



## 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 cumbersome, 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

**Market:**

Bullish and not overbought or oversold.

**Sectors:**

Top ETFs: Industrials and Consumer Discretionary

Bottom ETFs: HealthCare, Consumer Staples, Real Estate

**Top 20 & Bottom 20:**

Top ETFs: Industrials and Consumer Discretionary

Bottom ETFs: HealthCare, Consumer Staples

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

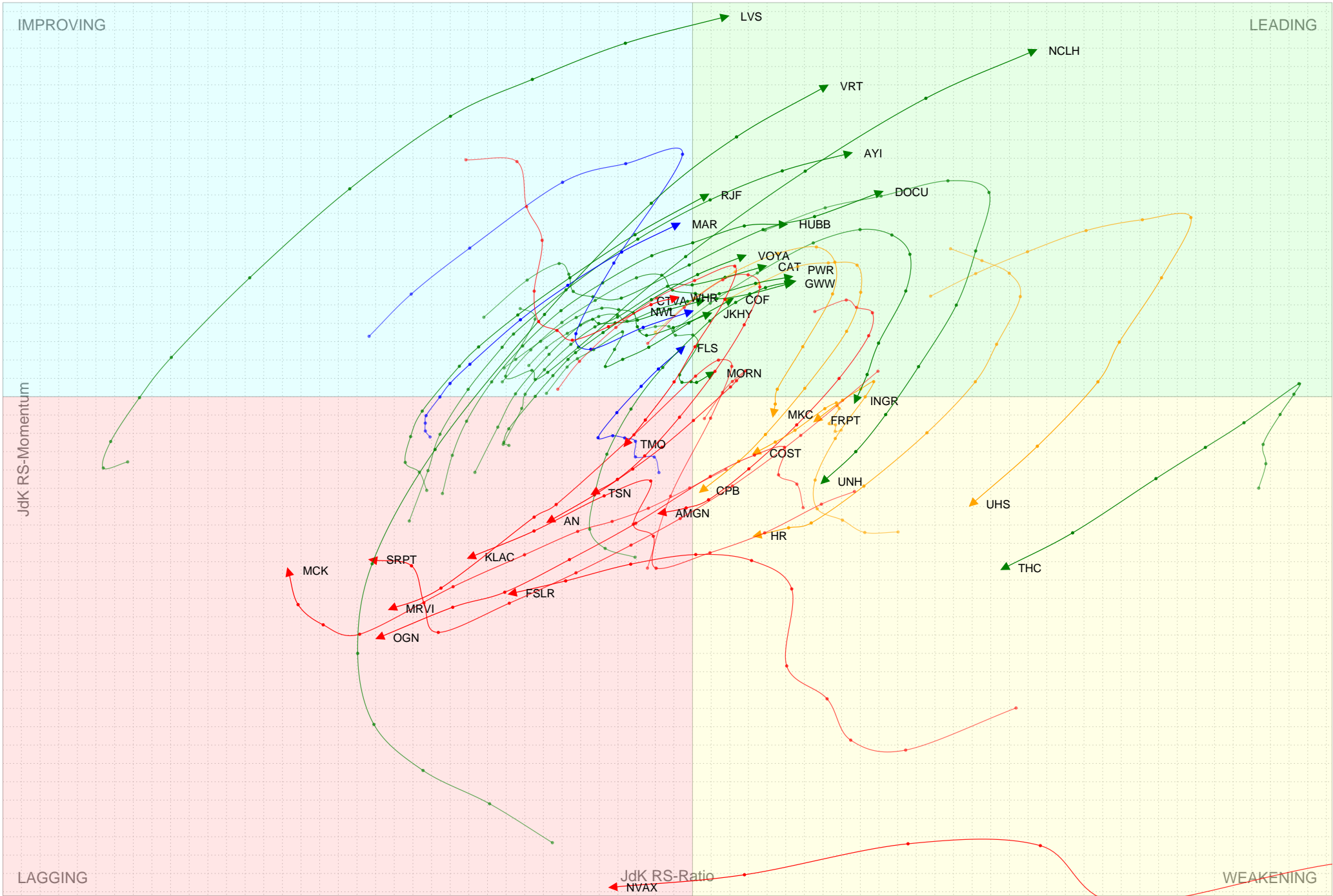
Buy	Prices as of 11/1/24		TOP 20					STOCK	SECTOR	TOTAL
Sell								TPA-RRG	TPA-RRG	TPA-RRG
Code	Name	Last	RRG Ratio	RRG Momentum	Quadrant	Mkt Cap (\$MIL)	TPA Sector	SCORE	SCORE	SCORE
LVS	Las Vegas Sands Corp	51.73	100.90	110.36	Leading	\$37,506	Consumer Discretionary	4.62	3.01	7.63
VRT	Vertiv Holdings Co - Ordinary Shares	106.90	103.57	108.46	Leading	\$40,123	Industrial	4.54	3.01	7.55
CAT	Caterpillar Inc.	379.63	101.91	103.55	Leading	\$184,082	Industrial	4.53	3.01	7.54
GWW	W.W. Grainger Inc.	1105.07	102.62	103.09	Leading	\$53,956	Industrial	4.46	3.01	7.47
HUBB	Hubbell Inc.	425.70	102.47	104.70	Leading	\$22,848	Industrial	4.44	3.01	7.45
AYI	Acuity Brands Inc.	306.39	104.21	106.63	Leading	\$9,456	Industrial	4.44	3.01	7.45
