



**Asset
Management**

Daily Liquid Alternatives MAPS

Market Analysis & Performance Summary
2019

Portfolio Strategy
Strategic Advisory Solutions

What are Daily Liquid Alternatives (DLA)?

Broadly speaking, alternative investments are diversifiers which tend to have:

- the ability to *short* sell investments
- access to less traditional financial instruments and asset classes
- high degrees of short-term flexibility
- few or no ties to traditional benchmarks, and
- broad investment mandates.

At their inception, these benefits were limited to institutions and Ultra High Net Worth investors participating through hedge funds. These private vehicles generally have high minimum investments and offer liquidity on a monthly or quarterly basis. However, alternative investments are now available to most investors through mutual funds. These daily liquid alternatives (DLA) offer investors access to alternative strategies with lower minimum investments, greater transparency into portfolio holdings, and daily liquidity.

Investors use daily liquid alternatives, similar to hedge funds, in an attempt to:

- differentiate returns from equities and fixed income
- seek to reduce long-term portfolio risk¹ with a lesser effect on long-term portfolio returns, and
- manage the effects of severe *drawdowns*, particularly in equities

We note that investing in alternative investments, either through hedge funds or mutual funds, involves potential risks and investors can lose money.

For definitions of all italicized terms, please refer to the glossary on pages 16-20.

GSAM DLA Peer Groups and How to Use Them

In order to help investors make sense of the myriad of offerings presented in the marketplace as daily liquid alternatives, we analyzed the 493 US-domiciled mutual funds that Morningstar, Inc. categorized as liquid alternatives of December 31, 2018². We then eliminated funds that use investment styles that do not closely resemble hedge fund strategies. Our process narrowed the universe down to 247 funds that we believe better provide a differentiated set of return and risk characteristics most similar to those of hedge funds³.

Once we identified this universe of “hedge fund-like” mutual funds, we then divided them into five “GSAM DLA Peer Groups” that we believe align most closely with the major hedge fund categories used by institutional investors: *Equity Long/Short*, *Event Driven*, *Relative Value*, *Tactical Trading/Macro*, and *Multi-Strategy*.

Investors can use these GSAM DLA Peer Groups to evaluate daily liquid alternatives relative to other mutual fund and hedge fund strategies. Pages 4-8 compare the returns, risk, and diversification benefits of the GSAM DLA Peer Groups relative to the most relevant hedge fund indices and Morningstar categories over the past one-, three-, and five-years (ended December 31, 2018). Please refer to pages 9-15 for the GSAM DLA Peer Group selection and calculation methodology.

¹ The measure of portfolio risk we use is the annualized standard deviation of returns, or “volatility.” ² Source: Morningstar, Inc. as of December 31, 2018. ³ Sources of information used in this process include but are not limited to fund prospectuses, fact sheets, semi-annual/annual shareholder reports, manager commentary, and performance data. Diversification does not protect an investor from market risk and does not ensure a profit.

2018 GSAM DLA Market Analysis

Although alternative investments were not entirely spared from a pickup in market volatility in 2018, daily liquid alternative performance was generally in line with that of the hedge fund universe. The average fund included in the GSAM DLA Peer Groups had a total return of -3.7%, compared to -4.1% on the HFRI Fund of Funds Composite Index. While the headline performance was negative, daily liquid alternatives have continued to exhibit similar returns, volatility, and diversification benefits as their harder-to-access hedge fund counterparts over one-, three-, and five-year periods, as exemplified on the following pages.

Negative returns on the year, however, likely contributed to outflows for daily liquid alternatives. In contrast to the last several years of inflows, the group experienced outflows of \$15.6b (or 11.3% of beginning of year assets), with over two-thirds coming amidst the fourth quarter equity market selloff. Interestingly, the Multi-Strategy Peer Group only represented 7% of outflows, possibly pointing to investors using these funds in a more disciplined manner as strategic, long-term holdings.

Another key theme in 2018 for the still relatively young daily liquid alternative market was the decision by many fund providers to rationalize their product lineups. From our 2017 year-end Peer Groups, there were 43 liquidations, with nearly two-thirds having been in the market for less than five years. Fund launches were relatively light in comparison, with 12 new inceptiones. As the alternative segment of the mutual fund industry continues to mature, we believe that growing fund track records across a wider range of market environments may give investors more insights when evaluating their performance.

Figure 1a: Morningstar Liquid Alternative Categories

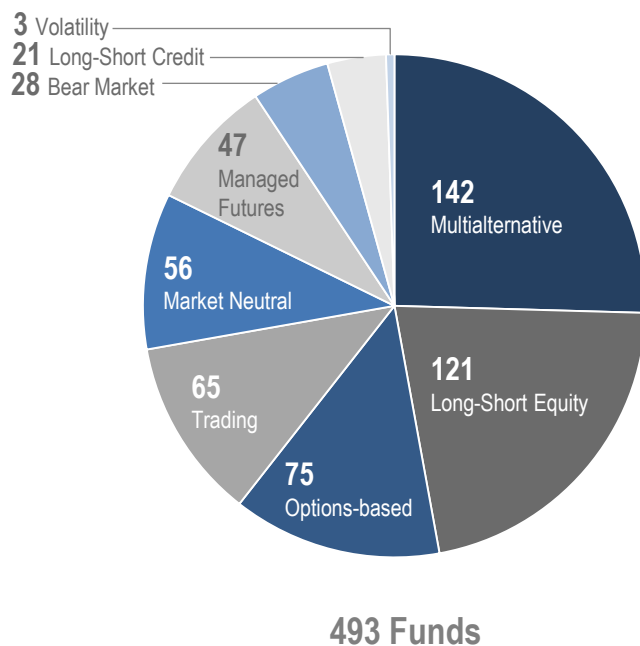
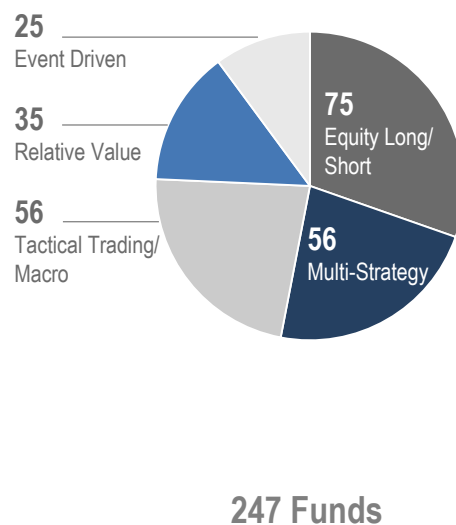


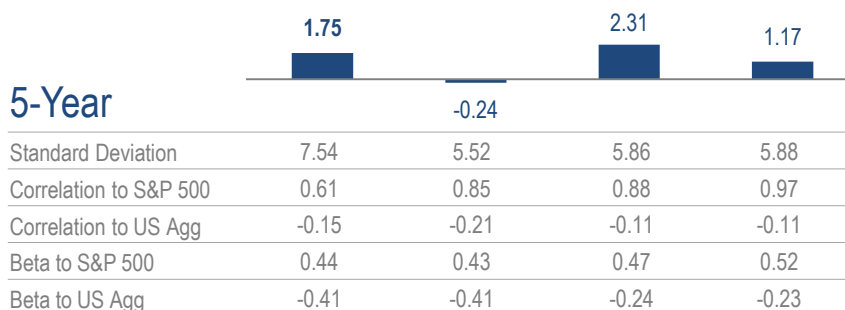
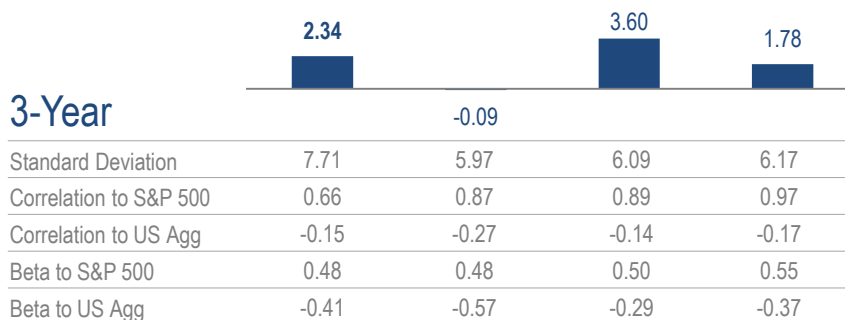
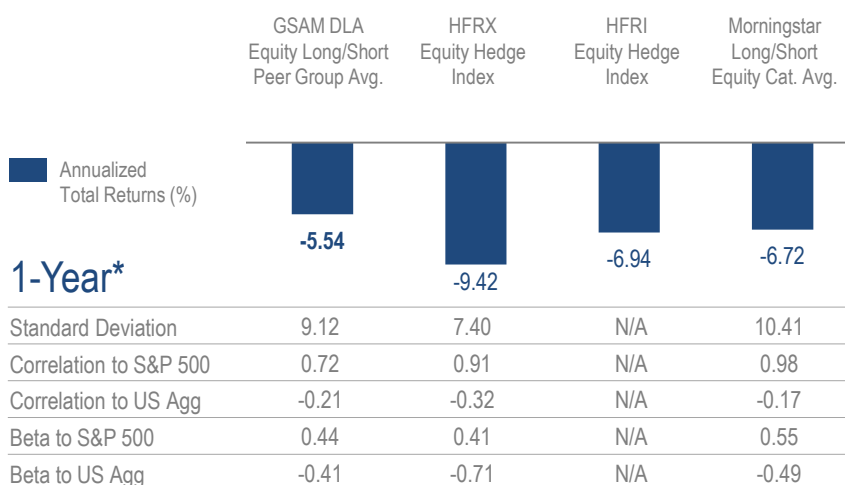
Figure 1b: GSAM DLA Peer Groups



