Professional Portfolio Management – Simplified

The Alpha Sheet advanced, high-performance investment management models both simplify and improve advisory services. Dual Defense™ refers to employing two independent methods for determining when to be in defensive funds versus equities. It is published by AlphaDroid, a service of SumGrowth Strategies, every Sunday and on monthly and special rebalance events.

How to Subscribe

Notice: Pending Rebalance Trade Lists for July 3, 2023 Posted Below

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StormGuard™ Defensive Snapshot
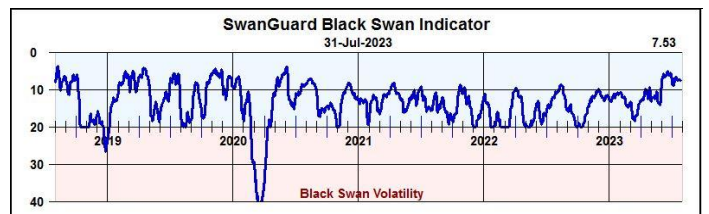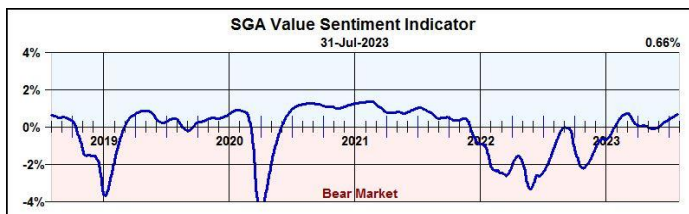
July 31, 2023

ALPHADROID

Overview

StormGuard incorporates three primary views of the market: Market Trend, Institutional Momentum and Value Sentiment. Twelve separate measures of these three views are logically combined to produce the StormGuard-Armor composite value. Four additional measures of volatility and oversold conditions help hasten exits for Black Swan market crash events and help hasten re-entry following strong rebound events.

+.98

BEAR — BULL
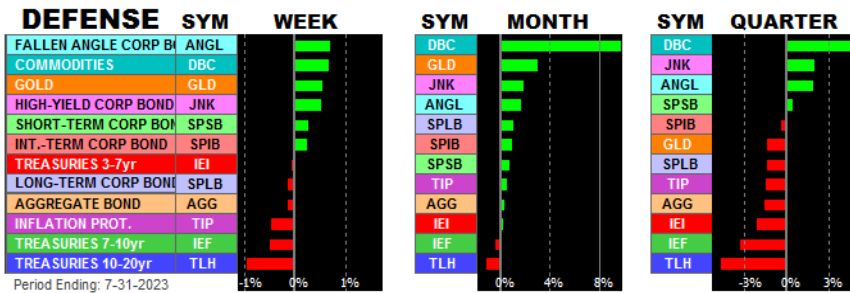
StormGuard
Jul 31, 2023

Deeper Dive Info.

StormGuard-Armor Composite Indicator — 31-Jul-2023 — 1.05%

StormGuard considers numerous indicators.

SGA Market Trend Indicator — 31-Jul-2023 — 2.3%

SGA Institutional Momentum Indicator — 31-Jul-2023 — 1.56%

SGA Value Sentiment Indicator — 31-Jul-2023 — 0.66%

SwanGuard Black Swan Indicator — 31-Jul-2023 — 7.53

Automated Narrative: " StormGuard indicates market safety is marginal and declining. NOTE: StormGuard-Armor, like a smoke alarm, is not perfectly clairvoyant but helps improve your long-term batting average."

See Legal-Disclaimer page for technical terms, historical data, and service limits information. Performance updated daily.

SECTORS

5 Mkt-Days	21 Mkt-Days	63 Mkt-Days

Period Ending: 7-31-2023

STYLEBOX

Period Ending: 7-31-2023

DEFENSE

Period Ending: 7-31-2023

SPDR S&P 500 ETF — SPY

SPDR S&P 500 ETF — SPY
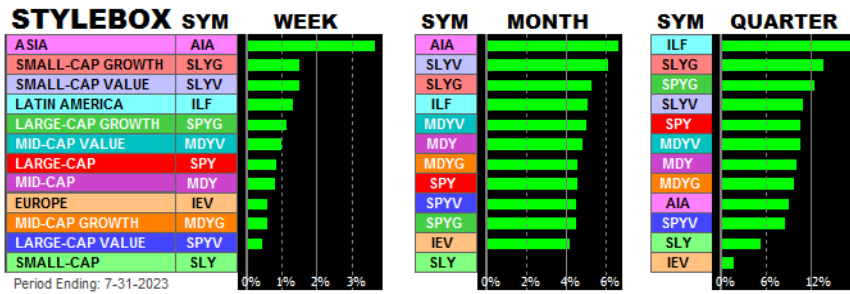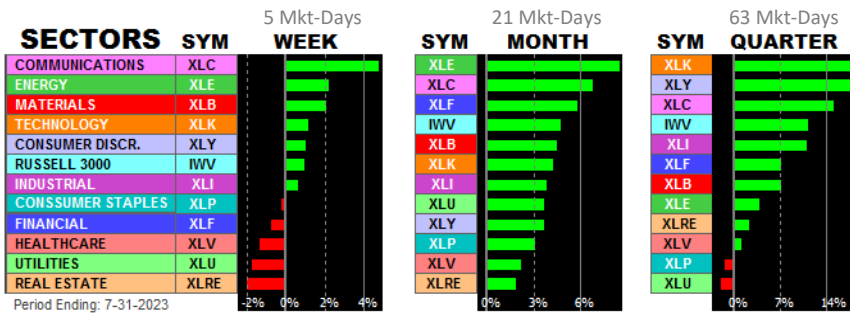
Which Trend Is My Friend?

Why These Aren't Trade Signals

Thematic Dual Defense™ Portfolios

Link	CAGR	Risk No	MaxDD
⇨ Alpha Bonds	8.6%	25	9.0%
⇨ Tactical Risk Mitigation	12.9%	28	11.0%
⇨ Alpha Stylebox DD	19.6%	33	25.0%
⇨ Alpha Sectors DD	25.2%	31	18.0%
⇨ Alpha Global DD	20.3%	34	16.0%
⇨ Alpha Green DD	17.2%	44	17.0%
⇨ Alpha Innovation DD	24.7%	48	26.0%
⇨ Alpha Stocks DD	37.7%	28	20.0%

How to Blend These Models

Blended Dual Defense™ Portfolios

Link	CAGR	Risk No	MaxDD
⇨ Alpha 20:80 DD	10.7%	23	8.0%
⇨ Alpha 40:60 DD	13.5%	22	9.0%
⇨ Alpha 60:40 Core DD	14.8%	25	10.0%
⇨ Alpha 60:40 Sectors DD	17.4%	23	12.0%
⇨ Alpha 60:40 Global DD	13.8%	24	10.0%
⇨ Alpha 60:40 Green DD	14.1%	24	10.0%
⇨ Alpha 60:40 Stocks DD	27.7%	23	14.0%
⇨ Alpha 80:20 DD	18.7%	25	12.0%

Benchmark Construction Page

See Legal-Disclaimer page for technical terms, historical data, and service limits information. Performance updated daily.

Model Rebalanced: Aug-01-2023   Status: BULL Market

	Sym	%	Fund Name
1	JNK	25.0	SPDR Blmbg High Yield Bond ETF
2	FALN	25.0	iShares Fallen Angels USD Bond ETF
3	SHYG	25.0	iShares 0-5 Year High-Yield Bond ETF
4	IEI	25.0	iShares 3-7 Year Treasury Bond ETF

Alpha Bonds Portfolio

▶ **Portfolio Inception Date: 12-25-2022** When the portfolio design was completed and available.
▶ **Forward Walk Starting: 05-07-2011** Backtesting ends. Walk through out-of-sample data begins.
▶ **Bear Market Strategy: BMS-B,Y** Invoked by StormGuard-Armor. Selects only defensive funds.
▶ **Benchmark Index: BND** U.S. Aggregate Bond Index.
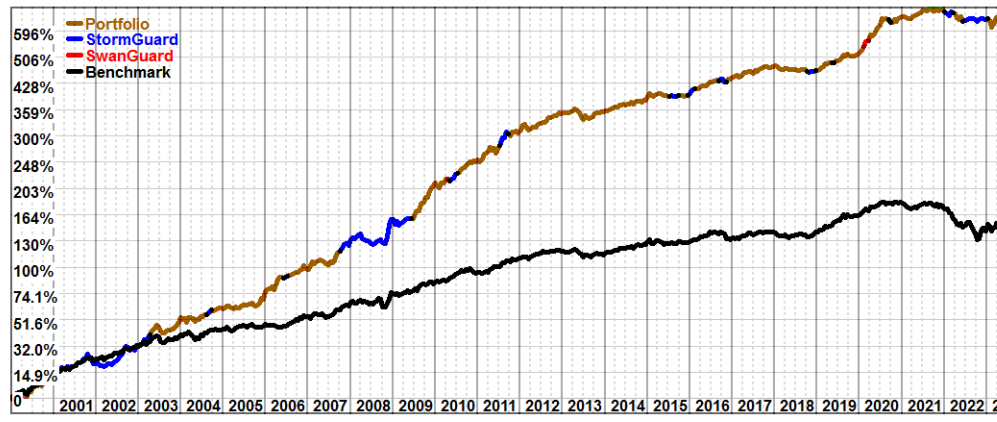
Hypothetical Performance

	RISK	CAGR	MaxDD
Portfolio	25.3	8.7%	9%
Benchmark	29.9	3.1%	18%

Statistics measured from 6/1/2004 by AlphaDroid.

Jul 31, 2023

RISK **25** Riskalyze   ALPHA**DROID** ®   CAGR **8.7** Percent

Legend: Portfolio, StormGuard, SwanGuard, Benchmark

Underlying Strategies	Weight
1. Bonds SPDR	25.0%
2. Bonds iShares	25.0%
3. Gold'n Yield	25.0%
4. Treasuries	25.0%

Return Variation

Drawdown
---- Annualized ----

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Portfolio	10.5%	12.6%	7.8%	6.3%	16.4%	13.7%	13.5%	18.8%	15.1%	14.7%	10.7%	1.0%	6.4%	2.5%	9.1%	6.7%	-1.9%	8.6%	22.0%	4.8%	-5.8%
Benchmark	8.3%	4.0%	4.2%	2.4%	4.3%	7.3%	6.9%	3.6%	6.2%	7.9%	3.9%	-2.1%	5.8%	0.6%	2.5%	3.6%	-0.1%	8.8%	7.7%	-1.9%	-13.0%
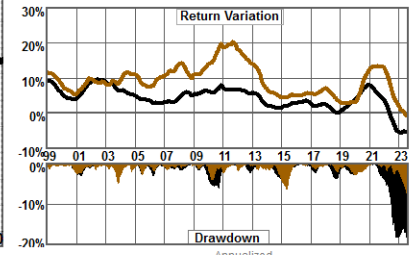
	YTD	1-Yr	3-Yr	5-Yr	10-Yr	20-Yr
Portfolio	0.3%	-0.3%	-0.4%	5.6%	5.3%	8.7%
Benchmark	2.3%	-3.2%	-4.5%	0.8%	1.5%	3.1%

Hypothetical portfolio model performance assumes trade signals provided are executed at the close of the subsequent market day. Past performance does not guarantee future performance. Copyright 2023 SumGrowth Strategies, LLC all rights reserved.

Methodology

Tactical Momentum Strategies. Each of the four underlying strategies uses a rules-based tactical momentum algorithm to evaluate a set of candidate ETFs at each month-end, wherein the trend leader of each is selected to be a member of the model's Portfolio for the subsequent month. Candidate ETFs are defensive ETFs vs equity ETFs.

Portfolio Construction   [More Charts]

Selections are made from a universe of over 48 ETFs that include a wide range of bond and Treasury categories, gold, and the S&P 500 index. The Strategy includes an integrated Bear Market Strategy, which limits the selection to a less aggressive fund universe.

