Goldman Sachs E-FX

"Last Look" Disclosure

As of December 2021

The purpose of this Disclosure is to provide additional information to counterparties regarding select trading practices used by Goldman Sachs ("GS") as a market maker when transacting in certain FX products on electronic platforms. In particular, this Disclosure explains a pre-trade review process conducted by GS commonly referred to as "last look", including the circumstances when it is employed and the rationale for its use. This Disclosure supplements any other agreements, notices or disclosures that GS may provide its counterparties from time to time.

What is "last look" and why does Goldman Sachs use it?

GS currently provides indicative FX spot, outright forwards and NDF prices to its counterparties across a range of electronic platforms. When a counterparty sends us an electronic trade request, we perform a series of pre-trade reviews before accepting or rejecting the trade at the requested price.

One of the pre-trade reviews we perform on certain platforms is how the requested price compares to our most recent internal price[1]. This price comparison process determines whether a trade at the requested price would exceed a counterparty-specific Symmetric Tolerance Band (defined below) due to a market move. When this comparison shows that a market move does not exceed the GS tolerance within the Symmetric Tolerance Band, the trade request is accepted. When this comparison shows that a market move exceeds the GS tolerance beyond the Symmetric Tolerance Band, the trade request is rejected. In certain circumstances depending on the platforms used and the direction and extent of a market move, GS may "price improve" a trade request, as discussed further below.

GS applies this price comparison process primarily to help it manage the risks posed by trading on stale prices due to latencies inherent in electronic communications, market disruptions, and certain adverse trading behaviors. For example, factors such as market moves and technical or pricing errors may cause a requested price to be rejected through this price comparison process. Further, trading activities such as latency arbitrage, aggregation or order splitting may result in more rejected trade requests. Given that the proportion of trade requests that may be rejected is influenced by individual counterparties' trading activities, GS does not provide data in respect of average rejection rates. GS will however share with counterparties their own rejection statistics upon request.

What is "price improvement" and where does Goldman Sachs make it available?

Price improvement establishes a symmetric tolerance band (the "Symmetric Tolerance Band") that takes into account market movements that are both favorable and unfavorable to GS during the price comparison process. Specifically, if our most recent internal price, when compared to the requested price:

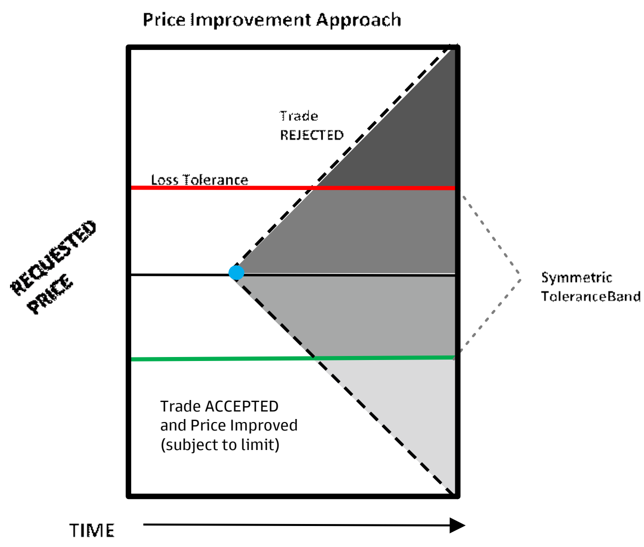
- remains within the Symmetric Tolerance Band (whether in GS's or the counterparty's favor), the trade request will be accepted;
- moves in GS's favor and no longer remains within the Symmetric Tolerance Band, the trade request will be automatically price improved. The amount of the price improvement will be equal to the amount by which our most recent internal price has moved in GS's favor beyond the Symmetric Tolerance Band[2]; or
- moves unfavorably to GS and no longer remains within the Symmetric Tolerance Band as it has exceeded GS' loss tolerance[3], the trade request will be rejected.

Please see the diagram below:

[1] Our "internal prices" are internally-calculated amounts used to determine client-specific bid or ask quotes, as applicable. This price comparison process exists on vendor price streaming platforms and on our bi-lateral API connections. The comparison does not exist on Marquee Trader, our single dealer platform, or on the request for quote (RFQ) platforms where we trade.

[2] Price improvement is currently limited to 3 basis points from the requested price beyond which trade requests are rejected to prevent anomalous results during extraordinary market conditions. Based on historical trading activity, we believe rejections resulting from this limit should be minimal. The amount of the Symmetric Tolerance Band and the price improvement limit may vary between individual counterparties and are subject to change, without notice, at GS's discretion.

[3] As used in this document, the term "loss" does not refer to actual GS realized losses but rather is an estimation of expected value.



What are the advantages of price improvement as compared to symmetric trade rejections?
In addition to the pricing benefits described above, we believe price improvement will result in fewer trade rejections than a purely "symmetric" pricing process that automatically rejects trades when a tolerance band is exceeded due to market movements in a dealer's favor.

Price improvement has been enabled on most vendor price streaming platforms and applies automatically to all counterparties who have established bilateral API connectivity with GS since October 14, 2016. If you trade through a bi-lateral API connection that was established prior to this date and have not yet contacted us to enable it, please contact your sales representative or email the electronic sales team at GS-eFXSales@gs.com. If you trade through a vendor price streaming platform that is unable to support price improvement then it will not apply.

Note that GS provides no assurances that price improvement is superior to alternative pricing processes that may be available or that it is suitable for individual counterparties' trading strategies.

Which products are in-scope for price improvement?
All FX products that are subject to the price comparison review described above through our bi-lateral API connections or applicable vendor price streaming platforms are in scope, including, FX spot, outright forwards and NDFs.

What other pre-trade reviews might cause Goldman Sachs to reject an electronic offer to trade?
In addition to the price comparison process described above, before determining whether to accept or reject a trade request, GS's systems perform various pre-trade validity reviews. Some of these reviews determine whether:

(i) a counterparty is enabled to trade on the relevant platform;
(ii) a counterparty currently has credit available;
(iii) the trade request matches the side quoted;
(iv) the trade size is within the amount permitted by GS;
(v) the trade size is within limits set for that counterparty; and
(vi) the quote which the counterparty has requested to trade against is not aged (based on number of updates or other factors).

These reviews may be changed from time to time without notice. The extent to which these reviews are employed will vary depending on the counterparty and/or platform being used. GS may impose additional reviews at its discretion.

How long does this pre-trade review process take?

The time required to conduct the price comparison and other pre-trade validity reviews described above is generally less than 10 milliseconds (though may be longer due to latencies beyond our control, such as system or network issues).   Goldman Sachs does not apply any additional latencies, or “hold periods”, to this process.

Does Goldman Sachs conduct trading activity that uses the information from an electronic trade request during the pre-trade review process?

During the price comparison process and the application of the other pre-trade reviews referenced above, GS does not use any information from the trade request to either (i) change the indicative pricing it provides over electronic platforms, or (2) pre-hedge or otherwise attempt to cover the risk associated with any pending trade request.   GS may continue to trade during this period for reasons unrelated to the trade request.

Will Goldman Sachs notify a counterparty if its offer to trade is rejected?

GS will use its reasonable efforts to notify a counterparty when a trade request has been rejected and to provide an indication of the primary reason for the rejection. Upon request, GS can provide any counterparty with a more detailed explanation of why any offer to trade has been rejected and also with an historic summary of that counterparty’s rejected trade requests.

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