

# DUAL MOMENTUM SYSTEMS

**Process driven investment decisions  
driving better long term results with more  
shallow drawdowns and better risk  
adjusted performance.**





## Disclosure

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# Investment Strategies

## Investments for the month of October 31, 2024

### Strategy Components Invested:

Aggressive →

Month	HedgeFundie	MAX PAIN	Profit Farmer
Oct 2023	55% UPRO 45% TMF	3X Long Term Treasuries	47.69% EDC 9.86% TQQQ 42.45% DRN
Nov 2023	55% UPRO 45% TMF	Extended Duration Treasuries	73.74% EDC 11.96% TQQQ 14.3% DRN
Dec 2023	55% UPRO 45% TMF	3X S&P 500	68.3% EDC 31.7% TQQQ
Jan 2024	55% UPRO 45% TMF	3X Russell 2000	22.1% URTY 68.18% TMF 9.72% DRN
Feb 2024	55% UPRO 45% TMF	3X S&P 500	57.76% TQQQ 42.24% TMF
Mar 2024	55% UPRO 45% TMF	3X S&P 500	58.03% EDC 41.97% TQQQ
Apr 2024	55% UPRO 45% TMF	3X S&P MidCap 400	70.42% EDC 29.58% TQQQ
May 2024	55% UPRO 45% TMF	3X S&P 500	89.52% EDC 6.19% URTY 4.29% TQQQ
Jun 2024	55% UPRO 45% TMF	3X S&P MidCap 400	69.34% EDC 1.45% URTY 29.21% TQQQ
Jul 2024	55% UPRO 45% TMF	3X S&P 500	23.24% EDC 44.42% TQQQ 32.34% DRN
Aug 2024	55% UPRO 45% TMF	3X Russell 2000	1.7% URTY 35.28% TMF 63.02% DRN
Sep 2024	55% UPRO 45% TMF	3X S&P 500	7.9% URTY 53.07% TMF 39.03% DRN
<b>Oct 2024</b>	55% UPRO 45% TMF	3X S&P 500	<b>19.37% EDC 45.63% TMF 35.% DRN</b>

**For October, here are the investments by strategy:**

# Investment Strategies

## Rolling 12 Month Returns

### Through September 30, 2024

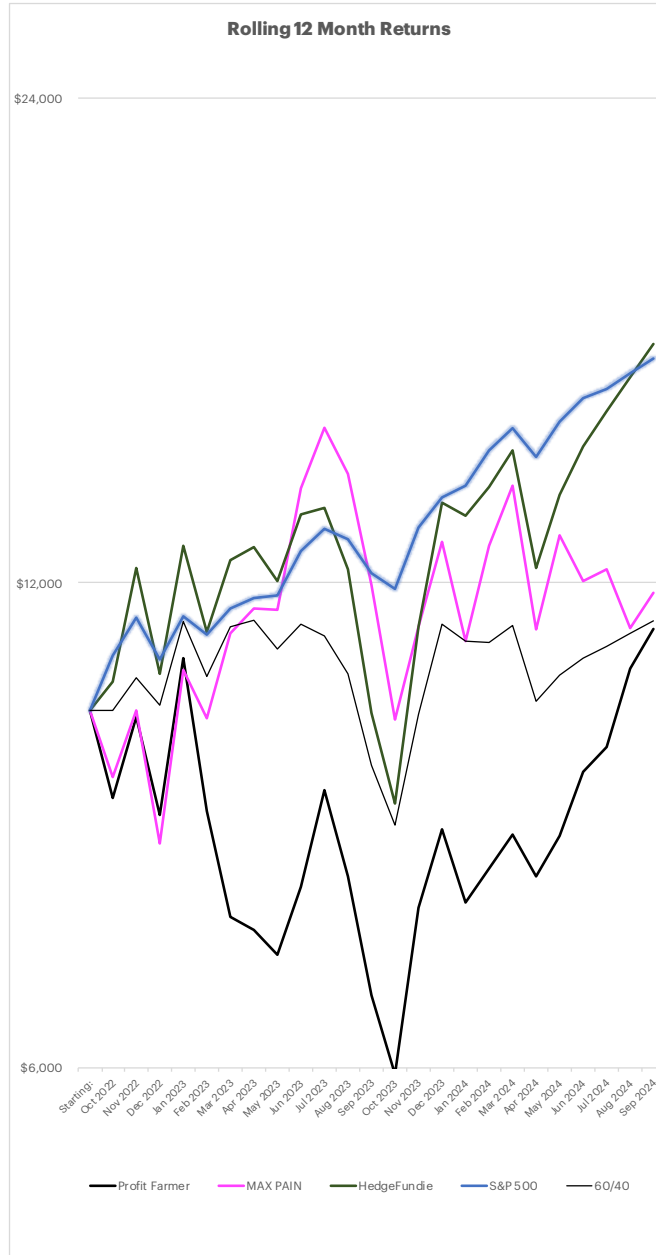
#### Returns and Maximum Drawdown:

Month	US Market S&P 500	Balanced 60/40	HedgeFundie	Profit Farmer	MAX PAIN
Oct 2022	8.13%	0.00%	4.23%	-11.77%	-9.10%
Nov 2022	5.56%	4.80%	17.55%	12.27%	10.08%
Dec 2022	-5.76%	-3.78%	-13.94%	-13.08%	-17.36%
Jan 2023	6.29%	12.70%	20.01%	25.22%	28.28%
Feb 2023	-2.51%	-7.60%	-11.66%	-19.65%	-6.80%
Mar 2023	3.71%	7.37%	10.98%	-14.03%	12.86%
Apr 2023	1.60%	0.82%	1.83%	-1.93%	3.60%
May 2023	0.46%	-3.93%	-4.81%	-3.44%	-0.15%
Jun 2023	6.48%	3.52%	10.10%	10.22%	19.13%
Jul 2023	3.27%	-1.53%	1.00%	14.82%	8.95%
Aug 2023	-1.63%	-5.36%	-8.44%	-11.67%	-6.37%
Sep 2023	-4.74%	-12.16%	-18.57%	-15.63%	-14.71%
Oct 2023	-2.17%	-8.27%	-12.18%	-10.62%	-17.43%
Nov 2023	9.13%	17.24%	28.69%	26.78%	14.03%
Dec 2023	4.57%	13.67%	19.41%	11.99%	12.94%
Jan 2024	1.59%	-2.34%	-1.81%	-10.00%	-13.18%
Feb 2024	5.22%	-0.22%	4.29%	4.93%	14.67%
Mar 2024	3.27%	2.37%	5.31%	5.17%	8.83%
Apr 2024	-4.03%	-10.17%	-15.58%	-5.89%	-18.46%
May 2024	5.06%	3.71%	11.10%	5.88%	14.28%
Jun 2024	3.53%	2.47%	7.11%	9.69%	-6.35%
Jul 2024	1.21%	1.67%	5.23%	3.63%	1.81%
Aug 2024	2.34%	1.98%	4.92%	11.73%	-8.12%
Sep 2024	2.10%	1.78%	4.94%	5.93%	5.13%
<b>24 Mo Rtrn:</b>	<b>65.40%</b>	<b>13.68%</b>	<b>68.87%</b>	<b>12.37%</b>	<b>18.30%</b>
<b>CAGR</b>	<b>28.61%</b>	<b>6.62%</b>	<b>29.95%</b>	<b>6.00%</b>	<b>8.76%</b>
<b>Max DD:</b>	<b>-8.33%</b>	<b>-25.32%</b>	<b>-34.52%</b>	<b>-44.86%</b>	<b>-34.06%</b>