GSAM DLA Equity Long/Short Peer Group

Funds that take *long* positions in stocks that the managers expect to appreciate in value and *short* positions in stocks they expect to decline. The security selection process may use a *bottom-up*, *top-down*, *fundamental*, or *quantitative* methodology. Short exposure may be obtained by shorting stocks, stock index futures, ETFs, or by using long *put options*. Funds typically maintain a maximum net long exposure of 70%.

For definitions of all italicized terms, please refer to the glossary on pages 16-20.



GSAM DLA Sample Sizes

2018: 75

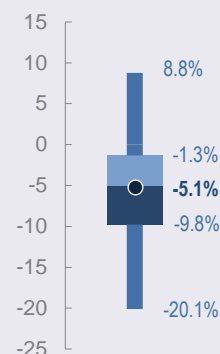
1-year: 73

3-year: 55

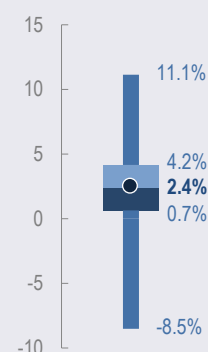
5-Year: 35

As of December 31, 2018

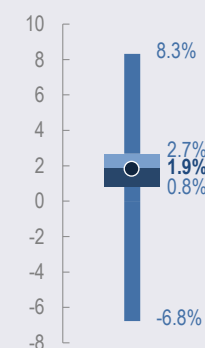
GSAM DLA Equity Long/Short Peer Group Annualized Total Returns
Quartiles/Median



Quartiles/Median



Quartiles/Median

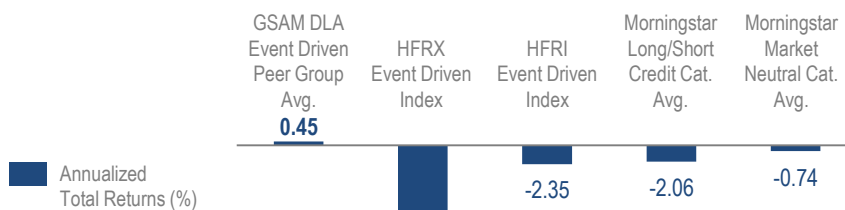


The returns represent past performance. Past performance does not guarantee future results, which may vary. Current performance may be lower or higher than the performance quoted. The performance results are based on historical performance of the indices used. The results are net of fees and will vary based on market conditions and your allocation. Returns for other share classes will vary due to different fees charged. US Agg is represented by the Bloomberg Barclays US Aggregate Index. Past correlations are not indicative of future correlations, which may vary. Given a relatively short time frame, one-year calculations use the smallest periodicity available. *One-Year standard deviation, beta, and correlation use daily or weekly data (depending on data availability). Calculations of three years or more (standard deviation, beta, and correlation) uses monthly data. Please see page 12 for more detailed calculation methodology. N/A: HFRI Data for standard deviation, correlation, and beta metrics has been omitted due to insufficient data points as the index only publishes monthly data. HFRI and HFRX and related indices are trademarks and service marks of Hedge Fund Research, Inc. ("HFR") which has no affiliation with GSAM. Information regarding HFR indices was obtained from HFR's website and other public sources and is provided for comparison purposes only. HFR does not endorse or approve any of the statements made herein.

GSAM DLA Event Driven Peer Group

Funds that invest in equity or debt securities in order to potentially profit from catalysts related to *corporate events*, such as mergers, spin-offs, restructurings, and bankruptcies. These strategies may include *merger arbitrage*, *long/short credit*, or multi-strategy event driven.

For definitions of all italicized terms, please refer to the glossary on pages 16-20.



1-Year*

Standard Deviation	3.83	5.39	N/A	1.79	2.03
Correlation to S&P 500	0.53	0.73	N/A	0.82	0.62
Correlation to US Agg	-0.15	0.11	N/A	-0.45	-0.08
Beta to S&P 500	0.13	0.31	N/A	0.11	0.05
Beta to US Agg	0.01	0.23	N/A	-0.31	-0.04

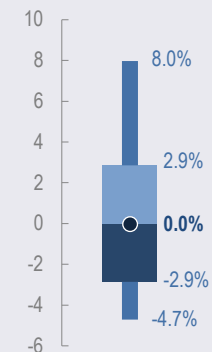
3-Year

	2.53	1.46	5.12	1.79	1.20
Standard Deviation	3.15	5.92	4.24	2.16	1.32
Correlation to S&P 500	0.43	0.74	0.79	0.65	0.57
Correlation to US Agg	0.01	0.03	-0.27	0.05	-0.27
Beta to S&P 500	0.13	0.40	0.30	0.14	0.07
Beta to US Agg	0.01	0.05	-0.39	0.04	-0.13

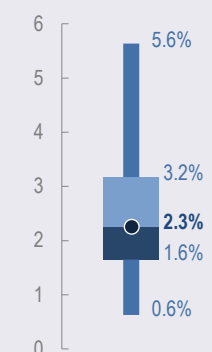
5-Year

	1.64	-1.38	2.52	0.96	0.79
Standard Deviation	3.35	6.26	4.38	2.29	1.28
Correlation to S&P 500	0.43	0.67	0.75	0.61	0.61
Correlation to US Agg	0.01	-0.03	-0.20	0.12	-0.09
Beta to S&P 500	0.14	0.39	0.30	0.13	0.07
Beta to US Agg	0.01	-0.07	-0.32	0.10	-0.04

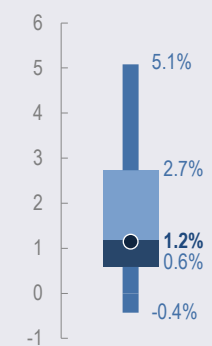
GSAM DLA Event Driven Peer Group Annualized Total Returns Quartiles/Median



Quartiles/Median



Quartiles/Median



GSAM DLA Sample Sizes

2018: 25

1-year: 24

3-year: 20

5-Year: 14

As of December 31, 2018

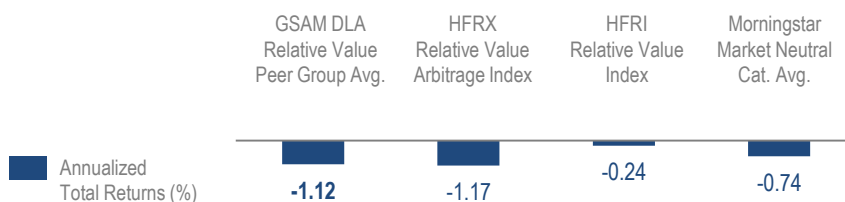
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GSAM DLA Relative Value Peer Group

Funds that seek to capture the price differential between similar securities by taking long positions in securities that the managers expect to outperform and short positions in securities they expect to underperform.

These strategies may include *equity market neutral*, *convertible arbitrage*, *volatility arbitrage*, or multi-arbitrage strategies. Funds typically have minimal equity market exposure with a *beta* of 0.20 or less.

