



Model Portfolio Monthly Update: October 5, 2017

There are limitations inherent in our theoretical model results, particularly with the fact that such results do not represent actual trading and they may not reflect the impact material economic and market factors might have had on our decision making if we were actually managing client money. Please see additional disclaimers and disclosures at the back of this report.

We highlight stocks that demonstrate solid growth at a reasonable price (GARP). Stocks selected for our model portfolio strategies all rank highly for the following metrics, with an emphasis on proxies for cash flow growth and ROIC:

- Relative Value
- Operating Momentum
- Analyst Revision Momentum
- Fundamental Quality

Pages 2-8 contain brief commentary and highlights of a few stocks that seem particularly attractive.

Page 9 contains rebalancing actions for our long-only model portfolio.

Page 10 contains rebalancing actions for our short-only model portfolio.

Target and stop prices, as well as updated return data, to be provided in our daily reports that will follow.

Notes:

Readers that would like to follow our daily price target changes can follow us on our Seeking Alpha [instablog](#) or on [Tumblr](#). This report is a follow-up to our October 5, 2017 [abbreviated report](#) and [last month's full report](#).

Commentary

Core Model

The theoretical **Core Long Model** portfolio finished September 2017 up +4.42%, versus the **S&P 500** up +1.92% and the **SPDR S&P 500 ETF (SPY)** up +2.01%

Stocks in the theoretical **Core Short Model** portfolio finished up +3.54% for the assumed inverse short sale loss of -3.54%.

The theoretical **Core Long/Short Model** portfolio finished up +0.88% (+4.42% - 3.54% = +0.88%), ahead of the preliminary **Barclay Equity Long/Short Index** average of 0.71% (representing return data from 153 funds, compared to 400+ funds that would represent the full average).

For the year through September 29, on a simple cumulative return basis, the **Core Long Model** is up +14.82% versus the S&P 500 up +11.99%.

Opportunistic Model

The theoretical Opportunistic Model portfolios use the same basket of stocks as the Core Model, but additionally use a cash allocation strategy in an attempt to minimize losses during periods of extreme market volatility. While this strategy significantly improved returns in the 2009-2011 period, moving to cash has consistently hurt the portfolio returns in every instance since the beginning of 2012.

The theoretical **Opportunistic Long Model** maintained a minimum 30% cash allocation for the month, with cash levels only changing when a stock position was closed and replaced with cash. This model will remain with at least a 30% minimum cash allocation through just prior to the close of October 12, when it will assume a 0% cash allocation (excluding stock positions that were closed and replaced with cash). The **Opportunistic Long/Short Model** finished September 2017 down -1.42%.

Theoretical long stock returns September 2017

Our favorite long idea as of September 8 was **Yum! Brands, Inc. (YUM)**. The stock finished the September 8-29 period down -3.75%.

The best performing stock in the long model since the September 8 rebalancing was **MasTec, Inc. (MTZ)**, which reached a price target on September 26 and was assumed closed the next day for a 16.81% return. MTZ was the worst performing stock in August, down -11.69% in August.

The worst performing long idea since the September 8 rebalancing was **Teck Resources Limited (TECK)**, down -9.25% for the period. Interestingly, TECK led the model portfolio for the first four trading days of October with a +9.10% return and remains in the model portfolios for October.

Theoretical short sale stock returns for September 2017

The best short sale idea for September was **Sage Therapeutics, Inc. (SAGE)**, which reached a price target on September 13 and was assumed closed the next day for an assumed short sale gain of +25.46%.

Notes

Except for extremely unusual circumstances, our long model portfolios are composed of high-quality stocks and our short model portfolios are composed of low-quality stocks.

As a simple quantitative model based on fundamental rankings, the portfolio models do not take into account rumors or pending M&A transactions.

Theoretical return data does not assume the impact of costs such as execution fees, margin fees, slippage, the availability of stocks for short selling, or any other kind of cost.

We favor reporting theoretical model portfolio returns data on a on a simple cumulative basis. Cumulatively adding daily returns allows for the easy comparison of returns from one period to another. Simple cumulative returns are significantly lower than compound returns over time. For the theoretical Core Long Model portfolio simple cumulative returns since the March 31, 2009 inception have been 190.94% and compounded returns have been 451.11%. S&P 500 returns over that same period have been 125.24% on a simple cumulative return basis and 215.76% on a compounded basis.

In most cases the models are created just prior to the market close each month, but we usually do not publish until after the close due to time constraints.

Looking ahead for the balance October 2017

Long portfolio rebalancing actions

As noted in our [abbreviated report](#), we assume that just prior to the close as of October 5, 2017, we assume 12 stocks have left the long-only model, 16 have been added, and 19 have been rebalanced. This 35-stock theoretical long model assumes a 2.86% weight for each stock. The long model portfolios are composed of high-quality stocks.

Short sale portfolio rebalancing actions

Just prior to the October 5, 2017 close, we assume that 4 stocks have left the short-sale model portfolios, 9 have been added, and 16 have been rebalanced. This 25-stock theoretical model portfolio assumes a 4.00% weight for each stock.

This short sale model is composed of low-quality stocks, and only tends to work well during periods of high uncertainty or volatility in the market. Low-quality stocks do tend to outperform high-quality stocks during market rallies as the market prices in expectations for a sharp recovery in fundamentals.

Our favorite ideas for the balance of October

We have two strong long candidates this month: **Micron Technology, Inc. (MU)** and **Agilent Technologies, Inc. (A)**.

Our high relative value ranking for **Micron Technology** is likely signaling the market's belief that the company has reached a peak in its operating cycle. Supporting this theory is a consensus forecast that implies ROIC will likely peak in February 2018 quarter. The philosophy of this model, which has tended to work well over time, is to hold stocks displaying the best fundamental momentum and relative value until proven otherwise. Consensus tends to be poor at calling peaks and troughs, so we support the "contrarian" stance that there is a good chance that estimates for Micron continue to be revised higher.

