

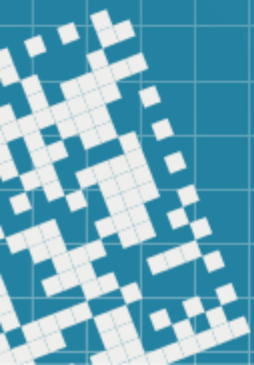
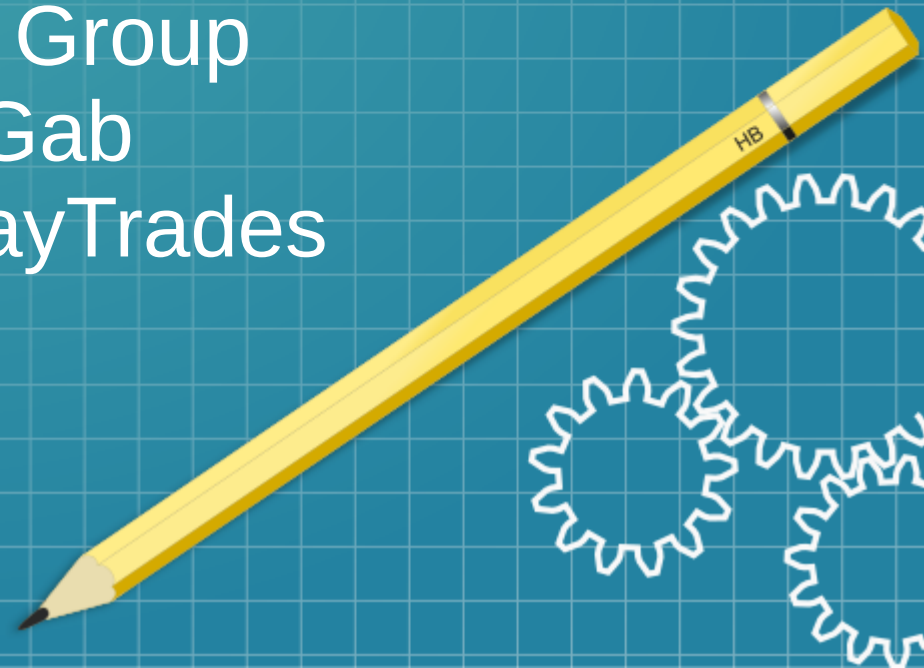


# Options Fundamentals

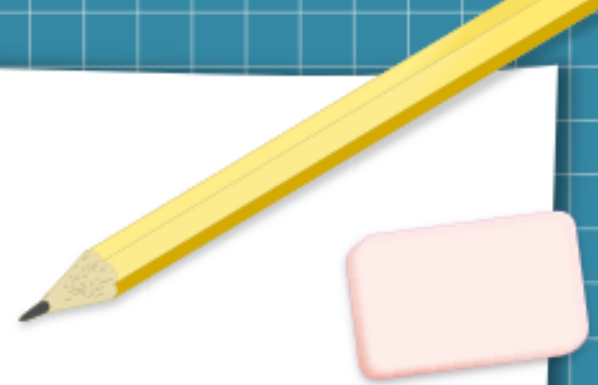
## Ep 3

# Volatility

Gab: Finance Group  
@MidwayGab  
BitChute: MidwayTrades



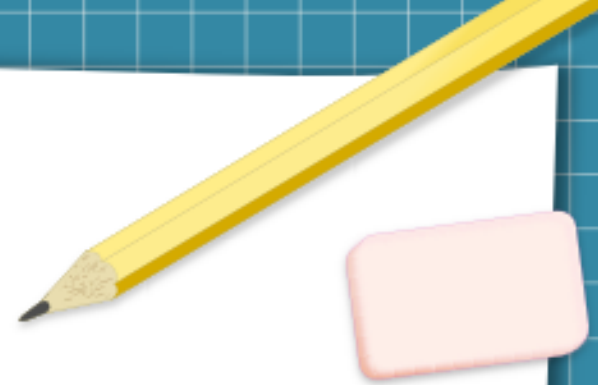
# Disclaimer



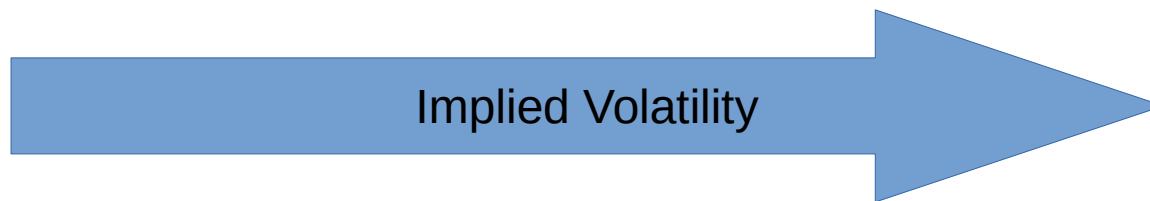
This presentation is for educational purposes only. Nothing in this presentation is intended to be trading or financial advice.



