The Siren Song of Growth
Why Investors Willfully Set Sail for the Rocks[1]

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Introduction:

Our Core Small & Mid-Cap (Core SMID) model has continued to put up solid results over the last 12 months despite significant name concentration and low turnover in an environment characterized by high levels of market volatility and correlation. While the model has a number of mechanisms that help to systematically exploit large spreads between "growth" and "value" stocks, we admit this has been a year of living cheaply. The Core SMID model's predilection for value shares at the expense of more traditional growth names has not been lost on a subset of our customers, and there has been some consternation at our relatively defensive posture.

In discussions with investors we struggled to pin down precisely what constitutes a growth company. The striking range of answers has been enlightening if only to reveal the intellectual diversity that can inhabit the predefined style boxes created by consultants. While the more esoteric descriptions often engender entertaining discussion, we have found that they typically prove to be unreliable constructs for those seeking to build and test the efficacy of an investment process. After examining a range of concepts, we settled on the use of *long-term expected earnings growth* as a defining proxy for a growth stock. Skeptics should note that in all four major methodologies tested by us (Price-to-Book, Price-to-Sales, Two-Year EPS Growth, Five-Year EPS Growth), the variations in outcome were minimal (+/-3%).

Beguiled by Mephistopheles'[2] Smile: the Crux of It All

High growth investing is an art that arguably rewards analytical prowess more richly than many other investment disciplines. Investors need to be mindful that the cost of errors in the growth world, no matter if it is in the investor's control or not, comes more often and with dire consequences. Generically, we believe this foots with intuition as the world of high growth is frequently accompanied by a combustible and contravening mix of higher payoffs, higher expectations and higher risks.

Since Fig. 1 below lies at the very heart of our paper and at the core of how we hope to increase the success rates for growth investors, allow us a moment of explanation. The horizontal axis is broken up into the deciles of 12-month relative returns, ranked from the worst decile to the best. Historically, the stocks in our SMID universe that landed in decile one, on average, underperformed the Russell 2000 Growth (R2000G) by 63% while stocks that landed in decile 10 went on to beat the R2000G by 100% on average. Fig. 1 takes the fastest growing stocks in our SMID universe and then looks at what percent of these stocks end up in each decile of 12-month relative returns.
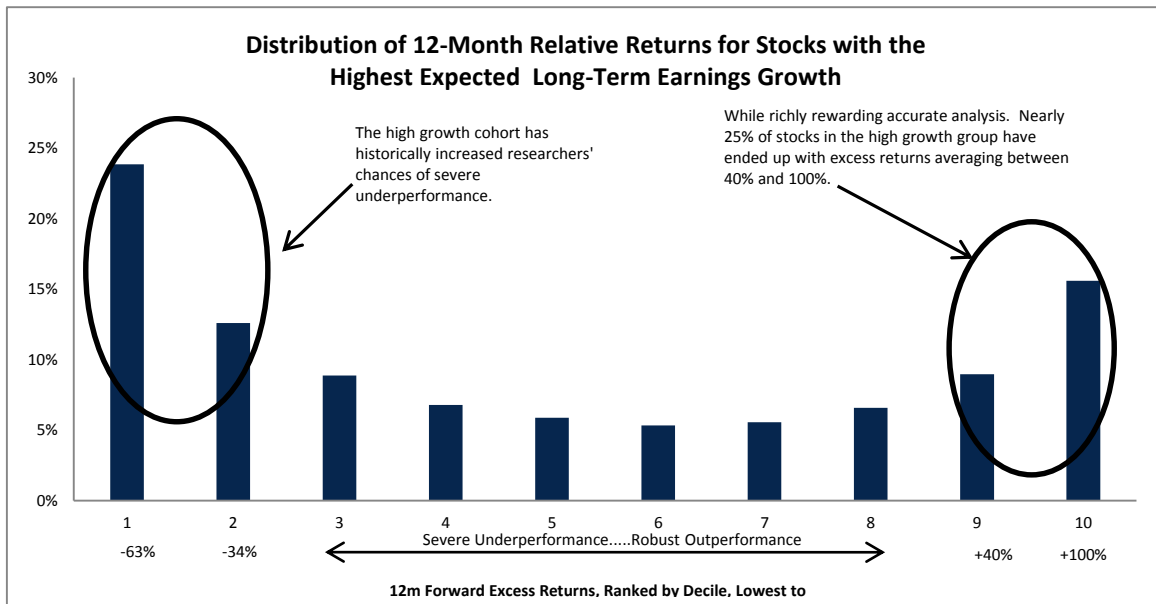
What we see here is that stocks with the highest expected growth have very low central tendencies and very fat tails that, when charted, create a "smile." This smile effect means that for growth investors playing in this category, there is a great potential to achieve significant excess returns when picking stocks from the group, but an even greater potential for failure. We've dubbed this chart "Mephistopheles' Smile" because the large number of stocks in the top two deciles is *dwarfed* by the even greater numbers that appear in the bottom two. The negative asymmetry of outcomes here is further exacerbated by the geometric nature of returns; an alluring but crooked "smile" if ever there was one.

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[1] **Reprinted with permission of Knight Capital. Kailash is not affiliated with Knight Capital. See infra.**
[2] Mephistopheles is a character perhaps most famously known from Johann Wolfgang von Goethe's *Faust, A Tragedy* who convinces Faust to sell his soul in exchange for knowledge and power. Although the name is most synonymous with Goethe's *Faust*, Mephistopheles is referenced in various other literary and popular culture sources and is primarily depicted as a conniving and devious creature that tricks and cons others for his own gains and amusement.
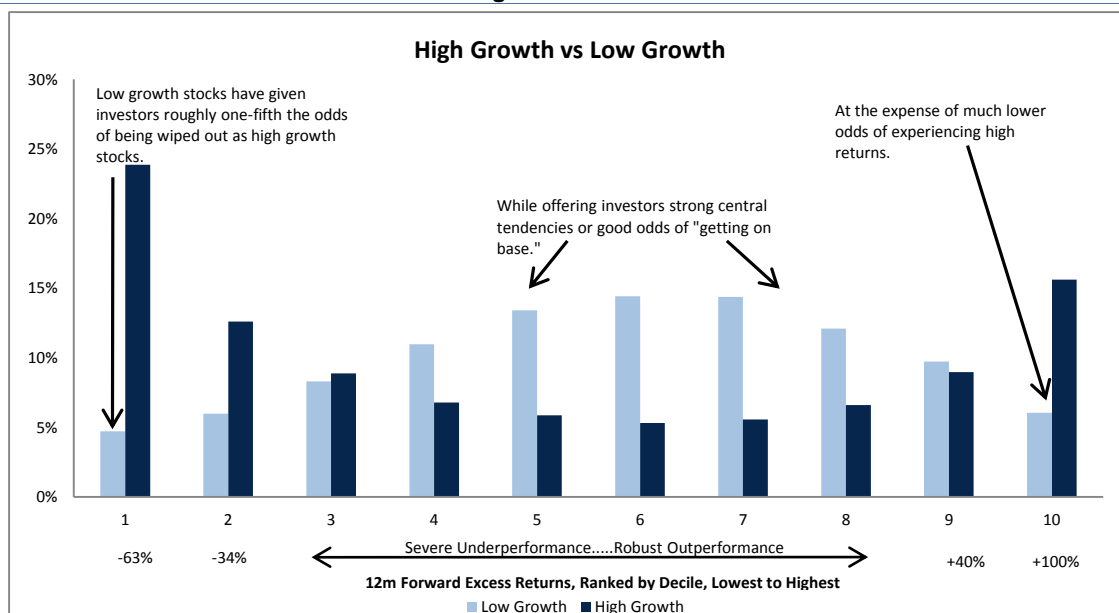
Fig. 1: Mephistopheles' Smile: Distribution of 12-Month Relative Returns for High-Growth Stocks

