

# The Macro Ops DOTM Guide

## What is the DOTM strategy?

DOTM is short for deep-out-of-the-money. This strategy involves buying cheap calls on bullish stocks. If the stock price makes a strong move higher in a short amount of time, these call options can appreciate in value by many multiples. It's not out of the ordinary for some of these call options to appreciate 30-50x.

Here's an example to illustrate the power of DOTM calls.

Back in August of 2017 we issued a buy alert for Interactive Brokers in our MIR report ([link here](#)).

At the time IBKR traded at \$40.54.

The December DOTM call options struck at \$47 were trading for just \$0.20.

The screenshot shows the IBKR stock price at 40.54. Below it is an option chain for calls expiring on 15 DEC 17. The 47 strike call is highlighted as a DOTM call with a bid of .10 and an ask of .20.

Expiration	Impl Vol	Prob.OTM	Delta	Bid	Ask	Exp	Strike
15 DEC 17	1.31%	.91	6.70	7.00	15 DEC 17	34	
15 DEC 17	4.88%	.88	5.80	6.10	15 DEC 17	35	
15 DEC 17	0.67%	.83	5.00	5.30	15 DEC 17	36	
15 DEC 17	20.61%	24.56%	.79	4.10	4.40	15 DEC 17	37
15 DEC 17	20.19%	31.31%	.73	3.40	3.60	15 DEC 17	38
15 DEC 17	19.58%	32.70%	.66	2.70	2.90	15 DEC 17	39
15 DEC 17	19.52%	47.04%	.58	2.10	2.35	15 DEC 17	40
15 DEC 17	18.60%	55.39%	.49	1.55	1.75	15 DEC 17	41
15 DEC 17	18.36%	63.77%	.40	1.15	1.30	15 DEC 17	42
15 DEC 17	18.05%	71.63%	.32	.80	.95	15 DEC 17	43
15 DEC 17	17.38%	79.05%	.24	.50	.65	15 DEC 17	44
15 DEC 17	17.45%	84.56%	.18	.35	.45	15 DEC 17	45
15 DEC 17	17.07%	89.45%	.12	.20	.30	15 DEC 17	46
15 DEC 17	16.75%	93.12%	.08	.10	.20	15 DEC 17	47

Had you gone out and bought plain IBKR stock at \$40.54 you would of done pretty well by the end of the year. By December 15th, IBKR was trading for \$60.40. A 49% gain in a few months.

But take a look at the price of the 47 DOTM calls.

CALLS		Strikes: ALL				
Impl Vol	Prob.OTM	Delta	Bid	Ask	Exp	Strike
0.00%	0.00%	1.00	20.80	22.00	15 DEC 17	39
431.96%	4.36%	.97	20.10	21.00	15 DEC 17	40
0.00%	0.00%	1.00	19.00	19.80	15 DEC 17	41
361.11%	3.37%	.98	18.10	18.90	15 DEC 17	42
305.16%	2.03%	.99	17.10	17.80	15 DEC 17	43
286.95%	2.09%	.99	16.00	16.90	15 DEC 17	44
301.21%	3.68%	.97	15.10	15.90	15 DEC 17	45
0.00%	0.00%	1.00	14.10	14.70	15 DEC 17	46
234.16%	2.35%	.98	13.00	13.90	15 DEC 17	47
216.87%	2.45%	.98	11.80	13.10	15 DEC 17	48
200.03%	2.58%	.98	10.90	12.00	15 DEC 17	49
207.39%	4.58%	.96	10.00	11.00	15 DEC 17	50
0.00%	0.00%	1.00	5.10	5.70	15 DEC 17	55
0.00%	0.00%	.97	.20	.65	15 DEC 17	60
0.00%	0.00%	.97	0	.10	15 DEC 17	65
0.00%	0.00%	.97	0	.05	15 DEC 17	70
0.00%	0.00%	.97	0	.05	15 DEC 17	75

Those were trading for \$13.00 **That's a 6400% return in a few month. \$1,000 invested in this DOTM option would turn into \$65,000 in four months time....**

That's a serious difference in return.

### What is considered a deep out-of-the-money call?

A deep out of the money call is an option with a strike price that is far away (25%+) from the current price of the underlying. If you're familiar with option greeks — DOTM calls are those with a 15 delta or less.

