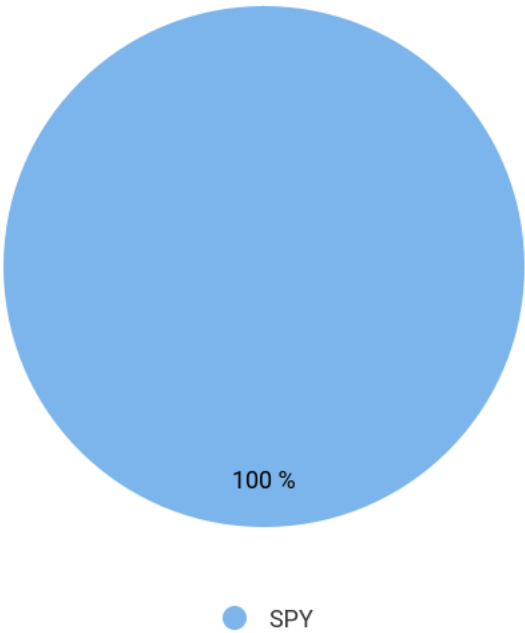


**Report Parameters**

<b>Start Date</b>	01/01/2000
<b>End Date</b>	12/10/2021
<b>Initial Balance</b>	\$1,200
<b>External Cashflows</b>	Contribute \$100 monthly
<b>Rebalancing</b>	No rebalancing
<b>Reinvest Dividends</b>	Yes

Portfolio 1

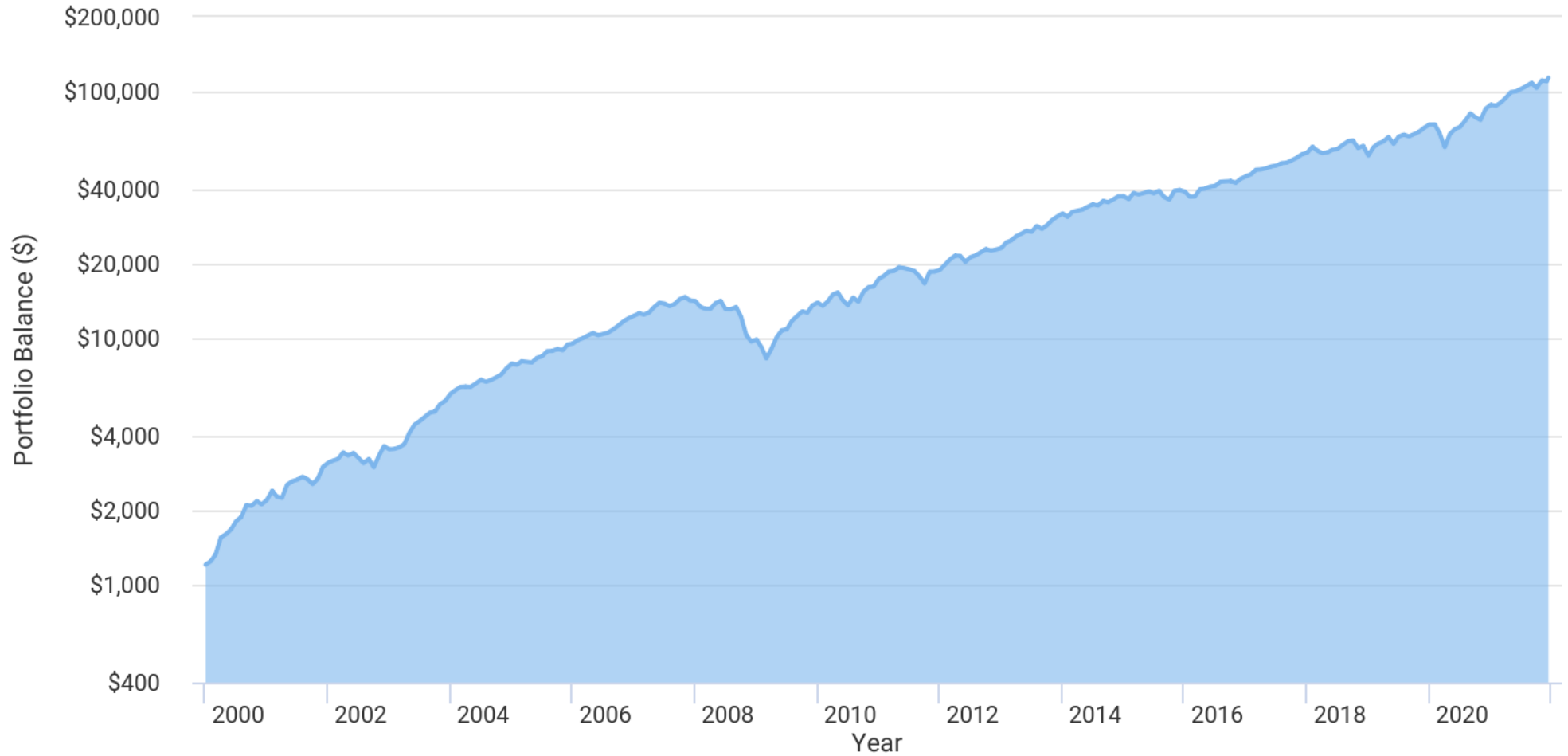
Ticker	Name	Allocation
SPY	SPDR S&P 500 ETF Trust	100.00%