# What is Volatility?



- The amount a stock price fluctuates without regard to direction
- Two Types of volatility

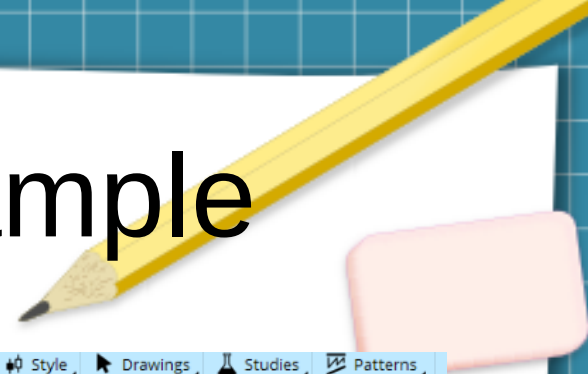


# Historical Volatility

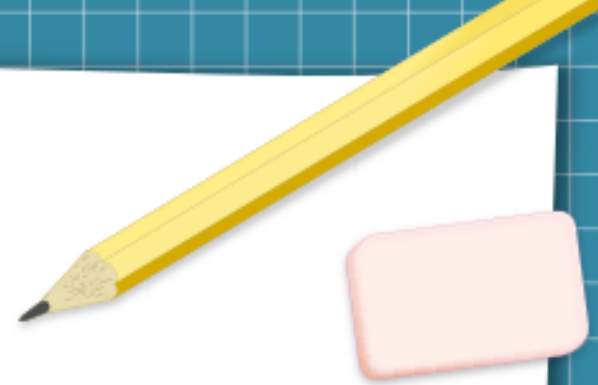


- Textbook: The annualized standard deviation of the past stock price movements
- Real-world: The amount a stock fluctuates on daily basis over a year
  - A stock could end the year at the exactly the same price as it started the year and it could still be quite volatile if it moved a lot during the year
- It's helpful to a trader to understand the range so we know what is high and what is low

# Historical Volatility Example



# Implied Volatility



- Implied volatility is a way to express the what the market thinks is going to happen
- It becomes a component of the extrinsic value of an option price.
  - It measures the perceived risk of a stock movement
  - This can sometimes be seen with respect to known events like earnings or a major Fed announcement
- Implied Volatility is how the market tried to price probabilities.

