

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

The makeup of the Top 20 and Bottom 20 has remained the same. The TOP stocks are TECH or Communications and the Bottom stocks are HealthCare and Financial. There would have been more Financial stocks, but many of them are short-term oversold based on RSI.

TTWO



ERIE



Sectors

XLK, the most used TECH ETF, has remained in the top 5 for the past 7 weeks. The rest of the Top sectors and subsectors are TECH or TECH-related. Some of this outperformance is due to the beating TECH took in 2022. The chart below shows that XLK underperformed SPY by a little under 8% in 2022.

RELATIVE PERFORMANCE XLK AND SPY 2022



Market

Technically the S&P500 is still struggling with support. After briefly dipping below 3950, the S&P500 is now above 3950, but has failed to regain 4000. SIVB may have briefly stymied this market. We would guess that if the fallout is limited, the S&P500 will move above 4000 again soon.

S&P500



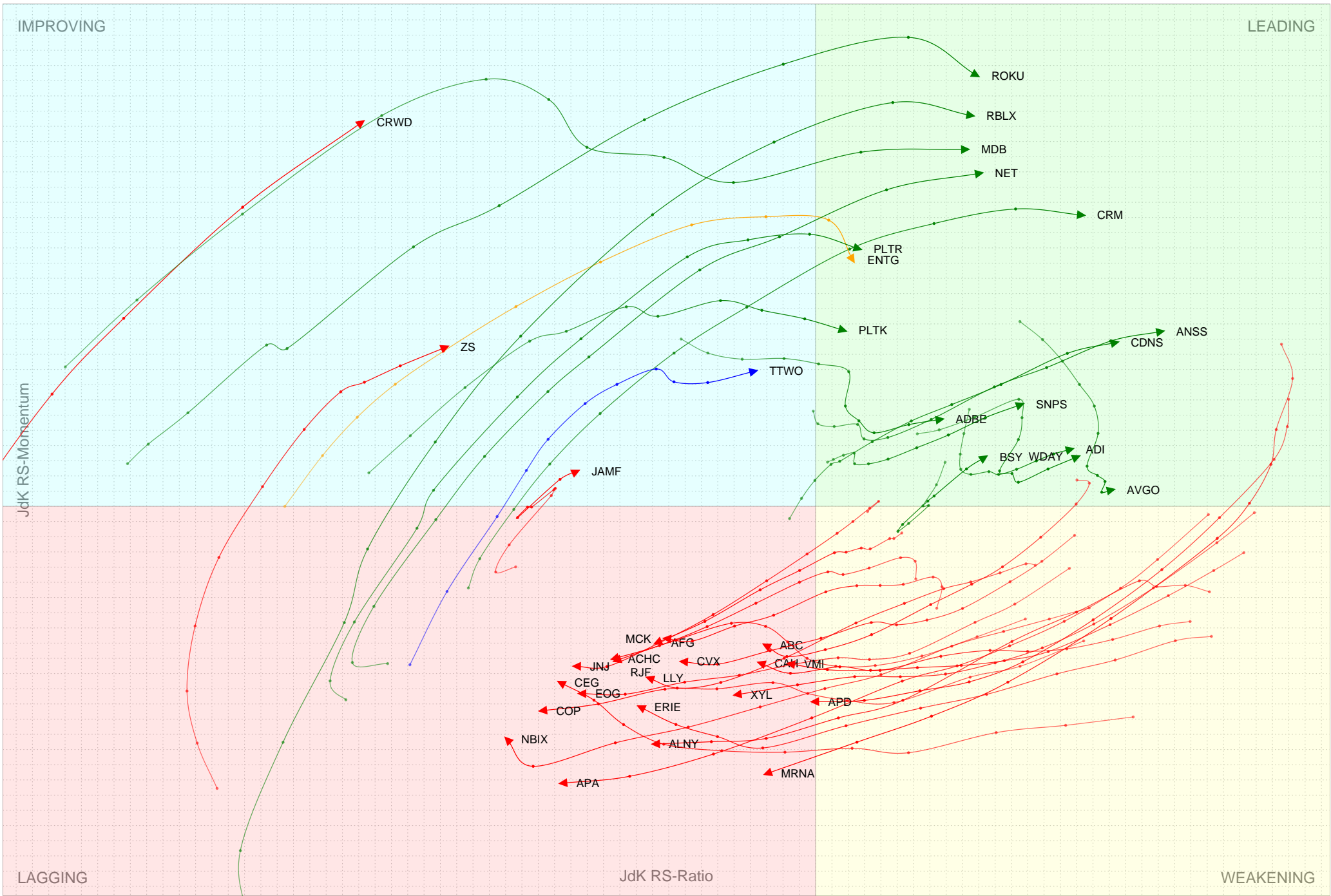
TPA-RRG TOP 20 & BOTTOM 20 (table below)

