

## Pairs Trading Matrixes

July 8, 2015

Sturdivant & Co. conducts bottom-up fundamental analysis on a wide range of nearly 3,000 large and small cap US equities. Herein we present our exclusive Pairs Trading Matrixes utilizing Polaris, our innovative system for stock selection guidance. (System design overview for Polaris is attached separately.)

Polaris integrates proprietary analytics that are focused on valuation, catalytic and technical properties to rank and characterize stocks. The quantitative scores derived for each stock in our coverage universe can be used to identify pricing disparities among pairs of stocks. An exploitable pricing disparity is indicated by a wide spread between the respective quantitative scores for the long and short component of a pair of stocks selected from the same sector and industry.

Our Pairs Trading Matrixes provide investors with guidance by specifying long/short pair combinations that we find attractive based on the spread in quantitative scores among the components of each pair. A separate matrix for a large cap universe and a small cap universe is provided below in Tables 1 and 2.

The Sturdivant & Co. coverage universe is grouped into 16 economic sectors and approximately 200 different industries. We have identified pair combinations selected from the 10 industries that we believe have the greatest degree of pricing disparity based on our analysis. For each industry from which attractive pairs are identified, we select 1 to 4 long candidates and 1 to 4 short candidates. Consequently, there can be anywhere from 1 to 16 different pair combinations to select from for each industry. As an example, in Table 1 below, we have identified 3 pairs in the Internet Services industry that merit investment consideration, including: (A1) LC-LNKD, (A2) LC-Z and (A3) LC-FB.

**Table 1: Large Cap Pairs Matrix**

LARGE CAP PAIRS (based on 07/02/2015 prices)									
PAIR COMBINATIONS = A1, A2, A3, A4, B1, B2, B3, B4, C1, C2, C3, C4, D1, D2, D3, D4									
INDUSTRY	LONG SIDE of PAIR				SHORT SIDE of PAIR				Number of Pairs
	A	B	C	D	1	2	3	4	
1 AEROSPACE/DEFENSE EQUIP	RTN				TDG				1
2 MEDICAL-BIOMED/GENETICS	ISIS	PBYI	ICPT		SGEN	ILMN	ALXN	GILD	12
3 UTILITY-ELECTRIC POWER	ED	WEC	XEL	PNW	NEE				4
4 INTERNET SERVICES	LC				LNKD	Z	FB		3
5 FOOD-MISC/DIVERSIFIED	FLO	MKC			CAG				2
6 RETAIL-DISCOUNT & VARIETY	ROST	SHLD			FDO	TJX			4
7 CONSULTING	TW				IT				1
8 OUTSOURCING	G	BR	PAYX		ADP	RRD			6
9 OIL REFINING & MARKETING	INT	MPC			PSX				2
10 OIL & GAS-U S EXPLO & PROD	LNG	FANG	CXO		EPE	EOG	NBL	WLL	12
TOTAL Number of PAIRS =									<b>47</b>

**Table 2: Small Cap Pairs Matrix**

SMALL CAP PAIRS (based on 07/02/2015 prices)									
PAIR COMBINATIONS = A1, A2, A3, A4, B1, B2, B3, B4, C1, C2, C3, C4, D1, D2, D3, D4									
INDUSTRY	LONG SIDE of PAIR				SHORT SIDE of PAIR				Number of Pairs
	A	B	C	D	1	2	3	4	
1 AEROSPACE/DEFENSE EQUIP	ESL	HEI	ATRO		AVAV	CW			6
2 MEDICAL-DRUGS	CTLT	DRRX	NBIX	SAGE	AERI	OTIC	BCRX	PCRX	16
3 REIT-EQTY TRUST - OTHER	CUBE	COR	SBRA	DFT	HT	PKY	WRE		12
4 COMPUTER-SOFTWARE	AVID	MSTR	BLOX	PFPT	ININ	TRAK	PRO	CSOD	16
5 FINANCE-INVESTMENT BKRS	ITG	COWN			KCG				2
6 MEDICAL-BIOMED/GENETICS	ONCE	ARRY	CRIS	AFFX	SRPT	RPTP	AEGR		12
7 BANKS-SOUTHEAST	HOMB				HBHC				1
8 ELEC-SEMICONDUCTORS	AMBA	CAVM			AMD	LSCC	OVTI		6
9 LEISURE & RECREATION SVCS	IILG				SFXE	MYCC			2
10 RETAIL-MISC/DIVERSIFIED	BKS				RGS				1
TOTAL Number of PAIRS =									<b>74</b>

