



## TPA-RRG Report

- **What is hot and what is not.**

TPA-RRG captures the inevitable movement of stocks into and out of favor.

- **Scores and ranking**

Clients can quickly see which stocks are showing the best and worst relative strength characteristics. TPA found that using RRG's was very beneficial, but took some time to parse through, so we simplified the process by creating a score for each stock and sector.

- **The best of both worlds – RRG & TPA**

Now, clients can use TPA-RRG scores and rankings to identify stocks that are not only moving into favor, but are also technically positive.

- ***TPA-RRG analyzes every stock in the Russell 1000 and 25 major sector & subsector ETFs***



*Find more in-depth explanations and links to instructional videos below.*

## THE REPORT

### TPA-RRG Weekly Commentary

### Top 20-Bottom 20

Top 20: TECH and Consumer

Bottom 20: Health Care, Financial, Energy

### RBLX – good example of top-rated stock



## CEG – good example of bottom-rated stock



## Sectors

As the Financials move to the bottom of the rank and lose relative strength and momentum and head toward the Lagging quadrant, TECH-related stocks, especially larger cap companies are outperforming. The Financial crisis of the past 2 weeks has hit the large sector hard and let in the possibility that the FE may have to slow down its hawkish actions to ensure market stability. This benefits TECH and other high-growth stocks that have been more susceptible to the pain of higher rates. Large-cap TECH stocks have the added benefit of their size and liquidity.

## Market

This week may decide the fate of the market for the next quarter – watch the recent support at S&P500 3950 and 4000. The fallout from SIVB, etc.... has so far forestalled recovery.

