

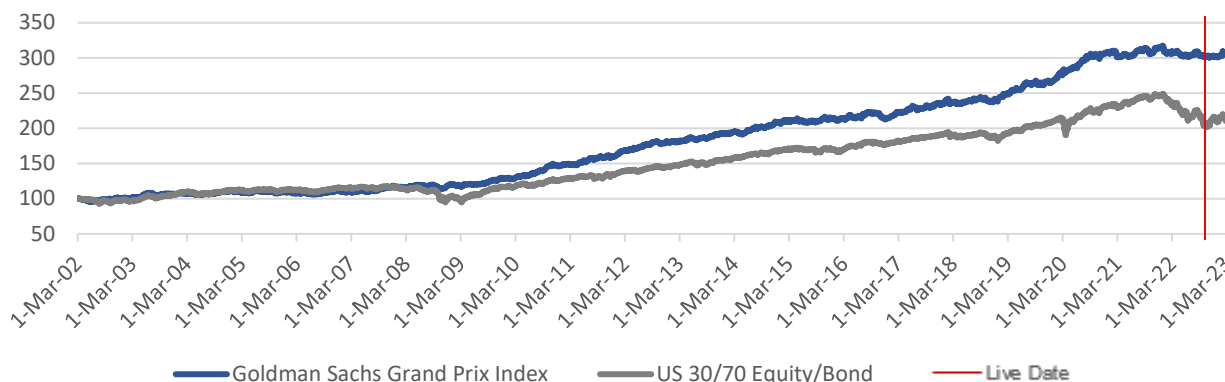
Index Key Facts

Bloomberg Ticker	GSGRNDPX
Live Date	October 28, 2022
Index Sponsor	Goldman Sachs International
Index Calculator	Goldman Sachs International
Currency	USD
Max Underliers	2
Volatility Target	4.50%
Return Type	Excess Return
Index Deduction Rate ²	0.50% p.a.
Rebal/Service Cost ^{1,2}	Backtested high of 0.62% p.a., backtested average of 0.44% p.a.

Overview

The Goldman Sachs Grand Prix Index (the "Index"):

- aims to provide an **equity and bond portfolio** and seeks to capitalize on **calendar based signals and price patterns**.
- seeks to dynamically allocate between an index of **US technology equity futures** for equity exposure and an index of **10-year T-Note futures** for bond exposure while **targeting 4.5% volatility**.
- utilizes the **truVol® Risk Control Engine**, which aims to increase accuracy and responsiveness by utilizing intraday data and proprietary mechanism.³

Hypothetical Backtested and Historical Performance (March 1, 2002 – March 31, 2023)^{1,2}Hypothetical Backtested and Historical Performance Statistics (March 1, 2002– March 31, 2023)^{1,2}

	1M Return	YTD Return	3Y Return (ann.)	5Y Return (ann.)	Full History Return (ann.)	Ann. Volatility	Sharpe	Max Drawdown
GS Grand Prix Index	0.65%	2.34%	3.05%	5.54%	5.49%	4.34%	1.26	-5.91%
US 30/70 Equity/Bond	2.45%	3.14%	2.50%	2.74%	3.72%	5.86%	0.63	-19.57%

¹Source: Goldman Sachs FICC and Equities, as of March 31, 2023. Backtested data from March 1, 2002 to October 28, 2022 and live data thereafter. Backtesting analysis/simulated results are for illustrative purposes only. GS provides no assurance or guarantee that the Index will operate or would have operated in the past in a manner consistent with the above backtesting analysis. Performance figures are net of 0.50% per annum deduction rate and applicable servicing and rebalancing costs. Backtested performance is simulated performance data created by applying the Goldman Sachs Grand Prix Index's calculation methodology and strategy to historical prices of the assets underlying the Index. You should not take historical index performance data or hypothetical index performance data as an indication of the future performance of the Index.

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³The weights of the index components are based in part upon the truVol Risk Control Engine "truVol®", which is determined and designed by Salt Financial Indices LLC (Salt Financial) (or any applicable successor thereto, which may include Goldman Sachs International or its affiliates), a third party vendor, who licenses truVol to Goldman Sachs for use in calculating the Goldman Sachs Grand Prix Index. Although Goldman Sachs International administers the Goldman Sachs Grand Prix Index on a day-to-day basis based on the Index Methodology, and calculates and publishes index levels in its role as calculation agent, neither Goldman Sachs International nor any of its affiliates was in any way involved in the design or determination of truVol nor offers any express or implicit guarantee, assurance or endorsement with regard to the quality or performance of such truVol tools in connection with the Index.

