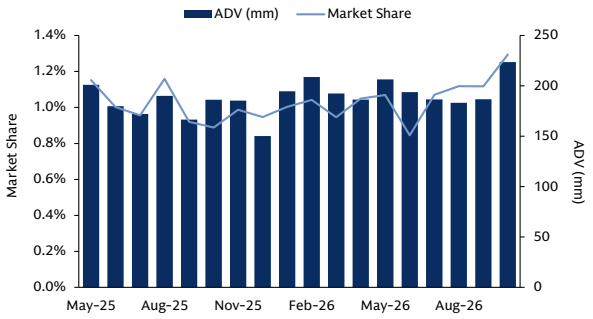
Sigma X^{2}® Monthly Metrics

October 2026

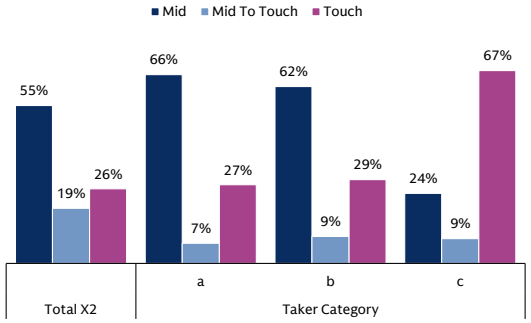
Summary Execution Metrics

Avg. daily volume (mm)	222
Total shares executed (mm)	4,889
Avg. daily notional ($mm)	18,815
Avg. trade size (shares)	46
Total symbols traded	11,613
Market share	1.28%

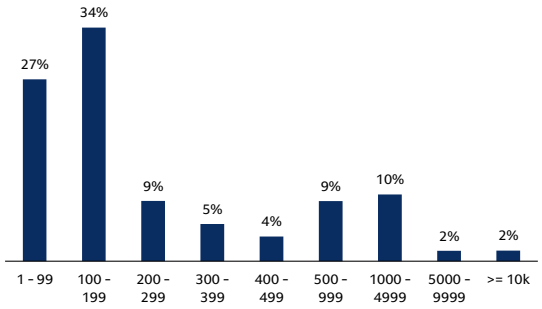
Average Daily Volume by Month



Executions by Price Relative to NBBO[1]



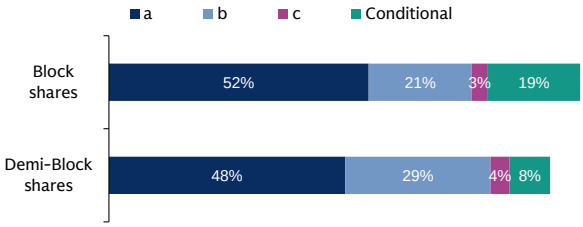
Trade Size Distribution



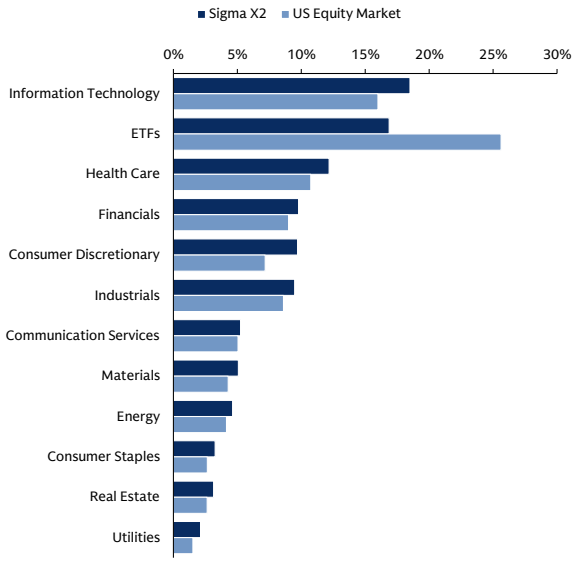
Block Metrics

Avg. block size (10K+ shares)	18,033
% of shares (10K+ shares)	2%
% of shares (>$200K)	2%
Avg. demi-block size (2K-9.9K shares)	3,312
% of shares demi-block (2K-9.9K shares)	5%
% of shares demi-block ($100K-$200K)	2%

Block Distribution by Taker Category[1]



Executed Shares by Sector



Source: Goldman Sachs FICC and Equities. Past performance is not indicative of future results.

