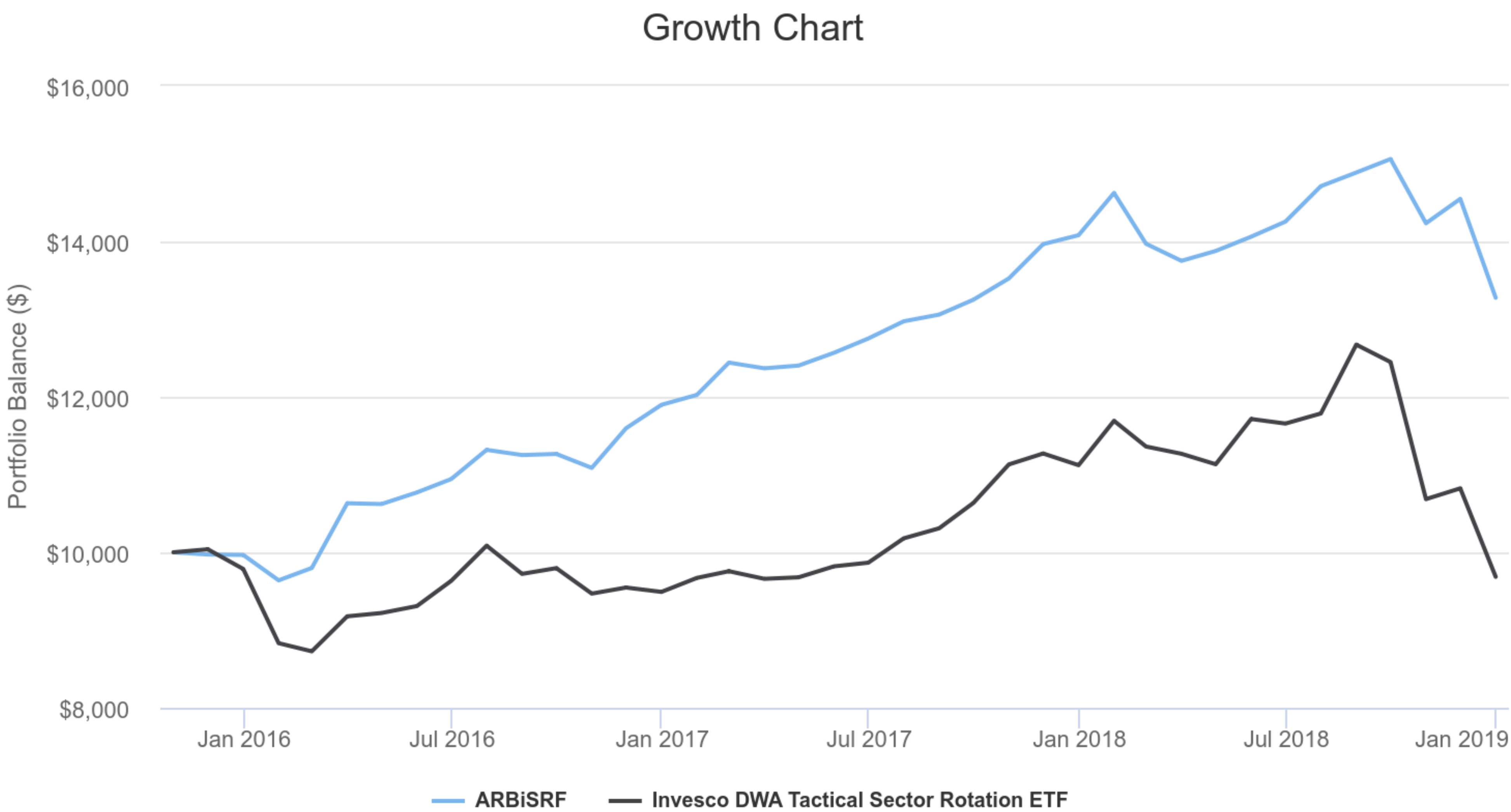
Fund Information (Nov 2015 - Dec 2018)

Field	Value
Ticker	ARBISRF
Name	ARBiSRF

Fund Performance Summary

Metric	ARBiSRF	Invesco DWA Tactical Sector Rotation ETF
Start Balance	$10,000	$10,000
End Balance	$13,275	$9,685
End Balance (inflation adjusted)	$12,567	$9,168
CAGR	9.36%	-1.01%
CAGR (inflation adjusted)	7.48%	-2.70%
Stdev	10.10%	14.89%
Best Year	19.38%	17.18%
Worst Year	-5.72%	-12.91%
Max. Drawdown	-11.85%	-23.57%
Sharpe Ratio	0.85	-0.05
Sortino Ratio	1.25	-0.06
US Stock Market Correlation	0.95	0.88