For definitions of all italicized terms, please refer to the glossary on pages 16-20.



1-Year*

Standard Deviation	4.66	2.18	N/A	2.03
Correlation to S&P 500	0.16	0.81	N/A	0.62
Correlation to US Agg	-0.18	-0.57	N/A	-0.08
Beta to S&P 500	0.04	0.15	N/A	0.05
Beta to US Agg	-0.21	-0.52	N/A	-0.04

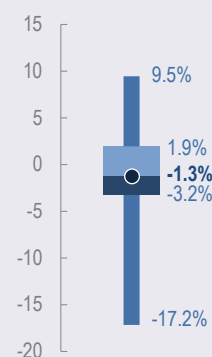
3-Year

Standard Deviation	5.01	2.55	2.73	1.32
Correlation to S&P 500	0.14	0.70	0.77	0.57
Correlation to US Agg	-0.10	-0.33	-0.16	-0.27
Beta to S&P 500	0.03	0.16	0.19	0.07
Beta to US Agg	-0.21	-0.29	-0.15	-0.13

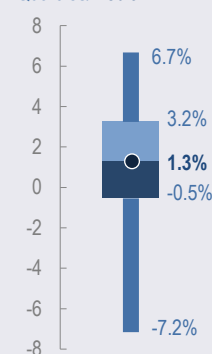
5-Year

Standard Deviation	5.19	3.24	2.69	1.28
Correlation to S&P 500	0.12	0.67	0.73	0.61
Correlation to US Agg	-0.10	-0.15	-0.08	-0.09
Beta to S&P 500	0.03	0.20	0.18	0.07
Beta to US Agg	-0.21	-0.18	-0.08	-0.04

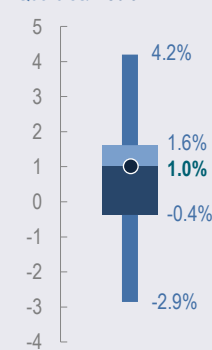
GSAM DLA Relative Value Peer Group Annualized Total Returns
Quartiles/Median



Quartiles/Median



Quartiles/Median



GSAM DLA Sample Sizes

2018: 35

1-year: 33

3-year: 25

5-Year: 21

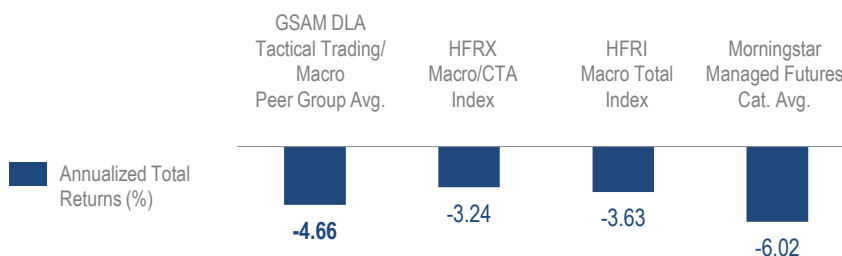
As of December 31, 2018

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GSAM DLA Tactical Trading/Macro Peer Group

Funds that take dynamic, top-down *directional* views (long and short) in at least three of the four broadest asset classes: equity, debt, commodities, and currencies. Funds most commonly use either a *systematic* trading approach (i.e. managed futures) or a *discretionary* approach (i.e. global macro). These funds typically have considerable short exposure and relatively high portfolio turnover.

For definitions of all italicized terms, please refer to the glossary on pages 16-20.



1-Year*

Standard Deviation	9.45	8.13	N/A	10.49
Correlation to S&P 500	0.38	0.51	N/A	0.48
Correlation to US Agg	0.05	0.20	N/A	0.20
Beta to S&P 500	0.25	0.25	N/A	0.29
Beta to US Agg	0.70	0.50	N/A	0.60

3-Year

	-0.67	-1.25	-0.16	-2.55
Standard Deviation	8.00	5.07	4.11	7.45
Correlation to S&P 500	0.20	0.33	0.29	0.22
Correlation to US Agg	0.21	0.32	0.37	0.37
Beta to S&P 500	0.14	0.15	0.11	0.15
Beta to US Agg	0.70	0.56	0.53	0.92

5-Year

	1.11	-0.13	0.74	-0.01
Standard Deviation	8.36	4.93	4.11	7.15
Correlation to S&P 500	0.18	0.26	0.30	0.17
Correlation to US Agg	0.21	0.35	0.43	0.43
Beta to S&P 500	0.13	0.12	0.11	0.11
Beta to US Agg	0.70	0.63	0.63	1.09

GSAM DLA Sample Sizes

2018: 56

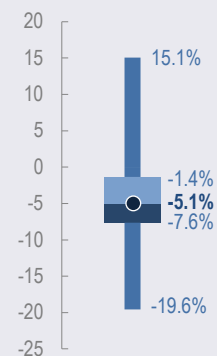
1-year: 53

3-year: 46

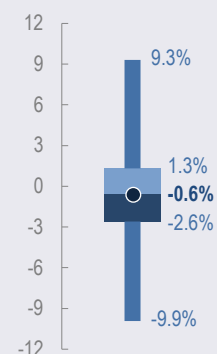
5-Year: 32

As of December 31, 2018

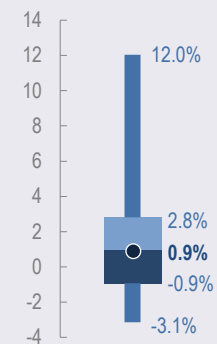
GSAM DLA Tactical Trading/Macro Peer Group Annualized Total Returns Quartiles/Median



Quartiles/Median



Quartiles/Median

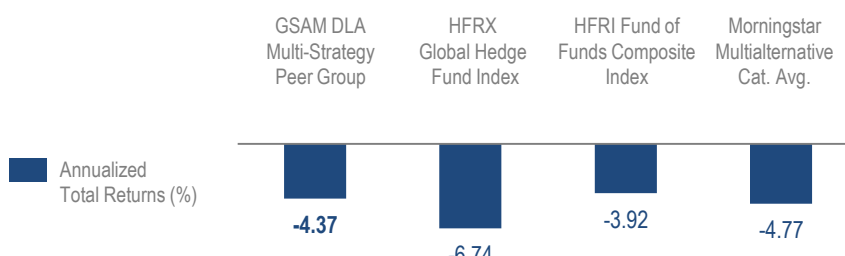


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GSAM DLA Multi-Strategy Peer Group

Funds that employ strategies consistent with at least two of the other DLA Peer Groups through either a single-manager or multi-manager approach, and using either *active management* or *passive hedge fund replication*.

For definitions of all italicized terms, please refer to the glossary on pages 16-20.



1-Year*

Standard Deviation	4.66	3.91	N/A	5.09
Correlation to S&P 500	0.59	0.87	N/A	0.93
Correlation to US Agg	-0.08	-0.12	N/A	-0.11
Beta to S&P 500	0.17	0.29	N/A	0.26
Beta to US Agg	0.11	-0.19	N/A	-0.15

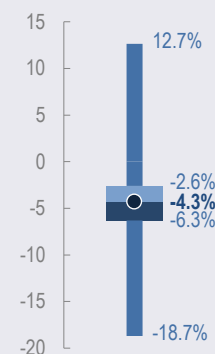
3-Year

	0.64	0.44	1.34	0.43
Standard Deviation	3.85	3.94	3.67	3.11
Correlation to S&P 500	0.56	0.87	0.81	0.91
Correlation to US Agg	0.07	-0.09	-0.11	0.09
Beta to S&P 500	0.19	0.31	0.27	0.26
Beta to US Agg	0.11	-0.12	-0.14	0.10

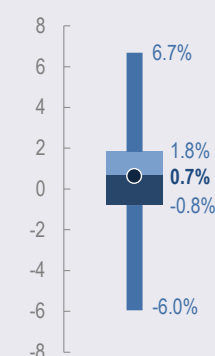
5-Year

	0.85	-0.59	1.42	0.03
Standard Deviation	4.18	3.88	3.54	3.27
Correlation to S&P 500	0.58	0.84	0.78	0.89
Correlation to US Agg	0.07	-0.05	-0.05	0.16
Beta to S&P 500	0.22	0.30	0.25	0.27
Beta to US Agg	0.11	-0.06	-0.07	0.19

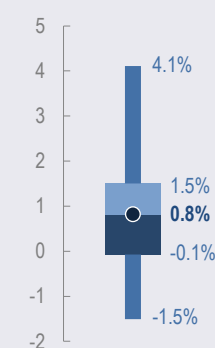
GSAM DLA Multi-Strategy Peer Group Annualized Total Returns
Quartiles/Median



Quartiles/Median



Quartiles/Median



GSAM DLA Sample Sizes

2018: 56

1-year: 51

3-year: 44

5-Year: 31

As of December 31, 2018

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Selection Methodology

GSAM DLA Selection Universe

In order to help investors make sense of the myriad of offerings presented in the marketplace as daily liquid alternatives, we analyzed the 493 US-domiciled mutual funds that Morningstar, Inc. categorized as liquid alternatives of December 31, 2018². We then eliminated funds that use investment styles that do not closely resemble hedge fund strategies. Our process narrowed the universe down to 247 funds that we believe better provide a differentiated set of return and risk characteristics most similar to those of hedge funds³.