## S&P500



## TPA-RRG TOP 20 & BOTTOM 20 (table below)

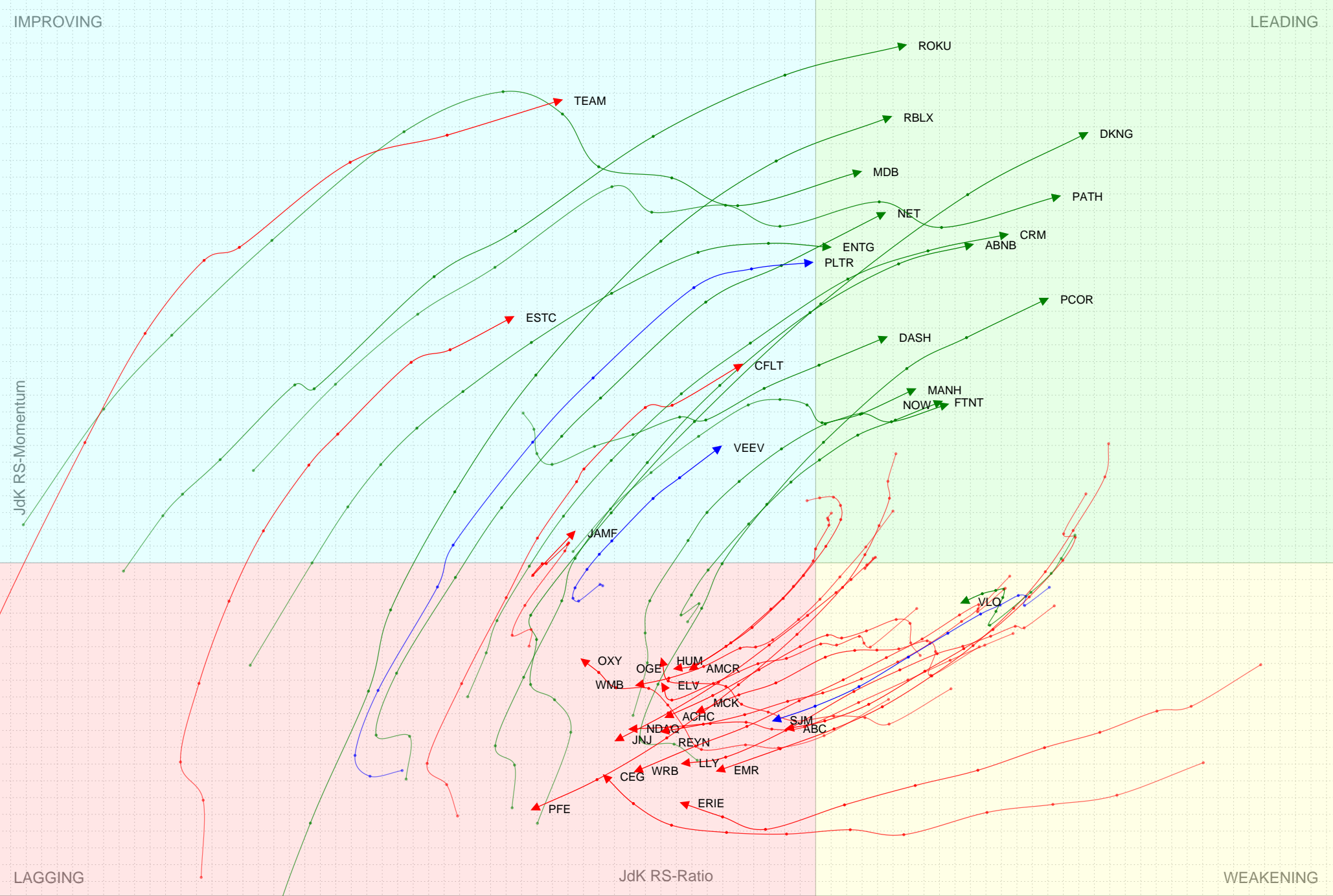
Buy	Prices as of 3/17/21							STOCK	SECTOR	TOTAL
Sell				TOP 20				TPA-RRG	TPA-RRG	TPA-RRG
Code	Name	Last	RRG Ratio	RRG Momentum	Quadrant	Mkt Cap (\$MIL)	TPA Sector	SCORE	SCORE	SCORE
MDB	MongoDB Inc	219.77	101.39	111.65	Leading	\$15,227	Technology	4.80	2.26	7.06
RBLX	Roblox Corporation - Ordinary Shar	43.69	102.36	113.28	Leading	\$26,250	Technology	4.65	2.26	6.90
MANH	Manhattan Associates Inc.	143.46	103.15	105.16	Leading	\$8,966	Tech-Software	4.54	2.29	6.83
NOW	ServiceNow Inc	441.00	104.20	104.71	Leading	\$89,523	Tech-Software	4.46	2.29	6.76
CRM	Salesforce Inc	184.85	106.13	109.78	Leading	\$184,850	Technology	4.43	2.26	6.69
FTNT	Fortinet Inc	61.22	104.01	104.79	Leading	\$48,001	Technology	4.35	2.26	6.61
PCOR	Procore Technologies Inc	60.31	107.43	107.85	Leading	\$8,459	Technology	4.30	2.26	6.56
NET	CloudFlare Inc	54.53	102.17	110.41	Leading	\$18,022	Cyber Security	4.76	1.71	6.47
ROKU	Roku Inc	64.24	102.84	115.43	Leading	\$9,001	Communication Services	4.57	1.64	6.21
PATH	UiPath Inc - Ordinary Shares - Class	17.05	107.81	110.92	Leading	\$9,426	Communication Services	4.54	1.64	6.18
ABNB	Airbnb Inc - Ordinary Shares - Class	118.15	105.00	109.48	Leading	\$74,662	Consumer Discretionary	4.44	1.71	6.15
DKNG	DraftKings Inc. - Ordinary Shares - C	17.87	108.71	112.79	Leading	\$8,071	Consumer Discretionary	4.41	1.71	6.11
CFLT	Confluent Inc - Ordinary Shares Clas	21.88	97.56	105.88	Improving	\$5,921	Technology	3.66	2.26	5.92
VEEV	Veeva Systems Inc	172.63	96.88	103.43	Improving	\$26,876	Internet	3.53	2.26	5.79
DASH	DoorDash Inc - Ordinary Shares - Cl	59.64	102.22	106.71	Leading	\$23,155	Retail	4.69	1.06	5.75
PLTR	Palantir Technologies Inc - Ordinary	7.88	99.82	108.95	Improving	\$16,414	Tech-Software	3.36	2.29	5.66
TEAM	Atlassian Corporation Plc	158.25	91.73	113.78	Improving	\$40,727	Technology	3.36	2.26	5.62
ENTG	Entegris Inc	81.66	100.40	109.41	Leading	\$12,199	Technology	3.35	2.26	5.60
JAMF	Jamf Holding Corp	19.79	92.17	100.88	Improving	\$2,442	Tech-Software	3.26	2.29	5.56
ESTC	Elastic N.V	54.90	90.17	107.31	Improving	\$5,297	Tech-Software	3.25	2.29	5.54

