

Information is as of March 31, 2019 | For Informational Purposes Only



ARK
INVEST

— WHY INVEST IN

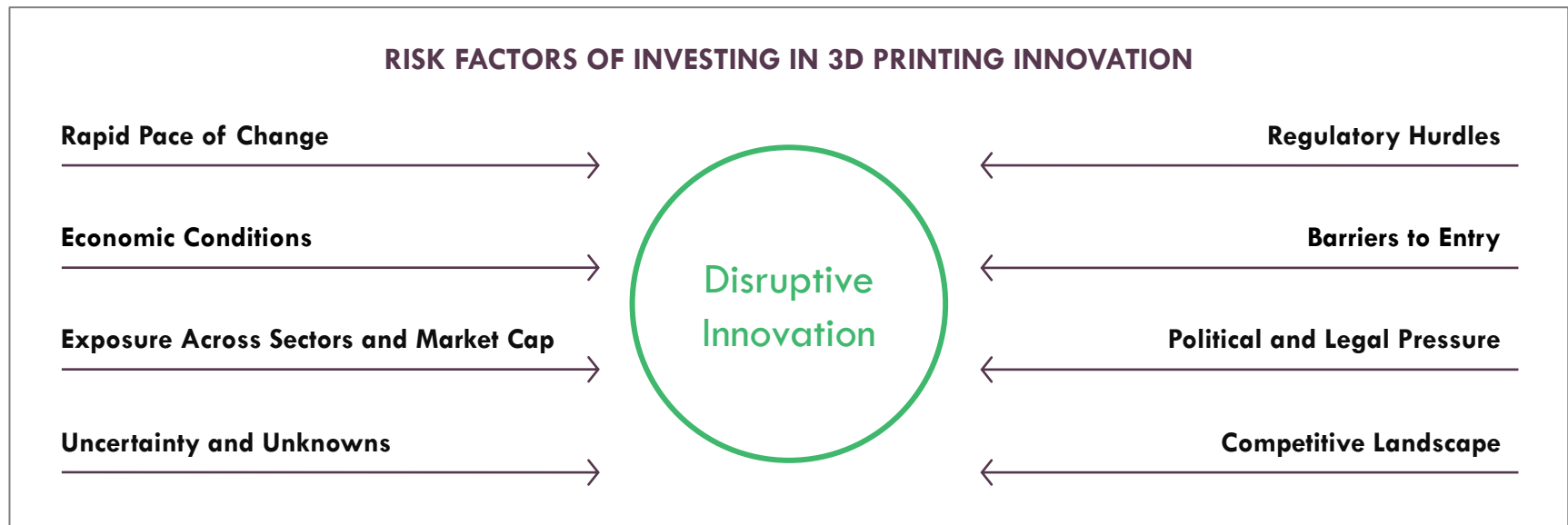
THE 3D PRINTING OPPORTUNITY (PRNT)

www.ark-funds.com



Risks of Investing in 3D Printing 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 of 3D Printing, 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.**



→ Aim for a cross-sector understanding of technology and combine top down and bottom up research.

→ Aim to understand the regulatory, market, sector, and company risks. (See Risk Disclosure on page 14)