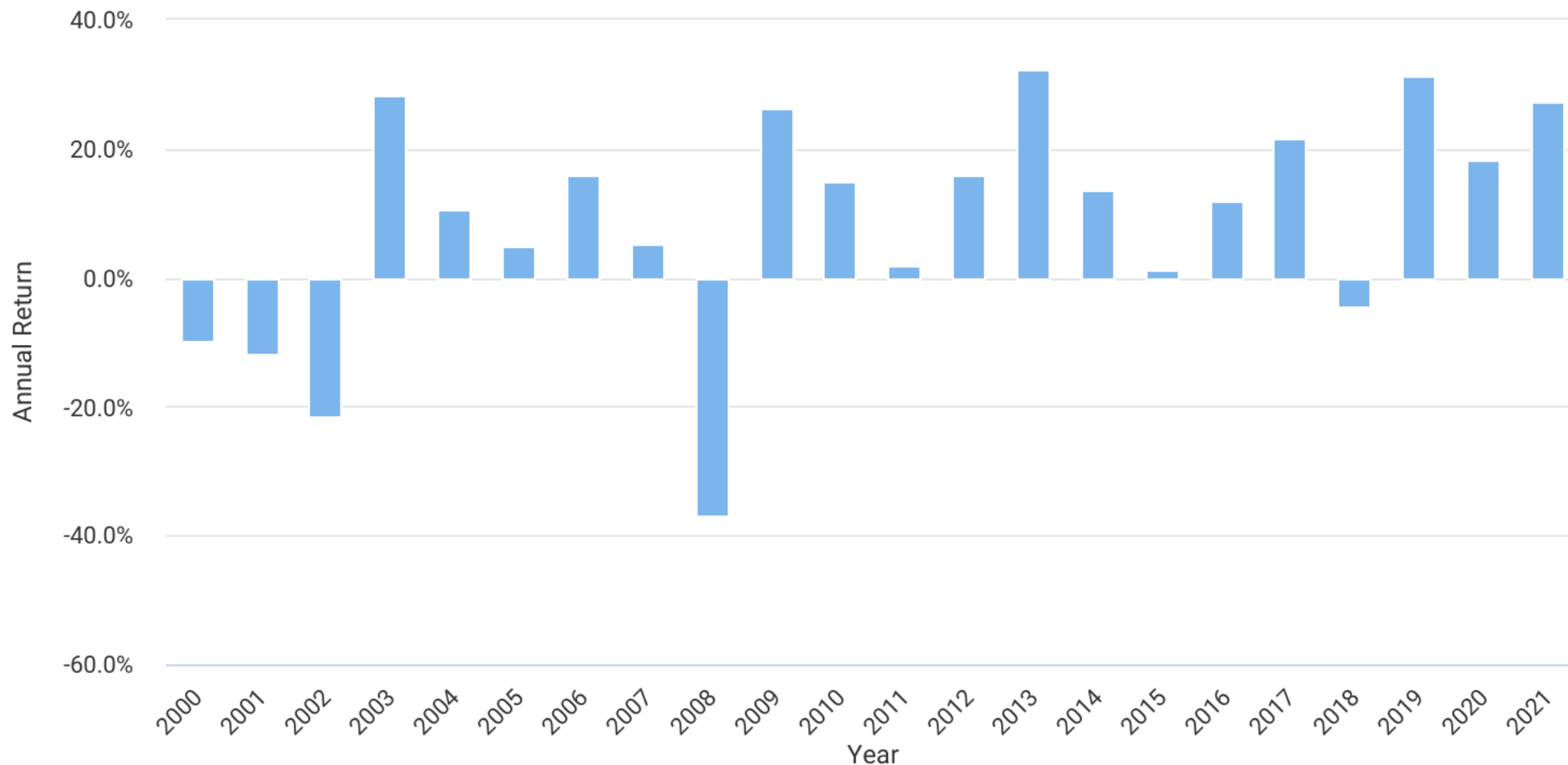
**Portfolio Performance (01/01/2000 - 12/10/2021)**