Buy	Prices as of 3/17/21							STOCK	SECTOR	TOTAL
Sell				BOTTOM 20				TPA-RRG	TPA-RRG	TPA-RRG
HUM	Humana Inc.	495.55	95.04	97.08	Lagging	\$61,931	Health Care	-2.12	-1.63	-3.75
WMB	Williams Cos Inc	28.30	94.27	96.36	Lagging	\$34,485	Energy	-2.07	-1.79	-3.86
OXY	Occidental Petroleum Corp.	58.48	92.50	97.09	Lagging	\$52,636	Energy	-2.08	-1.79	-3.87
VLO	Valero Energy Corp.	126.37	104.77	98.83	Weakening	\$46,902	Energy	-2.08	-1.79	-3.87
OGE	Oge Energy Corp.	35.68	95.51	96.85	Lagging	\$7,144	Utilities	-3.10	-1.02	-4.11
AMCR	Arcor PLC	10.70	96.00	96.84	Lagging	\$15,898	Materials	-3.07	-1.17	-4.24
PFE	Pfizer Inc.	40.10	90.90	92.67	Lagging	\$225,325	Pharmaceutical	-3.11	-1.30	-4.41
EMR	Emerson Electric Co.	80.84	96.88	93.81	Lagging	\$46,192	Industrial	-3.45	-1.13	-4.58
NDAQ	Nasdaq Inc	52.75	94.06	95.04	Lagging	\$25,795	Financial	-3.19	-1.44	-4.63
WRB	W.R. Berkley Corp.	61.00	94.23	93.80	Lagging	\$16,070	Financial	-3.23	-1.44	-4.67
ERIE	Erie Indemnity Co.	229.23	95.72	92.82	Lagging	\$10,675	Financial	-3.27	-1.44	-4.71
JNJ	Johnson & Johnson	152.38	93.60	94.73	Lagging	\$396,842	Health Care	-3.11	-1.63	-4.74
ELV	Elevance Health Inc	463.17	95.07	96.34	Lagging	\$109,983	Health Care	-3.14	-1.63	-4.77
ACHC	Acadia Healthcare Company Inc	69.46	95.22	95.42	Lagging	\$6,343	Health Care	-3.19	-1.63	-4.82
REYN	Reynolds Consumer Products Inc	26.63	95.08	94.98	Lagging	\$5,589	Consumer Staples	-3.22	-1.60	-4.82
MCK	Mckesson Corporation	339.35	96.22	95.57	Lagging	\$46,470	Health Care	-3.25	-1.63	-4.88
LLY	Eli Lilly & Co	329.18	95.76	94.02	Lagging	\$312,818	Health Care	-3.26	-1.63	-4.89
CEG	Constellation Energy Corporation	76.77	93.21	93.62	Lagging	\$25,114	Energy	-3.22	-1.79	-5.01
ABC	Amerisource Bergen Corp.	152.02	99.12	95.06	Lagging	\$30,747	Health Care	-3.41	-1.63	-5.04
SJM	J.M. Smucker Co.	151.88	98.70	95.31	Lagging	\$16,196	Consumer Staples	-3.46	-1.60	-5.06

Relative Rotation Graph for Top 20 and Bottom 20 is provided below.

Also, use the following link that shows RRG over time - how stocks move in and out of favor over time:

<https://youtu.be/Ceas3h36> to



74.0 74.5 75.0 75.5 76.0 76.5 77.0 77.5 78.0 78.5 79.0 79.5 80.0 80.5 81.0 81.5 82.0 82.5 83.0 83.5 84.0 84.5 85.0 85.5 86.0 86.5 87.0 87.5 88.0 88.5 89.0 89.5 90.0 90.5 91.0 91.5 92.0 92.5 93.0 93.5 94.0 94.5 95.0 95.5 96.0 96.5 97.0 97.5 98.0 98.5 99.0 99.5 100.0 100.5 101.0 101.5 102.0 102.5 103.0 103.5 104.0 104.5 105.0 105.5 106.0 106.5 107.0 107.5 108.0 108.5 109.0 109.5 110.0 110.5 111.0 111.5 112.0 112.5 113.0 113.5 114.0 114.5 115.0 115.5 116.0 116.5

## **TPA Relative Rotation Fund**

<https://realinvestmentadvice.com/tpa-rrg-report-relative-rotation-graphs-scores-rankings/>

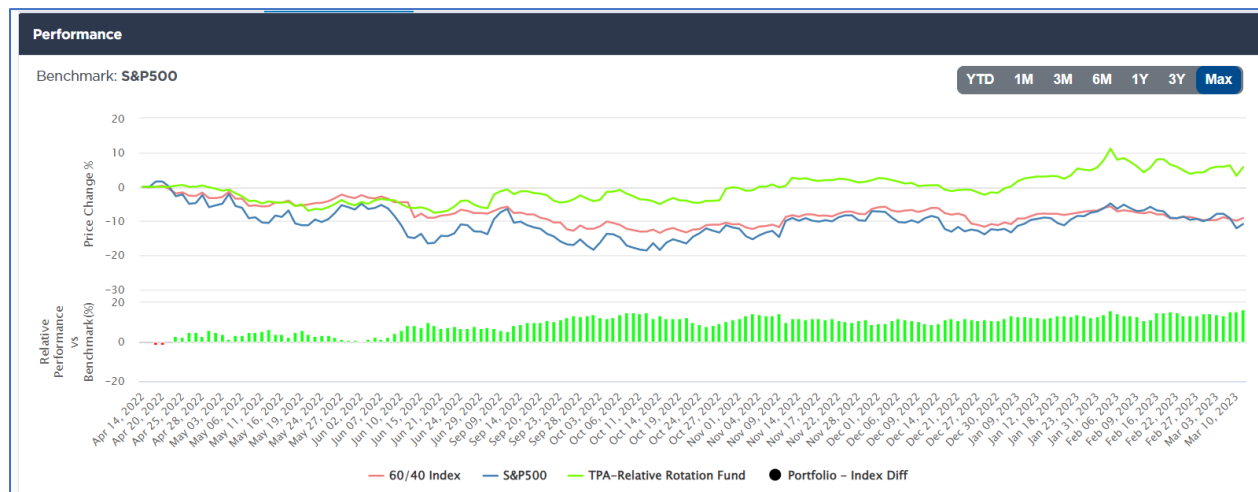
(See the explanation and performance comparisons to the S&P500 and a 60/40 Index below.)