3D PRINTING HAS THE POTENTIAL TO REVOLUTIONIZE TRADITIONAL MANUFACTURING

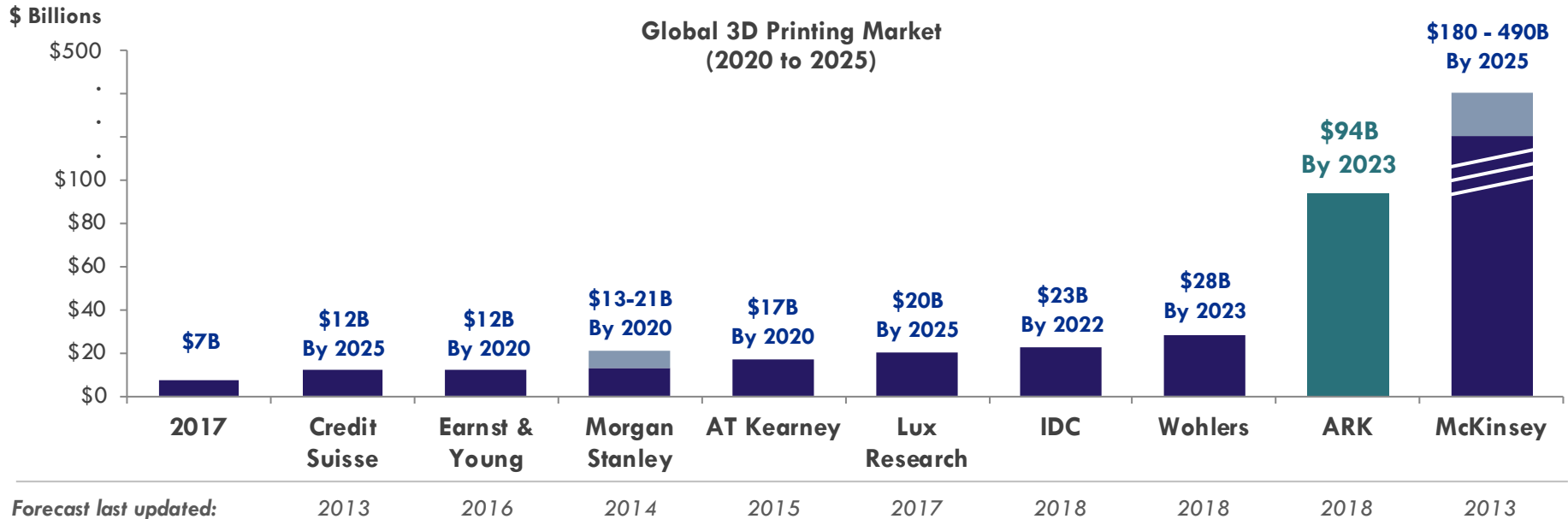
By building objects layer-by-layer instead of removing material from a larger block or using a mold, 3D printing offers a range of benefits:

- **SHORTENS DESIGN-TO PRODUCTION TIME.**
- **SHIFTS POWER TO THE DESIGNERS.**
- **CREATES PRODUCTS WITH LESS WASTE AND RADICALLY NEW ARCHITECTURES AT A FRACTION OF THE COST OF TRADITIONAL MANUFACTURING.**



ANALYSTS HAVE HIGH PROJECTIONS FOR THE 3D PRINTING MARKET

- ARK estimates that the 3D printing market could grow to \$94 billion by 2023.





3D PRINTING IS IN ITS INFANCY

- The next frontier for 3D printing will be the end use parts market - **an additional \$490 billion opportunity.*** (as shown in the 3D Printing Global Market Penetration figure below)

3D Printing Market Potential and Its Current Penetration

	PROTOTYPES	MOLDS & TOOLS	END USE PARTS
Market size:	\$12.5 Billion	\$30 Billion	\$490 Billion
First Applications	1980's	1990's	Early 2000's
Current Penetration	40-50%	6%	1%



3D PRINTING IS PENETRATING THE AEROSPACE & AVIATION INDUSTRY

- ARK estimates that 3D printing has penetrated only 1% of the addressable market for aircraft.
- Given 10-20% gross margins, aerospace companies have significant incentives to adopt 3D printing.

CASE STUDY 1: Advanced Turboprop Engine (ATP)¹

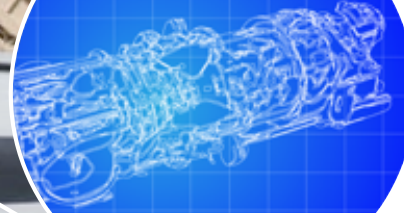
- Number of parts dropped from 855 to just 12
- Fuel burn lowered 20%
- Weight reduced by 5%
- Test schedules cut in half to 6 months

CASE STUDY 2: GEnx Engine Metal Bracket²

- 20 components combined into one single piece
- Manufacturing waste reduced by 90%
- Weight reduced by 10%
- New part less expensive to produce



3D PRINTED PART



Boeing estimates that 3D printing could save \$2-3 million per plane.

