



# GUIDE TO FUND CLASSIFICATIONS

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## OVERVIEW

The new Bloomberg Fund Classification System (BFCS) allows more granular prospectus-based fund classification providing clients with the selections and features they need to group and compare funds with similar investment objectives. This system also drives the building of Bloomberg Peer Groups (BPG), peer rankings, and generation of aggregates like our hedge fund performance indices.

## CLASSIFICATION UNIVERSE

- The new classification system's active coverage includes over **156,000** open end fund share-classes, **15,000** exchange traded products, and **10,000** hedge funds. Closed funds have also been classified.

## NEW FEATURE HIGHLIGHTS

- A **standardized industry focus** classification that allows clients to search for and group funds in a way that aligns to the underlying instruments a fund invests in.
- **Multiple selections for geographic focus** to better reflect the multiple markets a fund may participate in.
- **Global Money Market Fund classifications** including currency focused, general and enhanced MMKT.
- **Exchange-Traded Fund (ETF) specific objectives** to provide more granular, strategic analysis.
- **Refined Alternative Investment Strategies** that capture accurate hedge fund investment objectives.
- **Alternative strategies** are now applicable to mutual funds.
- **New key categories** such as 'Inflation-protected' and attributes that capture aspects of a strategy in a granular way, such as 'China A Share', 'ESG' and 'Tax Managed'.

## USAGE IN BLOOMBERG FUNCTIONALITY

- **Idea generation:** Fund screening and scoring capabilities (**FSRC<GO>** and **FSCO<GO>**) allow clients to use the new classifications in combination with return - and holdings-based criteria to generate ideas useful for investment discussions with peers.
- **Comparative analytics:** Our relative value functionality (**RV<GO>**) allows comparison of any fund to other members of its default peer group as well as against any customized peer group.
- **Single fund analytics:** Our description page for funds (**DES<GO>**) displays details of the classification and objective of the fund along with key performance measures (absolute and peer-relative), risk, exposure, fees and expenses, contact and management information.
- **Top-Down analysis:** **FMAP<GO>** provides aggregate performance and risk measures based on regions, fund types and objectives that use the new classifications.
- Customized analysis in the **Desktop API and Launchpad**, with full availability of fund classifications plus the addition of new fields for a fund's Bloomberg peer group ranking.

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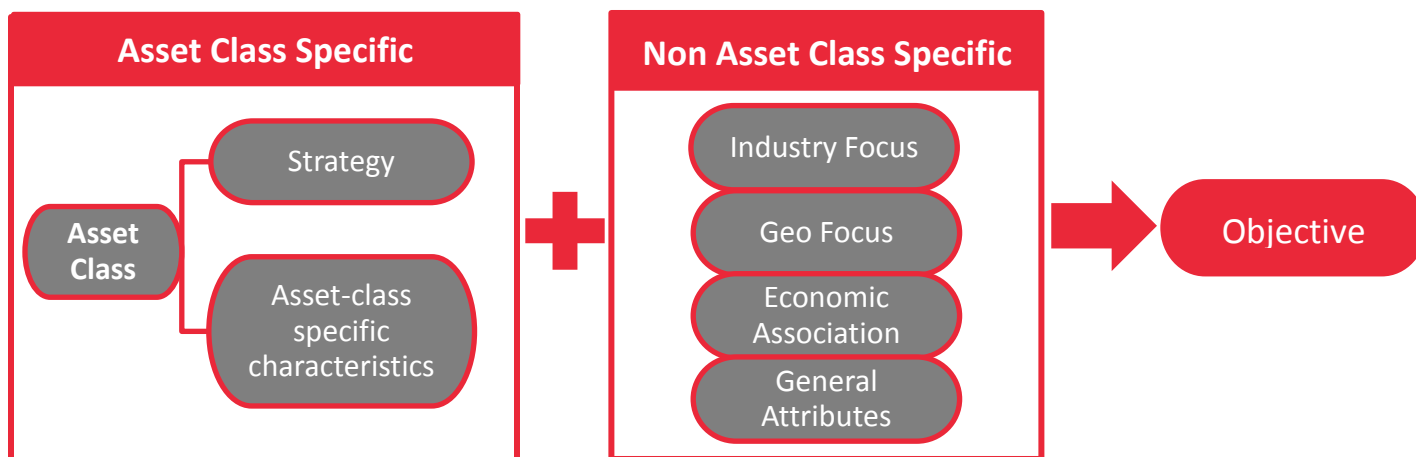
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## Methodology

Bloomberg takes a prospectus based view of each fund by using publicised documents including prospectuses and annual reports to determine the intended investment objective of the manager. The characteristics of this objective are captured in two complementary parts; an asset class specific part and a non-asset class specific part to derive the Bloomberg Fund Objective (BFO). Funds that share the same BFO, fund type and geographic focus are grouped into an enhanced peer group ranking system comparing performance over defined periods for funds with similar characteristics.



Bloomberg first assigns an asset class focus for a fund – then the **asset class specific investment strategy** implemented by the fund, and where applicable, **asset class specific detail about the investment universe of securities** to which this strategy is applied.

Additionally, Bloomberg captures **non-asset class specific information** about a fund – whether the fund targets particular industries, invests in emerging markets, is an Index Fund or is Tax managed for example.

This structure allows us to **granularly specify any given fund's objective**, which enables us to build **tighter peer groups**.

Bloomberg will use the following primary sources as provided by the fund company to assign the BFO:

- Prospectus
- Fund Fact Sheet
- Annual/Semi-Annual reports

Information typically contained within the 'Investment Objective' statement will be used to classify the fund in a corresponding category.

Selection availability of the criterion outlined above differs across the asset classes. The mandatory and optional selections are outlined below. Where the field is left blank this option is not available for selection for the particular asset-class. Geographic Focus, Economic Association and General Attributes are optional selections applicable to any fund regardless of asset class.

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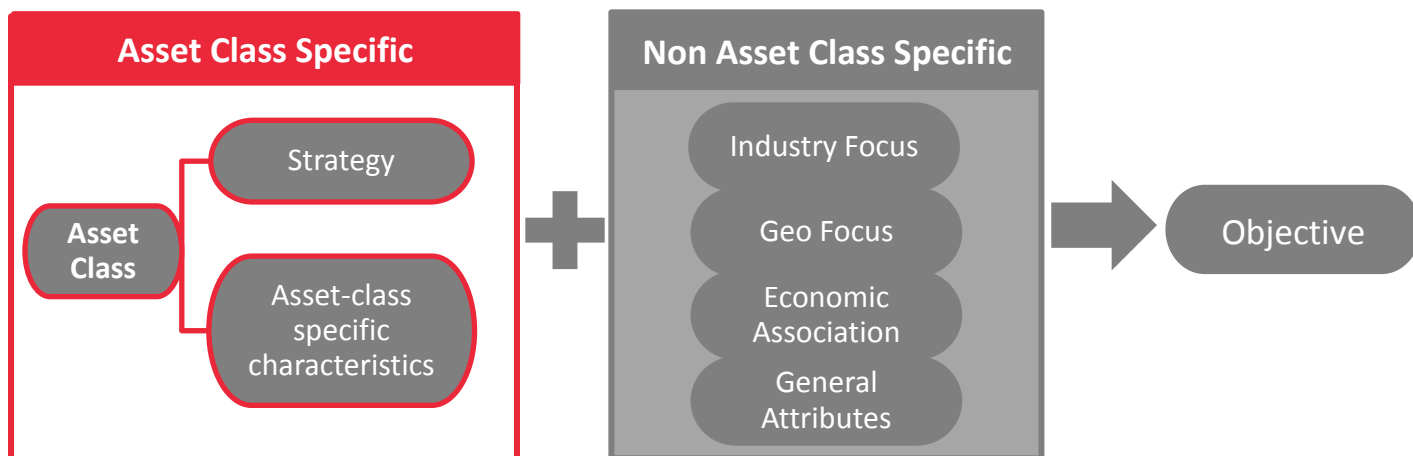
Asset Class	Strategy	Industry	Currency	Market Cap	Maturity Band	Rating Class	Style
Equity	●	○		○			
Fixed Income	●	○	○		○	○	
Mixed	●	○					
Specialty	●	○					
Real Estate	●						
Commodity	●						
Money Mkt	●	○	○				○

● = mandatory

○ = optional

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## Asset Class Specific Classifications

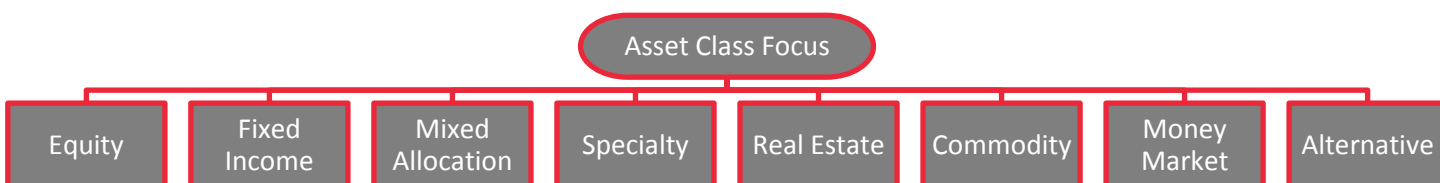


The extraction of asset-class specific data from source documents will include three separate classification components, namely Asset Class, Investment Strategy and Asset-class specific characteristics. Firstly, we assign an asset class focus on the fund level. An asset-class specific strategy is denoted in accordance with the methodology a manager uses to select assets for inclusion in the portfolio and further details about the asset-class market segment is also selected. Using Equity as an example, we add further detail about the market capitalization focus of the fund, and for Fixed Income, about the maturity and credit quality focus of the fund.

Source documents may in certain instances not define the asset-class specific characteristics. The Investment Strategy is therefore mandatory selection criteria, whereas asset-class specific characteristics are non-mandatory.

### Asset Class Focus

This is the broad asset sector the fund will invest in as stated in the source document, typically the prospectus. We added the Specialty asset class focus to capture the objectives of funds which target non-traditional mutual and hedge fund investments (e.g. derivatives).



