

Alpha Signals Monthly Model Performance Report

September 2024



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Monthly Performance Recap

US:

The models over the US Large Cap universe struggled during the month. Many models had a negative performance. Over the US Small Cap universe, the Small Cap model had the strongest one month decile return spread performance, returning 2.56%. On the 12-month basis, the Price Momentum model performed best at 21.34% while the performance of the Earnings Momentum model continued to lag.

Developed Europe:

Over the Developed Europe universe, the Deep Value model returned -1.30% on a one month decile return spread basis. On a 12-month basis, the Relative Value model performed the best, at 18.11% cumulative.

Developed Pacific:

The models exhibited variability across the Developed Pacific Universe. The Deep Value model had the strongest one month decile return spread performance, returning 4.62%. The Deep Value model led the performance over the recent one year as well, delivering 21.05%.

Emerging Markets:

Within the Emerging Markets universe, the Value Momentum model returned 4.28% on one month quintile return spread basis. The Price Momentum model led over the one-year period, with returns at 22.62%.

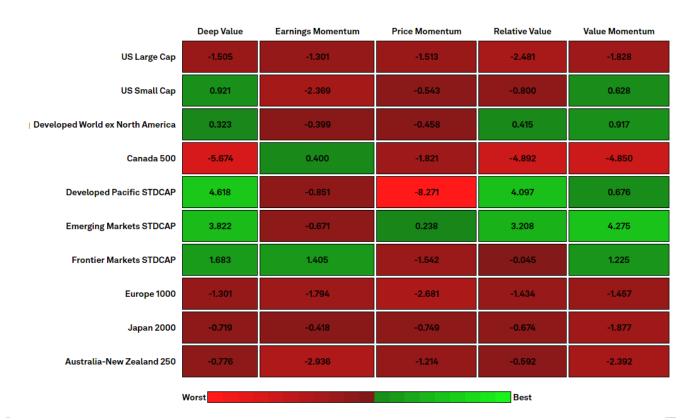
Sector Rotation:

The US Large Cap Sector Rotation model returned 3.10%. The Telecom sector had a favorable ranking and the Financials sector had an unfavorable ranking. The US Small Cap Sector Rotation model earned a return of 1.40%. The Non-Cyclicals sector had a favorable ranking and the Energy sector had an unfavorable ranking. The Developed Europe Sector Rotation model returned 1.70%. The Telecom sector had a favorable ranking and the Energy sector had an unfavorable ranking.

Specialty Models:

The Semiconductor model's one year cumulative performance was the highest at 28.81% while the Oil and Gas model's performance was the lowest at 5.22%. Within the specialty model library, the Insurance and the Bank and Thrift 2 models had the strongest one month quintile return spread performance returning 4.48% and 0.51%, respectively, while the Retail and the Oil and Gas models saw weaker returns.

Alpha Signals Model Matrix





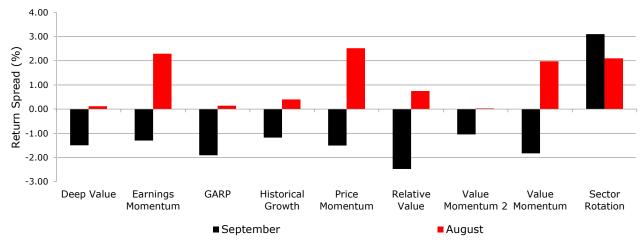
US Large Cap⁽¹⁾

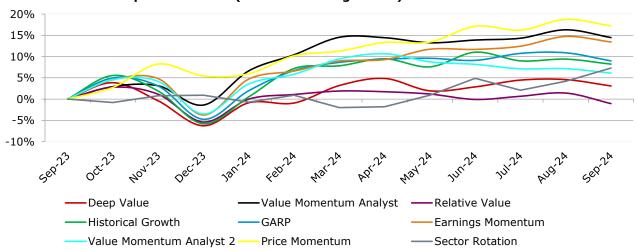
The models over the US Large Cap universe struggled during the month. Many models had a negative performance. The US Large Cap Sector Rotation model returned 3.10%. The Telecom sector had a favorable ranking and the Financials sector had an unfavorable ranking.

