

Daily ETF Performance @Hedgeye - 07/01/2022

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Daily ETF Performance - Country Performance

Performance

	1D	5D	1M	3M	QTD	YTD	vs. 52-Wk		Today's Price Z Score (TTM)
	% Chng	% Chng	% Chng	% Chng	% Chng	% Chng	High	Low	
U.S. Equities									
S&P 500 (\$VOO)	-0.79	-0.64	-7.87	-16.68	0	-20.54	-21.39	3.78	-2.58
Nasdaq (\$QQQ)	-1.24	-1.6	-8.41	-22.54	0	-29.55	-31.42	4.08	-2.29
Russell 2000 (\$IWM)	-0.78	-0.28	-8.09	-18.41	0	-23.87	-30.72	4.04	-2.18
European Equities									
Portugal (\$PGAL)	-0.71	-1.83	-6.7	-5.58	0	-4.36	-12.34	8.3	-1.1
Spain (\$EWP)	-0.17	-0.09	-9.65	-9.65	0	-11.23	-18.94	4.62	-2.05
Ireland (\$EIRL)	-1.03	-1.73	-13.29	-16.75	0	-29.48	-35.51	1.74	-2.23
U.K. (\$EWU)	-0.76	1.77	-8.41	-11.7	0	-9.6	-14.61	2.92	-2.7
France (\$EWQ)	-0.69	0.17	-11.11	-15.8	0	-22.81	-26.18	2.21	-2.42
Belgium (\$EWK)	-0.78	0.07	-8.57	-16.79	0	-20.22	-24.39	2.05	-2.5
Italy (\$EWI)	-1.39	-1.47	-14.97	-19.65	0	-26.61	-30.04	1.78	-2.64
Switzerland (\$EWL)	0.17	3.28	-6.88	-16.12	0	-21.24	-21.73	6.38	-2.38
Netherlands (\$EWN)	-0.28	2.36	-9.41	-17.97	0	-30.19	-35.08	4.28	-1.94
Germany (\$EWG)	-1.03	-1.54	-14.81	-19.57	0	-29.8	-34.42	2.49	-2.29
Austria (\$EWO)	-1.47	-1.95	-14.89	-17.72	0	-29.04	-33.48	1.68	-2.33
Denmark (\$EDEN)	-0.04	0.95	-7.69	-15.57	0	-22.37	-26.75	4.92	-2
Greece (\$GREK)	-0.08	-3.11	-10.8	-12.57	0	-10.36	-21.28	2.29	-2.48
Norway (\$NORW)	-0.65	1.32	-12.54	-19.86	0	-14.39	-22.37	2.19	-2.68
Sweden (\$EWD)	-1.36	-0.56	-15.44	-23.38	0	-34.28	-38.03	1.81	-2.26
Finland (\$EFNL)	-1.52	-0.17	-12.57	-16.83	0	-27.82	-34.64	1.53	-2.09
Poland (\$EPOL)	-0.75	3.17	-9.75	-24.55	0	-30.53	-38.79	5.25	-1.96
North & South American Equities									
Canada (\$EWC)	-0.91	1.88	-10.78	-16.26	0	-12.36	-18.09	2.25	-2.8
Mexico (\$EWW)	-0.36	1.97	-9.8	-15.84	0	-7.92	-16.55	6.69	-1.43
Colombia (\$GXG)	-1.81	-5.58	-26.85	-28.43	0	-11.13	-29.66	2.3	-2.2
Peru (\$EPU)	-3.3	-1.66	-17.12	-32.13	0	-13.84	-33.07	6.87	-1.41
Brazil (\$EWZ)	-1.4	0.92	-21.97	-30.02	0	-2.42	-32.8	3.48	-1.59
Chile (\$ECH)	-0.66	-1.67	-19.28	-18.54	0	4.24	-22.33	12.9	-1.33
Argentina (\$ARGT)	-1.86	-3.98	-18.44	-31.7	0	-20.64	-33.49	1.6	-2.73
Greater Asian Equities									
China Large Cap (\$FXI)	-0.09	2.94	7.55	2.14	0	-7.3	-26.99	29.77	-0.68
Hong Kong (\$EWH)	0.54	5.11	0.54	-3.14	0	-4.27	-17.87	8.37	-0.91
South Korea (\$EWY)	0.07	1.7	-13.93	-18.07	0	-25.27	-37.51	2.57	-2.1
Japan (\$EWJ)	-0.15	0.32	-8.33	-14.69	0	-21.1	-28.72	2.13	-2.13
Taiwan (\$EWT)	-2.15	-2.96	-10.86	-18	0	-24.31	-26.29	1.43	-2.79
Vietnam (\$VNM)	-2.11	-1.71	-10.33	-24.96	0	-32.2	-33.5	0.7	-2.62
Philippines (\$EPHE)	-1.67	1.08	-11.97	-18.55	0	-19.79	-24.59	1.85	-2.83
Thailand (\$THD)	-0.88	1.38	-8.92	-11.76	0	-9.5	-15.59	1.89	-2.56
Malaysia (\$EWM)	-0.23	1.01	-8.62	-15.38	0	-12.31	-18.76	1.48	-2.85
Singapore (\$EWS)	-0.95	-1.23	-6.7	-15.73	0	-17.34	-27.9	1.49	-2.04
Indonesia (\$IDX)	0.1	-2.23	-8.16	-7.34	0	-0.81	-12.02	11.88	-0.21
Russia (\$RSX)	0	0	0	0	0	-78.81	-83.08	13	-1.37
Australia (\$EWA)	-1.12	0.86	-14.3	-20.49	0	-14.54	-21.87	2.69	-2.84
New Zealand (\$ENZL)	-0.83	-0.34	-8.14	-19.61	0	-24.47	-31.6	3.95	-2.13
India (\$INDA)	-0.05	0	-5	-13.3	0	-14.11	-22.57	2.06	-1.99
Pakistan (\$PAK)	1.81	-4.68	-8.69	-19.58	0	-21.49	-39.58	2.33	-2.12
Middle East & African Equities									
United Arab Emirates (\$UAE)	-0.62	1.64	-9.45	-18.39	0	-3.9	-19.95	13.94	-0.5
Qatar (\$QAT)	0.48	3.67	-6.98	-13.09	0	1.55	-18.67	12.05	-0.32
Kuwait (\$KWT)	0.99	3.04	-6.54	-9.49	0	7.21	-13.34	13.89	0.06
Saudi Arabia (\$KSA)	-1.36	2.12	-9.86	-13.46	0	1.22	-19.03	8.12	-0.69
Israel (\$EIS)	-2.23	-0.77	-9.25	-20.48	0	-24.04	-26.1	3.46	-2.54
Turkey (\$TUR)	-0.52	-0.73	-11.33	-9.26	0	2.31	-21.72	26.73	-1.37
Egypt (\$EGPT)	0.4	-2.71	-8.98	-19	0	-34.82	-36.32	1.09	-2.53
Nigeria (\$NGE)	0.44	0.32	-6.15	-6.45	0	-3.51	-29.78	3.66	-1.51
South Africa (\$EZA)	-1.3	-0.12	-10.7	-24.77	0	-8.43	-24.93	2.07	-1.92

