HURST'S NOMINAL MODEL

TradFi:

YEARS	MONTHS	WEEKS	TRADING DAYS	FILTER (OFFSET)	FLD (OFFSET)
18	216	936	4680	1170 (-585)	1170 (1755)
9	108	468	2340	585 (-293)	585 (878)
	54	234	1170	293 (-146)	293 (438)
	18	78	390	98 (-49)	98 (146)
		40	200	50 (-25)	50 (75)
		20	100	25 (-13)	25 (38)
			57	14 (-7)	14 (21)
			29	7 (-4)	7 (11)
			14	4 (-2)	4 (6)
			7	2 (-1)	2 (3)

Hurst identified 10 dominant cycles in all markets in his original work. Not all of these are going to be important on all markets. Each market has 3 or 4 dominant cycle that explain most of their price action. As an example, the stock market has a dominant 54 month, 18 month, and 20 week cycle. These three cycles combined explain most of the price action you see on stock indices.

All filters and FLDs in the table above are based on trading days.

Crypto:

YEARS	MONTHS	WEEKS	CALENDAR DAYS	FILTER (OFFSET)	FLD (OFFSET)
4	48	208	1456	364 (-182)	364 (546)
	16	69	480	120 (-60)	120 (180)
		34	240	40 (-20)	40 (60)
			80	20 (-10)	20 (30)
			20	10 (-5)	10 (5)

There are 4 dominant cycles that I've identified on crypto markets. They differ somewhat from Hurst's nominal model, which is to be expected given crypto's short trading history. As an example, Hurst's 54 month cycle appears as a 48 month cycle – exactly 4 years – on crypto markets.

All filters and FLDs in the table above are based on calendar days, as crypto markets are open 24/7.

COMMON CYCLE PATTERNS

## Higher highs and higher lows.
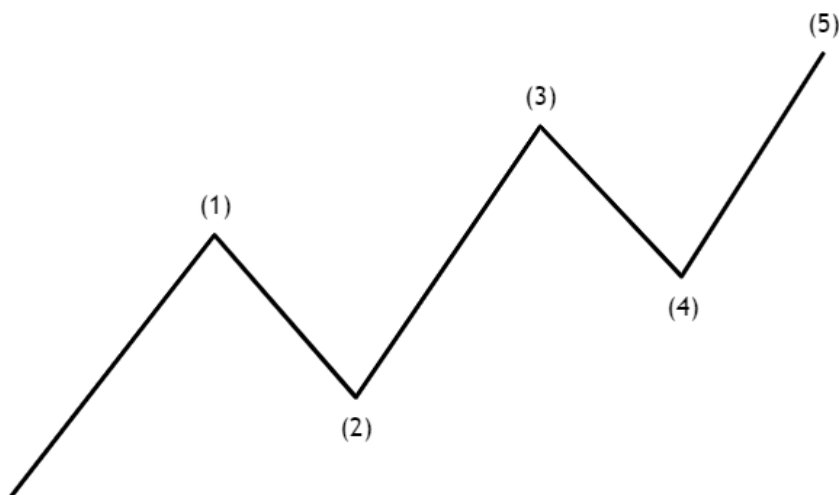
The definition of a bull market for a cycles analyst is a price pattern of higher highs and higher lows on a dominant cycle, such as Bitcoin's 80-day cycle. In the image, cycle low (4) is higher than cycle low (2). Higher lows.

Likewise, cycle high (3) is higher than cycle high (1).

This is a classic bull market pattern.

You can see this pattern take place on Bitcoin's chart during all of 2023 and the first half of 2024.