J	Jacobs Solutions Inc	139.62	102.61	103.26	Leading	\$17,348	Industrial	4.40	3.01	7.41
DOCU	DocuSign Inc	71.11	105.04	105.57	Leading	\$14,433	Tech-Software	4.34	3.02	7.35
PWR	Quanta Services Inc.	303.50	102.69	103.14	Leading	\$44,715	Industrial	4.29	3.01	7.30
NCLH	Norwegian Cruise Line Holdings Ltd	24.88	109.16	109.43	Leading	\$10,940	Consumer Discretionary	4.26	3.01	7.28
FLS	FlowsERVE Corp.	53.54	99.73	101.33	Improving	\$7,034	Industrial	4.17	3.01	7.18
JKHY	Jack Henry & Associates Inc.	183.06	100.44	102.26	Leading	\$13,348	Technology	5.05	2.00	7.06
NWL	Newell Brands Inc	8.79	99.94	102.32	Improving	\$3,657	Consumer Discretionary	4.01	3.01	7.02
COF	Capital One Financial Corp.	163.90	101.03	102.64	Leading	\$62,586	Financial	4.96	2.01	6.97
MORN	Morningstar Inc	328.41	100.53	100.64	Leading	\$14,084	Financial	4.96	2.01	6.97
RJF	Raymond James Financial Inc.	144.29	100.37	105.49	Leading	\$29,334	Financial	4.92	2.01	6.93
CTVA	Corteva Inc	60.86	100.25	102.61	Leading	\$42,130	Materials	4.78	2.00	6.78
VOYA	Voya Financial Inc	79.97	101.36	103.83	Leading	\$7,863	Financial	4.69	2.01	6.70
MAR	Marriott International Inc	260.57	99.60	104.70	Improving	\$73,356	Consumer Discretionary	3.63	3.01	6.64
WHR	Whirlpool Corp.	104.05	98.89	102.51	Improving	\$5,712	Consumer Discretionary	3.77	3.02	6.79

