Decoding Market Dynamic: Understanding the Order Book Utilizing Bookmap™ and Level 2

TRADING TERMINAL.COM

Presented by: Thor Young

Thor Young

History Prior to Trading:

- IT Industry
- Worked on options Trading Platform Server's

Trading History:

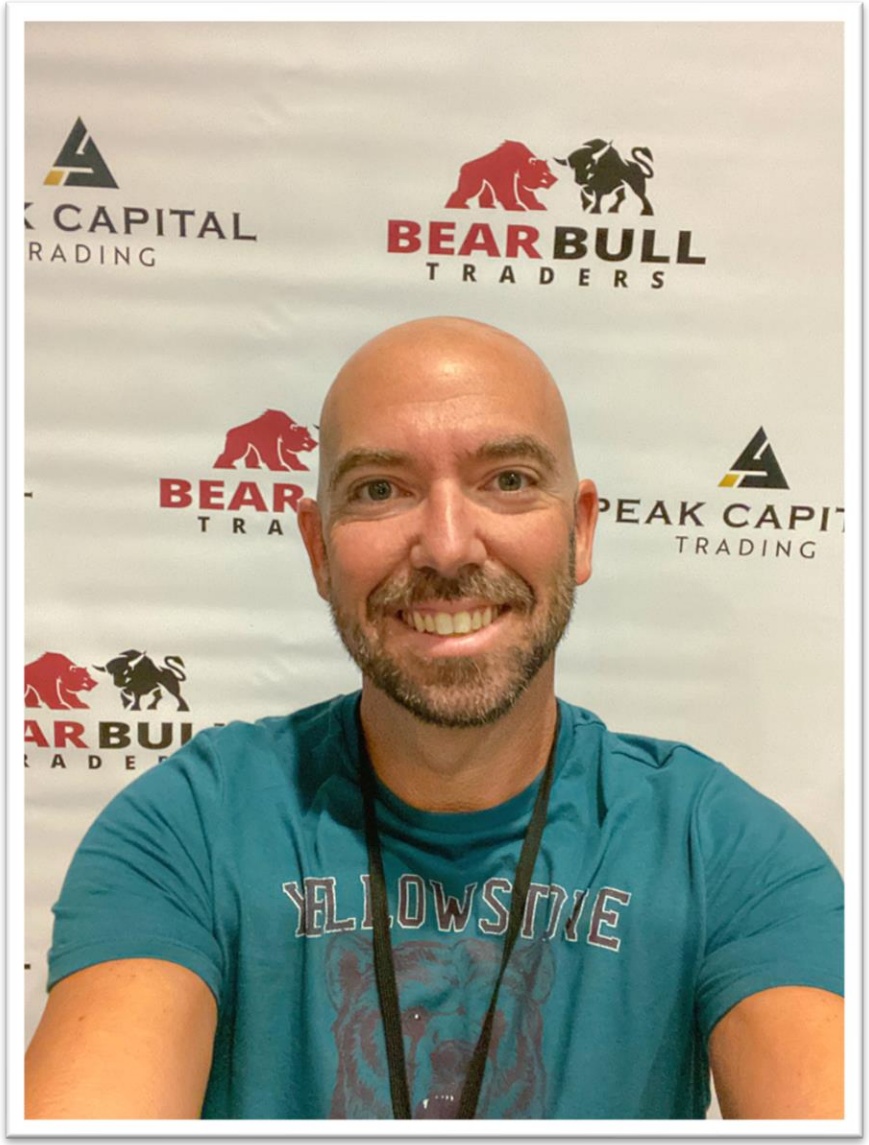
- 5+ Years Trading
- 3+ Years Consistently Profitable
- Full time Day Trader

Trading Edges:

- Reading Market Movement & Order Flow
- VPA & Pivots
- Where, When, and How Trading Methodology

Hobbies:

- NFL Jaguars
- Taking Family to the Beach
- Touring the NYSE and hitting Broadway



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Introduction of Concept

In the 1990's, larger spreads forced tape readers to abandon simple tickers and focus attention on market depth screens, most commonly referred to as "Level 2". In the 1990's the world changed. Complex Algorithms took over the market. Order volume began coming in a way that had never seen before.

Through this revolution in Market Structure. Utilizing the book, Tape Readers found an obvious edge over other participants. This market skill allows proponents to measure the emotional intensity of participants while the judge if the market makers have been properly incentivized to move.

Introduction of Concept

Over Promise and Under Deliver

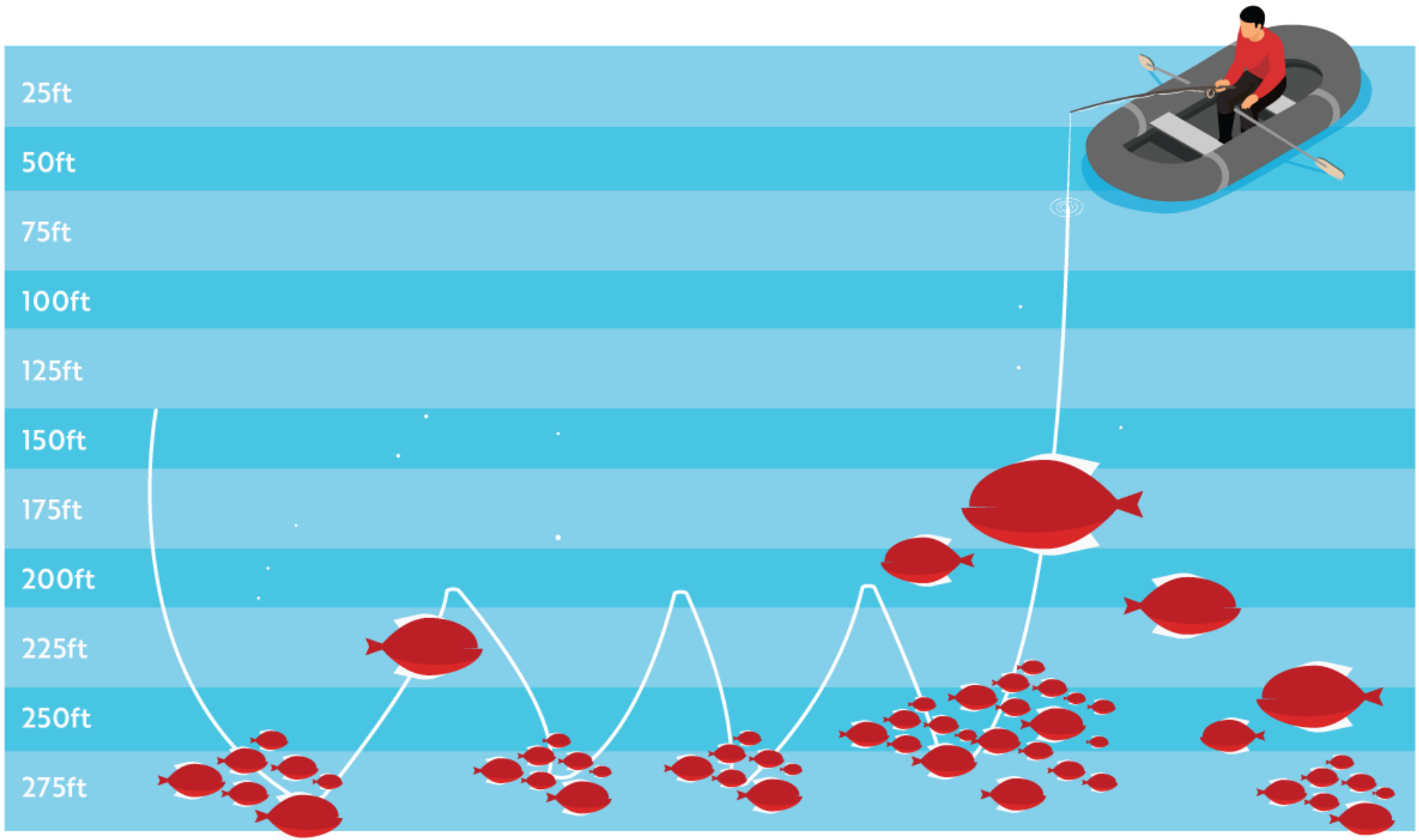
Who are they?

Institutional Orders (State/Gov Pensions, ETC)

Algorithms Control Everything

Real Estate Analogy

Jigging Analogy



Jigging Analogy

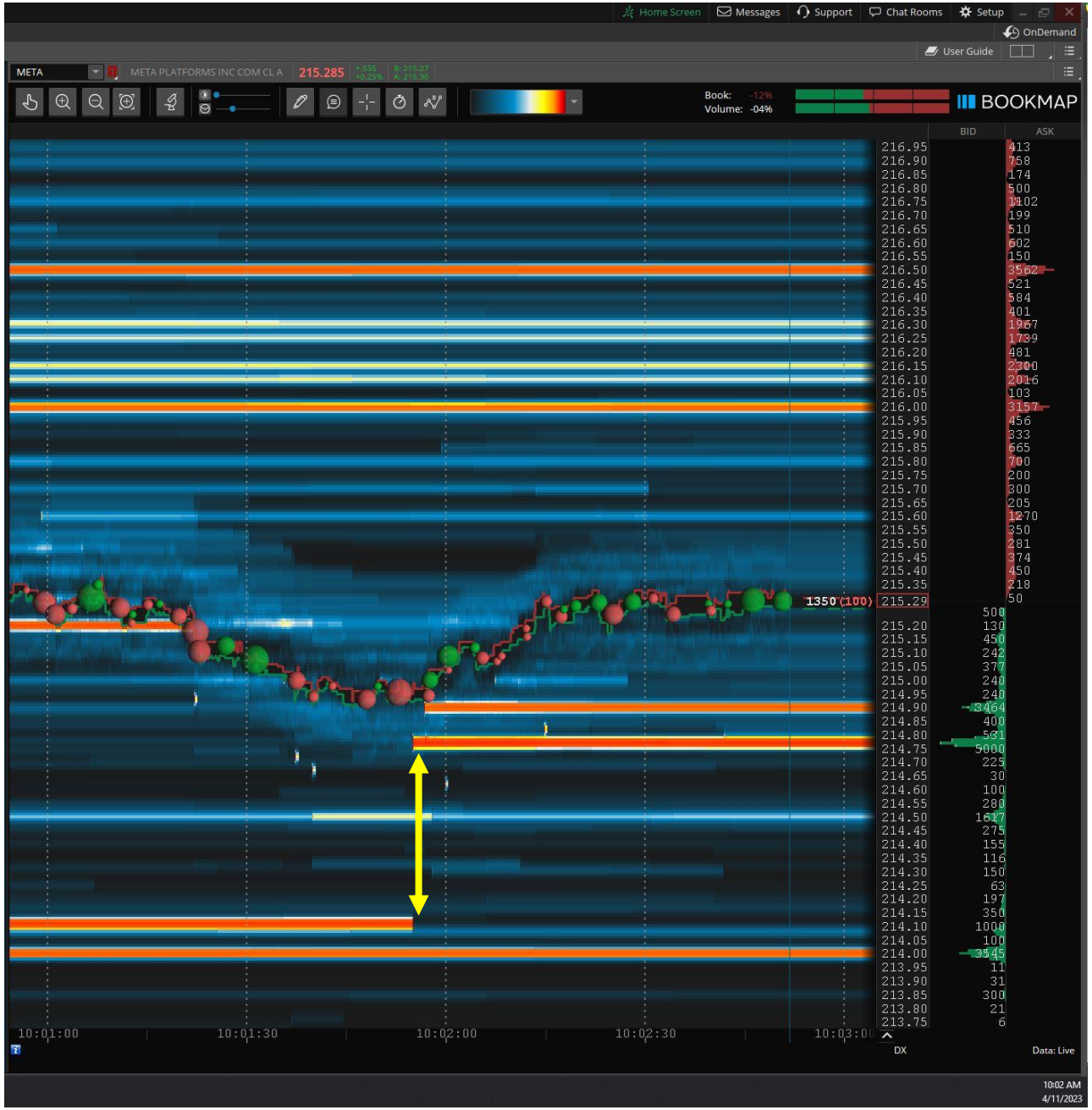
Jiggin' Analogy:

Per usual my level of country cannot be contained in a simple presentation. Since I think in pictures and metaphor, I often find my best examples are stories related to things unlike trading at all.

In this example I'm going to talk about how the market maker entices participation but constantly teasing the bid trying to get them to chase.

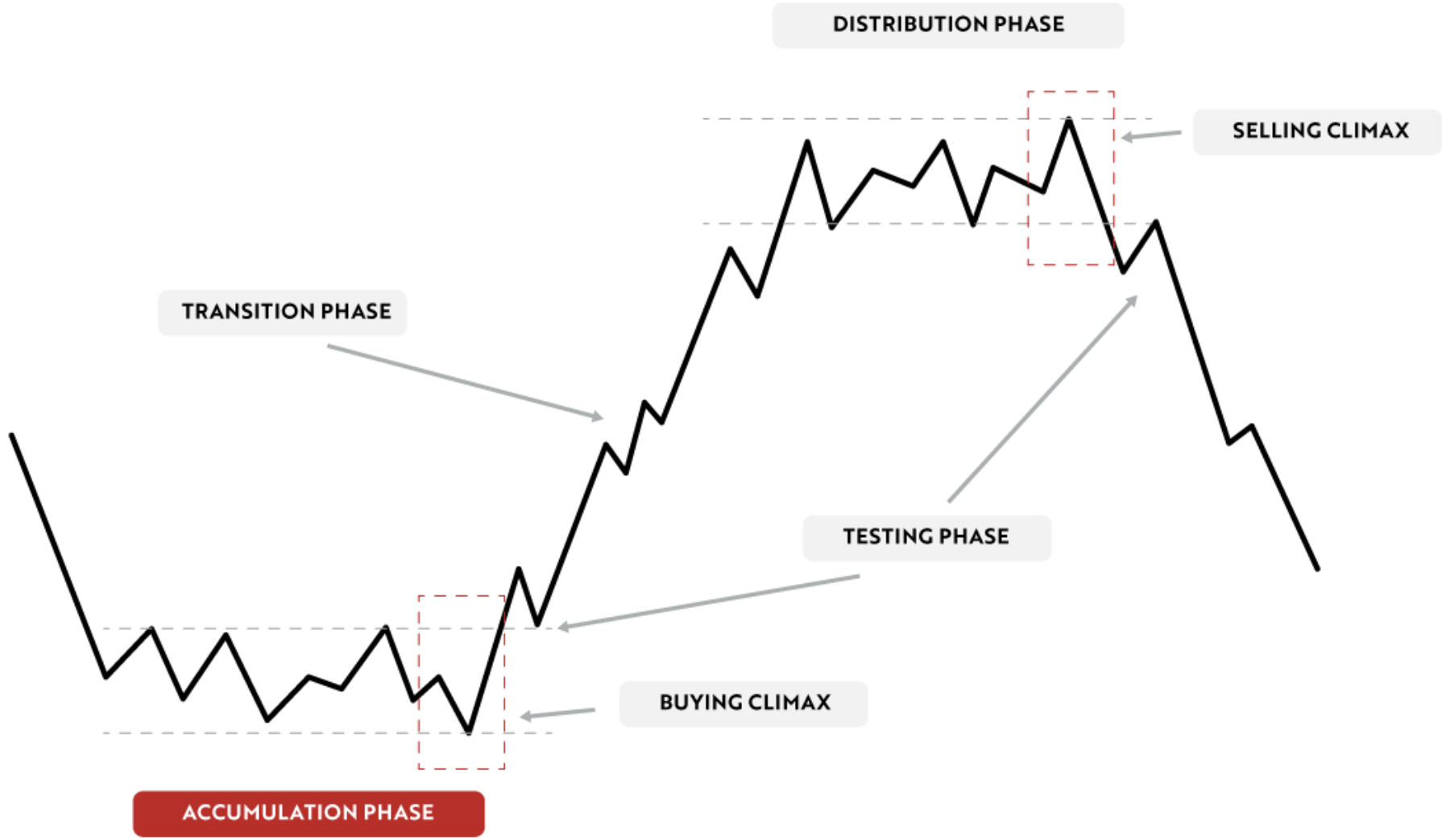
Like the way you get a fish to come of the bottom of a lake if you are using a Jig Lure. You keep teasing the fish by lowering the lure lower and lower until it comes off the bottom. When it does you reel as fast as you can and try and get the fish to chase. In similar fashion the Market Makers will lower the price attempting to find the bid or raise the price until they find that seller. And when they do they run as fast as possible.

On the image to the right notice how the bid closes the position and then moves it up to a higher price at almost the exact same time.



