



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 TOP 20 & BOTTOM 20 (table below)

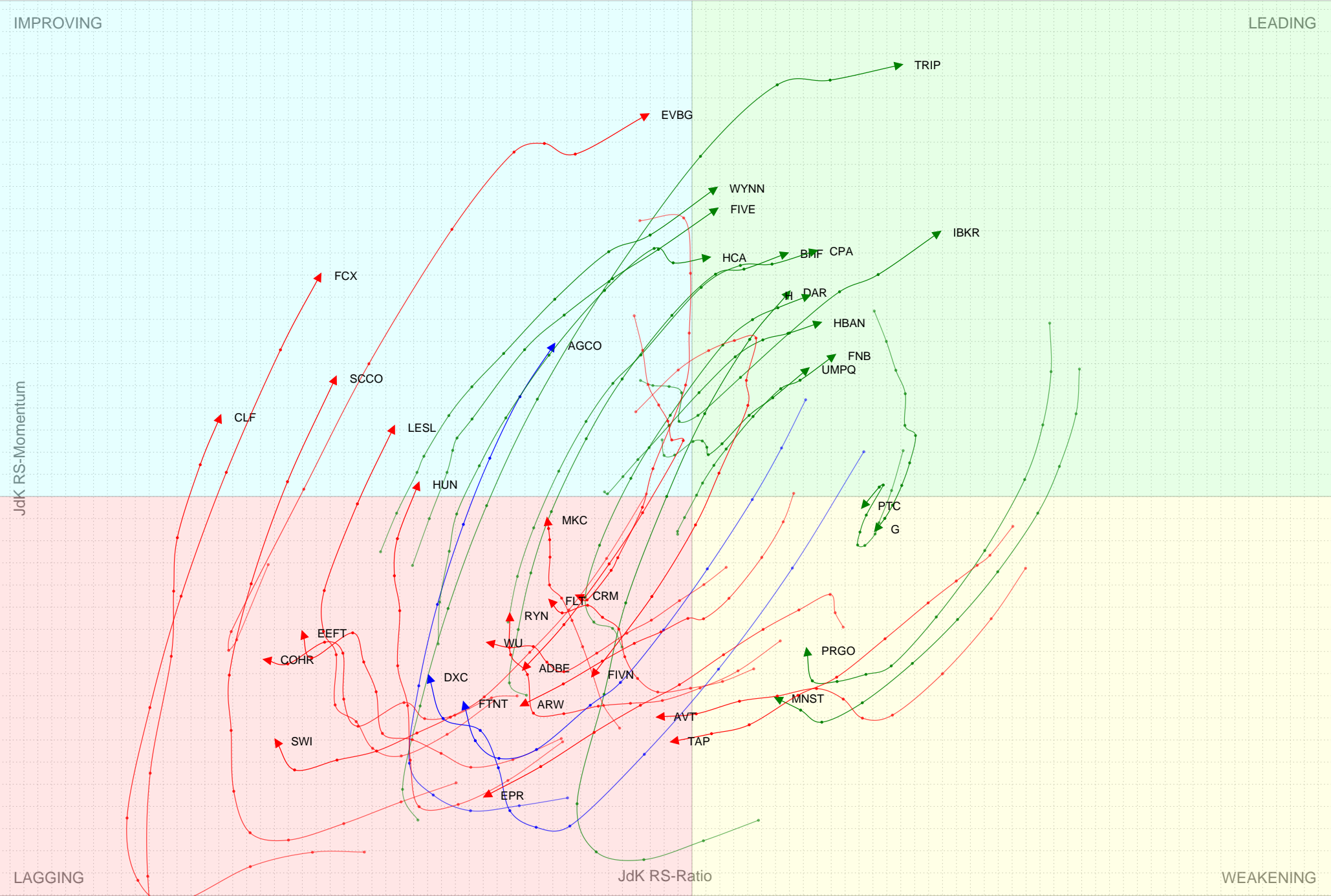
Buy	Prices as of 10/10/22							STOCK	SECTOR	TOTAL
Sell			TOP 20					TPA-RRG	TPA-RRG	TPA-RRG
Code	Name	Last	RRG Ratio	RRG Momentum	Quadrant	Mkt Cap (\$MIL)	TPA Sector	SCORE	SCORE	SCORE
FIVE	Five Below Inc	140.10	100.85	106.48	Leading	\$7,777	Retail	4.79	1.73	6.52
BHF	Brighthouse Financial Inc	46.99	103.37	105.48	Leading	\$3,375	Financial	4.46	1.76	6.22
DAR	Darling Ingredients Inc	73.19	103.46	104.60	Leading	\$11,738	Agribusiness	4.27	1.71	5.98
WYNN	Wynn Resorts Ltd.	73.09	100.83	106.95	Leading	\$8,313	Consumer Discretionary	4.84	1.08	5.92
CPA	Copa Holdings S.A.	72.04	104.42	105.54	Leading	\$2,996	Industrial	4.39	1.02	5.41
H	Hyatt Hotels Corporation	82.78	104.16	104.53	Leading	\$9,034	Consumer Discretionary	4.27	1.08	5.35
EVBG	Everbridge Inc	31.64	98.37	108.62	Improving	\$1,251	Cyber Security	3.53	1.73	5.27
AGCO	AGCO Corp.	106.15	95.02	103.41	Improving	\$7,919	Agribusiness	3.43	1.71	5.14
