

## Our Sizing Algo

We have seen how to derive our first sizing algo. Now we're going to build on that to show you 2 improved versions.

### Sizing Algorithm 1 - Basic

This is the algorithm you've just seen:

$$\text{Amount to Bet (in Lots)} = (\text{Risk} * \text{Account Balance}) / (\text{Stop Loss} * \text{Contract Size})$$

Drawbacks: This algorithm assumes our account deposit currency is the same as our quote currency (usually USD). The deposit currency is the currency our capital is held in.

### Sizing Algorithm 2 – Advanced (FX Only) (OPTIONAL READING)

To account for the possibility that there is a difference in quote and deposit currency, we added Tick Value to our sizing algorithm to:

$$\begin{aligned} \text{Amount to Bet (in Lots)} &= (\text{Risk} * \text{Account Balance}) / (\text{Stop Loss} * \text{Contract Size} * \text{Tick Value}) \\ &= \text{Old Amount to Bet (in Lots)} / \text{Tick Value} \end{aligned}$$

Tick Value = Dollar value of one tick of the quote currency, in the account deposit currency, for one standard lot.

Think of Tick Value as the exchange rate between your quote and deposit currency. We are using it to convert the currency of your betting amount to your deposit currency.

One Tick = The smallest price increment we can have for the product we are trading.

Note: If we are trading on a yen currency pair, multiply Amount to Bet by 100 to account for the different decimal place (Since 1 pip = 0.01 on a yen pair, 1 pip = 0.0001 on a non-yen pair).

### Sizing Algorithm 3 – Advanced (All Products) (LEARN THIS!)

Sizing Algorithm 2 works on Forex products only as it uses the Contract Size variable. This contract size is standardised to \$100,000 of the base currency. However, this may not be the case if you are trading CFDs or other non-Forex products.

This is the sizing algorithm we use:

$$\text{Amount to Bet (in Lots)} = (\text{Risk} * \text{Account Balance}) / (\text{Stop Loss} / \text{Tick Size} * \text{Tick Value})$$

Tick Value = Dollar value of one tick of the quote currency, in the account deposit currency, for one standard lot.

Think of Tick Value as the exchange rate between your quote and deposit currency. We are using it to convert the currency of your betting amount to your deposit currency.

Tick Size = One Tick = The smallest price increment we can have for the product we are trading.

#### Interpretation:

Let's break the formula down to different parts.

$\text{Risk} * \text{Account Balance} = \text{Amount to Risk}$  (i.e. the amount we lose in one trade if our stop loss is hit)

$\text{Stop Loss/Tick Size} = \text{Stop Loss amount}$  (with Tick Size as units)

Eg. Our Stop Loss is 20 pips (or 0.00200)

Tick Size is 0.00001 (which is the case for Forex with a 5-digit broker)

Thus,  $\text{Stop Loss/Tick Size} = 0.00200/0.00001 = 200$ . This means our stop loss amount equates to 200 tick sizes.

$\text{Stop Loss/Tick Size} * \text{Tick Value}$

= Stop Loss amount per tick \* Dollar Value of one tick (of the quote currency, in deposit currency, for one lot)

= Dollar Value of our Stop Loss (for one lot)

Starting to see the picture...?

### Going back to our sizing algo...

Amount to Bet (in Lots)

=  $(\text{Risk} * \text{Account Balance}) / (\text{Stop Loss/Tick Size} * \text{Tick Value})$

= Amount to Risk / Dollar Value of our Stop Loss (for one lot)

To better understand the above formula, let's throw in some figures. For example:

Amount to Risk = \$1000

Dollar Value of our Stop Loss (for one lot) = \$200

Using logical deduction, if we only want to lose \$1000 and for every lot that we enter, we lose \$200, we should enter 5 lots in this trade.

Amount to Bet (in Lots)

=  $(\text{Risk} * \text{Account Balance}) / (\text{Stop Loss/Tick Size} * \text{Tick Value})$

= Amount to Risk / Dollar Value of our Stop Loss (for one lot)

= \$1000/\$200

= 5 Lots (IT WORKS!)

Note: Do test out the above or any sizing algorithm before deploying it on a product (Forex or otherwise). Some products have distorted values for Tick Value and Tick Size. For those cases, you might need to manually customise the sizing algorithm.