Investor Risk Profile	Rebalance Activity		Dual Defense Strategy	About Momentum Trading Expectations
	Scheduled	Unscheduled		
Fixed Income	Month-End	Exit market quickly for a for Black Swan event. Get back in early for a particularly sharp market rebound.	StormGuard reviews 16 market health measures to determine Bull/Bear. Ultra short-term bonds act as a momentum backstop.	Economic, bureaucratic, and social responses to inflation, politics, and pandemics can disrupt momentum in otherwise orderly markets that is required for profitable trading.

See Legal-Disclaimer page for technical terms, historical data, and service limits information. Performance updated daily.

Model Rebalanced: Aug-01-2023   Status: BULL Market

	Sym	%	Fund Name
1	SPY	45.0	SPDR S&P 500 ETF
2	BND	30.0	Vanguard Total Bond Market ETF
3	GLD	25.0	SPDR Gold ETF

Tactical Risk Mitigation Portfolio

- **Portfolio Inception Date: 12-25-2022**   When the portfolio design was completed and available.
- **Forward Walk Starting: 01-06-2005**   Backtesting ends. Walk through out-of-sample data begins.
- **Bear Market Strategy: BMS-W,A,Y,0**   Invoked by StormGuard-Armor. Selects only defensive funds.
- **Benchmark Index: B6040**   Based on industry consensus asset allocation mix. See portfolio notes.

Hypothetical Performance

	RISK	CAGR	MaxDD
Portfolio	28.4	13.2%	11%
Benchmark	49.4	7.1%	36%

Statistics measured from 6/1/2004 by AlphaDroid.

Jul 31, 2023

RISK **28** Riskalyze   ALPHA DROID®   CAGR **13** Percent

Underlying Strategies	Weight
1. Tactical Risk Mitigation-1	25.0%
2. Tactical Risk Mitigation-2	25.0%
3. Tactical Risk Mitigation-3	25.0%
4. Tactical Risk Mitigation-4	25.0%
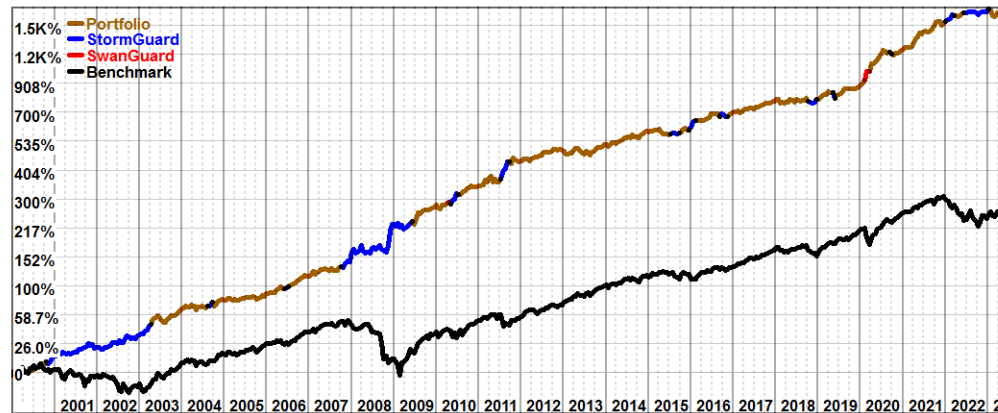
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Portfolio	12.1%	20.5%	9.2%	2.5%	18.0%	14.1%	31.8%	14.4%	19.1%	20.5%	9.1%	5.3%	10.5%	1.8%	13.9%	10.1%	1.4%	10.7%	34.2%	23.3%	10.0%
Benchmark	-8.6%	20.3%	9.3%	5.7%	12.1%	7.6%	-23.3%	18.7%	11.1%	2.3%	11.6%	16.6%	7.5%	1.3%	5.6%	14.7%	-4.0%	21.5%	15.7%	13.6%	-16.2%
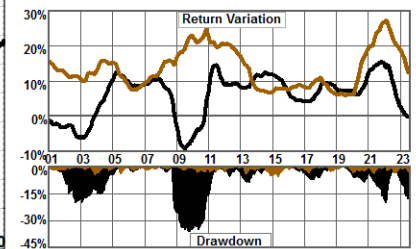
	YTD	1-Yr	3-Yr	5-Yr	10-Yr	20-Yr
Portfolio	-0.2%	-0.3%	10.4%	15.2%	11.8%	13.2%
Benchmark	12.1%	6.6%	5.3%	7.1%	7.3%	7.1%

Methodology

Tactical Momentum Strategies. Each of the four underlying strategies uses a rules-based tactical momentum algorithm to evaluate a set of candidate ETFs at each month-end, wherein the trend leader of each is selected to be a member of the model's Portfolio for the subsequent month. Candidate ETFs may be defensive ETFs or equity ETFs.

Portfolio Construction   [More Charts]

Selections are made from a universe of over 48 ETFs that include a wide range of bond and Treasury categories, gold, and the S&P 500 index. A simple 60/40 portfolio forms the model's backbone, which is challenged for momentum leadership by the defensive ETFs. The Strategy includes an integrated Bear Market Strategy, which limits the selection universe.

Investor Risk Profile	Rebalance Activity		Dual Defense Strategy	About Momentum Trading Expectations
	Scheduled	Unscheduled		
Conservative	Month-End	Exit market quickly for a for Black Swan event. Get back in early for a particularly sharp market rebound.	StormGuard reviews 16 market health measures to determine Bull/Bear. A momentum backstop is also directly employed.	Economic, bureaucratic, and social responses to inflation, politics, and pandemics can disrupt momentum in otherwise orderly markets that is required for profitable trading.

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Model Rebalanced: Aug-01-2023   Status: BULL Market

	Sym	%	Fund Name
1	QQQ	25.0	Invesco QQQ ETF
2	IVE	25.0	iShares S&P 500 Value ETF
3	VONG	25.0	Vanguard Russell 1000 Growth ETF
4	IWY	25.0	iShares Russell Top 200 Growth ETF

Alpha Stylebox DD Portfolio

▶ **Portfolio Inception Date: 12-25-2022** When the portfolio design was completed and available.
▶ **Forward Walk Starting: 05-25-2006** Backtesting ends. Walk through out-of-sample data begins.
▶ **Bear Market Strategy: BMS-W,Y,G** Invoked by StormGuard-Armor. Selects only defensive funds.
▶ **Benchmark Index: S&P500** The S&P500 U.S. stock market index.

Hypothetical Performance

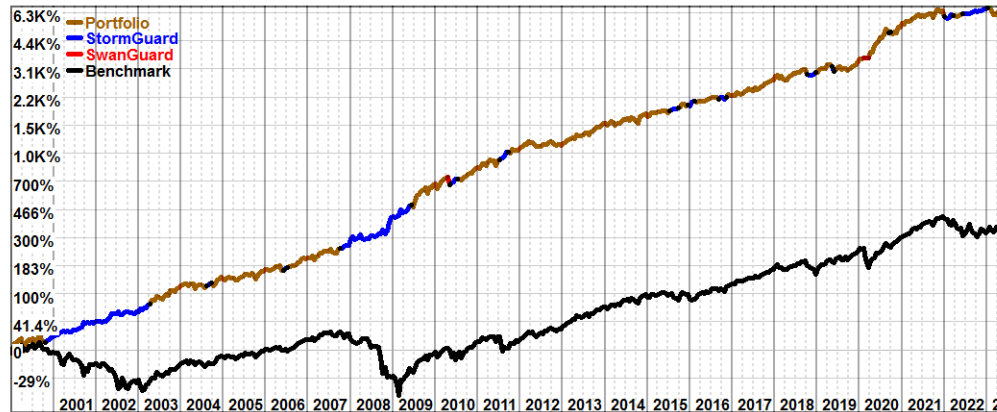|	RISK	CAGR	MaxDD
Portfolio	33.1	19.7%	25%
Benchmark	75.9	10.1%	55%

Statistics measured from 6/1/2004 by AlphaDroid.

Jul 31, 2023

RISK 33 Riskalyze   **ALPHADROID®**   **CAGR 20** Percent

Underlying Strategies	Weight
1. Stylebox SPDR DD	25.0%
2. Stylebox iShares DD	25.0%
3. Stylebox Vanguard DD	25.0%
4. Stylebox Russell DD	25.0%
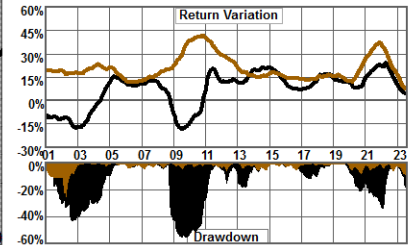
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Portfolio	16.1%	34.7%	12.7%	5.7%	17.3%	22.1%	37.7%	47.6%	23.1%	25.8%	6.9%	30.6%	10.8%	11.9%	12.4%	22.4%	9.4%	13.8%	55.3%	19.5%	3.8%
Benchmark	-22.1%	28.7%	10.9%	4.9%	15.8%	5.5%	-37.0%	26.5%	15.1%	2.1%	16.0%	32.4%	13.7%	1.4%	12.0%	21.8%	-4.4%	31.5%	18.4%	28.7%	-18.1%

	YTD	1-Yr	3-Yr	5-Yr	10-Yr	20-Yr
Portfolio	3.3%	9.2%	13.0%	18.0%	16.9%	19.7%
Benchmark	20.6%	13.0%	13.7%	12.2%	12.7%	10.1%

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Methodology

Tactical Momentum Strategies. Each of the four underlying strategies uses a rules-based tactical momentum algorithm to evaluate a set of candidate ETFs at each month-end, wherein the trend leader of each is selected to be a member of the model's Portfolio for the subsequent month. In Bear markets candidates are defensive ETFs vs equity ETFs.

Portfolio Construction   [More Charts]

The ETF selection is made from a field of 44 classic Stylebox ETFs divided among SPDR, iShares, Vanguard and Russell. The underlying strategies employ a momentum backstop having defensive funds that compete for momentum leadership with the 44 Stylebox ETFs. The Strategy includes a defensive integrated Bear Market Strategy, triggered by StormGuard.

Investor Risk Profile	Rebalance Activity		Dual Defense Strategy	About Momentum Trading Expectations
	Scheduled	Unscheduled		
Conservative	Month-End	Exit market quickly for a for Black Swan event. Get back into equities early for a particularly sharp market rebound.	StormGuard reviews 16 market health measures to determine Bull/Bear. A momentum backstop is also directly employed.	Economic, bureaucratic, and social responses to inflation, politics, and pandemics can disrupt momentum in otherwise orderly markets that is required for profitable trading.

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Model Rebalanced: Aug-01-2023   Status: BULL Market

	Sym	%	Fund Name
1	XLK	25.0	Technology Select Sector SPDR ETF
2	XHB	25.0	SPDR S&P Homebuilders ETF
3	ITB	25.0	iShares US Home Construction ETF
4	PSI	25.0	Invesco Dynamic Semiconductors ETF

Alpha Sectors DD Portfolio

- Portfolio Inception Date: 12-25-2022   When the portfolio design was completed and available.
- Forward Walk Starting: 03-06-2007   Backtesting ends. Walk through out-of-sample data begins.
- Bear Market Strategy: BMS-W,Y,G,0   Invoked by StormGuard-Armor. Selects only defensive funds.
- Benchmark Index: S&P500   The S&P500 U.S. stock market index.
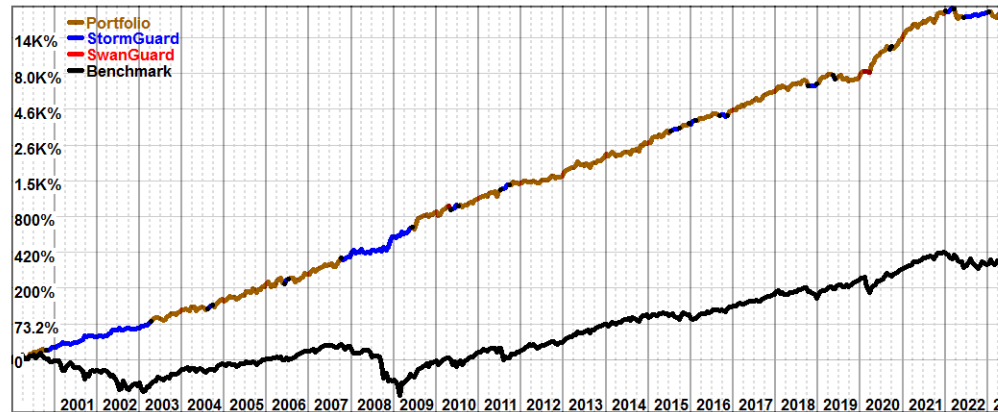
Hypothetical Performance

	RISK	CAGR	MaxDD
Portfolio	31.1	26.7%	18%
Benchmark	75.9	10.1%	55%

Statistics measured from 6/1/2004 by AlphaDroid.

