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Kristjan Kullamägi Breakout Strategy – Backed by Data



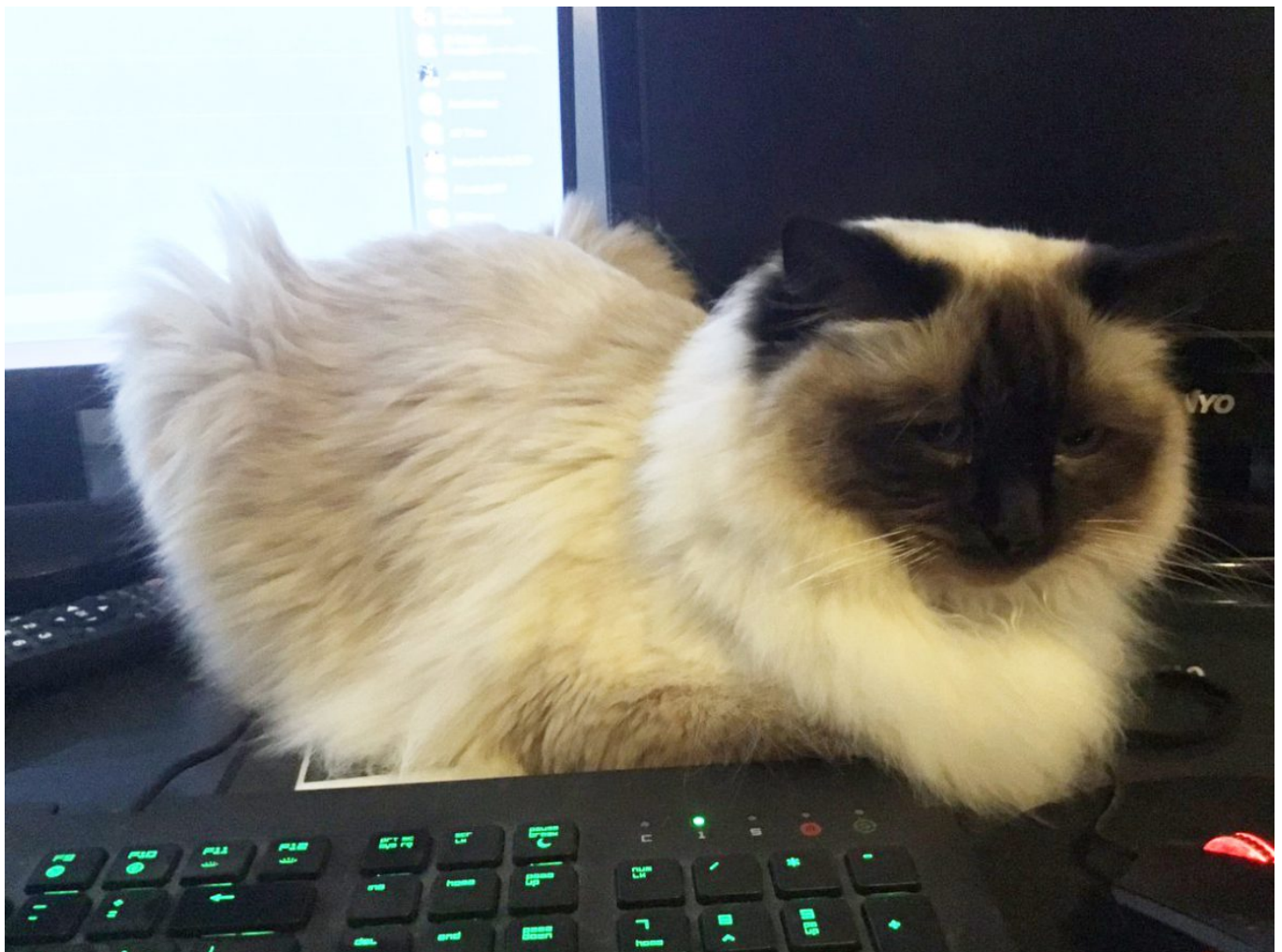
Niv Goren

May 25, 2022 · 2 minute read · 23 comments

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For those who don't know him, Kristjan Kullamägi is a Swedish super trader who was kind enough to share all of his trading secrets. Picking

up the pieces across all medias, I developed a strategy with black & white rules that aims to duplicate his results.