Buy	Prices as of 11/1/24		BOTTOM 20					STOCK	SECTOR	TOTAL
Sell								TPA-RRG	TPA-RRG	TPA-RRG
SRPT	Sarepta Therapeutics Inc	123.29	91.40	95.55	Lagging	\$11,758	Health Care	-2.08	-3.02	-5.10
MCK	Mckesson Corporation	526.34	89.16	95.25	Lagging	\$68,254	Health Care	-2.09	-3.02	-5.11
AN	Autonation Inc.	156.25	96.16	96.61	Lagging	\$6,195	Retail	-3.12	-2.01	-5.13
KLAC	KLA Corp.	669.38	94.04	95.62	Lagging	\$89,681	Semiconductor	-3.13	-2.01	-5.14
MKC	McCormick & Co. Inc. - Ordinary Sha	78.75	102.17	99.52	Weakening	\$21,133	Consumer Staples	-2.15	-3.01	-5.16
INGR	Ingredion Inc	133.77	104.37	99.89	Weakening	\$8,703	Consumer Staples	-2.18	-3.01	-5.19
THC	Tenet Healthcare Corp.	156.13	108.34	95.32	Weakening	\$14,848	Health Care	-2.19	-3.02	-5.21
FRPT	Freshpet Inc	133.69	103.31	99.36	Weakening	\$6,482	Consumer Staples	-2.19	-3.01	-5.21
FSLR	First Solar Inc	204.94	95.13	94.63	Lagging	\$21,941	Solar & Environ	-3.24	-2.01	-5.25
HR	Healthcare Realty Trust Inc - Ordinar	16.92	101.70	96.21	Weakening	\$5,996	Health Care	-2.23	-3.02	-5.25
COST	Costco Wholesale Corp	877.31	101.68	98.46	Weakening	\$388,713	Consumer Staples	-2.27	-3.01	-5.28
UHS	Universal Health Services Inc.	205.26	107.48	97.06	Weakening	\$13,694	Health Care	-2.26	-3.02	-5.28
UNH	UnitedHealth Group Inc	567.56	103.50	97.68	Weakening	\$524,095	Health Care	-2.29	-3.02	-5.31
CPB	Campbell Soup Co.	46.33	100.25	97.43	Weakening	\$13,789	Consumer Staples	-2.59	-3.01	-5.61
TMO	Thermo Fisher Scientific Inc.	557.92	98.21	98.70	Lagging	\$213,123	Health Care	-2.72	-3.02	-5.74
MRVI	Maravai LifeSciences Holdings Inc - C	7.46	91.92	94.22	Lagging	\$1,056	Health Care	-3.06	-3.02	-6.08
TSN	Tyson Foods Inc.	58.36	97.35	97.37	Lagging	\$20,358	Consumer Staples	-3.10	-3.01	-6.12
OGN	Organon & Co.	18.07	91.58	93.43	Lagging	\$4,653	Health Care	-3.11	-3.02	-6.13
AMGN	AMGEN Inc.	319.22	99.15	96.82	Lagging	\$171,526	Health Care	-3.35	-3.02	-6.37
NVAX	Novavax Inc.	9.35	97.83	86.62	Lagging	\$1,497	Health Care	-3.46	-3.02	-6.48