Model (2)	Decile F	Decile Return Spread (3)			cess Retu	r n ⁽³⁾	D10 E	ccess Retu	rn ⁽³⁾	Informat	tion Coeffic	cient (3)
Model	1mo	3mo	12mo	1mo	3mo	12mo	1mo	3mo	12mo	1mo	3mo	12mo
Deep Value	-1.50	0.22	3.07	0.02	1.57	6.93	1.52	1.35	3.85	-0.05	0.00	0.04
Earnings Momentum	-1.30	1.74	13.44	-0.17	1.06	8.19	1.14	-0.69	-5.25	0.00	0.02	0.03
GARP	-1.91	-0.13	8.98	-1.00	0.92	8.44	0.91	1.06	-0.54	-0.05	-0.02	0.03
Historical Growth	-1.18	-2.82	8.22	-0.01	-1.40	8.62	1.17	1.41	0.40	-0.01	-0.02	0.03
Price Momentum	-1.51	0.09	17.25	-0.73	-1.07	7.48	0.78	-1.17	-9.77	-0.05	0.00	0.03
Relative Value	-2.48	-0.97	-1.07	-0.76	0.57	2.86	1.72	1.54	3.93	-0.07	-0.01	0.03
Value Momentum 2	-1.05	-2.06	6.09	-1.12	-0.74	5.33	-0.07	1.32	-0.76	-0.02	0.01	0.04
Value Momentum	-1.83	0.58	14.46	-0.84	0.76	7.07	0.99	0.18	-7.39	-0.08	-0.01	0.03
Sector Rotation	3.10	2.40	7.30	0.40	-1.20	2.40	-2.70	-3.80	-5.20	-	-	-

Equal Weighted US Large Cap Universe 1-Month Return = 2.16%

Long/Short Return Performance







US Small Cap(1)

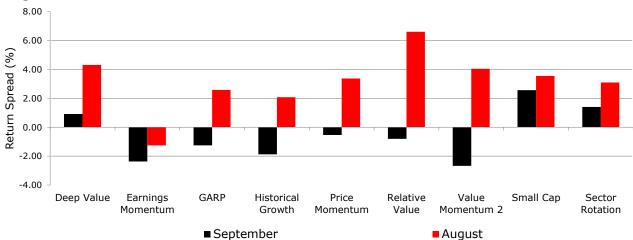
Over the US Small Cap universe, the Small Cap model had the strongest one month decile return spread performance, returning 2.56%. On the 12-month basis, the Price Momentum model performed best at 21.34% while the performance of the Earnings Momentum model continued to lag.

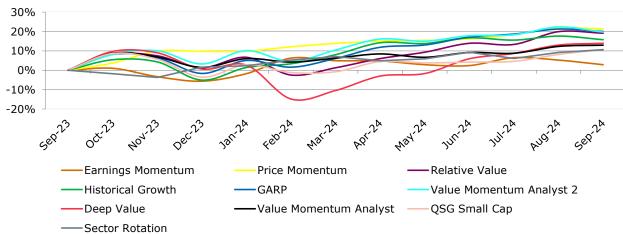
The US Small Cap Sector Rotation model earned a return of 1.40%. The Non-Cyclicals sector had a favorable ranking and the Energy sector had an unfavorable ranking.

Model ⁽²⁾	Decile R	Decile Return Spread (3)			cess Retur	n ⁽³⁾	D10 Ex	cess Retu	rn ⁽³⁾	Informat	ion Coeffic	ient ⁽³⁾
Model	1mo	3mo	12mo	1mo	3mo	12mo	1mo	3mo	12mo	1mo	3mo	12mo
Deep Value	0.92	7.99	13.92	-0.63	6.53	13.38	-1.55	-1.46	-0.54	0.07	0.10	0.09
Earnings Momentum	-2.37	0.46	2.88	-1.82	-0.07	6.18	0.54	-0.52	3.30	-0.01	0.02	0.02
GARP	-1.25	2.87	20.01	0.44	-0.42	4.17	1.69	-3.30	-15.84	0.04	0.04	0.07
Historical Growth	-1.87	-0.97	15.77	0.13	-0.44	4.30	2.00	0.54	-11.47	0.03	0.01	0.04
Price Momentum	-0.54	5.16	21.34	-0.81	2.80	5.18	-0.27	-2.36	-16.17	-0.02	0.03	0.03
Relative Value	-0.80	5.21	19.14	0.41	0.77	3.69	1.21	-4.44	-15.45	0.02	0.02	0.06
Value Momentum 2	-2.67	1.87	19.71	-0.37	0.17	6.72	2.29	-1.70	-12.98	0.04	0.05	0.07
Small Cap	2.56	6.53	10.73	1.46	1.02	3.93	-1.11	-5.51	-6.81	0.09	0.05	0.05
Sector Rotation	1.40	1.30	10.60	0.70	-0.30	3.60	-0.70	-1.50	-6.90	-	-	-

