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Global Macro Quantamental framework: Scenarios and risk map

From uncertainty to opportunity in asset allocation

Overview

In an era where data abundance coexists with heightened uncertainty, investment decisions require more than intuition or models — they demand synthesis. Santander Asset Management's (SAM) Quantamental framework provides that synthesis, bridging systematic analysis and macroeconomic insight to turn uncertainty into opportunity.

This white paper is part of a series that examines how SAM's Quantamental framework operationalizes our Global Macro investment philosophy to asset allocation. Each paper focuses on a specific dimension of our process, showing how economic analysis, systematic modeling, and risk awareness converge in portfolio decision-making.

In this first installment, we discuss how macroeconomic scenarios, and our risk mapping framework connect to the broader investment process. By linking macro understanding with structured scenario design, we illustrate how the Global Asset Allocation (GAA) team transforms global insights into disciplined, forward-looking asset allocation decisions.

A Quantamental process guided by a Global Macro philosophy

The GAA team within SAM combines deep economic insight with a comprehensive understanding of financial markets to deliver investment solutions ranging from strategic recommendations and model portfolios to fully customized mandates to internal and external clients. Its strength lies in a disciplined and methodical framework that integrates both quantitative and qualitative perspectives, ensuring analytical depth, consistency, and intellectual rigor. Through this structured process, the team maintains a continuous and coherent view of global markets — a process not dependent on individual discretion but built on collective expertise and systematic decision-making.

Our **investment philosophy** to asset allocation is rooted in **Global Macro** perspective that guides how we interpret economies, markets and their interconnections through a forward-looking lens. Global macro aims to profit from broad market moves by understanding economic growth and inflation trends, divergences across regions and sectors, policy shifts, and their impact on market pricing. While macroeconomic scenarios, the stage of the economic cycle and growth momentum form the cornerstone of our philosophy, the approach also gives weight to price dynamics, income potential, market interlinkages, and investor sentiment in shaping a comprehensive assessment of cross-asset attractiveness. This philosophy provides the foundation for how we construct and interpret our macro scenarios and translate them into our risk mapping process — the practical bridge between macro understanding and investment decisions.

Our approach operationalizes our **Global Macro philosophy** through a disciplined quantamental framework that integrates systematic modeling with a broader fundamental investment process.



Quantitative methods provide broad market reach, internal coherence, and an objective lens through which we interpret fundamental data and price action. Fundamental and qualitative analysis adds informational depth, context, and interpretation — helping us understand not only what the models indicate, but also why those signals may or may not hold under specific market regimes or unexpected shocks.

This deep understanding of how models behave allows the team to adapt frameworks to new realities and recognize when model-driven signals require discretion or recalibration. By combining systematic analysis with informed macro interpretation, the GAA process achieves greater consistency and robustness while mitigating the behavioral biases common in traditional discretionary investing.

From macro thinking to scenarios

Scenario analysis lies at the core of our Global Asset Allocation process. It is the framework through which we interpret the global economy, assess uncertainty, and translate macro understanding into investment conviction. Scenarios are our representation of how we understand the world. Rather than producing point forecasts or model-based estimates, we focus on defining the economic environment in which we operate — identifying the most probable macroeconomic scenario, the stage of the economic cycle, the prevailing market regime, and the alternative states of the world that could materialize if the central case does not realize. The purpose of this framework is to determine directionality, define context, and delineate the range of risks that could challenge our baseline view.

Scenario design is a joint effort between our macro, investment strategy and Quantitative Research teams, combining top-down economic analysis with quantitative modeling. We use both approaches to provide structure and discipline to what is inherently a complex and uncertain process. The analysis incorporates a broad set of macro variables — growth, inflation, output gaps, operating surplus generation, monetary and fiscal policy, public and private balance sheets, financial conditions, asset valuations, and risk environment — as well as topical indicators such as trade policy, regulation, and market sentiment. Quantitative inputs, including models of regime identification, growth momentum, valuation, and market dislocation provide an unbiased foundation to translate a complex reality into a set of essential axes for investment assessment.

Our framework produces a central scenario — the most probable outcome, where our conviction is highest — and alternative scenarios, which represent different “states of the world” that could emerge if key risks materialize or if our central assumptions are challenged by the evolution of events. The latter are particularly relevant in periods of elevated uncertainty. Each scenario is assigned a probability that reflects both analytical evidence and expert judgment, ensuring that the exercise captures not only data-driven assessments but also the qualitative dimension of uncertainty.

Currently, our central scenario — Soft Landing with Delayed Disinflation — reflects a temporary drag on growth due to trade tariffs, combined with a slower disinflation process also influenced by those higher duties. As visibility on the transmission of tariffs has improved, we have increased its probability, reflecting greater conviction that the growth impact will be modest and short-lived. At the same time, we monitor several key risks: growth risks (either stronger-than-expected resilience or a deeper slowdown), reflation risks (should disinflation stall and price dynamics reaccelerate), and fiscal balance risks (given high structural deficits and elevated interest rates) among others. These scenarios guide our asset allocation strategy across asset classes, regions, and sectors, as well as our relative-value positioning along yield curves. They also inform our risk management decisions, helping us determine which exposures to maintain, adjust or hedge within portfolio strategies.