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The asset class focus is assigned based on the following guideline:

Prevalent exposure of 80% of a fund's portfolio defines the selected category for Equity, Fixed Income or Mixed Allocation. For example, a fund assigned as Equity clearly states in the accompanying document that 80% or greater is invested in equities, likewise for a fund to be assigned as Fixed Income.

Equity	Invests in stocks.
Fixed Income	Exposure to fixed income securities with maturity >1 year.
Mixed Allocation	Investing in a combination of variable and fixed income securities.
Specialty	Invests in non-traditional investments specifically life policy, currencies and derivatives.
Real Estate	Focused on tangible real estate assets. REITS are not included.
Commodity	Either tangible or through the use of derivative strategies to invest in commodities.
Money Market	Invests in fixed income instruments with a mean residual life to maturity of <1 year.
Alternative	Funds using hedge/derivative strategies

The above components are updated from information contained in the **objective and investment strategy sections** of the fund's source document. The fund's name may also be used as a general barometer for the correct selection components.

Mixed Allocation funds must expressly state the intention of holding diversified assets in the source document or provide evidence, such as full historical portfolio disclosure, that the fund's intended objective is other than that stated in the source document to qualify as Mixed Allocation.

## **Example:** Needham Small Cap Growth Fund

### Principal Investment Strategy:

Under normal conditions, the Small Cap Growth Fund invests at least 80% of its net assets in equity securities of domestic issuers listed on a nationally recognized securities exchange or traded on the NASDAQ System that have market capitalizations not exceeding \$3 billion at the time of investment. The Small Cap Growth Fund invests, in general, in companies with strong growth potential that, for a variety of reasons, including the market's inefficiencies, are trading at a discount to their underlying value where a catalyst is in place to eliminate that discount. (Needham Funds, 2013)

The BFO selection would be as follows:

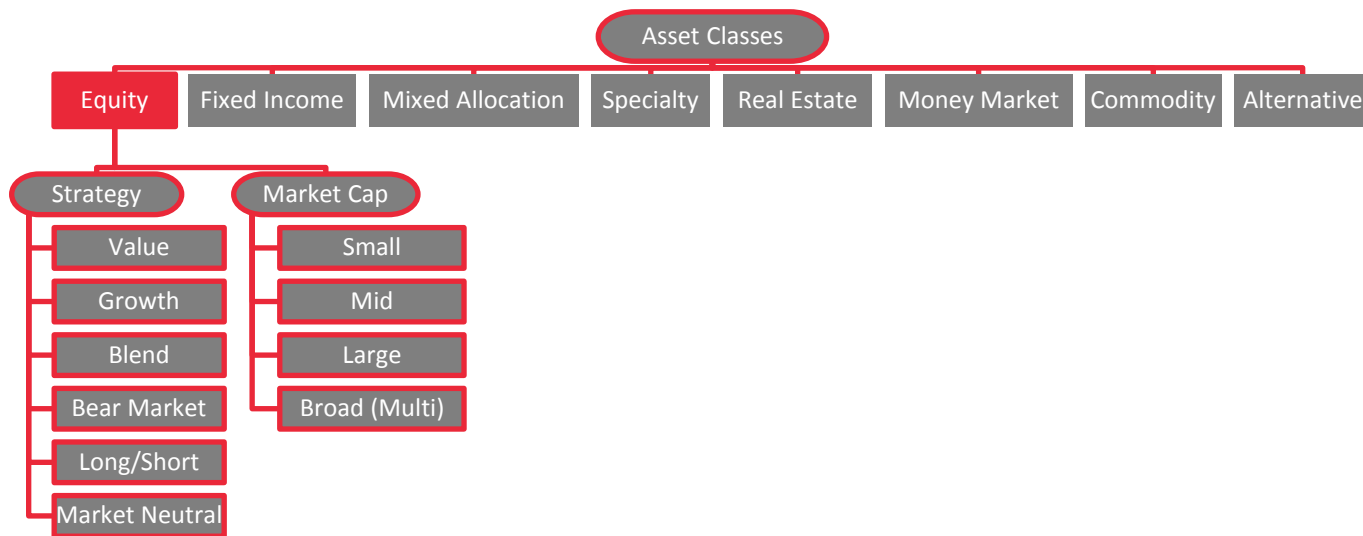
- Asset-Class: Equity
- Investment Strategy: Small Cap\*
- Geographical Focus: US\*\*
- Industry Sector Focus: None

\*Small Cap selected as found in the fund name.

\*\*as noted, the fund invests 'in equity securities of domestic issuers listed on a nationally recognized securities exchange or traded on the NASDAQ System'.

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## Equity



## Strategy

The stock selection methodology the fund will employ to achieve its stated objective.

- **Value**  
A value fund primarily holds stocks that are deemed to be undervalued in price and that are likely to pay dividends.
- **Growth**  
A growth fund invests in stocks with growth as its primary goal. The portfolio will mainly consist of companies with above-average growth in earnings that reinvest their earnings into expansion, acquisitions, and/or research and development.
- **Blend**  
A blend fund invests in a combination of value and growth stocks.
- **Bear Market**  
Bear-market funds invest in short positions and derivatives in order to profit from stocks that drop in price. Because these portfolios often have extensive holdings in shorts or puts, their returns generally move in the opposite direction of the benchmark index. The Fund invests in out-of-favor stocks.
- **Long/Short**  
Long/short Funds employ both long and short equity positions. The fund's goal is not to be market neutral, but rather to switch back and forth between an overall net long or net short portfolio, depending on market conditions and opportunities where a manager sees differences between a security's value and market price. Investments will usually be regional or sector specific.
- **Market Neutral**  
A market neutral fund invests predominately in equity securities. The funds will long equities perceived as undervalued and short equities perceived as overvalued. This strategy will seek positive/absolute returns regardless of the overall market direction.



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**Business Rule:** If Value, Growth, or Blend is not clearly stated in the document AND it is an Index Fund, Bloomberg will look at the underlying benchmark – i.e. Index Fund tracking the Russell 2000 Value Index, then we will assign Value as the investment strategy.

## Market Capitalization

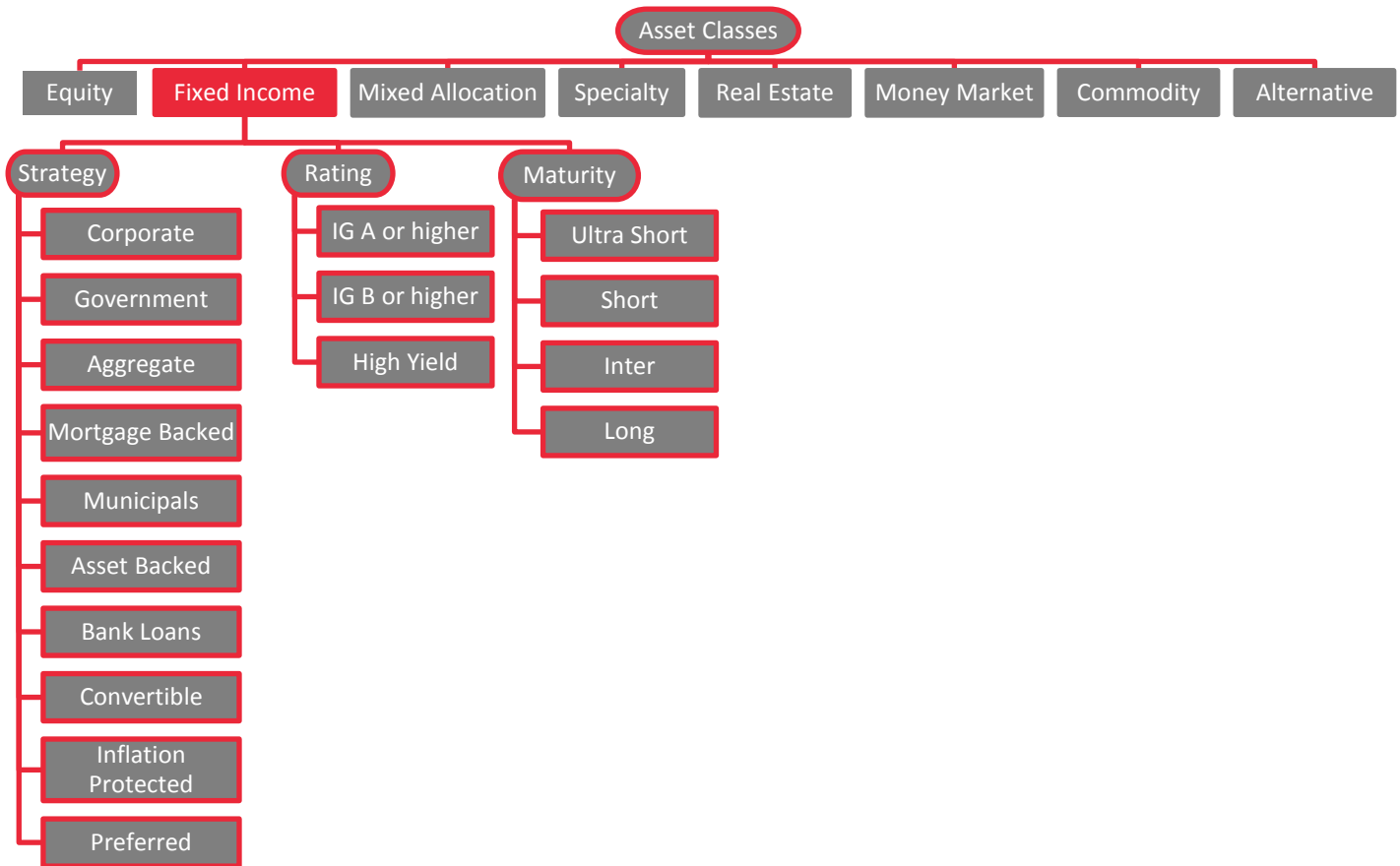
- **Small Cap**  
The definition of a small cap will vary between fund companies. A general guide to this selection is a fund that targets investments in companies with a market cap of less than 1.5 billion. Small cap may be included in the fund name.
- **Mid Cap**  
The definition of a mid-cap will vary between fund companies. A general guide to this selection is a fund that targets investments in companies with a market cap of greater than 1.5 billion but less than 8 billion. Mid cap may be included in the fund name.
- **Large**  
The definition of a large cap will vary between fund companies. A general guide to this selection is a fund that targets investments in companies with a market cap of greater than 8 billion. Large cap may be included in the fund name. (Also commonly referred to as blue chip)
- **Broad Market** (otherwise known as multi-cap)  
Funds investing in small, mid or large cap companies will be updated as Broad Market.