Equal Weighted US Small Cap Universe 1-Month Return = 0.04%

Long/Short Return Performance







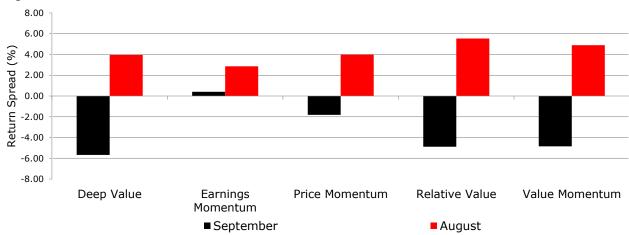
Canada 500⁽¹⁾

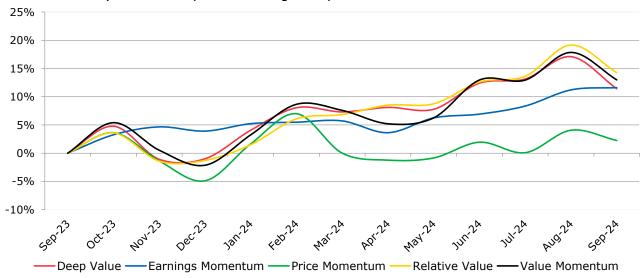
The models over the Canadian universe exhibited unfavorable results during the month. The Earnings Momentum model had the strongest one month quintile return spread performance, returning 0.40%. On the 12-month basis, the Relative Value model performed the best at 14.26% while the performance of the Price Momentum model trailed all the other models.

Model (2)	Quintile Return Spread (3)			Q1 Excess Return (3)			Q5 Ex	cess Retu	rn ⁽³⁾	Informat	tion Coeffic	cient ⁽³⁾
Model	1mo	3mo	12mo	1mo	3mo	12mo	1mo	3mo	12mo	1mo	3mo	12mo
Deep Value	-5.67	-0.99	11.43	-2.91	-1.60	1.02	2.77	-0.61	-10.41	-0.18	0.00	0.04
Earnings Momentum	0.40	4.69	11.60	0.32	0.78	3.31	-0.08	-3.91	-8.29	0.04	0.08	0.02
Price Momentum	-1.82	0.30	2.23	-0.52	0.26	4.87	1.30	-0.04	2.64	-0.04	0.02	0.02
Relative Value	-4.89	1.64	14.26	-2.56	-0.15	2.31	2.33	-1.80	-11.95	-0.13	0.03	0.06
Value Momentum	-4.85	0.03	12.98	-2.66	-0.86	0.39	2.19	-0.89	-12.59	-0.15	0.03	0.05

Equal Weighted Canada 500 Universe 1-Month Return = 3.83%

Long/Short Return Performance







Japan 2000⁽¹⁾

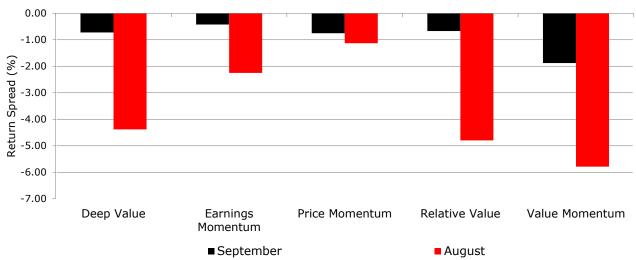
Within the Japan universe, the models struggled during the month.

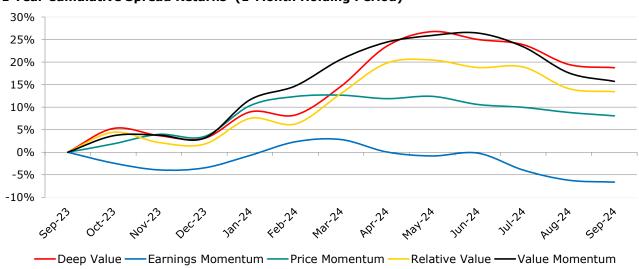
The Deep Value model's one year cumulative performance was the highest at 18.75%. The 2-Year Ahead EPS Growth factor within the Earnings Momentum model had a one month decile return spread of 0.31% and was the largest contributor to the model's performance in September.

Model (2)	Decile Return Spread (3)			D1 Ex	cess Retui	r n ⁽³⁾	D10 Ex	ccess Retu	ırn ⁽³⁾	Informat	ion Coeffic	cient ⁽³⁾
Model	1mo	3mo	12mo	1mo	3mo	12mo	1mo	3mo	12mo	1mo	3mo	12mo
Deep Value	-0.72	-6.27	18.74	-1.10	-4.27	4.69	-0.38	2.00	-14.05	-0.05	-0.09	0.06
Earnings Momentum	-0.42	-6.44	-6.62	-0.23	-2.98	-3.76	0.19	3.46	2.86	-0.01	-0.08	-0.02
Price Momentum	-0.75	-2.53	8.06	-0.36	-1.05	0.40	0.39	1.48	-7.66	-0.01	-0.05	0.02
Relative Value	-0.67	-5.36	13.44	-1.01	-4.22	1.24	-0.34	1.14	-12.19	-0.06	-0.10	0.04
Value Momentum	-1.88	-10.71	15.74	-0.93	-4.93	4.83	0.95	5.78	-10.91	-0.10	-0.15	0.04

