

# Why Invest in Next Generation Internet?

As of June 30, 2024

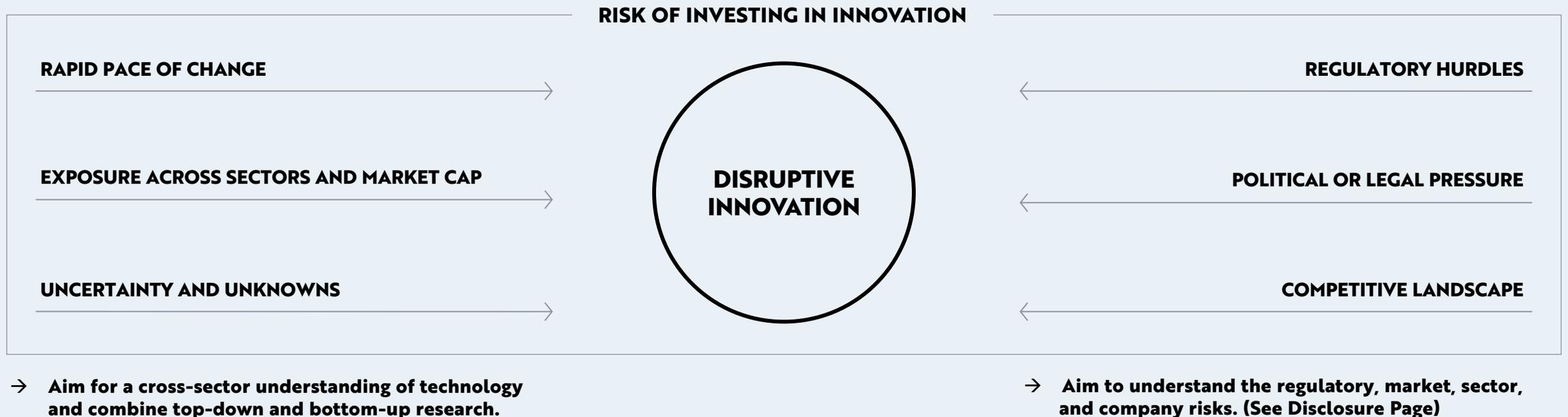




# Risks of Investing in Innovation

Please note: Companies that ARK believes are capitalizing on disruptive innovation and developing technologies to displace older technologies or create new markets may not in fact do so. ARK aims to educate investors and seeks to size the potential investment opportunity, noting that risks and uncertainties may impact our projections and research models. Investors should use the content presented for informational purposes only, and be aware of market risk, disruptive innovation risk, regulatory risk, and risks related to certain innovation areas.

Please read risk disclosure carefully.





# Definitions, Risk and Disclosure Associated with Internet Innovation

## Definitions:

**Blockchain:** A system in which a record of transactions, especially those made in a cryptocurrency, is maintained across computers that are linked in a peer-to-peer network. The goal of blockchain is to allow digital information to be recorded and distributed, but not edited. In this way, a blockchain is the foundation for immutable ledgers, or records of transactions that cannot be altered, deleted, or destroyed.

**Cryptocurrency (Crypto):** A digital currency designed to work as a medium of exchange through a computer network that is not reliant on any central authority, such as a government or bank, to uphold or maintain it.

**Smart Contract:** A computer program or a transaction protocol that is intended to automatically execute, control or document events and actions according to the terms of a contract or an agreement.

**Proof-of-Stake:** A cryptocurrency consensus mechanism for processing transactions and creating new blocks in a blockchain. A consensus mechanism is a method for validating entries into a distributed database and keeping the database secure. Proof of stake achieves consensus by requiring participants to stake crypto behind the new block they want added to a cryptocurrency's blockchain. Meanwhile, proof of work achieves consensus by requiring participants to spend computational power — and electricity — in order to generate a new valid block.

**Hash Rate:** A measure of the computational power on a blockchain network. Hash rate is determined by how many guesses are made per second. The overall hash rate helps determine the security and mining difficulty of a blockchain network.

**Decentralized Finance (DeFi):** Offers financial instruments without relying on intermediaries such as brokerages, exchanges, or banks by using smart contracts on a blockchain.

**Web3:** An idea for a new iteration of the World Wide Web which incorporates concepts such as decentralization, blockchain technologies, and token-based economics.

## Disclosure:

**Cryptocurrency Risk:** Cryptocurrencies (also referred to as “virtual currencies” and “digital currencies”) are digital assets designed to act as a medium of exchange. Cryptocurrency is an emerging asset class. There are thousands of cryptocurrencies, the most well-known of which is bitcoin. Cryptocurrency generally operates without central authority (such as a bank) and is not backed by any government. Cryptocurrency is not legal tender. Federal, state and/or foreign governments may restrict the use and exchange of cryptocurrency, and regulation in the U.S. is still developing. The market price of bitcoin and other cryptocurrencies have been subject to extreme fluctuations. Similar to fiat currencies (i.e., a currency that is backed by a central bank or a national, supra-national or quasi-national organization), cryptocurrencies are susceptible to theft, loss and destruction. Cryptocurrency exchanges and other trading venues on which cryptocurrencies trade are relatively new and, in most cases, largely unregulated and may therefore be more exposed to fraud and failure than established, regulated exchanges for securities, derivatives and other currencies. Cryptocurrency exchanges may stop operating or permanently shut down due to fraud, technical glitches, hackers or malware, which may also affect the price of cryptocurrencies. Cryptocurrency Tax Risk. Many significant aspects of the U.S. federal income tax treatment of investments in bitcoin and other cryptocurrencies are uncertain and still evolving.

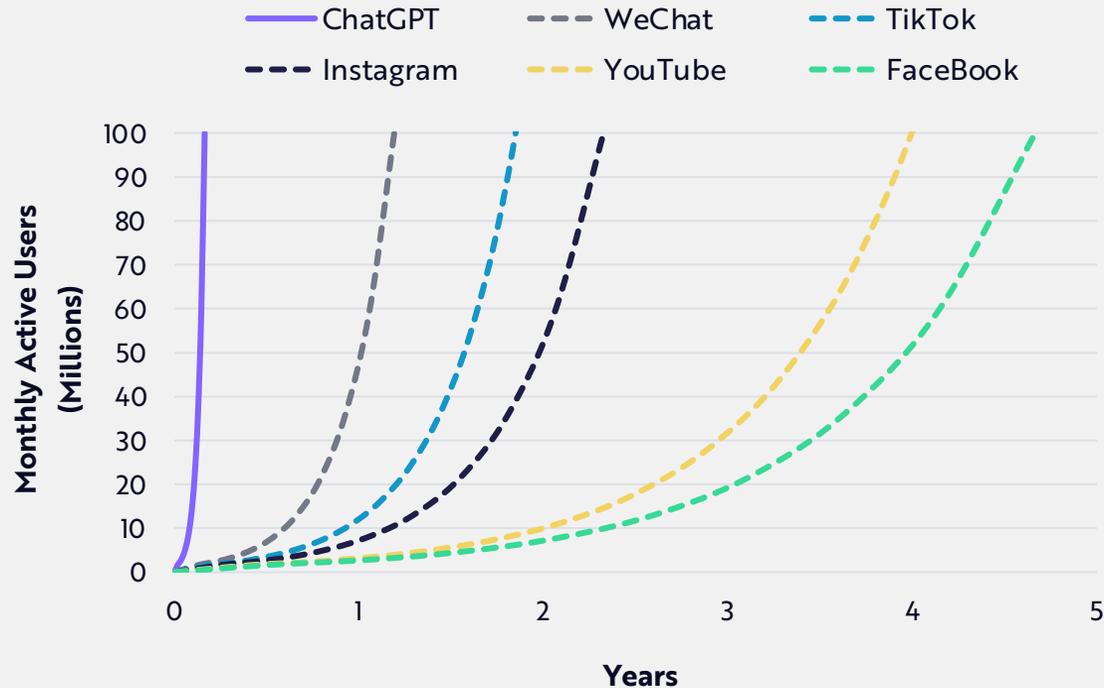
**Internet Company Risk.** Many Internet-related companies have incurred large losses since their inception and may continue to incur large losses in the hope of capturing market share and generating future revenues. Accordingly, many such companies expect to incur significant operating losses for the foreseeable future and may never be profitable. The markets in which many Internet companies compete face rapidly evolving industry standards, frequent new service and product announcements, introductions and enhancements, and changing customer demands. The failure of an Internet company to adapt to such changes could have a material adverse effect on the company's business.

**Counterparty Risk.** The other party in an investment, credit, or trading transaction may not fulfill its part of the deal and may default on the contractual obligations.

# ChatGPT Delighted Consumers And Amazed Enterprises

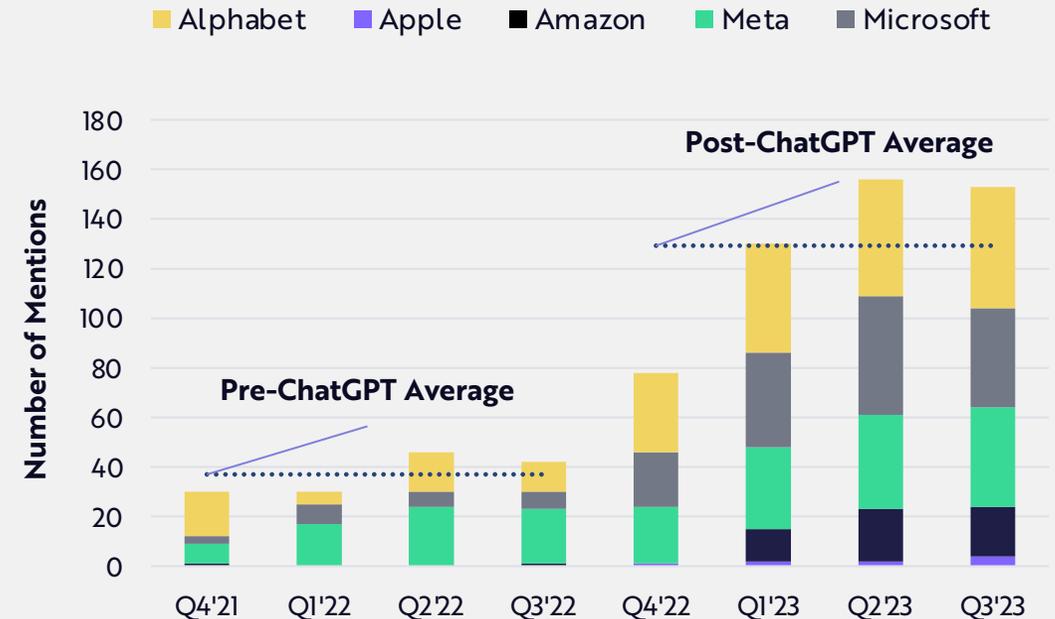
Building on years of progress since Google invented transformer architecture in 2017, ChatGPT catalyzed the public's understanding of generative AI. No longer a tool just for developers, ChatGPT's simple chat interface enabled anyone speaking any language to harness the power of large language models (LLMs). In 2023, enterprises scrambled to understand and deploy generative AI.