Jul 31, 2023

RISK **31** Riskalyze   ALPHADROID®   CAGR **27** Percent

Underlying Strategies	Weight
1. Sectors SPDR-9 DD	25.0%
2. Sectors SPDR Gold DD	25.0%
3. Sectors iShares DD	25.0%
4. Sectors Aggressive DD	25.0%
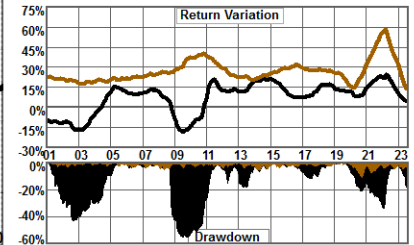
Legend: Portfolio, StormGuard, SwanGuard, Benchmark

Return Variation / Drawdown — Annualized

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Portfolio	15.7%	28.1%	19.8%	18.5%	25.5%	31.6%	34.0%	44.7%	23.9%	24.3%	14.5%	34.0%	20.8%	37.6%	19.1%	35.9%	13.6%	11.3%	77.7%	49.1%	1.6%
Benchmark	-22.1%	28.7%	10.9%	4.9%	15.8%	5.5%	-37.0%	26.5%	15.1%	2.1%	16.0%	32.4%	13.7%	1.4%	12.0%	21.8%	-4.4%	31.5%	18.4%	28.7%	-18.1%

	YTD	1-Yr	3-Yr	5-Yr	10-Yr	20-Yr
Portfolio	-0.1%	5.5%	21.1%	25.2%	26.2%	26.6%
Benchmark	20.6%	13.0%	13.7%	12.2%	12.7%	10.1%

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Methodology

Tactical Momentum Strategies. Each of the four underlying strategies uses a rules-based tactical momentum algorithm to evaluate a set of candidate ETFs at each month-end, wherein the trend leader of each is selected to be a member of the model's Portfolio for the subsequent month. In Bear markets candidates are defensive ETFs vs equity ETFs.

Portfolio Construction   [More Charts]

The Sector ETF selections are made from a field of 44 sector and sub-sector ETFs from multiple asset managers. The underlying strategies employ a momentum backstop having defensive funds that compete for momentum leadership with the 44 Sector ETFs. The Strategy includes a defensive integrated Bear Market Strategy, triggered by StormGuard.

Investor Risk Profile	Rebalance Activity		Dual Defense Strategy	About Momentum Trading Expectations
	Scheduled	**Unscheduled**		
Moderate	Month-End	Exit market quickly for a for Black Swan event. Get back into equities early for a particularly sharp market rebound.	StormGuard reviews 16 market health measures to determine Bull/Bear. A momentum backstop is also directly employed.	Economic, bureaucratic, and social responses to inflation, politics, and pandemics can disrupt momentum in otherwise orderly markets that is required for profitable trading.

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Model Rebalanced: Aug-01-2023

Status: BULL Market

	Sym	%	Fund Name
1	IOO	25.0	iShares Global 100 ETF
2	QQQ	25.0	Invesco QQQ ETF
3	EDIV	25.0	SPDR S&P Emerging Markets Dividend ETF
4	IXN	25.0	iShares Global Technology ETF

Alpha Global DD Portfolio

- **Portfolio Inception Date: 12-25-2022** When the portfolio design was completed and available.
- **Forward Walk Starting: 12-24-2006** Backtesting ends. Walk through out-of-sample data begins.
- **Bear Market Strategy: BMS-W,Y** Invoked by StormGuard-Armor. Selects only defensive funds.
- **Benchmark Index: S&P500** The S&P500 U.S. stock market index.

Hypothetical Performance

	RISK	CAGR	MaxDD
Portfolio	33.4	21.9%	16%
Benchmark	75.9	10.1%	55%

Statistics measured from 6/1/2004 by AlphaDroid.

Jul 31, 2023

RISK **33** Riskalyze

ALPHADROID ®

CAGR **22** Percent

Underlying Strategies

	Weight
1. Global Regions iSh DD	25.0%
2. Global Countries DD	25.0%
3. Global Regions SPDR DD	25.0%
4. Global Sectors DD	25.0%
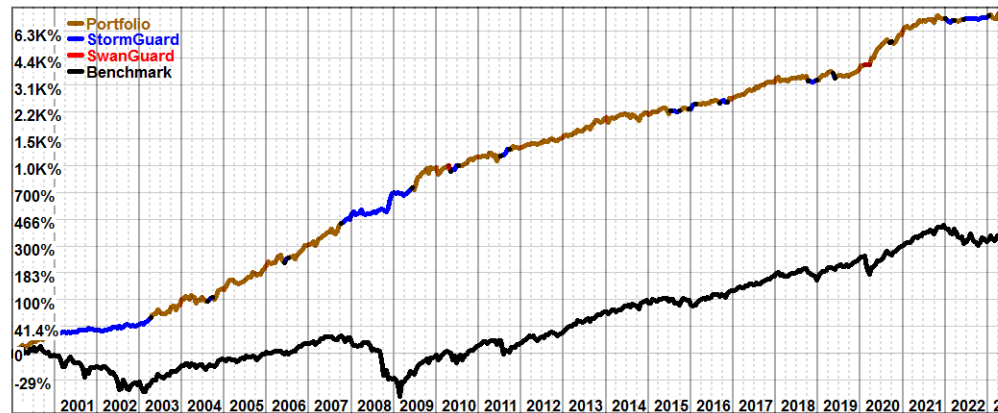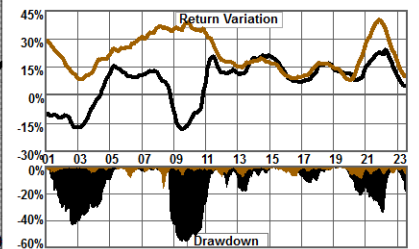
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Portfolio	8.6%	30.9%	22.4%	26.1%	38.3%	41.8%	36.8%	36.6%	17.0%	11.3%	15.8%	28.1%	5.0%	6.7%	13.0%	26.4%	1.7%	15.3%	57.6%	21.5%	1.5%
Benchmark	-22.1%	28.7%	10.9%	4.9%	15.8%	5.5%	-37.0%	26.5%	15.1%	2.1%	16.0%	32.4%	13.7%	1.4%	12.0%	21.8%	-4.4%	31.5%	18.4%	28.7%	-18.1%

	YTD	1-Yr	3-Yr	5-Yr	10-Yr	20-Yr
				Annualized		
Portfolio	13.6%	14.9%	16.7%	20.3%	16.8%	21.9%
Benchmark	20.6%	13.0%	13.7%	12.2%	12.7%	10.1%

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Methodology

Tactical Momentum Strategies. Each of the four underlying strategies uses a rules-based tactical momentum algorithm to evaluate a set of candidate ETFs at each month-end, wherein the trend leader of each is selected to be a member of the model's Portfolio for the subsequent month. In Bear markets candidates are defensive ETFs vs equity ETFs.

Portfolio Construction

More Charts

The Global ETF selections are made from a field of 43 country, region, and sector ETFs from various asset managers. The underlying strategies employ a momentum backstop having defensive funds that compete for momentum leadership with the 43 Global ETFs. The Strategy includes a defensive integrated Bear Market Strategy, triggered by StormGuard.

Investor Risk Profile	Rebalance Activity		Dual Defense Strategy	About Momentum Trading Expectations
	Scheduled	Unscheduled		
Moderate	Month-End	Exit market quickly for a for Black Swan event. Get back into equities early for a particularly sharp market rebound.	StormGuard reviews 16 market health measures to determine Bull/Bear. A momentum backstop is also directly employed.	Economic, bureaucratic, and social responses to inflation, politics, and pandemics can disrupt momentum in otherwise orderly markets that is required for profitable trading.

See Legal-Disclaimer page for technical terms, historical data, and service limits information. Performance updated daily.

Model Rebalanced: Aug-01-2023   Status: BULL Market

	Sym	%	Fund Name
1	ESGY	25.0	American Century Sustainable Growth ETF
2	FIW	25.0	First Trust Water ETF
3	ACES	25.0	ALPS Clean Energy ETF
4	DRIV	25.0	Global X Atnms & Elctrc Vhcls ETF

Alpha Green DD Portfolio

▶ **Portfolio Inception Date: 12-25-2022**   When the portfolio design was completed and available.
▶ **Forward Walk Starting: 11-12-2015**   Backtesting ends. Walk through out-of-sample data begins.
▶ **Bear Market Strategy: BMS-W,0,Z**   Invoked by StormGuard-Armor. Selects only defensive funds.
▶ **Benchmark Index: S&P500**   The S&P500 U.S. stock market index.
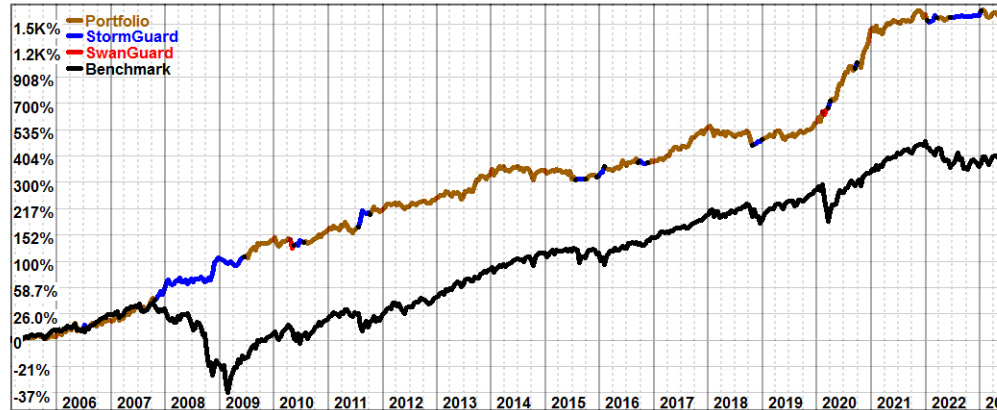
Hypothetical Performance

	RISK	CAGR	MaxDD
Portfolio	44.0	17.4%	17%
Benchmark	77.0	9.7%	55%

Statistics measured from 6/1/2004 by AlphaDroid.

Jul 31, 2023   RISK 44 Riskalyze   CAGR 17 Percent

Underlying Strategies | Weight

Underlying Strategies	Weight
1. Sustainable Future DD	25.0%
2. Clean Water DD	25.0%
3. Clean Energy DD	25.0%
4. Electric Vehicles DD	25.0%
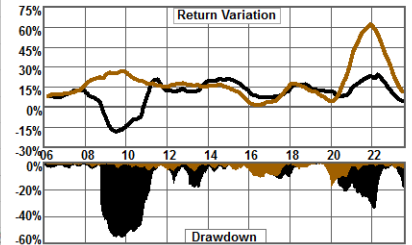
Legend: Portfolio, StormGuard, SwanGuard, Benchmark

Return Variation / Drawdown - Annualized -

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Portfolio	14.3%	31.3%	31.1%	17.6%	9.5%	18.1%	10.3%	26.9%	2.1%	-5.2%	13.1%	33.3%	-8.6%	16.5%	113.2%	20.4%	-0.4%
Benchmark	15.8%	5.5%	-37.0%	26.5%	15.1%	2.1%	16.0%	32.4%	13.7%	1.4%	12.0%	21.8%	-4.4%	31.5%	18.4%	28.7%	-18.1%

	YTD	1-Yr	3-Yr	5-Yr	10-Yr	18-Yr
Portfolio	9.8%	10.9%	21.9%	25.6%	17.8%	17.4%
Benchmark	20.6%	13.0%	13.7%	12.2%	12.7%	9.7%

Hypothetical portfolio model performance assumes trade signals provided are executed at the close of the subsequent market day. Past performance does not guarantee future performance. Copyright 2023 SumGrowth Strategies, LLC all rights reserved.