Growth Chart
Portfolio Balance ($)
$16,000
$14,000
$12,000
$10,000
$8,000
Jan 2016
Jul 2016
Jan 2017
Jul 2017
Jan 2018
Jul 2018
Jan 2019
ARBiSRF
Invesco DWA Tactical Sector Rotation ETF


Annual Returns
30.0%
20.0%
10.0%
0.0%
-10.0%
-20.0%
Annual Return
2015
2016
2017
2018
ARBiSRF
Invesco DWA Tactical Sector Rotation ETF


Cumulative Active Return
40.0%
30.0%
20.0%
10.0%
0.0%
-10.0%
Active Return
Jan 2016
Jul 2016
Jan 2017
Jul 2017
Jan 2018
Jul 2018
Jan 2019
ARBiSRF

Risk and Return Metrics

Metric	ARBiSRF	Invesco DWA Tactical Sector Rotation ETF
Arithmetic Mean (monthly)	0.79%	0.01%
Arithmetic Mean (annualized)	9.90%	0.11%
Geometric Mean (monthly)	0.75%	-0.08%
Geometric Mean (annualized)	9.36%	-1.01%
Volatility (monthly)	2.91%	4.30%
Volatility (annualized)	10.10%	14.89%
Downside Deviation (monthly)	1.94%	3.46%
Max. Drawdown	-11.85%	-23.57%
US Market Correlation	0.95	0.88
Beta (*)	0.53	1.00
Alpha (annualized)	9.42%	0.00%
R Squared	60.50%	100.00%
Sharpe Ratio	0.85	-0.05
Sortino Ratio	1.25	-0.06
Treynor Ratio (%)	16.30	-0.77
Calmar Ratio	0.85	-0.01
Information Ratio	0.99	N/A
Skewness	-0.85	-1.41
Excess Kurtosis	3.33	3.15
Historical Value-at-Risk (5%)	-5.65%	-10.70%
Analytical Value-at-Risk (5%)	-4.00%	-7.06%
Conditional Value-at-Risk (5%)	-8.75%	-14.17%
Upside Capture Ratio (%)	85.34	100.00
Downside Capture Ratio (%)	34.40	100.00
Sustainable Withdrawal Rate	29.56%	24.34%
Positive Periods	27 out of 38 (71.05%)	23 out of 38 (60.53%)
Gain/Loss Ratio	0.86	0.66

(*) Invesco DWA Tactical Sector Rotation ETF is used as the benchmark for calculations. Value-at-risk metrics are based on monthly values.

ARBiSRF Returns

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2015											-0.28%	-0.05%	-0.34%
2016	-3.28%	1.65%	8.50%	-0.09%	1.41%	1.60%	3.44%	-0.59%	0.13%	-1.59%	4.60%	2.60%	19.38%
2017	1.07%	3.45%	-0.59%	0.28%	1.33%	1.46%	1.74%	0.66%	1.47%	2.07%	3.26%	0.82%	18.35%
2018	3.86%	-4.47%	-1.58%	0.92%	1.32%	1.38%	3.20%	1.19%	1.17%	-5.49%	2.20%	-8.75%	-5.72%

Invesco DWA Tactical Sector Rotation ETF Returns

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2015											0.39%	-2.52%	-2.14%
2016	-9.76%	-1.19%	5.16%	0.47%	0.97%	3.49%	4.70%	-3.60%	0.76%	-3.34%	0.82%	-0.59%	-3.02%
2017	1.90%	0.89%	-1.00%	0.20%	1.46%	0.48%	3.18%	1.27%	3.17%	4.65%	1.26%	-1.33%	17.18%
2018	5.13%	-2.83%	-0.82%	-1.20%	5.23%	-0.50%	1.11%	7.52%	-1.77%	-14.17%	1.30%	-10.52%	-12.91%

Drawdowns for ARBiSRF

Rank	Start	End	Length	Recovery By	Recovery Time	Underwater Period	Drawdown
1	Oct 2018	Dec 2018	3 months				-11.85%
2	Feb 2018	Mar 2018	2 months	Jul 2018	4 months	6 months	-5.97%
3	Nov 2015	Jan 2016	3 months	Mar 2016	2 months	5 months	-3.61%
4	Aug 2016	Oct 2016	3 months	Nov 2016	1 month	4 months	-2.05%
5	Mar 2017	Mar 2017	1 month	May 2017	2 months	3 months	-0.59%
6	Apr 2016	Apr 2016	1 month	May 2016	1 month	2 months	-0.09%