Distribution of 12-Month Relative Returns for Stocks with the Highest Expected Long-Term Earnings Growth

The high growth cohort has historically increased researchers' chances of severe underperformance.

While richly rewarding accurate analysis. Nearly 25% of stocks in the high growth group have ended up with excess returns averaging between 40% and 100%.

Severe Underperformance.....Robust Outperformance

12m Forward Excess Returns, Ranked by Decile, Lowest to

Note: Data from 4/30/1989 – 12/31/2011 Kailash Concepts SMID Universe
Source: Kailash Concepts, Russell, Compustat

Context helps inform as to just how precarious a world Mephistopheles has created for growth investors. In Fig. 2 we have overlaid the distribution of future outcomes for both the highest and lowest growth stocks. You can see that the low growth stocks (light blue bars) create a virtual "frown" in their distribution. While historically investors had about a 5% chance of doubling their money in this category, they also only had a 5% chance of losing two-thirds of their money (on a relative basis). Stocks with low expected growth rates seem to offer managers lower payoffs for accurate foresight but also greatly reduce the risk of catastrophe while increasing the chance of making modest and consistent returns.

Fig. 2: Distribution of 12-Month Relative Returns for Highest & Lowest Growth Stocks


High Growth vs Low Growth

Low growth stocks have given investors roughly one-fifth the odds of being wiped out as high growth stocks.

While offering investors strong central tendencies or good odds of "getting on base."

At the expense of much lower odds of experiencing high returns.

Severe Underperformance.....Robust Outperformance

12m Forward Excess Returns, Ranked by Decile, Lowest to Highest

Low Growth   High Growth

Note: Data from 4/30/1989 – 12/31/2011 Kailash Concepts SMID Universe
Source: Kailash Concepts, Russell, Compustat

The Myth of Low PE to Growth in SMID

We believe a significant cohort of growth investors recognize the volatile characteristics of pure growth investing and have moved into a value/growth hybrid method or "growth at a reasonable price" (GARP). We applaud this concept and think robust risk-adjusted returns can be achieved by properly tethering growth and value together. Unfortunately, some of the client literature we've read seems to focus on the concept of buying high growth stocks with low PE to Growth (PEG) ratios. Some investors seem to believe that buying low PEG shares in the high growth universe will allow them to benefit from both growth and multiple expansion. We find this worrisome as our analysis, shown in Fig. 3 below, demonstrates that PEG used as a standalone tool lacks efficacy. In our analysis, the distribution of average annual arithmetic returns shows no defining tendency with deciles one and two performing much the same as seven and nine, and deciles three and four roughly matching the performance of those seen in deciles eight and 10.
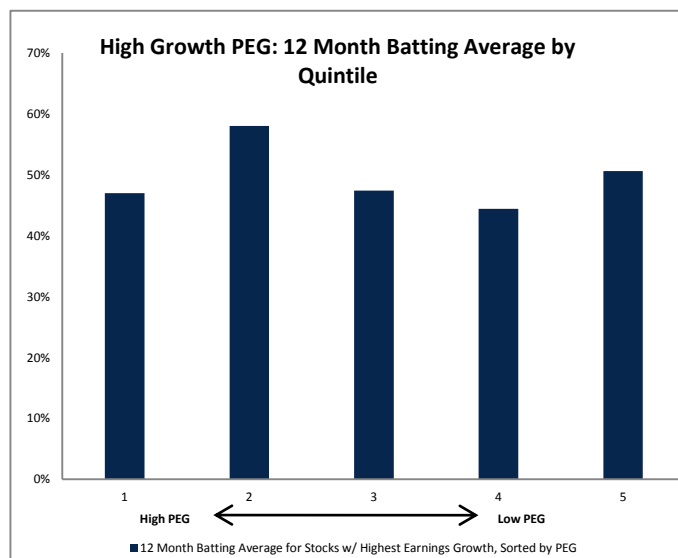
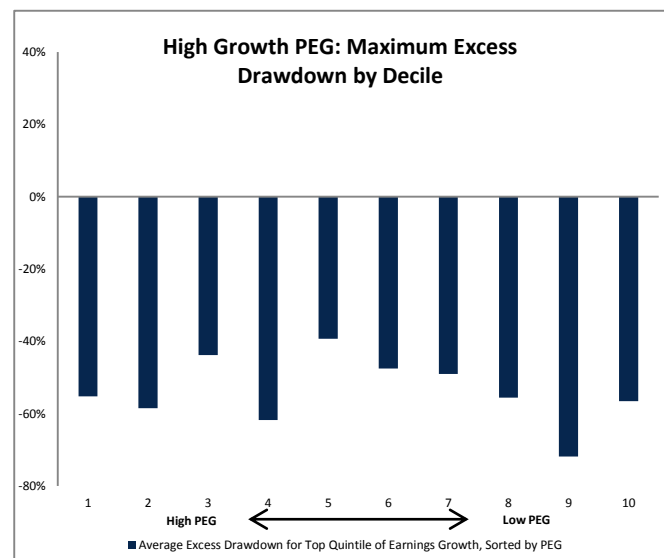**Fig. 3: Simple PEG Strategies Leave Much to Be Desired**
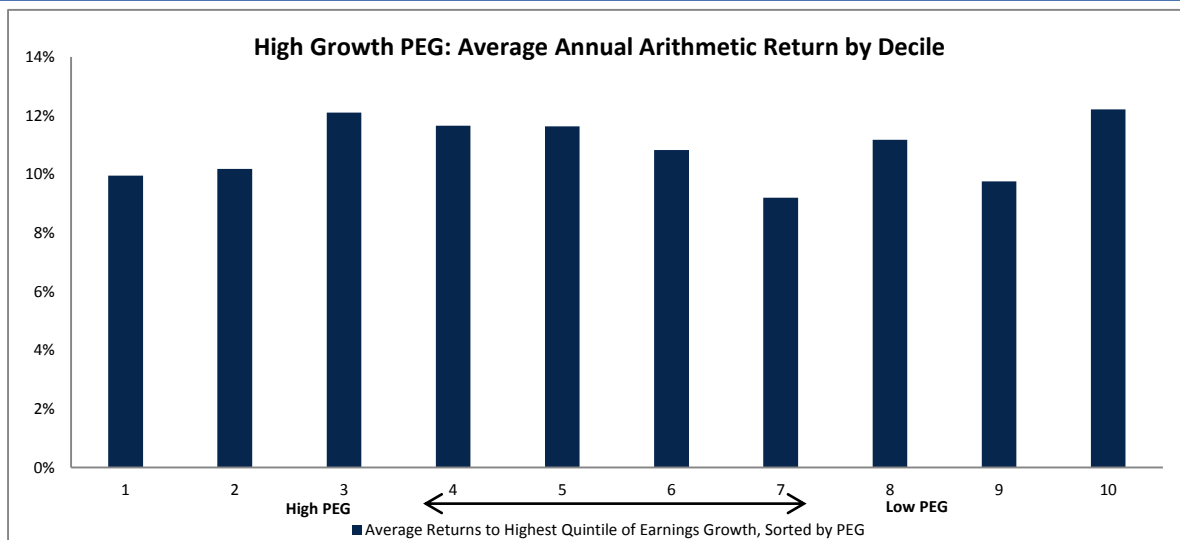
Note: Data from 4/30/1989 – 12/31/2011 Kailash Concepts SMID Universe
Source: Kailash Concepts, Russell, Compustat

