Theia Insights

Portfolio Analysis

Client Portfolio - ARKK

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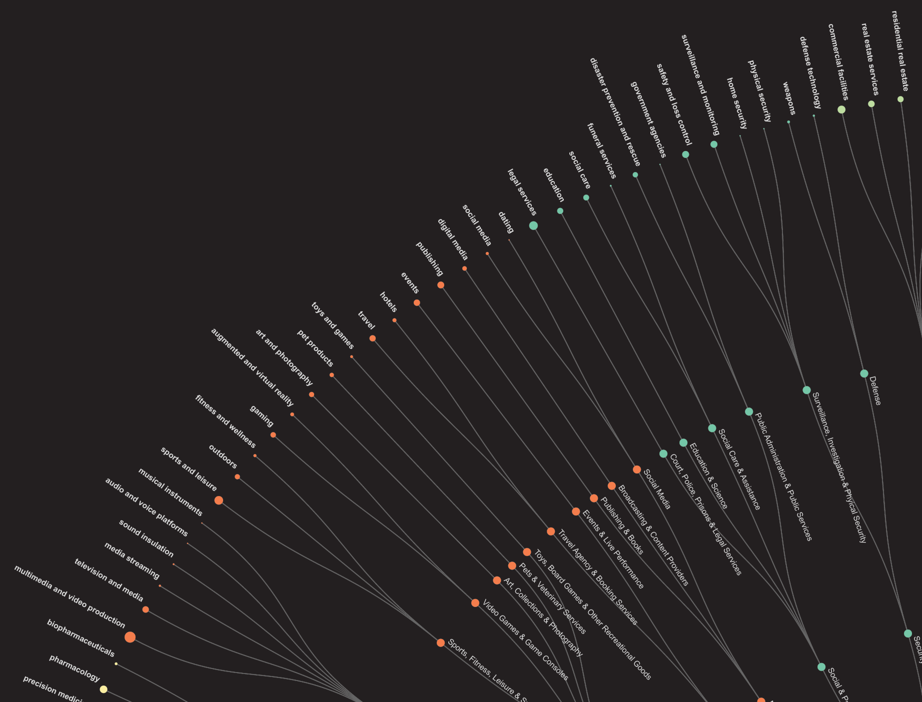

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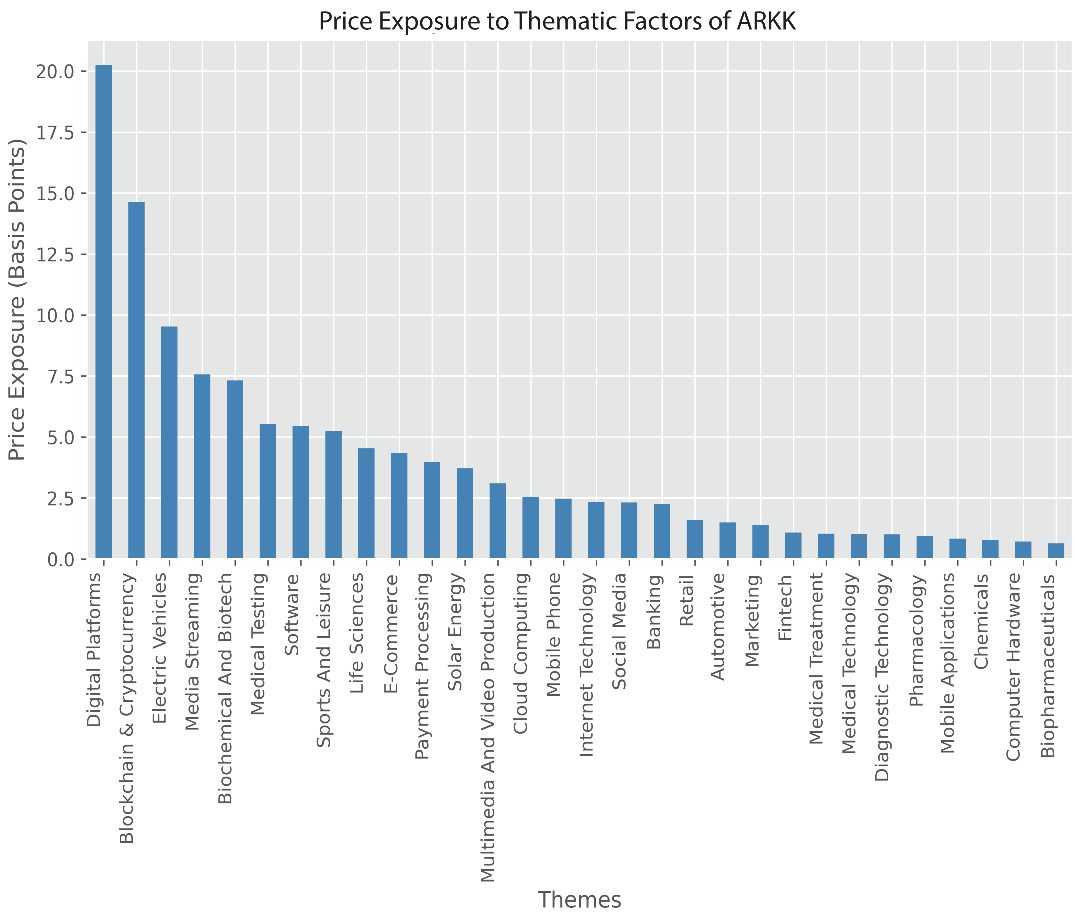
What's in my portfolio?