## ChatGPT Users Hit 100 Million Users In Two Months



\*values between 0 and 100 million users are estimates

## The Number of AI Mentions Tripled On Earnings Calls



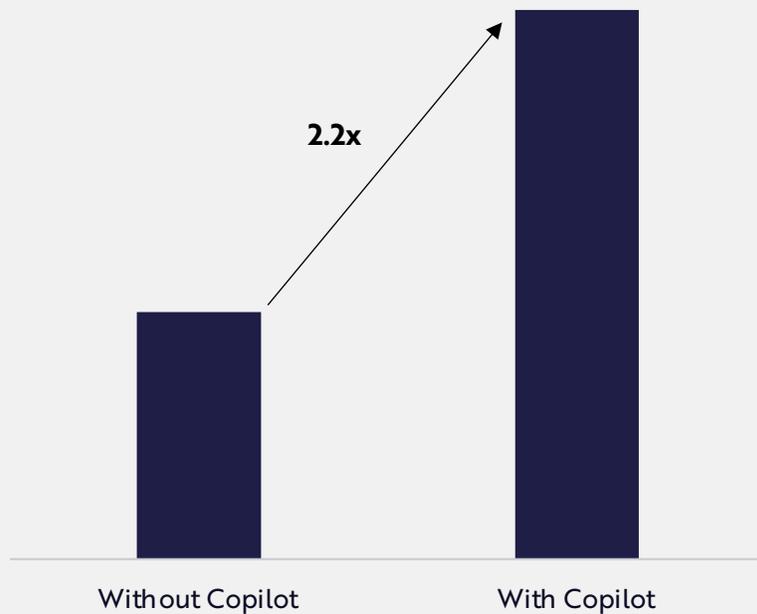
Sources: ARK Investment Management LLC, 2024. This ARK analysis is based on a range of data sources, which are available upon request. Forecasts are inherently limited and cannot be relied upon. For informational purposes only and should not be considered investment advice or a recommendation to buy, sell, or hold any particular security. Past performance is not indicative of future results.



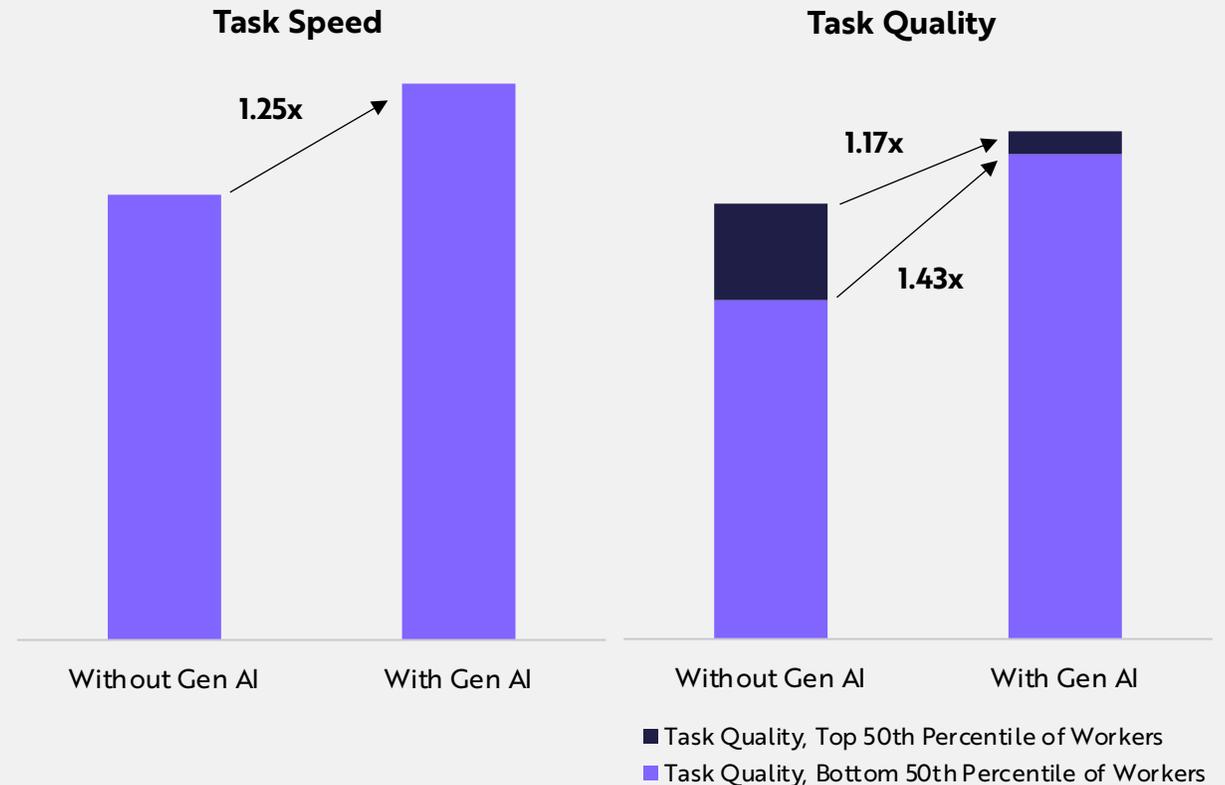
# AI Already Has Boosted Productivity Significantly

Coding assistants like GitHub Copilot and Replit AI are early success stories that have boosted the productivity and job satisfaction of software developers. AI-powered assistants are increasing the performance of knowledge workers and, interestingly, benefiting underperforming workers relatively more than high performers.

**Productivity of Developers On Coding Tasks Using Github Copilot in 2023**



**Productivity of Consultants Using Gen AI In 2023**

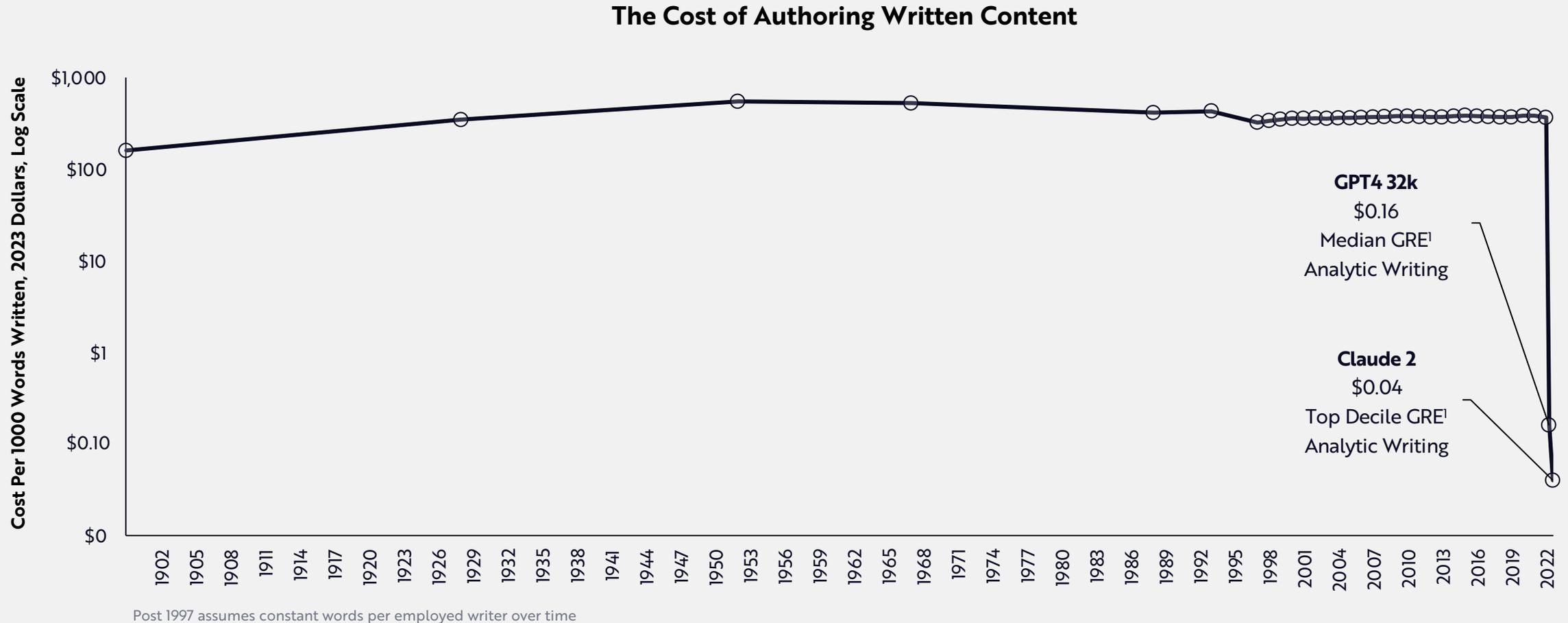


Sources: ARK Investment Management LLC, 2024. The data used to analyze productivity were collected from several different studies with varying numbers of participants and definitions of task quality. The sources used are Dell'Acqua et al. 2023 and GitHub 2022. Forecasts are inherently limited and cannot be relied upon. For informational purposes only and should not be considered investment advice or a recommendation to buy, sell, or hold any particular security. Past performance is not indicative of future results.



# The Cost Of Authoring The Written Word Has Collapsed

Over the past century, the cost of authoring written content has been relatively constant in real terms. During the past two years, as the writing quality of LLMs has improved, the cost has collapsed.