b/(w) S&P 500: 0.0% -51.7% 3.5% -53.0% -47.1%

#### \$10,000 turns into:

Month	US Market S&P 500	Balanced 60/40	HedgeFundie	Profit Farmer	MAX PAIN
<b>Starting:</b>	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000
Oct 2022	\$ 10,813	\$ 10,000	\$ 10,423	\$ 8,823	\$ 9,090
Nov 2022	\$ 11,414	\$ 10,480	\$ 12,252	\$ 9,906	\$ 10,006
Dec 2022	\$ 10,757	\$ 10,084	\$ 10,544	\$ 8,610	\$ 8,269
Jan 2023	\$ 11,433	\$ 11,365	\$ 12,654	\$ 10,781	\$ 10,608
Feb 2023	\$ 11,146	\$ 10,501	\$ 11,179	\$ 8,662	\$ 9,886
Mar 2023	\$ 11,560	\$ 11,275	\$ 12,406	\$ 7,447	\$ 11,158
Apr 2023	\$ 11,745	\$ 11,368	\$ 12,633	\$ 7,304	\$ 11,559
May 2023	\$ 11,799	\$ 10,921	\$ 12,025	\$ 7,052	\$ 11,542
Jun 2023	\$ 12,563	\$ 11,305	\$ 13,240	\$ 7,773	\$ 13,750
Jul 2023	\$ 12,974	\$ 11,133	\$ 13,372	\$ 8,925	\$ 14,981
Aug 2023	\$ 12,763	\$ 10,536	\$ 12,244	\$ 7,884	\$ 14,026
Sep 2023	\$ 12,158	\$ 9,254	\$ 9,970	\$ 6,652	\$ 11,963
Oct 2023	\$ 11,894	\$ 8,489	\$ 8,755	\$ 5,945	\$ 9,878
Nov 2023	\$ 12,980	\$ 9,952	\$ 11,267	\$ 7,537	\$ 11,264
Dec 2023	\$ 13,573	\$ 11,313	\$ 13,454	\$ 8,441	\$ 12,721
Jan 2024	\$ 13,789	\$ 11,048	\$ 13,211	\$ 7,597	\$ 11,045
Feb 2024	\$ 14,509	\$ 11,023	\$ 13,778	\$ 7,971	\$ 12,665
Mar 2024	\$ 14,983	\$ 11,284	\$ 14,510	\$ 8,383	\$ 13,783
Apr 2024	\$ 14,379	\$ 10,136	\$ 12,249	\$ 7,889	\$ 11,239
May 2024	\$ 15,107	\$ 10,512	\$ 13,609	\$ 8,353	\$ 12,844
Jun 2024	\$ 15,640	\$ 10,772	\$ 14,576	\$ 9,162	\$ 12,029
Jul 2024	\$ 15,830	\$ 10,952	\$ 15,338	\$ 9,494	\$ 12,246
Aug 2024	\$ 16,199	\$ 11,169	\$ 16,092	\$ 10,608	\$ 11,252
Sep 2024	\$ 16,540	\$ 11,368	\$ 16,887	\$ 11,237	\$ 11,830



# Investment Strategies

1980 through September 30, 2024

Annual returns:

Year End	Benchmarks			Dual Momentum		
	US Market S&P 500	Balanced 60/40	Nasdaq 100 QQQ	HedgeFundie	MAX FUND	Profit Farmer
1980	32.49%	21.02%	0.00%	45.72%	112.85%	0.00%
1981	-4.90%	0.07%	0.00%	-13.21%	17.16%	0.00%
1982	21.55%	25.68%	0.00%	104.69%	134.42%	0.00%
1983	22.55%	16.21%	0.00%	33.46%	107.36%	0.00%
1984	6.25%	9.84%	0.00%	25.80%	8.11%	0.00%
1985	31.23%	27.65%	0.00%	122.87%	87.51%	0.00%
1986	18.05%	17.65%	0.00%	68.99%	37.57%	0.00%
1987	4.68%	4.81%	0.00%	-2.02%	-45.08%	-18.83%
1988	16.22%	12.64%	0.00%	37.21%	23.23%	56.44%
1989	31.38%	24.20%	0.00%	86.89%	73.31%	30.16%
1990	-3.32%	1.56%	0.00%	-4.70%	-31.86%	-17.86%
1991	30.22%	24.30%	0.00%	90.44%	89.45%	166.45%
1992	7.40%	7.35%	0.00%	23.25%	23.14%	53.18%
1993	9.58%	9.66%	0.00%	40.42%	44.23%	63.89%
1994	0.38%	-0.77%	0.00%	-10.94%	-15.76%	-22.12%
1995	38.05%	29.81%	0.00%	133.08%	96.18%	120.13%
1996	22.51%	14.70%	0.00%	33.24%	24.90%	16.68%
1997	33.49%	23.58%	0.00%	78.35%	73.59%	85.81%
1998	28.69%	21.01%	0.00%	71.42%	4.10%	25.04%
1999	20.39%	11.65%	0.00%	14.82%	12.88%	61.90%
2000	-9.74%	-1.49%	0.00%	2.12%	58.06%	98.51%
2001	-11.75%	-3.81%	0.00%	-18.16%	5.80%	22.72%
2002	-21.59%	-9.80%	0.00%	-20.45%	19.08%	-6.68%
2003	28.16%	18.19%	0.00%	49.04%	222.74%	163.96%
2004	10.71%	8.00%	0.00%	29.13%	39.62%	44.50%
2005	4.83%	3.87%	0.00%	20.71%	-8.55%	52.20%
2006	15.84%	10.95%	0.00%	24.73%	55.90%	57.12%
2007	5.14%	5.94%	0.00%	19.86%	9.98%	-19.18%
2008	-36.81%	-21.86%	0.00%	-42.86%	48.69%	17.52%
2009	26.38%	18.66%	0.00%	-4.88%	23.19%	5.06%
2010	15.06%	12.04%	0.00%	43.94%	38.95%	21.52%
2011	1.88%	4.38%	0.00%	45.73%	60.10%	80.37%
2012	16.00%	11.39%	0.00%	31.69%	47.10%	11.19%
2013	32.31%	17.44%	0.00%	29.66%	149.93%	114.09%
2014	13.48%	10.56%	0.00%	64.08%	27.61%	56.48%
2015	1.26%	1.11%	0.00%	-2.45%	-17.34%	4.30%
2016	12.00%	8.34%	0.00%	19.88%	58.20%	50.27%
2017	21.71%	14.26%	0.00%	51.13%	23.68%	61.33%
2018	-4.56%	-2.47%	0.00%	-13.56%	8.78%	7.79%
2019	31.23%	21.98%	0.00%	81.31%	27.64%	21.26%
2020	18.39%	14.93%	0.00%	49.80%	120.14%	101.69%
2021	28.76%	15.74%	0.00%	36.12%	82.82%	108.84%
2022	-18.16%	-15.86%	0.00%	-63.22%	-63.67%	-80.51%
2023	26.18%	12.18%	0.00%	27.60%	53.84%	-1.96%
2024	21.86%	0.49%	0.00%	25.51%	-7.01%	33.12%
+/- S&P YTD:	0.0%	-21.4%	-21.9%	3.7%	-28.9%	11.3%
CAGR	11.9%	9.5%	12.2%	25.9%	33.9%	0.0%



## **Strategy Fact Sheets**



# Dual Momentum Strategies: HedgeFundie

Sort of a highly leveraged 60/40 Portfolio as prescribed by HedgeFundie on Bogleheads

Results through 09/30/2024

## Investment selection for October 2024:

55% UPRO 45% TMF

## Tax friendliness:

**HedgeFundie** unsure of short/long term taxes

## Months between change of holdings

**HedgeFundie** as tracked here is rebalanced monthly.

## Portfolio size appropriateness:

Whale, **HedgeFundie** can be used for any sized portfolio.

## Characteristics:

Drawdowns: **HedgeFundie** has frequent and massive drawdowns.

Volatility: **HedgeFundie** is extremely volatile.

Returns: **HedgeFundie** has superior historical returns compared to the S&P 500.

**HedgeFundie** is always leveraged with 3X ETF's

## Strategy Description:

HedgeFundie's Excellent Adventure threads on the Boglehead's forum has been active since 1st posted.