Buy	Prices as of 3/24/23							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	220.07	104.73	111.84	Leading	\$15,413	Technology	4.60	2.14	6.74
NET	CloudFlare Inc	58.18	105.24	111.13	Leading	\$19,228	Cyber Security	4.54	1.94	6.47
TTWO	Take-Two Interactive Software Inc.	117.48	98.10	104.41	Improving	\$19,816	Tech-Software	3.47	2.18	5.66
CRWD	CrowdStrike Holdings Inc	134.54	86.26	112.82	Improving	\$31,119	Tech-Software	3.41	2.18	5.60
PLTR	Palantir Technologies Inc - Ordinary	8.33	101.44	108.58	Leading	\$17,351	Tech-Software	3.32	2.18	5.51
RBLX	Roblox Corporation - Ordinary Shar	42.07	104.55	112.63	Leading	\$25,276	Technology	3.29	2.14	5.43
CRM	Salesforce Inc	187.44	108.07	109.48	Leading	\$187,440	Technology	3.25	2.14	5.39
ENTG	Entegris Inc	81.50	101.43	108.36	Leading	\$12,175	Technology	3.22	2.14	5.36
ADBE	Adobe Inc	369.00	103.73	102.76	Leading	\$168,928	Technology	3.20	2.14	5.34
ZS	Zscaler Inc	112.56	88.71	105.27	Improving	\$16,335	Tech-Software	3.15	2.18	5.34
JAMF	Jamf Holding Corp	19.48	92.82	101.28	Improving	\$2,404	Tech-Software	3.11	2.18	5.29
CDNS	Cadence Design Systems Inc.	207.00	109.31	105.47	Leading	\$56,499	Technology	3.08	2.14	5.22
ANSS	Ansys Inc. - Registered Shares	314.65	110.58	105.73	Leading	\$27,402	Technology	3.08	2.14	5.22
SNPS	Synopsys Inc.	379.40	106.36	103.40	Leading	\$57,783	Technology	3.04	2.14	5.17
WDAY	Workday Inc	188.04	107.94	101.55	Leading	\$48,702	Tech-Software	2.96	2.18	5.15
ADI	Analog Devices Inc.	189.45	107.90	101.94	Leading	\$95,834	Technology	2.99	2.14	5.12
AVGO	Broadcom Inc	639.23	109.13	100.57	Leading	\$266,510	Technology	2.98	2.14	5.12
BSY	Bentley Systems Inc - Ordinary Shar	41.27	105.16	101.59	Leading	\$11,901	Technology	2.93	2.14	5.07
PLTK	Playtika Holding Corp	10.83	100.94	105.85	Leading	\$3,956	Communication Services	3.37	1.08	4.45
ROKU	Roku Inc	63.20	105.31	114.51	Leading	\$8,855	Communication Services	3.29	1.08	4.37