Update: a new version of the strategy that should be more close to the origin can be found [here](#)

The data

I used data of all stocks in the US stock market since 2007 from Polygon, with no survivorship bias.

The strategy

I used almost all the rules he published online, with the exceptions of rules I found not really adding anything and rules I found myself that were critical to the success of the system.

The rules are:

- For each stock in the US stock market, wait for a pivot breakout and buy next open. A pivot is defined as a candle with 3 highs that are lower than his on his right and on his left.

Example of a pivot:

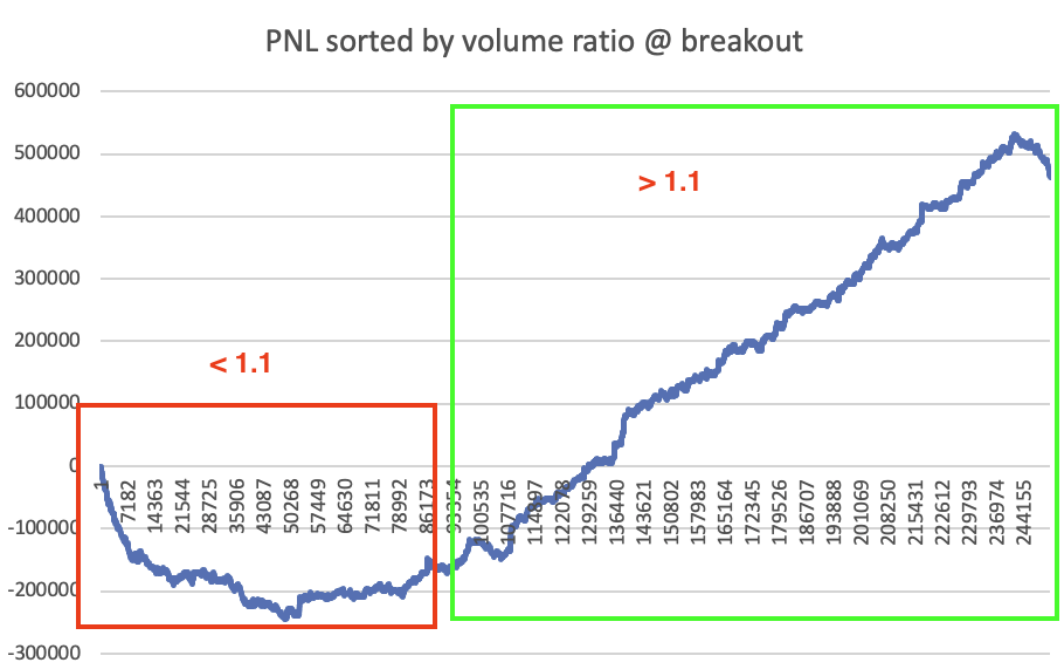


So a pivot breakout would be something like the following:



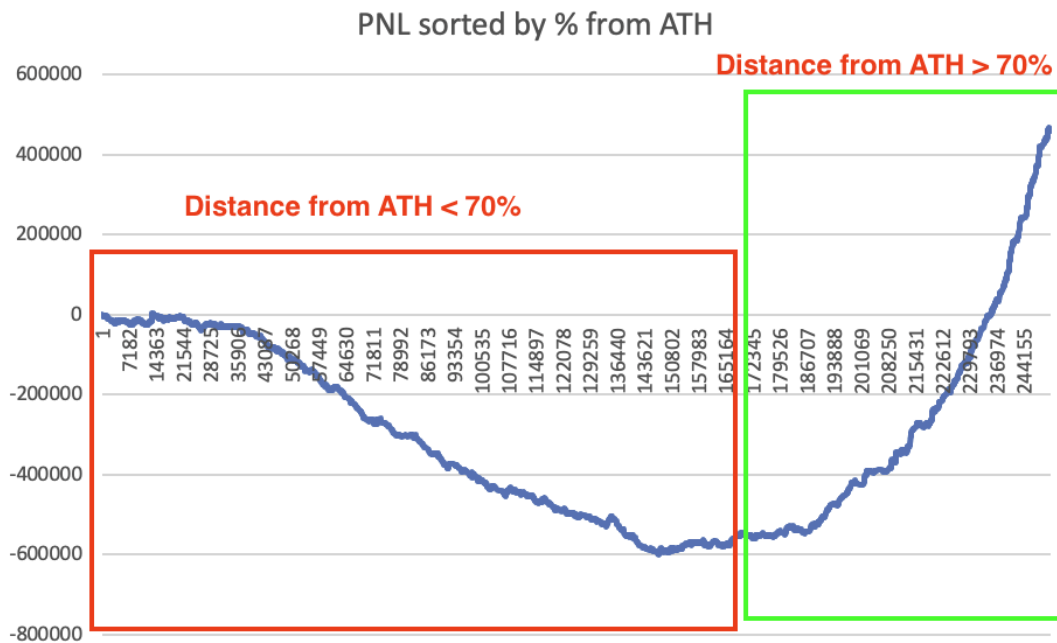
- The stock must be above it's 50 EMA

- SPY must be above it's 50 EMA (important for winning rate)
- Initial stop below the minimum of the last 3 candles low's.
- Trailing stop below latest pivot low.
- $ADR(20) > 5$
- Higher than average volume. Defined as: $\text{volume @ breakout} / \text{average 30 days volume} > 1.1$ (10% above recent average on breakout day).



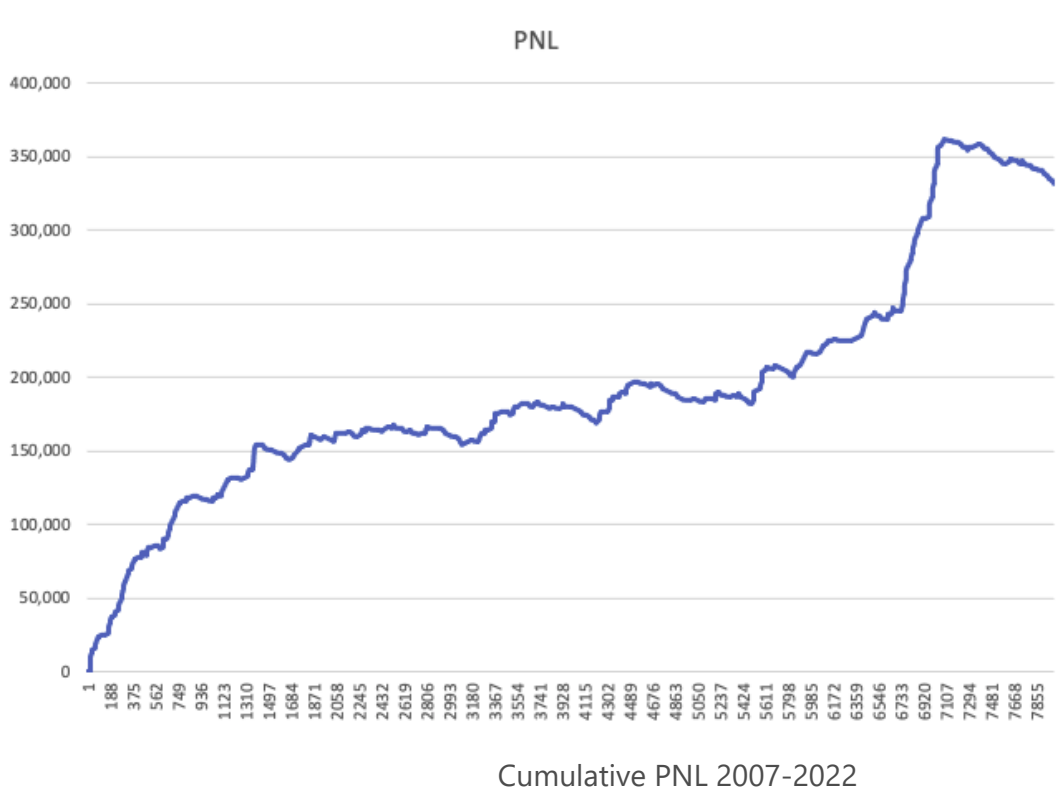
PNL sorted by volume ratio. The higher the volume on breakout day – the better

- The stock should fall at least 70% from All Times High before the breakout. This rule is hinted on one of his podcasts, but you can see here how critical it is:



PNL sorted by percentage decrease from All Times High. If the breakout is far away from ATH the strategy works well.