Scenario probabilities reflect GAA's assessment as of January 2026 are subject to change as macro and market conditions evolve.



Investment scenarios: January/06

Source: Santander Asset Management

The GAA's scenario framework combines quantitative analysis and macro judgment to assess the global outlook and define the environment in which investment decisions are made.

Each scenario captures a distinct balance between growth, inflation, and policy dynamics, helping us translate complex global developments into a structured view of risks and opportunities.



Our base case — **Expansion with Policy Support and Earnings Broadening**— remains the most probable path (75%), supported by policy flexibility, resilient private-sector balance sheets, and a gradual broadening of earnings across sectors and regions. This scenario implies is consistent with constructive risk assets performance and contained volatility.

Alternative scenarios — **Policy-led Reflation with Elevated U.S. Inflation Tolerance, Cyclical Growth Soft Patch, and a Geopolitical Shock Triggering Recession**— capture the main asymmetries around inflation persistence, cyclical momentum, and geopolitical risk. Together, they frame the potential macro regimes that could emerge over the coming quarters.

This framework is not designed to forecast precise outcomes, but rather to contextualize uncertainty and anchor our investment views. By assigning probabilities and continuously reassessing their evolution, we maintain a disciplined and forward-looking approach to portfolio strategy and risk management.

The risk map – Translating scenarios into actionable risk awareness

The GAA's Risk Map is designed to identify and position the most relevant global risks according to their probability of occurrence and potential market impact. Some risks are significant enough to alter the central macroeconomic scenario, while others may influence market dynamics without changing the underlying outlook. The map therefore serves both defensive and opportunistic purposes: it helps avoid excessive exposure to vulnerabilities while highlighting areas where market dislocations or mispriced risks can create value.

Updated monthly as part of the GAA process — and monitored continuously — the Risk Map combines quantitative indicators with qualitative judgment. It integrates data from leading macroeconomic variables, financial spreads, volatility measures, event-based tracking, and geopolitical and policy uncertainty indices. Risks are grouped into three main categories — macroeconomic, financial, and geopolitical— and are evaluated according to their probability, their capacity to disrupt the central scenario, and their estimated impact on fundamentals and valuations. This structured approach captures both cyclical and structural sources of uncertainty, quantifying their relevance across asset classes.



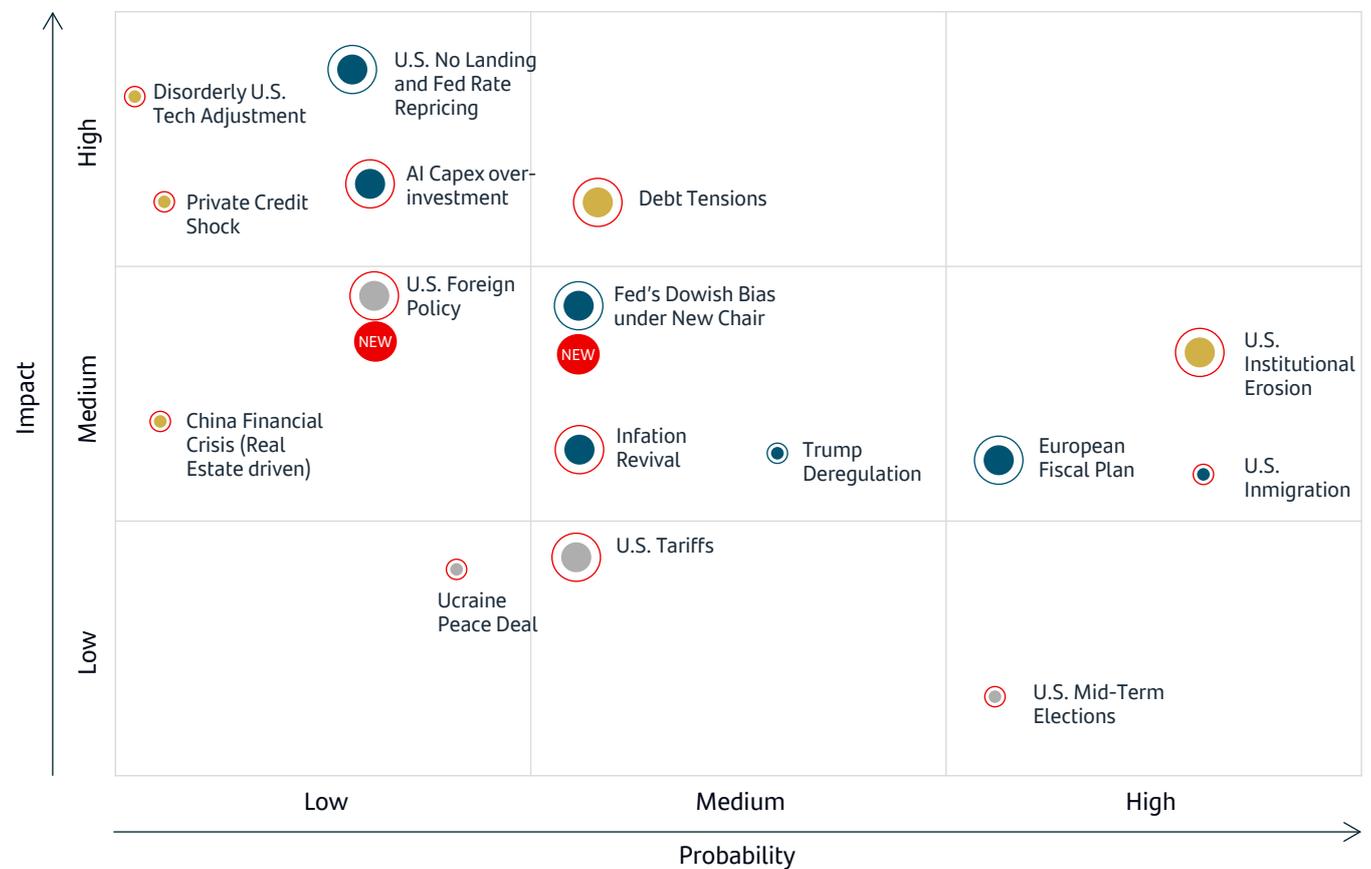
The Risk Map plays a central role in our asset allocation and portfolio construction process. It informs tactical and relative-value strategies across fixed income, equities, currencies, and commodities, while guiding diversification and hedging decisions. It also supports communication with stakeholders and clients, offering a consistent and forward-looking view of the key risks shaping the investment landscape.