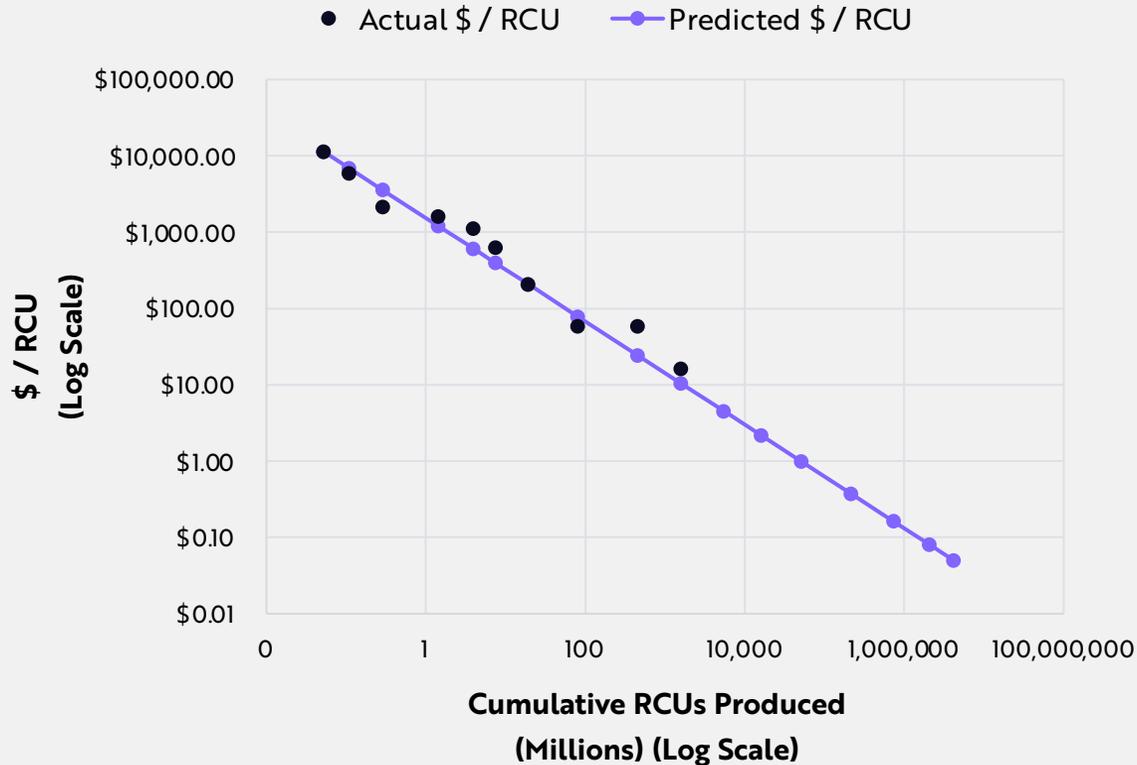
[1] The GRE, or Graduate Record Examination, is a standardized test that is part of the admissions process for many graduate schools in the United States and Canada and a few other countries. A median score would be the middle result out of all GRE results, and top decile would be in the top 10% of all GRE scores. Sources: ARK Investment Management LLC, 2024. This ARK analysis is based on a range of data sources as of Jan 9, 2024, which are available upon request. Forecasts are inherently limited and cannot be relied upon. For informational purposes only and should not be considered investment advice or a recommendation to buy, sell, or hold any particular security. Past performance is not indicative of future results.



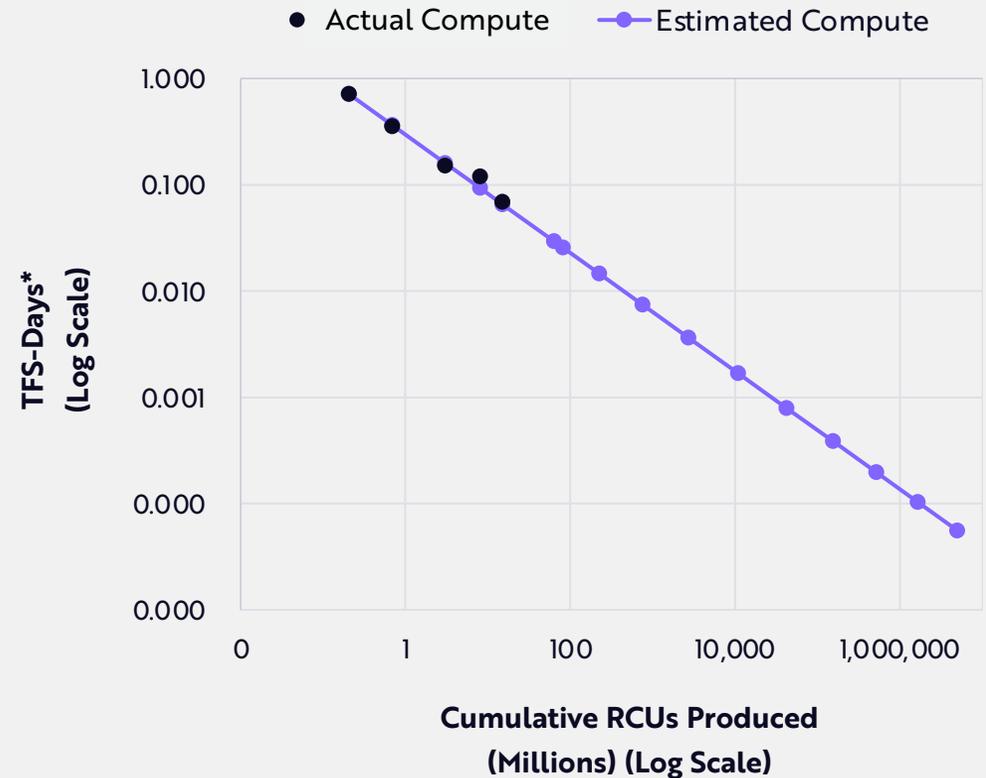
# Training Costs Should Continue To Fall 75% Per Year

According to Wright's Law, improvements in accelerated compute hardware should reduce AI-relative compute unit (RCU) production costs by **53%** per year, while algorithmic model enhancements could lower training costs further by **47%** per year. In other words, the convergence of hardware and software could drive AI training costs down by 75% at an annual rate through 2030.

### AI Training Hardware Cost



### AI Software Training Cost Using Neural Networks

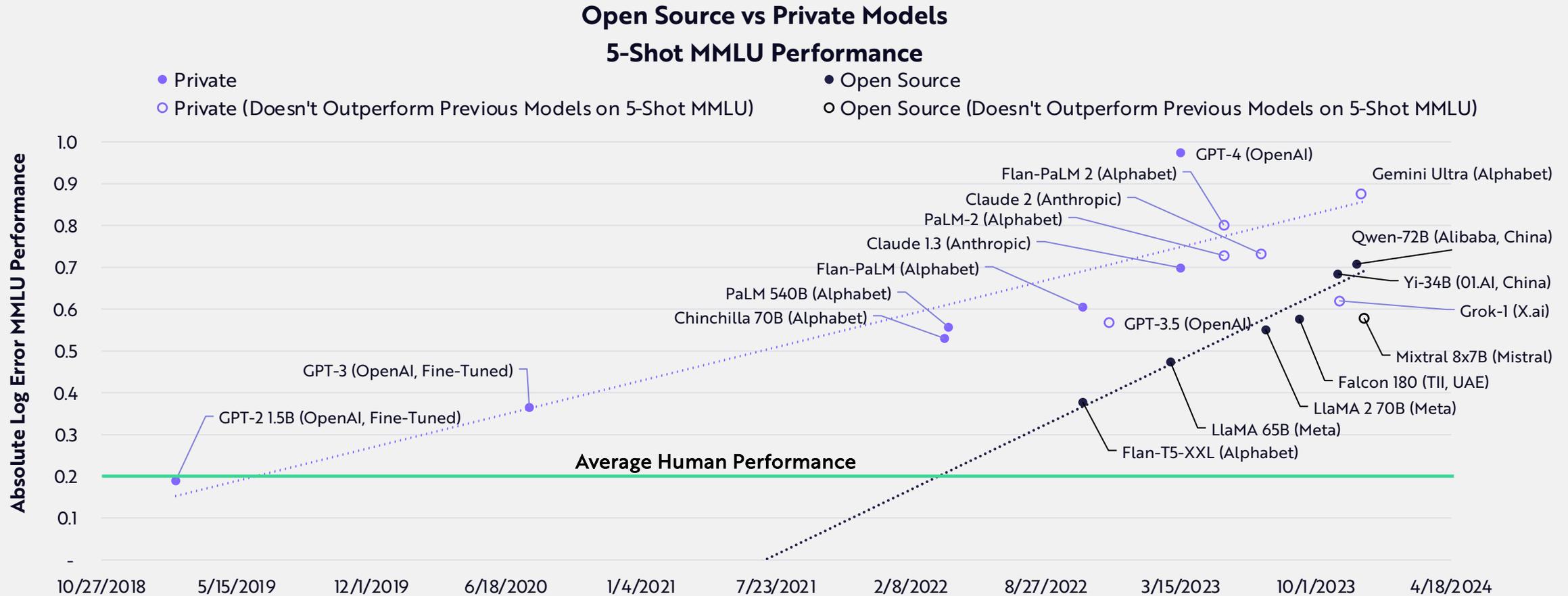


\*TFS-Days is a measure of compute required to train a model. Wright's Law states that for every cumulative doubling of units produced, cost will fall by a constant percentage. Sources: ARK Investment Management LLC, 2024. This ARK analysis is based on a range of data sources as of Jan. 9, 2024, which are available upon request. Forecasts are inherently limited and cannot be relied upon. For informational purposes only and should not be considered investment advice or a recommendation to buy, sell, or hold any particular security. Past performance is not indicative of future results.



# The Open-Source Community Is Competing With Private Models

Challenging closed-source models from OpenAI and Google, the open-source community and its corporate champion, Meta, are democratizing access to generative AI. On balance, the performance of open-source models is improving faster than that of closed-source models, helped recently by models from China.



Note: The chart's trendlines are fit to the most performant open- or closed-source models on 5-Shot MMLU (Massive Multitask Language Understanding) at the time of their release. Sources: ARK Investment Management LLC, 2024. This ARK analysis is based on a range of data sources as of Jan. 9, 2024, which are available upon request. Forecasts are inherently limited and cannot be relied upon. For informational purposes only and should not be considered investment advice or a recommendation to buy, sell, or hold any particular security. Past performance is not indicative of future results.



