

# Market Structure



# Outline

- General Remarks
- Defining Market Structure
  - Definition
  - Market structure = trend?
  - Which highs/lows? Wicks or bodies?
  - Is there a unified market structure per time frame?
- Identifying Breaks in Market Structure
  - Definition
  - Wicks or bodies?
  - Directional bias
  - Deriving key levels from market structure
  - Entry triggers/evidence of confirmation at structure
- Trading Breaks in Market Structure
  - Continuation from market structure level
  - Continuation from pullback level
  - Reversal
- Nuances
  - Time frames and reasonable expectations
  - Market structure in a range
  - Failure to continue



# General Remarks

- Presenting an understanding of market structure that I've found personally useful
  - Not presenting a canonical view, if such a thing even exists
- Topic with lots of grey areas
  - Market structure is a tool to provide context (same as levels etc.)
  - Tends to follow the general principle of clearer = better
- Examples are deliberately cherry-picked to present the concepts as clearly as possible
- Practice, practice, practice
  - *"I've finished the course, where do I go next?"*
  - The charts!



# Terms

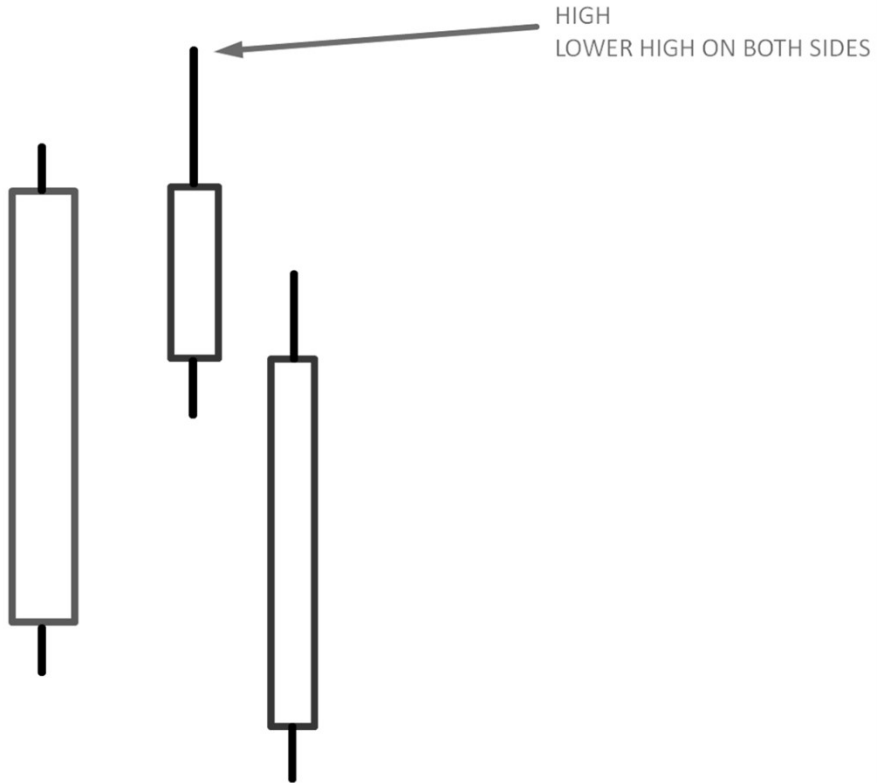
- MS = Market Structure
- HL = Higher Low
- HH = Higher High
- LH = Lower High
- LL = Lower Low
- MSB = Market Structure Break
- HTF = High Time Frame
- LTF = Low Time Frame



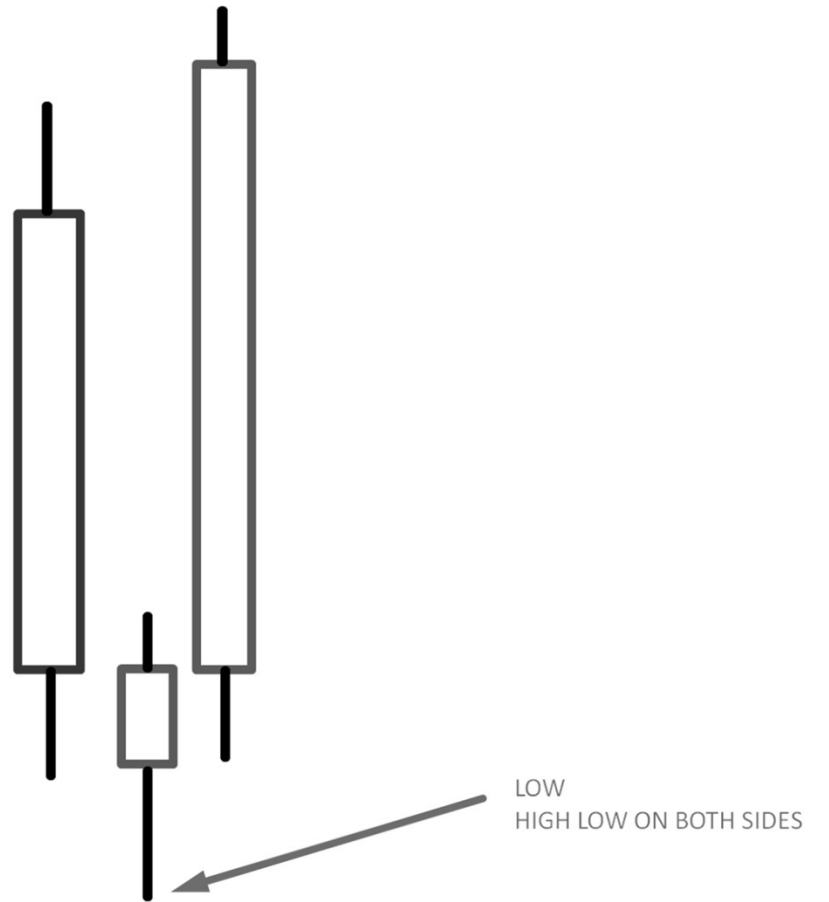
# Defining Market Structure I

- Definition: *Sequence of (proximate) highs and lows in a given instrument*
  - More forward-looking than levels i.e. how does price look now?
- Sequence
  - Bullish MS = Higher highs and higher lows
  - Bearish MS = Lower highs and lower lows
- Selecting highs/lows as MS anchors
  - Basic structure:
    - Swing low = Low with a HL on both sides
    - Swing high = High with a LH on both sides
  - No single 'formula'
    - Just like there is disagreement over levels
  - Some things to consider:
    - Recency
    - Significance/size of the move following that high/low (greater swing = better high/low)
    - What's the 'obvious'/most outstanding high/low?
      - If it doesn't look like a clear swing point from first glance, it likely won't be the best structure
- Can be used in a complementary fashion
  - e.g. HTF bull trend sees a LTF MSB = opportunity to dip buy etc.