[1] Sigma X^{2}'s Counterparty Classification Framework segments liquidity-taking Participants into three Liquidity Taker Categories based on an objective post-trade mark-out analysis performed by GSCO. Please see additional Notes & Definitions on page 3.

Unless otherwise noted, the metrics refer to the month listed at the top right of this publication. Please read in conjunction with Sigma X^{2}'s Form ATS-N posted on the Goldman Sachs Equity Execution Services website. You should periodically review the website for http://www.goldmansachs.com/what-we-do/securities/gset/equities/liquidity-access/index.html

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Sigma X^{2}® Monthly Metrics

October 2026

Distribution by Order Type

Order Type	Executed Shares	% Executed Shares	Average Trade Size	Average Spread (bps)
Peg Mid	4,916,507,656	50.3%	65	9.29
Limit	3,840,087,669	39.3%	31	10.19
Peg Primary	769,737,989	7.9%	63	5.18
Peg Market	251,238,266	2.6%	91	10.12

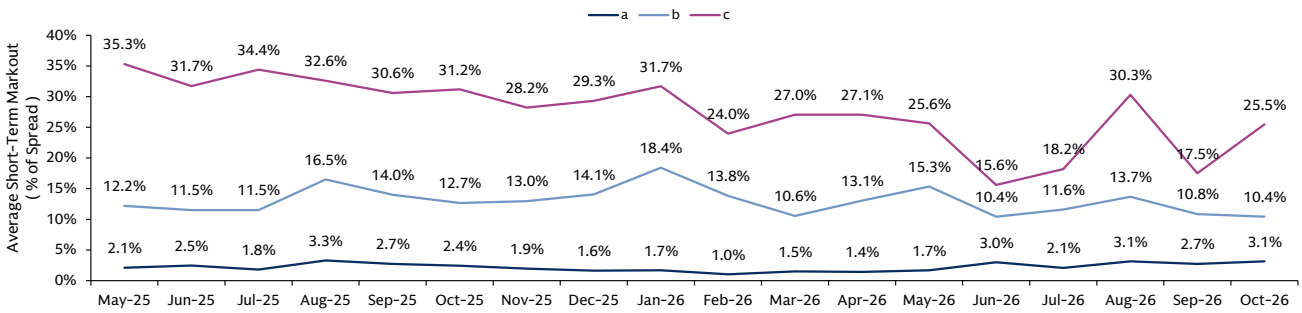
Distribution by Taker Category[1]

Taker Category	Executed Shares	% Executed Shares	Average Trade Size	Average Spread (bps)	Average Short Term Mark-Out (% of spread)
a	2,456,186,212	59.3%	53	10.42	3.1%
b	1,471,436,764	35.5%	79	8.01	10.4%
c	217,082,854	5.2%	107	7.13	25.5%

Distribution by Contra Category[1]

Contra Category Requested	Taker Category	Executed Shares	% Executed Shares	Average Trade Size	Average Spread (bps)	Average Short Term Mark-Out (% of spread)
a		1,590,903,272	38.4%	53	9.69	-5.4%
	a	1,590,903,272	100.0%	53	9.69	-5.4%
b		945,830,979	22.8%	71	7.76	-11.4%
	a	273,732,306	28.9%	61	9.44	0.1%
	b	672,098,673	71.1%	76	7.21	-16.3%
c		1,607,971,579	38.8%	68	10.06	-4.4%
	a	591,550,634	36.8%	50	12.87	0.6%
	b	799,338,091	49.7%	81	8.76	-5.9%
	c	217,082,854	13.5%	107	7.13	-25.5%

Average Short-term Mark-Out Trend by Taker Category[1,2]



Source: Goldman Sachs FICC and Equities. Past performance is not indicative of future results.