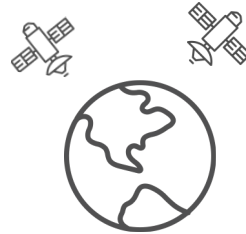
Aircraft can fly further, faster, cheaper, with more payload.



THE END-USE PARTS MARKET SHOULD GROW RAPIDLY, EVEN IN SPACE

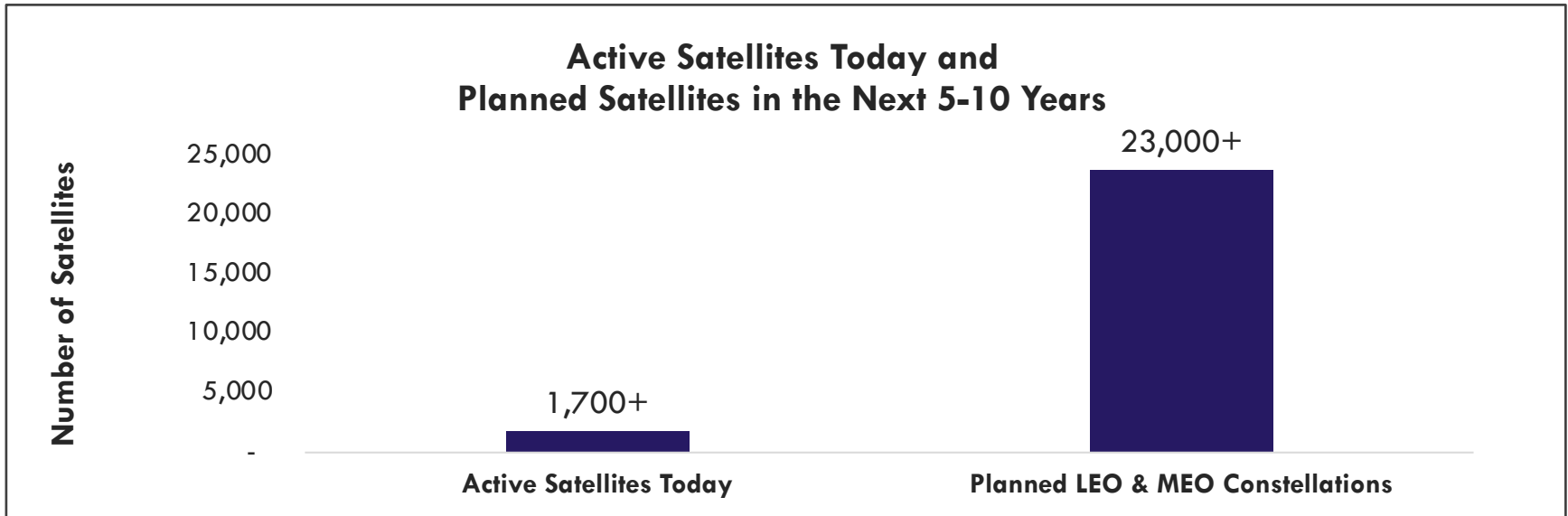
3D PRINTING ON EARTH

- Cost declines in rockets, satellites, and antennas are leading to a new space age.
- **Lockheed Martin estimates that it will be able to produce 3D printed satellites twice as fast at half of the cost.¹**



3D PRINTING IN SPACE

- Today, the cost to launch an object into space is \$10,000 per payload pound.
- Eventually, parts will be printed in-orbit, either with materials brought from earth or mined from Mars.