HedgeFundie left after some point, tired of defending the strategy and being attacked, the strategy lives on. I track it out of curiosity, even though I find it to be a terrible strategy given it's performance adjusted metrics.

People can dream.

## Strategy Components

UPRO 3X S&P 500

TMF 3X Long Term Treasuries

Metric	2000+	1980+
Beta	1.53	1.74
Alpha	2.39%	5.48%

## Annualized Returns actual YTD for current year.

Investment	YTD	1 Year	3 Year	5 Year	10 Year	2000+	1980+
<b>HedgeFundie</b>	25.51%	69.38%	-10.38%	5.26%	14.85%	13.80%	25.92%
Balanced 60/40	0.49%	22.84%	-1.07%	4.94%	6.43%	5.49%	9.52%
S&P 500	21.86%	36.04%	11.81%	15.89%	13.28%	7.59%	11.94%

## Maximum Drawdown single largest drawdown.

Investment	YTD	1 Year	3 Year	5 Year	10 Year	2000+	1980+
<b>HedgeFundie</b>	-15.58%	-15.58%	-69.46%	-69.46%	-69.46%	-69.46%	-69.46%
Balanced 60/40	-10.40%	-10.40%	-32.17%	-32.17%	-32.17%	-32.33%	-32.33%
S&P 500	-4.03%	-4.03%	-23.92%	-23.92%	-23.92%	-50.79%	-50.79%

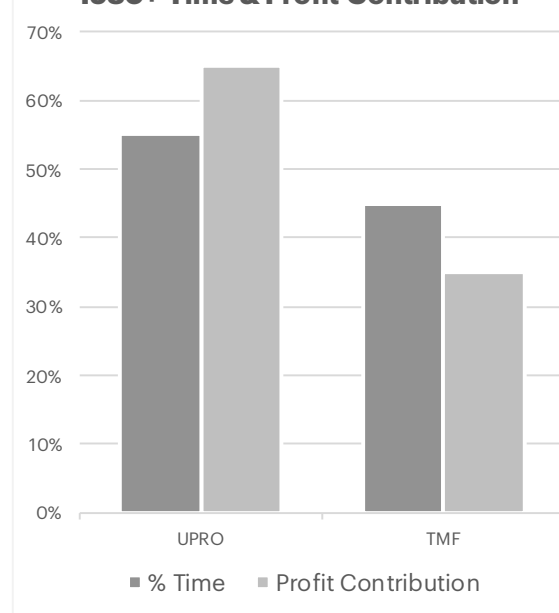
## Ulcer Index the higher the number the more painful downside volatility. Considers all downside not just maximum.

Investment	YTD	1 Year	3 Year	5 Year	10 Year	2000+	1980+
<b>HedgeFundie</b>	5.33	5.77	49.81	39.02	28.27	26.99	21.32
Balanced 60/40	4.53	4.59	14.02	11.07	7.98	8.72	6.81
S&P 500	1.27	1.27	9.88	8.35	6.39	16.21	12.76

## Sortino Ratio, risk adjusted performance measure - bigger number is better.

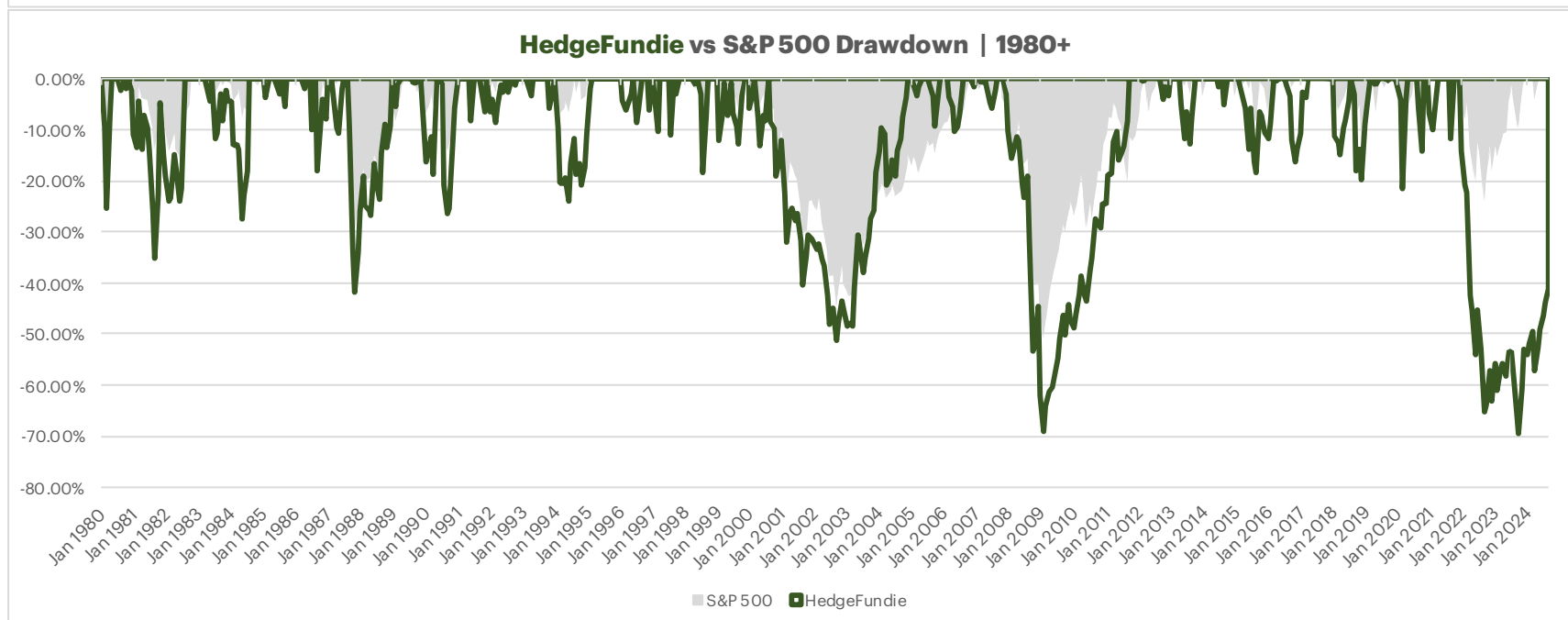
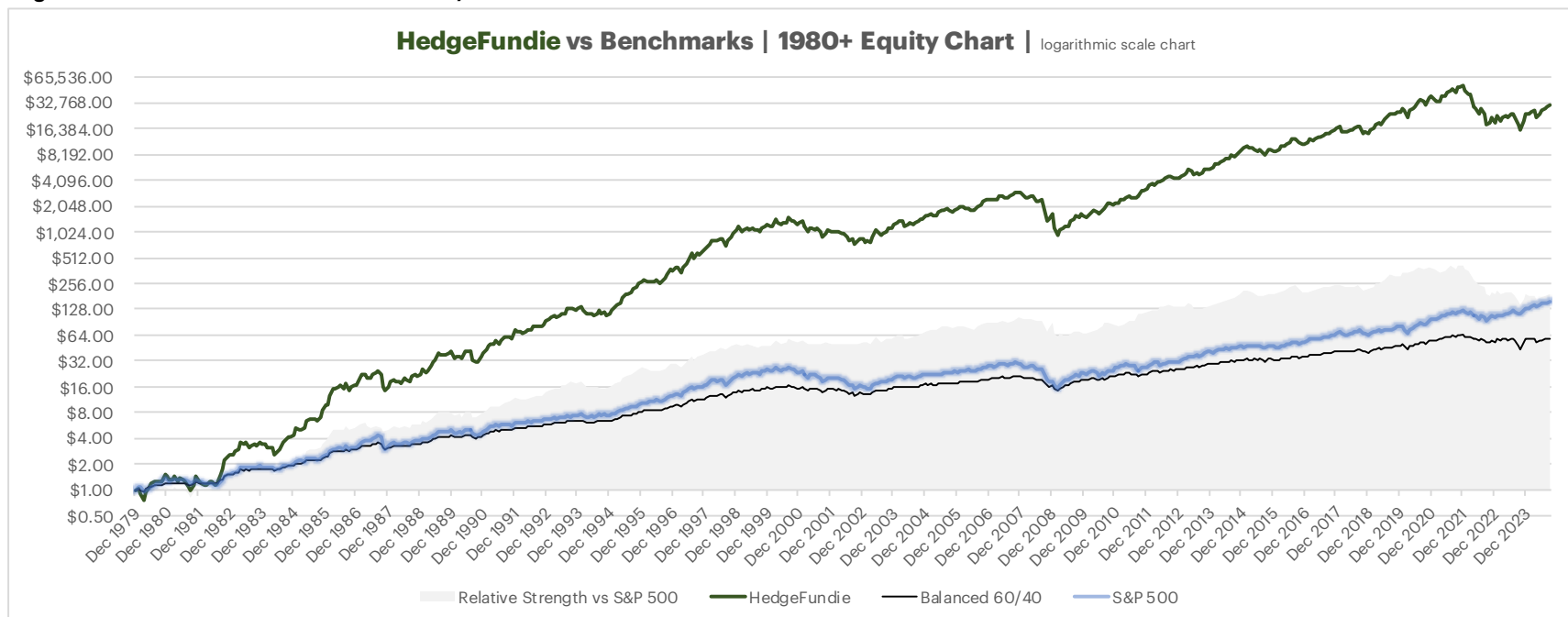
Investment	YTD	1 Year	3 Year	5 Year	10 Year	2000+	1980+
<b>HedgeFundie</b>	(0.87)	0.23	(1.31)	(1.12)	(1.19)	0.64	1.24
Balanced 60/40	(2.58)	(1.42)	(2.17)	(2.23)	(2.54)	0.19	0.73
S&P 500	(2.33)	(1.88)	(2.06)	(1.92)	(2.22)	0.37	0.78

