

Report Parameters

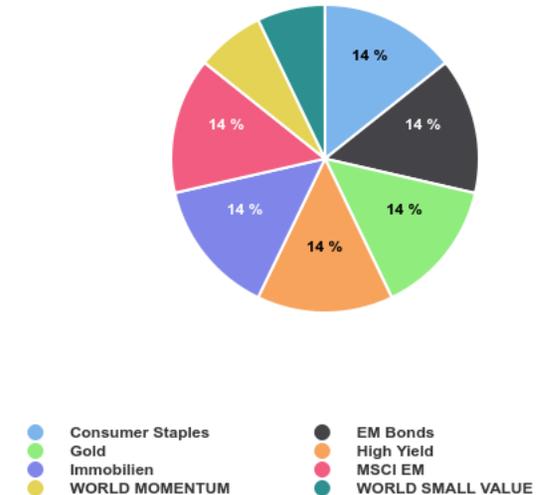
Initial Amount	\$300,000
Periodic Adjustment	Withdraw fixed amount periodically
Withdrawal Amount	\$1,000
Frequency	Monthly
Inflation Adjusted	No
Simulation Period	25
Simulation Model	Historical Returns
Bootstrap Model	Single Year
Sequence of Return Risk	No Adjustments
Inflation Model	Parameterized Inflation
Annual Inflation Mean	2.00%
Annual Inflation Stdev	3.00%

Simulation Description

Monte Carlo simulation results for 10000 portfolios with \$300,000 initial portfolio balance using available historical returns data from Jan 2001 to Dec 2017. The historical return for the selected portfolio for this period was 9.69% mean return (8.74% CAGR) with 9.72% standard deviation of annual returns. The simulation results are based on generated nominal returns and specified withdrawals (\$1,000 per month not adjusted for inflation). The simulated inflation model used normal distribution with 2.00% mean and 3.00% standard deviation based on the parameters. The generated inflation samples were uncorrelated with simulated asset returns. The available historical data for the simulation inputs was constrained by Consumer Staples [Jan 2001 - Nov 2018].

Portfolio

Asset Class	Allocation	CAGR	Expected Annual Return	Annualized Volatility
Consumer Staples	14.32%	6.47%	7.09%	10.79%
EM Bonds	14.28%	7.28%	7.87%	10.58%
Gold	14.28%	8.03%	9.49%	16.55%
High Yield	14.28%	7.27%	7.85%	10.41%
Immobilien	14.28%	9.81%	11.83%	19.04%
MSCI EM	14.28%	8.62%	10.72%	19.55%
WORLD MOMENTUM	7.14%	6.02%	6.97%	13.39%
WORLD SMALL VALUE	7.14%	8.49%	9.72%	15.08%