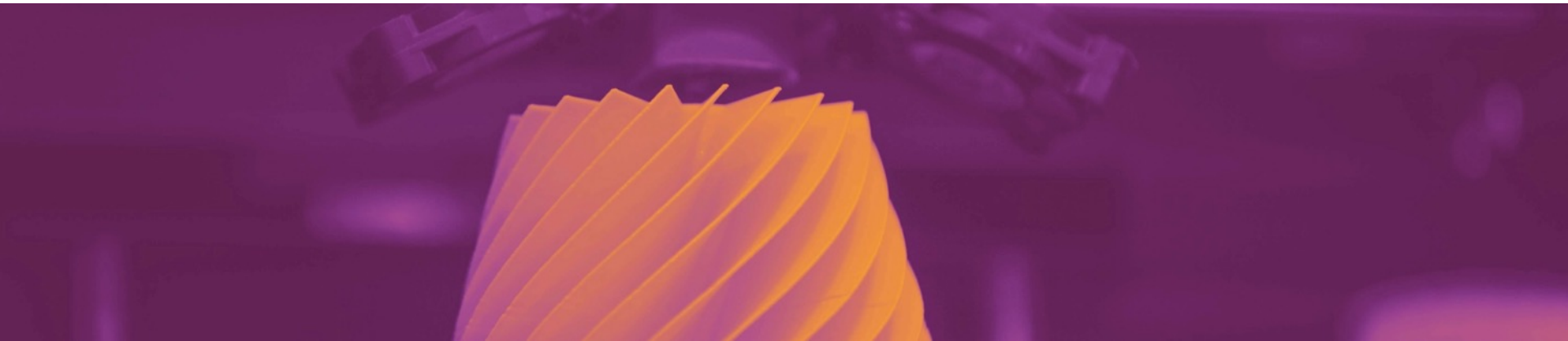
Forecasts are inherently limited and cannot be relied upon.

Sources: ARK Source: ARK Investment Management LLC, 2018 ; UCS Satellite Database, , <https://arkinv.st/2Fptsff>.

[1] Pappalardo, Joe, "Lockheed Martin Is 3D-Printing Giant Titanium Space Parts", Popular Mechanics, Jul 12, 2018, <https://arkinv.st/2sgniGp>



ARK SEEKS TO CAPTURE THE 3D PRINTING OPPORTUNITY





THE 3D PRINTING ETF (PRNT) TRACKS THE PERFORMANCE OF THE TOTAL 3D-PRINTING INDEX (3DPRNT)

The Total 3D-Printing Index is designed to track the price movements of exchange listed companies from the U.S., non-U.S. developed markets and Taiwan that are engaged in 3D printing related businesses within the following business lines: 3D printing hardware, computer aided design and 3D printing simulation software, 3D printing centers, scanning and measurement, and 3D printing materials.

Index Details

- Index: Total 3D-Printing Index
- Weighting Method: Multi-Factor Weighting (Equal within each Factor)
- Rebalance: Quarterly
- Index Calculator: Solactive AG



The 3D Printing ETF (PRNT)

“Shaping the Future of Design and Manufacturing”

PRNT seeks to provide investment results that closely correspond, before fees and expenses, to the performance of the Total 3D-Printing Index, which is designed to track the price movements of stocks of companies involved in the 3D printing industry.

- **Ticker:** PRNT
- **Assets Under Management:** \$38 Million
- **Number of Holdings:** 49
- **Expense Ratio:** 0.66%
- **Index: Total 3D Printing Index**
- **Weighting Method: Multi-Factor Weighting (Equal within each Factor)**

TOP 10 HOLDINGS

	Weight
EXONE CO/THE	6.1%
STRATASYS LTD	6.1%
MGI DIGITAL GRAPHIC TECHNOLO	5.6%
PRODWAYS GROUP SA	5.5%
SLM SOLUTIONS GROUP AG	5.1%
3D SYSTEMS CORP	5.1%
HP INC	4.9%
RENISHAW PLC	4.8%
ORGANOVO HOLDINGS INC	4.8%
DASSAULT SYSTEMES SE	4.3%

Holdings are subject to change and should not be considered as investment advice, or a recommendation to buy, sell or hold any particular security.

52.3%

MARKET CAPITALIZATION

Mega (100 B+)	5.4%
Large (10-100 B)	35.3%
Medium (2-10 B)	12.4%
Small (300M-2B)	24.9%
Micro (50-300M)	21.6%

INDEX FACTORS WEIGHT AT REBALANCE

3D Printing Hardware	50%
CAD and Simulation Software	30%
3D Printing Centers	13%
Scanning and Measurement	5%
3D Printing Materials	2%

SECTORS

Information Technology	58.1%
Industrials	30.0%
Health Care	10.3%
Materials	1.1%
Funds	0.4%
Consumer Staples	0.1%



WHY INVESTORS SHOULD CONSIDER THE 3D PRINTING ETF (PRNT)

- 1. Targeted Exposure to Innovation:** ARK believes 3D printing is misunderstood today, leading to historically poor market performance and stock declines for companies in this industry. However, ARK expects 3D printing to revolutionize manufacturing by collapsing the time between design and production, reducing costs, and providing greater design complexity, accuracy and customization.
- 2. Growth Potential:** The Fund aims to provide investment results that closely correspond to the performance of the Total 3D-Printing Index, which is designed to track companies involved in the 3D printing industry. ARK believes 3D printing is one of the highest growth potential industries in the economy and is set to transform the manufacturing landscape.

