Simulation of Market Order FAK
(Fill and Kill)

Case: Market Order FAK Volume **Equal or Less Than** Order Book Volume (1/2)

1. There are some limit order on order book. The best bid/buy price is 60 and best ask/sell price is 65 which the volume of bid and ask is 100 lots each.

	Order Type	Bid Vol	Bid Price	Ask Price	Ask Vol	Order Type	
Best Bid =	Limit	100	60	65	100	Limit	Best Ask
	Limit	100	59	66	100	Limit	
	Limit	100	58	67	100	Limit	
	Limit	100	57	68	100	Limit	
	Limit	100	56	69	100	Limit	

2. There is a new buy order using market order FAK (fill and kill) with the volume 300 lots. This order will be fully or partially matched with the sell open order on order book. In this case, the buy market order (FAK) will be fully matched with 300 lots sell volume at price 65, 66 and 67.



Case: Market Order FAK Volume **Equal or Less Than** Order Book Volume (2/2)

3. After FAK order fully matched in 300 lots, then best bid/buy will be the limit order with price is 60 and the best ask/sell price is 68. There are still 200 lot volume open order sell/ask on order book.

	Order Type	Bid Vol	Bid Price	Ask Price	Ask Vol	Order Type	
Best Bid —	Limit	100	60	68	100	Limit	Best Ask
	Limit	100	59	69	100	Limit	
	Limit	100	58				
	Limit	100	57				
	Limit	100	56				

Case: Market Order FAK Volume More Than Order Book Volume (1/2)

I. There are some limit order on order book. The best bid/buy price is 60 and best ask/sell price is 65 which the volume of bid and ask is 100 lots each.

	Order Type	Bid Vol	Bid Price	Ask Price	Ask Vol	Order Type	
Best Bid =	Limit	100	60	65	100	Limit	Best Ask
	Limit	100	59	66	100	Limit	
	Limit	100	58	67	100	Limit	
	Limit	100	57	68	100	Limit	
	Limit	100	56	69	100	Limit	

2. There is a new buy order using market order FAK (fill and kill) with the volume 1.000 lots. This order will be fully or partially matched with the sell open order on order book. In this case, the buy market order (FAK) will be partially matched with 500 lots sell volume at price 65, 66, 67, 68, and 69.



Case: Market Order FAK Volume More Than Order Book Volume (2/2)

3. Since market order (FAK) is fully matched at 500 lots, the remaining volume that couldn't matched will be expired automatically (withdraw from order book). It happened because market order has an immediate order duration type.

Remaining volume will be expired 👍 💶	Order Type	Bid Vol	Bid Price	Ask Price	Ask Vol	Order Type
	Market	500	-	-	-	
Best Bid 💳	Limit	100	60	1	-	
	Limit	100	59	ı	1	
	Limit	100	58	-	ı	
	Limit	100	57	-	ı	
	Limit	100	56	ı	ı	

Case: Market Order FAK Volume Equal or Less Than Order Book Volume, but Available Volume is **More Than Sweep limit Regulation** (1/2)

. There are some limit order on order book. The best bid/buy price is 60 and best ask/sell price is 65 which the volume of bid and ask is 100 lots each.

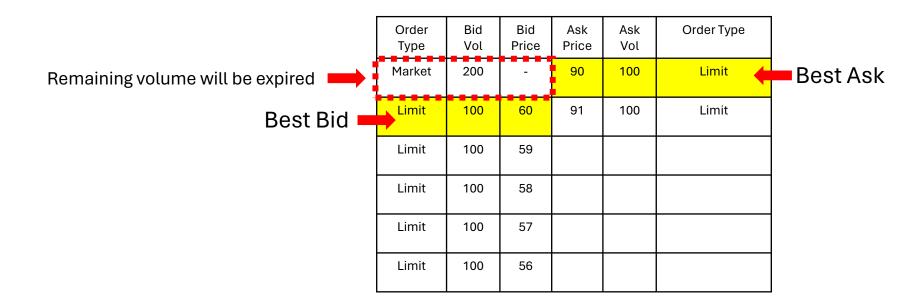
	Order Type	Bid Vol	Bid Price	Ask Price	Ask Vol	Order Type	
Best Bid =	Limit	100	60	65	100	Limit	Best Ask
	Limit	100	59	66	100	Limit	
	Limit	100	58	67	100	Limit	
	Limit	100	57	90	100	Limit	
	Limit	100	56	91	100	Limit	

2. There is a new buy order using market order FAK (fill and kill) with the volume 500 lots. This order will be fully or partially matched with the sell open order on order book. In this case, the buy market order (FAK) will be partially matched with 300 lots sell volume at price 65,66, and 67. It happened because another 200 lots sell/ask order are more than sweep limit regulation (the sweep limit price should be maximum at 75 or 10 tick from best ask price).



Case: Market Order FAK Volume Equal or Less Than Order Book Volume, but Available Volume is More Than Sweep limit Regulation (2/2)

3. Since market order (FAK) partially matched in 300 lots, the remaining volume that couldn't matched will be expired automatically (withdraw from order book). It happened because there are sell/ask price that's more than sweep limit regulation and market order has an immediate order duration type.