Once we identified this universe of “hedge fund-like” mutual funds, we then divided them into five “GSAM DLA Peer Groups” that we believe align most closely with the major hedge fund categories used by institutional investors: Equity Long/Short, Event Driven, Relative Value, Tactical Trading/Macro, and Multi-Strategy.

GSAM DLA Peer Group Selection Methodology

In order to draw the line between true daily liquid alternatives and other nontraditional investments, we first identified the qualitative and quantitative aspects that are characteristic of each the five major hedge fund categories. We then identified conditions that we believe are necessary for mutual funds to behave in a manner similar to those hedge fund categories.

One of our primary criterion was that daily liquid alternatives should provide more than just long-only exposure to asset classes, namely: equities, fixed income, commodities, or currencies. Secondly, they seek to significantly hedge against potential downside risk via short positions. We believe that, without considering this narrower universe, investors may end up investing in a mutual fund that does not have an investment strategy that is consistent with their investment goals or objectives. There is no guarantee that these objectives will be met.

For **GSAM DLA Equity Long/Short Peer Group**, we included funds that take long positions in stocks the managers expect to appreciate in value and short positions in stocks they expect to decline. These funds typically maintain a maximum net long exposure of 70%. The majority of these funds were found in the Morningstar Long/Short Equity category, with a few from the Market Neutral category.

For **GSAM DLA Event Driven Peer Group**, we included funds that invest in equity or debt securities in order to potentially profit from catalysts related to corporate events, such as mergers, spin-offs, restructurings, and bankruptcies. These funds were primarily merger arbitrage strategies from the Morningstar Market Neutral category, and several from the Long-Short Credit category.

For **GSAM DLA Relative Value Peer Group**, we included funds that seek to capture the price differential between similar securities by taking long positions the securities expected to outperform and short positions in securities expected to underperform. These funds typically have minimal equity market exposure with a beta of 0.20 or less. The majority of these funds were arbitrage strategies (non-merger) from the Morningstar Market Neutral category, with a few also found within the Options-Based category.

For **GSAM DLA Tactical Trading/Macro Peer Group**, we included funds that take dynamic, top-down directional views (long and short) in at least three of the four broadest asset classes: equity, debt, commodities, and currencies. These funds typically have considerable short exposure and relatively high portfolio turnover. We combined funds that use systematic strategies from the Morningstar Managed Futures category with those that use discretionary global macro strategies from the Multialternative category.

For **GSAM DLA Multi-Strategy Peer Group**, we included funds that employ strategies consistent with at least two of the other DLA Peer Groups through either a single-manager or multi-manager approach, and using either active management or passive hedge fund replication. These funds were sourced from the Morningstar Multialternative category.

² Source: Morningstar, Inc. as of December 31, 2018. ³ Sources of information used in this process include but are not limited to fund prospectuses, fact sheets, semi-annual/annual shareholder reports, manager commentary, and performance data.

GSAM DLA Peer Group Definitions and Mappings

Upon closer examination of the underlying fundamentals, we mapped the daily liquid alternative mutual fund universe to the following five peer groups that we believe align most closely with the major hedge fund categories.

GSAM DLA Category	Goal of Category	Morningstar Categories Most Commonly Sourced From	Investment Styles	Risks/Unfavorable Environments
Equity Long/Short	Seeks to generate returns through long and short equity views	Long-Short Equity Market Neutral	Bottom-Up Fundamental Top-Down Quantitative Hybrid/Quantamental	Because these strategies generally take on some broad stock market risk, they will likely lose money in an equity bear market, though potentially not as much as a long-only equity investment. These strategies will also not likely rise as much as a long-only equity investment in an equity bull market.
Event Driven	Seeks to profit from corporate events, such as mergers and bankruptcies	Market Neutral Long-Short Credit	Merger Arbitrage Long/Short Credit	Because these strategies generally take on some broad equity and credit risks, they will likely lose money in an equity bear market, periods of low market liquidity, and/or when credit spreads widen. These strategies also may not perform as well in an environment with fewer corporate events.
Relative Value	Seeks to capture the price differential between similar securities	Market Neutral Options-Based	Equity Market Neutral Convertible Arbitrage Statistical Arbitrage Volatility Arbitrage	Although these positions are typically “hedged” it is possible that both the long and the short positions can lose money at the same time. This tends to happen during periods of low liquidity or low dispersion among different securities in the same market.
Tactical Trading/Macro	Seeks to profit from long and short directional positions in equities, debt, commodities, and currencies	Managed Futures Multialternative	Trend Following Countertrend Discretionary Global Macro/GTAA	Systematic strategies tend to perform poorly or lose money when long-term asset class (up or down) price trends are not present, or if there are short-term reversals in a long-term price trend. Discretionary strategies can perform poorly if a manager makes an incorrect selection of a group of securities or asset class.
Multi-Strategy	Follows at least two of the strategies listed above, in an attempt to offer diversified alternatives exposure	Multialternative	Multi-Manager Multi-Strategy Single-Manager Multi-Strategy Hedge Fund Style Premia/Replication	Multi-Strategy funds can employ various combinations of the above strategies, and therefore these funds can act very differently from one another. Additionally, they can target different levels of volatility and leverage, which may magnify both positive and negative returns. Multi-Manager strategies can have higher fees, which may dampen returns.

Excluded Nontraditional Investment Styles

We believe the following investment styles, while nontraditional, do not materially reshape the risks of the underlying asset classes or provide meaningfully differentiated returns. Thus, we believe they are unlikely to significantly reduce long-term portfolio risks or manage *drawdowns*.

Investment Style	Description	Why Not Alternative?	Morningstar Category	Suggested Benchmarks	Risks/Unfavorable Environments
Option Income	Buys and/or sells options as an overlay to long equity positions	Does not take long and short views on equities and are highly correlated to broad markets	Long-Short Equity	CBOE Buy Write/Put Write Indices (Chicago Board Options Exchange)	These strategies, like equity long/short strategies, tend to rise less than a long-only equity investment in an equity bull market and tend to fall less than stocks in an equity bear market. However, more so than with equity long/short strategies, their performance can be hampered in periods of low volatility.
Tactical Shorting	Long-only equity or multi-asset strategies which attempt to time down markets	Inconsistently hedged to the underlying asset classes	Long-Short Equity Multialternative	Long-only equity indices (S&P 500, MSCI World, etc.) or a balanced portfolio index (60/40, etc)	Because these strategies do not have a standard level of shorting or hedging, they may lose as much or more than a long-only investment in any environment.
Limited Shorting	Equity or credit strategies which use relatively limited hedging	Insufficiently hedged to equity or credit risk	Long-Short Equity Long-Short Credit Nontraditional bond	Long-only equity or credit indices	Because these strategies do not have a significant level of shorting or hedging, they may lose as much as a long-only investment in an equity bear market or when credit spreads widen.
Rate Hedged	Seeks to profit from long credit exposure, while hedging some duration risk	Insufficiently hedged to credit risk	Nontraditional Bond Long-Short Credit	Bloomberg Barclays US/Global Agg Bond, US/global high yield bond indices	These strategies often short Treasuries or employ derivatives seeking to profit from rising interest rates. These positions can lose money if interest rates do not rise. These strategies are usually unhedged against credit risk, meaning they tend to lose money when credit spreads widen, similar to long-only bond strategies.
Leveraged Long or Short Indices	Tracks and seeks to deliver the leveraged return or inverse return of a specific long-only index	Unhedged, levered vehicles	Leveraged/Inverse Equity Leveraged/Inverse Debt Leveraged/Inverse Commodities Miscellaneous Bear Market	The fund's reported comparative index	These are unhedged and/or leveraged strategies that rise and fall with their underlying index, but in a potentially magnified or inverse manner.