## 1980+ Time & Profit Contribution



HedgeFundie's Excellent Adventure [55/45] began in August 2019, out of sample after that time.

## HedgeFundie's Excellent Adventure: 55% UPRO / 45% TMF



HedgeFundie's Excellent Adventure [55/45] began in August 2019, out of sample after that time.



# Dual Momentum Strategies: MAX PAIN

USA Momentum Rotational always using triple leverage

Results through 09/30/2024

## Investment selection for October 2024:

3X S&P 500

## Tax friendliness:

MAX PAIN has mostly Short Term Cap Gains.

## Months between change of holdings

MAX PAIN changes it's holdings every 2.5 months on average.

## Portfolio size appropriateness:

Small Fry, MAX PAIN is only suitable for < \$500,000 allocations.

## Characteristics:

Drawdowns: MAX PAIN has frequent and larger drawdowns than the S&P.

Volatility: MAX PAIN is far more volatile than the S&P over time.

Returns: MAX PAIN has incredibly huge historical returns compared to the S&P 500.

Leverage: MAX PAIN has a maximum leverage of 300% and average leverage of: 258%

## Strategy Description:

MAX PAIN invests in the United States, going into the 3X leveraged version of the best performer of the Russell 1000, Russell MidCap Growth, or Russell Small Cap. When these markets aren't experiencing positive momentum the strategy goes into 3X Long Term Treasuries. This is an extremely high return strategy with equally high volatility and frequent drawdowns, know what you're getting into.

## Strategy Components

URTY 3X Russell 2000, MIDU 3X S&P MidCap 400, UPRO 3X S&P 500

TMF 3X Long Term Treasuries, 1st month in treasuries

EDV Extended Duration Treasuries, subsequent months in treasuries

Metric	2000+	1980+
Beta	1.11	1.61
Alpha	25.07%	14.96%

## Annualized Returns

actual YTD for current year.

Investment	YTD	1 Year	3 Year	5 Year	10 Year	2000+	1980+
MAX PAIN	-7.01%	-1.12%	-11.32%	21.55%	18.18%	33.45%	33.90%
Balanced 60/40	0.49%	22.84%	-1.07%	4.94%	6.43%	5.49%	9.52%
S&P 500	21.86%	36.04%	11.81%	15.89%	13.28%	7.59%	11.94%

## Maximum Drawdown

single largest drawdown.

Investment	YTD	1 Year	3 Year	5 Year	10 Year	2000+	1980+
MAX PAIN	-18.46%	-18.46%	-63.67%	-63.67%	-63.67%	-63.67%	-67.06%
Balanced 60/40	-10.40%	-10.40%	-32.17%	-32.17%	-32.17%	-32.33%	-32.33%
S&P 500	-4.03%	-4.03%	-23.92%	-23.92%	-23.92%	-50.79%	-50.79%

## Ulcer Index

the higher the number the more painful downside volatility. Considers all downside not just maximum.

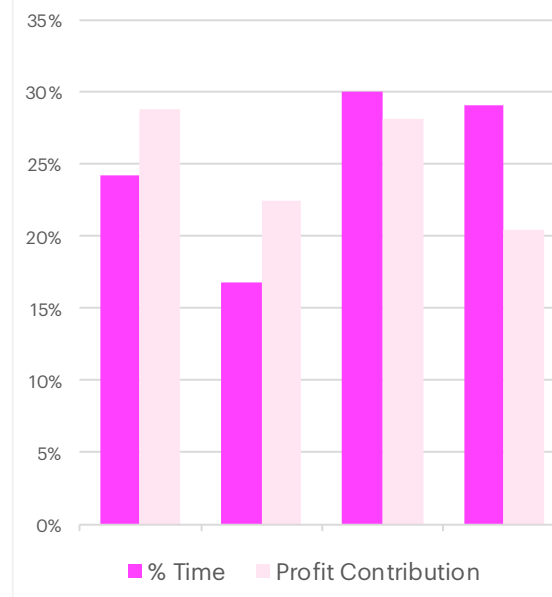
Investment	YTD	1 Year	3 Year	5 Year	10 Year	2000+	1980+
MAX PAIN	11.77	11.51	44.90	35.34	27.12	19.32	22.27
Balanced 60/40	4.53	4.59	14.02	11.07	7.98	8.72	6.81
S&P 500	1.27	1.27	9.88	8.35	6.39	16.21	12.76

## Sortino Ratio

risk adjusted performance measure - bigger number is better.