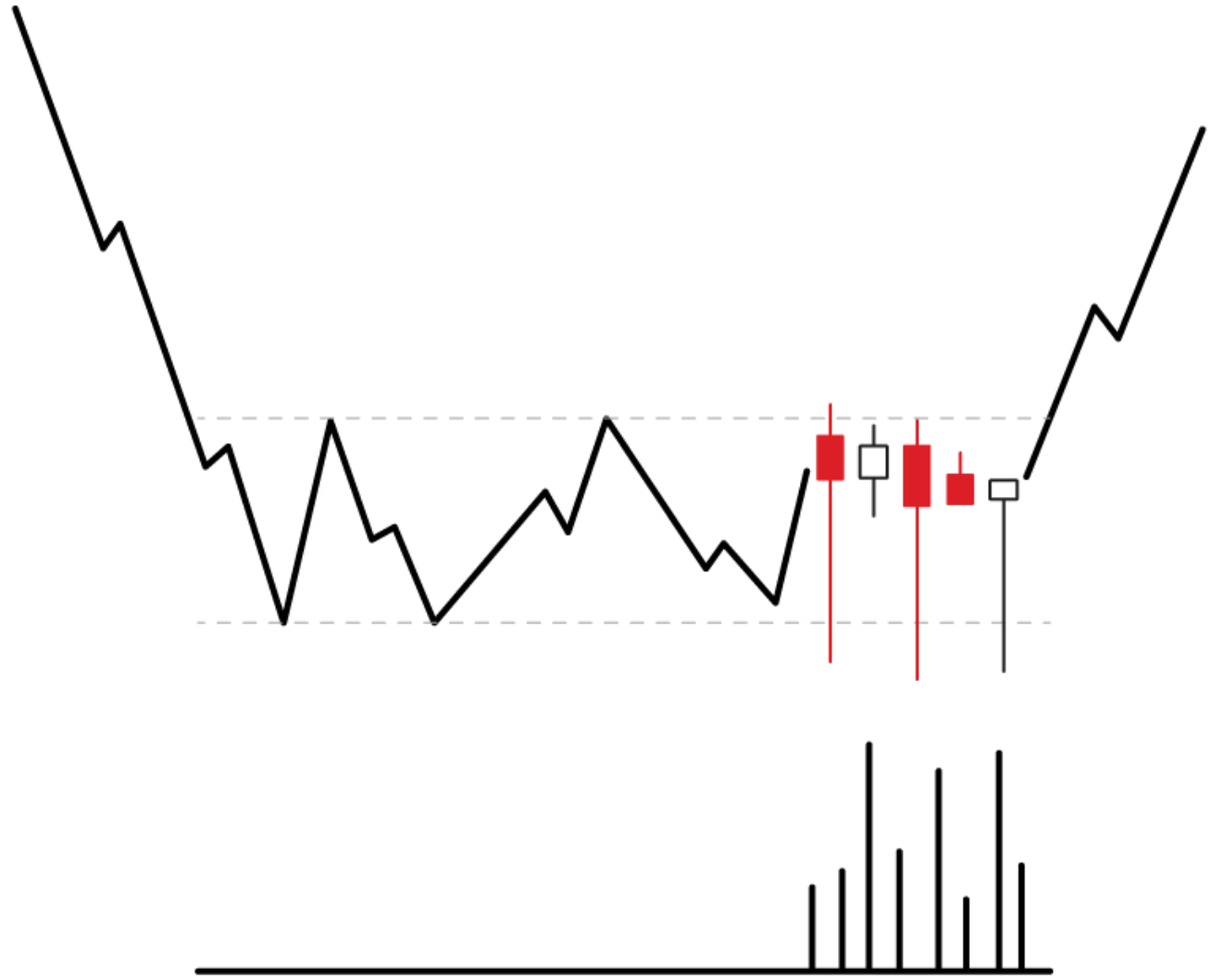
Market Phases

The Accumulation Phase



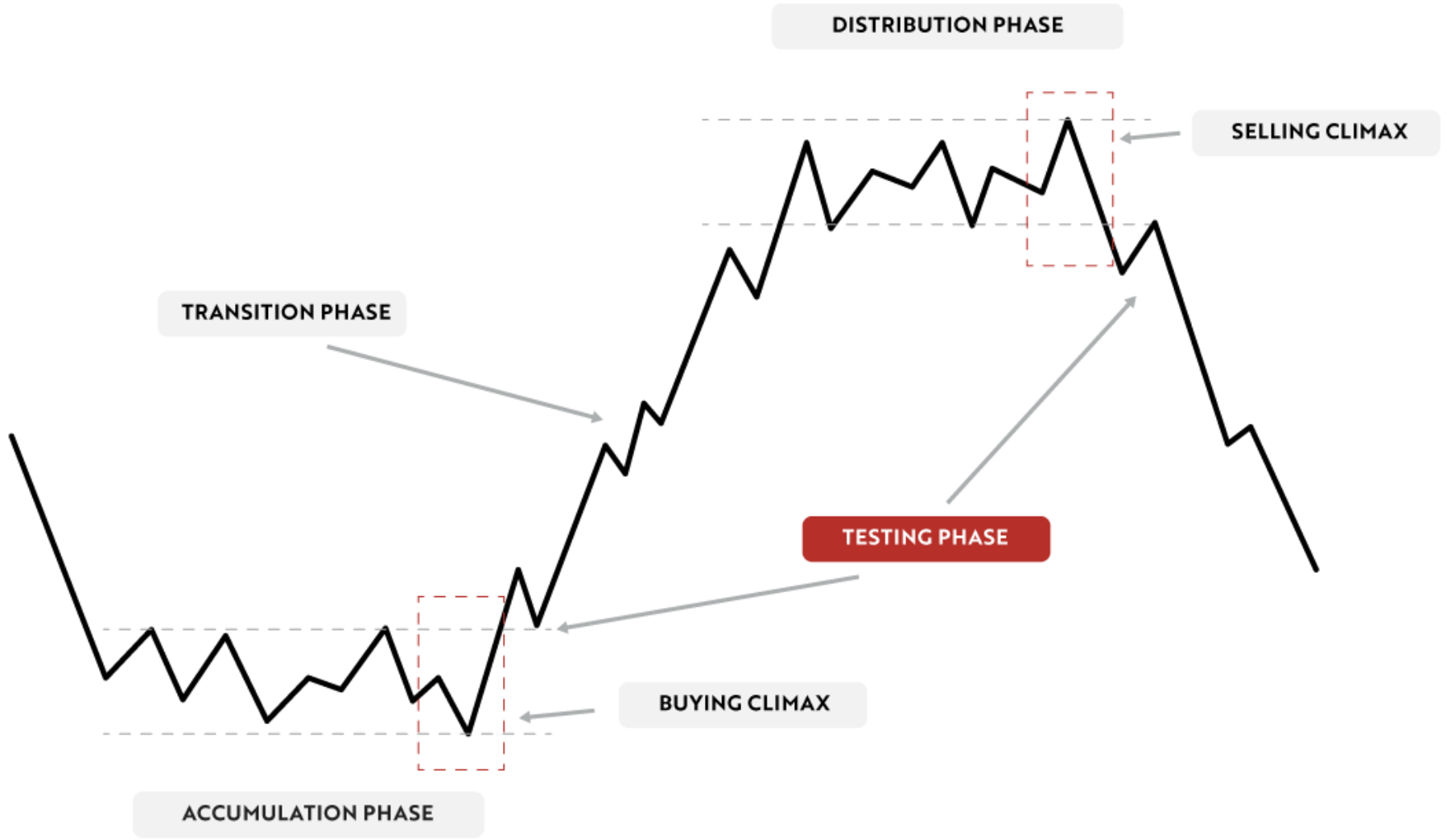
Market Phases

The Buying Climax



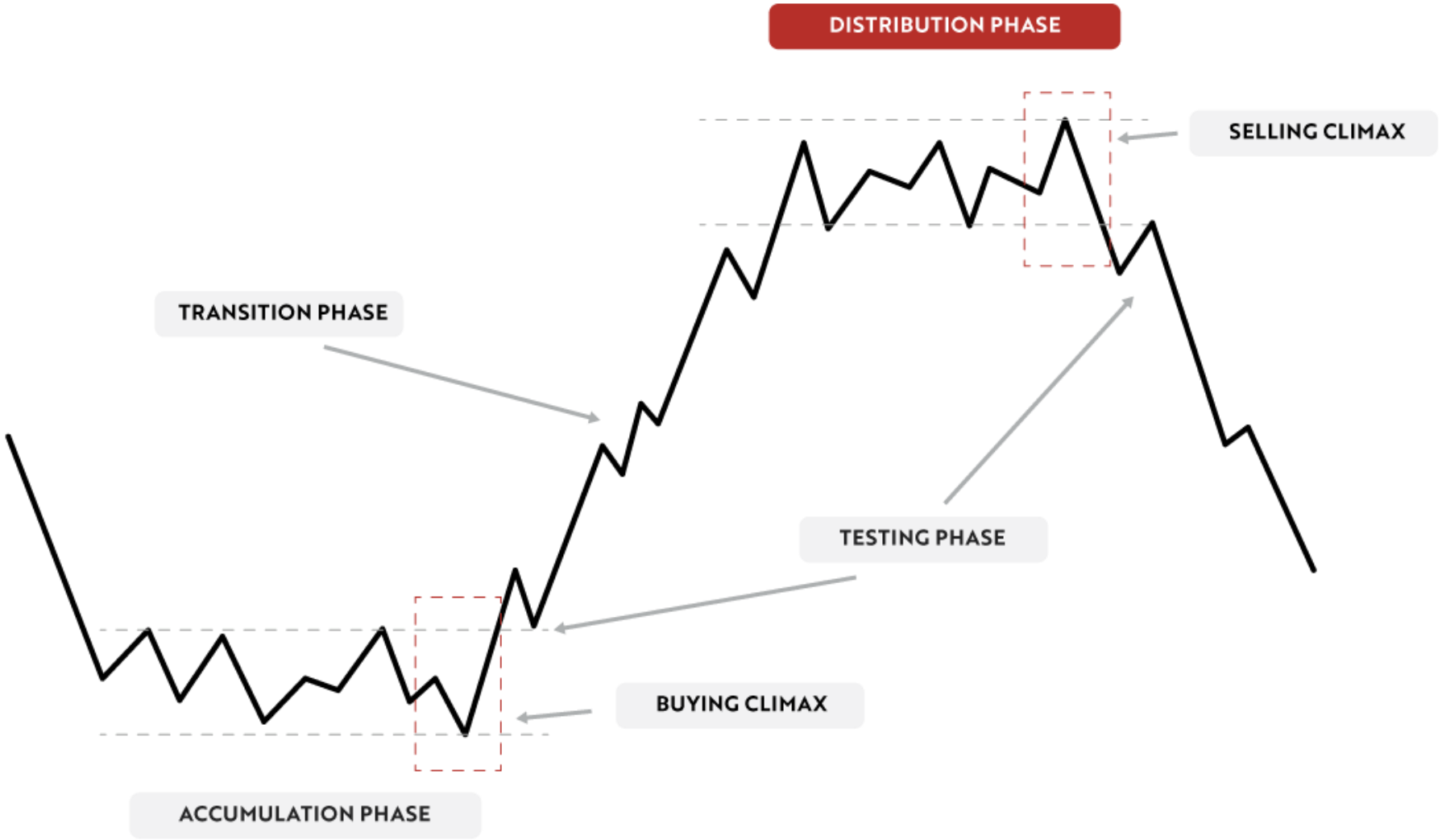
Market Phases

The Testing Phase



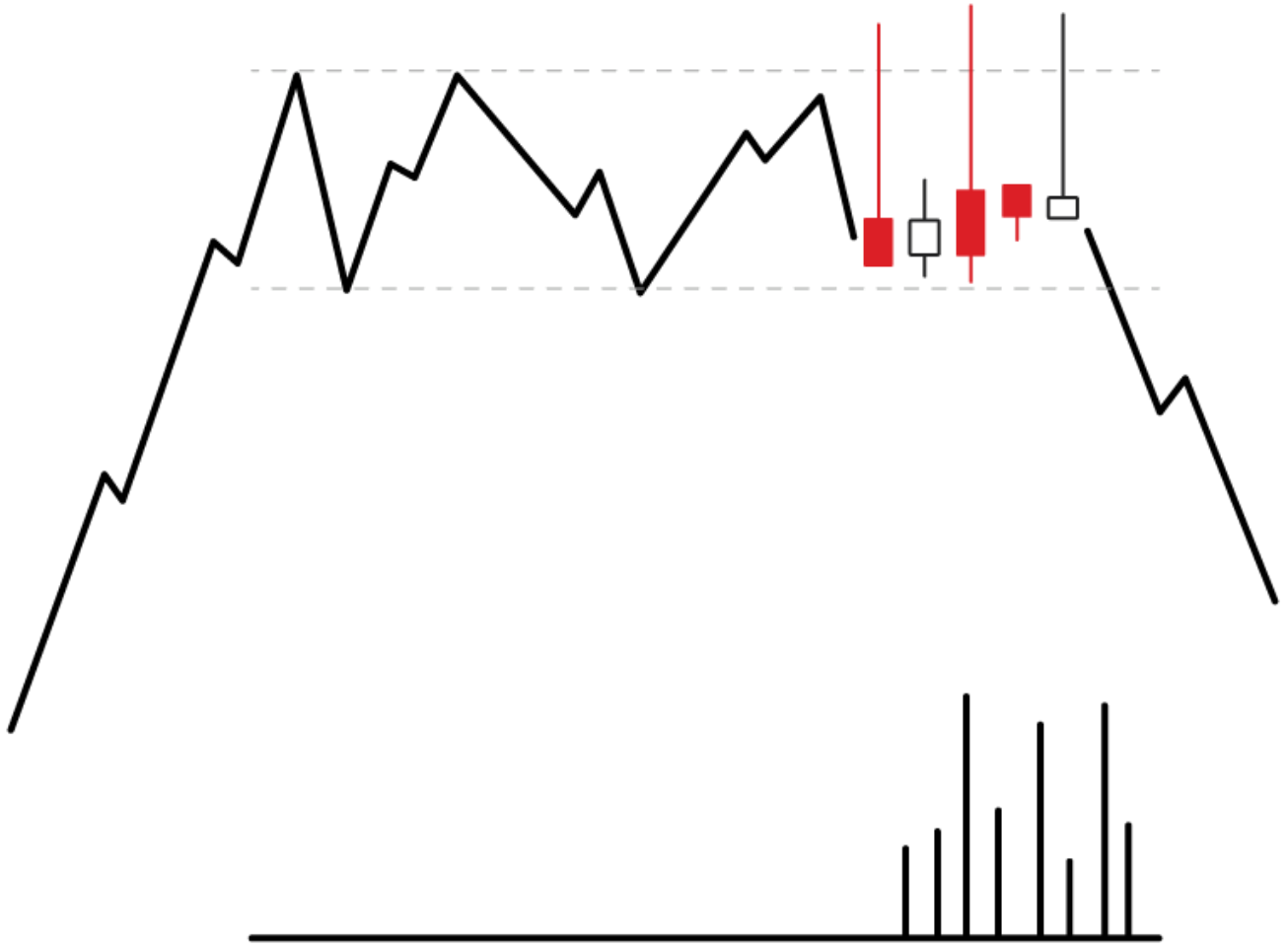
Market Phases

The Distribution Phase

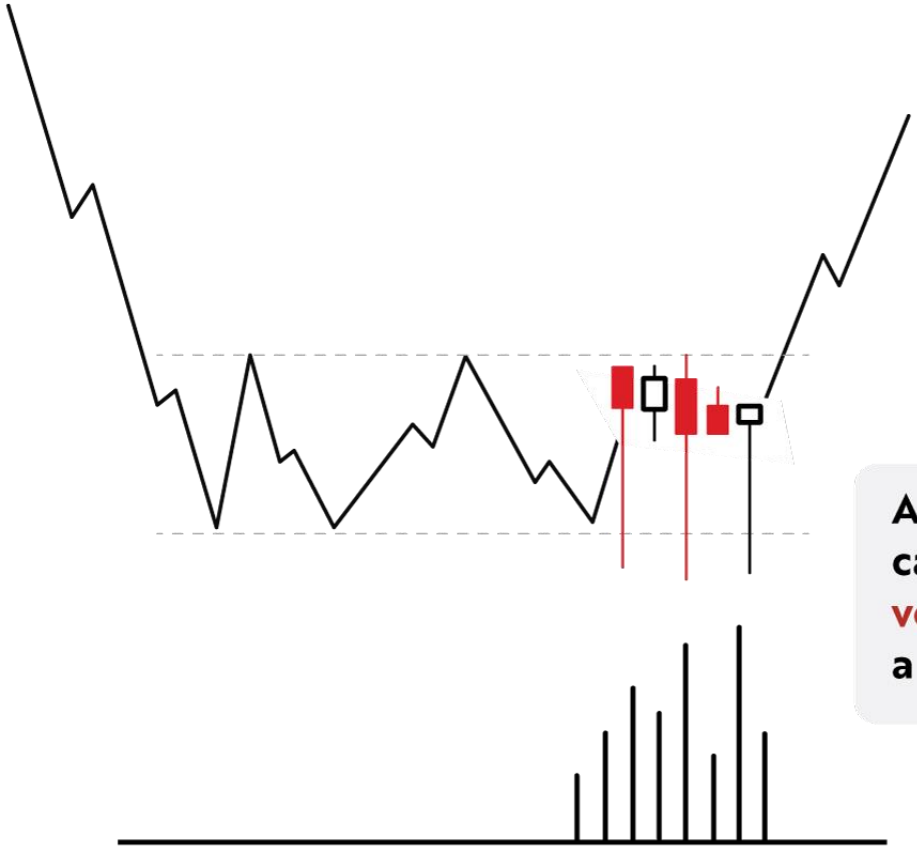


Market Phases

The Selling Climax “The Big Trap”

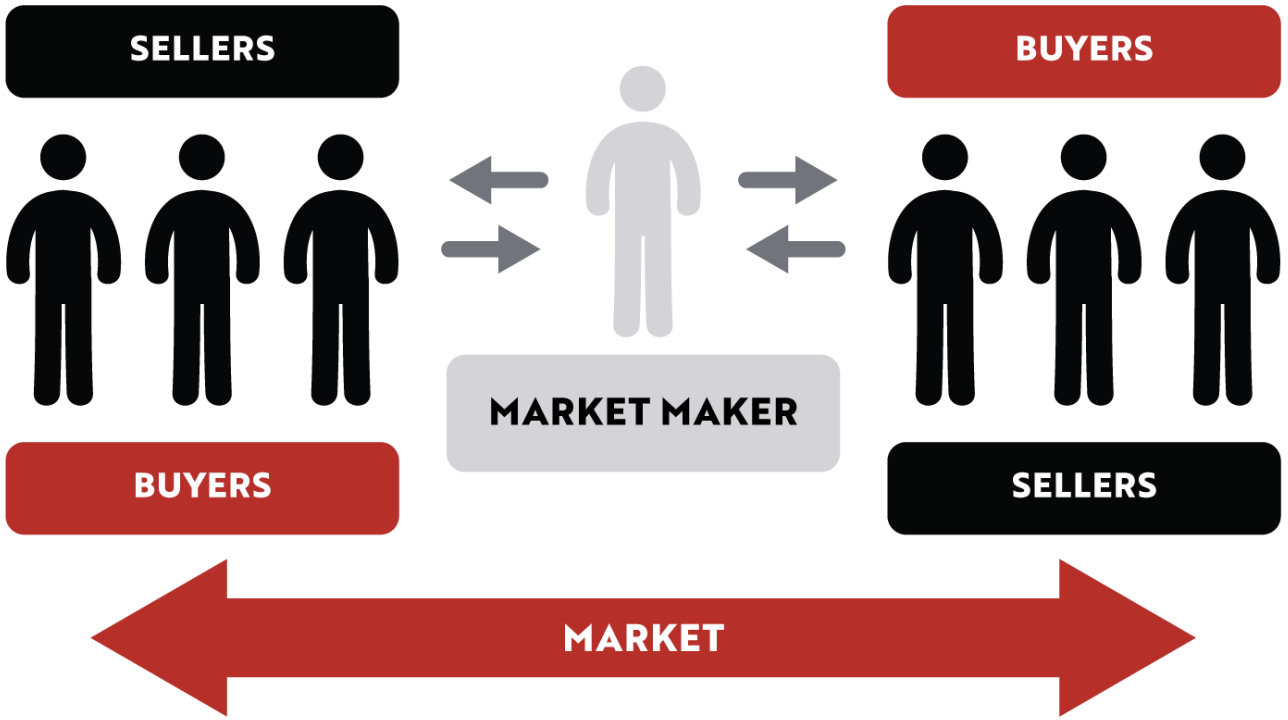


So, Why Volume?



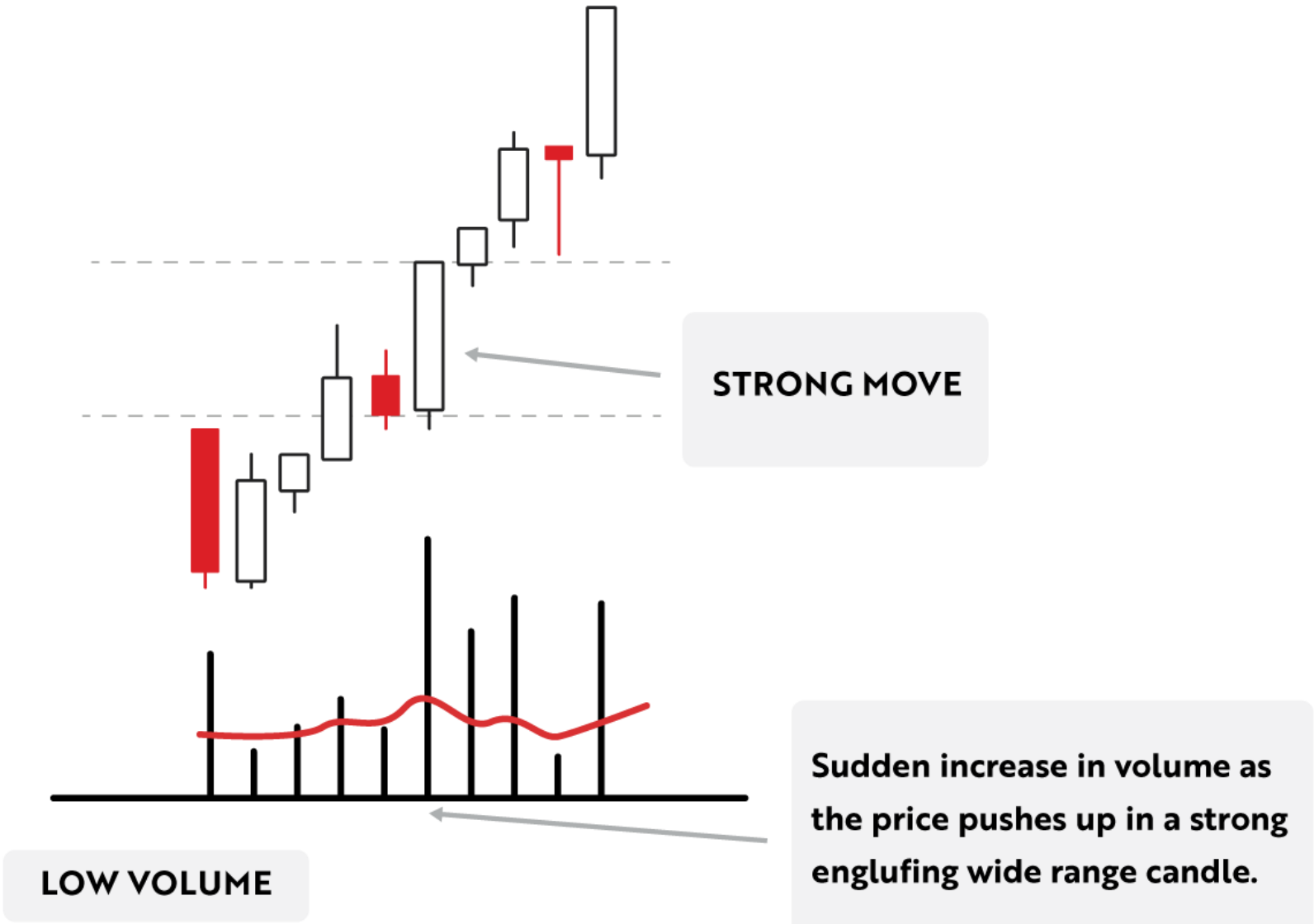
A stock with a catalyst and high volume will attract a lot of attention

How the Market Maker get's Paid



Reading Volume

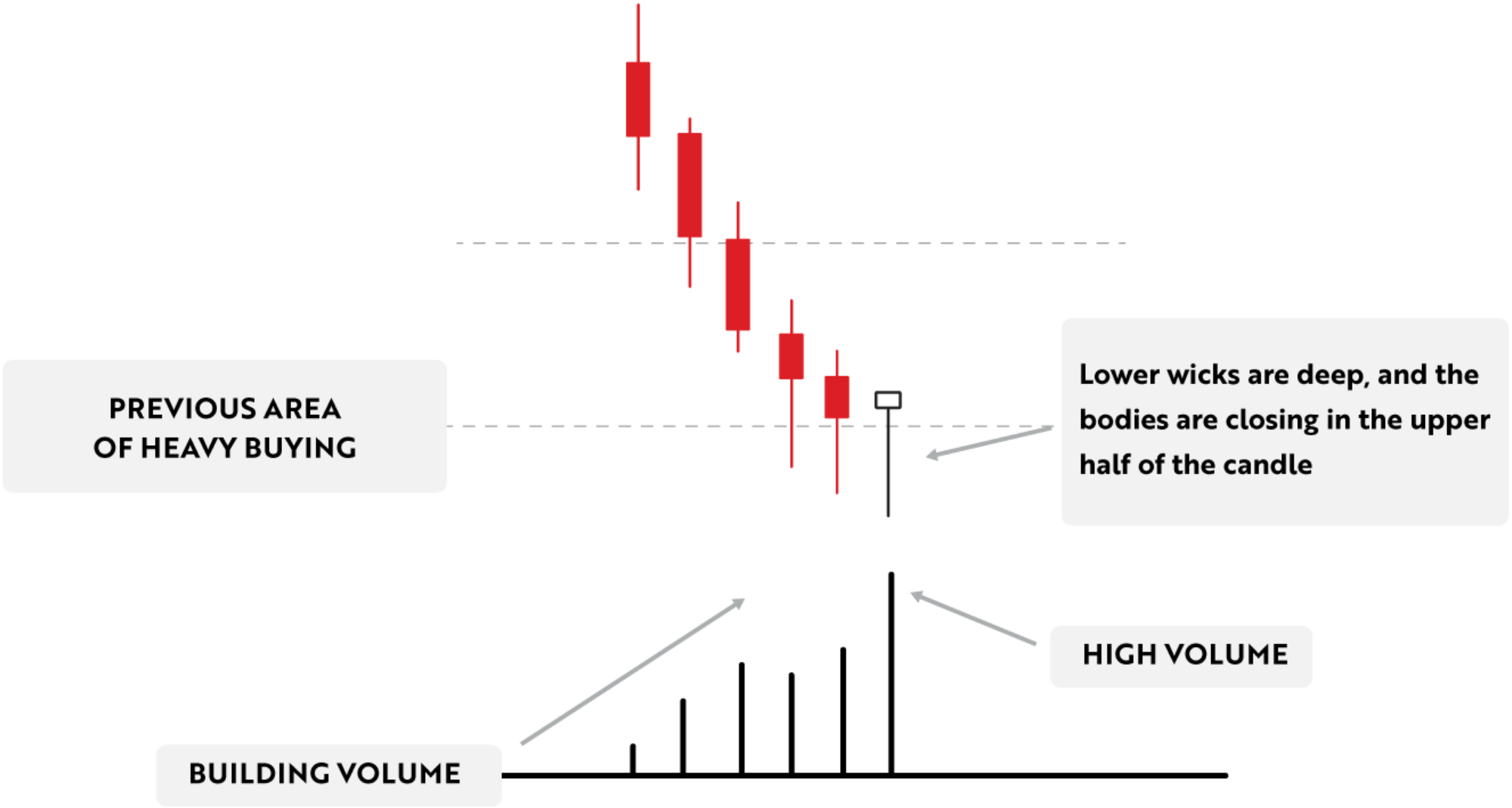
Advancing Volume



Sudden increase in volume as the price pushes up in a strong englufing wide range candle.