This report analyses a client portfolio - ARKK, an actively managed ETF focused on 'disruptive innovation,' using the S&P 500 as a benchmark, reflecting the U.S. large-cap equities. ARKK invests in transformative tech-based companies such as Tesla and Coinbase Global, while the S&P 500 encompasses the 500 largest U.S. public companies. We scrutinize the influential factors and themes for both, aiming to provide succinct, comprehensible insights for strategic investment alignment



The graph highlights the portfolio's varying theme exposures, measured by Price Exposure - the predicted portfolio value shift due to a theme's value change. This differs from Business Exposure, which shows a company's reported involvement in a theme. Calculated through our proprietary algorithm using stock return analyses, Price Exposure more accurately reflects market-perceived theme exposure.

ARKK's portfolio shows high sensitivity to changes in 'Digital Platforms,' with a price exposure of 0.20. Notably, the company 'Unity Software' (U) ranks first in this theme. Other themes ARKK is sensitive to include 'Blockchain & Cryptocurrency,' 'Electric Vehicles,' 'Media Streaming,' and 'Biochemical and Biotech,' among others.

ARKK is more sensitive to tech-focused themes such as digital platforms and blockchain, while S&P500 has diversified exposure across a wider range of sectors including mobile phones, oil and gas, and semiconductors. This reflects ARKK's investment strategy to seek disruptive, innovative companies, compared to S&P500's broader market representation.

Portfolio Overview

Client Portfolio v. S&P 500 Benchmark

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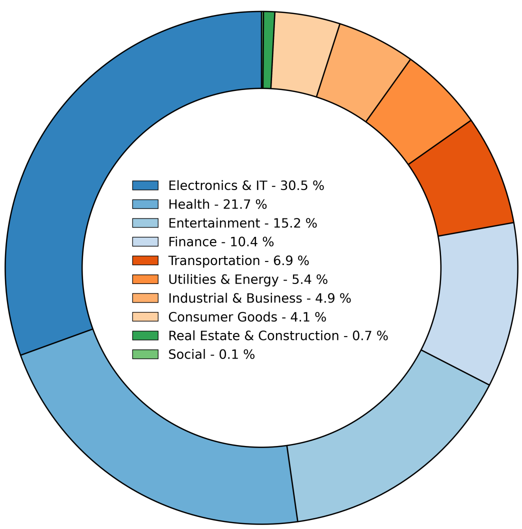
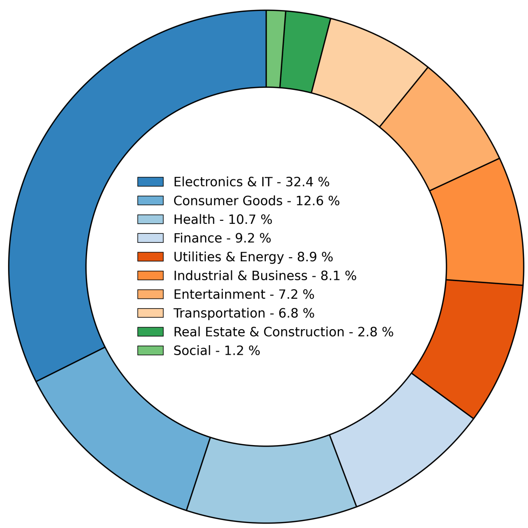
What’s in my portfolio compared to S&P 500?

