RIVERSIDE ANALYTICS INC

HEAT MAP - HOW TO SERIES

HEAT MAP RADAR

DATE: JULY 25, 2020

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RIVERSIDE'S EDUCATIONAL SERIES

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Good investing is not an "event" like finding the next growth opportunity or catching the next market turn. Rather, good investing is a disciplined process that converts research and training into a well-tested methodology, and then makes a habit of following that approach day after day.

John P. Hussman, Ph.D
President, Hussman Strategic Advisors

RIVERSIDE'S HEAT MAP RANKING AND RADAR

DETECTING MOVEMENTS

HEAT MAP RANKING

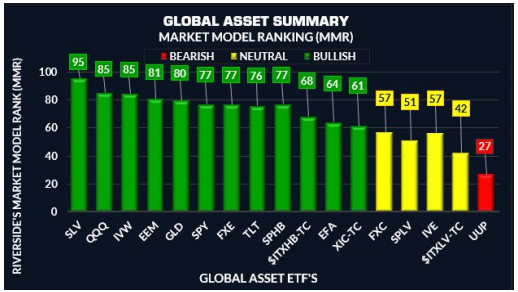
HEAT MAP RADAR

| | | |

TODAY'S AGENDA

- Heat Map Ranking;
- Swing Detection Tracking (SDT);
- Inverse Fisher RSI;
- Heat Map Radar;
- Bringing Everything Together;
- Question and Answer Period;

Today's Webinar is being recorded. The recording and slide deck and will be posted on the Riverside Website. Details to follow today's session.



HEAT MAP RANKING / FILTERIING

- VARIOUS RANKING FEATURES

RIVERSIDE'S HEAT MAP RANKING

CATEGORY AND MMR BASED

VARIOUS HEAT MAP RANKING FEATURES

BASIC TICKER INFORMATION																		MARKET MODEL RANK							RADAR	TF Cross Above 60	PMT Diff 15	TR Diff 20	MMR Cross Above 60							RADAR	TF Cross Above 60	PMT Diff 15	TR Diff 20	MMR Cross Below 60			
Rank ALL ETF's	Rank ALL ETF's by Sub Category	Rank Preffered ETF's by Sub Category	ETF Main Category	ETF Sub Category	ETF Sub Category Preferred ETF's Only	Symbol	Date	Posture	Description	GROUP ID	Filter Preferred_ETF_List	Filter GTAA_ETF_List	DIV (%)	YTD%	MMR_0	MMR_5	MMR_10	MMR_15	MMR_20	RIVERSIDE SHIELD	RR ↑	TF ↑	PMT ↑	TR ↑	MMR ↑	Swing Up ↑	Inv_Fish (D) ↑	Inv_Fish (W) ↑	RR ↓	TF ↓	PMT ↓	TR ↓	MMR ↓	Swing On ↓	Inv_Fish (D) ↓	Inv_Fish (W) ↓
4	4	1	1	1100	1100	FFTY	2020-07-23	Offensive	Innovator IBD 50 ETF	Broad Index	1			3.57	83	84	87	85	89																			
1	1	1	1	1100		QNEQ	2020-07-23	Offensive	Fidelity NASDAQ Composite Tracking Stock	Broad Index			0.89	16.42	84	87	86	85	91																			
2	2	1	1	1100		QQEW	2020-07-23	Offensive	First Trust Nasdaq-100 Equal Weighted Index Fund	Broad Index			0.50	12.47	84	86	84	84	80																			
3	3	1	1	1100		QQQE	2020-07-23	Offensive	Direxion NASDAQ-100 Equal Weighted Index Shares	Broad Index			0.69	12.70	83	85	84	84	80																			
5	5	2	1	1100	1100	QQQ	2020-07-23	Offensive	Invesco QQQ Trust	Broad Index	1		0.66	21.35	81	86	85	82	80																			
9	9	1	1	1100		ITOT	2020-07-23	Offensive	iShares Core S&P Total U.S. Stock Market ETF	Broad Index			1.78	0.12	78	78	78	77	67																			
13	13	1	1	1100		IWB	2020-07-23	Offensive	iShares Russell 1000 ETF	Broad Index			1.69	0.81	78	79	78	78	68																			
12	12	1	1	1100		IWV	2020-07-23	Offensive	iShares Russell 3000 ETF	Broad Index			1.65	0.04	78	78	78	78	67																			
16	16	1	1	1100		IYY	2020-07-23	Offensive	iShares Dow Jones U.S. ETF	Broad Index			1.64	0.39	78	79	78	77	67																			
15	15	1	1	1100		SCHX	2020-07-23	Offensive	Schwab U.S. Large-Cap ETF	Broad Index			1.95	1.12	78	78	78	77	67																			
22	22	5	1	1100	1100	MGC	2020-07-23	Offensive	Vanguard Mega Cap ETF	Broad Index	1		1.80	2.36	77	79	78	78	69																			
11	11	1	1	1100		VV	2020-07-23	Offensive	Vanguard Large-Cap ETF	Broad Index			1.82	1.40	78	78	78	77	68																			
7	7	1	1	1100		SCHB	2020-07-23	Offensive	Schwab U.S. Broad Market ETF	Broad Index			1.96	0.05	79	79	78	78	67																			
14	14	3	1	1100	1100	OEF	2020-07-23	Offensive	iShares S&P 100	Broad Index	1		1.71	2.94	78	80	77	77	70																			
8	8	1	1	1100		VONE	2020-07-23	Offensive	Vanguard Russell 1000 ETF	Broad Index			1.79	0.81	79	79	78	78	67																			
25	25	1	1	1100		IWL	2020-07-23	Offensive	iShares Russell Top 200 ETF	Broad Index			1.65	3.09	76	79	78	77	68																			
24	24	1	1	1100		JKD	2020-07-23	Offensive	iShares Morningstar Large-Cap ETF	Broad Index			1.73	-0.51	76	78	77	63	62																			
23	23	1	1	1100		IVV	2020-07-23	Offensive	iShares Core S&P 500 ETF	Broad Index			1.90	0.30	76	79	78	77	66																			
17	17	1	1	1100		VTHR	2020-07-23	Offensive	Vanguard Russell 3000 ETF	Broad Index			1.79	-0.10	77	78	78	77	66																			
6	6	1	1	1100		BFOR	2020-07-23	Offensive	ALPS Barron's 400 ETF	Broad Index			0.75	-3.79	81	76	60	64	58																			
18	18	4	1	1100	1100	VTI	2020-07-23	Offensive	Vanguard Total Stock Market ETF	Broad Index	1		1.87	0.20	77	78	78	77	67																			
21	21	1	1	1100		VOO	2020-07-23	Offensive	Vanguard S&P 500 ETF	Broad Index			1.83	0.32	77	77	78	77	66																			

RIVERSIDE'S HEAT MAP FILTERING

CATEGORY AND MMR BASED



ETF MAIN CATEGORY – WE HAVE GROUPED ALL ETF'S WITHIN THE HEAT MAP INTO 10 DISTINCT CATEGORIES. SEE THE HEAT MAP ETF GROUP LEGEND TAB. THIS ALLOWS USERS TO ISOLATE INDEPENDENT ETF GROUPS. (I.E MAJOR INDEX'S, SECTORS, INDUSTRY GROUPS, ETC)

FILTERING EXAMPLE: ETF MAIN CATEGORY→→ FILTER =4→→ DISPLAYS THE SECTOR ETF'S IN THE HEAT MAP

ETF SUB CATEGORY – WITHIN EACH ETF CATEGORY, WE HAVE FURTHER INDEXED ETF'S TO APPLICABLE SUB CATEGORIES FOR FILTERING PURPOSES.

FILTERING EXAMPLE: ETF SUB CATEGORY→→ FILTER = 1100→→ DISPLAYS THE MAJOR INDEX ETF'S IN THE HEAT MAP

ETF SUB CATEGORY PREFERRED ETF'S ONLY – WE HAVE REFINED THE SUB CATEGORIES FOR OUR PREFERRED ETF LIST TO BE ABLE TO SORT MORE EFFICIENTLY.

FILTERING EXAMPLE: ETF SUB CATEGORY PREFERRED ETF's ONLY→→ FILTER = 5100→→ DISPLAYS THE PREFERRED INDUSTRY GROUP ETF'S IN THE HEAT MAP

RIVERSIDE'S HEAT MAP FILTERING

PREFERRED ETF's AND GTAA ETF's

PREFERRED ETF'S AND GTAA ETFs



| BASIC TICKER INFORMATION | | | | | | | | | | | | | | | | | | | | | | | MARKET MODEL RANK | | | | | | | RADAR | TF Cross Above | PMT Diff | TR Diff | MMR Cross Above | | | | | | | | | | | | | | | | | | |

RIVERSIDE'S HEAT MAP RANKING

CATEGORY AND MMR BASED



RANK ALL ETF's = RANKS ALL ETF's IN THE HEAT MAP BASED ON MMR

FILTERING EXAMPLE: RANK ALL ETF's →→ FILTER LESS THAN OR EQUAL TO 10 →→ DISPLAYS THE TOP 10 ETF'S IN THE HEAT MAP

RANK ETF'S BY SUB CATEGORY – ALL TICKER SYMBOLS WITHIN THE HEAT MAP ARE RANKED BASED ON THE MMR WITHIN EACH ETF SUB CATEGORIES.

FILTERING EXAMPLE: RANK ETF's BY SUB CATEGORY→→ FILTER LESS THAN OR EQUAL TO 10 →→ DISPLAYS THE TOP 10 ETF'S IN THE HEAT MAP IN EACH SUBCATEGORY BASED ON THE MMR

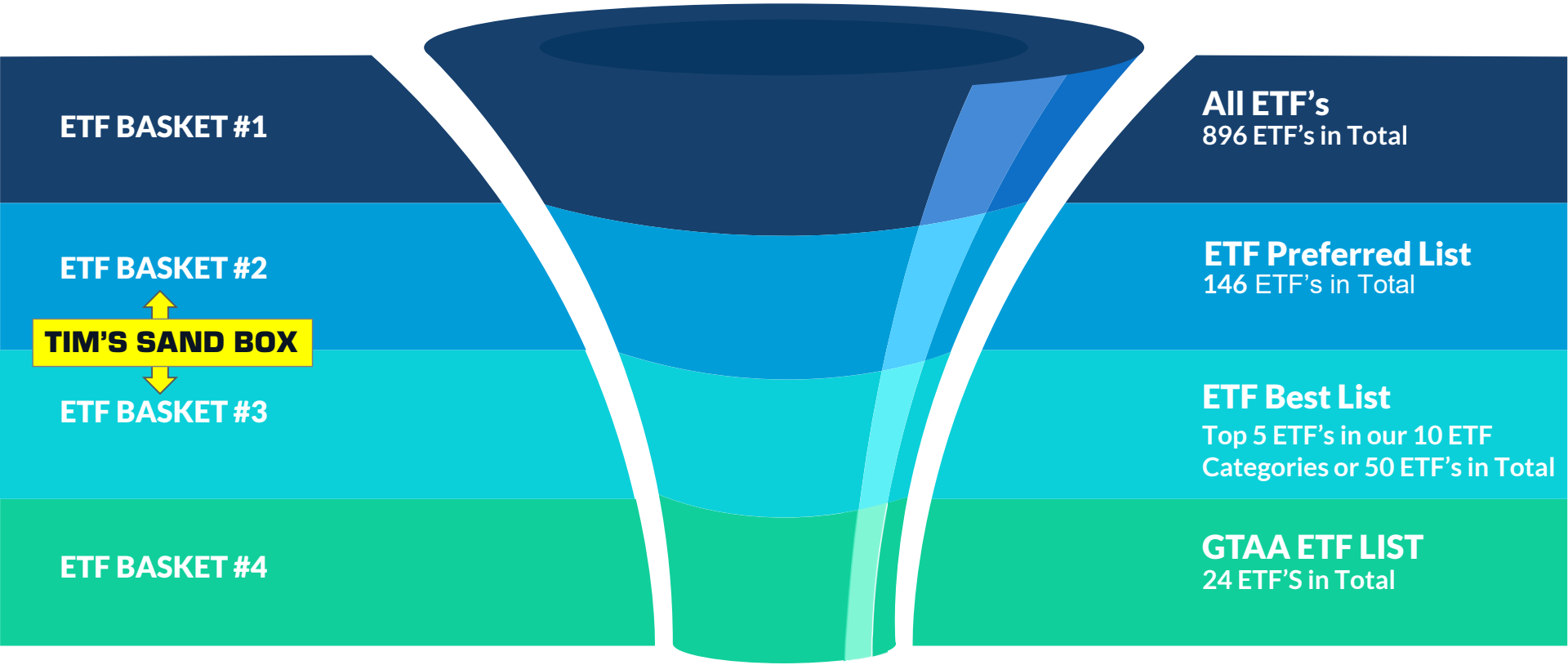
RANK PREFERRED ETF'S BY SUB CATEGORY – ALL TICKER SYMBOLS WITHIN THE HEAT MAP PREFERRED LIST ARE RANKED BASED ON THE MMR WITHIN EACH ETF SUB CATEGORIES.

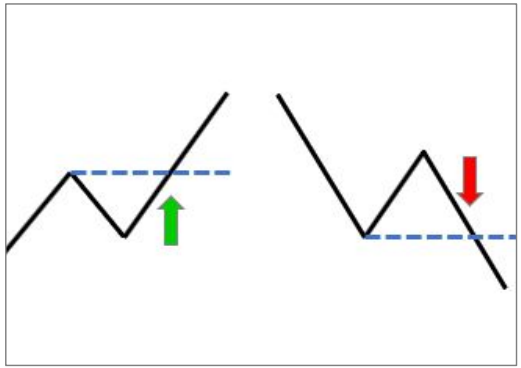
FILTERING EXAMPLE: RANK PREFERRED ETF's BY SUB CATEGORY→→ FILTER LESS THAN OR EQUAL TO 10 →→ DISPLAYS THE TOP 10 ETF'S IN THE HEAT MAP IN EACH SUBCATEGORY BASED ON THE MMR

RIVERSIDE'S ETF FUNNEL

A SYSTEMATIC APPROACH TO TARGETING THE BEST ETF'S IN EACH GROUP

US ETF HEAT MAP EXAMPLE





SWING DETECTION TRACKING (SDT)

- AN INDICATOR THAT'S NOT REALLY AN INDICATOR;
- WHAT THE SDT DOES;
- SWING DETECTION;
- PRICE LEVEL IDENTIFICATION;
- PRIMARY SIGNALS;
- SECONDARY SIGNALS;

SWING DETECTION TRACKING (SDT)

WHAT IS IT?

Our SDT is an indicator.

We've called it an indicator but it doesn't know it's an indicator because it's not an indicator.

But we needed to call it something….

So….

The SDT is an indicator.

SWING DETECTION TRACKING (SDT)

WHAT IS IT?

Indicators manipulate direct price action to produce it's values.