# Digital Assets Like Bitcoin Are A New Asset Class

According to ARK's research, bitcoin has emerged as an independent asset class worthy of a strategic allocation in institutional portfolios.

|                        | Bitcoin  | Commodities<br>(Including Gold)   | Real Estate  | Bonds   | Equities<br>(Including Emerging Markets)   |
|------------------------|--|---|--|---|--|
| History                | Created during the Global Financial Crisis in 2009 by an individual or group under the pseudonym Satoshi Nakamoto    | Origins trace back thousands of years to commodities like gold being used as a store of value | Earliest known private property rights took shape in ancient Greece and Rome | Earliest known bond was issued by the city of Venice in the 12 <sup>th</sup> century, but the concept of debt/lending can be traced back to ancient Mesopotamia | Origins trace back to the 1600s with the establishment of the Amsterdam Stock Exchange |
| Investability          | Highly liquid and accessible to anyone with access to the internet. Traded on crypto exchanges and through spot ETPs | Fairly liquid and accessible through physical coins and ETFs through banks and brokers.       | Illiquid, purchased directly or through REITs                                | Highly liquid. Traded on bond markets, accessible through brokers   | Highly liquid. Traded on stock exchanges, accessible through brokers                   |
| Basis Of Value         | Tied to demand for a decentralized, independent monetary system powered by open-source software                      | Tied to supply and demand, influenced by global economic conditions                           | Tied to interest rates, property markets, and local economic factors         | Tied to interest rate policies and credit risk  | Tied to expectations of future cash flow   |
| Correlation Of Returns | Low correlation with traditional asset classes   | Typically inversely correlated with asset classes, especially during economic uncertainty     | Typically low to moderate correlation with stocks and bonds                  | Inversely correlated recently, but not always throughout economic history, with equities  | Correlated with the health of global economy and market sentiment                      |
| Governance             | Decentralized and community-driven, leveraging open-source software for decision making                              | Governed by mining regulation   | Governed by local and national property laws                                 | Governed by issuance terms set by government or corporations  | Governed by company management and regulated by government agencies                    |
| Use Cases              | Scarce digital store of value, its currency native to the internet   | Industrial activity, wealth preservation, and hedging   | Personal residence, rental income  | Fixed income investment, with regular interest payments and return of principal at maturity   | Company ownership, often with voting rights and dividends                              |

Sources: ARK Investment Management LLC, 2024 For informational purposes only and should not be considered investment advice or a recommendation to buy, sell, or hold any particular security or cryptocurrency. Past performance is not indicative of future results.



# Bitcoin Could Play An Important Role In Maximizing Risk-Adjusted Returns

Focused on the volatility and return profiles of traditional asset classes, ARK's research suggests that a portfolio seeking to maximize risk-adjusted returns<sup>1</sup> would have allocated 19.4% to bitcoin in 2023.

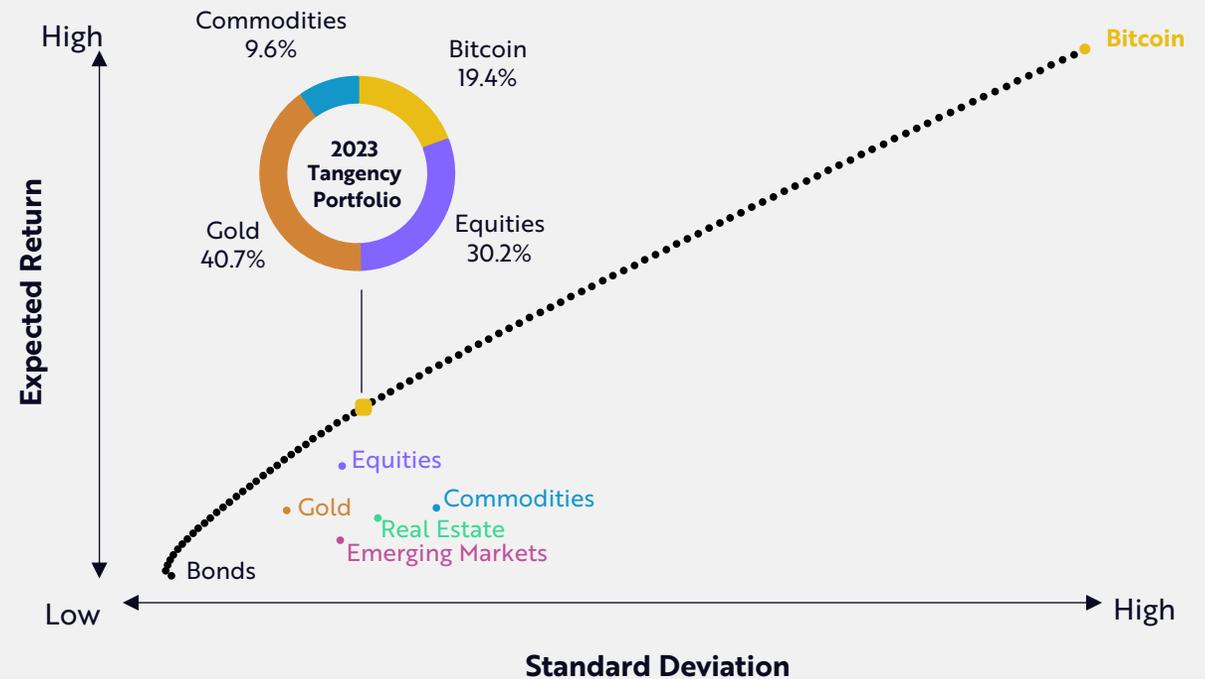
## Simulated Optimal Portfolio Allocation Targets By Year<sup>2,3</sup>

(Rolling 5-Year As Of End Of Every Year<sup>6</sup>)

|      | Bitcoin | Gold  | Commodities | Bonds | Equities |
|------|---------|-------|-------------|-------|----------|
| 2015 | 0.5%    | 0%    | 0%          | 82.5% | 16.9%    |
| 2016 | 0.9%    | 0%    | 0%          | 62.1% | 36.9%    |
| 2017 | 0.9%    | 0%    | 0%          | 58.7% | 40.3%    |
| 2018 | 2.4%    | 0%    | 0%          | 77.3% | 20.2%    |
| 2019 | 3.9%    | 1.4%  | 0%          | 70.4% | 24.2%    |
| 2020 | 4.3%    | 4.1%  | 0%          | 75.6% | 15.8%    |
| 2021 | 4.7%    | 7.3%  | 0%          | 65.3% | 22.6%    |
| 2022 | 6.2%    | 52.8% | 9.1%        | 0%    | 31.8%    |
| 2023 | 19.4%   | 40.7% | 9.6%        | 0%    | 30.3%    |

## 2023 Simulated Portfolio Optimization<sup>3,4,5</sup>

Based On Monthly Asset Class Returns (No Limit, Rolling 5-Year<sup>6</sup>)



[1] Measurement of returns of an asset against its risk (in this case, volatility). [2] Real Estate and Emerging Markets are calculated out of these tangency portfolios given their low participation in maximizing risk-adjusted returns relative to the other asset classes included in this table. [3] Asset classes are represented by the following instruments: S&P 500 Index, Bloomberg U.S. Aggregate Bond Index, FTSE NAREIT Equity REITs Index, Gold Price, S&P GSCI Commodity Index, and MSCI Emerging Markets Index. [4] This simulation, also known as "efficient frontier", is a set of theoretical investment portfolios expected to provide the highest returns at multiple levels of risk. [5] The dots under the efficient frontier in the chart represent portfolios comprised of a single asset class. [6] 5 years were used since, in our view, they represent a sample of a long-term time horizon. Sources: ARK Investment Management LLC, 2024, based on data and calculation from PortfolioVisualizer.com, with bitcoin price data from Glassnode, as of June 30, 2024. For informational purposes only and should not be considered investment advice or a recommendation to buy, sell, or hold any particular security or cryptocurrency. Past performance is not indicative of future results.



# Vertical Software Platforms Are Consolidating Financial Services

In addition to enabling core business operations, vertical software providers like Block, Shopify, and Toast are consolidating financial services for merchants. With digital wallets at their core, and partnering with sponsor banks and fintech companies or activating their own banking charters, vertical platforms should eliminate myriad merchant interactions with less efficient legacy financial institutions.

|         | Consumer*      | Merchant |          |           |            |             |                           |             |
|---------|----------------|----------|----------|-----------|------------|-------------|---------------------------|-------------|
|         | Digital Wallet | Payroll  | Checking | Savings** | Debit Card | Credit Card | Working Capital Financing | Bill Pay*** |
| Block   | ✓              | ✓        | ✓        | ✓         | ✓          | ✓           | ✓                         | ✓           |
| Shopify | ✓              |          | ✓        | ✓         | ✓          | ✓           | ✓                         | ✓           |
| Toast   | ✓              | ✓        |          |           | ✓          |             | ✓                         | ✓           |

\*We consider Block's Cash App and Toast's MyToast mobile app as consumer digital wallets, and we consider Shopify's Shop mobile app and Toast's Toast Takeout mobile app as digital wallets in their early stages. \*\*We consider Shopify Balance as both a checking and savings vehicle for merchants. \*\*\*Given xtraCHEF's invoice automation features, we believe Toast will soon offer direct bill pay on its platform. Sources: ARK Investment Management LLC, 2024. This ARK analysis is based on a range of underlying data from external sources, which may be provided upon request. Forecasts are inherently limited and cannot be relied upon. For informational purposes only and should not be considered investment advice or a recommendation to buy, sell, or hold any particular security. Past performance is not indicative of future results.



# Vertical Software Platforms Are Consolidating Consumer Services

Vertical software platforms are not only enabling vast merchant networks but also building consumer networks using digital wallets. By scaling merchant and consumer networks simultaneously, vertical software platforms are becoming operating systems for these two-sided networks.

|         | Consumer* |          |         |              |                   |                  |            |         | Merchant       |
|---------|-----------|----------|---------|--------------|-------------------|------------------|------------|---------|----------------|
|         | Payments  | Checking | Savings | Debit Card** | Buy Now Pay Later | Personal Lending | E-commerce | Loyalty | Digital Wallet |
| Block   | ✓         | ✓        | ✓       | ✓            | ✓                 | ✓                | ✓          | ✓       | ✓              |
| Shopify | ✓         |          |         |              | ✓                 |                  | ✓          | ✓       | ✓              |
| Toast   | ✓         |          |         | ✓            |                   |                  | ✓          | ✓       | ✓              |

\*We consider Block's Cash App and Toast's MyToast mobile app as consumer digital wallets, and we consider Shopify's Shop mobile app and Toast's Toast Takeout mobile app as digital wallets in their early stages. \*\*We consider the Toast Pay Card a form of consumer debit cards. Sources: ARK Investment Management LLC, 2024. This ARK analysis is based on a range of underlying data from external sources, which may be provided upon request. Forecasts are inherently limited and cannot be relied upon. For informational purposes only and should not be considered investment advice or a recommendation to buy, sell, or hold any particular security. Past performance is not indicative of future results.