Similarly, looking at Fig. 4 we find that adding PEG to a high growth strategy does little to increase 12-month batting averages. Across the distribution, we detect no statistically significant pattern. Contrary to what many users of PEG might expect, Fig. 5 demonstrates that adjusting PE ratios for growth rates appears to do nothing to diminish the maximum excess drawdowns across deciles. This tells us that attempts to solve the complex issues faced by high growth investors with simple univariate solutions may end poorly across any reasonable time period.

Fig. 4: PEG Has Done Nothing to Help Batting Averages

Fig. 5: Excess Drawdowns Have Not Favored Low PEG

Note for both figures Data from 4/30/1989 – 12/31/2011 Kailash Concepts SMID Universe
Source: Kailash Concepts, Russell, Compustat

SAGE: Pruning the Left Tail

In an effort to better fortify the intersection of value and growth, we designed a model dedicated to sourcing growth stocks from the Core SMID strategy. Dubbed the **Systematic Analysis of Growth in Earnings** Model (**SAGE**), Fig. 6 shows our basic strategy characteristics. Using the same portfolio method as our Core model, we were pleasantly surprised by the SAGE model's ability to *reduce* the average portfolio size from the typical ~100 names a year that we rely on in Core to just over 40 for SAGE while still maintaining over 900bps of excess annual returns and an information ratio north of .90. For fundamental users this should translate into a highly concentrated set of four new ideas a month that will be sourced from the world of high growth. If you are not familiar with our glacial turnover and fundamentally compatible name selection process, please contact your Kailash Concepts Representative.

Fig. 6: SAGE Performance Based on Historical Composite Portfolio Data

Portfolio Characteristics					
Annual Excess Return	**Information Ratio**	**Average New Ideas Per Month**	**Average # of Names in a Portfolio**	**Holding Period**	**SAGE Batting Average vs R2000G**
9.5%	**0.9**	**4**	**41**	**1 Year**	**50.7%**
Price to Book	**Price to Sales**	**Price to Earnings**	**Debt to Price**	**ROE**	**Shareholder Yield**
2.4	**1.0**	**25.2**	**32.6%**	**15.8%**	**2.8%**

Note: Data from 4/30/1989 – 12/31/2011 Kailash Concepts SMID Universe
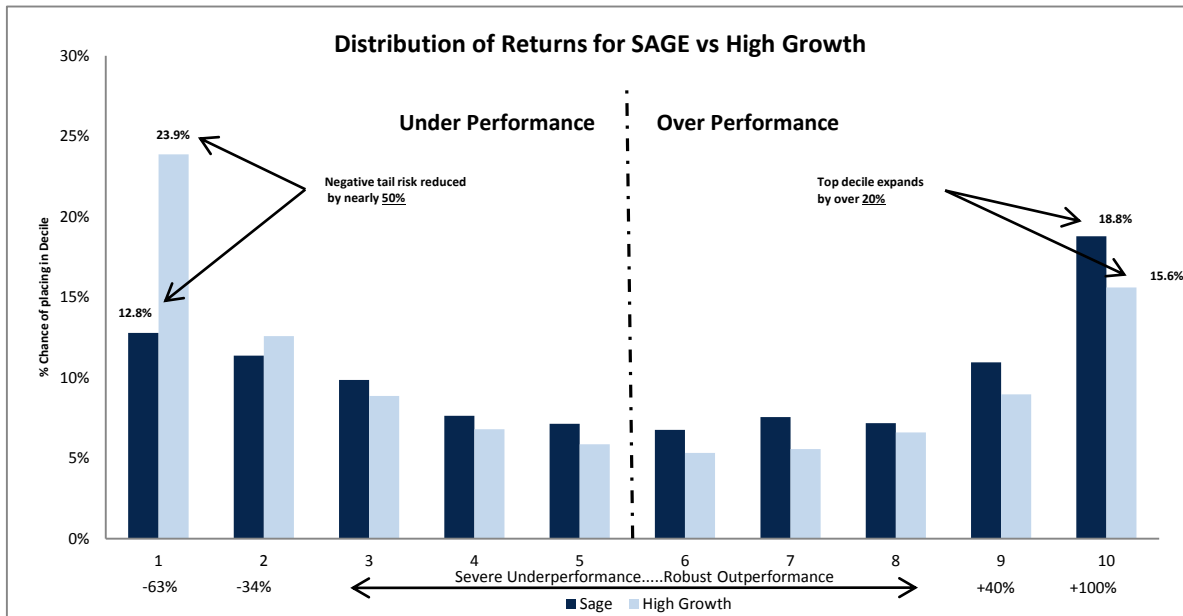Source: Kailash Concepts, Russell, Compustat