# Implied Vol: MSFT

MSFT									
MICROSOFT CORP COM		107.71	+1.59 +1.50%	B: 107.81 A: 107.90	NASDAQ				
Underlying									
Last X		Net Chng		Bid X		Ask X		Size	
107.71 Q		+1.59		107.81 P		107.90 P		1 x 10	
Option Chain									
Filter: Off		Spread: Single		Layout: Last X, Net Change, Impl Vol					
CALLS									
		Last X	Net Chng	Impl Vol	Bid X	Ask X	Strikes: 25	Exp	Strike
25 JAN 19 (5) 100 (Weeklys)									
		9.75 Q	+2.25	--	7.65 X	11.35 M		25 JAN 19	98
		8.77 I	+1.77	--	7.20 X	11.00 M		25 JAN 19	98.5
		8.43 M	+1.78	--	6.70 N	8.95 H		25 JAN 19	99
		8.05 I	+1.25	--	6.20 N	10.00 N		25 JAN 19	99.5
		7.42 C	+1.62	--	5.70 X	8.30 M		25 JAN 19	100
		6.69 C	+1.19	--	4.75 X	6.90 A		25 JAN 19	101
		5.70 N	+.95	26.95%	5.75 B	6.05 M		25 JAN 19	102
		4.85 C	+1.50	21.40%	4.70 M	5.05 X		25 JAN 19	103
		3.80 Q	+1.12	22.62%	3.85 H	4.10 X		25 JAN 19	104
		3.05 C	+.98	19.32%	2.87 X	3.15 N		25 JAN 19	105
		2.27 A	+.82	19.66%	2.13 Z	2.31 Z		25 JAN 19	106
		1.60 Q	+.67	21.12%	1.54 Z	1.69 Z		25 JAN 19	107
		1.02 W	+.42	20.00%	.99 Z	1.04 Z		25 JAN 19	108
		.62 P	+.27	19.67%	.57 Z	.63 Z		25 JAN 19	109
		.32 C	+.12	19.59%	.30 Z	.36 X		25 JAN 19	110
		.16 Z	+.10	19.67%	.14 Q	.20 X		25 JAN 19	111
		.05 C	0	19.15%	.06 Q	.08 Q		25 JAN 19	112
		.03 B	0	19.77%	.02 X	.05 X		25 JAN 19	113
		.02 I	0	19.98%	0 P	.03 Q		25 JAN 19	114
		.02 X	0	23.65%	.01 P	.03 Q		25 JAN 19	115
		.01 X	0	25.33%	0 B	.03 N		25 JAN 19	116
		.02 Q	0	26.53%	0 C	.02 N		25 JAN 19	117
		.02 E	0	30.31%	0 P	.03 N		25 JAN 19	118
		.01 C	0	32.68%	0 P	.03 N		25 JAN 19	119
		.68 N	0	33.38%	0 Z	.02 N		25 JAN 19	120
1 FEB 19 (12) 100 (Weeklys)									
		9.80 A	+1.55	30.94%	8.25 M	11.65 M		1 FEB 19	98
		8.70 N	0	37.64%	9.20 X	10.15 X		1 FEB 19	98.5
		7.85 E	+.50	50.67%	8.70 X	10.95 X		1 FEB 19	99
		8.00 Q	+1.00	36.48%	8.35 C	9.15 X		1 FEB 19	99.5
		8.25 Q	+1.35	32.91%	7.90 X	8.45 X		1 FEB 19	100
		7.15 P	+1.30	32.10%	6.95 M	7.60 M		1 FEB 19	101
		6.70 N	+1.60	36.38%	6.60 Z	6.75 Z		1 FEB 19	102
		5.60 B	+.95	36.51%	5.80 N	6.05 X		1 FEB 19	103
		4.90 P	+.87	36.32%	5.05 Z	5.35 M		1 FEB 19	104
		4.35 N	+.80	35.49%	4.35 Z	4.60 X		1 FEB 19	105
		3.50 Q	+.50	34.39%	3.70 Z	3.85 Z		1 FEB 19	106
		3.20 Q	+.70	33.92%	3.10 Z	3.25 Z		1 FEB 19	107
		2.51 E	+.51	33.50%	2.57 H	2.70 Z		1 FEB 19	108
		1.98 Z	+.37	33.05%	2.08 Z	2.22 H		1 FEB 19	109

# Implied Vol: MSFT

- Why is the implied volatility up so much in 1 week?



msft earnings date



Web Images Videos News

All Regions ▾ Safe Search: Moderate ▾ Any Time ▾

## Microsoft Corporation (MSFT) Earnings Report Date - NASDAQ.com

Microsoft Corporation is estimated to report earnings on 01/30/2019. The upcoming earnings date is derived from an algorithm based on a company's historical reporting dates. Our vendor, Zacks ...

 <https://www.nasdaq.com/earnings/report/msft>



# Implied Vol: Exercise



- Stock XYZ is sitting at \$50/share
- I buy an \$60 call option 60 days out for \$1.00
- In 30 days, XYZ is now trading at \$55/share
- Excluding all other factors (only volatility), where should my \$60 call be priced?
  - A) \$1.00
  - B) \$1.50
  - C) \$2.00
  - D) \$3.00

# Implied Vol: Exercise




- Stock XYZ is sitting at \$50/share
- I buy an \$60 call option 60 days out for \$1.00
- In 30 days, XYZ is now trading at \$55/share
- Excluding all other factors (only volatility), where should my \$60 call be priced?
  - A) \$1.00
  - B) \$1.50
  - C) \$2.00
  -

# Implied Vol: Exercise



- Stock XYZ is sitting at \$50/share
- I buy an \$60 call option 60 days out for \$1.00
- In 30 days, XYZ is now trading at \$55/share
- Excluding all other factors (only volatility), where should my \$60 call be priced?
  - A) \$1.00
  - 
  - C) \$2.00
  -

# Implied Vol: Exercise



- Stock XYZ is sitting at \$50/share
- I buy an \$60 call option 60 days out for \$1.00
- In 30 days, XYZ is now trading at \$55/share
- Excluding all other factors (only volatility), where should my \$60 call be priced?
  - A) \$1.00
  - 
  - 
  -

