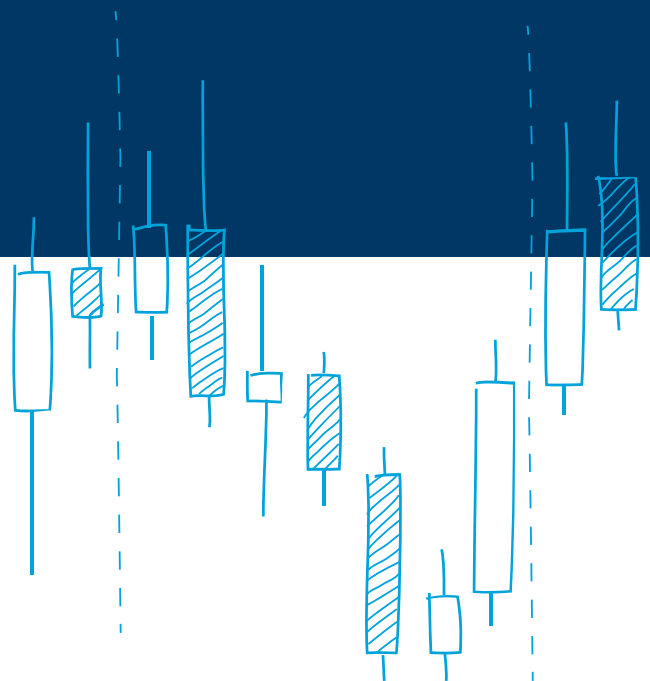




# NADEX BINARY OPTIONS 101

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# TABLE OF CONTENTS

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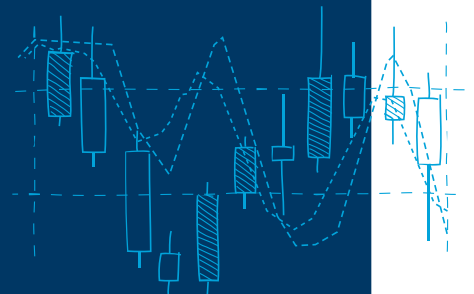
03 TO BE OR NOT TO BE? THAT'S A BINARY QUESTION.

04 LET'S LOOK AT AN EXAMPLE.

06 WHO SETS A BINARY OPTION'S PRICE? AND HOW?

07 PRICE REFLECTS PROBABILITY.

07 WAIT UNTIL EXPIRATION OR GET OUT EARLY?



# TO BE OR NOT TO BE? THAT'S A BINARY QUESTION.

A BINARY OPTION ASKS A SIMPLE YES/NO QUESTION:  
WILL THIS MARKET BE ABOVE THIS PRICE AT THIS TIME?



You buy the option if you think the answer is **YES** and sell if you think the answer is **NO**.

When the trade expires, if you were right about the market's price, you get the full \$100 value. If you were wrong, you'll get zero. Zero or \$100. No other settlement value is possible.

When you enter a trade, you pay some value between zero and \$100 based on the probability of the binary option expiring with an answer of "yes." You also pay a fee of 90 cents per option to enter the trade. If you are right when the option expires, you'll pay another 90 cents as a settlement fee. If you were wrong, then we won't charge you the settlement fee. You can never lose more than you paid. And your maximum profit is \$100 minus the amount you paid.

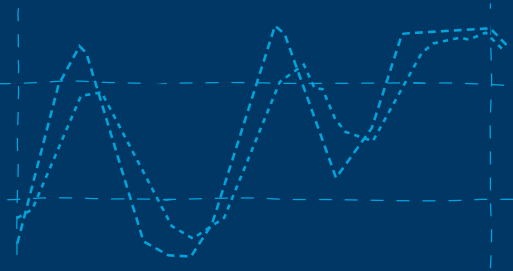
There's a third way your trade can go. Suppose the option starts moving in your direction and its value goes up, but you aren't sure it will stay there. Naturally, you might want to just cash out while you can and get some profit. You can do that. You just sell the option if you bought it or buy it back if you sold it.

You can also close your position before expiration if the trade is losing and you don't want to stay in the trade. Maybe you want to cut your losses rather than risk losing the full amount. Maybe the market just isn't doing what you thought it would. Whatever the reason, you can exit the trade before expiration.

So the question is a simple yes/no: Will it be or not be above the strike price at the expiration time? There are many ways to trade based on that question. It will take all your trading skill and acumen.

But it won't take more money than you decide to risk up front. Nadex doesn't issue margin calls, ever. We don't have to. And you don't have to worry about getting one.

Since both buyer and seller put up their share of the option's \$100 value before entering the trade, it's fully collateralized, meaning no leveraged debt.