**Business Rule:** Funds will be marked as small, mid or large cap if designated in the prospectus. Micros will roll into small. Small to Mid-Cap rolls up to Mid, etc. A fund investing in small, mid or large cap (i.e. No restriction on market cap) will be updated as Broad Market. If no specification is in the document then market cap will be left blank.

For Index funds, we will use the index that it tracks/replicates to determine the market cap. There may be instances where market sentiment of an index overrules what the index technically invests in. i.e. the S&P 500 is technically a multi cap but is seen in the marketplace as a large cap index thus the tracking fund of SPY US is marked as large cap.

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## Fixed Income



## Strategy

- **Aggregate**  
An aggregate bond fund primarily invests in debt securities issued by government(s) and corporation(s).
- **Asset Backed**  
An asset-backed fund primarily invests in securities issued by the government, federal agencies or corporations that are backed by real assets such as home equity loans, credit card receivables, etc.
- **Bank Loans**  
Bank loan funds consist of loans made by banks or other financial institutions to companies and are often below investment grade.
- **Convertible**  
A convertible securities fund will primarily invest in securities that are convertible into another type of security. They are usually bonds or preferred shares that are exchangeable for a set number of another form of asset type, usually common shares.
- **Corporate**

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A corporate fund invests primarily in debt securities issued by corporations. Although preferred shares may not be a predominant portion of the fund investments, the fund may invest in them.

- **Government**

A government fund invests the majority of its assets in securities that are issued or guaranteed by the government, its agencies or instrumentalities.

- **Inflation Protected**

An inflation-protected fund primarily invests in inflation-indexed debt securities issued by the government or corporations.

- **Mortgaged Backed**

A mortgaged-backed fund is a type of asset-backed security that primarily invests in securities that are secured by a mortgage or a collection of mortgages.

- **Municipal**

A municipal fund will invest primarily in municipal securities issued in any state/province.

- **Preferred (ETF Only)**

The ETF will track preferred securities.

**Business Rule:** Inflation-Protected takes precedence over corporate, government, or aggregate.

## Rating Class

- **High Yield**

High yield funds invest in bonds with a bond rating of Ba or lower according to Moody's or BB+ or lower on S&P's scale. The securities are below investment grade and are commonly referred to as junk bonds. (Also referred to as speculative grade)

- **Investment Grade A or higher-** A fund investing in investment-grade debt securities rated A- by S&P or higher or the equivalent of other rating agencies

- **Investment Grade B or higher-** a fund investing in investment-grade debt securities rated BBB- by S&P or higher or the equivalent of other rating agencies

## Maturity Band

- **Ultra-Short**

An ultra-short fund typically has an average duration or maturity of less than 1 year.

- **Short**

A short fund typically has an average duration or maturity between 1 and 3 years.

- **Intermediate**

An intermediate fund typically has an average duration or maturity between 3 and 10 years.

- **Long**

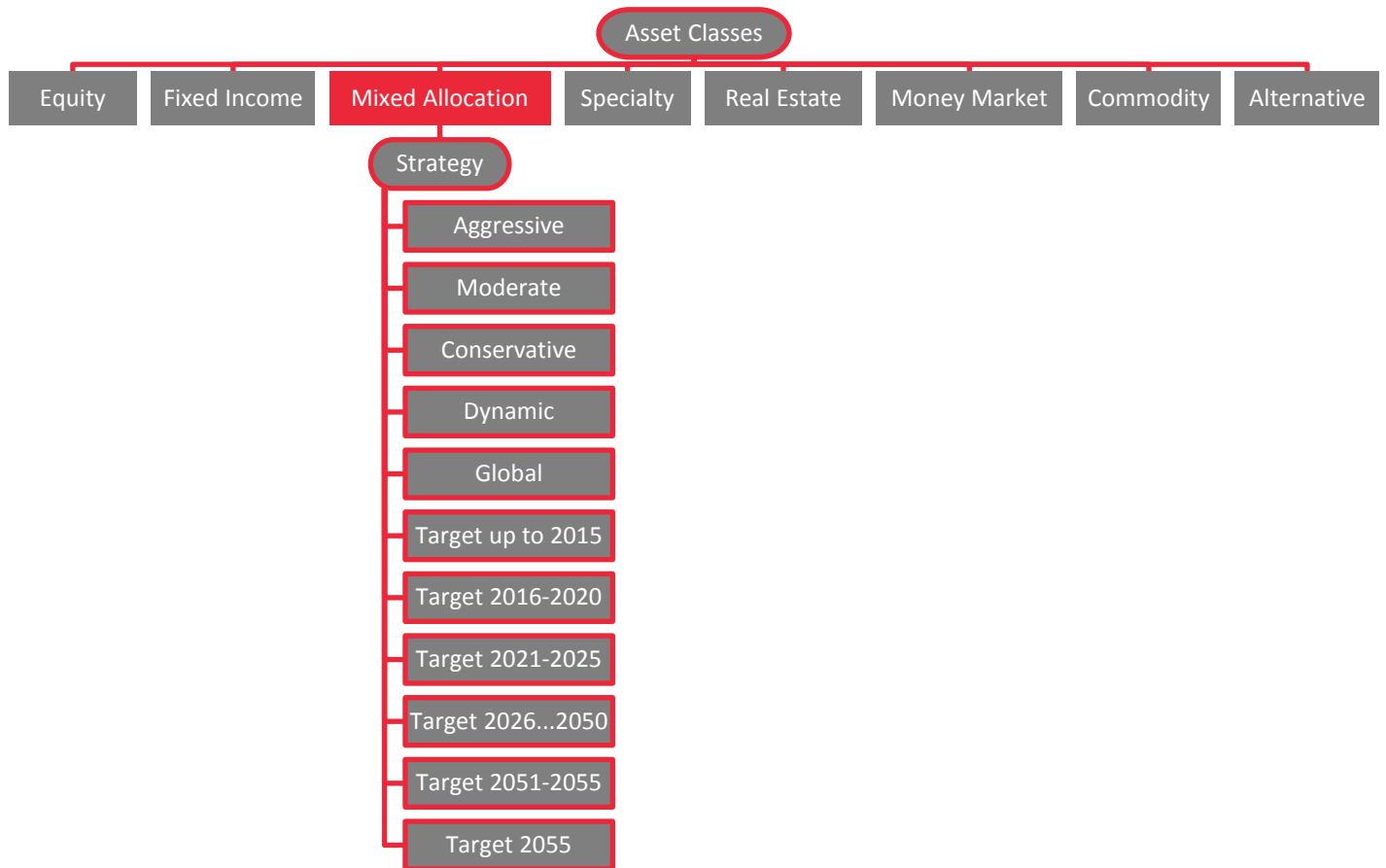
A long term fund typically has an average duration or maturity greater than 10 years.

**Business Rule:** Funds will be marked as ultra-short, short, intermediate or long if designated in the prospectus. Maturity bands that are not restricted or not identified will not have any selections.

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## Mixed Allocation



## Strategy

- **Aggressive Allocation**  
Aggressive allocation funds seek to provide both capital appreciation and income by investing in three major areas: stocks, bonds, and cash. These portfolios can hold large positions in stocks ranging from 70% to 100% of the assets in equities and the remainder in fixed income and cash.
- **Moderate Allocation**  
Moderate allocation portfolios seek to provide both capital appreciation and income by investing in three major areas: stocks, bonds, and cash. These portfolios tend to hold larger positions in stocks than conservative-allocation portfolios. These portfolios typically have 50% to 70% of assets in equities and the remainder in fixed income and cash.
- **Conservative Allocation**

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Conservative allocation portfolios seek to provide both capital appreciation and income by investing in three major areas: stocks, bonds, and cash. These portfolios tend to hold smaller positions in stocks than moderate-allocation portfolios. These portfolios typically have 20% to 50% of assets in equities and 50% to 80% of assets in fixed income and cash.

- **Dynamic Allocation**

Dynamic Allocation funds do not have targets but instead have the flexibility to move asset classes.

- **Global Allocation**

Global allocation funds specifically target either international or global asset allocation.