[2] GSCO performs and refreshes the mark-out analysis routinely. Figures referenced here represent Taker Category data for the last 18 months. Taker Category distribution and metrics are based on the most recently assigned client Taker Categories derived from the post trade mark-out analysis. A Participant's current behavior may demonstrate mark-out characteristics that differ from the Taker Category assigned and would be reflected in the following month's report.

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You should periodically review the website for updates.

What types of participants use Sigma X^{2}?

The Sigma X^{2} participant base consists primarily of institutional customers and broker-dealers, including equity and options market makers and specialists, and introducing brokers. These clients, along with GSCO (on behalf of itself as principal or its customers as agent) and GSCO affiliates are collectively referred to herein as "Participants." Participants may access Sigma X^{2} directly ("Direct Subscribers") or indirectly ("Indirect Subscribers").

How can Sigma X^{2} be accessed?

Subscribers can access Sigma X^{2} directly ("Direct Subscribers") or indirectly ("Indirect Subscribers"), and all Subscribers can utilize both ATS and non-ATS GSCO offered products and services.Direct Subscribers access Sigma X^{2} via a FIX connection. Indirect Subscribers access Sigma X^{2} indirectly via non-ATS GSCO offered products and services, which may include:

i. GSCO algorithms, which accept parent-level orders and can send portions of such orders (i.e., child orders) to GSCO's SOR. GSCO's SOR may route such orders to Sigma X^{2} or other market centers, as described below;

ii. The GSCO SOR (hosted in Carteret and NY4), which can route various orders to Sigma X^{2} or other market centers or may route directed orders to Sigma X^{2}; and

iii. The GSCO Direct Market Access ("DMA") System, which GSCO clients may use to direct orders to Sigma X^{2} or other market centers using their own algorithms, i.e., non-GSCO algorithms. Orders routed via the GSCO DMA System do not pass through, and are not known by, GSCO's SOR.

Direct Subscribers' orders experience less latency than Indirect Subscribers' orders.

Sigma X^{2} does not display orders to Participants, or outside of Sigma X^{2}. However, GSCO's SOR is aware of orders it has posted in all venues, including Sigma X^{2}. The GSCO SOR uses knowledge of such orders to predict venue-level fill rates. This data is not communicated outside of the SOR.

How do we define executions by price relative to NBBO?

Price relative to NBBO is determined by the NBBO of Sigma X^{2} at the time of execution. Executions at NBB or NBO are executed at the national best bid or offer respectively. Executions at Mid are executed directly at the midpoint. Executions at Inside are executed within the NBBO excluding the midpoint.

Transactions in Sigma X^{2} are executed using an NBBO constructed by Operations and Compliance Network, LLC ("Ocean"), a third party technology provider for X^{2}. Ocean constructs the NBBO using a combination of direct market data feeds and market data disseminated by the Securities Information Processors ("SIPs") (a "Constructed NBBO"). If there is an issue with the Constructed NBBO, transactions in Sigma X^{2} will be priced solely using the NBBO disseminated by the SIPs. Accordingly, all executions in Sigma X^{2} are programmed to match at or within the Constructed NBBO or the SIP NBBO.

How is liquidity-taking and liquidity-providing defined?

Orders in Sigma X^{2} are treated as liquidity-taking or liquidity-providing orders based on their time of order arrival. When Sigma X^{2} assesses two orders for a potential match, the liquidity-providing order is the order that was first-in-time, and the liquidity-taking order is the order that was second-in-time.

What is average spread?

Average spread is the average difference in bid and ask prices measured in bps at execution time.

How do we define block distribution by Taker Category?