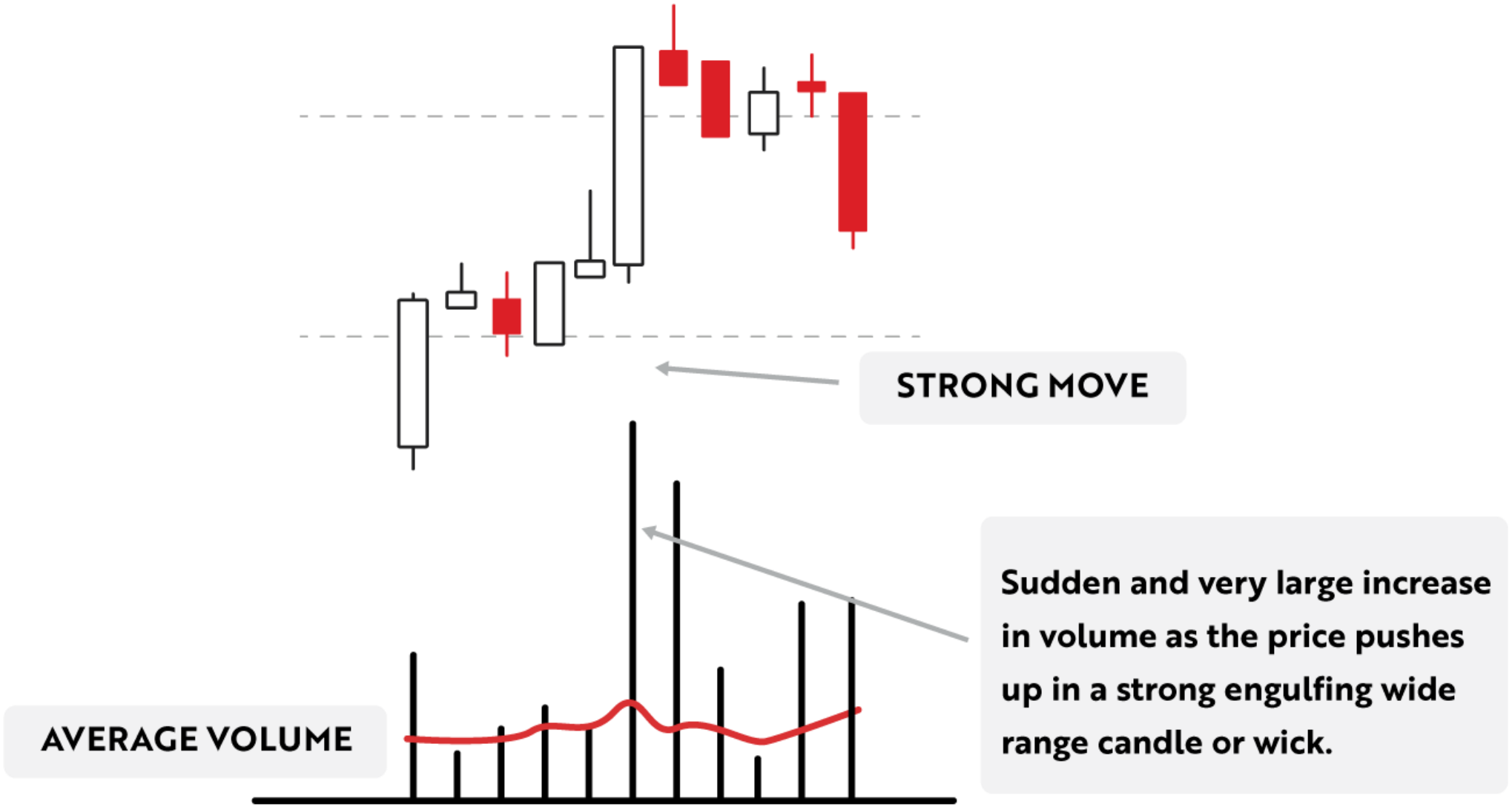
Reading Volume

Stopping Volume - AKA Fireworks, Tails, Tweezers



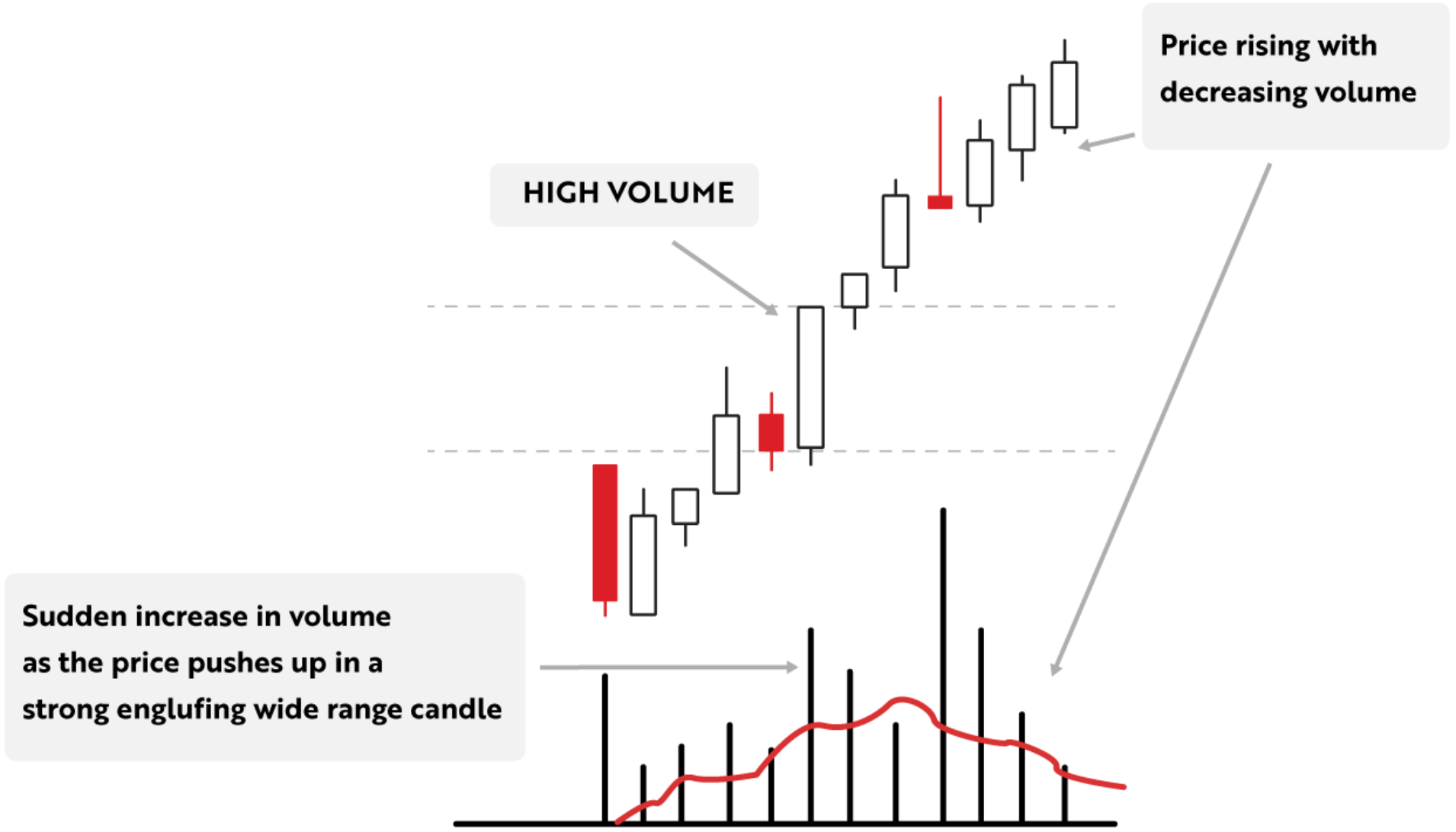
Reading Volume

Stopping Volume – Climatic Volume



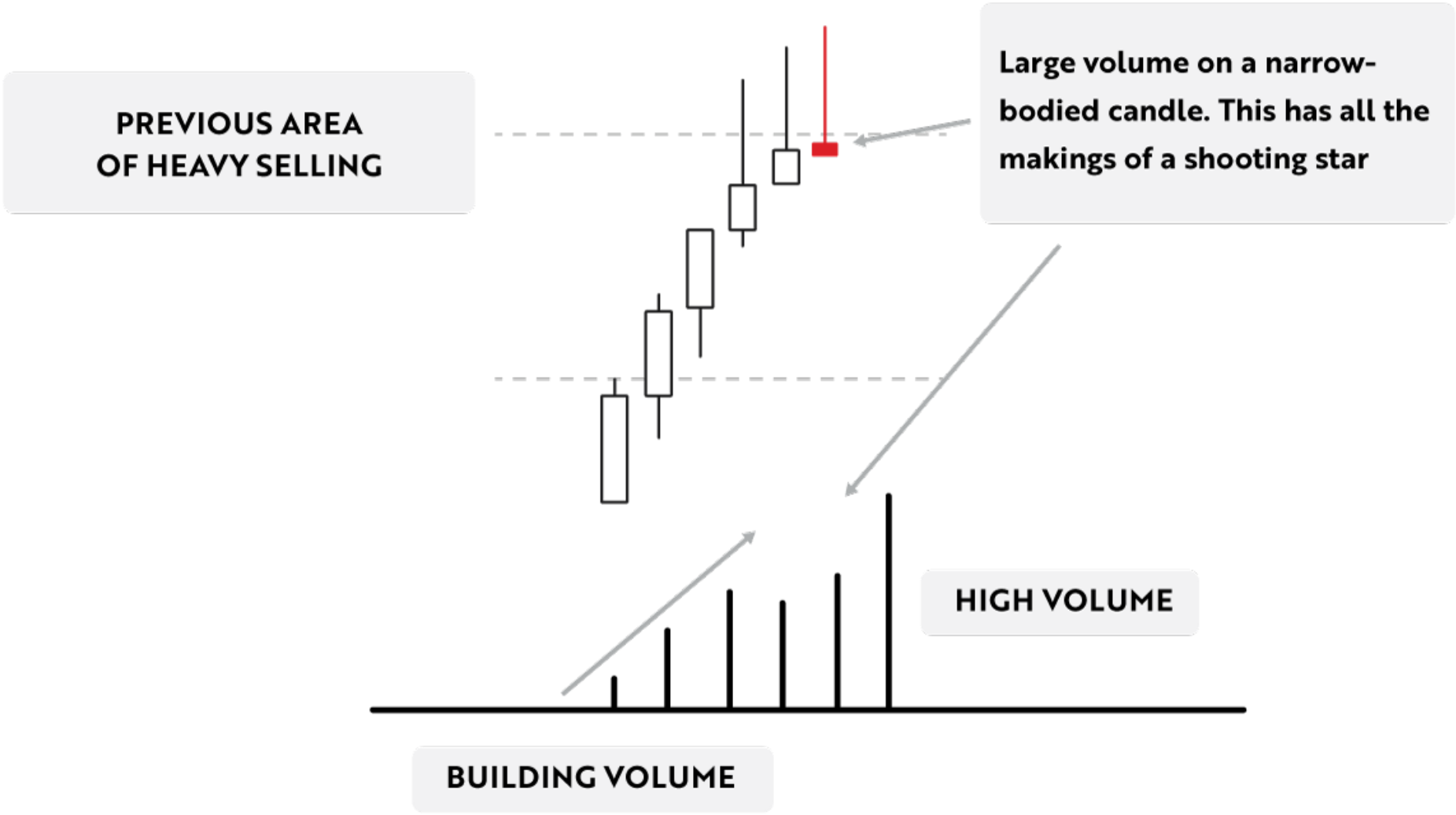
Reading Volume

Struggling Volume



Reading Volume

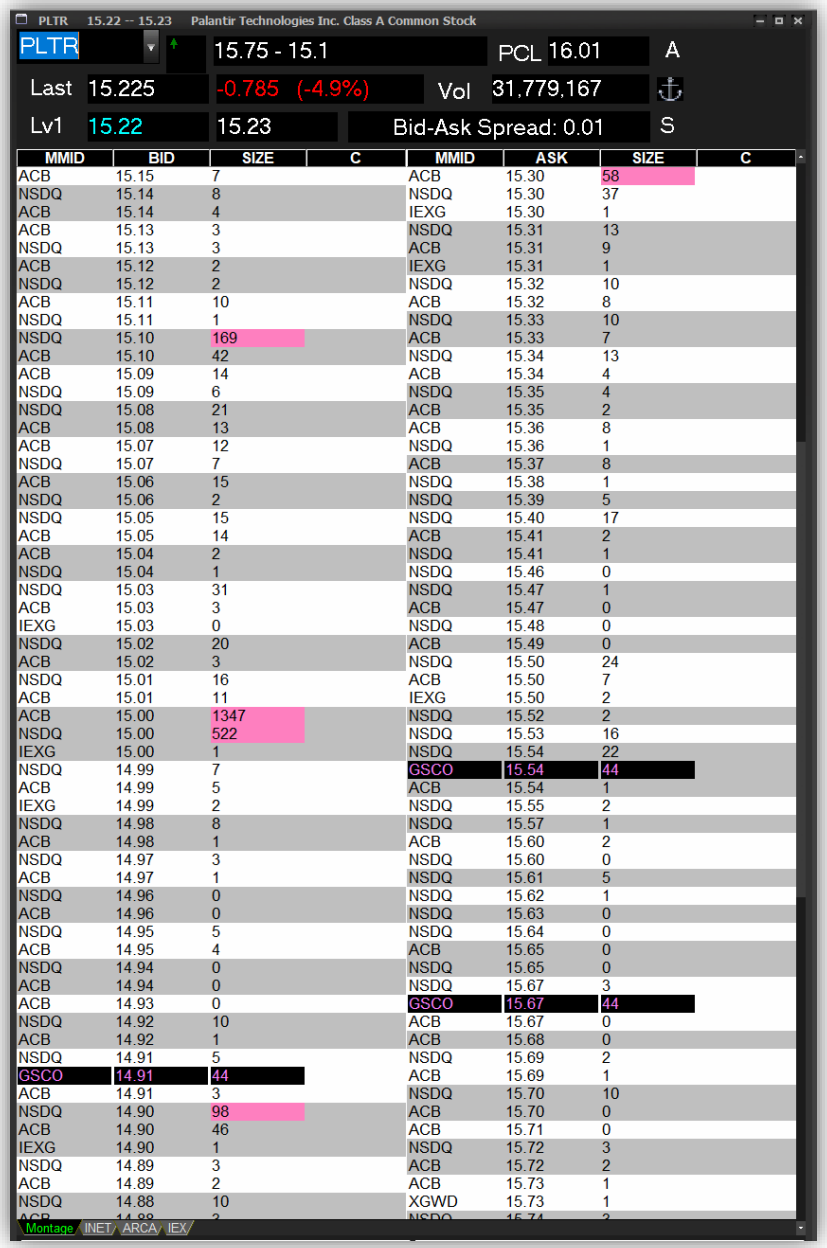
Volume Anomaly



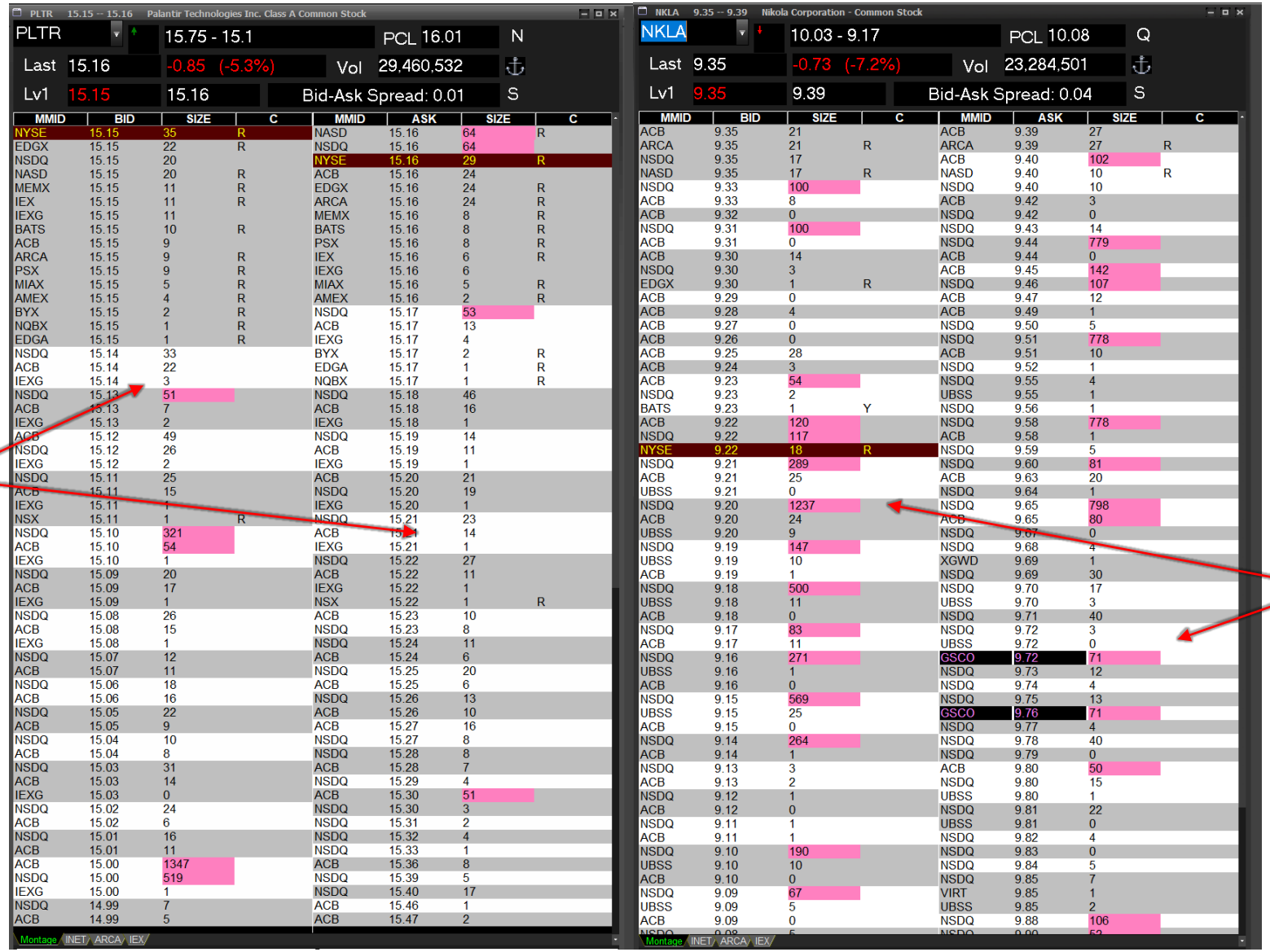
What is an Order Book?

- The term order book refers to an electronic list of buy and sell orders for a specific security or financial instrument organized by price tier “Level”.

- An order book lists the number of shares being bid on or offered at each price point, or market depth. Often referred to as a Level 2, or DOM (Depth of Market). It also identifies the market participants behind the buy and sell orders, though some choose to remain anonymous. These lists help us traders, the market maker algos, and improve market transparency. Providing us extremely valuable trading information.