Data Source: Bloomberg

Correlations

	SPX				USD Index				WTI Crude Oil			
	15D	30D	90D	120D	15D	30D	90D	120D	15D	30D	90D	120D
U.S. Equities												
S&P 500 (\$VOO)	1	1	1	1	-0.49	-0.84	-0.81	-0.85	0.15	0.4	-0.42	-0.64
Nasdaq (\$QQQ)	0.97	0.98	0.99	0.99	-0.51	-0.78	-0.84	-0.88	-0.02	0.37	-0.46	-0.69
Russell 2000 (\$IWM)	0.97	0.98	0.97	0.97	-0.42	-0.79	-0.88	-0.86	0.36	0.51	-0.36	-0.58
European Equities												
Portugal (\$PGAL)	0.85	0.91	0.17	0.08	-0.6	-0.84	0.11	0.19	0.41	0.48	0.2	0.24
Spain (\$EWP)	0.88	0.93	0.64	0.76	-0.73	-0.96	-0.49	-0.73	0.25	0.32	-0.26	-0.63
Ireland (\$EIRL)	0.77	0.92	0.82	0.81	-0.55	-0.93	-0.81	-0.9	0.6	0.41	-0.47	-0.82
U.K. (\$EWU)	0.9	0.93	0.87	0.89	-0.49	-0.93	-0.71	-0.8	0.45	0.36	-0.37	-0.59
France (\$EWQ)	0.94	0.95	0.85	0.85	-0.56	-0.93	-0.78	-0.9	0.38	0.37	-0.42	-0.79
Belgium (\$EWK)	0.87	0.89	0.93	0.94	-0.54	-0.93	-0.76	-0.86	0.24	0.27	-0.53	-0.76
Italy (\$EWI)	0.8	0.9	0.82	0.84	-0.6	-0.94	-0.78	-0.9	0.43	0.32	-0.45	-0.8
Switzerland (\$EWL)	0.85	0.9	0.96	0.97	-0.44	-0.92	-0.78	-0.84	-0.15	0.16	-0.52	-0.7
Netherlands (\$EWN)	0.95	0.98	0.93	0.89	-0.45	-0.89	-0.88	-0.93	0.33	0.42	-0.45	-0.8
Germany (\$EWG)	0.66	0.92	0.85	0.83	-0.46	-0.92	-0.86	-0.93	0.66	0.44	-0.43	-0.8
Austria (\$EWO)	0.48	0.89	0.67	0.72	-0.34	-0.9	-0.73	-0.86	0.77	0.52	-0.33	-0.78
Denmark (\$EDEN)	0.97	0.97	0.95	0.96	-0.54	-0.9	-0.74	-0.79	0.11	0.36	-0.41	-0.62
Greece (\$GREK)	0.73	0.94	0.68	0.74	-0.57	-0.89	-0.53	-0.75	0.2	0.4	-0.51	-0.72
Norway (\$NORW)	0.6	0.92	0.93	0.85	-0.34	-0.89	-0.72	-0.59	0.75	0.53	-0.28	-0.27
Sweden (\$EWD)	0.66	0.91	0.92	0.91	-0.37	-0.9	-0.77	-0.88	0.75	0.47	-0.42	-0.77
Finland (\$EFNL)	0.81	0.91	0.82	0.83	-0.54	-0.94	-0.7	-0.86	0.41	0.34	-0.43	-0.81
Poland (\$EPOL)	0.76	0.91	0.92	0.89	-0.32	-0.92	-0.87	-0.93	0.33	0.32	-0.48	-0.81
North & South American Equities												
Canada (\$EWC)	0.66	0.93	0.95	0.89	-0.29	-0.84	-0.75	-0.65	0.79	0.6	-0.23	-0.28
Mexico (\$EWW)	0.94	0.89	0.83	0.62	-0.53	-0.93	-0.56	-0.28	0.21	0.23	-0.26	-0.04
Colombia (\$GXG)	0.08	0.73	0.81	0.44	-0.18	-0.66	-0.57	-0.14	0.85	0.75	-0.09	0.22
Peru (\$EPU)	0.11	0.81	0.92	0.78	-0.17	-0.84	-0.89	-0.66	0.9	0.61	-0.32	-0.23
Brazil (\$EWZ)	0.45	0.85	0.86	0.39	-0.25	-0.91	-0.64	-0.11	0.85	0.4	-0.2	0.24
Chile (\$ECH)	0.22	0.85	0.43	0.06	-0.21	-0.86	-0.26	0.15	0.84	0.58	0.3	0.51
Argentina (\$ARGT)	0.69	0.9	0.97	0.66	-0.51	-0.91	-0.75	-0.35	0.59	0.42	-0.38	-0.03
Greater Asian Equities												
China Large Cap (\$FXI)	0.5	-0.13	0.18	0.52	-0.04	0.48	-0.35	-0.74	-0.55	0.04	-0.04	-0.66
Hong Kong (\$EWH)	0.57	0.8	0.68	0.71	-0.03	-0.54	-0.73	-0.86	-0.16	0.29	-0.26	-0.7
South Korea (\$EWY)	0.53	0.86	0.9	0.92	-0.29	-0.89	-0.87	-0.91	0.82	0.47	-0.36	-0.69
Japan (\$EWJ)	0.85	0.89	0.87	0.89	-0.46	-0.92	-0.93	-0.96	0.6	0.35	-0.36	-0.73
Taiwan (\$EWT)	0.43	0.86	0.85	0.88	-0.19	-0.75	-0.96	-0.98	0.77	0.65	-0.39	-0.72
Vietnam (\$VNM)	0.58	0.87	0.88	0.91	-0.37	-0.8	-0.93	-0.94	0.8	0.63	-0.46	-0.71
Philippines (\$EPHE)	0.23	0.77	0.82	0.84	-0.13	-0.84	-0.89	-0.91	0.93	0.46	-0.43	-0.62
Thailand (\$THD)	0.61	0.87	0.85	0.79	-0.08	-0.88	-0.91	-0.82	0.78	0.41	-0.38	-0.43
Malaysia (\$EWM)	0.47	0.81	0.93	0.83	-0.34	-0.89	-0.84	-0.67	0.79	0.3	-0.48	-0.38
Singapore (\$EWS)	0.97	0.93	0.93	0.91	-0.55	-0.91	-0.85	-0.91	0.09	0.29	-0.54	-0.74
Indonesia (\$IDX)	0.68	0.92	0.61	0.15	-0.64	-0.83	-0.19	0.27	0.44	0.53	-0.23	0.31
Russia (\$RSX)	0	0	0	0	0	0	0	0	0	0	0	0
Australia (\$EWA)	0.85	0.92	0.92	0.66	-0.48	-0.92	-0.63	-0.29	0.59	0.38	-0.29	-0.03
New Zealand (\$ENZL)	0.93	0.93	0.93	0.94	-0.63	-0.92	-0.92	-0.88	0.07	0.28	-0.43	-0.6
India (\$INDA)	0.81	0.92	0.92	0.94	-0.22	-0.85	-0.68	-0.79	0.5	0.42	-0.59	-0.77
Pakistan (\$PAK)	0.22	0.66	0.8	0.84	-0.51	-0.76	-0.73	-0.83	0.32	0.21	-0.59	-0.74
Middle East & African Equities												
United Arab Emirates (\$UAE)	-0.05	0.74	0.84	0.38	0.06	-0.75	-0.53	-0.02	0.79	0.43	-0.4	0.15
Qatar (\$QAT)	0.2	0.74	0.81	0.33	0.02	-0.81	-0.55	-0.02	0.88	0.43	-0.34	0.21
Kuwait (\$KWT)	0.46	0.79	0.63	0.05	-0.17	-0.8	-0.23	0.33	0.48	0.29	-0.35	0.36
Saudi Arabia (\$KSA)	0.23	0.79	0.68	0.3	-0.06	-0.78	-0.32	0.06	0.91	0.57	-0.34	0.13
Israel (\$EIS)	0.93	0.95	0.97	0.98	-0.5	-0.88	-0.85	-0.87	-0.08	0.24	-0.5	-0.67
Turkey (\$TUR)	0.46	0.87	0.28	0.14	-0.34	-0.83	0.2	0.27	-0.08	0.3	-0.21	0.04
Egypt (\$EGPT)	0.01	0.43	0.59	0.73	-0.09	-0.63	-0.82	-0.92	0.72	0.27	-0.4	-0.78
Nigeria (\$NGE)	0.32	0.69	0.43	0.56	-0.15	-0.82	-0.24	-0.49	0.87	0.29	-0.19	-0.46
South Africa (\$EZA)	0.86	0.95	0.95	0.8	-0.53	-0.92	-0.89	-0.67	0.04	0.31	-0.4	-0.27