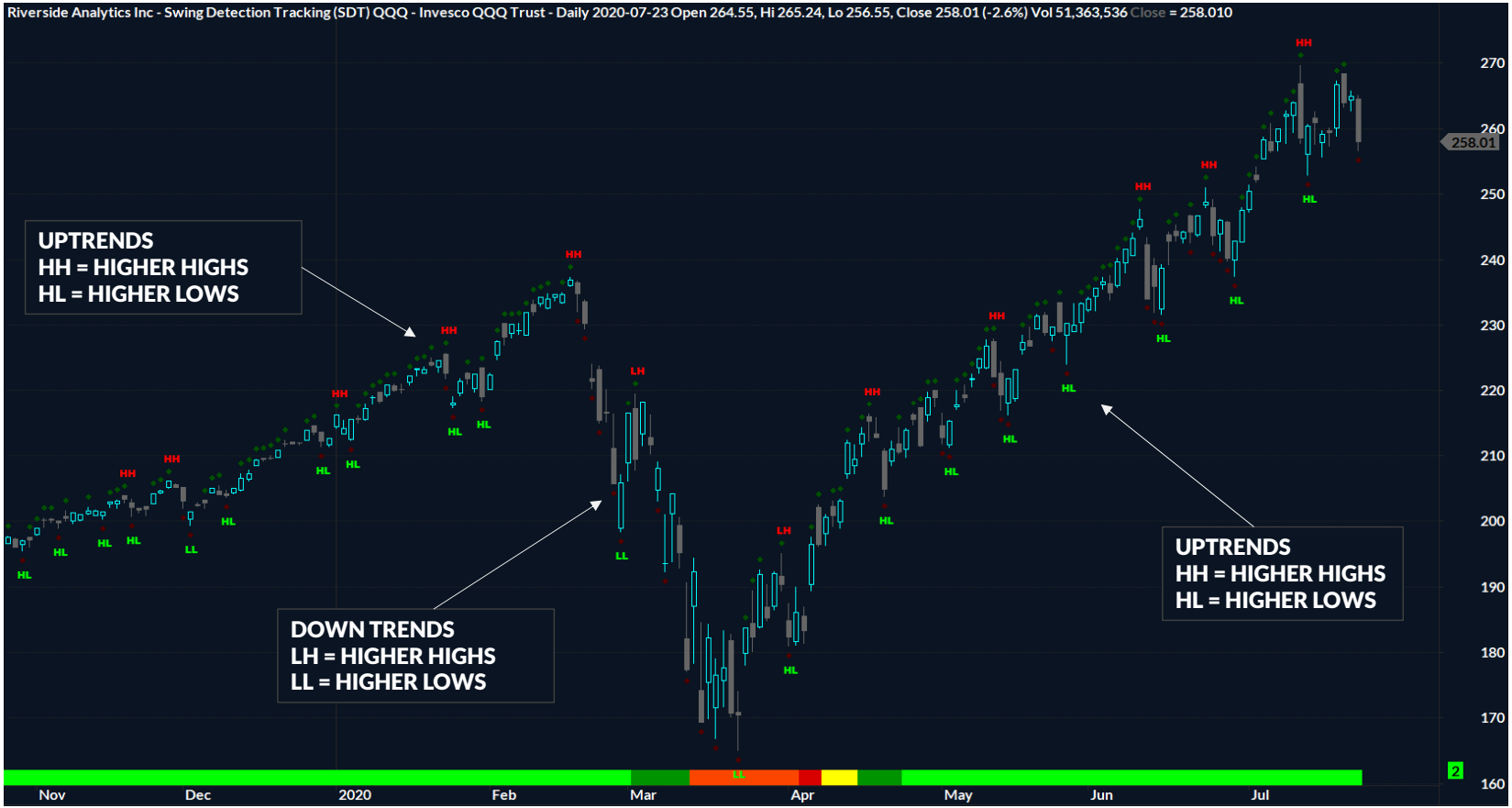
The SDT does not manipulate price data.

Rather, it identifies it.

The SDT is an indicator that identifies Swing Highs and Swing Lows.

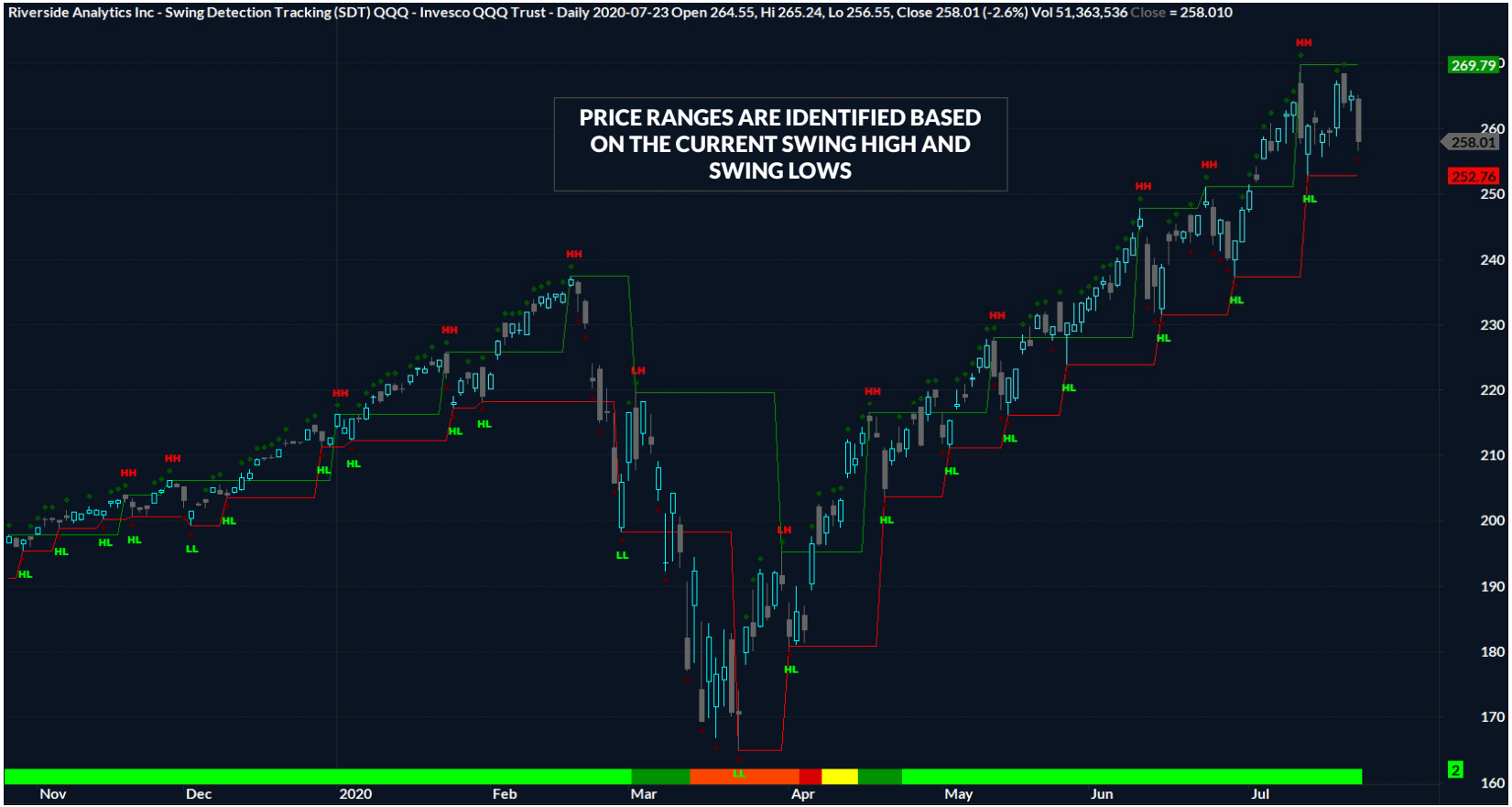
SWING DETECTION TRACKING (SDT)

DETECTING SWINGS



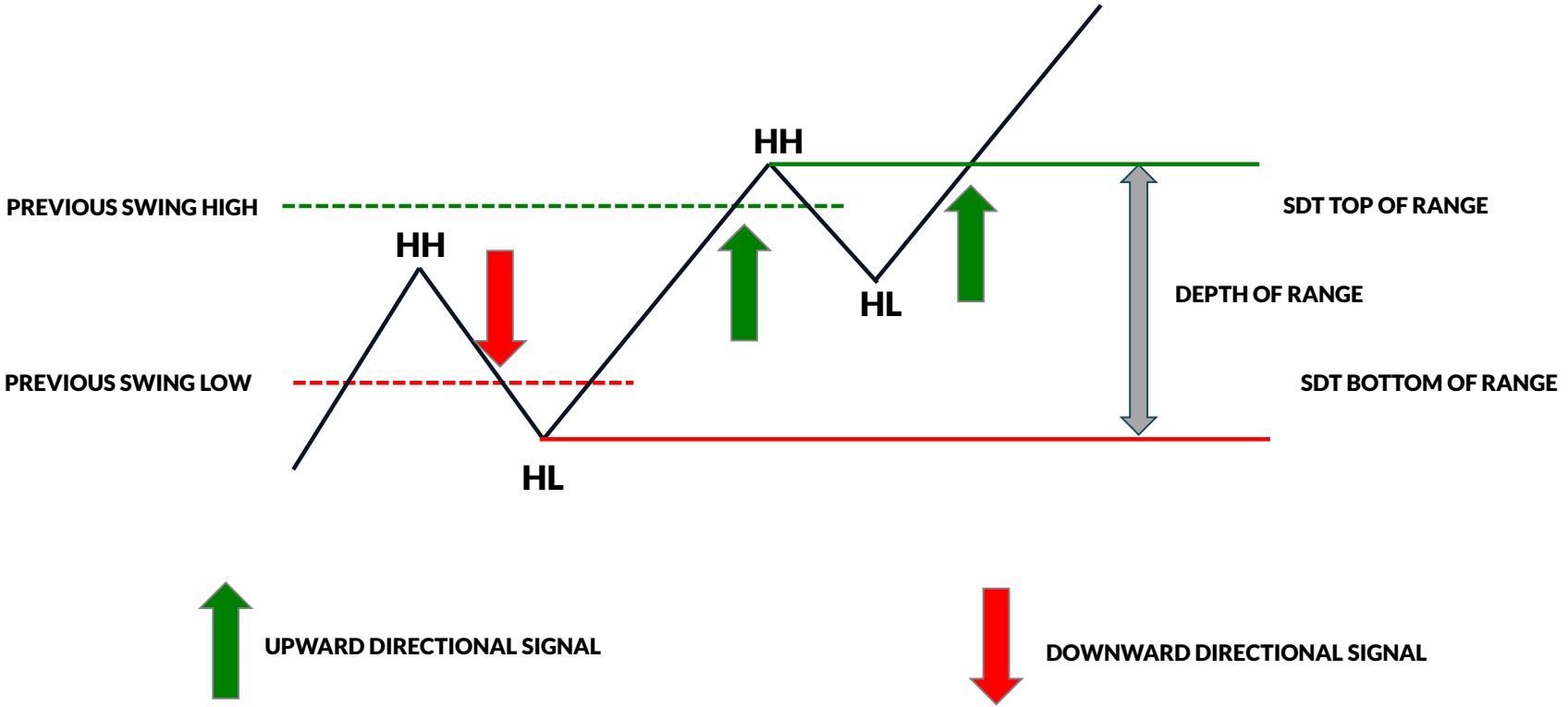
SWING DETECTION TRACKING (SDT)

RANGE IDENTIFICATION



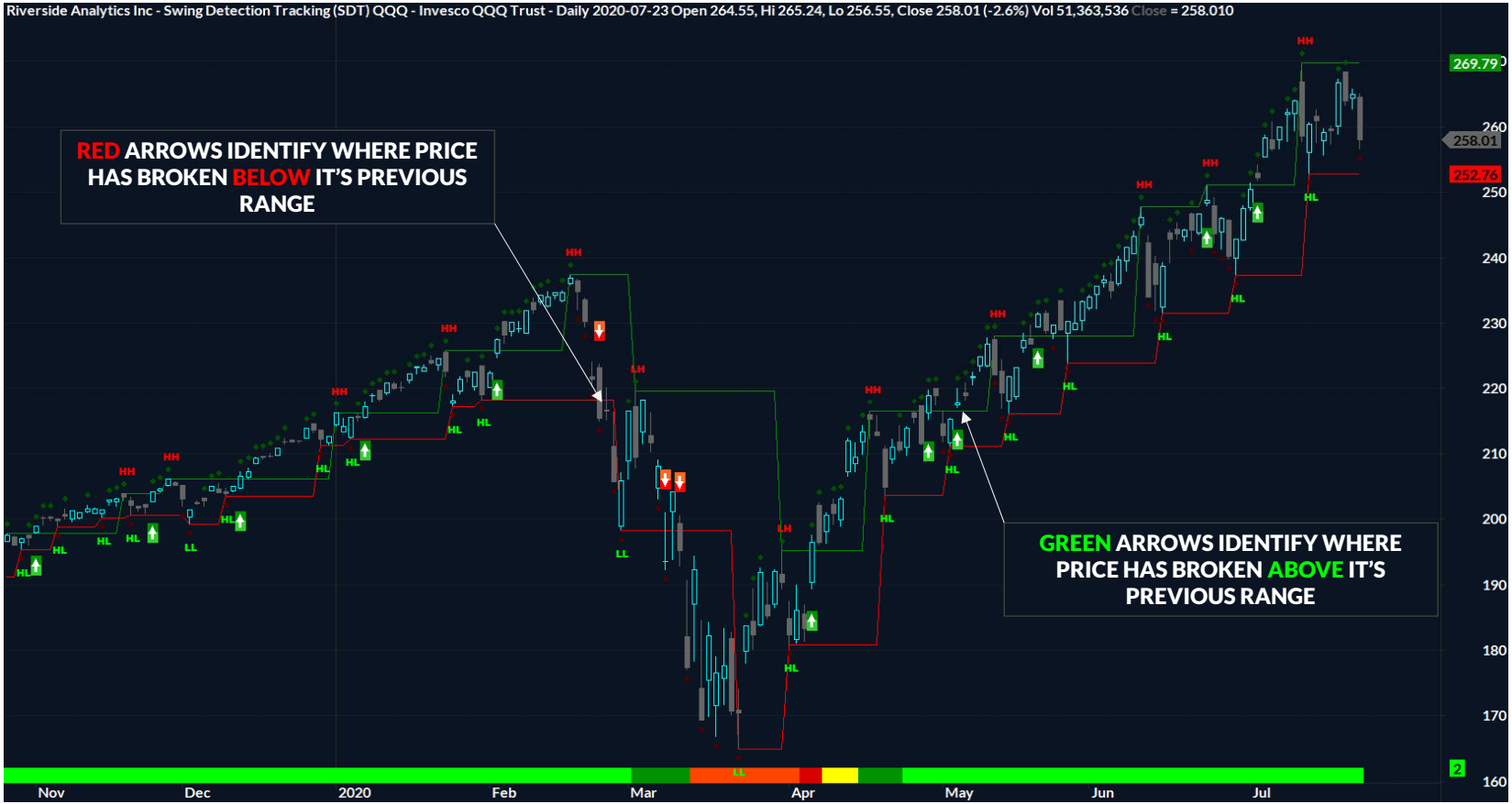
SWING DETECTION TRACKING (SDT)

