

Last week we published a [B.I.G. Tips](#) report over at [Bespoke Premium](#) (subscribe [here](#)) that highlighted sector and asset class correlation numbers. Now that a week has passed, we have decided to publish the report in its entirety on this site as well. If you're interested in becoming a [Bespoke Premium](#) member and receiving all of our unique publications, please click [here](#).

A few years have passed since we last published these asset class correlation matrices, but they're always interesting to take a look at. For reference, a correlation coefficient of 1 means the two sectors/asset classes are moving in complete tandem with each other on a daily basis. A correlation coefficient of -1 means they are moving in the complete opposite direction of each other, and a correlation coefficient of 0 means their movements have no correlation and are completely random.

Below we highlight the correlation between the daily percentage moves of the S&P 500, its ten sectors, oil, gold, the US dollar index, and the long bond future over the following time frames -- the last six months, since the bull market started on 3/9/09, and during the bear market from 10/9/07 to 3/9/09. We also provide a matrix that shows the difference between correlations during the current bull market and the prior bear market.

Over the last six months, the Industrials and Technology sectors have been the most highly correlated to the S&P 500. The dollar index and the long bond have been the most negatively correlated to the S&P 500. Within sectors, Industrials and Consumer Discretionary, Technology and Consumer Discretionary, and Industrials and Materials have had the highest correlations, while Telecom and Energy have had by far the lowest correlation. The two most negatively correlated asset classes over the last six months have been the US dollar and the S&P 500 Energy sector.

Correlation Matrix: Daily % Change Correlation Over Last Six Months															
Asset	S&P 500	C. Disc.	C. Stap	Energy	Finan.	H Care	Indust.	Mater.	Tech	Telcom	Utilit.	Oil	Gold	Dollar	L Bnd
S&P 500	1.00	0.88	0.81	0.79	0.86	0.89	0.94	0.87	0.91	0.66	0.72	0.14	0.17	-0.45	-0.33
Cons. Disc.	0.88	1.00	0.73	0.57	0.71	0.79	0.84	0.74	0.84	0.60	0.64	-0.05	0.08	-0.31	-0.32
Cons. Stap.	0.81	0.73	1.00	0.56	0.61	0.78	0.77	0.67	0.71	0.63	0.70	0.13	0.23	-0.45	-0.30
Energy	0.79	0.57	0.56	1.00	0.61	0.64	0.71	0.82	0.64	0.41	0.52	0.43	0.32	-0.49	-0.24
Financials	0.86	0.71	0.61	0.61	1.00	0.67	0.79	0.69	0.68	0.58	0.59	0.11	0.07	-0.31	-0.22
H Care	0.89	0.79	0.78	0.64	0.67	1.00	0.83	0.74	0.83	0.62	0.72	0.08	0.12	-0.45	-0.34
Industrials	0.94	0.84	0.77	0.71	0.79	0.83	1.00	0.84	0.83	0.61	0.68	0.05	0.16	-0.44	-0.31
Materials	0.87	0.74	0.67	0.82	0.69	0.74	0.84	1.00	0.75	0.53	0.56	0.19	0.32	-0.42	-0.21
Technology	0.91	0.84	0.71	0.64	0.68	0.83	0.83	0.75	1.00	0.54	0.62	0.04	0.09	-0.37	-0.34
Telecom	0.66	0.60	0.63	0.41	0.58	0.62	0.61	0.53	0.54	1.00	0.58	0.05	0.12	-0.35	-0.27
Utilities	0.72	0.64	0.70	0.52	0.59	0.72	0.68	0.56	0.62	0.58	1.00	0.09	0.22	-0.41	-0.16
Oil	0.14	-0.05	0.13	0.43	0.11	0.08	0.05	0.19	0.04	0.05	0.09	1.00	0.50	-0.27	-0.01
Gold	0.17	0.08	0.23	0.32	0.07	0.12	0.16	0.32	0.09	0.12	0.22	0.50	1.00	-0.32	0.14
Dollar	-0.45	-0.31	-0.45	-0.49	-0.31	-0.45	-0.44	-0.42	-0.37	-0.35	-0.41	-0.27	-0.32	1.00	-0.12
Long Bond	-0.33	-0.32	-0.30	-0.24	-0.22	-0.34	-0.31	-0.21	-0.34	-0.27	-0.16	-0.01	0.14	-0.12	1.00

Throughout the entire bull market (since 3/9/09), the Industrials sector and the S&P 500 have had the highest correlation between any of the asset classes shown. The dollar and the long bond have been the most negatively correlated asset classes to the S&P 500 and its sectors, and the asset class most correlated with gold has been oil, but here the correlation is relatively low at 0.35.

