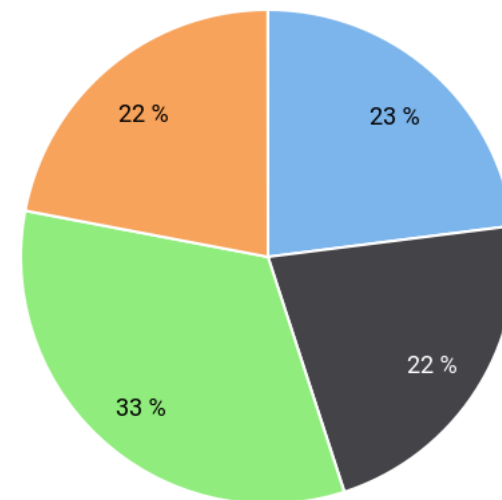


Report Parameters

Start Date	01/01/2021
End Date	03/30/2023
Initial Balance	\$100,000
Rebalancing	Rebalance annually
Reinvest Dividends	Yes
Benchmark	SPDR S&P 500 ETF Trust

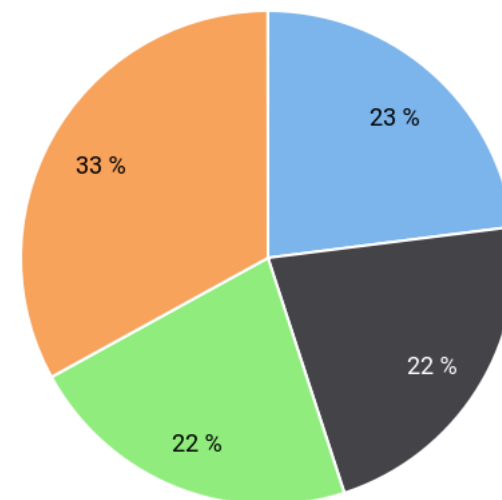
OMFL23, SCHD22, SCHG33, SPGP22

Ticker	Name	Allocation
OMFL	Invesco Russell 1000 Dynamic Mltfct ETF	23.00%
SCHD	Schwab US Dividend Equity ETF	22.00%
SCHG	Schwab US Large-Cap Growth ETF	33.00%
SPGP	Invesco S&P 500 GARP ETF	22.00%



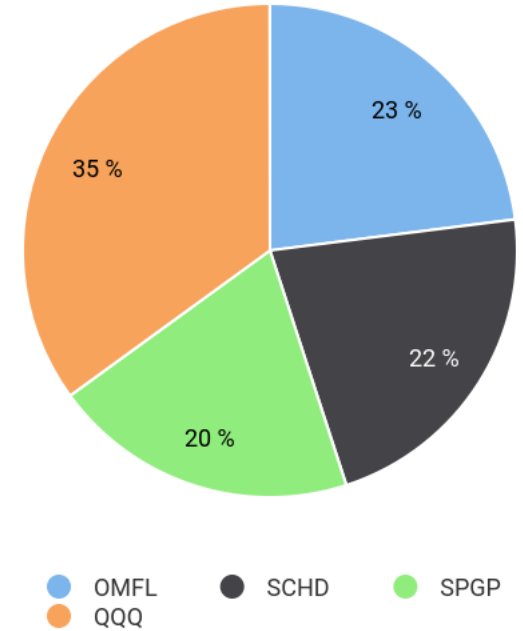
OMFL23, QQQ33, SCHD22, SPGP22

Ticker	Name	Allocation
OMFL	Invesco Russell 1000 Dynamic Mltfct ETF	23.00%
SCHD	Schwab US Dividend Equity ETF	22.00%
SPGP	Invesco S&P 500 GARP ETF	22.00%
QQQ	Invesco QQQ Trust	33.00%



OMFL23, QQQ35, SCHD22, SPGP20

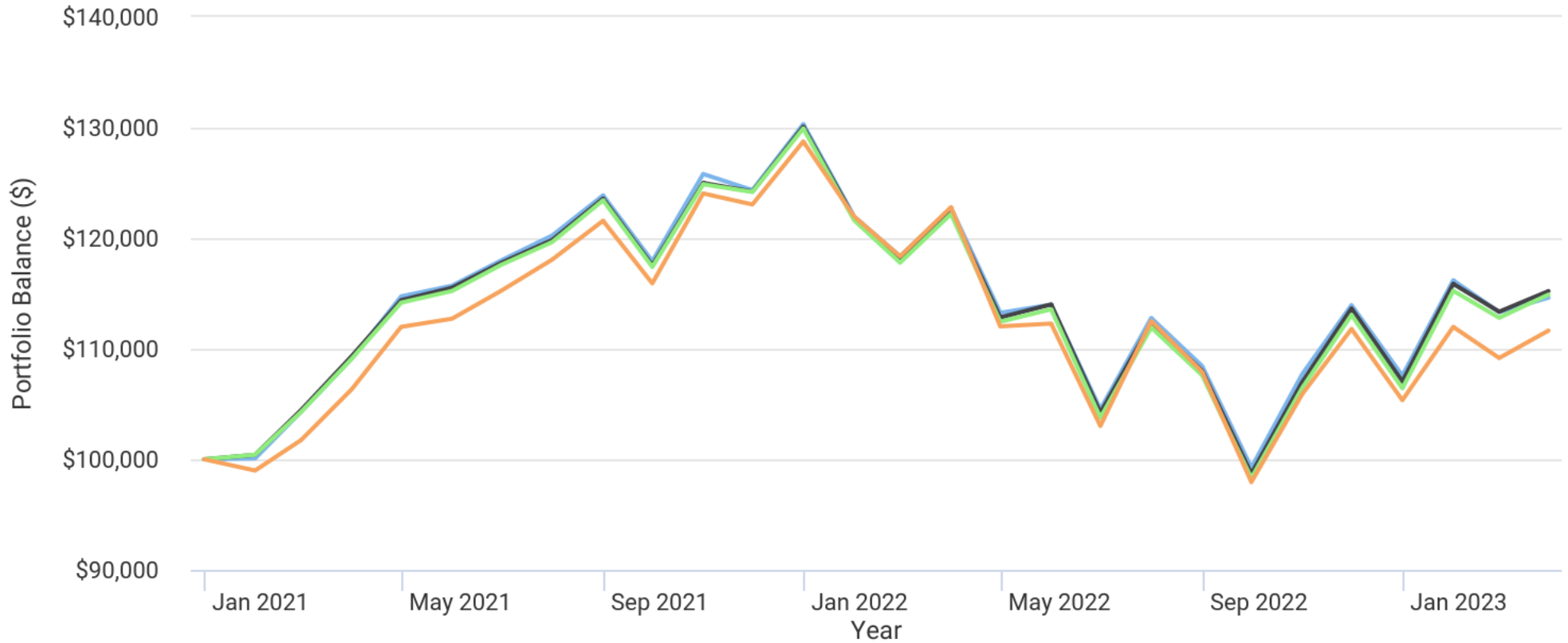
Ticker	Name	Allocation
OMFL	Invesco Russell 1000 Dynamic Mltfct ETF	23.00%
SCHD	Schwab US Dividend Equity ETF	22.00%
SPGP	Invesco S&P 500 GARP ETF	20.00%
QQQ	Invesco QQQ Trust	35.00%