Methodology

Tactical Momentum Strategies. Each of the four underlying strategies uses a rules-based tactical momentum algorithm to evaluate a set of candidate ETFs at each month-end, wherein the trend leader of each is selected to be a member of the model's Portfolio for the subsequent month. In Bear markets candidates are defensive ETFs vs equity ETFs.

Portfolio Construction   More Charts

The Green ETF selections are made from a field of 32 sustainable, clean water, clean energy, and electric vehicle ETFs. The underlying strategies employ a momentum backstop having defensive funds that compete for momentum leadership with the 32 Green ETFs. The Strategy includes a defensive integrated Bear Market Strategy, triggered by StormGuard.

Investor Risk Profile	Rebalance Activity		Dual Defense Strategy	About Momentum Trading Expectations
	Scheduled	Unscheduled		
Moderate	Month-End	Exit market quickly for a for Black Swan event. Get back into equities early for a particularly sharp market rebound.	StormGuard reviews 16 market health measures to determine Bull/Bear. A momentum backstop is also directly employed.	Economic, bureaucratic, and social responses to inflation, politics, and pandemics can disrupt momentum in otherwise orderly markets that is required for profitable trading.

See Legal-Disclaimer page for technical terms, historical data, and service limits information. Performance updated daily.

Model Rebalanced: Aug-01-2023   Status: BULL Market

	Sym	%	Fund Name
1	ARKQ	25.0	ARK Autonomous Technology & Robotics ET
2	XWEB	25.0	SPDR S&P Internet ETF
3	AIQ	25.0	Global X Artificial Intellignce&Tech ET
4	XLK	25.0	Technology Select Sector SPDR ETF

Alpha Innovation DD Portfolio

- ▶ **Portfolio Inception Date: 12-25-2022**   When the portfolio design was completed and available.
- ▶ **Forward Walk Starting: 01-03-2019**   Backtesting ends. Walk through out-of-sample data begins.
- ▶ **Bear Market Strategy: BMS-G,M**   Invoked by StormGuard-Armor. Selects only defensive funds.
- ▶ **Benchmark Index: S&P500**   The S&P500 U.S. stock market index.

Hypothetical Performance

	RISK	CAGR	MaxDD
Portfolio	47.6	23.1%	26%
Benchmark	75.9	10.1%	55%

Statistics measured from 6/1/2004 by AlphaDroid.

Jul 31, 2023

RISK 48 Riskalyze   **ALPHADROID®**   **CAGR 23** Percent

Underlying Strategies

Underlying Strategies	Weight
1. Innov. ARK DD	25.0%
2. Innov. Internet DD	25.0%
3. Innov. Robo-AI DD	25.0%
4. Innov. Bio-Genome DD	25.0%
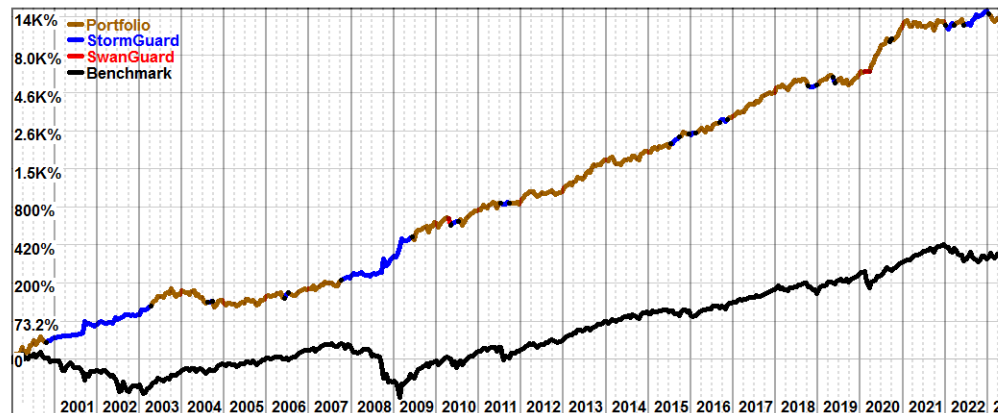
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Portfolio	18.9%	35.1%	-10.9%	1.5%	14.8%	20.6%	34.1%	63.1%	18.3%	11.7%	18.8%	59.2%	10.3%	31.0%	24.7%	45.7%	12.4%	15.4%	95.4%	9.8%	17.3%
Benchmark	-22.1%	28.7%	10.9%	4.9%	15.8%	5.5%	-37.0%	26.5%	15.1%	2.1%	16.0%	32.4%	13.7%	1.4%	12.0%	21.8%	-4.4%	31.5%	18.4%	28.7%	-18.1%

	YTD	1-Yr	3-Yr	5-Yr	10-Yr	20-Yr
Portfolio	3.0%	23.2%	18.7%	24.2%	26.7%	23.0%
Benchmark	20.6%	13.0%	13.7%	12.2%	12.7%	10.1%

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Methodology

Tactical Momentum Strategies. Each of the four underlying strategies uses a rules-based tactical momentum algorithm to evaluate a set of candidate ETFs at each month-end, wherein the trend leader of each is selected to be a member of the model's Portfolio for the subsequent month. In Bear markets candidates are defensive ETFs vs equity ETFs.

Portfolio Construction   [More Charts]

The Innovation ETF selections are made from a field of 33 ARK, internet, robotics, AI, and bio-genome ETFs. The underlying strategies employ a momentum backstop having defensive funds that compete for momentum leadership with the 33 green ETFs. The Strategy includes a defensive integrated Bear Market Strategy, triggered by StormGuard.

Investor Risk Profile	Rebalance Activity		Dual Defense Strategy	About Momentum Trading Expectations
	Scheduled	Unscheduled		
Growth	Month-End	Exit market quickly for a for Black Swan event. Get back into equities early for a particularly sharp market rebound.	StormGuard reviews 16 market health measures to determine Bull/Bear. A momentum backstop is also directly employed.	Economic, bureaucratic, and social responses to inflation, politics, and pandemics can disrupt momentum in otherwise orderly markets that is required for profitable trading.

See Legal-Disclaimer page for technical terms, historical data, and service limits information. Performance updated daily.

ALPHADROID

Model Rebalanced: Aug-01-2023   Status: BULL Market

	Sym	%	Fund Name		Sym	%	Fund Name
1	BSX	9.1	Boston Scientific	9	NVDA	9.1	Nvidia
2	MDLZ	9.1	Mondelez International-A	10	PCG	9.1	PG&E
3	TJX	9.1	TJX Companies	11	SCCO	9.1	Southern Copper
4	SPGI	9.1	S&P Global Inc				
5	ETN	9.1	Eaton				
6	EPD	9.1	Enterprise Products Partners LP				
7	META	9.1	Meta Platforms Inc				
8	DLR	9.1	Digital Realty Trust				

Alpha Stocks DD Portfolio

- **Portfolio Inception Date: 12-25-2022**   When the portfolio design was completed and available.
- **Forward Walk Starting: 07-20-2003**   Backtesting ends. Walk through out-of-sample data begins.
- **Bear Market Strategy: BMS-W,Y**   Invoked by StormGuard-Armor. Selects only defensive funds.
- **Benchmark Index: S&P500**   The S&P500 U.S. stock market index.

Hypothetical Performance

	RISK	CAGR	MaxDD
Portfolio	27.6	38.0%	20%
Benchmark	75.9	10.1%	55%

Statistics measured from 6/1/2004 by AlphaDroid.

Jul 31, 2023

RISK **28** Riskalyze

ALPHADROID ®

CAGR **38** Percent
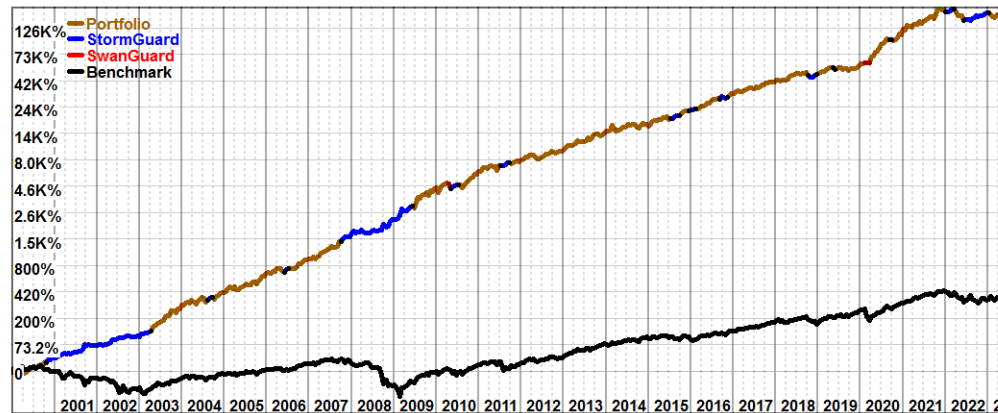
Strategy	Wt.	Strategy	Wt.
Stocks: Healthcare	9.1%	Stocks: Communications	9.1%
Stocks: Cons. Staples	9.1%	Stocks: Real Estate	9.1%
Stocks: Cons. Discretional	9.1%	Stocks: Technology	9.1%
Stocks: Finance	9.1%	Stocks: Utilities	9.1%
Stocks: Industrial	9.1%	Stocks: Materials	9.1%
Stocks: Energy	9.1%		
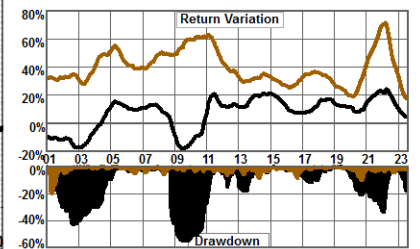
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Portfolio	22.9%	81.3%	38.4%	36.6%	40.3%	66.7%	40.4%	84.7%	37.2%	30.1%	27.3%	43.7%	18.9%	33.7%	40.2%	28.4%	19.1%	18.4%	95.2%	63.0%	-5.6%
Benchmark	-22.1%	28.7%	10.9%	4.9%	15.8%	5.5%	-37.0%	26.5%	15.1%	2.1%	16.0%	32.4%	13.7%	1.4%	12.0%	21.8%	-4.4%	31.5%	18.4%	28.7%	-18.1%

	YTD	1-Yr	3-Yr	5-Yr	10-Yr	20-Yr
Portfolio	9.9%	25.4%	27.1%	31.7%	31.5%	37.9%
Benchmark	20.6%	13.0%	13.7%	12.2%	12.7%	10.1%

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Methodology

Tactical Momentum Strategies. Each of the 11 underlying strategies uses a rules-based tactical momentum algorithm to evaluate a set of candidate ETFs at each month-end, wherein the trend leader of each is selected to be a member of the model's Portfolio for the subsequent month. In Bear markets candidates are defensive ETFs vs equity ETFs.

Portfolio Construction   [More Charts]

The Stocks selections are made from a field of 121 of the largest cap stocks in each of the 11 economic sectors. The underlying strategies employ a momentum backstop having defensive funds that compete for momentum leadership with the 121 Stocks. The Strategy includes a defensive integrated Bear Market Strategy, triggered by StormGuard.

Investor Risk Profile	Rebalance Activity		Dual Defense Strategy	About Momentum Trading Expectations
	Scheduled	**Unscheduled**		
Growth	Month-End	Exit market quickly for a for Black Swan event. Get back into equities early for a particularly sharp market rebound.	StormGuard reviews 16 market health measures to determine Bull/Bear. A momentum backstop is also directly employed.	Economic, bureaucratic, and social responses to inflation, politics, and pandemics can disrupt momentum in otherwise orderly markets that is required for profitable trading.

See Legal-Disclaimer page for technical terms, historical data, and service limits information. Performance updated daily.