In Tables 3 and 4 below we provide output from the Polaris analysis for the stocks in each of the matrixes (large cap and small cap, respectively). The stocks in each matrix are grouped first by sector, then industry. The overall attractiveness of a stock is indicated by the Polaris Score, or PSCORE, whereby long candidates will have a positive PSCORE and short candidates will have a negative PSCORE. The PSCORE is a proprietary factor that is based on our analysis of each stock's valuation, technical and catalytic properties. The difference in PSCORES between the long and short candidates of a pair is the metric that we use as an indication of pricing disparity, otherwise referred to as the spread. Descriptions for the column headings in Tables 3 and 4 are as follows:

**COLUMN HEADINGS**

XSECTOR – Sector Identification Number used in master database (1 thru 16)\*\*

DCOORD – Dimensional Coordinate used to characterize stocks in Polaris framework (1 thru 8)

**PSCORE – Polaris Score, (+) value is favorable, (-) value is unfavorable, (0) value is neutral**

VTCAVG – Average calculated from VSCORE, TSCORE and CSCORE

VSCORE – Valuation Score, (+) value is favorable, (-) value is unfavorable, (0) value is neutral

TSCORE – Technical Score, (+) value is favorable, (-) value is unfavorable, (0) value is neutral

CSCORE – Catalytic Score, (+) value is favorable, (-) value is unfavorable, (0) value is neutral

**\*\*Sector Identification Numbers**

- |                          |                       |                          |                      |
|--------------------------|-----------------------|--------------------------|----------------------|
| 1 Consumer Staples       | 5 Autos/Tires/Trucks  | 9 Conglomerates          | 13 Finance           |
| 2 Consumer Discretionary | 6 Basic Materials     | 10 Computer & Technology | 14 Utilities         |
| 3 Retail/Wholesale       | 7 Industrial Products | 11 Aerospace             | 15 Transportation    |
| 4 Medical                | 8 Construction        | 12 Oils/Energy           | 16 Business Services |

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Table 3: Large Cap Pairs – Polaris Output (07/02/2015)