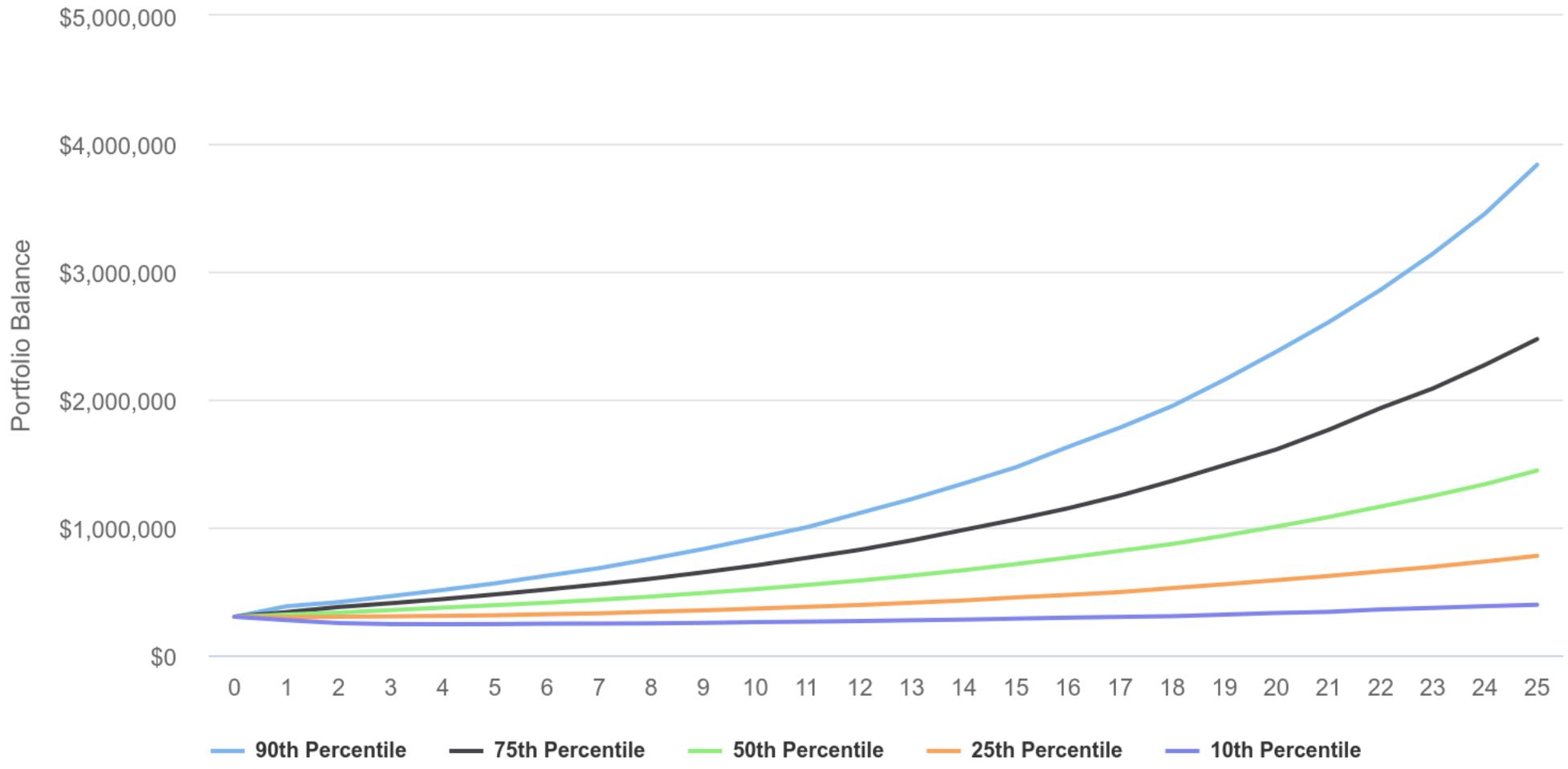


Summary Statistics

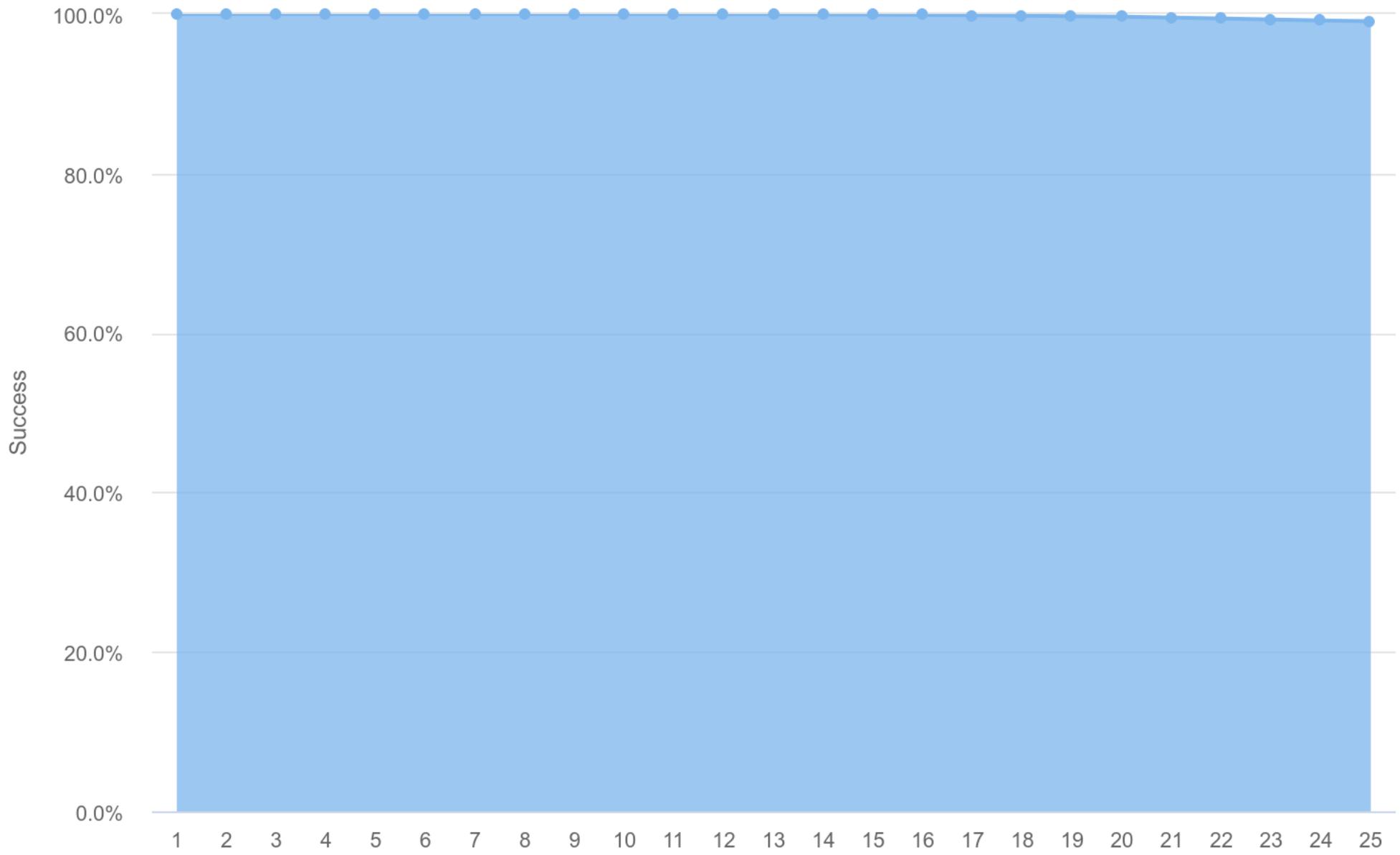
	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile
Time Weighted Rate of Return (nominal)	5.08%	6.90%	8.86%	10.78%	12.46%
Time Weighted Rate of Return (real)	2.89%	4.71%	6.71%	8.64%	10.31%
Portfolio End Balance (nominal)	\$393,592	\$776,082	\$1,443,423	\$2,470,960	\$3,834,411
Portfolio End Balance (real)	\$239,631	\$472,112	\$889,313	\$1,532,676	\$2,382,230
Maximum Drawdown	-53.12%	-40.74%	-32.06%	-26.58%	-18.18%
Maximum Drawdown Excluding Cashflows	-44.83%	-34.50%	-28.81%	-25.72%	-17.55%
Safe Withdrawal Rate	5.09%	6.50%	8.22%	10.17%	12.05%
Perpetual Withdrawal Rate	2.90%	4.57%	6.36%	8.02%	9.42%

9910 portfolios out of 10000 simulated portfolios (99.10%) survived all withdrawals.

Simulated Portfolio Balances



Portfolio Success



Portfolio Balances (nominal)