Fig. 7 shows us the comparative annual returns from the SAGE strategy vs. the R2000G index. You can see that while a few modest shortfalls have occurred in some years, the SAGE process has produced excess returns fairly consistently. The post-2006 performance in particular stands out as an example of the model's stock selection in the face of whip-saw volatility. In speaking with friends who focus exclusively on the growth universe, the white-knuckled nature of "risk-on"/ "risk-off" switching is a common area of anxiety. Looking at the model's historic outperformance during the tremendous draw-down of 2008 and subsequent ability to thrive in the rallies of 2009 and 2010 gives us some confidence that we have done a respectable job balancing the need for both outperformance on the upside and capital preservation, while still hewing to the growth mandate.

Fig. 7: The SAGE Process Provides Potential for Relative Returns in Multiple Market Environments
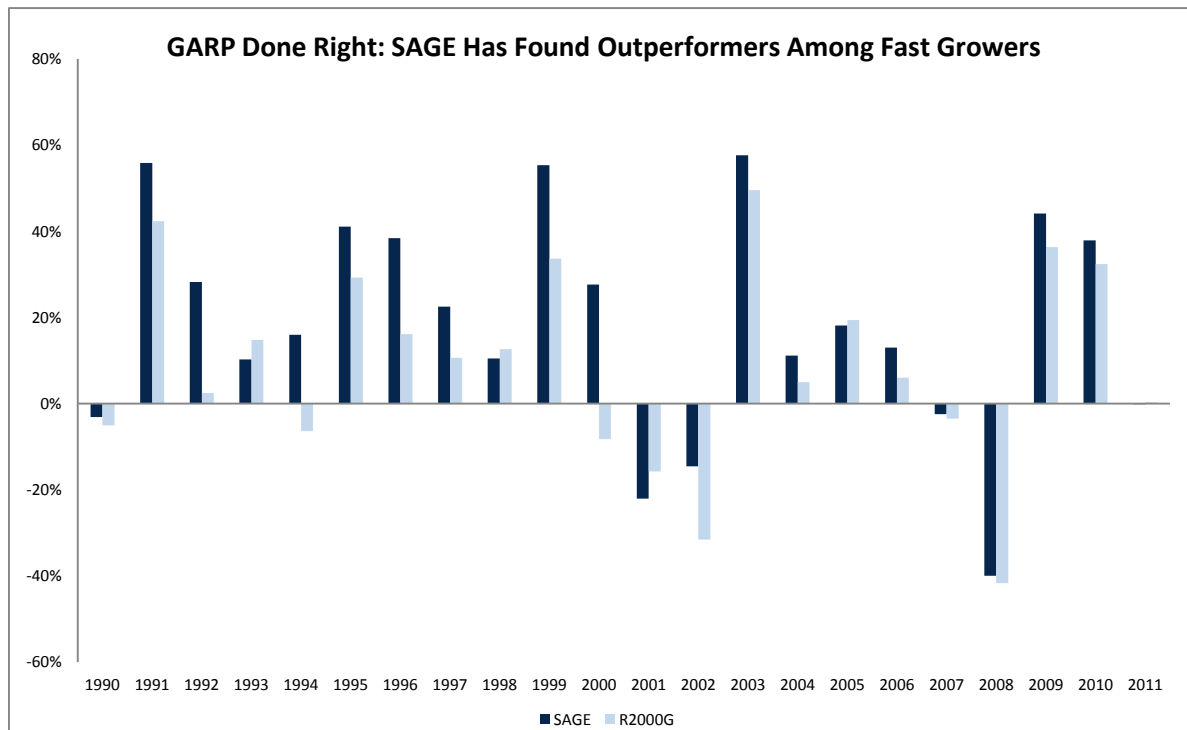
GARP Done Right: SAGE Has Found Outperformers Among Fast Growers

Note: Data from 4/30/1989 – 12/31/2011 Kailash Concepts SMID Universe
Source: Kailash Concepts, Russell, Compustat

Figure 8 below illustrates how risk reduction lies at the heart of our SAGE stock selection process. This graph shows the distribution of outcomes for both the high growth universe and the SAGE-optimized growth universe. Our process allows one to shop from stocks with the fastest earnings growth in the R2000G while cutting the odds of experiencing the most severe drawdowns from ~24% to ~13%. This sharp reduction in left tail outcomes benefitted from a simultaneous increase in the odds of finding outperformers at every decile with excess returns (decile 6 and above). **We believe working with our SAGE list should help significantly reduce the time you spend working on stocks that turn out to be left-tail losers, enhance your chances of finding right-tail winners and, as a result, give you that much more time to get to know the companies and managements that could help your portfolio outperform.**

Fig. 8: Redeeming Faust: SAGE Should Reduce Left Tail Risk while Expanding Right Tail Potential
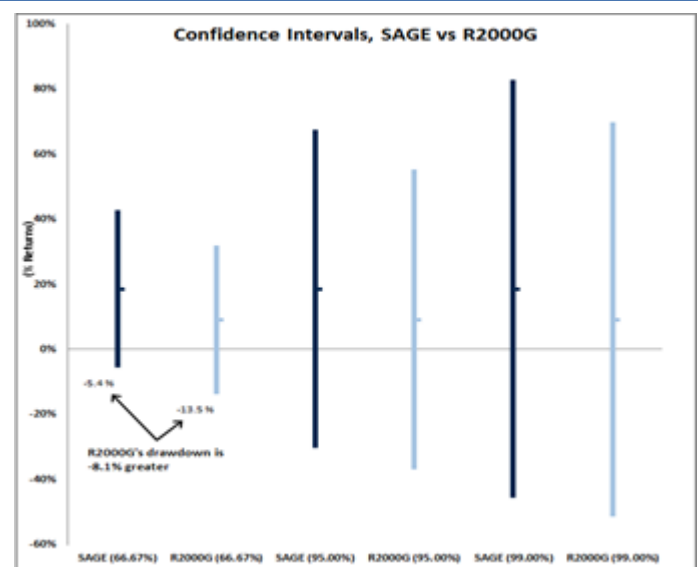

Note: Data from 4/30/1989 – 12/31/2011 Kailash Concepts SMID Universe
Source: Kailash Concepts, Russell, Compustat

You can see, from Figs. 9 and 10, the significant improvements our growth model has historically offered over the R2000G index. Fig. 9 shows the benefits that may accrue to consistent users who work with the process over time. Similarly, one can see, in Fig. 10, the means and distributions at roughly the one, two and three sigma levels and see that historically, in all cases, the model reduced downside variability considerably.