PRNT is the first, and only, ETF in the U.S. to focus solely on the most innovative companies within the 3D printing ecosystem.

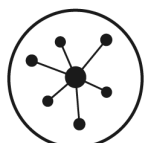


THEMATIC STRATEGIES FOCUSED ON DISRUPTIVE INNOVATION



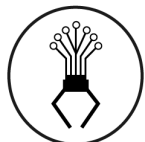
ARK Innovation ETF^{1,2}

Ticker: ARKK



ARK Web x.0 ETF³

Ticker: ARKW



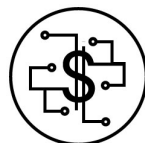
ARK Industrial Innovation ETF

Ticker: ARKQ



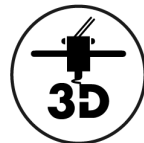
ARK Genomic Revolution ETF⁴

Ticker: ARKG



ARK Fintech Innovation ETF

Ticker: ARKF



The 3D Printing ETF

Ticker: PRNT



Israel Innovative Technology

Ticker: IZRL




- (1) "Active ETF of the Year" (2017, 2018)⁺
- (2) "ETF of the Year" (2017)⁺⁺
- (3) "ETF Innovative Product of the Year" (2015)⁺⁺⁺
- (4) "ETF Innovation" (2018)⁺

www.ark-funds.com



**For information regarding ARK's ETFs, please contact our sales partner,
Resolute Investment Distributors at 1-800-679-7759 or send an email to etfs@ark-invest.com**

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

ARK Invest
3 East 28th Street, 7th Floor
New York, NY 10011

©2019, ARK Investment Management LLC. No part of this material may be reproduced in any form, or referred to in any other publication, without the express written permission of ARK Investment Management LLC ("ARK").

The information provided is for informational purposes only and is subject to change without notice. This presentation does not constitute, either explicitly or implicitly, any provision of services or products by ARK, and investors should determine for themselves whether a particular investment management service is suitable for their investment needs. All statements made regarding companies or securities are strictly beliefs and points of view held by ARK, and are not endorsements by ARK of any company or security or recommendations by ARK to buy, sell or hold any security. Historical results are not indications of future results.

Certain of the statements contained in this presentation may be statements of future expectations and other forward-looking statements that are based on ARK's current views and assumptions, and involve known and unknown risks and uncertainties that could cause actual results, performance or events to differ materially from those expressed or implied in such statements. The matters discussed in this presentation may also involve risks and uncertainties described from time to time in ARK's filings with the U.S. Securities and Exchange Commission. ARK assumes no obligation to update any forward-looking information contained in this presentation. ARK and its clients as well as its related persons may (but do not necessarily) have financial interests in securities or issuers that are discussed. Certain information was obtained from sources that ARK believes to be reliable; however, ARK does not guarantee the accuracy or completeness of any information obtained from any third party.

Investors should carefully consider the investment objectives and risks as well as charges and expenses of an ARK ETF before investing. This and other information are contained in the ARK ETFs' prospectuses, which may be obtained by visiting www.ark-funds.com. The prospectus should be read carefully before investing.

Fund Risks: The principal risks of investing in ARK's Index ETFs include equity, market, concentration and non-diversification risks, as well as fluctuations in market value and net asset value ("NAV"). The principal risks of investing in PRNT: **Equity Securities Risk.** The value of the equity securities the Fund holds may fall due to general market and economic conditions. **Foreign Securities Risk.** Investments in the securities of foreign issuers involve risks beyond those associated with investments in U.S. securities. **Index Tracking Risk.** The returns of the ETF may not match the returns of the underlying index that the ETF is designed to track. **Industrials Sector Risk.** Companies in the industrials sector may be adversely affected by changes in government regulation, world events, economic conditions, environmental damages, product liability claims, high barriers to entry and exchange rates. Companies in the aerospace and defense industry rely to a large extent on U.S. (and other) Government demand for their products and services and may be significantly affected by changes in government regulations and spending, as well as economic conditions and industry consolidation. **Information Technology Sector Risk.** 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.