Year	10th Percentile Balance	25th Percentile Balance	50th Percentile Balance	75th Percentile Balance	90th Percentile Balance	Portfolio Success
1	\$273,216	\$295,546	\$316,960	\$336,270	\$382,095	100.00%
2	\$250,314	\$299,999	\$332,413	\$376,061	\$414,397	100.00%
3	\$242,470	\$303,123	\$352,239	\$405,627	\$460,919	100.00%
4	\$241,530	\$306,970	\$371,313	\$438,222	\$509,637	100.00%
5	\$242,509	\$311,150	\$390,423	\$474,398	\$561,171	100.00%
6	\$245,737	\$319,813	\$409,784	\$513,139	\$621,303	100.00%
7	\$246,489	\$326,398	\$432,923	\$553,524	\$680,370	100.00%
8	\$248,044	\$339,465	\$457,755	\$597,520	\$753,294	100.00%
9	\$251,704	\$349,890	\$486,309	\$647,781	\$829,929	100.00%
10	\$258,007	\$363,492	\$515,606	\$700,964	\$914,399	100.00%
11	\$261,708	\$377,598	\$548,984	\$761,879	\$1,001,559	100.00%
12	\$266,285	\$391,877	\$583,115	\$823,653	\$1,111,563	99.99%
13	\$272,321	\$409,500	\$622,313	\$897,770	\$1,220,963	99.99%
14	\$277,432	\$427,525	\$664,344	\$979,758	\$1,342,965	99.96%
15	\$285,564	\$451,248	\$711,961	\$1,060,977	\$1,469,159	99.93%
16	\$292,679	\$470,720	\$762,641	\$1,148,450	\$1,628,416	99.89%
17	\$298,884	\$492,895	\$815,954	\$1,248,250	\$1,779,975	99.85%
18	\$304,243	\$524,138	\$869,412	\$1,362,780	\$1,948,159	99.80%
19	\$316,504	\$553,885	\$934,327	\$1,485,727	\$2,153,592	99.72%
20	\$329,258	\$586,300	\$1,005,745	\$1,608,801	\$2,373,733	99.67%
21	\$338,258	\$618,654	\$1,079,879	\$1,761,770	\$2,603,604	99.56%
22	\$357,250	\$654,909	\$1,162,079	\$1,932,223	\$2,857,532	99.44%
23	\$368,955	\$690,275	\$1,245,505	\$2,085,169	\$3,139,164	99.32%
24	\$382,653	\$731,915	\$1,336,806	\$2,269,707	\$3,452,035	99.19%
25	\$393,592	\$776,082	\$1,443,423	\$2,470,960	\$3,834,411	99.10%

Portfolio Balances (inflation adjusted)

Year	10th Percentile Balance	25th Percentile Balance	50th Percentile Balance	75th Percentile Balance	90th Percentile Balance	Portfolio Success
1	\$270,750	\$288,553	\$310,349	\$332,369	\$371,389	100.00%
2	\$241,241	\$286,369	\$320,691	\$360,912	\$402,394	100.00%
3	\$228,579	\$283,188	\$332,042	\$384,443	\$439,550	100.00%
4	\$224,296	\$281,347	\$343,285	\$408,519	\$474,388	100.00%
5	\$219,498	\$280,942	\$354,010	\$431,336	\$513,812	100.00%
6	\$217,350	\$282,536	\$365,770	\$458,376	\$557,109	100.00%
7	\$215,323	\$284,786	\$377,432	\$484,435	\$600,035	100.00%
8	\$211,244	\$289,071	\$392,388	\$514,234	\$650,987	100.00%
9	\$211,531	\$292,111	\$405,476	\$547,465	\$702,471	100.00%
10	\$211,159	\$296,067	\$422,220	\$581,564	\$759,210	100.00%
11	\$209,074	\$302,697	\$443,289	\$617,780	\$822,352	100.00%
12	\$208,535	\$310,580	\$462,022	\$659,873	\$890,240	99.99%
13	\$209,863	\$315,816	\$481,986	\$701,473	\$959,250	99.99%
14	\$209,617	\$324,166	\$503,674	\$748,517	\$1,031,832	99.96%
15	\$212,377	\$333,058	\$530,277	\$797,358	\$1,105,029	99.93%
16	\$210,195	\$344,309	\$554,681	\$848,733	\$1,201,109	99.89%
17	\$211,361	\$353,992	\$582,746	\$907,643	\$1,292,400	99.85%
18	\$215,083	\$368,841	\$611,945	\$968,202	\$1,388,148	99.80%
19	\$216,362	\$381,638	\$647,302	\$1,028,404	\$1,502,589	99.72%
20	\$222,425	\$396,826	\$683,923	\$1,095,929	\$1,614,750	99.67%
21	\$221,788	\$410,647	\$718,205	\$1,182,151	\$1,748,173	99.56%
22	\$228,316	\$422,754	\$762,933	\$1,256,278	\$1,873,951	99.44%
23	\$233,024	\$437,824	\$798,458	\$1,341,149	\$2,045,333	99.32%
24	\$235,519	\$455,955	\$844,221	\$1,439,251	\$2,202,685	99.19%
25	\$239,631	\$472,112	\$889,313	\$1,532,676	\$2,382,230	99.10%

Portfolio Cashflows (nominal)