I. Industry Breakdown



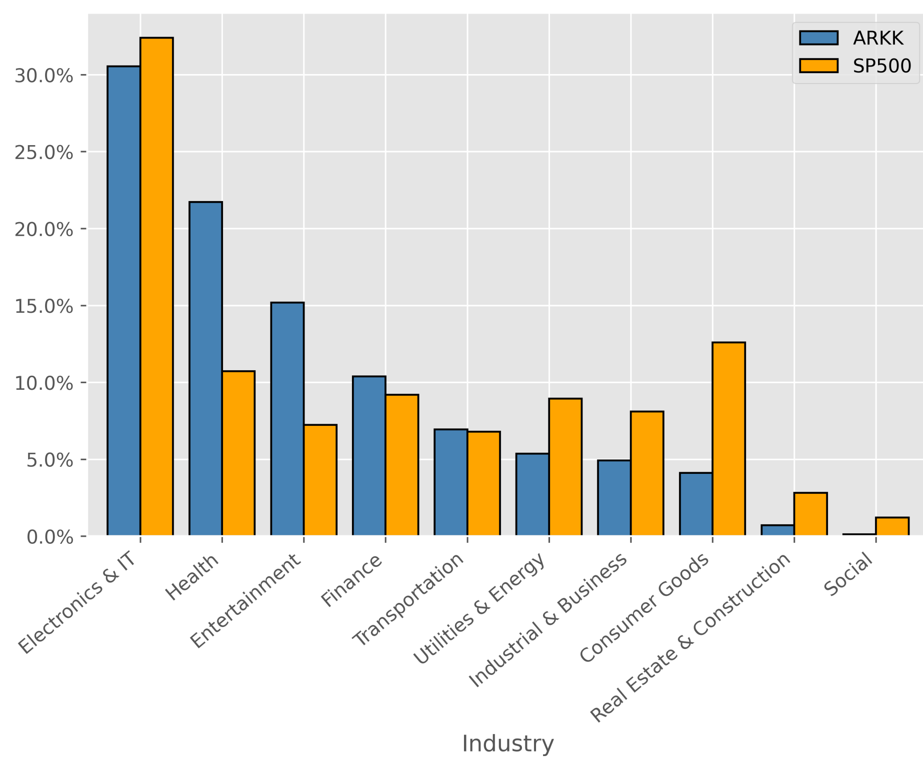
ARKK Industry Exposure



S&P500 Industry Exposure

The industry breakdown is based on the Business Exposure, derived from analyzing the company activity reports using Natural Language Processing (NLP). If a company spans multiple industries, we calculate weights accordingly for each relevant industry.

Business Exposure provides insights into the company's direct industry involvements, whereas Price Exposure shows how the market perceives a company's industry influences.



This illustration juxtaposes the industry exposure of Portfolio ARKK as of 2023-07-05, and Portfolio SP500 as of 2023-06-29. The showcased ten industries correspond to the first tier of Theia Insights Industry Classification (TIIC). The arrangement of industries is sorted according to the exposure level of Portfolio ARKK.

Top Industries

Electronics & IT: Significant investments in 'Software' and 'Digital Platforms.'