Correlation Matrix: Daily % Change Correlation During Bull Market (Since 3/9/09)															
Ticker	S&P 500	C. Disc.	C. Stap	Energy	Finan.	H Care	Indust.	Mater.	Tech	Telcom	Utilit.	Oil	Gold	Dollar	L Bnd
S&P 500	1.00	0.93	0.83	0.89	0.88	0.78	0.95	0.90	0.92	0.74	0.77	0.52	0.14	-0.41	-0.38
Cons. Disc.	0.93	1.00	0.75	0.78	0.78	0.68	0.92	0.83	0.89	0.68	0.68	0.45	0.08	-0.34	-0.37
Cons. Stap.	0.83	0.75	1.00	0.72	0.62	0.78	0.76	0.70	0.72	0.69	0.73	0.39	0.11	-0.33	-0.35
Energy	0.89	0.78	0.72	1.00	0.71	0.66	0.84	0.85	0.78	0.63	0.74	0.64	0.24	-0.47	-0.37
Financials	0.88	0.78	0.62	0.71	1.00	0.58	0.80	0.75	0.73	0.62	0.57	0.41	0.05	-0.32	-0.28
H Care	0.78	0.68	0.78	0.66	0.58	1.00	0.69	0.63	0.67	0.59	0.67	0.34	0.09	-0.28	-0.29
Industrials	0.95	0.92	0.76	0.84	0.80	0.69	1.00	0.87	0.88	0.69	0.72	0.51	0.12	-0.38	-0.38
Materials	0.90	0.83	0.70	0.85	0.75	0.63	0.87	1.00	0.82	0.64	0.68	0.53	0.28	-0.47	-0.32
Technology	0.92	0.89	0.72	0.78	0.73	0.67	0.88	0.82	1.00	0.69	0.68	0.44	0.12	-0.36	-0.37
Telecom	0.74	0.68	0.69	0.63	0.62	0.59	0.69	0.64	0.69	1.00	0.64	0.34	0.04	-0.30	-0.24
Utilities	0.77	0.68	0.73	0.74	0.57	0.67	0.72	0.68	0.68	0.64	1.00	0.42	0.17	-0.34	-0.30
Oil	0.52	0.45	0.39	0.64	0.41	0.34	0.51	0.53	0.44	0.34	0.42	1.00	0.35	-0.42	-0.28
Gold	0.14	0.08	0.11	0.24	0.05	0.09	0.12	0.28	0.12	0.04	0.17	0.35	1.00	-0.34	0.00
Dollar	-0.41	-0.34	-0.33	-0.47	-0.32	-0.28	-0.38	-0.47	-0.36	-0.30	-0.34	-0.42	-0.34	1.00	0.01
Long Bond	-0.38	-0.37	-0.35	-0.37	-0.28	-0.29	-0.38	-0.32	-0.37	-0.24	-0.30	-0.28	0.00	0.01	1.00

During the last bear market, sectors generally were more correlated with each other than they have been during the current bull. Gold and oil, on the other hand, have had much higher correlation coefficients with the S&P 500 and its ten sectors during the current bull market versus the prior bear market. The dollar's correlation to equities has been much more negative during the current bull than it was during the prior bear, while the long bond's correlation to other asset classes has remained about the same throughout.

Correlation Matrix: Daily % Chg Correlation During Bear Market (10/9/07-3/9/09)