Daily ETF Performance - Country IVOL PREM %

TIME WINDOW SETTING: VOLATILITY_30D PUT_IMP_VOL_30D		TOTAL RETURN PERFORMANCE	IVOL PREMIUM/DISCOUNT							REALIZED VOLATILITY TRENDS			IMPLIED VOLATILITY TRENDS		
	TICKER	YTD %	IVOL PREM % IVOL / RVOL	Yesterday	1W Ago	1M Ago	TTM Z-Score		3Yr Z-Score	RVOL CURRENT	MM %	PERCENTILE 10YR	IVOL CURRENT	MM %	PERCENTILE 10YR
U.S. Equities			CURRENT												
VANGUARD S&P 500 ETF	VOO US Equity	-19.95%	-9%	-19%	-15%	-28%	-0.8	-0.7		28.8	-7%	96%	26.3	-6%	95%
INVESCO QQQ TRUST SERIES 1	QQQ US Equity	-29.33%	-6%	-16%	-18%	-30%	-0.6	-0.6		36.2	-13%	96%	33.9	-7%	97%
ISHARES RUSSELL 2000 ETF	IWM US Equity	-23.51%	-3%	-9%	-11%	-19%	-0.6	-0.5		32.4	-5%	95%	31.5	-8%	93%
European Equities															
ISHARES MSCI SPAIN ETF	EWP US Equity	-9.90%	1%	-1%	-6%	-14%	-0.3	-0.4		27.3	8%	82%	27.5	3%	83%
ISHARES MSCI UNITED KINGDOM	EWU US Equity	-7.94%	-12%	-14%	-18%	-30%	-0.7	-0.6		27.3	9%	92%	23.9	4%	89%
ISHARES MSCI FRANCE ETF	EWQ US Equity	-20.54%	-8%	-9%	-14%	-7%	-0.7	-0.6		31.8	26%	92%	29.3	-7%	91%
ISHARES MSCI ITALY ETF	EWI US Equity	-24.36%	-3%	-8%	-11%	-20%	-0.5	-0.5		35.7	35%	92%	34.5	33%	91%
ISHARES MSCI SWITZERLAND ETF	EWL US Equity	-19.63%	-6%	-16%	-7%	-14%	-0.8	-0.6		27.1	27%	97%	25.6	21%	95%
ISHARES MSCI NETHERLANDS ETF	EWN US Equity	-29.27%	-10%	3%	-5%	-20%	-0.7	-0.6		36.7	9%	96%	33.0	-5%	89%
ISHARES MSCI GERMANY ETF	EWG US Equity	-27.63%	-9%	-12%	-15%	-30%	-0.7	-0.6		32.0	15%	93%	29.1	8%	94%
GLOBAL X MSCI GREECE ETF	GREK US Equity	-10.13%	21%	44%	16%	1%	-0.4	-0.1		33.2	2%	60%	40.2	1%	66%
ISHARES MSCI SWEDEN ETF	EWD US Equity	-32.37%	4%	-17%	-1%	-14%	-0.2	-0.3		36.4	5%	94%	37.9	9%	95%
North & South American Equities															
ISHARES MSCI CANADA ETF	EWK US Equity	-11.71%	2%	-1%	-8%	-25%	-0.1	-0.4		27.4	-1%	94%	27.9	9%	96%
ISHARES MSCI MEXICO ETF	EWX US Equity	-6.51%	5%	-1%	6%	-3%	-0.8	-0.3		26.3	19%	81%	27.7	2%	84%
GLOBAL X MSCI COLOMBIA ETF	GXG US Equity	-5.95%	-29%	-28%	29%	-11%	-1.6	-1.0		51.2	136%	98%	36.2	-38%	81%
ISHARES MSCI BRAZIL ETF	EWZ US Equity	2.22%	0%	-2%	0%	-18%	-0.5	-0.4		37.5	5%	78%	37.5	5%	76%
ISHARES MSCI CHILE ETF	ECH US Equity	8.43%	2%	1%	2%	-22%	-0.2	0.0		37.5	2%	91%	38.1	3%	94%
GLOBAL X MSCI ARGENTINA ETF	ARGT US Equity	-19.43%	-41%	-42%	-47%	-47%	-1.5	-1.3		43.2	0%	94%	25.6	-12%	43%
Greater Asian Equities															
ISHARES CHINA LARGE-CAP ETF	FXI US Equity	-6.89%	-8%	-11%	-12%	-15%	0.0	-0.2		38.5	1%	94%	35.5	-10%	95%
ISHARES MSCI HONG KONG ETF	EWH US Equity	-2.81%	25%	28%	28%	4%	0.1	0.3		18.5	-5%	70%	23.2	5%	88%
ISHARES MSCI SOUTH KOREA ETF	EWY US Equity	-25.27%	3%	-4%	-2%	-17%	-0.3	-0.1		28.8	-4%	88%	29.5	3%	93%
ISHARES MSCI JAPAN ETF	EWJ US Equity	-20.33%	16%	12%	15%	-15%	0.6	0.4		19.0	-10%	74%	22.1	3%	90%
ISHARES MSCI TAIWAN ETF	EWT US Equity	-24.31%	20%	18%	9%	-5%	0.0	0.3		24.8	-7%	88%	29.7	6%	97%
ISHARES MSCI THAILAND ETF	THD US Equity	-7.96%	-12%	15%	6%	13%	-1.5	-1.1		19.1	5%	61%	16.7	-40%	19%
ISHARES MSCI MALAYSIA ETF	EWM US Equity	-10.51%	-4%	2%	30%	23%	-0.8	-0.7		17.3	30%	65%	16.6	-19%	40%
ISHARES MSCI SINGAPORE ETF	EWS US Equity	-16.10%	-11%	-12%	-23%	-21%	-0.4	-0.4		23.6	-1%	87%	21.1	-10%	80%
VANECK RUSSIA ETF	RSX US Equity	-78.81%	-	-	-	-	-	-		0.0	-	1%	-	-	-
ISHARES MSCI AUSTRALIA ETF	EWA US Equity	-11.78%	-15%	-19%	-20%	-28%	-1.1	-0.9		31.9	11%	94%	27.1	1%	92%
ISHARES MSCI NEW ZEALAND ETF	ENZL US Equity	-23.59%	21%	16%	21%	6%	0.3	0.1		23.3	14%	90%	28.2	-8%	79%
ISHARES MSCI INDIA ETF	INDA US Equity	-14.11%	23%	18%	11%	25%	-0.1	0.2		20.0	4%	49%	24.6	-8%	71%
Middle East & African Equities															
ISHRS MSCI SAUDI ARABIA ETF	KSA US Equity	1.97%	65%	131%	123%	3%	0.8	-0.1		22.6	-1%	77%	37.5	61%	81%
ISHARES MSCI TURKEY ETF	TUR US Equity	5.22%	49%	45%	66%	36%	0.6	0.6		32.4	19%	64%	48.2	25%	92%
ISHARES MSCI SOUTH AFRICA ET	EZA US Equity	-6.38%	-10%	-11%	-7%	-13%	-1.2	-0.9		39.0	20%	87%	35.0	-26%	79%
Data Source: CBOE, CME, Bloomberg															

Data Source: CBOE, CME, Bloomberg

Performance

Data Source: Bloomberg

	SPX				USD Index				WTI Crude Oil			
	15D	30D	90D	120D	15D	30D	90D	120D	15D	30D	90D	120D
Alternative Energy												
Nuclear (\$NLR)	0.88	0.94	0.67	0.35	-0.45	-0.89	-0.3	0.06	0.51	0.44	-0.08	0.22
Uranium (\$URA)	0.69	0.89	0.9	0.6	-0.39	-0.77	-0.69	0.27	0.77	0.68	-0.26	0.04
Solar (\$TAN)	0.83	0.43	0.41	0.15	-0.48	-0.1	-0.35	0.06	-0.24	0.31	0.21	0.38
Global Wind (\$FAN)	0.85	0.94	0.85	0.75	-0.47	-0.89	-0.78	-0.57	0.51	0.49	-0.23	-0.22
Global Clean Energy (\$PBD)	0.84	0.95	0.89	0.8	-0.55	-0.83	-0.75	-0.56	0.3	0.49	-0.21	-0.25
Carbon Offsets (\$KRBN)	0.21	0.61	-0.09	0.28	0.13	-0.43	0.22	-0.36	0.03	0.3	-0.29	-0.6
Energy												
Oil & Gas Exploration & Production (\$PXE)	0.26	0.68	-0.28	-0.53	-0.08	-0.52	0.53	0.76	0.95	0.89	0.67	0.84
Oil & Gas Equip. & Services (\$PXI)	0.43	0.84	0.46	-0.09	-0.19	-0.75	-0.15	0.41	0.91	0.73	0.31	0.69
Nat Gas Producers (\$FCG)	0.29	0.73	-0.11	-0.44	-0.11	-0.6	0.38	0.7	0.95	0.85	0.62	0.84
Materials, Metals and Mining												
Gold Minors (\$GDX)	0.14	0.7	0.89	0.42	-0.37	-0.83	-0.74	-0.16	0.68	0.52	-0.35	0.16
Hard Asset Producers (\$HAP)	0.39	0.85	0.8	0.38	-0.2	-0.82	-0.47	0	0.9	0.63	-0.06	0.32
Metals & Mining (\$XME)	0.47	0.89	0.88	0.22	-0.31	-0.84	-0.57	0.15	0.84	0.61	-0.17	0.44
Steel Production (\$SLX)	0.39	0.88	0.87	0.39	-0.22	-0.85	-0.59	-0.02	0.9	0.6	-0.12	0.32
Silver Miners (\$SIL)	0.24	0.76	0.9	0.8	-0.38	-0.83	-0.83	-0.68	0.71	0.56	-0.38	-0.35
Timber (\$WOOD)	0.62	0.89	0.8	0.82	-0.35	-0.9	-0.59	-0.65	0.78	0.44	-0.3	-0.45
Copper Producers (\$COPX)	0.22	0.78	0.92	0.67	-0.2	-0.78	-0.79	-0.44	0.89	0.69	-0.21	0
Industrials and Infrastructure												
Transport (\$IYT)	0.97	0.98	0.93	0.94	-0.41	-0.84	-0.85	-0.87	0.23	0.41	-0.39	-0.61
Aerospace & Defense (\$ITA)	0.92	0.93	0.96	0.78	-0.39	-0.68	-0.77	-0.5	0.23	0.5	-0.32	-0.16
Global Infrastructure (\$GII)	0.9	0.93	0.57	0.23	-0.4	-0.91	-0.15	0.2	0.45	0.36	-0.05	0.3
Airlines (\$JETS)	0.86	0.92	0.79	0.82	-0.44	-0.88	-0.53	-0.66	0.48	0.37	-0.49	-0.61
Auto Manufacturers (\$CARZ)	0.84	0.96	0.94	0.93	-0.46	-0.83	-0.88	-0.93	0.45	0.5	-0.36	-0.73
Autonomous Vehicles (\$IDRV)	0.88	0.97	0.91	0.88	-0.45	-0.82	-0.9	-0.93	0.43	0.51	-0.4	-0.79
Utilities												
Smart Grid (\$GRID)	0.86	0.97	0.97	0.96	-0.45	-0.82	-0.8	-0.83	0.56	0.57	-0.33	-0.63
Consumer												
Gaming (\$BJK)	0.95	0.96	0.89	0.89	-0.49	-0.76	-0.9	-0.94	0.09	0.41	-0.44	-0.73
Vice Stocks (\$VICE)	0.97	0.98	0.94	0.95	-0.46	-0.78	-0.89	-0.91	0.18	0.43	-0.5	-0.7
Food & Beverage (\$PBJ)	0.82	0.94	0.66	0.46	-0.25	-0.78	-0.21	-0.01	0.03	0.33	-0.33	-0.05
Homebuilders (\$XHB)	0.87	0.96	0.78	0.83	-0.3	-0.8	-0.84	-0.91	0.52	0.52	-0.27	-0.73
Online Retail (\$IBUY)	0.88	0.91	0.93	0.93	-0.52	-0.7	-0.91	-0.94	-0.09	0.35	-0.51	-0.78
Liesure & Entertainment (\$PEJ)	0.84	0.95	0.97	0.95	-0.4	-0.85	-0.88	-0.87	0.54	0.49	-0.48	-0.6
Media (\$PBS)	0.91	0.93	0.96	0.97	-0.51	-0.86	-0.89	-0.9	0.37	0.38	-0.47	-0.66
Cannabis (\$YOLO)	0.6	0.8	0.93	0.94	-0.45	-0.87	-0.91	-0.93	0.68	0.36	-0.5	-0.71
Technology												
Semiconductors (\$PSI)	0.81	0.96	0.86	0.9	-0.35	-0.83	-0.87</					

