SSGA Market Regime Indicator Update

Strategy Update
Multi-Asset Solutions

June 2022

The Market Regime Indicator (MRI) is a proprietary macro indicator developed by the SSGA Investment Solutions Group (ISG). Based on forward-looking market information, it is designed to identify the level of Risk aversion/appetite in the market. The factors utilized to generate the signal include implied equity and currency volatility as well as spreads on fixed income.

The Investment Solutions Group uses the MRI as one of the inputs into its global tactical asset-allocation decision-making process.

The MRI is the result of over twelve months of rigorous testing by the Investment Solutions Group. The test results showed that the MRI tracked historical market stress events and trading strategies based on the level of outperformance generated by the indicator. By design, the MRI signal varies between 0% and 100%. On this scale, a high level is often characterised by market tensions, such as a significant increase in volatility and a drop in Risky asset prices.

We Have Identified Five Different Market Regimes:

Crisis (level close to 100%) — Extreme Risk aversion ('Fear/Panic')

High Risk Aversion Aversion towards Risky assets

Normal Characterised by neutral market sentiment

Low Risk Aversion (level below the average) — Appetite towards Risky assets

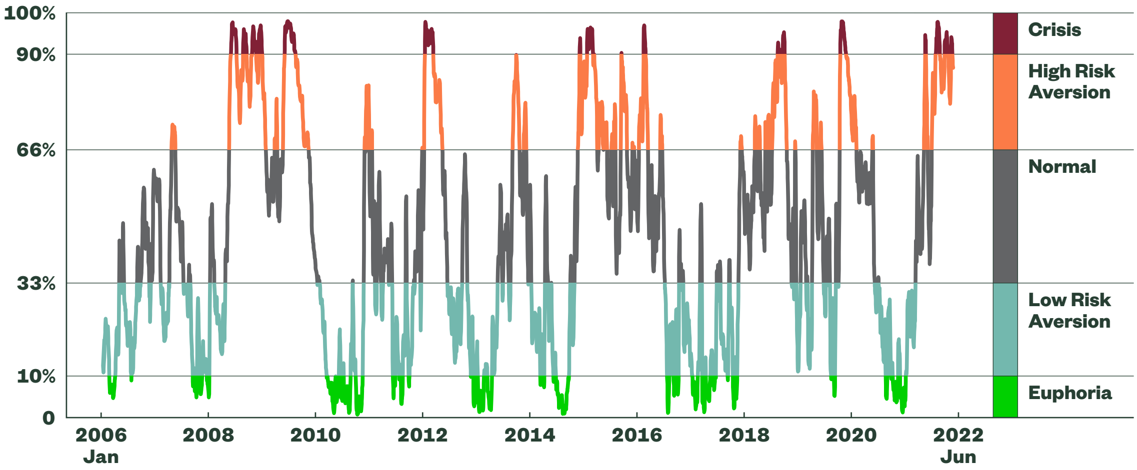
Euphoria (level close to 0%) — Extreme Risk appetite ('Greed/Complacency')

Figure 1 **Market Regime Indicator**

Market Regime Indicator	31/03/2022	30/06/2022
Average — Equity Implied Volatility	High	High
Average — Risky Debt Spreads	High	Crisis
Average — Currency Implied Volatility	Crisis	Crisis
MRI Level	High	High

Source: SSGA Investment Solutions Group, 30 June 2022.

Figure 2 **Market Regime Indicator (MRI) Evolution**



Source: State Street Global Advisors ISG, as of June 30, 2022. The data displayed is not indicative of the past or future performance of any SSGA product. The portion of results through March 31, 2011 represents a back-test of the MRI model, which means that those results were achieved by means of the retroactive application of the model which was developed with the benefit of hindsight. Data displayed beyond this date is not backtested, but is still generated by the model referenced. All data shown above does not represent the results of actual trading, and in fact, actual results could differ substantially, and there is the potential for loss as well as profit. The Market Regime Indicator (MRI) is a quantitative framework that attempts to identify the current market risk environment based on forward-looking market indicators. We believe the factors used, equity implied volatility, currency pairs implied volatility and bond spreads, are good indicators of the current risk environment as they are responsive to real-time market impacts and in theory should include all current and forward views of those markets. These factors are combined to create a single measure and used to identify one of five risk regimes: Euphoria, Low Risk, Normal, High Risk, and Crisis. A slight calculation change was made as of June 28, 2019.

Market Commentary

The second quarter of 2022 continued the theme of much of the first, as the MRI remained at elevated levels throughout. The signal entered April in High Risk regime and although it did initially move marginally lower the end of the month saw a reversal and a move into Crisis regime. A move lower into High Risk regime followed in late May, but once again this was not sustained and mid-June saw the MRI move into Crisis regime. In late June the signal moved lower into High Risk regime where is closed the quarter. The MRI has now been in either Crisis or High Risk regime since mid-January, and the current period is now the longest the MRI has remained in the highest two of the five different market regimes since the GFC, so undoubtably an extreme environment.

The Implied Volatility on Equities factor began the second quarter in High Risk regime and initially declined moving into Normal regime mid-month. By late April however, the factor had reversed and entered Crisis regime as investors grappled with numerous risks including the a new Covid outbreak in China, inflationary pressures, the continued conflict in the Ukraine and concerns that central banks hiking cycles could push economies into recession. May began in similar fashion as investor concerns regarding the global growth outlook continued to increase. Equities declined with the S&P 500 registering seven weekly decreases for the first time since the dotcom crisis in 2001. Late in the month there were some signs of stabilization which saw the factor move into High Risk regime. This downward trend continued in early June as the Implied Volatility on Equities factor moved into Normal regime, however headlines that suggested the FOMC may surprise with a 75bp hike ensured any relative calm did not last, with the S&P 500 entering bear market territory mid-month and the factor moving back higher into High Risk regime where it closed June.

The Implied Volatility on Currencies factor entered the quarter in Crisis regime and remained elevated for the entire period. April saw the factor remain firmly in Crisis regime for the whole month as uncertainty regarding rate hikes kept volatility high. During the month the yen depreciated for 13 straight days as the Bank of Japan (BOJ) reiterated its commitment to defend its bond yield cap of 0.25% with unlimited buying, in contrast to the global move in a more hawkish direction, while the French election added to euro volatility. May again saw the factor largely remain in crisis regime, only moving to High Risk on the last day of the month. This move was short lived however, and the factor swiftly moved back to Crisis regime for the remainder of June. The month saw some significant moves as currency markets continued to be rocked by monetary policy tightening, including the Federal Reserve's 75bp increase, its biggest since 1995, and the Swiss National Bank's surprise decision to hike rates by 50 basis points. During the month the Japanese yen hit a 24 year low as the BOJ stuck to loose monetary policy, while the dollar index surged to its highest level since 2002.

The Risky Debt Spread factor entered the period in High Risk regime, moving higher into Crisis regime in late April. The factor remained in Crisis regime for much of the rest of the quarter, other than a brief period in High Risk in early June. This was reflective of a very difficult quarter for both High Yield and Emerging market debt. The Bloomberg Global High Yield Corporate Bond index hit its widest level since July 2020, while in the US, spreads widened by 2.44%. Emerging market debt meanwhile experienced another sharp correction in Q2 2022, mostly against a challenging macro backdrop for EM assets, with investors' concerns shifting from the war in Ukraine to stagflation. Over the course of Q2 2022, hard currency outflows were -$14.4bn and local currency outflows amounted to -$18.9bn, while total outflows this year are the most severe in 17 years (Source: JP Morgan).

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ID1129925-4708815.4.2.GBL.RTL 0722
Exp. Date: 31/07/2023