Year	10th Percentile Cashflow	25th Percentile Cashflow	50th Percentile Cashflow	75th Percentile Cashflow	90th Percentile Cashflow
1	-\$12,000	-\$12,000	-\$12,000	-\$12,000	-\$12,000
2	-\$12,000	-\$12,000	-\$12,000	-\$12,000	-\$12,000
3	-\$12,000	-\$12,000	-\$12,000	-\$12,000	-\$12,000
4	-\$12,000	-\$12,000	-\$12,000	-\$12,000	-\$12,000
5	-\$12,000	-\$12,000	-\$12,000	-\$12,000	-\$12,000
6	-\$12,000	-\$12,000	-\$12,000	-\$12,000	-\$12,000
7	-\$12,000	-\$12,000	-\$12,000	-\$12,000	-\$12,000
8	-\$12,000	-\$12,000	-\$12,000	-\$12,000	-\$12,000
9	-\$12,000	-\$12,000	-\$12,000	-\$12,000	-\$12,000
10	-\$12,000	-\$12,000	-\$12,000	-\$12,000	-\$12,000
11	-\$12,000	-\$12,000	-\$12,000	-\$12,000	-\$12,000
12	-\$12,000	-\$12,000	-\$12,000	-\$12,000	-\$12,000
13	-\$12,000	-\$12,000	-\$12,000	-\$12,000	-\$12,000
14	-\$12,000	-\$12,000	-\$12,000	-\$12,000	-\$12,000
15	-\$12,000	-\$12,000	-\$12,000	-\$12,000	-\$12,000
16	-\$12,000	-\$12,000	-\$12,000	-\$12,000	-\$12,000
17	-\$12,000	-\$12,000	-\$12,000	-\$12,000	-\$12,000
18	-\$12,000	-\$12,000	-\$12,000	-\$12,000	-\$12,000
19	-\$12,000	-\$12,000	-\$12,000	-\$12,000	-\$12,000
20	-\$12,000	-\$12,000	-\$12,000	-\$12,000	-\$12,000
21	-\$12,000	-\$12,000	-\$12,000	-\$12,000	-\$12,000
22	-\$12,000	-\$12,000	-\$12,000	-\$12,000	-\$12,000
23	-\$12,000	-\$12,000	-\$12,000	-\$12,000	-\$12,000
24	-\$12,000	-\$12,000	-\$12,000	-\$12,000	-\$12,000
25	-\$12,000	-\$12,000	-\$12,000	-\$12,000	-\$12,000

Expected Annual Return

Percentile	1 Year	3 Years	5 Years	10 Years	15 Years	20 Years	25 Years
10th Percentile	-5.13%	-2.62%	0.17%	2.97%	3.96%	4.61%	5.08%
25th Percentile	2.62%	4.40%	4.78%	5.75%	6.32%	6.65%	6.90%
50th Percentile	9.91%	9.41%	9.15%	8.93%	8.93%	8.91%	8.86%
75th Percentile	16.29%	14.42%	13.15%	11.92%	11.41%	11.02%	10.78%
90th Percentile	31.94%	19.22%	16.82%	14.59%	13.53%	12.90%	12.46%