Buy	Prices as of	3/24/23						STOCK	SECTOR	TOTAL
Sell	BOTTOM 20							TPA-RRG	TPA-RRG	TPA-RRG
VMI	Valmont Industries Inc.	304.71	99.14	94.77	Lagging	\$6,506	Industrial	-3.40	-1.13	-4.53
XYL	Xylem Inc	97.23	97.47	93.72	Lagging	\$17,528	Industrial	-3.50	-1.13	-4.63
APD	Air Products & Chemicals Inc.	266.94	99.92	93.56	Lagging	\$59,283	Materials	-3.42	-1.22	-4.64
JNJ	Johnson & Johnson	151.13	92.58	94.68	Lagging	\$393,586	Health Care	-3.12	-1.60	-4.72
ACHC	Acadia Healthcare Company Inc	69.44	93.75	94.93	Lagging	\$6,341	Health Care	-3.14	-1.60	-4.74
NBIX	Neurocrine Biosciences Inc.	95.69	90.45	92.27	Lagging	\$9,243	Health Care	-3.17	-1.60	-4.77
MCK	Mckesson Corporation	335.83	95.21	95.47	Lagging	\$45,988	Health Care	-3.19	-1.60	-4.79
LLY	Eli Lilly & Co	332.64	94.81	94.29	Lagging	\$316,107	Health Care	-3.21	-1.60	-4.81
COP	Conoco Phillips	96.42	91.66	93.33	Lagging	\$117,515	Energy	-3.17	-1.68	-4.85
EOG	EOG Resources Inc.	104.78	92.76	93.81	Lagging	\$61,582	Energy	-3.18	-1.68	-4.86
CEG	Constellation Energy Corporation	73.40	92.16	94.20	Lagging	\$24,011	Energy	-3.20	-1.68	-4.88
ALNY	Alnylam Pharmaceuticals Inc	190.49	95.08	92.20	Lagging	\$23,646	Health Care	-3.29	-1.60	-4.89
ABC	Amerisource Bergen Corp.	150.93	98.22	95.23	Lagging	\$30,527	Health Care	-3.31	-1.60	-4.91
APA	APA Corporation	34.01	92.14	90.82	Lagging	\$10,576	Energy	-3.24	-1.68	-4.92
CAH	Cardinal Health Inc.	69.01	98.17	94.74	Lagging	\$17,780	Health Care	-3.33	-1.60	-4.93
CVX	Chevron Corp.	154.52	95.86	94.84	Lagging	\$294,619	Energy	-3.26	-1.68	-4.94
AFG	American Financial Group Inc	116.33	95.04	95.43	Lagging	\$9,911	Financial	-3.16	-1.96	-5.12
RJF	Raymond James Financial Inc.	91.31	94.01	95.05	Lagging	\$19,664	Financial	-3.19	-1.96	-5.15
MRNA	Moderna Inc	149.42	98.43	91.15	Lagging	\$57,727	Health Care	-3.58	-1.60	-5.18
ERIE	Erie Indemnity Co.	223.52	94.59	93.39	Lagging	\$10,409	Financial	-3.25	-1.96	-5.21

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/aG9e5y21YbA>



JdK RS-Momentum (Vertical Axis) | JdK RS-Ratio (Horizontal Axis)

116.5
116.0
115.5
115.0
114.5
114.0
113.5
113.0
112.5
112.0
111.5
111.0
110.5
110.0
109.5
109.0
108.5
108.0
107.5
107.0
106.5
106.0
105.5
105.0
104.5
104.0
103.5
103.0
102.5
102.0
101.5
101.0
100.5
100.0
99.5
99.0
98.5
98.0
97.5
97.0
96.5
96.0
95.5
95.0
94.5
94.0
93.5
93.0
92.5
92.0
91.5
91.0
90.5
90.0
89.5
89.0
88.5
88.0
87.5

