

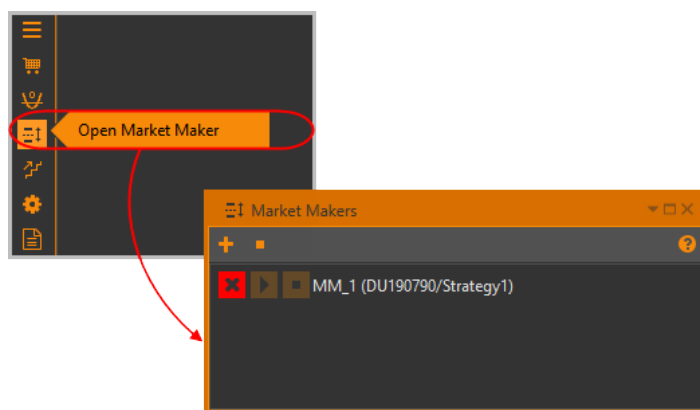
$\bullet$ $-()$:

 $\bullet$ $-$

 $\bullet$ $-()$

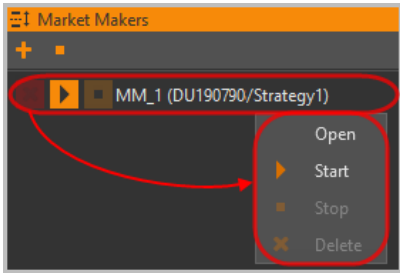
 $\bullet$ $-()$

Market Makers  (. 1).



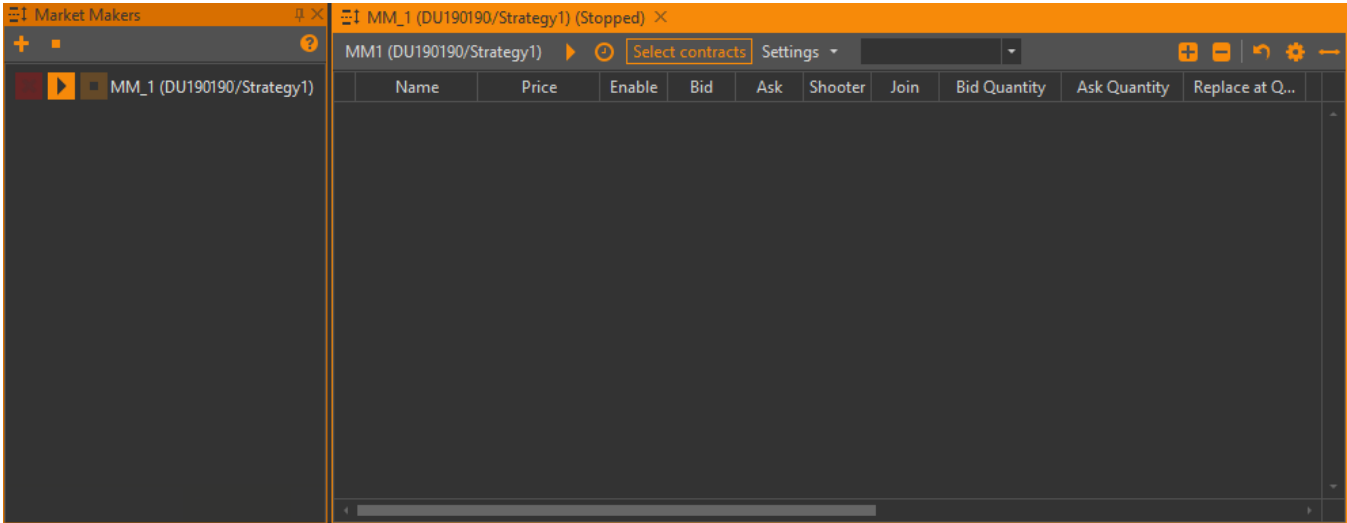
1 – Market Makers

(. 2).



2 –

, , **Open.** .