Metric	Portfolio 1
Start Balance	\$1,200
End Balance	\$113,415
End Balance (inflation adjusted)	\$69,011
Annualized Return (CAGR)	22.97%
Annualized Return (CAGR, inflation adjusted)	20.22%
Time-Weighted Rate of Return (TWRR)	7.39%
Money-Weighted Rate of Return (MWRR)	10.96%
Standard Deviation	15.00%
Best Year	32.31%
Worst Year	-36.81%
Max. Drawdown	-43.62%
Max. Drawdown (excluding cashflows)	-50.80%
Sharpe Ratio	0.45
Sortino Ratio	0.65
US Stock Market Correlation	0.99

## Portfolio Growth



## Annual Returns



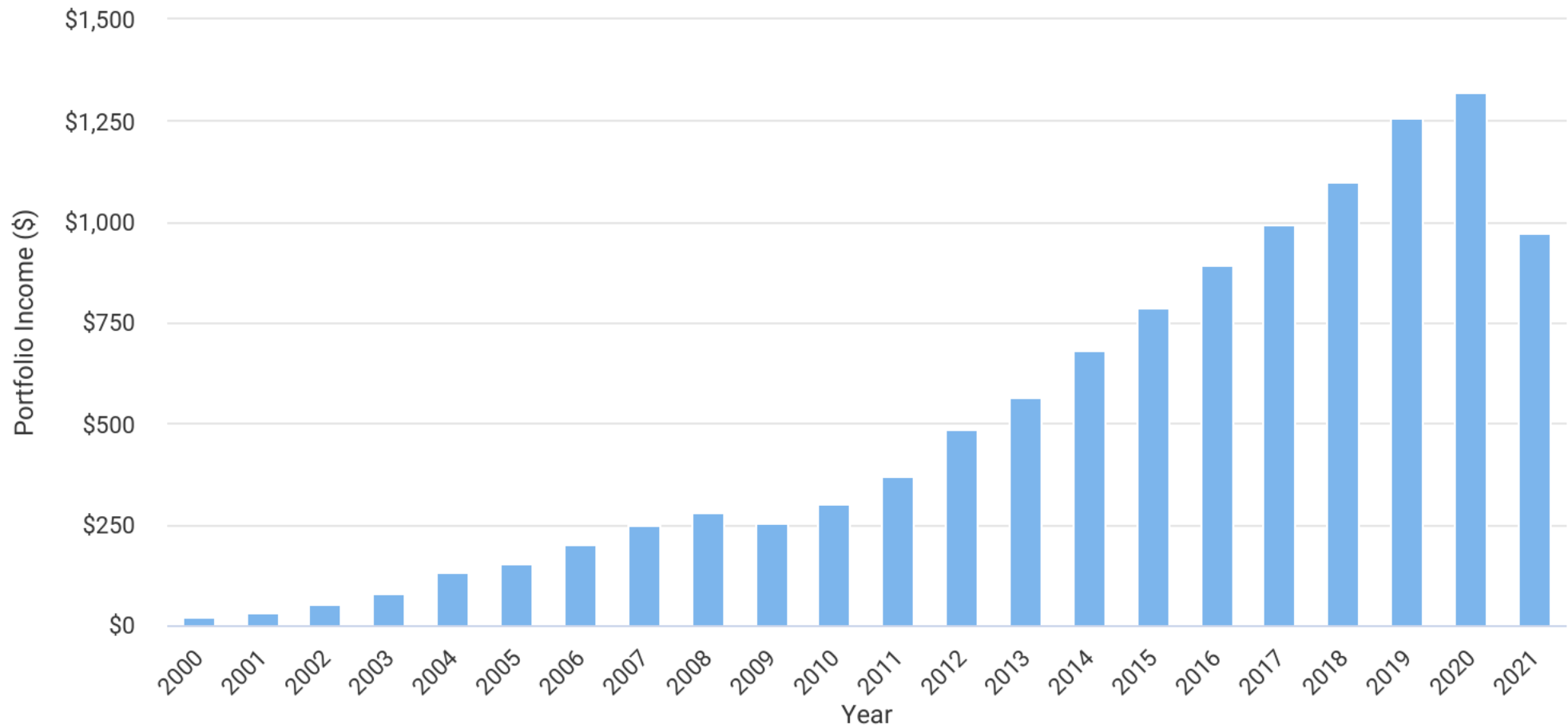
## Trailing Returns

Name	Total Return			Annualized Return				Annualized Standard Deviation	
	3 Month	YTD	1 year	3 year	5 year	10 year	Full	3 year	5 year
Portfolio 1	0.58%	15.91%	29.96%	15.90%	16.80%	16.51%	7.02%	18.69%	15.10%

Trailing return and volatility are as of last full calendar quarter ending September 2021

## Portfolio Income

All dividends and distributions were reinvested



**Risk and Return Metrics (01/01/2000 - 12/10/2021)**

Metric	Portfolio 1
Arithmetic Mean (monthly)	0.69%
Arithmetic Mean (annualized)	8.61%
Geometric Mean (monthly)	0.60%
Geometric Mean (annualized)	7.39%
Standard Deviation (monthly)	4.33%
Standard Deviation (annualized)	15.00%
Downside Deviation (monthly)	2.93%
Max. Drawdown	-50.80%
US Market Correlation	0.99
Beta (*)	0.96
Alpha (annualized)	0.13%
R Squared	97.70%
Sharpe Ratio	0.45
Sortino Ratio	0.65
Treynor Ratio (%)	7.06
Calmar Ratio	1.31
Active Return	-0.16%
Tracking Error	2.37%
Information Ratio	-0.07
Skewness	-0.51
Excess Kurtosis	1.07
Historical Value-at-Risk (5%)	-7.45%
Analytical Value-at-Risk (5%)	-6.43%
Conditional Value-at-Risk (5%)	-9.57%
Upside Capture Ratio (%)	94.65
Downside Capture Ratio (%)	95.49
Positive Periods	167 out of 264 (63.26%)
Gain/Loss Ratio	0.87

(\*) US stock market is used as the benchmark for calculations. Value-at-risk metrics are based on monthly values.