Portfolio Performance (01/01/2021 - 03/30/2023)

Metric	OMFL23, SCHD22, SCHG33, SPGP22	OMFL23, QQQ33, SCHD22, SPGP22	OMFL23, QQQ35, SCHD22, SPGP20	SPDR S&P 500 ETF Trust
Start Balance	\$100,000	\$100,000	\$100,000	\$100,000
End Balance	\$114,616	\$115,209	\$114,896	\$111,638
End Balance (inflation adjusted)	\$99,237	\$99,751	\$99,479	\$96,658
Annualized Return (CAGR)	6.25%	6.49%	6.37%	5.01%
Annualized Return (CAGR, inflation adjusted)	-0.34%	-0.11%	-0.23%	-1.50%
Standard Deviation	18.17%	18.24%	18.29%	18.31%
Best Year	30.32%	30.09%	29.93%	28.74%
Worst Year	-17.46%	-17.72%	-18.09%	-18.17%
Maximum Drawdown	-23.84%	-24.14%	-24.35%	-23.93%
Sharpe Ratio	0.35	0.36	0.35	0.28
Sortino Ratio	0.52	0.53	0.52	0.41
Stock Market Correlation	0.99	0.99	0.99	0.99

Portfolio Growth

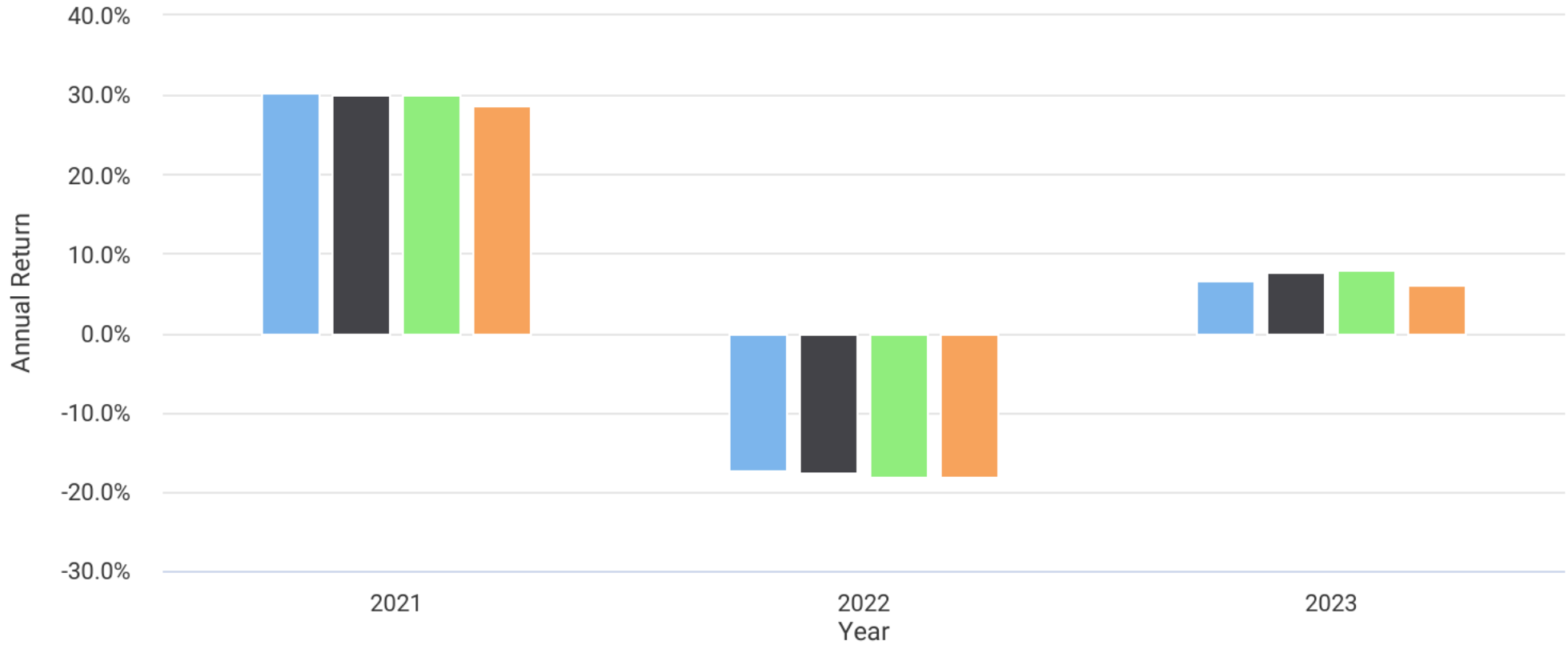


— OMFL23, SCHD22, SCHG33, SPGP22
— SPDR S&P 500 ETF Trust

— OMFL23, QQQ33, SCHD22, SPGP22

— OMFL23, QQQ35, SCHD22, SPGP20

Annual Returns



- OMFL23, SCHD22, SCHG33, SPGP22
 ● OMFL23, QQQ33, SCHD22, SPGP22
● OMFL23, QQQ35, SCHD22, SPGP20
- SPDR S&P 500 ETF Trust

