Investing in Growth

—Innovation and the Case for Optimism

Aletheia Private Client Group's 2021/2022 Letter

It's easier for us to write these occasional notes with the goal of answering a few questions that interest us.

Here we go…

1. First the obvious: Given so much uncertainty on multiple fronts, what part(s) of the market appears most attractive for appreciation?
2. Our answer leads us to investing in innovation. Since innovation is "all the rage," is it being properly defined?
3. With definitions in hand, is there a Right Approach?

As we reflect on 2021, and look forward to 2022, we think ensuring our portfolios have the appropriate exposure to innovation is more essential now than ever. More importantly, we want to share with clients how we might improve our critical approach to how to invest in companies which best represent innovation-driven opportunities.

In 2021, the S&P 500 and NASDAQ rose up 28.7% and 27.5%, respectively. We have two big takeaways from another, ostensibly, awesome year in US stocks.

First, the "market" is not what it seems. The Russell 3000 Index measures the performance of the largest 3,000 US companies, representing approximately 97% of the investable US equity market. As of December 2021, the Russell 3000 is 3.4% off its 52-week highs, and 2,288 stocks, or 76% of the index, are **10% or more below their 52-week highs**. More surprising is that 559 stocks, nearly 20% of the Russell 3000 Index, **are 50% or more below their 52-week highs**. This doesn't feel like record levels for stocks.

Another shocker is how dispersion and concentration across the S&P 500 is now at all-time highs (see chart below) and hasn't been this extended since 1999. The best example of this is Apple. Apple is now worth ~$3 Trillion of market capitalization. At this level it is worth more than WalMart, Disney, Netflix, Nike, Exxon Mobile, Coca-Cola, McDonalds, AT&T, Goldman Sachs, Bank of America and IBM…..COMBINED!

The second takeaway is that the S&P 500 and NASDAQ indexes are hardly a comprehensive representation of the most innovative and fastest growing companies. While the indexes indeed include innovative companies, or companies engaged in transformational things, it is not the intentional representation of innovation we're seeking.

Conceptually, stock performance, strong growth and innovation should be linked but often are not. Some of the most innovative companies available to investors in the public markets are small capitalizations stocks (market capitalization of less than ~$2 billion). Over the past six months, the S&P SmallCap 600 Growth Index has underperformed the Large Cap S&P 500 index by 6%. However, during that time the S&P SmallCap 600 Growth Index earnings per share (EPS) grew 10%