For illustration, one of the current areas of focus in our framework relates to debt tensions and fiscal sustainability in developed markets. High sovereign debt-to-GDP ratios, structurally large deficits, and a persistently higher interest-rate environment have increased vulnerabilities across long-dated sovereign curves —particularly in the U.S., Japan, the U.K., and France. This raises the risk of renewed market pressure on fiscal credibility, steeper yield curves, and potential tolerance for higher inflation under fiscal dominance dynamics. It also heightens the likelihood of fiscal consolidation efforts and reinforces the role of gold and other hard assets as preferred hedges in multi-asset portfolios.

GAA Risk map Assessing the probability and market impact of key global risks

Source: Santander Asset Allocation

- ⊖ Negative geopolitical risk ⊕ Negative financial risk ⊖ Negative macroeconomic risk ⊖ ⊕ Material risk to the scenario
- ⊕ Positive geopolitical risk ⊕ Positive financial risk ⊕ Positive macroeconomic risk ⊖ ⊕ Non-material risk to the scenario



The GAA Risk Map summarizes our assessment of the key macroeconomic, financial, and geopolitical risks shaping the global outlook. Each risk is positioned according to its probability and estimated market impact, highlighting those that could challenge or reinforce our central scenario.



Conclusion

Macro scenarios and risk mapping: From uncertainty to opportunity

Our **Global Macro philosophy** provides the foundation for a disciplined, coherent, and adaptable investment process. It focuses on understanding how growth, inflation, and policy dynamics shape markets—and how this macro context can be translated into actionable investment decisions. This philosophy guides a quantamental framework that combines the objectivity and structure of quantitative models with the informational richness and contextual understanding of fundamental analysis. Together, these elements create a process that is both rigorous and flexible, capable of functioning effectively even under conditions of elevated uncertainty.

By integrating the science of systematic modeling with the art of macroeconomic interpretation, the GAA process blends data-driven discipline with human insight. This synthesis allows us to reduce bias, form stronger convictions, and enhance consistency across our investment assessments. In practice, this philosophy is expressed through a structured scenario framework that defines a **central case**—our most probable and coherent representation of the global economy and markets—alongside **alternative scenarios** that capture the asymmetries and potential deviations from that baseline. These scenarios, together with the **Risk Map**, translate our macro understanding into a tangible assessment of opportunities and vulnerabilities across markets. The continuous interaction between scenarios, the Risk Map, and asset allocation keeps the framework dynamic and self-correcting, ensuring that our views capture and adapt to shifts in the cycle rather than react to it.

Ultimately, our philosophy is about reducing uncertainty and defining the contours of the investment landscape. We invest with the awareness that alternative developments may unfold and with the readiness to adapt portfolios or hedge risks as conditions evolve. Our objective is to transform complexity into clarity and uncertainty into opportunity—through a disciplined, coherent, and forward-looking Global Macro approach.

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