# Implied Vol: Exercise



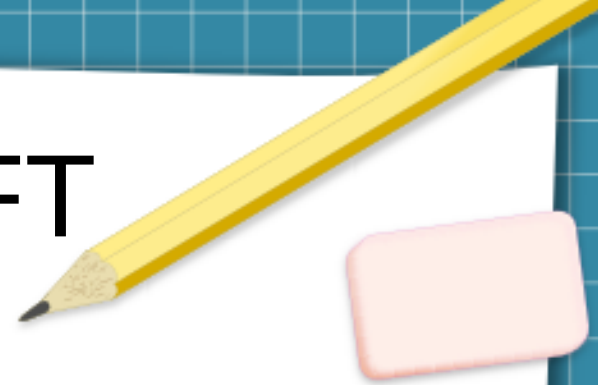
- Stock XYZ is sitting at \$50/share
- I buy an \$60 call option 60 days out for \$1.00
- In 30 days, XYZ is now trading at \$55/share
- Excluding all other factors (only volatility), where should my \$60 call be priced?
  - A) \$1.00
- Why? Because the probability hasn't really changed. The price moved half way there in half the time.
- In reality, it may trade under \$1.00 due to time decay

# Expected Move



- Financial media like to talk about the “expected move” of a stock for a given event like earnings.
- This is usually done by looking at the price of an ATM long straddle after but near the event.
  - Buy 1 Call ATM
  - Buy 1 Put ATM

# Long Straddle: MSFT



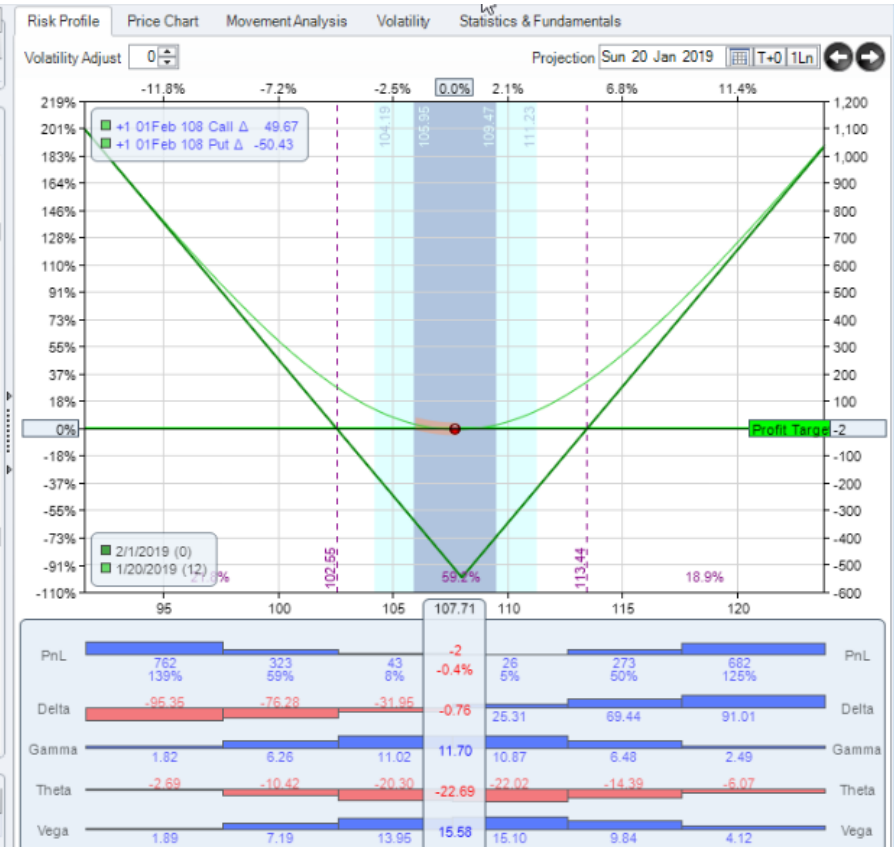
Microsoft Corp											33.57 (+7%)				
Open	High	Low	Last	Chg	Chg%	SD	Model	Pos	Open Position (0)		Start New Trade				
107.46	107.90	105.91	107.71	0.00	0.00%	0.00			DIT	SD	IVChg%	OrigMargin	PnL%		
									0	0.00	0.00%	547.50	-0.37%		