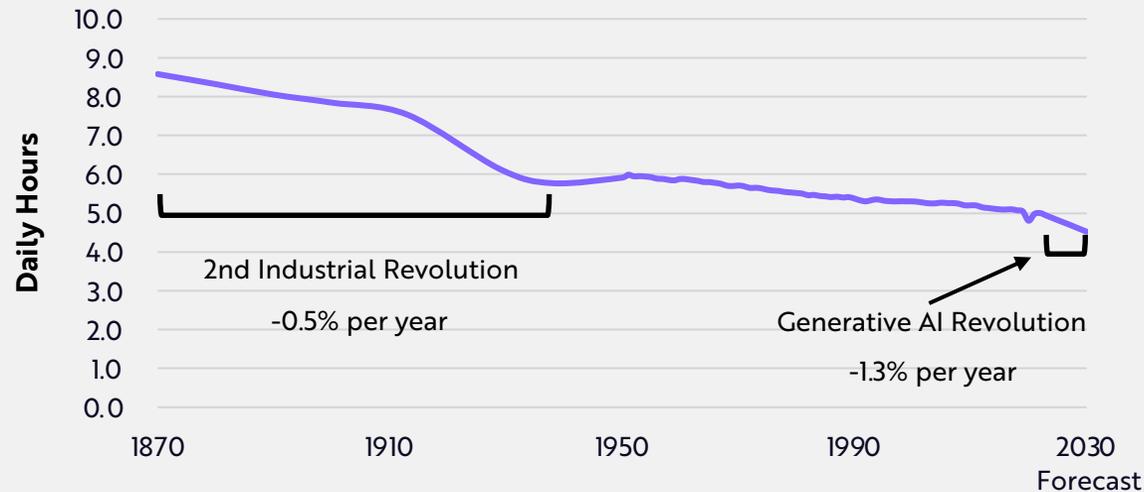


# Artificial Intelligence Could Lower The Average Workweek And Stimulate Digital Consumption

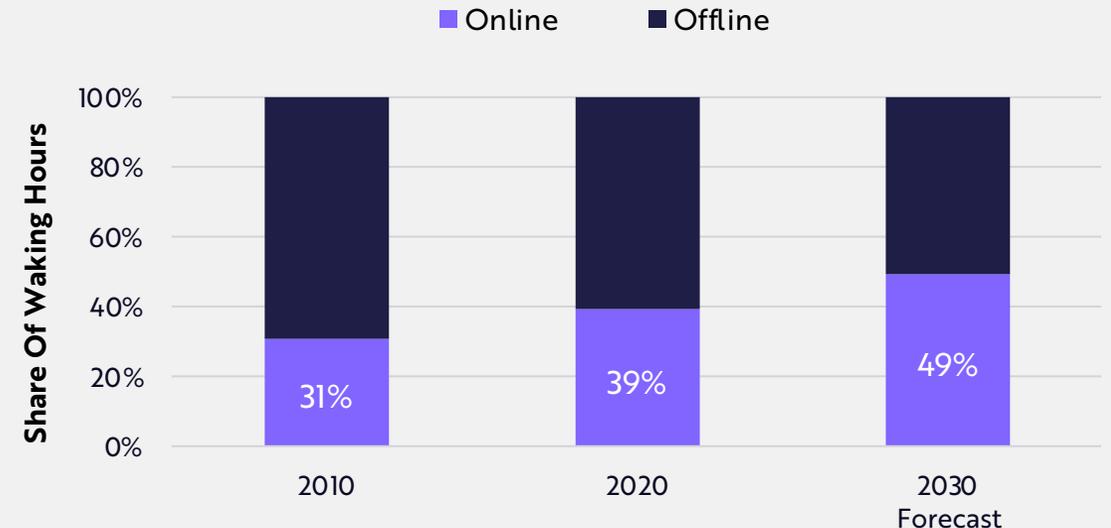
During the 80 years between the Second Industrial Revolution through the end of World War II, labor hours per worker decreased 0.5% at an annual rate globally. Generative AI could lower labor hours per worker by 1.3% on average, from 5.0 hours per day in 2022 to 4.5 hours in 2030.\*

As a result, consumers might devote more time to online entertainment, potentially increasing the share of total waking hours spent online from 40% in 2023 to 49% in 2030.

### Global Labor Hours Per Worker Per Day\*



### Global Online And Offline Time\*\*

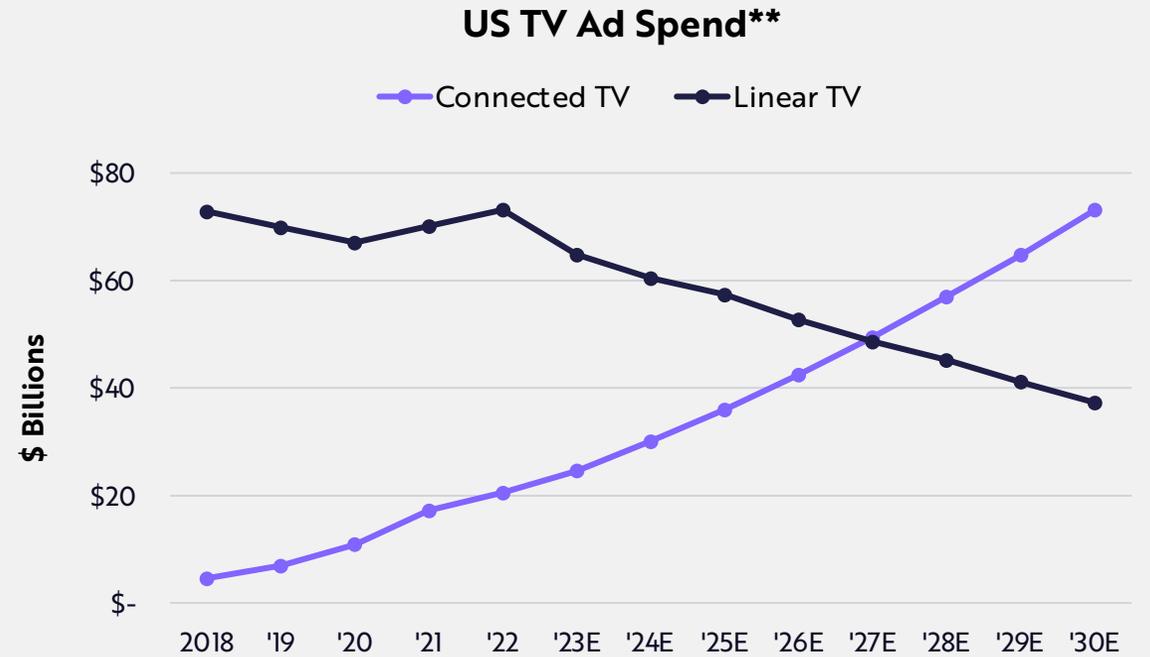
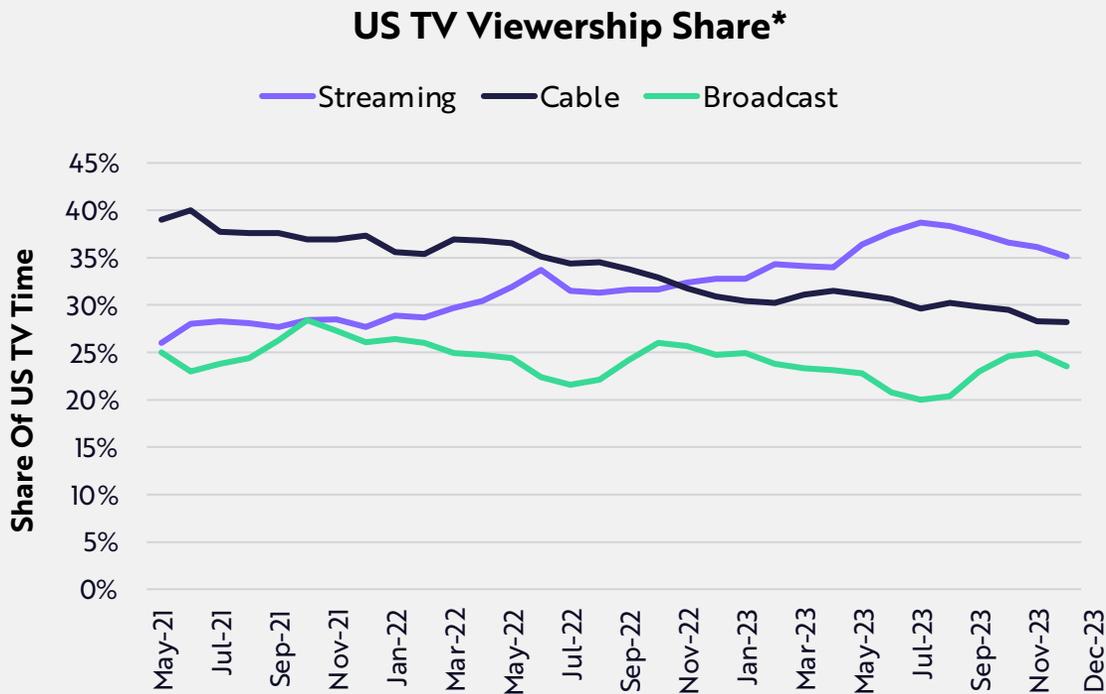


\*To calculate global daily working hours, we divide total annual hours of labor per worker by the total days of the year. \*\*The chart illustrating daily allocation of online vs. offline time captures total daily waking hours, including those allocated to labor or education. The chart captures hours generated by internet users only. Sources: ARK Investment Management LLC, 2024. This ARK analysis is based on a range of underlying data from external sources, which may be provided upon request. Forecasts are inherently limited and cannot be relied upon. For informational purposes only and should not be considered investment advice or a recommendation to buy, sell, or hold any particular security. Past performance is not indicative of future results.