PRNT has a limited number of financial institutions that may act as Authorized Participants ("APs") on an agency basis (i.e., on behalf of other market participants). To the extent that those APs exit the business or are unable to process creation and/or redemption orders, and no other AP is able to step forward to create and redeem in either of these cases, shares may possibly trade at a discount to NAV. The AP risk may be heightened in the case of ETFs investing internationally because international ETFs often require APs to post collateral, which only certain APs are able to do. ETF shares may only be redeemed directly with the ETF at NAV by Authorized Participants, in very large creation units.

Index Descriptions: The Total 3D-Printing Index is composed of equity securities and depositary receipts of exchange listed companies from the U.S., non-U.S. developed markets and Taiwan that are engaged in 3D printing related businesses within the following business lines: (i) 3D printing hardware, (ii) computer aided design and 3D printing simulation software, (iii) 3D printing centers, (iv) scanning and measurement, and (v) 3D printing materials. The S&P 500® Index is a widely recognized capitalization-weighted index that measures the performance of the large-capitalization sector of the U.S. stock market. The MSCI World Index represents large and mid-cap equity performance across 23 developed markets countries. Returns shown for the MSCI World Index are net of foreign withholding taxes applicable to U.S. investors. Securities in the ETF's portfolio will not match those in any index. You cannot invest directly in an index. Although reinvestment of dividend and interest payments is assumed, no expenses are netted against an index's returns. Index performance information was furnished by sources deemed reliable and is believed to be accurate, however, no warranty or representation is made as to the accuracy thereof and the information is subject to correction.

Portfolio holdings will change and should not be considered as investment advice or a recommendation to buy, sell or hold any particular security. Please visit www.ark-funds.com for the most current list of holdings for the ARK ETFs.

DISCLOSURES 2/2



The information herein is general in nature and should not be considered financial, legal or tax advice. An investor should consult a financial professional, an attorney or tax professional regarding the investor's specific situation. Certain information was obtained from sources that ARK believes to be reliable; however, ARK does not guarantee the accuracy or completeness of any information obtained from any third party.

ARK Investment Management LLC is the investment adviser to the ARK ETFs.

Foreside Fund Services, LLC, distributor.



Award Information

“Women In Finance, Outstanding Contribution” 2016: Number of Nominees: Unknown. Ranking Entity: Markets Media; Length of the period: 12 Months

Criteria on which the ranking is based: Markets Media’s editorial team identifies candidates via online submissions from market participants, including those across the institutional buy side and sell side. (Award Page: marketsmedia.com/announcing-the-2016-markets-choice-award-winners/)

“ETF Innovative Product of the Year” 2016 — Number of Nominees: Four; Ranking Entity: Fund Action; Length of the period: 12 Months

Criteria on which the ranking is based: 1. Positive inflows and performance – against an immediate peer group; 2. Genuine innovation in a number of areas – fees, distribution and new investment ideas; 3. The market perception and the opinion of the analyst community; 4. Feedback from key investor representatives – intermediaries and distribution platforms (Award Page: eiseverywhere.com/ehome/148459/338713/?&)

“ETF Provider of the Year” and “Active ETF of the Year” 2018— Number of Nominees: Unknown. Ranking Entity: Fund Intelligence; Length of the period: 12 Months;