Model Rebalanced: Aug-01-2023   Status: BULL Market

	Sym	%	Fund Name
1	JNK	20.0	SPDR Blmbg High Yield Bond ETF
2	SHYG	20.0	iShares 0-5 Year High-Yield Bond ETF
3	FALN	17.5	iShares Fallen Angels USD Bond ETF
4	IEI	17.5	iShares 3-7 Year Treasury Bond ETF
5	SPY	7.5	SPDR S&P 500 ETF
6	BND	5.0	Vanguard Total Bond Market ETF
7	GLD	2.5	SPDR Gold ETF
8	QQQ	2.5	Invesco QQQ ETF

	Sym	%	Fund Name
9	IVE	2.5	iShares S&P 500 Value ETF
10	VONG	2.5	Vanguard Russell 1000 Growth ETF
11	IWY	2.5	iShares Russell Top 200 Growth ETF

Alpha 20:80 DD Portfolio

- **Portfolio Inception Date:** 12-25-2022   When the portfolio design was completed and available.
- **Forward Walk Starting:** 05-07-2011   Backtesting ends. Walk through out-of-sample data begins.
- **Bear Market Strategy:** BMS-W,Y   Invoked by StormGuard-Armor. Selects only defensive funds.
- **Benchmark Index:** B2080   Based on industry consensus asset allocation mix. See portfolio notes.

Hypothetical Performance

	RISK	CAGR	MaxDD
Portfolio	22.5	10.6%	8%
Benchmark	25.5	4.1%	14%

Statistics measured from 6/1/2004 by AlphaDroid.

Jul 31, 2023   RISK **22** Riskalyze   **ALPHADROID** ®   CAGR **11** Percent
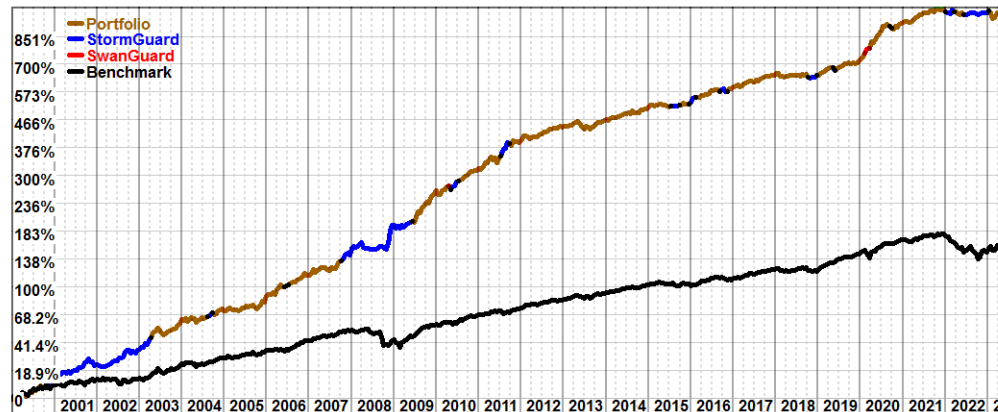
Strategy	Wt.	Strategy	Wt.
Bonds SPDR	20%	Tactical Risk Mitigation-3	2.5%
Gold'n Yield	20%	Tactical Risk Mitigation-4	2.5%
Bonds iShares	17.5%	Stylebox SPDR DD	2.5%
Treasuries	17.5%	Stylebox iShares DD	2.5%
Tactical Risk Mitigation-1	5.0%	Stylebox Vanguard DD	2.5%
Tactical Risk Mitigation-2	5.0%	Stylebox Russell DD	2.5%
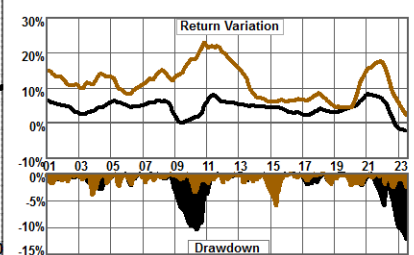
Legend: Portfolio, StormGuard, SwanGuard, Benchmark

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Portfolio	11.9%	17.0%	8.6%	5.8%	17.1%	14.8%	18.8%	21.4%	16.9%	17.1%	10.4%	4.2%	7.4%	3.0%	10.2%	8.8%	-0.5%	9.4%	27.0%	9.0%	-2.3%
Benchmark	1.0%	8.5%	5.2%	3.6%	7.0%	6.8%	-5.6%	8.9%	6.6%	4.3%	5.6%	4.3%	5.0%	0.6%	3.0%	6.5%	-0.9%	11.3%	9.1%	3.6%	-10.9%

	YTD	1-Yr	3-Yr	5-Yr	10-Yr	20-Yr
Portfolio	0.7%	0.8%	2.7%	8.4%	7.4%	10.6%
Benchmark	5.4%	1.5%	0.1%	3.2%	3.3%	4.1%

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Methodology

Tactical Momentum Strategies. Each of the 12 underlying strategies uses a rules-based tactical momentum algorithm to evaluate a set of candidate ETFs at each month-end, wherein the trend leader of each is selected to be a member of the model's Portfolio for the subsequent month. In Bear markets candidates are defensive ETFs vs equity ETFs.

Portfolio Construction   [More Charts]

The 20:80 Portfolio is a blended allocation weighted combination of the following portfolios: 75% Alpha Bonds, 15% Alpha Risk Mitigation, and 10% Alpha Stylebox. The Portfolio will never allocate more than 20% of its assets to equities. However, both Dual Defense components employ bonds and commodities that at times reduces equities well under 20%.

Investor Risk Profile	Rebalance Activity		Dual Defense Strategy	About Momentum Trading Expectations
	Scheduled	Unscheduled		
Fixed Income	Month-End	Exit market quickly for a for Black Swan event. Get back into equities early for a particularly sharp market rebound.	StormGuard reviews 16 market health measures to determine Bull/Bear. A momentum backstop is also directly employed.	Economic, bureaucratic, and social responses to inflation, politics, and pandemics can disrupt momentum in otherwise orderly markets that is required for profitable trading.

See Legal-Disclaimer page for technical terms, historical data, and service limits information. Performance updated daily.

Model Rebalanced: Aug-01-2023   Status: BULL Market

Sym	%	Fund Name		Sym	%	Fund Name
1 JNK	12.5	SPDR Blmbg High Yield Bond ETF		9 IVE	6.3	iShares S&P 500 Value ETF
2 SHYG	12.5	iShares 0-5 Year High-Yield Bond ETF		10 XLK	6.3	Technology Select Sector SPDR ETF
3 FALN	12.5	iShares Fallen Angels USD Bond ETF		11 XHB	6.3	SPDR S&P Homebuilders ETF
4 IEI	12.5	iShares 3-7 Year Treasury Bond ETF				
5 SPY	11.3	SPDR S&P 500 ETF				
6 BND	7.5	Vanguard Total Bond Market ETF				
7 GLD	6.3	SPDR Gold ETF				
8 QQQ	6.3	Invesco QQQ ETF				

Alpha 40:60 DD Portfolio

- Portfolio Inception Date: 12-25-2022   When the portfolio design was completed and available.
- Forward Walk Starting: 05-07-2011   Backtesting ends. Walk through out-of-sample data begins.
- Bear Market Strategy: BMS-W,Y   Invoked by StormGuard-Armor. Selects only defensive funds.
- Benchmark Index: B4060   Based on industry consensus asset allocation mix. See portfolio notes.

Hypothetical Performance

	RISK	CAGR	MaxDD
Portfolio	21.8	13.6%	9%
Benchmark	36.4	5.7%	24%

Statistics measured from 6/1/2004 by AlphaDroid.

Jul 31, 2023

RISK **22** Riskalyze   **ALPHA DROID**®   CAGR **14** Percent

Strategy	Wt.	Strategy	Wt.
Bonds SPDR	12.5%	Tactical Risk Mitigation-3	6.3%
Gold'n Yield	12.5%	Tactical Risk Mitigation-4	6.3%
Bonds iShares	12.5%	Stylebox SPDR DD	6.3%
Treasuries	12.5%	Stylebox iShares DD	6.3%
Tactical Risk Mitigation-1	6.3%	Sectors SPDR-9 DD	6.3%
Tactical Risk Mitigation-2	6.3%	Sectors SPDR Gold DD	6.3%
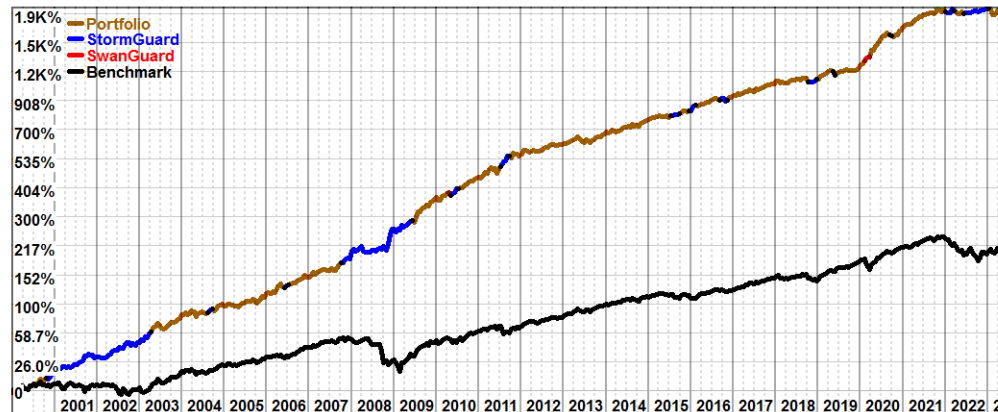
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Portfolio	14.1%	20.9%	10.9%	6.0%	18.0%	17.1%	24.0%	26.5%	19.5%	18.2%	9.5%	9.1%	10.3%	8.4%	11.6%	11.7%	3.3%	9.6%	35.3%	16.6%	1.1%
Benchmark	-3.8%	14.4%	7.2%	4.7%	9.5%	7.2%	-14.8%	13.8%	8.9%	3.4%	8.6%	10.3%	6.2%	1.0%	4.3%	10.5%	-2.4%	16.3%	12.7%	8.5%	-13.5%

	YTD	1-Yr	3-Yr	5-Yr	10-Yr	20-Yr
Portfolio	0.0%	2.2%	6.9%	12.1%	11.0%	13.6%
Benchmark	8.7%	4.1%	2.7%	5.2%	5.4%	5.7%

Methodology

Tactical Momentum Strategies. Each of the 12 underlying strategies uses a rules-based tactical momentum algorithm to evaluate a set of candidate ETFs at each month-end, wherein the trend leader of each is selected to be a member of the model's Portfolio for the subsequent month. In Bear markets candidates are defensive ETFs vs equity ETFs.

Portfolio Construction   [More Charts]

The 40:60 Portfolio is a blended set of portfolios including: 50% Alpha Bonds, 25% Alpha Risk Mitigation, 12.5% Alpha Stylebox, and 12.5% Alpha Sectors. The Portfolio will never allocate more than 40% of its assets to equities. However, both Dual Defense components employ bonds and commodities that at times reduces equities well under 40%.

Investor Risk Profile	Rebalance Activity		Dual Defense Strategy	About Momentum Trading Expectations
	Scheduled	**Unscheduled**		
Conservative	Month-End	Exit market quickly for a for Black Swan event. Get back into equities early for a particularly sharp market rebound.	StormGuard reviews 16 market health measures to determine Bull/Bear. A momentum backstop is also directly employed.	Economic, bureaucratic, and social responses to inflation, politics, and pandemics can disrupt momentum in otherwise orderly markets that is required for profitable trading.

See Legal-Disclaimer page for technical terms, historical data, and service limits information. Performance updated daily.

Model Rebalanced: Aug-01-2023

Status: BULL Market

	Sym	%	Fund Name		Sym	%	Fund Name
1	JNK	8.0	SPDR Blmbg High Yield Bond ETF	9	IVE	12.0	iShares S&P 500 Value ETF
2	SHYG	8.0	iShares 0-5 Year High-Yield Bond ETF	10	VONG	12.0	Vanguard Russell 1000 Growth ETF
3	FALN	8.0	iShares Fallen Angels USD Bond ETF	11	IWY	12.0	iShares Russell Top 200 Growth ETF
4	IEI	8.0	iShares 3-7 Year Treasury Bond ETF				
5	SPY	8.4	SPDR S&P 500 ETF				
6	BND	5.6	Vanguard Total Bond Market ETF				
7	GLD	6.0	SPDR Gold ETF				
8	QQQ	12.0	Invesco QQQ ETF				

Alpha 60:40 Core DD Portfolio

- **Portfolio Inception Date: 12-25-2022** When the portfolio design was completed and available.
- **Forward Walk Starting: 05-07-2011** Backtesting ends. Walk through out-of-sample data begins.
- **Bear Market Strategy: BMS-W,Y** Invoked by StormGuard-Armor. Selects only defensive funds.
- **Benchmark Index: B6040** Based on industry consensus asset allocation mix. See portfolio notes.