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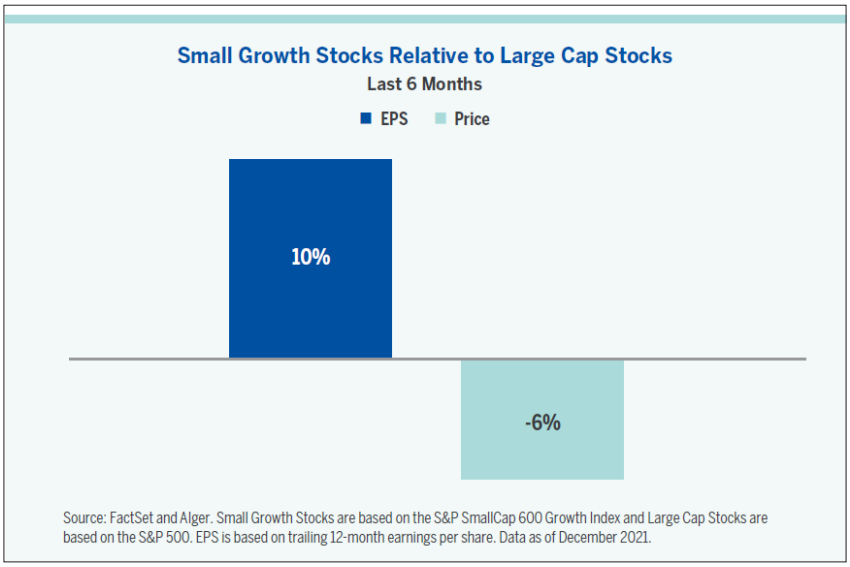
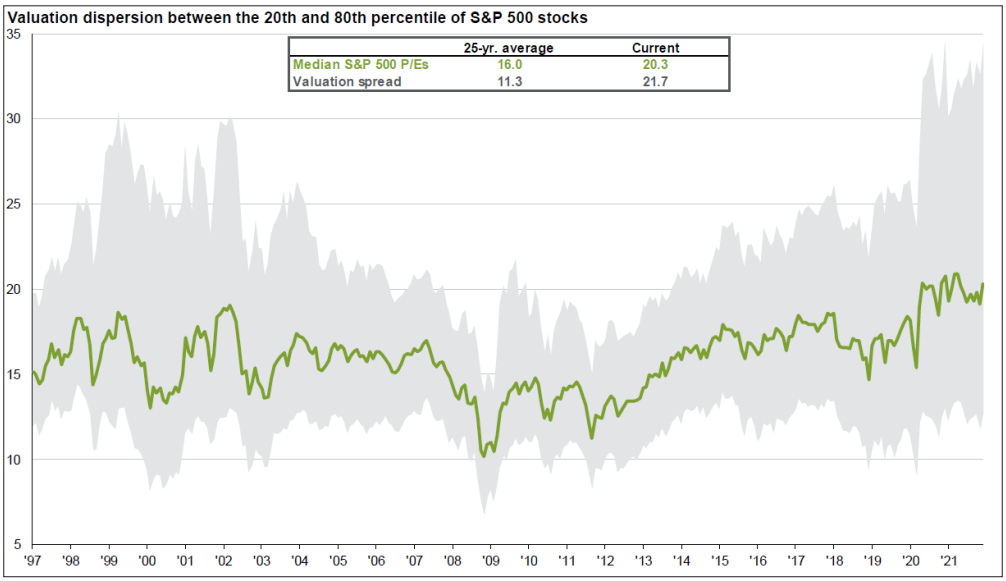
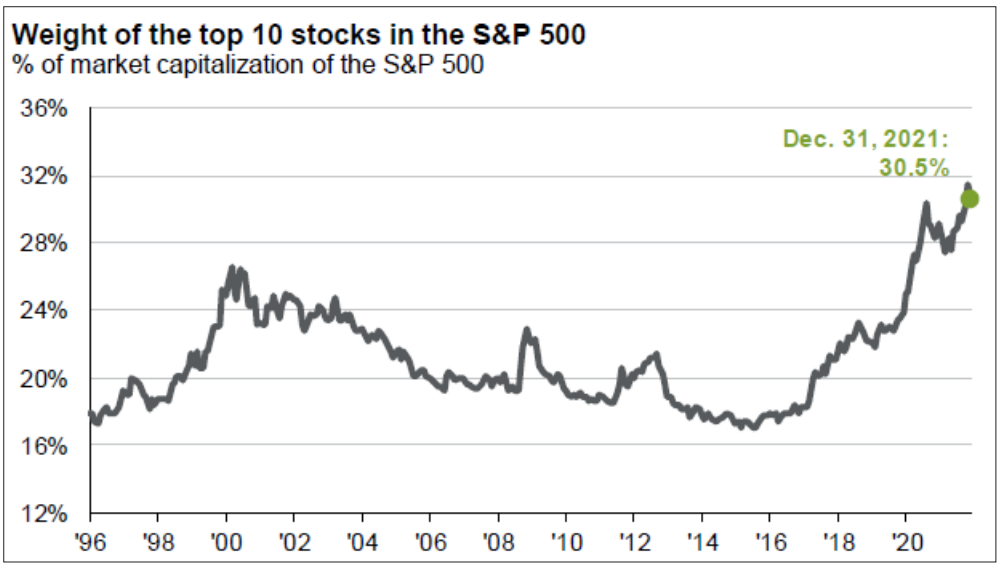
faster than S&P 500 EPS. The last time the valuation discount between small growth and large cap stocks was this large (in early 2001), the S&P SmallCap 600 Growth Index outperformed the S&P 500 by more than 50% during the subsequent five years (Source: Alger).