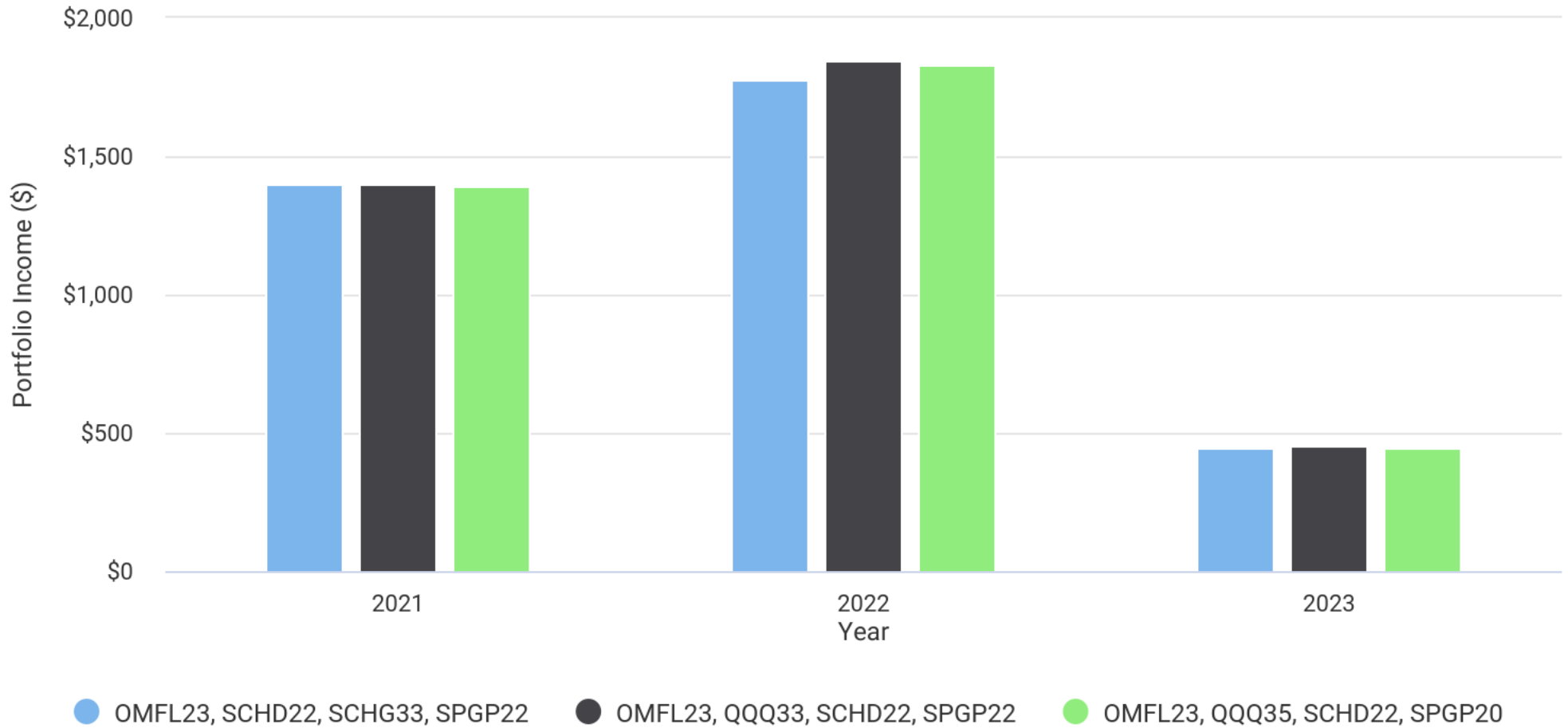
Trailing Returns

Name	Total Return			Annualized Return
	3 Month	Year to Last Month	1 year	Full
	OMFL23, SCHD22, SCHG33, SPGP22	-0.55%	5.34%	-4.27%
OMFL23, QQQ33, SCHD22, SPGP22	-0.26%	5.90%	-3.99%	5.95%
OMFL23, QQQ35, SCHD22, SPGP20	-0.22%	5.99%	-4.24%	5.72%
SPDR S&P 500 ETF Trust	-2.35%	3.62%	-7.77%	4.13%

Trailing returns are as of last full calendar month ending February 2023

Portfolio Income

All dividends and distributions were reinvested



Risk and Return Metrics (01/01/2021 - 03/30/2023)

Metric	OMFL23, SCHD22, SCHG33, SPGP22	OMFL23, QQQ33, SCHD22, SPGP22	OMFL23, QQQ35, SCHD22, SPGP20	SPDR S&P 500 ETF Trust
Arithmetic Mean (monthly)	0.64%	0.66%	0.65%	0.54%
Arithmetic Mean (annualized)	7.95%	8.22%	8.10%	6.73%
Geometric Mean (monthly)	0.51%	0.53%	0.52%	0.41%
Geometric Mean (annualized)	6.25%	6.49%	6.37%	5.01%
Standard Deviation (monthly)	5.24%	5.27%	5.28%	5.29%
Standard Deviation (annualized)	18.17%	18.24%	18.29%	18.31%
Downside Deviation (monthly)	3.48%	3.53%	3.56%	3.58%
Maximum Drawdown	-23.84%	-24.14%	-24.35%	-23.93%
Stock Market Correlation	0.99	0.99	0.99	0.99
Beta (*)	0.98	0.99	0.99	1.00
Alpha (annualized)	1.26%	1.49%	1.35%	0.00%
R Squared	98.19%	97.92%	98.06%	100.00%
Sharpe Ratio	0.35	0.36	0.35	0.28
Sortino Ratio	0.52	0.53	0.52	0.41
Treynor Ratio (%)	6.46	6.69	6.56	5.21
Active Return	1.24%	1.48%	1.35%	N/A
Tracking Error	2.46%	2.64%	2.55%	N/A
Information Ratio	0.50	0.56	0.53	N/A
Skewness	-0.30	-0.36	-0.37	-0.34
Excess Kurtosis	-1.03	-0.96	-0.95	-0.87
Historical Value-at-Risk (5%)	-8.13%	-8.38%	-8.44%	-8.62%
Analytical Value-at-Risk (5%)	-7.88%	-7.91%	-7.95%	-8.15%
Conditional Value-at-Risk (5%)	-8.39%	-8.61%	-8.64%	-9.01%
Upside Capture Ratio (%)	101.55	102.14	102.14	100.00
Downside Capture Ratio (%)	97.19	96.91	97.34	100.00
Positive Periods	17 out of 27 (62.96%)	17 out of 27 (62.96%)	17 out of 27 (62.96%)	16 out of 27 (59.26%)
Gain/Loss Ratio	0.78	0.79	0.79	0.88

(*) SPDR S&P 500 ETF Trust is used as the benchmark for calculations. Value-at-risk metrics are based on monthly values.