- **Target up to 2015**
- **Target 2016 – 2020**
- **Target 2021 – 2025**
- **Target 2026 – 2030**
- **Target 2031 – 2035**
- **Target 2036 – 2040**
- **Target 2041 – 2045**
- **Target 2045 – 2050**
- **Target 2051 – 2055**
- **Target over 2055**

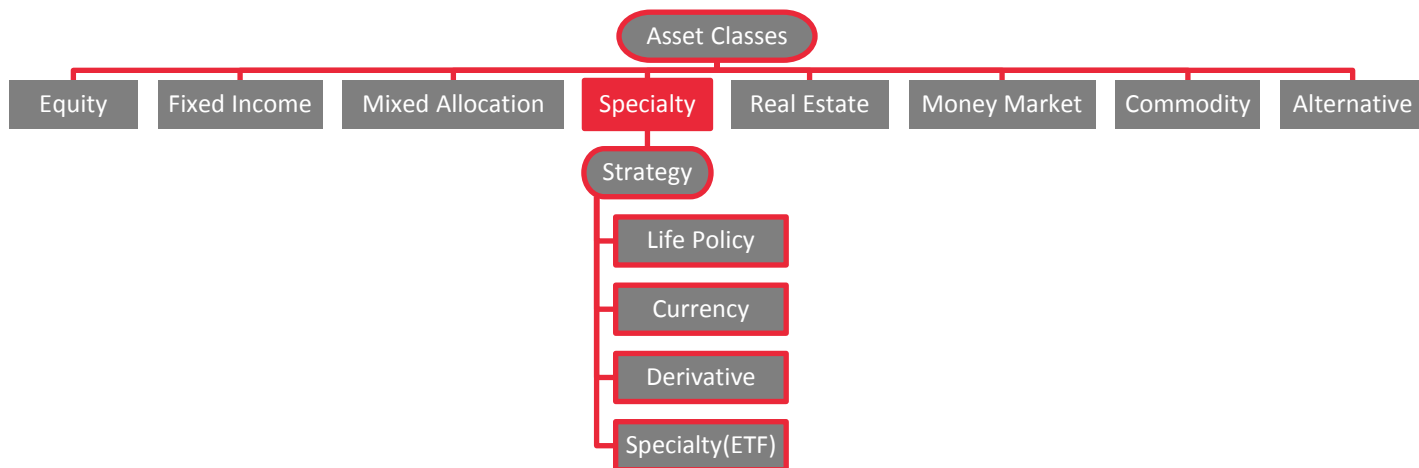
Target funds automatically reset the asset mix (stocks, bonds, cash equivalents) in its portfolio according to a selected time frame.

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## Specialty

The specialty asset class has been created to accommodate the market trend of mutual funds that follow life policy, currency and derivative strategies.



## Strategy

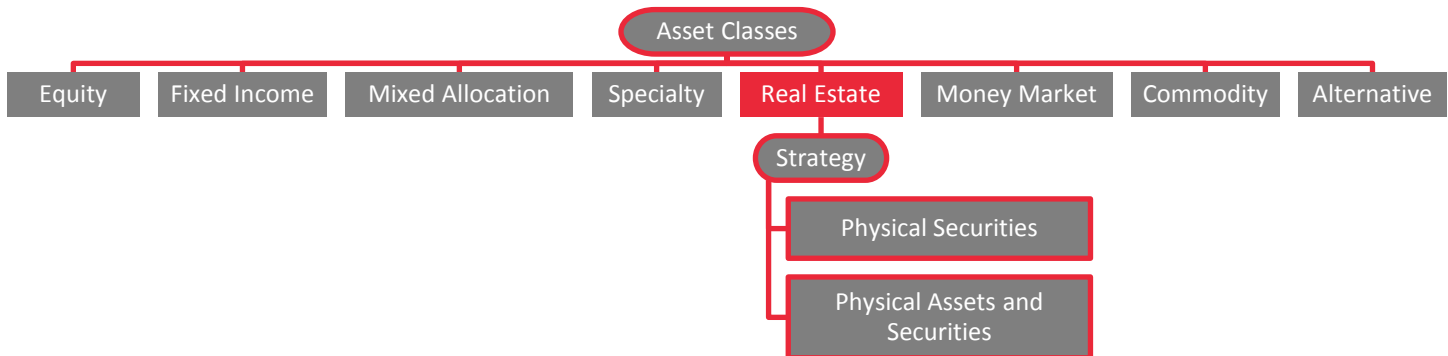
This is the selection methodology the fund will employ to achieve its stated objective.

- **Life Policy**  
Life policy funds invest in whole-of-life insurance policies that are given up by their owners. The funds buy the policies at a deep discount to their face values. They undertake to pay policy premiums and returns are realized when the insured parties die.
- **Currency**  
Currency funds invest in US and foreign currencies through the use of short-term money-market instruments and derivative instruments (including and not limited to, forward currency contracts, index swaps and options) and cash deposits.
- **Derivative**  
A derivatives fund will primarily invest in derivative securities such as futures, options or warrants. Derivatives funds that invest in a single type of derivatives product or a mix of derivatives products will be included.
- **Specialty (ETFs only)**  
Specialty ETFs provide exposure usually associated with hedge funds and financial entities. The goal of this strategy is to exploit perceived market inefficiencies. These are typically ETFs that do not fit into any particular asset class, employ hedge fund strategies or track volatility.

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## Real Estate



## Strategy

This is the selection methodology the fund will employ to achieve its stated objective.

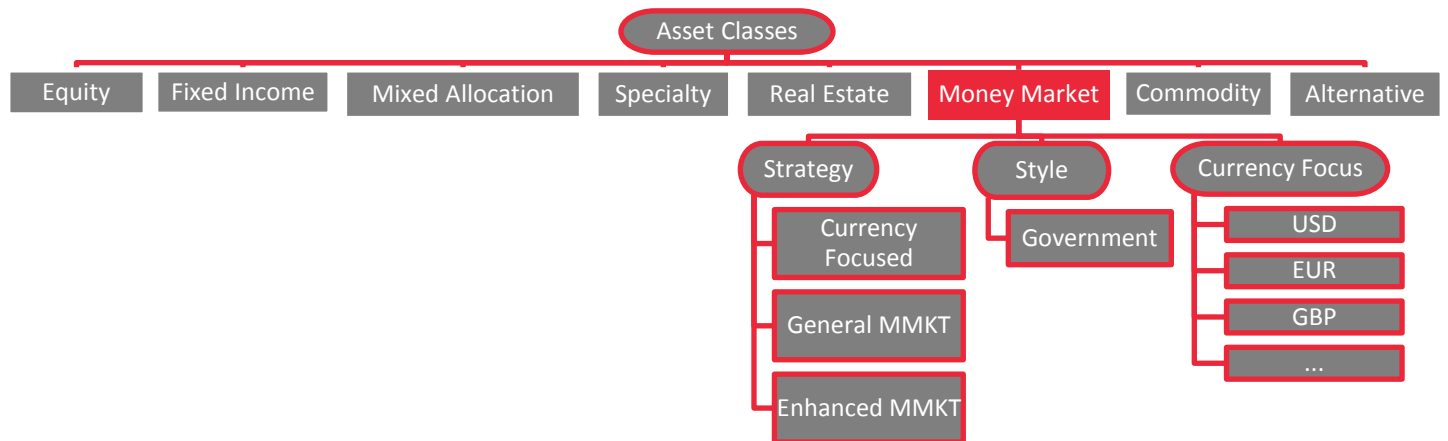
- **Physical Assets\***  
A physical assets fund will engage in management and or ownership of property. These are typically illiquid assets.
- **Physical Assets and Securities**  
A physical assets and securities fund will engage in management and or ownership of property and the purchase of real estate securities.

\*Note: REITS will be classified as Equity

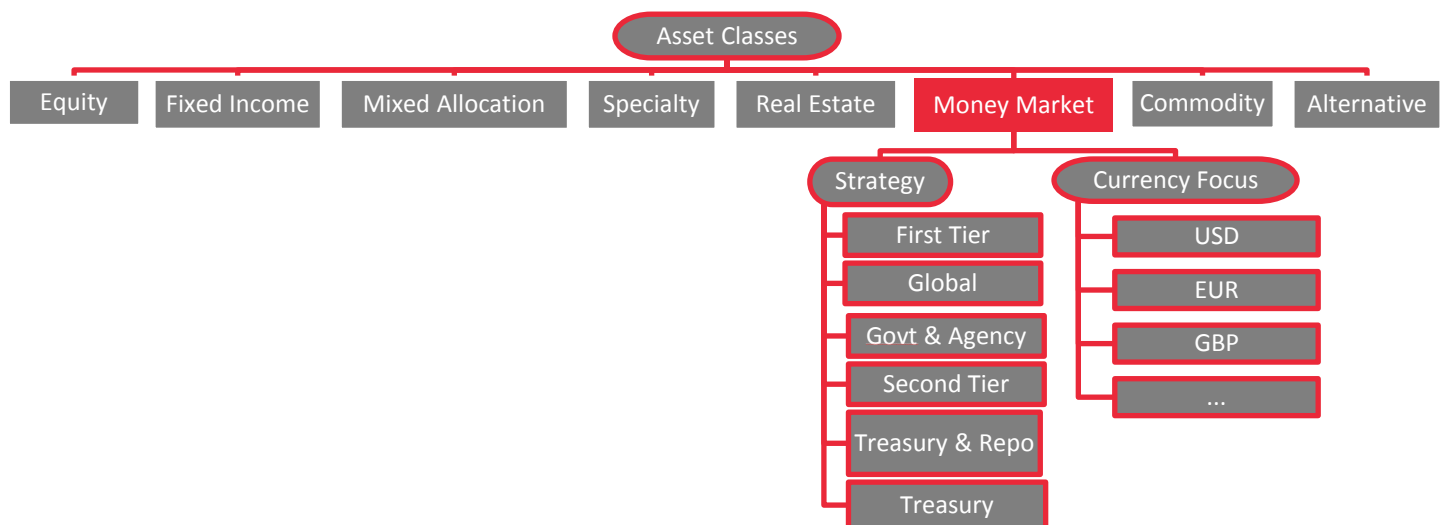
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## Money Market

### Non-US Money Market Strategies



### US Money Market Strategies



### Strategy – Non-US Money Market

This is the selection methodology a non-US money market fund will employ to achieve its stated objective.

- **Currency Focused**  
The prospectus will typically state that the fund is investing in money markets denominated only in specific currencies.
- **General Money Market**



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The fund invests in money market instruments in general with no particular currency focus.

- **Enhanced**

Also called cash plus funds – the fund will typically invest some of their portfolio in the same assets as money market funds, but also invest in riskier, higher yielding, less liquid assets such as: lower – rated bonds, longer maturities. The purpose of enhanced cash funds is not to replace money markets, but to fit in the continuum between cash and bonds – to provide a higher-yielding investment for more permanent cash

*Style: Non-US Money Market*

- **Government** – a Money Market Fund investing mainly in government-issued money markets- ex. Treasury-Bills.

**Business Rule:** For Enhanced money market funds that are also currency focused, Enhanced will take priority as the investment strategy

## Strategy – US-Domiciled Money Market

This is the selection methodology a US domiciled money market fund will employ to achieve its stated objective.