### **Most recent performance:**

#### **Since inception (4/22/22)**



#### **Year to date (2023)**



### **TPA Relative Rotation Fund explanation:**

The Relative Rotation Fund is created using the weekly Top and Bottom ranked stocks in the TPA-RRG report. The fund holds 60 stocks; 30 long and 30 short. The portfolio is created by buying the Top 10 and selling short the Bottom 10 ranked stocks each week. Screens are used to ensure that overbought and oversold stocks are not included. Long positions have twice the weight of short positions. This is a nod to history, which has shown that stocks go approximately up twice as much as down on a daily basis. Since new stocks are added each week, each position is held for 3 weeks. Rebalancing occurs as close as possible to Friday's closing prices.

**TPA-RRG 27 SECTOR ETFS**

TPA-RRG U.S. SECTOR & SUBSECTOR ETFS			2/24/23				
Code	Name	Last	RRG Ratio	RRG Momentum	Quadrant	TPA-RRG SCORE	
IGV	Software	286.13	101.90	103.16	Leading	4.59	
FDN	Internet	139.43	102.17	103.42	Leading	4.53	
XLK	TECH	143.46	102.17	102.79	Leading	4.51	
HACK	Cyber Security	45.12	98.54	101.04	Improving	3.43	
XLY	Consumer Discretionary	141.34	97.91	103.13	Improving	3.41	
XLC	Communications	55.01	102.97	103.44	Leading	3.28	
SMH	SEMI	250.32	108.16	103.71	Leading	3.02	
CLOU	Cloud Computing	16.96	102.47	102.15	Leading	2.16	
SOCL	Social Media	34.79	110.37	102.57	Leading	2.13	
XRT	Retail	60.60	102.42	100.79	Leading	2.12	
IYT	Transportation	219.63	101.54	100.58	Leading	2.10	
ITB	Home Construction	67.74	108.79	100.97	Leading	2.06	
IYR	Real Estate	82.06	99.20	100.79	Improving	1.69	
XLU	Utilities	66.97	95.43	97.68	Lagging	-2.04	
MOO	Agribusiness	82.73	98.23	98.91	Lagging	-2.04	
TAN	Solar	69.41	97.16	98.93	Lagging	-2.09	
XOP	Oil&Gas E&P	117.66	93.92	97.08	Lagging	-2.09	
XME	Metals & Mining	49.49	105.42	99.20	Weakening	-2.16	
ITA	Aerospace & Defense	110.46	102.93	98.32	Weakening	-2.20	
XLI	Industrial	96.67	101.96	98.38	Weakening	-2.25	
OIH	Oil Services	257.59	106.43	95.92	Weakening	-2.27	
XLB	Materials	75.51	101.92	98.44	Weakening	-2.33	
PPH	Pharma	73.95	100.87	97.65	Weakening	-2.60	
XLF	Financials	30.98	100.54	98.18	Weakening	-2.88	
XLP	Staples	72.11	97.55	97.48	Lagging	-3.20	
XLV	Health Care	125.86	97.38	96.61	Lagging	-3.26	
XLE	Energy	76.97	98.55	95.96	Lagging	-3.58	