Hypothetical Performance

	RISK	CAGR	MaxDD
Portfolio	24.6	14.9%	10%
Benchmark	49.4	7.1%	36%

Statistics measured from 6/1/2004 by AlphaDroid.

Jul 31, 2023

RISK 25 Riskalyze   **ALPHADROID®**   **CAGR 15** Percent
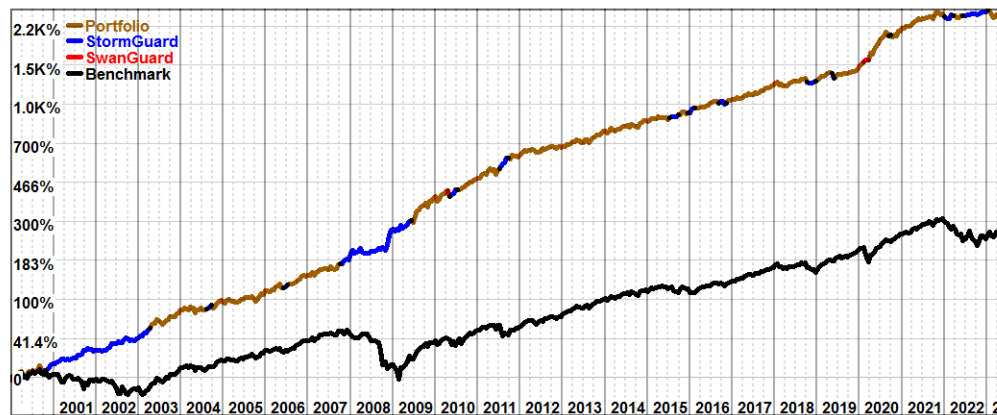
Strategy	Wt.	Strategy	Wt.
Bonds SPDR	8.0%	Tactical Risk Mitigation-3	6.0%
Gold'n Yield	8.0%	Tactical Risk Mitigation-4	6.0%
Bonds iShares	8.0%	Stylebox SPDR DD	12.0%
Treasuries	8.0%	Stylebox iShares DD	12.0%
Tactical Risk Mitigation-1	4.0%	Stylebox Vanguard DD	12.0%
Tactical Risk Mitigation-2	4.0%	Stylebox Russell DD	12.0%
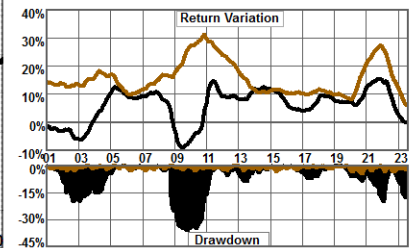
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Portfolio	13.6%	25.0%	10.9%	5.1%	17.5%	17.9%	28.4%	31.2%	19.8%	21.1%	8.8%	15.6%	9.4%	7.0%	11.7%	14.7%	4.3%	11.7%	40.2%	15.5%	1.8%
Benchmark	-8.6%	20.3%	9.3%	5.7%	12.1%	7.6%	-23.3%	18.7%	11.1%	2.3%	11.6%	16.6%	7.5%	1.3%	5.6%	14.7%	-4.0%	21.5%	15.7%	13.6%	-16.2%

	YTD	1-Yr	3-Yr	5-Yr	10-Yr	20-Yr
Portfolio	1.7%	4.3%	8.1%	13.6%	12.2%	14.9%
Benchmark	12.1%	6.6%	5.3%	7.1%	7.3%	7.1%

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Methodology

Tactical Momentum Strategies. Each of the 12 underlying strategies uses a rules-based tactical momentum algorithm to evaluate a set of candidate ETFs at each month-end, wherein the trend leader of each is selected to be a member of the model's Portfolio for the subsequent month. In Bear markets candidates are defensive ETFs vs equity ETFs.

Portfolio Construction   [More Charts]

The 60:40 Core Portfolio is a blended combination of other portfolios including: 32% Alpha Bonds, 20% Alpha Risk Mitigation, and 48% Alpha Stylebox. The Portfolio will never allocate more than 60% of its assets to equities. However, both Dual Defense components employ bonds and commodities that at times reduces equities well under 60%.

Investor Risk Profile	Rebalance Activity		Dual Defense Strategy	About Momentum Trading Expectations
	Scheduled	Unscheduled		
Conservative	Month-End	Exit market quickly for a for Black Swan event. Get back into equities early for a particularly sharp market rebound.	StormGuard reviews 16 market health measures to determine Bull/Bear. A momentum backstop is also directly employed.	Economic, bureaucratic, and social responses to inflation, politics, and pandemics can disrupt momentum in otherwise orderly markets that is required for profitable trading.

See Legal-Disclaimer page for technical terms, historical data, and service limits information. Performance updated daily.

Model Rebalanced: Aug-01-2023

Status: BULL Market

	Sym	%	Fund Name
1	JNK	8.0	SPDR Blmbg High Yield Bond ETF
2	SHYG	8.0	iShares 0-5 Year High-Yield Bond ETF
3	FALN	8.0	iShares Fallen Angels USD Bond ETF
4	IEI	8.0	iShares 3-7 Year Treasury Bond ETF
5	SPY	8.4	SPDR S&P 500 ETF
6	BND	5.6	Vanguard Total Bond Market ETF
7	GLD	6.0	SPDR Gold ETF
8	XLK	12.0	Technology Select Sector SPDR ETF

	Sym	%	Fund Name
9	XHB	12.0	SPDR S&P Homebuilders ETF
10	ITB	12.0	iShares US Home Construction ETF
11	PSI	12.0	Invesco Dynamic Semiconductors ETF

Alpha 60:40 Sectors DD Portfolio

- **Portfolio Inception Date: 12-25-2022** When the portfolio design was completed and available.
- **Forward Walk Starting: 05-07-2011** Backtesting ends. Walk through out-of-sample data begins.
- **Bear Market Strategy: BMS-W,Y** Invoked by StormGuard-Armor. Selects only defensive funds.
- **Benchmark Index: B6040** Based on industry consensus asset allocation mix. See portfolio notes.

Hypothetical Performance

	RISK	CAGR	MaxDD
Portfolio	22.7	18.3%	12%
Benchmark	49.4	7.1%	36%

Statistics measured from 6/1/2004 by AlphaDroid.

Jul 31, 2023

RISK **23** Riskalyze

ALPHADROID®

CAGR **18** Percent
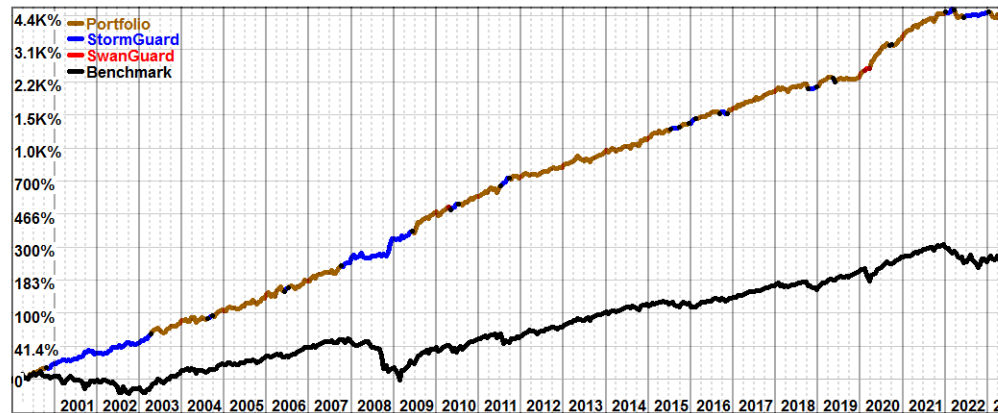
Strategy	Wt.	Strategy	Wt.
Bonds SPDR	8.0%	Tactical Risk Mitigation-3	6.0%
Gold'n Yield	8.0%	Tactical Risk Mitigation-4	6.0%
Bonds iShares	8.0%	Sectors SPDR-9 DD	12.0%
Treasuries	8.0%	Sectors SPDR Gold DD	12.0%
Tactical Risk Mitigation-1	4.0%	Sectors iShares DD	12.0%
Tactical Risk Mitigation-2	4.0%	Sectors Aggressive DD	12.0%
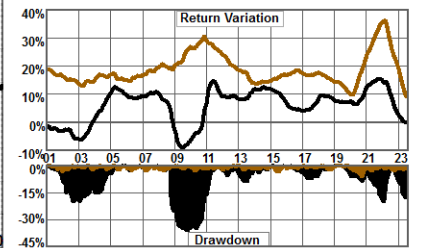
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Portfolio	13.3%	22.2%	14.4%	11.7%	21.8%	22.4%	26.8%	29.9%	20.1%	20.4%	12.2%	17.1%	14.0%	18.5%	14.9%	20.8%	6.3%	10.6%	50.0%	29.1%	0.7%
Benchmark	-8.6%	20.3%	9.3%	5.7%	12.1%	7.6%	-23.3%	18.7%	11.1%	2.3%	11.6%	16.6%	7.5%	1.3%	5.6%	14.7%	-4.0%	21.5%	15.7%	13.6%	-16.2%

	YTD	1-Yr	3-Yr	5-Yr	10-Yr	20-Yr
Portfolio	0.0%	2.5%	12.0%	17.0%	16.6%	18.3%
Benchmark	12.1%	6.6%	5.3%	7.1%	7.3%	7.1%

Methodology

Tactical Momentum Strategies. Each of the 12 underlying strategies uses a rules-based tactical momentum algorithm to evaluate a set of candidate ETFs at each month-end, wherein the trend leader of each is selected to be a member of the model's Portfolio for the subsequent month. In Bear markets candidates are defensive ETFs vs equity ETFs.

Portfolio Construction

More Charts

The 60:40 Sectors Portfolio is a blended combination of other portfolios including: 32% Alpha Bonds, 20% Alpha Risk Mitigation, and 48% Alpha Sectors. The Portfolio will never allocate more than 60% of its assets to equities. However, both Dual Defense components employ bonds and commodities that at times reduces equities well under 60%.

Investor Risk Profile	Rebalance Activity		Dual Defense Strategy	About Momentum Trading Expectations
	Scheduled	**Unscheduled**		
Moderate	Month-End	Exit market quickly for a for Black Swan event. Get back into equities early for a particularly sharp market rebound.	StormGuard reviews 16 market health measures to determine Bull/Bear. A momentum backstop is also directly employed.	Economic, bureaucratic, and social responses to inflation, politics, and pandemics can disrupt momentum in otherwise orderly markets that is required for profitable trading.

See Legal-Disclaimer page for technical terms, historical data, and service limits information. Performance updated daily.

Model Rebalanced: Aug-01-2023

Status: BULL Market

	Sym	%	Fund Name
1	FALN	15.0	iShares Fallen Angels USD Bond ETF
2	IEI	15.0	iShares 3-7 Year Treasury Bond ETF
3	SPY	15.0	SPDR S&P 500 ETF
4	BND	10.0	Vanguard Total Bond Market ETF
5	QQQ	10.0	Invesco QQQ ETF
6	IVE	7.5	iShares S&P 500 Value ETF
7	VONG	7.5	Vanguard Russell 1000 Growth ETF
8	IWY	7.5	iShares Russell Top 200 Growth ETF

	Sym	%	Fund Name
9	IOO	2.5	iShares Global 100 ETF
10	EDIV	5.0	SPDR S&P Emerging Markets Dividend ETF
11	IXN	5.0	iShares Global Technology ETF

Alpha 60:40 Global DD Portfolio

- Portfolio Inception Date: 12-25-2022   When the portfolio design was completed and available.
- Forward Walk Starting: 10-01-2007   Backtesting ends. Walk through out-of-sample data begins.
- Bear Market Strategy: BMS-W,Y   Invoked by StormGuard-Armor. Selects only defensive funds.
- Benchmark Index: B6040   Based on industry consensus asset allocation mix. See portfolio notes.