Equal Weighted Japan 2000 Universe 1-Month Return = -0.47%

Long/Short Return Performance







Developed Europe(1)

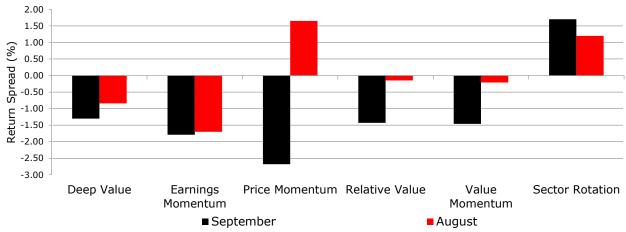
Over the Developed Europe universe, the Deep Value model returned -1.30% on a one month decile return spread basis. On a 12-month basis, the Relative Value model performed the best, at 18.11% cumulative.

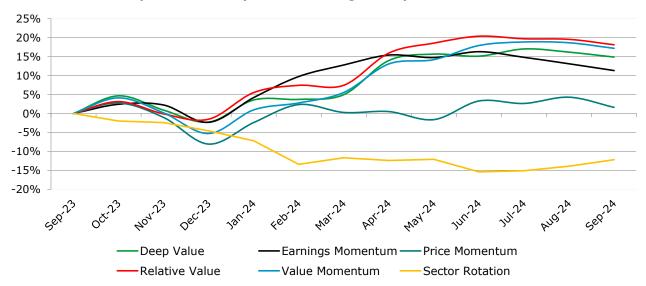
The Developed Europe Sector Rotation model returned 1.70%. The Telecom sector had a favorable ranking and the Energy sector had an unfavorable ranking.

Model (2)	Decile F	Decile Return Spread (3)			cess Retu	r n ⁽³⁾	D10 E	xcess Retu	ırn ⁽³⁾	Informat	tion Coeffic	cient ⁽³⁾
Hodel	1mo	3mo	12mo	1mo	3mo	12mo	1mo	3mo	12mo	1mo	3mo	12mo
Deep Value	-1.30	-0.23	14.87	-1.10	-0.30	5.43	0.20	-0.06	-9.44	-0.10	-0.05	0.02
Earnings Momentum	-1.79	-4.99	11.31	-1.43	-3.32	7.22	0.37	1.67	-4.09	-0.08	-0.06	0.02
Price Momentum	-2.68	-1.68	1.61	-1.96	-1.62	0.60	0.73	0.06	-1.01	-0.10	-0.03	0.01
Relative Value	-1.43	-2.26	18.11	-0.91	-1.31	6.66	0.53	0.95	-11.45	-0.11	-0.05	0.01
Value Momentum	-1.46	-0.74	17.17	-1.90	-1.73	7.40	-0.45	-0.99	-9.77	-0.10	-0.02	0.03
Sector Rotation	1.70	3.20	-12.20	0.20	-1.20	-9.60	-1.50	-4.50	2.40	-	-	

Equal Weighted Europe 1000 Universe 1-Month Return = 0.69%

Long/Short Return Performance







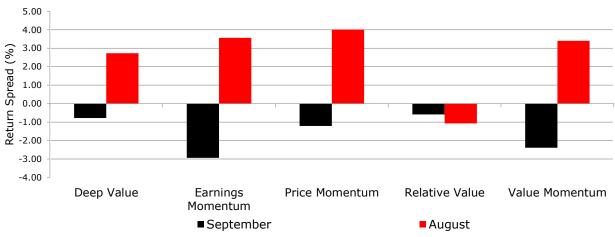
Australia-New Zealand 250(1)

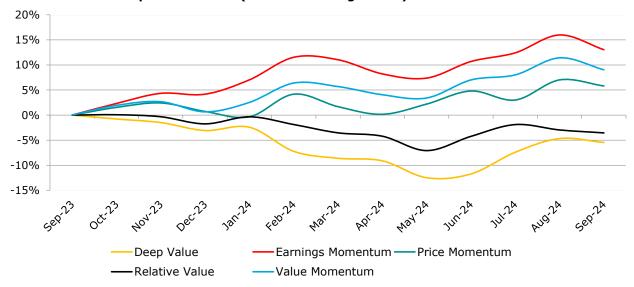
The Earning Momentum model's one year cumulative performance was at 13.04% and the performance of the Deep Value model returned -5.46%. The Relative Value model had the strongest one month quintile return spread performance within the Australia-New Zealand universe returning -0.59%, while Earnings Momentum lagged.