Annual Return Probabilities

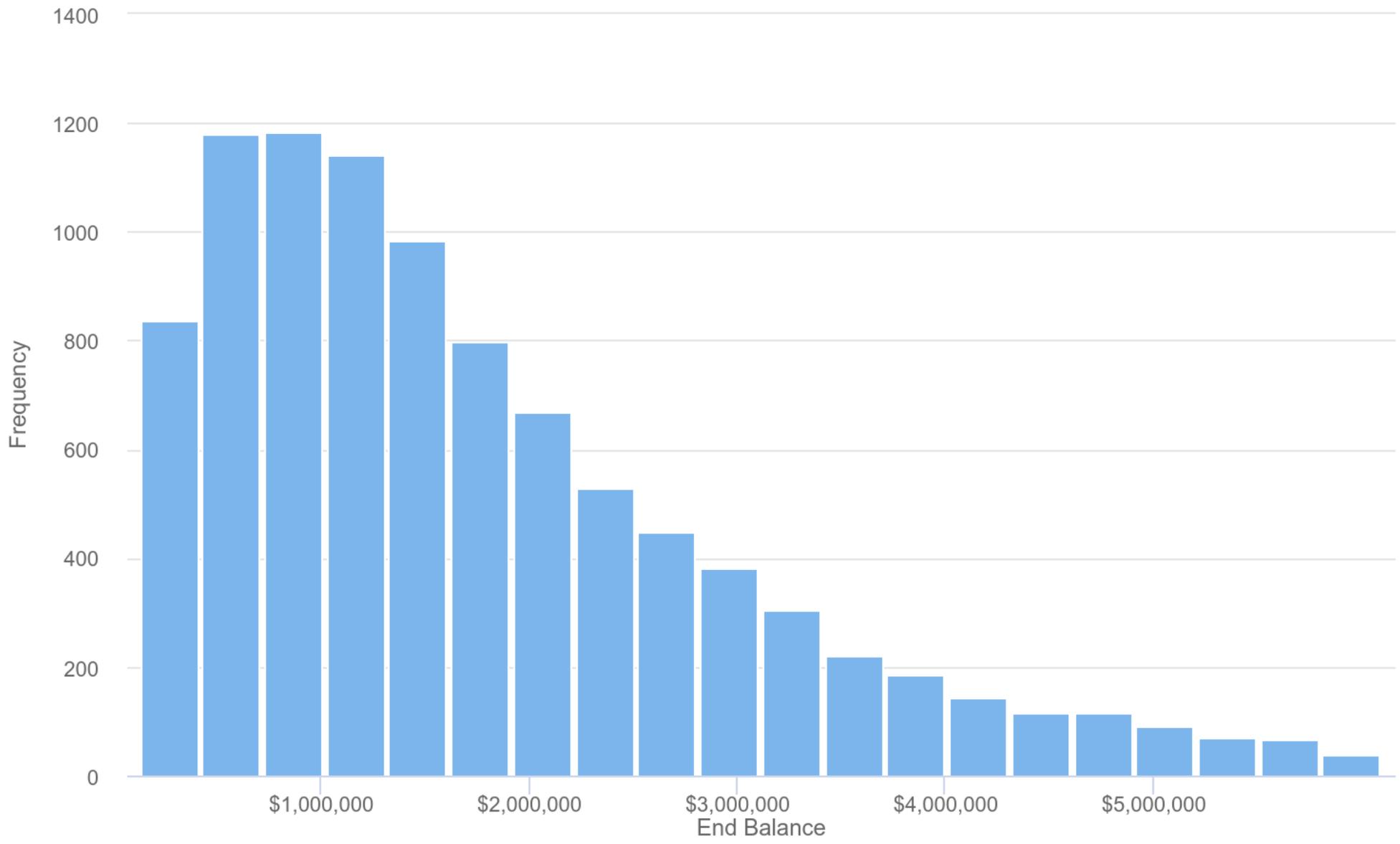
Return	1 Year	3 Years	5 Years	10 Years	15 Years	20 Years	25 Years
>= 0.00%	88.59%	85.89%	90.47%	96.83%	98.82%	99.46%	99.80%
>= 2.50%	76.94%	81.06%	83.83%	91.48%	95.29%	97.40%	98.21%
>= 5.00%	65.15%	72.31%	74.00%	79.75%	84.33%	88.04%	90.48%
>= 7.50%	59.04%	59.85%	60.40%	62.15%	64.56%	66.44%	68.08%
>= 10.00%	47.84%	47.09%	44.50%	40.36%	38.37%	36.40%	34.42%
>= 12.50%	36.39%	33.39%	28.69%	20.70%	16.00%	12.57%	9.78%