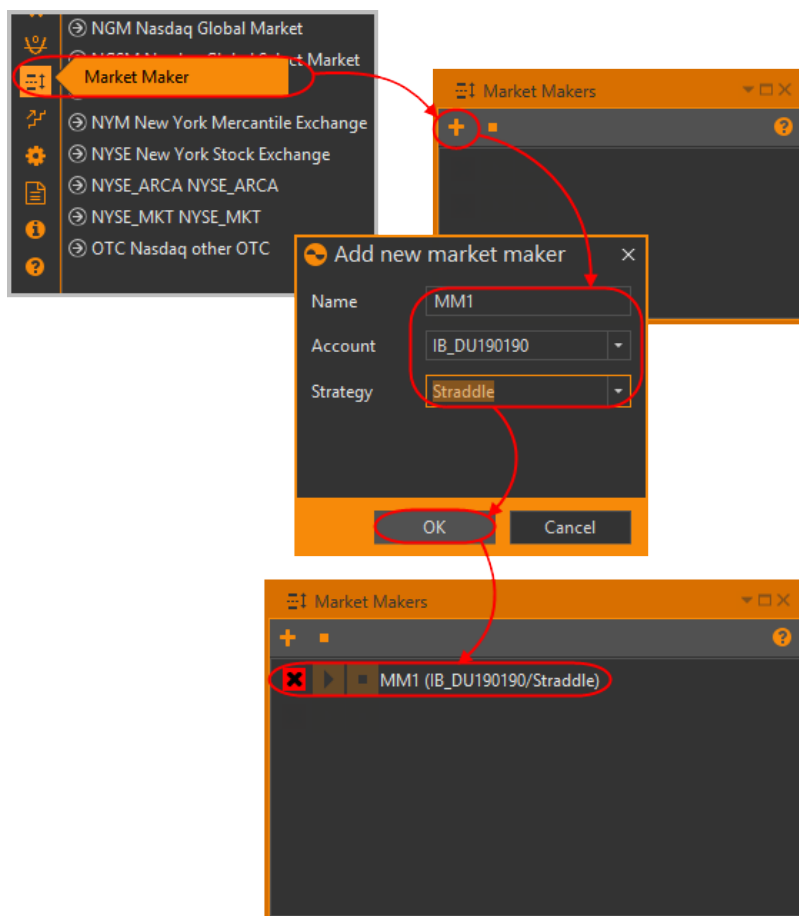


3 –

, , .

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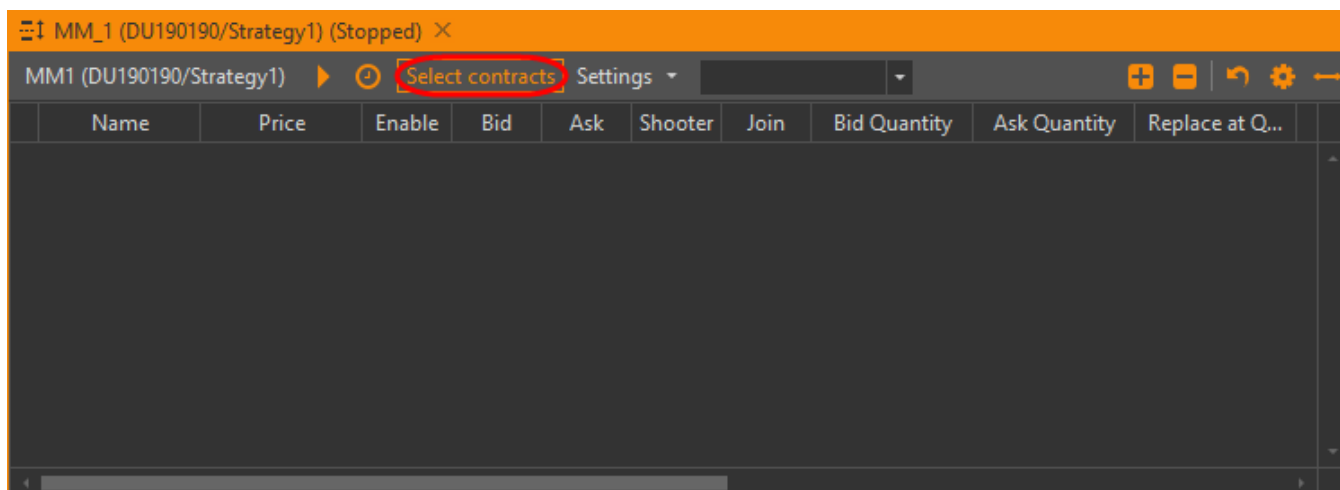
, .