## LET'S LOOK AT AN EXAMPLE.

This is a hypothetical example, so we'll leave out some of the finer details and focus on the basics. Let's say you're looking at a binary option based on the following question:

**WILL THE EXCHANGE RATE BETWEEN THE EURO CURRENCY AND US DOLLAR BE ABOVE 1.1300 (\$1.13 PER EURO) AT 7PM TODAY?**



On the Nadex platform it would be written like this:  
**EUR/USD > 1.1300 (7pm)**

Now let's say you buy this binary. That means you think the answer to the question will be "yes." If you are right, and the spot EUR/USD FX rate is higher than 1.1300 at 7pm (ET), the binary will settle at \$100.

If not, and the spot EUR/USD FX rate is lower than 1.1300 at 7pm (ET), the binary will settle at zero.

You're probably wondering, what if the EUR/USD is exactly 1.1300 at 7pm? It will still settle at zero. (See the box to the right to learn how we calculate that final price.)

The desired outcome for every binary option is always "greater than," so both "less than" and "equal to" get the answer "no." The final price using the settlement calculations noted above creates what is called the settlement value. That's the price we compare to the strike price, 1.1300, to say whether it is greater than, less than or equal.

**IN SHORT, AT EXPIRATION WE COMPARE THE SETTLEMENT PRICE OF THE UNDERLYING MARKET TO THE STRIKE PRICE OF THE BINARY OPTION. IF THE MARKET SETTLEMENT IS GREATER, THE BINARY IS WORTH \$100. IN ALL OTHER CASES, THE BINARY IS WORTH ZERO.**

The calculation doesn't consider whether the EUR/USD was higher than 1.1300 at some earlier time. We only look at the 7pm expiration.

Since it's possible for the euro or any market to spend all day above the strike price (1.1300) and then drop just before 7pm, it's possible for a binary that looked ready to expire at \$100 to end up at zero.

## SETTLEMENT CALCULATIONS

Nadex calculates the expiration values for underlying indicative markets (excluding economic events) like this:

- 01 Take the last 25 trade prices (for index and commodity futures) or midpoint prices (for spot FX) that happen before the moment of expiration.
- 02 Remove the highest 5 prices and lowest 5 prices, leaving the middle 15.
- 03 Calculate the arithmetic average of the remaining 15 prices rounded to one decimal point past the precision of the underlying market (with the exception of Wall St 30, which is rounded to the same precision as the underlying market).

Nadex uses market prices from a data feed from Reuters. If Reuters is unavailable, Nadex may obtain pricing data through Bloomberg or another trusted data provider.

That's one of the challenges of binary options trading but also one of the opportunities. If the market is even a tiny bit above 1.1300 at expiration, you still get the full \$100. You get a substantial return on a small margin of difference.

This difference is especially powerful in flat markets, where a market might not move up or down very much. With binary options, it doesn't have to be more than a tick above the strike price for a buyer to get the full \$100 payout. That's because with binary options, as the name implies, it's all or nothing.

Unless you exit early. More about that in the next section...

# WHO SETS A BINARY OPTION'S PRICE? AND HOW?

Who is an easy question to answer: it's the market participants themselves. The buyers and sellers decide the price at any given moment based on their collective opinion.

NADEX DOESN'T PLAY A ROLE IN PRICING. WE OPERATE THE MATCHING ENGINE, CONNECTING BUYERS TO SELLERS AND MAKING SURE ALL TRADES ARE FAIR AND ACCURATE.

Now let's look at how those buyers and sellers determine price. Before a binary option expires at either \$100 or zero, its price moves up and down as long as the underlying market moves (though not in strict correlation). During that period, its trading price may fall anywhere between zero and \$100. The price of the binary reflects the probability that it will expire "in the money," meaning above the strike price. So in the case of our euro example: EUR/USD > 1.1300 (7pm).

The price of the binary option will go up and down based on whether it looks likely to expire above 1.1300 at 7pm.

Can you see how all the factors that play into that probability will also affect the price?

If it is hours from 7pm and the market keeps bouncing above and below 1.1300, it's hard to say what is likely to happen. Anything could

happen before 7pm. The price will reflect that 50/50 probability by being about \$50 at that time. The best bid and offer may be something like 48-52.

Let's continue with the same example: EUR/USD > 1.1300 (7pm).

Imagine it is 6pm (ET), i.e. one hour before expiration, and that the underlying spot EUR/USD FX rate is standing at 1.1290. If it is at 1.1290 an hour from now, at 7pm, the binary option will expire with a value of zero and you will lose whatever you paid (but not more).

Let's think about the probabilities of where it can go in the final hour before expiration. Markets can go in one of three directions: up, down or sideways. Right now, it's below 1.1300. So the chance of it staying below 1.1300 are good compared to other possibilities. It doesn't have to do anything to get there. It's already there.

