

ARK GLOBAL DISRUPTIVE INNOVATION FUND

Net returns as at 30 June 2023

	1 month	3 months	6 months	1 year	2 years p.a.	3 years p.a.	Since inception* p.a.
Fund growth return	6.54	10.98	45.26	15.36	-36.73	-12.71	-0.47
Fund distribution return	0.00	0.00	0.00	0.00	0.00	0.00	0.05
Total Fund return [‡]	6.54	10.98	45.26	15.36	-36.73	-12.71	-0.43
MSCI All Countries World Index [^]	2.87	6.83	16.07	20.38	5.23	12.25	9.52

Past performance is not a reliable indicator of future performance. Taxes payable by investors have not been taken into account. The figures shown have been provided for illustrative purposes – they are unaudited and subject to change. The total returns shown are prepared on an exit to exit basis – they include all ongoing fees and expenses and assume reinvestment of all distributions.

** Inception date of the ARK Global Disruptive Innovation Fund: August 2018.*

‡ Total Fund net returns are post fees, pre tax using redemption prices and assume reinvestment of distributions. Fund growth return is the change in redemption prices over the period. Fund distribution return equals Total Fund minus Fund growth return. Past performance is not an indicator of future performance.

^ Reference Index shown for illustrative purposes only: MSCI All Countries World Index (with net dividends reinvested) expressed in Australian Dollars (unhedged).

Portfolio review

The Fund outperformed broad based global equities during the month (net).

Key contributors to absolute performance:

- **Tesla** shares rallied after the company opened its Supercharger network to General Motors and Ford. Later in the month, SAE International, an automotive industry body that sets and reviews engineering standards, announced that it would standardize Tesla's North American Charging Standard connector.
- **Unity** shares soared after the company unveiled its artificial intelligence (AI) marketplace. The stock was also upgraded to "outperform" by an analyst, citing a meaningful mobile cross-sell opportunity, cost synergies, and an increasing total addressable market.
- **Coinbase** and other crypto-related companies appreciated after a large investment company filed an application for a spot bitcoin ETF in the U.S. ARK maintains conviction in Coinbase being a leader in various parts of the crypto ecosystem.
- **Roku** and other streaming services rallied following news that Amazon was considering an ad-supported tier for Prime Video, which would add ad tiers of Max and Paramount+ to its Prime Channels. This supports the ad-supported streaming ecosystem on which Roku is dependent.
- **Schrödinger** traded up on relatively little company-specific news. Schrödinger specializes in developing computational tools and software for drug discovery and materials science. It's stock price has benefitted

from a broader rotation into names thought to benefit from the forthcoming artificial intelligence boom.

Key detractors from absolute performance:

- **CRISPR Therapeutics** detracted from performance this month. CRISPR and Vertex Pharmaceuticals announced that their Biologics License Applications for gene-edited blood disorder candidate exa-cel has been accepted by the FDA. The FDA has issued a Priority Review for its BLA in severe sickle cell disease with a target action date on December 8, 2023, and a standard review for that in transfusion-dependent beta-thalassemia with a target action date on March 30, 2024.
- **Twilio** depreciated on little company specific news. The company agreed to sell its Value First business and allocate its resources to other strategic priorities. Twilio is a leading provider of customer-focused IP and programmatic communications with developer-friendly APIs, global connectivity, and industry-leading reliability.
- **PagerDuty** shares underperformed, despite delivering strong first quarter results. The company reported year-over-year revenue growth of 21% and a net retention rate of 116%. Management cut full-year revenue guidance based on the persistent macro headwinds that are extending sales cycles and limiting seat expansion. In ARK's view, as AI increases the efficiency and productivity of software developers, demand for automated incident support software will increase. Thanks to its proprietary data

and early adoption of AI, ARK believes PagerDuty is positioned to be a prime beneficiary of this trend. PagerDuty is a SaaS provider that helps companies manage alerts, ensuring high service quality and uptime.

- **UiPath** depreciated despite the absence of significant news specific to the company. The company experienced an "equal weight" downgrade from an analyst due to market shifts towards the cloud. UiPath provides a suite of robotic process automation products that automates complex processes under specified compliance and governance standards.
- **Roblox** traded down on minimal company specific news. Roblox provides a creator-first digital entertainment platform and a 3D engine, both of which allow third-party developers around the world to create games and experiences for users.

Market outlook

Broad-based global equity indexes (as measured by the MSCI World) appreciated despite mixed economic signals. Although the labor market remains solid, leading indicators are pointing toward a looming recession. The Federal Reserve District Banks of Dallas, New York, Philadelphia, Richmond, and Kansas publish monthly manufacturing surveys on business activity, all of which are in contraction territory and trending downward. In 2022, Gross Domestic Product (GDP) declined for two consecutive quarters, a technical recession. Now, Gross Domestic Income (GDI), which should equal GDP over time, has declined sequentially. The divergence in growth rates raises questions about whether revision will increase GDI or decrease GDP. ARK's view is the latter.

Relative to the MSCI World Index, the Consumer Discretionary, Industrials, and Materials sectors outperformed in June, while the Utilities, Communication Services, and Consumer Staples sectors lagged, but still had positive performance. Some of the largest beneficiaries of the rotation to cyclical, Energy and Financial Services, could be disrupted significantly during the next five years. In ARK's view, autonomous electric vehicles and digital wallets, including blockchain technologies, cryptocurrencies, and decentralized financial services (DeFi), will disrupt and disintermediate both Energy and Financial Services.