# Streaming TV Is Displacing Linear TV

In just two years, streaming's share of overall TV consumption increased more than 10 percentage points to 39% as of July 2023, surpassing the shares of cable and broadcast, respectively. Ad spend on connected TV (CTV) is following eyeballs and is likely to continue to grow at the pace of streaming consumption.

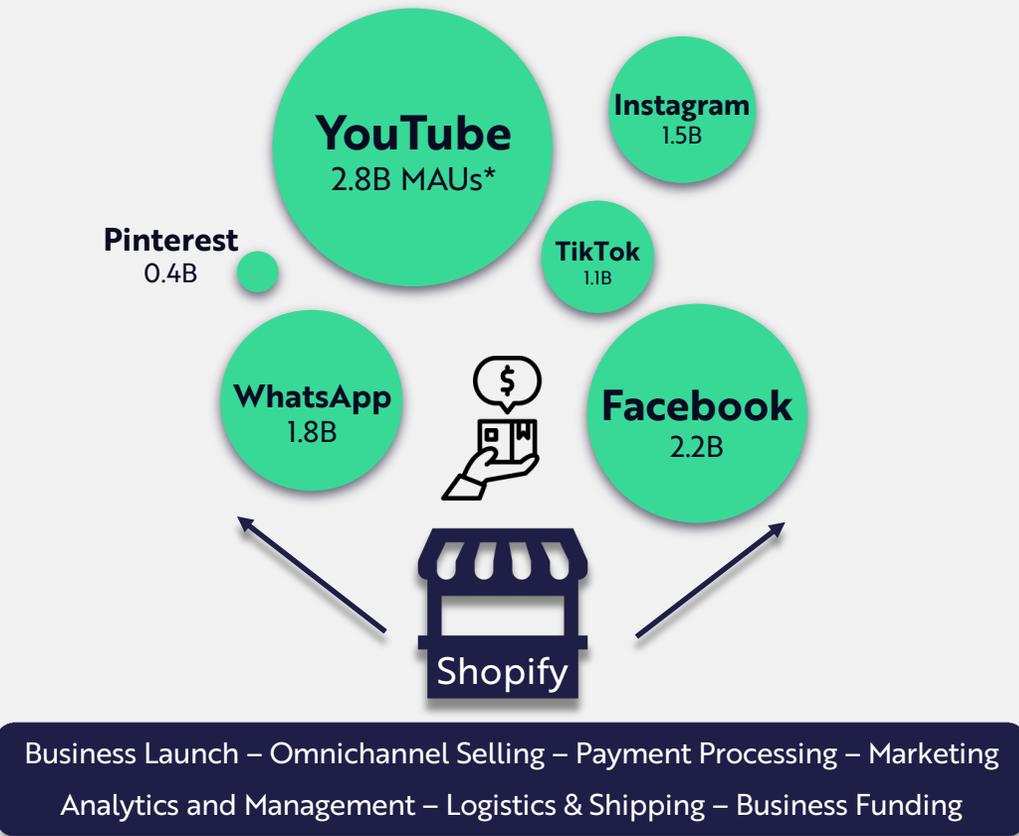


\*The share of streaming, cable, and broadcast do not add up to 100%, as we exclude the portion of consumption that Nielsen categorizes as "Other," which includes time spent on unmeasured sources like video-on-demand (VOD), audio streaming, gaming, and other device use. \*\*We define linear TV as traditional TV delivered via cable, satellite, or over-the-air. We define connected TV as streamed TV delivered over-the-top through smart TVs, streaming media devices, video game consoles, and other modern hardware. Sources: ARK Investment Management LLC, 2024. This ARK analysis is based on a range of underlying data from external sources, including Nielsen, Insider Intelligence, and MAGNA Global, which may be provided upon request. Forecasts are inherently limited and cannot be relied upon. For informational purposes only and should not be considered investment advice or a recommendation to buy, sell, or hold any particular security. Past performance is not indicative of future results.

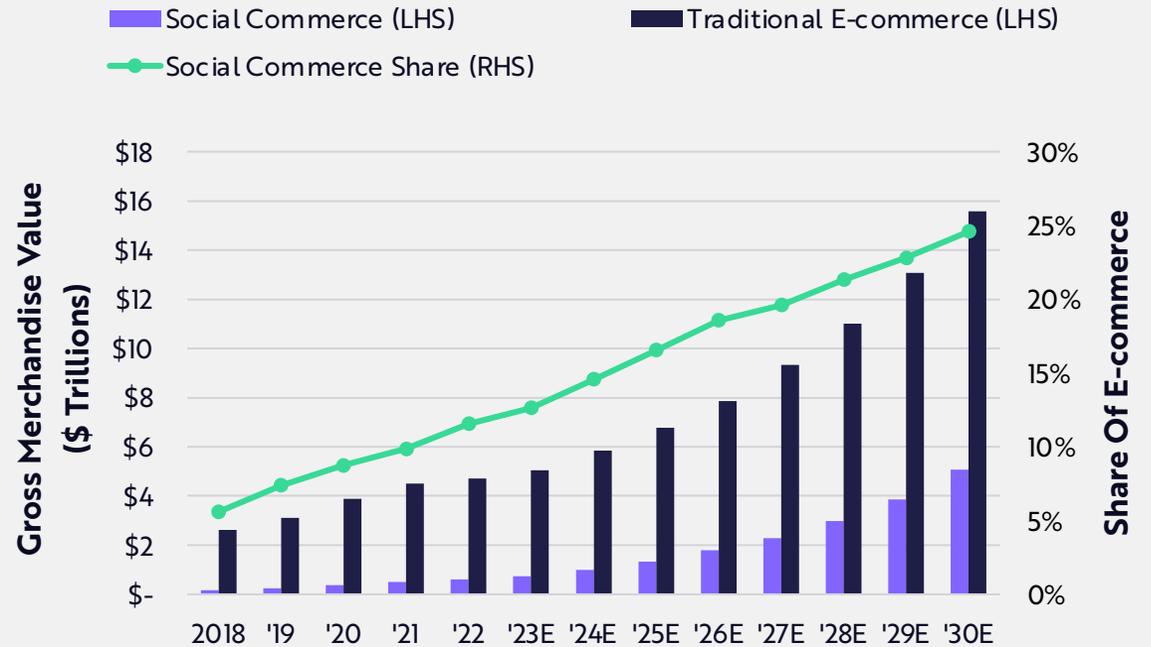


# Social Commerce Merchants Can Sell to Anyone—Anytime, Anywhere

Social media platforms are increasing their monetization of global audiences with e-commerce. Thanks to omnichannel solutions—both physical and digital—we believe social commerce could grow 32% at an annual rate, from \$730 billion today to potentially over \$5 trillion in 2030.



**Global Social Commerce Sales  
ARK Forecast**



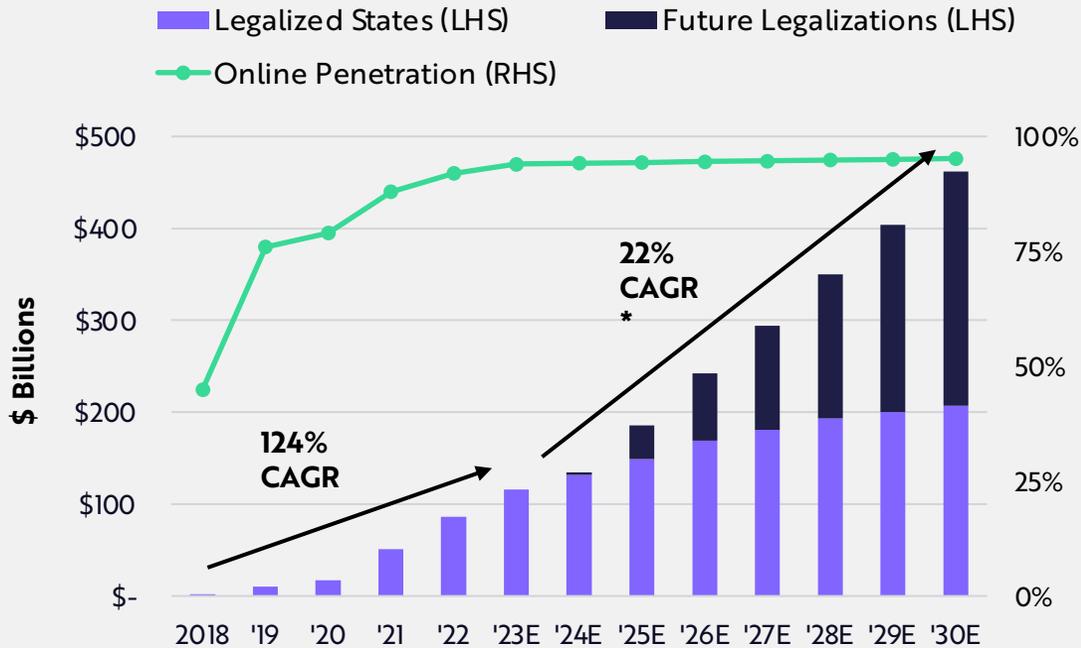
\*We estimate each platform's monthly active users (MAUs) across its iOS and Android mobile apps. Sources: ARK Investment Management LLC, 2024. This ARK analysis is based on a range of underlying data from external sources, including Sensor Tower, which may be provided upon request. Forecasts are inherently limited and cannot be relied upon. For informational purposes only and should not be considered investment advice or a recommendation to buy, sell, or hold any particular security. Past performance is not indicative of future results.