Daily ETF Performance - Sub Sector IVOL PREM %

TIME WINDOW SETTING:		TOTAL RETURN PERFORMANCE	IVOL PREMIUM/DISCOUNT						REALIZED VOLATILITY TRENDS				IMPLIED VOLATILITY TRENDS		
VOLATILITY_30D PUT_IMP_VOL_30D			IVOL PREM %	Yesterday	1W Ago	1M Ago	TTM Z-Score	3Yr Z-Score	RVOL	PERCENTILE	IVOL	PERCENTILE			
TICKER		YTD %	IVOL / RVOL												
Alternative Energy			CURRENT												
GLOBAL X URANIUM ETF	URA US Equity	-18.22%	4%	2%	0%	-17%	-0.1	-0.3	54.9	-10%	92%	57.1	1%	94%	
INVESCO SOLAR ETF	TAN US Equity	-7.25%	4%	5%	-2%	-20%	0.1	0.0	50.4	-9%	86%	52.4	-3%	92%	
FIRST TRUST GLOBAL WIND ENER	FAN US Equity	-14.31%	-3%	162%	-15%	-26%	-0.6	-0.6	24.8	-9%	85%	24.1	-4%	38%	
INVESCO GLOBAL CLEAN ENERGY	PBD US Equity	-26.37%	3%	-3%	-12%	18%	-0.2	-0.2	41.0	-9%	94%	42.4	-19%	82%	
Energy															
INVESCO DYNAMIC ENERGY EXPLO	PXE US Equity	34.56%	25%	3%	43%	-4%	-0.3	-0.3	59.1	11%	95%	73.8	16%	90%	
INVESCO DYNAMIC OIL & GAS SE	PXJ US Equity	19.72%	6%	6%	169%	-12%	-0.6	-0.6	52.5	-6%	92%	55.8	-9%	70%	
FIRST TRUST NATURAL GAS ETF	FCG US Equity	28.99%	-4%	-5%	2%	-20%	-0.8	-0.2	58.7	7%	88%	56.1	10%	91%	
Materials, Metals and Mining															
VANECK GOLD MINERS ETF	GDX US Equity	-14.52%	-4%	-4%	-8%	-11%	-0.9	-0.3	43.3	12%	72%	41.8	4%	74%	
SPDR S&P METALS & MINING ETF	XME US Equity	-2.56%	-7%	-24%	-3%	-16%	-0.9	-0.6	50.4	3%	95%	47.1	12%	92%	
VANECK STEEL ETF	SLX US Equity	-6.99%	11%	8%	12%	-3%	-0.2	-0.4	41.9	8%	89%	46.6	1%	82%	
GLOBAL X SILVER MINERS ETF	SIL US Equity	-29.20%	1%	-1%	-4%	-13%	-0.8	0.0	47.6	3%	74%	48.2	4%	88%	
ISHARES GLOBAL TIMBER & FORE	WOOD US Equity	-17.62%	-18%	-26%	-19%	-29%	-1.2	-0.8	30.5	5%	95%	25.2	6%	79%	
GLOBAL X COPPER MINERS ETF	COPX US Equity	-15.79%	-2%	-4%	-5%	-29%	-0.6	-0.6	46.9	0%	91%	46.1	23%	98%	
Industrials and Infrastructure															
ISHARES US TRANSPORTATION ET	IYT US Equity	-22.56%	0%	-16%	-11%	-22%	-0.4	-0.4	30.2	-8%	93%	30.3	-5%	94%	
ISHARES U.S. AEROSPACE & DEF	ITA US Equity	-3.11%	-6%	-6%	-5%	-12%	-0.6	-0.5	29.0	10%	93%	27.3	-6%	75%	
US GLOBAL JETS ETF	JETS US Equity	-21.76%	-1%	-3%	-3%	-12%	-0.4	-0.6	47.4	6%	91%	46.8	3%	84%	
ISHARES SELF-DRIVING EV&TECH	IDRV US Equity	-31.39%	15%	23%	17%	-2%	-0.1	-0.4	37.0	-4%	85%	42.7	5%	80%	
Consumer															
VANECK GAMING ETF	BJK US Equity	-23.69%	-21%	-23%	-27%	-27%	-0.7	-0.7	41.4	-1%	95%	32.7	-3%	83%	
SPDR S&P HOMEBUILDERS ETF	XHB US Equity	-35.91%	-11%	-5%	-1%	-11%	-1.2	-0.7	39.8	-1%	95%	35.6	-6%	92%	
AMPLIFY ONLINE RETAIL ETF	IBUY US Equity	-52.40%	-10%	-17%	-33%	-6%	-0.5	-0.7	62.1	10%	97%	55.6	-6%	97%	
INVESCO DYNAMIC LEISURE AND	PEJ US Equity	-25.73%	-17%	-14%	-27%	-27%	-1.1	-0.8	41.5	18%	96%	34.4	-11%	65%	
ADVISHARES PURE CANNABIS	YOLO US Equity	-59.41%	29%	31%	15%	2%	0.4	0.1	39.3	-14%	51%	50.9	0%	51%	
Technology															
INVESCO DYNAMIC SEMICONDUCTO	PSI US Equity	-36.29%	1%	-5%	-10%	-24%	0.0	0.1	44.3	-12%	92%	44.9	-1%	84%	
GLOBAL X ART INTEL & TECH	AIQ US Equity	-34.35%	-3%	-10%	20%	25%	-0.9	-1.0	40.1	-2%	91%	38.9	-6%	77%	
FIRST TRUST NASDAQ CYBERSECU	CIBR US Equity	-23.74%	-15%	-23%	-20%	-32%	-0.9	-1.0	39.9	-11%	96%	33.9	-13%	83%	
EVANECK VIDEOGAMING ESPORTS	ESPO US Equity	-28.02%	14%	6%	-9%	-15%	0.5	-0.3	37.3	-11%	84%	42.5	-2%	84%	
INVESCO NASDAQ INTERNET ETF	PNQI US Equity	-44.56%	-18%	-23%	-21%	-28%	-0.7	-1.0	48.4	-1%	96%	39.5	-6%	91%	
FIRST TRUST CLOUD COMPUTING	SKYY US Equity	-36.73%	-17%	-22%	-21%	-29%	-0.8	-1.0	50.9	-4%	98%	42.0	-11%	94%	
GLOBAL X SOCIAL MEDIA ETF	SOCJ US Equity	-38.22%	-23%	-26%	-22%	-20%	-0.6	-0.9	50.1	18%	97%	38.6	-22%	93%	
ROBO GLOBAL ROBOTICS AND AUT	ROBO US Equity	-35.89%	10%	0%	6%	-4%	-0.4	-0.3	33.1	-8%	94%	36.3	-13%	90%	
AMPLIFY TRANSFOR DATA SHARIN	BLOK US Equity	-54.87%	36%	21%	16%	-7%	2.1	1.0	49.6	-20%	79%	67.6	2%	94%	
Healthcare															
SPDR S&P BIOTECH ETF	XBI US Equity	-33.66%	-1%	-6%	-12%	-18%	-0.3	-0.4	51.8	-18%	96%	51.1	-11%	97%	
INVESCO DYNAMIC PHARMACEUTIC	PJP US Equity	-7.08%	-2%	-7%	35%	-21%	-1.3	-1.0	25.0	3%	87%	24.5	-31%	73%	
ISHARES U.S. HEALTHCARE PROV	IHF US Equity	-11.81%	15%	-4%	-4%	-12%	0.1	0.1	24.1	-19%	86%	27.8	-5%	95%	
ISHARES U.S. MEDICAL DEVICES	IHI US Equity	-23.32%	1%	-8%	-13%	-24%	-0.5	-0.5	28.0	-23%	93%	28.3	-6%	91%	
SPDR S&P HEALTH CARE EQUIPME	XHE US Equity	-27.65%	-2%	-19%	-45%	-37%	0.1	-0.4	36.6	-21%	96%	35.8	14%	95%	
Financials															
ISHARES U.S. BROKER-DEALERS	IAI US Equity	-22.92%	2%	-6%	-1%	-24%	0.1	-0.4	29.2	-12%	91%	29.9	1%	90%	
INVESCO GLOBAL LISTED PRIVAT	PSP US Equity	-35.31%	-15%	65%	29%	23%	-1.2	-0.8	35.3	-1%	96%	30.0	-31%	59%	
SPDR S&P CAPITAL MARKETS ETF	KCE US Equity	-28.81%	35%	11%	-5%	-5%	1.2	0.5	32.4	-10%	92%	43.8	28%	96%	
SPDR S&P INSURANCE ETF	KIE US Equity	-5.44%	4%	-5%	8%	-13%	-0.4	-0.1	26.0	2%	93%	27.0	-1%	92%	
SPDR S&P BANK ETF	KBE US Equity	-18.53%	27%	15%	6%	-16%	0.6	0.7	29.6	-2%	84%	37.5	8%	91%	
SPDR S&P REGIONAL BANKING	KRE US Equity	-17.11%	15%	10%	12%	-5%	0.7	0.6	28.9	-3%	79%	33.1	-4%	87%	
Small Cap															
INVESCO S&P SMALLCAP HEALTH	PSCH US Equity	-23.83%	-14%	-19%	-36%	-33%	-0.2	-0.4	32.7	-15%	93%	28.2	33%	88%	
INVESCO S&P SMALLCAP ENERGY	PSCE US Equity	25.18%	-2%	76%	36%	-14%	-0.9	-0.9	62.1	19%	92%	61.0	3%	33%	
Data Source: CBOE, CME, Bloomberg															