TPA Relative Rotation Fund

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

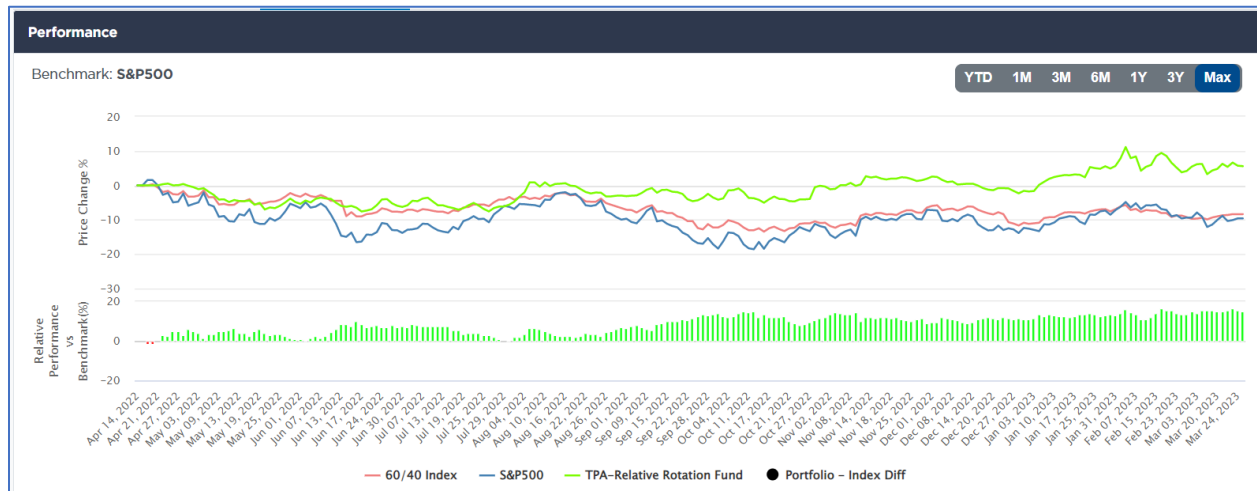
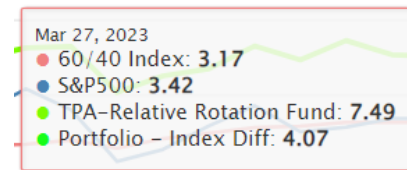
(See the explanation and performance comparisons to the S&P500 and a 60/40 Index below.)

Most recent performance:

Since inception (4/22/22)