Lower highs and lower lows.
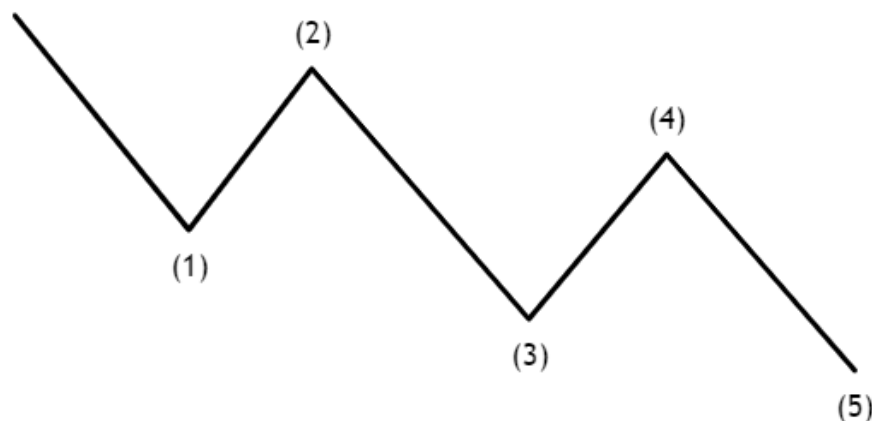
A bear market is when a market is making lower highs and lower lows on a dominant cycle. In this image, cycle low (3) is lower than cycle low (1). Lower lows.

Likewise, cycle high (4) is lower than cycle high (2).

This is the textbook definition of a bear market.

This was the pattern traced out by 80-day cycles during the 2022 crypto bear market.

Neutral Cycles.
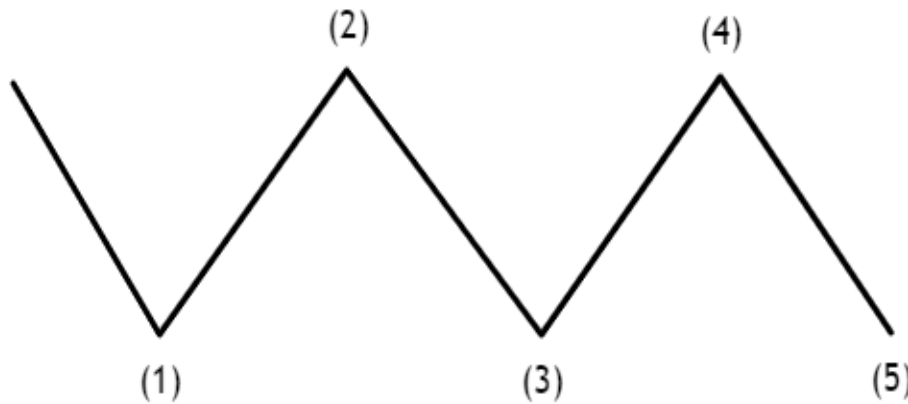
While more unusual than the other two, the market sometimes makes 'neutral' cycles. This is when the highs take place around the same price, and so do the lows.

In this image, cycle lows (1), (3), and (5) all take place around the same level. Ditto for cycle highs (2) and (4). This is a rangebound, or "neutral" market.

You can see this chart pattern play out between April and September of 2023, on Bitcoin.

# CYCLE MODEL INDICATORS

Future Lines of Demarcation (FLD)

An FLD is a moving average that projects a cycle into the future by mirroring its expected movement. To calculate an FLD, we take the nominal cycle duration, divide by 4 to get the filter duration, and project the line forward by 1.5 the filter duration.

For example, the 80-day cycle FLD is calculated by taking the 80-day cycle duration and dividing by 4: 80/4=20. The moving average is set to 20.

The displacement is 1.5 times the moving average duration: 1.5*20=30.

So, the 80-day cycle FLD is a 20-day moving average, displaced forward by 30 days!