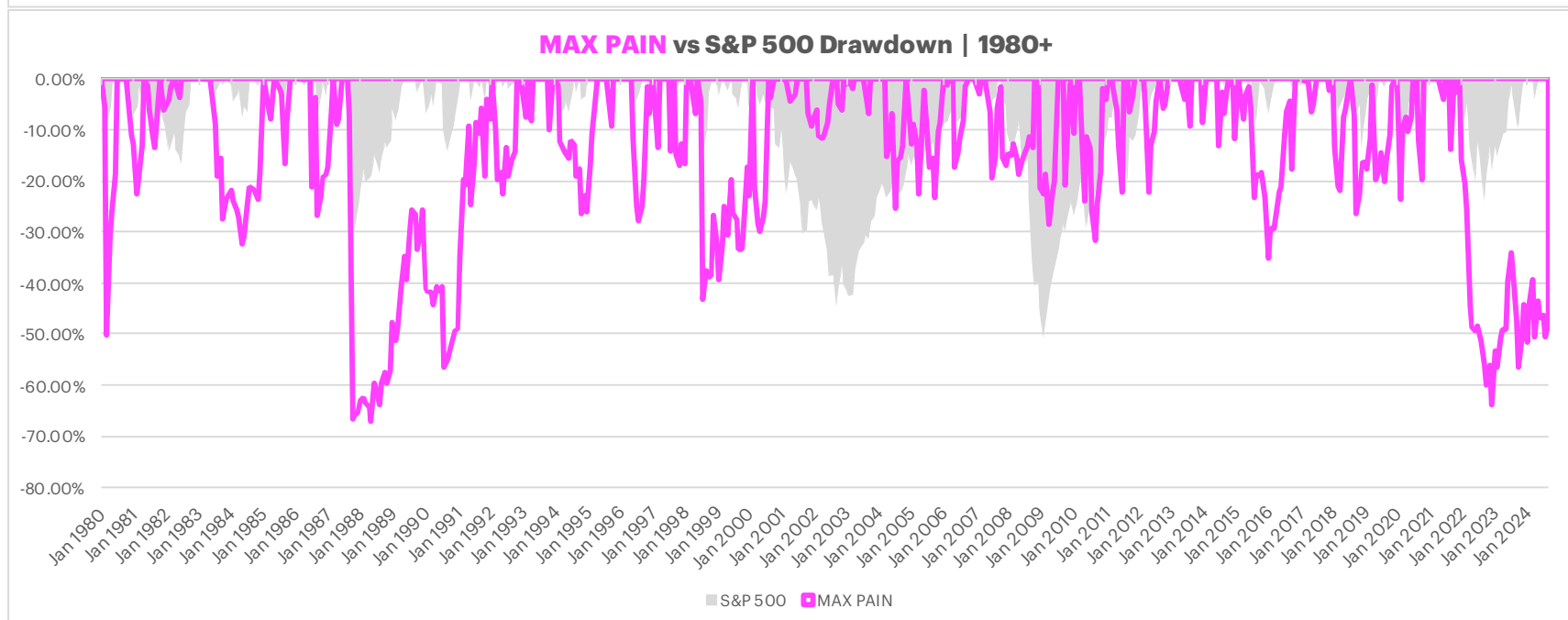
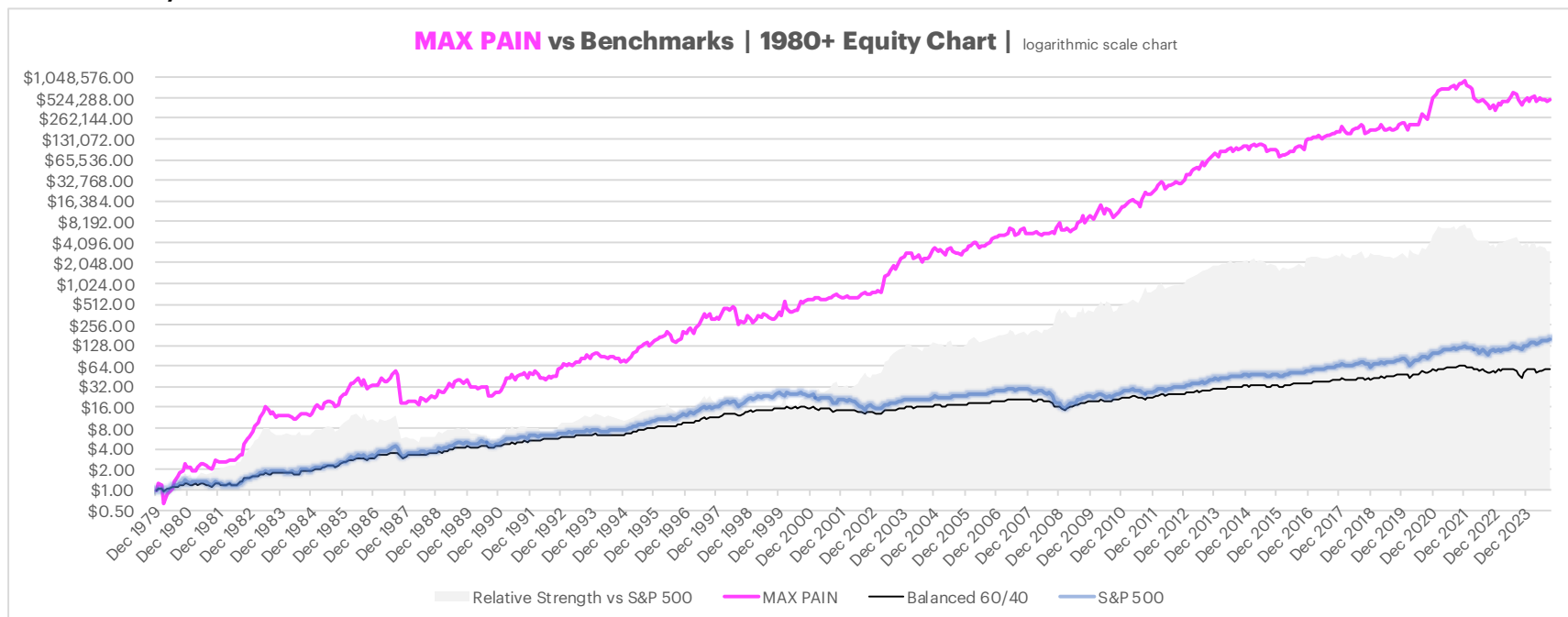
Investment	YTD	1 Year	3 Year	5 Year	10 Year	2000+	1980+
MAX PAIN	(1.47)	(1.17)	(1.40)	(0.64)	(0.89)	1.46	1.38
Balanced 60/40	(2.58)	(1.42)	(2.17)	(2.23)	(2.54)	0.19	0.73
S&P 500	(2.33)	(1.88)	(2.06)	(1.92)	(2.22)	0.37	0.78

## 1980+ Time & Profit Contribution



The MAX PAIN inception date January 2021, out of sample since then and before 2000.

## Dual Momentum Systems: MAX PAIN



The MAX PAIN inception date January 2021, out of sample since then and before 2000.

# Dual Momentum Strategies: Profit Farmer

A Minimum Variance Adaptive Asset Allocation strategy by Private Farmer

Results through 09/30/2024

## Investment selection for October 2024:

19.37% EDC 45.63% TMF 35.% DRN

## Tax friendliness:

**Profit Farmer** has all Short Term Cap Gains.

## Months between change of holdings

**Profit Farmer** changes it's holdings virtually every month.

## Portfolio size appropriateness:

Small Fry, Profit Farmer is only suitable for < \$500,000 allocations.

## Characteristics:

Drawdowns: **Profit Farmer** has frequent and larger drawdowns than the S&P.

Volatility: **Profit Farmer** is far more volatile than the S&P over time.

Returns: **Profit Farmer** has incredibly huge historical returns compared to the S&P 500.

## Strategy Description:

**Profit Farmer** is a Minimum Variance Adaptive Asset Allocation strategy, it is not a DMS strategy, but created by a friend of DMS. I track it because I have invested in it myself. Profit Farmer is always leveraged to 300%.

## Strategy Components

EDC 3X Emerging Markets

URTY 3X Russell 2000

TQQQ 3X Nasdaq 100

TMF 3X Long Term Treasuries

DRN 3X Real Estate

Metric	2000+	05/1987+
Beta	1.33	1.37
Alpha	19.49%	22.57%

## Annualized Returns actual YTD for current year.

Investment	YTD	1 Year	3 Year	5 Year	10 Year	2000+	05/1987+
<b>Profit Farmer</b>	33.12%	68.93%	-31.49%	5.07%	16.10%	29.48%	32.81%
MAX PAIN	-7.01%	-1.12%	-11.32%	21.55%	18.18%	33.45%	28.72%
S&P 500	21.86%	36.04%	11.81%	15.89%	13.28%	7.59%	10.54%