LESL	Leslies Inc	14.62	89.27	101.55	Improving	\$2,676	Retail	3.27	1.73	5.00
HCA	HCA Healthcare Inc	200.46	100.57	105.40	Leading	\$57,537	Health Care	4.53	0.43	4.97
HBAN	Huntington Bancshares Inc.	13.21	104.56	103.92	Leading	\$19,051	Financial	3.19	1.76	4.94
SCCO	Southern Copper Corporation	47.91	87.18	102.66	Improving	\$37,039	Materials	3.31	1.62	4.93
TRIP	TripAdvisor Inc.	22.88	107.47	109.74	Leading	\$3,200	Communication Services	4.39	0.52	4.90
CLF	Cleveland-Cliffs Inc	14.83	83.04	101.79	Improving	\$7,672	Metals and Mining	3.11	1.79	4.90
VRM	Vroom Inc.	1.13	102.20	121.07	Leading	\$156	Retail	3.14	1.73	4.87
FCX	Freeport-McMoRan Inc	28.95	86.63	104.98	Improving	\$41,377	Materials	3.23	1.62	4.85
IBKR	Interactive Brokers Group Inc - Ord	69.69	108.86	105.96	Leading	\$7,167	Financial	3.09	1.76	4.84
UMPQ	Umpqua Holdings Corp	17.17	104.13	102.87	Leading	\$3,727	Financial	3.08	1.76	4.84
FNB	F.N.B. Corp.	12.23	105.08	103.17	Leading	\$4,290	Financial	3.06	1.76	4.82
HUN	Huntsman Corp	25.34	90.16	100.27	Improving	\$5,104	Materials	3.20	1.62	4.82