Hypothetical Performance

	RISK	CAGR	MaxDD
Portfolio	23.9	14.0%	10%
Benchmark	49.4	7.1%	36%

Statistics measured from 6/1/2004 by AlphaDroid.

Jul 31, 2023

RISK **24** Riskalyze   ALPHADROID®   CAGR **14** Percent
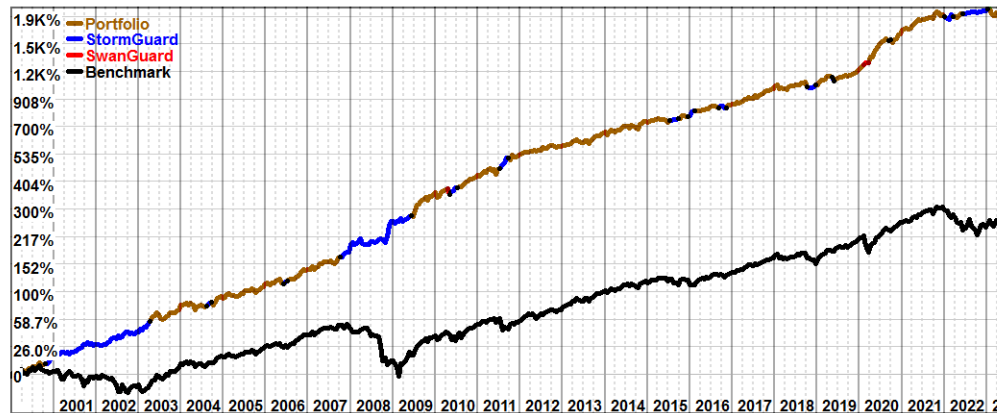
Strategy	Wt.	Strategy	Wt.
Bonds iShares	15.0%	Stylebox Vanguard DD	7.5%
Treasuries	15.0%	Stylebox Russell DD	7.5%
Tactical Risk Mitigation-1	12.5%	Global Regions iSh DD	2.5%
Tactical Risk Mitigation-2	12.5%	Global Countries DD	2.5%
Stylebox SPDR DD	7.5%	Global Regions SPDR DD	5.0%
Stylebox iShares DD	7.5%	Global Sectors DD	5.0%
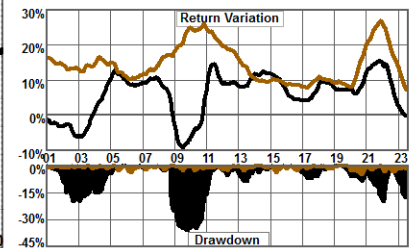
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Portfolio	14.1%	20.2%	10.7%	7.6%	15.4%	18.5%	27.3%	24.7%	16.5%	18.9%	8.4%	12.6%	9.0%	4.3%	9.9%	15.0%	3.3%	12.5%	37.5%	16.5%	3.3%
Benchmark	-8.6%	20.3%	9.3%	5.7%	12.1%	7.6%	-23.3%	18.7%	11.1%	2.3%	11.6%	16.6%	7.5%	1.3%	5.6%	14.7%	-4.0%	21.5%	15.7%	13.6%	-16.2%

	YTD	1-Yr	3-Yr	5-Yr	10-Yr	20-Yr
Portfolio	3.1%	4.3%	9.8%	14.0%	11.8%	14.0%
Benchmark	12.1%	6.6%	5.3%	7.1%	7.3%	7.1%

Hypothetical portfolio model performance assumes trade signals provided are executed at the close of the subsequent market day. Past performance does not guarantee future performance. Copyright 2023 SumGrowth Strategies, LLC all rights reserved.

Methodology

Tactical Momentum Strategies. Each of the 12 underlying strategies uses a rules-based tactical momentum algorithm to evaluate a set of candidate ETFs at each month-end, wherein the trend leader of each is selected to be a member of the model's Portfolio for the subsequent month. In Bear markets candidates are defensive ETFs vs equity ETFs.

Portfolio Construction   [More Charts]

The 60:40 Global Portfolio is a blended combination of other portfolios including: 32% Alpha Bonds, 20% Alpha Risk Mitigation, and 48% Alpha Global. The Portfolio will never allocate more than 60% of its assets to equities. However, both Dual Defense components employ bonds and commodities that at times reduces equities well under 60%.

Investor Risk Profile	Rebalance Activity		Dual Defense Strategy	About Momentum Trading Expectations
	Scheduled	Unscheduled		
Moderate	Month-End	Exit market quickly for a for Black Swan event. Get back into equities early for a particularly sharp market rebound.	StormGuard reviews 16 market health measures to determine Bull/Bear. A momentum backstop is also directly employed.	Economic, bureaucratic, and social responses to inflation, politics, and pandemics can disrupt momentum in otherwise orderly markets that is required for profitable trading.

See Legal-Disclaimer page for technical terms, historical data, and service limits information. Performance updated daily.

Model Rebalanced: Aug-01-2023

Status: BULL Market

	Sym	%	Fund Name
1	FALN	15.0	iShares Fallen Angels USD Bond ETF
2	IEI	15.0	iShares 3-7 Year Treasury Bond ETF
3	SPY	15.0	SPDR S&P 500 ETF
4	BND	10.0	Vanguard Total Bond Market ETF
5	QQQ	7.5	Invesco QQQ ETF
6	IVE	7.5	iShares S&P 500 Value ETF
7	XLK	7.5	Technology Select Sector SPDR ETF
8	ITB	7.5	iShares US Home Construction ETF

	Sym	%	Fund Name
9	ESGY	2.5	American Century Sustainable Growth ETF
10	FIW	2.5	First Trust Water ETF
11	ACES	5.0	ALPS Clean Energy ETF
12	DRIV	5.0	Global X Atnms & Elctrc Vhcls ETF

Alpha 60:40 Green DD Portfolio

▸ **Portfolio Inception Date: 12-25-2022** When the portfolio design was completed and available.
▸ **Forward Walk Starting: 10-01-2007** Backtesting ends. Walk through out-of-sample data begins.
▸ **Bear Market Strategy: BMS-W,Y** Invoked by StormGuard-Armor. Selects only defensive funds.
▸ **Benchmark Index: B6040** Based on industry consensus asset allocation mix. See portfolio notes.

Hypothetical Performance

	RISK	CAGR	MaxDD
Portfolio	24.2	14.5%	10%
Benchmark	49.4	7.1%	36%

Statistics measured from 6/1/2004 by AlphaDroid.

Jul 31, 2023

RISK **24** Riskalyze

ALPHADROID®

CAGR **14** Percent

Strategy	Wt.
Bonds iShares	15.0%
Treasuries	15.0%
Tactical Risk Mitigation-1	12.5%
Tactical Risk Mitigation-2	12.5%
Stylebox SPDR DD	7.5%
Stylebox iShares DD	7.5%
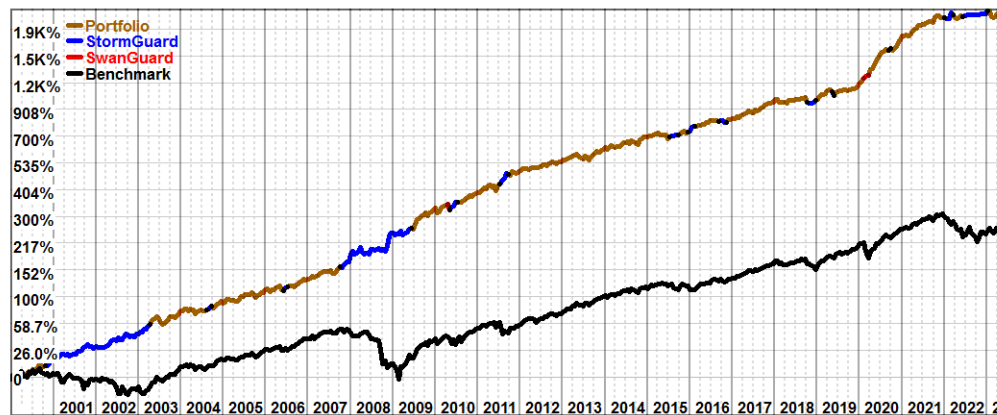
Strategy	Wt.
Sectors SPDR-9 DD	7.5%
Sectors iShares DD	7.5%
Sustainable Future DD	2.5%
Clean Water DD	2.5%
Clean Energy DD	5.0%
Electric Vehicles DD	5.0%

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Portfolio	14.6%	18.0%	10.5%	7.6%	12.1%	18.9%	26.2%	21.2%	16.3%	20.0%	8.9%	12.1%	10.3%	4.7%	11.0%	16.8%	1.8%	13.0%	50.0%	20.0%	3.8%
Benchmark	-8.6%	20.3%	9.3%	5.7%	12.1%	7.6%	-23.3%	18.7%	11.1%	2.3%	11.6%	16.6%	7.5%	1.3%	5.6%	14.7%	-4.0%	21.5%	15.7%	13.6%	-16.2%

	YTD	1-Yr	3-Yr	5-Yr	10-Yr	20-Yr
Portfolio	1.7%	2.9%	12.2%	16.7%	13.4%	14.5%
Benchmark	12.1%	6.6%	5.3%	7.1%	7.3%	7.1%

Hypothetical portfolio model performance assumes trade signals provided are executed at the close of the subsequent market day. Past performance does not guarantee future performance. Copyright 2023 SumGrowth Strategies, LLC all rights reserved.

Methodology

Tactical Momentum Strategies. Each of the 12 underlying strategies uses a rules-based tactical momentum algorithm to evaluate a set of candidate ETFs at each month-end, wherein the trend leader of each is selected to be a member of the model's Portfolio for the subsequent month. In Bear markets candidates are defensive ETFs vs equity ETFs.

Portfolio Construction

More Charts

The 60:40 Green Portfolio is a blended combination of other portfolios including: 32% Alpha Bonds, 20% Alpha Risk Mitigation, and 48% Alpha Green. The Portfolio will never allocate more than 60% of its assets to equities. However, both Dual Defense components employ bonds and commodities that at times reduces equities well under 60%.

Investor Risk Profile	Rebalance Activity		Dual Defense Strategy	About Momentum Trading Expectations
	Scheduled	**Unscheduled**		
Moderate	Month-End	Exit market quickly for a for Black Swan event. Get back into equities early for a particularly sharp market rebound.	StormGuard reviews 16 market health measures to determine Bull/Bear. A momentum backstop is also directly employed.	Economic, bureaucratic, and social responses to inflation, politics, and pandemics can disrupt momentum in otherwise orderly markets that is required for profitable trading.

See Legal-Disclaimer page for technical terms, historical data, and service limits information. Performance updated daily.

Model Rebalanced: Aug-01-2023   Status: BULL Market

	Sym	%	Fund Name		Sym	%	Fund Name
1	SHYG	20.0	iShares 0-5 Year High-Yield Bond ETF	9	META	5.0	Meta Platforms Inc
2	IEI	20.0	iShares 3-7 Year Treasury Bond ETF	10	DLR	5.0	Digital Realty Trust
3	BSX	7.5	Boston Scientific	11	NVDA	7.5	Nvidia
4	MDLZ	5.0	Mondelez International-A	12	SCCO	5.0	Southern Copper
5	TJX	7.5	TJX Companies				
6	SPGI	5.0	S&P Global Inc				
7	ETN	5.0	Eaton				
8	EPD	7.5	Enterprise Products Partners LP				

Alpha 60:40 Stocks DD Portfolio

- **Portfolio Inception Date: 12-25-2022** When the portfolio design was completed and available.
- **Forward Walk Starting: 04-16-2006** Backtesting ends. Walk through out-of-sample data begins.
- **Bear Market Strategy: BMS-W,Y** Invoked by StormGuard-Armor. Selects only defensive funds.
- **Benchmark Index: B6040** Based on industry consensus asset allocation mix. See portfolio notes.