4 –



- / .
-
- Select contracts.



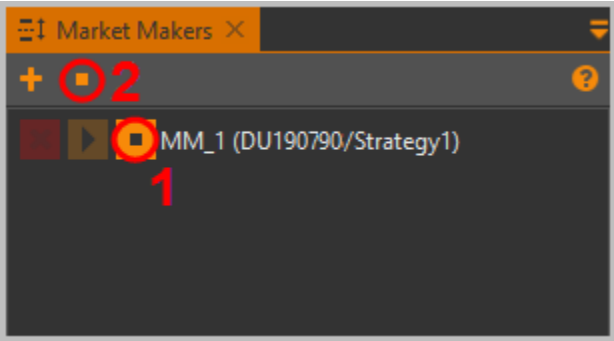
(. 6[1]),  (. 6[2]), (. 6[3]). , .

7 -

PUT, -CALL, - . (. -).

/ , **Open, :**

1. :  Start/Stop;
2. :  Market Makers.  (. 8 [2]).



8 –

, (. 7). ,  Market Makers.

-

, . , , (. 1).

1 –

Name	
Price	
Enable	, , . Bid / Ask
Bid	
Ask	
Shooter	
Join	
Bid Quantity	. : • (, 1 5); • (, 1d 2.5d). , ()
Ask Quantity	. Bid Quantity
Replace at Quantity	,
Lower Limit	. . "" . : • - = 100, • = 120, • = 30. (100), 20
Upper Limit	. . "" . , • - = 100, • = 80, • = 30. (100), 20



MM_1 (DU190790/Strategy1) (Running) X																	
MM1 (DU190790/Strategy1) [Select contracts] Settings																	
Na...	Price	Enable	Bid	Ask	Shooter	Join	Bid Q...	Ask Q...	Repla...	Lower...	Upper...	Bid Sp...	Ask S...	Sensiti...	Shift p...	Curr...	
AAPL...	40.7800	✓	✓	✓	■	✓	10	10	5	-50	50	100p	0p	20p	5p		
My market	40,78	50		Best ask		449,8		Accumulated shift		0p		Cur. joint level		0			
Bid	-59,22	0		Market		40,525	0,003052					Max. joint level		0			
				Best bid		38,85	0,003052										
AAPL...	35.7800	✓	✓	✓	■	■	10	10	7	-50	50	100p	0p	20p	5p		
AAPL...	0.2132	✓	■	✓	■	■	10	10	0	-50	50	2v	0p	20p	5p		
AAPL...	0.0000	✓	✓	✓	■	■	10	10	10	-50	50	150p	0p	20p	5p		
AAPL...	0.5303	✓	✓	✓	■	■	10	10	3	-50	50	3v	0p	20p	5p		

10 –



:

1. bid ask, - ;
2. ;
3. **Accumulated shift** (, Shift per contract);
4. , :
 - **Cur. joint level** – ;
 - **Max. joint level** – ;
 - **Cur. upper limit** – bid, ;
 - **Cur. lower limit** – ask, .

11 , call – put .

MM_1 (DU190790/Strategy1) (Running) X																	
MM1 (DU190790/Strategy1) [Select contracts] Settings																	
Na...	Price	Enable	Bid	Ask	Shooter	Join	Bid Q...	Ask Q...	Repla...	Lower...	Upper...	Bid Sp...	Ask S...	Sensiti...	Shift p...	Curr...	
AAPL...	40.7800	✓	✓	✓	■	■	10	10	5	-50	50	100p	0p	20p	5p		
AAPL...	35.7800	✓	✓	✓	■	■	10	10	7	-50	50	100p	0p	20p	5p		
AAPL...	0.2132	✓	■	✓	■	■	10	10	0	-50	50	2v	0p	20p	5p		
AAPL...	0.0000	✓	✓	✓	■	■	10	10	10	-50	50	150p	0p	20p	5p		
AAPL...	0.5303	✓	✓	✓	■	■	10	10	3	-50	50	3v	0p	20p	5p		

11 –

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1. ask (. 3). sk, **AskQuantity**;