Buy	Prices as of 10/10/22							STOCK	SECTOR	TOTAL
Sell			BOTTOM 20					TPA-RRG	TPA-RRG	TPA-RRG
Code	Name	Last	RRG Ratio	RRG Momentum	Quadrant	Mkt Cap (\$MIL)	TPA Sector	SCORE	SCORE	SCORE
SWI	SolarWinds Corp	8.45	85.07	94.47	Lagging	\$1,360	Tech-Software	-2.06	-0.97	-3.03
MKC	McCormick & Co. Inc. - Ordinary Sh	73.44	94.81	99.47	Lagging	\$19,704	Consumer Staples	-2.04	-1.00	-3.04
MNST	Monster Beverage Corp.	90.29	103.05	95.44	Weakening	\$47,573	Consumer Staples	-2.10	-1.00	-3.10
RYN	Rayonier Inc.	31.48	93.45	97.31	Lagging	\$4,609	Real Estate	-2.13	-0.98	-3.11
PRGO	Perrigo Company PLC	38.09	104.13	96.52	Weakening	\$5,128	Pharmaceutical	-1.92	-1.61	-3.54
ADBE	Adobe Inc	288.77	93.98	96.12	Lagging	\$134,249	Technology	-1.99	-1.65	-3.64
COHR	Coherent Corp	36.84	84.69	96.31	Lagging	\$4,821	Technology	-2.02	-1.65	-3.67
G	Genpact Ltd	44.16	106.62	99.26	Weakening	\$8,103	Technology	-2.05	-1.65	-3.69
EEFT	Euronet Worldwide Inc	77.71	86.02	96.91	Lagging	\$3,853	Technology	-2.05	-1.65	-3.70
CRM	Salesforce Inc	150.29	95.90	97.75	Lagging	\$150,290	Technology	-2.06	-1.65	-3.71
WU	Western Union Company	13.47	92.71	96.69	Lagging	\$5,196	Technology	-2.06	-1.65	-3.71
PTC	PTC Inc	110.17	106.15	99.78	Weakening	\$12,941	Technology	-2.08	-1.65	-3.73
FLT	FleetCor Technologies Inc	179.59	94.92	97.64	Lagging	\$13,472	Technology	-2.09	-1.65	-3.74
FTNT	Fortinet Inc	51.47	91.81	95.31	Lagging	\$40,585	Technology	-2.11	-1.65	-3.76
DXC	DXC Technology Co	26.56	90.56	95.91	Lagging	\$6,106	Technology	-2.12	-1.65	-3.77
EPR	EPR Properties	35.80	92.60	93.24	Lagging	\$2,686	Real Estate	-3.18	-0.98	-4.16
FIVN	Five9 Inc	76.97	96.45	95.97	Lagging	\$5,396	Tech-Software	-3.27	-0.97	-4.23
TAP	Molson Coors Brewing Company	47.02	99.32	94.47	Lagging	\$10,191	Consumer Staples	-3.43	-1.00	-4.43
ARW	Arrow Electronics Inc.	95.54	93.92	95.30	Lagging	\$6,131	Technology	-3.14	-1.65	-4.79
AVT	Avnet Inc.	37.91	98.82	95.02	Lagging	\$3,589	Technology	-3.45	-1.65	-5.10