Model (2)	Quintile Return Spread (3)			Q1 Excess Return (3)			Q5 Ex	cess Retui	r n ⁽³⁾	Informat	tion Coeffic	cient ⁽³⁾
Houel	1mo	3mo	12mo	1mo	3mo	12mo	1mo	3mo	12mo	1mo	3mo	12mo
Deep Value	-0.78	6.28	-5.45	0.14	3.20	-3.05	0.92	-3.09	2.40	0.00	0.06	-0.02
Earnings Momentum	-2.94	2.36	13.05	0.13	1.83	5.95	3.06	-0.53	-7.10	-0.09	0.07	0.06
Price Momentum	-1.21	0.99	5.79	0.19	1.33	3.24	1.41	0.34	-2.55	-0.09	0.04	0.05
Relative Value	-0.59	0.69	-3.56	0.12	-0.34	-2.38	0.72	-1.03	1.17	-0.02	0.01	-0.01
Value Momentum	-2.39	2.02	9.04	0.19	2.70	5.54	2.58	0.68	-3.49	-0.10	0.07	0.05

Equal Weighted Australia New Zealand 250 Universe 1-Month Return = 4.83%

Long/Short Return Performance







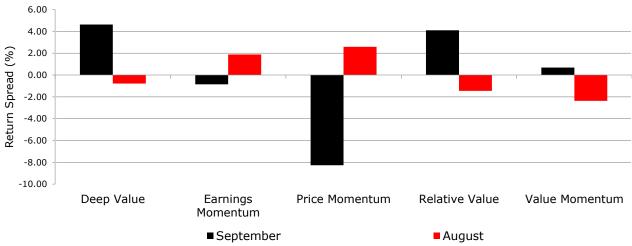
Developed Pacific(1)

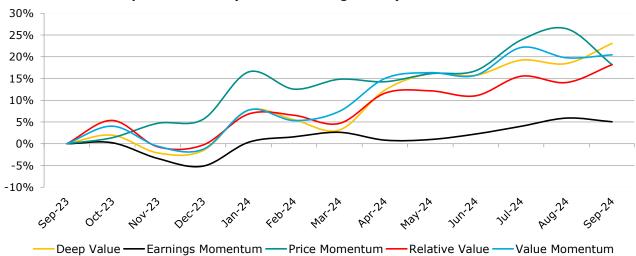
The models exhibited variability across the Developed Pacific Universe. The Deep Value model had the strongest one month decile return spread performance, returning 4.62%. The Deep Value model led the performance over the recent one year as well, delivering 21.05%.

Model (2)	Decile Return Spread (3)			D1 Ex	cess Retu	r n ⁽³⁾	D10 E	cess Retu	ırn ⁽³⁾	Informa	tion Coeffi	cient ⁽³⁾
Model	1mo	3mo	12mo	1mo	3mo	12mo	1mo	3mo	12mo	1mo	3mo	12mo
Deep Value	4.62	7.34	21.05	5.18	-0.99	6.61	0.56	-8.33	-14.43	0.07	0.03	0.07
Earnings Momentum	-0.85	2.80	5.04	0.32	1.78	6.71	1.17	-1.02	1.67	-0.04	0.00	0.01
Price Momentum	-8.27	1.37	18.18	-2.28	0.32	9.17	5.99	-1.05	-9.01	-0.18	0.02	0.06
Relative Value	4.10	7.14	18.18	4.12	2.21	7.38	0.03	-4.93	-10.79	0.07	0.02	0.05
Value Momentum	0.68	4.70	20.45	0.80	-1.78	4.71	0.13	-6.48	-15.73	0.02	0.02	0.06

Equal Weighted Developed Pacific Universe 1-Month Return = 7.68%

Long/Short Return Performance







Developed World Ex North America (EAFE)(1)

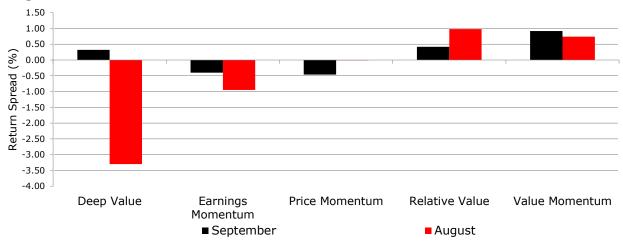
Within the Developed World Ex North America (EAFE) universe, the Value Momentum model had the strongest one month decile return spread performance, returning 0.92%, while the Price Momentum model lagged.

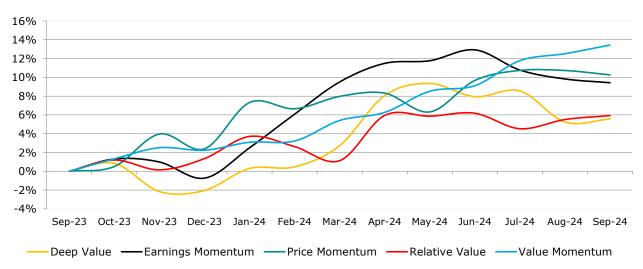
The Value Momentum model's one year cumulative performance was the highest at 13.44%.