3 –

Spread	Ask	Bid	
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	$P_{ask} = T + AskSpread + Curr.pos * Shift \text{ per ontract}$	$P_{bid} = T - BidSpread + Curr.Pos * Shift \text{ per ontract}$	• $T -$; • $Ask/BidSpread - (+/ -)$; • $Curr. Pos - (+/ -)$; • $Shift \text{ per ontract} - -$
	$P_{ask/bid} = P_{teor} + Curr.pos * Shift \text{ per ontract}$		• $P_{teor} - Ask / BidSpread (+/ -)$; • $Curr. Pos - (+/ -)$; • $Shift \text{ per ontract} - -$
	$P_{ask} = T + AskSpread * T / 100\% + Curr.pos * Shift \text{ per ontract}$	$P_{bid} = T - BidSpread * T / 100\% + Curr.pos * Shift \text{ per ontract}$	• $-$; • $Ask/BidSpread - \% (+/ -)$ • $Curr. Pos - (+/ -)$; • $Shift \text{ per ontract} - -$

2. bid (.3). bid, BidQuantity;
3. , , ;
4. , :
 - a. Sensitivity;
 - b. Replace at Quantity;
5. .


 (,), . Enable .

:

- (Shooter);
- (Join).

. . Shooter. :

1. ask bid (.) ;
2. P_{ask} Best bid, ask.
Best bid AskQuantity;
3. P_{bid} Best ask, bid.
Best ask BidQuantity;
4. , ;
5. , 2 / 3.


 / , .
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. , .


 , 100 put 100 call. . . :

- put call ;
- Upper limit=100;
- Quantity=5.

Join.

MM1 (DU190790/Strategy1) (Running) X																	
MM1 (DU190790/Strategy1) [Select contracts] Settings																	
Na...	Price	Enable	Bid	Ask	Shooter	Join	Bid Q...	Ask Q...	Repla...	Lower...	Upper...	Bid Sp...	Ask S...	Sensiti...	Shift p...	Curr...	
AAPL...	40.7800	☒	☒	☒	☒	☒	10	10	5	-50	50	100p	0p	20p	5p		
AAPL...	35.7800	☒	☒	☒	☒	☒	10	10	7	-50	50	100p	0p	20p	5p		
AAPL...	0.2132	☒	☒	☒	☒	☒	10	10	0	-50	50	2v	0p	20p	5p		
AAPL...	0.0000	☒	☒	☒	☒	☒	10	10	10	-50	50	150p	0p	20p	5p		
AAPL...	0.5303	☒	☒	☒	☒	☒	10	10	3	-50	50	3v	0p	20p	5p		

12 –

:

1. Cur. joint level – .

$L_i = \text{Curr. Pos}/\text{Quantity}, :$

- Curr. Pos – (+/-);
- Quantity – bid ask.

(. 4).

4 – Cur. joint level

	Bid	Ask
Current position 0	+	-
Current position < 0	-	+


, Quantity=5, Curr. pos.=20, Bid, Cur. joint level=4.

2. Max. joint level;

$L_{\max} = \max(L_i)$

3. Bid/Ask Quantity, :

- (Current joint level) (Max joint level);
- (Current joint level).

Lower limit, Upper limit.

, – Cur. upper limit bid, Cur. lower limit ask. , , .

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.. Pricing model. .. Option desk ..

MM (CQGDDEMOITG158/Straddle)							
Select contracts Settings							
Contract	Price	Enable	Bid	Ask	Shooter	Jo	Pricing Model Option Desk ES M17 (exp 2017-Jun-16) AMR/MARGIN
☐ CME ES FC M...	111.26	■	■	■	■	■	Pricing Model Option Desk ES U16 (exp 2016-Sep-16) AMR/MARGIN
Ask			Best ask	112,25	16,29	Accumulated shift	
My market			Market	111,375	16,17		
Bid			Best bid	110,5	16,05		
☐ CME ES FC U...	185.84	■	■	■	■	■	
Ask	185,75	199,9	Best ask	20,25	19,34	Accumulated shift	
My market	185,842	200	Market	19,75	18,79	Upper limit is reached	
Bid	185,75	199,9	Best bid	19,25	18,25	Lower limit is reached	
☐ CME ES FC U...	179.03	■	■	■	■	■	
Ask	179	200	Best ask	11,5	17,47	Accumulated shift	
My market	179,025	200	Market	11,25	17,18	Upper limit is reached	
Bid	179	200	Best bid	11	16,9	Lower limit is reached	

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-  - , / .