of over 1,500 times."
- "The investors executing this surging volume of trading have changed profoundly. Individual amateur investors did over 90 percent of all New York Stock Exchange (NYSE) trading 50 years ago... Fifty years later, the share of trading by individuals has been overwhelmed by institutional and high-speed machine trading to over 98 percent."
- "Today, the 50 most active (and ruthless) professionals--half of them hedge funds-do 50 percent of all NYSE listed stock trading, and the smallest of these 50 giants spends \$100 million annually in fees and commissions buying information services from the global securities industry."
- "Investment research from major securities firms in all the major markets around the world produced by expert analysts of companies and industries, economists, political analysts, demographers, and geologists, amounts to an enormous volume of useful information. It is distributed almost instantly via the Internet to hundreds of thousands of analysts and portfolio managers who work in fast-response decision-making organizations worldwide."
- "Bloomberg machines, unheard of 50 years ago, now number over 320,000 and spew unlimited market and economic data virtually 24 hours a day."
- "The Internet, e-mail, and blast faxes have created a revolution in global communications: instantaneous, worldwide, and accessible 24/7."
- "Regulations have changed to ensure simultaneous disclosure to all investors of all potentially important information. Since 2000 in the United States, the Securities Exchange Commission's Regulation FD (Fair Disclosure) has required that any significant corporate information be made simultaneously available to all investors."

tions of this transformation on the efficacy of various investment approaches going forward. That is, we should ask ourselves whether this transformation makes any particular investment approaches more or less likely to be successful in the future.

In particular, consider the conventional approach to investment management. The conventional approach seeks to outperform the markets by outsmarting others. An investor following the conventional approach seeks to identify "mispriced" securities through diligent study and analysis of any and all information deemed relevant to the investment decision-making process such as financial statements, economic analyses, Wall Street research,

etc. Such an investor hopes to buy or overweight securities (or baskets of securities) deemed undervalued and sell, underweight, or avoid completely securities deemed overvalued.

When thinking about the conventional approach—or any approach for that matter—it's important to remember the arithmetic reality of investing as a zero-sum game. The concept of investing as a zero-sum game dictates that since the holdings of all investors in a particular market aggregate to form that market, if one investor's dollars are to outperform the market average, by necessity, another investor's dollars must underperform by an equal, and offsetting amount such that aggregate performance of all investors sums to equal

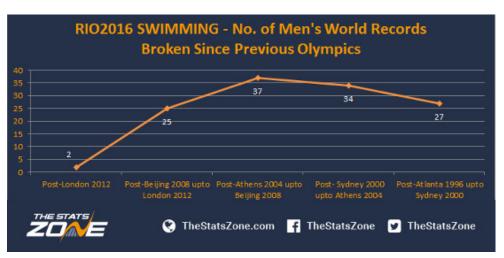
the performance of the market average. That is, for every "winner" there must be an offsetting "loser" in the game of performance investing. Not everyone—or even the majority—can be above average!

Now, consider the conventional approach in context of today's hyper-competitive financial markets. We know that in order for one investor to outperform some other investor must underperform. The question then, as it applies to the prospective efficacy of the conventional approach becomes: How likely is it that any investor will be able to consistently outsmart the collective wisdom and knowledge of all other market participants so as to outperform after fees and costs in the long run?

Fifty years ago, in the environment described by Ellis above—the one in which individuals executed over 90 percent of stock trades, the global communication and computing power we possess today were the stuff of science-fiction, and enterprising investors could gain an edge just by working harder than others and tapping their networks for information not available to the general public-we think it's highly likely a group of talented, intelligent, well-resourced, and committed professional investors would have been able to consistently outperform the averages after costs. Remember, back then these professionals were competing with mom-and-pop investors who lacked the resources, training, and commitment to conducting the rigorous financial analyses necessary to make informed, high-quality investment decisions. Back then, these professionals could win, and they could do so at the expense of mom and pop.

Today, however, as we know, the situation is very different.

Today, these professionals are competing almost exclusively with one another, all of whom are better trained and resourced and more committed to delivering superior investment performance than was imaginable 50 years ago. In order for one of them to win today, they must do so at the expense of one of their peers. How likely is it in today's



world which features massive computing power and instantaneous access to information that a particular investor will be able to acquire and maintain a consistent advantage over the other professionals they are competing with day in and day out?

