Morgan Stanley Global Tactical Asset Allocation Strategy

The **Morgan Stanley Global Tactical Asset Allocation (GTAA) Strategy** is a top-down global macro portfolio that seeks to identify and exploit inefficiencies between markets, regions and sectors to deliver returns in excess of a customized financial benchmark. The team seeks to capture these mispricings utilizing a combination of quantitative techniques and fundamental analysis across global asset classes including stocks, bonds, currencies and commodities.

Strategy at a Glance

Inception	1995
Investment style	Top-down multi-asset-class
Permissible asset classes	Global Equities Global Bonds Currencies Commodities
Active risk target	2–4% (customizable for separately managed accounts)
Available vehicles	Commingled mutual fund Separately managed account Insurance trust Alternative investments

Investment Philosophy

The Global Asset Allocation team applies an integrated approach to top-down macro investing across a variety of asset classes, including global stocks, bonds, currencies and commodities. Global financial markets present opportunities to potentially generate excess returns due to inefficiencies such as extrapolation of trends by investors, under/overreaction to changing dynamics, and structural inefficiencies. In addition, different regions and countries often have independent economic drivers, such as monetary policy, fiscal policy, inflation and economic growth, which give rise to uncorrelated investment opportunities. The team exploits these global market inefficiencies by investing in a broad range of highly liquid asset classes.

The investment team believes that its flexible approach to markets and asset classes enables it to respond quickly to changing capital markets environments to create a portfolio that seeks to deliver excess returns, as well as to manage downside risks in volatile markets.

Investment Process

Investment Universe

The Global Asset Allocation team's investment process follows several different steps, from establishing an investment universe to risk management of the portfolio. The investment universe for the GTAA strategy includes, but is not limited to, the following:

• 24 Developed Equity Markets;
• 22 Emerging Equity Markets;
• 24 Industry Groups;
• G10 and select emerging market currencies and bonds, and;
• commodities.

Within that universe, information is broadly organized into three categories: macroeconomic data, market data and sector/company data. The investment team then uses quantitative techniques to systematically process and organize that information into an investment framework.

Combines Fundamental Research and Quantitative Techniques with a Rigorous Risk Framework

Idea Generation
Ideas generated from:
- Macroeconomic cycle research
- Fundamental research
- Quantitative models
- Third-party sources

Idea Validation
Validate Investment ideas through combination of:
- Fundamental research
  - Macro-economic
  - Industry
  - Thematic
- Quantitative research

Investment Views
Overall assessment combining quantitative & fundamental factors of investment ideas on three dimensions -
- Valuation
- Fundamental dynamics
- Sentiment/technical

Portfolio Construction
Size position based on:
- Conviction
- Expected Profit and Loss contribution
- Risk contribution – Value at Risk (VaR) contribution

Portfolio Implementation
Implement using:
- Index futures
- Trading baskets
- Exchange traded funds (ETFs)
- Forward contracts – no single-security positions
- OTC and exchange-listed derivatives

Ongoing Risk Monitoring & Management
Ongoing Monitoring & Risk Management:
- Stress Test
- Factor Betas
- VaR
- Performance/Attribution
- Trading discipline

Source: Morgan Stanley Investment Management.
The information presented represents how the portfolio management team generally applies their investment process under normal market conditions.

Quantitative Analysis and Fundamental Research

The Global Asset Allocation team utilizes a combination of quantitative and fundamental analysis to evaluate attractive investment ideas within the strategy's investment universe. From a quantitative standpoint, relevant macroeconomic, market, and sector/company data within each asset class are systematically organized to create proprietary factor-based, quantitative models in which markets are ranked according to relative attractiveness based on model factors. These analytical outputs rank asset class markets by three metrics --valuations, dynamics, and technicals --and provide a foundation for trade idea generation.

The team conducts fundamental analysis on each asset class to generate investment ideas, and to validate and supplement the quantitative model output. As a result, fundamental factors such as the current stage of the macroeconomic cycle, policy environment, and potential regulatory shifts are weighed into the evaluation of the relative attractiveness of the asset class.