You can see in the example below that IBKR is trading for \$64.46. The DOTM calls are the ones with a strike price far away from that value. The red rectangle shows that these are the calls struck at \$85 and \$90.

IBKR INTERACTIVE BROKERS GROUP INC. COM 64.46 +.26 +0.40% B: 64.45 A: 64.48 NASDAQ ±1.333

Underlying: Last X 64.46, Net Chng +.26, Bid X 64.45, Ask X 64.48, Size 2 x 1

Option Chain Filter: Off Spread: Single Impl Vol, Probability OTM, Delta

CALLS Strikes: ALL

Expiry	Strike	Impl Vol	Prob. OTM	Delta	Bid X	Ask X	Exp	Strike
16 FEB 18	100	(18)	100					
	16 MAR 18	(46)	100					
	15 JUN 18	(137)	100					
21 SEP 18	35	42.00%	4.92%	.97	27.50 N	31.90 N	21 SEP 18	35
	40	39.03%	8.42%	.95	22.70 A	27.20 I	21 SEP 18	40
	45	36.22%	13.51%	.91	18.80 X	21.90 X	21 SEP 18	45
	50	30.59%	17.71%	.88	14.50 X	16.80 X	21 SEP 18	50
	55	30.25%	29.19%	.78	11.50 M	12.10 T	21 SEP 18	55
	60	27.76%	40.98%	.67	7.90 X	8.40 M	21 SEP 18	60
	65	27.13%	55.12%	.53	5.30 M	5.60 M	21 SEP 18	65
	70	26.36%	68.29%	.39	3.20 X	3.60 M	21 SEP 18	70
	75	26.50%	78.77%	.28	2.00 M	2.25 X	21 SEP 18	75
	80	27.04%	86.07%	.19	1.25 H	1.45 M	21 SEP 18	80
85	29.87%	89.53%	.15	.80 T	1.45 M	21 SEP 18	85	
90	29.84%	93.25%	.10	.60 X	.80 M	21 SEP 18	90	

Also notice that these calls are much cheaper than the ones closer to the current stock price. The 90 call in this example trades for \$.80. The 65 call trades for \$5.60 — 7 times more expensive. Buying DOTM calls can be a very lucrative strategy because if we're right about a stock trending higher these inexpensive calls give you incredible positive asymmetry versus buying ones closer to the money.

### Options have a ton of expiries, how far out should you buy?

Selecting the correct tenor (time till expiration) is one of the hardest parts about option trading. We've spent years experimenting with different tenors for buying and selling options. After thousands of trades, and lots of time spent researching this, it's clear to us that the best options for the DOTM strategy are those with 6-18 months left until expiry. [Billionaire trader Jim Leitner agrees:](#)

*If the option maturity is long enough, trend can take us far enough away from the strike that it's okay to overpay. ~ Jim Leitner*

Short-dated options (1-90 days to expiry) don't allow enough time for the underlying stock to capitalize on the power of its price trend. Buying these short-dated calls is a losers game because time is not on your side.

The long-dated calls on the other hand allow ample time for a stock to make its full move.

Another benefit of buying long-dated options is the convenience. We can open the trade and then let it sit for half a year or more before worrying about rolling exposure. This makes execution much easier.

## Why buy the DOTM calls instead of the stock?

*Options take away that whole aspect of having to worry about precise risk management. It's like paying for someone else to be your risk manager. Meanwhile, I know I am long XYZ for the next six months. Even if the option goes down a lot in the beginning to the point that the option is worth nothing, I will still own it and you never know what can happen. ~ Jim Leitner*

Buying a call option defines your risk. The most you can lose on a DOTM call is the amount of premium that you pay. This makes risk management easy. We can know our risk with absolute certainty before placing a trade.

You also avoid the hassle of setting and honoring stops.

A standard stock trade with a stop can be frustrating. It's common for a quality stock to hit your stop from random volatility and then resume its uptrend without you in it.



By using a call option you don't have to worry about controlling your risk with stops. The DOTM call does it for you. In a sense, you're outsourcing the risk management process to the option.

Using DOTM calls also allows you to **greatly leverage your capital and amplify returns**.