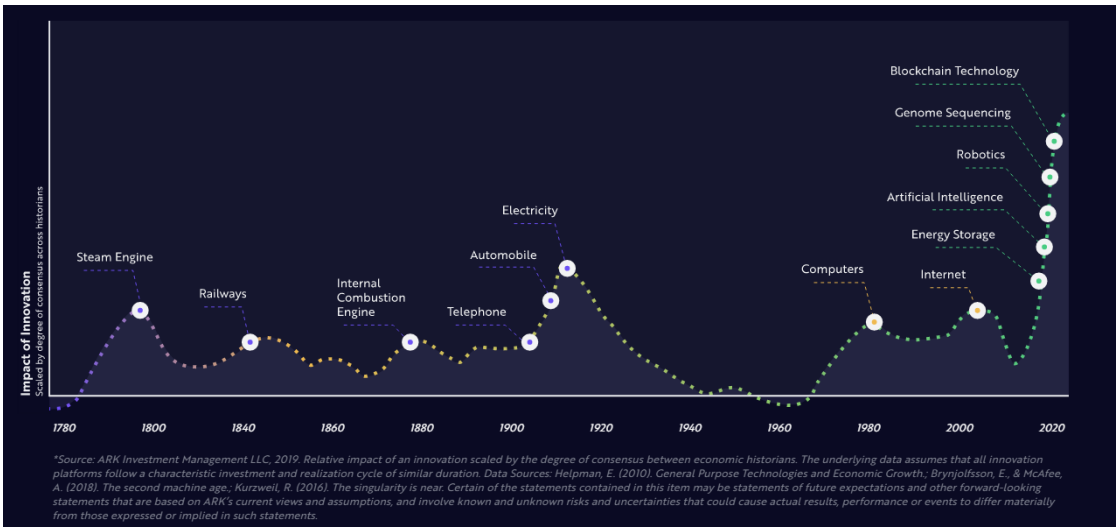




The bottom line of these few charts is that differences in growth and dispersion of returns often lead to confusing or contradictory results. In other words, the explanatory power of Index performance is weak. There is nothing wrong with broad market exposure, given the usefulness of cheap beta in our portfolios (see our prior commentaries). Nevertheless, to ensure we're getting the exposure to innovation, likely to be the greatest source of growth in the coming decades, we believe it's necessary to look beyond the primary indexes. Taken a step further, given that many of the most disruptive, innovative companies today remain private, looking beyond simply the publicly traded universe has also become increasingly valuable.

Below is our attempt to shed some light on our opening questions. As always, we love your questions and feedback.

In today's market environment, what parts of the market are most attractive for appreciation?



Source: ARK Funds

Out of necessity, current investment discussions with clients start by acknowledging what is seemingly obvious: Generally speaking, asset values are high, and very possibly absurdly so. There are many potential culprits for this. Back in the dot-com bubble excuses were made for no earnings and silly valuations because the internet and exponential website traffic created a so-called new paradigm. It turned out to be true…a decade later and with new companies that rose from the ashes. Perhaps today collective wisdom is allowing artificially low interest rates, ordinarily a sign of a bigger problem, to instead provide cover for a wishful-thinking approach to valuations. For better or worse, none of us will know the answer ahead of time.

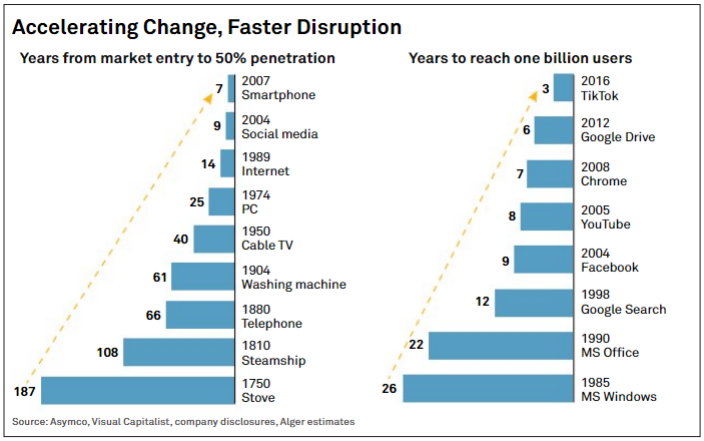
Meanwhile, in a world of deeply negative real interest rates, we must forge ahead allocating capital attempting to seek attractive risk-adjusted returns. While an entire letter could be devoted to the endlessly debated value vs. growth discussion, we are dogmatic about just a handful of things—chief among them, exceptional investors (stewards of capital) can indeed be identified and price matters. Client conversations typically start with these basic facts, but it's a quick pivot to the question of what investment opportunities excite us right now.