## Portfolio 1 Returns

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Inflation	Cashflow	Balance
2000	-4.98%	-1.52%	9.69%	-3.51%	-1.57%	1.97%	-1.57%	6.53%	-5.48%	-0.47%	-7.47%	-0.52%	-9.73%	3.39%	\$1,200	\$2,199
2001	4.45%	-9.54%	-5.60%	8.54%	-0.56%	-2.38%	-1.02%	-5.93%	-8.16%	1.30%	7.80%	0.56%	-11.75%	1.55%	\$1,200	\$3,109
2002	-0.98%	-1.79%	3.32%	-5.82%	-0.59%	-7.38%	-7.88%	0.68%	-10.49%	8.23%	6.17%	-5.66%	-21.59%	2.38%	\$1,200	\$3,529
2003	-2.46%	-1.35%	0.21%	8.46%	5.48%	1.07%	1.80%	2.06%	-1.09%	5.35%	1.09%	5.03%	28.18%	1.88%	\$1,200	\$5,922
2004	1.98%	1.36%	-1.32%	-1.89%	1.71%	1.85%	-3.22%	0.24%	1.00%	1.29%	4.45%	3.02%	10.70%	3.26%	\$1,200	\$7,846
2005	-2.24%	2.09%	-1.83%	-1.87%	3.22%	0.15%	3.83%	-0.94%	0.80%	-2.37%	4.40%	-0.19%	4.83%	3.42%	\$1,200	\$9,474
2006	2.40%	0.57%	1.65%	1.26%	-3.01%	0.26%	0.45%	2.18%	2.70%	3.15%	1.99%	1.34%	15.85%	2.54%	\$1,200	\$12,279
2007	1.50%	-1.96%	1.16%	4.43%	3.39%	-1.46%	-3.13%	1.28%	3.87%	1.36%	-3.87%	-1.13%	5.14%	4.08%	\$1,200	\$14,109
2008	-6.05%	-2.58%	-0.90%	4.77%	1.51%	-8.35%	-0.90%	1.55%	-9.44%	-16.52%	-6.96%	0.98%	-36.81%	0.09%	\$1,200	\$9,842
2009	-8.21%	-10.74%	8.35%	9.93%	5.85%	-0.07%	7.46%	3.69%	3.55%	-1.92%	6.16%	1.91%	26.36%	2.72%	\$1,200	\$13,885
2010	-3.63%	3.12%	6.09%	1.55%	-7.95%	-5.17%	6.83%	-4.50%	8.96%	3.82%	0.00%	6.68%	15.06%	1.50%	\$1,200	\$17,328
2011	2.33%	3.47%	0.01%	2.90%	-1.12%	-1.69%	-2.00%	-5.50%	-6.94%	10.91%	-0.41%	1.04%	1.89%	2.96%	\$1,200	\$18,847
2012	4.64%	4.34%	3.22%	-0.67%	-6.01%	4.05%	1.18%	2.51%	2.54%	-1.82%	0.57%	0.90%	15.99%	1.74%	\$1,200	\$23,109
2013	5.12%	1.28%	3.80%	1.92%	2.36%	-1.34%	5.17%	-3.00%	3.17%	4.63%	2.96%	2.59%	32.31%	1.50%	\$1,200	\$31,937