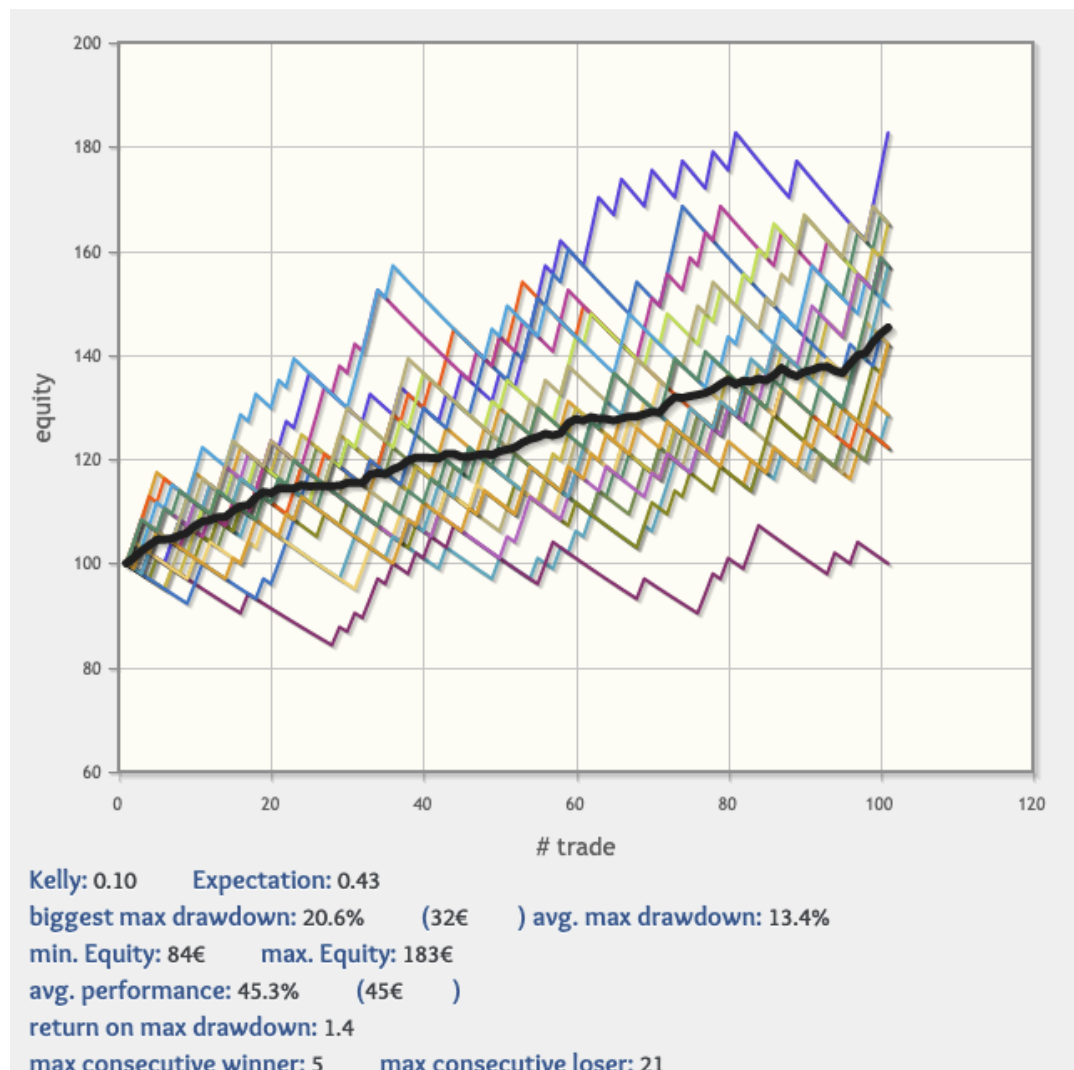
The results



If you started with \$10k and risked \$100 per trade, you would end up with \$338k by April 2022. The success rate is 28% which is typical for a

trend following system, while the return is high – 1:4.1 risk reward. Note that the strategy was losing for the past few months, together with the whole market.

Running a random walk simulation on this stats, it is possible to loss 20 time in a row and have a 25% drawdown at some point, assuming 1% risk per trade. The average 100 trades performance would be around 50%.



