WHITE PAPER

"The Times They Are A-Changin'"
— BOB DYLAN

BY **BILL SPITZ**, PRINCIPAL

Evolution and Disruption in Finance

I have written about profound changes in every aspect of our lives due to the emergence of exciting new technologies (See Revolution: The Impact of Technology December 2020). These changes are particularly visible in areas such as data, computing, communications, health care, retail, consumer electronics, and entertainment. While understandably not top of mind for most people, the world of finance is also evolving quickly as a result of significant enhancements in technology, as well as the continuation of longer-term shifts in the structure of the industry. In this paper, I briefly discuss a number of the powerful trends in financial services and divide them into two broad categories: evolutionary changes and disruptive innovation. As is the case with virtually all significant challenges to the status quo, these changes create both opportunities and risks.

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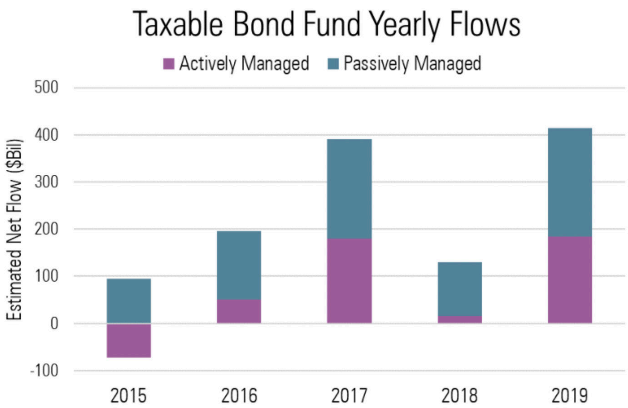
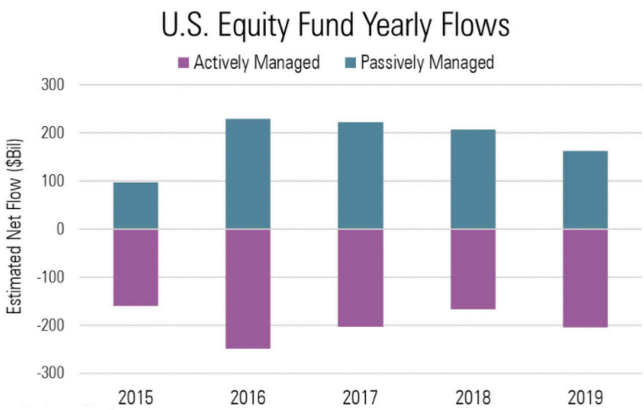
The Continuing Evolution of the Financial World

The first major trend impacting markets and the financial services business is the continuing shift toward **indexed or passive funds and ETFs.** As depicted below, investors have withdrawn significant dollars from actively-managed equity mutual funds in favor of indexed products. Flows into both active and passive bond funds are positive, but passive funds have recently garnered the larger share.



Source: Morningstar Direct



Source: Morningstar Direct

As of August 2019, assets in passive equity mutual funds and ETFs surpassed those in actively-managed funds for the first time, and while more recent data is not available, anecdotal evidence suggests this trend continues.

The shift to passive management has a number of implications for both the performance of markets and the structure of the financial services industry. Because market indices are capitalization-weighted, a significant share of every dollar flowing into an index fund is directed toward the largest stocks, which served to reinforce their strong outperformance over the past few years. While these large companies (Amazon, Apple, Facebook, Google, and Microsoft, etc.) are indeed wonderful businesses, there are legitimate concerns that their incredible performance is indicative of a bubble.

The dominance of passive investing has also led to major changes to Wall Street. According to Integrity Research, coverage of individual stocks by research analysts has declined at a 6% annual rate since 2014. Moreover, the total number of investment companies (mutual funds and ETFs) declined from 19,000 in 2000 to 16,600 in 2019, according to Statistica, despite the fact that assets under management roughly tripled. Index Fund management is a scale business given very low fees, as well as the cost of technology, which leads to dominance by a small number of firms. Vanguard alone has more than a 25% share of the mutual fund market, and the three largest firms, Vanguard, Blackrock, and State Street Global, manage a combined $16.7 trillion. As a point of reference, total financial assets held by