Calculation Methodology

For each fund in the DLA Peer Groups, we applied the least expensive share class based on the prospectus net expense ratio. We then calculated the performance and risk (measured by standard deviation) metric for each unique fund in the peer group using data sourced from Morningstar, Inc., and took the median observation of each peer group. The median observation was used to exclude the distorting effect of outliers. For context, we also report the range of outcomes (*dispersion*), which includes the minimum return, 25th percentile return, 50th percentile return (or median), 75th percentile return, and maximum return for each time period. Mutual fund performance data was sourced from Morningstar, Inc. Morningstar category average performance information was sourced from Morningstar, Inc. Hedge Fund Research (“HFR”) indices were sourced from Hedge Fund Research, Inc. www.hedgefundresearch.com. Market index data was sourced from Bloomberg and Morningstar, Inc. We calculated data for one-year, three-year, and five-year time segments ended December 31, 2018 as such periodicity better captures different market cycles and is consistent with common industry reporting.

One-Year Calculations

The HFRI indices only publish data on a monthly basis. To avoid showing calculations that lack statistical significance, the HFRI standard deviation, correlation, and beta statistics were omitted (because there are only 12 observations).

- Standard Deviation: GSAM used the smallest periodicity available for such calculations. This was dictated by Morningstar, Inc., which performs such calculations using daily data.
- Beta and Correlation: GSAM used the most granular periodicity available for such calculations. This was dictated by Morningstar, Inc., which performs such calculations using weekly data.

Calculations of Three Years or More

- Standard Deviation: GSAM used monthly data to perform these calculations, as this is industry standard.
- Beta and Correlation: GSAM used monthly data to perform these calculations, as this is industry standard.

Calculation Methodology

MATERIAL DIFFERENCES BETWEEN SUBJECTS OF COMPARISON⁴:

GSAM DLA Peer Groups: We note that there are limitations within our Peer Group methodology. These Peer Groups were created and reviewed only by GSAM. These are not indices, in that there is no weighting scheme employed to arrive at a Peer Group statistic; the median observation is always used. There is survivorship bias, in that accurate and complete data on liquid alternative mutual funds that liquidated prior to this analysis is not obtainable. The Peer Groups were based on our own *selection bias*, in that we selected funds from the universe that Morningstar, Inc. already deemed alternative. There is *backfill bias*, in that we intentionally analyze the back history of the funds in the Peer Groups. This backfill bias is not the same as in hedge fund indices, however, because hedge funds can choose if and when to report their performance data, while mutual funds cannot.

Morningstar Category Averages⁵: The Morningstar Category Averages are created and reviewed only by Morningstar, Inc. and are publically available. According to Morningstar, Inc., www.morningstar.com, they are simple weighted averages of all share classes of funds in a Morningstar category (also created and reviewed by Morningstar, Inc.), and published on a monthly and year-end basis. These averages have survivorship bias, as obsolete fund returns are removed from the monthly category average performance numbers. These averages do not have backfill or selection bias, as all mutual funds are required to publically report data upon inception. Morningstar, Inc., however, selects which funds belong in each category.

HFRI Indices: We chose to use the HFRI indices as they are widely used indices for gauging hedge fund performance. These are created and reviewed only by Hedge Fund Research, and are available with a subscription. According to Hedge Fund Research as of January 4, 2019, the HFR Hedge Fund Database is comprised of over 6800 funds and fund of funds worldwide⁶. Information on the hedge fund universe of established and emerging managers is collected directly from the fund managers and/or their respective offshore administrators, while other pertinent information is culled from offering memoranda, onsite visits, and due diligence interviews. HFR requests that the client fund managers report performance by the 15th of each month. It also directly integrates the fund managers with the HFR Hedge Fund Database by providing them with their own website for updating their fund profile. In this manner HFR ensures current and accurate fund data that flows seamlessly from fund managers. The HFRI Monthly Indices (“HFRI”) are a series of benchmarks designed to reflect hedge fund industry performance by constructing equally weighted composites of constituent funds, as reported by the hedge fund managers listed within HFR Database. The HFRI range in breadth from the industry-level view of the HFRI Fund Weighted Composite Index to the increasingly specific-level of the sub-strategy classifications.

In order to be considered for inclusion in the HFRI, a hedge fund manager must submit a complete set of information to HFR Database. Funds are eligible for inclusion in the HFRI the month after their addition to HFR Database. For instance, a fund that is added to HFR Database in June is eligible for inclusion in the indices upon reporting their July performance. Additionally, all HFRI constituents are required to report monthly, net of all fees, performance and assets under management in US Dollars. Constituent funds must have either (a) \$50 million under management or (b) a track record of greater than twelve (12) months. Most HFRI Monthly Indices (HFRI) are fund-weighted (equal weighted) indices. Unlike asset-weighting, the equal-weighting of indices presents a more general picture of performance of the hedge fund industry. Any bias towards the larger funds potentially created by alternative weightings is greatly reduced, especially for strategies that encompass a small number of funds.

⁴ Source: GSAM, as of December 31, 2018. ⁵ In an effort to distinguish funds by what they own, as well as by their prospectus objectives and styles, Morningstar developed the Morningstar Categories. While the prospectus objective identifies a fund’s investment goals based on the wording in the fund prospectus, the Morningstar Category identifies funds based on their actual investment styles as measured by their underlying portfolio holdings (portfolio and other statistics over the past three years).

⁶ Link to HFRI Indices methodology document: https://www.hedgefundresearch.com/sites/default/files/pdf/HFRI_formulaic_methodology.pdf

Calculation Methodology

HFRX Indices: We chose to use the HFRX indices as they are widely used indices for gauging hedge fund performance. These indices are created and reviewed by Hedge Fund Research, and are similar to the HFRI indices, except they are investable through tracker funds and are asset-weighted. According to their methodology document as of February 11, 2019, HFRX Indices are designed to be investable, offer full transparency, daily pricing and consistent fund selection, as well as stringent risk management and strict reporting standards⁷. Constituents of all indices are selected from an eligible pool of the more than 6800 funds that report to the HFR Database. These funds are screened for various reporting characteristics, asset and duration of track record qualities, unique fund strategy inclusion, and whether they are open to accepting new investment via a fully transparent managed account format.

HFR Hedge Fund Strategy Classification System

According to Hedge Fund Research as of February 11, 2019, Hedge Fund Research, Inc. (HFR) has constructed a relevant, robust, and contemporaneous Strategy Classification System for all investment managers present in the HFR Database⁸. The classifications seek to reflect the evolution of strategic trends in the hedge fund industry, cognizant of the reality that over market cycles the classification system is likely to continue to evolve, as new opportunities attract investor capital. The objective of the system is to define pure strategy and sub-strategy buckets which can be used to characterize pure strategy return at each level of analysis, to be used for purposes of quantitative index construction.

Equity Hedge (Total): Equity Hedge strategies maintain positions both long and short in primarily equity and equity derivative securities. A wide variety of investment processes can be employed to arrive at an investment decision, including both quantitative and fundamental techniques; strategies can be broadly diversified or narrowly focused on specific sectors and can range broadly in terms of levels of net exposure, leverage employed, holding period, concentrations of market capitalizations and valuation ranges of typical portfolios. Equity Hedge managers would typically maintain at least 50% exposure to, and may in some cases be entirely invested in, equities, both long and short .

Event Driven (Total): Investment Managers who maintain positions in companies currently or prospectively involved in corporate transactions of a wide variety including but not limited to mergers, restructurings, financial distress, tender offers, shareholder buybacks, debt exchanges, security issuance or other capital structure adjustments. Security types can range from most senior in the capital structure to most junior or subordinated, and frequently involve additional derivative securities. Event Driven exposure includes a combination of sensitivities to equity markets, credit markets and idiosyncratic, company specific developments. Investment theses are typically predicated on fundamental characteristics (as opposed to quantitative), with the realization of the thesis predicated on a specific development exogenous to the existing capital structure.