Ranking Data as of October 5, 2017

Micron Technology, Inc.
NasdaqGS:MU

Information Technology
Semiconductors

Ascendere Ranking		Price 10/05/17	39.71	Cash	(5,428)	EV/LTM EBITDA	5.1
		Shares	1,110	Debt	11,134	Price/Book	2.4
		Market Cap	43,914	Other	849		
				Enterprise Value	50,469		
5 = Best	Rank						
Relative Value	5						
Operating Momentum	4	CY1 Consensus EPS Est.	\$ 6.70	CY1 PE	5.9	Total Capital	\$ 30,604
Analyst Revisions Momentum	5	CY2 Consensus EPS Est.	\$ 7.32	CY2 PE	5.4	Debt/Capital	19%
Fundamental Quality	4	Latest Annualized Dividend	\$ -	Div Yield	0.0%	Debt/Enterprise Value	22%

Source: Capital IQ data and estimates, and Ascendere Associates LLC data and estimates.

NasdaqGS:MU	Estimate	Estimate	Estimate	Estimate					
	LTM+4Q	LTM+3Q	LTM +2Q	LTM +1Q	Last LTM	LTM-1	LTM-2	LTM -3	LTM -4
NOPLAT	9,176	9,390	9,159	8,036	5,850	4,053	2,137	859	863
Economic Charge	4,314	4,245	4,157	4,037	3,871	3,611	3,318	2,673	2,334
Economic Profit	4,862	5,145	5,002	3,999	1,979	443	(1,181)	(1,814)	(1,471)
Y/Y change	-5.5%	2.9%	25.1%	102.1%	347.2%	-137.5%	-34.9%	23.3%	107.7%
NOPLAT	9,176	9,390	9,159	8,036	5,850	4,053	2,137	859	863
Operating Capital	39,348	38,714	37,919	36,817	35,305	33,705	32,714	27,260	26,847
ROIC (NOPLAT / Operating Capital)	23.3%	24.3%	24.2%	21.8%	16.6%	12.0%	6.5%	3.2%	3.2%
NOPLAT	9,176	9,390	9,159	8,036	5,850	4,053	2,137	859	863
5 Qtr Average Operating Capital	38,199	37,189	35,936	34,635	31,166	29,229	27,454	25,909	25,443
ROIC (NOPLAT / Operating Capital)	24.0%	25.2%	25.5%	23.2%	18.8%	13.9%	7.8%	3.3%	3.4%

Source: Ascendere Associates assumptions and estimates, and S&P Capital IQ data and consensus estimates.

Agilent Technologies was in our model portfolio last month, but its rankings recently changed to a configuration that on occasions in the past have subsequently performed very well. In addition, economic profit is poised to turn positive for the first time since July 2013, and ROIC is set to reach double digits for the first time since October 2012. When certain key stock metrics reach certain thresholds,

such as turning to positive from negative or from single digit to double digit, it seems to attract additional interest from investors, arbitrarily deserved or not.

Ranking Data as of October 5, 2017

Agilent Technologies, Inc.
NYSE:A

Healthcare
Life Sciences Tools and Services

Ascendere Ranking		Price 10/05/17	65.76	Cash	(2,563)	EV/LTM EBITDA	19.6
		Shares	322	Debt	2,081	Price/Book	4.6
		Market Cap	21,186	Other	3		
				Enterprise Value	20,707		
5 = Best	Rank						
Relative Value	3						
Operating Momentum	4	CY1 Consensus EPS Est.	\$ 2.40	CY1 PE	27.4	Total Capital	\$ 6,692
Analyst Revisions Mon	5	CY2 Consensus EPS Est.	\$ 2.66	CY2 PE	24.7	Debt/Capital	-7%
Fundamental Quality	4	Latest Annualized Dividend	\$ 0.53	Div Yield	0.8%	Debt/Enterprise Value	10%

Source: Capital IQ data and estimates, and Ascendere Associates LLC data and estimates.

NYSE:A	Estimate	Estimate	Estimate	Estimate					
	LTM+4Q	LTM+3Q	LTM +2Q	LTM +1Q	Last LTM	LTM-1	LTM-2	LTM -3	LTM -4
NOPLAT	755	721	675	642	612	537	491	433	427
Economic Charge	647	645	643	641	638	627	642	608	582
Economic Profit	108	76	32	1	(26)	(90)	(151)	(174)	(155)
Y/Y change	42.6%	133.8%	2137.0%	-105.6%	-71.2%	-40.1%	-13.4%	12.8%	-20.2%
NOPLAT	755	721	675	642	612	537	491	433	427
Operating Capital	7,375	7,349	7,324	7,299	7,268	7,251	7,358	7,478	7,345
ROIC (NOPLAT / Operating Capital)	10.2%	9.8%	9.2%	8.8%	8.4%	7.4%	6.7%	5.8%	5.8%
NOPLAT	755	721	675	642	612	537	491	433	427
5 Qtr Average Operating Capital	7,337	7,310	7,286	7,294	7,340	7,360	7,674	7,987	8,266
ROIC (NOPLAT / Operating Capital)	10.3%	9.9%	9.3%	8.8%	8.3%	7.3%	6.4%	5.4%	5.2%

Source: Ascendere Associates assumptions and estimates, and S&P Capital IQ data and consensus estimates.

Our favorite pair trade idea for October is Long Micron Technologies and Short Cree, Inc.

In the semiconductor space, **Cree, Inc. (CREE)** looks as unattractive as does **Micron Technologies** appears attractive. Cree is probably not a good standalone short sale idea because we do not expect a significant increased deterioration in its fundamentals. However, CREE's ROIC is low and the trend is stagnant, and relative value is unattractive. It's a good hedge for a long position in MU, in our opinion.

Ranking Data as of October 5, 2017

Cree, Inc.
NasdaqGS:CREE **Information Technology**
Semiconductors

Ascendere Ranking	Price 10/05/17	29.47	Cash	(611)	EV/LTM EBITDA	23.9	
	Shares	97	Debt	145	Price/Book	1.3	
	Market Cap	2,884	Other	0			
			Enterprise Value	2,418			
5 = Best	Rank						
Relative Value	1						
Operating Momentum	1	CY1 Consensus EPS Est.	\$ 0.15	CY1 PE	191.7	Total Capital	\$ 2,368
Analyst Revisions Mom	1	CY2 Consensus EPS Est.	\$ 0.52	CY2 PE	56.9	Debt/Capital	-20%
Fundamental Quality	1	Latest Annualized Dividend	\$ -	Div Yield	0.0%	Debt/Enterprise Value	6%

Source: Capital IQ data and estimates, and Ascendere Associates LLC data and estimates.