	COMPANY	X SECTOR	TICKER	PRICE	DIV YLD	DCOORD	PSCORE	VTCAVG	VSCORE	TSCORE	CSCORE	MKT CAP
<b>Consumer Staples</b>												
<b>FOOD-MISC/DIVERSIFIED</b>												
A	Flowers Foods	1	FLO	20.82	2.79	1.00	1.61	0.83	0.07	1.97	0.46	4373.80
B	Mccormick & Co	1	MKC	79.96	2.00	3.00	1.56	0.36	-0.35	0.77	0.66	10217.69
1	Conagra Foods	1	CAG	44.56	2.24	8.00	-1.65	-1.49	-0.11	-0.97	-3.37	19029.44
<b>Retail-Wholesale</b>												
<b>RETAIL-DISCOUNT &amp; VARIETY</b>												
A	Ross Stores	3	ROST	49.31	0.95	3.00	1.56	2.51	-0.35	3.12	4.74	20403.99
B	Sears Hldg Cp	3	SHLD	25.53	0.00	1.00	1.40	0.53	0.42	1.00	0.19	2721.55
2	Tjx Cos Inc New	3	TJX	66.80	1.26	6.00	-1.54	-0.35	0.77	-1.16	-0.66	45449.72
1	Family Dollar	3	FDO	79.35	0.39	8.00	-1.70	-2.03	-1.91	-3.50	-0.69	9086.29
<b>Medical</b>												
<b>MEDICAL-BIOMED/GENETICS</b>												
A	Isis Pharmaceut	4	ISIS	56.13	0.00	1.00	1.67	0.94	0.63	0.92	1.28	6719.49
B	Puma Biotechnlg	4	PBYI	112.11	0.00	3.00	1.56	0.55	-0.33	0.67	1.31	3604.45
C	Intercept Pharm	4	ICPT	241.17	0.00	3.00	1.29	-0.12	-1.60	0.88	0.36	5805.44
4	Gilead Sciences	4	GILD	115.04	0.37	6.00	-1.33	-0.04	0.79	-0.71	-0.21	169063.48
3	Illexion Pharma	4	ALXN	185.22	0.00	6.00	-1.33	-0.85	0.89	-3.08	-0.37	41512.07
2	Illumina Inc	4	ILMN	220.07	0.00	8.00	-1.44	-0.35	-0.13	-0.72	-0.19	31712.09
1	Seattle Genetic	4	SGEN	47.65	0.00	8.00	-1.70	-1.64	-2.42	-0.72	-1.77	5950.87
<b>Computer and Technology</b>												
<b>INTERNET SERVICES</b>												
A	Lendingclub Cp	10	LC	13.95	0.00	1.00	1.67	0.75	0.83	0.46	0.95	5193.78
3	Facebook Inc-A	10	FB	87.29	0.00	8.00	-1.49	-1.46	-1.44	-2.78	-0.17	245116.98
2	Zillow Group	10	Z	87.32	0.00	8.00	-1.70	-1.02	-1.07	-0.56	-1.42	5126.03
1	Linkedin Corp-A	10	LNKD	207.76	0.00	8.00	-1.70	-1.26	-1.19	-1.68	-0.92	26170.49
<b>Aerospace</b>												
<b>AEROSPACE/DEFENSE EQUIP</b>												
A	Raytheon Co	11	RTN	95.57	2.80	1.00	1.67	1.32	0.85	1.56	1.55	29162.42
1	Transdigm Group	11	TDG	227.78	0.00	8.00	-1.70	-1.19	-1.91	-0.80	-0.88	12136.57
<b>Oils-Energy</b>												
<b>OIL &amp; GAS-U S EXPLD &amp; PROD</b>												
A	Cheniere Energy	12	LNG	68.77	0.00	3.00	1.51	0.16	-1.13	1.08	0.52	16268.99
B	Diamondback Egy	12	FANG	73.13	0.00	3.00	1.51	0.10	-1.63	1.32	0.63	4607.85
C	Concho Resources	12	CXD	112.37	0.00	3.00	1.29	0.15	-0.63	0.73	0.33	13485.86
4	Whiting Petrolm	12	WLL	31.33	0.00	6.00	-1.38	-0.07	0.45	-0.37	-0.27	6395.24
3	Noble Energy	12	NBL	41.02	1.76	6.00	-1.54	0.11	0.99	-0.35	-0.31	15874.95
2	Eog Res Inc	12	EOG	85.67	0.78	6.00	-1.54	-0.05	0.89	-0.48	-0.55	47027.18
1	Ep Energy Cp-A	12	EPE	11.33	0.00	8.00	-1.70	-0.61	-1.15	-0.29	-0.40	2810.19
<b>OIL REFINING &amp; MARKETING</b>												
A	World Fuel Svcs	12	INT	47.86	0.50	1.00	1.61	0.68	0.08	1.41	0.54	3454.87
B	Marathon Petrol	12	MPC	54.01	1.85	1.00	1.45	1.82	0.53	4.53	0.39	29342.23
1	Phillips 66	12	PSX	81.45	2.75	6.00	-1.60	-0.39	0.33	-0.48	-1.02	44172.54
<b>Utilities</b>												
<b>UTILITY-ELECTRIC POWER</b>												
A	Consol Edison	14	ED	59.14	4.40	1.00	1.67	0.53	0.76	0.33	0.51	17320.75
B	Wisc Energy Cp	14	WEC	46.65	3.62	1.00	1.61	0.51	0.17	0.35	1.01	14727.17
C	Xcel Energy Inc	14	XEL	32.82	3.90	3.00	1.35	0.13	-0.20	0.44	0.15	16636.92
D	Pinnacle West	14	PNW	58.32	4.08	3.00	1.35	0.08	-0.11	0.32	0.03	6458.88
1	Nextera Energy	14	NEE	100.22	3.07	8.00	-1.70	-0.74	-1.22	-0.39	-0.59	44510.11
<b>Business Services</b>												
<b>CONSULTING</b>												
A	Towers Watson	16	TW	128.93	0.47	3.00	1.56	0.48	-0.26	0.87	0.84	8937.68
1	Gartner Inc -A	16	IT	86.50	0.00	8.00	-1.70	-0.94	-0.59	-1.80	-0.42	7181.75
<b>OUTSOURCING</b>												
A	Genpact Ltd	16	G	21.46	0.00	3.00	1.56	0.54	-0.07	0.86	0.84	4695.43
B	Broadridge Finl	16	BR	51.80	2.08	3.00	1.56	0.26	-0.46	0.51	0.73	6209.52
C	Paychex Inc	16	PAYX	47.65	3.19	3.00	1.29	0.14	-0.77	0.71	0.48	17306.00
2	Donnelley (Fr)	16	RRD	17.25	6.03	6.00	-1.54	-0.09	1.21	-1.20	-0.28	3460.35
1	Automatic Data	16	ADP	80.83	2.42	8.00	-1.70	-0.76	-0.75	-1.27	-0.27	37951.63