Since FLDs are mirror images of a cycle, a top on an FLD represents a future likely low in the price action, such as the image shown below:
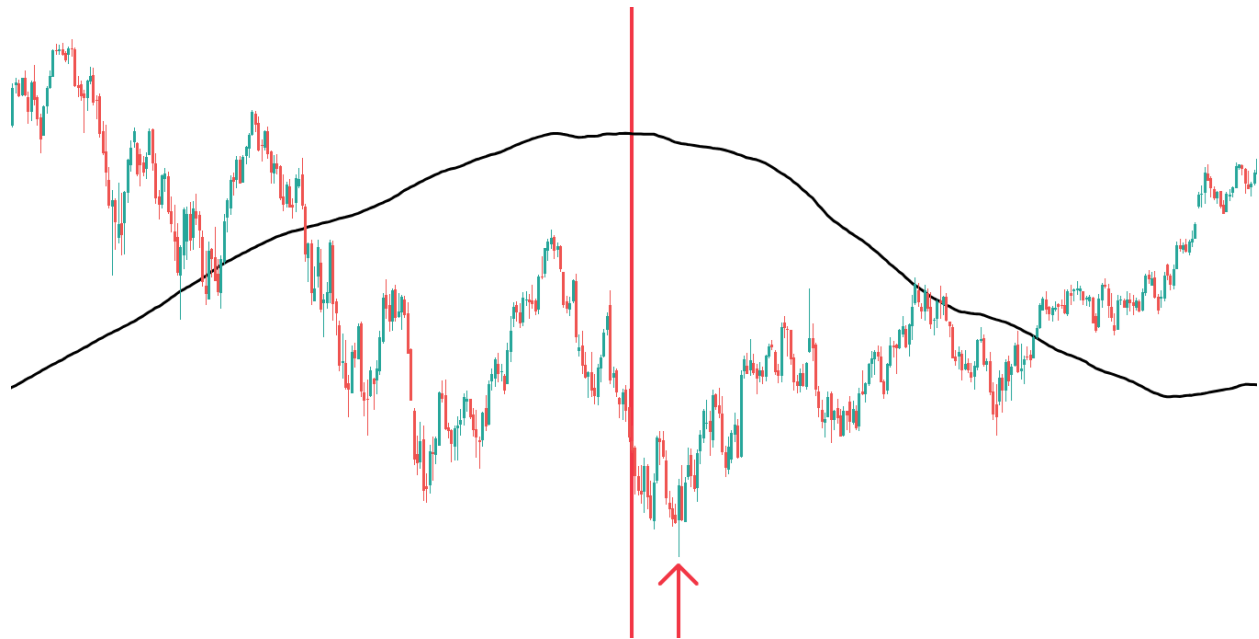

Above is the S&P500 during 2022. The black line is the 18-month cycle FLD. The red vertical line is the FLD projection for an 18-month cycle low (a high on the FLD). The red vertical arrow shows when the actual low took place. They are remarkably close!

Another useful technique for FLDs is identifying cycle turning points, these take place when prices cross "both sides" of an FLD, such as the image below, highlighting the 80-day cycle FLD on Bitcoin:
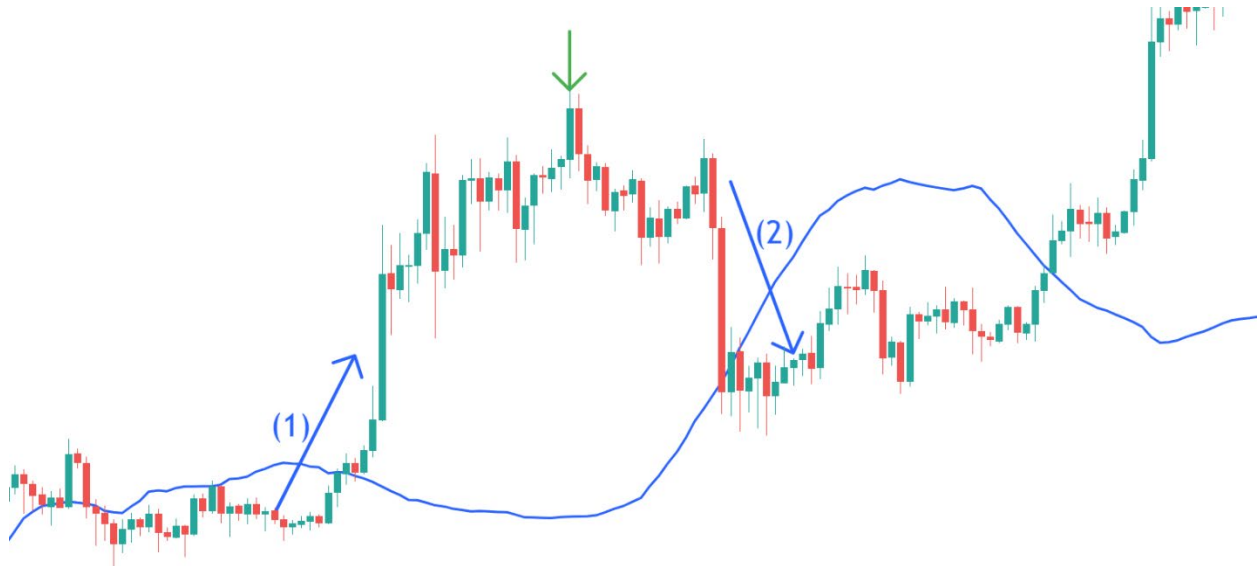
Arrow (1) is when prices cross above the Bitcoin's 80-day FLD, prices cross back below on arrow (2). The highest price between these two crossovers is highlighted with a green arrow. This is an 80-day cycle top on Bitcoin.