Fig. 9: SAGE Has Had Solid Batting Averages
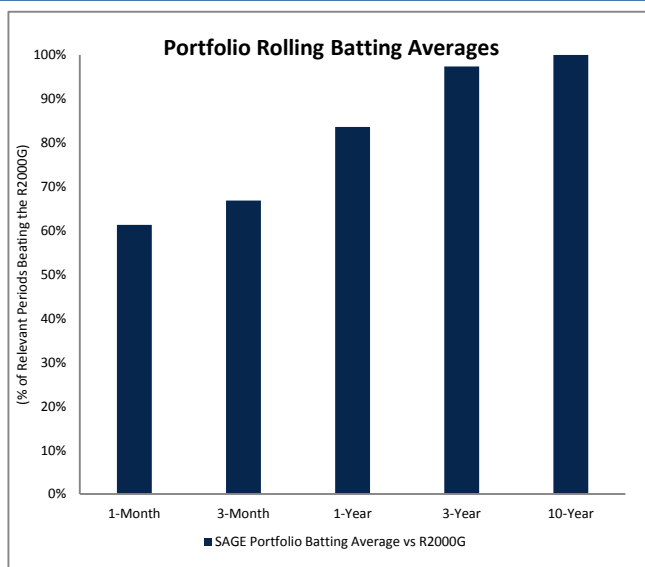
**Fig. 10: Means & Tails Improve at Every Sigma**

Note for both figures: Data from 4/30/1989 – 12/31/2011 Kailash Concepts SMID Universe
Source for both figures: Kailash Concepts, Russell, Compustat

Macro Considerations & the Value of Playing Defense:

Kailash Concepts makes no apologies for the risk aversion we bring to our SAGE initiative. We understand that our growth stocks will often lack the cachet coveted by some growth investors. Due to the wide disparity of views on what specifically constitutes a growth company, we thought it might be helpful to bring our readers' attention to two particular pieces of analysis done by Eugene F. Fama and Kenneth R. French[3]. The authors broke the equity universe down into six primary buckets based on size, growth and value. Fig. 11 below shows the composition of returns in the 1963 to 2006 period.

For most readers the chart may resonate with what we have come to associate with intuition or common sense. Value stocks tend to source a larger proportion of their returns from dividends while growth stocks generally benefit more from capital gains. We think this concept is likely so ingrained in investors and consultants alike that they approach stock selection in the growth and value universes accordingly and without question.
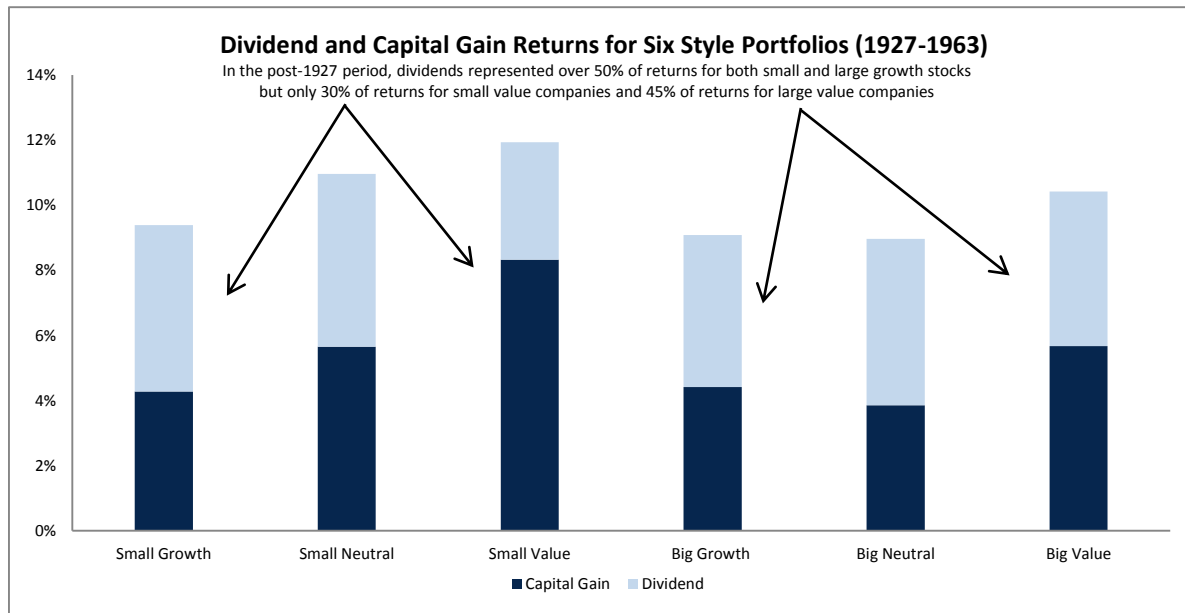
Fig. 11: Post-1963 Data Foots with Intuition: Capital Gains Drive Growth Returns > Value Returns
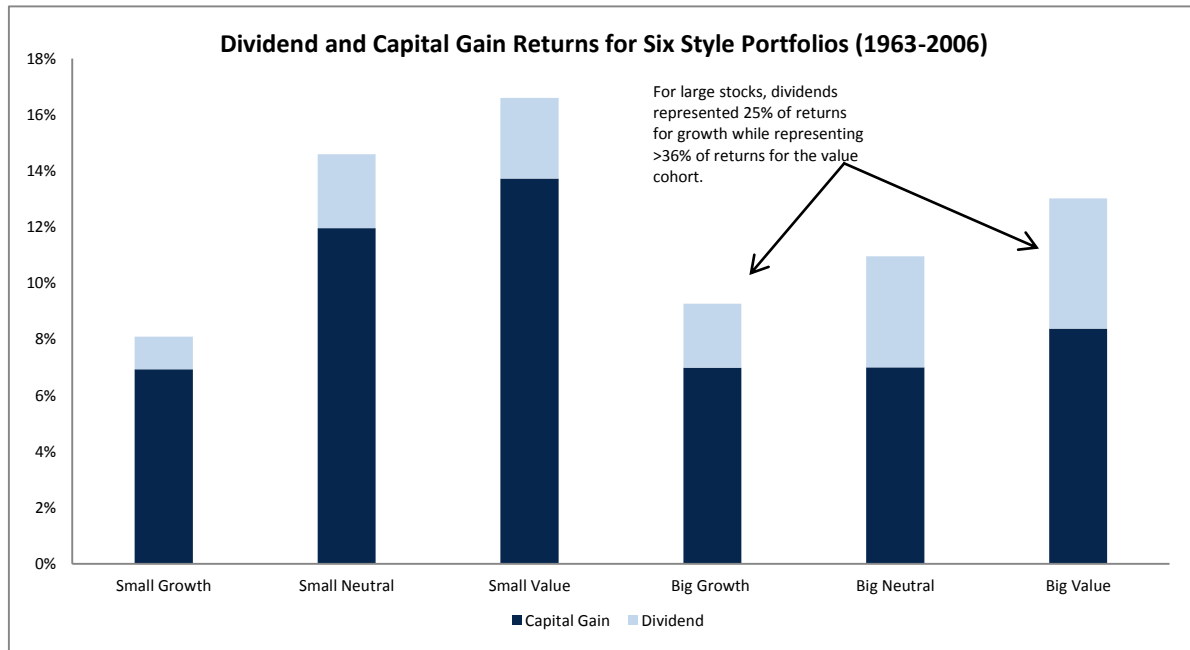
Source: Kailash Concepts, Fama & French "The Anatomy of Value and Growth Stock Returns."