Model (2)	Decile R	Decile Return Spread (3)			D1 Excess Return			cess Retu	rn	Informat	ion Coeffic	cient ⁽³⁾
Model	1mo	3mo	12mo	1mo	3mo	12mo	1mo	3mo	12mo	1mo	3mo	12mo
Deep Value	0.32	-2.37	5.56	-0.06	-0.46	5.37	-0.38	1.91	-0.19	-0.03	-0.03	0.03
Earnings Momentum	-0.40	-3.50	9.43	0.62	-1.03	6.49	1.02	2.47	-2.93	-0.07	-0.07	0.01
Price Momentum	-0.46	0.60	10.27	-0.33	0.67	5.84	0.13	0.07	-4.43	-0.05	0.00	0.03
Relative Value	0.42	-0.25	5.92	0.20	0.72	5.85	-0.22	0.97	-0.07	0.02	0.00	0.02
Value Momentum	0.92	4.32	13.43	1.03	4.21	7.44	0.11	-0.12	-5.99	-0.01	0.00	0.04

Equal Weighted Developed World Ex North America (EAFE) 1-Month Return = 1.81%

Long/Short Return Performance







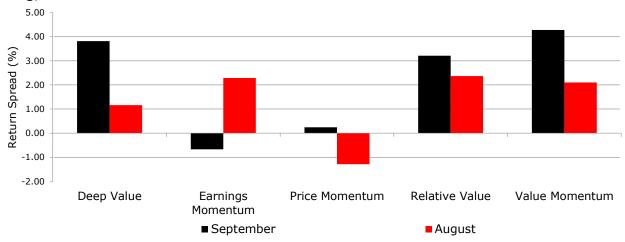
Emerging Markets⁽¹⁾

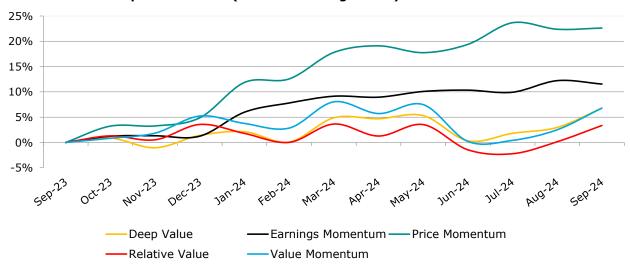
Within the Emerging Markets universe, the Value Momentum model returned 4.28% on one month quintile return spread basis. The Price Momentum model led over the one-year period, with returns at 22.62%.

Model (2)	Quintile Return Spread (3)			Q1 Excess Return (3)			Q5 Ex	cess Retu	r n ⁽³⁾	Informat	tion Coeffic	cient ⁽³⁾
Model	1mo	3mo	12mo	1mo	3mo	12mo	1mo	3mo	12mo	1mo	3mo	12mo
Deep Value	3.82	6.47	6.79	2.40	3.51	4.37	-1.42	-2.96	-2.42	0.14	0.09	0.04
Earnings Momentum	-0.67	1.21	11.54	0.72	1.76	7.08	1.40	0.55	-4.46	-0.02	0.00	0.02
Price Momentum	0.24	3.23	22.63	0.39	1.58	9.34	0.15	-1.65	-13.29	0.03	0.05	0.08
Relative Value	3.21	4.80	3.36	1.84	2.23	1.47	-1.37	-2.57	-1.90	0.12	0.07	0.03
Value Momentum	4.28	6.58	6.79	2.48	4.15	6.42	-1.79	-2.43	-0.37	0.15	0.08	0.04

Equal Weighted Emerging Markets Universe 1-Month Return = 3.81%

Long/Short Return Performance







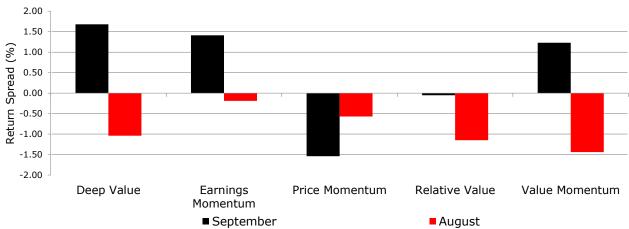
Frontier Markets(1)

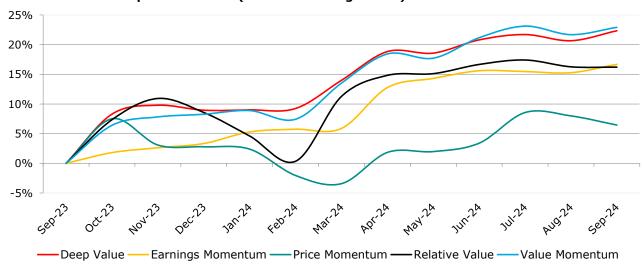
Over the Frontier Market's thematic models, the Deep Value model had the strongest one month quintile return spread performance, returning 1.68%. The Value Momentum model's one year cumulative performance reached 22.91%.