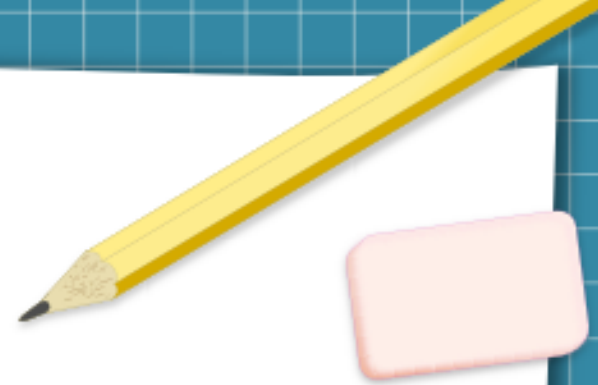
Option Chain															
	Weekly					Weekly					Weekly				
	25 Jan 19 (5)					01 Feb 19 (12)					08 Feb 19 (19)				
	Mid	IV	Delta	Model	Pos	Mid	IV	Delta	Model	Pos	Mid	IV	Delta	Model	Pos
CALL															
113	0.035	18.62	3.25			0.79	32.95	22.02			0.985	27.37	24.33		
112	0.07	18.06	6.08			1.06	33.65	27.15			1.32	29.85	29.54		
111	0.17	18.63	12.47			1.34	33.72	32.26			1.615	28.39	34.25		
110	0.33	18.65	21.18			1.73	31.99	38.09			2.025	29.08	39.56		
109	0.60	18.85	32.95			2.15	32.41	43.87			2.50	29.87	44.89		
108	1.015	22.89	46.58			2.635	35.57	49.67		+1	2.945	31.40	50.00		
107	1.615	24.45	59.74			3.175	33.40	55.38			3.475	30.18	55.15		
106	2.22	19.79	72.57			3.775	33.94	60.85			4.125	31.20	60.00		
105	3.01	20.29	82.20			4.475	35.11	65.78			4.80	32.03	64.51		
104	3.975	23.92	85.92			5.20	38.93	70.31			5.525	32.97	68.61		
103	4.875	24.67	90.79			5.925	36.37	74.70			6.20	32.92	72.83		
PUT															
111	2.605	0.00	99.99			4.60	30.95	-67.89			5.10	30.60	-64.48		
110	1.735	0.00	99.99			3.875	30.31	-62.67			4.15	27.58	-61.14		
109	1.83	21.07	-68.05			3.425	32.36	-56.15			3.675	28.90	-55.37		
108	1.25	21.87	-53.62			2.82	34.33	-50.43		+1	3.375	32.98	-49.86		
107	0.83	22.99	-39.72			2.39	35.23	-44.56			2.87	31.36	-44.93		
106	0.53	20.29	-27.91			1.98	33.02	-38.92			2.30	31.75	-39.78		
105	0.335	25.19	-18.93			1.635	33.55	-33.64			1.95	30.73	-35.03		
104	0.215	22.52	-12.68			1.33	36.67	-28.71			1.92	34.27	-31.94		
103	0.15	24.25	-8.85			1.10	37.58	-24.45			1.44	32.51	-26.94		
102	0.095	25.33	-5.80			0.86	34.85	-20.22			1.14	33.83	-22.78		
101	0.07	27.19	-4.19			0.70	38.49	-16.90			0.915	33.93	-19.17		
100	0.055	29.26	-3.18			0.595	37.00	-14.39			0.81	33.70	-16.82		

Trade Analysis												
Analysis	CurMargin	Cost	Cur Cost	Com	Profit/Loss	PnL%	Delta	Gamma	Theta	Vega	T/D	Plot
Model	547.50	-547.50	545.50	2.00	-2.00	-0.37%	-0.76	11.70	-22.69	15.58	-30	<input checked="" type="checkbox"/>

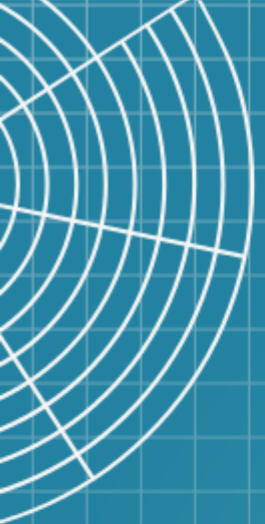


# Summary



- Volatility is part of the extrinsic value of an option that represents the probability of the movement of the underlying.
- Historical volatility gives us the range so we know what's high and what's low for the underlying
- Implied volatility is the price associated with the probability of our trade being successful. It's part of the premium paid for the risk being taken





Thank you for your time. Let's keep talking!  
Gab: Finance Group  
@MidwayGab  
BitChute: MidwayTrades