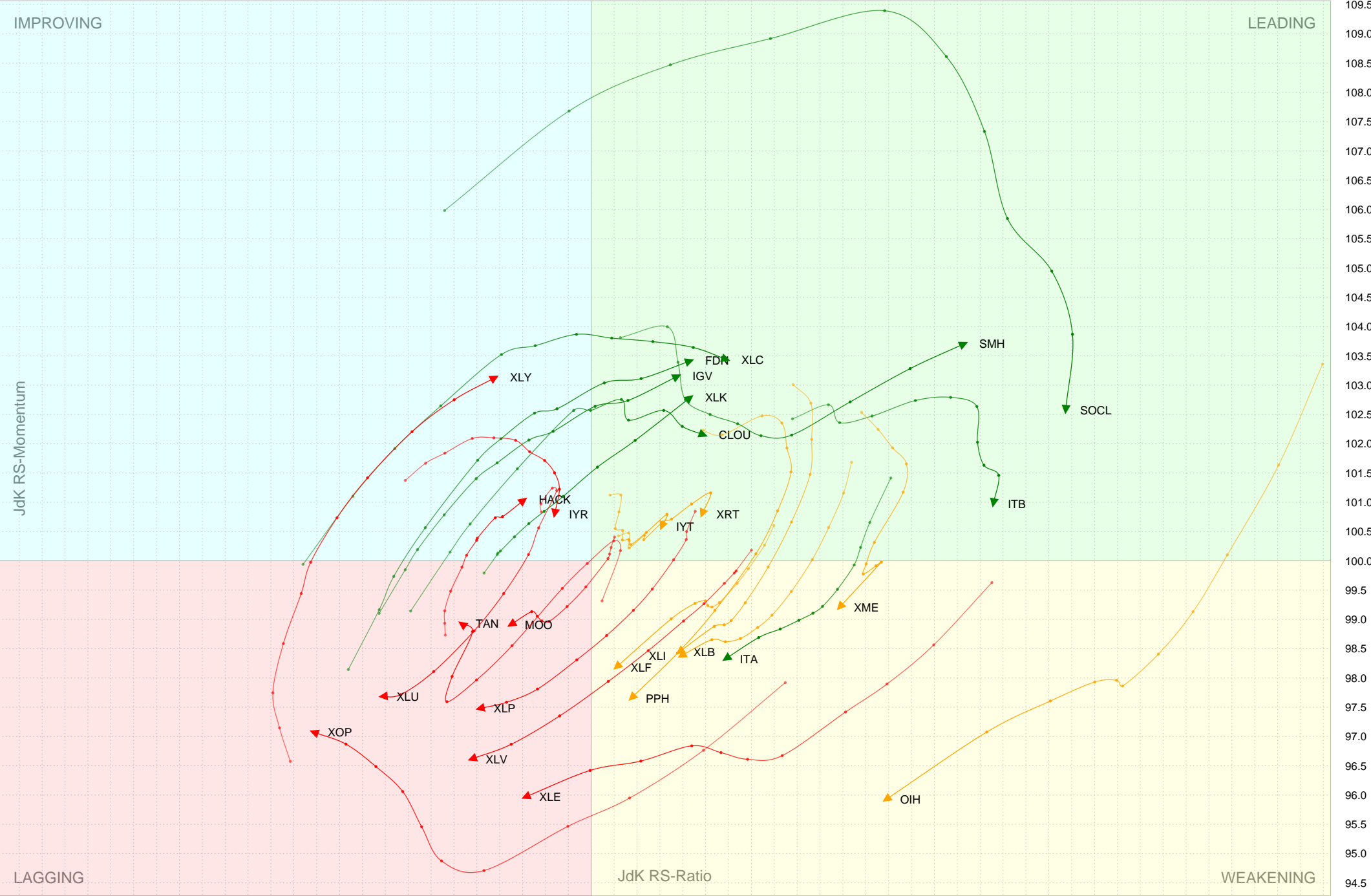
TPA-RRG U.S. SECTOR & SUBSECTOR ETFS - HISTORY																						
	7/25/22	7/31/22	8/8/22	8/15/22	8/22/22	8/29/22	9/5/22	9/12/22	9/19/22	9/26/22	10/3/22	10/10/22	10/17/22	10/24/22	10/28/22	11/4/22	11/11/22	11/18/22	11/25/22	12/2/22		
Rank	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code		
1	HACK	XLK	XLK	XLV	XLK	ITB	IYT	XLV	XLV	XLV	XME	OIH	XLV	OIH	OIH	OIH	XME	PPH	XME	XRT		
2	XLK	XLV	XLK	XLK	IYT	XLV	ITB	SMH	XLV	IYT	OIH	XME	OIH	MOO	HACK	PPH	OIH	XLB	XLB	XLB		
3	IGV	IGV	HACK	XRT	XLV	XLK	XLV	IYT	IYT	XLV	MOO	XLV	MOO	MOO	MOO	XLV	XRT	XRT	MOO	XME		
4	XLV	HACK	FDN	FDN	FDN	IYT	XLK	XRT	XRT	XRT	XLV	HACK	XME	XLV	XME	XLV	XME	XRT	XRT	SMH		
5	CLOU	FDN	CLOU	CLOU	XRT	FDN	XLV	XLV	XLK	CLOU	XLV	XRT	XLV	HACK	XLV	XLV	PPH	OIH	PPH	ITA		
6	FDN	XRT	XRT	HACK	TAN	TAN	TAN	XLK	SMH	XLV	CLOU	MOO	XLV	XLV	CLOU	ITA	HACK	XLV	ITA	XLV		
7	SMH	ITB	IGV	ITB	IGV	IGV	FDN	ITB	XLV	ITB	XLV	CLOU	XOP	XLV	XLV	XLV	CLOU	ITA	XLV	ITB		
8	ITB	TAN	TAN	TAN	ITB	XRT	SMH	FDN	ITB	XLK	TAN	XLV	XLV	XLV	XLV	XME	ITA	XLV	XLV	PPH		
9	TAN	CLOU	ITB	IGV	CLOU	CLOU	XRT	XLV	FDN	FDN	ITB	ITB	ITA	XOP	ITA	XOP	XLV	XLV	OIH	XLV		
10	XLV	SMH	SMH	XLV	HACK	SMH	CLOU	IGV	CLOU	SMH	XLK	XOP	XLV	ITA	XLV	XLV	XLV	MOO	XOP	OIH		
11	XLV	XLV	SOCL	SMH	XLV	XLV	IGV	CLOU	IGV	IGV	XOP	XLV	XRT	XLV	XOP	MOO	XLV	XLV	XLV	XLV		
12	XRT	SOCL	XLV	SOCL	SMH	HACK	HACK	XME	XME	MOO	FDN	XLV	ITB	XLV	XLV	XLV	MOO	XLV	XLV	XLV		
13	SOCL	IYT	IYT	IYT	SOCL	XLV	XLV	SOCL	OIH	OIH	IYT	FDN	XLV	XLV	FDN	CLOU	XLV	XOP	XLV	XLV		
14	IYT	XLV	XLV	XLV	XLV	SOCL	XLV	XOP	MOO	XME	XRT	IYT	HACK	FDN	XLV	HACK	XOP	HACK	ITB	XOP		
15	ITA	ITA	XLV	XLV	XLV	XLV	XOP	HACK	XLV	XLV	XLV	XLV	FDN	CLOU	XRT	FDN	FDN	CLOU	HACK	MOO		
16	XLV	XLV	ITA	XLV	XLV	XLV	XLV	XLV	XLV	SOCL	IGV	XLV	IYT	XRT	PPH	XLV	SMH	FDN	IYT	HACK		
17	PPH	XLV	XLV	ITA	XLV	XOP	XLV	XLV	XLV	HACK	SMH	SOCL	CLOU	PPH	IYT	IYT	ITB	SMH	SMH	IYT		
18	XLV	XLV	XLV	XLV	IYR	XLV	SOCL	TAN	XOP	TAN	XLV	XLV	XLV	XLV	XLV	XLV	XLV	ITB	FDN	SOCL		
19	XOP	XOP	XLV	XLV	XLV	XLV	ITA	XLV	HACK	XLV	HACK	ITA	XLV	IYT	SOCL	IGV	SOCL	XLV	CLOU	FDN		
20	XLV	PPH	PPH	PPH	ITA	ITA	XLV	XLV	XLV	ITA	XLV	SMH	IGV	IGV	SMH	SOCL	IYT	IGV	XLV	CLOU		
21	XLV	XLV	XOP	XLV	PPH	XLV	OIH	XLV	SOCL	XOP	ITA	IGV	SMH	SMH	IYR	SMH	IYR	SOCL	SOCL	XLV		
22	XME	OIH	XLV	XOP	XLV	PPH	XME	ITA	TAN	XLV	XLV	IYR	SOCL	SOCL	IGV	IYR	IGV	IYT	IGV	IYR		
23	MOO	XLV	XME	IYR	XOP	OIH	IYR	XLV	IYR	XLV	SOCL	XLV	IYR	IYR	ITB	TAN	XLV	IYR	IYR	IGV		
24	OIH	MOO	IYR	XME	XME	XLV	XLV	IYR	XLV	IYR	XLV	XLV	TAN	TAN	TAN	XLV	TAN	XLV	XLV	XLV		
25	XLV	XLV	MOO	MOO	XLV	XME	PPH	MOO	ITA	XLV	IYR	TAN	XLV	XLV	ITB	XLV	TAN	TAN	TAN	TAN		
26	XLV	IYR	XLV	XLV	MOO	MOO	XLV	OIH	XLV	XLV	XLV	PPH	PPH	ITB	XLV	XLV	XLV	XLV	XLV	XLV		
27	IYR	XME	OIH	OIH	OIH	IYR	MOO	PPH	PPH	PPH	PPH	XLV	XLV	XLV	XLV	XLV	XLV	XLV	XLV	XLV		