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:

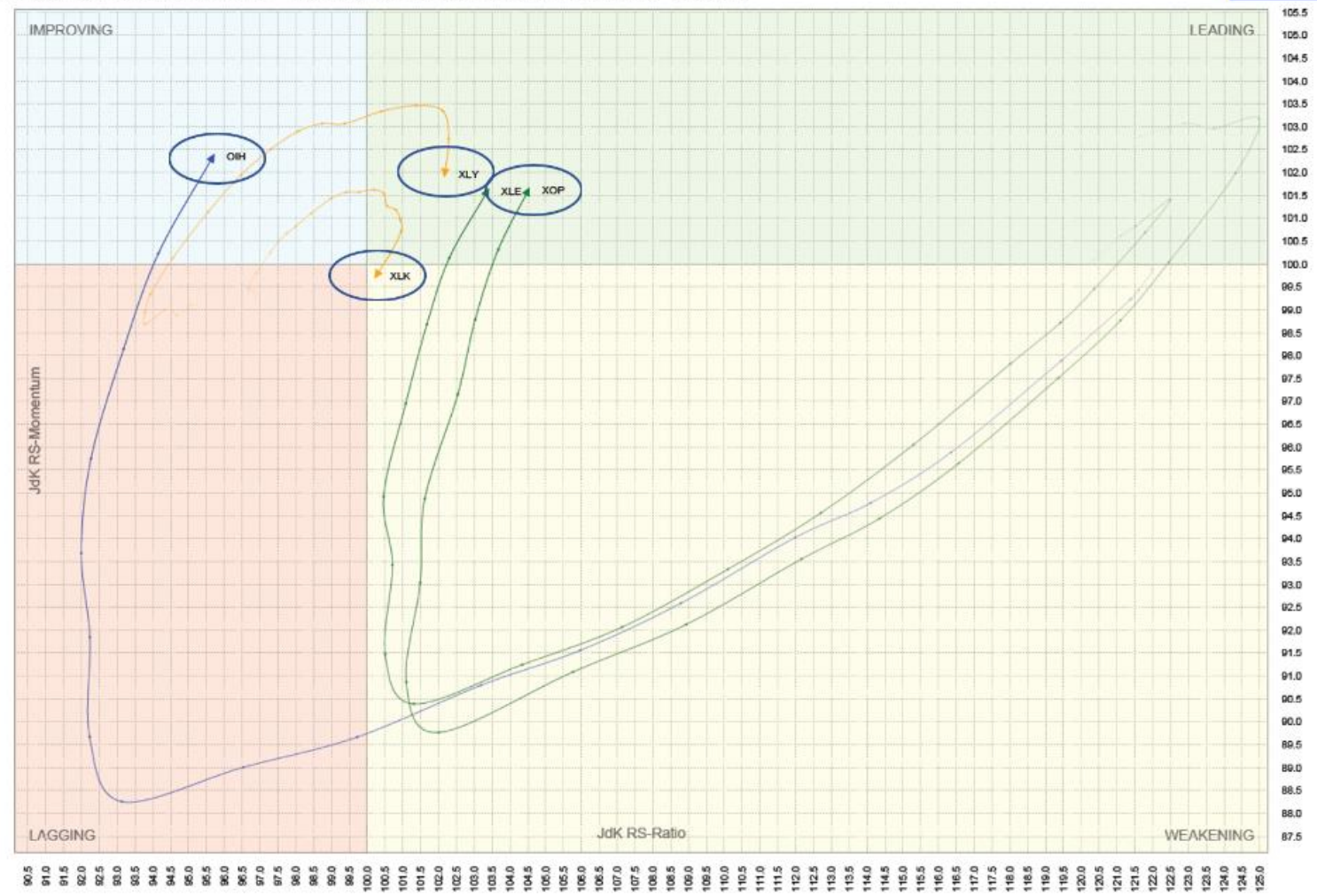
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TPA-RRG U.S. SECTOR & SUBSECTOR ETFs - HISTORY																						
	2/21/22	2/28/22	3/7/22	3/13/22	3/20/22	4/10/22	4/18/22	4/25/22	5/2/22	5/9/22	5/16/22	5/23/22	5/30/22	6/6/22	6/13/22	6/20/22	6/27/22	7/4/22	7/10/22	7/17/22		
Rank	Code	Code	Code	Code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