Daily ETF Performance - Commodity, Currency and Bond Performance

Performance

	1D	5D	1M	3M	QTD	YTD	vs. 52-Wk		Today's Price Z Score (TTM)
	% Chng	% Chng	% Chng	% Chng	% Chng	% Chng	High	Low	
Commodities									
Palladium (\$PALL)	-2.25	4.14	-3.54	-15.73	0	1.37	-40.11	24.84	-0.9
Gold (\$GLD)	-0.61	-1.06	-2.19	-6.15	0	-1.46	-12.85	4.84	-0.49
Platinum (\$PPLT)	-2.52	-1.63	-10.17	-9.65	0	-7.56	-24.35	0.23	-2.05
Silver (\$SLV)	-2.61	-3.77	-7.4	-18.03	0	-13.34	-25.14	0	-2.44
U.S. Oil (\$USO)	-3.13	1.73	-6.07	8.33	0	47.81	-12.85	85.05	1.33
Brent Oil (\$BNO)	-2.21	3.09	-3.39	9.9	0	56.58	-11.13	94.07	1.46
Natural Gas (\$UNG)	-13.08	-10.92	-36.19	-4.57	0	52.2	-41.99	62.62	0.17
Gasoline (\$UGA)	-3.42	-3	-10.59	21.26	0	65.58	-15.53	110.75	1.54
Sugar (\$CANE)	0.22	0.76	-5.09	-2.51	0	1.3	-8.45	14.35	0
Biofuels (\$FUE)	-1.55	0.86	-7.35	-2.45	0	14.97	-17.07	34.47	0.59
Grains (\$GRU)	-4.3	-3.78	-10.4	-6.64	0	12.9	-37.18	31.2	0.27
Corn (\$CORN)	-4.15	-3.79	-8.41	-7.02	0	16.81	-16.96	32.98	0.51
Soybeans (\$SOYB)	-1.31	2.69	-4.04	2.27	0	18.95	-7.61	30.91	0.93
Wheat (\$WEAT)	-4.64	-6.13	-13.82	-6.71	0	22.33	-29.1	47.59	0.36
Rare Earth Metals (\$REMX)	-0.18	4.89	-8.54	-28.84	0	-22.63	-31.92	6.2	-2.01
Steel (\$SLX)	-2.5	-0.04	-21.24	-28.45	0	-6.99	-29.76	1.39	-1.97
Currencies									
U.S. Dollar (\$UUP)	-0.32	0.43	1.97	6.15	0	9.09	-0.89	13.31	2.08
Euro (\$FXE)	0.33	-0.5	-1.71	-5.44	0	-8.37	-12.77	1.08	-1.82
British Pound (\$FXB)	0.41	-0.83	-2.61	-7.32	0	-10.17	-13.29	1.69	-2.28
Swiss Franc (\$FXF)	0.04	0.57	0.78	-3.37	0	-5.03	-6.5	5.25	-1.16
Australian Dollar (\$FXA)	0.3	-0.02	-3.92	-8.18	0	-5.24	-9.97	1.01	-2.24
Canadian Dollar (\$FXC)	0.24	0.9	-1.67	-2.84	0	-1.95	-4.72	1.64	-1.43
Chinese Renminbi (\$CYB)	-0.07	-0.22	0.09	-4.52	0	-3.66	-5.76	2.15	-1.62
Japanese Yen (\$FXY)	0.65	-0.57	-4.12	-9.76	0	-15.36	-20.28	0.96	-2.21
U.S. Government Bonds									
U.S. 20+ Yr Treasuries (\$TLT)	0.88	0.64	-1.16	-13.23	0	-22.48	-25.95	6.25	-1.81
U.S. 7-10 Yr Treasury (\$IEF)	0.77	0.78	-0.3	-4.08	0	-11.04	-13.77	4.4	-1.63
U.S. 1-3 Yr Treasury (\$SHY)	0.19	0.16	-0.41	-0.42	0	-3.21	-4.08	1.04	-1.6
U.S. Tips (\$TIP)	-0.09	-1.23	-2.72	-7.46	0	-11.83	-13.29	0.79	-2.61
Corporate Bonds									
Corporate Long Term (\$IGLB)	0.41	0.11	-3.91	-13.54	0	-23.35	-26.15	3.39	-1.84
Corporate Medium Term (\$IGIB)	0.43	0.12	-2.33	-6.69	0	-13.85	-16.54	2.43	-1.84
Corporate Short Term (\$IGSB)	0.18	0.26	-0.94	-1.94	0	-6.18	-7.84	1.47	-1.7
Corporate Investment Grade (\$PFIG)	0.37	0.31	-1.73	-4.72	0	-10.39	-13.33	5.68	-1.75
Corporate High Yield (\$HYG)	-0.05	-1.21	-6.7	-10.18	0	-15.4	-16.5	0.99	-2.51
International Bonds									
Emerging Market Government (\$PCY)	0.16	-2.47	-9.17	-18.33	0	-29.68	-33.56	1.37	-2.06
International Bond Fund (\$BNDX)	0.67	0.55	-1.47	-5.31	0	-10.19	-14.16	2.82	-1.77
Internatinal Govt (\$BWX)	0.7	-0.26	-3.5	-10.58	0	-18.08	-22.72	3.35	-2.01
Short Term Int. Govt. (\$BWZ)	0.48	-0.07	-2.85	-7.23	0	-11.32	-15.36	1.01	-2.06
International Corporate (\$PICB)	0.96	0.05	-5.15	-12.94	0	-20.7	-25.61	2.85	-2.03
U.S. Municipal Bonds									
National Muni (\$TFI)	0.31	0.46	-2.11	-4.06	0	-11.35	-12.7	2.32	-1.71
National Muni Long Term (\$ITM)	0.91	1.13	-1.57	-3.28	0	-10.92	-12.73	3.96	-1.57
National Muni Short Term (\$MLN)	0.34	0.46	-5.26	-8.73	0	-18.38	-20.09	2.85	-1.89
High Yield Muni (\$HYD)	1.01	1.89	-3.1	-6.05	0	-13.74	-15.83	5.8	-1.76
Taxable Muni Bonds (\$BAB)	1.35	1.65	-0.72	-6.38	0	-15.9	-18.47	4.21	-1.67
Other Bonds									
Convertible Bonds (\$CWB)	-0.83	-0.71	-5.46	-16.39	0	-22.18	-28.09	2.78	-2.01
Mortgage Bonds (\$SPMB)	0.53	0.79	-1.17	-3.95	0	-9.97	-12.01	3.82	-1.71
Senior Loans (\$BKLN)	-0.88	-1.03	-4.16	-7.19	0	-8.28	-8.88	0.65	-3.39
Deflation (\$BNDD)	0.32	-0.31	-1.48	-13.5	0	-13.53	-17.93	3.58	-1.75