Random walk simulation

Trade examples

CRIS

Entry @ 2020/11/12 on open. Exit @ 2021/02/23 below pivot.



TTI

Entry @ 2020/11/10 on open. Exit @ 2021/04/08 below pivot.



Rules that were left out

A few rules were left out because they didn't really add anything to the results.

1. Focusing on 1-2% of the top performing stocks. Didn't really improved the results (but did made my computer's fans go crazy the whole night backtesting it).
2. Higher lows before the break out – couldn't make it work properly so left it out.
3. 30-90% increase before the breakout – didn't really improve the results.
4. Tight range before the breakout – didn't really improve the results. measured as $ADR(4) / ADR(20)$

1

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23 COMMENTS

**Daniel** says:

May 25, 2022 at 7:04 pm

Hi Niv, thanks for the article!

Which website did you use for the random walk simulation?

Thanks!

Reply**Niv Goren**  says:

May 26, 2022 at 11:35 am

Here you go:

<http://www.equitycurvesimulator.com/>

Reply



Mick says:

May 25, 2022 at 8:47 pm

Fascinating. Great work Niv. I am going to do a deep dive. Can you recommend a program that can identify the pivots on the chart

Reply



Patrick Evan says:

May 25, 2022 at 8:48 pm

Ty – great work putting this together !

Reply



Nicolas says:

May 25, 2022 at 11:50 pm

This is awesome Niv, thanks for this article. I wanted to ask you if there's a way to create a scanner for this setup for TOS platform.

Reply



Niv Goren  says:

May 26, 2022 at 11:34 am

Thinking about sending signals via telegram bot

Reply



Dudu says:

May 26, 2022 at 4:34 am

Thanks for sharing Niv, impressive results.

what setup are using to run this ? is it local?

im thinking of running this with quantconnect but believe this will be too heavy on their universe scanner...

Reply



Niv Goren says:

May 26, 2022 at 11:34 am

Yea it's local. Data from polygon and running on local mysql server.

Reply



Milagros says:

May 26, 2022 at 10:31 am

Great work. So we'll broken down and completed explained correctly.

Reply



Rob says:

May 26, 2022 at 3:52 pm

very interesting

Reply



Ahmad Zeeshan says:

May 26, 2022 at 6:09 pm

Hi Niv,

Thanks for the impressive observations. For pivot point, the 3 candles before should form with higher highs and higher lows or just the close for these 3 candles be higher than the previous ones?

Reply

Niv Goren says:



May 28, 2022 at 11:37 am

3 highs that are lower from the high of the candle in the middle of both side – with no particular order

Reply



Ahmad Zeeshan says:

May 28, 2022 at 9:56 pm

Thanks Niv, Appreciate your prompt response.

Reply



Ahmad Zeeshan says:

May 28, 2022 at 9:56 pm

Thanks Niv, Appreciate your prompt response.

Reply



Nils says:

June 12, 2022 at 8:12 pm

Thank you for sharing this, Niv. Excellent work. Couple of questions:

1. Over what time frame are you doing your back testing?
2. Could you please clarify what the X and Y axes are in the charts?

Reply



Dempsey says:

June 16, 2022 at 7:29 am

Thanks for sharing.

Question: how relevant is $ADR(20) > 5$? Assuming this is Average Daily Range, \$5 seems to be an arbitrary value, since some stocks may have an ADR somewhere between \$20-\$200 a day.

Is this, effectively, just trying to filter out small cap stocks?

Reply



Niv Goren  says:

June 27, 2022 at 8:24 am

Its not \$5 it's 5%. This filter improved the results.

Reply



Mikhail says:

June 16, 2022 at 12:53 pm

Niv

If there are multiple stocks matching the criteria – you open a position in all of them?

Reply



Niv Goren  says:

June 27, 2022 at 8:25 am

it picks 2 random trades per day, not much sophistications there – just a skeleton.

Reply



Patrik says:

June 30, 2022 at 7:50 pm

Thanks for sharing your work, I really appreciate! 😊 Could you link the podcast where he was talking about the distance from ATH?