2023 Year to date



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

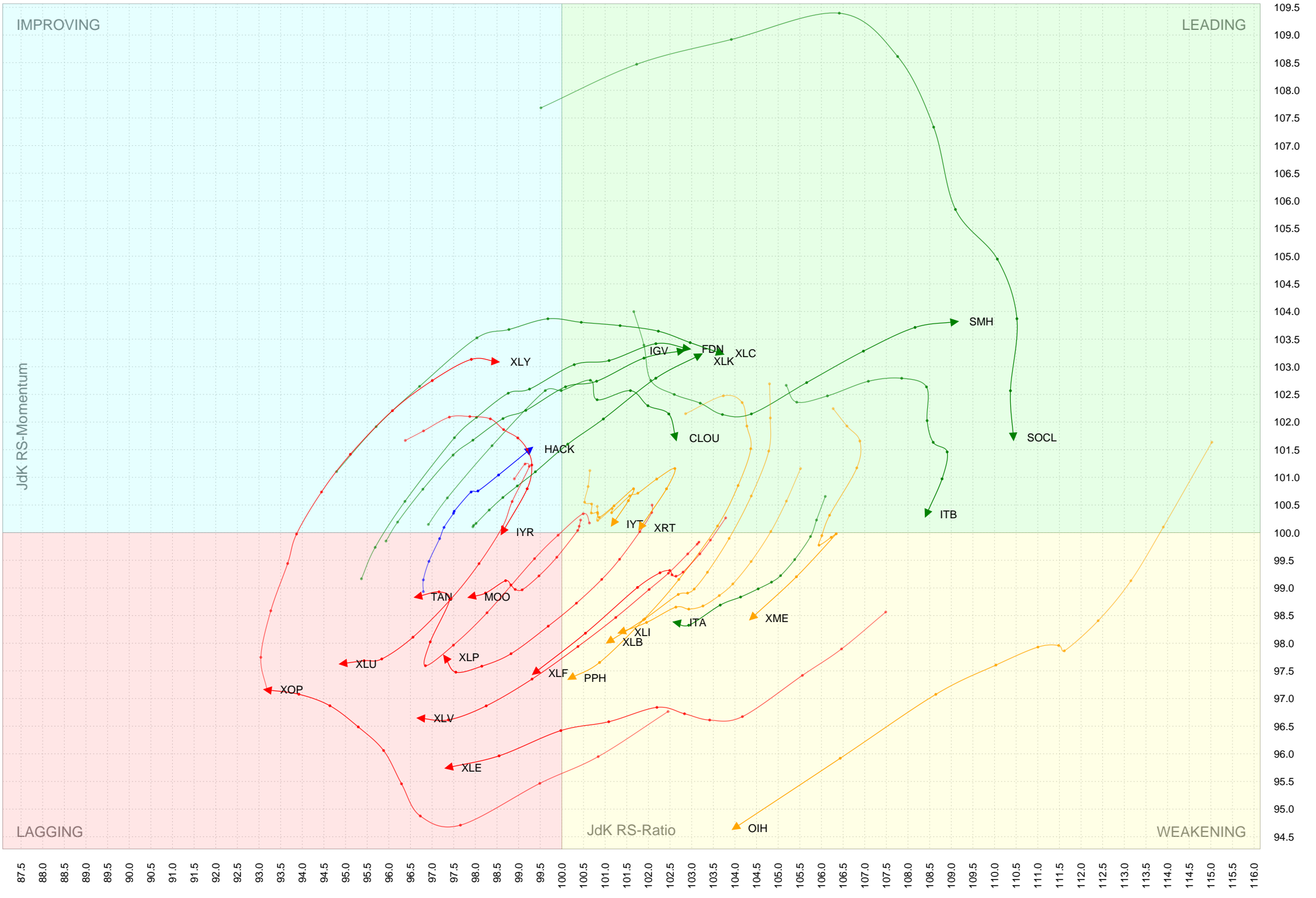
TPA-RRG U.S. SECTOR & SUBSECTOR ETFS						3/26/23	
<u>Code</u>	<u>Name</u>	<u>Last</u>	<u>RRG Ratio</u>	<u>RRG Momentum</u>	<u>Quadrant</u>	<u>TPA-RRG SCORE</u>	
IGV	Software	289.99	102.78	103.29	Leading	4.37	
XLK	TECH	145.58	103.19	103.21	Leading	4.28	
HACK	Cyber Security	46.06	99.28	101.52	Improving	3.87	
FDN	Internet	142.03	102.91	103.33	Leading	3.26	
SMH	SEMI	258.71	109.10	103.81	Leading	3.05	
XRT	Retail	59.94	101.81	100.09	Leading	2.31	
IYT	Transportation	215.56	101.18	100.16	Leading	2.26	
CLOU	Cloud Computing	17.18	102.63	101.71	Leading	2.16	
XLC	Communications	56.36	103.69	103.24	Leading	2.16	
XLY	Consumer Discretionary	142.04	98.49	103.09	Improving	2.15	
SOCL	Social Media	36.70	110.44	101.72	Leading	2.09	