Well, what we really like is long-term, consistently compounding growth, and that leads to the current state of innovation. Explosive growth driven by innovation is certainly not new, but contrasted with the history of life-changing innovation, which often took longer than the average human lifespan, today it's happening exponentially. Clearly the last 25 years served to set the stage for profound changes in the coming decades in both the digital and physical world. Of course, driven by the tsunami of available capital looking for a home, the Wall Street hype-machine has firmly grabbed hold of "Innovation" as an investment theme. If innovation is one response to where investors should seek appreciation potential, then we should dissect it further.

What is Innovation?

For most of the last 60 years, we've seen persistent and frustratingly low productivity growth rates in the US and across the Western world. Economists struggle to explain it given all the obvious technological advancement. Notable is that for more than a generation meaningful scientific discoveries seem less fundamental to our understanding of the physical world than what we saw in earlier time periods. As a result, despite the tremendous growth of digital technologies leading to all manner of life-changing conveniences, the world around does not feel as though it has undergone profound change.

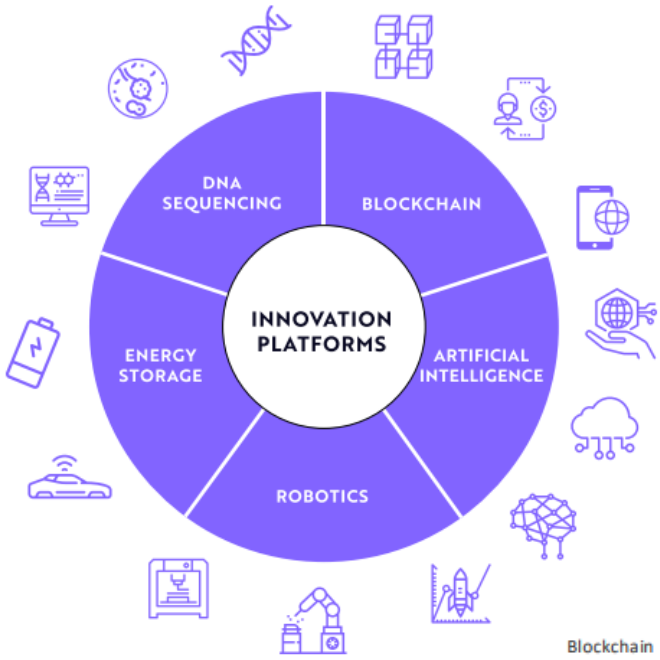
For many years, foundational technologies such as software and semiconductors have played an increasingly important role in every aspect of our day-to-day lives. Today, however, the convergence of new capabilities has the potential to change the world in tremendously exciting ways, perhaps exceeding the impact of online connectivity and wireless mobility, which we now take for granted.



Disruptive Innovations	Innovations Mischaracterized as Disruptive	Potential Disruption
Mini-steel mills	Ride sharing (Uber)	3D Printing
Video streaming	Electric Vehicles (Tesla)	Online Education
Radios	Digital cameras/portable navigation/voice recorder, etc.	Artificial Intelligence
Online Encyclopedia / Reference	Corporate mainframes	
Smartphones	Hospitals	
Personal computers	Lightbulbs	
Retail medical clinics		
Photography		
Lightbulbs		
P2P Accommodation		
Personal Copiers		