2014	-3.52%	4.55%	0.83%	0.70%	2.32%	2.06%	-1.34%	3.95%	-1.38%	2.36%	2.75%	-0.26%	13.46%	0.76%	\$1,200	\$37,521
2015	-2.96%	5.62%	-1.57%	0.98%	1.29%	-2.03%	2.26%	-6.10%	-2.54%	8.51%	0.37%	-1.72%	1.25%	0.73%	\$1,200	\$39,198
2016	-4.98%	-0.08%	6.72%	0.39%	1.70%	0.35%	3.65%	0.12%	0.01%	-1.73%	3.68%	2.03%	12.00%	2.07%	\$1,200	\$45,195
2017	1.79%	3.93%	0.13%	0.99%	1.41%	0.64%	2.06%	0.29%	2.01%	2.36%	3.06%	1.21%	21.70%	2.11%	\$1,200	\$56,320
2018	5.64%	-3.64%	-2.74%	0.52%	2.43%	0.58%	3.70%	3.19%	0.59%	-6.91%	1.85%	-8.79%	-4.56%	1.91%	\$1,200	\$54,864
2019	8.01%	3.24%	1.81%	4.09%	-6.38%	6.96%	1.51%	-1.67%	1.95%	2.21%	3.62%	2.90%	31.22%	2.29%	\$1,200	\$73,328
2020	-0.04%	-7.92%	-12.46%	12.70%	4.76%	1.78%	5.89%	6.98%	-3.74%	-2.49%	10.88%	3.71%	18.37%	1.36%	\$1,200	\$88,226
2021	-1.02%	2.78%	4.54%	5.29%	0.66%	2.25%	2.44%	2.98%	-4.66%	7.02%	-0.80%	3.33%	27.15%	6.19%	\$1,100	\$113,415

The cashflow column shows the total annual portfolio contributions (positive) and withdrawals (negative)



### Portfolio Returns Based Style Analysis

Style Category	Portfolio 1
Large-cap Value	46.03%
Large-cap Growth	53.64%
Mid-cap Value	0.00%
Mid-cap Growth	0.17%
Small-cap Value	0.00%
Small-cap Growth	0.00%
Global ex-US Developed Markets	0.00%
Emerging Markets	0.01%
Corporate Bonds	0.15%
Long-Term Treasuries	0.00%
Intermediate-Term Treasuries	0.00%
Short-Term Treasuries	0.00%

**R Squared** 99.91%

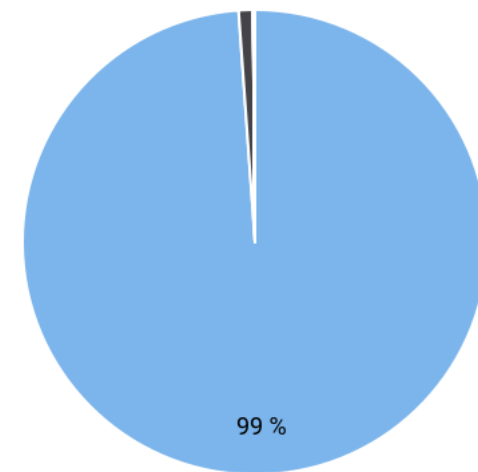
Style analysis is based on monthly returns from April 2005 to November 2021 and uses total portfolio return with monthly rebalancing. Returns based style analysis aims to explain the portfolio returns based on asset class exposures, it does not identify the actual portfolio holdings.