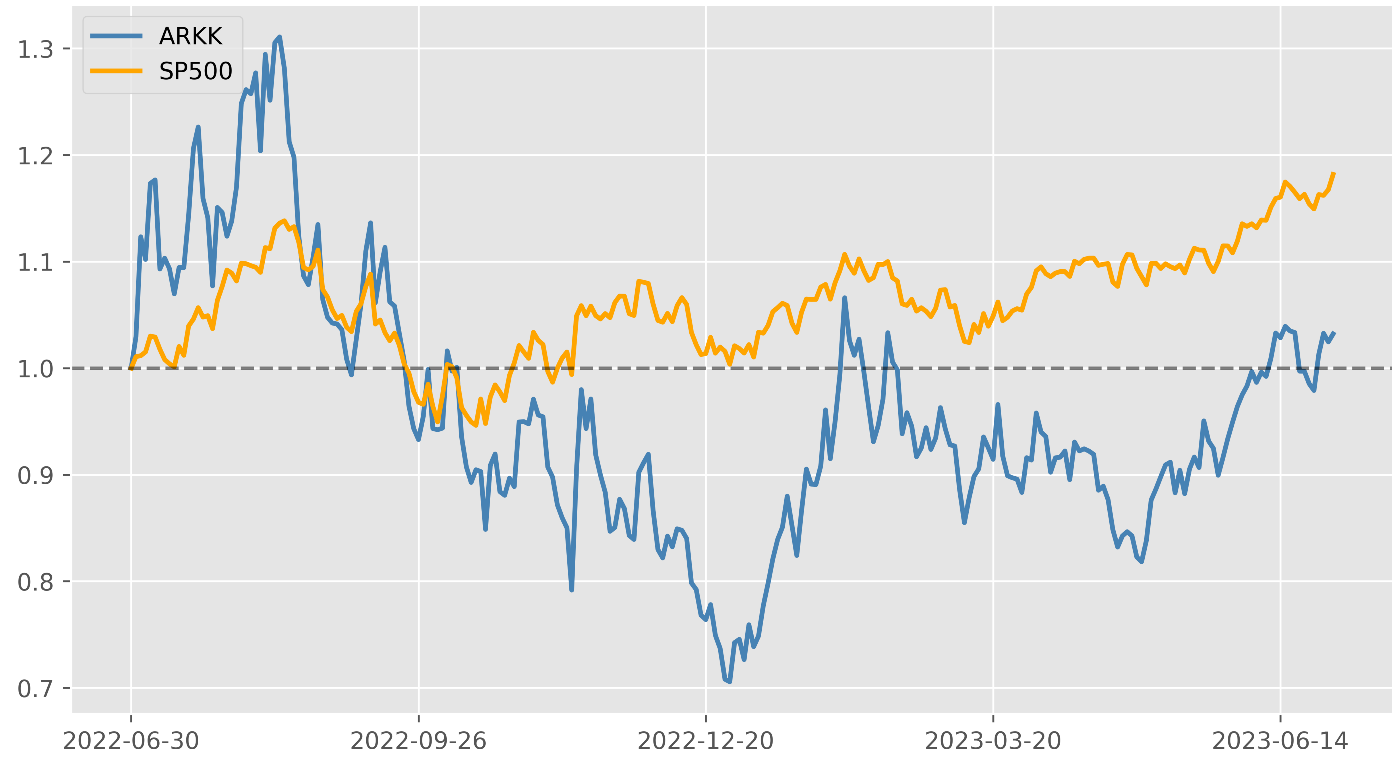
Heath: substantial allocations in 'Pharmacology,' 'Biochemical and Biotech,' and 'Life Sciences.'

Entertainment: Especially in Gaming and Video streaming.

Finance: Primarily centered around 'Payment Processing' and 'Financial Services.'

Others: Transportation - 'Electric Vehicles'. Utilities - mainly through investments in 'Renewable and Clean Energy' and 'Solar Energy.'

What happened to my portfolio?



This figure presents the normalized value histories of the two portfolios under comparison, ARKK and SP500, spanning from 2022-06-30 to 2023-06-30. The values are reconstructed using the holdings data as of 2023-07-05 for ARKK, and 2023-06-29 for SP500. Please note that due to the unavailability of daily holdings data, the reconstructed value history may have minor discrepancies. The initial value has been normalized to 1 for ease of interpretation.