## SWING HIGH

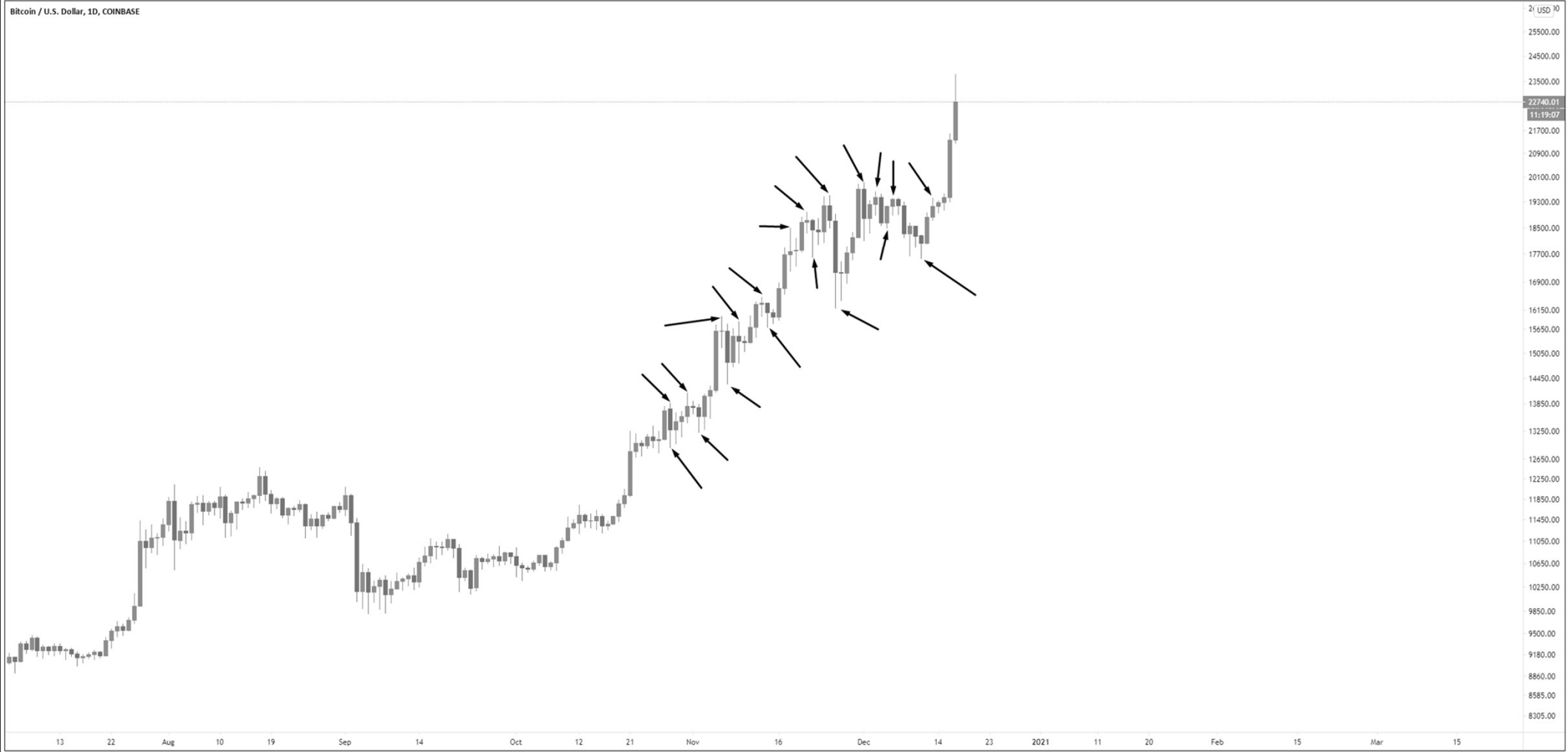


## SWING LOW



COINBASE:BTCUSD, 1D 22740.01 ▲ +1380.36 (+6.46%) O:21360.50 H:23776.94 L:21252.01 C:22740.01

Bitcoin / U.S. Dollar, 1D, COINBASE





# Defining Market Structure II

- Selecting highs/lows as MS anchors
  - Some things to consider (cont.)
    - Is the swing high/low you're assessing confluent with another key level e.g. S/R, candle opens, etc.?
    - In any given market on any given time frame, you can almost certainly find structure that qualifies as an MSB. That in itself does not make it worth trading.
      - Focus on swing points whose break will be visible and significant to the largest number of participants
    - If in doubt, S/R it out
      - By definition, horizontal S/R is derived from old highs/lows
      - If you can identify at least decent levels, you can automatically identify meaningful MS levels
      - Works for trendlines too given sequence of higher lows/lower highs
- Candle bodies for MS
  - Unconventional, but can be used
  - Work better on high time frames and/or swing points with outlier wicks
  - Test for yourself
  - Be consistent!



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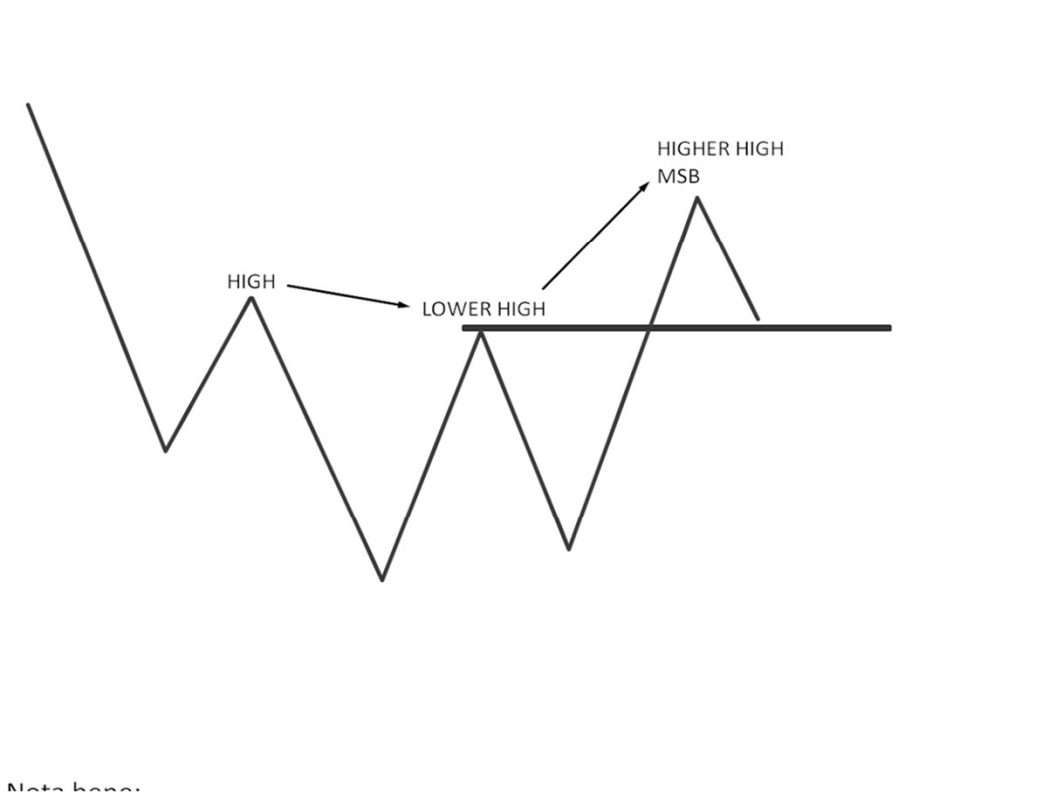
## Defining Market Structure III

- Is there a single, unified MS per time frame?
  - Not really.
- Assessment of MS will depend on how strictly you define your criteria for valid swing points (and the types of trades you want to take)
  - E.g. totally fine to say that HTF MS is bullish but LTF MS has been broken, on the same time frame
  - We'll deal with navigating these apparent contradictions towards the end of the presentation

