

Goldman Sachs Equity TimeX Index

OBJECTIVE

The Goldman Sachs Equity TimeX Index provides equity exposure while aiming to provide greater option cost stability through volatility control and excess return structure.

APPROACH

The Index uses calendar based signals and price patterns to dynamically adjust exposure to equities at a targeted volatility level of 10%

INDEX COMPONENT

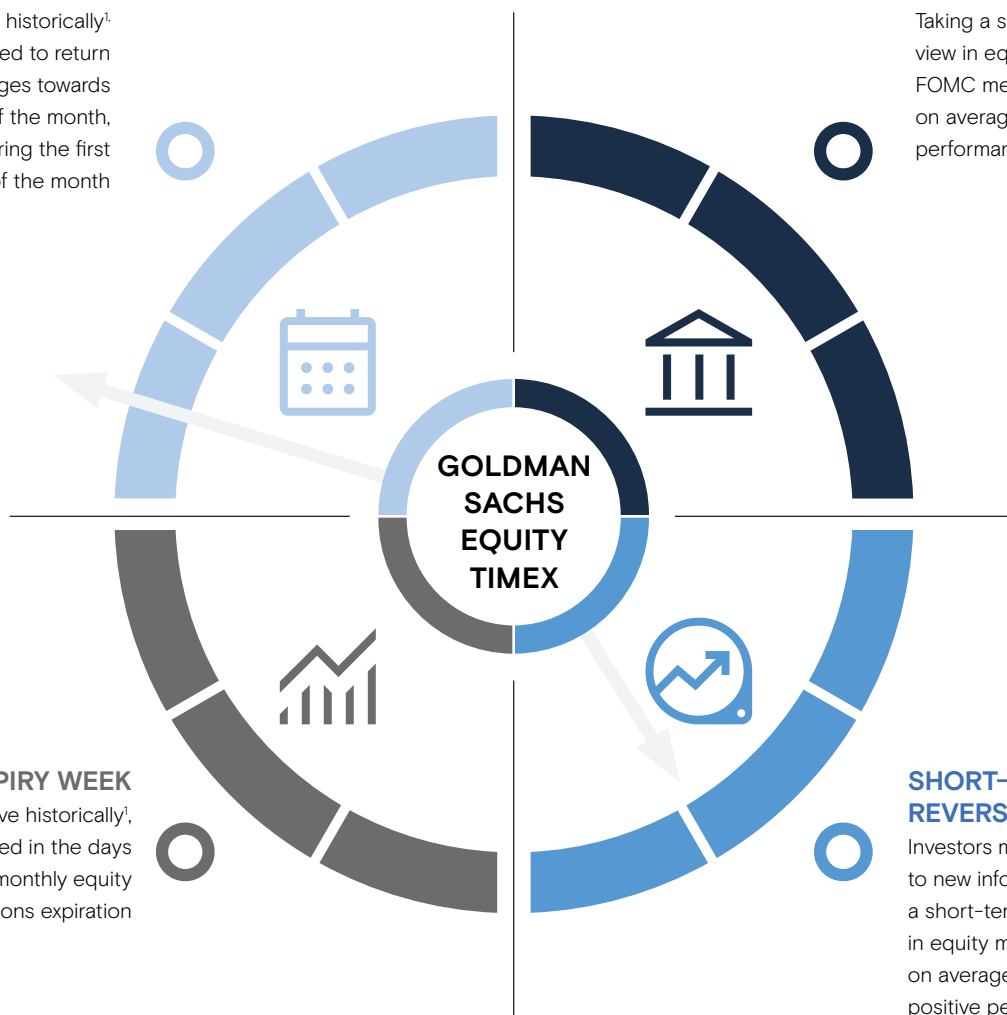
The SPDR® S&P 500® ETF Trust

TURN OF THE MONTH

Equity markets have historically¹ on average, tended to return to prior averages towards the end of the month, and outperform during the first few days of the month

FOMC SIGNAL

Taking a short-term bullish view in equity markets during FOMC meetings has historically¹, on average, provided positive performance



OPTIONS EXPIRY WEEK

Equity markets have historically¹, on average, trended in the days prior to monthly equity options expiration

SHORT-TERM MEAN REVERSION

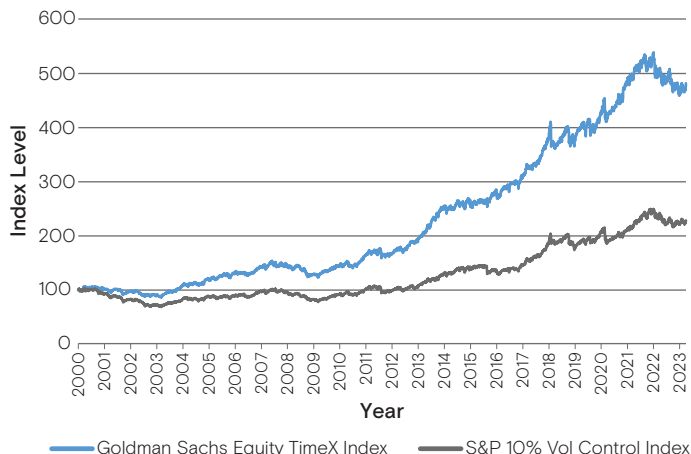
Investors may overreact to new information, and taking a short-term contrarian view in equity markets has historically¹, on average, provided strong positive performance

This index dynamically adjusts the weights of the index components based on certain calendar based signals and price patterns ("Market Signals"). Past performance or hypothetical past performance on the basis of Market Signals is no guide to future performance and historical trends may not hold.