As you can see from Fig. 12, between 1927-1963, the composition of returns by security type diverged dramatically from where modern intuition might have led us. According to Fama and French's analysis, dividends actually represented a *higher percentage of returns for growth stocks than value stocks in both Big and Small size cohorts.* The members of Kailash Concepts make no claim to macroeconomic prowess so we leave the study of governments and their abilities as stewards of public funds to others. That said, we don't believe market participants need advanced degrees to postulate that the current environment, characterized by its high levels of consumer and sovereign debt, might resemble the 1927-1963 period a bit more than the post-1963 period. **In light of this, one must ask *"Should growth investors be paying more attention to the return of capital than to just the rate of retained earnings growth?"***

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[3]Fama, Eugene F. and Kenneth French. "The Anatomy of Value and Growth Stock Returns." Financial Analyst Journal 63.6 (2007): 44-54.

Fig. 12: The 1927-1963 Data Points to the Need for a More Open-Minded Approach to Growth Investing

Dividend and Capital Gain Returns for Six Style Portfolios (1927-1963)

In the post-1927 period, dividends represented over 50% of returns for both small and large growth stocks but only 30% of returns for small value companies and 45% of returns for large value companies

Legend: ■ Capital Gain ■ Dividend

Categories: Small Growth, Small Neutral, Small Value, Big Growth, Big Neutral, Big Value

Source: Kailash Concepts, Fama and French "The Anatomy of Value and Growth Stock Returns."

We believe "Yes" to be the unequivocal answer. Below, we show the sum of both dividend and buyback yields (shareholder yield) for our portfolio of SAGE growth stocks. The debate around the potential for misallocation of capital via buybacks and the extent to which they are a true proxy for dividends has been both topical and lively over the past year. While everyone is entitled to their opinion, we believe the conclusions drawn by Fama and French are too important to ignore. While the presence of dividends and buy-backs in our growth model has been erratic over time, as can be seen in Fig. 13, current levels are notably higher than the R2000G median. We believe that the current spread in shareholder yield between our SAGE picks and the R2000G could provide investors with potential exposure to the returns available from high growth shares, while offering a bulwark against an uncertain macro backdrop should a 1927-1963 environment prove to be the proper historical precedent.

Fig. 13: SAGE Stocks Currently Have Significant Shareholder Yield (Dividend + Buyback)
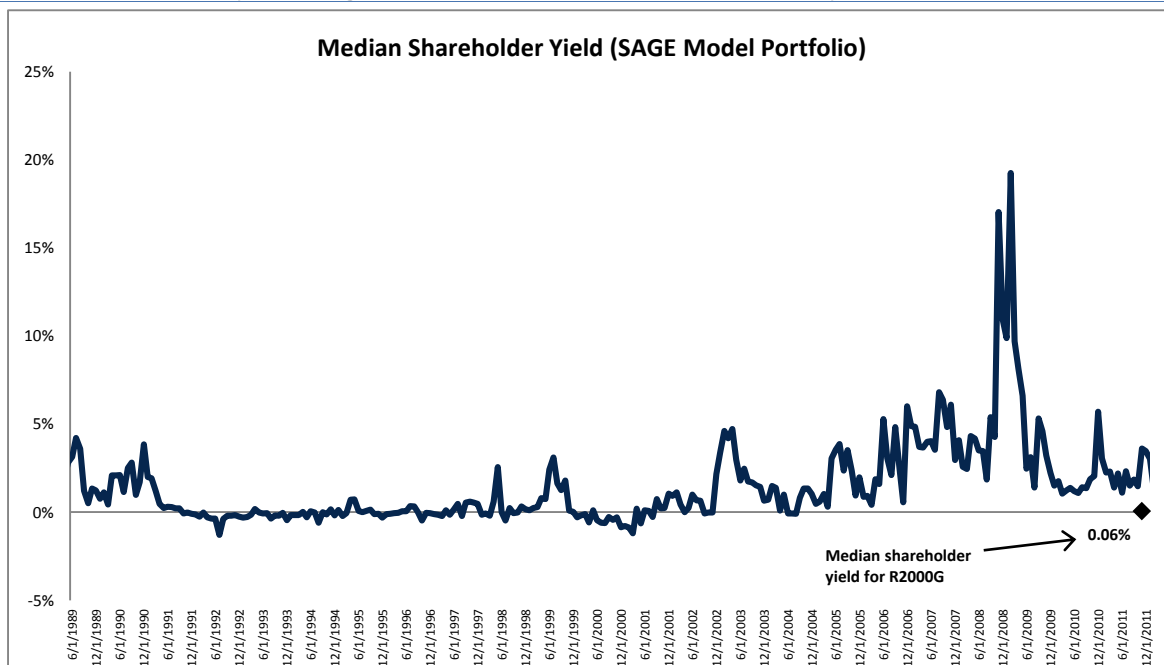
Median Shareholder Yield (SAGE Model Portfolio)

0.06%

Median shareholder yield for R2000G

Note: Data from 4/30/1989 – 12/31/2011 Kailash Concepts SMID Universe
Source: Kailash Concepts, Russell, Compustat

SAGE Stock Characteristics: Some of the Secret Sauce

Investors have expressed intermittent frustration at our Core SMID model's lack of linear behavior. In our experience as fundamental investors, we have not found that simply seeking out a simple combination of highly or lowly ranked factors has contributed to universally better outcomes. Instead, we tend to focus on the interaction of critical variables, the behavior and expectations of market participants and the ability of corporations to intelligently and reliably deploy capital. That said, we understand the need to apprise users of the core areas where our portfolios differentiate themselves from the typical investment product. Fig. 14 below is sourced from our master signal book and demonstrates seven of the most critical variables that tend to abet what we see as our model's advantage over a typical stock in the high growth universe.