➤ Hypothetical Backtested and Historical Monthly Realized^{1,2}

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
2002			-0.79%	-1.53%	-1.49%	0.41%	1.91%	-0.06%	0.92%	0.73%	0.88%	-0.21%	0.73%
2003	-0.45%	1.51%	-0.06%	1.10%	3.95%	-0.54%	-0.85%	0.29%	1.03%	0.00%	-0.40%	0.51%	6.16%
2004	0.20%	0.34%	0.62%	-2.60%	0.89%	0.91%	-0.45%	0.62%	0.70%	1.62%	-0.06%	0.94%	3.74%
2005	-0.85%	-1.35%	0.17%	-0.56%	2.72%	-0.71%	-0.22%	0.61%	-1.07%	-1.55%	1.01%	-0.61%	-2.46%
2006	0.25%	-0.64%	-0.11%	0.39%	-1.60%	0.85%	-0.25%	1.61%	0.31%	1.06%	1.13%	-1.79%	1.15%
2007	-0.11%	-0.08%	0.19%	1.60%	-0.30%	-0.63%	0.36%	2.27%	1.42%	1.06%	1.44%	-0.21%	7.19%
2008	-0.70%	-0.23%	0.78%	0.41%	1.29%	-0.99%	0.15%	1.13%	-2.53%	-1.69%	3.28%	1.38%	2.17%
2009	-1.16%	-0.92%	2.12%	0.48%	-0.03%	0.55%	1.05%	1.09%	1.96%	-0.26%	2.99%	-1.03%	6.95%
2010	-0.43%	1.38%	1.24%	1.62%	0.11%	1.45%	2.49%	0.59%	4.13%	1.29%	0.12%	-0.31%	14.48%
2011	1.07%	0.31%	-0.16%	1.88%	2.30%	-0.55%	2.22%	0.27%	0.12%	1.07%	-0.21%	1.10%	9.78%
2012	3.63%	1.03%	0.18%	1.81%	0.69%	0.87%	1.73%	1.67%	0.13%	-1.31%	1.53%	-0.50%	11.99%
2013	-0.07%	0.66%	0.83%	1.32%	-0.26%	-0.28%	1.02%	-0.44%	1.83%	1.23%	1.01%	0.13%	7.18%
2014	-0.20%	1.18%	-1.01%	-0.20%	2.50%	0.70%	0.06%	1.84%	-0.60%	1.31%	2.55%	-1.08%	7.17%
2015	1.81%	0.19%	-0.29%	0.04%	0.22%	-1.36%	1.18%	-0.55%	0.65%	1.41%	-0.16%	0.03%	3.17%
2016	-0.14%	-0.01%	1.79%	-0.92%	0.35%	1.04%	1.86%	-0.33%	0.22%	-1.88%	-1.81%	0.13%	0.21%
2017	1.96%	1.83%	0.23%	1.47%	1.53%	-1.40%	0.64%	2.05%	-1.18%	1.86%	-0.21%	0.35%	9.43%
2018	2.66%	-1.84%	-0.29%	0.17%	0.73%	0.27%	0.69%	1.96%	-0.59%	-2.13%	1.20%	0.87%	3.63%
2019	2.32%	-0.27%	2.26%	1.24%	-0.11%	2.53%	-0.18%	1.58%	-1.36%	0.98%	0.57%	-0.02%	9.87%
2020	2.98%	1.60%	0.94%	1.41%	0.92%	1.43%	2.47%	1.46%	0.02%	-1.90%	2.54%	0.92%	15.73%
2021	-0.84%	-1.34%	-0.16%	0.92%	-0.41%	1.28%	1.17%	0.88%	-2.42%	0.95%	1.91%	0.49%	2.36%
2022	-2.53%	0.32%	0.09%	-2.18%	0.41%	-0.39%	1.62%	-1.37%	-0.61%	0.26%	0.28%	-0.62%	-4.68%
2023	0.94%	0.73%	0.65%										2.34%

➤ Hypothetical Backtested and Historical Average Final Lookthrough Weight Per Month¹

Asset Class	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
Equity	5.3%	4.0%	8.5%	11.6%	10.8%	10.9%
Bond	6.2%	7.1%	6.3%	15.9%	8.7%	15.2%

¹Source: Goldman Sachs Global Markets Division, as of March 31, 2023. Backtested data from March 1, 2002 to October 28, 2022 and live data thereafter. Backtesting analysis/simulated results are for illustrative purposes only. GS provides no assurance or guarantee that the Index will operate or would have operated in the past in a manner consistent with the above backtesting analysis. Performance figures are net of 0.50% per annum deduction rate and applicable servicing and rebalancing costs. Backtested performance is simulated performance data created by applying the Goldman Sachs Grand Prix Index's calculation methodology and strategy to historical prices of the assets underlying the Index. You should not take historical index performance data or hypothetical index performance data as an indication of the future performance of the Index.