TPA-RRG U.S. SECTOR & SUBSECTOR ETFs - HISTORY																					
	12/9/22	12/16/22	12/23/22	12/30/22	1/6/23	1/13/23	1/20/23	1/27/23	2/3/23	2/10/23	2/17/23	2/24/23	3/3/23	3/10/23	3/17/23						
Rank	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code		Code	Code	Code	Code	Code
1	MOO	PPH	PPH	IYT	IYT	SMH	SOCL	SOCL	SOCL	FDN	CLOU	XLK	XLK	XLK	IGV						
2	XRT	XLB	XLB	PPH	SMH	IYT	XLV	CLOU	CLOU	XLK	IGV	IGV	IGV	IGV	FDN						
3	XLB	IYT	SMH	XLV	SOCL	XLV	SOCL	FDN	XLK	FDN	XLK	FDN	XLK	FDN	FDN	XLK					
4	IYT	SMH	MOO	SMH	SOCL	CLOU	CLOU	FDN	XLK	IGV	XLK	FDN	CLOU	XLV	HACK						
5	SMH	MOO	SOCL	SOCL	IYR	XLV	SMH	IGV	IGV	SOCL	XLV	XLV	XLV	XLV	XLV						
6	PPH	SOCL	IYR	IYR	PPH	XLV	IYT	IYR	XLK	HACK	XLV	CLOU	XLV	CLOU	XLV						
7	SOCL	XRT	IYT	XRT	XLV	IYR	IYR	IYT	IYR	ITB	HACK	SMH	HACK	HACK	SMH						
8	ITA	XLV	XRT	MOO	XME	XRT	IGV	SMH	ITB	IYT	IYT	XRT	SMH	SMH	CLOU						
9	XLV	ITB	ITA	XLV	ITB	ITB	PPH	ITB	XRT	CLOU	XRT	HACK	XRT	XRT	SOCL						
10	ITB	XLV	XLV	XLV	XLV	MOO	XLK	XLK	IYT	SMH	SOCL	PPH	IYT	IYT	XRT						
11	XLV	XME	ITB	ITB	XRT	XLV	MOO	MOO	SMH	XME	PPH	SOCL	SOCL	SOCL	IYT						
12	XME	OIH	XME	XLV	MOO	ITA	XRT	XLV	XLV	IYR	SMH	IYT	ITB	ITB	ITB						
13	XOP	XLV	XLV	XME	OIH	OIH	XLV	XRT	PPH	PPH	IYR	IYR	IYR	IYR	IYR						
14	OIH	XLV	OIH	OIH	ITA	PPH	OIH	XLV	XME	XRT	ITB	ITB	TAN	TAN	XLV						
15	XLV	ITA	XLV	ITA	XLV	XLV	XLV	XLV	XLV	XLV	XLV	XLV	XME	XME	MOO						
16	XLV	XLV	XLV	XLV	XLV	XLV	ITA	PPH	HACK	XLV	OIH	XLV	XLV	XLV	TAN						
17	XLV	IYR	XLV	XLV	XLV	XLV	ITB	XME	XLV	XLV	XLV	OIH	XLV	XLV	XOP						
18	XLK	XLK	XLV	TAN	TAN	XLV	XLV	XLV	OIH	ITA	XME	XLV	XLV	XLV	XME						
19	IYR	HACK	XLK	HACK	TAN	XME	XME	TAN	ITA	ITA	XME	ITA	OIH	ITA	ITA						
20	HACK	FDN	CLOU	FDN	HACK	FDN	TAN	XLV	XLV	XLV	XLV	XLV	XLV	XLV	MOO	OIH					
21	CLOU	CLOU	TAN	CLOU	XLK	IGV	FDN	HACK	XLV	XLV	XLV	XLV	XLV	XLV	XLV						
22	FDN	IGV	FDN	XLV	IGV	TAN	HACK	ITA	XLV	XLV	XLV	XLV	XLV	XOP	XLV						
23	IGV	XLV	XLV	XLV	CLOU	HACK	XLV	OIH	XLV	XLV	XLV	XLV	PPH	XLV	PPH						
24	XLV	XLV	HACK	IGV	XLV	XLV	XLV	XLV	XLV	XLV	XLV	TAN	MOO	PPH	XLV						
25	XLV	XOP	IGV	XLV	FDN	XLV	XLV	XLV	TAN	TAN	TAN	MOO	MOO	XLV	XLV						
26	XLV	TAN	XLV	XLV	XLV	XLV	XLV	XLV	XOP	XOP	XOP	XOP	XLV	XLV	XLV						
27	TAN	XLV	XOP	XOP	XOP	XOP	XOP	XOP	MOO	MOO	MOO	XLV	XLV	XLV	XLV						