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/EWuMwPRnxX4>



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 99.5 100.0 100.5 101.0 101.5 102.0 102.5 103.0 103.5 104.0 104.5 105.0 105.5 106.0 106.5 107.0 107.5 108.0 108.5 109.0 109.5 110.0 110.5 111.0 111.5 112.0 112.5 113.0 113.5 114.0 114.5 115.0 115.5 116.0 116.5 117.0

TPA-RRG 25 SECTOR ETFS

TPA-RRG U.S. SECTOR & SUBSECTOR ETFS						11/3/24	
Code	Name	Last	RRG Ratio	RRG Momentum	Quadrant	TPA-RRG SCORE	
IGV	Software	92.26	100.58	101.69	55.26	3.02	
XLY	Consumer Discretionary	200.09	101.19	101.66	55.72	3.01	
XLI	Industrial	134.01	100.91	101.29	42.54	3.01	
HACK	Cyber Security	69.33	101.19	101.31	48.27	3.01	
ITB	Home Construction	117.15	104.20	100.51	36.93	2.02	
XME	Metals & Mining	63.86	96.89	101.27	50.00	2.02	
FDN	Internet	222.03	99.49	102.58	65.13	2.02	
SOCL	Social Media	41.68	95.18	101.12	47.83	2.02	
CLOU	Cloud Computing	21.17	97.71	102.53	64.08	2.01	
IYT	Transportation	69.70	98.87	102.20	51.63	2.01	
ITA	Aerospace & Defense	144.54	101.97	100.10	33.76	2.01	
XLC	Communications	92.40	99.90	100.23	63.68	2.01	
XLF	Financials	46.64	101.83	100.76	53.06	2.01	
XLB	Materials	93.13	98.74	100.78	39.57	2.00	
MOO	Agribusiness	71.48	97.20	100.55	38.01	2.00	
XLK	TECH	223.91	98.32	100.05	44.66	2.00	
TAN	Solar	39.79	92.05	99.37	52.88	-2.01	
XRT	Retail	75.43	96.71	99.64	46.13	-2.01	
XLU	Utilities	78.13	103.64	99.93	40.80	-2.01	
SMH	SEMI	244.75	96.66	99.25	46.51	-2.01	
XLE	Energy	88.03	93.93	99.60	41.46	-2.01	
XOP	Oil&Gas E&P	129.34	90.11	99.32	37.88	-2.01	
OIH	Oil Services	271.79	89.25	97.80	37.49	-2.01	
IYR	Real Estate	97.20	103.81	99.67	36.72	-2.02	
XLP	Staples	80.15	99.67	99.29	35.29	-3.01	
XLV	Health Care	147.74	98.91	98.92	34.22	-3.02	
PPH	Pharma	91.39	98.55	98.24	29.48	-3.03	