Reply



Niv Goren  says:

July 7, 2022 at 6:23 am

Hi Patrik, I think it was Chat with traders but not sure

Reply

**Ahmad Zeeshan** says:

July 1, 2022 at 5:28 pm

Hi Niv,

In the chart examples above, the exit is below pivot. What does it mean? Is it again a pivot candle but in the opposite direction? i.e. low of the middle candle lower than lows of 3 candles on its left and right? Also, was it part of the exit rules? Was it part of your testing or Kullamägi mentioned it somewhere?

Would really appreciate your response.

Reply

**Niv Goren**  says:

July 7, 2022 at 6:22 am

Right. It wasn't part of his trailing stop method, I think he use either 10MA or 20MA for trailing. All three methods are more of the same.

Reply

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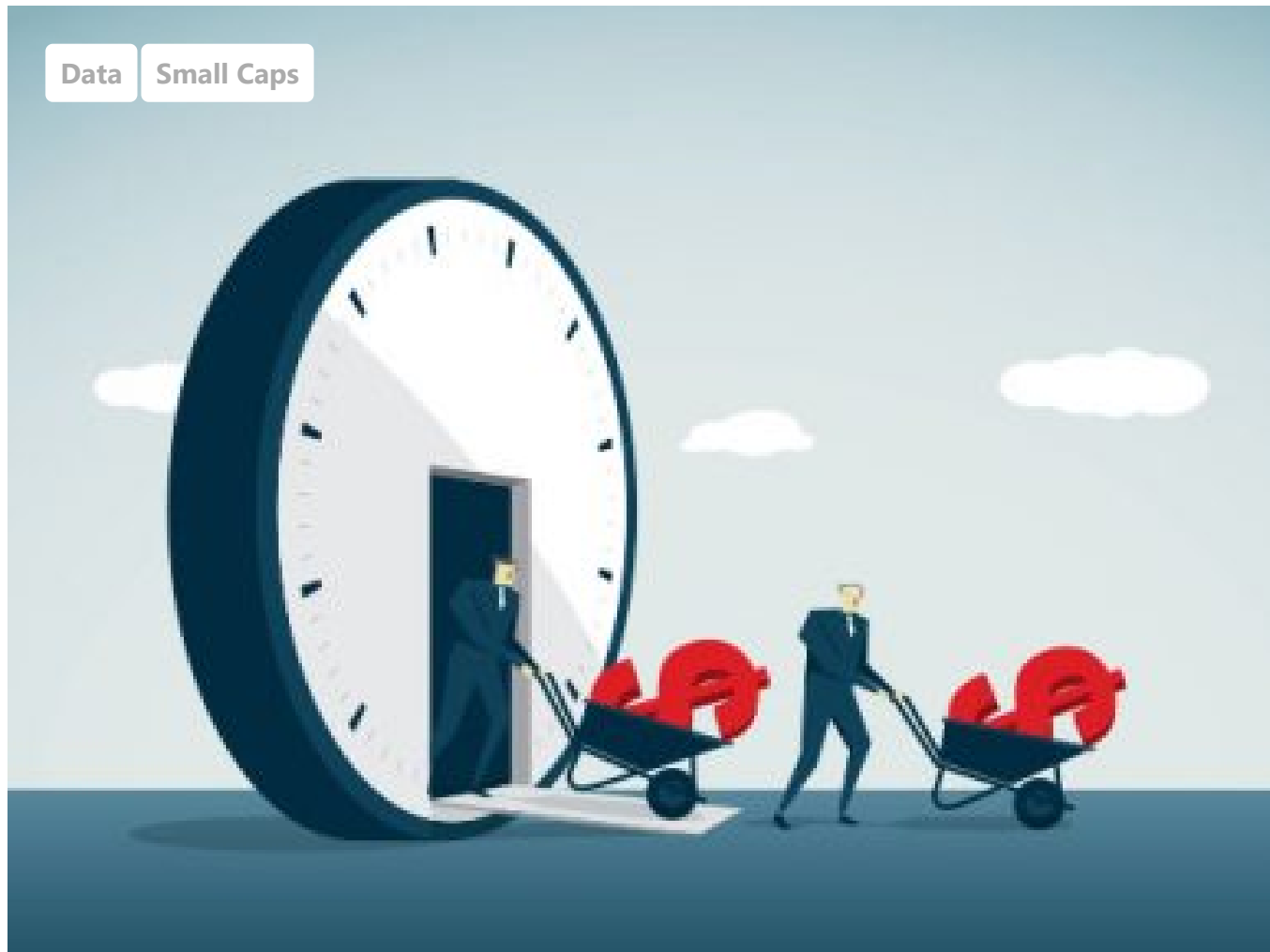