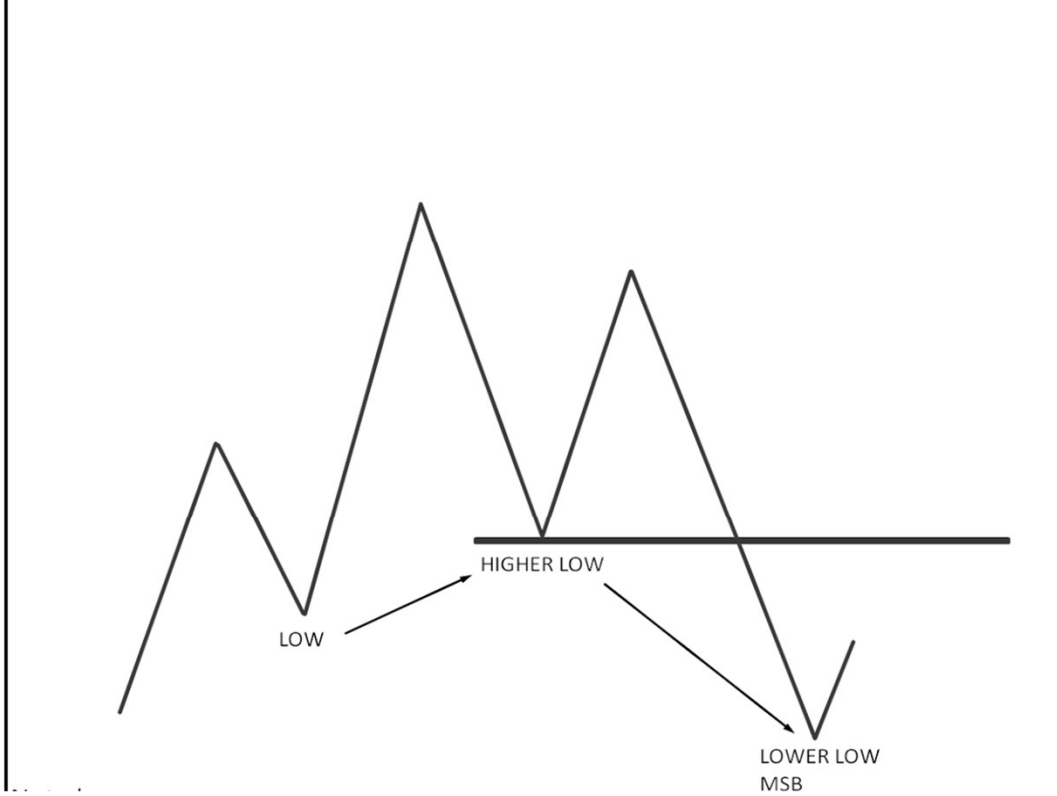


# Identifying Breaks in Market Structure I

- Definition: *A shift in the sequence of highs/lows in the opposite direction*
  - Bullish MSB: Sequence of LH violated by a HH
  - Bearish MSB: Sequence of HL violated by a LL
- For some traders this is considered aggressive
  - Alternative view: HL required before HH is valid/LH required before LL is valid
    - Personal view: Requirement of a higher low before a higher high is more conservative (safe)
  - Alternative view: LH that is broken must have preceded LL to be valid/HL that is broken must have preceded HH to be valid
    - Personal view: I still integrate similar logic for setups
- Don't chase every MSB
  - Sometimes price goes lower to go higher and goes higher to go lower
    - By definition, a bullish dip/HL requires an MSB on some time frame, and vice versa
  - Sometimes the MSB is immaterial and is a weak sign of reversal in an overwhelmingly strong trend *cf.* Altcoin/Bitcoin pairs
  - Risks turning into breakout/breakdown chasing under the guise of MS
- Study your own trades and markets and see which approach generates more reliable signals
  - Or use both/everything/neither, according to your own discretion
    - E.g. Waiting for more evidence when knife-catching counter-trend versus taking a more aggressive approach when trading in the direction of a market with a strong trend



Note here:



Note here:



# Identifying Breaks in Market Structure II

- Wicks or bodies?
  - In most cases, if you must ask yourself whether MSB formed, it hasn't
  - No 'right' answer as long as your framework is consistent
  - Some common variants:
    - Wicks for MS and wicks above/below for MSB
    - Wicks for MS and closes above/below for MSB
    - Bodies for MS and closes above/below for MSB (my preferred variant)
- Time frames for closes
  - Generally: Same time frame as the MS anchor
    - E.g. Would need a daily close above/below daily MS level to signify an MSB



# Identifying Breaks in Market Structure III

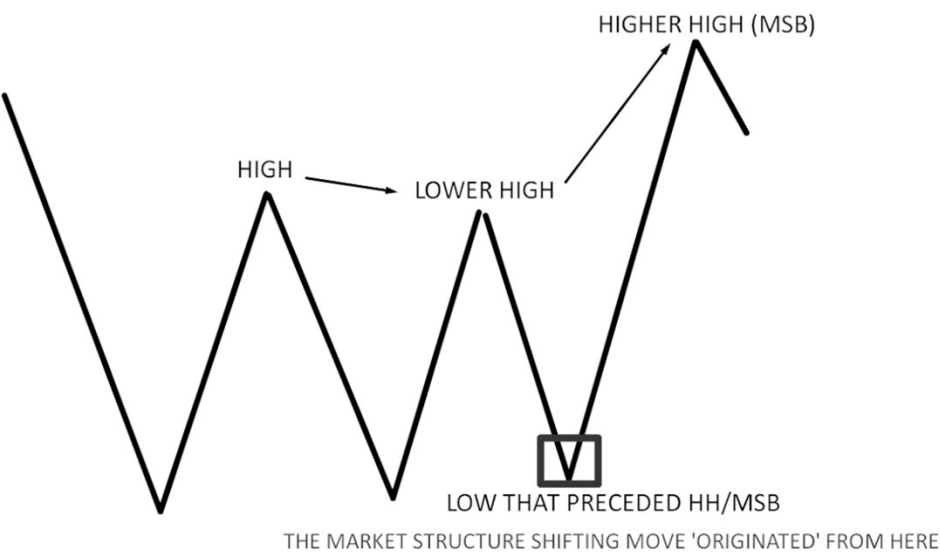
- Directional bias shifts in the direction of the MSB
- Basic outline
  - Bullish MSB = Anticipating another HH (with or without a HL) = Bullish outlook, favouring long-side trades
  - Bearish MSB: Anticipating another LL (with or without another LH) = Bearish outlook, favouring short-side trades (or staying out/taking profit/hedging etc. if long-only)
- Practical considerations for trading an MSB
  - Trades taken in the direction opposite to MSB are technically counter-trend on the time frame that MSB occurred
  - Counter-trend trades:
    - Shorter holding periods
    - More conservative targets/FTA
    - Greater minimum R:R requirements (usually with closer invalidation, not wider targets)
    - More active trade management
    - Different sizing (smaller/more conservative)
    - Flip these around when trading in the direction of the MSB
- MSB doesn't always have to translate into a trade, it can be used as a signal



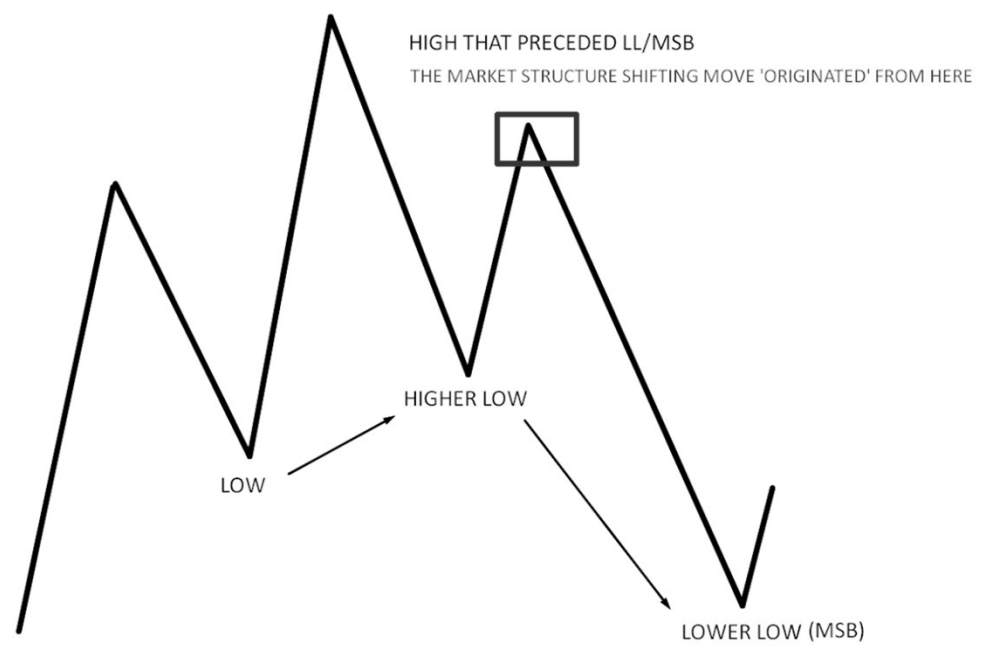
# Identifying Breaks in Market Structure IV

