

ESE - Epic Sport Exchange

I. Introduction

Epic Sport Exchange is a web site created to make bet on sport competition. The idea is simple, you create a universe with a group of friend and every one start the competition with 100 000\$. During all the competition you can invest this money in teams. As the competition goes, prices will go up and down so you can maximize your profits and try to end the competition with more money than your friend.

II. The product

A. Principe

During the competition, you will buy and sell teams to other player. But to do so you'll have to estimate a price and see what buying it can bring you.

A team is a contract between two players. When it's exchange, the buyer will give money to the seller. And at the end of the competition the seller will give a reward to the buyer based on the team's performance.

B. Pay Off

The final reward that the seller has to pay the buyer of the contract depends on the competition.

Here are the values for the Euro 2016:

Results	Reward
Winner	1000\$
Second	500\$
Semi Finalist	250\$
Quarter Finalist	125\$
Eighth Finalist	50\$
Two worst third of group phase	25\$

C. Example

During the Euro 2016, John wants to buy 10 units of team France to Bill at 250\$ each.

So Bill will immediately receive 2500\$ ($250\$ \times 10$) from John.

Now if France is eliminated in eighth finals, Bill will pay John 1000\$ ($100\$ \times 10$), so John will lose 1500\$ in total.

But if France finished second, Bill will pay 5000\$ ($500\$ \times 10$) to John, so John will win 2500\$ in total.

III. The market

A. How do I start?

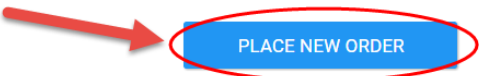
At the beginning of the competition you have 100 000\$ that you can freely invest on the market. You can buy the teams you want and sell the other. Indeed, as it is a contract, you don't have to own a team to sell it. Just remember that if you sell a team, you'll get instantly money but you'll probably have to pay something at the end of the competitions.

B. Order

1. Place an order

To place an order, you can go on the main page: <http://www.epicsportexchange.com/>

And click on place new order.



	Team	Best Bid	Best Ask	My Bid	My Ask	Order Book
→	Arsenal (0)	180	259	180	259	SHOW ALL
↓	Astana (3)	3	8		8	SHOW ALL
→	Atlético Madrid (200)	240	300	240	300	SHOW ALL
→	Barcelona (440)	300	445	300	445	SHOW ALL
↑	BATE Borisov (25)	15	99	15	99	SHOW ALL
↑	Bayer Leverkusen (175)	125	222	125	222	SHOW ALL
→	Bayern Munich (270)	280	400	280	400	SHOW ALL
↓	Benfica (193)	200	310	200	310	SHOW ALL
↑	Borussia Monchengladbach (60)	25	42			SHOW ALL
→	Chelsea (225)	230	370	230	400	SHOW ALL
↑	CSKA Moscow (101)	80	101	80	150	SHOW ALL
→	Dinamo Zagreb (2)	12	26		44	SHOW ALL
→	Dynamo Kyiv (86)	88	119	88	141	SHOW ALL
→	Galatasaray (45)	60	86	60	110	SHOW ALL
↓	Gent (17)		29			SHOW ALL
→	Juventus (181)	145	195	145	240	SHOW ALL
→	Lyon (150)	120	143	120	200	SHOW ALL
→	Maccabi Tel Aviv (10)	7	15		55	SHOW ALL
→	Malmö FF (40)	4	10			SHOW ALL
↓	Manchester City (206)	105	275	105	275	SHOW ALL
→	Manchester United (0)	181	290	175	290	SHOW ALL
↓	Olympiacos (40)	40	149	40	149	SHOW ALL
↓	Paris Saint-Germain (180)	105	300	105	300	SHOW ALL
↑	Porto (200)	180	225	180	276	SHOW ALL
↓	PSV Eindhoven (69)	70	250	70	250	SHOW ALL
↑	Real Madrid (99)	275	423	275	425	SHOW ALL
↑	Roma (95)	60	98		98	SHOW ALL
→	Sevilla (0)	110	175	110	199	SHOW ALL
↓	Shakhtar Donetsk (35)	80	199	80	199	SHOW ALL
→	Valencia (0)	175	260	175	275	SHOW ALL
↑	Wolfsburg (123)	25	100	25	100	SHOW ALL
↑	Zenit Saint Petersburg (150)	125	225	125	225	SHOW ALL

This will open a pop up where you can describe what you want to do.

Buy Sell

BAYERN MUNICH

256 \$

10

SEND NEW ORDER

Just specify if you want to buy or sell the team, the price and the quantity you want. The order will be automatically send to the market and available for other player.

2. Study the market

On this same page, you have access to a table with a lot of information on the market.

