

Index Overview

GS Momentum Builder® Focus Index

Strategy Overview

The Goldman Sachs Momentum Builder® Focus ER Index ("Index"):

- Measures the performance of a dynamically rebalanced synthetic portfolio comprised of a Base Index and non-interest-bearing positions, over a deduction of 0.65% per annum (accruing daily) applied to the entire synthetic portfolio.
- Provides potential exposure to futures-based indices including: focus US equities, other developed market equities, developed market fixed income, emerging market equities, and commodities.
- Seeks to provide exposure to nine underlying indices and cash using a methodology developed by Goldman Sachs & Co. LLC (Index Sponsor).

Index Overview

Ticker:	GSMBFC5
RIC:	.GSMBFC5
Index Sponsor:	Goldman Sachs & Co. LLC
Currency:	USD
Number of Underliers:	max. 10
Volatility Target:	5.00%
Deduction Rate:	0.65% per annum (calculated on an excess return basis)
Index Calculation Agent:	Solactive AG
Index Base Date:	January 6, 2020
Launch Date:	January 12, 2021

"We are providing to you this reference to the Solactive AG website (<https://www.solactive.com/indices/?index=DE000SLOBNJ6>). This URL is a textual reference only and the information on the Solactive AG website is not incorporated by reference into, or a part of, any InspereX LLC materials. InspereX LLC disclaims all responsibility for the information on the Solactive AG website. InspereX LLC has not endorsed, approved or reviewed the information on the Solactive AG website. Solactive AG serves as the calculation agent for the GS Momentum Builder® Focus ER Index. Goldman Sachs & Co. LLC is the sponsor of the GS Momentum Builder® Focus ER Index. Securities offered through InspereX LLC, Member FINRA/SIPC. InspereX LLC is not affiliated with Solactive AG or Goldman Sachs & Co. LLC."

Source: The strategy and rebalancing process are further described in the full rulebook available at <https://www.solactive.com/indices/?se=1&index=DE000SLOBNJ6>.

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Methodology

The Base Index is determined by nine underlying indices across the five asset classes and a “return-based money market position” using a return-maximization algorithm that seeks to capture the highest historical return by selecting from a universe of eligible underlying assets, subject to the constraints on minimum and maximum weights (including 20% minimum weight on focused US equities asset class) and volatility.

The Volatility-Controlled Index is determined by testing the Base Index (for which the levels are calculated following deductions of federal funds rate) for volatility daily and may deleverage from the Base Index into a non-interest bearing “deleverage cash position” as frequently as daily if the realized volatility of the Base Index (using the higher of two measures of exponentially-weighted moving volatility with different “decay factors” (reflecting the relative weight of more recent versus older data) exceeds the volatility cap.

A Top-Level Index is determined by applying a momentum risk control adjustment feature that may further deleverage the portfolio into a non-interest bearing “momentum risk control cash position” as frequently as daily if the Volatility-Controlled Index has demonstrated negative price momentum.

Volatility Control Feature is applied in two levels across the portfolio before the momentum risk control adjustment feature is triggered (if applicable):

- **Target volatility: 5%.** It is measured daily and acts as a constraint (based on the annualized historical realized volatility) of each return-maximized daily target portfolio, which limit may be relaxed by increments of 0.50%, up to 10%, to the extent that no combination of target weights satisfies the pre-defined weight and volatility constraints.
- **Volatility cap: 5%.** It is measured daily following the application of the volatility-and weight-constrained return-maximization algorithm. The index is rebalanced from the base index into the deleverage cash position to the extent that the annualized historical realized volatility exceeds the volatility cap.

The Goldman Sachs Momentum Focus Index is calculated on an excess return basis over the return on the federal funds rate, and the index performance reduced by a deduction rate of 0.65% per annum (accruing daily). The weighted return of the indices included in the index must outperform the product of the return on the federal funds rate multiplied by the combined weight of indices in the index plus 0.65% per annum (accruing daily) for the index level to increase.

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Index Rebalancing

Step 1 On each index business day, the algorithm tests the returns of possible portfolio combinations of the underlying assets (comprised of the 9 underlying indices and the return-based money market position) and selects the portfolio combination with the highest historical return over each look-back period (the prior nine months, six months and three months).

- For each look-back period (the prior nine months, six months, and three months), the algorithm considers only those portfolios that have a realized volatility of 5% or less for such look-back period (the 5% volatility constraint may be successively relaxed by increments of 0.50%, up to 10%, to the extent that no combination of target weights satisfies the pre-defined weight and volatility constraints) and for which the underlying asset and asset class weights meet the constraints on minimum and maximum weights.

Step 2 Average the weights of each underlying asset across the 3 return-maximized, weight- and volatility-constrained, portfolios chosen in step 1 (one portfolio for each of the 3 look-back periods) to determine the target weight of such underlying asset for that day.

Step 3 Average the target weights of each resulting underlying asset weight (averaged over the targets corresponding to the three look-back periods) over the weight averaging period which is comprised of such day and each of the prior 9 index business days to determine the daily weight of such underlying asset, effective after the close of business on that day.

Step 4 On a daily basis, monitor the realized volatility of the resulting base index (which levels are calculated following deductions at the federal funds rate) using the higher of two measures of exponentially-weighted moving volatility based on different “decay factors” (reflecting the relative weight of more recent versus older data). If this volatility exceeds 5%, a pro-rata portion of the underlying assets is allocated to a non-interest bearing deleverage cash position (the resulting interim index, the volatility-controlled index).

Step 5 On a daily basis, monitor the price momentum of the volatility-controlled index resulting from step 4. The index will allocate to the volatility-controlled index based on the weighted percentage of the number of index business days over a period of 21 index business days during which the volatility-controlled index level equals or exceeds its level on the 100th index business day prior, with a value of 1 assigned to days for which the condition is satisfied and a value of 0.25 assigned to days for which the condition is not satisfied. Any portion of the index not allocated to the volatility-controlled index will be allocated to a non-interest-bearing momentum risk control cash position (the resulting index, the top-level index).

Index Composition

Asset Class	Name	Ticker	Asset Class Min- Max Weight	Underlier Min- Max Weight
Focused US Equities	US Equity Futures Rolling Strategy Index	FRSIUSE	20-50%	0-30%
	US Technology Equity Futures Rolling Strategy Series Q.Total Return Index	GSISNQET		0-30%
Other Developed Equities	European Equity Futures Rolling Strategy Index	FRSIEUE	0-50%	0-30%
	Japanese Equity Futures Rolling Strategy Index	FRSIJPE		0-30%
Fixed Income	US Government Bond Futures Rolling Strategy Index	FRSIUSB	0-80%	0-60%
	European Government Bond Futures Rolling Strategy Index	FRSIEUB		0-60%
	Japanese Government Bond Futures Rolling Strategy Index	FRSIJPB		0-60%
Emerging Market Equity	Emerging Market Equity Futures Rolling Strategy Index	FRSIEME	0-20%	0-20%
Commodities	Bloomberg Gold Subindex Total Return	BCOMGCTR	0-25%	0-25%
Cash Equivalent	Money Market Position	N/A	0-80%	0-80%

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