- Market structure can be used to 'filter' good S/R levels and structures from bad ones
- Basic premises:
  - Resistance (high) that preceded a bearish MSB (lower low) is strong resistance
  - Support (low) that preceded a bullish (MSB) higher high is strong support
- In other words, we're asking what this level actually achieved
  - It broke market structure!
- Applicable to all support/resistance structures
  - You'll see this logic applied to Supply/Demand zones etc.
- Particularly applicable for range trading where retests are deeper and/or HL/LH less pronounced
- TL;DR
  - High that forced LL is significant
  - Low that forced HH is significant

## STRONG SUPPORT



## STRONG RESISTANCE







# Identifying Breaks in Market Structure V

- MSB can be used as an entry trigger when trading at (HTF) structure
- Basic premises:
  - Bearish MSB at resistance for sell setups
  - Bullish MSB at support for buy setups
- Commonly used in multi-time frame trading systems
  - High time frame (Weekly/Daily) structure as an area to do business
  - Low time frame (Hourly/M15 etc.) MSB as the trigger for the trade
  - This time frame logic is often scaled down e.g. M5-M15 MSB at intraday levels etc.
- Much easier said than done!
  - If confirmation in trading were easy/accessible, losing a trade would be very difficult
  - Most participants end up being their own greatest enemies in trying to develop a confirmation-based system
  - Often a trade-off: good confirmation and bad entry versus little/no confirmation and great entry
    - May create a poor habit of only entering a market once it moves (significantly) in your favour
- My preferred approach: 'Previewing' HTF price action
  - Daily market structure at Weekly levels
  - (Or just using daily market structure on its own when the market is between levels and/or for LTF trading)



# Trading Breaks in Market Structure I

- We will focus on 3 setups
  - Continuation from MS level/anchor
  - Continuation from pullback level
  - Reversal
- All 3 are contingent on an MSB forming i.e. occur after HH/LL
- ‘Continuation’ means the trade setup is in the same direction as the MSB while ‘Reversal’ is for trading the other side of an MSB
- Dose of realism
  - Always look for probability enhancers (underlying trend, higher time frames, technical confluence, & whatever else you use/has proven its worth)
  - A lot of the time, trade just doesn’t work!
    - You even can do everything correctly, and still lose money
  - No guarantee you’ll get a setup after MSB, could just full send/full reverse without you
  - Harder parts of setups is sizing, execution, management, choosing targets etc.

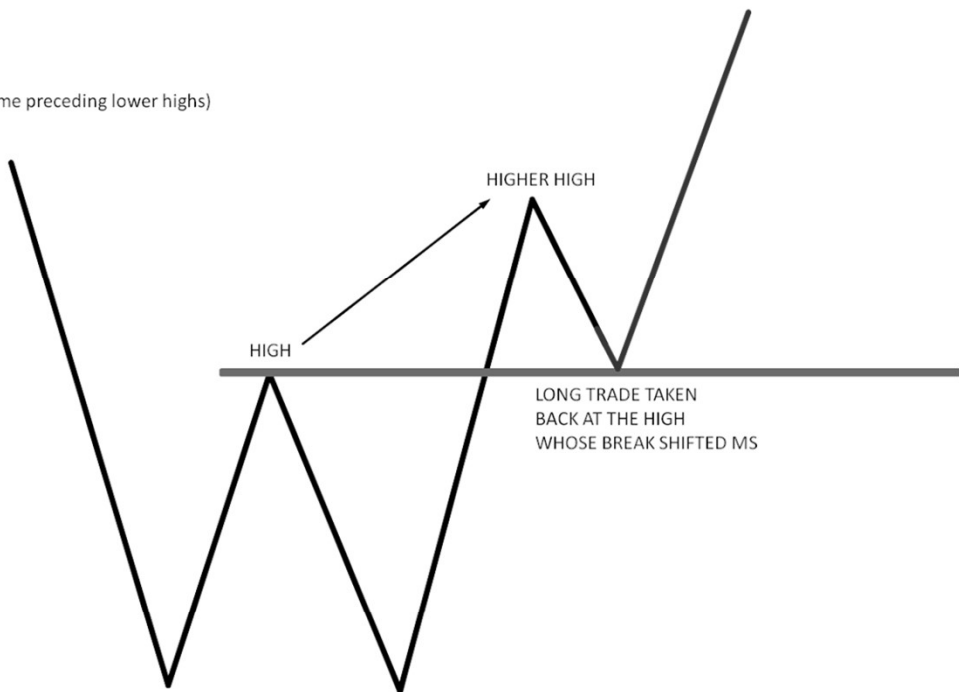


## Trading Breaks in Market Structure II - Continuation from MS Level

- Basic premises:
  - Bullish MSB requires HH. The long trade is taken on a pullback to the broken high.
  - Bearish MSB requires LL. The short trade is taken on a pullback to the broken low.
- This is textbook support/resistance
  - Floor turned ceiling/Ceiling turned floor
- Usual S/R considerations apply
  - Same discussion wrt wicks/bodies
  - General balancing consideration:
    - Using wicks and/or anchors closer to market = more likely to get a fill but entry may be worse
    - Using bodies and/or anchors further from market = less likely to get a fill but entry may be better
- Identify MS → Identify MSB → Trade taken on a retest of Step 1
- Invalidation: Failing to flip the MS level (to support if bullish/to resistance if bearish)

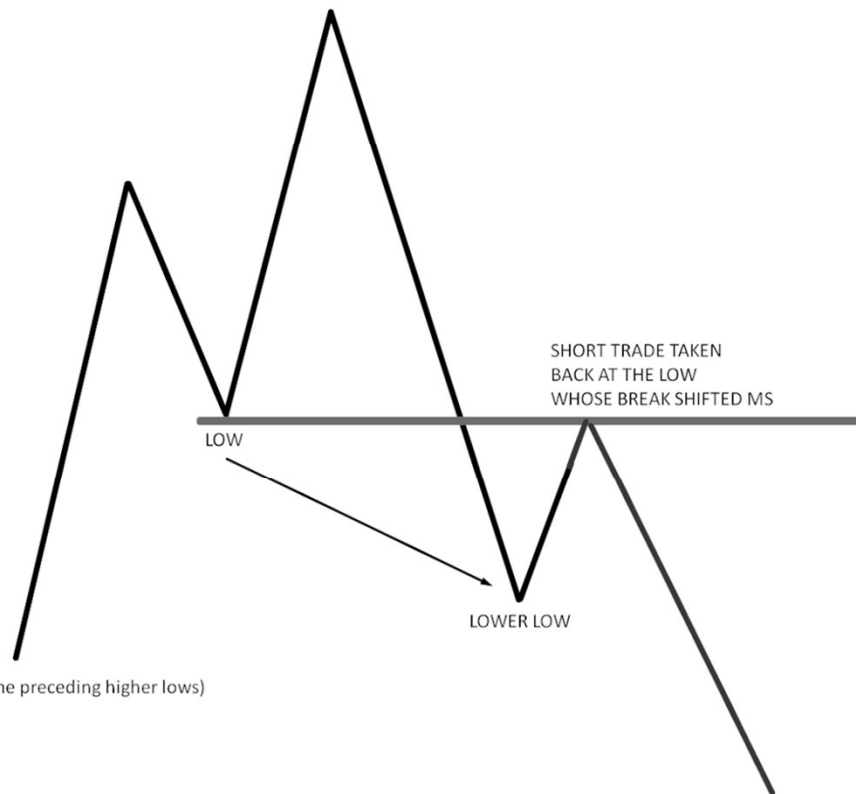
## BULLISH MSB + RETEST

(Assume preceding lower highs)



## BEARISH MSB + RETEST

(Assume preceding higher lows)