↑ Porto (200)	132	225	120	276	SHOW ALL
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For each team you have access to:

- The price trend (is this team gaining or losing values?)
- The last traded price
- The best bid: maximum price a player is willing to pay for this team
- The best ask: minimum price a player is willing to sell this team
- My bid: the current price you are willing to pay for this team
- My ask: the current price you are willing to sell this team
- Order book: pop up that will show the full set of orders available for this team

Bayern Munich

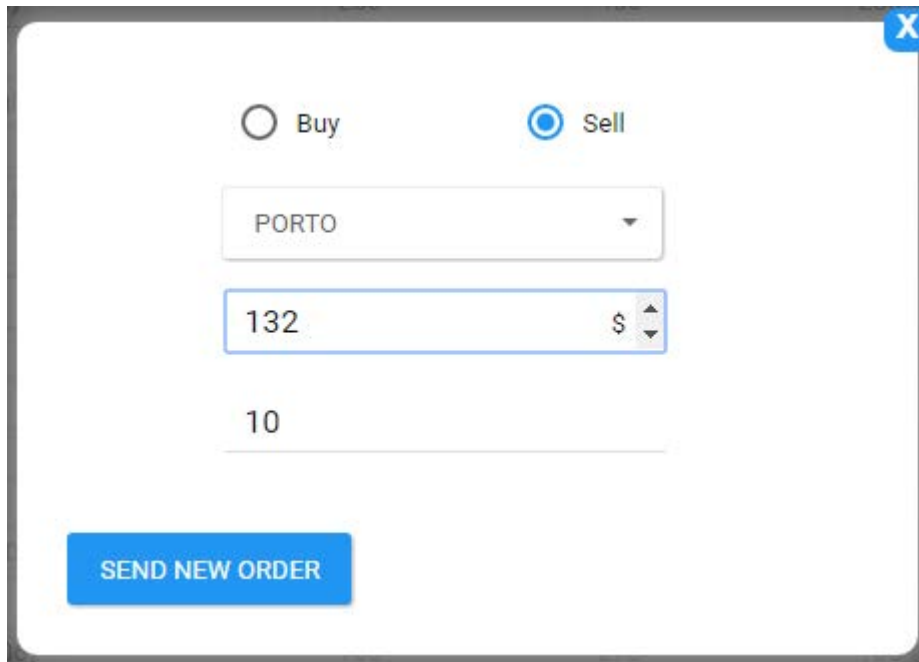
Last traded price : 270 Current price : 340 Your position : +10

Bids		Asks	
Price	Quantity	Price	Quantity
280	10	400	10
270	20	445	10
267	10		

3. Match an order

If you see a price that interests you on this table, just click on it! It will display the same pop up as the one to place an order pre fill with all the information needed to make the trade.

On the previous example, the best bid for Porto is 132. This mean that a player is willing to pay 132\$ for it. So when I click on the cell. A popup appear with everything ready to sell 10 Porto at 132 to this player.



4. Modify my order

You can only put one buy and one sell order per team. If you put a second one it will automatically cancel the first. So if you want to modify an existing order, just click on the existing cell, enter the new values and send the order.

Once you clicked on the corresponding cell you can see a cancel order button in case you want to completely remove your order.

C. Swaps

In progress ...