Since 1 call option represents 100 shares of stock you can take on much more exposure for less cash. Let's run through a quick example.

Let's say IBKR is trading for \$64.46 and our target DOTM call option is trading for \$.80

Purchasing 100 shares of this stock would cost \$6,446. Replicating the same exposure in the DOTM call option would only require \$80 — a fraction of the cost.

We could buy exposure to 10x more shares in the DOTM option for only \$800 — still less cash than 100 shares of stock.

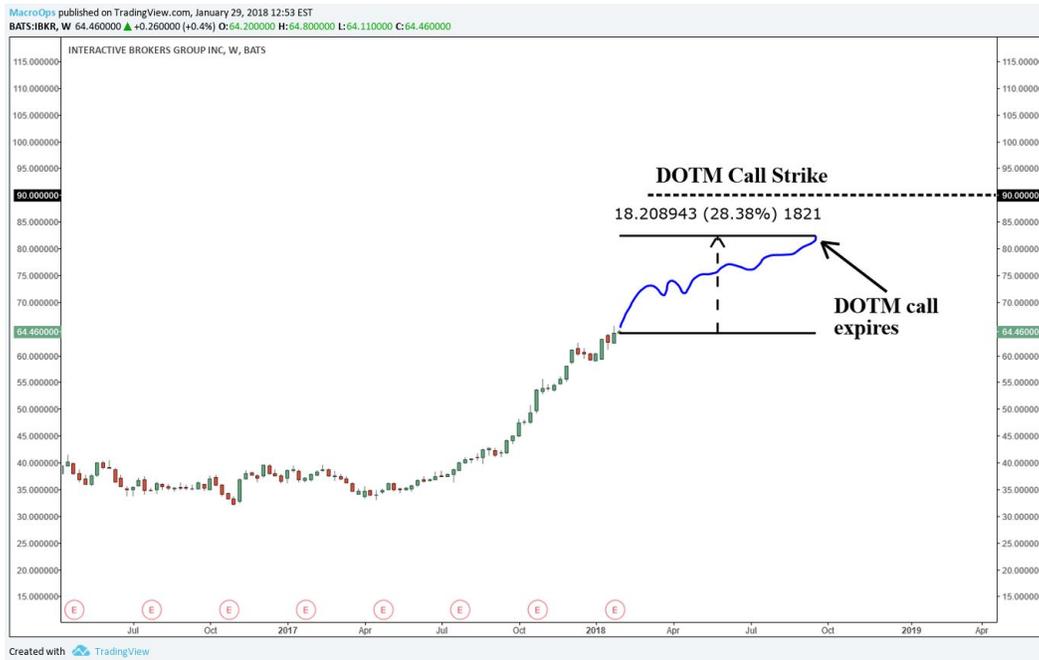
The cash savings we get from using the DOTM call option can be used for other trades or put into short-dated government securities to earn an additional return.

## **What are the downsides of using DOTM calls over stock?**

Every trading vehicle has its downsides and DOTM calls are no exception. DOTM call holders are not entitled to dividends. If the company pays a dividend, only stock owners will receive that distribution.

DOTM call holders can also lose 100% despite a mild rally in the underlying stock. If the stock chops around and finishes lower than the strike price of the DOTM call it will expire worthless.

In the example below, IBKR traveled up 28.38% by the time the DOTM option expired. But because the strike on the DOTM call was at \$90 (above the current price of the stock) the option expires worthless.



In this situation the stock owner would have a 28.38% gain while the DOTM call holder would have a 100% loss.

### Can this strategy be executed on any stock that has a bullish outlook?

No, not all stocks have liquid DOTM call options with 6 months or more until expiry.

Market makers only list options on underlyings that have a lot of public interest. These companies will usually have a market cap of \$10 billion or higher.

### What's the ideal trade/investment case for this strategy?

Every play has its own nuances but here are the three primary things we like to see before placing a DOTM trade.