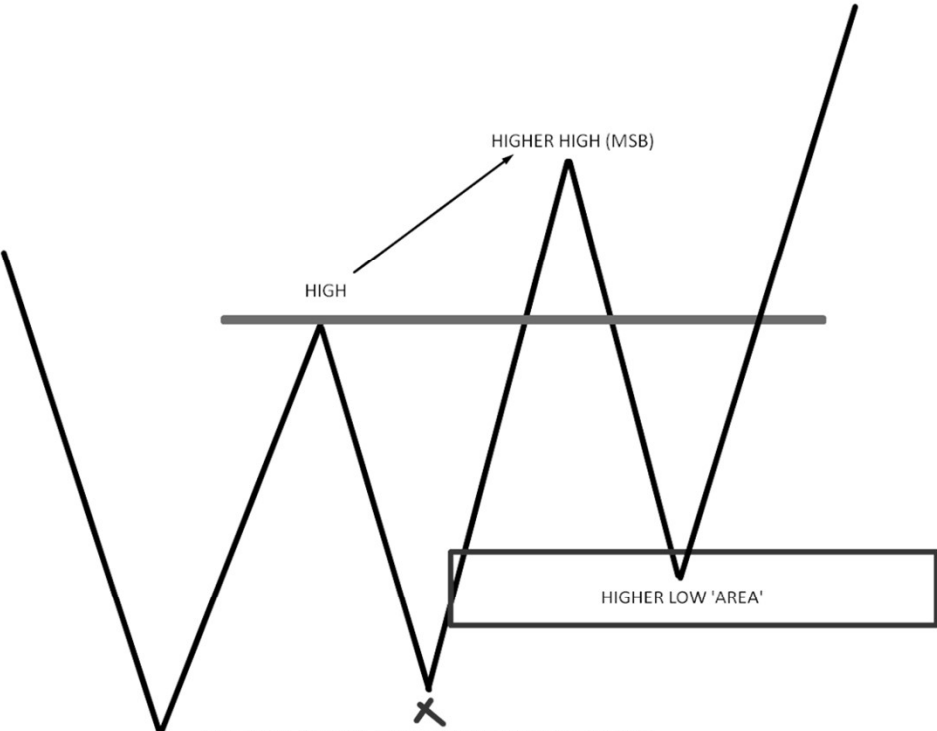




# Trading Breaks in Market Structure III - Continuation from Pullback Level

- Basic premises:
  - (Reminder: Bullish MS predicated on HH and HL/Bearish MS predicated on LH/LL)
  - Bullish MSB requires HH. Continuation trade is taken below the breakout point but above the most recent low.
  - Bearish MSB requires LL. Continuation trade is taken above the breakdown point but below the most recent high.
- A bit less straightforward, but the basic logic is as follows (bullish example):
  - *I've identified a bullish MSB. That's...bullish!*
  - *Bullish MS is predicated on HH and HL.*
  - *The HH portion is complete (by definition) meaning that if the market is indeed bullish, the next dip will form a HL.*
  - *Which area/structure, which isn't the breakout level, is a reasonable candidate for this HL?*
- Price making a HH and not flying straight away isn't bearish *per se*; a pullback is still bullish so long as it forms a HL
  - Very bullish: HH, moon
  - Bullish: HH, retest breakout, moon (Setup 1)
  - Still bullish but deeper pullback: HH, dip below breakout but form HL, moon (Setup 2)
  - Bearish: HH, dip below breakout and break the last low thus forming a LL after HH

