Transparency

A Catalyst for Innovation and Positive Change

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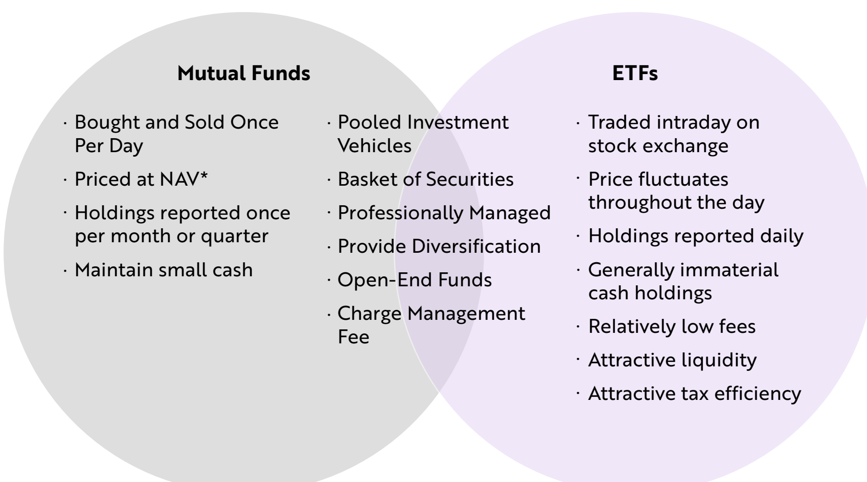
Introduction

Core to ARK's investment process, transparency is a catalyst for innovation and positive change. We founded ARK for two reasons—to focus exclusively on disruptive innovation and to add new dimensions to research—both of which demand transparency. Fully transparent active equity exchange-traded funds (ETFs), the most transparent among investment vehicles, give our investors the opportunity to monitor and analyze the implementation of our investment strategy. Our open research ecosystem includes thought leaders with wide-ranging backgrounds, which not only enhances our discussions and debates but also battle tests our assumptions about the innovation that we believe will transform every sector and industry around the world during the next five to ten years. Importantly, this ecosystem serves not only investors but also society at large, encouraging positive change.

Transparent Investment Vehicles

Initially, ARK Invest centered its business on a suite of actively managed transparent equity ETFs focused solely on disruptive innovation. As outlined in an upcoming blog, Overlooked Benefit of ETFs: Liquidity, ETFs are pooled investment vehicles that trade throughout the day on stock exchanges. They offer several benefits relative to mutual funds and other "wrappers", among them low fees, superior liquidity, increased tax efficiency and, of course, transparency.[1]