Simulation of Market Order FOK (Fill or Kill)

Case: Market Order FOK Volume **Equal or Less Than** Order Book Volume (1/2)

. There are some limit order on order book. The best bid/buy price is 60 and best ask/sell price is 65 which the volume of bid and ask is 100 lots each.

	Order Type	Bid Vol	Bid Price	Ask Price	Ask Vol	Order Type	
Best Bid =	Limit	100	60	65	100	Limit	Best Ask
	Limit	100	59	66	100	Limit	
	Limit	100	58	67	100	Limit	
	Limit	100	57	68	100	Limit	
	Limit	100	56	69	100	Limit	

2. There is a new buy order using market order FOK (fill or kill) with the volume 300 lots which means the order will be fully matched or not at all (none) with open order on order book. In this case, the buy market order FOK will be fully matched with 300 lots sell volume at price 65, 66 and 67.



Case: Market Order FOK Volume **Equal or Less Than** Order Book Volume (2/2)

3. After FOK order fully matched in 300 lot, then the best bid/buy will be the limit order with price is 60 and best ask/sell price is 68. there are still 200 lot volume open order sell/ask on order book.

	Order Type	Bid Vol	Bid Price	Ask Price	Ask Vol	Order Type	
Best Bid 💳	Limit	100	60	68	100	Limit	Best Ask
	Limit	100	59	69	100	Limit	
	Limit	100	58				
	Limit	100	57				
	Limit	100	56				

Case: Market Order FOK Volume **More Than** Order Book Volume (1/2)

1. There are some limit order on order book. The best bid/buy price is 60 and best ask/sell price is 65 which the volume of bid and ask is 100 lots each.

	Order Type	Bid Vol	Bid Price	Ask Price	Ask Vol	Order Type	
Best Bid -	Limit	100	60	65	100	Limit	Best Ask
	Limit	100	59	66	100	Limit	
	Limit	100	58	67	100	Limit	
	Limit	100	57	68	100	Limit	
	Limit	100	56	69	100	Limit	

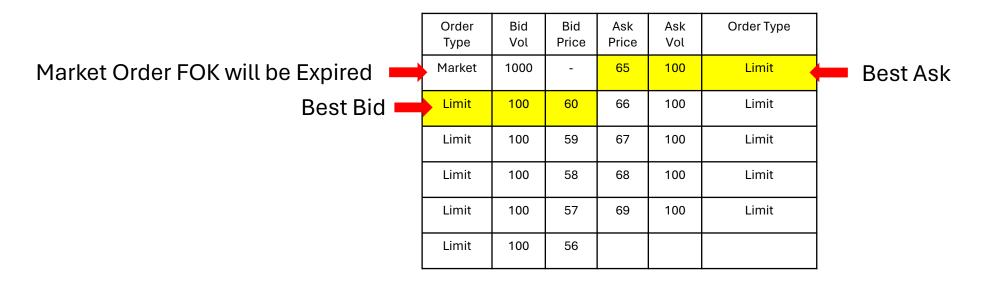
2. There is a new order buy using market order FOK (fill or kill) with the volume 1000 lots which means the order will be fully matched or not at all (none) with sell open order on order book. In this case, the buy market order FOK exceed sell/ask volume on book order and can not be matched.



Case: Market Order FOK Volume More Than Order Book Volume (2/2)

3. Since FOK order can't be matched, market order will be expired (withdraw from order book) because market order has an immediate order duration type.

And then best bid/buy will be back at 60 and best ask/sell will be at 65



Case: Market Order FOK Volume Equal or Less Than Order Book Volume, but Available Volume is **More Than Sweep limit Regulation** (1/2)

. There are some limit order on order book. The best bid/buy price is 60 and best ask/sell price is 65 which the volume of bid and ask is 100 lots each.

	Order Type	Bid Vol	Bid Price	Ask Price	Ask Vol	Order Type	
Best Bid =	Limit	100	60	65	100	Limit	Best Ask
	Limit	100	59	66	100	Limit	
	Limit	100	58	67	100	Limit	
	Limit	100	57	90	100	Limit	
	Limit	100	56	91	100	Limit	

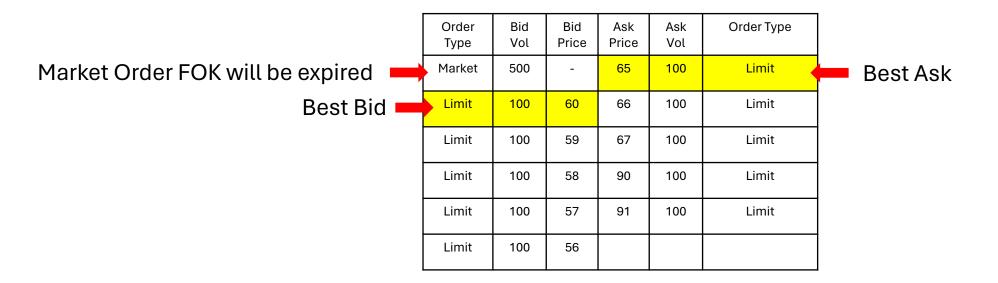
2. There is a new buy order using market order FOK (fill or kill) with the volume 500 lots. This order will be fully matched or not at all (none) with the sell open order on order book. In this case, the buy market order FOK can't be matched because there is another 200 lots sell/ask order that are more than sweep limit regulation (the sweep limit price should be maximum at 75 or 10 tick from best ask price).