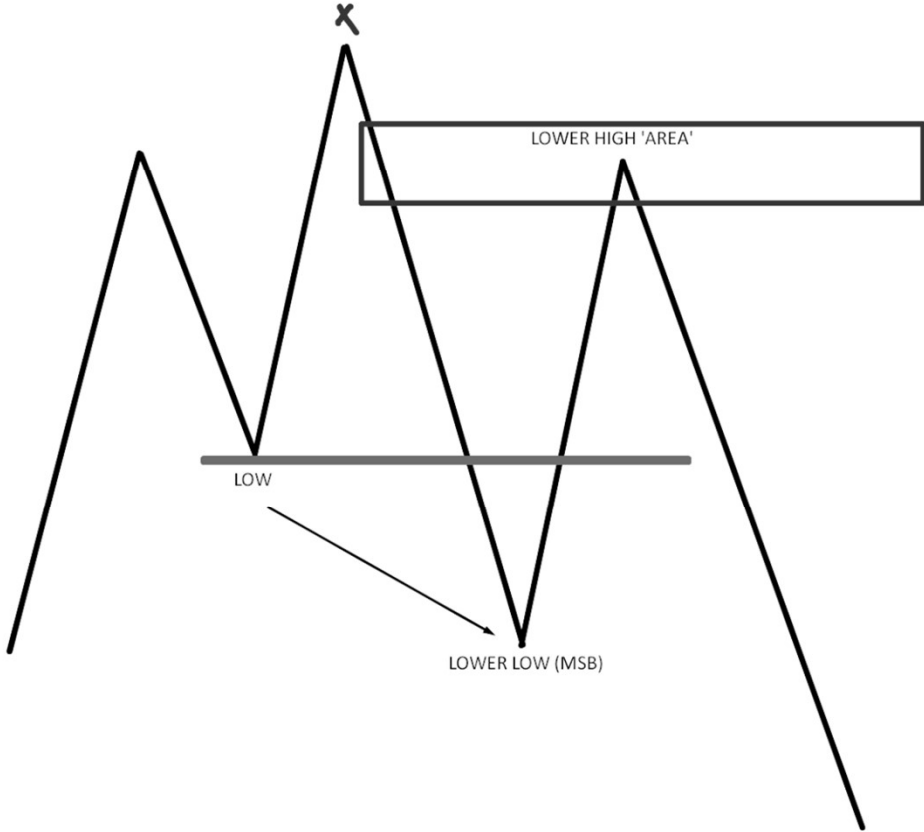
# BULLISH MSB + PULLBACK



IDEA VALID AS LONG AS PREVIOUS LOW ISN'T VIOLATED  
IF IT'S BROKEN, HH/HL STRUCTURE HAS FAILED --> INVALIDATION

# BEARISH MSB + PULLBACK

IDEA VALID AS LONG AS PREVIOUS HIGH ISN'T VIOLATED  
IF IT'S BROKEN, LH/LL STRUCTURE HAS FAILED --> INVALIDATION



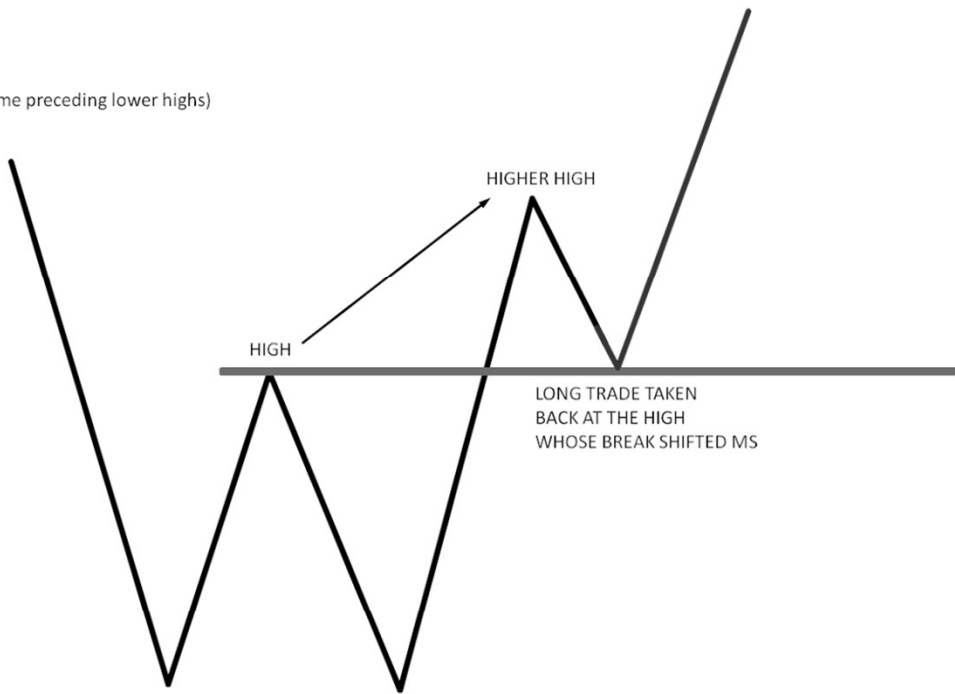


## Trading Breaks in Market Structure IV - Continuation from Pullback Level

- Key event is MSB. Once that takes place, you simply don't know if the market will pull back, and if so, the extent.
- The MSB is an impulsive move. The market may continue the impulse (Setup 1) or retrace the impulse before continuing (Setup 2).
  - Setup 1: Minimal pullback
    - Idea is that the market will use the breakout/breakdown for continuation. This setup is focused on trading the at the MSB i.e. the HH/LL.
  - Setup 2: Meaningful pullback
    - Idea is that the market may need to retrace following an MSB. Go higher before going lower/go lower before going higher. The breakout/breakdown level isn't enough. This setup is focused on trading the move following the MSB i.e. the HL/LH.
  - Both setups are continuation setups!
    - They focus on different legs (impulse versus retracement).
    - The first is more aggressive, the second is less aggressive but often comes with clearer invalidation (and greater R:R).

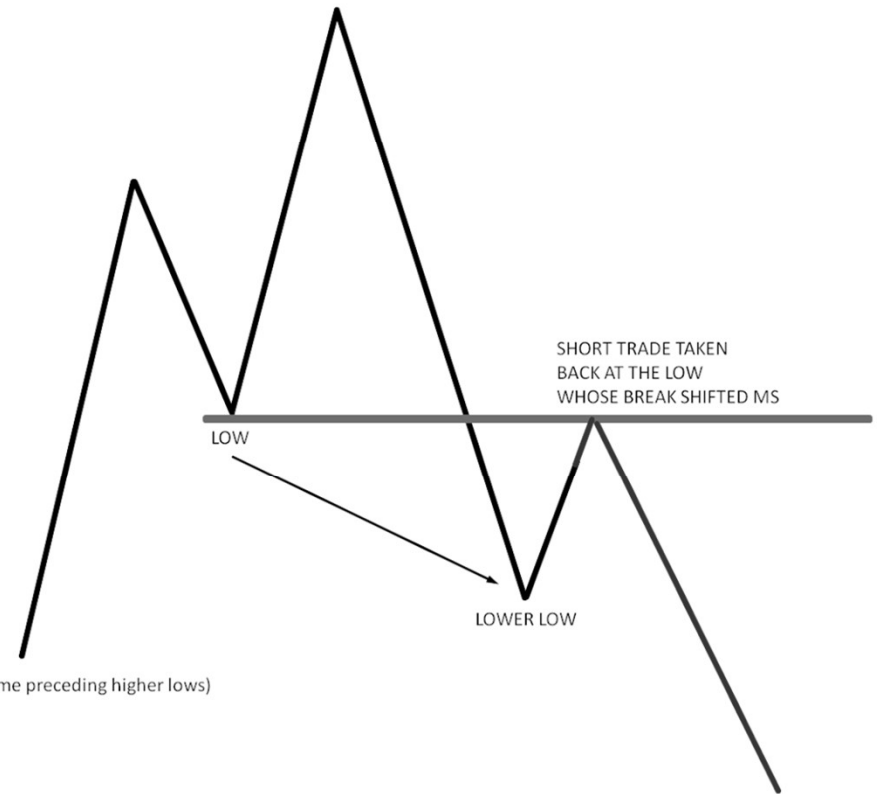
## BULLISH MSB + RETEST

(Assume preceding lower highs)



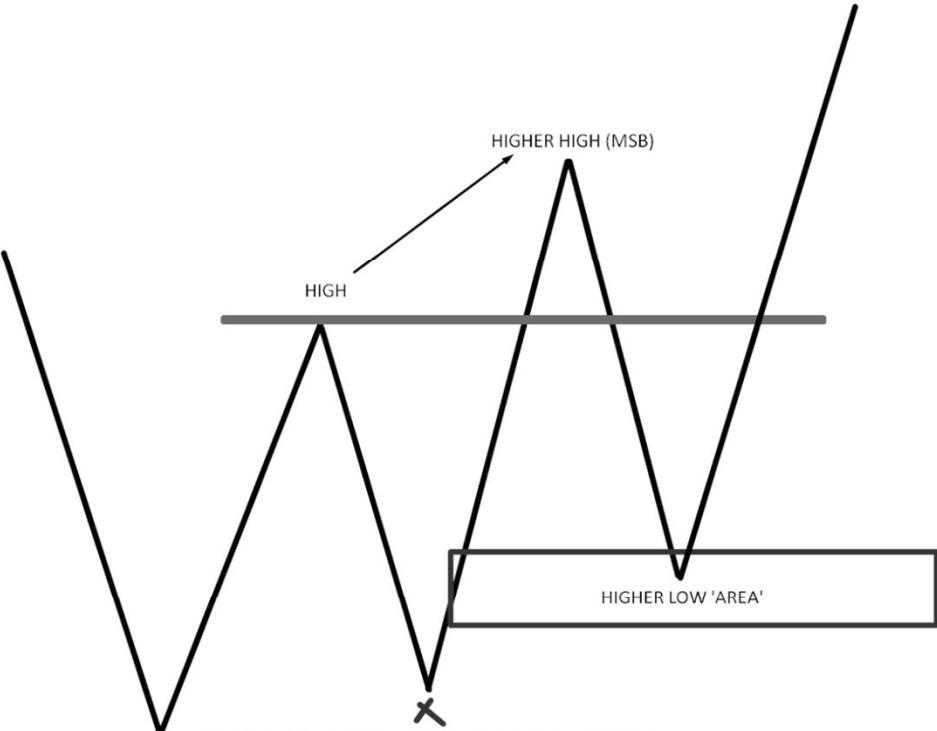
## BEARISH MSB + RETEST

(Assume preceding higher lows)