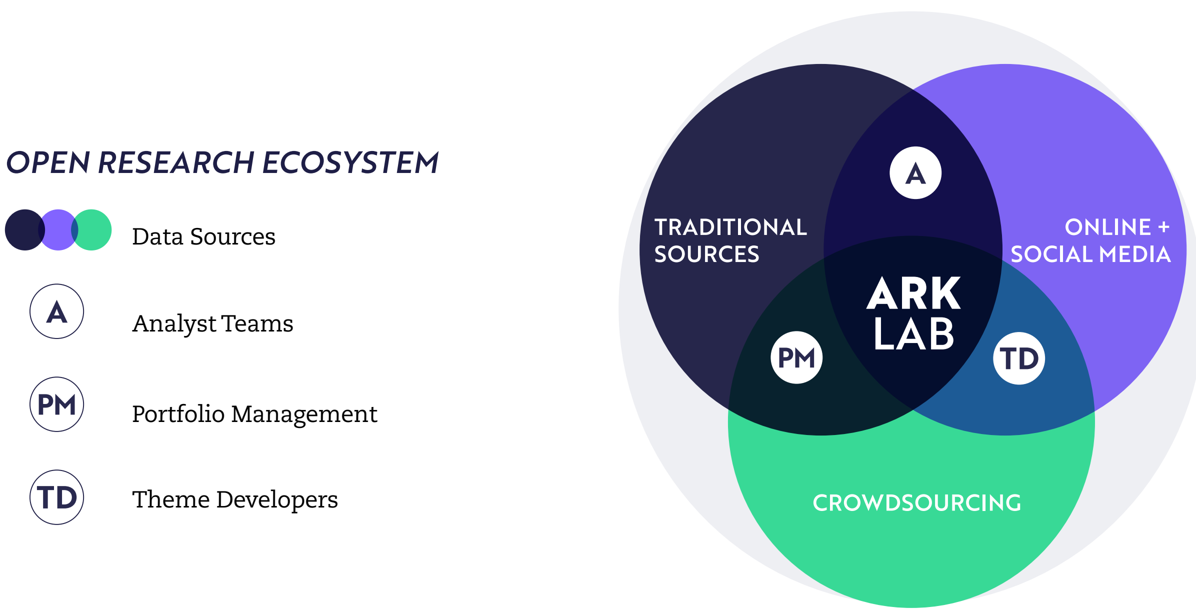
1 *A mutual fund manager must often sell fund securities to honor redemptions, potentially triggering capital gains which then trickle down to the fund's investors. There are however certain traditional mutual funds managed to be tax efficient. In general, ETFs can be tax efficient. ETFs are subject to capital gains tax and taxation of dividend income. However, ETFs are structured in such a manner that taxes are generally minimized for the holder of the ETF. An ETF manager accommodates investment inflows and outflows by creating or redeeming "creation units," which are baskets of assets. As a result, the investor usually is not exposed to capital gains on any individual security in the underlying portfolio. However, capital gains tax may be incurred by the investor after the ETF is sold. Information on the types of fees, charges and expenses of mutual funds and ETFs can be found in the prospectus. For mutual funds, transaction fees may include sales loads, charges or redemption fees that are paid directly by investors. ETF transactions generally include brokerage commission just like a stock trade which are paid directly by investors. Brokerage commissions will reduce returns. The expense ratio represents the operating costs of a fund divided by the average dollar value under management as of the fund's fiscal year end and includes the management fee. Other aspects of these operating costs can include custodial services, recordkeeping, legal expenses, acquired fund fees and expenses (if the fund invests in other funds), accounting and auditing fees, or a marketing fee (called a 12b-1 fee). These expenses are taken out of the fund itself and therefore lower the return to the investors.*

**NAV: Net Asset Value is calculated as total value of assets minus liabilities. Represented as a per share/unit price for MFs.*

ETF sponsors disclose their portfolio holdings and weights daily. In contrast, traditional asset managers like long-only or hedge funds report quarterly, typically six weeks after the end of a quarter, by which time portfolios may have changed considerably. With longer lockup periods and infrequent liquidity events resulting in stale valuations, venture capital and other private equity managers are even less transparent. Thanks to the radical transparency of active ETFs, investors and other followers can monitor and analyze portfolio construction and management decisions which, at ARK, we appreciate. In fact, we take transparency one step further, posting not only our holdings but also our trades each day.

Open Research Ecosystem

ARK Invest leverages an avant-garde, open research ecosystem, as illustrated below, that aligns with the transparency of our active ETFs. In our view, disruptive innovation requires an open-source research ecosystem to facilitate a deep understanding of the convergences between and among the five major innovation platforms evolving today: DNA sequencing, robotics, energy storage, artificial intelligence, and blockchain technology. In a few years, the notion that a single institution can house all the research and insights necessary to invest in leading edge technologies probably will seem provincial. ARK's open research ecosystem combines top-down and bottom-up research to identify disruptive innovations early, allowing for an organized exchange of insights among portfolio managers, our director of research, analysts, and—importantly—external thought leaders. With this ecosystem, we seek to exploit the market inefficiencies associated with the research and investment silos that have evolved in the traditional asset management industry during the last 75 years.