If the market stays there, the binary option will expire at zero. If it goes down, the binary will also expire at zero. Then there's the third possibility: that the EUR/USD rate will go up in the next hour and be above 1.1300 at 7pm. That's one of three possible outcomes.

And actually, it's a little less than a one-third possibility, since the market could go up but then still be below 1.1300 at 7pm. In other words, it is reasonable to believe it is more likely that the binary will settle at zero than that it will settle at \$100.

# PRICE REFLECTS PROBABILITY.

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The pricing of the binary option will reflect the probability of the EUR/USD rate being above 1.1300 at 7pm. Since right now that is less probable than the market staying at or below 1.1300, the binary option might trade on Nadex at around \$30. This price would imply that Nadex participants (those actively buying and selling that binary option) believe there is only a 30% chance that the binary option will settle at \$100.

Remember that Nadex doesn't influence the pricing or participate in trading. The value judgments are made by the buyers and sellers. We're just the exchange, making sure everything is done fairly and accurately.

So with the underlying market at 1.1290 at 6pm (ET), the market is likely to think there's a smaller chance (about 30%) of the rate being above 1.1300 in another hour, and greater chance (about 70%) that it will be the same or lower than it is now.

So at 6pm, the answer to "will the EUR/USD exchange rate be above 1.1300 at 7pm?" seems more likely to be "no" than "yes." The pricing will roughly correspond to that and be about \$30 to buy the option and \$70 to sell it.

## WAIT UNTIL EXPIRATION OR GET OUT EARLY?

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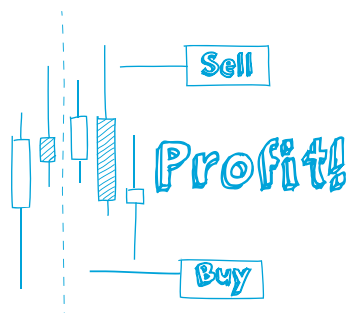
No one can give you a hard and fast rule about when to hold a binary option until expiration and when to exit early. It's a personal choice. Generally people exit early for one of two reasons: to take profits or to get out with a smaller loss than the maximum (the amount you paid to enter the trade).

Here's a situation where traders often take profits rather than holding on. Let's say that same EUR/USD > 1.1300 jumps up 12 points and is now in the money.

If it's in the money, the binary option has likely gone up significantly in value, maybe to \$80 or more. If you have a binary option that is trading at \$90 with three hours left until expiration, do you want to hold out for that last \$10 of potential profit? Or do you take the actual profit you now have? After all, if you bought it at \$30 you've just gotten a nearly 200% return in a few hours. Not bad for a day's work, as they say. (Of course, that's a hypothetical result and not meant to represent a typical trade on Nadex. Your actual results may vary.)

This isn't a suggestion of what you should do, but many traders would do what old floor traders who came up in the '70s and '80s call the Steve Miller move: they take the money and run. (Remember that song?) They weigh the two choices: risk losing some of their gains while they hold out for a little bit more versus locking in those gains and giving up a chance to squeeze out a few more dollars. After all, you can always get back in with a new trade.

The same kind of choice would move some traders to get out if their \$30 binary option went down to \$15 in value with no sign that the market was about to turn upwards and rally. In that situation, the question is, is it better to admit the trade didn't go as you expected and salvage some of your money than to lose it all clinging to an increasingly faint hope?



**IMPORTANT SKILLS FOR A TRADER TO LEARN IS THE DISCIPLINE TO QUICKLY ADMIT YOU WERE WRONG ABOUT A TRADE. SOME TRADERS PUT IT THIS WAY: THE PURPOSE OF TRADING ISN'T TO PROVE YOURSELF RIGHT. IT'S TO MAKE MONEY.**

You know, that's important enough to repeat. The purpose of trading isn't to prove yourself right. It's to make money.

So when should you hold on till expiration? There are multiple scenarios, and only practice will tell you when you want to hold versus exiting early. But if that EUR/USD did a slow but steady climb to 1.2998, then 1.2999, and now there's about ten minutes left, you'll be facing a situation where your binary has already lost some value but is just one tick away from being in the money and worth the full \$100.

There's no right or wrong choice, but can you see why some would hold on to give the market a chance to gain that last tick? You already know your maximum loss. It's the \$30 plus fees that you paid up front. If trying for that last tick is worth \$30 to you (versus the \$20 or so you'd lose if you exited early), then hold on to the binary until expiration.

Either way, it's your choice. A choice you can make knowing precisely what the worst case scenario is. That's the point of binary options trading. Limited risk just might remove some of the limits on your own sense of confidence and possibility.

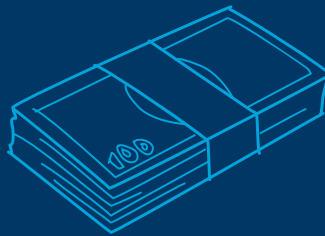


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