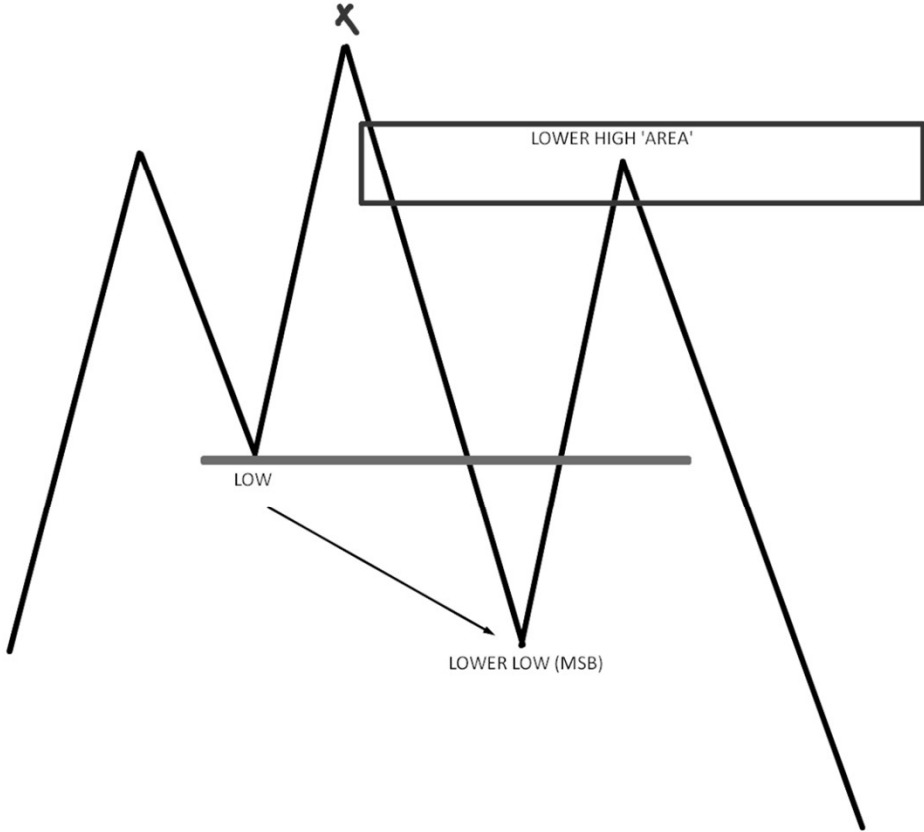
# BULLISH MSB + PULLBACK



IDEA VALID AS LONG AS PREVIOUS LOW ISN'T VIOLATED  
IF IT'S BROKEN, HH/HL STRUCTURE HAS FAILED --> INVALIDATION

# BEARISH MSB + PULLBACK

IDEA VALID AS LONG AS PREVIOUS HIGH ISN'T VIOLATED  
IF IT'S BROKEN, LH/LL STRUCTURE HAS FAILED --> INVALIDATION



LOWER LOW (MSB)



# Trading Breaks in Market Structure V - Continuation from Pullback Level

- Defining the pullback (HL/LH) area
  - Bullish: Anything that is below the breakout level but above the last low is valid
  - Bearish: Anything that is above the breakdown level but below the last high is valid
  - Problem: That's a lot of space! Especially if using HTF market structure.
- Reminder: We are looking for HL/LH 'candidates' in those areas, which means it's a bit of a free-for-all in terms of price action tools
  - Support/resistance structures
  - HTF candle opens
  - Moving averages/moving average clusters
  - Fibonacci retracement levels
  - Personally: I look for S/R structures anywhere between 0.618-0.786 retracement
  - There's no fixed answer!
- R:R consideration
  - The deeper price reaches into the pullback area, the superior the R:R
    - This is because deeper pullback = closer to invalidation
  - Purely mechanically suggests entering as close as possible to the last HL/LH, but this is not always the case
- Invalidation: Lower low (HL has failed)/Higher high (LH has failed)

COINBASE:BTCUSD, 1D 23217.97 ▲ +1858.32 (+8.7%) O:8919.21 H:8927.45 L:8635.31 C:8757.84



COINBASE:BTCUSD, 240 23278.21 ▲ +1918.56 (+8.98%) O:23375.50 H:23750.00 L:22416.50 C:23278.21



COINBASE:ETHUSD, 5 655.15 ▲ +17.17 (+2.69%) O:656.51 H:656.87 L:655.01 C:655.15

Ethereum / U.S. Dollar, 5, COINBASE





# Trading Breaks in Market Structure VI - Reversal

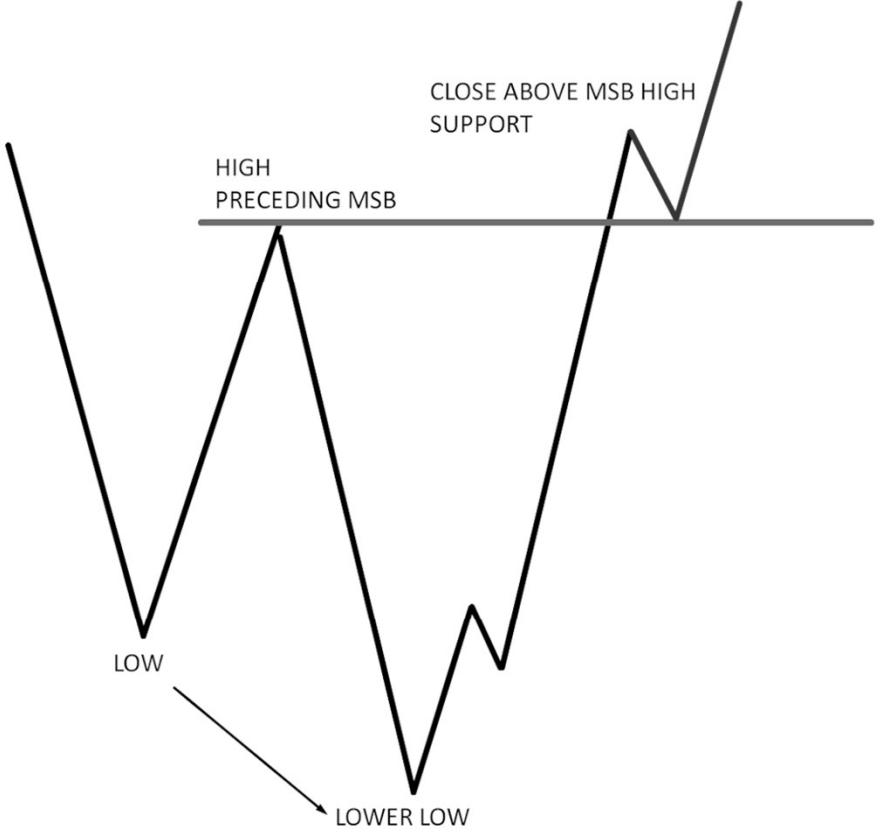
- Preceding setups have focused on taking trades in the direction of an MSB i.e. they're continuation setups
  - Setup 1 focuses on dealing with the impulse at the MSB level
  - Setup 2 focuses on dealing with the retracement away from the MSB level
- Reversal setup focuses on trading in the opposite direction of an MSB
  - Getting long a market when a LH fails to form following a LL
  - Getting short a market when a HL fails to form following a HH
- Good setups that fail are often great setups in the opposite direction
  - We're acting on the invalidation of Setup 2
- Setup logic in colloquial form:
  - HH = Bullish / LL = Bearish
  - Invalidation = LL / Invalidation = HH
  - HH into LL = Bulls offside / LL into HH = Bears offside
  - Bulls offside = Sell setup / Bears offside = Buy setup



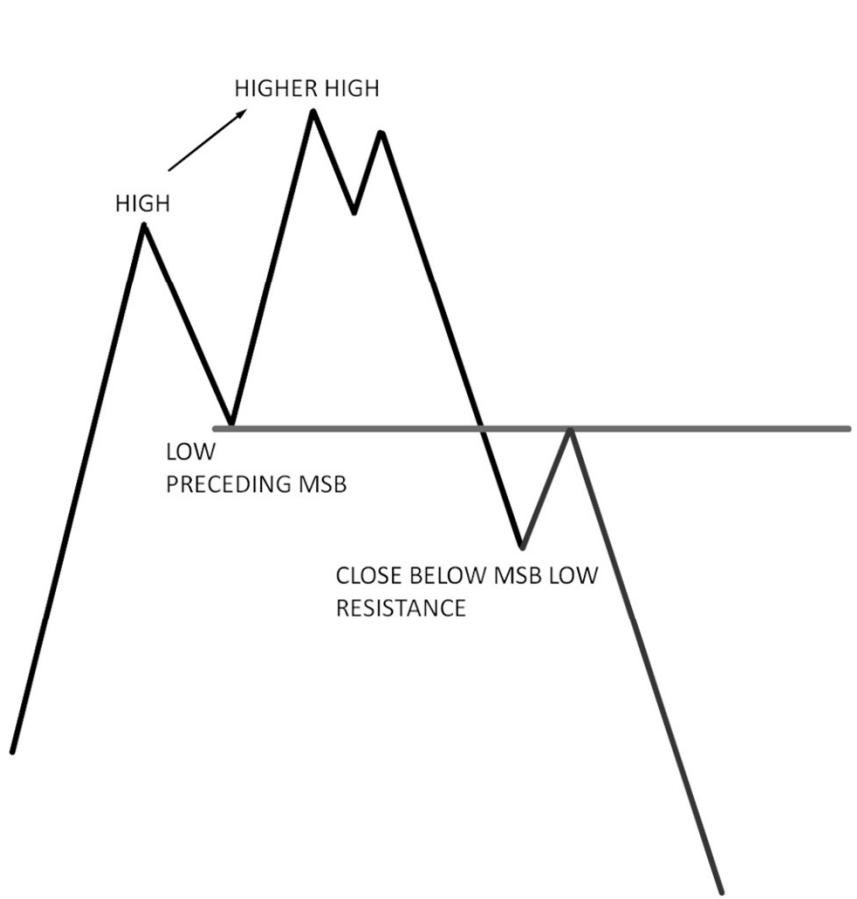
# Trading Breaks in Market Structure VII - Reversal