Data Source: Bloomberg

Correlations

	SPX				USD Index				WTI Crude Oil			
	15D	30D	90D	120D	15D	30D	90D	120D	15D	30D	90D	120D
Commodities												
Palladium (\$PALL)	0.53	0.8	0.64	0.42	-0.37	-0.85	-0.77	-0.44	-0.11	0.09	-0.22	-0.02
Gold (\$GLD)	0.18	0.55	0.76	0.27	-0.6	-0.74	-0.78	-0.12	0.44	0.4	-0.27	0.26
Platinum (\$PPLT)	0.2	0.75	0.48	0.46	-0.41	-0.68	-0.77	-0.68	0.75	0.69	0	-0.17
Silver (\$SLV)	-0.04	0.58	0.84	0.64	-0.43	-0.75	-0.87	-0.57	0.48	0.48	-0.35	-0.17
U.S. Oil (\$USO)	0.16	0.33	-0.55	-0.7	-0.07	-0.11	0.66	0.84	1	0.95	0.92	0.97
Brent Oil (\$BNO)	0.17	0.24	-0.49	-0.67	-0.02	0.01	0.56	0.81	0.99	0.9	0.96	0.98
Natural Gas (\$UNG)	0.24	0.68	-0.47	-0.62	-0.22	-0.72	0.73	0.84	0.9	0.65	0.47	0.72
Gasoline (\$UGA)	0.53	0.49	-0.73	-0.8	-0.36	-0.2	0.77	0.88	0.86	0.8	0.81	0.91
Sugar (\$CANE)	0.27	0.64	0.16	-0.29	-0.23	-0.76	0.15	0.58	0.81	0.36	0.34	0.69
Biofuels (\$FUE)	-0.13	0.37	-0.08	-0.51	-0.03	-0.49	0.42	0.76	0.82	0.63	0.35	0.81
Grains (\$GRU)	-0.19	0.32	0.07	-0.43	-0.1	-0.54	0.12	0.66	0.82	0.41	0.36	0.8
Corn (\$CORN)	-0.24	0.14	-0.24	-0.56	-0.05	-0.34	0.64	0.84	0.75	0.48	0.26	0.76
Soybeans (\$SOYB)	-0.06	0.38	-0.18	-0.52	-0.13	-0.43	0.38	0.7	0.83	0.79	0.46	0.82
Wheat (\$WEAT)	-0.15	0.38	-0.21	-0.55	-0.07	-0.57	0.43	0.77	0.84	0.43	0.55	0.85
Rare Earth Metals (\$REMX)	0.48	0.86	0.9	0.86	-0.24	-0.87	-0.8	-0.7	0.76	0.49	-0.28	-0.35
Steel (\$SLX)	0.39	0.88	0.87	0.39	-0.22	-0.85	-0.59	-0.02	0.9	0.6	-0.12	0.32
Currencies												
U.S. Dollar (\$UUP)	-0.47	-0.84	-0.81	-0.84	0.96	0.99	1	1	0.04	-0.2	0.43	0.74
Euro (\$FXE)	0.49	0.85	0.78	0.82	-0.94	-0.96	-0.99	-0.99	-0.15	0.23	-0.44	-0.76
British Pound (\$FXB)	0.49	0.83	0.84	0.87	-0.94	-0.97	-0.98	-0.99	0.11	0.25	-0.45	-0.74
Swiss Franc (\$FXF)	0.09	0.26	0.72	0.79	-0.36	-0.41	-0.91	-0.93	-0.79	-0.54	-0.41	-0.65
Australian Dollar (\$FXA)	0.34	0.87	0.93	0.72	-0.67	-0.87	-0.81	-0.48	0.58	0.55	-0.26	-0.08
Canadian Dollar (\$FXC)	0.81	0.92	0.85	0.82	-0.5	-0.75	-0.66	-0.63	0.52	0.6	-0.11	-0.31
Chinese Renminbi (\$CYB)	0.14	0.28	0.81	0.81	-0.35	-0.32	-0.92	-0.88	-0.53	-0.03	-0.44	-0.56
Japanese Yen (\$FXY)	-0.16	0.53	0.65	0.74	-0.28	-0.79	-0.92	-0.95	0.56	0.06	-0.37	-0.69
U.S. Government Bonds												
U.S. 20+ Yr Treasuries (\$TLT)	0.45	0.63	0.71	0.79	-0.47	-0.8	-0.93	-0.96	-0.35	-0.12	-0.41	-0.73
U.S. 7-10 Yr Treasury (\$IEF)	0.48	0.66	0.59	0.72	-0.5	-0.82	-0.89	-0.93	-0.51	-0.17	-0.32	-0.69
U.S. 1-3 Yr Treasury (\$SHY)	0.62	0.77	0.51	0.67	-0.64	-0.91	-0.83	-0.9	-0.39	-0.03	-0.28	-0.74
U.S. Tips (\$TIP)	0.66	0.77	0.76	0.79	-0.64	-0.88	-0.9	-0.86	0.4	0.23	-0.31	-0.52
Corporate Bonds												
Corporate Long Term (\$IGLB)	0.6	0.84	0.8	0.83	-0.65	-0.93	-0.97	-0.97	0	0.18	-0.41	-0.78
Corporate Medium Term (\$IGIB)	0.71	0.85	0.74	0.8	-0.67	-0.93	-0.95	-0.97	-0.08	0.14	-0.38	-0.76
Corporate Short Term (\$IGSB)	0.7	0.83	0.67	0.76	-0.63	-0.93	-0.91	-0.94	-0.19	0.08	-0.38	-0.79
Corporate Investment Grade (\$PFIG)	0.71	0.86	0.72	0.79	-0.66	-0.93	-0.94	-0.96	-0.02	0.17	-0.37	-0.76
Corporate High Yield (\$HYG)	0.79	0.93	0.9	0.91	-0.62	-0.92	-0.93	-0.95	0.28	0.33	-0.41	-0.73
International Bonds												
Emerging Market Government (\$PCY)	0.5	0.87	0.87	0.84	-0.48	-0.92	-0.94	-0.96	0.44	0.35	-0.55	-0.84
Internatinal Bond Fund (\$BNDX)	0.64	0.7	0.75	0.81	-0.36	-0.83	-0.9	-0.94	-0.3	-0.04	-0.42	-0.75
Internatinal Govt (\$BWX)	0.63	0.78	0.78	0.83	-0.75	-0.93	-0.97	-0.98	-0.19	0.06	-0.44	-0.76
Short Term Int. Govt. (\$BWZ)	0.67	0.83	0.79	0.83	-0.88	-0.97	-0.99	-0.99	0.19	0.2	-0.45	-0.76
International Corporate (\$PICB)	0.81	0.86	0.85	0.86	-0.77	-0.95	-0.97	-0.98	0.17	0.21	-0.45	-0.78
U.S. Municipal Bonds												
National Muni (\$TFI)	0.82	0.89	0.66	0.76	-0.42	-0.73	-0.93	-0.96	0.25	0.46	-0.29	-0.73
National Muni Long Term (\$ITM)	0.7	0.87	0.63	0.75	-0.4	-0.72	-0.92	-0.95	0.23	0.45	-0.28	-0.73
National Muni Short Term (\$MLN)	0.85	0.93	0.72	0.79	-0.62	-0.84	-0.95	-0.97	0.17	0.39	-0.32	-0.73
High Yield Muni (\$HYD)	0.69	0.9	0.76	0.82	-0.51	-0.85	-0.95	-0.97	-0.05	0.3	-0.37	-0.75
Taxable Muni Bonds (\$BAB)	0.49	0.8	0.67	0.76	-0.37	-0.88	-0.93	-0.96	-0.32	0.06	-0.38	-0.76
Other Bonds												
Convertible Bonds (\$CWB)	0.98	0.99	0.97	0.98	-0.48	-0.81	-0.88	-0.9	0.22	0.44	-0.45	-0.67
Mortgage Bonds (\$SPMB)	0.65	0.77	0.66	0.76	-0.6	-0.89	-0.92	-0.95	-0.23	0.01	-0.33	-0.72
Senior Loans (\$BKLN)	0.52	0.88	0.93	0.94	-0.49	-0.77	-0.78	-0.87	0.53	0.58	-0.48	-0.71
Deflation (\$BNDL)	0.13	0.39	0.78	0.82	-0.42	-0.67	-0.91	-0.91	0.08	-0.1	-0.45	-0.63