Block distribution by Taker Category defines the percentage of total executed shares that are executed in block size by each Liquidity Taker Category ("a", "b" or "c"). Block trades are defined as executions comprised of 10K+ shares and demi-block trades are defined as executions comprised of 2K-9.999K shares.

How are Sectors and market comparisons determined?

Sectors are based on MSCI GICS classification and show the distribution of executed shares in Sigma X^{2} along with a similar distribution for consolidated US Equity market. The market-wide volumes are obtained from Bloomberg. ETFs are shown as its own segment. Due to security symbology/mapping differences, and similar data-related issues, all sector percentage calculations are approximate.

How are order types classified?

Upon receipt of each order, except for Benchmark Cross orders, Sigma X^{2} will determine and apply an "Assigned Limit Price." The Assigned Limit Price of an order is the highest price for a buy order (lowest for a sell order) at which the order may be executed at or within the National Best Bid and Offer ("NBBO") after applying the constraints selected by the Participant (e.g., limit price or peg type). Assigned Limit Prices will be reevaluated and updated as may be necessary with each change in the NBBO.

Primary Peg orders are pegged to the near side of the NBBO (e.g., best bid for a buy order). Mid Peg orders are pegged to the midpoint of the NBBO.

Market Peg orders are pegged to the far side of the NBBO (e.g., best offer for buy order). Limit orders, which are determined by the Participant, are posted to the Sigma X^{2} order book with an Assigned Limit Price equal to the order's Limit Price with the following exception: Orders with prices outside the NBBO (i.e., at prices higher than the NBBO for buy orders and lower than the NBBO for sell orders) are given an Assigned Limit Price at the NBBO. For example, if the NBBO is $10.00 x $10.02, a buy order with a limit price of $10.03 will have an Assigned Limit Price of $10.02.

What is average short-term mark-out?

The average short-term mark-out is a calculation of notionally-weighted average "mark-outs" (in bps) divided by notionally-weighted average spread (in bps). A "mark-out" is a standardized assessment of the short term price movement in a security (i.e., impact on the security's mid-quote) that is measured within a particular time horizon surrounding an execution.

How are Taker Categories defined?

Order flow for liquidity-taking orders placed by a Participant is mapped into three Taker Categories (i.e. "a," "b" and "c") based on a post-trade mark-out analysis performed by GSCO. The mark-out analysis is a standardized assessment, across all securities, of the short-term price movement in a security (i.e., impact on the security's mid-quote) that is measured within a particular time horizon surrounding an execution. As further described in Sigma X^{2}'s Form ATS-N, GSCO performs and refreshes the mark-out analysis for all liquidity-taking orders on approximately a monthly basis (and for new order flow, on an ad-hoc basis). In addition, GSCO may periodically, as needed, reassess and modify the factors used to determine the three Taker Categories. On April 3, 2020, GSCO modified the metrics used to determine the Taker Categories, and continues its routine monitoring of the Counterparty Classification Framework. On May 10, 2022, Sigma X^{2} began offering Conditional Orders. Liquidity Taker Categories, as described in Form ATS-N, do not apply to Conditional orders.

How are Contra Categories defined?

Sigma X^{2} offers Participants the ability to restrict the interaction of their liquidity-providing orders with a specified category (or categories) of liquidity-taking orders (i.e., Taker Categories "a," "b," or "c") through the designation of a "Contra Category." A Participant's Contra Category selection ("a," "b," or "c") for a liquidity-providing order determines the Taker Category (or Taker Categories) with which the liquidity-providing order may interact. When a Participant sending a liquidity-providing order selects Contra Category "a," the Participant's order will only interact with Taker Category "a" orders. If a Participant sending a liquidity-providing order selects Contra Category "b," the Participant's order may potentially interact with Taker Category "a" or "b" orders. If a Participant sending a liquidity-providing order selects Contra Category "c," the Participant's order may potentially interact with Taker Category "a," "b," or "c" orders. Subscribers that route liquidity-providing orders and have not selected a Contra Category will be defaulted to Contra Category "c".

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