NasdaqGS:CREE	Estimate	Estimate	Estimate	Estimate					
	LTM+4Q	LTM+3Q	LTM +2Q	LTM +1Q	Last LTM	LTM-1	LTM-2	LTM -3	LTM -4
NOPLAT	18	10	(10)	24	33	2	43	46	38
Economic Charge	249	245	242	243	241	246	253	230	230
Economic Profit	(230)	(235)	(252)	(219)	(208)	(244)	(210)	(184)	(192)
Y/Y change	-2.1%	-6.6%	14.9%	5.4%	-14.6%	15.8%	14.5%	-4.5%	-41.0%
NOPLAT	18	10	(10)	24	33	2	43	46	38
Operating Capital	2,845	2,805	2,769	2,782	2,757	2,767	2,818	2,880	2,867
ROIC (NOPLAT / Operating Capital)	0.6%	0.3%	-0.4%	0.9%	1.2%	0.1%	1.5%	1.6%	1.3%
NOPLAT	18	10	(10)	24	33	2	43	46	38
5 Qtr Average Operating Capital	2,800	2,778	2,768	2,781	2,818	2,846	2,868	2,885	2,884
ROIC (NOPLAT / Operating Capital)	0.7%	0.4%	-0.4%	0.9%	1.2%	0.1%	1.5%	1.6%	1.3%

Source: Ascendere Associates assumptions and estimates, and S&P Capital IQ data and consensus estimates.

Long running advice regarding the use of our model portfolio report

Wayne Gretzky said it best – “skate to where the puck is going to be, not where it has been.” Quantitative screens like the one in this report show where a stock has been and assume the trajectory is fixed. Of course, this is not always the case. The best investors will use this model portfolio as guidance, and not the end all. At the same time, the model does well enough on its own, often beating the indices with ease (though not this past month). With a little effort, we hope that active fundamental portfolio managers will do even better.

Long Model Portfolio -- Rebalancing Actions

10/5/2017 Rebalancing					
Core and Opportunistic Long Portfolio:					
35 stocks in the model portfolio = 2.86% weight per position					
Close Position		Hold/Rebalance		Open Position	
Yum! Brands, Inc.	YUM	Burlington Stores, Inc.	BURL	Thor Industries, Inc.	THO
LVMH Moët Hennessy Louis Vuitton	LVMU.Y	Kohl's Corporation	KSS	Compañía Cervecerías Unidas S.A.	CCU
Peabody Energy Corporation	BTU	Evercore Inc.	EVR	TC PipeLines, LP	TCP
First Horizon National Corporation	FHN	Raymond James Financial, Inc.	RJF	East West Bancorp, Inc.	EWBC
Cathay General Bancorp	CATY	SVB Financial Group	SIVB	American Equity Investment Life Holdings	AEL
Celgene Corporation	CELG	Agilent Technologies, Inc.	A	Exelixis, Inc.	EXEL
Cirrus Logic, Inc.	CRUS	Masimo Corporation	MASI	Trex Company, Inc.	TREX
CDW Corporation	CDW	MasTec, Inc.	MTZ	ManpowerGroup Inc.	MAN
Alphabet Inc.	GOOG	EMCOR Group, Inc.	EME	Graco Inc.	GGG
Ansys, Inc.	ANSS	Allison Transmission Holdings, Inc.	ALSN	Donaldson Company, Inc.	DCI
Louisiana-Pacific Corporation	LPX	Valmont Industries, Inc.	VMI	Applied Industrial Technologies, Inc.	AIT
Cabot Corporation	CBT	Advanced Energy Industries, Inc.	AEIS	InterDigital, Inc.	IDCC
		Vishay Intertechnology, Inc.	VSH	Micron Technology, Inc.	MU
		YY Inc.	YY	Intuit Inc.	INTU
		Facebook, Inc.	FB	Kronos Worldwide, Inc.	KRO
		Arista Networks, Inc.	ANET	Trinseo S.A.	TSE
		Teck Resources Limited	TECK		
		Norbord Inc.	OSB		
		United States Steel Corporation	X		

Source: Ascendere Associates LLC

Short Model Portfolio -- Rebalancing Actions

When the market anticipates an improving economy from low price levels, low-quality stocks will at times out-perform high-quality stocks as the expected improvements in fundamentals are discounted from a relatively more depressed price level.

10/5/2017 Rebalancing					
Core and Opportunistic Short Portfolio:					
25 stocks in the model portfolio = 4.00% weight per position					
Close Position		Hold/Rebalance		Open Short Sale	
DISH Network Corporation	DISH	Adient plc	ADNT	Penske Automotive Group, Inc.	PAG
Sage Therapeutics, Inc.	SAGE	Under Armour, Inc.	UA	National Oilwell Varco, Inc.	NOV
Kite Pharma, Inc.	KITE	MetLife, Inc.	MET	Alnylam Pharmaceuticals, Inc.	ALNY
Alliance Data Systems Corporati	ADS	Voya Financial, Inc.	VOYA	Puma Biotechnology, Inc.	PBYI
		Agios Pharmaceuticals, Inc.	AGIO	Textron Inc.	TXT
		Penumbra, Inc.	PEN	Colfax Corporation	CFX
		Jacobs Engineering Group Inc.	JEC	KBR, Inc.	KBR
		ZTO Express (Cayman) Inc.	ZTO	Cree, Inc.	CREE
		Univar Inc.	UNVR	The Sherwin-Williams Company	SHW
		Fluor Corporation	FLR		
		Flowserve Corporation	FLS		
		MACOM Technology Solutions	MTSI		
		Integrated Device Technology,	IDTI		
		ViaSat, Inc.	VSAT		
		PTC Inc.	PTC		
		The Mosaic Company	MOS		