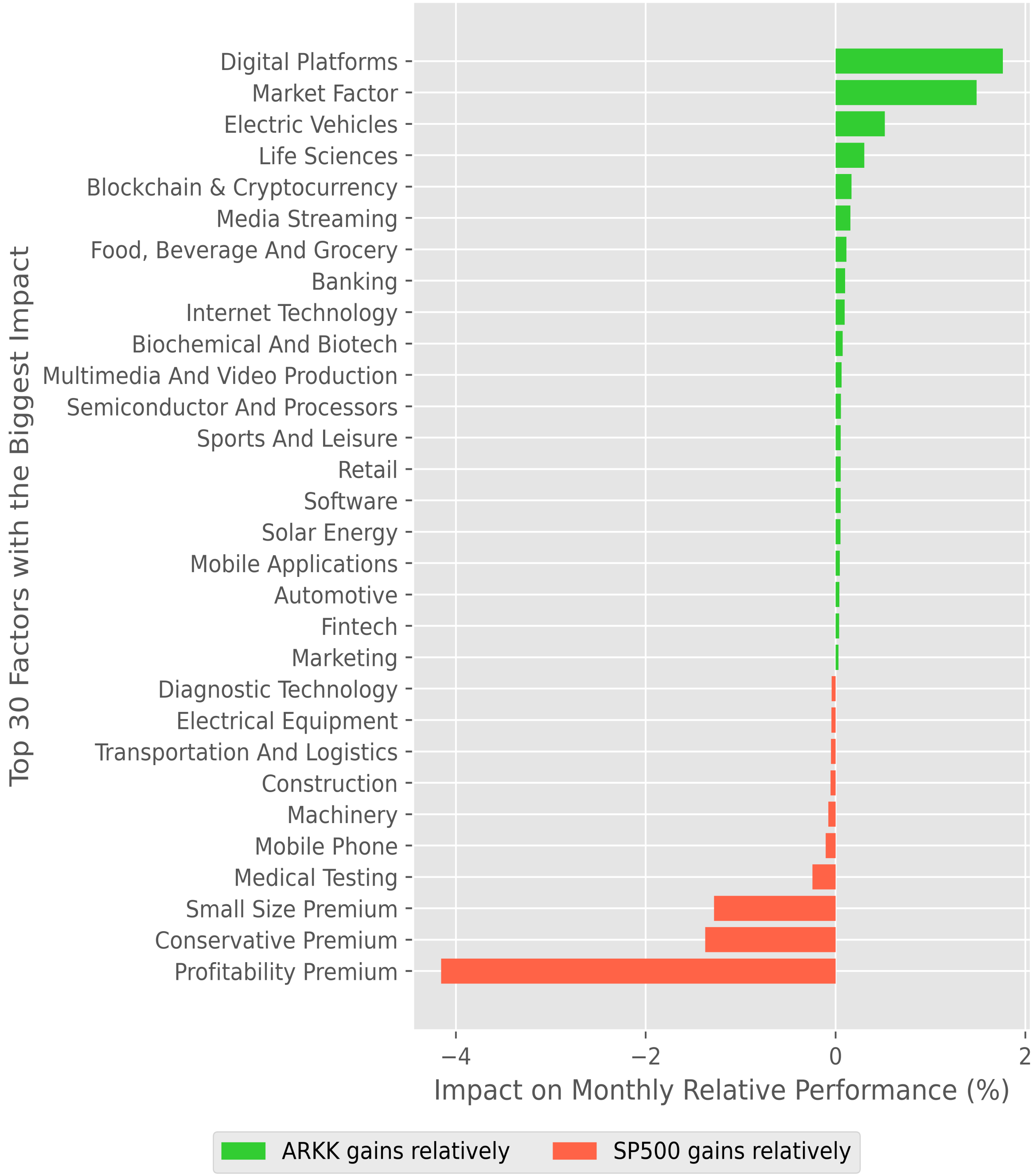
The graph illustrates the performance of ARKK from June 30, 2022, to June 30, 2023, with values normalized to 1 for clarity. We've recreated this data based on the holdings as of July 5, 2023. Be aware that due to the lack of daily holdings data, there may be slight variances.

Over the past year, ARKK has seen a total return of 3.21%. Comparatively, the S&P 500 benchmark, which we use as a market standard, has secured an 18.18% total return. This suggests that, over this period, the S&P 500 has outperformed ARKK.

What drove the performance?

I. Factors

Hi, Theia! What has driven the return difference between ARKK and SP500?



What drove the performance?

I. Factors (cont.)

Comparing ARKK to the S&P 500 through the lens of return factor attribution, several key differences emerge. These discrepancies underline the diverging investment focus of the two, with ARKK leaning towards disruptive, high-growth sectors, while the S&P 500 remains more traditional and broad-based.

1. Market Factors

A key aspect of this difference is seen in the market factor. ARKK has a price exposure of 1.64, compared to S&P's 1.25, suggesting ARKK's portfolio is more sensitive to general market movements.

However, it's important to note that the S&P 500 gains significantly in conservative and profitability premiums, aligning with its propensity towards established, profitable companies.

ARKK's tilt towards the 'small size premium'—with a value of 0.37 compared to tl S&P's -0.02—demonstrates ARKK's investment inclination towards smaller, high-growth firms