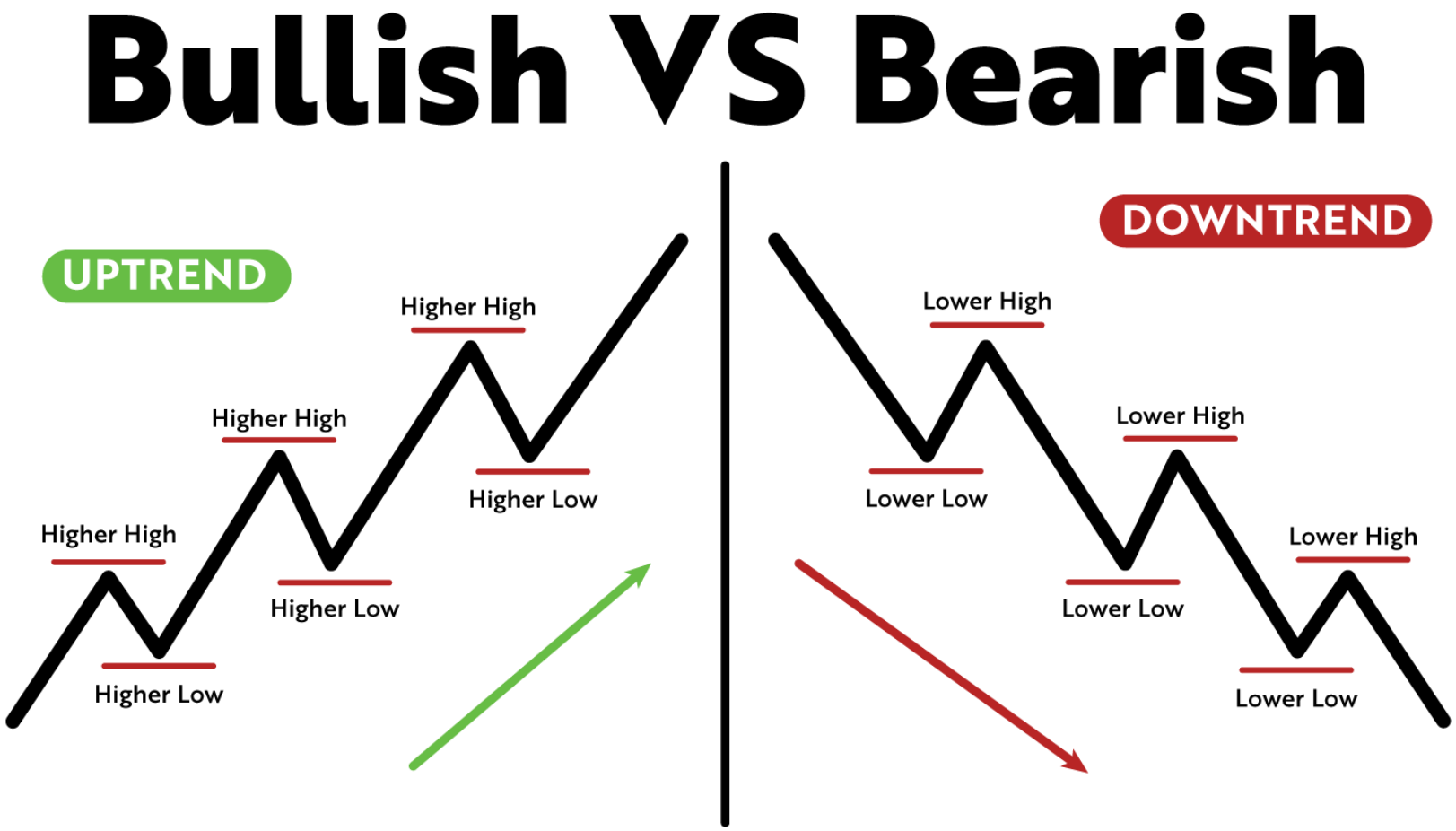
Balanced Book Example in DAS

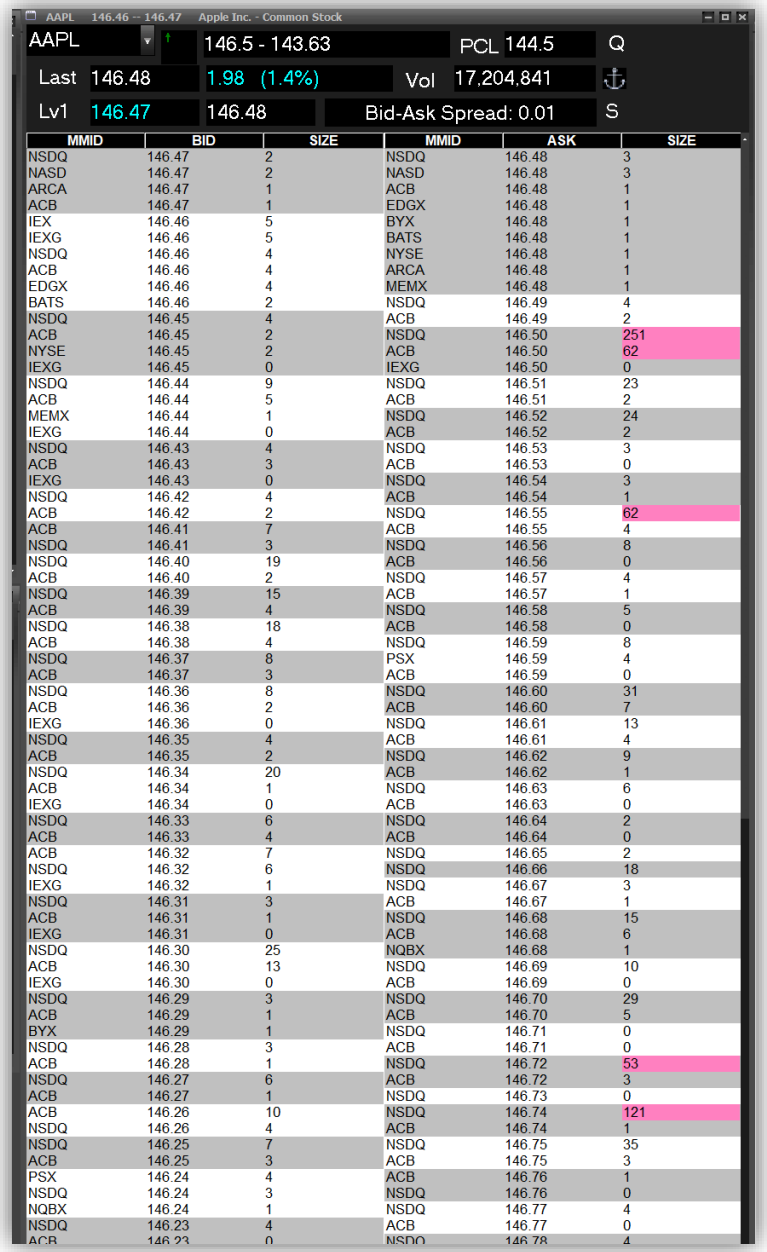


Orders evenly placed throughout the book

No Orders at any price or so many orders you see no imbalance

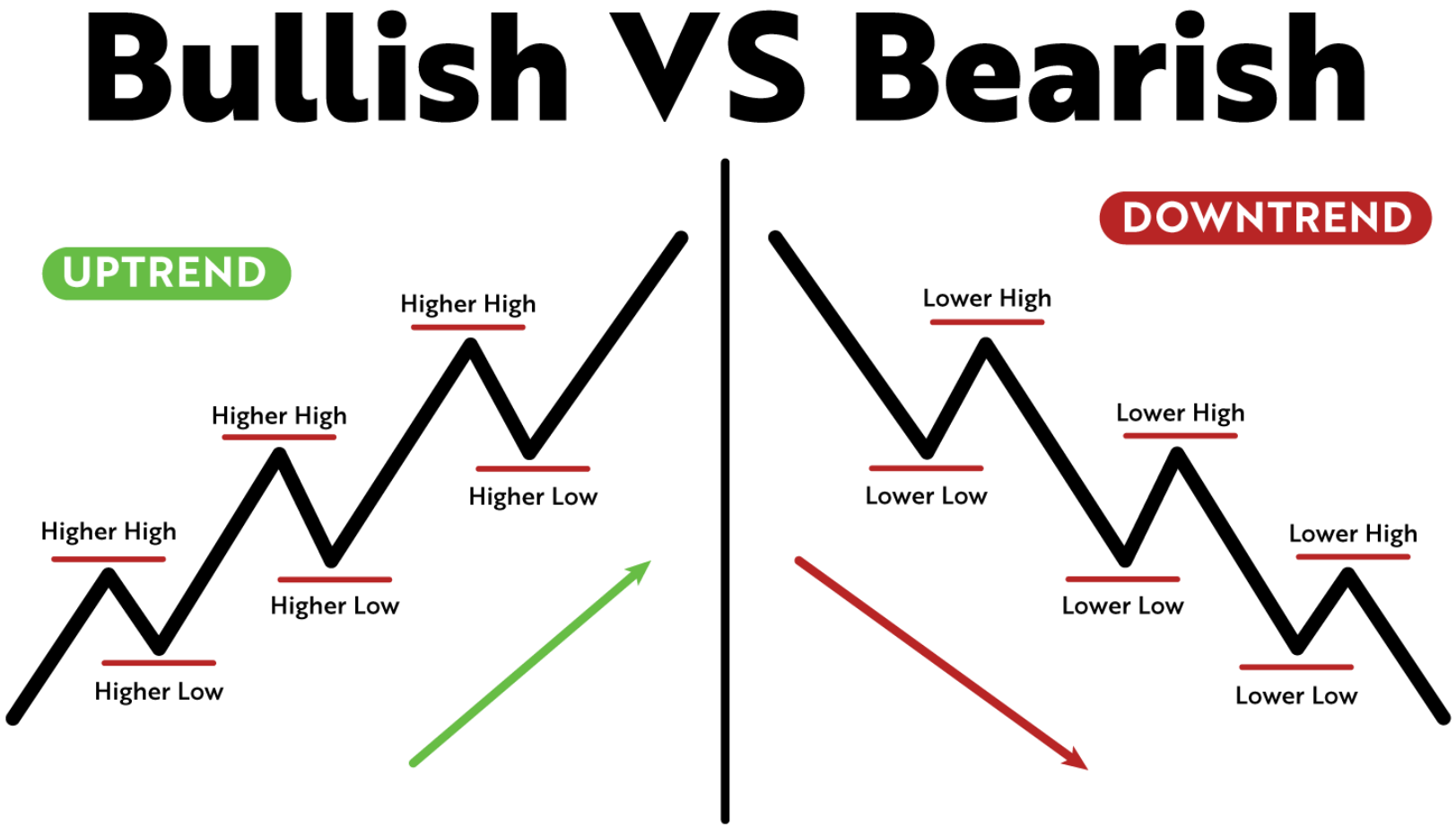
Bullish Book Example in DAS





MMID	BID	SIZE	MMID	ASK	SIZE
NSDQ	146.47	2	NSDQ	146.48	3
NASD	146.47	2	NASD	146.48	3
ARCA	146.47	1	ACB	146.48	1
ACB	146.47	1	EDGX	146.48	1
IEX	146.46	5	BYX	146.48	1
IEXG	146.46	5	BATS	146.48	1
NSDQ	146.46	4	NYSE	146.48	1
ACB	146.46	4	ARCA	146.48	1
EDGX	146.46	4	MEMX	146.48	1
BATS	146.46	2	NSDQ	146.49	4
NSDQ	146.45	4	ACB	146.49	2
ACB	146.45	2	NSDQ	146.50	251
NYSE	146.45	2	ACB	146.50	62
IEXG	146.45	0	IEXG	146.50	0
NSDQ	146.44	9	NSDQ	146.51	23
ACB	146.44	5	ACB	146.51	2
MEMX	146.44	1	NSDQ	146.52	24
IEXG	146.44	0	ACB	146.52	2
NSDQ	146.43	4	NSDQ	146.53	3
ACB	146.43	3	ACB	146.53	0
IEXG	146.43	0	NSDQ	146.54	3
NSDQ	146.42	4	ACB	146.54	1
ACB	146.42	2	NSDQ	146.55	62
ACB	146.41	7	ACB	146.55	4
NSDQ	146.41	3	NSDQ	146.56	8
NSDQ	146.40	19	ACB	146.56	0
ACB	146.40	2	NSDQ	146.57	4
NSDQ	146.39	15	ACB	146.57	1
ACB	146.39	4	NSDQ	146.58	5
NSDQ	146.38	18	ACB	146.58	0
ACB	146.38	4	NSDQ	146.59	8
NSDQ	146.37	8	PSX	146.59	4
ACB	146.37	3	ACB	146.59	0
NSDQ	146.36	8	NSDQ	146.60	31
ACB	146.36	2	ACB	146.60	7
IEXG	146.36	0	NSDQ	146.61	13
NSDQ	146.35	4	ACB	146.61	4
ACB	146.35	2	NSDQ	146.62	9
NSDQ	146.34	20	ACB	146.62	1
ACB	146.34	1	NSDQ	146.63	6
IEXG	146.34	0	ACB	146.63	0
NSDQ	146.33	6	NSDQ	146.64	2
ACB	146.33	4	ACB	146.64	0
ACB	146.32	7	NSDQ	146.65	2
NSDQ	146.32	6	NSDQ	146.66	18
IEXG	146.32	1	NSDQ	146.67	3
NSDQ	146.31	3	ACB	146.67	1
ACB	146.31	1	NSDQ	146.68	15
IEXG	146.31	0	ACB	146.68	6
NSDQ	146.30	25	NQBX	146.68	1
ACB	146.30	13	NSDQ	146.69	10
IEXG	146.30	0	ACB	146.69	0
NSDQ	146.29	3	NSDQ	146.70	29
ACB	146.29	1	ACB	146.70	5
BYX	146.29	1	NSDQ	146.71	0
NSDQ	146.28	3	ACB	146.71	0
ACB	146.28	1	NSDQ	146.72	53
NSDQ	146.27	6	ACB	146.72	3
ACB	146.27	1	NSDQ	146.73	0
ACB	146.26	10	NSDQ	146.74	121
NSDQ	146.26	4	ACB	146.74	1
NSDQ	146.25	7	NSDQ	146.75	35
ACB	146.25	3	ACB	146.75	3
PSX	146.24	4	ACB	146.76	1
NSDQ	146.24	3	NSDQ	146.76	0
NQBX	146.24	1	NSDQ	146.77	4
NSDQ	146.23	4	ACB	146.77	0

Bearish Book Example in DAS



PLTR 15.22 -- 15.23 Palantir Technologies Inc. Class A Common Stock

PLTR 15.75 - 15.1 PCL 16.01 A

Last 15.225 -0.785 (-4.9%) Vol 31,779,167

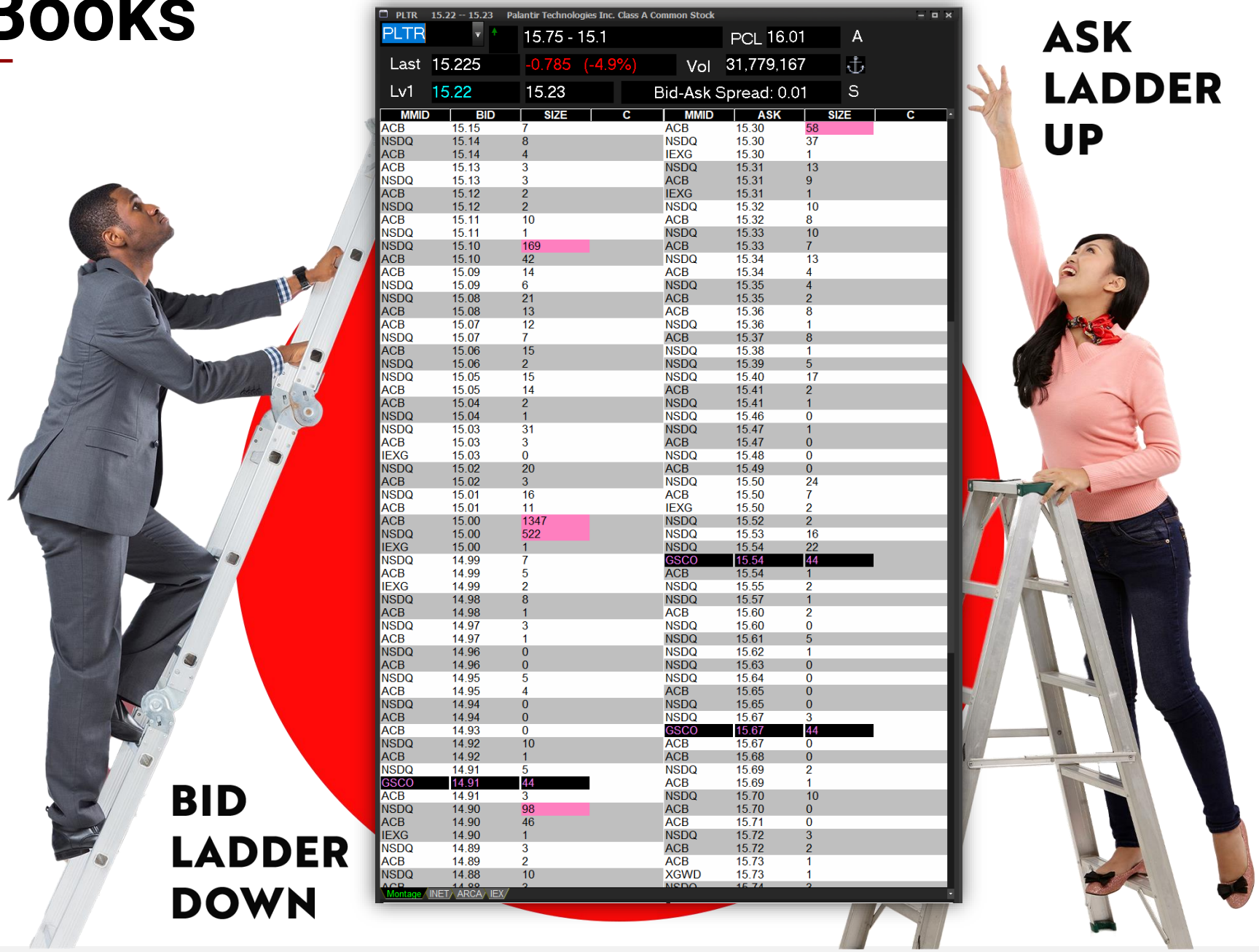
Lv1 15.22 15.23 Bid-Ask Spread: 0.01 S

MMID	BID	SIZE	C	MMID	ASK	SIZE	C
ACB	15.15	7		ACB	15.30	58	
NSDQ	15.14	8		NSDQ	15.30	37	
ACB	15.14	4		IEXG	15.30	1	
ACB	15.13	3		NSDQ	15.31	13	
NSDQ	15.13	3		ACB	15.31	9	
ACB	15.12	2		IEXG	15.31	1	
NSDQ	15.12	2		NSDQ	15.32	10	
ACB	15.11	10		ACB	15.32	8	
NSDQ	15.11	1		NSDQ	15.33	10	
NSDQ	15.10	169		ACB	15.33	7	
ACB	15.10	42		NSDQ	15.34	13	
ACB	15.09	14		ACB	15.34	4	
NSDQ	15.09	6		NSDQ	15.35	4	
NSDQ	15.08	21		ACB	15.35	2	
ACB	15.08	13		ACB	15.36	8	
ACB	15.07	12		NSDQ	15.36	1	
NSDQ	15.07	7		ACB	15.37	8	
ACB	15.06	15		NSDQ	15.38	1	
NSDQ	15.06	2		NSDQ	15.39	5	
NSDQ	15.05	15		NSDQ	15.40	17	
ACB	15.05	14		ACB	15.41	2	
ACB	15.04	2		NSDQ	15.41	1	
NSDQ	15.04	1		NSDQ	15.46	0	
NSDQ	15.03	31		NSDQ	15.47	1	
ACB	15.03	3		ACB	15.47	0	
IEXG	15.03	0		NSDQ	15.48	0	
NSDQ	15.02	20		ACB	15.49	0	
ACB	15.02	3		NSDQ	15.50	24	
NSDQ	15.01	16		ACB	15.50	7	
ACB	15.01	11		IEXG	15.50	2	
ACB	15.00	1347		NSDQ	15.52	2	
NSDQ	15.00	522		NSDQ	15.53	16	
IEXG	15.00	1		NSDQ	15.54	22	
NSDQ	14.99	7		GSCO	15.54	44	
ACB	14.99	5		ACB	15.54	1	
IEXG	14.99	2		NSDQ	15.55	2	
NSDQ	14.98	8		NSDQ	15.57	1	
ACB	14.98	1		ACB	15.60	2	
NSDQ	14.97	3		NSDQ	15.60	0	
ACB	14.97	1		NSDQ	15.61	5	
NSDQ	14.96	0		NSDQ	15.62	1	
ACB	14.96	0		NSDQ	15.63	0	
NSDQ	14.95	5		NSDQ	15.64	0	
ACB	14.95	4		ACB	15.65	0	
NSDQ	14.94	0		NSDQ	15.65	0	
ACB	14.94	0		NSDQ	15.67	3	
ACB	14.93	0		GSCO	15.67	44	
NSDQ	14.92	10		ACB	15.67	0	
ACB	14.92	1		ACB	15.68	0	
NSDQ	14.91	5		NSDQ	15.69	2	
GSCO	14.91	44		ACB	15.69	1	
ACB	14.91	3		NSDQ	15.70	10	
NSDQ	14.90	98		ACB	15.70	0	
ACB	14.90	46		ACB	15.71	0	
IEXG	14.90	1		NSDQ	15.72	3	
NSDQ	14.89	3		ACB	15.72	2	
ACB	14.89	2		ACB	15.73	1	
NSDQ	14.88	10		XGWD	15.73	1	

Montage INET ARCA IEX

The 2 Order Books

- The Order Book is not a single book rather 2 books that we view at the same time.
- A Price Ladder showing limit demand on the bid
- A Price Ladder showing limit demand on the ask
- Both Ladders must be considered when trading



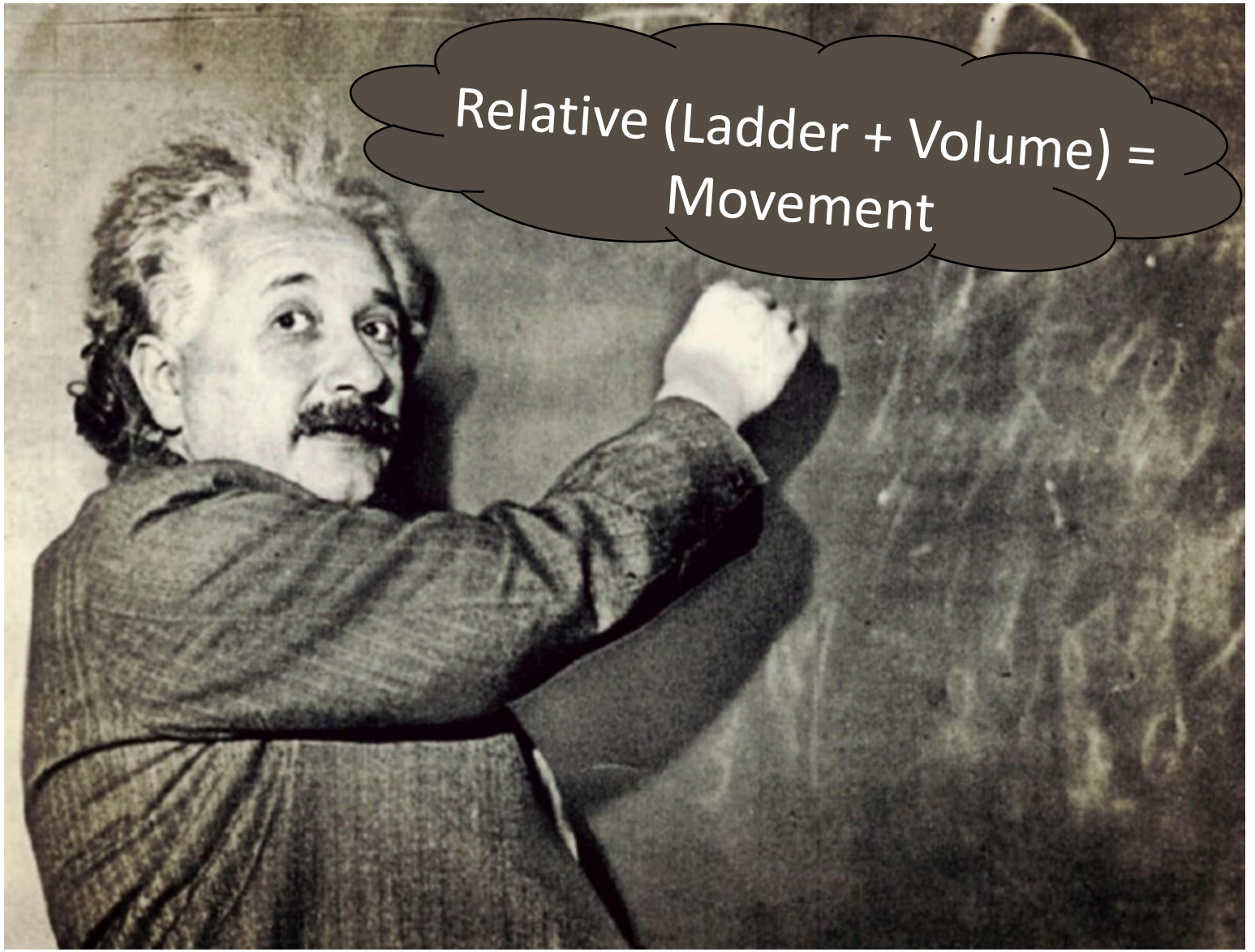
The Relative Ladder

- The word ladder means there are orders tiered with areas of higher value spread out with areas of lower value in between.