The same thing can be done to identify lows:
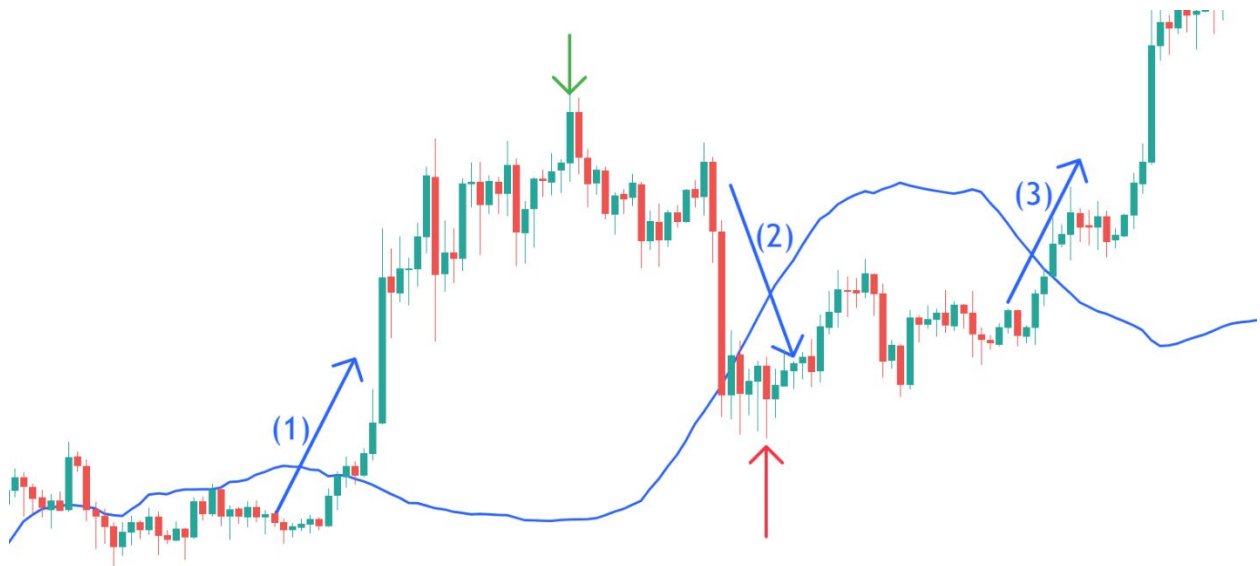
On arrow (2), prices cross below the 80-day FLD. On arrow (3), they cross back above. The lowest price between these two crosses is an 80-day-cycle low, highlighted with the red arrow. Did you notice how close the high and the low are to FLD projections?

Valid Trendlines (VTL)

A "Valid Trendline" or VTL is a line drawn between to consecutive cycle highs ('High' VTL) or two consecutive cycle lows ('Low' VTL).

VTLs are one of the most powerful tools available to you, and they are easy to use. Technically speaking, when prices cross ABOVE a HIGH VTL, the low left behind is a low of a higher degree cycle:

In this example (Ethereum, 2023) highs (2) and (4) are both 80-day cycle tops. Connecting them allows us to draw the 80-day High VTL.

The orange arrow points to the day when prices moved above the high VTL. This crossover means that low (5) – highlighted by the red arrow – is a "low of a higher degree" than the VTL. Since this is an 80-day VTL, and the next degree cycle is the 240-day cycle, low (5) is also a 240-day cycle low.