Transparency Transforms Industries by Creating Launching Pads for Innovation

Although one of the first investment managers to focus exclusively on disruptive innovation with an open research ecosystem, ARK Invest is not the first company to benefit from radical transparency. In fact, transparency has transformed several industries meaningfully over time, with the most transparent companies often the leaders and prime beneficiaries. The internet evolved on open-source technologies and protocols that became launching pads for innovation, so much so that Apple Inc., Amazon, Facebook, and Google, now Alphabet Inc. all scaled to market capitalizations in the range of $920 billion to $2.9 trillion.[2] Today, Alphabet's TensorFlow, a software library for machine learning and artificial inteligence (AI) that is training many AI models, is free and open-source.[3] Likewise, PyTorch is an open-source machine learning library used for computer vision and natural language processing.[4] Accelerating its adoption, open-source software is the key reason that ARK has modeled AI, excluding self-driving vehicles, as an $80 trillion investment opportunity in the public equity markets during the next decade.[5]

Enabled by the internet, Blockchain Technology is another transparent innovation platform. Public blockchains like Bitcoin and Ethereum are decentralized transparent networks that are empowering digital-native economies like cryptocurrencies and shifting power from centralized entities like banks to networks of participants via consensus mechanisms such as proof-of-work and proof-of-stake. Most public blockchains, whose functioning is governed by open-source code rather than the policies of a central intermediary, allow participants to access the complete history of transactions on the network, one of the reasons Bitcoin has evolved as the first private rules-based monetary system that any global citizen can access with an internet connection. According to ARK's research, thanks to the proliferation of blockchain technologies, use-cases today range from frictionless money transfers to non-fungible tokens for in-game purchases and interoparable ecosystems in the "metaverse."

History also teaches that a lack of transparency can slow the pace of innovation, with potentially disastrous consequences for economies, companies, and individuals. Leveraged and opaque financial instruments like complex derivatives and non-transparent leveraged loan funds contributed to the 2008-09 global financial crisis that pushed U.S. gross domestic product (GDP) down by 4.3% from peak to trough.[6] Accounting fraud pushed Enron[7] and WorldCom[8]

2 *Data sourced from a third party (Bloomberg as of December 9, 2021)*
3 *Source: TensorFlow: A System for Large-Scale Machine Learning - Usenix. https://www.usenix.org/system/files/conference/osdi16/osdi16-abadi.pdf.*
4 *Source: "Pytorch." PyTorch, https://pytorch.org/.*
5 *Source: ARK Investment Management LLC, 2021*
6 *Source: Rich, Robert. "The Great Recession." Federal Reserve History, https://www.federalreservehistory.org/essays/great-recession-of-200709. Period represents peak in fourth quarter 2007 to its trough in second quarter 2009.*
7 *Source: Constable, Simon. "How the Enron Scandal Changed American Business Forever." Time, Time, 2 Dec. 2021, https://time.com/6125253/enron-scandal-changed-american-business-forever/.*
8 *Source: Romero, Simon, and Riva. "WorldCom Files for Bankruptcy; Largest U.S. Case." The New York Times, The New York Times, 22 July 2002, https://www.nytimes.com/2002/07/22/us/worldcom-s-collapse-the-overview-worldcom-files-for-bankruptcy-largest-us-case.html.*

into bankruptcies. In both cases, increased transparency would have exposed, if not prevented, criminal activity and negligent behavior, saving innocent investors and employees from the fallout.

Analyzing and Quantifying Company Transparency

The development of standards for analyzing and quantifying transparency could lead to their adoption. Transparency Invest, ARK's partner on a specific transparency-driven investment strategy, has developed a thought-provoking methodology that analyzes the transparency of global public companies and ranks them. Its investment thesis is that transparent companies have superior corporate cultures that incentivize innovation to solve problems, delight customers, and maintain or accelerate growth rates. Transparency Invest estimates that nontransparent companies are responsible for roughly $2.4 trillion[9] per year in corruption around the world.

The Transparency Index™ is a thematic impact index designed to track the stock price movements of the 100 most transparent companies in the world. An initial screen removes "non-transparent industries, including Global Industry Classification Standard (GICS) industries falling under metals & mining, fossil fuel transporation, oil & natural gas, banking, and other industries". The methodology then applies a proprietary scoring algorithm incorporating key performance indicators (KPIs) to gauge the level of transparency in six areas, as shown below:

1. **Transparency Standards**—Easy to understand standards leading to high levels of accountability.
2. **Terms**—Simple customer contract.
3. **Total Accountability**—High quality governance and definable consequences that lead to adherence of standards and terms.
4. **Transparent Cost**—Complete and total cost, no hidden fees and simple to understand.
5. **Truth**—Open, accurate, data based communication and facts.
6. **Trust**—Complete consumer loyalty.