- There is no distinction made for the number of shares it takes to create that ladder. Only recognizing the amount of volume it will require to do so.

- One ladder often requires higher volume then the other ladder. This is why pull backs are always on low volume.

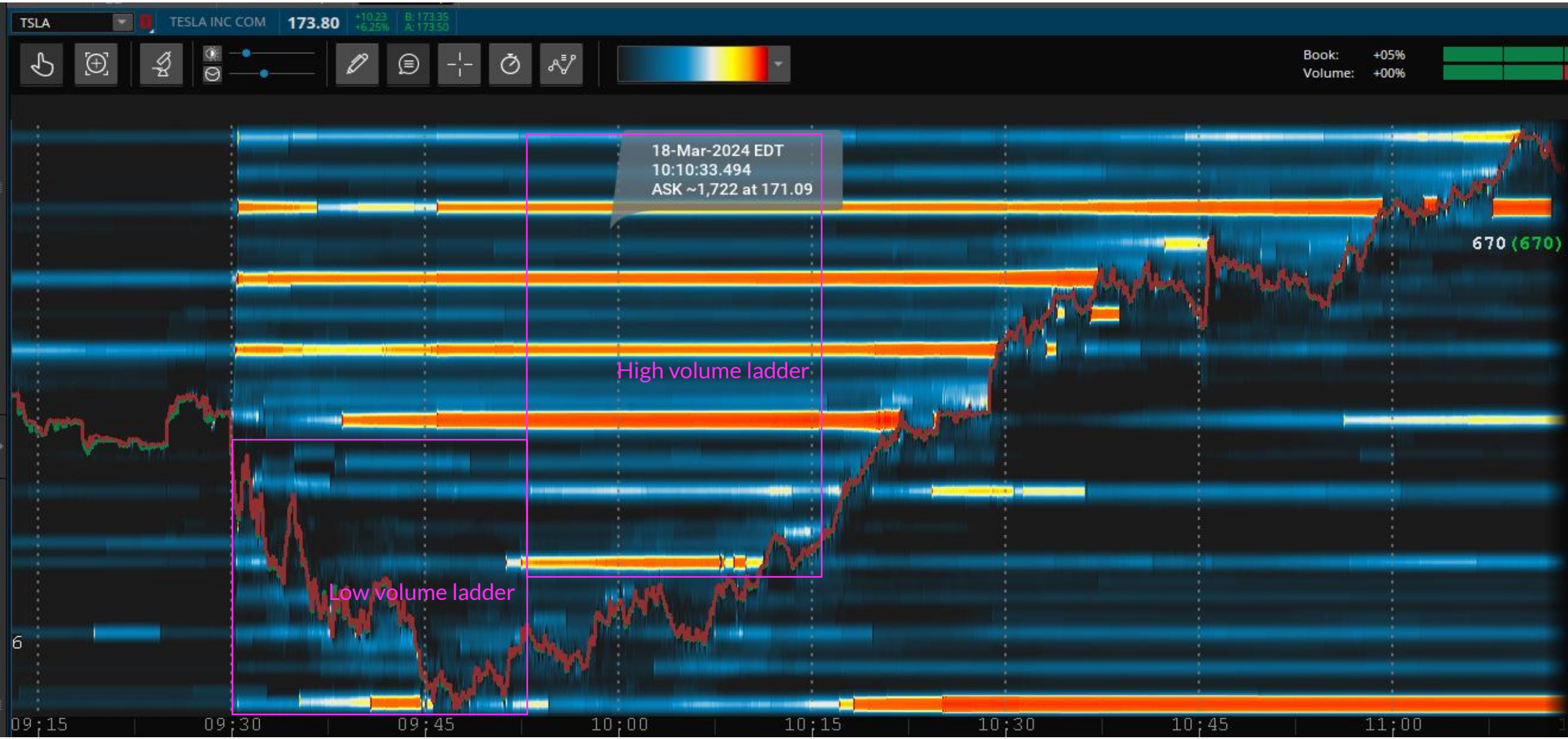
- RVOL can be a clue



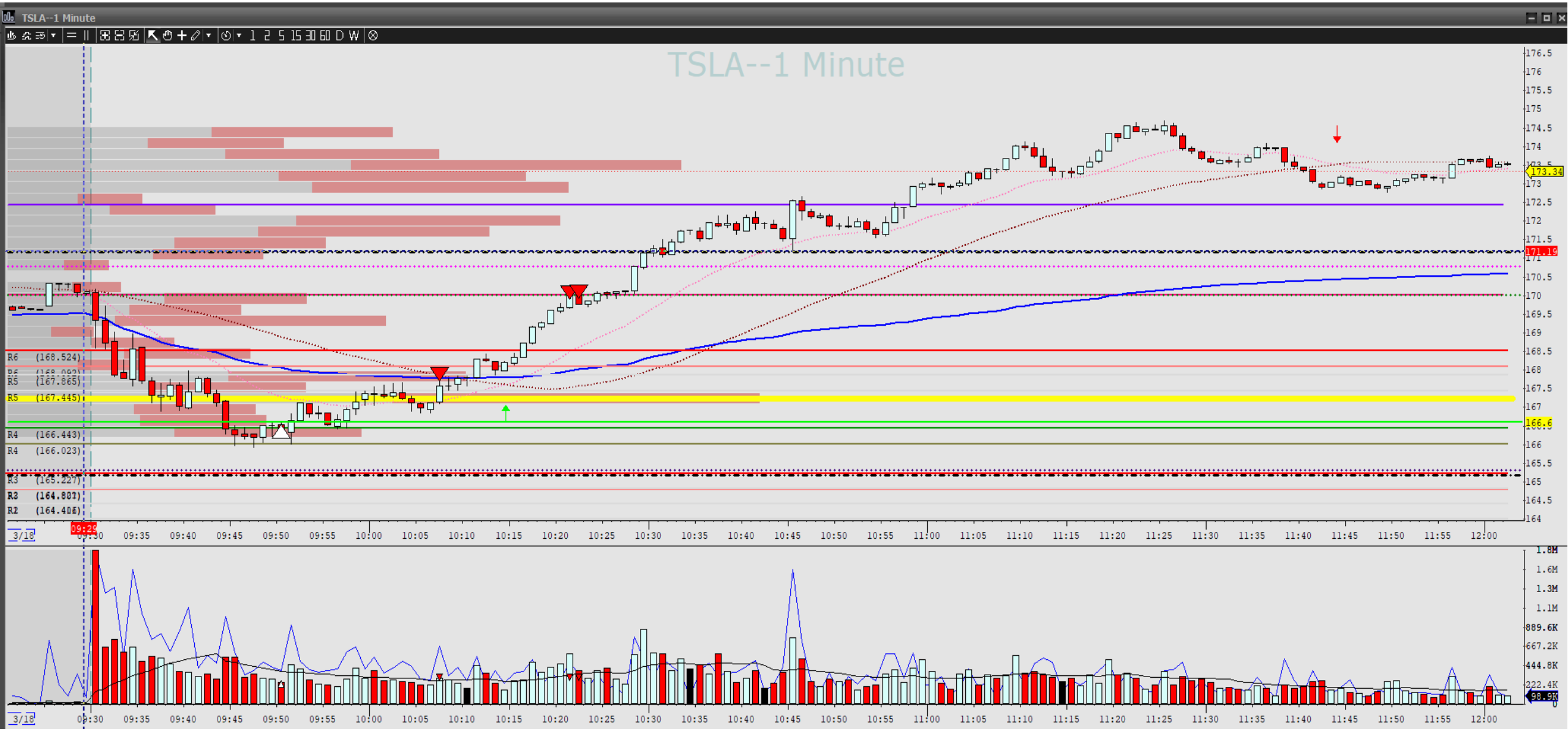
The Relative Ladder in $AMZN

The Trade on $AMZN

The Relative Ladder in $TSLA



The Trade on $TSLA



Watch for Iceburgs

What is an Iceberg?

Earlier we talked about Liquidity and Supply and referenced how important it is for large accounts to have enough of it to perform their transactions.

What do they do if there isn't enough?

To do this, they use an Iceberg order. An Iceberg order is a large order that is intentionally having its display hidden electronically on the Level 2. This is actually something that we can do in DAS although most of us don't take position sizes large enough to use it.

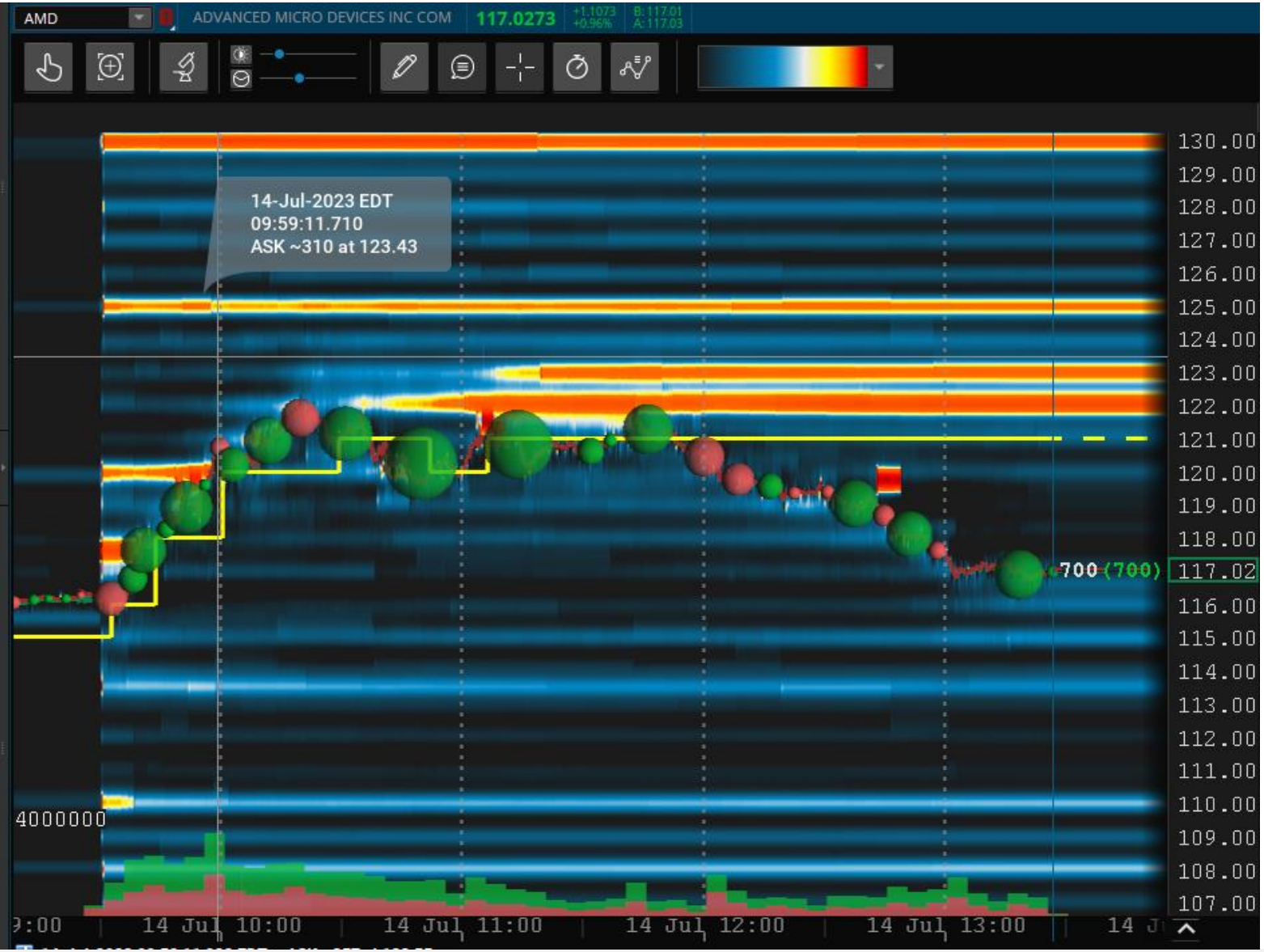
The reason they do this is because of the lack of available supply or demand. As you recall you can lose a lot of money if you get a lot of slippage. Imagine trying to sell off 40000 shares. Once everyone spots your order, they are going to start taking profit in front you. This will often cause your target to get missed.

When using an Iceberg like the example below you can choose to only display 1000 shares at a time. On the level 2 other traders will only see a small 10 lot even though there's 40,000 shares there.

Icebergs have a very characteristic look on the L2. You will see the lots recycle. You'll see a 50 lot for instance as the price goes to it ,the quantity drops to 10. The as the price moves away the quantity suddenly moves back up to 50. You'll see it happen over and over again until the Iceberg melts or the other participants exhaust themselves.

So, like an Iceberg the majority of the orders are not visible. When trading if you are struggling to move to a new price but can't figure out what's in the way. Start looking for the signs of an Iceberg. If it's to big and the Market Maker exhausts themselves trying to fill the order. Imbalance can set in very quickly causing an extreme move in the opposite direction that will provide amazing RVR.

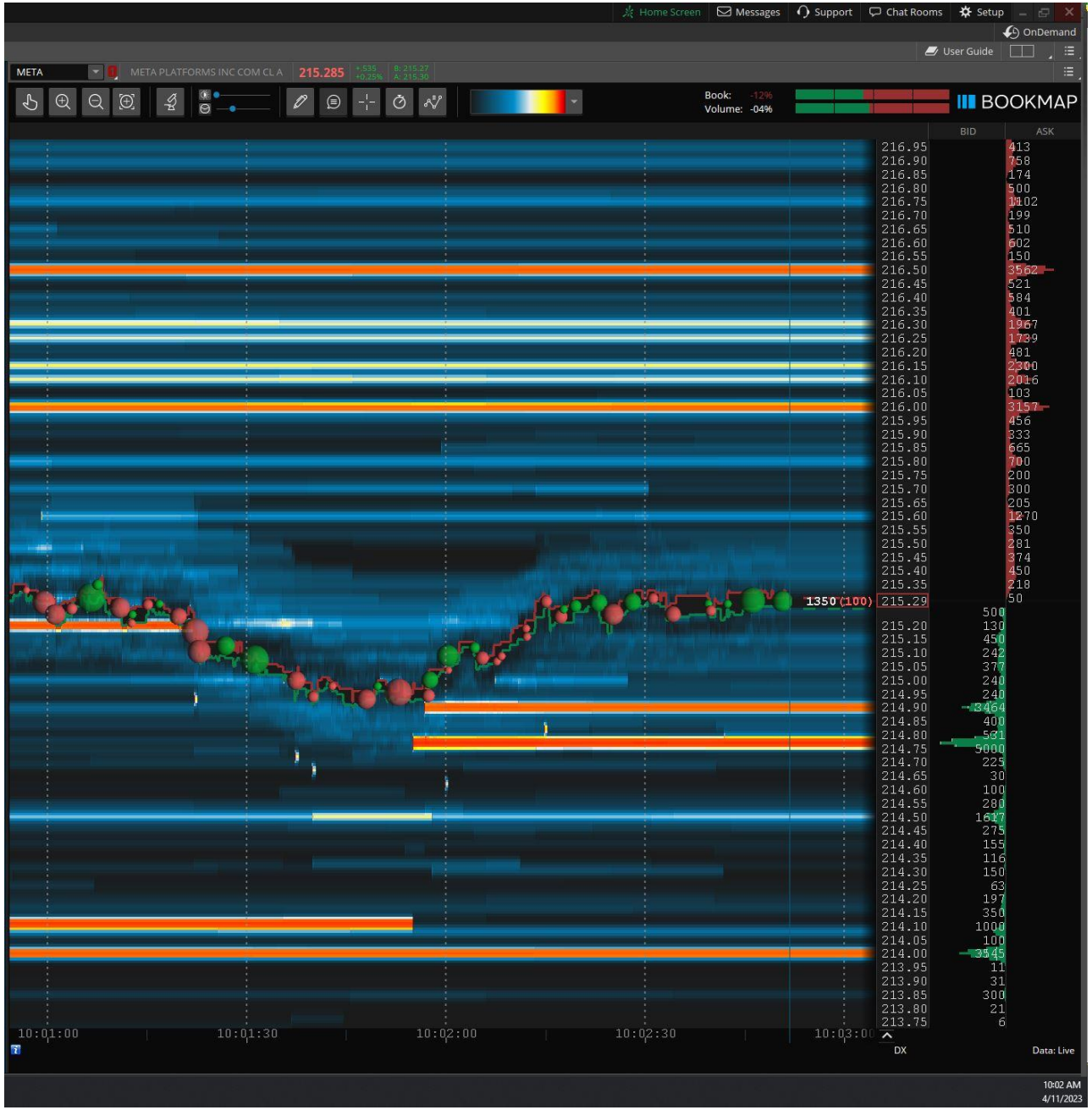
Watch for Ice burgs



What is a Heatmap?

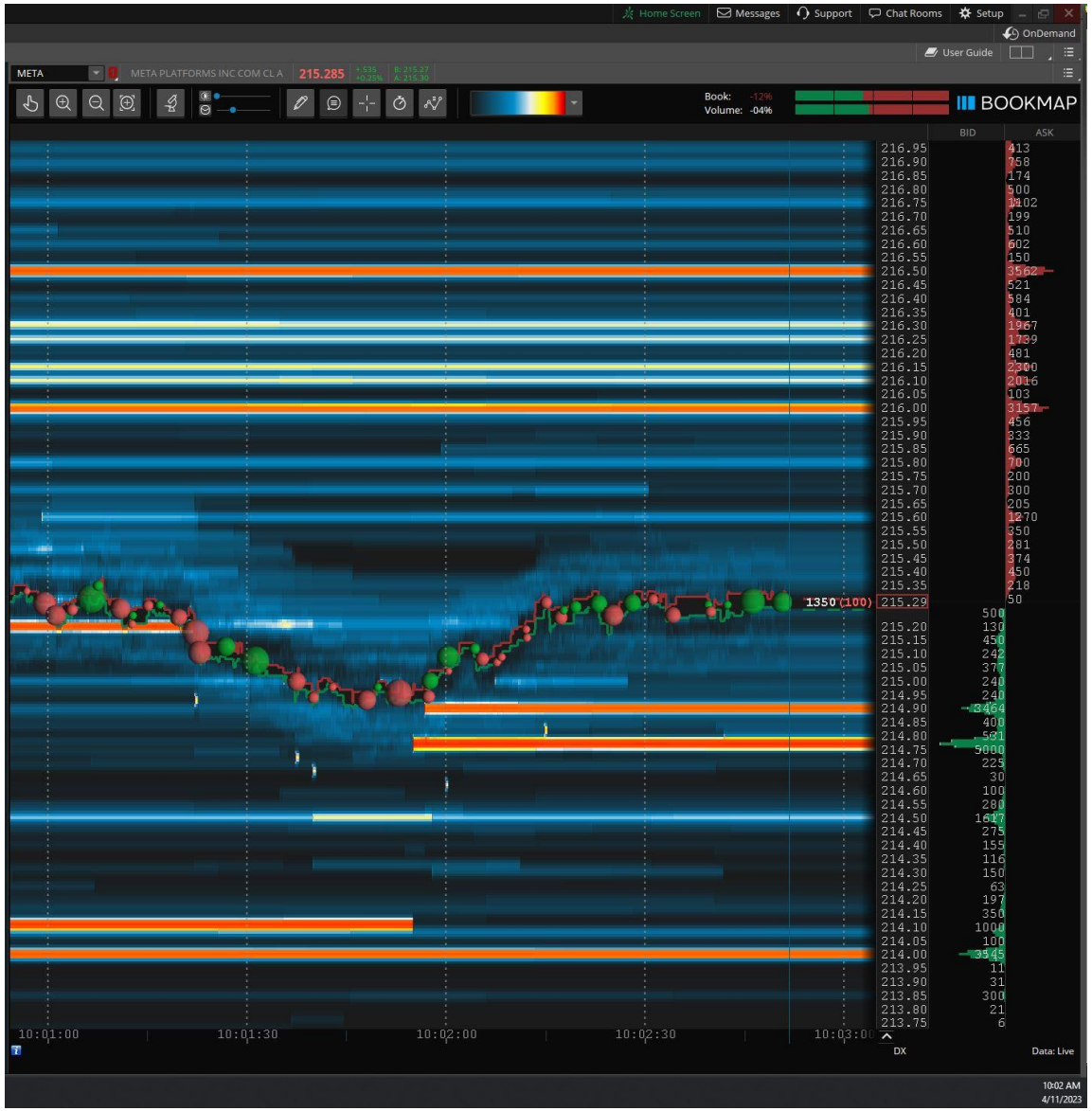
- A heatmap is a DOM that has been organized into a visual representation.