Here's the same chart, but this time we're looking at the 80-day cycle low VTL:

In this chart, lows (1) and (3) are both 80-day cycle lows. Connecting them allows us to draw the 80-day Low VTL. The orange arrow points to the day when prices moved below the low VTL. This crossover means that high (2) – highlighted by the green arrow – is a "high of a higher degree" than the VTL.

Since this is an 80-day VTL, and the next degree cycle is the 240-day cycle, high (2) is also a 240-day cycle top.

USEFUL TRADING PATTERNS

Double VTL Rule.

On the stock market, shorting should be done when the market breaks two consecutive VTLs on the 20 week cycle. Consider the following:
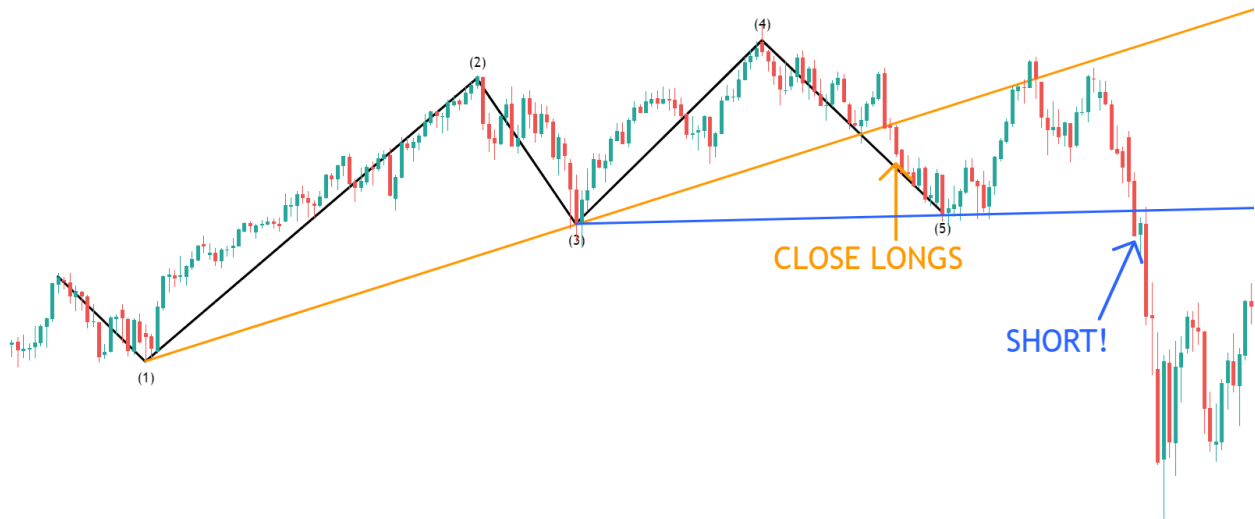

On this chart, points (1), (3) and (5) are 20-week cycle lows. Let's draw the first VTL connecting lows (1) and (3):
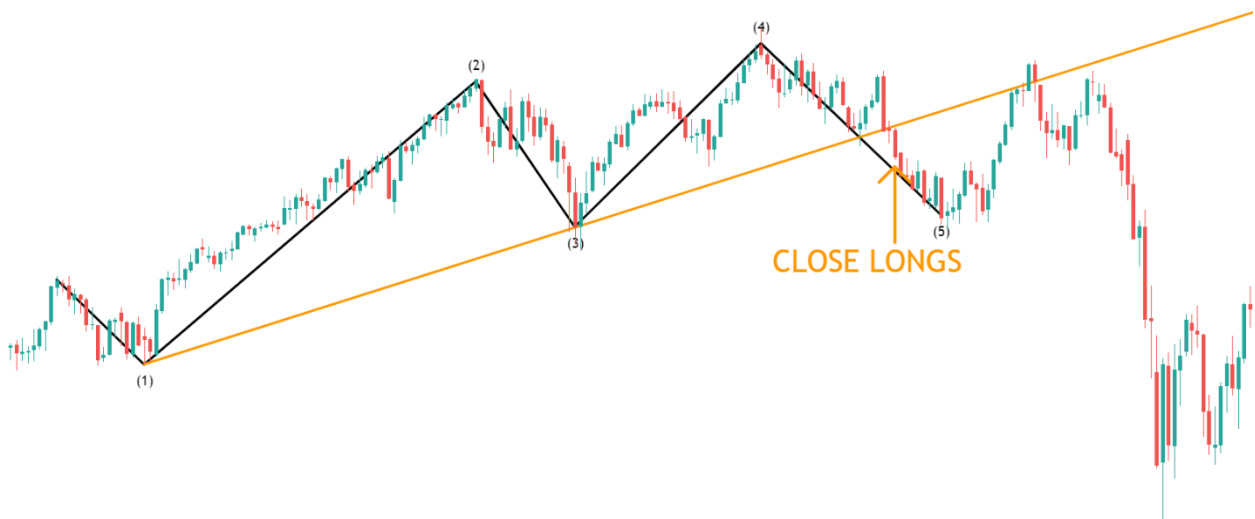
The orange arrow points to the day when prices closed below the orange uptrend line, the low VTL connecting lows (1) and (3). This is a good time to close out of any long positions.