**TPA-RRG U.S. SECTOR & SUBSECTOR ETFs - HISTORY**

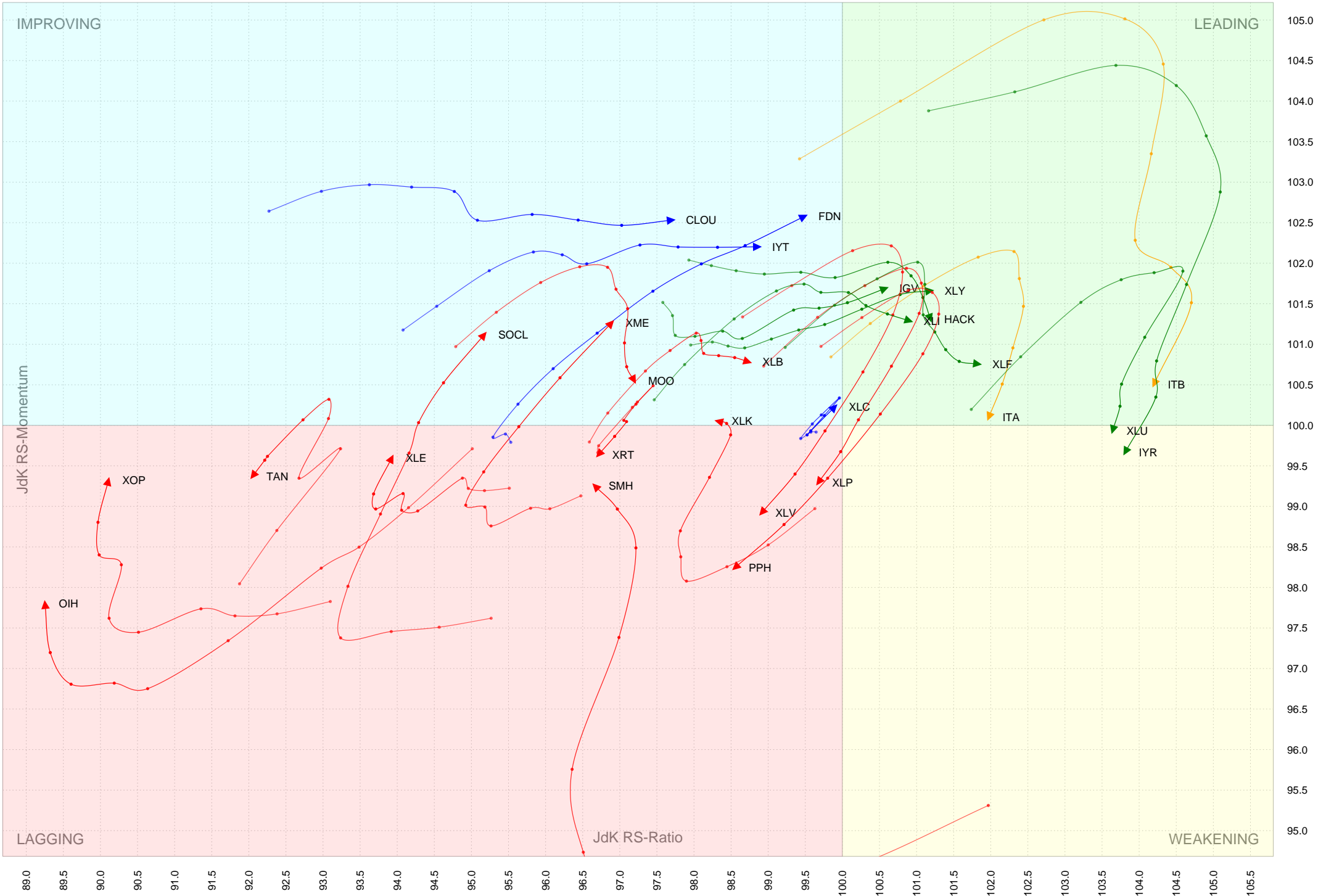
Rank	2/2/24	2/9/24	2/16/24	2/23/24	3/1/24	3/8/24	3/15/24	3/22/24	3/29/24	4/5/24	4/12/24	4/19/24	4/26/24	5/3/24	5/10/24	5/17/24	5/24/24	5/31/24	6/7/24	6/14/24
Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code
1	IYR	SMH	YIT	YIT	YIT	YIT	YIT	OIH	XLI	XLI	XLI	OIH	OIH	TAN	XLE	XOP	XOP	XLU	XOP	XME
2	TAN	TAN	TAN	TAN	TAN	SMH	SMH	XOP	XOP	XOP	OIH	XOP	XOP	SOCL	XOP	XLE	XLE	XME	XLE	XLU
3	ITB	IYR	ITB	ITB	SMH	PPH	PPH	XLV	SMH	OIH	OIH	XOP	XLE	XOP	XLB	XLB	XME	XOP	XME	OIH
4	FDN	ITB	SMH	PPH	ITB	FDN	PPH	XLE	XLE	XLE	XLE	XLU	XME	XLU	XLU	OIH	XLB	XLE	XLU	XOP
5	ITA	CLOU	CLOU	SMH	FDN	XLP	FDN	XLV	XLB	TAN	TAN	XME	XLU	OIH	OIH	XLU	TAN	XLB	ITA	XLE
6	SMH	XRT	IYR	XRT	PPH	XLV	XLI	PPH	XRT	XLB	XLU	SMH	MOO	XME	SOCL	SOCL	OIH	TAN	OIH	MOO
7	CLOU	FDN	PPH	FDN	XLP	XLC	XLC	XLI	SMH	MOO	XLB	MOD	SMH	XLE	MOO	TAN	XLU	OIH	XLB	TAN
8	XRT	XLF	FDN	XLC	XLV	XLI	XLP	XLC	SMH	MOO	XLB	XLP	MOO	XME	MOO	SOCL	SOCL	MOO	MOO	XLK
9	IYT	IGV	XLV	XLV	XLC	XLF	XRT	IYT	PPH	PPH	SMH	XLP	XLB	XLB	XLP	XME	MOO	MOO	SOCL	ITA
10	XME	PPH	HACK	XLP	XLI	XLB	XLK	XLC	IYT	IYT	PPH	XLF	TAN	ITA	TAN	XLI	ITA	ITA	TAN	SOCL
11	XLK	IYT	XRT	XLI	XLF	MOO	XLF	XLP	XRT	IYT	XLI	PPH	XLP	ITA	XLP	XLI	XLP	XLP	XLP	XLP
12	IGV	XLI	XLF	XLF	XLK	XLU	XLB	TAN	ITB	XLP	TAN	ITA	XLF	XLI	ITA	XLP	XLC	XLC	XLC	PPH