### Holdings Based Style Analysis for Portfolio 1

Ticker	Name	Category	Weight	SEC Yield	Expense Ratio		P/E
					Net	Gross	
SPY	SPDR S&P 500 ETF Trust	Large Blend	100.00%	1.17%	0.09%	0.09%	24.03

### Asset Allocation for Portfolio 1

Category	Weight
US Stocks	98.88%
Intl Stocks	1.00%
US Bonds	0.00%
Intl Bonds	0.00%
Other	0.00%
Cash	0.12%



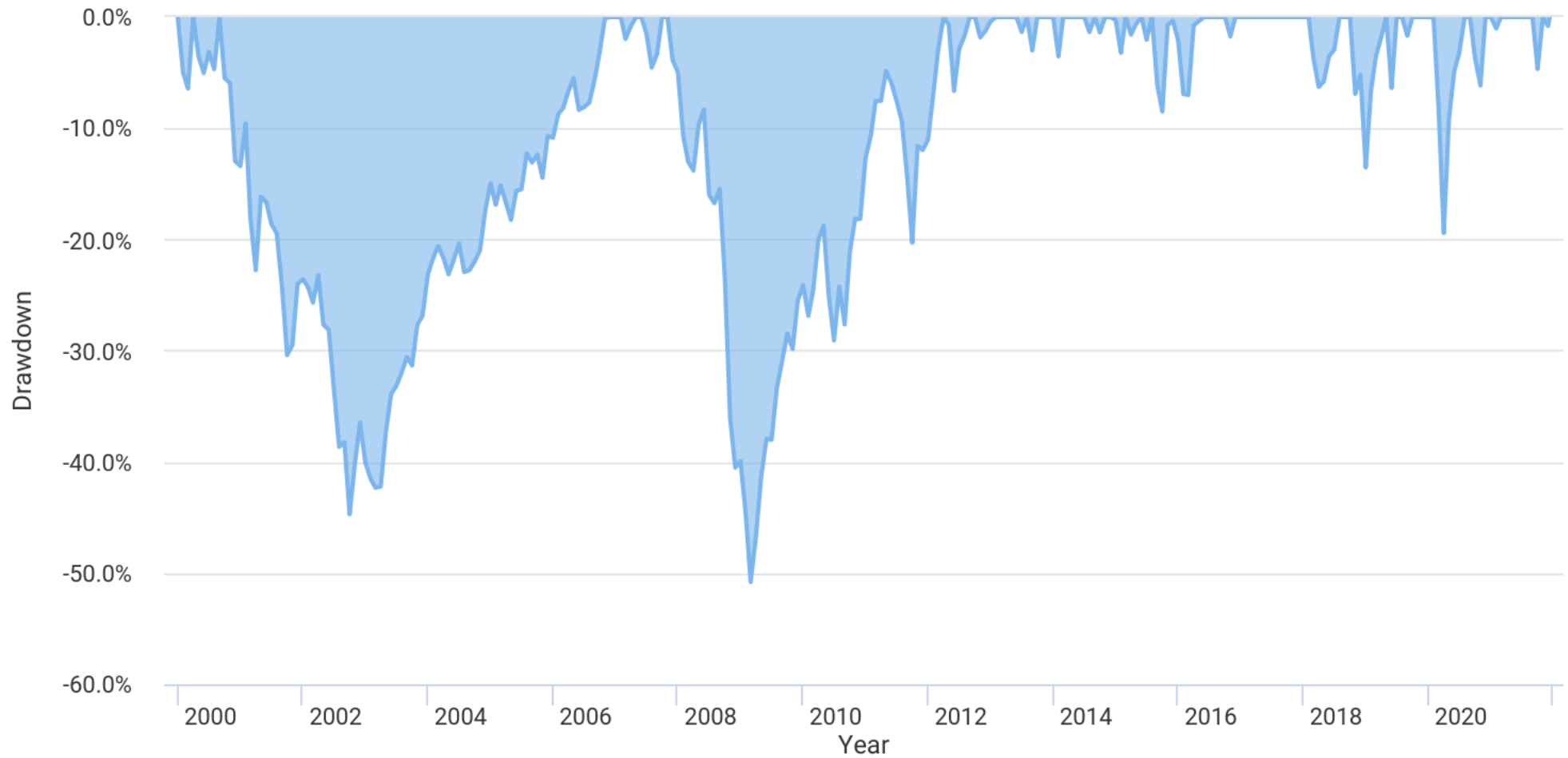
### Equity Market Capitalization for Portfolio 1