- Stock has strong positive price momentum (ie, bullish trend)
- Stock has a great fundamental narrative supporting the strong trend
- Option volatility is moderately priced (20-50% implied volatility reading)

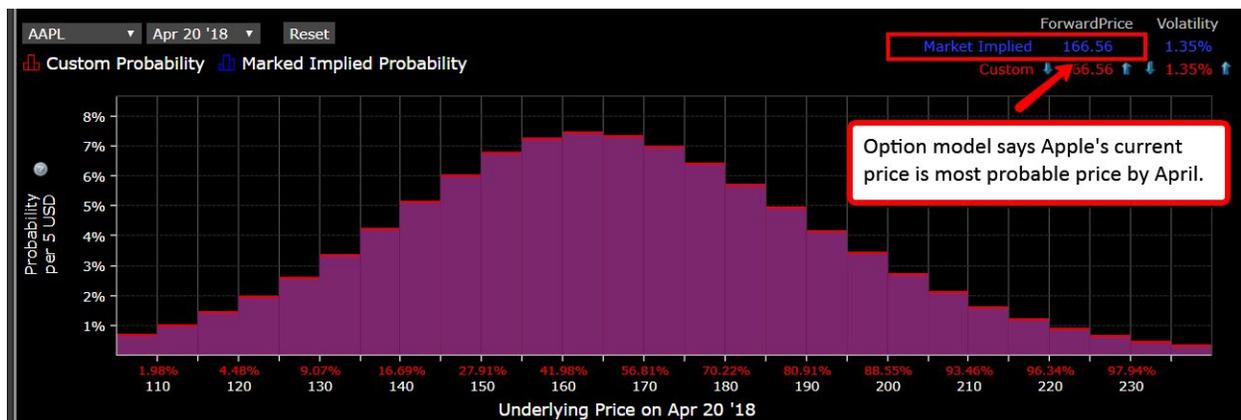
## How do you size a DOTM trade?

Sizing depends on the individual's risk tolerance. In the Macro Ops portfolio we usually put anywhere between 0.5%-1.00% of our portfolio into one DOTM option.

## Why does this strategy work, what is the theory behind it?

The Black-Scholes model assumes that all stocks have an equal chance of going higher as they do lower. The math behind Black-Scholes implies that trends don't exist and that day to day fluctuations are random.

Take a look at the probability distribution for April calls on Apple stock, below. The pink shaded area represents the likelihood that Apple falls into that particular price range by expiration. You can see that it's a fairly symmetrical bell curve. The amount of shading on the right is about the same as the amount to the left. Also note that the market implied forward price is right near the price that Apple was trading at the time of this snapshot (October 30th, 2017).



Now let's say we believe Apple actually has positive price and fundamental momentum. We believe trends exist and that Apple will continue its uptrend over time. If our assumption is true, the probability of the stock moving higher than it is today is much greater than what the above distribution implies.

The correct distribution should instead look something like this.



The red shading represents the probability of Apple reaching those prices if we assume that the current trend persists. The difference between the red and the purple areas are what we call [edge](#).

The market is implying a low probability of higher prices while we think the likelihood is significantly higher. We can buy the DOTM calls in this situation and show a profit over time.

Also notice that the “custom” forward price is higher than the market implied price. The option market always assumes no trend — and in this hypothetical example, we think otherwise.

It’s important to understand that these edges, i.e. the discrepancy between the red area and the purple area, are more likely to occur in options with more than 6 months left to expiry. Long-term momentum is a factor that the options market regularly ignores.

## Who on Earth is selling these cheap calls to us?

Whenever you’re trading derivatives it’s important to understand the psychology and reasons behind the other side of your trade. Derivative trading is a zero-sum game. One side needs to lose for the other side to win.

So who’s willing to sell us DOTM calls that have the potential to 50x?

Option market makers.

A market maker’s goal is to collect the bid ask spread on an option’s price. They aren’t in the business of guessing what the final value of the option will be. They don’t want risk associated with movements in the underlying stock.

To protect against this risk they do something called “delta hedging.” Delta hedging offsets the directional risk of an option. When market makers sell DOTM call options they delta hedge them by buying stock. As the underlying stock trends higher and higher they buy more and more stock to offset directional risk.

At the end of the trade they are left with a really large loss on their short call but at the same time a really large gain on their long stock hedge. The two P&Ls cancel each other out and the market maker is left with the tiny gain from the original bid/ask spread.

The real “losers” in this trade are the market participants selling their stock to the market maker who’s delta hedging. These sellers of stock missed out on a nice bull trend.