ITB	Home Construction	67.64	108.42	100.33	Leading	2.08	
IYR	Real Estate	78.73	98.63	100.01	Improving	1.11	
TAN	Solar	73.58	96.65	98.84	Lagging	-2.03	
XLU	Utilities	63.70	94.92	97.63	Lagging	-2.04	
ITA	Aerospace & Defense	110.53	102.63	98.38	Weakening	-2.04	
MOO	Agribusiness	83.72	97.89	98.84	Lagging	-2.06	
XOP	Oil&Gas E&P	118.48	93.17	97.16	Lagging	-2.06	
XME	Metals & Mining	49.89	104.38	98.45	Weakening	-2.22	
XLI	Industrial	96.51	101.36	98.20	Weakening	-2.27	
PPH	Pharma	74.68	100.19	97.37	Weakening	-2.32	
OIH	Oil Services	258.64	103.99	94.66	Weakening	-2.42	
XLB	Materials	76.19	101.08	98.03	Weakening	-2.44	
XLP	Staples	71.75	97.30	97.75	Lagging	-3.18	
XLV	Health Care	125.56	96.72	96.64	Lagging	-3.20	
XLE	Energy	77.59	97.36	95.75	Lagging	-3.36	
XLF	Financials	31.01	99.37	97.46	Lagging	-3.92	