Loss Probabilities

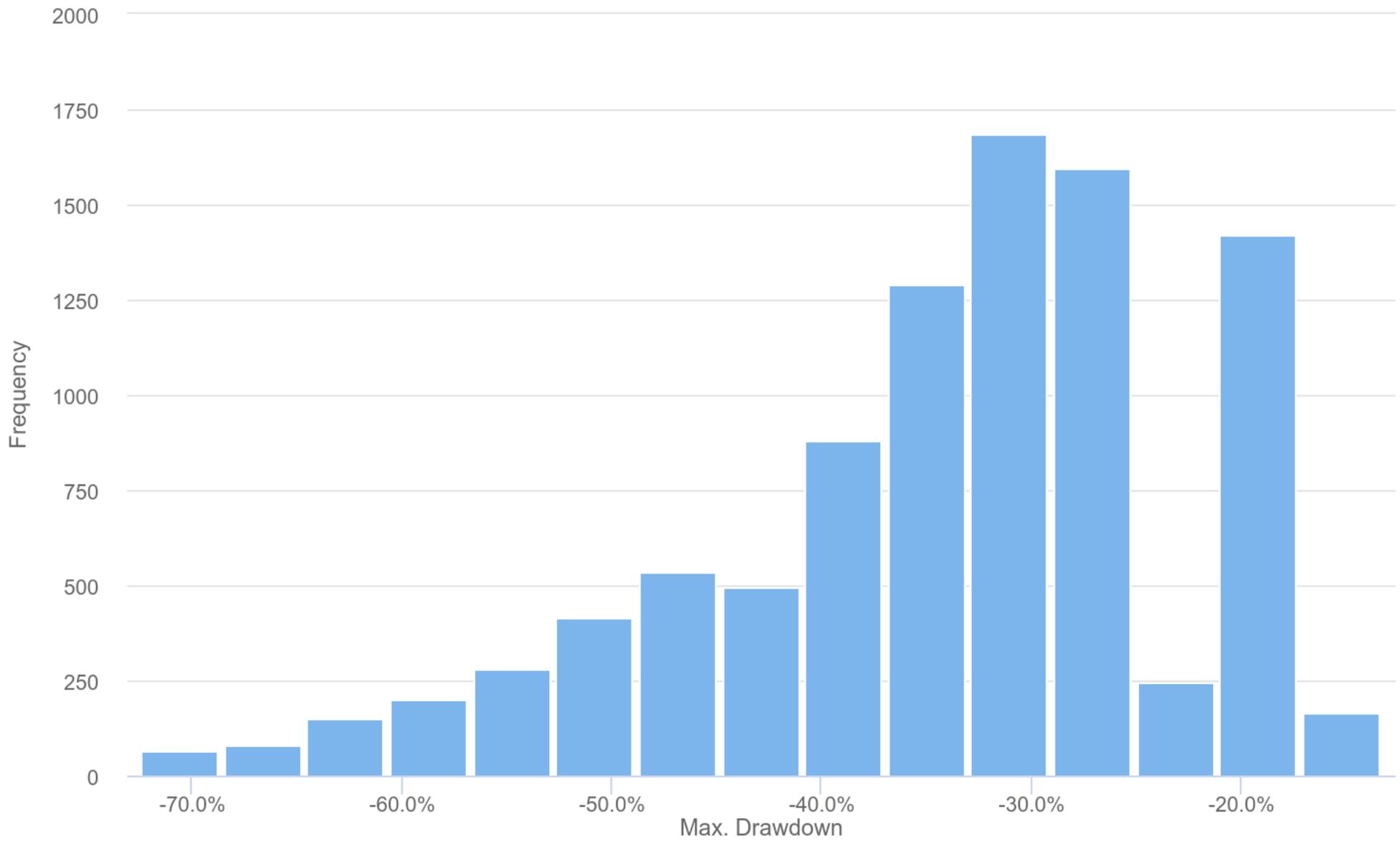
Loss	Loss Probability Excluding Cashflows		Loss Probability Including Cashflows	
	Within Time Period	End of Time Period	Within Time Period	End of Time Period
>= 2.50%	41.95%	0.17%	59.76%	6.72%
>= 5.00%	25.55%	0.14%	53.23%	6.46%
>= 7.50%	23.94%	0.13%	40.18%	6.25%
>= 10.00%	18.12%	0.12%	36.17%	6.06%
>= 12.50%	16.99%	0.10%	31.07%	5.82%
>= 15.00%	15.43%	0.09%	28.40%	5.64%
>= 17.50%	13.70%	0.08%	25.94%	5.43%
>= 20.00%	12.30%	0.07%	24.40%	5.28%
>= 22.50%	11.32%	0.06%	22.45%	5.08%
>= 25.00%	10.03%	0.06%	20.60%	4.87%
>= 27.50%	5.96%	0.06%	18.81%	4.68%
>= 30.00%	4.19%	0.04%	15.93%	4.51%
>= 32.50%	3.35%	0.03%	13.77%	4.36%
>= 35.00%	2.72%	0.03%	11.53%	4.16%
>= 37.50%	2.28%	0.03%	10.15%	3.93%
>= 40.00%	1.84%	0.03%	8.89%	3.69%

Loss is measured against the original portfolio balance.

