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Recent Enhancements

Three ways to assign factor weights in both K⁴ Fund Selection and K⁴ Manager Selection:

- Complete the Preference Questionnaire
- Equally Weight All Attributes
- Enter Your Own Importance Weights

Five new attributes have been added to K⁴ Manager Selection:

- Firm GIPS Compliance
- Firm Disciplinary Action (last 5 years)
- Product Number of Accounts
- Manager Experience
- Manager Product Tenure

Data can now be exported to Excel in two ways in both K⁴ Fund Selection and K⁴ Manager Selection.

Tickers can be used to find funds in K⁴ Fund Selection scenarios.

Coming Attractions

Sample models are coming to both K⁴ Fund Selection and K⁴ Manager Selection. Five models will be added to K⁴ Fund Selection and three added to K⁴ Manager Selection.

New Product Offering

K⁴ Plan Goals for retirement plan participants is scheduled for release in May 2008 and is currently available for demonstration. The key features that set K⁴ Plan Goals apart from other tools are:

- Measures aggregate plan health with the revolutionary Plan Track report
- Delivers complete, personalized retirement strategy without trial and error inputs
- Offers online and paper-based strategy reports to reach all participants

For more information, visit www.kleindecisions.com or call us at 919.233.6767.

Potentially Higher Returns, Definitely Lower Expenses

Can “Active Indexes” Provide the Best of Both Worlds?

Based upon studies conducted over the past two decades¹, many investment professionals have concluded that over 90% of portfolio return is determined by asset allocation. With less than 10% coming from market timing and security selection, one might wonder if searching for actively managed mutual funds is worth the effort. Perhaps in the academic world it’s not, but in the real world it certainly can be. Consider, for example, a 40 year-old planning to retire at age 65 and expecting to live until age 85. For this individual, an additional 1% of return can make a real difference. If the accumulation returns are 9% and 10%, and the distribution year returns are 6% and 7%, he or she could expect approximately 35% more income during the retirement years. That’s definitely a result worth working for.

Indexers are also quick to point out that a significant body of research indicates that the “average” mutual fund will not consistently outperform the appropriate index. But are investors really looking for “average” funds? Wouldn’t they prefer to achieve “superior” or, at least, “better than average” results? Other research supports persistence in individual fund performance for short to intermediate periods², and this may be the key to building superior portfolios.

In mid-2006, Klein Decisions undertook a research project to develop a ranking process for mutual funds and ETFs. The specific intent was to develop ratings that would rank mutual funds based on their potential performance persistence. Unlike other rating systems, ours (the Klein Fund Ratings) relied exclusively on factors that research suggests are useful when seeking performance persistence.

Once the ratings were developed, the next step was to create models that would convert these findings into solutions that could be used by advisors and investors. The goal was to add value over traditional index products. In the process, it was necessary to both backtest the models as well as monitor them out of sample. The results have been extremely positive. Two years into the project, we have constructed nine domestic equity indexes that are currently tracked by the American Stock Exchange. In the very near term, they will be the basis for investment products that will be available to investment professionals and retail investors. With their arrival, perhaps there is some hope for investors seeking better than average results and future retirees seeking additional income.

THE KLEIN FUND RATINGS

The Klein Fund Ratings (KFR) are the starting point in our search for fund performance persistency. The KFR are based on a weighted factor model that was created using Klein Decisions’ *K⁴ Fund Selection* software. Initially, funds are segregated by style and risk level to isolate market-related performance. As a result, active management components are the primary determinants of fund performance differences. Funds are first grouped based on capitalization (large, mid, and small) and then by management approach (blend, growth, and value) within each capitalization. The style classifications used for the Klein Fund Ratings are the *Morningstar Style Categories*, which are based on portfolio holdings over the past three years³.

In an effort to equalize the non-systematic factors, three filters are used to ensure that the comparison is only among comparable funds. The first filter requires at least \$10 million in assets, thus eliminating extremely small funds.

The second filter eliminates funds that do not have comparable risk levels relative to their category index. For the purposes here, the filter required the funds’ beta to be within 15% of the category index’s beta⁴. Since the goal is to find funds that consistently produce alpha, it is important to minimize return differences stemming from varying levels of beta.

The third filter requires the fund to have an R² of at least 80 relative to the category index. This accomplishes several purposes:

- It verifies the style categorization.
- It eliminates concentrated funds that tend to be more volatile.
- It improves the statistical significance of other Modern Portfolio Theory variables used in the process.

Funds are then scored on four factors, or attributes, weighted by importance. The importance

K⁴ portfolio selection

The preference driven answer to portfolio selection.