13	XLY	XLV	XLI	XLK	XLB	XLK	MOO	XRT	XLF	XLF	PPH	XLI	XLI	XLF	XLF	XLC	XLF	PPH	PPH	XLV
14	XLF	HACK	XLP	MOO	MOO	XLY	IGV	XLK	XLV	XRT	XLC	XLF	XLC	PPH	XLV	XLV	XLY	XLY	XLY	XLY
15	XLI	XLK	XLC	XLB	XRT	XRT	XLY	XLY	ITB	ITA	XLV	XLY	XLY	XLC	PPH	PPH	XLV	XLY	IYR	IYR
16	HACK	XLY	XLB	XLU	XLY	HACK	ITB	MOO	SOCL	FDN	XLY	XLY	XLC	FDN	XLV	XLC	XLY	PPH	IYR	XLC
17	XLV	XLP	XLK	IGV	XLU	ITB	HACK	XLU	IYR	SOCL	ITB	IYT	ITB	IYR	IYR	XLY	SMH	XLK	SMH	IGV
18	XLP	XLC	MOO	XLY	IGV	IGV	XLU	ITB	FDN	XLC	XLV	XRT	IYR	XLY	FDN	XLF	IYR	IGV	IGV	HACK
19	PPH	MOO	IGV	XLE	HACK	SOCL	SOCL	FDN	ITA	XLY	XLK	IYR	XLV	PPH	FDN	IYR	IYR	XLI	XLF	CLOU
20	XLC	XLB	XME	HACK	XLE	XLE	XLE	XLK	IYR	IYR	ITB	XRT	XRT	CLOU	CLOU	FDN	FDN	SMH	HACK	SMH
21	MOO	ITA	XLY	XOP	XOP	OIH	IYR	IGV	XLU	ITA	XLC	SOCL	FDN	ITB	XRT	ITB	IGV	HACK	XLK	IYT
22	XLB	XLE	XLU	XME	OIH	XOP	TAN	SOCL	HACK	XLK	FDN	ITA	SOCL	CLOU	ITB	SMH	CLOU	CLOU	XLU	XRT
23	XLU	XLU	ITA	OIH	CLOU	CLOU	OIH	IYR	IGV	IGV	SOCL	FDN	CLOU	SMH	SMH	XLK	ITB	IGV	CLOU	XLF
24	XLE	XOP	XLE	IYR	SOCL	TAN	XOP	HACK	MOO	HACK	HACK	XLK	XLK	XLK	XLK	XRT	XLC	ITB	IYT	FDN
25	XOP	OIH	XOP	CLOU	ITA	ITA	ITA	TAN	XME	XME	HACK	HACK	HACK	HACK	HACK	IGV	HACK	XRT	FDN	XLI
26	OIH	XME	OIH	SOCL	IYR	IYR	CLOU	XME	XME	XLU	IGV	IGV	IGV	IGV	HACK	XRT	FDN	XRT	XLB	XLB
27	SOCL	SOCL	SOCL	ITA	XME	XME	CLOU	CLOU	CLOU	CLOU	CLOU	CLOU	CLOU	IYT	IYT	IYT	IYT	IYT	ITB	ITB