Drawdowns for Invesco DWA Tactical Sector Rotation ETF

Rank	Start	End	Length	Recovery By	Recovery Time	Underwater Period	Drawdown
1	Sep 2018	Dec 2018	4 months				-23.57%
2	Dec 2015	Feb 2016	3 months	Jul 2016	5 months	8 months	-13.08%
3	Aug 2016	Oct 2016	3 months	Jul 2017	9 months	1 year	-6.12%
4	Feb 2018	Apr 2018	3 months	May 2018	1 month	4 months	-4.78%
5	Dec 2017	Dec 2017	1 month	Jan 2018	1 month	2 months	-1.33%
6	Jun 2018	Jun 2018	1 month	Jul 2018	1 month	2 months	-0.50%

ARBiSRF Factor Regression

Model	MKT-RF	SMB	HML	MOM	RMW	CMA	Annualized Alpha	R Squared
Fama-French 3-factor model	0.88	-0.11	0.09				1.80%	89.99%
Carhart 4-factor model	0.86	-0.12	0.03	-0.10			1.85%	90.65%
Fama-French 5-factor model	0.91	-0.06	-0.03		0.22	0.30	1.17%	93.22%

Factor regression from Nov 2015 to Dec 2018

Invesco DWA Tactical Sector Rotation ETF Factor Regression

Model	MKT-RF	SMB	HML	MOM	RMW	CMA	Annualized Alpha	R Squared
Fama-French 3-factor model	1.06	0.29	-0.49				-10.19%	87.11%
Carhart 4-factor model	1.11	0.33	-0.29	0.36			-10.40%	91.12%
Fama-French 5-factor model	1.02	0.25	-0.40		-0.14	-0.30	-9.62%	88.10%

Factor regression from Nov 2015 to Dec 2018

Portfolio Returns Based Style Analysis

Style Category	ARBiSRF	Invesco DWA Tactical Sector Rotation ETF
Large-cap Value	63.60%	0.00%
Large-cap Growth	23.86%	49.06%
Mid-cap Value	3.95%	0.00%
Mid-cap Growth	0.00%	33.35%
Small-cap Value	0.00%	0.00%
Small-cap Growth	0.00%	12.71%
Global ex-US Developed Markets	0.00%	0.00%
Emerging Markets	1.68%	4.88%
Corporate Bonds	0.00%	0.00%
Long-Term Treasuries	6.92%	0.00%
Intermediate-Term Treasuries	0.00%	0.00%
Short-Term Treasuries	0.00%	0.00%
R Squared	93.69%	80.14%

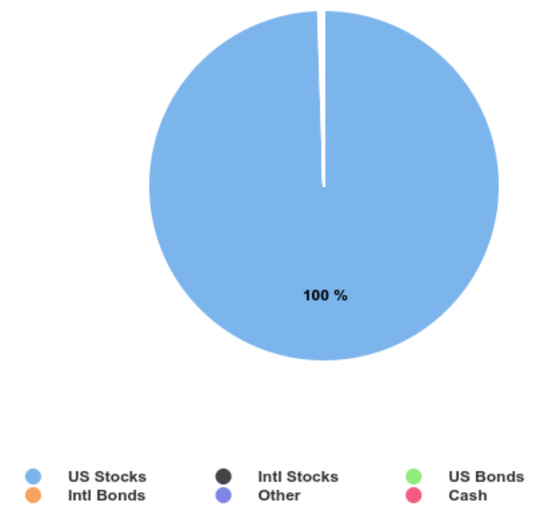
Style analysis is based on monthly returns from Nov 2015 to Dec 2018 and uses total portfolio return with monthly rebalancing.

Exposures for Invesco DWA Tactical Sector Rotation ETF

Ticker	Name	Category	ER	Weight
DWTR	Invesco DWA Tactical Sector Rotation ETF	Mid-Cap Growth	0.75%	100.00%

Asset Allocation for Invesco DWA Tactical Sector Rotation ETF

Category	Weight
US Stocks	99.50%
Intl Stocks	0.22%
US Bonds	0.00%
Intl Bonds	0.00%
Other	0.00%
Cash	0.28%



Equity Market Capitalization for Invesco DWA Tactical Sector Rotation ETF

Category	Weight
Large Cap	29.17%
Mid Cap	42.65%
Small Cap	28.18%

Stock Sectors for Invesco DWA Tactical Sector Rotation ETF

Category	Weight
Basic Materials	2.29%
Consumer Cyclical	19.44%
Financial Services	1.05%
Real Estate	0.00%
Consumer Defensive	2.12%
Healthcare	17.27%
Utilities	0.00%
Communication Services	0.71%
Energy	0.00%
Industrials	22.21%
Technology	34.91%