Source: Ascendere Associates LLC

Return Data

Core & Opportunistic Long Model					MTD				
9/08/2017 to 9/29/2017									
Sector	Company	Ticker	9/8/2017	9/29/2017	Performance	Target/ Stop Date	Date+1 Sell Price	Return	
Financials	First Horizon National Corp.	FHN	16.36	19.15	17.05%	9/25/2017	\$ 18.48	12.96%	
Financials	Cathay General Bancorp	CATY	34.76	40.20	15.65%	9/22/2017	\$ 38.25	10.04%	
Industrials	MasTec, Inc.	MTZ	40.15	46.40	15.57%	9/26/2017	\$ 46.90	16.81%	
Financials	SVB Financial Group	SIVB	162.46	187.09	15.16%	9/27/2017	\$ 186.59	14.85%	
Financials	Evercore Partners Inc.	EVR	70.35	80.25	14.07%	9/20/2017	\$ 77.35	9.95%	
Information Technology	Advanced Energy Industries, Inc.	AEIS	71.57	80.76	12.84%				
Industrials	Allison Transmission Holdings, Inc.	ALSN	33.49	37.53	12.06%	9/27/2017	\$ 37.22	11.14%	
Financials	Raymond James Financial Inc.	RJF	75.32	84.33	11.96%	9/20/2017	\$ 82.74	9.85%	
Information Technology	CDW Corporation	CDW	58.96	66.00	11.94%	9/26/2017	\$ 65.22	10.62%	
Information Technology	YY Inc.	YY	78.01	86.78	11.24%				
Information Technology	Arista Networks, Inc.	ANET	172.68	189.61	9.80%				
Consumer Discretionary	Kohl's Corp.	KSS	42.00	45.65	8.69%				
Consumer Discretionary	Burlington Stores, Inc.	BURL	88.01	95.46	8.46%				
Industrials	Valmont Industries, Inc.	VMI	146.55	158.10	7.88%	9/27/2017	\$ 158.50	8.15%	
Information Technology	Vishay Intertechnology Inc.	VSH	17.50	18.80	7.43%				
Materials	Cabot Corporation	CBT	52.41	55.80	6.47%				
Consumer Discretionary	LVMH Moët Hennessy Louis Vuitton S.	LVMUY	52.88	55.31	4.60%				
Industrials	EMCOR Group Inc.	EME	66.45	69.38	4.41%				
Healthcare	Celgene Corporation	CELG	140.50	145.82	3.79%				
Information Technology	Alphabet Inc.	GOOG	926.50	959.11	3.52%				
Materials	Norbord Inc.	OSB	37.71	38.12	1.09%				
Healthcare	Masimo Corporation	MASI	86.14	86.56	0.49%				
Information Technology	Facebook, Inc.	FB	170.95	170.87	-0.05%				
Energy	Peabody Energy Corp.	BTU	29.29	29.01	-0.96%				
Materials	Louisiana-Pacific Corp.	LPX	27.37	27.08	-1.06%				
Healthcare	Agilent Technologies Inc.	A	65.02	64.20	-1.26%				
Consumer Discretionary	Yum! Brands Inc.	YUM	76.48	73.61	-3.75%				
Information Technology	Ansys, Inc.	ANSS	128.44	122.73	-4.45%				
Information Technology	Cirrus Logic Inc.	CRUS	55.92	53.32	-4.65%				
Materials	United States Steel Corp.	X	26.96	25.66	-4.82%				
Materials	Teck Resources Limited	TECK	23.24	21.09	-9.25%				

Ascendere Associates LLC

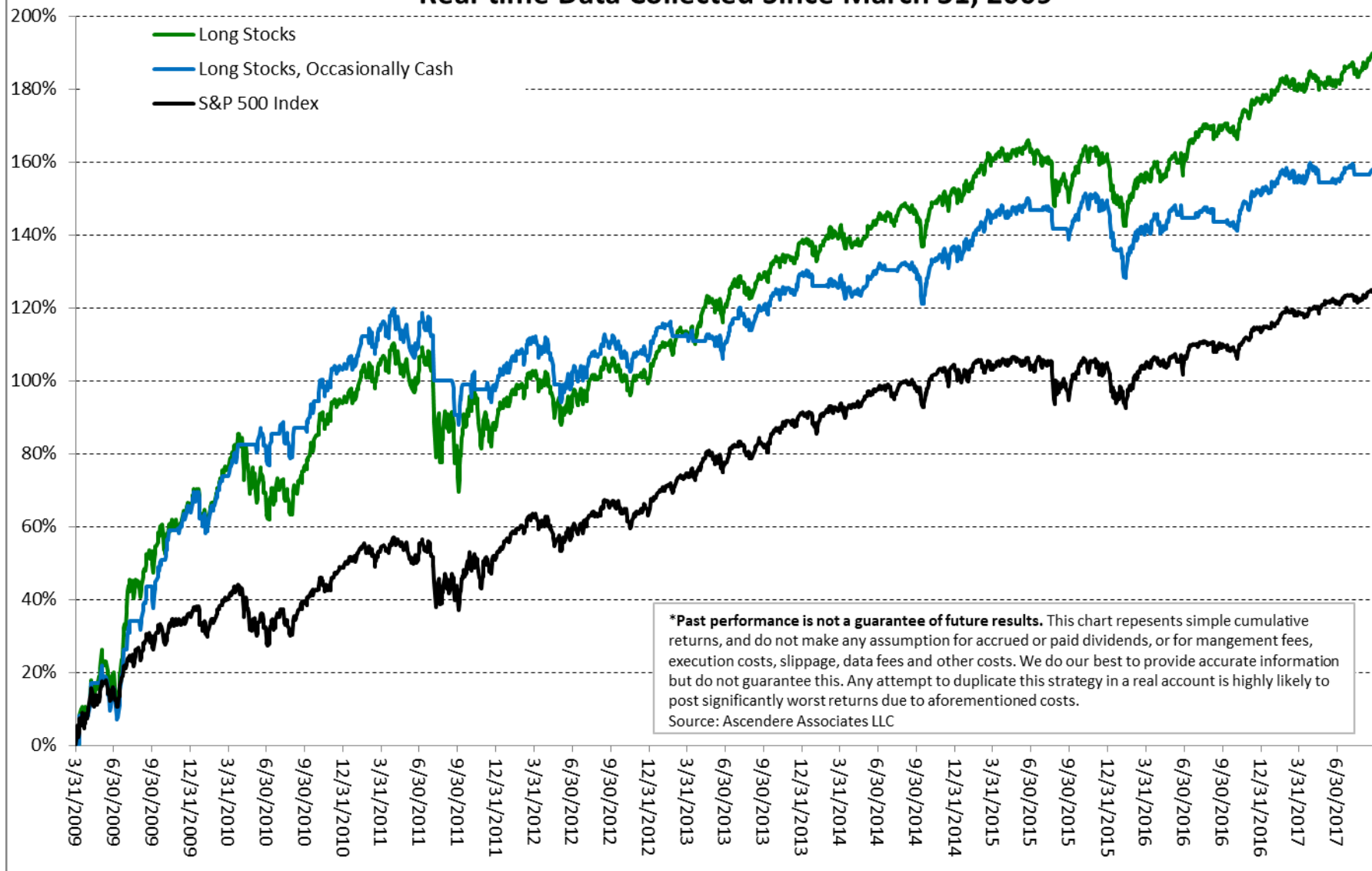
Core & Opportunistic Short Model					MTD			
9/08/2017 to 9/29/2017								
Sector	Company	Ticker	9/8/2017	9/29/2017	Performance	Target/ Stop Date	Date+1 Sell Price	Return
Healthcare	Sage Therapeutics, Inc.	SAGE	87.00	62.30	-28.39%	9/13/2017	\$ 64.85	-25.46%
Consumer Discretionary	Under Armour, Inc.	UAA	17.42	16.48	-5.40%			
Consumer Discretionary	Dish Network Corp.	DISH	54.60	54.23	-0.68%			
Healthcare	Kite Pharma, Inc.	KITE	178.23	179.81	0.89%			
Industrials	ZTO Express (Cayman) Inc.	ZTO	13.90	14.04	1.01%			
Information Technology	PTC Inc.	PTC	55.40	56.28	1.59%			
Healthcare	Penumbra, Inc.	PEN	88.05	90.30	2.56%			
Information Technology	Alliance Data Systems Corporation	ADS	214.32	221.55	3.37%			
Healthcare	Agios Pharmaceuticals, Inc.	AGIO	63.64	66.75	4.89%			
Information Technology	MACOM Technology Solutions Holding	MTSI	42.52	44.61	4.92%			
Industrials	Univar Inc.	UNVR	27.38	28.93	5.66%			
Industrials	Jacobs Engineering Group, Inc.	JEC	54.63	58.27	6.66%	9/25/2017	\$ 58.30	6.72%
Information Technology	ViaSat Inc.	VSAT	60.08	64.32	7.06%			
Information Technology	Integrated Device Technology Inc.	IDTI	24.80	26.58	7.18%	9/13/2017	\$ 27.48	10.81%
Industrials	Fluor Corporation	FLR	39.10	42.10	7.67%	9/26/2017	\$ 42.10	7.67%
Industrials	Flowserve Corp.	FLS	39.48	42.59	7.88%	9/22/2017	\$ 43.03	8.99%
Financials	Voya Financial, Inc.	VOYA	36.52	39.89	9.23%	9/20/2017	\$ 39.02	6.85%
Financials	MetLife, Inc.	MET	47.14	51.95	10.20%	9/26/2017	\$ 51.86	10.01%
Materials	Mosaic Co.	MOS	19.39	21.59	11.35%	9/18/2017	\$ 20.84	7.48%
Consumer Discretionary	Adient plc	ADNT	72.55	83.99	15.77%	9/15/2017	\$ 80.26	10.63%