We think this conversation is more nuanced that simply using innovation as a code word for technology. In what seems like a frenzied environment of tech mega-giants and venture capital unicorns, the term “disruptive innovation” gets tossed around too loosely. In fact, with breathless excitement about the future, breakthrough innovation and disruptive innovation are typically used interchangeably, even though they’re really not the same thing. The academic world has pretty clearly defined disruptive innovation and it’s probably not what you might think. The Harvard professor Clayton Christensen coined the term in the mid-90’s and explained it as a phenomenon by which an innovation transforms an existing market or sector by introducing simplicity, convenience, accessibility, and affordability where complication and high cost are the status quo. It may be not be obvious or consequential to the industry incumbents, but eventually the new product or idea completely redefines the industry. He describes it as a positive force. The distinction is clear: “Disruptive innovations are not breakthrough technologies that make good products better; rather they are innovations that make products and services more accessible and affordable, thereby making them available to a much larger population.” (Source: https://hbr.org/2015/12/what-is-disruptive-innovation).

As these examples highlight, disruptive innovation produces a powerful impact, but how it relates to breakthrough innovation (close cousins, indeed!) is important because we’re on the hunt for exponential growth, which disruptive innovation might not produce. Collectively we’re pretty good at recognizing near term growth prospects, yet surprisingly average at grasping the magnitude of long-term growth potential, with exponential growth trickier still. Grasping where and how breakthrough innovation originates is one key to identifying the where and how to seek out new investment opportunities. The ARK funds created the now widely-recognized schematic shown below to illustrate their view of the world. The expectation is these platforms will give life to a degree of progress we might not even currently comprehend. Therefore, as we look into the future, it is fair to ask if the biggest risk from an investment perspective is a failure of imagination.



Source: ARK Funds

Blockchain
Frictionless Value Transfer
Mobile Connected Devices
Internet of Things
Cloud Computing
Neural Networks
Reusable Rockets
Adaptive Robotics
3D Printing
Autonomous Mobility
Battery Systems
Gene Editing
Immunotherapy
Sequencing Technology

Below is blurb on a few of the most exciting of the popular innovation themes. We chose these four for a reason. Fascinating is how seemingly distinct areas of technology and science—AI, biology, cheap and clean energy, and a revolutionized communications system—may instead be symbiotic. For example, the convergence of AI with biological life powered cheaply by the one thing we can't live without, energy, reminds us again that imagination is key.

Big Data and Artificial Intelligence: AI and machine learning steal the most attention and will clearly be a source of both disruption and breakthrough. Until recently, AI was not broadly accessible because the cost of predictions and the people needed to build models are very expensive. We're now rapidly reaching an inflection point, where AI is going from scarce and costly to cheap and abundant; as this occurs its use across many business fields just explodes.

Just one very impressive example of AI creating a platform for breakthrough advancement is for language models, or natural language processing. Initially, AI models consisted of simple objects using computer vision, such as animals, objects and scenes. The real test for artificial intelligence, however, is its ability to understand language—what people say, what the words mean, and the ability to reply humanly with insight.

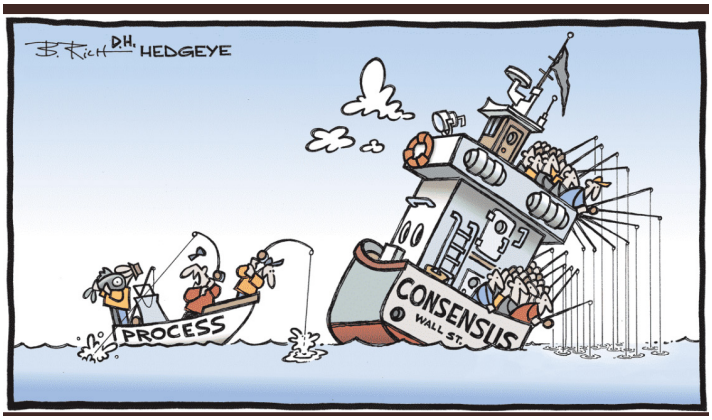
To get a glimpse of where we're headed, today's models, like Open AI's GPT-3 with up to 175 billion connections, have dwarfed early models. That many connections may sound like a lot but compared to the human brain with 150 trillion connections, it is relatively small. Even so, today's networks can do many valuable things, such as interacting with our cell phones using Siri, acting as intelligent chatbots, performing document analysis, and other tasks simulating human interaction. At the current stage of advancement, however, there is really no limit to the size of the neural networks that can be used to build language models unleashing enormous advancement. Semiconductor giant NVIDIA believes that within 2 years models will have 100 trillion or more connections. Models of that size will exceed the technical capabilities of existing platforms, which NVIDIA and others are working feverishly to resolve.