Relative Rotation Graph for 27 major sector & subsector ETFs provided below.

Also, use the following link that shows RRG over time - how sectors & subsectors move in and out of favor over time: <https://youtu.be/Z6fLiNmHAAw>





87.5 88.0 88.5 89.0 89.5 90.0 90.5 91.0 91.5 92.0 92.5 93.0 93.5 94.0 94.5 95.0 95.5 96.0 96.5 97.0 97.5 98.0 98.5 99.0 99.5 100.0 100.5 101.0 101.5 102.0 102.5 103.0 103.5 104.0 104.5 105.0 105.5 106.0 106.5 107.0 107.5 108.0 108.5 109.0 109.5 110.0 110.5 111.0 111.5 112.0 112.5 113.0 113.5 114.0 114.5 115.0 115.5 116.0



Click [HERE](#) for the entire Russell 1000 TPA-RRG Score and Rank Report.

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### What are RRGs?

Julius de Kempnaer developed Relative Rotational Graphs (RRG) in 2004 and thousands of investors use RRGs. *“Relative Rotation Graphs, commonly called RRGs, are a unique **visualization tool for relative strength analysis**. Chartists can use RRGs to analyze the relative strength trends of several securities against a common benchmark, and against each other. The real power of this tool is its ability to plot relative performance on one graph and show true rotation. We have all heard of sector and asset class rotation, but it is hard to visualize this “rotation” sequence on linear charts. **RRGs use four quadrants to define the four phases of a relative trend. True rotations can be seen as securities move from one quadrant to the other over time.**”* - Stockcharts

### What are TPA-RRG scores?

TPA recognizes the power of RRGs to highlight stocks and sectors moving in and out of favor, but also notes the shortcoming of having to examine many RRGs to decide where to invest. TPA has developed TPA-RRG Scores to be able to rank stocks and sectors in terms of relative strength. *TPA-RRG scores are constructed to focus on stocks and sectors as they move from negative to positive and positive to negative.* Scoring also allows ranking so investors can focus on the best and worst areas of the market.