Since March 2021, the yield curve (as measured by the difference between yields on the 10-year Treasury bond and the 2-year Treasury note) has flattened 265 basis points, from 159 to -106 basis points, suggesting that if the Federal Reserve does not pull back its rate increases, both real growth and inflation could continue to surprise on the low side of expectations. US consumer sentiment (as of June 2023, measured by the University of Michigan) remains at levels slightly above those last seen during the 2008-2009 Global Financial Crisis and the early 1980s

when the economy suffered two recessions and inflation and interest rates hit double digits but is still well below levels seen during COVID. Meanwhile, according to Federal Reserve Economic Data (FRED), the consumer saving rate has collapsed from 33% to 4.6%, near levels last seen during the 2008-2009 Global Financial Crisis, suggesting that consumers do not have the means for significant real consumption growth. Additionally, the plummeting willingness of banks to lend is a worrying sign, as it often precedes an impending recession. Adding to the concerns, credit card balances have reached a record level, nearing \$1 trillion, making it the third largest category of non-housing debt. With interest rates on credit cards surging to 21%, the burden of credit card debt has intensified. Meanwhile, interest rate futures are pricing in a slowdown or recession, as recent economic data and comments from the U.S. Federal Reserve indicate a slower pace of interest rate increases. Investors now expect just two more rate hikes before interest rates start to decline, and if the slowdown turns into a hard landing, the interest rate decline could steepen.

In ARK's view, deflation is a more significant risk than inflation, with commodity prices and leading economic indicators falling. The combination of geopolitical forces and inventory hoarding pushed US consumer price inflation, a lagging indicator of inflation, to 4.0% on a year-over-year basis, a rate that ARK believes deflationary forces, good, bad, and cyclical, will continue to unwind.

Innovation is the source of good deflation, as learning curves cut costs and increase productivity. Yet, ARK believes many companies have catered to the short-term-oriented, risk-averse shareholders and have satisfied demands for profits/dividends "now". As a result, many have leveraged their balance sheets to buy back stock, bolster earnings, and increase dividends. In so doing, many have curtailed investments in innovation and could be ill-prepared for the impact of disintermediation associated with disruptive innovation. Burdened with aging products and services, they could be forced to cut prices to clear unwanted inventories and service debt, causing bad deflation.

If ARK is correct in their assessment that growth, inflation, or both will surprise on the low side of expectations, scarce double-digit growth opportunities should be rewarded accordingly. The adoption of new technologies typically accelerates as concerned businesses and consumers change their behavior much more rapidly than otherwise would be the case, giving new leadership an opportunity to surface in the equity market. ARK believes the coronavirus crisis and Russia's invasion of Ukraine have transformed the world significantly and permanently, suggesting that many innovation-driven strategies and stocks could be productive holdings during the next five to ten years.

In ARK's view, the wall of worry built on the back of high

multiple stocks bodes well for equities in the innovation space. The strongest bull markets do climb a wall of worry, a fact that those making comparisons to the tech and telecom bubble seem to forget. No wall of worry existed or tested the equity market in 1999. This time around, the wall of worry has scaled to enormous heights.

While the 2022 bear market obscured many disruptive breakthroughs, innovation continued apace thanks to AI, genomics, and space exploration, among others. In ARK's view, companies sacrificing short-term profitability to invest heavily in innovative technologies will enjoy exponential and highly profitable long-term growth opportunities.

Top 10 holdings (underlying Fund*)

Security Name	% of Fund
Tesla Motors, Inc.	9.2
Roku Inc	7.5
Zoom Video Communications Inc	6.8
Coinbase Global Inc	6.2
Block, Inc	5.9
Unity Software Inc	4.5
Draftkings Inc	4.1
Uipath Inc	4.0
Shopify, Inc. Class A	3.8
Exact Sciences Corporation	3.7

* The Fund invests in the Nikko AM ARK Disruptive Innovation Fund (Underlying Fund), a sub-fund of the Nikko AM Global Umbrella Fund. The Underlying Fund is an open-ended investment company (Company) established under Luxembourg law as a 'société d'investissement à capital variable' (SICAV).

Region exposure (underlying Fund*)

United States	91.27%
Canada	3.80%
Switzerland	3.30%
Belgium	0.59%
Sweden	0.42%
Taiwan	0.10%

Portfolio composition (underlying Fund*)

Element	Exposure (%)
Cloud Computing	16.6
Digital Media	14.3
E-Commerce	9.3
Gene Therapy	8.5
Instrumentation	7.6
Big Data & Machine Learning	6.6
Blockchain & P2P	5.6
Mobile	5.5
Internet of Things	5.3
Molecular Diagnostics	3.8
Beyond DNA	3.4
Energy Storage	3.0
Bioinformatics	2.5
Social Platforms	2.3
3D Printing	1.3
Autonomous Vehicles	1.2
Targeted Therapeutics	0.9
Development of Infrastructure	0.9
Next Generation Oncology	0.7
Robotics	0.6

Features

Investment objective	The Fund aims to achieve a target average total return (before fees, expenses and taxes) of 10% to 15% per annum over a rolling five year period.	
Recommended investment time frame	7+ years	
Fund inception	August 2018	
Fund size	A\$62.7mn as at 30 June 2023	
APIR code	NIK1854AU	
Estimated management cost	1.35% p.a.	
Buy/sell spread	+/- 0.20%	
Platform availability	Asgard BT Panarama Hub24 Macquarie Wrap Mason Stevens Netwealth	OneVue Praemium uXchange Wealth02

Applications and contacts

Investment into the ARK Global Disruptive Innovation Fund can be made by Australian resident investors only.

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