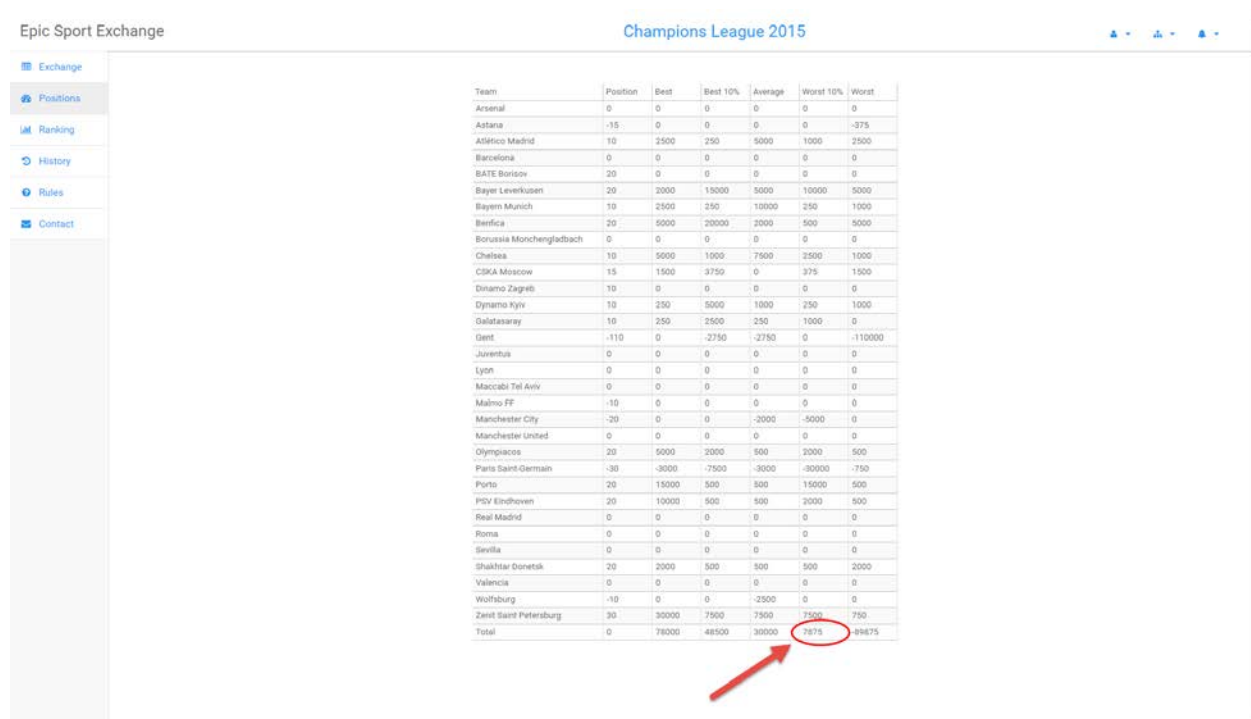
D. Limits

As said before you can sell a team that you don't have. But you cannot do whatever you want.

Each time you'll send an order, the website will check that you have enough money to pay what you own at the end of the competition. The two following paragraphs will explain how to calculate your limit. The first one is enough to play. The second one is more technical and is only there for your curiosity.

1. Simple Check

To get your current balance and see if you can still trade new teams you have to subtract the Total Worst 10% value (available here : <http://www.epicsportexchange.com/Positions>) to your current cash.



Epic Sport Exchange Champions League 2015

Team	Position	Best	Best 10%	Average	Worst 10%	Worst
Arsenal	0	0	0	0	0	0
Astana	-15	0	0	0	0	-375
Atletico Madrid	10	2500	250	5000	1000	2500
Barcelona	0	0	0	0	0	0
BATE Borisov	20	0	0	0	0	0
Bayer Leverkusen	20	2000	15000	5000	10000	5000
Bayern Munich	10	2500	250	10000	250	1000
Berfica	20	5000	20000	2000	500	5000
Borussia Monchengladbach	0	0	0	0	0	0
Chelsea	10	5000	1000	7500	2500	1000
CSKA Moscow	15	1500	3750	0	375	1500
Dinamo Zagreb	10	0	0	0	0	0
Dynamo Kyiv	10	250	5000	1000	250	1000
Galatasaray	10	250	2500	250	1000	0
Genk	-110	0	-2750	-2750	0	-110000
Juventus	0	0	0	0	0	0
Lyon	0	0	0	0	0	0
Maccabi Tel Aviv	0	0	0	0	0	0
Malmo FF	-10	0	0	0	0	0
Manchester City	-20	0	0	-2000	-5000	0
Manchester United	0	0	0	0	0	0
Olympiacos	20	5000	2000	500	2000	500
Paris Saint-Germain	-30	-3000	-7500	-3000	-30000	-750
Porto	20	15000	500	500	15000	500
PSV Eindhoven	20	10000	500	500	2000	500
Real Madrid	0	0	0	0	0	0
Roma	0	0	0	0	0	0
Sevilla	0	0	0	0	0	0
Shakhtar Donetsk	20	2000	500	500	500	2000
Valencia	0	0	0	0	0	0
Wolfsburg	-10	0	0	-2500	0	0
Zenit Saint Petersburg	30	30000	7500	7500	7500	750
Total	0	78000	48500	30000	7175	49675

2. Technical explanation

The idea is to be able to pay everything you owe at the end of the competition. To make the check more flexible and to avoid running out of cash to fast we are assuring that you have enough money to pay what you owe in 90% of the cases.

To calculate this value, a number N of simulation is launched on the competition. For each competition we are calculating the results based on your current positions. After ordering the results and ignoring the worst X% we get the current Value At Risk X

So under the Positions menu, you can see different scenarios based on this calculation:

- What is the best thing that can happen to you
- What is the best thing that can happen to you ignoring the best extreme 10% scenarios
- What will happen to you in average
- What is the worst thing that can happen to you ignoring the worst extreme 10% scenarios
- What is the worst thing that can happen to you

To check that you have enough to place an order we are doing the same calculation but include the new order in your position. Then check that: $\text{Current Cash} - \text{Var}(90\%) > 0$

IV. Ranking

A temporary ranking is available during all the competition: <http://www.epicsportexchange.com/Ranking>

To calculate it, the current cash amount is taken as a basis. Then for each position we are updating it with the team values calculated as following:

- If the team is eliminated we are taking its final value
- If the team has orders on it then we are taking the mid price (best bid + best ask)/2
- If the team has no orders then the last trading price is taken.