2. Industry-Theme Factors

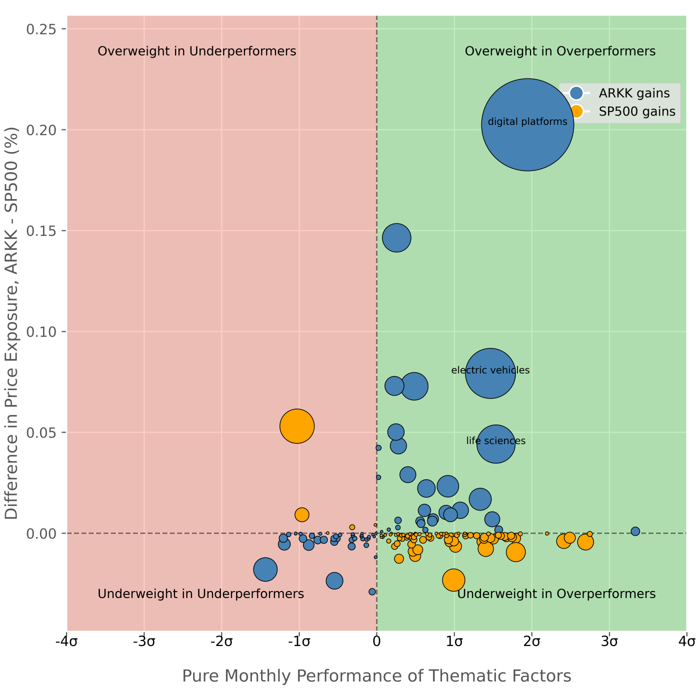
Regarding industry-specific factors, ARKK's greater price exposure in innovative sectors lik digital platforms, blockchain & cryptocurrency, electric vehicles, and biochemical and biotech indicates the fund's heavy investment in tech-driven, disruptive industries.

In contrast, the S&P 500 exhibits less exposure in these rapidly evolving areas.

In several traditional industries such as maritime, fitness and wellness and utility, ARKK has relatively less or negative exposure compared to the S&P 500. These sectors, while stable, might not offer the high growth potential that ARKK seeks.

In conclusion, ARKK's distinctive return characteristics stem from its higher exposures to growth-focused, disruptive sectors. This differentiation from the broad market (S&P 500) explains the variance in their overall returns. However, it's worth noting that while ARKK chases high growth, the S&P 500's relative gains in conservative and profitability premiums indicate a more balanced and potentially lower-risk approach.

The Monthly Factor Allocation Efficiency (ARKK against SP500)



What drove the performance?

I. Factors (cont.)

Factor	Net Impact (Basis Points)	Last Month Performance (sigma)	Price Exposure (Basis Points)		
			ARKK	SP500	Difference
Fama French Factors	**-534.7**				
Profitability Premium	-415.4	1.06	-81.5	6.5	-88.0
Market Factor	148.6	0.85	163.9	125.0	39.0
Conservative Premium	-137.3	0.38	-90.7	-9.4	-81.3
Small Size Premium	-128.1	-0.74	36.7	-1.9	38.6
Value Premium	-2.5	0.02	-25.7	-1.3	-24.4
Thematic Factors (Top 20)	**292.7**				
Digital Platforms	176.2	1.95	20.3	0.0	20.2
Electric Vehicles	52.0	1.47	9.5	1.6	7.9
Life Sciences	30.4	1.54	4.5	0.1	4.4
Medical Testing	-24.4	-1.03	5.5	0.2	5.3
Blockchain & Cryptocurrency	16.8	0.26	14.6	0.0	14.6
Media Streaming	15.8	0.48	7.6	0.3	7.3
Food, Beverage And Grocery	11.5	-1.44	0.0	1.8	-1.8
Mobile Phone	-10.3	0.99	2.5	4.8	-2.3
Banking	10.1	1.33	2.2	0.6	1.7
Internet Technology	9.6	0.92	2.3	0.0	2.3
Machinery	-7.5	1.79	0.2	1.1	-0.9
Biochemical And Biotech	7.5	0.23	7.3	0.0	7.3
Multimedia And Video Production	6.4	0.64	3.1	0.9	2.2
Semiconductor And Processors	5.7	-0.54	0.2	2.5	-2.4
Sports And Leisure	5.6	0.25	5.2	0.2	5.0
Retail	5.5	1.08	1.6	0.4	1.1
Software	5.4	0.28	5.5	1.1	4.3
Construction	-5.2	2.69	0.0	0.5	-0.4
Solar Energy	5.2	0.40	3.7	0.8	2.9
Transportation And Logistics	-4.8	1.41	0.0	0.8	-0.8
The Rest of the Themes	-18.8				
Unexplained	**530.6**				
Total	**288.6**				

What drove the performance?