Model (2)	Quintile Return Spread (3)			Q1 Excess Return (3)			Q5 Ex	cess Retu	rn ⁽³⁾	Informat	tion Coeffic	cient ⁽³⁾
	1mo	3mo	12mo	1mo	3mo	12mo	1mo	3mo	12mo	1mo	3mo	12mo
Deep Value	1.68	1.53	22.33	2.15	1.62	11.05	0.46	0.09	-11.29	0.06	0.01	0.08
Earnings Momentum	1.41	1.07	16.67	1.53	0.28	9.20	0.12	-0.80	-7.47	0.06	0.01	0.04
Price Momentum	-1.54	3.05	6.46	-0.43	1.03	0.17	1.11	-2.02	-6.29	-0.07	0.04	0.05
Relative Value	-0.05	-0.44	16.22	0.83	0.45	11.61	0.87	0.89	-4.61	-0.02	-0.02	0.07
Value Momentum	1.23	1.73	22.91	1.04	0.98	12.89	-0.18	-0.74	-10.01	0.07	0.04	0.11

Equal Weighted Frontier Markets Universe 1-Month Return = 2.2%

Long/Short Return Performance





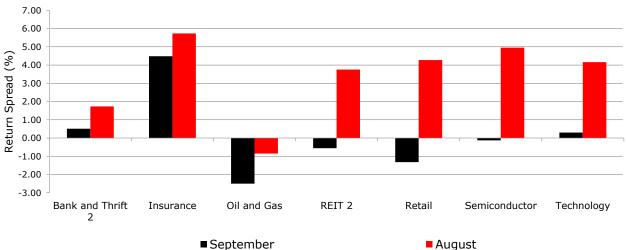
Specialty Models(1)

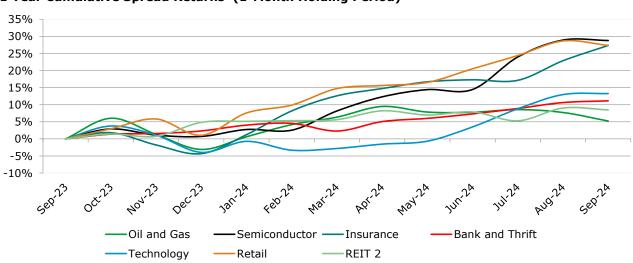
The Semiconductor model's one year cumulative performance was the highest at 28.81% while the Oil and Gas model's performance was the lowest at 5.22%.

Within the specialty model library, the Insurance and the Bank and Thrift 2 models had the strongest one month quintile return spread performance returning 4.48% and 0.51%, respectively, while the Retail and the Oil and Gas models saw weaker returns.

Model (2)	Decile/Quint	Decile/Quintile Return Spread (3)			D1 Excess Return (3)			ccess Retu	rn ⁽³⁾	Informat	tion Coeffic	cient ⁽³⁾
Model	1mo	3mo	12mo	1mo	3mo	12mo	1mo	3mo	12mo	1mo	3mo	12mo
Bank and Thrift 2 ⁽⁴⁾	0.51	3.83	11.15	0.03	1.62	7.24	-0.48	-2.21	-3.91	0.07	0.05	0.05
Insurance	4.48	10.06	27.37	1.72	2.14	6.33	-2.76	-7.91	-21.05	0.21	0.15	0.09
Oil and Gas	-2.50	-2.56	5.22	-2.37	-1.83	3.13	0.13	0.73	-2.09	-0.14	-0.02	0.03
REIT 2	-0.56	0.60	8.48	0.27	-0.06	-0.39	0.83	-0.66	-8.86	0.08	0.07	0.07
Retail	-1.32	6.84	27.36	-0.28	3.21	17.05	1.05	-3.63	-10.31	-0.01	0.05	0.07
Semiconductor	-0.13	14.34	28.81	0.48	7.88	12.39	0.60	-6.46	-16.43	0.07	0.15	0.09
Technology	0.30	9.78	13.29	-0.39	2.76	5.55	-0.69	-7.02	-7.74	0.09	0.12	0.03

Long/Short Return Performance







APPENDIX

1.1 UNIVERSE DESCRIPTIONS

US Large Cap: Top 90% of US stocks by cumulative market-cap, including securities held by passively benchmarked ETF's tracking the same market segment.

US Small Cap: Securities in 91-98% of US stocks by cumulative market-cap, including securities held by passively benchmarked ETF's tracking the same market segment.