Daily ETF Performance - Commodity, Currency and Bond IVOL PREM %

Main Window Setting: Volatility_30D			Total Return Performance	IVOL Premium/Discount					Realized Volatility Trends			Implied Volatility Trends			
PUT_IMP_VOL_30D		Ticker	YTD %	IVOL Prem %	Yesterday	1W Ago	1M Ago	TTM Z-Score	3Yr Z-Score	RVOL	MM %	Percentile	IVOL	MM %	Percentile
				IVOL / RVOL						Current		10Yr	Current		10Yr
Commodities															
SPDR Gold Shares		GLD US Equity	-1.46%	17%	9%	2%		0.3	0.4	14.4	3%	61%	16.8	-1%	74%
iShares Silver Trust		SLV US Equity	-13.34%	13%	10%	-1%	-4%	-0.2	0.3	26.1	-5%	71%	29.5	-6%	77%
United States Oil Fund LP		USO US Equity	47.81%	36%	38%	38%	10%	0.4	0.8	33.4	-27%	64%	45.6	-5%	86%
United States Brent Oil Fund		BNO US Equity	56.58%	52%	55%	56%	21%	0.7	1.1	31.4	-36%	61%	47.8	-11%	87%
US Natural Gas Fund LP		UNG US Equity	52.20%	-26%	-24%	-21%	5%	-1.0	-1.0	92.6	9%	98%	68.6	-25%	91%
United States Gas Fund LP		UGA US Equity	65.58%	51%	46%	57%	30%	0.8	1.2	36.3	-21%	73%	54.8	7%	94%
Teucrium Sugar Fund		CANE US Equity	1.30%	103%	94%	103%	53%	2.3	0.1	15.5	-31%	11%	31.5	-5%	62%
Teucrium Corn Fund		CORN US Equity	16.81%	14%	27%	25%	35%	-0.8	-0.6	29.6	34%	92%	33.8	8%	93%
Teucrium Soybean Fund		SOYB US Equity	18.95%	15%	25%	16%	47%	-0.4	-0.7	22.4	26%	83%	25.7	8%	82%
Teucrium Wheat Fund		WEAT US Equity	22.33%	4%	19%	4%	28%	-0.7	-0.8	42.4	28%	98%	44.2	-17%	86%
VanEck Rare Earth/Strat Met		REMX US Equity	-22.63%	-12%	-10%	-13%	-19%	-0.3	-0.5	51.5	2%	95%	45.3	3%	87%
VanEck Steel ETF		SLX US Equity	-6.99%	11%	8%	12%	-3%	-0.2	-0.4	41.9	8%	89%	46.6	1%	82%
Currencies															
Invesco DB US Dollar Index B		UUP US Equity	9.09%	9%	15%	5%	10%	-0.5	-0.5	9.5	25%	91%	10.4	1%	95%
Invesco CurrencyShares Euro		FXE US Equity	-8.37%	-4%	-4%	-17%	-19%	-0.3	-0.5	10.1	16%	86%	9.6	0%	83%
Invesco CurrencyShares Briti		FXB US Equity	-10.17%	-15%	-20%	-18%	-26%	-1.3	-0.8	13.0	8%	97%	11.0	-3%	86%
Invesco CurrencyShares Swiss		FXF US Equity	-5.03%	-24%	-27%	-30%	-9%	-1.3	-1.3	12.6	69%	94%	9.5	-2%	81%
Invesco CurrencyShares Austr		FXA US Equity	-5.24%	-10%	-8%	-10%	-24%	-0.8	-0.7	14.2	-5%	94%	12.8	-15%	89%
Invesco CurrencyShares Canad		FXC US Equity	-1.95%	-4%	-7%	-11%	-16%	-0.3	-0.4	8.1	-5%	75%	7.8	-14%	69%
WisdomTree Chinese Yuan STRA		CYB US Equity	-3.66%	37%	-9%	-12%	-29%	-0.3	-0.3	10.7	3%	93%	14.7	26%	87%
Invesco CurrencyShares Japan		FXJ US Equity	-15.36%	2%	1%	-2%	-13%	-0.5	-0.4	12.7	8%	90%	13.0	11%	92%
U.S. Government Bonds															
iShares 20+ Year Treasury B		TLT US Equity	-21.73%	-3%	-10%	-6%	-5%	-0.4	-0.2	21.9	8%	98%	21.3	-1%	97%
iShares 7-10 Year Treasury B		IEF US Equity	-10.42%	-6%	-8%	-6%	-5%	-1.1	-0.7	11.8	25%	99%	11.1	9%	97%
iShares 1-3 Year Treasury B		SHY US Equity	-2.90%	19%	22%	15%	58%	-1.2	-0.6	3.1	35%	99%	3.7	-37%	84%
iShares TIPS Bond ETF		TIP US Equity	-8.58%	-6%	-15%	-7%	-21%	-0.9	-0.7	10.7	1%	97%	10.1	-2%	96%
Corporate Bonds															
iShares 10+ Year Inv Gr Corp		IGLB US Equity	-21.85%	17%	16%	12%	-2%	0.7	0.0	18.1	3%	97%	21.3	15%	98%
iShares 5-10Y Inv Grade Corp		IGIB US Equity	-12.72%	-6%	-4%	7%	2%	-1.3	-0.6	10.4	22%	98%	9.8	2%	95%
iShares 1-5Y Inv Grade Corp		IGSB US Equity	-5.39%	27%	19%	31%	35%	-0.8	-0.4	5.3	39%	98%	6.7	6%	94%
iShares iBoxx High Yld Corp		HYG US Equity	-13.38%	-1%	-12%	-8%	-34%	-0.6	-0.7	17.7	64%	98%	17.4	33%	98%
International Bonds															
Invesco Emerging Markets SOV		PCY US Equity	-27.51%	39%	51%	107%	106%	-0.6	-0.3	22.4	28%	97%	31.1	-14%	94%
Vanguard Total Intl Bond ETF		BNDX US Equity	-9.77%	29%	12%	7%	140%	-0.5	-0.5	9.2	73%	98%	11.9	-3%	94%
SPDR Bloomberg Int Treasury		BWX US Equity	-17.66%	213%	-28%	272%	176%	0.1	0.0	15.0	34%	99%	46.9	-12%	97%
U.S. Municipal Bonds															
SPDR Nuveen Bloomberg MuniCI		TFI US Equity	-10.59%	14%	20%	36%	16%	-1.7	-1.1	7.7	156%	97%	8.7	10%	91%
VanEck Intermediate Muni ETF		ITM US Equity	-10.13%	9%	13%	26%	39%	-1.5	-0.8	9.1	168%	96%	9.9	25%	73%
VanEck High Yield Muni ETF		HYD US Equity	-12.18%	-26%	-26%	-13%	4%	-2.2	-1.6	19.6	255%	97%	14.4	38%	91%
Other Bonds															
SPDR Bloomberg Convertible S		CWB US Equity	-21.58%	10%	11%	-1%	-8%	-0.8	-0.4	24.4	6%	96%	26.9	-4%	95%
Invesco Senior Loan ETF		BKLN US Equity	-6.73%	44%	33%	37%	80%	-1.3	-1.2	12.5	60%	98%	17.9	61%	97%
Data Source: CBOE, CME, Bloomberg															