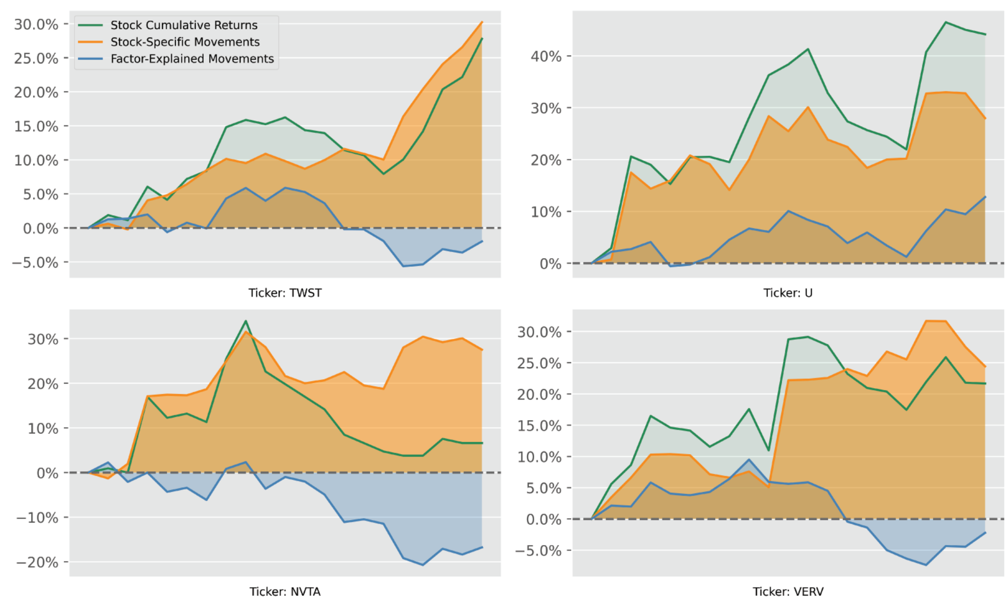
II. Holdings

Ticker	Weight	1st Theme by Price Exposure (Basis Points)		Last Month Cumulative Return		
		Theme	Exposure	Overall	Contribution	Idiosyncratic
TSLA	12.10%	electric vehicles	78.7	26.14%	3.16%	18.64%
COIN	7.85%	blockchain & cryptocurrency	163.9	12.55%	0.99%	10.91%
ROKU	7.16%	media streaming	105.7	9.24%	0.66%	4.49%
ZM	6.97%	mobile phone	35.5	0.07%	0.01%	-6.09%
PATH	5.89%	digital platforms	65.4	-7.59%	-0.45%	-11.96%
SQ	5.79%	payment processing	64.1	8.24%	0.48%	3.67%
EXAS	4.65%	medical testing	87.8	12.00%	0.56%	14.45%
U	4.49%	digital platforms	109.2	44.16%	1.98%	27.97%
SHOP	4.35%	digital platforms	51.5	11.49%	0.50%	4.76%
DKNG	3.91%	sports and leisure	134.2	8.76%	0.34%	10.70%
TDOC	3.79%	digital platforms	49.7	6.25%	0.24%	-0.69%
TWLO	3.75%	software	41.2	-5.47%	-0.21%	-5.86%
CRSP	3.57%	biochemical and biotech	116.2	-12.99%	-0.46%	-10.75%
RBLX	3.48%	digital platforms	69.2	-4.34%	-0.15%	-8.01%
NTLA	3.32%	life sciences	73.4	6.87%	0.23%	3.43%
HOOD	2.59%	blockchain & cryptocurrency	68.2	10.64%	0.28%	6.08%
DNA	2.40%	digital platforms	26.6	10.71%	0.26%	11.67%
BEAM	2.34%	biochemical and biotech	93.5	-1.78%	-0.04%	-0.82%
PACB	2.23%	life sciences	52.3	3.42%	0.08%	-2.51%
PD	2.21%	software	42.2	-18.99%	-0.42%	-19.72%
TXG	1.47%	medical testing	42.7	4.96%	0.07%	3.48%
VCYT	1.36%	biopharmaceuticals	46.9	-2.75%	-0.04%	-4.31%
PLTR	0.94%	digital platforms	47.3	5.43%	0.05%	4.03%
TWST	0.89%	diagnostic technology	55.5	27.80%	0.25%	30.22%
META	0.52%	social media	97.0	5.27%	0.03%	-3.90%

This table ranks stocks that most affected your portfolio in the last 20 days, highlighting their key industry theme and sensitivity to theme changes. It also shows each stock's unexplained return, helping identify unusual performance.