Relative Value (Total): Investment Managers who maintain positions in which the investment thesis is predicated on realization of a valuation discrepancy in the relationship between multiple securities. Managers employ a variety of fundamental and quantitative techniques to establish investment theses, and security types range broadly across equity, fixed income, derivative or other security types. Fixed income strategies are typically quantitatively driven to measure the existing relationship between instruments and, in some cases, identify attractive positions in which the risk adjusted spread between these instruments represents an attractive opportunity for the investment manager. Relative Value position may be involved in corporate transactions also, but as opposed to Event Driven exposures, the investment thesis is predicated on realization of a pricing discrepancy between related securities, as opposed to the outcome of the corporate transaction.

There is no guarantee that these objectives will be met. Diversification does not protect an investor from market risk and does not ensure a profit.

⁷ Link to HFRX Indices methodology document: https://www.hedgefundresearch.com/sites/default/files/pdf/HFRX_formulaic_methodology.pdf

⁸ Link to HFR Hedge Fund Strategy Classification System document: https://www.hedgefundresearch.com/sites/default/files/pdf/HFR_strategy_classifications.pdf

Calculation Methodology

Macro (Total): Investment Managers which trade a broad range of strategies in which the investment process is predicated on movements in underlying economic variables and the impact these have on equity, fixed income, hard currency and commodity markets. Managers employ a variety of techniques, both discretionary and systematic analysis, combinations of top down and bottom up theses, quantitative and fundamental approaches and long and short term holding periods. Although some strategies employ Relative Value techniques, Macro strategies are distinct in that the primary investment thesis is predicated on predicted or future movements in the underlying instruments, rather than realization of a valuation discrepancy between securities. In a similar way, while both Macro and equity hedge managers may hold equity securities, the overriding investment thesis is predicated on the impact movements in underlying macroeconomic variables may have on security prices, as opposes to Equity Hedge, in which the fundamental characteristics on the company are the most significant and integral to investment thesis.

Fund of Funds (Total): Fund of Funds invest with multiple managers through funds or managed accounts. The strategy designs a diversified portfolio of managers with the objective of significantly lowering the risk (volatility) of investing with an individual manager. The Fund of Funds manager has discretion in choosing which strategies to invest in for the portfolio. A manager may allocate funds to numerous managers within a single strategy, or with numerous managers in multiple strategies. The minimum investment in a Fund of Funds may be lower than an investment in an individual hedge fund or managed account. The investor has the advantage of diversification among managers and styles with significantly less capital than investing with separate managers.

Glossary

Active Management: An investment strategy that does not seek to closely track a specific benchmark index.

Arbitrage: See Relative Value.

Backfill Bias: An effect that can make an index or category average performance better than the actual experience of a hedge fund or mutual fund investor. Backfill bias happens when a fund chooses to report to a data base sometime after inception, and the data provider allows the past history of the fund to be incorporated into the indices.

Bear Equity Market: A period in which major stock market indices fall.

Bear Market: A Morningstar alternative category. According to Morningstar Inc.'s methodology document⁹, these funds dedicate a majority of the fund's assets to equities. Most of the portfolio is dedicated to short stock positions in an attempt to take advantage of anticipated market or stock declines producing a net exposure to equities of less than or equal to negative 20%. Some managers invest the proceeds from their short positions in low-risk assets, while others dedicate a portion to long stock positions in order to hedge against broad market rallies. In the event of a broad market rally, these funds will lose money on their short positions but will experience a gain on their long positions. Short positions typically account for 60% to 85% of fund active exposure, although some funds may be 100% short after excluding regulatory collateral. These funds will typically have a beta of less than negative 0.3 to equity indexes such as the S&P 500 or MSCI World.

Beta: A measure of the sensitivity of a security's or portfolio's returns to market moves; incorporates both the direction and magnitude of the response.

Bottom-up: An investment strategy that starts by selecting individual securities, rather than countries or sectors.

Bull Equity Market: A period in which major stock market indices rise.

Convertible Arbitrage: A strategy that generally takes long positions in convertible bonds and short positions in the stock of the same issuer.

Corporate Events: Significant changes in publicly traded corporations, such as mergers, acquisitions, spin offs, restructurings, recapitalizations, bankruptcies, and changes in management.

Correlation: A measure of the extent to which two or more variables fluctuate together; can be used to indicate the likelihood of a directional relationship between securities, portfolios, or asset classes.

Countertrend: A systematic trading strategy that attempts to profit from price trend reversals or lack of longer-term price trends.

Credit Risk: The risk that a borrower will default on a debt.

Credit Spread: The difference in yield between two debt instruments of similar maturity but different credit quality.

Directional: A way to describe a position in a portfolio; long or short positions, viewed independently.

Discretionary: Sourced primarily from a manager's knowledge.

Dispersion: A measure of the range of performance results across securities, funds, etc.

Drawdown: The peak-to-trough decline of an investment.

Duration: A measure of a bond's price sensitivity to a change in interest rates.

Equity Market Neutral: Strategies that match long stocks with short stocks in order to reduce most of the portfolio's systematic or broad market risk.

Equity Long/Short: An investment strategy that selects stocks to potentially profit from both rising and falling stock prices. Also a Daily Liquid Alternatives (DLA) Peer Group as defined by GSAM.

Event Driven: An investment strategy that seeks profit from company events, such as mergers or bankruptcies. Also a Daily Liquid Alternatives (DLA) Peer Group as defined by GSAM.

Glossary

Fundamental: An investment process that attempts to value securities based on the financial statements and intangible characteristics (such as management quality, brand, or competitive advantages) of the underlying companies.

GTAA: An acronym for Global Tactical Asset Allocation, which is a long-only (see definition for long-only), global macro strategy (see definition for Macro or Global Macro).

Hedge: Establishing a position to reduce the risk of adverse price movements in a strategy.

Hedge Fund: Private, pooled investment vehicles that are offered via private placement to qualified investors, including certain high net worth individuals and institutional investors.

Hedge Fund Replication: A quantitative strategy that seeks to mimic the returns of a hedge fund index.

Hedge Fund Style Premia: A quantitative strategy that seeks to mimic the returns of hedge fund factors, which are distinct attributes of a portfolio which are deemed responsible for returns, such as value, momentum or size.

Hybrid: See Quantamental.

Illiquidity: The inability to quickly convert a security or asset into cash without incurring a large loss.

Long (or “Long Only”): Investments that attempt to profit when positions rise in value.

Long/Short Credit: The buying of a security with credit risk (a long bond or short credit default swap, for example) with the expectation that the asset will rise in value, combined with the selling of a security with credit risk (a short bond or long credit default swap, for example) with the expectation that the asset will fall in value. Also a Morningstar alternative category. According to Morningstar Inc.’s methodology document⁹, funds in the Long-Short Credit category seek to profit from changes in the credit conditions of individual bond issuers and credit markets segments represented by credit indexes. Typically, portfolios purchase bonds, or sell credit default swaps, with the expectation of profiting from narrowing credit spreads; or, the funds sell bonds, or purchase credit default swaps, with the expectation of profiting from the deteriorating credit of the underlying issuer. This category includes funds that use credit derivatives to hedge systematic risk of credit markets to isolate credit selection returns. Funds in this category frequently use derivatives to hedge interest rate risk.

Long/Short Equity: A Morningstar alternative category. According to Morningstar Inc.’s methodology document⁹, long/short portfolios hold sizable stakes in both long and short positions in equities and related derivatives. Some funds that fall into this category will shift their exposure to long and short positions depending on their macro outlook or the opportunities they uncover through bottom-up research. Some funds may simply hedge long stock positions through exchange-traded funds or derivatives. At least 75% of the assets are in equity securities or derivatives.

Macro or Global Macro: Strategies that take directional long and short positions across all asset classes.

Managed Futures: A trading strategy that utilizes futures and option contracts to gain exposure to financial instruments; trading programs can generally be classified as either technical or fundamental; managers are often referred to as “Trend Followers” or “Momentum Traders.” The strategies are generally run by CTAs (Commodity Trading Advisors) or CPOs (Commodity Pool Operators). Also a Morningstar alternative category. According to Morningstar Inc.’s methodology document⁹, these funds primarily trade liquid global futures, options, swaps, and foreign exchange contracts, both listed and over-the-counter. A majority of these funds follow trend-following, price-momentum strategies. Other strategies included in this category are systematic mean reversion, discretionary global macro strategies, commodity index tracking, and other futures strategies. More than 60% of the fund’s exposure is invested through derivative securities. These funds obtain exposure primarily through derivatives; the holdings are largely cash instruments.