Fig. 14: SAGE Stocks: Important Traits for High Growth Companies
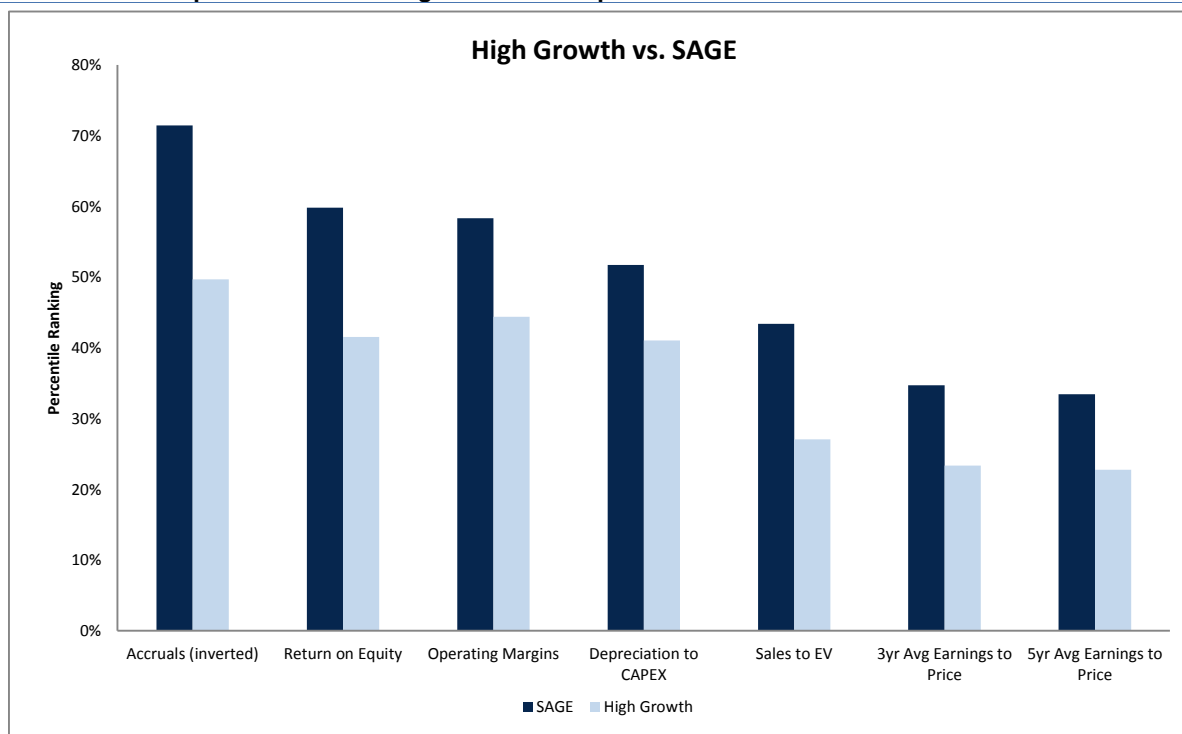
Note: Data from 4/30/1989 – 12/31/2011 Kailash Concepts SMID Universe
Source: Kailash Concepts, Russell, Compustat

Fig. 14 shows the average percentiles for our portfolio companies compared to the average of all companies in the high growth cohort in the SMID universe. In all cases, higher percentiles imply a more favorable score from our model. On average, we believe the companies that the model recommends tend to have higher levels of cash conversion of earnings, higher profitability, relatively low capital requirements for a growth stock and benefit from lower valuations in areas in which mean reversion may prove helpful to owners. Please note that Fig. 14 represents the graphical output of a large sample observation across 22 years and should not be expected of all SAGE's individual monthly picks.

For more information on SAGE, Core SMID or any of our other products, please contact your Kailash Concepts Representative.

Fig. 15: SAGE: March Buy List for Model Portfolio

Ticker	Company Name	Date Added	Price (2/29/12)	Valuation Rank	Balance Sheet Rank	Earnings Quality Rank	Analyst Rank	Accruals	ROE 5yr	OPM	Dep/CAPX	S/EV	3yr Avg E/P	5yr Avg E/P	LTG
NSP	INSPERITY INC	2/29/2012	$ 29.97	4	5	3	5	71%	46%	10%	16%	98%	54%	65%	95%
ASCA	AMERISTAR CASINOS INC	2/29/2012	$19.84	5	5	4	2	91%	28%	75%	74%	48%	12%	21%	87%
DTG	DOLLAR THRIFTY AUTOMOTIVE GP	2/29/2012	$75.91	5	4	5	5	96%	10%	86%	36%	51%	26%	17%	96%
TRLG	TRUE RELIGION APPAREL INC	2/29/2012	$26.37	5	4	5	2	85%	50%	64%	26%	68%	86%	78%	87%
VPRT	VISTAPRINT NV	2/29/2012	$40.68	5	4	5	5	97%	74%	42%	68%	53%	66%	53%	84%
CAR	AVIS BUDGET GROUP INC	2/29/2012	$12.90	4	5	5	3	91%	1%	83%	31%	57%	2%	1%	95%
APEI	AMERICAN PUBLIC EDUCATION	2/29/2012	$39.16	4	5	5	5	94%	94%	74%	11%	41%	57%	49%	86%
OCN	OCWEN FINANCIAL CORP	2/29/2012	$16.11	5	3	5	2	98%	31%	91%	100%	6%	36%	52%	98%
DHX	DICE HOLDINGS INC	2/29/2012	$8.88	5	4	5	1	84%	77%	87%	80%	34%	51%	48%	85%
BYD	BOYD GAMING CORP	2/29/2012	$8.01	5	4	3	2	55%	34%	53%	88%	54%	8%	28%	99%