- **First Tier**

A First Tier fund will invest in high-rated money market securities (short-term rating scale Moody rated P-1, S&P rated A-1) comprised of corporate debt and may contain some government debt with a maturity of 397 days or less.

- **Global**

A Global fund will invest in non-domestic money market securities with a maturity of 397 days or less.

- **Government and Agency**

A Government & Agency fund will invest in money market securities comprised of government, government agency or government instrumentality with a maturity of 397 days or less.

- **Second Tier**

A Second Tier fund will invest in high-rated money market securities (short-term rating scale comparisons Moody rated P-2, S&P rated A-2) comprised of corporate debt and may contain some government debt with a maturity of 397 days or less.

- **Treasury and Repo**

A Treasury & Repo fund will invest in money market securities comprised of a combination of Treasury Securities and Repo Agreements with a maturity of 397 days or less.

- **Treasury**

A money market Treasury fund will invest 100% in Treasury issued money market securities with a maturity of 397 days or less.

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## Commodity



## Strategy

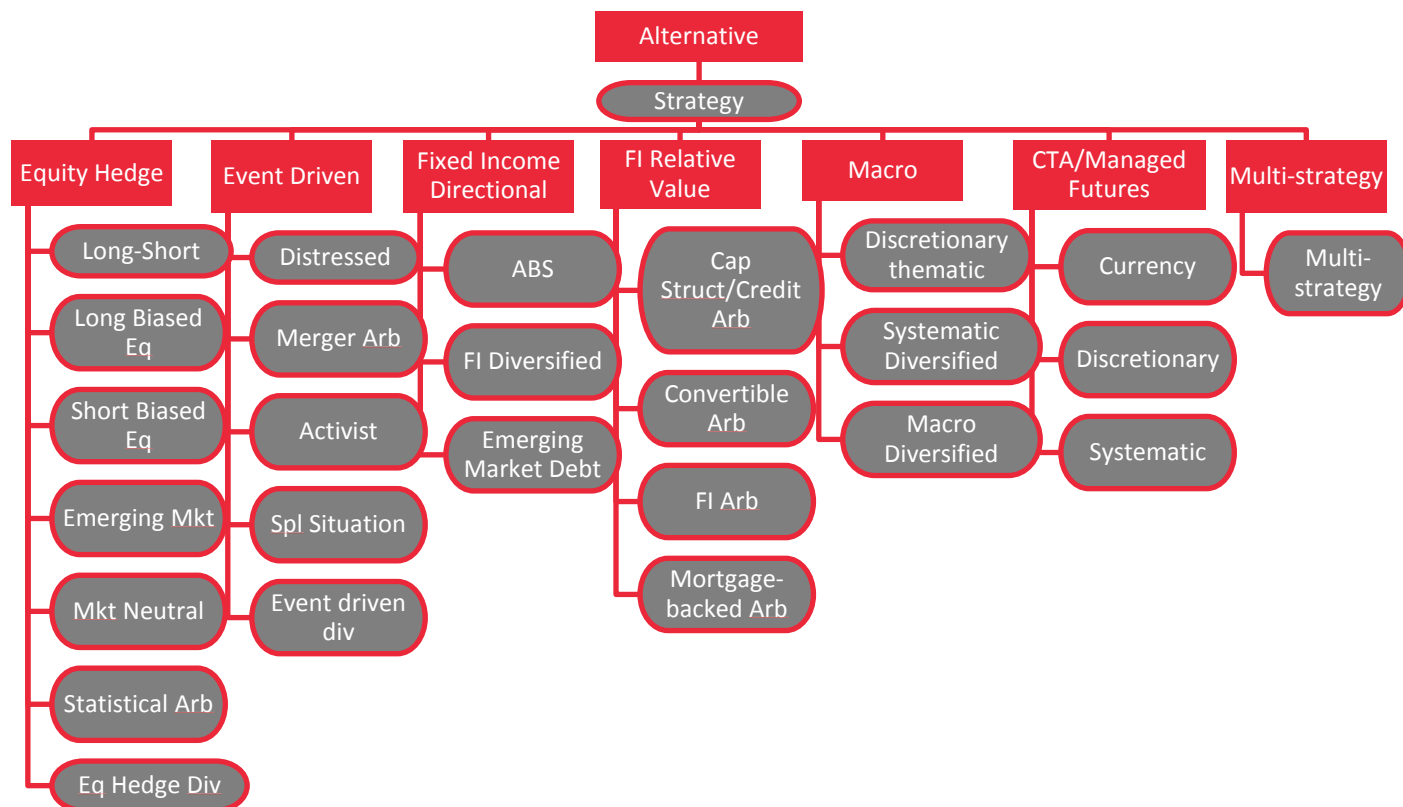
A Commodity fund will invest primarily in commodity options.

- **Agriculture**
- **Energy**
- **Precious Metals**
- **Industrial Metals**
- **Broad Based**
- **Livestock (ETFs only)**

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## Alternative Asset Class Focus

Some countries have set up a classification structure for hedge funds that register for business in their markets, while others have not. Because of this, there is no global standard for classifying funds into different investment style peer groups. Below is the peer grouping structure that Bloomberg utilizes. Funds are first broken down into distinct Investment Strategies, which are further refined into separate Investment Styles.



## Strategy: Equity Hedge

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.

### Styles

- **Long-Short**

An Equity Directional investment style employs both long and short equity positions. The Fund's goal is not to be market neutral, but rather to switch back and forth between an overall net long or net short

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portfolio, depending on market conditions and opportunities where a Manager sees differences between a securities value and market price. Investments will usually be regional or sector specific.

- **Long Biased**

An Equity Directional investment style employing both long and short equity positions. Funds will invest primarily in long positions in securities expected to appreciate in value while supplementing that with short positions of securities expected to fall in value. Investments will usually be regional or sector specific. This also includes funds which invest in private placements, or 'Regulation D' securities, which are privately offered securities offered to the fund, upon negotiated terms since they are highly illiquid.

- **Short Biased**

An Equity Directional investment style that employs short, and sometimes long, equity positions. Funds will invest in short positions in securities expected to fall in value and may supplementing that with long positions of securities expected to appreciate in value. Investments will usually be regional or sector specific.

- **Market Neutral**

An Equity Market Neutral investment style that attempts to take advantage of pricing inefficiencies in the equity markets. Funds will utilize a fundamental "bottom-up" investment style when selecting the long and short positions in their portfolios.

- **Statistical Arbitrage**

An Equity Market Neutral investment style that attempts to take advantage of pricing discrepancies in the equity markets. Funds will utilize mathematical models or calculations to evaluate a portfolio of stocks, and attempt to profit from variations of current prices compared to similar stocks and/or historical performance norms. One common technique is known as 'Pairs Trading'.

- **Emerging Market**

An Emerging Market investment style that invests primarily in equity securities, in emerging markets. These areas include parts of Asia and the former Soviet Union, Eastern Europe, Latin America and Africa.

- **Equity Hedge Diversified**

Equity Hedge Diversified will employ a range of different strategies including: Long/Short, Long Bias, Short Bias, Market neutral, Statistical Arbitrage, and Emerging Market.

## Strategy: Macro

These funds employ a top-down approach. Funds will use leveraging techniques on perceived price-value disparities of stock markets, interest rates, foreign exchange rates and commodities. Manager's strategies are usually based around an opportunistic approach to global economies and their policies, although funds may focus their investments in specific countries or regions.

### *Styles*

- **Discretionary Thematic**

Portfolio Managers may trade actively in developed and emerging markets, focusing on both absolute and relative levels on equity markets, interest rates/fixed income markets, currency and

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commodity markets; frequently employing spread trades to isolate a differential between instruments identified by the Investment Manager to be inconsistent with expected value. Positions typically are predicated on the evolution of investment themes the Manager expects to materialize over a relevant timeframe, which in many cases contain contrarian or volatility focused components.

- **Systematic Diversified**

Strategies which employ an investment process designed to identify opportunities in markets exhibiting trending or momentum characteristics across individual instruments or asset classes. Strategies typically employ quantitative process which focus on statistically robust or technical patterns in the return series of the asset, and typically focus on highly liquid instruments and maintain shorter holding periods than either discretionary or mean reverting strategies. Although some strategies seek to employ counter trend models, strategies benefit most from an environment characterized by persistent, discernible trending behaviour. Systematic Diversified strategies typically would expect to have no greater than 35% of portfolio in either dedicated currency or commodity exposures over a given market cycle.

- **Macro Diversified**

Macro Diversified will include both systematic and discretionary strategies. These macro managers benefit from having the least restrictive and most flexible mandate among the major hedge fund styles.

## Strategy: Fixed Income Relative Value

Fixed income relative value investing involves maintaining positions in which the goal is to realize any potential valuation discrepancies between multiple securities. Managers will employ fundamental and quantitative analysis on security types that range from equity, fixed income, derivatives, and others. Relative value is the attractiveness measured in terms of risk, liquidity, and return of one instrument relative to another, or for a given instrument, of one maturity relative to another. This style typically involves isolating asset specific return while hedging out systematic factors influencing returns.

### *Styles*

- **Fixed Income Arbitrage**

A Fixed Income Relative Value investment style that attempts to take advantage of risk spreads and pricing inefficiencies of sovereign, corporate and other types of debt securities. Funds will usually employ techniques such as yield-curve or spread arbitrage using municipal and corporate debt securities hedged with Treasury bonds or other financial contracts. This includes credit arbitrage techniques as well.

- **Convertible Arbitrage**

A Convertible Arbitrage Relative Value Style primarily involves taking long positions in convertible bonds or warrants, hedged with a short position, typically in the underlying stock. This portfolio construction will look to exploit inefficiencies in pricing by being long convertible bonds or preferred stock and short the underlying common stock. In many cases, convertible bonds and warrants are not accurately priced due to illiquidity in the convertible debt and warrant markets as

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compared to the markets in the underlying common stocks, uncertainty concerning the call or redemption features of convertible securities and lesser market focus on these derivatives as opposed to the equities into which they are convertible or exercisable may give rise to significant profit opportunities.