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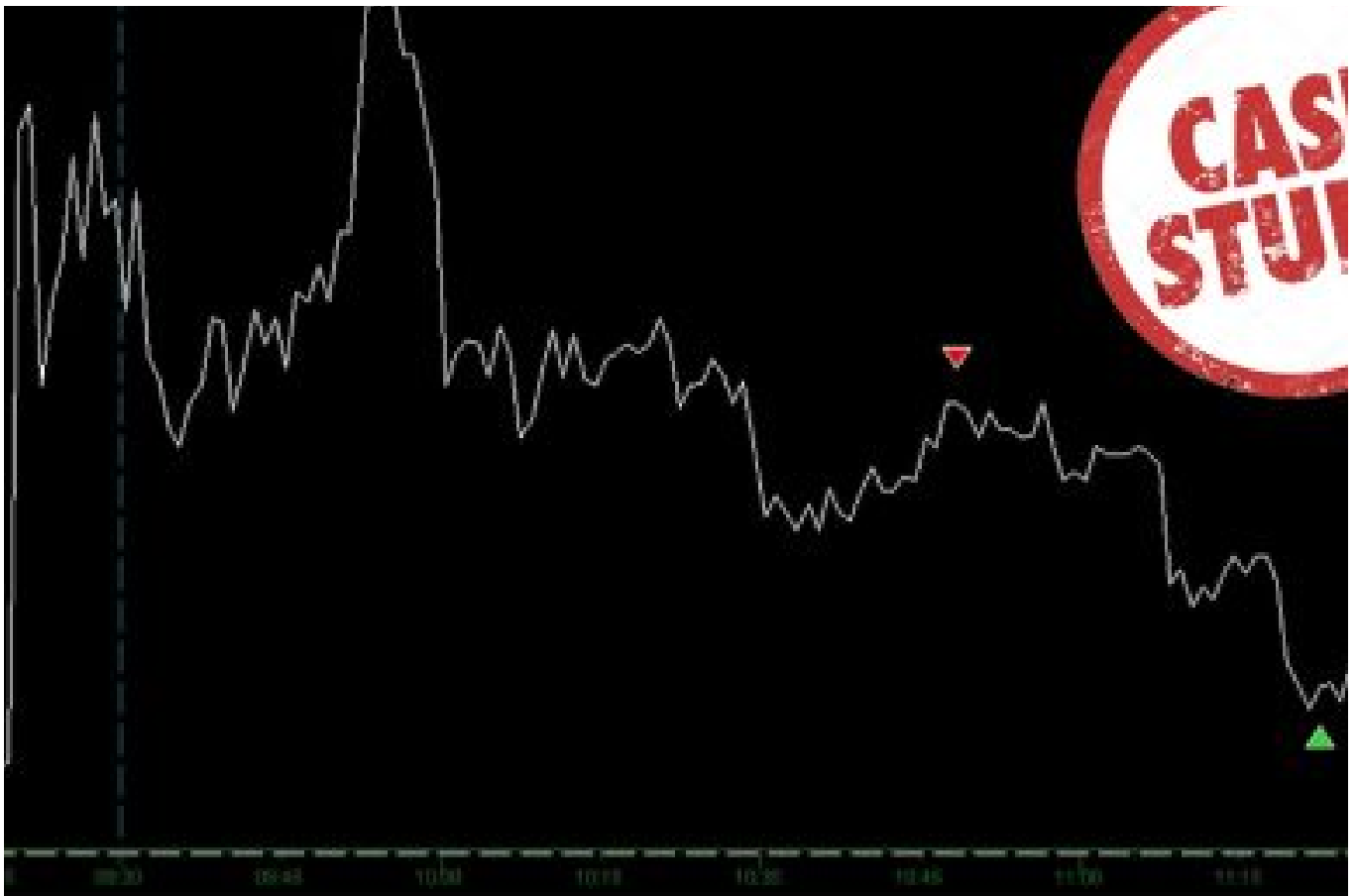
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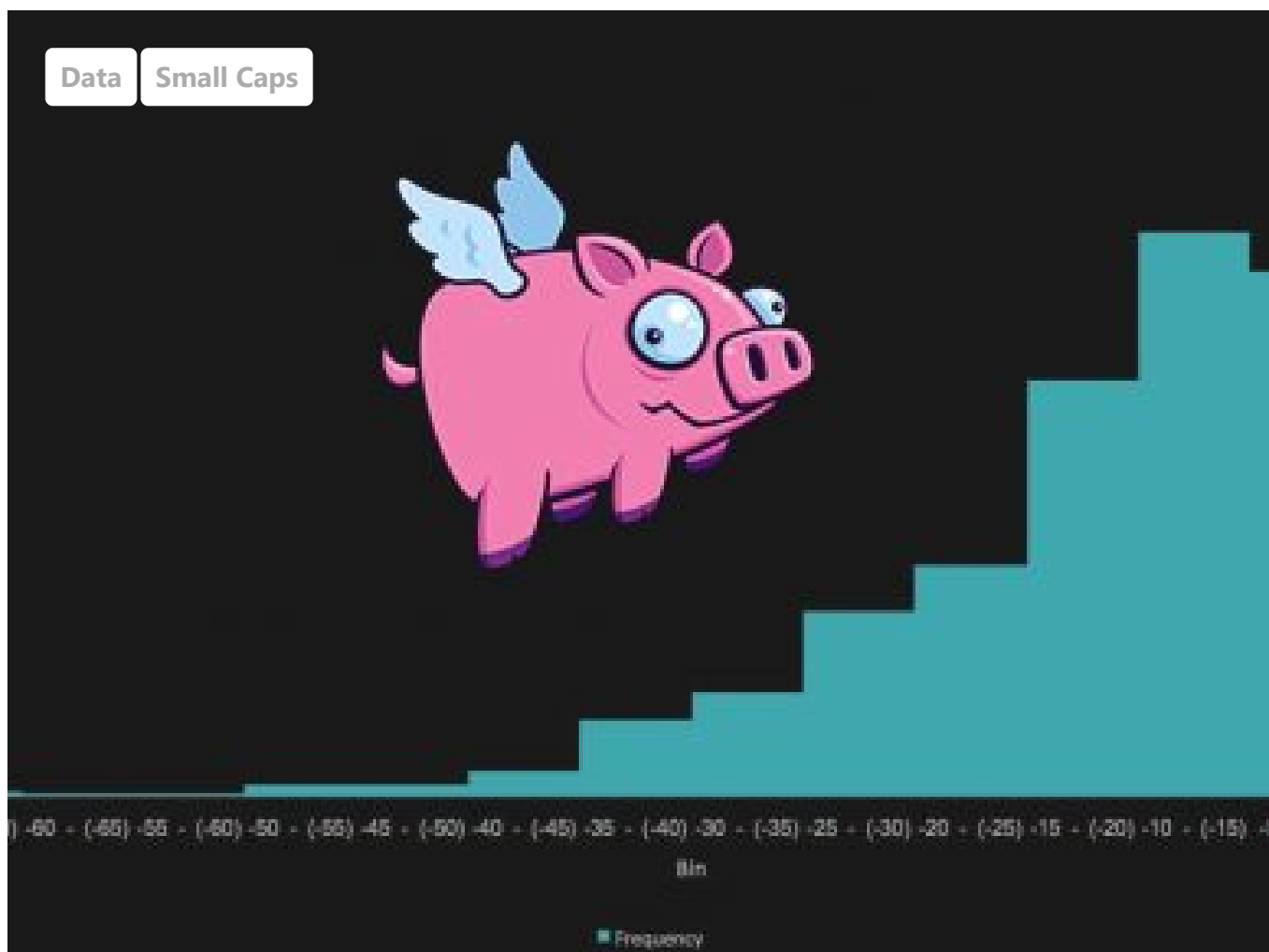


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Kristjan Kullamägi Breakout Strategy – Take II

 **Niv Goren** — July 19, 2022

After many comments and improvement suggestions from Kristjan's community, I backtested rules to his strategy that are more faithful to the origin within the limits of the backtest capabilities. Entry...

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