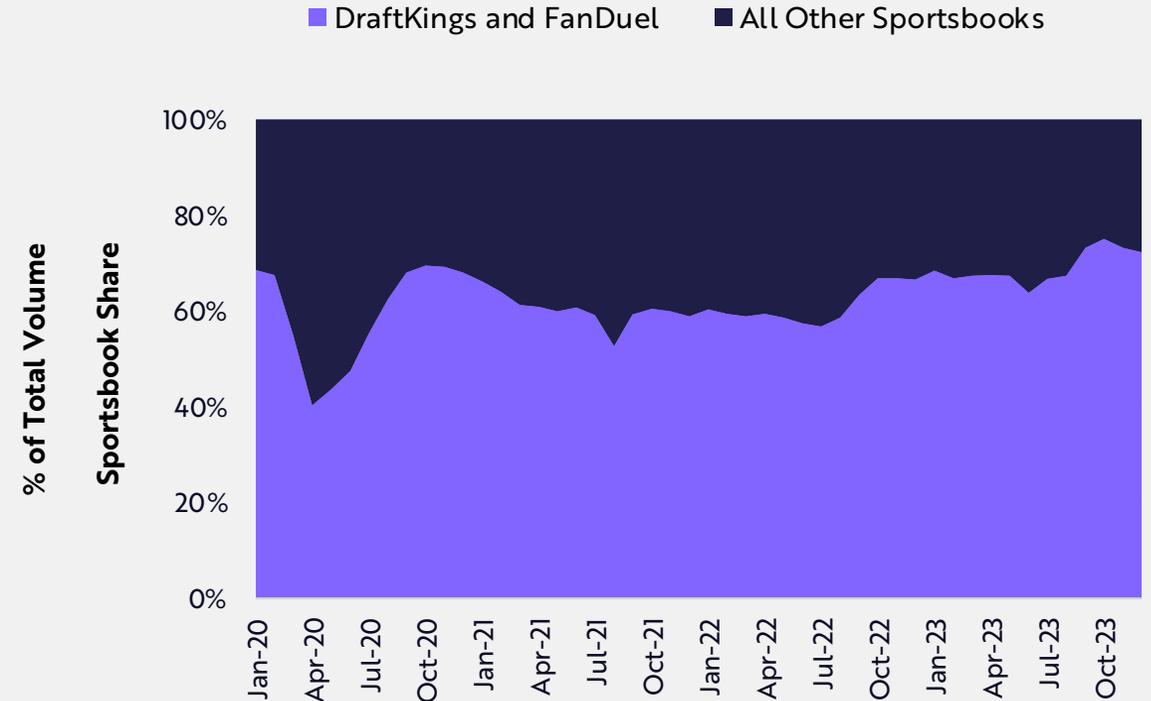
# Mobile Sports Betting Continues To Grow And Consolidate In The US

Thanks to legalization and consumer adoption, the winners in online sports betting are pulling away from the pack. As online sports betting surged 35% during 2023, DraftKings and FanDuel offered superior user experiences that helped take share from other sportsbooks. DraftKings and FanDuel grew their share of national deposits to 75% in 2023, while the long tail of sportsbooks lost 8 percentage points of share.

## US Online Sports Betting Volume



## National Deposit Market Share



\*CAGR is compound Annual Growth Rate. Sources: ARK Investment Management LLC, 2024. This ARK analysis is based on a range of underlying data from external sources, including Yipit Data, which may be provided upon request. Forecasts are inherently limited and cannot be relied upon. For informational purposes only and should not be considered investment advice or a recommendation to buy, sell, or hold any particular security. Past performance is not indicative of future results.

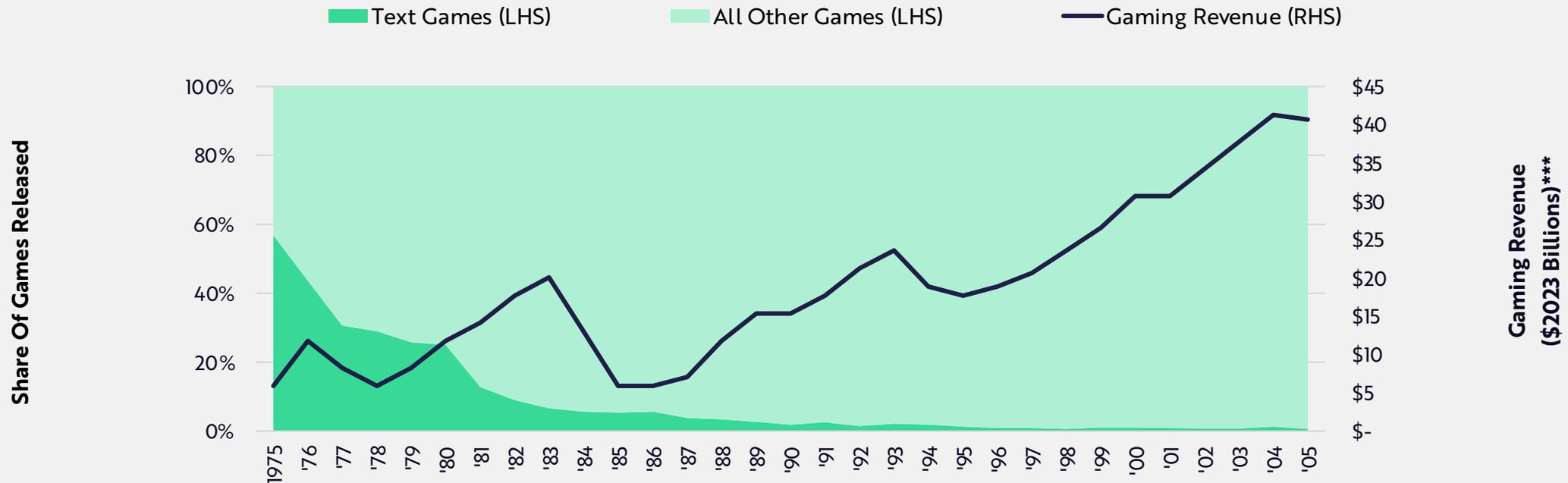


# Online Experiences Are Becoming More Immersive And Monetizable

History suggests that deeper immersion leads to higher monetization. After computer graphics expanded the market beyond text-based adventure games in the 1980s, gaming revenue soared 19% at an annual rate, from \$6 billion in 1985 to \$24 billion in 1993.

Now, multimodal AI—text, images, audio, and video—are creating more immersive and interactive experiences that should expand the market.

## Video Games Evolution\*



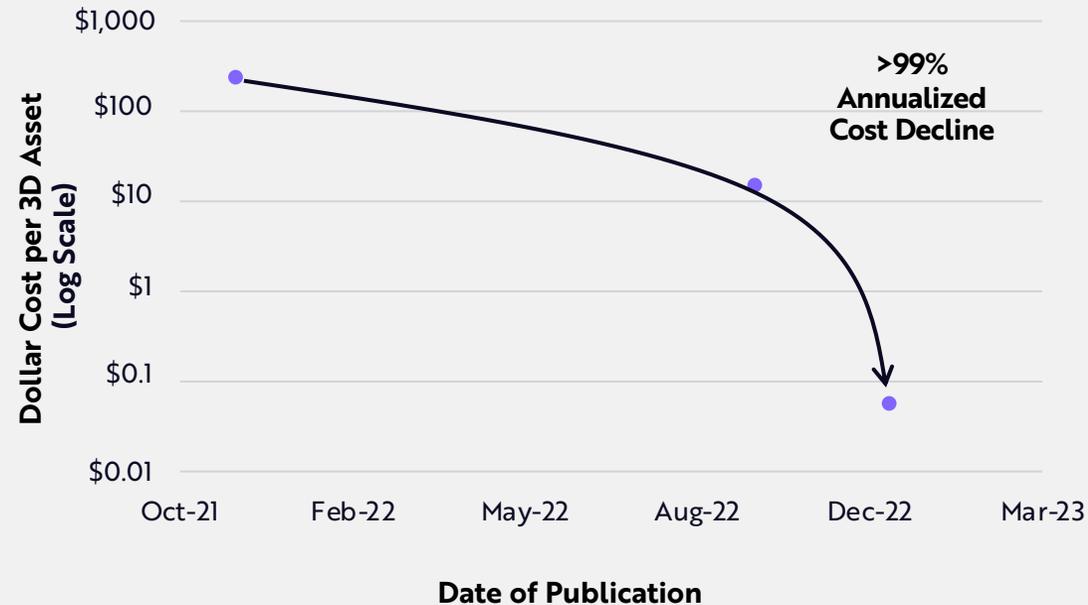
\*"Text games" refer to both text-based and spreadsheet-based games. "All other games" exclude arcade game releases. Gaming revenue captures PC and console gaming revenue only. \*\*Revenue figures have been inflation-adjusted to 2023 US Dollars. Sources: ARK Investment Management LLC, 2024. This ARK analysis is based on a range of underlying data from external sources, which may be provided upon request. Forecasts are inherently limited and cannot be relied upon. For informational purposes only and should not be considered investment advice or a recommendation to buy, sell, or hold any particular security. Past performance is not indicative of future results.



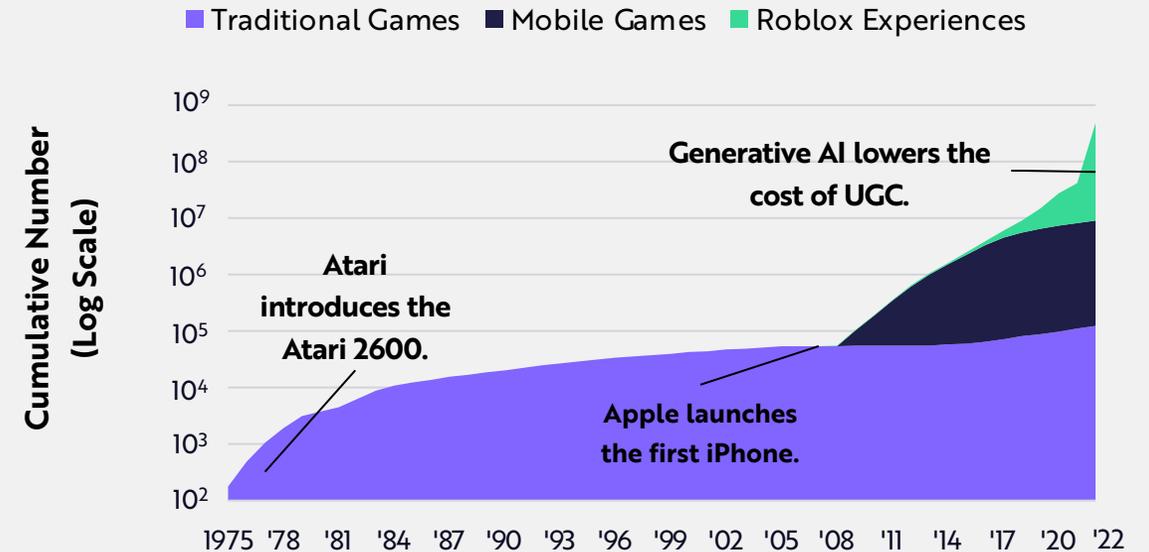
# Thanks To AI-Assisted Creation, Gamers Could Become Developers

AI-assisted game creation on user-generated content (UGC) platforms could cause an explosion in gaming content. According to our research, after normalizing for output quality, the cost of generating a single 3D asset has dropped ~99% at an annual rate to less than \$0.06 since 2021. AI should democratize content creation and accelerate the growth in UGC. Roblox already has delivered more than ~470 million experiences globally, 52x the combined number of PC, console, and mobile app games.

