

I will describe the three main types of orders: limit, stop, and market orders. This does not cover every single aspect of those order types, but hopefully it is sufficiently detailed for you to get an intuitive understanding of them.

LIQUIDITY

First we must briefly discuss liquidity. Liquidity is what allows you to trade: if you want to buy, you need a counterparty to take the other side of the transaction, to sell to you, and vice versa if you want to sell. If there are a lot of offers to buy and sell at competitive prices, it is a liquid market. The buyers' bids and the sellers' offers are liquidity; they give you the option to sell to or buy from them at the prices and quantities they are bidding or offering. This "optionality" of liquidity is important to understand – by creating a bid you are giving people the "option" to take your bid, to transact with or liquidate to you.

LIMIT ORDERS

Limit orders are offers to buy (bid) or sell (offer) a specific quantity at a specific price. They are essentially offering themselves as counterparties to any willing buyers or sellers. By virtue of the fact that limit orders give prospective buyers or sellers the option to trade with them, they are said to provide liquidity.

Limit orders don't "do" anything; they are passive. Once you issue a limit order, it's just sits in the "book" waiting to get filled. When will it be filled? Most exchanges use price/time priority.

Price/time priority gives first priority to the most competitively priced bids and offers. If there are multiple bids at the same price, then the first one to be filled will be the bid first entered at that price; essentially, first come first served. The limit order will stay right where it is until it's filled or moved/cancelled.

The "limit" aspect of a limit order prevents it from being filled at a worse price than the limit price. For example, a bid will not be filled at a price higher than its limit price. This property prevents it from chasing the market; it can also result in the market moving away without the order being filled. Hence the static/passive nature of limit orders.

The following image shows a price ladder/order book. Don't read anything into the composition of the book; I just chose random numbers.

Bids	Price	Offers
	1.4563	5
	1.4562	13
	1.4561	54
	1.4560	15
	1.4559	11
	1.4558	20
	1.4557	
	1.4556	
14	1.4555	
62	1.4554	
6	1.4553	
25	1.4552	
	1.4551	
45	1.4550	
70	1.4549	
	1.4548	
3	1.4547	

Buy limits are placed below the best offer and sell limits are placed above the best bid. You'll notice in the image above that the bids and offers don't overlap each other. Technically you can place a limit order at any price you like; however, if a limit order is placed at or beyond the best priced "opposite" limit (e.g. if a bid's limit price is as high or higher than the best priced offer), it will become a marketable limit order. That means it will be filled immediately, as long as there is liquidity within its limit price.

Now for some examples, using the price ladder image. Currently the market is 1.4555 bid, 1.4558 offered.

- If I place a bid for 10 contracts at 1.4555, the market price does not change. The number of contracts bid at 1.4555 changes from 14 to 24. When will my 10 contracts get filled? Let's say the price stays where it is and someone issues a market order to sell 20 contracts. Due to the rules of price/time priority, the bids first placed at that price will be filled first. So the market order would fill the previously existing 14 bids and then fill 6 contracts from my bid. The market is still 1.4555 bid but now there are only 4 contracts bid. I now have both price and time priority; should someone else subsequently place a bid at the same price, my bid would be completely filled before his.
- If I place a bid at 1.4556, I become the new best bid, and the market is now 1.4556 bid, 1.4558 offered. I have both price and time priority as I'm the first bid at the highest price.
- If I place a bid for 10 contracts at 1.4554, the number of contracts at that price increases to 72. My bid won't be filled until the bids at 1.4555 are taken out and 1.4554 becomes the new best bid; then I'll need to wait for the previously placed bids to be filled as they have time priority.
- If I place a bid for 10 contracts at 1.4558, my bid is a marketable limit order; it can be filled immediately because there are offers on the book at 1.4558. Since the bid's limit price of

1.4558 means it can be filled at a price up to 1.4558, it can be matched immediately to the existing offer at 1.4558. Price stays the same, but now there are only 10 contracts left on offer at 1.4558.