We think it's fairly unlikely.

This is what's known as the paradox of skill which posits that even as skill in a particular competitive endeavor increases, luck can play a greater role in determining the outcome (i.e., in separating the "winners" from the "losers"). In order to understand how this may be the case, it's important to differentiate between absolute skill and relative skill.

To help conceptualize this distinction, consider the highly competitive field of Olympic athletics such as track and field or swimming. Thanks to advances in training, nutrition and coaching, and increases in the number of participants, today's Olympic athletes run and swim faster than was imaginable

50 years ago. Thus, it can be said that the aggregate skill of Olympic athletes has increased markedly. However, as the absolute skill of these athletes has increased, the relative difference in skill among these elite athletes has declined. In other words, the difference in skill among the best Olympian and the average Olympian has narrowed. As a result, in spite of the fact that today's athletes in aggregate and on average are far faster than the athletes of yesteryear, winning a gold medal today is generally considered to be an even more challenging proposition than it was a half century ago as shown in the graph above.

Similarly, in today's investing environment, "winning" (i.e., generating consistent after-fee outperformance) has become an increasingly difficult proposition as the relative difference in skill among investors competing daily in the capital markets has considerably narrowed while the aggregate level of skill has markedly increased.

To wit, scantly anyone would

argue with the contention that the average investor of 2017, equipped with all of their contemporary training, resources, and unfettered access to information could, figuratively speaking, run laps around the average investor of the 1960s. However, as we know, this point is ultimately irrelevant.

What matters most for the prospects of investors seeking to outperform the market averages is not how today's investors compare to previous generations' investors, but rather, how today's investors compare to relatively one another. Unfortunately, for adherents of the conventional approach, the relative difference in skills among these super intelligent, welltrained, highly committed and robustly resourced investors has narrowed considerably over the last 50 years amidst the revolution in information access and computing technology. The relative skills differential among investors has narrowed so considerably over the last half century that we believe it's reached the point

where it's highly unlikely that any one investor will be able to consistently outsmart his or her peers on a consistent enough basis to overcome the pernicious drag of investment expenses and fees to outperform the market averages on the basis of skill as opposed to luck.

Thus, we have the paradox of skill whereby it is precisely because today's investors are so intelligent and hard-working and well-resourced that the prospects for the conventional approach are so dim in our perspective.

Fortunately, however, there is another way.

An alternate way which acknowledges that capital markets have immensely changed over the last half century and which seeks to harness the incredible powers of the financial markets and leverage the innovations and advances in computing power and information access to an investor's advantage rather than trying to

fight against them.

This is the approach we leverage when managing our clients' hard-earned assets and we'd welcome the opportunity to discuss them in more detail with you.

As always, we'd welcome your thoughts and feedback and opportunity to discuss this commentary with you further.

"... Collectively, these changes have compounded upon one another to massively transform the financial markets."

Thank you for your time and please reach out if you have any quations or would like to talk in more detail,

Kathmere Capital Management Investment Committee

1 Buffett once wrote in his annual letter to shareholders of Berkshire Hathaway ""What I advise here is essentially identical to certain instructions I've laid out in my will...My advice to the trustee could not be more simple: Put 10% of the cash in short-term government bonds and 90% in a very low-cost S&P 500 index fund...I believe the trust's long-term results from this policy will be superior to those attained by most investors—whether pension funds, institutions or individuals..."

2 See "The Case for Low-Cost Index-Fund Investing" from Vanguard, "The US Mutual Fund Landscape 2016" from Dimensional Fund Advisors and "SPIVA US Scorecard" from S&P Dow Jones Indices among others.

IMPORTANT DISCLOSURES

The S&P data is provided by Standard & Poor's Index Services Group.

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Stock investing involves risk including loss of principal.

The S&P 500 Index is a capitalization-weighted index of 500 stocks designed to measure performance of the broad domestic economy through changes in the aggregate market value of 500 stocks representing all major industries.

There is no guarantee that a diversified portfolio will enhance overall returns or outperform a non-diversified portfolio. Diversification and asset allocation do not protect against market risk.

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