PRIMARY "INDICATOR" SIGNALS



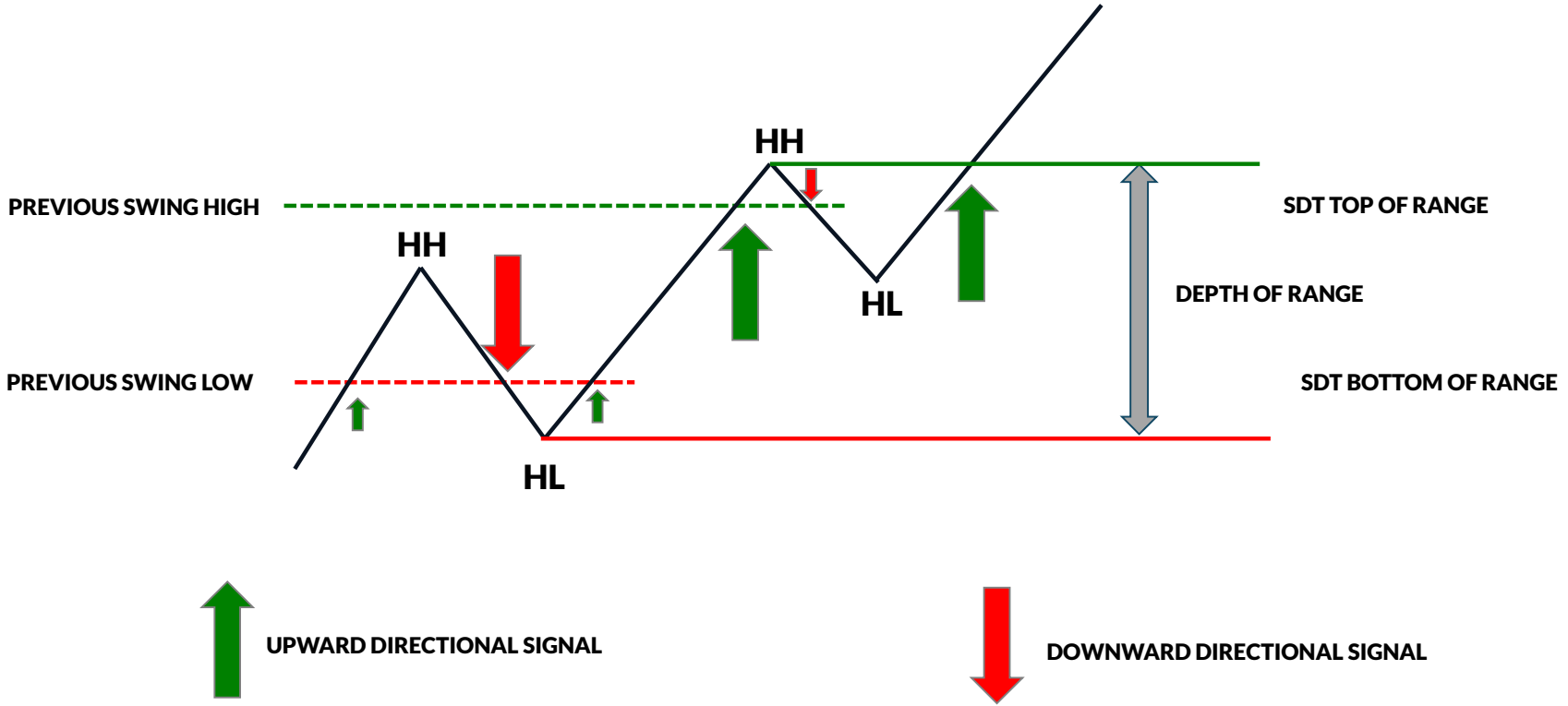
SWING DETECTION TRACKING (SDT)

PRIMARY "INDICATOR" SIGNALS



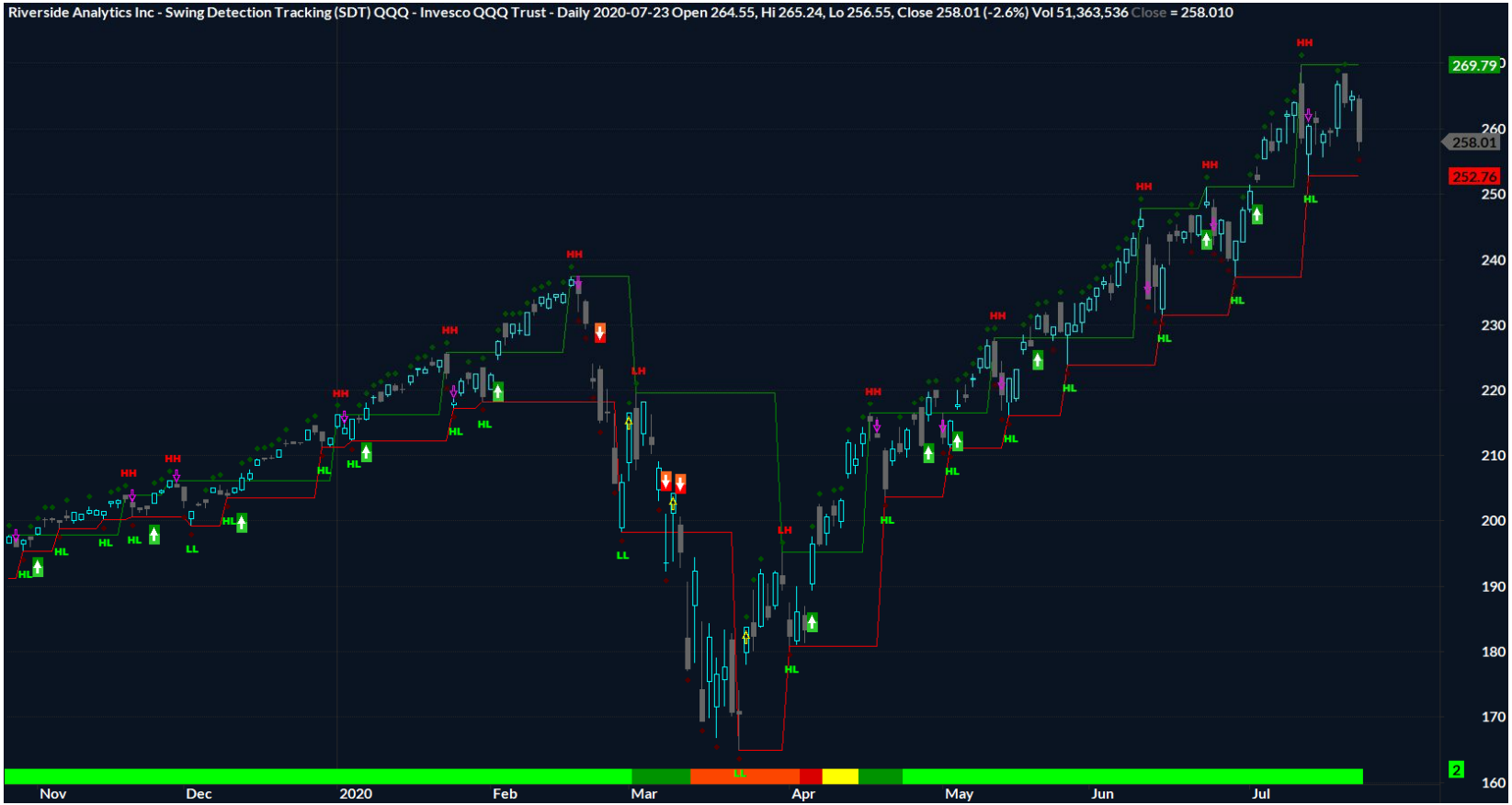
SWING DETECTION TRACKING (SDT)

PRIMARY AND SECONDARY "INDICATOR" SIGNALS



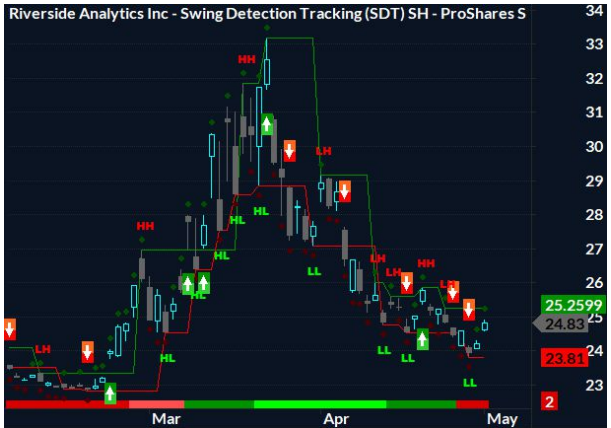
SWING DETECTION TRACKING (SDT)

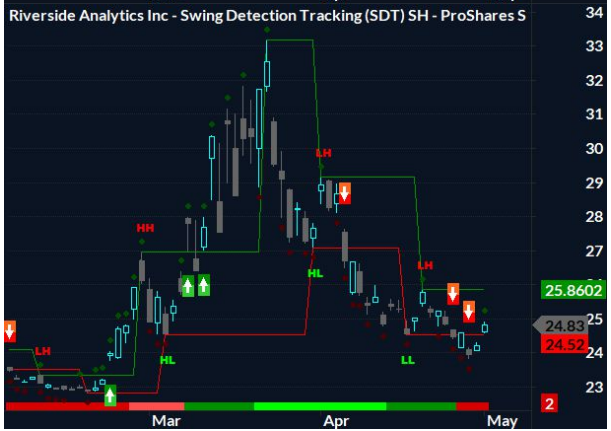
PRIMARY SIGNALS



S&P 500 LARGE CAP ETF's – SHORT VS LONG

SWING DETECTION TRACKING (SDT)





S&P 500 INVERSE ETF (SH)
LEFT CHART

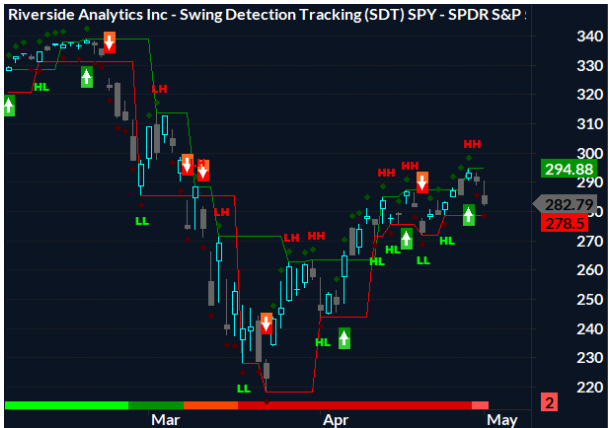
TOP PANE
SENSITIVE SDT SETTING
LONG SIGNAL ON CLOSE ABOVE 25.26.
SHORT SIGNAL ON CLOSE BELOW 23.81

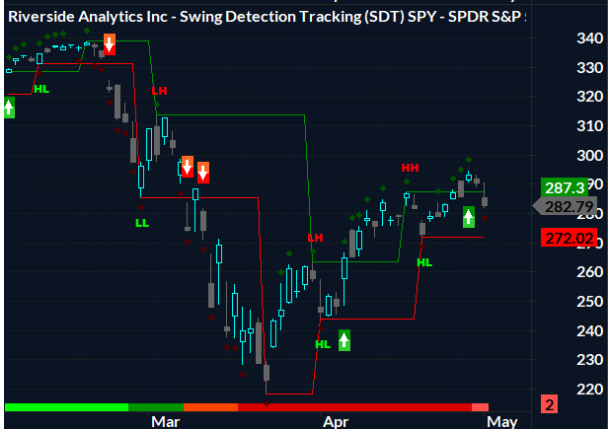
BOTTOM PANE
LESS SENSITIVE SDT SETTING
LONG SIGNAL ON CLOSE ABOVE 25.86.
SHORT SIGNAL ON CLOSE BELOW 24.52

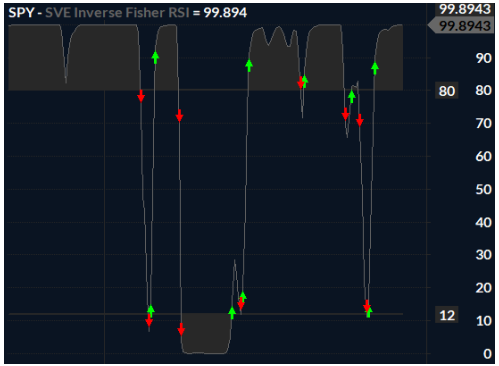
S&P 500 LONG ETF (SPY)
RIGHT CHART

TOP PANE
SENSITIVE SDT SETTING
LONG SIGNAL ON CLOSE ABOVE 294.88
SHORT SIGNAL ON CLOSE BELOW 278.50

BOTTOM PANE
LESS SENSITIVE SDT SETTING
WAIT FOR NEXT LONG SIGNAL
SHORT SIGNAL ON CLOSE BELOW 272.02







RSI INVERSE FISHER TRANSFORM

- ❖ VISUAL COMPARISON TO THE STANDARD RSI;
- ❖ THE MATH;
- ❖ INDICATOR LEVELS;
- ❖ INDICATOR SIGNALS;

RSI INVERSE FISHER TRANSFORM

BACKGROUND

INDICATORS

Clarity In Decision-Making

A Smoothed Rsi Inverse Fisher Transform

by Sylvain Vervoort

This indicator gives clear entry and exit signals, so your trading decisions are easier.

The Fisher transform has been a familiar concept to Stocks & Commodities readers in recent years following its introduction in 2002 by frequent S&C contributor John Ehlers. Its creator, Ronald Fisher, was one of the leading scientists of the 20th century, making major contributions to statistics, evolutionary biology, and genetics. Ehlers' 2004 followup applied an inverse Fisher transform to the relative strength index (Rsi), changing what was a good turning-point indicator to one that fine-tuned the timing of possible entry and exit points. Here is the inverse Fisher transform formula:

```
y = (Exp(2 * x) - 1)/(Exp(2 * x) + 1)
```

where *x* is the input value and *y* is the transformed value.

But the input data for the inverse Fisher transform formula needs to be in the range of -5 to +5. The normal Rsi is in the range of zero to 100, but we can convert this to a range of -5 to 5, using the following formula:

```
x = 0.1 * (Rsi value - 50)
```

Figure 1 shows a plot of the inverse Fisher transform. The transform creates boundaries to keep the output value in the range between -1 to +1. Input values larger than 2 generate a result close to 1, while input values less than -2 generate a result close to -1. This boundary characteristic is useful with any indicator moving between two fixed values, like the relative strength index (Rsi).