- **Capital Structure/Credit Arbitrage**

A Fixed Income Relative Value investment style that is an investment process designed to isolate attractive opportunities in corporate fixed income securities. These securities include both senior and subordinated claims as well as bank debt and other outstanding obligations, structuring positions with little or no broad credit market exposure. This strategy is similar to Convertible Arbitrage however Capital Structure/Credit Arbitrage attempts to exploit the mispricing of different classes of securities of the same company. If a company has more than one class of debt or stock, each class attempts to value their contingent claim on the company. Different valuations and trading inefficiencies can lead to arbitrage opportunities with a properly constructed portfolio. Capital Structure Arbitrage is primarily a bet on convergence. A manager will reap the benefits when firms in financial distress survive but can be dangerous if the company ends up in bankruptcy.

- **Mortgage-Backed Arbitrage**

A Fixed Income Relative Value investment style that attempts to capture the spread inherent in Mortgage-Backed Securities by using interest rate futures, options and treasury securities. This investment requires a careful analysis of the changes in mortgage-backed securities due to interest rate fluctuations to maintain a properly hedged portfolio. A typical portfolio construction would be long Mortgage Backed Security and short government bonds and other financial instruments or contracts.

## Strategy: Fixed Income Directional

Fixed income directional investing involves taking long and short positions in interest rate sensitive investments. The positions taken may not be market neutral. Returns generated by these strategies tend to have low correlation to equity markets.

### *Styles*

- **Fixed Income Diversified**

A Diversified style which typically holds long positions, but may also invest on the short side, in debt securities. This includes government, corporate and other types of debt instruments, fixed income options and credit derivatives. Funds will attempt to profit from credit/yield opportunities.

- **Emerging Market Debt**

An Emerging Market investment style that invests primarily in fixed income securities in emerging markets. These areas include parts of Asia and the former Soviet Union, Eastern Europe, Latin America and Africa.

- **Asset-Backed Securities**

A Fixed Income Directional investment style in which funds will invest in securities backed by notes or receivables against assets other than real estate. Some examples are auto loans, credit cards and royalties.

# GUIDE TO FUND CLASSIFICATIONS

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## Strategy: Event Driven

This strategy attempts to take advantage of pricing fluctuations of securities due to corporate events or actions. These situations include but are not limited to corporate restructuring, mergers, takeovers, financial distress, tender offers, liquidations, bankruptcy, spinoffs, re-organizations or other capital structure adjustments. Portfolio construction is made on a set of fundamental characteristics as opposed to quantitative. The risks can include exposure to credit markets, equity markets, as well as company specific events.

### *Styles*

- **Distressed Securities**  
An Event Driven investment style that attempts to invest in companies whose stock price is being unfairly punished due to financial, legal or operating difficulties, like reorganization, restructuring, bankruptcy. The manager feels a security's price will change rapidly due to a stock buyback, bond upgrade, spin-off or earnings surprise. Investments may be made through equity, debt or other securities. Funds focused on distressed debt may also use the terms 'high-yield' or 'junk bonds' to refer to the non-investment grade debt securities they invest in. Although distressed debt is usually considered a step below high-yield, for the purposes of classification we will place high yield funds into the Distressed Securities peer group.
- **Merger Arbitrage**  
An Event Driven investment style that attempts to exploit pricing inefficiencies in Merger & Acquisition events. Merger Arbitrage funds seek to capture the price spread between the current market price of a security and its value after a successfully completed merger transaction. Funds usually invest short in the acquiring company and invest long in the acquired company, continually modifying their positions as the merger process moves forward. This is because when mergers or acquisitions are announced, there is a general trend for the acquiring company's stock value to drop and the acquired company's stock value to rise.
- **Activist**  
Activist managers typically buy large stakes in a handful of corporations. These managers seek to obtain representation of the company's board of directors in an effort to impact or change the company's policies or direction. Activist managers will look to advocate activities such as division or asset sales, partial or complete corporate divestiture, dividend or share buybacks, and changes in management. Activist strategies employ an investment process primarily focused on opportunities in equity and equity related instruments of companies which are currently or prospectively engaged in a corporate transaction, security issuance/repurchase, asset sales, division spin-off or other catalyst oriented situation.
- **Special Situation**  
Special Situation Funds employ a portfolio construction primarily focused on opportunities in equity and equity related instruments of companies which are currently engaged in corporate transactions, security issuance and/or repurchase, asset sales, division spin-off or other catalyst oriented situation. These involve both announced transactions as well as situations in which no

# GUIDE TO FUND CLASSIFICATIONS

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formal announcement is expected to occur. Strategies employ an investment process that will focus on companies with corporate actions that are impacting an individual capital structure, primarily on situations identified via fundamental research which are likely to result in corporate transactions. Special situation funds will typically have at least 60% of their portfolio comprised of equity securities.

- **Event Driven Diversified**

An Event Driven strategy attempts to take advantage of pricing fluctuations of securities due to corporate events or actions. This includes Special Situations, Merger Arbitrage, Activist, and Distressed Strategies. These situations include but are not limited to corporate restructuring, mergers, takeovers, financial distress, tender offers, liquidations, bankruptcy, spinoffs, re-organizations or other capital structure adjustments. Portfolio construction is made on a set of fundamental characteristics as opposed to quantitative. The risks can include exposure to credit markets, equity markets, as well as company specific events.

## Strategy: Multi-Strategy

Funds which utilize multiple investment strategies and/or multiple investment styles will be categorized as such. Some funds employ several strategies within their own portfolio, while others will invest their assets in other hedge funds that run the desired investment strategy/style (Fund of Funds). If there are funds whose investment strategies/styles are so unique that they do not fit into an existing peer group, or if there are not enough funds with the same strategy/style to warrant their own peer group, then they will be categorized under Multi-Strategy/Multi-Style.

### *Styles*

- **Multi Strategy**

Funds utilizing multiple investment strategies.



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## Strategy: CTA/Managed Futures

This strategy attempts to profit by investing in listed financial and commodity futures markets and currency markets. Managed Futures funds invest in futures and options contracts of equity and debt securities, commodities and currencies. Some Funds are registered Commodities Trading Advisors and are referred to as CTA's.

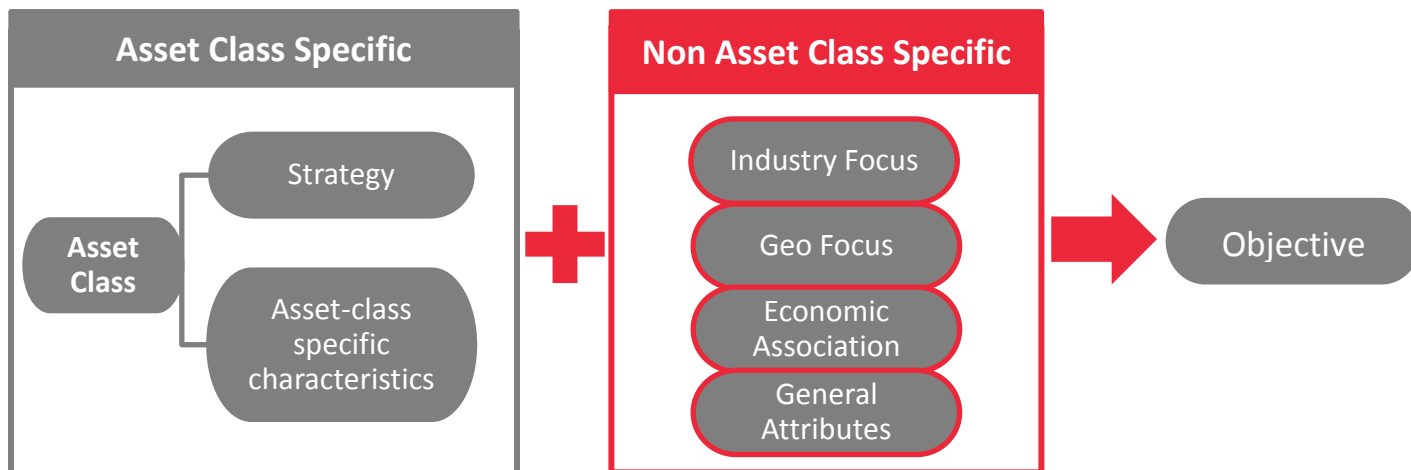
### *Styles*

- **Currency**  
Currency Strategies will include both discretionary and systematic managers looking to capitalize on inefficiencies with the currency market. Portfolio composition will consist of positions in the currency and global foreign exchange markets comprising at least 60% of their portfolio. These managers will actively trade in both developed and emerging markets.
- **Discretionary**  
Futures and options contracts of equity and debt securities, and commodities. These strategies employ an investment process heavily influenced by top down analysis of macroeconomic variables. Discretionary Portfolios are built on underlying themes developed by the portfolio managers.
- **Systematic**  
Systematic strategies will construct a portfolio based primarily on the futures and options contracts of equity and debt securities, and commodities. Managers will use mathematical, algorithmic, and technical models, with little or no influence of individuals over the portfolio positioning. The Manager will identify opportunities in markets exhibiting trending or momentum characteristics across futures and options markets in various assets classes. The portfolio will generally maintain shorter holding periods than that of a discretionary currency portfolio.

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## Non Asset Class Specific Classifications



To provide further granularity to the Bloomberg Funds Classification System, the selection of Industry Focus, Geographic Focus, Economic Association and General Attributes allows us to accurately account for unique fund specific characteristics. This enables us to create precise Bloomberg Fund Objectives and ultimately combine to provide tighter peer groups for accurate ranking.

The Non Asset Class Specific criteria can also be used independent of the classification system to output results from the fund screening tool FSRC<GO>. For example, this can be used to search for all emerging market funds or all funds that focus their investments on precious metals.