- This allows for an easier visualization of price levels as participants enter and exit the market. And has orders are requested and transacted.

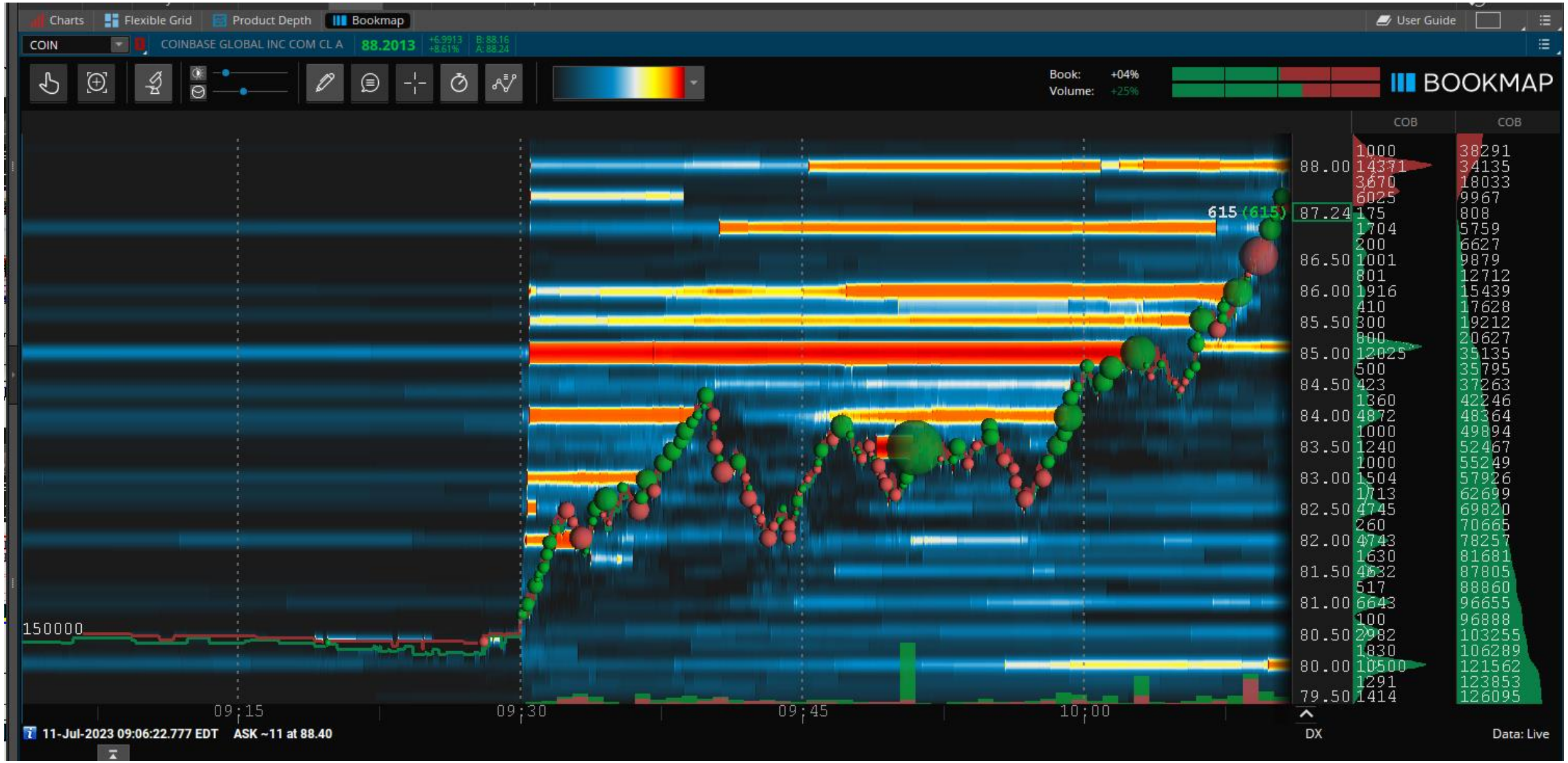


Advantages of using a Heatmap

- Historical Information
- Easily identify areas of high supply and liquidity.
- Easily identify areas of low supply and liquidity
- See Participant decisions being made in “Real-Time”.
- Easily read Market Bias

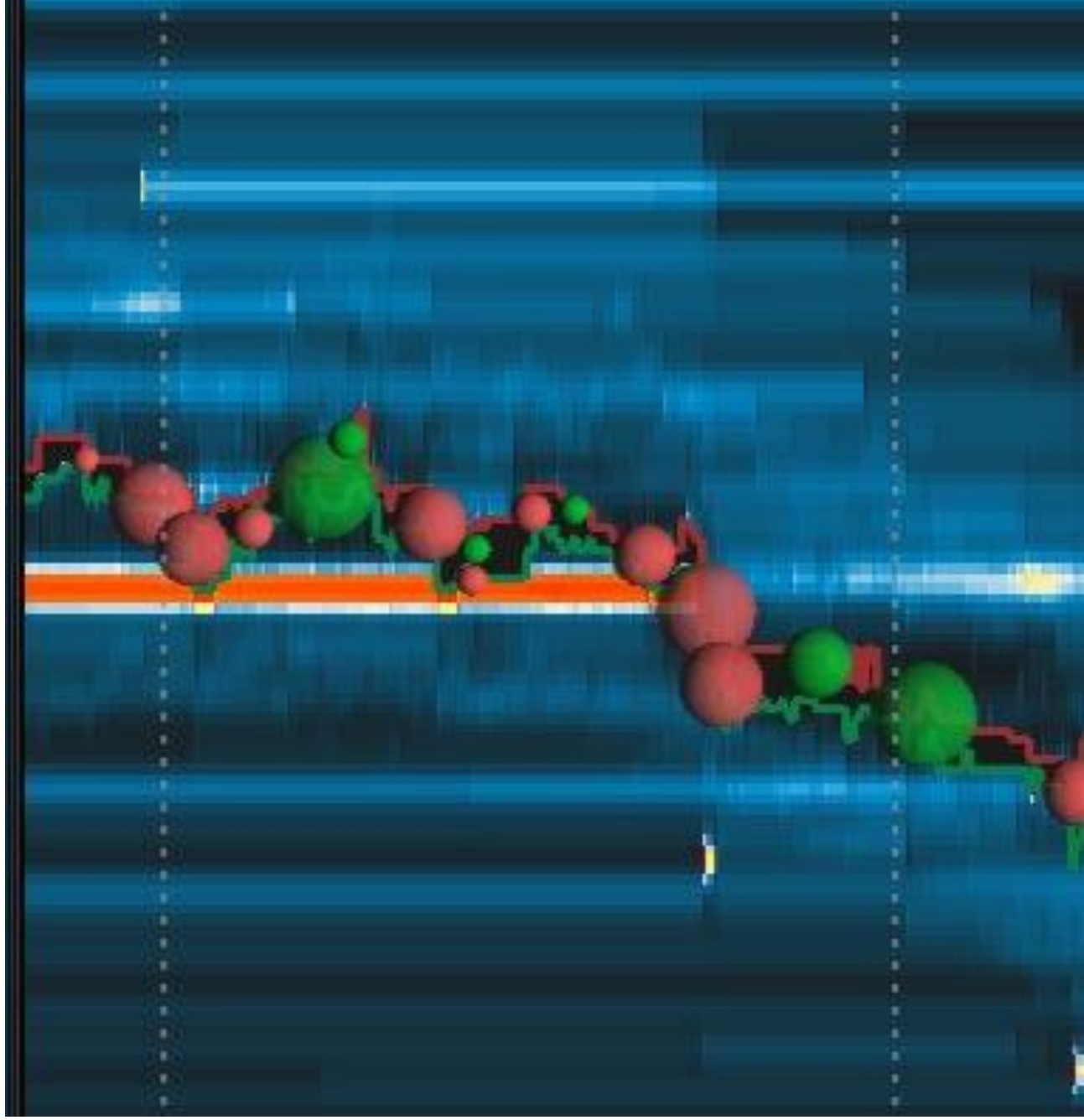


Advantages of using a Heatmap



What are Dots?

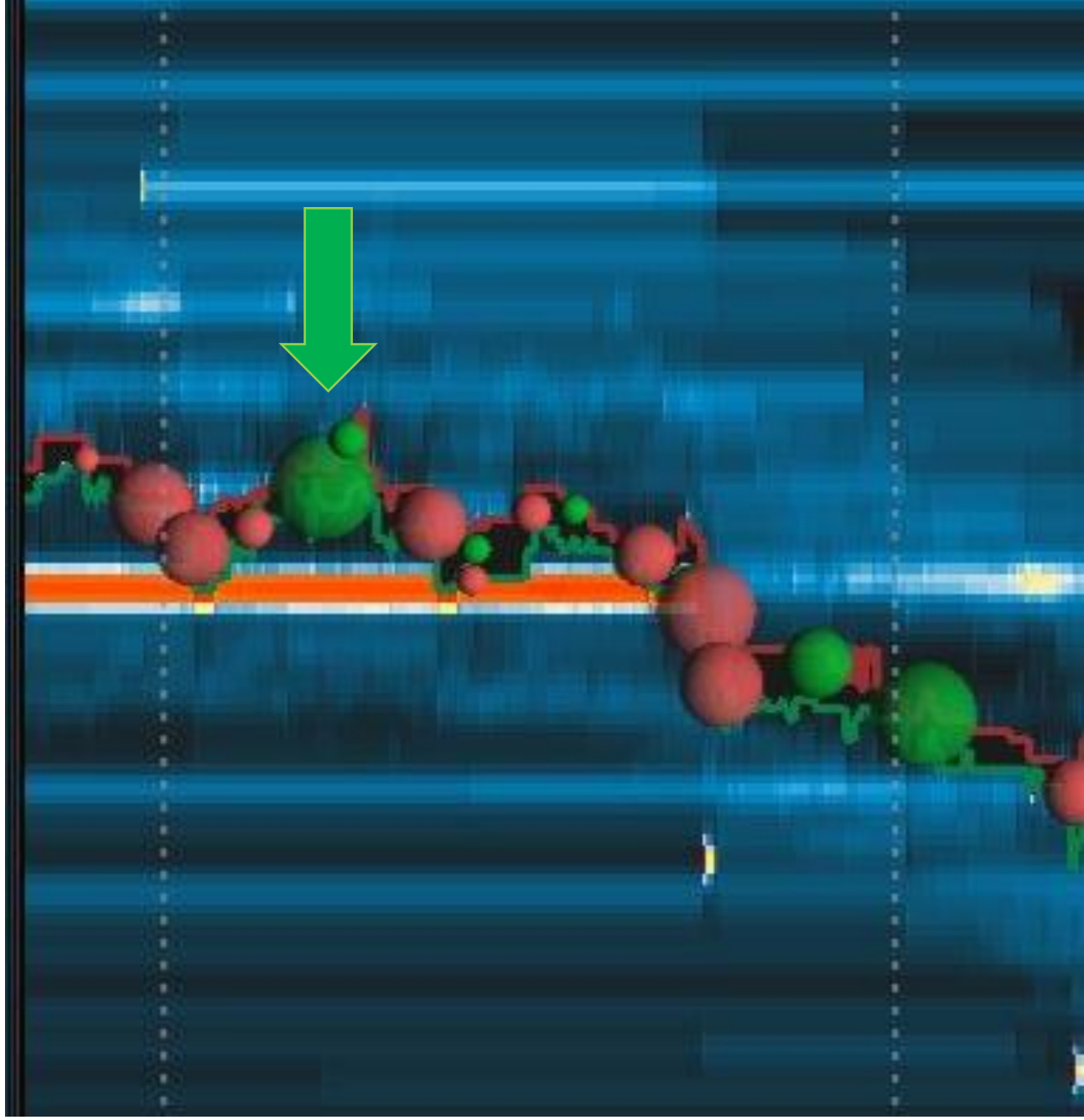
- Dots in a heat map represent Market Order transactions.
- You must have markets to fill limits
- The Bigger the Transaction the bigger the dot.
- The dot can only be as large as the number of shares transacted at the price level. A large transaction can be split into multiple dots at multiple levels.



Example of Buying

- Buying shows as Green Dots.

- Just because you see buying that doesn't mean the price is going up afterwards. It just means there's buying. It could be a short covering in front of a large order. It could be an eager bull going long. Without a ladder the price has no where to go to. A buyer without a seller. So we continue down.

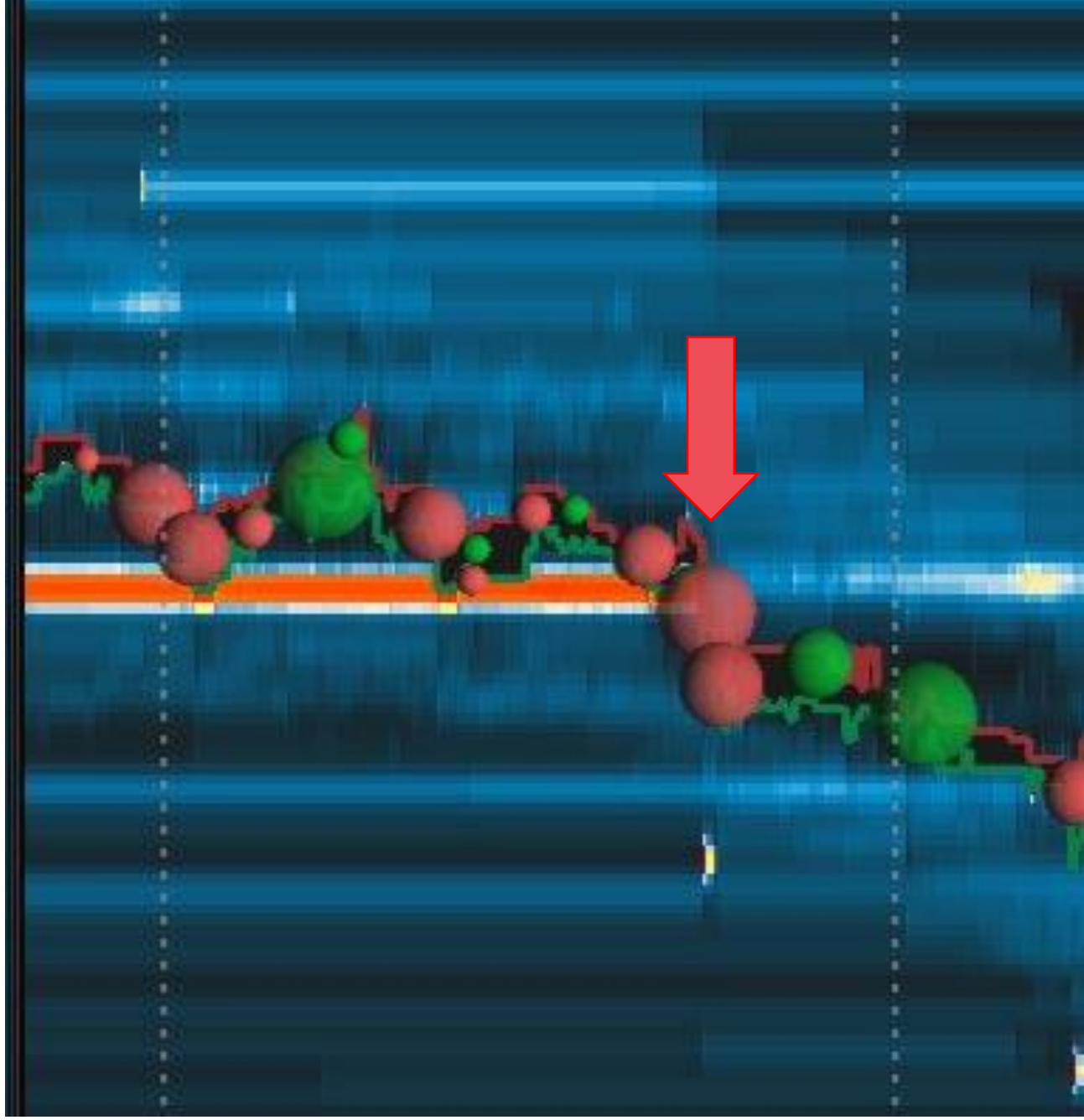


Example of Selling

- Selling shows as red dots.

- Just because you see selling that doesn't mean the price is going down afterwards. It just means there's selling. It could be a long selling in front of a large order. It could be an eager bear going short.

- In this example we can see we sell into a large buyer. As the price moves lower a large amount of market orders cause the price to drop quickly.

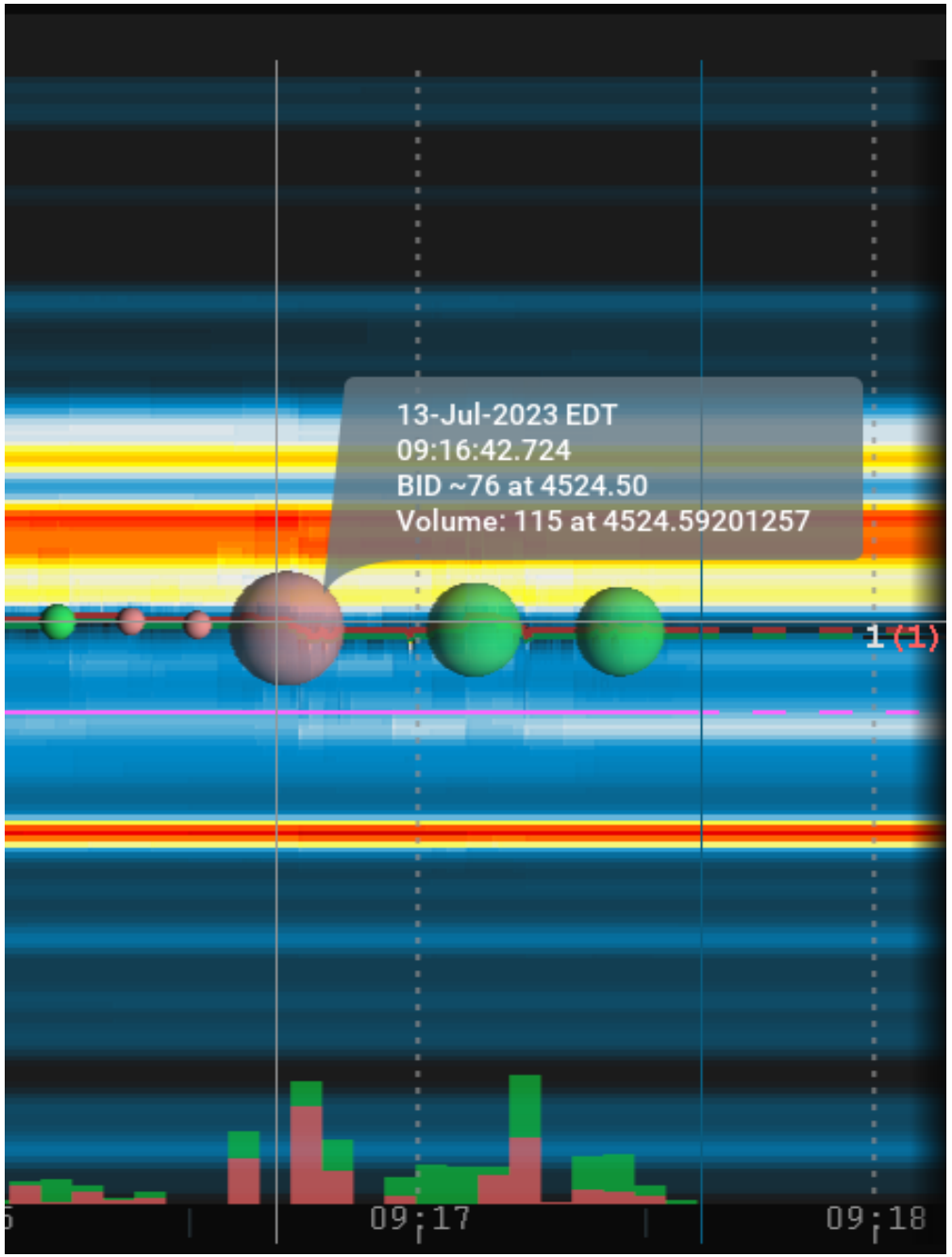


Volume Delta

- Takes the number of buy transactions minus the numbers of sell transactions to return a positive or negative share value.