According to an article in the Journal of Human Relations in 2020, organizational transparency can be measured by the timely disclosure, clarity, and accuracy of information. Other research has shown that a "measure of transparency with these three dimensions can explain variations in outcomes."[10] The benefits of organizational transparency include: employee satisfaction, brand loyalty, client retention, and increased revenue growth.

9 Source: Transparency, LLC, 2021
10 2020. The dimensional structure of transparency: A construct validation of transparency as disclosure, clarity, and accuracy in organizations. Human Relations, 1-33. Schnackenberg, Tomlinson, & Coen.

To earn a positon in The Transparency Index, a company must achieve a relatively high score based on these six KPIs. Each KPI is scored 1 to 5, from low to high, with the total score across all six KPIs of 30 points. Business to consumer companies must score greater than 60% (>18 of 30) to be considered for selection in the index. Business to business companies must have more than 4 of the 6 KPIs and a total KPI score greater than 67% (>20 of 30) to be considered for selection in the index. The 100 most transparent stocks based on this KPI-ranking methodology will be included in the index as constituents.

Based on a back-testing of this methodology, the impact of transparency on corporate behavior and portfolio performance could be material. What if relative to the S&P 500 Index, the Transparency Index identified companies that committed less financial crimes and violated fewer environmental regulations?[11] According to Transparency Invest, this could have an important impact on a company's performance as well as on the markets themselves. We would encourage our readers to explore the index section of Transparency Invest's website.

Catalyst for Positive Change

While its impact can be measured quantitatively, transparency also can serve as a catalyst for positive change in ways not as easily quantifiable. Innovation, for example, solves problems with better, faster, cheaper, and more effective solutions.[12] In 2003, for example, the first whole human genome was sequenced after thirteen years of dedicated work and computing power at a cost of $2.7 billion dollars.[13] Based on a steep learning curve during the past 18 years, clinicians now can sequence a whole human genome in a few hours for roughly $500 dollars.[14] Surfacing mutations, the earliest manifestation of disease, DNA sequencing has become a launching pad for more innovation, including gene editing, immunotherapies, and vaccine breakthroughs.

DNA sequencing was critical to the global fight against COVID-19. Researchers sequenced the virus in days, and then developed and rolled out vaccines globally in a matter of months. In contrast, they needed multiple months to sequence the SARS virus in 2003.[15]

11 *Source: Transparency, LLC, 2021 | Compared to companies in The S&P 500® Index.*
12 *To learn more about the innovation that inspires positive change, please read ARK's research white paper, "Impact Investing: Is Innovation the Key to Accelerating Progress Toward the United Nations' Sustainable Development Goals?". Another important example is the adoption of autonomous vehicles that is likely to save 35,000-40,000 in the US and 1.25 million lives around the world.*
13 *Source: "The Cost of Sequencing a Human Genome." Genome.gov, https://www.genome.gov/about-genomics/fact-sheets/Sequencing-Human-Genome-cost.*
14 *Source: "Big Ideas 2021: Innovation Research by ARK Invest." ARK Invest, 22 Feb. 2021, https://ark-invest.com/big-ideas-2021/. "Product Comparison." Oxford Nanopore Technologies, 17 Dec. 2021, https://nanoporetech.com/products/comparison.*
15 *Source: Guillou, Ian Le, et al. "Covid-19: How Unprecedented Data Sharing Has Led to Faster-than-Ever Outbreak Research." Horizon Magazine, 23 Mar. 2020, https://ec.europa.eu/research-and-innovation/en/horizon-magazine/covid-19-how-unprecedented-data-sharing-has-led-faster-ever-outbreak-research.*

Conclusion

Disruptive innovation is likely to increase the need for transparency over time, particularly to protect investors and support growth as companies and individuals embrace blockchain technologies. Focused on delivering superior investment returns, ARK Invest continues to evolve a transparency-enabled ecosystem. In August, 2021, we rolled out our ARK Transparency Standards, seeking to insure not only the highest transparency standards but also the best client experiences.