¹As observed in the analyzed sample between January 3, 2000 and July 31, 2023. Past performance of the index is no guide to future performance.

Goldman Sachs Equity TimeX Index

BACKTESTED ANNUAL PERFORMANCE¹



(In USD, Excess Return)	GS Equity TimeX Index	SPX DRC 10% ER
Annualized Return	7.24%	3.79%
Annualized Volatility	10.00%	10.07%
Ann Return/Ann Vol	0.72	0.38
Max Drawdown	-19.33%	-33.11%
Max Drawdown/Ann Return	-2.67	-8.74
Worst Month	-7.98%	-8.28%
Best Month	6.24%	6.73%
Average Monthly Gain	1.87%	1.90%
Average Monthly Loss	-1.90%	-2.21%
% of Positive Months	61.13%	58.30%
% of Negative Months	38.87%	41.70%

BACKTESTED ANNUAL PERFORMANCE¹

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
GS Equity TimeX	-4.00%	-2.44%	-8.05%	21.50%	14.26%	7.44%	10.81%	1.46%	-10.41%	12.10%	12.98%	1.62%	15.08%	34.14%	3.58%	5.66%	7.87%	24.79%	0.73%	12.91%	14.23%	10.88%	-12.43%
SPX DRC 10% ER	-9.19%	-11.25%	-13.23%	16.28%	7.05%	-1.32%	10.39%	-0.82%	-14.18%	11.17%	9.53%	-2.09%	7.00%	24.98%	7.26%	-3.77%	6.12%	27.73%	-3.13%	15.11%	2.86%	17.39%	-10.69%

HYPOTHETICAL BACKTESTED AND HISTORICAL PERFORMANCE STATISTICS (JANUARY 3, 2000– JULY 31, 2023)¹

	1M return	YTD return	3Y return (p.a.)	5Y return (p.a.)	10Y return (p.a.)	Return since Jan 2000 (p.a.)
Goldman Sachs Equity TimeX Index	0.72%	8.69%	5.07%	6.00%	8.37%	7.24%
S&P 500 Daily Risk Control 10% Index (ER)	2.31%	10.96%	7.43%	4.81%	7.40%	3.79%

HISTORICAL EQUITY INDEX WEIGHTINGS

	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23
Equity	53.4%	48.7%	56.0%	58.3%	68.1%	84.6%

¹Goldman Sachs Global FICC and Equities, as of August 4, 2023. Data from January 3, 2000 to July 31, 2023. Backtested performance for the Goldman Sachs Equity TimeX Index up to July 28, 2023 and live performance thereafter. Performance figures are net of 0.50% index fee, transaction and servicing costs. 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 backtesting analysis. Backtested performance may use slightly different data sources, approximation and limited differences in methodology to those prescribed in the index disclosure document.

The Goldman Sachs Equity TimeX Index is calculated on an excess return basis, and is subject to servicing costs (accruing daily) and rebalancing costs (applied to the volume of daily turnover). Further, a deduction rate of 0.50% per annum (accruing daily) is applied to the Goldman Sachs Equity TimeX Index. For more information about the costs and deductions, see goldmansachsindices.com/products/GSEQTMX.

Key Facts

Bloomberg Ticker	GSEQTMX
Index Launch Date	July 28, 2023
Index Sponsor	Goldman Sachs International
Index Calculator	Goldman Sachs International
Currency	USD
Max Underliers	1
Volatility Target	10%
Leverage Cap	150%
Return Type	Excess Return
Index Deduction Rate²	0.50% per annum
Rebal/Servicing Cost^{1,2}	Backtested high of 0.92% p.a. Backtested average of 0.61%

¹ Goldman Sachs Global FICC and Equities, as of July 28, 2023. Data from January 3, 2000 to July 28, 2023. Backtested performance for the Goldman Sachs Equity TimeX Index up to July 28, 2023 and live performance thereafter. Performance figures are net of 0.50% index fee, transaction and servicing costs. 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 backtesting analysis. Backtested performance may use slightly different data sources, approximation and limited differences in methodology to those prescribed in the index disclosure document.

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Selected Risk Factors

Goldman Sachs Equity TimeX Index

These "Selected key risks" are intended to summarize certain risks associated with the Goldman Sachs Equity TimeX Index ("Index"), but are not exhaustive, and should be read in conjunction with the risk included in the Goldman Sachs Equity TimeX Index Methodology.

- The value of the Index depends on the value of the underlying equity component ("Index Component"), which may increase or decrease in value over time. Neither the Index nor the Index Component includes any element of downside protection or guaranteed return. The value of the Index Component, or the Index itself, may fall substantially below its value as of the Launch 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 Launch 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 servicing costs and rebalancing costs applicable to the 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 Component.
- Depending on the application of the factors that impact the weight of the Index Component, the Index may have a leverage as high as 150%. Leverage means that the Index will have increased exposure to changes, which may be positive or negative, in the levels of the Index Component, magnifying the volatility and risk that the performance of the Index will be adversely affected should the value of the Index Component decrease. In other conditions the Index may have no exposure to the Index Component.
- No assurance can be given that the Index will achieve its volatility target of 10%, 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 the Index Component 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 the Index Component.
- The Market Signals and volatility control mechanisms 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.
- Goldman Sachs is a full service financial services firm engaged in a range of market activities. Goldman Sachs may issue, arrange for the issue of, or enter into financial instruments or derivatives linked to, the Index, other indices that are based on the Index Component and arrange for the distribution of these financial instruments or derivatives, including the payment of distribution fees and commissions to any intermediaries. These activities could adversely affect the Index Level and the Index Component.

Goldman Sachs Treatment of Incidents

- 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.

(1) In 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

(2) Any 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”.

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