Note: Data from 2/29/2012 Kailash Concepts SMID Universe
Source: Kailash Concepts, Russell, Compustat, Bloomberg

Fig. 16: Sample SAGE Model Portfolio

Ticker	Company Name	Date Added	Valuation Rank	Balance Sheet Rank	Earnings Quality Rank	Analyst Rank	Market Quality Quintile	Accruals	ROE 5yr	OPM	Dep/CAPX	S/EV	3yr Avg E/P	5yr Avg E/P	LTG
NSP	INSPERITY INC	2/28/2011	4	5	3	5	5	71%	46%	10%	16%	98%	54%	65%	95%
AOL	AOL INC	3/31/2011	5	5	3	1	1	79%	18%	50%	94%	86%	2%	1%	79%
ASCA	AMERISTAR CASINOS INC	8/31/2011	5	5	4	2	3	91%	28%	75%	74%	48%	12%	21%	87%
DTG	DOLLAR THRIFTY AUTOMOTIVE GP	6/30/2011	5	4	5	5	1	96%	10%	86%	36%	51%	26%	17%	96%
TRLG	TRUE RELIGION APPAREL INC	6/30/2011	5	4	5	2	3	85%	50%	64%	26%	68%	86%	78%	87%
NSR	NEUSTAR INC	6/30/2011	4	4	5	5	5	70%	55%	89%	39%	27%	54%	50%	62%
IACI	IAC/INTERACTIVECORP	8/31/2011	5	5	2	5	5	63%	27%	33%	89%	57%	7%	8%	60%
VPRT	VISTAPRINT NV	5/31/2011	5	4	5	5	5	97%	74%	42%	68%	53%	66%	53%	84%
ASMI	ASM INTERNATIONAL NV	2/28/2011	5	4	5	3	5	47%	18%	68%	12%	81%	37%	41%	5%
CAR	AVIS BUDGET GROUP INC	8/31/2011	4	5	5	3	1	91%	1%	83%	31%	57%	2%	1%	95%
ACIW	ACI WORLDWIDE INC	4/30/2011	4	5	4	4	5	68%	41%	61%	90%	40%	36%	32%	69%
TWTC	TW TELECOM INC	8/31/2011	4	5	4	1	4	92%	23%	82%	40%	33%	51%	28%	61%
CLD	CLOUD PEAK ENERGY INC	8/31/2011	5	5	5	5	3	64%	19%	62%	30%	77%	90%	89%	29%
FIG	FORTRESS INVESTMENT GRP LLC	11/30/2011	5	5	2	2	2	99%	5%	1%	79%	86%	1%	1%	62%
FICO	FAIR ISAAC CORP	11/30/2011	5	5	4	5	5	64%	83%	76%	56%	37%	69%	76%	56%
APEI	AMERICAN PUBLIC EDUCATION	5/31/2011	4	5	5	5	4	94%	94%	74%	11%	41%	57%	49%	86%
SYNA	SYNAPTICS INC	2/28/2011	5	5	4	5	1	87%	60%	39%	53%	55%	67%	56%	59%
TDS	TELEPHONE & DATA SYSTEMS INC	5/31/2011	5	5	5	1	1	94%	82%	63%	39%	86%	72%	85%	59%
FELE	FRANKLIN ELECTRIC CO INC	2/28/2011	4	4	5	4	5	36%	75%	41%	72%	59%	54%	54%	0%
WNR	WESTERN REFINING INC	8/31/2011	5	5	4	3	2	81%	15%	15%	84%	98%	13%	44%	0%
FTO	FRONTIER OIL CORP	5/31/2011	moved outside universe of criteria												
CSTR	COINSTAR INC	4/30/2011	5	5	5	3	2	98%	39%	57%	38%	75%	47%	33%	76%
OCN	OCWEN FINANCIAL CORP	1/31/2012	5	3	5	2	4	98%	31%	91%	100%	6%	36%	52%	98%
RGA	REINSURANCE GROUP AMER INC	12/31/2011	5	5	2	2	3	37%	90%	30%		88%	95%	92%	78%

HFC	HOLLYFRONTIER CORP	8/31/2011	moved outside universe of criteria											
ACOM	ANCESTRY.COM INC	9/30/2011	5	4	5	5	2	94%	62%	78%	85%	43%	62%	60%	71%
TPCG	TPC GROUP INC	6/30/2011	moved outside universe of criteria											
CRUS	CIRRUS LOGIC INC	7/31/2011	4	5	4	3	2	1%	22%	58%	9%	30%	75%	54%	81%
RA	RAILAMERICA INC	5/31/2011	5	5	3	4	5	63%	61%	74%	14%	35%	37%	27%	92%
SUN	SUNOCO INC	4/30/2011	5	5	5	1	1	93%	15%	6%	23%	100%	42%	94%	5%
MKSI	MKS INSTRUMENTS INC	4/30/2011	5	4	5	3	5	58%	23%	69%	44%	68%	24%	38%	81%
PWER	POWER-ONE INC	2/28/2011	moved outside universe of criteria											
VR	VALIDUS HOLDINGS LTD	2/28/2011	5	5	3	3	2	75%	47%	28%		78%	98%	98%	28%
FULT	FULTON FINANCIAL CORP	1/31/2012	5	5	3	2	4	29%	61%	84%	55%	31%	58%	77%	51%
BYD	BOYD GAMING CORP	2/29/2012	5	4	3	2	4	55%	34%	53%	88%	54%	8%	28%	99%
DHX	DICE HOLDINGS INC	2/29/2012	5	4	5	1	2	84%	77%	87%	80%	34%	51%	48%	85%
WPO	WASHINGTON POST -CL B	5/31/2011	5	5	5	3	1	66%	71%	39%	63%	87%	74%	84%	0%
AVAV	AEROVIRONMENT INC	5/31/2011	4	4	5	3	5	49%	68%	54%	34%	63%	56%	54%	84%
ANN	ANNTAYLOR STORES CORP	2/28/2011	5	5	4	5	2	91%	13%	29%	35%	91%	10%	19%	68%
ENH	ENDURANCE SPECIALTY HOLDINGS	2/28/2011	5	5	2	4	3	49%	49%	9%	84%	94%	99%	100%	37%
NILE	BLUE NILE INC	3/31/2011	moved outside known universe											

Note: Since this is a sample, pricing information is not included.
Note: Data from 02/29/2012 Kailash Concepts SMID Universe
Source: Kailash Concepts, Russell, Compustat