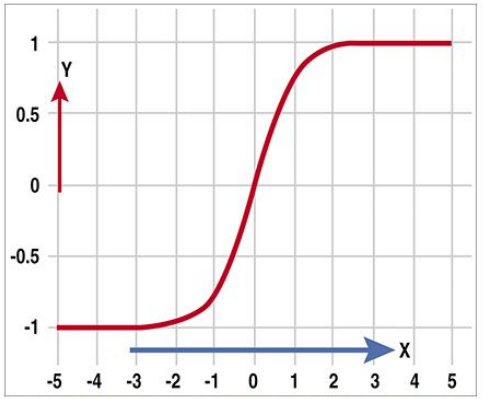
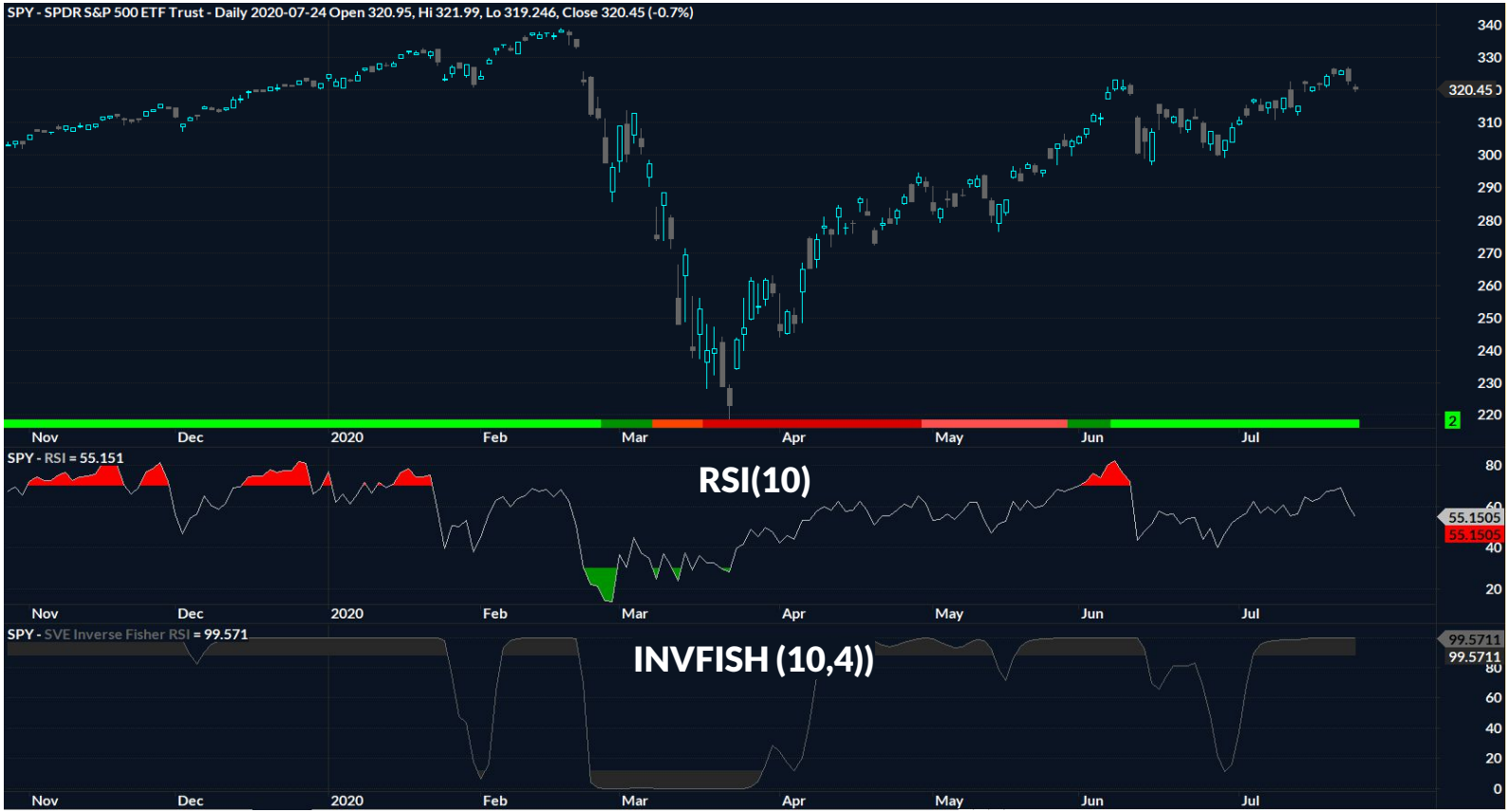


FIGURE 1: INVERSE FISHER TRANSFORM. The transform creates boundaries to keep the output value in the range of -1 to +1. Input values larger than 2 generate a result close to 1, and input values less than -2 generate a result close to -1. This boundary characteristic is useful with any indicator moving between two fixed values, like the RSI.

http://traders.com/documentation/feedbk_docs/2010/10/Vervoort.html

RSI INVERSE FISHER TRANSFORM

VISUAL COMPARISON TO THE STANDARD RSI



RSI INVERSE FISHER TRANSFORM

THE MATH AND COMPARISON TO THE STANDARD RSI

RELATIVE STRENGTH INDEX (RSI)

RSI = 100 - (100 /1 + RS)

WHERE;
RS = AVERAGE OF 'N' DAY 'S CLOSES UP / AVERAGE OF 'N' DAY'S CLOSES DOWN

INVERSE FISHER RSI

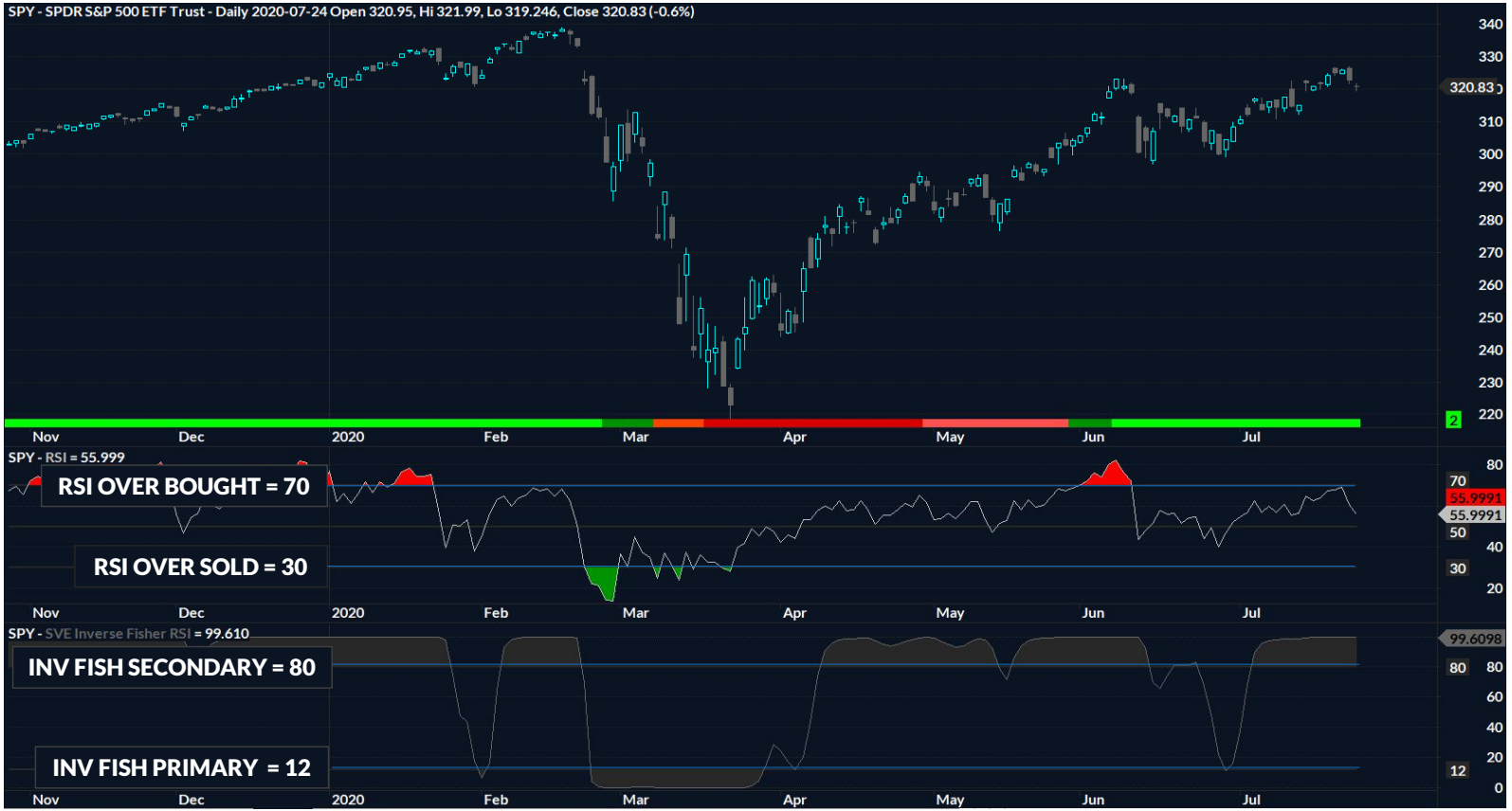
INVFISH = 50 * (Y + 1)

WHERE;
Y = (EXP(2 * X) - 1)/(EXP(2 * X) + 1)
X = 0.1 * (RSI VALUE - 50)



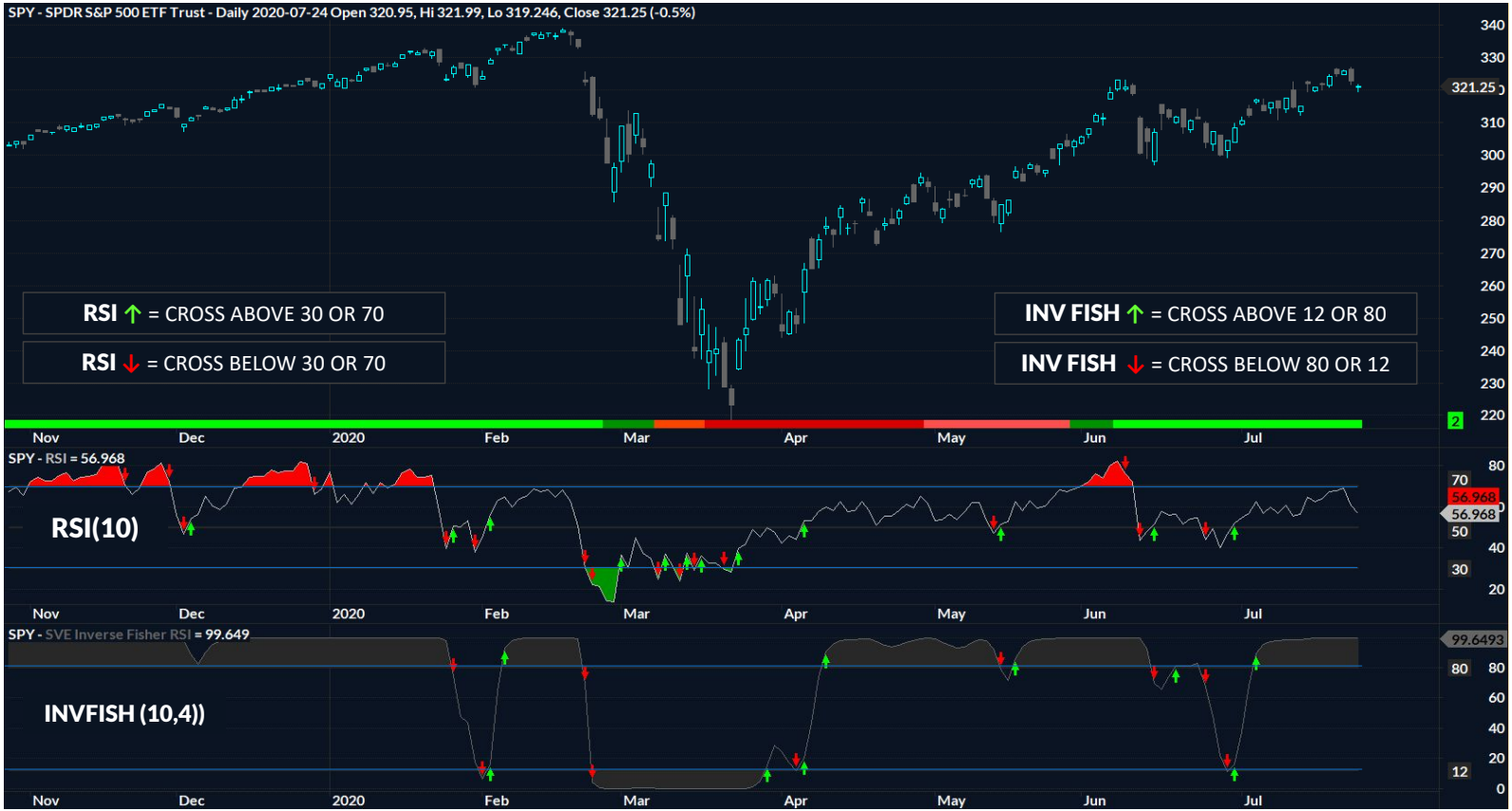
RSI INVERSE FISHER TRANSFORM

INDICATOR LEVELS



RSI INVERSE FISHER TRANSFORM

INDICATOR SIGNALS





HEAT MAP RADAR

- IMPROVEMENTS TO THE HEAT MAP RADAR
- CDN AND US ETF PREFERRED HEAT MAPS
- TSX INDEX HEAT MAP
- TSX AND S&P 1500 HEAT MAPS

RIVERSIDE'S HEAT MAP RADAR

DETECTING MOVEMENTS

Q: How do you spot changes in market direction? Or sentiment? How did you notice that there have been changes in trend direction on SPY and opportunities recently in TSX Utilities, Reit's and Financials? Is there a way that we can do this on our own?

A: My personal Heat Map….. Was…..Slightly different than the Heat Map issued each week. However, I have built my radar tools into the Heat Map Exports. Users of our Heat Map will now be able to see what I see on my side. In this week's Heat Map, you will see a new Heat Map Radar Section at the right side of the Heat Map. The following slides detail this new feature. I have used the Global Heat Map as a reference example.

RIVERSIDE'S HEAT MAP RADAR

DETECTING MOVEMENTS

ALL OTHER HEAT MAP METRICS ARE STILL IN THE HEAT MAP, SCROLL LEFT!