Hypothetical Performance

	RISK	CAGR	MaxDD
Portfolio	22.9	27.6%	14%
Benchmark	49.4	7.1%	36%

Statistics measured from 6/1/2004 by AlphaDroid.

Jul 31, 2023

RISK **23** Riskalyze

CAGR **28** Percent
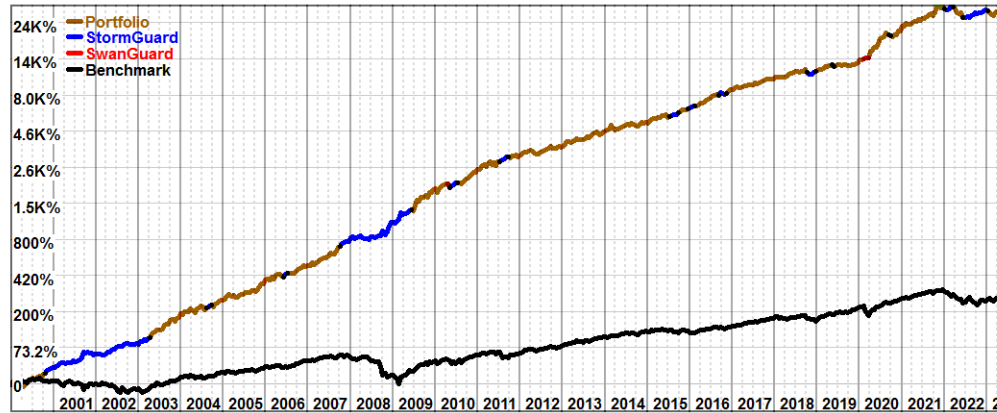
Strategy	Wt.	Strategy	Wt.
Gold'n Yield	20%	Stocks: Industrial	5.0%
Treasuries	20%	Stocks: Energy	7.5%
Stocks: Healthcare	7.5%	Stocks: Communications	5.0%
Stocks: Cons. Staples	5.0%	Stocks: Real Estate	5.0%
Stocks: Cons. Discretiona	7.5%	Stocks: Technology	7.5%
Stocks: Finance	5.0%	Stocks: Materials	5.0%
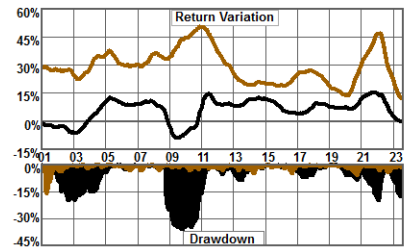
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Portfolio	19.5%	50.4%	28.6%	28.0%	30.2%	46.6%	32.2%	63.2%	31.9%	25.9%	17.0%	24.1%	15.1%	23.8%	32.4%	19.5%	12.7%	14.4%	62.4%	41.9%	-4.2%
Benchmark	-8.6%	20.3%	9.3%	5.7%	12.1%	7.6%	-23.3%	18.7%	11.1%	2.3%	11.6%	16.6%	7.5%	1.3%	5.6%	14.7%	-4.0%	21.5%	15.7%	13.6%	-16.2%

	YTD	1-Yr	3-Yr	5-Yr	10-Yr	20-Yr
Portfolio	6.2%	16.5%	16.7%	22.4%	22.3%	27.6%
Benchmark	12.1%	6.6%	5.3%	7.1%	7.3%	7.1%

Methodology

Tactical Momentum Strategies. Each of the 12 underlying strategies uses a rules-based tactical momentum algorithm to evaluate a set of candidate ETFs at each month-end, wherein the trend leader of each is selected to be a member of the model's Portfolio for the subsequent month. In Bear markets candidates are defensive ETFs vs equity ETFs.

Portfolio Construction   [More Charts]

The 60:40 Stocks Portfolio is a blended combination of other portfolios including: 40% Alpha Bonds and 60% Alpha Stocks. The Portfolio will never allocate more than 60% of its assets to equities. However, both Dual Defense components employ bonds and commodities that at times reduces equities well under 60%.

Investor Risk Profile	Rebalance Activity		Dual Defense Strategy	About Momentum Trading Expectations
	Scheduled	**Unscheduled**		
Growth	Month-End	Exit market quickly for a for Black Swan event. Get back into equities early for a particularly sharp market rebound.	StormGuard reviews 16 market health measures to determine Bull/Bear. A momentum backstop is also directly employed.	Economic, bureaucratic, and social responses to inflation, politics, and pandemics can disrupt momentum in otherwise orderly markets that is required for profitable trading.

See Legal-Disclaimer page for technical terms, historical data, and service limits information. Performance updated daily.

Model Rebalanced: Aug-01-2023

Status: BULL Market

	Sym	%	Fund Name
1	JNK	5.0	SPDR Blmbg High Yield Bond ETF
2	FALN	5.0	iShares Fallen Angels USD Bond ETF
3	SPY	15.0	SPDR S&P 500 ETF
4	BND	10.0	Vanguard Total Bond Market ETF
5	IOO	7.5	iShares Global 100 ETF
6	QQQ	7.5	Invesco QQQ ETF
7	EDIV	7.5	SPDR S&P Emerging Markets Dividend ETF
8	IXN	7.5	iShares Global Technology ETF

	Sym	%	Fund Name
9	XLK	7.5	Technology Select Sector SPDR ETF
10	XHB	7.5	SPDR S&P Homebuilders ETF
11	ITB	10.0	iShares US Home Construction ETF
12	PSI	10.0	Invesco Dynamic Semiconductors ETF

Alpha 80:20 DD Portfolio

- Portfolio Inception Date: 12-25-2022   When the portfolio design was completed and available.
- Forward Walk Starting: 08-13-2008   Backtesting ends. Walk through out-of-sample data begins.
- Bear Market Strategy: BMS-W,Y   Invoked by StormGuard-Armor. Selects only defensive funds.
- Benchmark Index: B8020   Based on industry consensus asset allocation mix. See portfolio notes.

Hypothetical Performance   **Jul 31, 2023**

	RISK	CAGR	MaxDD
Portfolio	24.6	20.0%	12%
Benchmark	63.5	8.3%	47%

Statistics measured from 6/1/2004 by AlphaDroid.

RISK 25 Riskalyze   **ALPHADROID®**   **CAGR 20** Percent
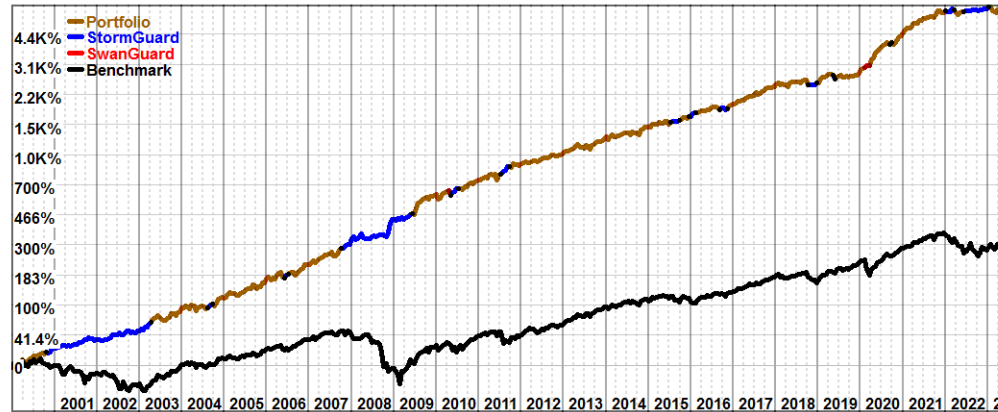
Strategy	Wt.	Strategy	Wt.
Bonds SPDR	5.0%	Global Regions SPDR DD	7.5%
Bonds iShares	5.0%	Global Sectors DD	7.5%
Tactical Risk Mitigation-1	12.5%	Sectors SPDR-9 DD	7.5%
Tactical Risk Mitigation-2	12.5%	Sectors SPDR Gold DD	7.5%
Global Regions iSh DD	7.5%	Sectors iShares DD	10.0%
Global Countries DD	7.5%	Sectors Aggressive DD	10.0%
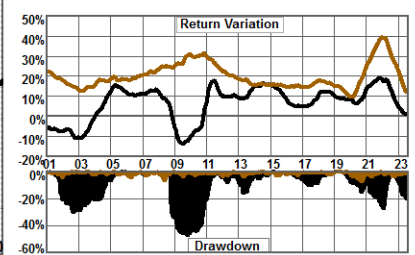
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Portfolio	13.0%	25.1%	16.5%	16.5%	25.2%	27.6%	31.7%	30.8%	19.1%	19.3%	13.7%	20.3%	11.9%	13.4%	13.9%	24.2%	4.7%	12.1%	54.1%	30.1%	4.3%
Benchmark	-13.7%	26.2%	11.2%	6.7%	14.7%	7.9%	-31.4%	23.4%	12.7%	0.4%	14.3%	23.3%	8.5%	1.6%	6.8%	18.8%	-5.6%	26.4%	17.6%	18.9%	-18.2%

	YTD	1-Yr	3-Yr	5-Yr	10-Yr	20-Yr
	4.4%	6.1%	16.2%	19.7%	17.6%	19.9%
	15.7%	9.6%	8.2%	8.8%	9.2%	8.3%

Hypothetical portfolio model performance assumes trade signals provided are executed at the close of the subsequent market day. Past performance does not guarantee future performance. Copyright 2023 SumGrowth Strategies, LLC all rights reserved.

Methodology

Tactical Momentum Strategies. Each of the 12 underlying strategies uses a rules-based tactical momentum algorithm to evaluate a set of candidate ETFs at each month-end, wherein the trend leader of each is selected to be a member of the model's Portfolio for the subsequent month. In Bear markets candidates are defensive ETFs vs equity ETFs.

Portfolio Construction   [More Charts]

The 80:20 Portfolio is a blended set of portfolios including: 10% Alpha Bonds, 25% Alpha Risk Mitigation, 30% Alpha Global, and 35% Alpha Sectors. The Portfolio will never allocate more than 80% of its assets to equities. However, both Dual Defense components employ bonds and commodities that at times reduces equities well under 80%.

Investor Risk Profile	Rebalance Activity		Dual Defense Strategy	About Momentum Trading Expectations
	Scheduled	Unscheduled		
Growth	Month-End	Exit market quickly for a for Black Swan event. Get back into equities early for a particularly sharp market rebound.	StormGuard reviews 16 market health measures to determine Bull/Bear. A momentum backstop is also directly employed.	Economic, bureaucratic, and social responses to inflation, politics, and pandemics can disrupt momentum in otherwise orderly markets that is required for profitable trading.

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Essential Videos

Overview	Dual Defense	Model Blender	Detailed Buy List	Retirement Funds
Introducing The Alpha Sheet	Momentum Dual Defense — StormGuard / TrendGuard	Combine Multiple Models — Portfolios Management	Trading Report	401(k) Ranking
The Alpha Sheet Online	**Dual Defense Online**	**AlphaDroid Wealth Mgr.**	**Download XLSX Example**	**Download XLSX Example**

Deeper Dives

Bull or Bear?	Momentum Leaders	AlphaDroid Platform	Index ETF Sponsor	Why MPT is Obsolete
StormGuard	Which Trend Is My Friend?	ALPHADROID	Merlyn.AI Indexes	Conquering The Seven Faces of Risk — Buy Online Hard Cover OR Download Your Free PDF Copy
Risk: Alpha Daily Brief	**Momentum Paper**	**AlphaDroid Quant**	**Merlyn.AI Home**	**Download the Book**

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Our Models: The Alpha Sheet Model Portfolios employ the methods and algorithms described in the above Essential Videos, Deeper Dives, and the specific Methodology and Portfolio Construction information associated with each Model. The company publishes these Models online daily at https://TheAlphaSheet.com for use by its subscribing financial advisor clients. Trading performance displayed is hypothetical, employs forward-walk testing, represents only historical conditions of the market, and does not include the costs of trading fees, portfolio management fees, account management fees, or other fees. There is no guarantee that such performance will be achieved in the future and there is no representation being made that any account will or is likely to achieve profits or losses similar to those shown. Investing in securities involves risk of loss that clients should be prepared to bear. An investment's objective, risks, charges, and expenses must be carefully considered before investing.

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