

NBBO Project

Bids and Offers

In most markets, there are people willing to buy a certain product and other people willing to sell that same product. Each buyer knows the maximum price at which he or she is willing to buy the product at and, similarly, each seller knows the minimum price at which he or she is willing to sell the product. Buyer prices are called bids and seller prices are called offers.

Maxwell Street Example

Sam and Reggie attend the Maxwell Street market one Sunday each looking to buy a new bike. After a few minutes of looking around they both find a bike they're interested in. Sam offers an initial price of \$100. The dealer counters with \$120. Reggie then throws in his buying price of \$110. At this point, a two-sided market, similar to equity markets, exists on Maxwell Street. Sam is \$100 bid; that is, he is willing to buy the bike at \$100. Reggie is \$110 bid; he is willing to pay up to \$110. Finally, the dealer is offering the bike at \$120. If a fourth interested party approached the trio, they would find the bike market below:

Bike Bids	Bike Offers
\$100	\$120
\$110	

The newcomer could immediately buy the bike for \$120 or sell the bike for \$110 or \$100. Although somewhat transparent to the average retail investor, every equity market is two-sided with various market participants willing to buy and sell the equity

at various prices around the equity's current price.

The 'NBBO' (see below) for the Maxwell Street bike is \$110 @ \$120. The best price the newcomer could sell the bike at is \$110 (to Reggie) and the best price the newcomer could buy the bike at is \$120 (from the dealer).

NBBO

NBBO stands for 'National Best Bid and Offer.' NBBO stems from SEC regulations requiring brokers (OptionsHouse, ETrade, etc) to execute customer trades at the best available (lowest) offer price when buying securities and the best available (highest) bid price when selling securities.

As an investor, you always want to buy securities at the cheapest price available and sell securities at the most expensive price available. NBBO allows brokers and investors to know the best prices available for any given security across all the exchanges it trades on.

AAPL NBBO Example

The tables below shows AAPL's share price on the NYSE, NASDAQ and BATS at different points in time. The NBBO is the combination of the highest bid price and the lowest offer price at any particular instant.

8:30:01am

	Bid	Offer
NYSE	420.71	420.76
NASDAQ	420.70	420.75

BATS	420.71	420.75
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Best bid = Max of (420.71, 420.70, 420.71) = 420.71

Best offer = Min of (420.76, 420.75, 420.75) = 420.75

NBBO = 420.71 @ 420.75

8:30:02am

	Bid	Offer
NYSE	420.75	420.80
NASDAQ	420.78	420.82
BATS	420.77	420.80

Best bid = Max of (420.75, 420.78, 420.77) = 420.78

Best offer = Min of (420.80, 420.82, 420.80) = 420.80

NBBO = 420.78 @ 420.80

8:30:03am

	Bid	Offer
NYSE	420.98	421.00
NASDAQ	420.93	420.99
BATS	420.95	421.05

Best bid = Max of (420.98, 420.93, 420.95) = 420.98

Best offer = Min of (421.00, 420.99, 421.05) = 420.99

NBBO = 420.98 @ 420.99