- Bullish setup requires price to break above a high that preceded a LL.
  - High → LL → HH above the first High
- Bearish setup requires price to break below a low that preceded a HH.
  - Low → HH → LL below the first Low
- If it helps, this can be articulated in S/R terms as discussed previously
  - Bullish: Resistance that forced LL is strong resistance. Price closing above it means strong resistance has failed.
  - Bearish: Support that forced HH is strong support. Price closing below it means strong support has failed.
- The underlying logic is that the MSB failed to offer continuation. Failed continuation is suggestive of reversal (or just chop. but reversal for our purposes)
- Invalidation: Price losing support at MSB high/Price breaking resistance at the MSB low
- This ends up looking identical to Setup 1, just with an MSB in the other direction!

### BULLISH: BEARISH MSB FAILURE



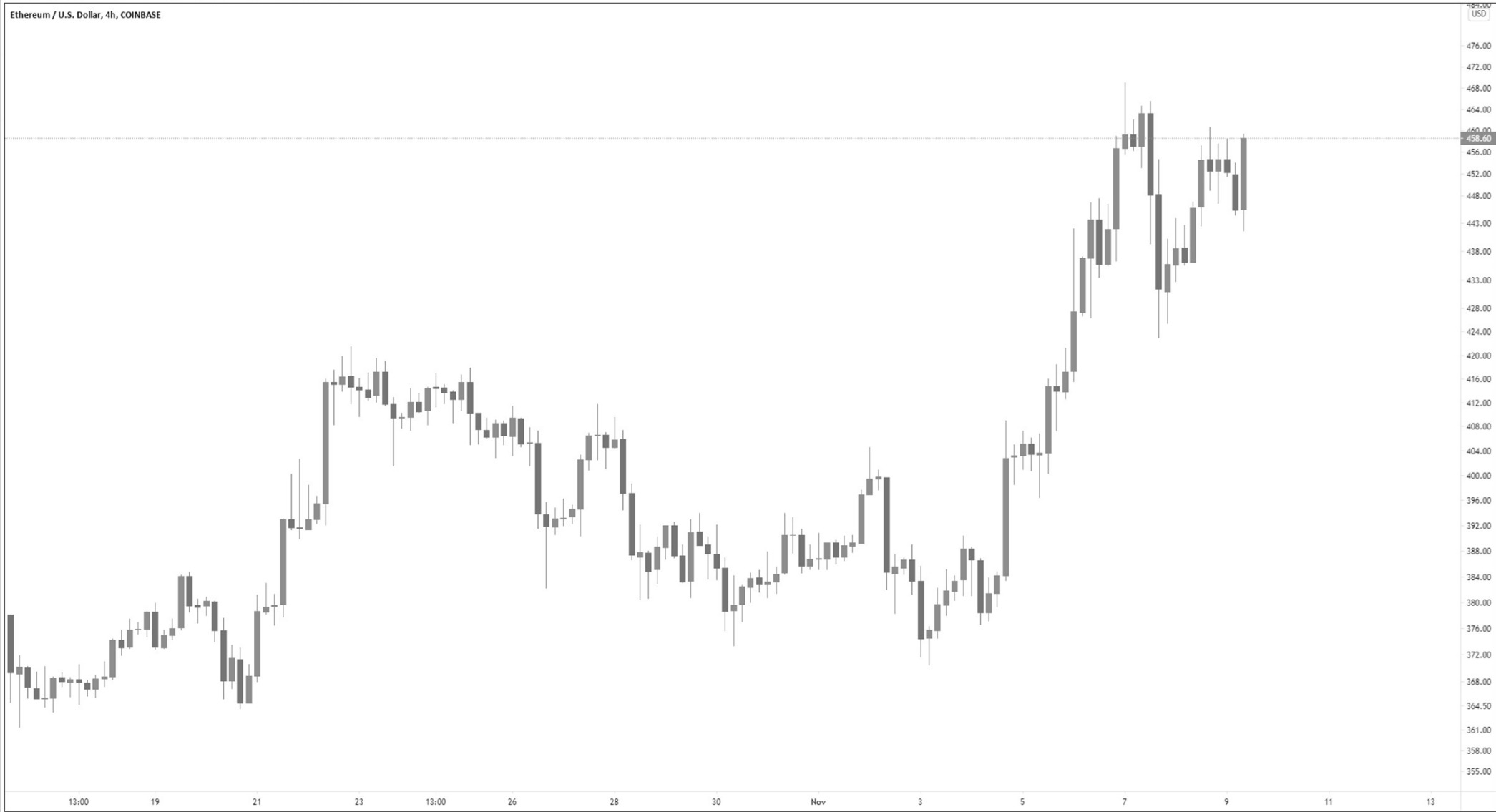
### BEARISH: BULLISH MSB FAILURE





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Ethereum / U.S. Dollar, 4h, COINBASE



COINBASE:ETHUSD, 1D 648.47 ▲ +10.49 (+1.64%) O:378.56 H:384.69 L:372.89 C:379.36

Ethereum / U.S. Dollar, 1D, COINBASE



BINANCE:SNXUSDT, 1D 5.244 ▼ -0.032 (-0.61%) O:5.271 H:5.600 L:5.046 C:5.244





# Nuances I - Time Frames and Reasonable Expectations

- You should generally expect the time frame of the MSB to have a significant bearing on the size of the move that follows i.e. manage your expectations
  - Don't expect the world to end over an intraday MSB, but at the same time don't expect a weekly MSB to fizzle out after a couple of days
  - Bigger and longer moves from larger breaks, smaller and shorter moves from smaller breaks
    - Possible exception: LTF MSB trigger at HTF structure
- Lower time frame MSB does not cancel a HTF dominant trend
  - E.g. selling every single M15 lower low in a strong high time frame uptrend
    - Stepping in front of a moving train with a plastic straw
  - Always consider the context e.g. LTF bearish MSB in HTF bull trend is a dip buy opportunity



## Nuances II - Market Structure in a Range

- MS ends up being a good tool used for the wrong job when applied without the appropriate context
- In less volatile conditions, less obvious/shorter-term MSB can be pure noise
  - Sometimes chop is chop, and that's all it is for most participants
  - Insignificant for majority of participants will mean low quality opportunities
- Best practice is to focus on MSB at the extremities of the range rather than chasing every HH/LL at the range midpoint
  - Bearish MSB at the top of the range
  - Bullish MSB at the bottom of the range
  - Not trying to force your view on a market at midrange
- MS is an incredibly versatile tool in many conditions and across virtually every time frame, but that doesn't mean we have to avoid optimising its use!



## Nuances III - Failure to Continue

- One of the key benefits of MS is that it gives a lot of weight to recency
- This can provide early hints of trend reversal or a slowdown more generally
- Be cognisant of shifts in behaviour when a dominant trend (or MS) is intact
  - Bullish example: Clear lower highs and lower lows starting to form equal/higher lows
  - Bearish example: Clear higher highs and higher lows starting to form equal/lower highs
- MSB remains the clearer and more actionable shift in behaviour, but these finer details are worth being aware of to avoid oversizing towards the end of a trend and/or to put reversal on the radar
- Sometimes waiting for a HH/LL before shifting bias is too late and can create an uncomfortable exit, hence the benefit of having some 'early warning' system
  - When/if you read that something is 'bottoming out/topping out', this type of shift in behaviour is what to look out for