- Example if 3000 shares are purchased at the same time 5000 shares are sold then the value of the dot will be returned as 2000 shares sold.

- Larger time frames group transactions more making volume delta very helpful.



Total Volume

- Takes the number of buy transactions minus the numbers of sell transactions to return a positive or negative share value.

- Example if 3000 shares are purchased at the same time 5000 shares are sold then the value of the dot will be returned as 2000 shares sold.

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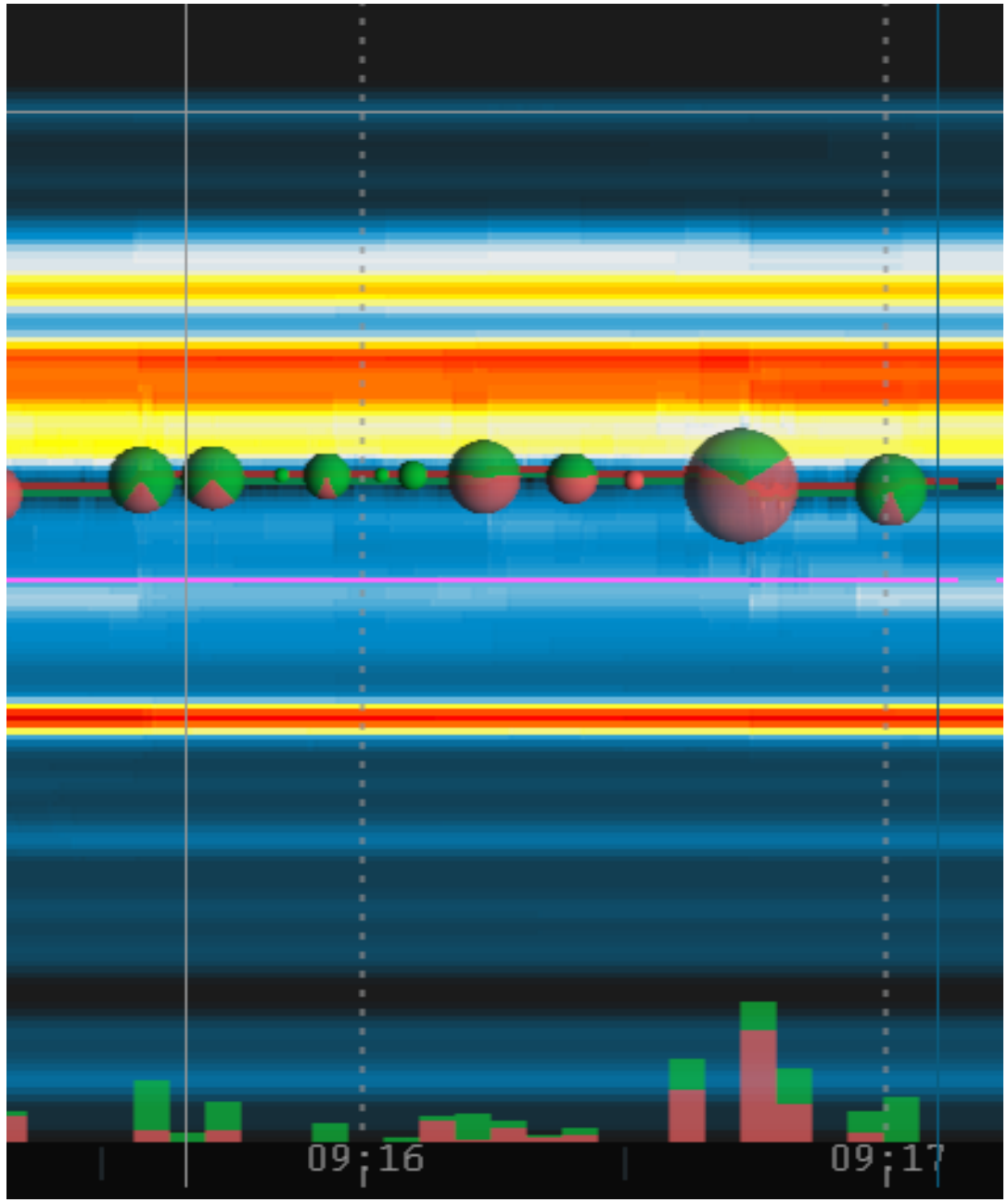
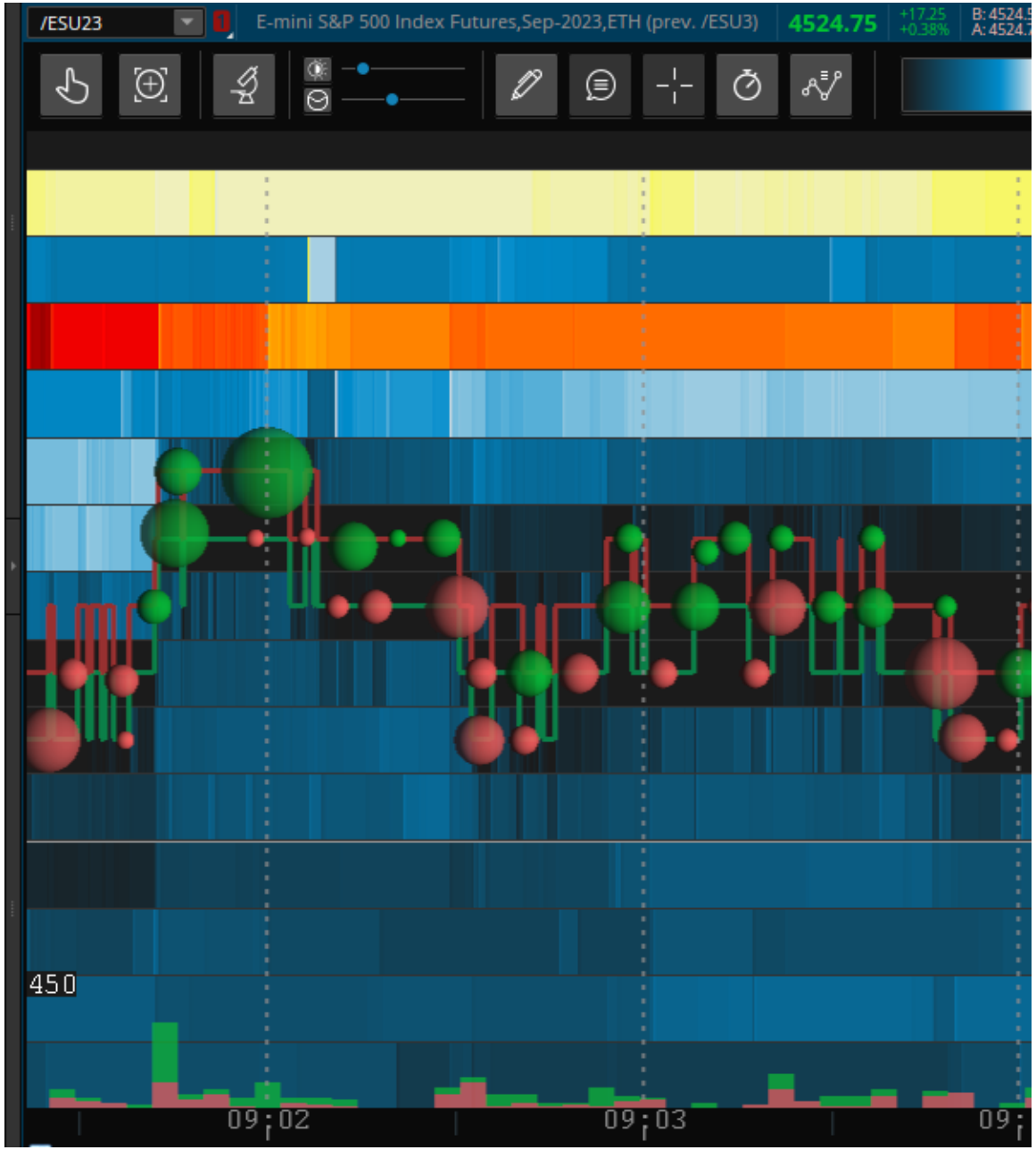


Volume Pressure

- The price is stuck between the best bid and best ask. Market orders to buy are applied to the limit ask. Market orders to sell are applied to the limit bid. To move the price, you need more market orders to one side.

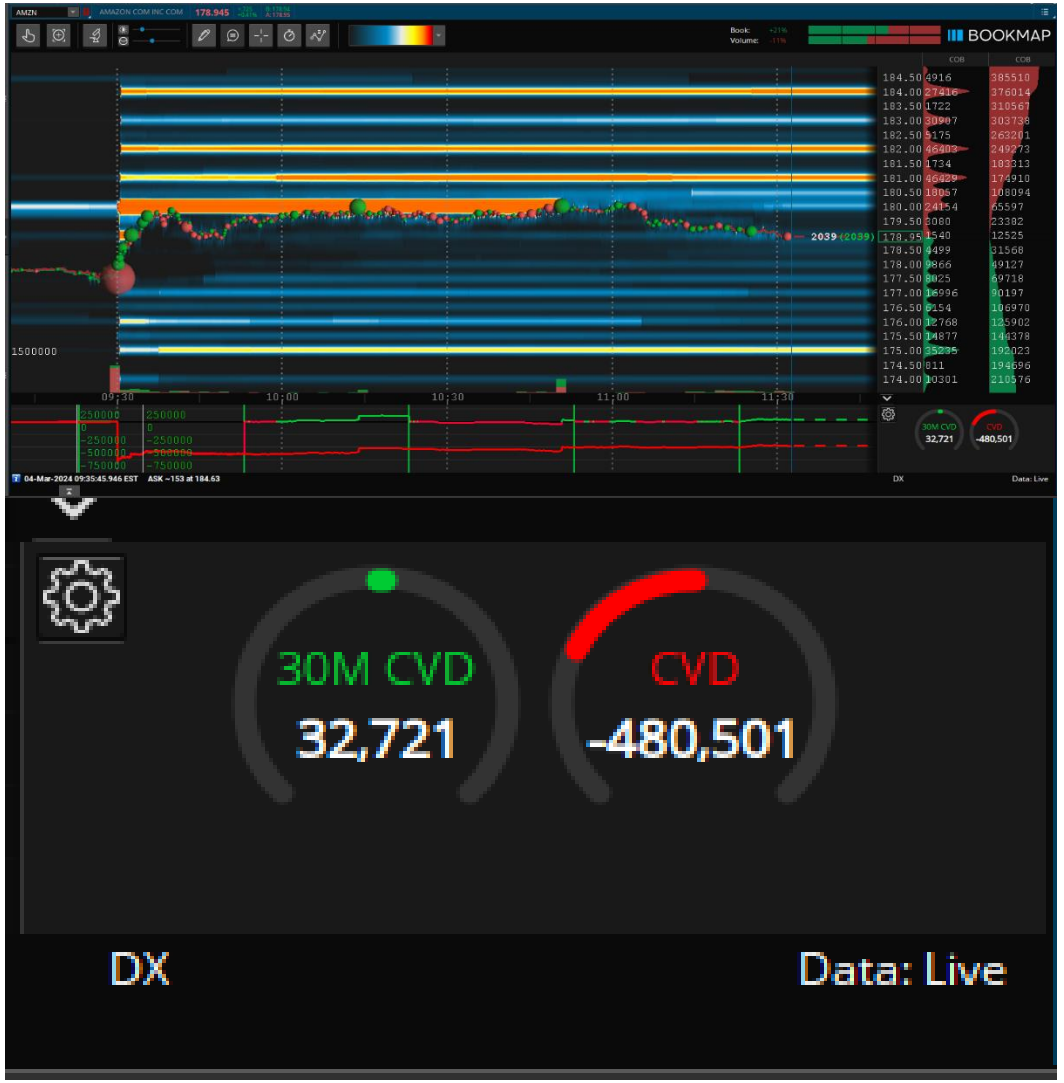
- This is “Volume Pressure”

- You can see using the book how many shares are available and then watch the tape to see if enough orders hit to move the price.



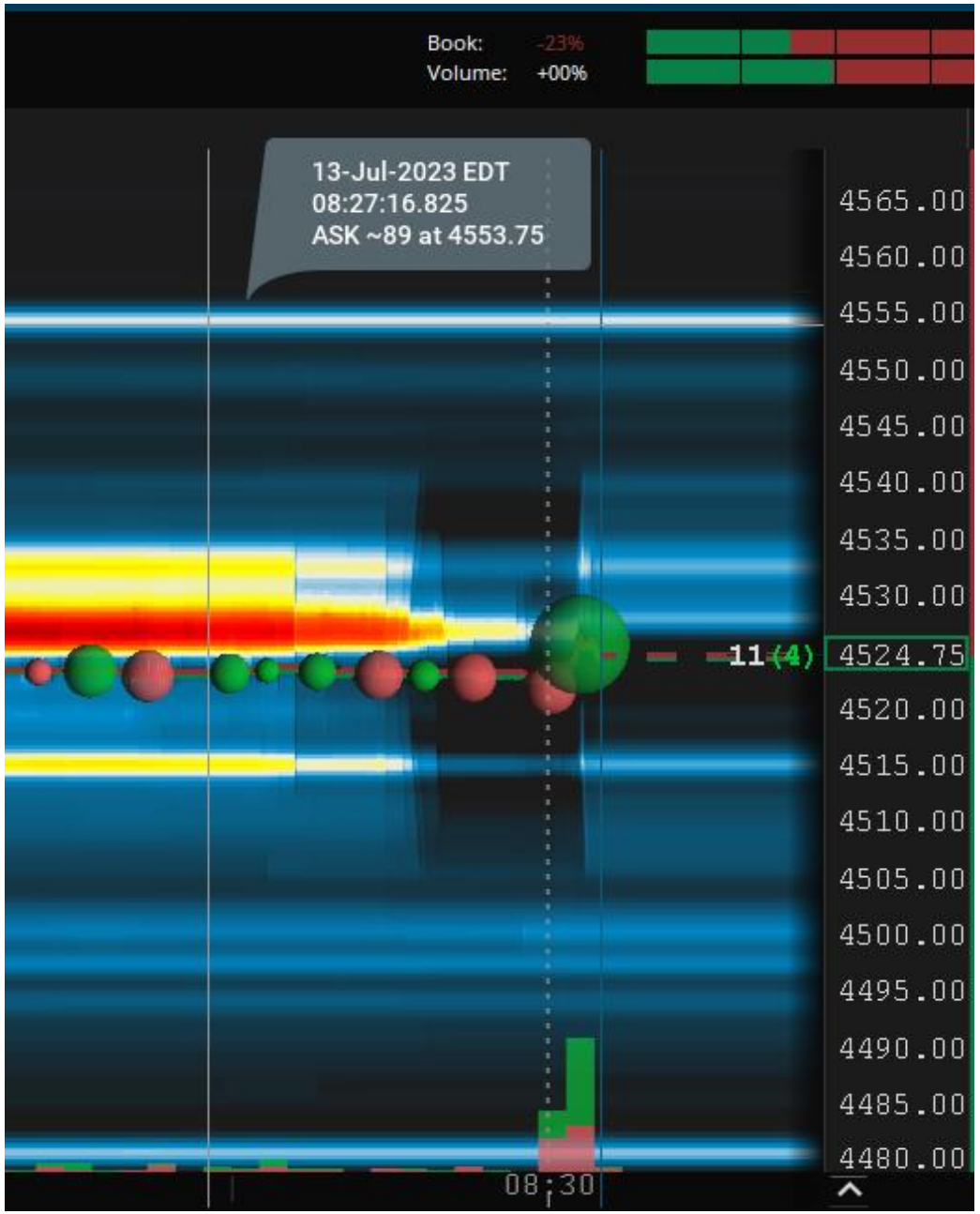
CVD

- Cumulative Volume Delta is the answer to. Is it Buying? Or Is it Selling?
- Stocks can move down on buying
- Stocks can move up on selling
- CVD = Buy + Sells
- If CVD is 200,000 then 200,000 more shares have been bought, then sold.
- Use CVD on multiple Time Frames to see buying on the day verses buying over a short period.



How News Effects the Book

- Buy the Rumor Sell the News
- News Algo make very fast decisions.
- Anticipation of news events can clear the book. This creates low volume, high volatility opportunities.

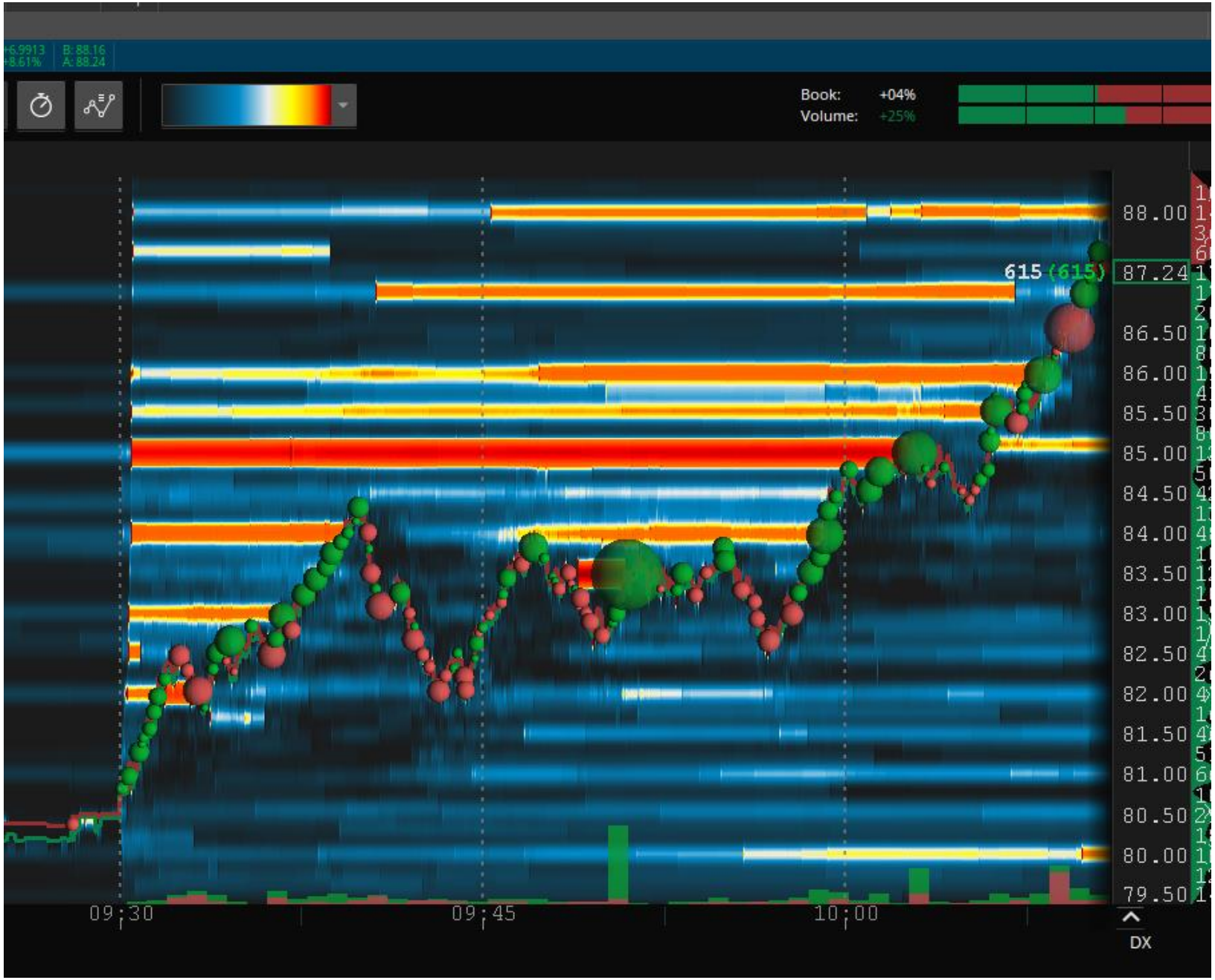


Buying the Book

- Occurs when a larger number of transactions occur then are available on a large portion of the order book.
- Causes massive price movement in a very quick period of time.
- The reason low floats are so dangerous. Because of the frequently low price and low number of shares available to transact. Anyone with a significant bank roll can move the price easily buy throwing a lot of market orders into the book.