OMFL23, SCHD22, SCHG33, SPGP22 Returns (01/01/2021 - 03/30/2023)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Inflation	Balance
2021	0.08%	4.22%	4.63%	5.13%	0.84%	1.98%	1.90%	3.02%	-4.80%	6.69%	-1.16%	4.80%	30.32%	7.04%	\$130,316
2022	-6.42%	-2.95%	3.70%	-7.73%	0.65%	-8.31%	7.90%	-3.85%	-8.47%	8.52%	5.79%	-5.60%	-17.46%	6.45%	\$107,562
2023	8.02%	-2.48%	1.15%										6.56%	1.36%	\$114,616

Annual return for 2023 is from 01/01/2023 to 03/30/2023

OMFL23, QQQ33, SCHD22, SPGP22 Returns (01/01/2021 - 03/30/2023)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Inflation	Balance
2021	0.40%	4.03%	4.70%	4.61%	0.98%	1.96%	1.75%	3.13%	-4.90%	6.35%	-0.62%	4.73%	30.09%	7.04%	\$130,087
2022	-6.35%	-3.09%	3.70%	-7.84%	1.05%	-8.60%	7.78%	-3.84%	-8.63%	8.41%	6.23%	-5.81%	-17.72%	6.45%	\$107,038
2023	8.25%	-2.17%	1.64%										7.63%	1.36%	\$115,209

Annual return for 2023 is from 01/01/2023 to 03/30/2023

OMFL23, QQQ35, SCHD22, SPGP20 Returns (01/01/2021 - 03/30/2023)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Inflation	Balance
2021	0.41%	3.86%	4.64%	4.63%	0.92%	2.06%	1.75%	3.16%	-4.89%	6.37%	-0.56%	4.63%	29.93%	7.04%	\$129,926
2022	-6.39%	-3.15%	3.74%	-7.98%	1.00%	-8.63%	7.87%	-3.86%	-8.65%	8.31%	6.19%	-5.87%	-18.09%	6.45%	\$106,419
2023	8.29%	-2.12%	1.86%										7.97%	1.36%	\$114,896

Annual return for 2023 is from 01/01/2023 to 03/30/2023

SPDR S&P 500 ETF Trust Returns (01/01/2021 - 03/30/2023)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Inflation	Balance
2021	-1.02%	2.78%	4.54%	5.29%	0.66%	2.25%	2.44%	2.98%	-4.66%	7.02%	-0.80%	4.63%	28.74%	7.04%	\$128,744
2022	-5.27%	-2.95%	3.76%	-8.78%	0.23%	-8.25%	9.21%	-4.08%	-9.24%	8.13%	5.56%	-5.76%	-18.17%	6.45%	\$105,349
2023	6.29%	-2.51%	2.27%										5.97%	1.36%	\$111,638

Annual return for 2023 is from 01/01/2023 to 03/30/2023

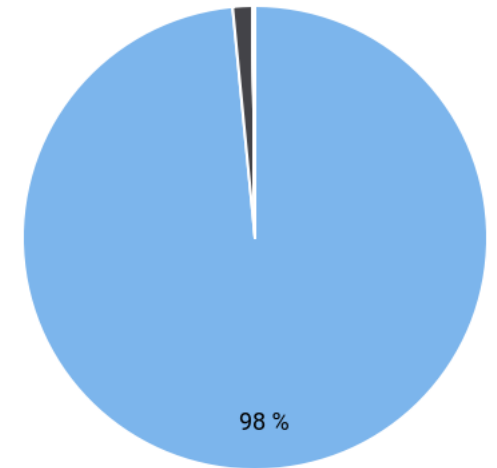
Holdings Based Style Analysis for OMFL23, SCHD22, SCHG33, SPGP22

Ticker	Name	Category	Weight	SEC Yield	Expense Ratio		P/E
					Net	Gross	
OMFL	Invesco Russell 1000 Dynamic Mltfct ETF	Large Blend	23.00%	1.66%	0.29%	0.29%	11.05
SCHD	Schwab US Dividend Equity ETF	Large Value	22.00%	3.48%	0.06%	0.06%	14.44
SCHG	Schwab US Large-Cap Growth ETF	Large Growth	33.00%	0.52%	0.04%	0.04%	27.11
SPGP	Invesco S&P 500 GARP ETF	Large Blend	22.00%	1.03%	0.33%	0.33%	12.27
			100.00%	1.55%	0.17%	0.17%	17.36

Asset Allocation for OMFL23, SCHD22, SCHG33, SPGP22

Category	Weight
US Stocks	98.45%
Intl Stocks	1.39%
US Bonds	0.00%
Intl Bonds	0.00%
Other	0.00%
Cash	0.15%

Holdings-based calculations by Morningstar as of 03/30/2023



- US Stocks
- Intl Stocks
- US Bonds
- Intl Bonds
- Other
- Cash

Equity Market Capitalization for OMFL23, SCHD22, SCHG33, SPGP22

Category	Weight
Large Cap	54.16%
Mid Cap	37.86%
Small Cap	7.98%

Market capitalization data is based on the rescaled long position of the equity holdings.
Holdings-based calculations by Morningstar as of 03/30/2023