Case: Market Order FOK Volume Equal or Less Than Order Book Volume, but Available Volume is **More Than Sweep limit Regulation** (2/2)

3. Since FOK order can't be matched, market order will be expired (withdraw from order book) because market order has an immediate order duration type.

And then best bid/buy will be back at 60 and best ask/sell will be at 65



Simulation of Market Order MTL (Market to Limit)

Case: Market Order MTL Volume **Equal or Less Than** Order Book Volume (1/2)

1. There are some limit order on order book. The best bid/buy price is 60 and best ask/sell price is 65 which the volume of bid and ask is 100 lots each.

	Order Type	Bid Vol	Bid Price	Ask Price	Ask Vol	Order Type	
Best Bid =	Limit	100	60	65	100	Limit	Best Ask
	Limit	100	59	66	100	Limit	
	Limit	100	58	67	100	Limit	
	Limit	100	57	68	100	Limit	
	Limit	100	56	69	100	Limit	

2. There is a new order buy using market order MTL (Market to Limit) with the volume 300 lots. This order will be fully matched or not at all (none) with the sell open order on order book. In this case, the buy market order (MTL) will be partially matched with 300 lots sell volume at price 65, 66 and 67



Case: Market Order MTL Volume **Equal or Less Than** Order Book Volume (2/2)

3. After MTL order fully matched in 300 lot, then best bid/buy will be the limit order with price is 60 and best ask/sell price is 68. There are still 200 lot volume open order sell/ask on order book.

	Order Type	Bid Vol	Bid Price	Ask Price	Ask Vol	Order Type	
Best Bid —	Limit	100	60	68	100	Limit	Best Ask
	Limit	100	59	69	100	Limit	
	Limit	100	58				
	Limit	100	57				
	Limit	100	56				

Case: Market Order MTL Volume **More Than** Order Book Volume (1/2)

1. There are some limit order on order book. The best bid/buy price is 60 and best ask/sell price is 65 which the volume of bid and ask is 100 lots each.

	Order Type	Bid Vol	Bid Price	Ask Price	Ask Vol	Order Type	
Best Bid =	Limit	100	60	65	100	Limit	Best Ask
	Limit	100	59	66	100	Limit	
	Limit	100	58	67	100	Limit	
	Limit	100	57	68	100	Limit	
	Limit	100	56	69	100	Limit	

2. There is a new order buy using market order MTL (Market to Limit) with the volume 1000 lots. This order will be fully or partially matched with the sell open order on order book. In this case, the market order MTL will be partially matched with 500 lot sell volume at price 65, 66, 67, 68, and 69.



Case: Market Order MTL Volume **More Than** Order Book Volume (2/2)

3. After MTL order fully matched in 500 lots, the remaining 500 lots of MTL order volume will be converted into limit order with the last matched price (69). Hence, the best bid/buy will be at 69.

The remaining volume will be converted into limit order

Order Type	Bid Vol	Bid Price	Ask Price	Ask Vol	Order Type
Limit	500	69			
Limit	100	60			
Limit	100	59			
Limit	100	58			
Limit	100	57			
Limit	100	56			

Case: Market Order MTL Volume Equal or Less Than Order Book Volume, but Available Volume is **More Than Sweep limit Regulation** (1/2)

. There are some limit order on order book. The best bid/buy price is 60 and best ask/sell price is 65 which the volume of bid and ask is 100 lots each.

	Order Type	Bid Vol	Bid Price	Ask Price	Ask Vol	Order Type	
Best Bid -	Limit	100	60	65	100	Limit	Best Ask
	Limit	100	59	66	100	Limit	
	Limit	100	58	67	100	Limit	
	Limit	100	57	90	100	Limit	
	Limit	100	56	91	100	Limit	

2. There is a new order buy using market order MTL (Market to Limit) with the volume 500 lots. This order will be fully or partially matched with the sell open order on order book. In this case, the market order MTL will be partially matched with 300 lot sell/ask order at price 65,66, and 67. It happened because another 200 lots sell/ask order are more than sweep limit regulation (the sweep limit price should be maximum at 75 or 10 tick from best ask price).



Case: Market Order MTL Volume Equal or Less Than Order Book Volume, but Available Volume is **More Than Sweep limit Regulation** (2/2)

3. After MTL order partially matched in 300 lots, the remaining volume that couldn't matched will be converted into limit order with the last matched price (67). Hence, the best bid/buy will be at 67.

Market Order MTL remaining volume will be converted into limit order and will be the new best bid