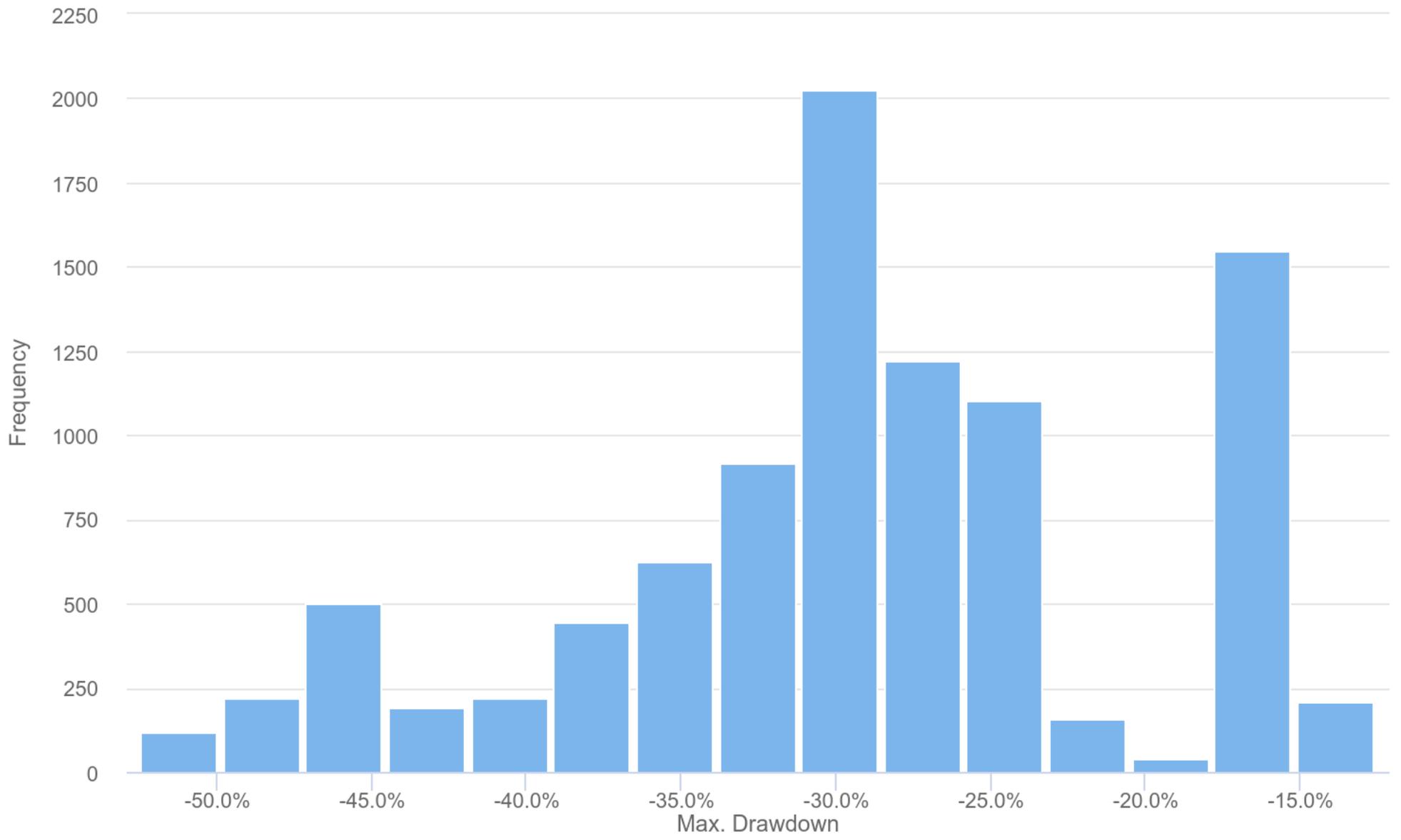
Portfolio End Balance Histogram (95% of results)



Maximum Drawdown Histogram Including Cashflows (95% of results)



Maximum Drawdown Histogram Excluding Cashflows (95% of results)



Disclosures:

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