## Maximum Drawdown single largest drawdown.

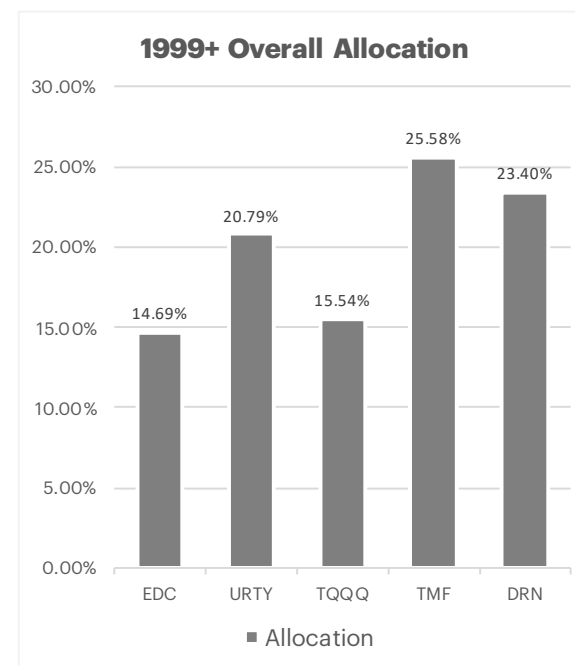
Investment	YTD	1 Year	3 Year	5 Year	10 Year	2000+	05/1987+
<b>Profit Farmer</b>	-10.00%	-10.62%	-86.54%	-86.54%	-86.54%	-86.54%	-86.54%
MAX PAIN	-18.46%	-18.46%	-63.67%	-63.67%	-63.67%	-63.67%	-67.06%
S&P 500	-4.03%	-4.03%	-23.92%	-23.92%	-23.92%	-50.79%	-50.79%

## Ulcer Index the higher the number the more painful downside volatility. Considers all downside not just maximum.

Investment	YTD	1 Year	3 Year	5 Year	10 Year	2000+	05/1987+
<b>Profit Farmer</b>	4.19	4.71	70.08	54.70	39.36	28.38	24.17
MAX PAIN	11.77	11.51	44.90	35.34	27.12	19.32	23.47
S&P 500	1.27	1.27	9.88	8.35	6.39	16.21	13.78

## Sortino Ratio, risk adjusted performance measure - bigger number is better.

Investment	YTD	1 Year	3 Year	5 Year	10 Year	2000+	05/1987+
<b>Profit Farmer</b>	(0.67)	0.17	(1.67)	(0.99)	(1.01)	1.18	1.36
MAX PAIN	(1.47)	(1.17)	(1.40)	(0.64)	(0.89)	1.46	1.19
S&P 500	(2.33)	(1.88)	(2.06)	(1.92)	(2.22)	0.37	0.63