CONDENSED VIEW OF THE MMR RANKINGS OVER THE PAST 20-DAYS

TIM'S HEAT MAP RADAR

RIVERSIDE ANALYTICS INC - GLOBAL HEAT MAP

BASIC TICKER SYMBOL INFORMATION									MARKET MODEL RANK					RADAR (OLD)	RIVERSIDE SHIELD	RADAR	TF Cross Above	PMT Diff	TR Diff	MMR Diff				RADAR	TF Cross Above	PMT Diff	TR Diff	MMR Diff			
																RADAR	60	15	20	10				RADAR	60	15	20	10			
MKT	CT MAIN	CT SUB	Symbol	Date	Posture	Description	GROUP ID	YTD%	MMR_0	MMR_5	MMR_10	MMR_15	MMR_20			RR	TF	PMT	TR	MMR	Swing Up	Inv_Fish (D)	Inv_Fish (W)	RR	TF	PMT	TR	MMR	Swing Dn	Inv_Fish (D)	Inv_Fish (W)
US	8	8100	LIT	2020-06-05	Offensive	Global X Lithium & Battery Tech ETF	Industry	16.06	95	81	59	42	35	↑		↑				↑											
CDN	4	4100	$TTK-TC	2020-06-05	Offensive	S&P/TSX CAPPED TECHNOLOGY INDEX	TSX Index's	28.72	94	92	90	84	86																			
US	5	5100	SMH	2020-06-05	Offensive	VanEck Vectors Semiconductor ETF	Industry	5.49	91	84	77	68	66																			
US	4	4100	XLY	2020-06-05	Offensive	Consumer Discretionary Select Sector SPDR Fund	Sector	2.2	91	79	71	54	50			↑				↑											
US	1	1100	QQQ	2020-06-05	Offensive	Invesco QQQ Trust	Broad Index	12.74	91	89	87	81	82	↑																	
INTL	4	4400	IXN	2020-06-05	Offensive	iShares Global Tech ETF	Sector	9.29	89	86	80	71	75	↑																	
CDN	5	4100	$TXGM-TC	2020-06-05	Defensive	S&P/TSX GLOBAL MINING INDEX	TSX Index's	3.4	89	90	85	82	84																		
US	8	8100	SLV	2020-06-05	Defensive	iShares Silver Trust	Commodities	-0.84	88	82	65	49	42																		
US	4	4100	XLK	2020-06-05	Offensive	Technology Select Sector SPDR Fund	Sector	7.79	88	88	82	77	77																		
US	1	1300	IVW	2020-06-05	Offensive	iShares S&P 500 Growth ETF	Broad Index	6.95	87	86	86	73	61	↑																	
US	5	5100	GDX	2020-06-05	Defensive	VanEck Vectors Gold Miners ETF	Industry	10.86	87	82	69	67	67											↓					↓		
US	5	5100	IBB	2020-06-05	Offensive	iShares NASDAQ Biotechnology ETF	Industry	9	86	91	88	84	86											↓		↓					
US	1	1200	SPHB	2020-06-05	Offensive	Invesco S&P 500 High Beta ETF	Broad Index	-7.12	84	58	46	28	25			↑	↑			↑											
INTL	4	4400	IXP	2020-06-05	Defensive	iShares Global Telecom ETF	Industry	1.55	82	74	69	52	49	↑										↓		↓					
US	1	1200	QUAL	2020-06-05	Offensive	iShares Edge MSCI U.S.A. Quality Factor ETF	Broad Index	-0.48	82	74	55	46	45	↑																	
US	5	5100	XRT	2020-06-05	Offensive	SPDR S&P Retail ETF	Industry	-5.85	81	68	58	46	41			↑	↑			↑											
US	5	5100	XHB	2020-06-05	Offensive	SPDR S&P Homebuilders ETF	Industry	-3.36	81	78	55	33	29			↑	↑			↑											
INTL	4	4400	IXJ	2020-06-05	Defensive	iShares Global Healthcare ETF	Sector	2.5	81	83	79	70	71	↑										↓		↓					
INTL	3	3500	EWG	2020-06-05	Offensive	iShares MSCI Germany ETF	International	-3.27	81	60	70	62	58	↑		↑	↑			↑											
CDN	5	5200	XGD-TC	2020-06-05	Defensive	iShares S&P/TSX Global Gold Index ETF	Industry	18.72	80	87	89	87	82	↑										↓		↓					
CDN	4	4100	$SPMT-TC	2020-06-05	Defensive	S&P/TSX CAPPED MATERIALS INDEX	TSX Index's	5.15	78	90	86	84	86	↑										↓		↓		↓			
US	4	4100	XLV	2020-06-05	Defensive	Health Care Select Sector SPDR Fund	Sector	-0.28	78	84	78	71	76											↓		↓					
CDN	5	4100	$TTGD-TC	2020-06-05	Defensive	S&P/TSX CANADIAN GOLD INDEX	TSX Index's	16.21	78	87	86	87	86	↑										↓		↓					
INTL	4	4400	IXI	2020-06-05	Offensive	iShares Global Consumer Discretionary ETF	Sector	-1.15	78	66	53	40	36	↑		↑	↑			↑											

RIVERSIDE'S HEAT MAP RADAR

MARKET MODEL RANKING – CONDENSED VIEW

CONDENSED VIEW OF THE MMR RANKINGS OVER THE PAST 20-DAYS

RIVERSIDE ANALYTICS INC - GLOBAL HEAT MAP

BASIC TICKER SYMBOL INFORMATION									MARKET MODEL RANK				
MKT	CT MAIN	CT SUB	Symbol	Date	Posture	Description	GROUP ID	YTD%	MMR_0	MMR_5	MMR_10	MMR_15	MMR_20
US	8	8100	LIT	2020-06-05	Offensive	Global X Lithium & Battery Tech ETF	Industry	16.06	95	81	59	40	36
CDN	4	4100	$TTTK-TC	2020-06-05	Offensive	S&P/TSX CAPPED TECHNOLOGY INDEX	TSX Index's	28.72	94	92	89	84	80
US	5	5100	SMH	2020-06-05	Offensive	VanEck Vectors Semiconductor ETF	Industry	5.49	91	84	77	68	66
US	4	4100	XLY	2020-06-05	Offensive	Consumer Discretionary Select Sector SPDR Fund	Sector	2.2	91	79	71	54	50
US	1	1100	QQQ	2020-06-05	Offensive	Invesco QQQ Trust	Broad Index	12.74	91	83	87	81	82
INTL	4	4400	IXN	2020-06-05	Offensive	iShares Global Tech ETF	Sector	9.29	89	86	80	71	75
CDN	5	4100	$TXGM-TC	2020-06-05	Defensive	S&P/TSX GLOBAL MINING INDEX	TSX Index's	3.4	89	90	85	82	84
US	8	8100	SLV	2020-06-05	Defensive	iShares Silver Trust	Commodities	-0.84	88	82	65	40	32
US	4	4100	XLK	2020-06-05	Offensive	Technology Select Sector SPDR Fund	Sector	7.79	88	88	82	77	77
US	1	1300	IVW	2020-06-05	Offensive	iShares S&P 500 Growth ETF	Broad Index	6.95	87	86	80	73	61
US	5	5100	GDX	2020-06-05	Defensive	VanEck Vectors Gold Miners ETF	Industry	10.86	87	92	89	87	87
US	5	5100	IBB	2020-06-05	Offensive	iShares NASDAQ Biotechnology ETF	Industry	9	86	91	88	84	86
US	1	1200	SPHB	2020-06-05	Offensive	Invesco S&P 500 High Beta ETF	Broad Index	-7.12	84	58	46	43	38
INTL	4	4400	IXP	2020-06-05	Defensive	iShares Global Telecom ETF	Industry	1.55	82	76	68	52	49
US	1	1200	QUAL	2020-06-05	Offensive	iShares Edge MSCI U.S.A. Quality Factor ETF	Broad Index	-0.48	82	74	55	46	45
US	5	5100	XRT	2020-06-05	Offensive	SPDR S&P Retail ETF	Industry	-5.85	81	68	58	46	41
US	5	5100	XHB	2020-06-05	Offensive	SPDR S&P Homebuilders ETF	Industry	-3.36	81	70	55	43	41
INTL	4	4400	IXJ	2020-06-05	Defensive	iShares Global Healthcare ETF	Sector	2.5	81	83	76	78	77
INTL	3	3500	EWG	2020-06-05	Offensive	iShares MSCI Germany ETF	International	-3.27	81	60	43	42	39
CDN	5	5200	XGD-TC	2020-06-05	Defensive	iShares S&P/TSX Global Gold Index ETF	Industry	18.72	80	87	88	87	88
CDN	4	4100	$SPMT-TC	2020-06-05	Defensive	S&P/TSX CAPPED MATERIALS INDEX	TSX Index's	5.15	78	90	88	84	86
US	4	4100	XLV	2020-06-05	Defensive	Health Care Select Sector SPDR Fund	Sector	-0.28	78	84	76	77	76
CDN	5	4100	$TTGD-TC	2020-06-05	Defensive	S&P/TSX CANADIAN GOLD INDEX	TSX Index's	16.21	78	87	88	87	88
INTL	4	4400	RXI	2020-06-05	Offensive	iShares Global Consumer Discretionary ETF	Sector	-1.15	78	66	53	41	38

KEY NOTES

THE MARKET MODEL RANK (MMR) IS A WEIGHT OF THE EVIDENCE BASED INDICATOR WHICH INCLUDES ALL OTHER HEAT MAP METRICS.

I LIKE TO KEEP THINGS SIMPLE WHEREBY FOCUSING ONLY ON THE WEIGHT OF EVIDENCE.

THE 20-DAY LOOK BACK ON THE MMR ALLOWS ME TO SEE WHAT IS GAINING OR LOSING STRENGTH OVER THE PAST MONTH.

THIS VIEW MAY BE EXPANDED UP TO A LOOK BACK PERIOD OF 155 DAYS BY CLICKING ON THE "+" BUTTON AT THE TOP OF THE SHEET.

AN EXAMPLE OF GAINING STRENGTH IS THE LITHIUM AND BATTERY ETF (LIT). 20 DAYS AGO THE MMR RESIDED AT 36, IT NOW RESIDES AT 95. THE OPPOSITE APPROACH CAN BE USED FOR DETECTING WEAKNESS

RIVERSIDE'S HEAT MAP RADAR

LONG/UP MOVEMENT DETECTION

LONG/UP MOVEMENT DETECTION (SHOWN IN GREEN)

RIVERSIDE ANALYTICS INC - GLOBAL HEAT MAP

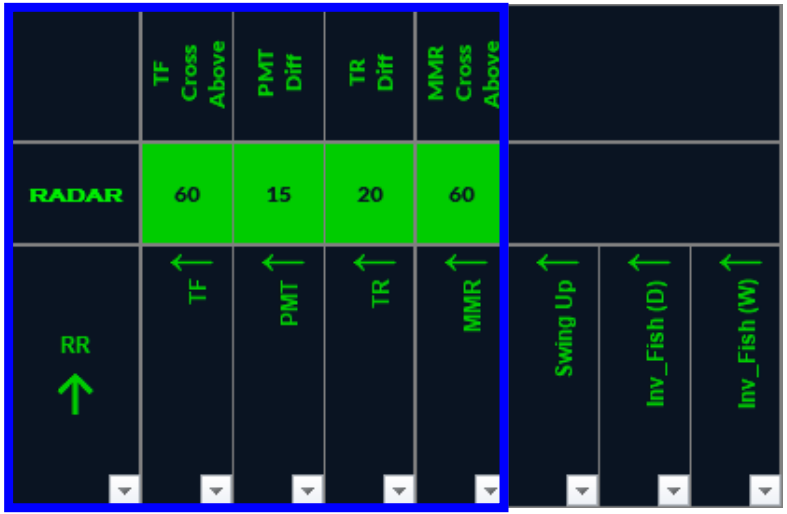
BASIC TICKER SYMBOL INFORMATION

											TF Cross Above	PMT Diff	TR Diff	MMR Cross Above			
										RADAR	60	15	20	60			
MKT	CT MAIN	CT SUB	Symbol	Date	Posture	Description	GROUP ID	CLOSE	YTD%	RR	TF	PMT	TR	MMR	Swing Up	Inv_Fish (D)	Inv_Fish (W)
US	8	8100	LIT	2020-07-17	Offensive	Global X Lithium & Battery Tech ETF	Industry	35.60	30.21								
CDN	5	4100	$TXGM-TC	2020-07-17	Defensive	S&P/TSX GLOBAL MINING INDEX	TSX Index's	98.48	19.43								
US	8	8100	SLV	2020-07-17	Defensive	iShares Silver Trust	Commodities	18.01	7.97								
US	5	5100	GDX	2020-07-17	Defensive	VanEck Vectors Gold Miners ETF	Industry	39.31	34.26								
US	5	5100	XHB	2020-07-17	Offensive	SPDR S&P Homebuilders ETF	Industry	47.06	3.41								
US	5	5100	SMH	2020-07-17	Offensive	VanEck Vectors Semiconductor ETF	Industry	160.21	13.29								
US	1	1100	QQQ	2020-07-17	Offensive	Invesco QQQ Trust	Broad Index	259.42	22.02								
US	5	5100	XRT	2020-07-17	Offensive	SPDR S&P Retail ETF	Industry	45.28	-1.59								
CDN	4	4100	$TTTK-TC	2020-07-17	Defensive	S&P/TSX CAPPED TECHNOLOGY INDEX	TSX Index's	165.31	40.18								
US	4	4100	XLB	2020-07-17	Offensive	Materials Select Sector SPDR Fund	Sector	61.16	-0.42								
INTL	4	4400	MXI	2020-07-17	Offensive	iShares Global Materials ETF	Sector	67.08	-0.62								
US	4	4100	XLY	2020-07-17	Offensive	Consumer Discretionary Select Sector SPDR Fund	Sector	133.84	6.71								
CDN	4	4100	$SPMT-TC	2020-07-17	Defensive	S&P/TSX CAPPED MATERIALS INDEX	TSX Index's	327.27	21.93	↑					↑		
US	1	1300	IVW	2020-07-17	Offensive	iShares S&P 500 Growth ETF	Broad Index	216.77	11.94								
INTL	4	4400	IXN	2020-07-17	Offensive	iShares Global Tech ETF	Sector	242.38	15.15								
US	1	1200	MTUM	2020-07-17	Offensive	iShares Edge MSCI U.S.A. Momentum Factor ETF	Broad Index	138.90	10.62								
US	4	4100	XLK	2020-07-17	Offensive	Technology Select Sector SPDR Fund	Sector	106.83	16.54								
INTL	3	3500	EWG	2020-07-17	Offensive	iShares MSCI Germany ETF	International	28.84	-1.9								
INTL	4	4400	RXI	2020-07-17	Offensive	iShares Global Consumer Discretionary ETF	Sector	124.61	-1.05								
US	5	5100	IBB	2020-07-17	Offensive	iShares NASDAQ Biotechnology ETF	Industry	143.96	19.46	↑					↑		
INTL	4	4400	IXP	2020-07-17	Defensive	iShares Global Telecom ETF	Industry	65.27	6.3								
CDN	5	4100	$TTGD-TC	2020-07-17	Defensive	S&P/TSX CANADIAN GOLD INDEX	TSX Index's	366.61	40.25	↑					↑		
CDN	5	5200	XGD-TC	2020-07-17	Defensive	iShares S&P/TSX Global Gold Index ETF	Industry	22.90	40.58	↑					↑		

THE NEXT THREE SLIDES WILL OUTLINE HOW THIS SECTION OF THE HEAT MAP RADAR WORKS FOR LONG/UP MOVEMENTS

RIVERSIDE'S HEAT MAP RADAR

LONG/UP MOVEMENT DETECTION



RR ↑

THE HEAT MAP WILL PLACE A ↑ IN THIS COLUMN OF THE HEAT MAP WHEN ANY LONG OR UP SIGNALS ARE DETECTED

TF ↑

THIS INDICATES WHEN THE TREND FILTER HAS TURNED BULLISH. THE HEAT MAP WILL PLACE A ↑ IN THE COLUMN OF THE HEAT MAP WHEN THE TF HAS CROSSED ABOVE OR IS EQUAL TO 60 FROM IT'S READING 5-DAYS AGO.