Market Neutral: A Morningstar alternative category. According to Morningstar Inc.’s methodology document⁹, these funds attempt to reduce systematic risk created by factors such as exposures to sectors, market-cap ranges, investment styles, currencies, and/or countries. They try to achieve this by matching short positions within each area against long positions. These strategies are often managed as beta-neutral, dollar-neutral, or sector-neutral. A distinguishing feature of funds in this category is that they typically have low beta exposures (< 0.3 in absolute value) to market indices such as MSCI World. In attempting to reduce systematic risk, these funds put the emphasis on issue selection, with profits dependent on their ability to sell short and buy long the correct securities.

Glossary

Median: The middle value in a consecutive series.

Merger Arbitrage: The strategy of buying the stock of a target company and shorting the stock of the acquirer.

Multialternative: A Morningstar alternative category. According to Morningstar Inc.'s methodology document⁹, these funds offer investors exposure to several different alternative investment tactics. Funds in this category have a majority of their assets exposed to alternative strategies. An investor's exposure to different tactics may change slightly over time in response to market movements. Funds in this category include both funds with static allocations to alternative strategies and funds tactically allocating among alternative strategies and asset classes. The gross short exposure is greater than 20%.

Multi-asset: An investment strategy that invests in more than one of the four asset classes (equities, fixed income, currencies, and commodities).

Multi-currency: A Morningstar alternative category. According to Morningstar Inc.'s methodology document⁹, currency portfolios invest in multiple currencies through the use of short-term money market instruments; derivative instruments including and not limited to forward currency contracts, index swaps, and options; and cash deposits. These funds include both systematic currency traders and discretionary traders.

Multi-Strategy: Funds employing more than one of the DLA Peer Group strategies, as defined by GSAM.

Mutual Fund: Public, pooled investment vehicles that are registered under the Investment Company Act of 1940 (in the US) and open-ended (i.e., additional shares may be issued).

Net Assets: Calculated as total assets less total liabilities of a mutual fund, as reported in the annual and semi-annual reports.

Net Exposure: Calculated as long exposure less absolute value of short exposure of underlying investments in a fund; one indication of the market risk a strategy employs.

Nontraditional Bond: A Morningstar category. According to Morningstar Inc.'s methodology document⁹, the Nontraditional Bond category contains funds that pursue strategies divergent in one or more ways from conventional practice in the broader bond-fund universe. Many funds in this group describe themselves as "absolute return" portfolios, which seek to avoid losses and produce returns uncorrelated with the overall bond market; they employ a variety of methods to achieve those aims. Another large subset are self-described "unconstrained" portfolios that have more flexibility to invest tactically across a wide swath of individual sectors, including high yield and foreign debt, and typically with very large allocations. Funds in the latter group typically have broad freedom to manage interest-rate sensitivity, but attempt to tactically manage those exposures in order to minimize volatility. The category is also home to a subset of portfolios that attempt to minimize volatility by maintaining short or ultra-short duration portfolios, but explicitly court significant credit and foreign bond market risk in order to generate high returns. Funds within this category often will use credit default swaps and other fixed income derivatives to a significant level within their portfolios.

Notional Short Exposure: The total short market exposure of a specific holding or a portfolio, including the inherent leverage of derivatives, derived from annual and semi-annual report data.

Option Writing: A Morningstar alternative category. According to Morningstar Inc.'s methodology document⁹, option writing funds aim to generate a significant portion of their returns from the collection of premiums on options contracts sold. This category includes covered call strategies, put writing strategies, as well as options strategies that target returns primarily from contract premiums. In addition, option writing funds may seek to generate a portion of their returns, either indirectly or directly, from the volatility risk premium associated with options trading strategies.

Put Option: A privilege, sold by one party to another, that gives the buyer the right, but not the obligation, to sell (put) a stock at an agreed-upon price within a certain period or on a specific date.

Quantamental: Funds employing both fundamental and quantitative methods in an investment process.

Quantitative: Sourced primarily by a computer program.

Relative Value: Long and short positions in similar securities, viewed together.

Glossary

Selection Bias: An effect that can make an index, peer group, or category average performance better than the actual experience of a hedge fund or mutual fund investor. Selection bias happens when the funds themselves, or another group of individuals, select the constituents of an index, category average, peer group, or database.

Short: The selling of a borrowed security with the expectation that the asset will fall in value.

Standard Deviation: A measure of volatility that indicates the “risk” or degree of potential price movements associated with an investment

Statistical Arbitrage: An investment strategy that uses various quantitatively driven algorithms to exploit the relative price movements by analyzing the price patterns and movements.

Survivorship Bias: An effect that can make an index or category average performance better than the actual experience of the hedge fund or mutual fund investor. Survivorship bias happens when hedge funds or mutual fund returns are dropped from the past history of an index or category average when the hedge fund chooses to stop reporting or when the hedge fund or mutual fund liquidates.

Systematic: See Quantitative.

Tactical Trading: Strategies which can take long and short directional positions in any asset class that change regularly in response to market views.

Top-down: An investment strategy that starts by selecting securities based on their country, sector, or industry.

Trading: A set of Morningstar alternative categories, that includes Trading-Inverse Commodities, Trading-Inverse Debt, Trading-Inverse Equity, Trading-Leveraged Commodities, Trading-Leveraged Debt, Trading-Leveraged Equity, and Trading-Miscellaneous.

Trading-Inverse Commodities: A Morningstar category. According to Morningstar Inc.’s methodology document⁹, these funds seek to generate returns equal to an inverse multiple of short-term returns of a commodity index. The compounding of short-term returns results in performance that does not correspond to those of investing in the index with external leverage. For example, a fund attempting to achieve negative 2 times the returns of a given index on a daily basis is unlikely to deliver anything like negative 2 times the index’s returns over periods longer than one day. Many of these funds seek to generate a multiple typically negative 1 to negative 3 times of the daily or weekly return of the reference index. Trading funds are not considered suitable for a long-term investor and are designed to be used by active traders.

Trading-Inverse Debt: A Morningstar category. According to Morningstar Inc.’s methodology document⁹, these funds seek to generate returns equal to an inverse fixed multiple of short-term returns of a fixed-income index. The compounding of short-term returns results in performance that does not correspond to those of investing in the index with external leverage. For example, a fund attempting to achieve negative 2 times the returns of a given index on a daily basis is unlikely to deliver anything like negative 2 times the index’s returns over periods longer than one day. Many of these funds seek to generate a multiple typically negative 1 to negative 3 times of the daily or weekly return of the reference index. Trading funds are not considered suitable for a long-term investor and are designed to be used by active traders.

Trading-Inverse Equity: A Morningstar category. According to Morningstar Inc.’s methodology document⁹, these funds seek to generate returns equal to an inverse fixed multiple of short-term returns of an equity index. The compounding of short-term returns results in performance that does not correspond to those of investing in the index with external leverage. For example, a fund attempting to achieve negative 2 times the returns of a given index on a daily basis is unlikely to deliver anything like negative 2 times the index’s returns over periods longer than one day. Many of these funds seek to generate a multiple typically negative 1 to negative 3 times the daily or weekly return of the reference index. Trading funds are not considered suitable for a long-term investor and are designed to be used by active traders.

Trading-Leveraged Commodities: A Morningstar category. According to Morningstar Inc.’s methodology document⁹, these funds seek to generate returns equal to a fixed multiple of short-term returns of a commodity index. The compounding of short-term returns results in performance that does not correspond to those of investing in the index with external leverage. For example, a fund attempting to achieve 2 times the returns of a given index on a daily basis is unlikely to deliver anything like 2 times the index’s returns over periods longer than one day. Many of these funds seek to generate a multiple of the daily or weekly return of the reference index. Trading funds are not considered suitable for a long-term investor and are designed to be used by traders.

Glossary

Trading-Leveraged Debt: A Morningstar category. According to Morningstar Inc.'s methodology document⁹, these funds seek to generate returns equal to a fixed multiple of the short-term returns of a fixed-income index. The compounding of short-term returns results in performance that does not correspond to those of investing in the index with external leverage. For example, a fund attempting to achieve 2 times the returns of a given index on a daily basis is unlikely to deliver anything like 2 times the index's returns over periods longer than one day. Many of these funds seek to generate a multiple of the daily or weekly return of the reference index. Trading funds are not considered suitable for a long-term investor and are designed to be used by active traders.