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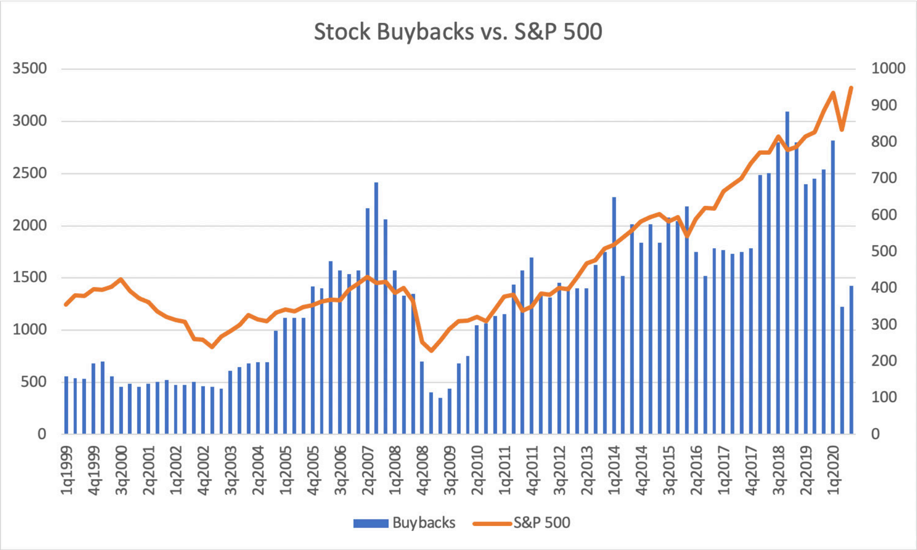
households in the U.S. is approximately $85 trillion. Vanguard's Total Stock Market Fund just crossed $1 trillion, making it the world's largest mutual fund. With intense competition from passive funds, the average expense ratio of actively-managed equity mutual funds has declined from 1.09% in 2002 to .74% in 2019, and the profitability of investment firms is under considerable pressure.

A second important change in the behavior of the equity markets is the steady growth in the importance of **stock buybacks**. As depicted in the following chart, buybacks increased from an annualized rate of about $100 billion in the early 2000s to a peak value of $885 billion in the latter part of 2018. Visually, it is obvious that there is a strong relationship between the level of buybacks and the S&P Index; and the actual correlation is about .8, which is quite high. Although buybacks declined precipitously during the early stages of the pandemic, they began to recover in the 3rd quarter of 2020 and it will be fascinating to track the trajectory moving forward. While there may be a *chicken and egg* issue, the chart also suggests that companies tend to buy high and reduce their purchases when prices are low (I think it is supposed to be the other way around!).



Another major trend in investing is the increased usage and wider availability of so-called **alternative assets**. According to the most recent NACUBO Endowment Survey, the average endowment now has 53% of its assets invested in categories other than global stocks and bonds. Similarly, an investment club for very high net worth individuals, called Tiger21, conducted a survey of its members and found an average allocation to alternatives of 57%, including 28% to real estate and 24% to private equity. Retail investors have limited exposure to non-traditional asset classes (less than 5%) through REITS, MLPS, and what are called "liquid alternative" mutual funds, but the SEC is considering regulatory changes that would allow much broader access, including the use of private equity and other less-liquid categories in 401K plans.

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The next important trend is the increasing provision by financial services firms of **solutions** as opposed to individual investment products. In order to make their overall fund less complex and more manageable, many institutions, such as pensions and insurance companies, are asking their investment managers to provide *one stop shopping,* including asset/liability management, asset allocation, and a single or small number of vehicles that contain a variety of asset classes. As just one example, I am familiar with a credit fund that contains actively-managed private and public debt of issuers throughout the world. In a single vehicle, it provides an easy complement to a core investment-grade portfolio.

The trend toward solutions is most pronounced in the retail space in the form of target date funds that contain a number of asset classes and an asset allocation that grows more conservative as the maturity date of the fund approaches. This allows an individual to select a fund that is specifically geared toward his or her retirement plans. Vanguard reports that more than 50% of all 401K investors have their entire balance invested in a target date fund and more than 75% of all investors have at least a portion of their total assets (including non-retirement assets) invested in one as well.

With advancements in computing and the development of the VisiCalc spreadsheet program in 1979, **technology** has played an ever-increasing role in investing. This topic merits a paper of its own, but I will limit the discussion here to a few of the larger applications. First, artificial intelligence and machine learning are increasingly being used in financial statement analysis and algorithmic trading. Indicative of the growing importance of computer-based high-speed trading, SIFMA (the securities industry trade association) reports that average daily share volume in the U.S increased from 8.8 billion in 2008 to slightly over 11 billion today. As a point of reference, daily NYSE volume was 15 million when I entered the business in 1975. Another interesting data point is that the average holding period for a stock is now five-and one-half months as compared to one year in 2000 and seven years in 1960. Second, the internet now provides a huge number of free or low-cost data sources and analytical tools for *do it yourself* investors. Finally, financial services companies are investing large sums to provide their clients with real- or near real-time analysis of and reporting on their portfolios. While I appreciate the convenience of this capability, I am concerned it spurs unnecessary activity, which is the long-term enemy of returns.