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The value of the Index depends on the values of the Index Components, each of which may increase or decrease in value over time. Neither the Index nor any of the Index Components includes any element of downside protection or guaranteed return. The value of an Index Component, or the Index itself, may fall substantially below its value at the Live Date or on any particular day and may fall to or below zero.

The Index has a very limited performance history. The Index will only be calculated live from the Live Date and as such, there will be no historical live performance data available in respect of it prior to that time.

Past performance or hypothetical past performance of the Index is no guide to future performance. The actual performance of the Index in the future may bear little relation to the historical performance or hypothetical historical past performance of the Index.

The Index deductions, including the Component Servicing Cost Rate and Component Rebalancing Cost Rate applicable to each Index Component, as well as the Index deduction rate, will have a negative impact on the Index performance. Such deductions may offset, in whole or in part, any increases in the return of the Index Components.

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Depending on the application of the factors that impact the weights of the Index Components, the Index may have a leverage as high as 200%. Leverage means that the Index will have increased exposure to changes, which may be positive or negative, in the levels of the Index Components, magnifying the volatility and risk that the performance of the Index will be adversely affected should the value of the Index Components decrease. In other conditions the Index may have no exposure to either of the Index Components, or all of its exposure to only one Index Component.

No assurance can be given that the Index will achieve its volatility target of 4.5%, as the Index’s volatility control mechanisms either rely on backward-looking historical volatility (which may not be replicated) or estimations of future volatility (which may not reflect actual future volatility). In addition, the Index may be slow to rebalance allocations or reduce exposure to Index Components following a sudden increase in volatility. All of these factors may cause the performance of the Index to be adversely and disproportionately affected by the poor performance of one or more Index Components.

The Market Signals, volatility control mechanisms, and risk parity allocation mechanism may each generate significant turnover within the Index which will impact performance due to the resulting embedded rebalancing costs and therefore negatively impact Index performance.

The Index’s Market Signals may not perform as expected should market environments change, and such signals’ effectiveness may wane or disappear over time. If the effectiveness of the Market Signals wanes or disappears, the changes to the Index Component weights will no longer reflect the underlying assumptions of such signals and the performance of the Index may suffer.

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- The treatment of incidents affecting Benchmarks administered by Goldman Sachs is subject to a specific “Policy on Global Benchmark Incidents and Restatements” (the **Policy**)¹ in addition to the oversight of the Index Committee.
- Incidents include errors or anomalies with respect to the published level of a Benchmark which has resulted from various events including, but not limited to, a third party restating input data consumed by Goldman Sachs, a discrepancy between the documentation and the implementation of a Benchmark, a documentation error, a calculation error, a publication error or a third party error.
- After identification of such incidents, should Goldman Sachs determine it is required by the Policy, Goldman Sachs will recalculate and republish the Benchmark level for a period starting up to three weekdays prior to the incident being identified and until the day the Benchmark is corrected (the “**Restatement**”). This period is defined as the “**Restatement Period**”.
- This means that the benchmark levels prior to the Restatement Period will not be corrected, even if impacted by an incident.
- The Restatement is implemented in such a way that the daily returns of the Benchmark are corrected for each day in the Restatement Period. Investors will be notified of such Restatement via a notice posted on the Marquee website.
- A Restatement may alter the calculation of cash flows of instruments linked to the Benchmark within the Restatement Period. In such case, the relevant contractual provisions set out in the legal documentation of the instrument will apply. Please note that the Restatement can lead to different calculated cash flows (higher or lower) than if the Restatement had not occurred.
- For every incident resulting in incorrect rates of costs being deducted from the Benchmark level from the date of an incident and onwards (“**Additional Costs**”²) the relevant Goldman Sachs Group entity shall offer to reimburse any such Additional Costs, where due and payable as determined by Goldman Sachs, to investors in, or counterparties to, financial instruments linked to or referencing the Benchmark, in accordance with, and where permitted by, applicable laws and regulations and the contractual provisions and offering documents of the relevant instruments. Any reimbursement of Additional Costs shall be limited to the Additional Costs accrued during the three (3) years prior to the date on which the incident was identified.

¹In the event of a discrepancy between the provisions of the Policy and the information set out in this document, the provisions of the Policy shall prevail. Please note that the policy can be changed at Goldman Sachs’ discretion.

²Any increased cost which has occurred as a result of or derived from any incorrect asset weights or asset quantities arising from an incident does not constitute “Additional Costs”.

³ For the avoidance of doubt, the Index is not an “Intraday Benchmark” for purposes of such Policy.