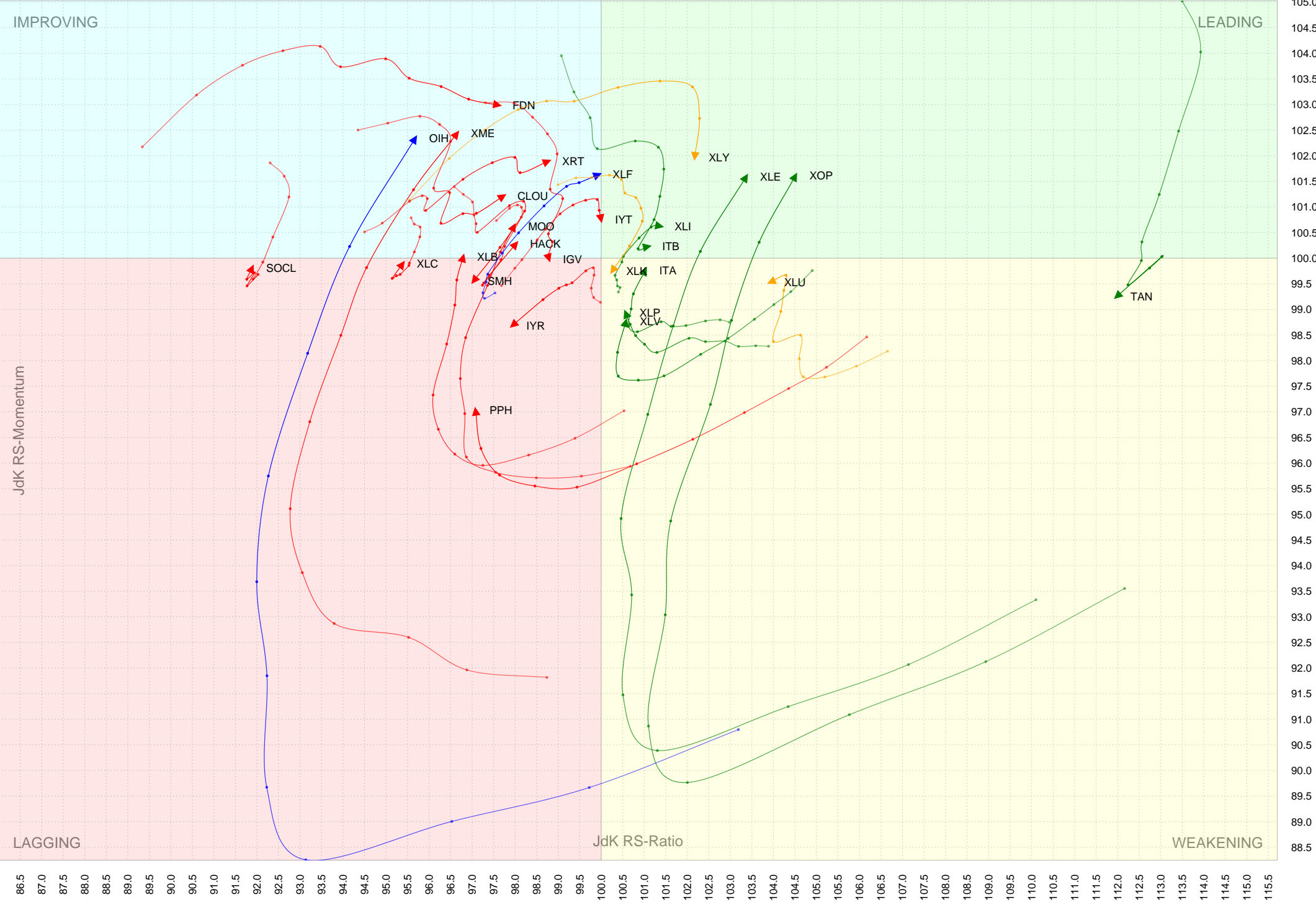


TPA-RRG 25 SECTOR ETFS

TPA-RRG U.S. SECTOR & SUBSECTOR ETFS			10/10/22			
<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>
OIH	Oil Services	247.29	95.68	102.34	Improving	3.79
XME	Metals & Mining	45.59	96.65	102.44	Improving	3.57
XLF	Financials	30.89	99.94	101.63	Improving	3.51
HACK	Cyber Security	44.15	98.02	100.28	Improving	3.47
XRT	Retail	58.26	98.77	101.89	Improving	3.46
MOO	Agribusiness	82.94	97.98	100.63	Improving	3.43
CLOU	Cloud Computing	16.20	97.73	101.21	Improving	3.34
XLB	Materials	69.46	96.79	100.03	Improving	3.23
ITB	Home Construction	54.80	101.09	100.23	Leading	3.01
XOP	Oil&Gas E&P	142.58	104.51	101.61	Leading	2.56
XLE	Energy	81.80	103.37	101.59	Leading	2.34
XLY	Consumer Discretionary	140.65	102.17	101.97	Leading	2.16
FDN	Internet	129.11	97.61	102.99	Improving	2.12
IYT	Transportation	200.02	100.00	100.75	Improving	2.05
XLI	Industrial	85.16	101.38	100.62	Leading	2.04
XLC	Communications	48.73	95.39	99.89	Lagging	1.03
SOCL	Social Media	28.18	91.89	99.81	Lagging	1.02
XLV	Health Care	122.62	100.57	98.76	Weakening	0.87
ITA	Aerospace & Defense	95.21	101.02	99.77	Weakening	0.70
SMH	SEMI	188.60	97.03	99.55	Lagging	-1.73
IGV	Software	256.65	98.79	99.98	Lagging	-1.94
IYR	Real Estate	78.63	97.94	98.69	Lagging	-1.97
XLP	Staples	66.50	100.57	98.93	Weakening	-1.99
XLU	Utilities	63.76	103.93	99.53	Weakening	-2.05
TAN	Solar	71.05	111.97	99.25	Weakening	-2.07
PPH	Pharma	67.78	97.08	97.03	Lagging	-3.23
XLK	TECH	120.77	100.25	99.75	Weakening	-3.30

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://vimeo.com/manage/videos/758688958/privacy>



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

What are RRG's?

Julius de Kempenaer 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.