Ticker	S&P 500	C. Disc.	C. Stap	Energy	Finan.	H Care	Indust.	Mater.	Tech	Telcom	Utilit.	Oil	Gold	Dollar	L Bnd
S&P 500	1.00	0.95	0.90	0.85	0.87	0.90	0.95	0.90	0.94	0.86	0.83	0.25	-0.06	-0.11	-0.38
Cons. Disc.	0.95	1.00	0.88	0.72	0.85	0.85	0.92	0.81	0.89	0.82	0.75	0.15	-0.11	-0.07	-0.34
Cons. Stap.	0.90	0.88	1.00	0.74	0.69	0.90	0.84	0.76	0.82	0.80	0.83	0.16	-0.11	-0.05	-0.29
Energy	0.85	0.72	0.74	1.00	0.60	0.76	0.78	0.89	0.78	0.71	0.81	0.47	0.12	-0.27	-0.35
Financials	0.87	0.85	0.69	0.60	1.00	0.71	0.82	0.70	0.78	0.71	0.58	0.13	-0.14	-0.02	-0.35
H Care	0.90	0.85	0.90	0.76	0.71	1.00	0.83	0.77	0.82	0.80	0.84	0.17	-0.10	-0.09	-0.29
Industrials	0.95	0.92	0.84	0.78	0.82	0.83	1.00	0.87	0.88	0.79	0.76	0.21	-0.06	-0.10	-0.37
Materials	0.90	0.81	0.76	0.89	0.70	0.77	0.87	1.00	0.85	0.73	0.76	0.33	0.11	-0.26	-0.38
Technology	0.94	0.89	0.82	0.78	0.78	0.82	0.88	0.85	1.00	0.80	0.75	0.21	-0.07	-0.08	-0.37
Telecom	0.86	0.82	0.80	0.71	0.71	0.80	0.79	0.73	0.80	1.00	0.77	0.23	-0.07	-0.11	-0.27
Utilities	0.83	0.75	0.83	0.81	0.58	0.84	0.76	0.76	0.75	0.77	1.00	0.24	-0.04	-0.13	-0.28
Oil	0.25	0.15	0.16	0.47	0.13	0.17	0.21	0.33	0.21	0.23	0.24	1.00	0.32	-0.37	-0.39
Gold	-0.06	-0.11	-0.11	0.12	-0.14	-0.10	-0.06	0.11	-0.07	-0.07	-0.04	0.32	1.00	-0.44	0.09
Dollar	-0.11	-0.07	-0.05	-0.27	-0.02	-0.09	-0.10	-0.26	-0.08	-0.11	-0.13	-0.37	-0.44	1.00	-0.01
Long Bond	-0.38	-0.34	-0.29	-0.35	-0.35	-0.29	-0.37	-0.38	-0.37	-0.27	-0.28	-0.39	0.09	-0.01	1.00

Correlation Matrix: Correl. During Bull Mkt Minus Correl. During Bear Mkt

Ticker	S&P 500	C. Disc.	C. Stap	Energy	Finan.	H Care	Indust.	Mater.	Tech	Telcom	Utilit.	Oil	Gold	Dollar	L Bnd
S&P 500	0.00	-0.01	-0.07	0.04	0.00	-0.12	0.00	0.00	-0.02	-0.11	-0.06	0.27	0.20	-0.30	0.00
Cons. Disc.	-0.01	0.00	-0.13	0.06	-0.06	-0.16	0.00	0.02	0.00	-0.14	-0.07	0.31	0.18	-0.28	-0.03
Cons. Stap.	-0.07	-0.13	0.00	-0.02	-0.07	-0.13	-0.07	-0.06	-0.10	-0.11	-0.10	0.23	0.22	-0.28	-0.07
Energy	0.04	0.06	-0.02	0.00	0.11	-0.10	0.06	-0.04	0.01	-0.07	-0.07	0.17	0.12	-0.20	-0.02
Financials	0.00	-0.06	-0.07	0.11	0.00	-0.13	-0.02	0.05	-0.05	-0.09	-0.02	0.28	0.19	-0.31	0.07
H Care	-0.12	-0.16	-0.13	-0.10	-0.13	0.00	-0.14	-0.13	-0.14	-0.21	-0.17	0.18	0.19	-0.19	-0.01
Industrials	0.00	0.00	-0.07	0.06	-0.02	-0.14	0.00	0.00	-0.01	-0.10	-0.04	0.30	0.17	-0.28	-0.02
Materials	0.00	0.02	-0.06	-0.04	0.05	-0.13	0.00	0.00	-0.03	-0.09	-0.08	0.20	0.16	-0.21	0.06
Technology	-0.02	0.00	-0.10	0.01	-0.05	-0.14	-0.01	-0.03	0.00	-0.11	-0.07	0.22	0.19	-0.28	0.00
Telecom	-0.11	-0.14	-0.11	-0.07	-0.09	-0.21	-0.10	-0.09	-0.11	0.00	-0.13	0.11	0.11	-0.19	0.03
Utilities	-0.06	-0.07	-0.10	-0.07	-0.02	-0.17	-0.04	-0.08	-0.07	-0.13	0.00	0.18	0.21	-0.21	-0.02
Oil	0.27	0.31	0.23	0.17	0.28	0.18	0.30	0.20	0.22	0.11	0.18	0.00	0.02	-0.06	0.12
Gold	0.20	0.18	0.22	0.12	0.19	0.19	0.17	0.16	0.19	0.11	0.21	0.02	0.00	0.10	-0.09
Dollar	-0.30	-0.28	-0.28	-0.20	-0.31	-0.19	-0.28	-0.21	-0.28	-0.19	-0.21	-0.06	0.10	0.00	0.03
Long Bond	0.00	-0.03	-0.07	-0.02	0.07	-0.01	-0.02	0.06	0.00	0.03	-0.02	0.12	-0.09	0.03	0.00

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