Canada 500: Top 500 Canada stocks by market-cap.

Japan 2000: Top 2000 Japan stocks by market-cap.

Australia - New Zealand 250: Top 250 stocks by market-cap in Australia and New Zealand. **Developed Europe:** Top 1000 securities in the Developed Europe markets by market-cap.

Developed Pacific: Top 95% of stocks by cumulative free float market-cap among developed countries in the region, subject to a minimum free float market-cap of USD 250 mm.

Developed World Ex-North America (EAFE): Top 80% of stocks by cumulative market-cap stocks, in global developed countries excluding US/ Canada.

Emerging Markets: Top 95% of stocks by cumulative free float market-cap among emerging market countries, subject to a minimum free float market cap of USD 100 mm.

Frontier Markets: Top 95% of stocks by cumulative free float market-cap among frontier market countries, subject to a minimum free float market cap of USD 100 mm.

Bank and Thrift: All bank and thrift stocks that are part of the US Total Cap universe (top 98% of US stocks), with a share price > \$5 and market-cap >= .01% of the largest bank in the universe.

Insurance Universe: All insurance companies listed on US exchanges, excluding ADR's and Insurance brokers.

Oil & Gas: Global stocks in the oil & gas industry

REIT: All US REITs that are part of the US Total Cap universe (top 98% of US stocks), excluding mortgage REIT's.

Retail: All Retail companies in the US Total Cap universe (top 98% of US stocks), including those in the Cyclical and Non-Cyclical sectors.

Semiconductors: Global securities classified in the Semiconductor industry.

Technology: All Technology companies in the US Total Cap universe (top 98% of US stocks).

1.2 MODEL DESCRIPTIONS

Deep Value Model (DVM): seeks to identify securities trading at a steep discount to their intrinsic **Earnings Momentum Model (EMM):** incorporates analyst forecasts alongside in conjunction with past earnings strength to estimate future earnings potential.

Price Momentum Model (PMM): seeks to combine price changes with several risk factors to provide a consistent short term investment signal.

Relative Value Model (RVM): an alternative approach to the DVM that considers valuation indicators on an industry adjusted basis thus mitigating any concentration risk.

Value Momentum Analyst (VMA): a comprehensive style model which includes factors from Value, Price and Earnings Momentum themes to identify attractive/ unattractive securities.

GARP Model (GARP): designed to identify attractively valued stocks using valuation techniques that take growth into consideration. The Valuation component selects stocks with attractive valuation characteristics.

Historical Growth Model (HGM): identifies stocks with an above-average track-record of earnings growth, strong sales growth and high sustainable growth. This blended approach enables our Historical Growth Model to not only identifies traditional growth stocks, but also value stocks on the verge of growth.

Small Cap Model: seeks to exploit the noticeable excess performance in the small cap arena. Constituent factors selected for its individual and orthogonal power within the small cap space.

Bank and Thrift II Model (QBM2): seeks to generate consistent outperformance by leveraging specialty data sources to create bank-and-thrift-specific factors which complement a set of broad factors exhibiting strong performance within the bank and thrift industries.

Insurance Model (QIM): provides a robust methodology to enhance stock selection processes by comparing the relative performance of insurance companies on a consistent valuation framework designed to identify stocks with significant alpha generating potential.

Oil and Gas Model (OGM): uses a comprehensive scoring system that systematically values companies utilizing energy specific operating metrics and fundamental factors relevant to the oil and gas industry.

Retail Model (QRT): designed to generate alpha by employing general factor signals alongside key retail specific measures. Retail specific indicators include Same Store Sales and Earnings Expectations.

REIT Model (QRM): incorporates detailed property level information such as occupancy rate, location, and building quality to construct a bottom up approach assessment of REIT Net Asset Value; along with several other metrics.

Technology Model (QTA2): a multidimensional approach of combining several industry-specific models with a cross-sectional overlay. The model seeks to generate alpha by accounting for the inherent cyclicality and volatility of sub-industries.



1.3 PERFORMANCE STATS CALCULATION

The reported Information Coefficient (correlation between model ranks and equity return) is the average over the given time period. The reported Decile 1 and Decile 10 Excess Returns are Cumulative Sum (CUMSUM) and are measured as the excess return of their respective benchmark over a given time period

The reported Decile 1 Excess Returns and Decile 10 Excess Returns are Cumulative Sum (CUSUM) returns and are measured as the excess return of their respective benchmark over the given time period.

The reported Long-Short Spread Returns are Cumulative SUM returns and are calculated by subtracting the total returns of stocks in the bottom decile/quintile from those in the top decile/quintile over the given time period.

Quintiles are used for performance stats calculations, instead of deciles, in cases of smaller universe

The reported performance stats are all in local currency.



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