Hierarchy of Decision Making

The investment team first assesses the relative attractiveness of global asset classes including stocks, bonds, currencies and commodities. The team then determines the relative attractiveness of regions and countries with global equities and bonds. Within U.S. and European equity regions, sector and industry groups are analyzed. In addition, style investment decisions are made periodically within equities and fixed income. Finally, the relative attractiveness of the major currencies around the world is evaluated. Investments in commodities are generally pursued on an opportunistic basis.

Portfolio Construction

Our portfolio construction methodology follows a hierarchy of top-down decision-making. First, we assess the relative attractiveness of global asset classes within a risk-reward framework. Within the financial asset classes of equities and fixed income, we evaluate the relative expected returns and volatilities of regions and countries. While many Global Asset Allocation managers focus on asset class and country selection, our research shows that equity sector selection is equally important in driving returns within a global universe. As such, we utilize a sector selection process within the U.S., Europe, and emerging equity markets. Furthermore, for select equity and fixed income regions, we evaluate style tilts (e.g. value, growth, momentum, size, duration, and quality). We also evaluate the relative value of commodities and any opportunistic investments (such as high yield fixed income, EM debt and global TIPS) for inclusion in the portfolio. As a final step, we establish the relative rankings of global currencies and apply these currency investment views over the asset class and region/country/sector exposures within the portfolio.

The magnitude of an asset's relative attractiveness (to other assets) and the level of confidence in our relative return expectation are the primary drivers of an asset's exposure in the portfolio. A high-conviction view will likely generate a large overweight position, whereas a moderate relative ranking would generate a neutral to slight overweight position.

Implementation

The GTAA strategy utilizes a range of active and passive instruments to gain exposure to the different asset classes within its investment universe. These instruments include, but are not limited to passive and active baskets of liquid securities, ETFs, futures, forwards, swaps, derivatives, cash securities and internal actively managed funds.

Risk Management

The lead portfolio manager, Cyril Moulle-Berteaux, is responsible for making investment decisions for Global

Tactical Asset Allocation mandates and is ultimately responsible for risk management oversight. Risk management functions are separated from trading functions, as all trades are executed by traders. All trading orders are authorized by portfolio managers and are time-stamped by the trader or the trading system.

While the portfolio managers are ultimately responsible for risk management oversight within the strategy, they are supported by the independent Global Risk and Analysis group, which monitors overall risk levels and by the compliance team and works closely with the investment team to provide a summary of any investment restrictions and guidelines. In addition, compliance works in conjunction with operations, client service, internal audit and risk to monitor and manage controls.

The strategy is also monitored using two separate risk systems: Barclays POINT and risk functionality in Bloomberg. The POINT system provides regular risk reports, covering VaR, conditional VaR, tracking error, standard deviation, and beta. The risk system in Bloomberg provides further analysis on the component (asset class, geographic region, style) contribution to tracking error.

Competitive Advantages

The Global High Yield strategy utilizes a bottom-up, credit-intensive approach.

- **Consistent and integrated approach:** The team's top-down methodology uses a combination of quantitative and fundamental analysis to provide a holistic view of the global capital markets. By integrating research efforts across asset classes, the team believes it has developed a unique approach that enables it to consistently generate potential excess returns in a wide variety of investments.
- **Macro Orientation:** The strategy's top-down philosophy focuses on taking advantage of large macro themes, such as economic cycles and credit quality (both corporate and sovereign). In an increasingly globalized and interconnected world, understanding the relationships between different markets and asset classes has become increasingly critical to investment success.
- **Broad investment universe:** The strategy provides investors the benefit of one-stop access to various opportunities among equities, bonds, currencies and commodities around the world.
- **Strategic Partnerships:** The Global Asset Allocation team works closely with its strategic partners, giving them full access to our investment and research capabilities. This is in addition to managing money for multiple corporate accounts, pension funds, endowment funds, mutual funds, and a hedge fund. The team believes that these relationships improve the investment capabilities of both our partners and our firm through joint knowledge transfer.
- **Experienced management:** The GTAA strategy, launched in 1995, is led by an accomplished management team with 100 years of combined experience.