Now, for the second low VTL:

The blue arrow points to the day when prices closed below the second low VTL, drawn by connecting cycle lows (3) and (5).

This is a signal to short the stock market.

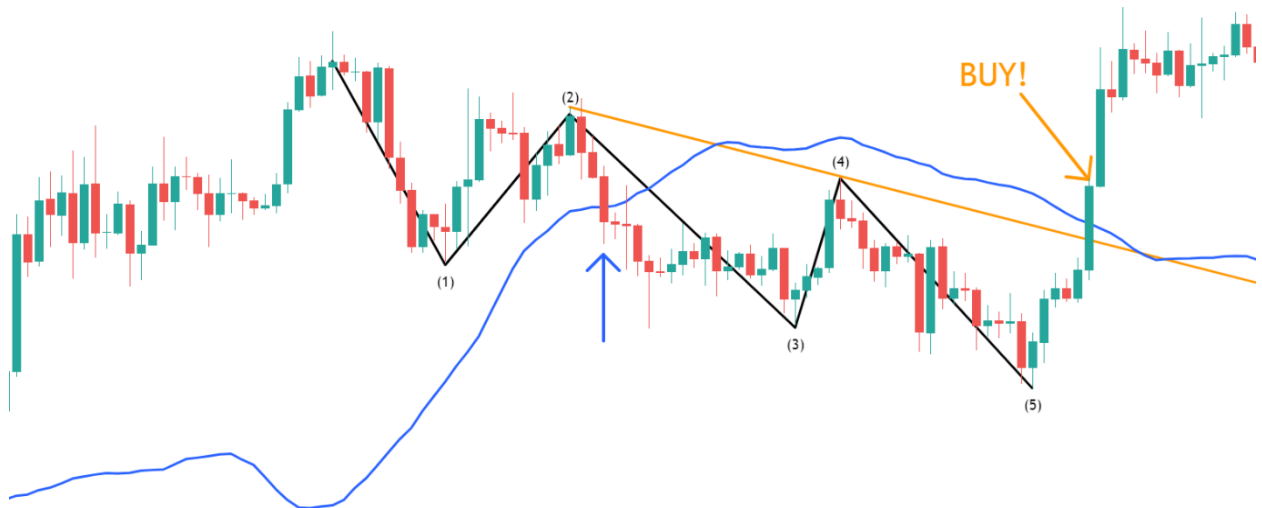The example above is the S&P500 in 2011.

Bitcoin "Scalp" Signal

Scalping Bitcoin requires the use of the 80-day cycle FLD, as well as the 20-day cycle high VTL:

In the chart above, the blue moving average is the 80-day cycle FLD. The blue arrow points to the day when prices moved below this line.

Next, we draw the 20-day high VTL:

Points (1) through (5) are labelled to highlight the 20-day cycle in the chart.

In this example, the 20-day cycle high VTL is drawn by connecting highs (2) and (4).

The orange arrow points to the day when prices crossed above the VTL. This is a buy signal!