Ascendere Associates LLC

	Theoretical Model Portfolio* 09/29/17	MTD	YTD	Since 03/31/09	Sharpe
	Simple Returns (No Compounding)				
Stock Targets	Core Model				
	Long	4.38%	14.82%	190.9%	1.02
	Short	3.54%	-0.03%	64.5%	0.38
	Core Long/Short	0.85%	14.86%	126.5%	0.97
Stock Targets and Portfolio Targets	Opportunistic Model				
	Long	2.11%	7.90%	158.8%	1.09
	Short	3.54%	4.10%	-5.0%	(0.04)
	Opportunistic Long/Short	-1.43%	3.80%	163.8%	1.29
Stock Targets and Portfolio Targets	Opportunistic Model III				
	Long Stocks	2.11%	7.90%	158.8%	1.09
	Long Inverse ETF ^SH	-1.50%	-8.50%	-88.5%	(0.80)
	Opportunistic Long/Short III	0.61%	-0.60%	70.3%	0.65
	S&P 500 Index	1.92%	11.99%	125.24%	0.94

* Return figures are calculated using cumulative simple returns. This table represents returns of several theoretical portfolios that do not assume any costs. This table is not to be construed as advertising for any investment service. Real portfolios that attempt to exactly replicate these theoretical strategies will generate lower returns relative to these models due to slippage, transaction costs, tax expenses and other costs. There are limitations inherent in our theoretical results, particularly with the fact that such results do not represent actual trading and they may not reflect the impact material economic and market factors might have had on our decision making if we were actually managing client money. We do our best to provide accurate information, but do not guarantee this. Please see additional disclosures and disclaimers.