PMT ↑

THIS INDICATES WHEN THERE IS A STRONG UPSIDE SHIFT IN PRICE MOMENTUM. THE HEAT MAP WILL PLACE A ↑ IN THE COLUMN OF THE HEAT MAP WHEN THE CURRENT PMT READING IS GREATER THAN 15 FROM IT'S PMT READING 5-DAYS AGO.

TR ↑

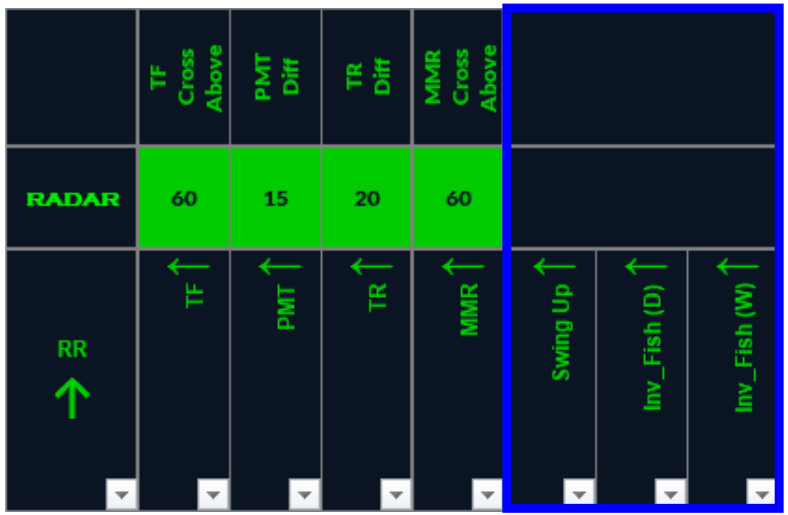
THIS INDICATES WHEN THERE IS A STRONG IMPROVEMENT TECHNICAL RANK. THE HEAT MAP WILL PLACE A ↑ IN THE COLUMN OF THE HEAT MAP WHEN THE CURRENT TR READING IS GREATER THAN 20 FROM IT'S TR READING 5-DAYS AGO.

MMR ↑

THIS INDICATES WHEN THE WEIGHT OF THE EVIDENCE HAS TURNED BULLISH. THE HEAT MAP WILL PLACE A ↑ IN THE COLUMN OF THE HEAT MAP WHEN THE MMR HAS CROSSED ABOVE OR IS EQUAL TO 60 FROM IT'S READING 5-DAYS AGO.

RIVERSIDE'S HEAT MAP RADAR

LONG/UP MOVEMENT DETECTION



SWING UP ↑

OUR SWING DETECTION TRACKING (SDT) INDICATOR IS BUILT INTO THE HEAT MAP. THE HEAT MAP WILL PLACE A ↑ IN THE COLUMN OF THE HEAT MAP WHEN A LONG OR UP/SIGNAL HAS BEEN DETECTED.

INV_FISH (D) ↑

THE HEAT MAP HAS BEEN CONFIGURED TO DETECT SIGNALS FROM THE DAILY AND WEEKLY INVERSE FISHER RSI INDICATOR. OUR LONG SIGNALS ARE GENERATED WITH A CROSS ABOVE 12 AND A CROSS ABOVE 80. THE HEAT MAP WILL PLACE A ↑ IN THE COLUMN OF THE HEAT MAP WHEN A LONG SIGNAL HAS BEEN DETECTED WITH THE **DAILY** INVERSE FISHER RSI.

INV_FISH (W) ↑

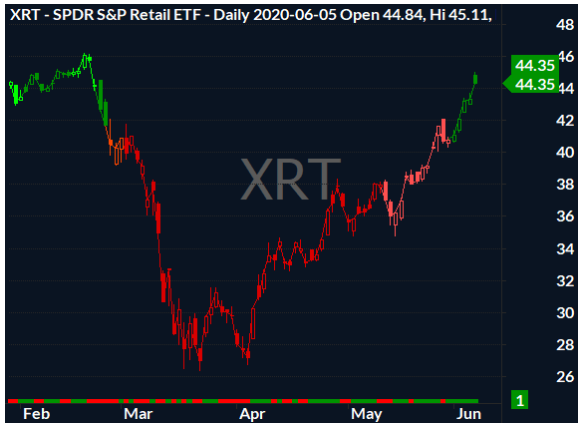
THE HEAT MAP HAS BEEN CONFIGURED TO DETECT SIGNALS FROM THE DAILY AND WEEKLY INVERSE FISHER RSI INDICATOR. OUR LONG SIGNALS ARE GENERATED WITH A CROSS ABOVE 12 AND A CROSS ABOVE 80. THE HEAT MAP WILL PLACE A ↑ IN THE COLUMN OF THE HEAT MAP WHEN A LONG SIGNAL HAS BEEN DETECTED WITH THE **WEEKLY** INVERSE FISHER RSI.

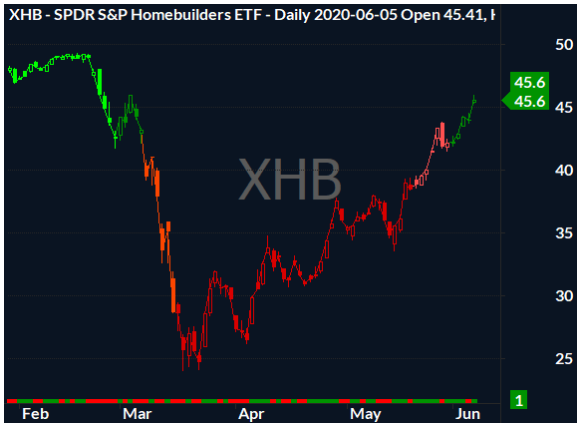
RIVERSIDE'S HEAT MAP RADAR

TF ↑ SIGNALS - EXAMPLES

BY FILTERING THE GLOBAL HEAT MAP COLUMN TF ↑ TO SEARCH FOR "↑" ONLY, WE CAN SEE THE FOLLOWING TICKER SYMBOLS HAVE HAD CHANGES IN TREND DIRECTION FROM BEARISH TRENDS TO BULLISH TRENDS







NOTE: HIGH BETA (SPHB), RETAIL (XRT) AND HOME BUILDERS (XHB) ALL HAVE MMR RANKINGS ABOVE 80. CHANGES IN TREND DIRECTION CAN BE USED TO AID INVESTORS IN INCREASING OR INITIATING LONG POSITIONS.

RIVERSIDE'S HEAT MAP RADAR

SHORT/DOWN MOVEMENT DETECTION

SHORT/DOWN MOVEMENT DETECTION (SHOWN IN RED)

RIVERSIDE ANALYTICS INC - GLOBAL HEAT MAP

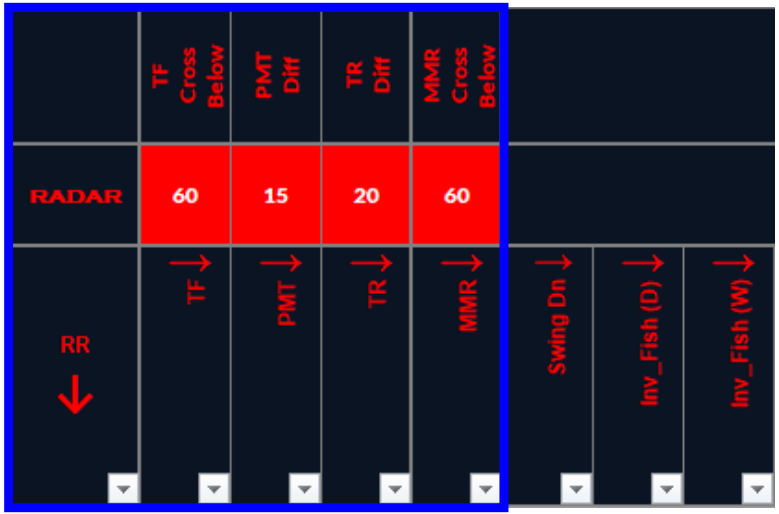
BASIC TICKER SYMBOL INFORMATION

										RADAR	TF Cross Below	PMT Diff	TR Diff	MMR Cross Below			
											60	15	20	60			
MKT	CT MAIN	CT SUB	Symbol	Date	Posture	Description	GROUP ID	CLOSE	YTD%	RR	TF	PMT	TR	MMR	Swing On	Inv_Fish (D)	Inv_Fish (W)
US	8	8100	LIT	2020-07-17	Offensive	Global X Lithium & Battery Tech ETF	Industry	35.60	30.21								
CDN	5	4100	$TXGM-TC	2020-07-17	Defensive	S&P/TSX GLOBAL MINING INDEX	TSX Index's	98.48	19.43								
US	8	8100	SLV	2020-07-17	Defensive	iShares Silver Trust	Commodities	18.01	7.97								
US	5	5100	GDX	2020-07-17	Defensive	VanEck Vectors Gold Miners ETF	Industry	39.31	34.26								
US	5	5100	XHB	2020-07-17	Offensive	SPDR S&P Homebuilders ETF	Industry	47.06	3.41								
US	5	5100	SMH	2020-07-17	Offensive	VanEck Vectors Semiconductor ETF	Industry	160.21	13.29								
US	1	1100	QQQ	2020-07-17	Offensive	Invesco QQQ Trust	Broad Index	259.42	22.02								
US	5	5100	XRT	2020-07-17	Offensive	SPDR S&P Retail ETF	Industry	45.28	-1.59								
CDN	4	4100	$TTTK-TC	2020-07-17	Defensive	S&P/TSX CAPPED TECHNOLOGY INDEX	TSX Index's	165.31	40.18	↓		↓					
US	4	4100	XLB	2020-07-17	Offensive	Materials Select Sector SPDR Fund	Sector	61.16	-0.42								
INTL	4	4400	MXI	2020-07-17	Offensive	iShares Global Materials ETF	Sector	67.08	-0.62								
US	4	4100	XLY	2020-07-17	Offensive	Consumer Discretionary Select Sector SPDR Fund	Sector	133.84	6.71								
CDN	4	4100	$SPMT-TC	2020-07-17	Defensive	S&P/TSX CAPPED MATERIALS INDEX	TSX Index's	327.27	21.93								
US	1	1300	IVW	2020-07-17	Offensive	iShares S&P 500 Growth ETF	Broad Index	216.77	11.94								
INTL	4	4400	IXN	2020-07-17	Offensive	iShares Global Tech ETF	Sector	242.38	15.15								
US	1	1200	MTUM	2020-07-17	Offensive	iShares Edge MSCI U.S.A. Momentum Factor ETF	Broad Index	138.90	10.62								
US	4	4100	XLK	2020-07-17	Offensive	Technology Select Sector SPDR Fund	Sector	106.83	16.54								
INTL	3	3500	EWG	2020-07-17	Offensive	iShares MSCI Germany ETF	International	28.84	-1.9								
INTL	4	4400	RXI	2020-07-17	Offensive	iShares Global Consumer Discretionary ETF	Sector	124.61	-1.05								
US	5	5100	IBB	2020-07-17	Offensive	iShares NASDAQ Biotechnology ETF	Industry	143.96	19.46								
INTL	4	4400	IXP	2020-07-17	Defensive	iShares Global Telecom ETF	Industry	65.27	6.3								
CDN	5	4100	$TTGD-TC	2020-07-17	Defensive	S&P/TSX CANADIAN GOLD INDEX	TSX Index's	366.61	40.25								

THE NEXT THREE SLIDES WILL OUTLINE HOW THIS SECTION OF THE HEAT MAP RADAR WORKS FOR SHORT/DOWN MOVEMENTS

RIVERSIDE'S HEAT MAP RADAR

SHORT/DOWN MOVEMENT DETECTION



RR ↓

THE HEAT MAP WILL PLACE A ↓ IN THIS COLUMN OF THE HEAT MAP WHEN ANY SHORT OR DOWN SIGNALS ARE DETECTED

TF ↓

THIS INDICATES WHEN THE TREND FILTER HAS TURNED BEARISH. THE HEAT MAP WILL PLACE A ↓ IN THE COLUMN OF THE HEAT MAP WHEN THE TF HAS CROSSED BELOW 60 FROM IT'S READING 5-DAYS AGO.

PMT ↓

THIS INDICATES WHEN THERE IS A STRONG DOWNSIDE SHIFT IN PRICE MOMENTUM. THE HEAT MAP WILL PLACE A ↓ IN THE COLUMN OF THE HEAT MAP WHEN THE DIFFERENCE FROM THE CURRENT PMT READING IS LESS THAN 15 FROM IT'S PMT READING 5-DAYS AGO.

TR ↓

THIS INDICATES WHEN THERE IS A STRONG DECLINE TECHNICAL RANK. THE HEAT MAP WILL PLACE A ↓ IN THE COLUMN OF THE HEAT MAP WHEN THE CURRENT TR READING IS LESS THAN THAN 20 FROM IT'S TR READING 5-DAYS AGO.

MMR ↓

THIS INDICATES WHEN THE WEIGHT OF THE EVIDENCE HAS TURNED BEARISH. THE HEAT MAP WILL PLACE A ↓ IN THE COLUMN OF THE HEAT MAP WHEN THE MMR HAS CROSSED BELOW 60 FROM IT'S READING 5-DAYS AGO.

RIVERSIDE'S HEAT MAP RADAR

SHORT/DOWN MOVEMENT DETECTION



SWING UP ↓

OUR SWING DETECTION TRACKING (SDT) INDICATOR IS BUILT INTO THE HEAT MAP. THE HEAT MAP WILL PLACE A ↓ IN THE COLUMN OF THE HEAT MAP WHEN A DOWN OR SHORT SIGNAL HAS BEEN DETECTED.

INV_FISH (D) ↓

THE HEAT MAP HAS BEEN CONFIGURED TO DETECT SIGNALS FROM THE DAILY AND WEEKLY INVERSE FISHER RSI INDICATOR. OUR DOWN SIGNALS ARE GENERATED WITH A CROSS BELOW 88 AND A CROSS BELOW 12. THE HEAT MAP WILL PLACE A ↓ IN THE COLUMN OF THE HEAT MAP WHEN A DOWN SIGNAL HAS BEEN DETECTED WITH THE **DAILY** INVERSE FISHER RSI.

INV_FISH (W) ↓

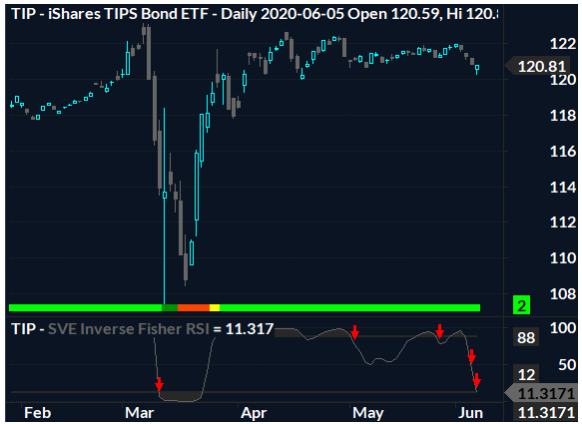
THE HEAT MAP HAS BEEN CONFIGURED TO DETECT SIGNALS FROM THE DAILY AND WEEKLY INVERSE FISHER RSI INDICATOR. OUR DOWN SIGNALS ARE GENERATED WITH A CROSS BELOW 88 AND A CROSS BELOW 12. THE HEAT MAP WILL PLACE A ↓ IN THE COLUMN OF THE HEAT MAP WHEN A DOWN SIGNAL HAS BEEN DETECTED WITH THE **WEEKLY** INVERSE FISHER RSI.