Stock Sectors for OMFL23, SCHD22, SCHG33, SPGP22

Category	Weight
Basic Materials	3.81%
Consumer Cyclical	12.02%
Financial Services	15.85%
Real Estate	1.27%
Consumer Defensive	5.63%
Healthcare	14.80%
Utilities	1.10%
Communication Services	6.74%
Energy	3.31%
Industrials	10.94%
Technology	24.53%

Sector data is based on the rescaled long position of the equity holdings. Holdings-based calculations by Morningstar as of 03/30/2023

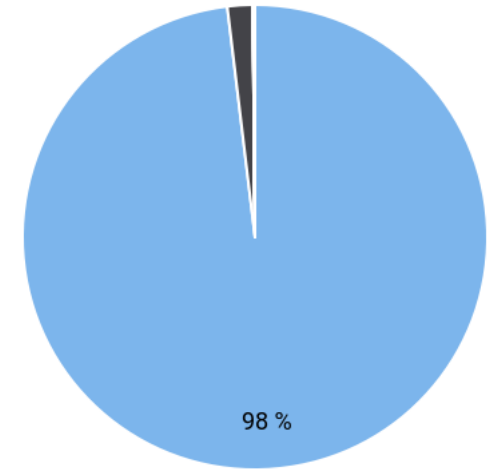
Holdings Based Style Analysis for OMFL23, QQQ33, SCHD22, SPGP22

Ticker	Name	Category	Weight	SEC Yield	Expense Ratio		P/E
					Net	Gross	
OMFL	Invesco Russell 1000 Dynamic Mltfct ETF	Large Blend	23.00%	1.66%	0.29%	0.29%	11.05
SCHD	Schwab US Dividend Equity ETF	Large Value	22.00%	3.48%	0.06%	0.06%	14.44
SPGP	Invesco S&P 500 GARP ETF	Large Blend	22.00%	1.03%	0.33%	0.33%	12.27
QQQ	Invesco QQQ Trust	Large Growth	33.00%	0.68%	0.20%	0.20%	25.76
			100.00%	1.60%	0.22%	0.22%	16.92

Asset Allocation for OMFL23, QQQ33, SCHD22, SPGP22

Category	Weight
US Stocks	98.10%
Intl Stocks	1.77%
US Bonds	0.00%
Intl Bonds	0.00%
Other	0.00%
Cash	0.13%

Holdings-based calculations by Morningstar as of 03/30/2023



- US Stocks
- US Bonds
- Other
- Intl Stocks
- Intl Bonds
- Cash

Equity Market Capitalization for OMFL23, QQQ33, SCHD22, SPGP22

Category	Weight
Large Cap	56.56%
Mid Cap	35.60%
Small Cap	7.84%

Market capitalization data is based on the rescaled long position of the equity holdings. Holdings-based calculations by Morningstar as of 03/30/2023

Stock Sectors for OMFL23, QQQ33, SCHD22, SPGP22

Category	Weight
Basic Materials	3.10%
Consumer Cyclical	13.29%
Financial Services	13.64%
Real Estate	0.89%
Consumer Defensive	6.88%
Healthcare	11.87%
Utilities	1.44%
Communication Services	8.38%
Energy	2.91%
Industrials	11.17%
Technology	26.42%

Sector data is based on the rescaled long position of the equity holdings. Holdings-based calculations by Morningstar as of 03/30/2023

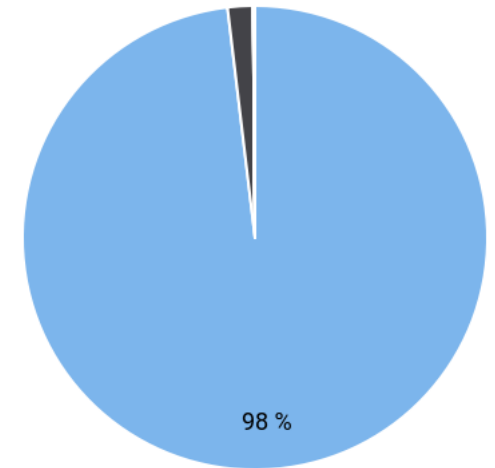
Holdings Based Style Analysis for OMFL23, QQQ35, SCHD22, SPGP20

Ticker	Name	Category	Weight	SEC Yield	Expense Ratio		P/E
					Net	Gross	
OMFL	Invesco Russell 1000 Dynamic Mltfct ETF	Large Blend	23.00%	1.66%	0.29%	0.29%	11.05
SCHD	Schwab US Dividend Equity ETF	Large Value	22.00%	3.48%	0.06%	0.06%	14.44
SPGP	Invesco S&P 500 GARP ETF	Large Blend	20.00%	1.03%	0.33%	0.33%	12.27
QQQ	Invesco QQQ Trust	Large Growth	35.00%	0.68%	0.20%	0.20%	25.76
			100.00%	1.59%	0.22%	0.22%	17.19

Asset Allocation for OMFL23, QQQ35, SCHD22, SPGP20

Category	Weight
US Stocks	98.12%
Intl Stocks	1.76%
US Bonds	0.00%
Intl Bonds	0.00%
Other	0.00%
Cash	0.12%