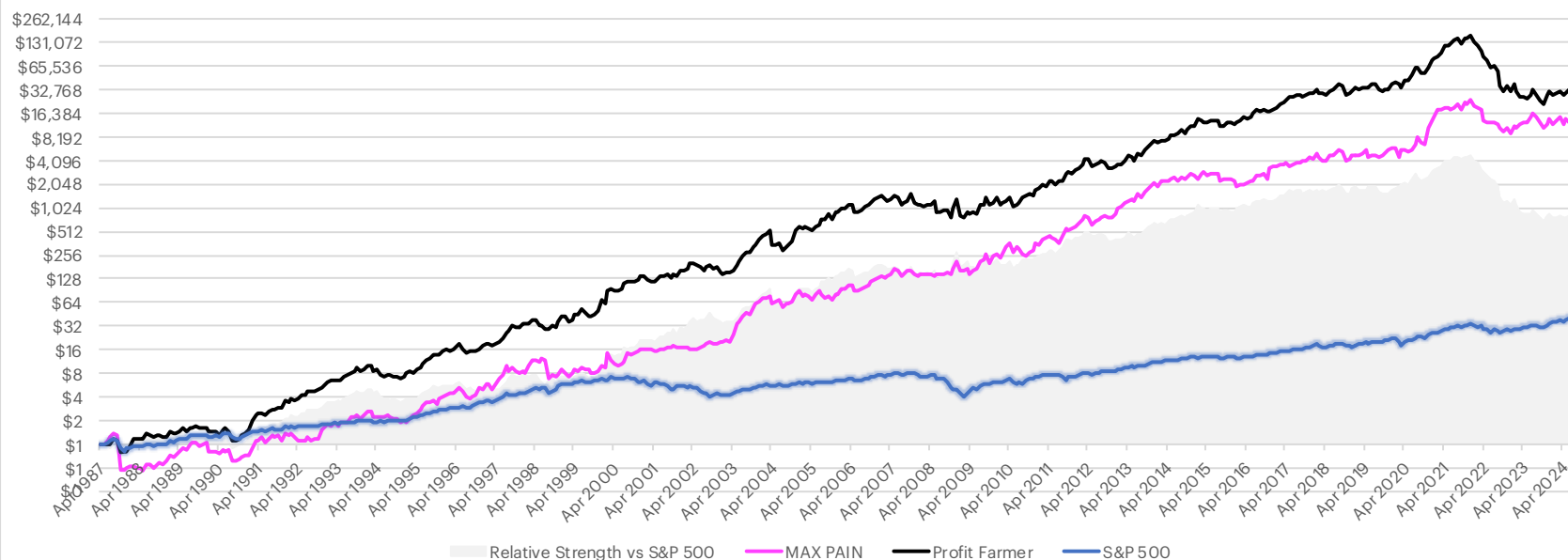


Profit Farmer, an Adaptive Asset Allocation by Private Farmer

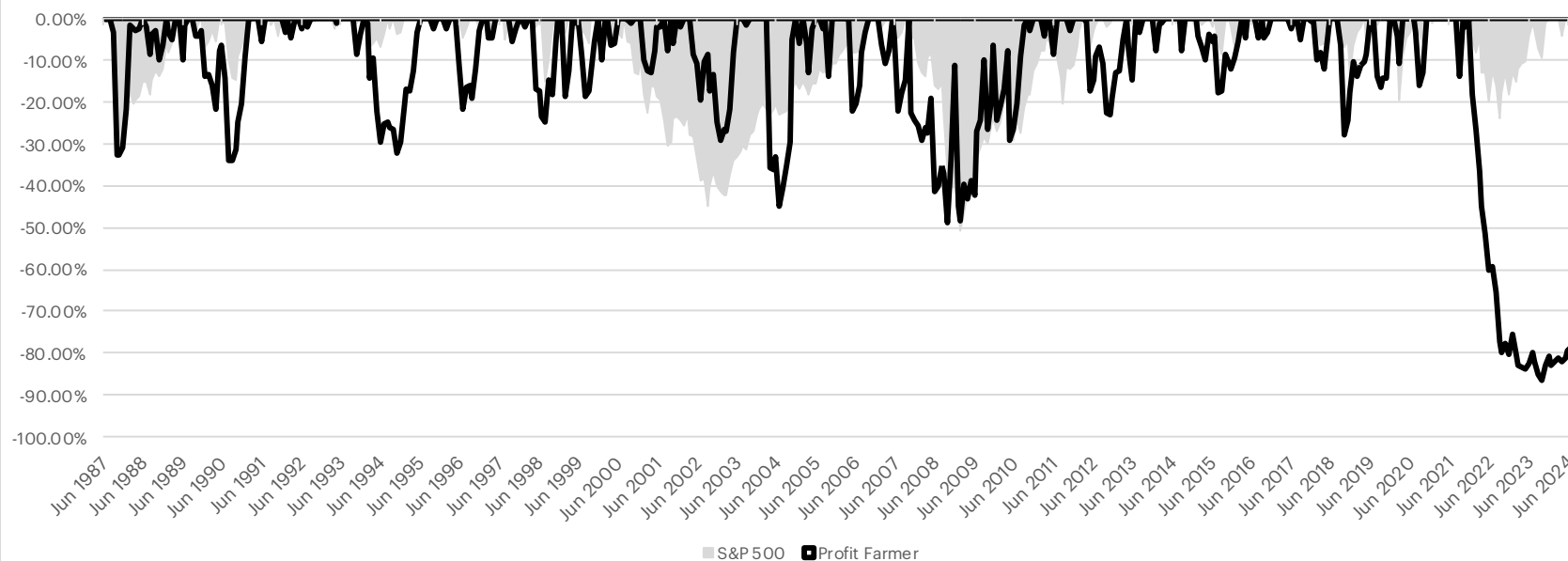
randy@dualmomentumsystems.com

## Strategy by Private Farmer

**Profit Farmer vs Benchmarks | May 1987+ Equity Chart** | logarithmic scale chart



**Profit Farmer vs S&P 500 Drawdown | May 1987+**



Profit Farmer, an Adaptive Asset Allocation by Private Farmer

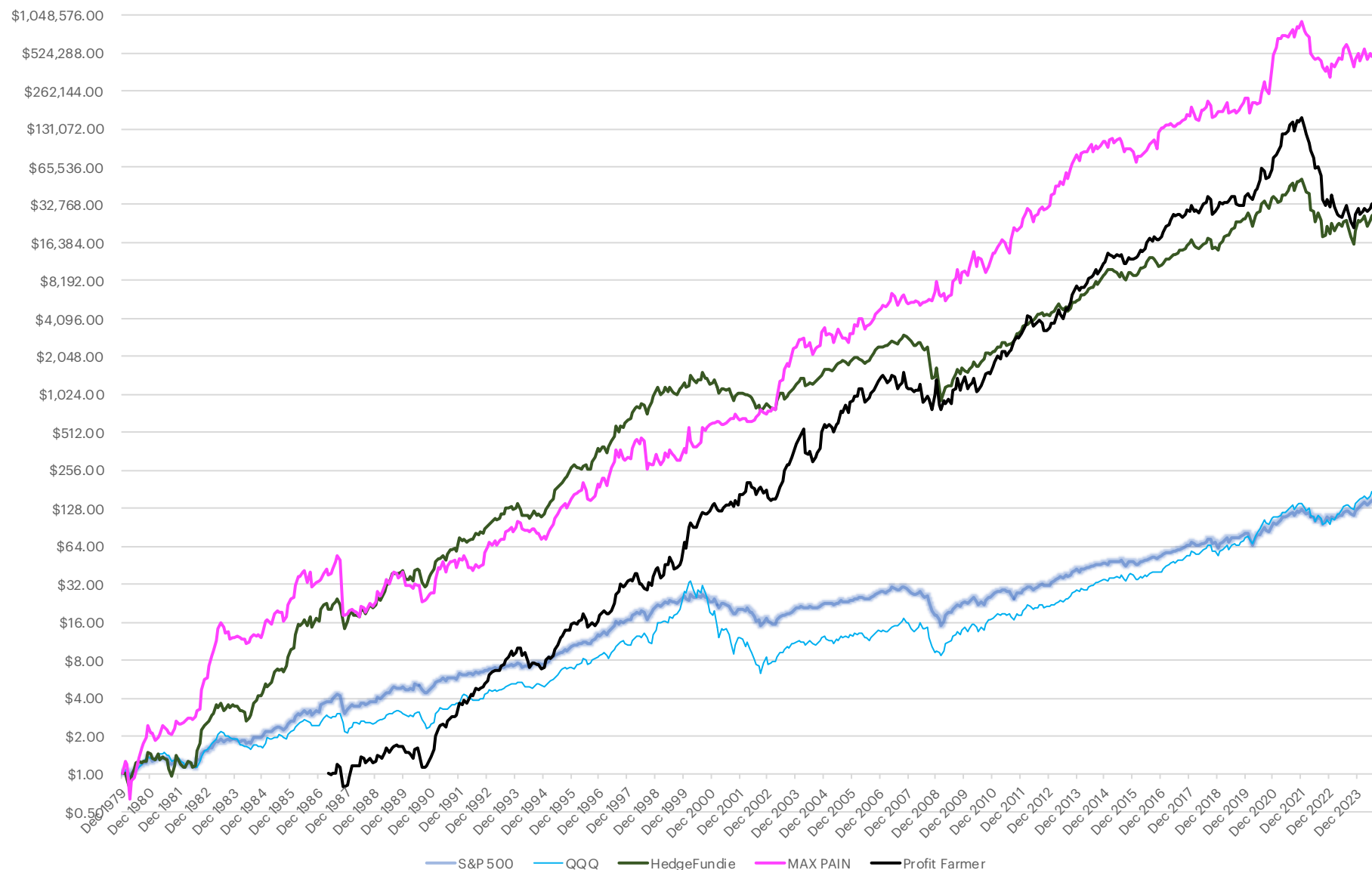
randy@dualmomentumsystems.com



## Equity Chart

### HedgeFundie vs MAX PAIN vs Profit Farmer vs Benchmarks 1980+ Equity Chart for Strategies which use leverage

logarithmic scale chart



\*Profit Farmer returns only back through May 1987



## Metrics, Annual Returns and Correlations

**CAGR:** Compound Annual Growth Rate, on average how much the strategy has returned per year

**Ulcer Performance Index:** A risk adjusted performance ratio which uses the Ulcer Index in it's calculations

**Sortino Ratio:** A risk adjusted performance ratio commonly used

**Gain to Pain:** Used by the famous Jack Schwager, simply the total net gain divided by net loses along the way

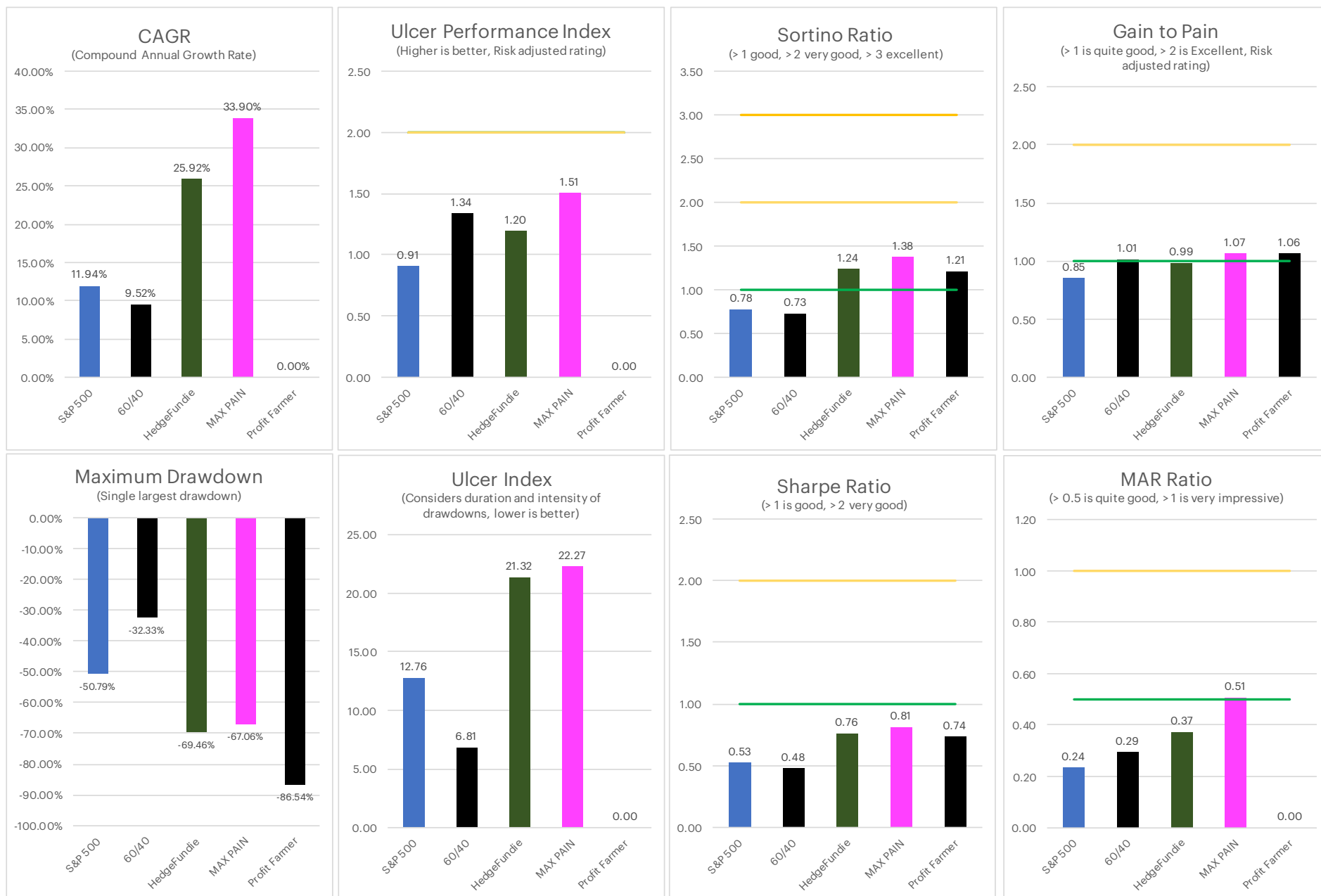
**Maximum Drawdown:** The largest negative drawdown for the strategy, on a month end basis

