αGST Management, LLC

Model Key

Disclaimer

This document may not be an exhaustive list of all the models we apply in our strategies. In addition, this document may contain unintended errors. GST Management, LLC makes no guarantee of its completeness or accuracy. GST Management, LLC bears no responsibility for investment decisions made based on this document. This document is intended as general reference material to educate institutional investors as to how the index algorithms produce investment exposures and performance.

Overview

This key describes the models that are used to generate the daily ETF and cash exposures for the GSTCAP Reference Point strategy indices. These products index active systematic equity strategies designed to beat underlying benchmarks. They are indexed to demonstrate effectiveness and provide transparency to our clients.

The models we apply focus on sources of market risk and are probability driven. We generate return distributions and test hypothesis and observe data and form hypothesis. Models are tested out of sample to determine effectiveness.

Definitions:

Risk seeking state: this is a market state characterized by investors willingness to take equity market exposure at higher prices.

Defensive state: this is a market state characterized by investors aversion to equity market risk. Investors have preferences for safe-have assets and sell equities at lower prices in this state.

CL stands for critical level. These are thresholds that our algorithms use to change equity investment exposure over time.

Long Term Models:

The long term models are designed to avoid large drawdowns. They seek to provide lower average drawdown than benchmarks that provide similar investment exposure.

Equity Risk Preference Model (ERP)

Description:

The model is designed to capture shifts in investor preferences that signal long term directional price movements in equity market ETFs listed on a U.S. exchanges. We focus on the transition periods between risk seeking and defensive market states to determine portfolio positioning.

The model generates trading signals when market participants materially reprice equity exchange traded funds from higher price levels to lower price levels and vice versa. A defensive state is identified when market participants reprice risk lower and a risk seeking state is identified when market participants reprice risk higher.

The model calculates proprietary daily scores by taking the difference between the price at day t and a critical price that is derived from a moving average composite price. A defensive state is identified when the price at day t falls below the critical price. In this case, equity exposure is moved to a non-interest bearing cash account or, if shorting is permitted, to a combined short equity, long cash position. A risk seeking state is identified when the price at day t rises above the critical price for a sustained period. In this case, cash or a combination short equity, long cash position, is removed and an equity position is taken.

The specific techniques and algorithms used to calculate the model are proprietary and not disclosed.

Model horizon: while the model horizon is scaled to capture long- term behavior, it does not have a fixed horizon. In addition, exchange traded fund exposure can, at times, change from day to day if there is no discernable investor price preference by market participants.

Credit Risk Preference Model (CRP)

Description:

The model is designed to capture shifts in investor preferences for U.S. credit market risk. We find that credit market behavior can signal future long term directional price movements in equity market ETFs listed on U.S. exchanges. We focus on the transition periods between credit risk seeking and defensive market states to determine portfolio positioning.

The model generates trading signals when market participants materially reprice the iShares iBOXX $ High Yield Corporate Bond ETF from higher price levels to lower price levels and vice versa. A defensive state is identified when market participants reprice credit risk lower and a risk seeking state is identified when market participants reprice credit risk higher. The model calculates proprietary daily scores by taking the difference between the ETF's price at day t and a critical price that is derived from a moving average composite price. A defensive state is identified when the price at day t falls below the critical price. In this case, equity exposure is moved to a non-interest bearing cash account or, if shorting is permitted, to a combination short equity, long cash position. A risk seeking state is identified when the price at day t rises above the critical price for a sustained period. In this case, cash or a combination short equity long cash position, is removed and an equity position is taken.

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Medium and Short-Term Models:

Short and medium term models are designed to generate alpha. They reverse positioning of long term models. The model horizons range from 5 to 30 trading days.

Elevated Volatility Model (EV)

Portfolio positioning: removes equity market exposure
Model horizon: variable, short term-medium term

This model removes equity market exposure when forecast equity market volatility exceeds an extreme, high, threshold level. The model's roots lie in the fact that (1) most models work sub-optimally when market volatility is too high and (2) extreme volatility is associated with negative equity market returns. We calculate standardized equity market option volatility scores each day and remove equity market exposure when that score exceeds a critical value.

Investor Exuberance Model (IE)

Portfolio positioning: removes equity market exposure
Model horizon: greater than or equal to 15 days

This model measures extreme exchange traded fund buying activity at higher prices for prolonged periods of time that has an exceptionally low likelihood of continuing. The model calculates a standardized score based on all historical ERP model scores to date each day and a dynamic upper bound threshold that is a fraction of 1% of all historical values to date. The model is only active when either the ERP or CRP models signal a risk seeking state. Equity exchange trade fund exposure is removed when a standardized score exceed a threshold.

Investor Panic Model (IP)

Portfolio positioning: adds equity market exposure
Model horizon: greater than or equal to 30 days

This model measures extreme exchange traded fund selling activity at lower and lower prices for prolonged periods of time that has an exceptionally low probability of continuing. The model calculates a standardized score based on ERP model scores each day and a dynamic lower bound threshold that is a fraction of 1% of all historical values to date. The model is only active when either the ERP or CRP models signal a defensive state. Equity exchange trade fund exposure is added, reversing current positioning, when the scores fall beneath the threshold.

Equity Accumulation Model (EA)

Portfolio positioning: adds equity market exposure
Model horizon: greater than or equal to 6 days

The model is designed to add equity ETF exposure more quickly than the ERP and CRP models when investors are moving from a defensive state to a risk seeking state. The model calculates equity market option volatility scores each day and adds equity ETF exposure when the current score moves below a critical level from recent, higher levels.

Selling Exhaustion Model (SE)

Portfolio positioning: adds equity market exposure
Model horizon: greater than or equal to 5 days

The model is designed to capture equity market reversals in severe down trending markets in defensive investor states. It adds equity ETF exposure when it is probable that the target ETF has reached a short-term price bottom in a long term down trend. The model is activated when intense, indiscriminate selling in stressed, downward trending equity market regime reaches a critical level. The model is activated when the ERP or CRP models signal a defensive investor state.

FOMO Model (FOMO)

Portfolio positioning: adds equity market exposure
Model horizon: greater than or equal to 6 days

The model is designed to capture equity market reversals in severe down trending markets in defensive investor states. It adds equity market exposure when it is probable that the target ETF has reached a short-term price bottom in a long term down trend. The model predicts higher short term equity ETF prices when investors observe strong short term equity market appreciation in a stressed, downward trending market. The model is activated when the ERP or CRP models signal a defensive investor state.

Flow Model (FM)

Portfolio positioning: adds equity market exposure
Model horizon: greater than or equal to 6 days

This model is only used in the U.S. Large Cap Strategy or the U.S. Large Cap Sub Strategy. This model is activated when either the ERP or CRP models signal a defensive investor state. It adds equity market exposure in stressed market conditions when flows increase relative to flows over a recent short term window.