Trading-Leveraged Equity: A Morningstar category. According to Morningstar Inc.'s methodology document⁹, these funds seek to generate returns equal to a fixed multiple of the short-term returns of an equity index. The compounding of short-term returns results in performance that does not correspond to those of investing in the index with external leverage. For example, a fund attempting to achieve 2 times the returns of a given index on a daily basis is unlikely to deliver anything like 2 times the index's returns over periods longer than one day. Many of these funds seek to generate a multiple of the daily or weekly return of the reference index. Trading funds are not considered suitable for a long-term investor and are designed to be used by active traders.

Trading-Miscellaneous: A Morningstar category. According to Morningstar Inc.'s methodology document⁹, these funds seek to generate returns equal to a fixed multiple (positive or negative) of short-term returns of an index. The reference index for this category is not equity, fixed-income, or commodity linked. The compounding of short-term returns results in performance that does not correspond to those of investing in the index with external leverage. For example, a fund attempting to achieve 2 times the returns of a given index on a daily basis is unlikely to deliver anything like 2 times the index's returns over periods longer than one day. Many of these funds seek to generate a multiple of the daily or weekly return of the reference index. Trading funds are not considered suitable for a long-term investor and are designed to be used by active traders.

Trend Following: See Managed Futures.

Volatility: The tendency of a security or index to swing in price; often calculated using standard deviation.

Volatility Arbitrage: An investment strategy that involves buying and selling options which are perceived to be mispriced.

Risk Considerations

Investors should also consider some of the potential risks of alternative investments:

Alternative Strategies. Alternative strategies often engage in leverage and other investment practices that are speculative and involve a high degree of risk. Such practices may increase the volatility of performance and the risk of investment loss, including the entire amount that is invested.

Manager experience. Manager risk includes those that exist within a manager's organization, investment process or supporting systems and infrastructure. There is also a potential for fund-level risks that arise from the way in which a manager constructs and manages the fund.

Leverage. Leverage increases a fund's sensitivity to market movements. Funds that use leverage can be expected to be more "volatile" than other funds that do not use leverage. This means if the investments a fund buys decrease in market value, the value of the fund's shares will decrease by even more.

Counterparty risk. Alternative strategies often make significant use of over-the-counter (OTC) derivatives and therefore are subject to the risk that counterparties will not perform their obligations under such contracts.

Liquidity risk. Alternative strategies may make investments that are illiquid or that may become less liquid in response to market developments. At times, a fund may be unable to sell certain of its illiquid investments without a substantial drop in price, if at all.

Valuation risk. There is risk that the values used by alternative strategies to price investments may be different from those used by other investors to price the same investments.

The above are not an exhaustive list of potential risks. There may be additional risks that should be considered before any investment decision. Investments in Liquid Alternative Funds expose investors to risks that have the potential to result in losses.

These strategies involve risks that may not be present in more traditional (e.g., equity or fixed income) mutual funds. These Funds generally may seek sources of returns that perform differently from broader securities markets. However, correlations among different asset classes may shift over time, and if this occurs a Fund's performance may track broader markets. In addition, if returns are in fact uncorrelated to the broader securities markets, a Fund may underperform those markets. For example, in periods of robust equity market returns, returns from a Fund may be lower or negative.

The use of alternative investment techniques such as shorting or leveraging creates an opportunity for increased returns but also creates the possibility for greater loss.

Losses on short positions are potentially unlimited, since the positions lose value as the asset that was sold short increases in value. Taking short positions leverages a Fund's assets, because the Fund is exposed to market movements beyond the amount of its actual investments.

Derivative instruments may involve a high degree of financial risk. These risks include the risk that a small movement in the price of the underlying security or benchmark may result in a disproportionately large movement, unfavorable or favorable, in the price of the derivative instrument; risks of default by a counterparty; and liquidity risk.

There is risk that alternative funds hold investments that may be difficult to value and as a result the values used by alternative funds to price investments may be different from those used by others to price the same investments. At times, a Fund may be unable to sell certain of its illiquid investments without a substantial drop in price, if at all.

There is also the risk that funds will not be able to pay redemption proceeds within the allowable time period because of unusual market conditions, an unusually high volume of redemption requests or other reasons.

There may be additional risks that the Funds do not currently foresee or consider material.

Not all investment products are suitable for all investors. This is not a recommendation for any particular investment product or strategy.

Stocks are subject to market risk.

Debt securities generally, include credit, liquidity and interest rate risk. Any guarantee on US government securities applies only to the underlying securities of a Fund if held to maturity and not to the value of a Fund's shares.

Risk Considerations

Foreign investments may be more volatile and less liquid than investments in US securities and are subject to the risks of adverse economic or political developments.

An investment in real estate securities is subject to greater price volatility and the special risks associated with direct ownership of real estate.

High-yield (Junk), lower-rated securities involve greater price volatility and present greater credit risks than higher-rated fixed income securities.

Investments in commodities may be affected by changes in overall market movements, commodity index volatility, changes in interest rates or factors affecting a particular industry or commodity.

An investment in alternatives is not appropriate for all investors. Investors should carefully review and consider their personal investments, risks, charges and expenses before investing.

REFERENCES TO “ALTERNATIVE INVESTMENTS” IN THE FOLLOWING PARAGRAPHS DO NOT INCLUDE LIQUID ALTERNATIVE MUTUAL FUNDS DISCUSSED HEREIN, WHICH DIFFER FROM TRADITIONAL “ALTERNATIVE INVESTMENTS” IN SEVERAL WAYS, INCLUDING WITH RESPECT TO LIQUIDITY PROFILE, FEE STRUCTURE AND REGULATORY REQUIREMENTS.

Supplemental Risk Disclosure for All Potential Direct and Indirect Investors in Hedge Funds and other private investment funds (collectively, “Alternative Investments”).

In connection with your consideration of an investment in any Alternative Investment, you should be aware of the following risks:

Alternative Investments are subject to less regulation than other types of pooled investment vehicles such as mutual funds. Alternative Investments may impose significant fees, including incentive fees that are based upon a percentage of the realized and unrealized gains, and such fees may offset all or a significant portion of such Alternative Investment's trading profits. An individual's net returns may differ significantly from actual returns. Alternative Investments are not required to provide periodic pricing or valuation information. Investors may have limited rights with respect to their investments, including limited voting rights and participation in the management of the Alternative Investment.

Alternative Investments often engage in leverage and other investment practices that are extremely speculative and involve a high degree of risk. Such practices may increase the volatility of performance and the risk of investment loss, including the loss of the entire amount that is invested.

Alternative Investments may purchase instruments that are traded on exchanges located outside the United States that are “principal markets” and are subject to the risk that the counterparty will not perform with respect to contracts.

Past performance of an index or indices does not represent performance of any Goldman Sachs product or fund. The value of investments and the income derived from investments will fluctuate and can go down as well as up. A loss of principal may occur.

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Alternative Investments may themselves invest in instruments that may be highly illiquid and extremely difficult to value. This also may limit your ability to redeem or transfer your investment or delay receipt of redemption or transfer proceeds.

Alternative Investments are not required to provide their investors with periodic pricing or valuation information.

Additional Information and Disclosures

The regulation governing alternative mutual funds and hedges differs. Alternative mutual funds are regulated according to the Investment Company Act of 1940, and therefore have explicit restrictions on the amount of leverage, illiquidity, and concentration that they can employ. Hedge funds are less regulated vehicles generally without externally imposed investment restrictions.

Source: Hedge Fund Research, Inc. www.hedgefundresearch.com, Bloomberg, Morningstar, Inc. As of September 30, 2016 The HFR indices included in this report, HFRI Equity Hedge, HFRI Event Driven, HFRI Relative Value, HFRI Macro, HFRI Fund of Funds, HFRX Equity Hedge, HFRX Event Driven, HFRX Macro/CTA, HFRX Relative Value Arbitrage, HFRX Global Hedge Fund, are being used under license from Hedge Fund Research, Inc., which does not approve of nor endorse the contents of this report.

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S&P 500 Index includes 500 leading companies and captures approximately 80% coverage of US market capitalization.

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Date of first use: March 7, 2019. 159717-OTU