ARK GLOBAL DISRUPTIVE INNOVATION FUND

Net returns as at 31 August 2023

	1 month	3 months	6 months	1 year	2 years p.a.	3 years p.a.	5 years p.a.	Since inception* p.a.
Fund growth return	-9.43	8.62	16.40	13.63	-34.92	-18.05	-0.18	-0.07
Fund distribution return	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.04
Total Fund return‡	-9.43	8.62	16.40	13.63	-34.92	-18.05	-0.14	-0.03
MSCI All Countries World Index^	1.14	6.53	14.83	20.62	4.00	12.08	9.85	9.94

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 underperformed broad based global equities during the month (net).

Key contributors to absolute performance:

- **Archer Aviation** shares soared after the company reported its second quarter earnings, reiterated plans to begin commercialisation of its flying taxis in 2025. Archer also shored up its balance sheet with USD 215 million investment from key partners like Stellantis, Boeing, and United, which ARK was able to participate in. Archer Aviation is an aerospace company aiming to revolutionise mobility with its electric vertical takeoff and landing (eVTOL) products and services.
- **Nvidia** delivered on stronger than expected second quarter results and guidance. Later in the month, Google announced that its A3 supercomputer virtual machines powered by Nvidia's H100 Tensor Core GPUs should be available next month.
- **Spotify** shares appreciated on little company-specific news. ARK believes Spotify will continue to grow its share in the music stream space, in addition to building out its podcasting capabilities.
- **Intuit** shares rallied after delivering a fourth quarter earnings beat, delivering stronger-than-expected top and bottom lines. However, the stock later retreated after delivering soft guidance for its fiscal first quarter. Ark observe that Intuit has made capital investments into AI, which Ark believe will drive a two-sided financial management ecosystem for both consumers and businesses.
- **MercadoLibre** posted strong earnings for the second quarter and cited Brazil and Mexico as the major contributors to profit growth with solid operational KPIs, strong monetization, and cost efficiency. Later in the month, MercadoLibre appointed a new CFO.

Key detractors from absolute performance:

- Shares of **Block** declined on relatively little company specific news. ARK believes Block is uniquely positioned to combine its seller and consumer ecosystems in the future, unlocking potential value unobtainable by other fintech firms.
- Shares of **Roku** declined after an investment firm downgraded the stock from "Buy" to "Neutral", stating that any coming reacceleration in revenue in 2024 was "priced in". Roku is a connected television (CTV) operating system and hardware provider that distributes various streaming platforms to millions of households globally.
- Shares of **Coinbase** traded down following the announcement of the company's third-quarter results, which included a smaller loss than expected and stronger than expected revenue.
- Shares of **Roblox** fell after the company reported second-quarter earnings with lower-than-expected headline numbers that masked excellent underlying growth dynamics. The year-over-year growth in Roblox bookings, total hours, and daily active users was robust: 22%, 24%, and 26%, respectively. While CEO David Baszucki suggested during the earnings call that developer exchange fees this year will approach $800 million, more than analysts had

expected, ARK believes that he was rounding existing guidance, not changing formal guidance. Thanks to its growing audience of older gamers, impressive product velocity, expertise in generative AI, and growing advertiser base, Roblox seems poised for continued strong growth. 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.

- Shares of Unity traded down following the announcement of earnings results. For the second quarter, the company reported its sales were USD 533.5 million compared to USD 297.0 million a year ago. Net loss was USD 192.2 million compared to USD 204.2 million a year ago.

Market outlook

Broad-based global equity indexes (as measured by the MSCI World) declined during the month. Relative to the MSCI World Index, the Energy and Health Care sectors performed best in August, while the Utilities and Materials sectors lagged. Some of the largest beneficiaries of the rotation to cyclicals – Energy and Financial Services – could be disrupted significantly during the next five years. In ARK' 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.

Monthly data highlights are shown below:

- The gap between the year-over-year percent changes in real Gross Domestic Product (GDP) and real Gross Domestic Income (GDI) has reached an unprecedented level, despite the theoretical expectation that the two should be equal over time as they represent income earned and the value of goods and services produced. This discrepancy is usually resolved through revisions, most commonly to GDP. Jeremy Nalewaik, a former Federal Reserve economist, contends that GDI might be a more reliable economic indicator, citing research that advance estimates of GDI more closely align with the final figures of both GDP and GDI.
- For the first time since 2009, the Real Federal Funds Policy Rate has exceeded the Natural Rate of Interest, indicating a shift toward restrictive monetary policy. Given that monetary policy effects manifest with long and variable delays, this suggests an intensifying downward pressure on lending and borrowing. Concurrently, the spread between the Real Federal Funds Policy Rate and the Natural Rate is expected to widen further as inflation continues to decelerate.
- Employment, a lagging economic indicator, has been heavily influential in the Federal Reserve's rate decisions, especially in the wake of labor disruptions caused by the COVID-19 pandemic. Though these disruptions should have been resolved by now, government revisions have consistently downgraded nonfarm payroll statistics for six consecutive months, indicating a weaker labor market than initially reported. This pattern of downward revisions, last seen in 2007 just before the onset of the Great Financial Crisis, raises concerns about the state of the labor market and its potential impact on economic stability.
- US consumer sentiment remains at levels last seen during the Global Financial Crisis in 2008-2009 and back-to-back recessions with double-digit inflation and interest rates during the early 1980s. Meanwhile, the personal saving rate has collapsed from 9.3% pre-COVID to 3.5% which, when coupled with historically low consumer sentiment, is pointing toward weakness in consumption growth. Adding to those concerns, the third largest category of non-housing debt, credit card balances have reached a record high level at $1 trillion. Because interest rates on credit cards nearly doubled to 20-21% during the past ten years, the burden of credit card debt has intensified. Additionally, student loan payments are slated to resume this October, further pressuring consumer purchasing power.

Recent economic data and comments from the US Federal Reserve (Fed) appear to have tempered investors' previous expectations of interest rate declines. Now, interest rate futures are pricing in a slowdown or recession and potentially one more rate hike before interest rates start to decline. Should an economic slowdown evolve into a hard landing, the slope of interest rate declines could steepen.

The Federal Funds Target Rate has surged 22-fold in the last year, a faster pace than all previous tightening cycles—including the one in 1980-1981 that crushed inflation—creating significant strains at regional banking and in commercial real estate. Bank deposits have dropped 4.0% year-over-year, the largest decline since 1948. We believe additional rate hikes will exacerbate this fragile situation.

While the Fed is determined to squelch inflation by increasing interest rates, the bond market has been signaling that it could be making a major mistake. 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 by 235 basis points, inverting from +159 to -76 basis points, the worst inversion since the early 1980s when the Fed was fighting entrenched double-digit inflation. This dynamic suggests that both real growth and inflation could surprise on the low side of expectations. In ARK's view, the Fed is making decisions based on lagging indicators, employment and headline inflation, and ignoring leading indicators that are telegraphing recession and/or price deflation.

The Federal Reserve began increasing interest rates when the year-over-year Consumer Price Index (CPI), a lagging economic indicator, reached 8.5% on a year-over-year basis in March 2022. Shortly thereafter, an inflationary surge influenced by geopolitical pressures and inventory hoarding peaked at 9.1% year-over-year. Since then, CPI inflation has dropped to 3.2%, thanks to various deflationary forces, good, bad, and cyclical.

Innovation is a potential source of good deflation, as learning curves can cut costs and increase productivity. Yet, ARK believes many companies have catered to short-term-oriented, risk-averse shareholders, satisfying their demands for profits/dividends "now". On balance, they have leveraged their balance sheets to buy back stock, bolster earnings, and increase dividends. In so doing, many have curtailed investments and could be ill-prepared for the potential disintermediation associated with disruptive innovation. Saddled 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 during tumultuous times as concerned businesses and consumers change their behavior much more rapidly than otherwise would be the case. As a result, stocks of innovation-oriented companies have historically performed better and emerged as new market leaders toward the end of a bear 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 bodes well for equities in the innovation space. The strongest bull markets climb walls 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.

Sector exposure (underlying Fund*)

Element	Exposure (%)
Information Technology	30.4
Health Care	23.0
Communication Services	14.8
Financials	14.3
Consumer Discretionary	13.2
Materials	3.0
Industrials	1.3

Portfolio composition (underlying Fund*)

Element	Exposure (%)
Cloud Computing	16.1
Digital Media	15.5
E-Commerce	8.5
Big Data & Machine Learning	7.1
Gene Therapy	6.8
Blockchain & P2P	6.7
Instrumentation	6.3
Mobile	5.7
Beyond DNA	5.1
Internet of Things	5.0
Molecular Diagnostics	2.8
Energy Storage	2.7
Social Platforms	2.6
Robotics	2.2
Bioinformatics	1.9
Next Generation Oncology	1.9
Autonomous Vehicles	1.1
Development of Infrastructure	0.8
Targeted Therapeutics	0.7
3D Printing	0.6

Top 10 holdings (underlying Fund*)

Security Name	% of Fund
Roku Inc	8.4
Tesla Inc	8.1
Zoom Video Communications Inc	7.3
Coinbase Global Inc	6.4
Block Inc	5.4
DraftKings Inc	4.5
Unity Software Inc	3.9
Twilio Inc	3.9
UiPath Inc	3.8
Shopify Inc	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).*

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$61.8 million as at 31 August 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.

Website www.yarracm.com

Investor Services Team 1800 034 494 (Australia) +61 3 9002 1980 (Overseas) IST@yarracm.com