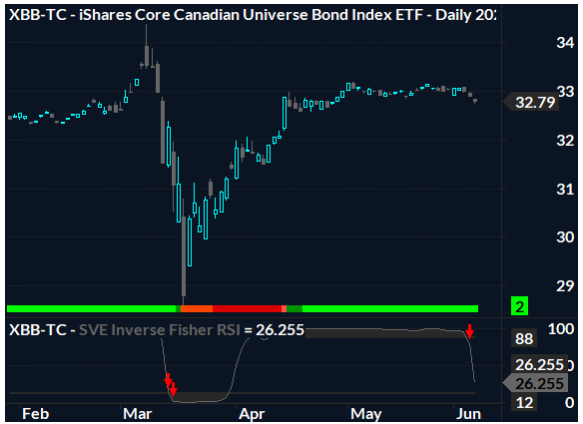
RIVERSIDE'S HEAT MAP RADAR

INV_FISH (D)↓ SIGNALS - EXAMPLES

BY FILTERING THE GLOBAL HEAT MAP COLUMN INV_FISH (D) ↓ TO SEARCH FOR "↓" ONLY, WE CAN SEE THE FOLLOWING TICKER SYMBOLS HAVE HAD DOWN OR SHORT DAILY INVERSE FISHER RSI SIGNALS







NOTE: THE DOWN DAILY INVERSE FISHER SIGNALS PROVIDE AN INDICATION THAT PRICE ACTION MAY BE CHANGING DIRECTIONS. THESE SIGNALS MAY BE USED BY INVESTORS TO TRIM LONG POSITIONS <u>OR…IN STRONG UPTRENDS…PAY ATTENTION FOR A POTENTIAL SWING LOW.</u>



PUTTING THE METHODOLOGY TO WORK

- ❖ THEORETICAL PROTOTYPE PORTFOLIO
- ❖ HEAT MAP RADAR

BASIC PORTFOLIO COMPOSITION

FINDING THE RIGHT FIT AND COMPOSITION

CASH

Cash is a position.

REAL ESTATE

Hard Assets, Equity, Mortgage Reits

COMMODITIES

Oil, Gold, Silver, Platinum, Palladium, etc



NORTH AMERICAN EQUITIES

TSX, S&P 500, Nasdaq, Dow Jones Industrial Average, etc

GLOBAL EQUITIES

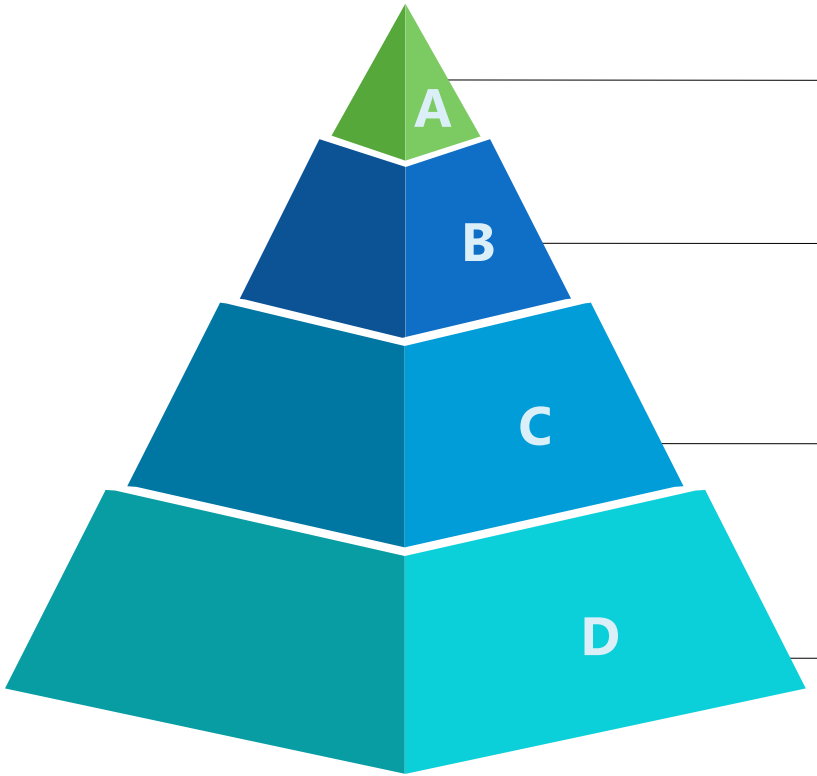
All World, EAFE, Emerging Markets, Specific Countries

FIXED INCOME

Long, Mid, Short Term Federal, Provincial, Corporate, High Yield, etc

UNIVERSE OF ASSETS

SIMPLE TO COMPLEX



GTAA ETF's
Condensed list of diversified ETF's

PREFERRED ETF'S
Hand selected ETF's within each ETF Group

ALL ETF'S
ALL ETF's within the Riverside database

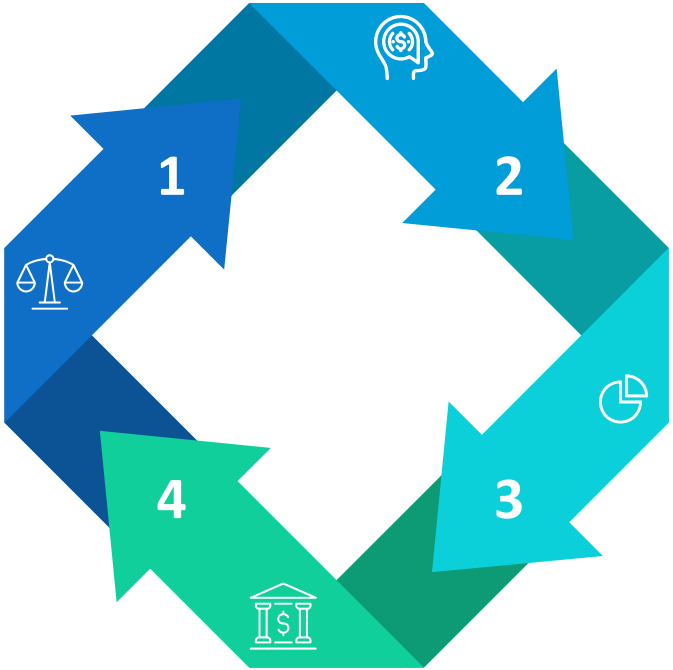
STOCKS
S&P 1500, TSX, etc

RIVERSIDE'S WEEKLY MARKET REVIEW PROCESS

FLOW CHART

THE WEIGHT OF THE EVIDENCE

Review the Weight of the Evidence each week with an un-biased and open mind.



DEVELOP A MARKET THESIS

Based on the Weight of Evidence, develop a Directional thesis on the Market (i.e Bullish, Neutral, Bearish)

REVIEW THE FACTS IN HAND

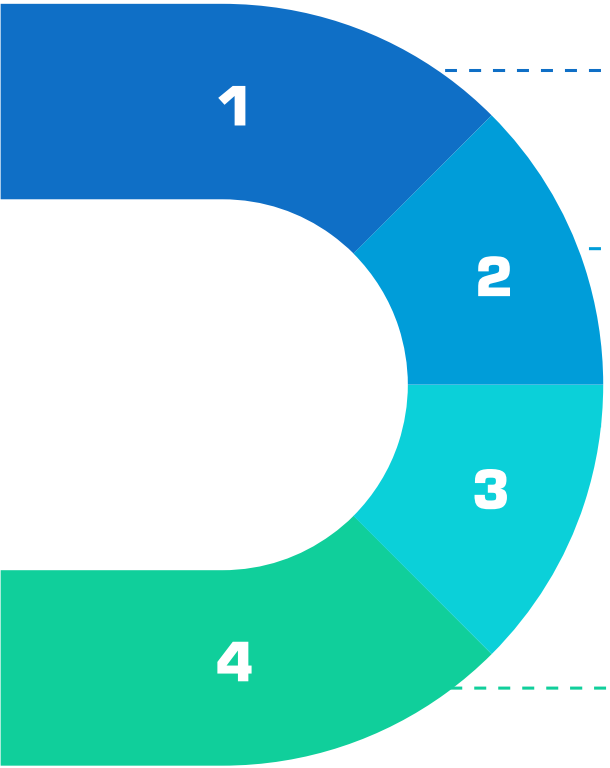
Do the current facts align with or contradict the current Market Thesis?

ALLOCATE ACCORDINGLY

Based on the current Market Thesis, allocate for the next week/month ahead.

THE WEIGHT OF THE EVIDENCE

RIVERSIDE'S TOOLS



HEAT MAP

Directed focus to strengthening or weakening assets

MARKET BREADTH

A look under the hood of the market

SEASONAL PROFIT EXPLORATION

A set of head lights illuminating the roadway ahead

HISTORICAL PRICE ANALYSIS

Aids in developing realistic market expectations

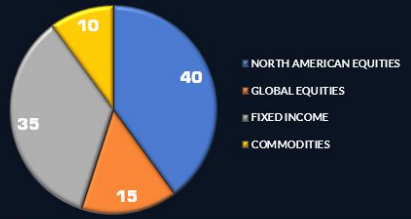
OUR PORTFOLIO PROJECT – US ETF's

A PROTOTYPE IN MOTION

RIVERSIDE ANALYTICS INC – US ETF CONSERVATIVE PORTFOLIO PROTOTYPE

Portfolio Amount		$ 1,000,000.00
ASSET	%	$ of Total
NORTH AMERICAN EQUITIES	40	$ 400,000.00
GLOBAL EQUITIES	15	$ 150,000.00
FIXED INCOME	35	$ 350,000.00
COMMODITIES	10	$ 100,000.00
REAL ESTATE	0	$ -
CASH	0	$ -
TOTAL	100	$ 1,000,000.00

Portfolio Performance Metrics	
Allocation %	100%
Portfolio Beta	0.54
Portfolio VLT	1.73
Portfolio Dividend %	1.34
YTD %	14.81
Number of Positions	15





Primary Asset	Sub-Asset	% of Asset	% of Total	$ of Total	No Positions	$ of Each Position
NORTH AMERICAN EQUITIES			40	$ 400,000.00	7	
	NA_INDEX	40	16	$ 160,000.00	2	$ 80,000.00
	NA_STYLE	20	8	$ 80,000.00	2	$ 40,000.00
	NA_SECTOR	30	12	$ 120,000.00	2	$ 60,000.00
	NA_INDUSTRY	10	4	$ 40,000.00	1	$ 40,000.00
	NA_TOTAL	100		$ 400,000.00	7	$ 220,000.00
GLOBAL EQUITIES			15	$ 150,000.00	2	
	GBL_INDEX	80	12	$ 120,000.00	1	$ 120,000.00
	GBL_STYLE	20	3	$ 30,000.00	1	$ 30,000.00
	GBL_TOTAL	100		$ 150,000.00	2	$ 150,000.00
FIXED INCOME AND DIVIDEND			35	$ 350,000.00	4	
	GOV	80	28	$ 280,000.00	3	$ 93,333.33
	CORPORATE	20	7	$ 70,000.00	1	$ 70,000.00
	TOTAL	100		$ 350,000.00	4	$ 163,333.33
COMMODITIES			10	$ 100,000.00	2	
	BASKET		0	$ -		
	PRECIOUS METALS	100	10	$ 100,000.00	2	$ 50,000.00
	TOTAL	100		$ 100,000.00	2	$ 50,000.00
REAL ESTATE AND OTHER			0	$ -	0	
	EQUITY REITS	95	0	$ -		
	MORTGAGE REITS	5	0	$ -		
	TOTAL	100		$ -	0	$ -

Rank Preferred ETF's by Sub	ETF Main Category	ETF Sub Category Preferred ETF's Only	Symbol	Description	Close	DIV (%)	YTD%	β	VLT	MMR_0	Position Value	No Shares	Postion Value	Weighted Beta	Weight Div	Weighted YTD	Weighted VLT
1	1	1100	FFTY	Innovator IBD 50 ETF	35.66	0.00	2.68	1.02	2.34	83	$ 80,000.00	2243	8%	0.08	0.00	0.21	0.1872
2	1	1100	QQQ	Invesco QQQ Trust	255.56	0.66	20.20	1.04	2.27	79	$ 80,000.00	313	8%	0.08	0.05	1.62	0.1816
1	1	1300	IVW	iShares S&P 500 Growth ETF	215.39	1.11	11.23	1.01	1.87	81	$ 40,000.00	186	4%	0.04	0.04	0.45	0.0748
2	1	1300	IJK	iShares S&P Mid-Cap 400 Growth ETF	233.48	1.04	-1.94	1.07	1.82	81	$ 40,000.00	171	4%	0.04	0.04	-0.08	0.0728
1	4	4100	XLB	Materials Select Sector SPDR Fund	61.47	2.21	0.08	1.03	1.87	89	$ 60,000.00	976	6%	0.06	0.13	0.00	0.1122
2	4	4100	XLY	Consumer Discretionary Select Sector SPDR Fund	135.54	1.30	8.07	0.99	1.92	84	$ 60,000.00	443	6%	0.06	0.08	0.48	0.1152
1	5	5100	GDXJ	VanEck Vectors Junior Gold Miners ETF	59.16	0.37	39.99	0.44	3.59	95	$ 40,000.00	676	4%	0.02	0.01	1.60	0.1436
1	3	3100	PIE	Invesco DVA Emerging Markets Momentum ETF	19.42	2.09	1.38	0.83	1.68	88	$ 120,000.00	6179	12%	0.10	0.25	0.17	0.2016
2	3	3100	GMF	SPDR S&P Emerging Asia Pacific ETF	107.43	1.83	3.92	0.78	1.56	86	$ 30,000.00	279	3%	0.02	0.05	0.12	0.0468
1	6	6100	ICVT	iShares Convertible Bond ETF	73.98	1.67	17.97	0.74	1.77	86	$ 93,333.33	1262	9%	0.07	0.16	1.68	0.1652
2	6	6100	LQD	iShares iBoxx USD Investment Grade Corporate Bond E	138.12	3.02	7.94	0.14	0.47	77	$ 93,333.33	676	9%	0.01	0.28	0.74	0.043867
3	6	6100	ZROZ	PIMCO 25+ Year Zero Coupon US Treasury Index ETF	182.48	1.41	36.86	-0.44	1.48	76	$ 93,333.33	511	9%	-0.04	0.13	3.44	0.138133
4	6	6100	TLT	iShares 20+ Year Treasury Bond ETF	169.74	1.77	25.29	-0.32	0.94	75	$ 70,000.00	412	7%	-0.02	0.12	1.77	0.0658
1	8	8100	SLV	iShares Silver Trust	21.21	0.00	27.16	0.24	2.63	94	$ 50,000.00	2357	5%	0.01	0.00	1.36	0.1315
2	8	8100	GLD	SPDR Gold Trust	178.7	0.00	25.05	0.01	1.01	78	$ 50,000.00	280	5%	0.00	0.00	1.25	0.0505