Daily ETF Performance - Commodity Futures

Performance

	1D	5D	1M	3M	QTD	YTD	vs. 52-Wk		Today's Price Z Score (TTM)
	% Chng	% Chng	% Chng	% Chng	% Chng	% Chng	High	Low	
Copper	-3.01	-3.9	-16.86	-23.25	-3.01	-19.38	-40.04	1.25	-3.82
Lead	-1.06	-2.05	-12.05	-21	-21	-17.8	-32.64	0.04	-3.35
Silver	-2.86	-6.56	-9.79	-19.81	-2.86	-15.34	-39.07	0.58	-2.66
Platinum	-2.43	-3.3	-12.33	-11.64	-2.43	-9.59	-37.03	0.63	-2.24
Cocoa	-0.26	-4.03	-7.53	-11.62	-0.26	-7.38	-21.59	4.37	-1.84
Natural Gas (Dutch)	3.1	8.37	53.73	14.78	14.78	105.44	-22.24	78.22	1.82
Orange Juice	0.9	4.94	-2.42	13.89	13.89	23.65	-11.82	32.88	1.53
Ferrous Scrap	-3.41	-1.92	-21.54	-42.37	-42.37	-12.07	-76.47	1.96	-1.46
Aluminum	-1.02	-1.5	-11.99	-30.17	-30.17	-13.22	-68.14	1.38	-1.4
Coal	1.42	-6.64	-13.19	37.45	37.45	134.6	-22.19	63.48	1.39
Rice	-0.09	1.95	-2.36	4.53	-0.09	12.62	-8.52	23.79	1.37
RBOB Gasoline	2.13	-7.03	-11.29	14.53	-1.04	62.07	-19.77	47.95	1.34
Heating Oil	3.65	-9	-4.18	15.95	1.85	70.39	-47.59	52.23	1.34
Butter	0	-1.59	-0.34	-2.01	-2.01	22.18	-0.68	45.55	1.32
Oats	0.15	-2.99	-22.24	-32.06	0.15	-26.39	-61.31	27.8	-1.2
WTI Crude Oil	1.72	-0.04	-6.66	8.37	1.72	43.04	-21.31	42.61	1.2
Cheese	-1.35	-6.18	-8.79	-0.86	-0.86	25.14	-9.95	28.64	1.05
Cotton	-1.88	-1.09	-18.11	-27.92	-1.88	-13.87	-60.81	12.44	-0.97
CRB Comodity Index	-2.74	-1.87	-9.02	-0.69	0	25.29	-11.66	42.07	0.92
Sugar	-0.92	0.11	-5.71	-5.37	-0.92	-2.91	-12.88	8.73	-0.9
Lumber	7.22	8.51	-2.48	-33.98	-33.98	-44.24	-113	29.7	-0.78
Arabica Coffee	0.35	3.43	-3.57	1.09	0.35	2.12	-12.8	36.05	0.67
Gold	-0.65	-1.9	-2.87	-6.66	-0.65	-1.8	-15.77	6.55	-0.63
Milk	-0.22	-1.32	-8.06	-8.43	-0.22	8.49	-14.72	29.94	0.62
Lean Hogs	-1.42	-1.52	-5.46	-15.36	-15.36	25.31	-24.71	30.19	0.52
Maize	-1.34	-4.23	-10.77	-6.81	-1.34	24.05	-42.86	28.57	0.41
Natural Gas	5.11	-8.34	-34.44	-0.33	5.11	52.84	-69.51	38.26	0.28
Live Cattle	0.3	-0.97	1.69	-3.32	-3.32	-5.1	-12.16	10.11	-0.27
Corn	-0.04	-8.09	-15.28	-15.71	-0.04	4.42	-33.09	19.69	-0.14
Wheat	0.62	-5.02	-14.57	-9.65	0.62	15.41	-53.29	31.48	0.14
Nickel	-4.61	-5.61	-20.1	-29.47	-29.47	8.52	-136.3	21.32	-0.12
Soybeans	-0.87	1.47	-14.49	-8.69	-0.87	7.91	-21.73	18.27	0.05

Data Source: Bloomberg

Correlations

	SPX				USD Index				WTI Crude Oil			
	15D	30D	90D	120D	15D	30D	90D	120D	15D	30D	90D	120D
Copper	0.05	0.66	0.87	0.75	0.08	-0.7	-0.8	-0.61	0.85	0.75	-0.18	-0.17
Lead	0.11	0.61	0.86	0.76	-0.03	-0.68	-0.79	-0.67	0.83	0.69	-0.36	-0.35
Silver	-0.01	0.59	0.83	0.62	-0.46	-0.72	-0.87	-0.57	0.45	0.53	-0.33	-0.17
Platinum	0.19	0.72	0.5	0.47	-0.31	-0.65	-0.78	-0.7	0.66	0.7	0.04	-0.19
Cocoa	0.39	0.76	0.82	0.74	-0.5	-0.73	-0.75	-0.73	-0.15	0.35	-0.4	-0.48
Natural Gas (Dutch)	-0.24	-0.68	0.01	-0.24	0.08	0.68	-0.21	0.21	-0.87	-0.67	0.1	0.41
Orange Juice	0.19	0.61	-0.47	-0.59	-0.04	-0.49	0.77	0.8	0.83	0.79	0.39	0.55
Ferrous Scrap	0.51	0.77	0.76	0.21	-0.38	-0.84	-0.53	0.12	0.78	0.44	-0.21	0.36
Aluminum	0.45	0.68	0.87	0.63	0.24	-0.81	-0.88	-0.64	0.84	0.28	-0.33	-0.12
Coal	0.11	0.4	-0.62	-0.74	-0.41	-0.56	0.51	0.78	-0.67	-0.28	0.55	0.81
Rice	-0.47	0.58	-0.58	-0.72	0.65	-0.71	0.76	0.88	0.11	0.16	0.47	0.81
RBOB Gasoline	0.49	0.61	-0.69	-0.77	-0.11	-0.41	0.76	0.89	0.84	0.87	0.83	0.94
Heating Oil	-0.13	-0.23	-0.47	-0.66	-0.29	0.41	0.7	0.87	0.45	0.37	0.62	0.86
Butter	0.38	-0.13	-0.47	-0.66	-0.23	0.46	0.78	0.9	-0.13	0.14	0.3	0.71
Oats	-0.25	0.43	0.73	0.61	0.15	-0.57	-0.53	-0.43	0.74	0.68	-0.21	-0.18
WTI Crude Oil	0.14	0.4	-0.43	-0.64	0.17	-0.26	0.4	0.73	1	1	1	1
Cheese	0.07	0.41	-0.57	-0.7	-0.3	-0.62	0.85	0.93	0.37	0.16	0.41	0.74
Cotton	-0.17	0.35	0.42	0.21	0.15	-0.58	-0.07	0.1	0.75	0.6	-0.22	0.04
CRB Comodity Index	0.13	0.58	-0.38	-0.62	-0.2	-0.53	0.65	0.84	0.92	0.89	0.79	0.93
Sugar	0.28	0.61	0.29	-0.13	0.16	-0.81	-0.06	0.4	0.78	0.4	0.23	0.54
Lumber	0.08	0.39	0.71	0.77	-0.19	-0.58	-0.85	-0.86	-0.78	-0.34	-0.45	-0.63
Arabica Coffee	-0.07	0.26	0.05	0.38	-0.09	0	-0.22	-0.62	-0.19	0.31	0.08	-0.49
Gold	0.22	0.57	0.77	0.25	-0.59	-0.76	-0.8	-0.13	0.42	0.44	-0.27	0.25
Milk	0.07	0.59	-0.01	-0.37	0.19	-0.72	0.33	0.67	0.76	0.58	0.22	0.68
Lean Hogs	-0.36	0.55	0.7	-0.02	-0.15	-0.72	-0.54	0.23	-0.27	0.01	-0.26	0.48
Maize	-0.32	0.2	-0.18	-0.55	0.13	-0.57	0.15	0.71	0.72	0.32	0.4	0.81
Natural Gas	0.25	0.68	-0.49	-0.63	-0.02	-0.74	0.7	0.82	0.87	0.7	0.46	0.69
Live Cattle	-0.04	-0.28	0.4	0.58	-0.37	0.32	-0.62	-0.8	0.47	0.37	-0.41	-0.71
Corn	-0.26	0.37	0.25	-0.33	-0.03	-0.68	-0.01	0.59	0.71	0.39	-0.03	0.64
Wheat	-0.16	0.33	-0.02	-0.47	0.05	-0.64	0.03	0.64	0.82	0.45	0.42	0.81
Nickel	0.08	0.68	0.41	-0.09	0.18	-0.72	-0.15	0.28	0.75	0.62	0.1	0.53
Soybeans	-0.06	0.54	0.58	-0.06	0.13	-0.77	-0.53	0.19	0.81	0.3	-0.12	0.49