Table 4: Small Cap Pairs – Polaris Output (07/02/2015)

	COMPANY	X SECTOR	TICKER	PRICE	DIV YLD	DCOORD	PSCORE	VTCAVG	VSCORE	TSCORE	CSCORE	MKT CAP
<b>Consumer Discretionary</b>												
<b>LEISURE &amp; RECREATION SVCS</b>												
A	Interval Leisur	2	IILG	22.39	2.14	1.00	1.69	0.93	1.80	0.57	0.43	1286.06
2	Clubcorp Hldgs	2	MYCC	24.19	2.15	8.00	-1.50	-0.90	-0.96	-1.37	-0.35	1563.01
1	Sfx Entmt Inc	2	SFXE	4.26	0.00	6.00	-1.61	-0.68	0.13	-1.64	-0.54	401.62
<b>Retail-Wholesale</b>												
<b>RETAIL-MISC/DIVERSIFIED</b>												
A	Barnes & Noble	3	BKS	25.99	0.00	3.00	1.53	0.70	-2.17	0.41	3.86	1665.36
1	Regis Corp/Mn	3	RGS	15.87	0.00	8.00	-1.72	-0.76	-0.82	-0.55	-0.92	866.18
<b>Medical</b>												
<b>MEDICAL-BIOMED/GENETICS</b>												
A	Spark Therapeut	4	ONCE	59.44	0.00	3.00	1.58	0.56	-0.24	0.85	1.07	1458.90
B	Array Biopharma	4	ARRY	6.89	0.00	3.00	1.58	0.37	-0.25	0.92	0.44	977.51
C	Curis Inc	4	CRIS	3.18	0.00	1.00	1.47	0.51	0.32	1.05	0.15	408.12
D	Affymetrix Inc	4	AFFX	10.38	0.00	1.00	1.42	0.43	0.20	1.04	0.04	802.62
3	Aegeion Pharma	4	AEGR	18.59	0.00	6.00	-1.55	-0.69	0.36	-0.94	-1.49	531.15
2	Raptor Pharmact	4	RPTP	15.79	0.00	8.00	-1.72	-0.67	-0.51	-0.66	-0.85	1270.78
1	Sarepta Therap	4	SRPT	30.14	0.00	8.00	-1.72	-0.83	-0.40	-0.91	-1.17	1249.79
<b>MEDICAL-DRUGS</b>												
A	Catalent Inc	4	CTLT	29.62	0.00	1.00	1.69	1.84	0.65	3.81	1.07	3681.35
B	Durect Corp	4	DRRX	2.26	0.00	1.00	1.63	0.49	0.26	0.75	0.47	270.23
C	Neurocrine Bios	4	NBIX	47.31	0.00	3.00	1.58	0.27	-0.37	0.57	0.62	4041.13
D	Sage Therapeutic	4	SAGE	68.91	0.00	3.00	1.53	0.66	-1.78	3.15	0.61	1954.77
4	Pacira Pharmact	4	PCRX	69.54	0.00	6.00	-1.55	-1.15	0.99	-1.01	-3.45	2534.25
3	Biocryst Pharma	4	BCRX	15.10	0.00	8.00	-1.66	-0.51	-0.28	-0.72	-0.52	1095.07
2	Otonomy Inc	4	OTIC	22.09	0.00	8.00	-1.72	-1.07	-1.09	-1.03	-1.09	533.12
1	Aerie Pharmact	4	AERI	17.28	0.00	8.00	-1.72	-1.52	-0.86	-1.39	-2.32	439.31
<b>Computer and Technology</b>												
<b>COMPUTER-SOFTWARE</b>												
A	Avid Tech Inc	10	AVID	13.23	0.00	1.00	1.63	0.47	0.22	0.93	0.28	523.56
B	Microstrategy	10	MSTR	172.57	0.00	3.00	1.58	0.27	-0.30	0.79	0.31	1954.53
C	Infoblox Inc	10	BLOX	25.96	0.00	3.00	1.53	0.35	-0.78	1.58	0.25	1494.26
D	Proofpoint Inc	10	PFPT	63.62	0.00	3.00	1.31	-0.32	-1.72	0.66	0.10	2507.96