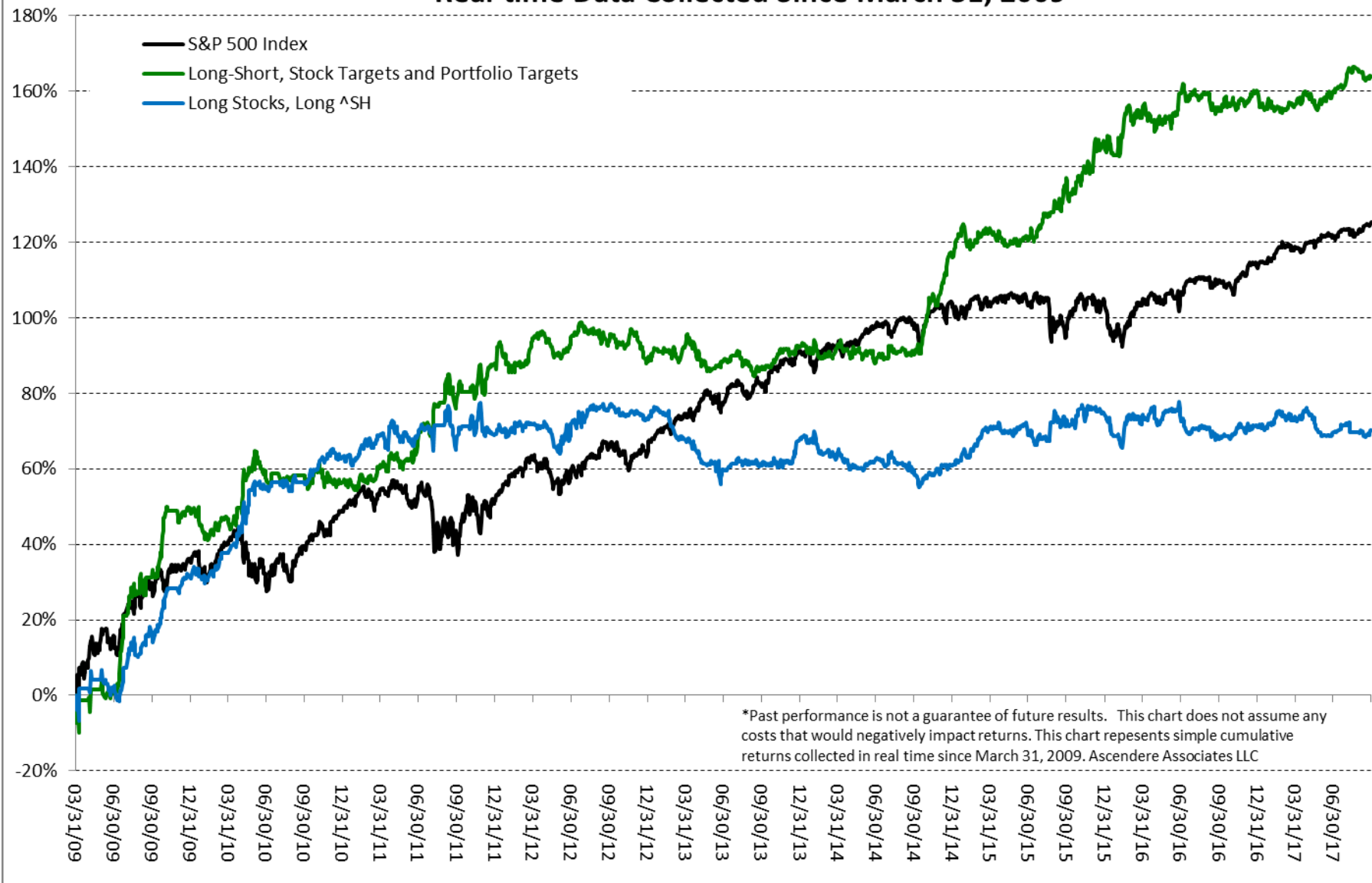
Simple Returns -- Long Theoretical Model Portfolios vs S&P 500 Total Return Index Real-time Data Collected Since March 31, 2009