“ETF Suite of the Year”, “ETF Innovation”, and “Active ETF of the Year” 2019— Number of Nominees: See below. Ranking Entity: Fund Intelligence; Length of the period: 12 Months; Other Finalists “Active ETF of the Year” 2018: TrimTabs All Cap U.S. Free-Cash-Flow ETF (TTAC), WBI BullBear Yield 1000 ETF (WBIQ), WisdomTree U.S. Quality Shareholder Yield Fund (QSY); Other Finalists “ETF Suite of the Year” 2018: DWS’ Xtrackers ESG ETF suite, Global X Suite of Thematic Growth ETFs, IndexIQ’s Alternative ETF Suite, Invesco’s Smart Beta ETF Suite, WisdomTree’s Rising Rates Solutions Suite; Other Finalists “ETF Innovation” 2018: Global X MLP & Energy Infrastructure ETF (MLPX), Nationwide Maximum Diversification U.S. Core Equity ETF (MXDU, PPTY-U.S. Diversified Real Estate ETF (PPTY), Salt High truBeta™ US Market ETF (SLT), Vesper U.S. Large Cap Short-Term Reversal Strategy ETF (UTRN), WisdomTree Interest Rate Hedged High Yield Bond Fund (HYZD) | Methodology: Ranking Entity: Fund Intelligence; Length of the period: 12 Months; Criteria on which the ranking is based: The winners are comprised of the individuals and firms who have been nominated via the online submission process and through recommendations from market participants. Judges will use the submitted application material, as well as any uploaded supplemental information, to make a determination on the firm, individual or product they believe to be the most suitable and deserving winners for each category. The Judges’ Choice Awards are adjudicated by a panel of industry experts convened by the Fund Action and Fund Directions editorial teams. The industry judges contribute their sector expertise to debate the merits of shortlist candidates to come to a decision on the winners. (Award Page: mutualfundindustryawards.awardstage.com/)

“ETF of the Year” 2017 — Other Finalists: iShares Core S&P 500 ETF (IVV), SPDR Portfolio Total Stock Market ETF (SPTM), U.S. Tax Reform Fund (TAXR), WisdomTree Emerging Markets ex-State-Owned Enterprises Fund (XSOE), Vanguard Total Bond Market ETF (BND); Ranking Entity: ETF.com; Length of the period: 12 Months

“Most Innovative ETF Issuer of the Year” 2017 — Other Finalists: Alpha Architect, EventShares, Exchange Traded Concepts, iShares by BlackRock, State Street Global Advisors; Ranking Entity: ETF.com; Length of the period: 12 Months

ETF.com Awards Page: etf.com/sections/features-and-news/and-2017-etfcom-awards-winners-are | Methodology: ETF.com Award winners are selected in a three-part process designed to leverage the insights and opinions of leaders throughout the ETF industry. Step 1: The awards process began with an open nomination period running from Dec. 4, 2017, through Jan. 2, 2018. We received hundreds of nominations from participants in all corners of the ETF space. Step 2: Following the open nominations process, the ETF.com Awards Nominating Committee—made up of senior leaders at ETF.com, Inside ETFs and FactSet—voted to select up to five finalists in each category. Votes were tallied on a majority basis. The members of the 2017 Nominating Committee were: Matt Hougan, CEO, Inside ETFs (Chair); Paul Britt, Senior Analyst, FactSet; Elisabeth Kashner, Director of ETF Research, FactSet; Dave Nadig, Managing Director, ETF.com; Drew Voros, Editor-in-Chief, ETF.com Step 3: Winners from these finalists were selected by a majority vote of the ETF.com Awards Selection Committee, a group of independent ETF experts. Committee members recused themselves from voting in any category in which they or their firms appeared as finalists. Ties were decided where possible with head-to-head runoff votes. The members of the 2017 Awards Selection Committee were: Kim Arthur, Main Management; Eric Balchunas, Bloomberg Intelligence; Ben Blaisdell, US Trust; Rob Glowica, RiverFront; Tom Lydon, ETFrends; Phil Mackintosh, Virtu; Tyler Mordy, Forstrong Global Asset Management; Jason Nicastro, LPL Financial; Todd Rosenbluth, CFRA; Jim Wiandt, Industry Expert. Voting was completed by Jan. 20, 2018, but results were kept secret until their announcement at the ETF.com U.S. Awards Dinner on March 22, 2018

Past performance is not indicative of future performance. The Adviser did not pay a fee to be considered for or granted the awards. The Adviser did not pay any fee to the grantor of the awards for the right to promote the Adviser’s receipt of the awards nor was the Adviser required to be a member of an organization to be eligible for the awards.