4	Cornerstone Ond	10	CSOD	35.75	0.00	8.00	-1.50	-0.83	-1.18	-1.16	-0.16	1928.28
3	Pros Holdings	10	PRD	20.81	0.00	8.00	-1.66	-2.66	-0.26	-0.91	-6.81	614.31
2	Dealertrack Hld	10	TRAK	62.75	0.00	8.00	-1.72	-0.90	-0.90	-0.81	-0.99	3438.26
1	Interact Intell	10	ININ	44.21	0.00	8.00	-1.72	-1.38	-0.69	-2.85	-0.62	952.55
<b>ELEC-SEMICONDUCTORS</b>												
A	Ambarella Inc	10	AMBA	101.21	0.00	3.00	1.58	0.38	-0.12	0.64	0.63	3172.02
B	Cavium Inc	10	CAVM	67.59	0.00	3.00	1.58	0.31	-0.32	0.87	0.36	3738.20
3	Omnivision Tech	10	OVTI	25.71	0.00	6.00	-1.39	-1.05	0.00	-2.94	-0.20	1502.75
2	Lattice Semicon	10	LSCC	6.09	0.00	6.00	-1.61	-0.46	0.23	-1.17	-0.45	711.33
1	Adv Micro Dev	10	AMD	2.53	0.00	8.00	-1.72	-1.39	-1.04	-1.48	-1.66	1968.49
<b>Aerospace</b>												
<b>AEROSPACE/DEFENSE EQUIP</b>												
A	Esterline Techn	11	ESL	94.23	0.00	1.00	1.69	0.74	0.20	1.82	0.21	2903.13
B	Heico Corp	11	HEI	57.62	0.24	3.00	1.36	0.24	-0.15	0.80	0.08	3849.36
C	Astronics Corp	11	ATRO	69.63	0.00	3.00	1.36	0.24	-0.28	0.98	0.02	1537.36
2	Curtiss Wright	11	CW	72.58	0.72	6.00	-1.39	-0.35	0.08	-0.91	-0.20	3451.54
1	Aerovirement	11	AVAV	27.56	0.00	8.00	-1.72	-1.88	-2.40	-0.78	-2.44	643.50
<b>Finance</b>												
<b>BANKS-SOUTHEAST</b>												
A	Home Bancshares	13	HOMB	36.23	1.38	3.00	1.58	0.28	-0.21	0.41	0.62	2454.11
1	Hancock Hldg Co	13	HBHC	31.35	3.06	6.00	-1.55	-0.59	0.55	-1.72	-0.59	2441.91
<b>FINANCE-INVESTMENT BKRS</b>												
A	Invest Tech-New	13	ITG	24.96	0.28	1.00	1.63	0.42	0.14	0.76	0.37	854.33
B	Cowen Group Inc	13	COWN	6.37	0.00	3.00	1.31	-0.29	-1.52	0.50	0.14	709.64
1	Kcg Holdings	13	KCG	12.49	0.00	8.00	-1.66	-0.81	-0.19	-0.70	-1.53	1472.57
<b>REIT-EQTY TRUST - OTHER</b>												
A	Cubesmart	13	CUBE	23.85	2.68	1.00	1.69	1.12	0.79	0.95	1.64	3967.33
B	Coresite Realty	13	COR	47.08	3.57	1.00	1.69	0.97	1.63	0.59	0.68	1248.56
C	Sabra Healthcr	13	SBRA	25.80	6.05	1.00	1.63	0.35	0.22	0.46	0.36	1680.46
D	Dupont Fabros	13	DFT	29.86	5.63	1.00	1.47	0.41	0.75	0.40	0.09	1952.49
3	Washington Reit	13	WRE	25.73	4.66	8.00	-1.66	-0.43	-0.23	-0.53	-0.51	1753.50
2	Parkway Ppty	13	PKY	17.86	4.20	8.00	-1.66	-0.52	-0.24	-0.76	-0.55	1992.09
1	Herasha Hosppty	13	HT	26.67	1.05	8.00	-1.66	-7.62	-0.18	-10.06	-12.63	1308.94

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