Category	Weight
Large Cap	83.70%
Mid Cap	16.08%
Small Cap	0.22%

### Stock Sectors for Portfolio 1

Category	Weight
Basic Materials	2.19%
Consumer Cyclical	12.88%
Financial Services	12.97%
Real Estate	2.61%
Consumer Defensive	6.04%
Healthcare	12.81%
Utilities	2.37%
Communication Services	10.36%
Energy	2.71%
Industrials	8.13%
Technology	26.93%

## Drawdowns



### Drawdowns for Historical Market Stress Periods

Stress Period	Start	End	Portfolio 1
Dotcom Crash	Mar 2000	Oct 2002	-44.71%
Subprime Crisis	Nov 2007	Mar 2009	-50.80%
COVID-19 Start	Jan 2020	Mar 2020	-19.43%

### Drawdowns for Portfolio 1 (worst 10)

Rank	Start	End	Length	Recovery By	Recovery Time	Underwater Period	Drawdown
1	Nov 2007	Feb 2009	1 year 4 months	Mar 2012	3 years 1 month	4 years 5 months	-50.80%
2	Sep 2000	Sep 2002	2 years 1 month	Nov 2006	4 years 2 months	6 years 3 months	-44.71%
3	Jan 2020	Mar 2020	3 months	Jul 2020	4 months	7 months	-19.43%
4	Oct 2018	Dec 2018	3 months	Apr 2019	4 months	7 months	-13.52%
5	Aug 2015	Sep 2015	2 months	May 2016	8 months	10 months	-8.48%
6	Apr 2012	May 2012	2 months	Aug 2012	3 months	5 months	-6.63%
7	Jan 2000	Feb 2000	2 months	Mar 2000	1 month	3 months	-6.43%
8	May 2019	May 2019	1 month	Jun 2019	1 month	2 months	-6.38%
9	Feb 2018	Mar 2018	2 months	Jul 2018	4 months	6 months	-6.28%
10	Sep 2020	Oct 2020	2 months	Nov 2020	1 month	3 months	-6.14%

### Rolling Returns (01/01/2000 - 12/10/2021)

Roll Period	Average	High	Low
1 year	8.72%	56.25%	-43.44%
3 years	8.03%	25.45%	-16.28%
5 years	8.25%	22.86%	-6.67%
7 years	8.02%	17.14%	-3.91%
10 years	8.07%	16.55%	-1.89%
15 years	7.92%	10.82%	3.67%

## Annualized Rolling Return (36 months)



## Annualized Rolling Return (60 months)



**Notes:**

- Past performance is no guarantee of future results, which may vary. All use is subject to terms of service.
- Investing involves risk, including possible loss of principal. The value of the investments and the income derived from them may fluctuate over time.
- All portfolio returns presented are hypothetical and backtested. Hypothetical returns do not reflect trading costs, transaction fees, or taxes.
- 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.
- 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.
- The results are based on the total return of assets and assume that all received dividends and distributions are reinvested.
- The month-to-date return for December 2021 includes daily returns from 12/01/2021 to 12/10/2021
- CAGR = Compound Annual Growth Rate
- TWRR = Annualized time weighted rate of return
- MWRR = Annualized money weighted rate of return (internal rate of return) taking into account the periodic cashflows
- Stdev = Annualized standard deviation of monthly returns
- Sharpe and Sortino ratios are calculated and annualized from monthly excess returns over risk free rate (3-month treasury bill)
- Stock market correlation is based on the correlation of monthly returns
- Drawdown analysis is calculated based on monthly returns excluding cashflows
- The results assume no rebalancing of portfolio assets per parameterization. See the allocation drift section for details
- Monthly contribution of \$100 was applied at the end of each period. This is reflected in the CAGR and maximum drawdown shown above.
- The monthly contribution was allocated based on each month's asset allocation (no rebalancing)
- 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 12/10/2021. (c) 2021 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.