Holdings-based calculations by Morningstar as of 03/30/2023



- US Stocks
- Intl Stocks
- US Bonds
- Intl Bonds
- Other
- Cash

Equity Market Capitalization for OMFL23, QQQ35, SCHD22, SPGP20

Category	Weight
Large Cap	57.54%
Mid Cap	34.62%
Small Cap	7.84%

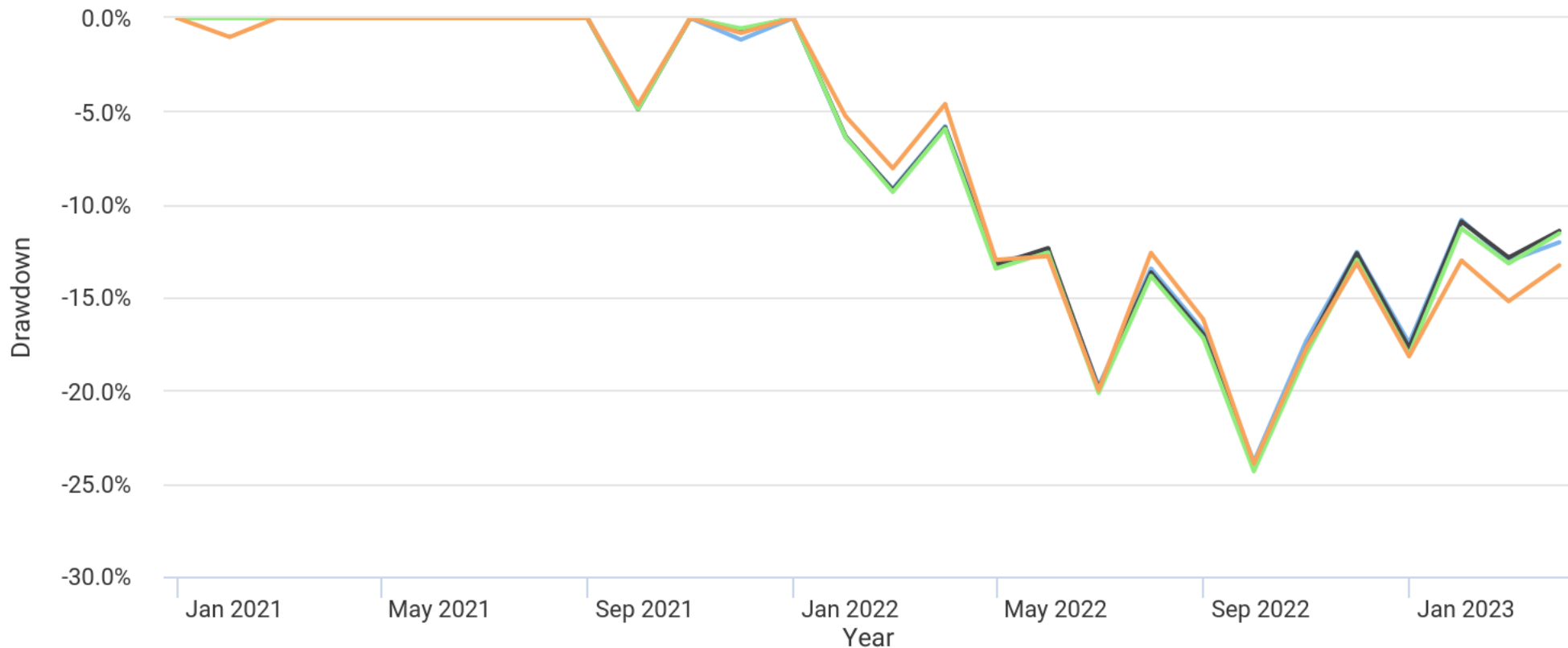
*Market capitalization data is based on the rescaled long position of the equity holdings.
Holdings-based calculations by Morningstar as of 03/30/2023*

Stock Sectors for OMFL23, QQQ35, SCHD22, SPGP20

Category	Weight
Basic Materials	2.99%
Consumer Cyclical	13.44%
Financial Services	13.30%
Real Estate	0.87%
Consumer Defensive	6.94%
Healthcare	11.49%
Utilities	1.42%
Communication Services	8.62%
Energy	2.85%
Industrials	11.07%
Technology	27.01%

Sector data is based on the rescaled long position of the equity holdings. Holdings-based calculations by Morningstar as of 03/30/2023

Drawdowns



— OMFL23, SCHD22, SCHG33, SPGP22
 — OMFL23, QQQ33, SCHD22, SPGP22
 — OMFL23, QQQ35, SCHD22, SPGP20
— SPDR S&P 500 ETF Trust

Drawdowns for OMFL23, SCHD22, SCHG33, SPGP22

Rank	Start	End	Length	Recovery By	Recovery Time	Underwater Period	Drawdown
1	Jan 2022	Sep 2022	9 months				-23.84%
2	Sep 2021	Sep 2021	1 month	Oct 2021	1 month	2 months	-4.80%
3	Nov 2021	Nov 2021	1 month	Dec 2021	1 month	2 months	-1.16%

Drawdowns for OMFL23, QQQ33, SCHD22, SPGP22

Rank	Start	End	Length	Recovery By	Recovery Time	Underwater Period	Drawdown
1	Jan 2022	Sep 2022	9 months				-24.14%
2	Sep 2021	Sep 2021	1 month	Oct 2021	1 month	2 months	-4.90%
3	Nov 2021	Nov 2021	1 month	Dec 2021	1 month	2 months	-0.62%

Drawdowns for OMFL23, QQQ35, SCHD22, SPGP20

Rank	Start	End	Length	Recovery By	Recovery Time	Underwater Period	Drawdown
1	Jan 2022	Sep 2022	9 months				-24.35%
2	Sep 2021	Sep 2021	1 month	Oct 2021	1 month	2 months	-4.89%
3	Nov 2021	Nov 2021	1 month	Dec 2021	1 month	2 months	-0.56%

Drawdowns for SPDR S&P 500 ETF Trust

Rank	Start	End	Length	Recovery By	Recovery Time	Underwater Period	Drawdown
1	Jan 2022	Sep 2022	9 months				-23.93%
2	Sep 2021	Sep 2021	1 month	Oct 2021	1 month	2 months	-4.66%
3	Jan 2021	Jan 2021	1 month	Feb 2021	1 month	2 months	-1.02%
4	Nov 2021	Nov 2021	1 month	Dec 2021	1 month	2 months	-0.80%

Portfolio Components (01/01/2021 - 03/30/2023)

Ticker	Name	CAGR	Stdev	Best Year	Worst Year	Max Drawdown	Sharpe Ratio	Sortino Ratio	Market Correlation
OMFL	Invesco Russell 1000 Dynamic Mltfct ETF	8.19%	18.13%	28.96%	-13.97%	-22.11%	0.45	0.71	0.94
SCHD	Schwab US Dividend Equity ETF	8.96%	16.75%	29.87%	-3.48%	-15.68%	0.51	0.88	0.84
SCHG	Schwab US Large-Cap Growth ETF	0.40%	22.95%	28.11%	-31.80%	-31.80%	0.07	0.10	0.93
SPGP	Invesco S&P 500 GARP ETF	8.12%	19.37%	35.48%	-13.83%	-22.19%	0.43	0.67	0.96
QQQ	Invesco QQQ Trust	0.89%	23.36%	27.42%	-32.58%	-32.58%	0.10	0.13	0.92