### Industry Focus

This is the industry (sector) the fund targets for investment as stated in the prospectus. Only one industry may be selected.

- **Materials**  
Comprises funds which invest in companies that are in a wide range of commodity-related manufacturing industries. Included in this sector are companies that manufacture chemicals, construction materials, glass, paper, forest products and related packaging products, and metals, minerals and mining companies, including producers of steel.
- **Communications**  
Comprises funds which invest in companies that provide communications services primarily through a fixed-line, cellular, wireless, high bandwidth and/or fibre optic cable network
- **Consumer Staples**  
Comprises funds which invest in companies whose businesses are less sensitive to economic cycles. It includes manufacturers and distributors of food, beverages and tobacco and producers of non-durable household goods and personal products. It also includes food & drug retailing companies, as well as hypermarkets and consumer super-centres.

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- **Consumer Discretionary**

Comprises funds which invest in those industries that tend to be the most sensitive to economic cycles. Its manufacturing segment includes automotive, household durable goods, textiles, apparel and leisure equipment. The services segment includes hotels, restaurants and other leisure facilities, media production and services and consumer retailing.

- **Energy**

Comprises funds which invest in companies whose businesses are dominated by either of the following activities: the construction or provision of oil rigs, drilling equipment and other energy related service and equipment, including seismic data collection. Companies engaged in the exploration, production, marketing, refining and/or transportation of oil and gas products.

- **Financial**

Comprises funds which invest in companies involved in activities such as banking, mortgage finance, consumer finance, specialized finance, investment banking and brokerage, asset management and custody, corporate lending, insurance, and financial investments.

- **Industrials**

Comprises funds which invest in companies whose businesses are dominated by one of the following activities: The manufacture and distribution of capital goods, including aerospace & defence, construction, engineering & building products, electrical equipment and industrial machinery. The provision of transportation services, including airlines, couriers, marine, road & rail and transportation infrastructure.

- **Technology**

Comprises funds which invest in companies following general areas:

- Technology Software & Services, including companies that primarily develop software in various fields such as the Internet, applications, systems, database management and/or home entertainment and companies that provide information, technology consulting and services, as well as data processing and outsourced services
- Technology Hardware & Equipment, including manufacturers and distributors of communications equipment, computers & peripherals, electronic equipment and related instruments
- Semiconductors and Semiconductor Equipment Manufacturers

- **Utilities**

Comprises funds which invest in companies considered electric, gas or water utilities, or companies that operate as independent producers and/or distributors of power. This sector includes both nuclear and non-nuclear facilities.

- **Health Care**

Comprises funds which invest in two main industry groups. The first includes companies who manufacture health care equipment and supplies or provide health care related services, including distributors of health care products, providers of basic health-care services, and owners and operators of health care facilities and organizations. The second includes companies primarily involved in research, development, production and marketing of pharmaceuticals and biotechnology products.

- **Thematic**

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Funds that invest by following a certain social, economic or corporate, demographic, or other themes that are popular in society. Currently, some popular themes are environmental and clean investing, agriculture, infrastructure, religiously responsible, fighting disease, and socially-responsible investing, as well as companies affected by globalization.

- **Real Estate**

Comprises funds which invest predominately in equity securities engaged in the real estate industry

## **Geographic Focus**

The geographical area the fund intends to invest in. Selections can include Region, Country and State choices. Multiple/Unlimited number of selections is permitted.

**Business Rule:** If the document says the fund invests in Hong Kong H shares, geo focus = China

## Region Focus

### **African**

An Africa Region fund will invest solely in African countries. The countries that comprise this region will be located within the African continent.

### **ASEAN Countries**

ASEAN is an acronym for the Association of South East Asian Nations. An ASEAN Countries fund will invest solely in the ASEAN countries. The following countries are included as ASEAN:

Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam.

### **Asian Pacific**

An Asian Pacific Region fund will invest solely in Pac Rim countries. The following countries are included in the Pacific Region:

Australia, Brunei, China, Hong Kong, India, Indonesia, Japan, Korea, Malaysia, Mauritius, New Zealand, Philippines, Singapore, Taiwan and Thailand.

### **Asian Pacific Excluding Japan**

An Asian Pacific Region excluding Japan fund will invest solely in Pac Rim countries excluding Japan. The following countries are included in the Pacific Region Excluding Japan:

Australia, Brunei, China, Hong Kong, India, Indonesia, Korea, Malaysia, Mauritius, New Zealand, Philippines, Singapore, Taiwan and Thailand.

### **BRIC**

A BRIC fund will invest a combination of Brazil, Russia, India and China. This category will include BRICT where as the "T" stands for Turkey. BRICT should have the BRIC region selected and the country Turkey should be selected as well.

### **CEE**

Central & Eastern Europe

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## Eastern European

An Eastern European Region fund will invest solely in Eastern European countries. The following countries are included in the Eastern European Region:

Belarus, Bosnia, Bulgaria, Croatia, Czech Hungary, Latvia, Lithuania, Poland, Romania, Russia, Slovakia, Serbia, and Ukraine.

## EMEA

An EMEA fund invests in Europe, the Middle East and Africa.

## European Region

A European Region fund will invest solely in European countries. The following countries are included in the European Region:

Albania	Germany	Montenegro
Andorra	Greece	Netherlands
Armenia	Georgia	Norway
Azerbaijan	Hungary	Poland
Austria	Iceland	Portugal
Belarus	Ireland	Romania
Belgium	Italy	Russia
Bosnia and Herzegovina	Kazakhstan	San Marino
Bulgaria	Latvia	Serbia
Croatia	Liechtenstein Lithuania	Slovakia
Czech Republic	Luxembourg	Slovenia
Cyprus	FYR of Macedonia (Republic of	Spain
Denmark	Macedonia)	Sweden
Estonia	Malta	Switzerland
Finland	Moldova	Turkey
France	Monaco	Ukraine
		United Kingdom
		Vatican City

## European Excluding UK

A European Region excluding UK fund invests solely in European Region countries, except for the UK.

## European Union

European Union Region funds will invest solely in the European Union. The following are included in the European Union: Belgium, Denmark, Greece, Portugal, Austria, Cyprus, Malta, Bulgaria, France, Ireland, Spain, Finland, Czech Republic, Poland, Romania, Germany, UK, Sweden, Estonia, Slovakia, Italy, Hungary, Slovenia, Luxembourg, Latvia, Netherlands, Lithuania.

## Euro zone

A Euro zone fund will target investment based on an economic and monetary union (EMU) of 17 European Union (EU) member states which have adopted the euro currency as their sole legal tender. It currently

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consists of Austria, Belgium, Cyprus, Estonia (eff 1/1/2011), Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia and Spain.

## **GCC**

Gulf Cooperation Council is a political and economic union involving the six Arab states of the Persian Gulf with many economic and social objectives. Members include Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates.

## **Global**

A Global Equity fund investment will include securities from inside, as well as, outside the home country of fund.

## **Greater China**

The Greater China funds invest in mainland China which includes China, Hong Kong and Macau. Some companies may include Taiwan, Singapore and Malaysia in the mix.

## **Iberian**

An Iberian Peninsula Region fund will invest solely in Iberian countries. The following countries are included in the Iberian Peninsula Region:

Spain and Portugal.

## **Indian Subcontinent**

An Indian Sub-Continent Region fund will invest solely in Indian Sub-Continent countries. The following countries are included in the Indian Sub-Continent Region: India, Pakistan, Bangladesh, and Sri Lanka.

## **International**

An International Equity fund invests solely outside of the home country of the fund.

## **Latin America**

A Latin America Region fund will invest solely in Latin America countries.

The following countries are included in the Latin America Region:

Aruba, Antigua and Barbuda, Argentina, the Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, French Guiana, Grenada, Guadeloupe, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Martinique, Netherlands Antilles, Nicaragua, Panama, Paraguay, Peru, Puerto Rico, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, Uruguay, and Venezuela.

## **MENA**

A Middle East Region fund will invest in Middle East and North African countries.

## **Middle East**

A Middle East Region fund will invest solely in Middle East countries.

## **Nordic**

A Nordic Region fund will invest solely in Nordic countries. The following countries are included in the Nordic Region: Denmark, Finland, Iceland, Norway and Sweden.

## **North American**

A North America Region fund will invest solely in North American countries. The following countries are included in the North America Region: Canada and the United States.

## **Oceania**

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An Oceania Region fund will invest solely in Oceania countries. The Oceania Region includes the islands of the southern, western, and central Pacific, including Melanesia, Micronesia, Polynesia, and sometimes Australia, New Zealand, and the Malay Archipelago.

## **OECD Countries**

OECD is an acronym for the Organization for Economic Co-operation and Development. An OECD Countries fund will invest solely in the OECD countries. The following countries are included as OECD countries: Australia, Austria, Belgium, Canada, Chile, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, South Korea, Spain, Sweden, Switzerland, Turkey, United Kingdom, United States.

## **Tiger**

A Tiger Region fund will invest solely in Tiger countries. The following countries are included in the Tiger Region: Hong Kong, Singapore, Thailand, China, Malaysia, Taiwan, South Korea, Indonesia, and the Philippines.

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## Country Focus

Countries will be selected when the fund invests in those countries but are not captured as a region selection. For example, a fund that invests in Europe and the US would have both Europe selected as a region and US selected as a country – each European country would not be selected even if they are listed.

**Business Rule:** Geo focus is not a mandatory field. However for the below-mentioned countries, an assumption of the geo focus can be made when no geo focus is mentioned in the document

Country	Default Geo Focus
Canada	Canada
US	US
Bermuda	International
Bahamas	International
Guernsey	International
Isle of Man	International
Jersey	International
Cayman Islands	International
British Virgin Islands	International
Luxembourg	International
China	China
India	India
Japan	Japan
Australia	Australia
Singapore	Singapore
Liechtenstein	International
Gibraltar	International

## States (US only)

These are one of the 50 US states which are used to categorise municipal bond funds.