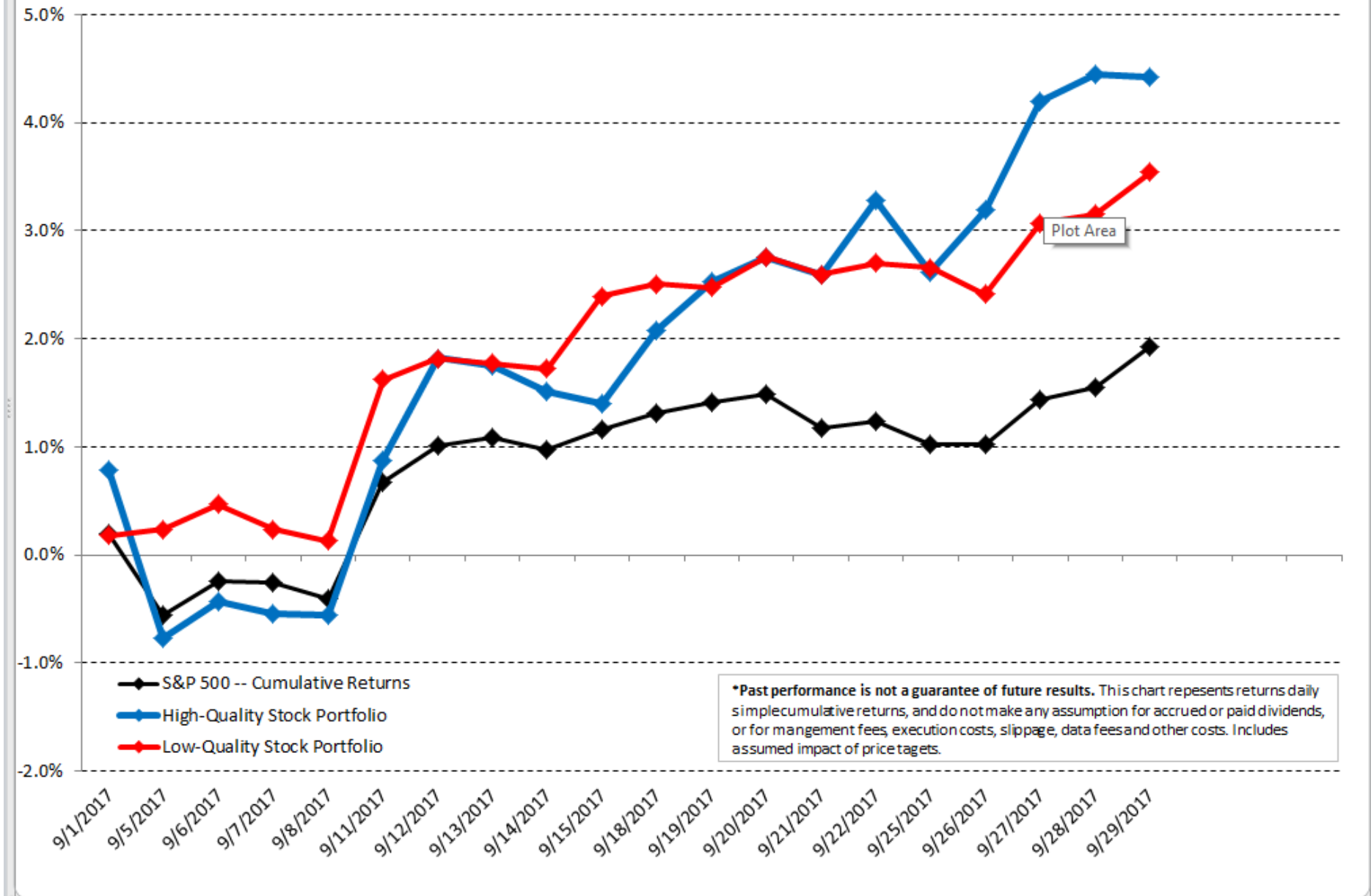
"Theoretical Dollar Neutral" Strategies

Simple Cumulative Returns

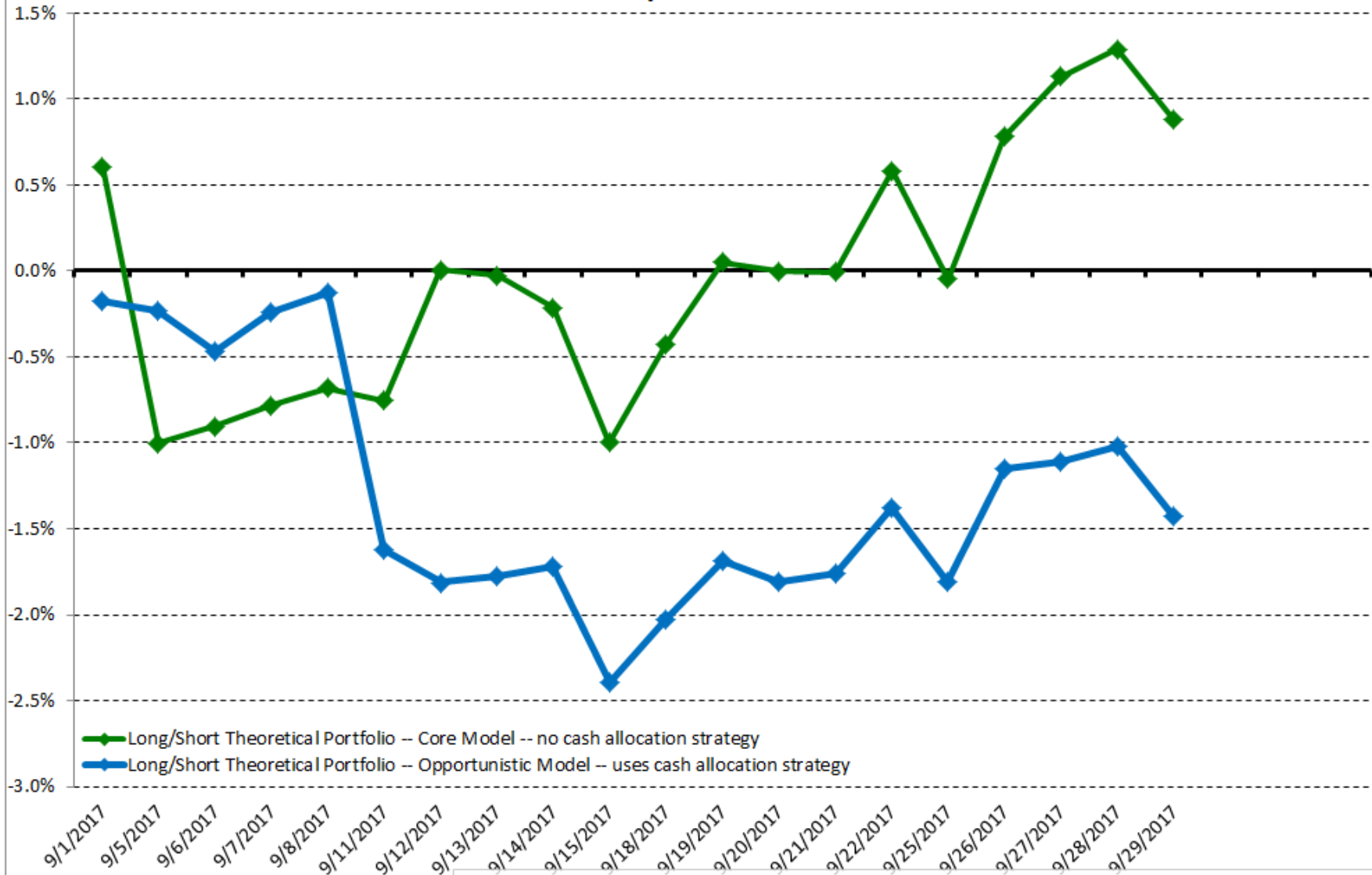
Real-time Data Collected Since March 31, 2009



High-Quality vs. Low-Quality Model Portfolios -- September 2017



Theoretical Long/Short Model Portfolio Returns September 2017



***Past performance is not a guarantee of future results.** This chart represents returns daily simple cumulative returns, and do not make any assumption for accrued or paid dividends, or for management fees, execution costs, slippage, data fees and other costs.

	Core	Opportunistic	"Dollar Neutral" 1	"Dollar Neutral" 2	
Inception March 31, 2009	Long, Stock Targets	Long, Stock and Portfolio Targets	Long/Short, Stock Targets and Portfolio Targets	Long, Stock and Portfolio Targets / Long ^SH ETF	S&P 500
9/29/2017	Theoretical	Theoretical	Theoretical	Theoretical	
Simple Returns					
Today	-0.02%	-0.02%	-0.40%	-0.02%	0.37%
MTD	4.42%	2.11%	-1.42%	0.62%	1.92%
YTD	14.86%	7.90%	3.81%	-0.59%	11.99%
Cumulative from 3/31/2009	190.97%	158.79%	163.83%	70.31%	125.24%
Absolute Risk					
Daily Average	0.09%	0.07%	0.08%	0.03%	0.06%
Daily Range	16.86%	15.84%	11.84%	12.00%	11.40%
Daily Standard Deviation	1.37%	1.07%	0.93%	0.78%	0.98%
Daily Return/Standard Deviation	6.50%	6.95%	8.21%	4.20%	5.99%
Average 90-Day T-bill	1.18%	1.18%	1.18%	1.18%	1.18%
Annualized Daily Returns	22.48%	18.69%	19.28%	8.28%	14.74%
Annualized Standard Deviation	21.8%	16.9%	14.8%	12.4%	15.5%
Sharpe Ratio	0.98	1.03	1.22	0.57	0.87
Percentage Down Days	45.4%	35.2%	43.2%	44.9%	45.3%
Average Daily Downside Value	-0.97%	-0.85%	-0.64%	-0.52%	-0.68%
Daily Downside Deviation	-1.04%	-0.88%	-0.61%	-0.55%	-0.75%
Daily VAR of 1000 at 95% Conf	-22	-17	-15	-13	-15
Benchmark Relative Risk					
Correlation	0.91	0.71	(0.05)	0.06	
R-Squared	0.83	0.50	0.00	0.00	
Daily Tracking Error	0.63%	0.79%	1.38%	1.21%	
Regression					
Beta	1.28	0.77	-0.05	0.05	
Daily Alpha	0.031%	0.016%	0.018%	-0.026%	
Jensen's Daily Alpha	0.039%	0.012%	-0.001%	-0.001%	
Trading Days	2141	2141	2141	2141	
*Returns calculated by the simple return method (not compounded).					
* Portfolio models are theoretical and assume no costs.					
* Data collected in real time since 3/31/2009					
Source: Ascendere Associates LLC					