OUR PORTFOLIO PROJECT – US ETF's

A PROTOTYPE IN MOTION – HEAT MAR RADAR

RIVERSIDE ANALYTICS INC
MY US ETF PORTFOLIO WATCHLIST - HEAT MAP

BASIC TICKER INFORMATION									MARKET MODEL RANK					RADAR	FIREWALL	RADAR	TF Cross Above	PMT Diff	TR Diff	MMR Cross Above			RADAR	TF Cross Above	PMT Diff	TR Diff	MMR Cross Below			
																RADAR	60	15	20	60			RADAR	60	15	20	60			
Symbol	Date	Posture	Description	GROUP ID	ETF PROVIDER	CLOSE	DIV (%)	YTD%	MMR_0	MMR_5	MMR_10	MMR_15	MMR_20	↑	HM SHIELD	RR ↑	TF ↑	PMT ↑	TR ↑	MMR ↑	Swing Up ↑	Inv_Fish (D) ↑	Inv_Fish (W) ↑	RR ↓	TF ↓	PMT ↓	TR ↓	MMR ↓	Swing Dn ↓	Inv_Fish (D) ↓	Inv_Fish (W) ↓
GDXJ	2020-07-24	Defensive	VanEck Vectors Junior Gold Miners ETF	Industry	VanEck	59.16	0.37	39.99	95	95	93	92	90																		
SLV	2020-07-24	Defensive	iShares Silver Trust	Commodities	BlackRock	21.21		27.16	94	90	84	80	81			↑		↑													
XLB	2020-07-24	Offensive	Materials Select Sector SPDR Fund	Sector	State Street Global Advisor	61.47	2.21	0.08	89	88	79	69	59																		
PIE	2020-07-24	Defensive	Invesco DWA Emerging Markets Momentum ETF	International	Invesco	19.42	2.09	1.38	88	87	87	85	71																		
GMF	2020-07-24	Defensive	SPDR S&P Emerging Asia Pacific ETF	International	State Street Global Advisor	107.43	1.83	3.92	86	87	88	82	77																		
ICVT	2020-07-24	Defensive	iShares Convertible Bond ETF	Fixed Income	BlackRock	73.98	1.67	17.97	86	90	90	89	89																		
XLY	2020-07-24	Offensive	Consumer Discretionary Select Sector SPDR Fund	Sector	State Street Global Advisor	135.54	1.30	8.07	84	86	85	83	80																		
FFTY	2020-07-24	Offensive	Innovator IBD 50 ETF	Broad Index	Innovator Capital Managem	35.66		2.68	83	85	88	86	75																		
IVW	2020-07-24	Offensive	iShares S&P 500 Growth ETF	Broad Index	BlackRock	215.39	1.11	11.23	81	85	84	83	79																		
IJK	2020-07-24	Offensive	iShares S&P Mid-Cap 400 Growth ETF	Broad Index	BlackRock	233.48	1.04	-1.94	81	80	75	76	72																		
QQQ	2020-07-24	Offensive	Invesco QQQ Trust	Broad Index	Invesco	255.56	0.66	20.20	79	86	86	84	81																		
GLD	2020-07-24	Defensive	SPDR Gold Trust	Commodities	State Street Global Advisor	178.70		25.05	78	78	74	76	76	↑																	
LQD	2020-07-24	Defensive	iShares iBoxx USD Investment Grade Corporate Bond	Fixed Income	BlackRock	138.12	3.02	7.94	77	78	76	76	75																		
ZROZ	2020-07-24	Defensive	PIMCO 25+ Year Zero Coupon US Treasury Index ETF	Fixed Income	PIMCO	182.48	1.41	36.86	76	75	71	69	66	↑																	
TLT	2020-07-24	Defensive	iShares 20+ Year Treasury Bond ETF	Fixed Income	BlackRock	169.74	1.77	25.29	75	75	70	70	71																		
VEU	2020-07-24	Defensive	Vanguard FTSE All-World ex-US ETF	International	Vanguard	50.00	3.35	-6.98	75	69	67	64	62																		

OUR PORTFOLIO PROJECT – CANADIAN ETF's

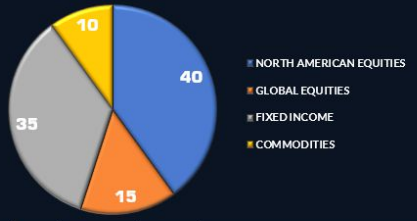
A PROTOTYPE IN MOTION

RIVERSIDE ANALYTICS INC – CDN ETF CONSERVATIVE PORTFOLIO PROTOTYPE

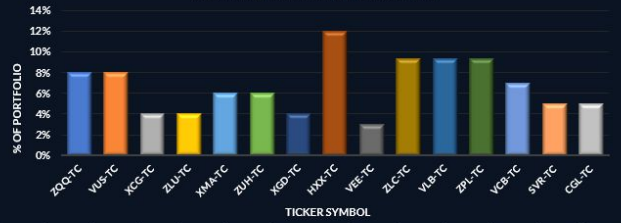
Portfolio Amount		$ 1,000,000.00
ASSET	%	$ of Total
NORTH AMERICAN EQUITIES	40	$ 400,000.00
GLOBAL EQUITIES	15	$ 150,000.00
FIXED INCOME	35	$ 350,000.00
COMMODITIES	10	$ 100,000.00
REAL ESTATE	0	$ -
CASH	0	$ -
TOTAL	100	$ 1,000,000.00

Portfolio Performance Metrics	
Allocation %	100%
Portfolio Beta	0.48
Portfolio VLT	1.24
Portfolio Dividend %	1.34
YTD %	10.72
Number of Positions	15

PORTFOLIO COMPOSITION (%)



PORTFOLIO POSITION BY WEIGHT (%)



Primary Asset	Sub-Asset	% of Asset	% of Total	$ of Total	No Positions	$ of Each Position
NORTH AMERICAN EQUITIES			40	$ 400,000.00	7	
	NA_INDEX	40	16	$ 160,000.00	2	$ 80,000.00
	NA_STYLE	20	8	$ 80,000.00	2	$ 40,000.00
	NA_SECTOR	30	12	$ 120,000.00	2	$ 60,000.00
	NA_INDUSTRY	10	4	$ 40,000.00	1	$ 40,000.00
	NA_TOTAL	100		$ 400,000.00	7	$ 220,000.00
GLOBAL EQUITIES			15	$ 150,000.00	2	
	GBL_INDEX	80	12	$ 120,000.00	1	$ 120,000.00
	GBL_STYLE	20	3	$ 30,000.00	1	$ 30,000.00
	GBL_TOTAL	100		$ 150,000.00	2	$ 150,000.00
FIXED INCOME AND DIVIDEND			35	$ 350,000.00	4	
	GOV	80	28	$ 280,000.00	3	$ 93,333.33
	CORPORATE	20	7	$ 70,000.00	1	$ 70,000.00
	TOTAL	100		$ 350,000.00	4	$ 163,333.33
COMMODITIES			10	$ 100,000.00	2	
	BASKET		0	$ -		
	PRECIOUS METALS	100	10	$ 100,000.00	2	$ 50,000.00
	TOTAL	100		$ 100,000.00	2	$ 50,000.00
REAL ESTATE AND OTHER			0	$ -	0	
	EQUITY REITS	95	0	$ -		
	MORTGAGE REITS	5	0	$ -		
	TOTAL	100		$ -	0	$ -

Rank Preffered ETF's by Sub	ETF Main Category	ETF Sub Category Preferred ETF's Only	Symbol	Description	Close	DIV (%)	YTD%	β	YLT	MMR_0	Position Value	No Shares	Postion Value	Weighted Beta	Weight Div	Weighted YTD	Weighted YLT
1	1	1100	ZQQ-TC	BMO NASDAQ 100 Equity Hedged To CAD Index ETF	76.82	0.41	19.08	0.94	2.20	84	$ 80,000.00	1041	8%	0.08	0.03	1.53	0.176
2	1	1100	VUS-TC	Vanguard U.S. Total Market Index ETF (CAD-hedged)	60.13	1.37	-2.45	0.97	1.54	81	$ 80,000.00	1330	8%	0.08	0.11	-0.20	0.1232
1	1	1300	XCG-TC	iShares Canadian Growth Index ETF	38.11	1.76	4.67	0.90	1.08	78	$ 40,000.00	1050	4%	0.04	0.07	0.19	0.0432
2	1	1300	ZLU-TC	BMO Low Volatility US Equity ETF	38.32	1.70	-1.26	0.69	1.24	64	$ 40,000.00	1044	4%	0.03	0.07	-0.05	0.0496
1	4	4100	XMA-TC	iShares S&P/TSX Capped Materials Index ETF	18.74	0.50	25.44	0.57	2.24	91	$ 60,000.00	3202	6%	0.03	0.03	1.53	0.1344
2	4	4100	ZUH-TC	BMO Equal Weight US Health Care Hedged to CAD Inde	65.74	0.30	9.31	0.90	1.61	83	$ 60,000.00	913	6%	0.05	0.02	0.56	0.0966
1	5	5100	XGD-TC	iShares S&P/TSX Global Gold Index ETF	24.12	0.13	48.07	0.24	2.91	84	$ 40,000.00	1658	4%	0.01	0.01	1.92	0.1164
1	3	3100	HXX-TC	Horizons EURO STOXX 50 Index ETF	32.74	0.00	-2.85	0.76	1.11	86	$ 120,000.00	3665	12%	0.09	0.00	-0.34	0.1332
2	3	3100	VEE-TC	Vanguard FTSE Emerging Markets All Cap Index ETF	34.56	2.40	-0.66	0.76	1.41	85	$ 30,000.00	868	3%	0.02	0.07	-0.02	0.0423
1	6	6100	ZLC-TC	BMO Long Corporate Bond Index ETF	20.69	3.78	6.70	0.23	0.54	82	$ 93,333.33	4511	9%	0.02	0.35	0.63	0.0504
2	6	6100	VLB-TC	Vanguard Canadian Long-Term Bond Index ETF	30.71	2.66	11.15	0.01	0.46	78	$ 93,333.33	3039	9%	0.00	0.25	1.04	0.042933
3	6	6100	ZPL-TC	BMO Long Provincial Bond Index ETF	18.67	2.89	10.80	0.07	0.49	78	$ 93,333.33	4999	9%	0.01	0.27	1.01	0.045733
4	6	6100	VCB-TC	Vanguard Canadian Corporate Bond Index ETF	26.58	2.70	4.52	0.04	0.21	77	$ 70,000.00	2634	7%	0.00	0.19	0.32	0.0147
1	8	8100	SVR-TC	iShares Silver Bullion ETF	12.04	0.00	27.41	0.32	2.43	95	$ 50,000.00	4153	5%	0.02	0.00	1.37	0.1245
2	8	8100	CGL-TC	iShares Gold Bullion ETF	15.9	0.00	24.90	0.06	1.01	81	$ 50,000.00	3145	5%	0.00	0.00	1.25	0.0505

OUR PORTFOLIO PROJECT – CANADIAN ETF's

A PROTOTYPE IN MOTION – HEAT MAR RADAR

RIVERSIDE ANALYTICS INC
MY CDN ETF PORTFOLIO WATCHLIST - HEAT MAP

BASIC TICKER INFORMATION										FIREWALL	RADAR	TF Cross Above	PMT Diff	TR Diff	MMR Cross Above				RADAR	TF Cross Above	PMT Diff	TR Diff	MMR Cross Below			
												60	15	20	60					60	15	20	60			
Symbol	Date	Posture	Description	GROUP ID	ETF PROVIDER	CLOSE	DIV (%)	YTD%	HM SHIELD	RR ↑	TF ↑	PMT ↑	TR ↑	MMR ↑	Swing Up ↑	Inv_Fish (D) ↑	Inv_Fish (W) ↑	RR ↓	TF ↓	PMT ↓	TR ↓	MMR ↓	Swing On ↓	Inv_Fish (D) ↓	Inv_Fish (W) ↓
ZQQ-TC	2020-07-24	Offensive	BMO NASDAQ 100 Equity Hedged To CAD Index ETF	Broad Index	BMO	76.82	0.41	19.08																	
VUS-TC	2020-07-24	Offensive	Vanguard U.S. Total Market Index ETF (CAD-hedged)	Broad Index	Vanguard Canada	60.13	1.37	-2.45																	
XCG-TC	2020-07-24	Offensive	iShares Canadian Growth Index ETF	Broad Index	BlackRock/iShares	38.11	1.76	4.67																	
ZLU-TC	2020-07-24	Defensive	BMO Low Volatility US Equity ETF	Broad Index	BMO	38.32	1.70	-1.26																	
XMA-TC	2020-07-24	Defensive	iShares S&P/TSX Capped Materials Index ETF	Sector	BlackRock/iShares	18.74	0.50	25.44																	
ZUH-TC	2020-07-24	Offensive	BMO Equal Weight US Health Care Hedged to CAD Inc	Sector	BMO	65.74	0.30	9.31																	
XGD-TC	2020-07-24	Defensive	iShares S&P/TSX Global Gold Index ETF	Industry	BlackRock/iShares	24.12	0.13	48.07																	
HXX-TC	2020-07-24	Defensive	Horizons EURO STOXX 50 Index ETF	International	Horizons ETF	32.74		-2.85																	
VEE-TC	2020-07-24	Defensive	Vanguard FTSE Emerging Markets All Cap Index ETF	International	Vanguard Canada	34.56	2.40	-0.66																	
ZLC-TC	2020-07-24	Defensive	BMO Long Corporate Bond Index ETF	Fixed Income	BMO	20.69	3.78	6.70																	
VLB-TC	2020-07-24	Defensive	Vanguard Canadian Long-Term Bond Index ETF	Fixed Income	Vanguard Canada	30.71	2.66	11.15																	
ZPL-TC	2020-07-24	Defensive	BMO Long Provincial Bond Index ETF	Fixed Income	BMO	18.67	2.89	10.80																	
VCB-TC	2020-07-24	Defensive	Vanguard Canadian Corporate Bond Index ETF	Fixed Income	Vanguard Canada	26.58	2.70	4.52																	
SVR-TC	2020-07-24	Defensive	iShares Silver Bullion ETF	Commodities	BlackRock/iShares	12.04		27.41																	
CGL-TC	2020-07-24	Defensive	iShares Gold Bullion ETF	Commodities	BlackRock/iShares	15.90		24.90																	



https://towardsdatascience.com/how-to-create-your-own-question-answering-system-easily-with-python-2ef8abc8eb5

QUESTION AND ANSWER PERIOD

- QUESTIONS ON THE HEAT MAP RADAR??

THAT'S IT FOR TODAY!



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RIVERSIDE ANALYTICS INC
SLIDE DECK

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