Investment Team

Led by Cyril Moulle-Berteaux, the strategy's investment team consists of seasoned investment professionals with diversity of background and experience. In addition to Morgan Stanley's vast network of sector, regional and asset class specialists, the team leverages the Firm's strategists, economists and industry analysts to enhance its own research and propriety models.

Cyril Moulle-Berteaux
Cyril Moulle-Berteaux is head of the Global Asset Allocation team at Morgan Stanley Investment Management. He re-joined the firm in 2011 and has 21 years of financial industry experience. Before returning to Morgan Stanley, Cyril was a founding partner and portfolio manager at Traxis Partners, a multi-strategy hedge fund firm. At Traxis Partners, Cyril managed absolute-return portfolios and was responsible for running the firm's quantitative and fundamental research effort. Prior to co-founding Traxis Partners, in 2003, he was a managing director at MSIM, initially running Asset Allocation Research and ultimately heading the Global Asset Allocation team. Previously, Cyril was an associate at Bankers Trust and worked there from 1991 to 1995 initially in corporate finance and eventually as a derivatives trader in the emerging markets group. He received a B.A. in economics from Harvard University.

Risk Considerations

There is no assurance that a portfolio will achieve its investment objective. Portfolios are subject to market risk, which is the possibility that the market values of securities owned by the portfolio will decline. Accordingly, you can lose money investing in this portfolio. Please be aware that this portfolio may be subject to certain additional risks. **Equity**. In general equity securities' values also fluctuate in response to activities specific to a company. **Foreign and emerging markets**. Investments in foreign markets entail special risks such as currency, political, economic, and market risks. The risks of investing in emerging-market countries are greater than the risks generally associated with foreign investments. **Derivative instruments**. Derivatives can be illiquid, may disproportionately increase losses and may have a potentially large negative impact on the fund's performance. **Fixed income securities**. Subject to credit and interest-rate risk. Credit risk refers to the ability of an issuer to make timely payments of interest and principal. Interest-rate risk refers to fluctuations in the value of a fixed-income security resulting from changes in the general level of interest rates. In a declining interest-rate environment, the portfolio may generate less income. In a rising interest-rate environment, bond prices fall. **Commodity risk**. The Strategy's investment exposure to the commodities markets may subject the Fund to greater volatility than investments in traditional securities, such as stocks and bonds. The commodities markets may fluctuate widely based on a variety of factors. These include changes in overall market movements, domestic and foreign political and economic events and policies, war, acts of terrorism, changes in domestic or foreign interest rates and/or investor expectations concerning interest rates, domestic and foreign inflation rates and/or investor expectations concerning inflation rates and investment and trading activities of mutual funds, hedge funds and commodities funds. Because the Strategy's performance is linked to the performance of highly volatile commodities, investors should consider purchasing shares of the Strategy only as part of an overall diversified portfolio and should be willing to assume the risks of potentially significant fluctuations in the value of Strategy shares. **Commodity-Linked Notes**. The portfolio's investments in commodity-linked notes involve substantial risks, including risk of loss of a significant portion of their principal value. In addition to commodity risk, they may be subject to additional special risks, such as risk of loss of interest and principal, lack of secondary market and risk of greater volatility, that do not affect traditional equity and debt securities. **Futures**. The use of futures includes the possible imperfect correlation between the price of futures contracts and movements in the prices of the securities being hedged, and the possible absence of a liquid secondary market for any particular instrument. **Currency**. The currency market is highly volatile. Prices in these markets are influenced by, among other things, changing supply and demand for a particular currency; trade; fiscal, money and domestic or foreign exchange control programs and policies; and changes in domestic and foreign interest rates.

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