DISCLOSURES

Ascendere is in the business of providing equity research and related consulting services to investors and their advisors. The equity research it provides includes basic quantitative model portfolios and more detailed fundamental research with respect to individual stocks. In addition, the firm manages stock portfolios for itself and clients.

Ascendere does not rate stocks on any scale, but does offer individual stock commentary and valuation opinions. With regard to Ascendere's portfolio strategies, "long" or "high-quality" baskets should generally be considered buys, unless otherwise noted. Stocks in our "short" or "low-quality" baskets should generally be considered sells, unless otherwise noted. While exceptions may occasionally occur, typically stocks in the high-quality basket are expected to outperform the S&P 500 over a month's time and stocks in the low-quality basket are expected to underperform. A more relevant benchmark would comprise of all stocks and ADRs that trade on major U.S. stock exchanges with a market cap above \$2 billion.

Ascendere adheres to professional standards and abides by codes of ethics that put the interests of clients ahead of its own. The following are specific disclosures made by Ascendere:

- 1) Ascendere may have a financial interest in the companies referred to in this report ("the Companies"). The research analyst covering the Companies and members of the analyst's immediate family have a financial interest in one or more of the Companies.
- 2) Ascendere generates revenue from research subscription revenue and portfolio management fees. At any given time it may be long or short any of the Companies.
- 3) Ascendere does not make a market in the securities of any of the Companies.
- 4) Ascendere has not received compensation from the Companies.
- 5) Ascendere has not managed or co-managed a public offering for any of the Companies.
- 6) Neither Ascendere nor any of its officers or any family member of the covering analyst serve as an officer, director or advisory board member of any of the Companies.
- 7) Neither Ascendere nor any of its officers or any family member of the covering analyst beneficially own 1% or more of any class of securities of any of the Companies.

DISCLAIMERS

This report is intended for informational purposes only and does not constitute a recommendation, or an offer, to buy or sell any securities or related financial instruments. The report is not intended to be in furtherance of the specific investment objectives, financial situation, or particular needs of any individual recipient. Investment decisions should be based on an individual's own goals, time horizon and tolerance for risk. The information contained herein accurately reflects the opinion of Ascendere at the time the report was released. The opinions of Ascendere are subject to change at any time without notice and without obligation or notification. The officers, affiliates or family members of Ascendere Associates may hold positions in the securities of the Companies. No warranty is made as to the accuracy of the information contained herein. The views and opinions expressed in the market commentary reflect the opinions of the author and may be based upon information obtained from third-party sources believed to be reliable but not guaranteed. These opinions are subject to change at any time based upon market or other conditions. Ascendere disclaims any responsibility to update such views. This information is intended for the sole use of clients of Ascendere. Any other use, distribution or reproduction is strictly prohibited. Investing in stocks includes a high degree of risk, including the risk of total loss. This is for informational purposes only and is not intended to constitute a current or past recommendation, investment advice of any kind, or a solicitation of an offer to buy or sell any securities or investment services. All information, opinions and estimates are current as of original distribution by author and are subject to change at any time without notice. Any companies, securities and/or markets referenced are solely for illustrative purposes. Past performance is not indicative of future performance, and no representation or warranty, express or implied, is made regarding future performance.

For Investment Professional use only. NOT FOR FURTHER DISTRIBUTION. Any dissemination or copying of this commentary is strictly prohibited.



J. Stephen Castellano – founded Ascendere Associates LLC in 2009 to provide innovative equity research and financial modeling consulting services.

Among the services that Ascendere provides are: 1) detailed custom equity research analysis; 2) valuation scenario analysis studies; 3) supply /demand studies; 4) long and short stock idea generation; 5) portfolio feedback; 6) detailed fundamental financial modeling services; and 7) additional analytical consulting services. Additional information is available at jstephencastellano.tumblr.com.

Mr. Castellano has over 20 years of experience in equity research and related consulting positions. At PaineWebber, Warburg Dillon Read, and Credit Lyonnais Securities he developed fundamental equity valuation models and conducted in-depth research on the steel and telecom services industries. At Boston Private Value Investors, he built sophisticated screens for stock idea generation and also provided general fundamental equity research coverage. He received a MBA from the F. W. Olin School of Business at Babson College (2005) and a BA from Oberlin College (1993). He is a CFA Level 3 candidate, and is on the Board of Advisors of GovBrain, a political intelligence and government analytics company serving the hedge fund industry.

Mr. Castellano's sell side equity research experience includes consulting with investment banking teams on planned equity, debt, and M&A deals. Consulting projects have included the development of detailed corporate budget and valuation forecasts for clients of the risk management division of a global consulting company, xml-based financial models as well as marketing strategies for a financial data provider, equity research reports for a family office equity portfolio, supply/demand models for a telecom consulting firm, cash burn rate scenarios for a key stakeholder in an iconic food manufacturing company, a budget forecast model for a 250,000 bpd oil refining company, a budget forecast and valuation for a risk management software startup, and due diligence of a potential acquisition of a fast-growing fashion apparel boutique, among others. Mr. Castellano's career history is highlighted below:

- Ascendere Associates, LLC (2009-Present)
- Boston Private Value Investors , Equity Research, Equity Research Analyst (2005-2009)
- Pyramid Research, Contract Consultant, Telecom Services (2002-2003)
- Credit Lyonnais Securities (USA), Equity Research, Telecom Services, Vice President (2000-2001)
- Warburg Dillon Read, Equity Research, Telecom Services, Research Associate (1999-2000)
- PaineWebber, Equity Research, Steel and Nonferrous Metals, Research Associate, Editor (1995-1999)