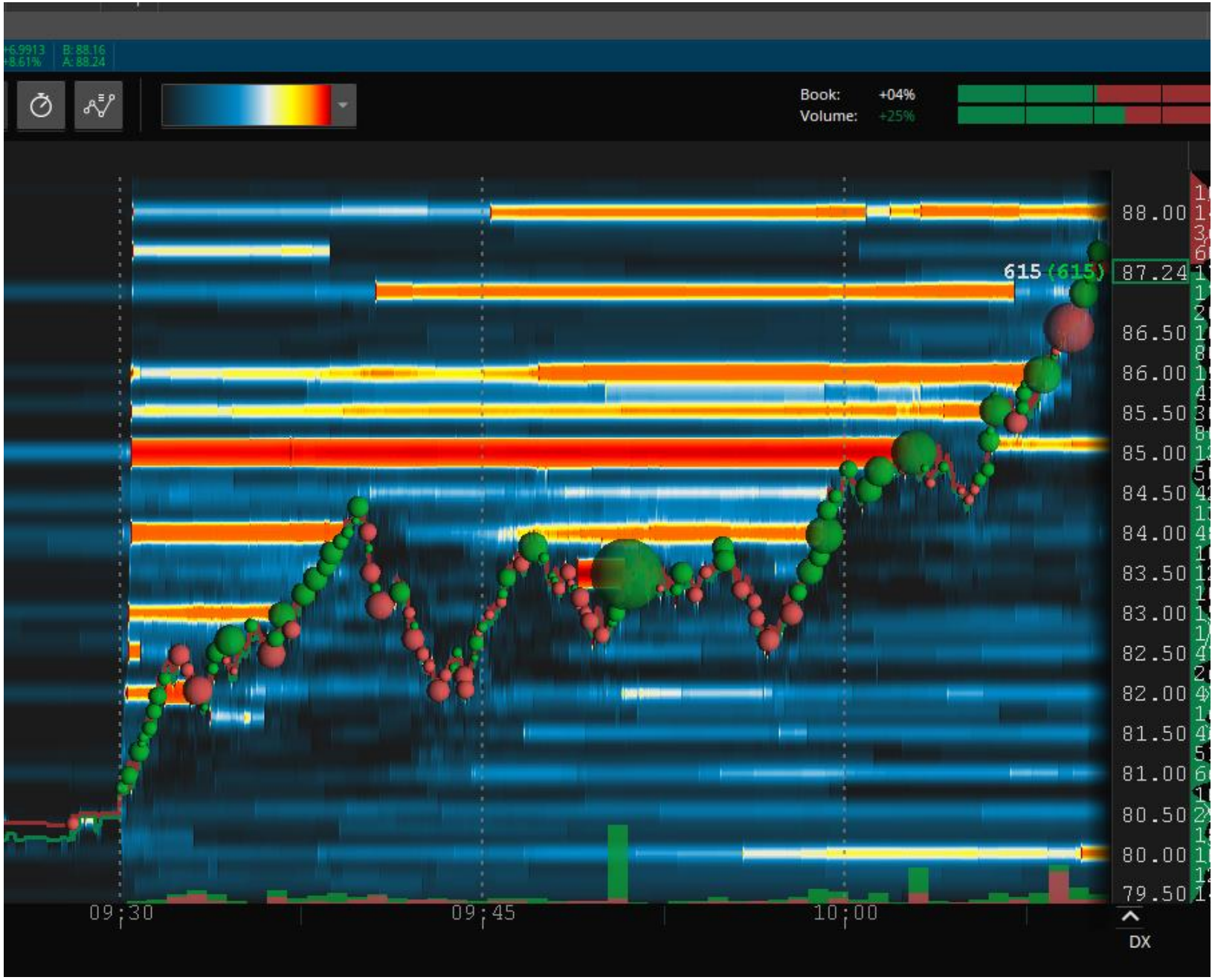
Better Entries

- Since you can see where the institutions are targeting price levels you can determine where to take action.
- Use this to plan your entry and risk management
- Don’t trip over dollars to pick up dimes.



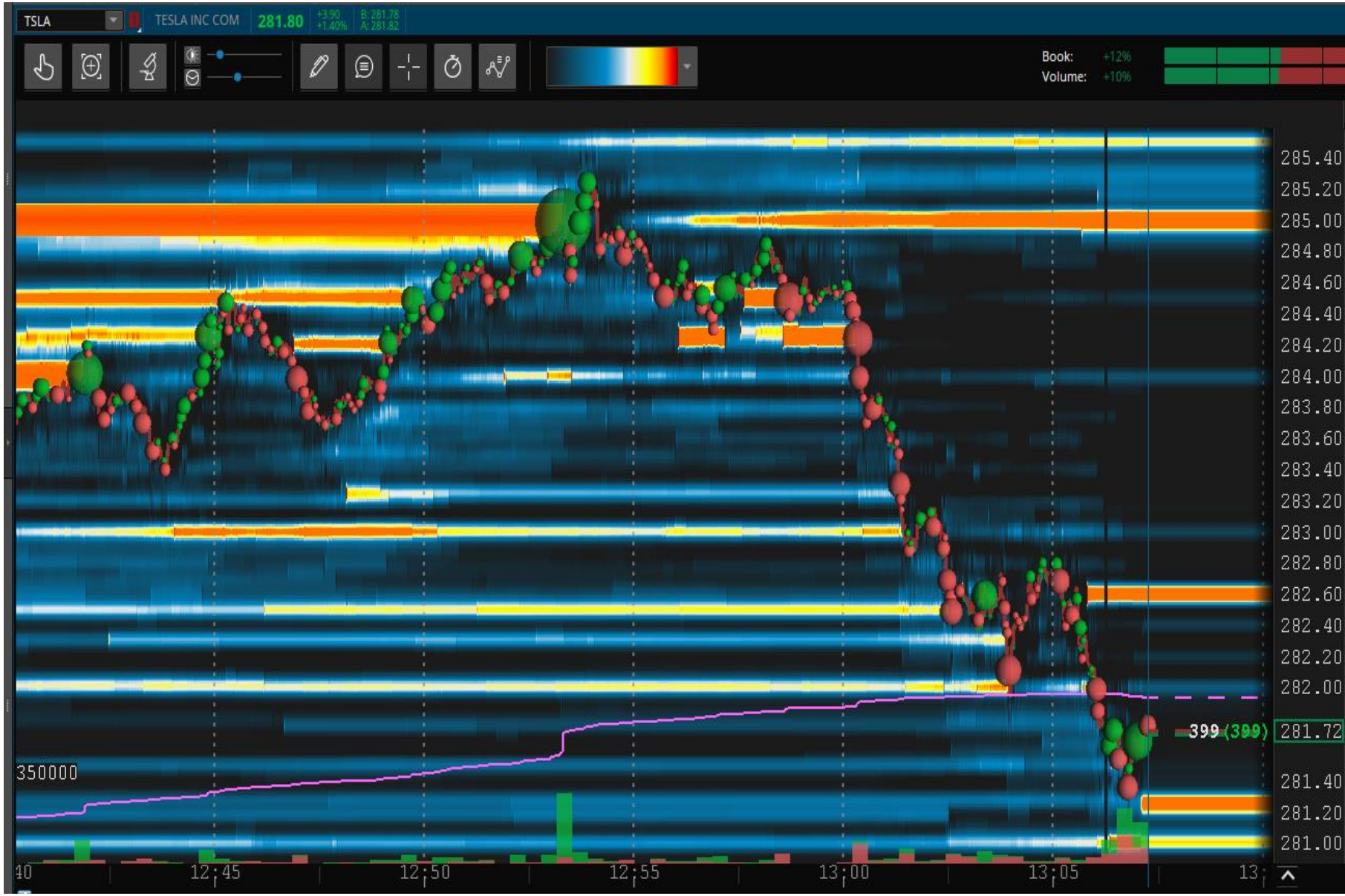
Better Exits

- Institutional orders are most often grouped at large round numbers.
- Place profit targets slightly in front of large institutional orders to get fill priority as the price moves to fill them.
- Go all out when there are no more institutional orders



Book Flips

- A book flip occurs when the market shifts its bias from Bullish to Bearish and vice versa.
- Book Flips can happen slowly
- Book Flips can happen suddenly
- Remember the two ladders
- Bid ladder requires less volume

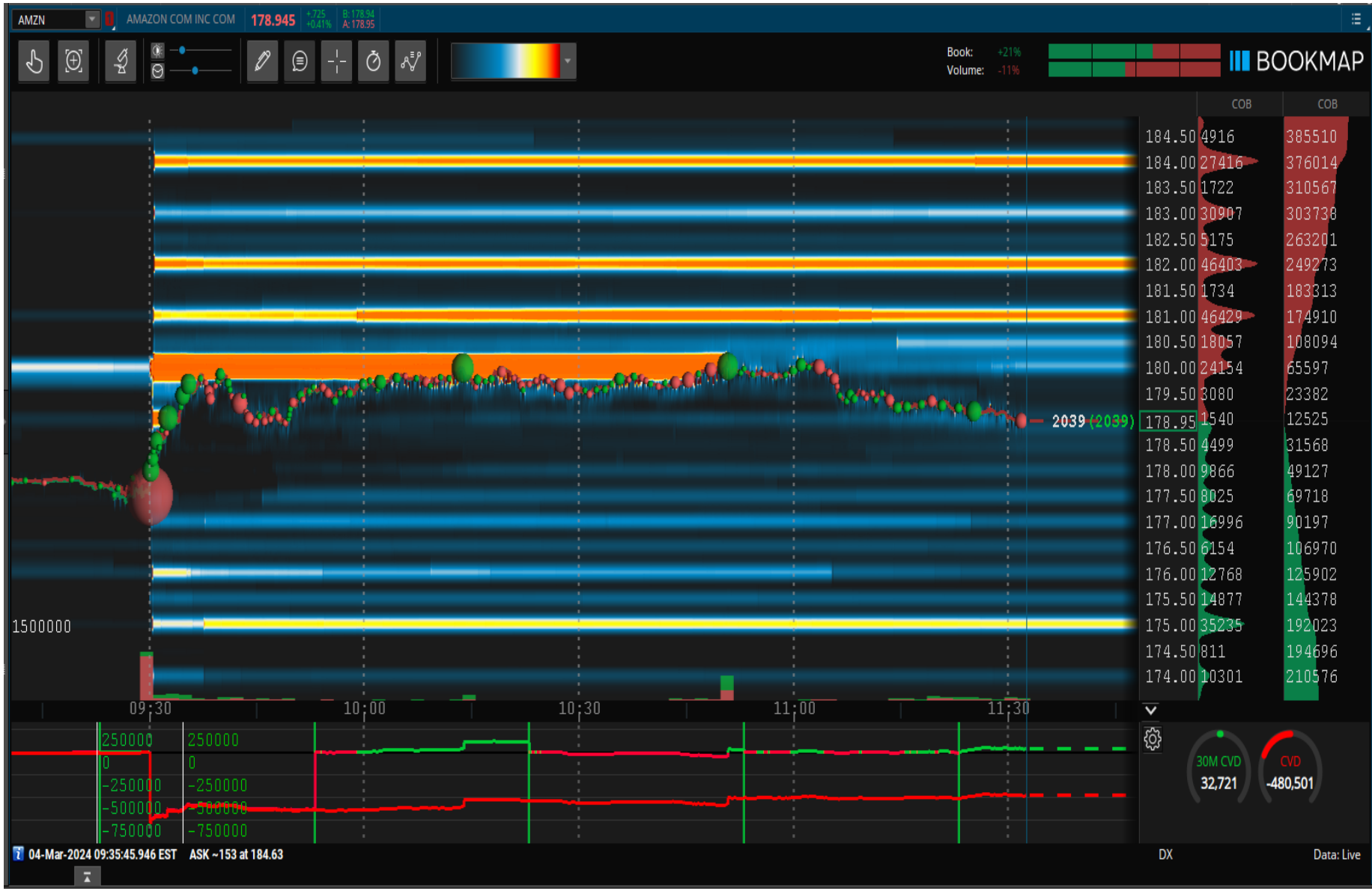


Order-Voids

- In order to move you need orders like rungs on a ladder
- An Order-Void show that no one is participating in the opposite direction.
- Without limit orders the market CANNOT move in that direction.
- Never trade into an order-void. There is no incentive to move the price there.
- This is my secret weapon for holding trades, and spotting reversals. I don't need to partial if the stock price can't bounce. I can confidently hold until I see buying on the tape and the order book fill in.
- Great for continuation trades.

Order-Wall

- Again - To move you need orders like rungs on a ladder.
- Because they are limit orders every single Rung Must be touched.
- To many rungs, to close together, with low RVOL
- Order Wall



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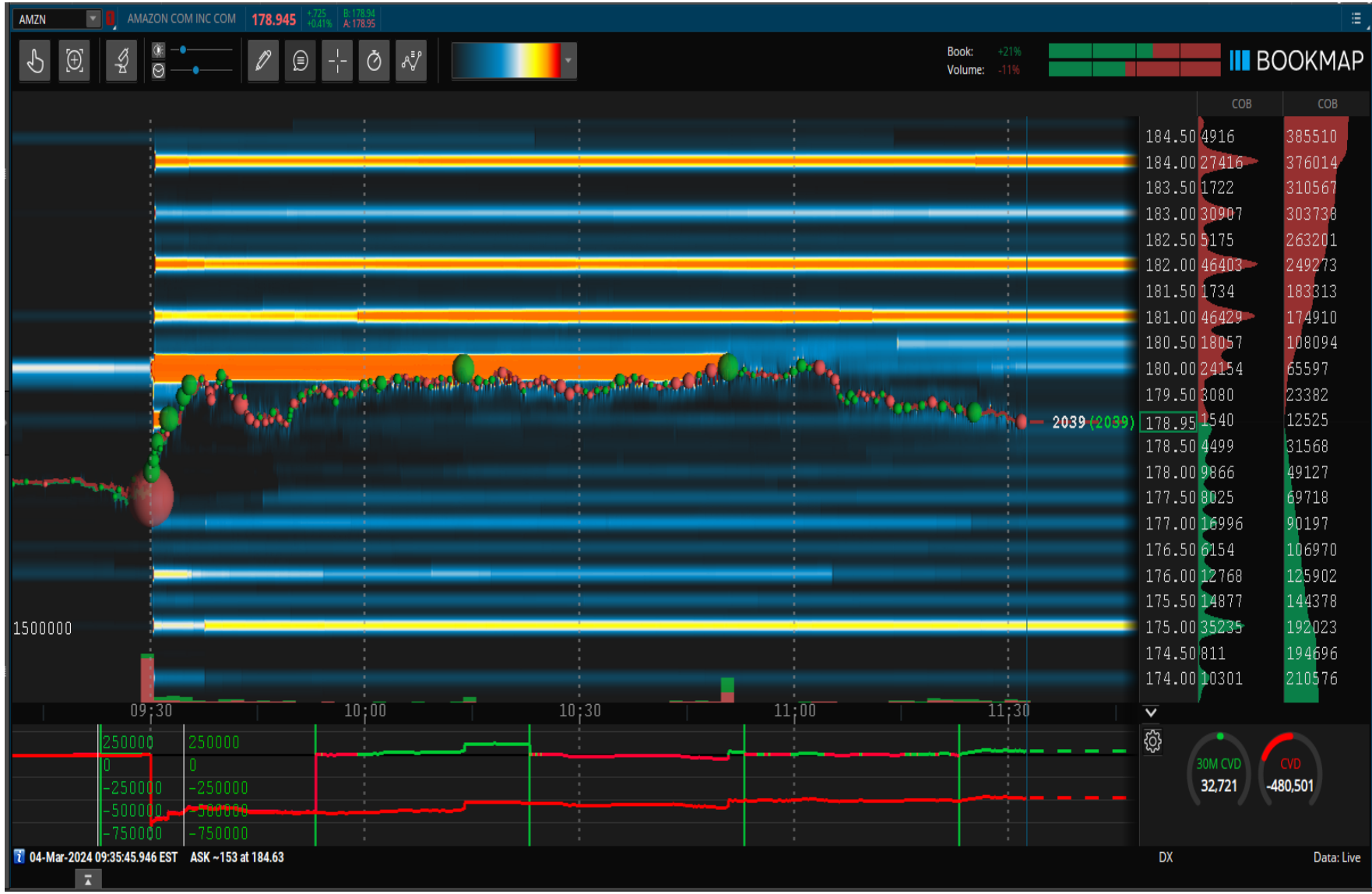
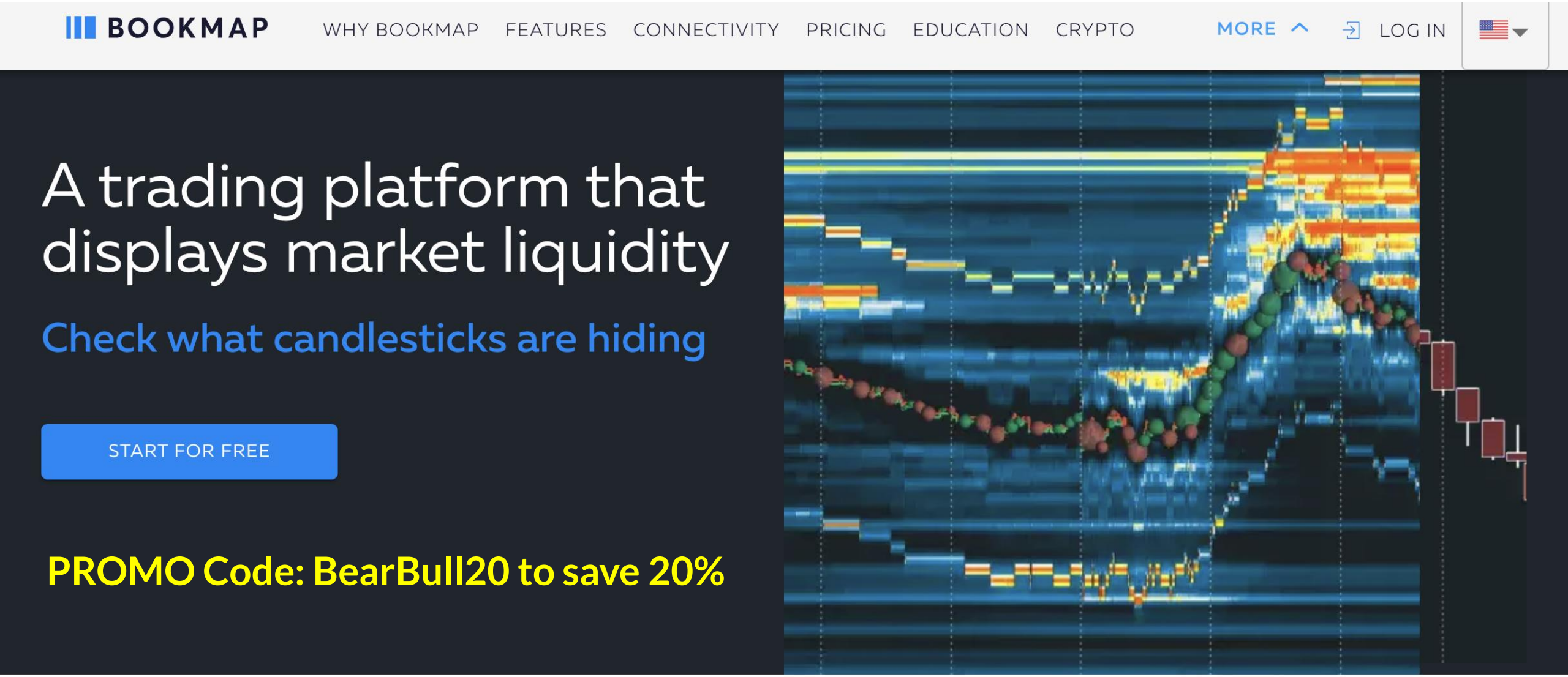
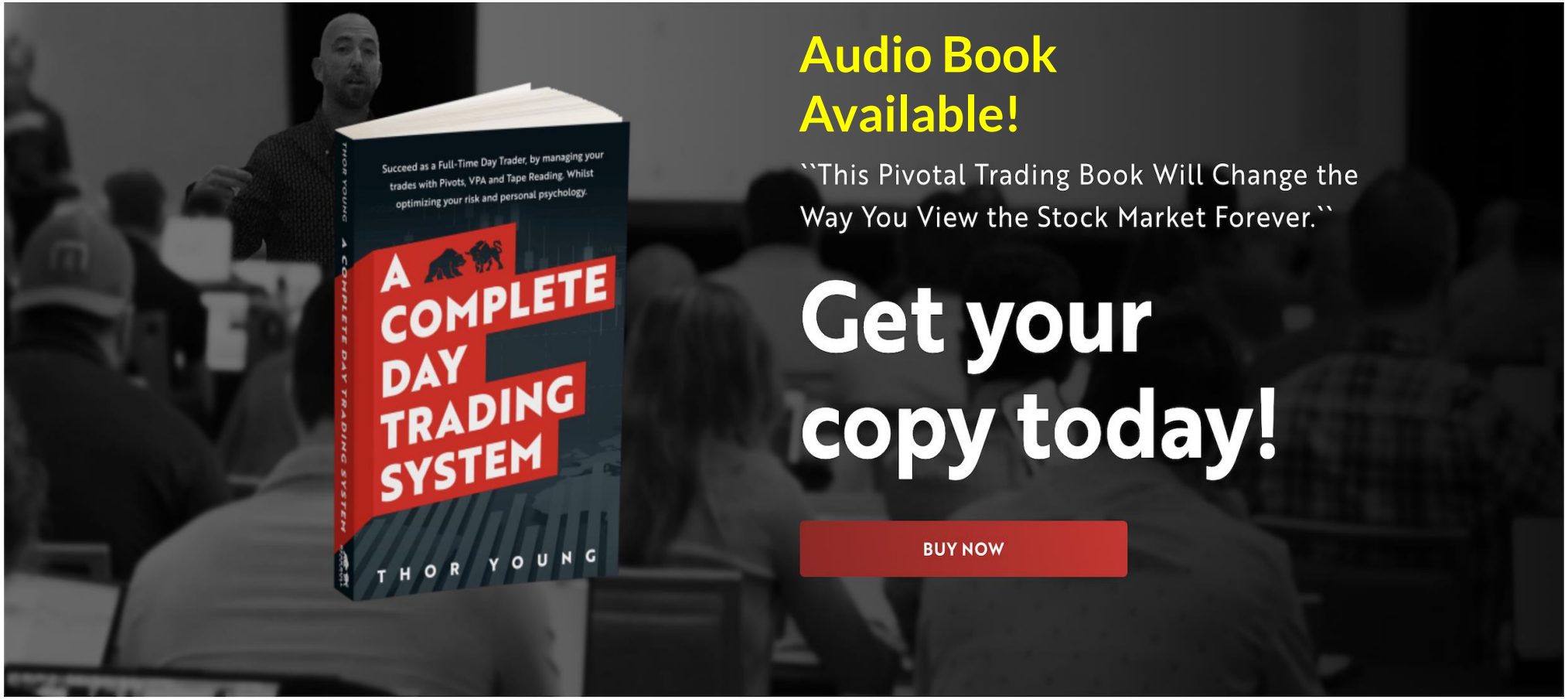


Special Mentions - Bookmap





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