Renewable energy: Solutions for climate change are clearly a priority. However, the inevitable process of electrifying everything will also provide countless opportunities as we redesign our transportation systems and infrastructure of all kinds. Solar and wind are critical to this vision, but different energy sources, such as small modular nuclear reactors or deep geothermal, could provide abundant and incredibly cheap, zero-carbon baseload energy. The combination of breakthrough innovation in energy production and energy storage (batteries) could be the ticket to true sustainability, and with it an order of magnitude in the potential to change the world.

5G: Potential exists to not only increase speed but vastly expand the entire network capacity contemplating a wide range of new use cases: ultra-reliable, low-latency communication, which increase the speed and quality of service in critical functions, such as the control of robots and drones; widespread practice of medicine through telehealth; assisted and autonomous driving; scale the internet of things (IoT), enabling devices and advanced electronics to communicate with one another and produce analyzable data like never before.

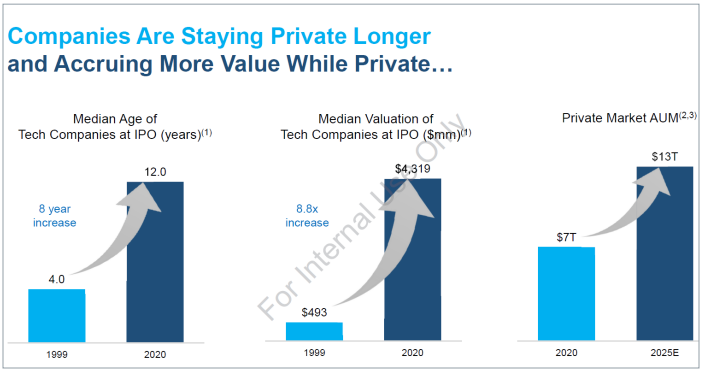
DNA Sequencing/Gene Editing/Epigenetics: Of anything discussed here, perhaps the greatest potential impact on humanity is the evolution in our understanding of DNA and proteins leading to all kinds of advancement, including drug discovery and development; specifically, biology becomes programmable to target specific diseases using precision genetic engineering. Additionally, we're just scratching the surface of how the new tools of synthetic biology can be applied to elements on the periodic table. A large percentage of the global economy's physical or material inputs could be manufactured in different ways.

Is Innovation investing unique or require a different approach?



Ideally, we should be agnostic on where a business resides—as a public or private security—and focus instead on the characteristics of the investment opportunity. Up to this point, we held off discussing how venture capital figures into the narrative. The modern venture capital (VC) industry is clearly responsible for leading early-stage, private investments in some of the most innovative ideas of the last 50+ years. However, the image of two founders in a garage is now outdated. Instead, the private markets today are a massively capitalized and evolved ecosystem with VC firms funding angel and seed-investments, growth and late-stage capital and, increasingly, continuing to own businesses once public. Removed from the rush to raise capital through an IPO many of the fastest growing companies in the world mature for much longer while still private. Since we principally avoid investing in start-ups with no revenues, the decision to invest private markets has shifted somewhat from a perception of risk to the tolerance for illiquidity.

The other advantage of staying private is permission for management and investor capital to play the long game, which can alter the rules of the game for the better. Short-term pressures often prevent investments in innovations that have a longer payoff, particularly given the behavioral bias mentioned earlier, where we are wired to discount outcomes hyperbolically; i.e., incorrectly discounting a short-term trade-off vs. a sizeable outcome in the long-term.