**Ulcer Index:** Measures how bad drawdowns are for an investment, not related to gains, just drawdowns

**Sharpe Ratio:** A commonly used risk adjusted performance measure, however, it penalizes for upside volatility

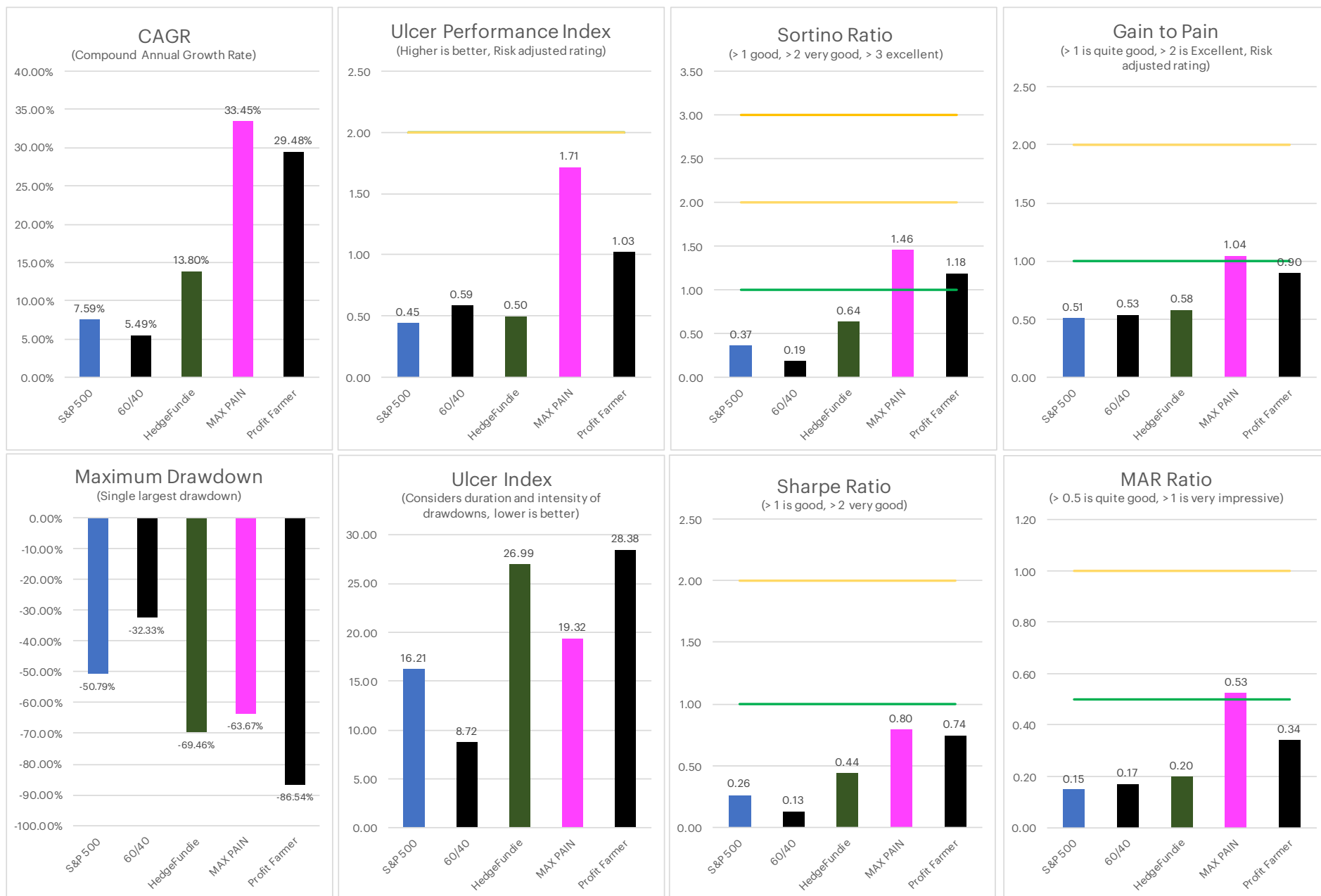
**MAR Ratio:** A risk adjusted performance ratio, uses maximum drawdown in it's calculations

## "Long Term" Metrics Comparisons: Strategies vs S&P 500 & 60/40 1980 to current



All Metrics are calculated from Monthly returns

## "Modern Era" Metrics Comparisons: Strategies vs S&P 500 & 60/40 2000 to current



All Metrics are calculated from Monthly returns

## 36 Month Strategy Return Correlations

← Aggressive

	S&P 500	Balanced 60/40	QQQ	LT Gain 3X	HedgeFundie	MAX PAIN
S&P 500	100%					
Balanced 60/40	79%	100%				
QQQ	92%	75%	100%			
LT Gain 3X	0%	0%	0%	0%		
HedgeFundie	93%	89%	92%	0%	100%	
MAX PAIN	72%	73%	76%	0%	80%	100%

# DUAL MOMENTUM SYSTEMS

Thank you for your time, my hope is that these strategies may help you grow your investments more than a market index fund, with less drawdowns along the way.

Countless hours of thought, development, and modeling have gone into these strategies which were inspired from the work of Gary Antonacci at [www.OptimalMomentum.com](http://www.OptimalMomentum.com). I have entrusted my invested net worth into these strategies, I am not looking to gain from anybody else who chooses to use them, I simply want to share what I think are fantastic ways to invest money for the long run. Receive the strategy information free by emailing me and getting on the distribution list, your information is kept private.

A handwritten signature in black ink, appearing to read "Randy".

## Extended Data & Out of Sample

### Extended Data

The strategies use ETF monthly total return data. Leveraged ETF data is used as far back as it is available, it is simulated using the available daily return total data to extend the leverage returns back in time. At this time, only the leveraged S&P 500 from 1970 through 1979 had to be simulated on monthly data instead of daily, if that information becomes available to me it will be updated. This deck is reporting back to 1980 for all strategies, I do have Global Navigator and LT Gain 3 back to 1970 but as mentioned the extended data for the 1970's should be based on daily returns.

The Nasdaq 100 benchmark data is based on Nasdaq 100 back to 1986, however, it didn't exist or data can't be found before that time, so the Nasdaq Composite is used pre-1986 as a proxy. I couldn't reliably emulate Nasdaq 100 from Nasdaq comp.

### In Sample, and Out of Sample

The strategies were created with available data from 2000 through the time each strategy was created. Because this data was available and used in the modeling of each strategy, it is considered "In Sample". "Out of Sample" is the periods that the strategy is looking at for which returns were not available when the strategies were created. 1980 through 2000, and from when the strategy was finalized forward is all out of sample.

Nothing was changed to any of the strategies after seeing the additional 20 years from 1980 through 2000, nor were any of the strategies changed or modified due to any returns which have resulted after the strategies were created. I use these strategies myself to invest my hard earned dollars in them, I don't want to fool anybody, most especially not myself by tweaking the strategies to handle some big incident better than it was originally designed to do, no data mining!