The final ongoing trend is the incorporation of **environment, social, and governance factors (ESG)** in investing and the broader corporate world. While socially responsible investing (SRI) has been around for a long time, it became better known in the 1970's and 1980's as some investors chose to divest of defense contractors and companies doing business in South Africa. But SRI funds were often focused on eliminating a small number of "sin stocks" and attracted relatively few dollars. The ESG movement is much broader, encompassing corporate governance, diversity of the workforce,

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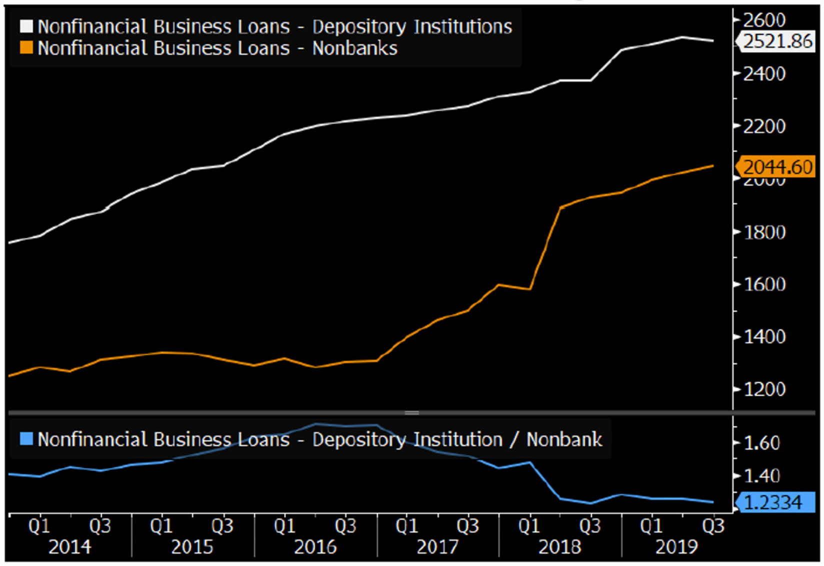
sustainability, the durability of supply chains, climate, treatment of all stakeholders, and many other issues. *Morningstar* reports that more than $1 trillion is now invested in ESG-oriented funds. More important, public companies are now being graded on their progress with respect to ESG issues, and most investment managers have or will shortly incorporate ESG into their investment selection criteria. There seems to be an emerging consensus that making progress on these issues is not only the right thing to do, but will result in better investment performance.

Disruption

The first disruptive trend is the **disintermediation of banks**. For the first three quarters of 2020, business loans from non-bank entities grew 5.4% as compared to 1.6% for banks. The following chart provides longer-term perspective, and you will note that non-bank lending, which is depicted in orange, is closing the gap rapidly and now represents about 45% of business loans.

Bank vs. Nonbank Business Lending ($ Billions)



Source: Bloomberg Intelligence

Similarly, banks' share of consumer loans fell from 45% in 2010 to 42% in 2018 and several market research firms forecast annual growth of 25-30% in peer-to-peer lending over the next five to seven years. This growth in non-bank lending has provided investors with interesting new asset classes with favorable yields and acceptable credit experience.

A second disruptive force is the increasing acceptance of **Bitcoin and other digital currencies**. The price of Bitcoin has increased four-and-one half fold in the past year, resulting in an aggregate market value of $597 billion. While initially viewed as a fringe investment, it is now found in the portfolios of a

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number of significant institutions, and there is growing infrastructure support, including custodians, Bitcoin enabled merchants, and so on. A major investment question is whether Bitcoin might replace gold as the non-correlated inflation hedge of choice for many investors.

Another topic that deserves an entire paper is the ever-increasing role of **private equity** in the capital markets. As of 2019, private equity firms had assets under management of $3.9 trillion, including cash and uncalled capital of $1.5 trillion. Given typical equity ratios of around 40%, this suggests that private equity firms have buying power of almost $4 trillion. As a point of reference, the market capitalization of the U.S. stock market is about $36 trillion. There is also a novel offshoot of private equity called Special Purpose Acquisition Companies that are publicly-traded entities formed to purchase or merge with an existing business. Also known as *blank check companies*, 219 successfully completed IPOs in 2020 raising $73 billion. In addition to the potential impact of PE buying power on stock prices, the growth in private equity influences capital markets in many other ways. Private equity firms provide for the ongoing capital needs of many companies, as well as an exit opportunity for investors in private companies without the burden of public ownership. Private companies can also be managed without the pressure of meeting quarterly earnings expectations, which arguably contribute to their long-term growth and profitability. Given the advantages of private ownership, the number of publicly-traded stocks has declined from approximately 8,000 in the mid-1990s to 6,000 today.