Innovation as an investment style

Wonky analysis of investment styles might seem too much in the weeds for non-professional investors, but it does reveal a lot about our investment choices and potential outcomes. For example, value investors look at a variety of metrics or factors such as absolute cheapness; "cash cow" businesses trading at a discount; a margin-of-safety principle; or, earnings yield relative to the market. Many terrific managers utilize this approach to uncover attractive opportunities, yet this isn't the likely place to find breakthrough innovation and hyper-growth.

Traditional growth investors, in contrast, believe superior returns are available by identifying companies capable of producing some combination of above average revenue growth and superior profitability, often deserving of a premium valuation. Critical metrics may include low debt, asset-light business models, higher margins and strong free cash flow generation. While these factors can also successfully identify a wide variety of terrific businesses it still might not capture leading edge innovation.

We refer to the financial characteristics of these two recognizable styles of investing because to invest in pursuit of the type of innovation described in the prior section probably requires a modified approach. Naturally this statement might set off an alarm that we're about to justify an exuberant market or provide cover for managers in our portfolios who might cleverly argue "price doesn't matter." Emphatically, price does matter, and we constantly want to test the thesis for a different approach against the argument that cheap capital and excessive bullishness have simply created an excuse for a lack of profits and crazy valuations in pursuit of growth in the very distant future.

Alkeon Capital articulates it best as to why there probably needs to be room for expanding beyond stylistically pure growth or value: We're moving from a world in which large-scale production and distribution have been the driving forces globally to a world where mass computation/ algorithms/code combined with connectivity are the driving forces. The collision of innovation and venture capital ecosystem now allows startups to scale at an astonishing pace. As a result, it's becoming clear that scalable startups are obviously the foundation of the most meaningful companies of tomorrow. In turn, a feedback loop is emerging where the amount of money going into the private market tech and venture ecosystem, from startups to late-stage growth equity, only accelerates. Our confidence level is high that this will be the source of much of the future market capitalization.

Finally, this begs the question of whether a new analytical style or framework has emerged for investors focused exclusively on transformative or disruptive change. Clearly, at the company level, hyper revenue growth is the gold standard, but monetizing innovation is still hard. Factors such as R&D spending, the number of data scientists employed, commercialization capabilities, and an effective M&A strategy are just a few of the key metrics; and, at the portfolio level, asset managers with deep relationships with subject matter experts, venture capital firms, and chief technology officers, can better demonstrate their philosophy and process for investing in innovation. All of the above are examples of how a specific diligence effort helps determine the best way to effectively take on exposure to innovation.

Conclusion

Accurate short-term projections of GDP growth, interest rates or inflation are not required to deliver strong, long-term investment returns. Much more critical is identifying the powerful, durable secular growth trends that will drive economic growth and the underlying companies and industries that can capitalize on it.

Due to behavioral forces, humans are far better at assessing what can go wrong than can go right and routinely miss enormousness of potential (again, a failure of imagination!). Opportunity cost is critical. The vast majority of investment regrets are usually things that you didn't do—hold onto or buy enough of a great company—rather than anything you've done. In other words, from a long-term perspective, it's much worse to occasionally miss the 5-10x opportunity than it is to occasionally be wrong and lose 30-40%. If investing is how you got rich, it's almost always the few best decisions, not the "market," that got you there.

The internet era is best characterized by the birth phrase total addressable market or TAM (revenue available to a product or service). It's easy to understand why as we witnessed billions of people connect online in the span of 10+ years. The concept of TAM takes on new meaning when we create things touching the physical world. Referring again to the promise of synthetic biology, one of the last major advancements in material science occurred more than a century ago with the invention of plastic as a by-product of oil. A reordering of the economy on this scale can produce massive new TAMs from scratch.

We're clearly hoping to witness largescale changes with exciting results; more impactful, however, is the prospect for innovation to genuinely change our lives for the better. The most dominant global industries—energy, transportation, healthcare and education—comprise by far the largest portions of global GDP and touch nearly every human being, independent of geography or socioeconomic status. Transformational change will be greatly welcomed.

Respectfully yours,

The Aletheia Private Client Group

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