Monthly Correlations (01/01/2021 - 03/30/2023)

Ticker	Name	OMFL	SCHD	SCHG	SPGP	QQQ
OMFL	Invesco Russell 1000 Dynamic Mltfct ETF	1.00	0.88	0.82	0.94	0.82
SCHD	Schwab US Dividend Equity ETF	0.88	1.00	0.60	0.90	0.60
SCHG	Schwab US Large-Cap Growth ETF	0.82	0.60	1.00	0.81	0.99
SPGP	Invesco S&P 500 GARP ETF	0.94	0.90	0.81	1.00	0.80
QQQ	Invesco QQQ Trust	0.82	0.60	0.99	0.80	1.00

Portfolio Asset Performance

Name	Total Return			Expense Ratio	
	3 Month	Year to Last Month	1 year	Net	Gross
Invesco Russell 1000 Dynamic Mltfct ETF	2.21%	7.13%	2.22%	0.29%	0.29%
Schwab US Dividend Equity ETF	-4.68%	-1.31%	0.12%	0.06%	0.06%
Schwab US Large-Cap Growth ETF	-0.36%	8.57%	-15.26%	0.04%	0.04%
Invesco S&P 500 GARP ETF	-0.84%	5.29%	-1.53%	0.33%	0.33%
Invesco QQQ Trust	0.31%	10.24%	-14.73%	0.20%	0.20%

Trailing returns as of last calendar month ending February 2023

Portfolio Return Decomposition (01/01/2021 - 03/30/2023)

Ticker	Name	OMFL23, SCHD22, SCHG33, SPGP22	OMFL23, QQQ33, SCHD22, SPGP22	OMFL23, QQQ35, SCHD22, SPGP20
OMFL	Invesco Russell 1000 Dynamic Mltfct ETF	\$4,356	\$4,354	\$4,348
SCHD	Schwab US Dividend Equity ETF	\$4,823	\$4,828	\$4,834
SCHG	Schwab US Large-Cap Growth ETF	\$1,096		
SPGP	Invesco S&P 500 GARP ETF	\$4,342	\$4,346	\$3,953
QQQ	Invesco QQQ Trust		\$1,681	\$1,760

Return attribution decomposes portfolio gains into its constituent parts and identifies the contribution to returns by each of the assets.

Portfolio Risk Decomposition (01/01/2021 - 03/30/2023)

Ticker	Name	OMFL23, SCHD22, SCHG33, SPGP22	OMFL23, QQQ33, SCHD22, SPGP22	OMFL23, QQQ35, SCHD22, SPGP20
OMFL	Invesco Russell 1000 Dynamic Mltfct ETF	22.13%	22.01%	21.90%
SCHD	Schwab US Dividend Equity ETF	17.53%	17.40%	17.23%
SCHG	Schwab US Large-Cap Growth ETF	37.72%		
SPGP	Invesco S&P 500 GARP ETF	22.62%	22.40%	20.23%
QQQ	Invesco QQQ Trust		38.19%	40.64%

Risk attribution decomposes portfolio risk into its constituent parts and identifies the contribution to overall volatility by each of the assets.

Notes:

- **IMPORTANT:** The projections or other information generated by Portfolio Visualizer regarding the likelihood of various investment outcomes are hypothetical in nature, do not reflect actual investment results and are not guarantees of future results. Results may vary with each use and over time.
- The results do not constitute investment advice or recommendation, are provided solely for informational purposes, and are not an offer to buy or sell any securities. All use is subject to terms of service.
- Investing involves risk, including possible loss of principal. Past performance is not a guarantee of future results.
- Asset allocation and diversification strategies do not guarantee a profit or protect against a loss.
- Hypothetical returns do not reflect trading costs, transaction fees, commissions, or actual taxes due on investment returns.
- The results are based on information from a variety of sources we consider reliable, but we do not represent that the information is accurate or complete.
- Refer to the related documentation sections for more details on terms and definitions, methodology, and data sources.
- Portfolio model information represents a blended portfolio consisting of the model's underlying positions and assigned weights provided by the user and rebalanced at the specified schedule. The results were constructed using net of fee mutual fund performance. Portfolio Visualizer does not provide preferential treatment to any specific security or investment.
- The results are based on the total return of assets and assume that all received dividends and distributions are reinvested.
- Market capitalization refers to the total value of all a company's shares of stock. It is calculated by multiplying the price of a stock by its total number of outstanding shares. Large cap refers to a company with a market capitalization value of more than \$10 billion, mid cap refers to a company with a market capitalization value between \$2 and \$10 billion, and small cap refers to a company with a market capitalization value below \$2 billion. For funds and portfolios the equity market capitalization is calculated based on the long position of the equity holdings.
- Credit quality measures the ability of a bond issuer to repay a bond's interest and principal in a timely manner. Ratings agencies research the financial health of each bond issuer and assign ratings to the bonds being offered. Lower-rated bonds generally offer higher yields to compensate investors for the additional risk. AAA is the highest possible rating that may be assigned to an issuer's bonds by any of the major credit rating agencies. Bonds rated AAA to AA are known as high-grade bonds, bonds rated A to BBB are known as medium-grade bonds, and bonds rated BB to C are known as non-investment grade bonds. An issuer will receive a rating of D if it is already in default on some of its debt. For funds and portfolios the fixed income credit quality break-down is calculated based on the long position of the fixed income holdings.
- A fixed income maturity date refers to the specific date on which the investor's principal will be repaid. Duration measures a bond's or fixed income portfolio's price sensitivity to interest rate changes. If a bond has a duration of 5 years, and interest rates increase by 1%, the bond's price will decline by approximately 5%. Conversely, if a bond has a duration of 5 years and interest rates fall by 1%, the bond's price will increase by approximately 5%. A fixed income portfolio's duration is computed as the weighted average of individual bond durations held in the portfolio.
- Compound annualized growth rate (CAGR) is the annualized geometric mean return of the portfolio. It is calculated from the portfolio start and end balance and is thus impacted by any cashflows.
- The time-weighted rate of return (TWRR) is a measure of the compound rate of growth in a portfolio. This is calculated from the holding period returns (e.g. monthly returns), and TWRR will thus not be impacted by cashflows. If there are no external cashflows, TWRR will equal CAGR.
- The money-weighted rate of return (MWRR) is the internal rate of return (IRR) taking into account cashflows. This is the discount rate at which the present value of cash inflows equals the present value of cash outflows.
- Total return is the combined return in income and capital appreciation from investment in an asset. Yield measures the current cash income received from investment in an asset. Bonds provide yield in the form of interest payments and stocks through dividends.
- Standard deviation (Stdev) is used to measure the dispersion of returns around the mean and is often used as a measure of risk. A higher standard deviation implies greater the dispersion of data points around the mean.
- Sharpe Ratio is a measure of risk-adjusted performance of the portfolio, and it is calculated by dividing the mean monthly excess return of the portfolio over the risk-free rate by the standard deviation of excess return, and the displayed value is annualized.
- Sortino Ratio is a measure of risk-adjusted return which is a modification of the Sharpe Ratio. While the latter is the ratio of average returns in excess of a risk-free rate divided by the standard deviation of those excess returns, the Sortino Ratio has the same denominator divided by the standard deviation of returns below the risk-free rate.
- Treynor Ratio is a measure of risk-adjusted performance of the portfolio. It is similar to the Sharpe Ratio, but it uses portfolio beta (systematic risk) as the risk metric in the denominator.
- Calmar Ratio is a measure of risk-adjusted performance of the portfolio. It is calculated as the annualized return over the past 36 months divided by the maximum drawdown over the past 36 months based on monthly returns.
- Risk-free returns are calculated based on the Federal Reserve 3-Month Treasury Bill (secondary market) rates.
- Downside deviation measures the downside volatility of the portfolio returns unlike standard deviation, which includes both upside and downside deviations. Downside deviation is calculated based on negative returns that hurt the portfolio performance.
- Correlation measures to what degree the returns of the two assets move in relation to each other. Correlation coefficient is a numerical value between -1 and +1. If one variable goes up by a certain amount, the correlation coefficient indicates which way the other variable moves and by how much. Asset correlations are calculated based on monthly returns.
- Skewness is a measure of the asymmetry of the probability distribution or returns from a normal Gaussian distribution shape about its mean. Negative skewness is associated with the left (typically negative returns) tail of the distribution extending further than the right tail; and positive skewness is associated with the right (typically positive returns) tail of the distribution extending further than the left tail.
- Excess kurtosis is a measure of whether a data distribution is peaked or flat relative to a normal distribution. Distributions with high kurtosis tend to have a distinct peak near the mean, decline rather rapidly, and have heavy or fat tails.
- A drawdown refers to the decline in value of a single investment or an investment portfolio from a relative peak value to a relative trough. A maximum drawdown (Max Drawdown) is the maximum observed loss from a peak to a trough of a portfolio before a new peak is attained. Drawdown values are calculated based on monthly returns.
- Value at Risk (VaR) measures the scale of loss at a given confidence level. If the 5% VaR is -3% the portfolio return is expected to be greater than -3% 95% of the time and less than -3% 5% of the time. Value at Risk can be calculated directly based on historical returns based on a given percentile or analytically based on the mean and standard deviation of the returns.
- Conditional Value at Risk (CVaR) measures the scale of the expected loss once the specific Value at Risk (VaR) breakpoint has been breached, i.e., it calculates the average tail loss by taking a weighted average between the value at risk and losses exceeding the value at risk.
- Beta is a measure of systematic risk and measures the volatility of a particular investment relative to the market or its benchmark. Alpha measures the active return of the investment compared to the market benchmark return. R-squared is the percentage of a portfolio's movements that can be explained by movements in the selected benchmark index.
- Active return is the investment return minus the return of its benchmark. For periods longer than 12 months this is displayed as annualized value, i.e., annualized investment return minus annualized benchmark

return.

- Tracking error, also known as active risk, is the standard deviation of active return. This is displayed as annualized value based on the standard deviation of monthly active returns.
- Information ratio is the active return divided by the tracking error. It measures whether the investment outperformed its benchmark consistently.
- Gain/Loss ratio is a measure of downside risk, and it is calculated as the average positive return in up periods divided by the average negative return in down periods.
- Upside Capture Ratio measures how well the fund performed relative to the benchmark when the market was up, and Downside Capture Ratio measures how well the fund performed relative to the benchmark when the market was down. An upside capture ratio greater than 100 would indicate that the fund outperformed its benchmark when the market was up, and a downside capture ratio below 100 would indicate that the fund lost less than its benchmark when the market was down. To calculate upside capture ratio a new series from the portfolio returns is constructed by dropping all time periods where the benchmark return is less than equal to zero. The up capture is then the quotient of the annualized return of the resulting manager series, divided by the annualized return of the resulting benchmark series. The downside capture ratio is calculated analogously.
- All risk measures for the portfolio and portfolio assets are calculated based on monthly returns.
- Gross expense ratio reflects the total annual operating expenses paid by each fund. Net expense ratio reflects what investors were charged after waivers, reductions, and reimbursements.
- Price to earnings (P/E) ratio of a stock is calculated by dividing the current price of the stock by its trailing 12 months' earnings per share. For funds the price to earnings ratio is computed as the weighted average of fund holdings.
- The annual results for 2023 are based on monthly returns from January to March.
- The month-to-date return for March 2023 includes daily returns from 03/01/2023 to 03/30/2023.
- The results assume annual rebalancing of portfolio assets to match the specified allocation.
- The annual income is calculated from the difference between monthly total returns and split adjusted monthly price changes and thus includes both dividends and capital gains distributions.
- The annual yield as a percentage is based on the portfolio asset allocation and is not impacted by cashflows.
- Fund fundamentals data as of 03/30/2023. (c) 2023 Morningstar. All Rights Reserved. The fund fundamentals information contained herein: (1) is proprietary to Morningstar and/or its content providers; (2) may not be copied or distributed; and (3) is not warranted to be accurate, complete or timely. Neither Morningstar nor its content providers are responsible for any damages or losses arising from any use of this information.