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	Code
1	HACK	XLK	XLY	XLY	XLK	ITB	IYT	XLY	XLY	XLF	XME	OIH	XLF	OIH	OIH	OIH	XME	PPH	XME	XRT	
2	XLK	XLY	XLK	XLK	IYT	XLY	ITB	SMH	XLF	IYT	OIH	XME	OIH	MOO	HACK	PPH	OIH	XLB	XLB	XLB	
3	IGV	IGV	HACK	XRT	XLY	XLK	XLF	IYT	IYT	XLY	MOO	XLF	MOO	XME	MOO	XLF	XRT	XRT	MOO	XME	
4	XLY	HACK	FDN	FDN	FDN	FDN	IYT	XLK	XRT	XRT	XLF	HACK	XME	XLF	XME	XLB	XLB	XME	XRT	SMH	
5	CLOU	FDN	CLOU	CLOU	XRT	FDN	XLY	XLF	XLK	CLOU	XLY	XRT	XLB	HACK	XLF	XLI	PPH	OIH	PPH	ITA	
6	FDN	XRT	XRT	HACK	TAN	TAN	TAN	XLK	SMH	XLI	CLOU	MOO	XLC	XLB	CLOU	ITA	HACK	XLV	ITA	XLI	
7	SMH	ITB	IGV	ITB	IGV	IGV	FDN	ITB	XLI	ITB	XLI	CLOU	XOP	XLC	XLB	XLV	CLOU	ITA	XLI	ITB	
8	ITB	TAN	TAN	TAN	ITB	XRT	SMH	FDN	ITB	XLK	TAN	XLB	XLE	XLE	XLE	XME	ITA	XLI	XLP	PPH	
9	TAN	CLOU	ITB	IGV	CLOU	CLOU	XRT	XLI	FDN	FDN	ITB	ITB	ITA	XOP	ITA	XOP	XLV	XLP	OIH	XLP	
10	XLV	SMH	SMH	XLC	HACK	SMH	CLOU	IGV	CLOU	SMH	XLK	XOP	XLY	ITA	XLV	XLE	XLI	MOO	XOP	OIH	
11	XLC	XLC	SOCL	SMH	XLC	XLC	IGV	CLOU	IGV	IGV	XOP	XLE	XRT	XLY	XOP	MOO	XLF	XLF	XLF	XLV	
12	XRT	SOCL	XLC	SOCL	SMH	HACK	HACK	XME	XME	MOO	FDN	XLY	ITB	XLV	XLI	XRT	MOO	XLE	XLE	XLF	
13	SOCL	IYT	IYT	IYT	SOCL	XLF	XLE	SOCL	OIH	OIH	IYT	FDN	XLI	XLI	FDN	CLOU	XLE	XOP	XLV	XLE	
14	IYT	XLF	XLI	XLF	XLF	SOCL	XLU	XOP	MOO	XME	XRT	IYT	HACK	FDN	XLC	HACK	XOP	HACK	ITB	XOP	
15	ITA	ITA	XLF	XLI	XLI	XLI	XOP	HACK	XLB	XLB	XLE	XLI	FDN	CLOU	XRT	FDN	FDN	CLOU	HACK	MOO	
16	XLF	XLP	ITA	XLP	XLP	XLU	XLI	XLC	XLU	SOCL	IGV	XLC	IYT	XRT	PPH	XLP	SMH	FDN	IYT	HACK	
17	PPH	XLU	XLP	ITA	XLU	XOP	XLC	XLE	XLE	HACK	SMH	SOCL	CLOU	PPH	IYT	IYT	ITB	SMH	SMH	IYT	
18	XLU	XLV	XLU	XLV	IYR	XLE	SOCL	TAN	XOP	TAN	XLB	XLV	XLP	XLP	XLP	XLC	XLC	ITB	FDN	SOCL	
19	XOP	XOP	XLV	XLU	XLV	ITA	XLU	HACK	XLU	HACK	ITA	XLV	IYT	SOCL	IGV	SOCL	XLC	CLOU	FDN	FDN	
20	XLE	PPH	PPH	PPH	ITA	ITA	XLP	XLB	XLC	ITA	XLU	SMH	IGV	IGV	SMH	SOCL	IYT	IGV	XLC	CLOU	
21	XLP	XLE	XOP	XLE	PPH	XLV	OIH	XLP	SOCL	XOP	ITA	IGV	SMH	SMH	IYR	SMH	IYR	SOCL	SOCL	XLC	
22	XME	OIH	XLE	XOP	XLE	PPH	XME	ITA	TAN	XLE	XLV	IYR	SOCL	SOCL	IGV	IYR	IGV	IYT	IGV	IYR	
23	MOO	XLI	XME	IYR	XOP	OIH	IYR	XLV	IYR	XLC	SOCL	XLP	IYR	IYR	ITB	TAN	XLP	IYR	IYR	IGV	
24	OIH	MOO	IYR	XME	XME	XLB	XLV	IYR	XLP	IYR	XLC	XLU	TAN	TAN	TAN	XLU	TAN	XLK	XLK	XLK	
25	XLB	XLB	MOO	MOO	XLB	XME	PPH	MOO	ITA	XLP	IYR	TAN	XLU	XLU	ITB	XLU	TAN	TAN	TAN	TAN	
26	XLI	IYR	XLB	XLB	MOO	MOO	XLB	OIH	XLY	XLV	XLP	PPH	PPH	ITB	XLY	XLV	XLV	XLU	XLU	XLY	
27	IYR	XME	OIH	OIH	OIH	IYR	MOO	PPH	PPH	PPH	PPH	XLK	XLK	XLK	XLK	XLK	XLK	XLK	XLK	XLU	