Stocks & themes to watch

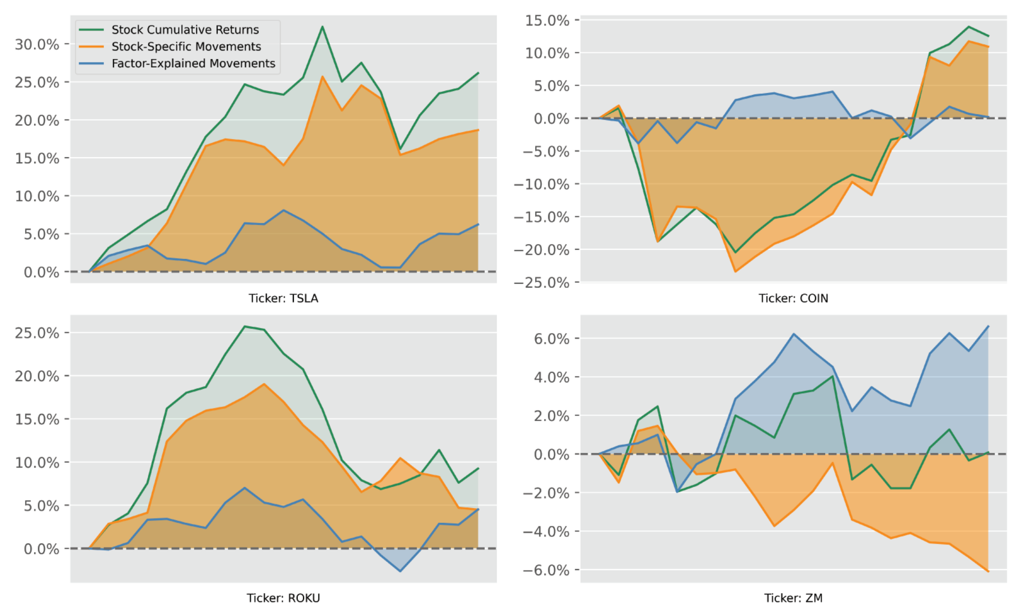
Stocks with the widest stock-specific movements in the past month



Most Volatile Stocks

Our chart highlights four stocks - TWST, U, NVTA, and VERV - that have shown large price changes that can't fully be explained by usual market factors or known industry themes in the past month. By tracking these unexplained price shifts, we can spot potential company-specific risks and better understand a stock's performance.

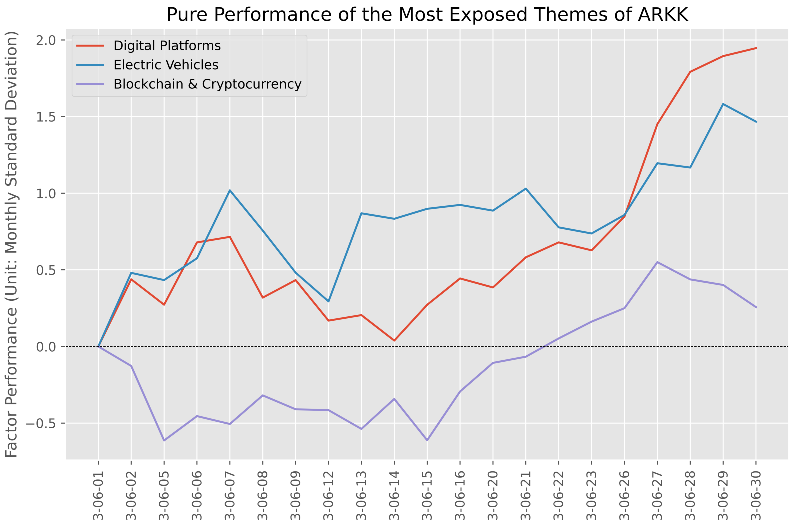
Stocks with the highest weight in the portfolio



Stocks with Highest Portfolio Weight

We also look at the stocks forming the largest part of the ARKK portfolio, namely TSLA, COIN, ROKU, and ZM. The chart breaks down their price changes into those that can be explained by known factors, and those that can't. Large unexplained price shifts may signal hidden risks at the company level, which need further investigation.

Stocks & themes to watch (cont.)



This graph shows how the top three themes in the portfolio have performed in the past month, measured in monthly standard deviation. This is the unit by which we measure a theme's fluctuation over a month. In simple terms: If a theme grows by 1 sigma in a month, it's doing well. If it grows by more than 2 sigmas, it's doing exceptionally well.

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