- If I place a bid for 50 contracts at 1.4558, my bid is a marketable limit order. As it's larger than the 20 contracts on offer, it will consume them all. As there is no further liquidity within the limit price of 1.4558, it will do what limit orders do: sit there waiting to be consumed/filled. At the same time it becomes the new best bid. The market price now becomes 1.4558 bid (30 contracts), 1.4559 offered.
- If I place a bid for 50 contracts at 1.4600, my bid is a marketable limit order. Its limit price of 1.4600 means it cannot be filled at a price worse than that (i.e. higher), but it can be filled at a better price should that be possible. First it will fill the 20 contracts on offer at 1.4558. Then it will fill the 11 on offer at 1.4559, then the 15 at 1.4560. At this point 46 contracts of my 50 limit buy have been filled. As there is still liquidity within the limit price, it will fill its remaining 4 contracts at 1.4561. The market is now 1.4555 bid, 1.4561 offered.

Notice how a marketable limit order acts just like a market order, consuming existing liquidity. The difference is that it has a limit; it cannot be slipped further than that limit. And should it not be completely filled when its limit is reached, it will remain on the book as the new best bid/offer. This is why you cannot have overlapping bids and offers – they would consume each other. And if not – for example if the bids on one exchange overlapped with offers on another – there would be the potential for arbitrage, which would remove this “inefficiency”.

MARKET ORDERS

Market orders are orders to buy/sell a specified quantity immediately. Market orders consume liquidity. The liquidity they consume is provided by limit orders. Market orders take the option to trade a certain quantity at a certain price that is provided by limit orders.

No price is attached to a market order. It will be filled by the best priced limit orders, regardless of what price those limit orders happen to be at; this is where slippage comes from. If you create a market order to buy ten million EUR/USD and the order book consists of one million on offer at the current price and another twenty million offered 500 pips higher, your market order will buy one million at the current price and nine million 500 pips higher. Slippage and paying the spread are the price of immediacy.

Market orders cannot fill each other; a buy market order and a sell market order issued at the same time will not fill each other, as they have no property specifying a price at which to trade. The buy market order will buy the best offer and the sell market order will sell to the best bid.

STOP ORDERS

Stop orders are market orders which have been created but are “stopped” from executing. They are “released” when the market price reaches their stop/trigger price. (Some exchanges may require a trade to occur at or beyond that price before stops are triggered.) What the “market price” means may vary; typically a buy stop will be triggered when its stop price is reached by the market's ask/offer price, and a sell stop will be triggered when reached by the market's bid.

Stop orders are essentially market orders; therefore they consume liquidity. However as you'll

have learned from the book, stop orders can also be thought of as providing liquidity. This is because the knowledge that there are a number of orders which will demand to trade (due to being triggered) when the market reaches a specific price gives you the option to trade with them using a limit order. They provide liquidity because they give a counterparty the option to trade with them, provided the potential counterparty knows of their existence.

Buy stop orders are placed above the current market price and sell stops are placed below. Your dealer may allow you to place a stop order wherever you want. Technically a buy stop below/sell stop above the market is a market-if-touched order; these are for all intents and purposes exactly the same as stop orders, as both are market orders held from execution until their trigger price is hit; the only difference is one is placed above the market and the other is placed below. Generally we can refer to both as stop orders.

Unlike limit orders, stop orders are not publically visible on the order book. Market orders cannot be matched with/filled by stop orders, for the same reason that market orders cannot fill each other; after all, when triggered a stop order becomes a market order.

SUMMARY

A limit order's main properties are quantity, passivity, and price specificity preventing slippage. Limits are passive because they don't chase the market, waiting instead to be filled by the initiative of others. The cost of passivity and slippage prevention is the risk of going unfilled at the sought after price; the premium is capturing the spread (if used for both entry and exit) and limited price impact.

A market order's properties are quantity and immediacy; the price for immediacy is paying the spread, and potential slippage.

A stop order is a market order with a trigger price.