The final, and perhaps most interesting disruption, involves tectonic shifts in the landscape for **retail investors**. First, a number of brokers are offering zero commission trading to retail investors, as well as mutual funds with minimal, or in a few cases, negative expense ratios. Second, Schwab, Fidelity, Interactive Brokers, and others are offering *slices* in which an investor can purchase a fractional share of a stock with as little as a $5 investment and no commission charge. This innovation is designed to give even the smallest investor an efficient mechanism to own individual stocks. As mentioned above, SPACS also offer small investors the ability to invest in a form of private equity. Finally, Robinhood is an app that allows real-time trading on any device in stocks, options, fractional shares, and cryptocurrencies, all without commission. The company has more than 10 million users and is particularly popular among younger, digitally-savvy investors.

This *democratization* of investing has both pros and cons. On the plus side, it certainly is beneficial for the economy to encourage saving and investing, and the low cost and digital access provided by these firms should draw younger investors contributing to their future retirement security. The major concern is that these products and services may be encouraging speculation on the part of relatively uninformed investors. Here are a few interesting tidbits supporting that point of view. A number of retail brokerage firms enjoyed client growth of 200-600% in 2020 as compared to 2019; in total, more than 10 million new accounts were opened. Individual traders doubled their share of overall volume versus 2019. There were more than 480 IPOs in 2020 (including the 219 SPACS), which exceeds the

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total in the year prior to the collapse of the Tech Bubble in 2000. Retail purchases of call options (less than 10 contracts) increased eight-fold in 2020 as compared to 2019. And, the current darling of the stock market, Tesla, has a market capitalization of $790 billion, which is about 2 times that of GM, Ford, Toyota, and Honda combined.

We have been watching all of this with interest for some time, but in the past couple of weeks, this issue has erupted bringing with it a wide variety of consequences. There have been “rags to riches” stories, the failure of several hedge funds, the necessity for capital injections into brokerage firms, a flood of lawsuits, and calls for regulatory action and Congressional hearings. It has been labeled a speculative mania, a populist revolt against Wall Street elites, the result of tech savvy individuals stuck at home in a pandemic, and a textbook example of the impact of disruptive technology. Whatever it is, we are in uncharted and amazing territory!

Reddit, Robinhood, and GameStop

This situation is very much in flux, and a complete explanation would require a tome, so I will limit the discussion to a superficial description of what is occurring. Spurred on by a discussion website called Reddit, a large number of small retail investors purchased call options and shares of stock of a number of companies in which hedge funds had established short positions. As individual investors drove up the price of these stocks, the hedge funds were forced to cover their short positions resulting in significant losses for them and further accelerating what became meteoric price increases and incredible volatility. The best-known example is GameStop which is a small retailer of video games and consumer electronics that is highly unprofitable. From a price $43 on January 21st, its stock rose to $347 on the 27th only to fall to $193 the following day. It then rallied to $317 but has since declined to $88. Over the past ten days, its average trading volume has been 96.7 million shares as compared to outstanding shares of 69.7 million. In other words, the balance of outstanding shares has been turning over one-and-one half times per day. Simply incredible!! Another example is the troubled movie theater chain AMC that has seen its price rise from $4.96 on January 26th to $19.90 the following day before falling to $8.63 on the 28th, recovering to $14 on February 1st, and falling to $8 on the 2nd. The most recent

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target seems to be the precious metal silver whose price increased 17% on February 1st.

In the last couple of trading days, several brokerage platforms were forced to temporarily suspend trading in these stocks because of the enormous volume as well as a shortage of capital which has in turn led to lawsuits from traders who believe that the inability to trade has impacted their financial positions.

I can't begin to forecast where all of this is heading so I will simply pose several of the more prominent questions that are being discussed. Has the center of gravity shifted from Wall Street institutions to a "mob" of retail investors? Should we care if large hedge funds suffer serious losses? Should these trading platforms be more tightly regulated if not eliminated? Has fundamental analysis of company financials been discarded in favor of order driven momentum trading? Should investor "suitability" rules be tightened for these kinds of platforms. Will all of this somehow result in long term damage to the stability of, and confidence in, markets and financial institutions? Is all of this indicative of a larger bubble in financial assets? Will a large number of retail investors ultimately suffer grievous financial damage. We look forward to providing you with more information and commentary as this incredible situation unfolds.

Conclusion

My main conclusion is that each of us should take advantage of some of these exciting developments while remaining grounded in a sensible long-term investment strategy. As mentioned, there are several new asset classes that may be of interest, and intense competition is bringing down the cost of investing for all. Technology arms us with ever-more information and the ESG movement is providing a variety of new metrics on which to evaluate companies. And, an entire new class of investors is accessing the capital markets, which should benefit the economy and capital markets despite the current speculative mania. However, all of this does not in any way change the keys to developing a successful investment program that we have always espoused, including careful asset allocation, risk management, diversification, and an appropriate savings or spending rate.

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