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	3/24/23					
Rank	Code	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	IGV					
2	XRT	XLB	XLB	PPH	SMH	IYT	XLU	CLOU	CLOU	XLK	IGV	IGV	IGV	IGV	FDN	XLK					
3	XLB	IYT	SMH	XLU	XLU	SOCL	XLC	XLC	FDN	XLC	FDN	XLC	FDN	FDN	XLK	HACK					
4	IYT	SMH	MOO	SMH	SOCL	CLOU	CLOU	FDN	XLC	IGV	XLK	FDN	CLOU	XLY	HACK	FDN					
5	SMH	MOO	SOCL	SOCL	IYR	XLC	SMH	IGV	IGV	SOCL	XLK	XLY	XLY	XLC	XLY	SMH					
6	PPH	SOCL	IYR	IYR	PPH	XLK	IYT	IYR	XLK	HACK	XLY	CLOU	XLC	CLOU	XLC	XRT					
7	SOCL	XRT	IYT	XRT	XLB	IYR	IYR	IYT	IYR	ITB	HACK	SMH	HACK	HACK	SMH	IYT					
8	ITA	XLI	XRT	MOO	XME	XRT	IGV	SMH	ITB	IYT	XRT	SMH	SMH	CLOU	CLOU						
9	XLI	ITB	ITA	XLI	ITB	ITB	PPH	ITB	XRT	CLOU	XRT	HACK	XRT	XRT	SOCL	XLC					
10	ITB	XLP	XLI	XLP	XLP	MOO	XLK	XLK	IYT	SMH	SOCL	PPH	IYT	IYT	XRT	XLY					
11	XLP	XME	ITB	ITB	XRT	XLP	MOO	MOO	SMH	XME	PPH	SOCL	SOCL	SOCL	IYT	SOCL					
12	XME	OIH	XME	XLB	MOO	ITA	XRT	XLP	XLB	IYR	SMH	IYT	ITB	ITB	ITB	ITB					
13	XOP	XLE	XLV	XME	OIH	OIH	XLB	XRT	PPH	PPH	IYR	IYR	IYR	IYR	IYR	IYR					
14	OIH	XLF	OIH	OIH	ITA	PPH	OIH	XLB	XME	XRT	ITB	ITB	TAN	TAN	XLU	TAN					
15	XLF	ITA	XLE	ITA	XLV	XLB	XLI	XLI	XLU	XLU	XLU	XLU	XME	XME	MOO	XLU					
16	XLV	XLV	XLF	XLF	XLF	XLI	ITA	PPH	HACK	XLY	OIH	XLF	XLU	XLU	TAN	ITA					
17	XLE	IYR	XLP	XLV	XLI	XLF	ITB	XME	XLY	XLF	OIH	XLB	XLI	XOP	MOO						
18	XLK	XLK	XLU	TAN	XLC	XLU	XLP	XLU	OIH	OIH	ITA	XME	XLF	XLB	XME	XOP					
19	IYR	HACK	XLK	HACK	TAN	XME	XME	TAN	ITA	ITA	XME	ITA	OIH	ITA	ITA	XME					
20	HACK	FDN	CLOU	FDN	HACK	FDN	TAN	XLY	XLI	XLE	XLI	XLI	XLI	MOO	XLI	XLI					
21	CLOU	CLOU	TAN	CLOU	XLK	IGV	FDN	HACK	XLF	XLI	XLE	XLE	ITA	OIH	OIH	PPH					
22	FDN	IGV	FDN	XLC	IGV	TAN	HACK	ITA	XLV	XLB	XLB	XLB	XLE	XOP	XLB	OIH					
23	IGV	XLC	XLC	XLK	CLOU	HACK	XLV	OIH	XLE	XLV	XLV	PPH	XLF	PPH	XLB						
24	XLC	XLU	HACK	IGV	XLE	XLY	XLV	HACK	XLP	XLP	TAN	TAN	PPH	XLF	XLP						
25	XLY	XOP	IGV	XLE	FDN	XLV	XLF	XLF	TAN	TAN	TAN	MOO	XOP	XLP	XLP	XLV					
26	XLU	TAN	XLY	XLY	XLY	XLE	XLE	XLE	XOP	XOP	XOP	XOP	XLP	XLV	XLV	XLE					
27	TAN	XLY	XOP	XOP	XOP	XOP	XOP	XOP	MOO	MOO	MOO	XLP	XLV	XLE	XLE	XLF					

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/IG6mHA1LDjs>



IMPROVING

LEADING

LAGGING

WEAKENING

JdK RS-Momentum

JdK RS-Ratio

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

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

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

What are RRGs?

Julius de Kempenaer 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***

Turning Point Analytics Disclaimer

Turning Point Analytics (TPA) is only one of many tools that an investor should use to make a final investment decision. TPA is an overlay on top of a client's good fundamental or macro analysis. TPA does not create or provide fundamental analysis. The information in this communication may include technical analysis. Technical analysis is a discipline that studies the past trading history of a security while trying to forecast future price action. Technical analysis does not consider the underlying fundamentals of the security in question and it does not provide information reasonably sufficient upon

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.