**TPA-RRG U.S. SECTOR & SUBSECTOR ETFs - HISTORY**

Rank	6/21/24	6/28/24	7/5/24	7/12/24	7/19/24	7/26/24	8/2/24	8/9/24	8/16/24	8/23/24	8/30/24	9/6/24	9/13/24	9/20/24	9/27/24	10/4/24	10/11/24	10/18/24	10/25/24	11/1/24
Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code
1	XLU	XLK	XLK	XLK	XLK	TAN	IYR	IYR	XLK	XLF	PPH	ITB	ITB	ITB	ITB	ITB	XLV	XLV	XLY	IGV
2	SOCL	SOCL	SOCL	SOCL	IYR	IYR	TAN	HACK	IYR	ITA	XLI	IYR	IYR	ITA	XLV	XLF	XLP	HACK	IGV	XLY
3	XLK	SMH	XLU	XLU	TAN	SMH	XLK	IGV	XLY	XLY	ITA	XLV	XLP	XLF	XLP	HACK	XLI	HACK	XLI	XLI
4	MOO	XLU	TAN	IYR	XLY	XLY	XLV	ITB	XLV	TAN	OIH	PPH	ITA	XLF	PPH	ITB	XLI	IYR	XLI	HACK
5	TAN	MOO	SMH	SMH	IGV	XLK	PPH	CLOU	IGV	FDN	XLF	XLP	XLV	XLP	FDN	IYR	XLP	XME	XME	ITB
6	PPH	XLP	IYR	TAN	SMH	IGV	CLOU	XLV	XLU	XLK	XLE	XLU	PPH	PPH	TAN	IYR	ITB	FDN	FDN	XME
7	XLP	ITA	XLY	XLY	XLV	PPH	XLY	PPH	XLI	ITB	XLU	XLF	XLF	IYR	IYR	PPH	XLU	XLU	SOCL	FDN
8	ITA	TAN	XLC	XLV	PPH	XLP	IGV	XLK	ITA	XLI	ITB	XLV	XLU	XLI	FDN	HACK	PPH	CLOU	CLOU	SOCL
9	XLY	PPH	XLV	PPH	XRT	XLV	HACK	XLY	XLF	PPH	HACK	CLOU	XLI	IYT	CLOU	CLOU	FDN	ITB	IYT	CLOU
10	IYR	XLV	HACK	XRT	MOO	MOO	XRT	XLU	TAN	XLU	XLB	MOO	IYT	XLU	HACK	XLY	IGV	ITA	ITB	IYT
11	XLV	XRT	PPH	OIH	XLP	XLF	ITA	MOO	XRT	SMH	XLP	XLI	XLB	CLOU	ITA	XLU	IYT	IYT	ITA	ITA
12	XLC	XLY	FDN	IGV	XLB	HACK	XLI	ITA	XOP	CLOU	XOP	IYT	MOO	MOO	XLU	IYT	CLOU	MOO	IYR	XLC
13	IGV	XLC	ITA	XLB	FDN	XLB	XLU	XLF	PPH	XOP	IGV	XLB	XRT	FDN	XLB	ITA	TAN	SOCL	MOO	XLF
14	HACK	HACK	CLOU	HACK	OIH	ITA	XLB	XLB	XLE	XRT	XLK	HACK	CLOU	XLB	IYT	XLC	XLY	IGV	XLU	XLB
15	SMH	CLOU	XRT	IYT	ITA	XRT	MOO	XLP	FDN	OIH	CLOU	XLY	HACK	HACK	IGV	XRT	ITA	XLF	XLF	MOO
16	CLOU	IYR	IYT	CLOU	HACK	XLI	XLF	XLI	SMH	XLP	SOCL	IGV	IGV	IGV	XLY	MOO	XLC	XLB	XLB	XLK
17	IYT	IYT	XLP	MOO	IYT	FDN	FDN	SOCL	XME	HACK	SMH	XLC	XLY	XLC	XLI	IGV	MOO	XRT	XLK	TAN
18	OIH	IGV	MOO	FDN	SOCL	OIH	XLP	FDN	HACK	IYR	XLC	XRT	XLC	XLY	MOO	XLI	XLF	XOP	TAN	XRT
19	XLE	OIH	IGV	XLP	CLOU	IYT	XME	XLE	XLP	SOCL	FDN	FDN	FDN	XRT	XRT	TAN	XRT	XLC	XLC	XLU
20	XOP	FDN	OIH	ITA	ITB	XLU	OIH	IYT	IYT	XLV	ITA	XLE	XLE	XLE	XLC	XLB	XLB	XLE	XLE	SMH
21	XLF	XLF	XLF	ITB	XLU	CLOU	XLE	OIH	SOCL	IYT	XRT	XME	XME	XOP	XME	XLE	XLE	OIH	XRT	XLE
22	XRT	XLI	XLB	XME	XME	SOCL	XOP	XRT	XLB	XME	XLV	SOCL	XOP	OIH	SOCL	XME	OIH	XLK	XOP	XOP
23	XLB	XLB	XLI	XLC	XLC	ITB	IYT	XOP	OIH	XLB	IYR	XOP	SOCL	XME	XLE	XLK	XME	TAN	OIH	OIH
24	XLI	ITB	XME	XLF	XLF	SOCL	XME	ITB	XLE	IYT	TAN	OIH	TAN	XOP	XOP	XOP	XME	SMH	SMH	IYR
25	FDN	XME	ITB	XLI	XLI	XME	ITB	SMH	XLC	XLC	TAN	OIH	TAN	SOCL	OIH	SOCL	XLK	XLV	XLP	XLP
26	ITB	XLE	XLE	XLE	XLE	XLE	SMH	TAN	CLOU	IGV	MOO	SMH	XLK	XLK	OIH	SOCL	SMH	XLV	XLV	XLV
27	XME	XOP	XOP	XOP	XOP	XOP	XLC	XLC	MOO	MOO	XME	XLK	SMH	SMH	SMH	SMH	SMH	PPH	PPH	PPH

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/Jw4ii2uV2Rk>



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

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### What are RRG's?

Julius de Kempnaer developed Relative Rotational Graphs (RRG) in 2004 and thousands of investors use RRG's. *"Relative Rotation Graphs, commonly referred to as 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 RRG's to highlight stocks and sectors moving in and out of favor, but also notes the shortcoming of having to examine many RRG's 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, 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 centre 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 centre.
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 RRG's 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's 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**

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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.*