### Cost Decline In Generative AI For 3D Assets\*



### Number Of Video Game Releases



\*We normalize the cost of 3D asset generation by each model's CLIP R-Precision scores. Sources: ARK Investment Management LLC, 2024. This ARK analysis is based on a range of underlying data from external sources, including Nichol et al. 2022, which may be provided upon request. Forecasts are inherently limited and cannot be relied upon. For informational purposes only and should not be considered investment advice or a recommendation to buy, sell, or hold any particular security. Past performance is not indicative of future results.





## 5 Reasons Investors Should Consider ARKW

1. **Exposure To Innovation:** Thematic multi-cap exposure to innovative internet technologies including cloud computing, big data, digital media, streaming, e-commerce, bitcoin and blockchain technologies, and the Internet of Things (IoT).
2. **Growth Potential:** Aims to capture long-term growth with low correlation of relative returns to traditional growth strategies and negative correlation to value strategies.
3. **Tool For Diversification<sup>1</sup>:** Offers a tool for diversification due to little overlap with traditional indices. It can be a complement to traditional value/growth strategies.
4. **Grounded In Research:** Combines top-down and bottom-up research in its portfolio management to identify innovative companies and convergence across markets.
5. **Cost Effective:** Seeks to provide a lower cost alternative to mutual funds with true active management in an exchange traded fund (ETF) that invests in rapidly moving themes.

*[1] Diversification does not assure a profit. The information herein is general in nature and should not be considered financial advice. An investor should consult a financial professional regarding the investor's specific situation.*



# ARK Next Generation Internet ETF – ARKW

The internet is transforming every sector of the economy. ARKW is focused on the disruptive innovations that are changing the way the world manages information, analyzes data, purchases goods, and communicates across the globe.

- Ticker: [ARKW](#)
- Fund AUM: [\\$1.45 Billion](#)
- Typical Number of Holdings: [35-55 U.S. Equities/U.S.-listed ADRs](#)
- Expense Ratio: [0.87%](#)

| <b>TOP 10 HOLDINGS</b>    | <b>Weight (%)</b> |
|---------------------------|-------------------|
| ARK 21SHARES BITCOIN ETF  | 10.3%             |
| TESLA INC                 | 9.1%              |
| ROKU INC                  | 8.6%              |
| COINBASE GLOBAL INC       | 7.8%              |
| BLOCK INC                 | 6.6%              |
| ROBLOX CORP               | 5.8%              |
| ROBINHOOD MARKETS INC     | 4.7%              |
| META PLATFORMS INC        | 3.5%              |
| PALANTIR TECHNOLOGIES INC | 2.9%              |
| UIPATH INC                | 2.5%              |
|                           | <b>61.8%</b>      |

| <b>MARKET CAPITALIZATION</b> | <b>(%)</b> |
|------------------------------|------------|
| Mega (\$100B+)               | 19.1%      |
| Large (\$10 - \$100B)        | 49.0%      |
| Medium (\$2 - \$10B)         | 26.4%      |
| Small (\$300M - \$2B)        | 4.9%       |
| Micro (\$50 - \$300M)        | 0.6%       |

| <b>PORTFOLIO COMPOSITION</b>  | <b>(%)</b> |
|-------------------------------|------------|
| Intelligent Devices           | 27.0%      |
| Next Gen Cloud                | 16.2%      |
| Neural Networks               | 14.1%      |
| Digital Wallets               | 10.8%      |
| Autonomous Mobility           | 8.6%       |
| Cryptocurrencies              | 6.2%       |
| Smart Contracts               | 4.5%       |
| Multiomic Technologies        | 0.9%       |
| Advanced Battery Technologies | 0.9%       |

| <b>SECTORS</b>         | <b>(%)</b> |
|------------------------|------------|
| Communication Services | 25.7%      |
| Information Technology | 24.9%      |
| Financials             | 22.0%      |
| Consumer Discretionary | 15.7%      |
| Health Care            | 0.9%       |

Holdings are subject to change and should not be considered as investment advice, or a recommendation to buy, sell or hold any particular security. It should not be assumed that an investment in the securities identified was or will be profitable.

Source: ARK Investment Management LLC; All data as of June 30, 2024.



# Thematic Strategies Focused on Disruptive Innovation



**ARKK**  
ARK Innovation ETF



**ARKX**  
ARK Space Exploration & Innovation ETF



**ARKW**  
ARK Next Generation Internet ETF



**PRNT**  
The 3D Printing ETF



**ARKQ**  
ARK Autonomous Tech. & Robotics ETF



**IZRL**  
Israel Innovative Technology ETF



**ARKG**  
ARK Genomic Revolution ETF



**ARKF**  
ARK Fintech Innovation ETF



### Contact our ETF Specialists:

#### Rebecca L. Burke

Vice President | National ETF Sales  
Resolute Investment Managers, Inc.  
M. 978.609.0553  
rebecca.burke@resolutemanagers.com

#### Ryan Hodapp, CFA, CAIA

Vice President | National ETF Sales  
Resolute Investment Managers, Inc.  
M. 617.279.3571  
ryan.hodapp@resolutemanagers.com

#### Jack Stock, CIMA

Vice President | National ETF Sales  
Resolute Investment Managers, Inc.  
M. 817.823.5337  
jack.stock@resolutemanagers.com



Factsheet, prospectus, and latest performance reports are available for download on our website: [ark-funds.com/investor-material](https://ark-funds.com/investor-material)



**ARK Investment Management LLC**  
200 Central Ave, St. Petersburg, FL 33711

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### **Investing in securities involves risk and there's no guarantee of principal.**

**Fund Risks:** The principal risks of investing in the ARKW include: **Equity Securities Risk.** The value of the equity securities the Fund holds may fall due to general market and economic conditions. **Information Technology Sector Risk.** The information technology sector includes companies engaged in internet software and services, technology hardware and storage peripherals, electronic equipment instruments and components, and semiconductors and semiconductor equipment. Information technology companies face intense competition, both domestically and internationally, which may have an adverse effect on profit margins. Information technology companies may have limited product lines, markets, financial resources or personnel. 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. Companies in the information technology sector are heavily dependent on intellectual property and the loss of patent, copyright and trademark protections may adversely affect the profitability of these companies. These companies may also be exposed to risks applicable to sectors other than the disruptive innovation theme for which they are chosen. **Disruptive Innovation Risk.** Companies that ARK 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. Companies that develop disruptive technologies may face political or legal attacks from competitors, industry groups or local and national governments. These companies may also be exposed to risks applicable to sectors other than the disruptive innovation theme for which they are chosen, and the securities issued by these companies may underperform the securities of other companies that are primarily focused on a particular theme.

**Cryptocurrency Risk.** Cryptocurrency (notably, bitcoin), often referred to as "virtual currency" or "digital currency," operates as a decentralized, peer-to-peer financial exchange and value storage that is used like money. The Fund may have exposure to bitcoin, a cryptocurrency, indirectly through an investment in the Bitcoin Investment Trust ("GBTC"), a privately offered, open-end investment vehicle. Cryptocurrency operates without central authority or banks and is not backed by any government. Even indirectly, cryptocurrencies may experience very high volatility and related investment vehicles like GBTC may be affected by such volatility. As a result of holding cryptocurrency, the Fund may also trade at a significant premium to NAV. Cryptocurrency is also not legal tender. Federal, state or foreign governments may restrict the use and exchange of cryptocurrency, and regulation in the U.S. is still developing. Cryptocurrency exchanges may stop operating or permanently shut down due to fraud, technical glitches, hackers or malware. Detailed information regarding the specific risks of ARKW ETF can be found in the prospectus. Additional risks of investing in ARKW include foreign securities, market, management and non-diversification risks, as well as fluctuations in market value and NAV.

**A non-fungible token (NFT)** is a non-interchangeable unit of data stored on a blockchain, a form of digital ledger, that can be sold and traded.<sup>[1]</sup> Types of NFT data units may be associated with digital files such as photos, videos, and audio. Because each token is uniquely identifiable, NFTs differ from blockchain cryptocurrencies. **Web3** is an idea for a new iteration of the World Wide Web based on blockchain technology, which incorporates concepts including decentralization and token-based economics.

**Non-Fungible Token (NFT) Risk:** The popularity of NFTs has also increased the chances of cyber threats to the NFT market. Plenty of cases are visible where replicas of the original NFT stores are put up on the internet. These stores look authentic because of the original logo and content. These fake NFT stores are a massive risk because they might sell NFTs not even present in the digital world. On top of that, there are chances of counterfeit NFTs being sold on a fake NFT store. Another risk is where someone is impersonating a famous NFT artist and selling fake NFTs. The risk of online fraud is enormous due to copyright theft, fake airdrops, fake NFT giveaways, and replication of popular NFTs. Another downside of NFTs are that they, like any service connected to the Internet, are vulnerable to hackers and malicious code.

The Fund's exposure to cryptocurrency may change over time and, accordingly, such exposure may not always be represented in the Fund's portfolio. Many significant aspects of the U.S. federal income tax treatment of investments in bitcoin are uncertain and an investment in bitcoin may produce income that is not treated as qualifying income for purposes of the income test applicable to regulated investment companies, such as the Fund. GBTC is expected to be treated as a grantor trust for U.S. federal income tax purposes, and therefore an investment by the Fund in GBTC will generally be treated as a direct investment in bitcoin for such purposes. See "Taxes" in the Fund's SAI for more information.

Shares of ARKW are bought and sold at market price (not NAV) and are not individually redeemed from the ETF. ETF shares may only be redeemed directly with the ETF at NAV by Authorized Participants, in very large creation units. There can be no guarantee that an active trading market for ETF shares will develop or be maintained, or that their listing will continue or remain unchanged. Buying or selling ETF shares on an exchange may require the payment of brokerage commissions and frequent trading may incur brokerage costs that detract significantly from investment returns.

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