We encourage other asset managers to adopt Transparency Standards as we all attempt to gain and maintain the trust of our clients and potential clients. Let’s compare notes!

Disclosures

Important Information

Disruptive Innovation Risk - Companies that (and ones that ARK Advisers believes) are capitalizing on disruptive innovation and developing technologies to displace older technologies or create new markets may not in fact do so. Companies that initially develop a novel technology may not be able to capitalize on the technology or incur large losses in the hopes of capturing market share and generating future revenues. Companies that develop disruptive technologies may face political or legal attacks from competitors, industry groups or local and national governments.

Companies that are developing technologies that seek to disrupt or displace established institutions generally face intense competition. Additionally, innovation companies may be adversely impacted by cybersecurity attacks, increased regulatory oversight and disruptions in the technology they depend on.

The products of information technology companies may face rapid product obsolescence due to technological developments and frequent new product introduction, unpredictable changes in growth rates and competition for the services of qualified personnel. Failure to introduce new products, develop and maintain a loyal customer base, or achieve general market acceptance for their products could have a material adverse effect on a company's business. The markets in which many of these companies compete face rapidly evolving industry standards, frequent new service and product announcements, enhancements and changing customer demands. This may result in significant costs to a company to adapt to such changes and its infrastructure.

Fund Risks

The ARK ETF Fund is classified as a "non-diversified" investment company. Therefore, the Fund may invest a relatively higher percentage of its assets in a relatively smaller number of issuers or may invest a larger proportion of its assets in a single issuer. As a result, the gains and losses on a single investment may have a greater impact on the Fund's NAV and may make the Fund more volatile than more diversified funds. The Fund will be subject to the risk that economic, political, or other conditions that have a negative effect on such industry, and likely will negatively impact the Fund.

As an actively-managed ETF, it is subject to management risk. The ability of the Adviser to successfully implement the Fund's investment strategies will significantly influence the Fund's performance. The success of the Fund will depend in part upon the skill and expertise of certain key personnel of the Adviser to select securities in a fund's portfolio. This is as opposed to a passively-managed fund that aims to track an index and attempts to mirror its performance.

In general, ETFs can be tax efficient. ETFs are subject to capital gains tax and taxation of dividend income. However, ETFs are structured in such a manner that taxes are generally minimized for the holder of the ETF. An ETF manager accommodates investment inflows and outflows by creating or redeeming "creation units," which are baskets of assets. As a result, the investor usually is not exposed to capital gains on any individual security in the underlying portfolio. However, capital gains tax may be incurred by the investor after the ETF is sold.

Shares of ETFs (including ARK ETFs) may be bought or sold throughout the day at their market price on the exchange on which they are listed. The market price of an ETF's shares may be at, above or below the ETF's net asset value («NAV») and will fluctuate with changes in the NAV as well as supply and demand in the market for the shares. The market price of ETF shares may differ significantly from their NAV during periods of market volatility. If a shareholder purchases Shares at a time when the market price is at a premium to the NAV or sells Shares at a time when the market price is at a discount to the NAV, the shareholder may sustain losses.

Before investing you should carefully consider the Fund's investment objectives, risks, charges and expenses. This and other information is in the prospectus, a copy of which may be obtained by visiting www.ark-funds.com. Please read the prospectus carefully before you invest.

Foreside Fund Services LLC, distributor

About ARK

Headquartered in St. Petersburg, ARK Investment Management LLC is a registered investment adviser and privately held investment firm. Specializing in thematic investing in disruptive innovation, the firm is rooted in over 40 years of experience in identifying and investing in innovations that should change the way the world works. Through its open research process, ARK identifies companies that it believes are leading and benefiting from cross-sector innovations such as robotics, energy storage, DNA sequencing, artificial intelligence, and blockchain technology.

ARK's investment strategies include: Autonomous Technology and Robotics, Next Generation Internet, Genomic Revolution, Fintech Innovation, 3D Printing, Israel Innovative Technology, and the overall ARK Disruptive Innovation Strategy.

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