### How are TPA-RRG scores created?

TPA uses not only the **RS Ratio** and **RS Momentum** of each stock to make its forecast, but TPA also uses certain characteristics on each stock's RS to calculate its score. The following measures are used to calculate the TPA-RRG score:

1. **RRG ANGLE** - Represents the current position of the security on the RRG chart based on the points of the compass:
  - 0-90 Degrees = Leading Quadrant
  - 90-180 Degrees = Weakening Quadrant
  - 180-270 Degrees = Lagging Quadrant
  - 270-360 Degrees = Improving Quadrant
2. **RRG DISTANCE** - This number represents how far away the security is from the center of the RRG chart (ie the benchmark). One of the observations is that higher alpha comes from those components that make bigger arcs around the benchmark. We will ignore those closest to the center.
3. **RRG ANGLE ROC** - The Angle Rate of Change measures the distance of the angle of the current data point of a security, to the previous data point. The greater the value, the larger the distance between the two data points.
4. **RRG HEADING** - This is the direction that the arrow is pointing to (where the RS is headed), again based on the points of the compass, and is one of the most useful measures:

- 0 degrees = North (up) - positive
  - 45 degrees = Northeast – less positive
  - 90 degrees = East (right) - positive
  - 180 degrees = South (down) - negative
  - 270 degrees = West (left) - negative
5. **RRG VELOCITY** This is the vector difference – or distance – between the last two data points on the line; with the longest having the highest relative momentum:

#### How investors can use TPA-RRG

1. The Sector analysis lets clients focus on the best and avoid the worst areas of the market
2. TPA-RRG ranks the entire Russell 1000 and provides the Top 20 and Bottom 20 stocks so investors can see the best and worst stocks to make sure they are taking advantage of opportunities and not getting into trouble.
3. We also look at the top and bottom stocks through a standard technical analysis to avoid stocks that are overbought, oversold or at other technical trouble spots.
4. Finally, we provide TPA-RRG Scores and rankings for the stocks in the most used 25 sector and subsector ETFs. This analysis is especially helpful for investors who are focused on specific areas of the market.

You can learn more about RRGs with these links:

[Relative Rotation Graphs \(RRG\) – explanation video](#)

[RRG – written explanation](#)

#### Included in the Weekly TPA-RRG Report

1. The weekly TPA RRG Report will provide RRG Scores, Rankings, RRG and a RRG Video for:
  - 25 Major Sector and Subsector ETFs
  - Top 20 & Bottom 20 stocks in the Russell 1000 - based on TPA's RRG and Trend-Range analysis
2. The report will also include:
  - TPA RRG scores and rankings for the *focus stocks* in the 11 major sectors ETFs and 14 major subsectors ETFs. *Provided in a separate PDF*
3. ***Finally, TPA will provide a weekly commentary on TPA-RRG Scores and Rankings***

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#### **Turning Point Analytics Disclaimer**

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*which to base an investment decision. Investors should not rely on technical analysis alone while making an investment decision. Before making an investment decision, investors should consider reviewing all publicly available information regarding the security in question, including, but not limited to, the underlying fundamentals of the security and other information which is available in filings with the Securities and Exchange Commission. The information and analysis contained in reports provided by TPA are copyrighted and may not be duplicated or redistributed for any reason without the express written consent of TPA. The information in this communication is for institutional or sophisticated investors only. By accepting this communication, the recipient agrees not to forward, and/or copy the information to any other person, except as permitted, or required by law. TPA does not guarantee accuracy or completeness. TPA is a publisher of technical research and has no investment banking or advisory relationship with any company mentioned in any report. Reports are neither a solicitation to buy nor an offer to sell securities. Past performance is in no way indicative of future results. Opinions expressed are subject to change without notice. TPA will provide, upon request, the details of any past recommendations. TPA's analysis and recommendations should not be used as the sole reason to buy or sell any security. TPA may compensate brokers and intermediaries for sales and marketing services. You understand and acknowledge that there is a very high degree of risk involved in trading securities and/or currencies. The Company, the authors, the publisher, and all affiliates of Company assume no responsibility or liability for your trading and investment results. It should not be assumed that the methods, techniques, or indicators presented will be profitable or that they will not result in losses. Statements, data, and analysis made by TPA or in its publications, are made as of the date stated and are subject to change without notice. TPA and/or its officers and employees may, from time to time acquire, hold, or sell a position in the securities mentioned herein. Upon request, TPA will furnish specific information in this regard. TPA will not be held liable for losses caused by conditions and/or events that are beyond TPA's control, including, but not limited to, war, strikes, natural disasters, new government restrictions, market fluctuations, and communications disruptions.*