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## Economic Association

- **Emerging Markets**

An Emerging Markets fund invests the majority of its assets in the bonds of a group of developing countries. For the most part, these countries are in Eastern Europe, Africa, the Middle East, Latin America, the Far East and Asia. A developing country is characterized as being vulnerable to political and economic instability, having low average per-capita incomes, and as being in the process of building its industrial and commercial base.

- **Emerging Markets Local Currency**

An Emerging Markets fund investing in fixed income securities principally denominated in currencies of developing countries.

- **Developed Markets**

An equity fund investing internationally/globally where the document specifically states the fund is investing in “developed markets” or the phrase “Developed Markets” is in the fund name.

## General Attributes

- **Capital Protection Fund**

The fund offers protection of capital up to a predetermined percentage. There is no guarantee, but the fund is invested in such safe financial instruments that the chance of the investor not getting the protected amount back is extremely small.

- **Carbon Emission Trading**

The activity of buying and selling carbon credits or carbon/emission permits.

- **China A Shares**

A Shares is a class of equity shares in China. A Shares are available to Chinese investors only and are traded in Chinese Yuan.

- **Clean Energy**

Funds investing in securities of companies contributing to less carbon intensive energy production and consumption.

- **Climate Change**

Funds investing in securities of companies facilitating adaptation to the impacts of climate change.

- **Environmentally Friendly**

Funds investing in securities of companies contributing to improving the quality of the environment.

- **ESG**

Environmental, social, and corporate governance- fund invests in companies compliant with ESG criteria

- **Guaranteed Fund**

Funds that guarantee the initial value invested. The fund will have a guarantor.

- **Index Fund**

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An Index fund typically seeks to replicate the performance of an Index by investing in those same securities that compose the Index.

- **Islamic**  
Funds that are 100% Sharia compliant
- **Natural Resources**  
Funds concentrating on investments in securities of companies engaged in the exploration/development of natural resources.
- **Religiously Responsible**  
Funds investing in securities of companies that do not violate the core beliefs of a particular religion.
- **Socially Responsible**  
Funds investing in securities of companies meeting socially responsible standards.
- **Structured Funds**  
Also called formula funds. The fund is managed to obtain a specific return at the end of a set period by applying a predefined calculation based on financial market indicators or financial instruments, and also to distribute income determined in the same way. The Fund may guarantee the initial value invested plus an additional amount based on an underlying portfolio/basket of securities. The investment objective can be guaranteed by a credit institution. The actual investments of the Fund can be completely unrelated from the portfolio/basket of securities outlined in the objective.
- **Tax Managed**  
A fund in which investment earnings are constantly reinvested. Since the fund does not bring the investor any profits, the investor does not have to pay taxes on the fund's increased value
- **Precious Metals**  
Funds concentrating their investments within the precious metals sector such as gold, silver and platinum.

## Clean Energy Attributes

These are the attributes that are available for all clean energy funds:

- **Biofuels**  
Liquid transportation fuels including biodiesel and bioethanol. These can be derived from a range of biomass sources, including sugar cane, rape seed, soybean oil or cellulose. Our database excludes producers of base biomass, but includes suppliers of everything from the processing technologies and equipment, through the logistics of distribution, to manufacturers of energy systems which are specially adapted for the use of biofuels and products, and the services on which they depend.
- **Biomass & Waste**  
Generation of electricity and heat from biomass and municipal/industrial waste through incineration, gasification or anaerobic digestion. Most common feed stocks are residues from the forestry industry but specially-grown crops, such as willow or elephant grass are becoming increasingly important. In sparsely wooded areas mainly agricultural residues like straw or husks are used. Our database includes

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feedstock producers and traders, logistic companies, power generation equipment providers and energy producers.

- **Carbon Capture and Storage**

Given the very substantial energy appetites of China, India and the US, and the substantial amounts of coal and natural gas available in those countries, it is highly unlikely that they will move rapidly enough to clean and renewable energy sources. One type of technology may allow us to continue using these fuels without adding to the emissions of CO<sub>2</sub>. Carbon capture and storage technologies involve the separation of CO<sub>2</sub> from the exhaust stream from the burning of fossil fuels, and its long-term storage, either in depleted oil and gas fields, under the ocean or elsewhere.

- **Carbon Markets**

The nascent markets for carbon emission credits in Europe and elsewhere are spawning a whole infrastructure of service companies around brokerage, trading and information.

- **Efficiency: Built Environment**

This sector covers a range of technologies that reduce the use of energy in homes, retail and commercial buildings. Such technologies include advanced insulation, building components, HVAC, lighting and intelligent systems for managing power consumption, as well as the tools and services that allow companies to design and implement energy-smart buildings.

- **Efficiency: Digital Energy**

This sector covers applications of information and communications technology to improving the efficiency and intelligence of the transportation and usage of energy. Smart metering, smart grid, demand response, self-healing grids, virtual power plants and home/building automation are examples of digital energy applications.

- **Efficiency: Industry**

This sector includes technologies used to streamline and save resources in industrial processes. Process control and monitoring, sensors and software, and waste-heat recovery are crucial technologies. Also efficiency step changes in industrial equipment such as blast furnaces will be covered as well as industrial energy service companies.

- **Efficiency: Supply Side**

This sector covers technologies that result in a step-change improvement in the efficiency of generation and transmission systems. Important areas for development are motor or generator design, as well as software, sensor and control technologies. Potentially important technologies in improving transmission efficiency are high-voltage-direct-current (HVDC), high-voltage-alternating-current (HVAC) and high-temperature-superconductors (HTS).

- **Efficiency: Transportation**

This sector covers technologies that reduce the use of fuel consumption associated with all types of transportation. Key technologies include electric or hybrid vehicles, electric vehicle infrastructure, combustion efficiency technologies such as new engine designs, superchargers and fuel additives. Transportation efficiency does not include biofuels, LNG or CNG. Power storage technologies relating to electric or hybrid vehicles will remain classified under Power Storage.

- **Fuel Cells**

Many observers believe that fuel cells will lie at the heart of any post-fossil energy architecture. Although they have been around for 150 years and their performance is not in doubt, their high

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manufacturing costs and low reliability mean that they have yet to capture any mass markets. A large number of companies and research initiatives are hoping to change that over the coming decade. We draw a distinction between the hydrogen industry and the fuel cell sector: fuel cells can burn a variety of hydrocarbon fuels, and hydrogen can be used by other systems, such as internal combustion engines. There is, however, substantial crossover between the two sectors.

- **General Financial & Legal Services**

Companies in this sector are general service providers, which are not themselves part of the clean energy industry, but which serve it. We add this sector so that we can track those organizations, even though they do not belong to any particular sector of the clean energy industry.

- **Geothermal**

Geothermal power has long played a part in the energy mix of countries with obvious geothermal resources, such as Iceland and Japan. Recent advances in two areas, however, mean that geothermal energy can play an increasing role worldwide: new drilling techniques allow users to tap into resources that had been too deep to access; and new ways of extracting useful power from lower temperature geothermal fields allow productive use of resources that could not have been used economically in the past.

- **Government & NGO**

This sector is for governmental organizations, NGOs and the like which are not themselves part of the clean energy industry but which interact with it. The reason we need this sector is that we need to track the activities of these organizations, but they cannot be allocated to clean energy sectors.

- **Hydrogen**

The hydrogen sector covers everything from the production and storage of hydrogen, through its distribution and the various technologies and applications in which it can be used. Hydrogen is not, of course, a renewable fuel source - it is only a carrier of energy, in the same way electricity is not a source but a carrier of power. But if produced renewably hydrogen looks like a promising candidate to replace fossil fuels in transport as these are depleted, and governments and corporations are investing accordingly.

- **Marine**

The marine sector covers all technologies relating to extraction of energy from the sea. Possibilities include waves and tide, either via tidal barrages or tidal flow generators. Note that exploitation of marine biomass would be categorized in biomass, rather than in this sector.

- **Nuclear Power**

Nuclear provides 70% of the carbon-free electricity generated in the world today. With global energy consumption projected to increase 160% by 2050, an expanding nuclear energy industry will provide the world's economies a cost-effective solution to base load electricity generation without large new emissions of carbon dioxide.

- **Power Storage**

This sector covers technologies such as batteries, flywheels and ultra-capacitors, which can store and release energy in the form of electricity. These technologies, by decoupling generation and usage, facilitate more effective and economical matching of demand and are key enablers for any shift in many intermittent renewable and emerging energy technologies.

- **Services & Support (Clean Energy)**

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The rapid growth of the clean energy industry will require the development of a complete sector of service companies dedicated to serving the needs of technology and equipment suppliers, owners of renewable energy and biofuels assets, and so on. In this sector we put providers of information and research (such as ourselves), financial services companies, lawyers and consultants, green utilities, carbon exchanges and the like.

- **Small Hydro**

There may seem little new about hydroelectric power. Indeed at New Energy Finance we don't cover large-scale hydroelectric power projects. However, there are interesting developments in small-scale and low-head hydro power, and even very small scale hydro solutions. Hydro power is undergoing a renaissance and has a lot to contribute to the deployment of renewable energy globally.

- **Solar**

The Solar sector covers all technologies which capture energy directly from the sun. These include direct production of electricity using semiconductor-based photovoltaic (PV) materials, use of concentrated sunlight to heat fluid to drive power generation equipment (solar thermal electricity generation or STEG), and passive methods which use solar to replace fossil fuel energy, for example to heat water. The photovoltaic sector is the largest of these in terms of investment volume, while passive is the largest in terms of fuel saved and carbon dioxide emissions reduced globally. However, PV is expected to dramatically reduce costs through new technologies and increased manufacturing scale, and is expected to break into new areas of energy demand over the coming decades.

- **Wind**

Wind is the renewable technology that has had the biggest impact on our energy usage patterns over the past decade. The next decade will see continued activity, particularly in developing countries and offshore. The Wind sector includes components and subassemblies for wind turbines as well as manufacturers of turbines themselves. A big part of this sector, however, consists of the various developers, generators, utilities and engineering firms that have sprung up to exploit opportunities to build wind farms around the world.