Most investors want high returns, low risk, and complete liquidity. While these goals may be ideal, they're obviously in direct conflict. Compromises are required to satisfy suitability concerns (what can we permit you to do?), risk tolerance (what can you handle?), and the investor's preferences (what would you like?). Many of today's Investment Policy Questionnaires apply a static scoring model for all investors regardless of their unique characteristics or concerns. As a result, most investors end up in a forced compromise commonly known as a "balanced" portfolio.

Now there's a better solution: Klein Decisions' K⁴ Portfolio Selection. Instead of simply averaging results from a set of conflicting responses, K⁴ Portfolio Selection engages the investor in a series of importance questions and dynamically generated trade-off questions to truly gauge his or her preferences. Then using Klein's patented decision analytics, K⁴ Portfolio Selection solves for the single solution that results in the greatest investor satisfaction over all variables simultaneously. Its robust reporting provides an objective analysis of the results and why they are the investor's unique solution.

Unlike the traditional "one size fits all" approach, K⁴ Portfolio Selection gives both the advisor and investor the confidence that they've arrived at the proper solution. Suitability constraints are programmed into the tool along with clear documentation for regulatory purposes. By participating in the profiling process, both advisor and client have a greater understanding of the investor's preferences as well as their inherent conflicts, providing an excellent opportunity for an open-ended discussion to address realistic expectations. Not only does K⁴ Portfolio Selection provide a unique appropriate solution for each client, it also strengthens client relationships and builds investor understanding, creating instant rapport and trust.

KEY FEATURES OF K⁴ PORTFOLIO SELECTION

- Individualizes client profiling and IPS processes
- Resolves inherent conflicts in preferences and risk tolerance
- Ranks asset models by both risk tolerance and preference in a single solution
- Provides objective, specific, traceable results

For more information, contact us at sales@kleindecisions.com or visit our website at www.kleindecisions.com.

K⁴ fund selection

A smarter way to evaluate mutual funds.

K⁴ manager selection

A smarter way to evaluate managers.

K⁴ plan goals

Participant preferences driving retirement decisions.

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weightings are determined by quantifying the importance and trade-offs among these four attributes⁵. Klein's *K⁴ Fund Selection* greatly simplified this process while adding rigor and consistency.

Independent studies, supported by Klein's internal research, isolated the following factors with regard to persistence of fund performance:

1. FEES:

Expense Ratio (Most Important) – A substantial body of research indicates that lower expenses will contribute to better performance while higher expenses pose a significant detriment. Although fund returns are typically reported net of expenses, higher expenses will always act as a performance drag that must be overcome before net alpha can be generated.

2. RETURN:

1 Year Return +/- Category Index (Second Most Important) – Evidence suggests that a "hot hand" effect can occur and contribute to persistence of positive short to intermediate term performance. In other words, recent outperformance is a relevant contributor to future outperformance, particularly in the short to intermediate term. Segmenting funds into peer group categories based on style and risk isolates the style- and risk-based contributions to performance that can favor "hot styles." Moreover, the R² filter described above minimizes the instance of funds benefiting by moving away from their style.

3. RISK-ADJUSTED RETURN:

3-year Alpha vs. Category Index (Third Most Important) – Several studies have found persistence of alpha, both positive and negative, over short to intermediate time periods. Even though style and beta criteria form boundaries, there is still some variance in the risk among funds within a category. The return factor rewards outstanding performance irrespective of risk, but this factor rewards only those funds that perform well after adjusting for their market-relative risk (i.e., beta).

4. RISK:

3-year Worst Year (Fourth Most Important) – This factor is calculated by identifying the worst 12 consecutive months that a fund has experienced over the last three years. Its inclusion incorporates downside potential by penalizing funds with poor stretches of performance. Even though it has the lowest importance, an extremely bad 12 months can lower a fund's overall ranking.

In the Klein Fund Ratings system, each fund receives a relative performance score for each of the four factors. The individual attribute scores are then adjusted by the relative importance of each factor and summed to give each fund one overall unique score. The funds are then rank ordered based on their overall scores. Again, Klein's *K⁴ Fund Selection* greatly simplifies these steps by automating the process.

Not every fund with a high score will perform well in the future, nor will every low-scoring fund perform poorly. However, when grouped by scores, an initial analysis has shown that the higher ranked funds do tend to perform better in the subsequent year than the lower ranked funds⁶.

PUTTING THE KLEIN FUND RATINGS TO WORK

What if you could purchase a single portfolio of securities that would closely track a group of top performing mutual funds? Not only would it offer the potential of index-beating returns, it would come at only a fraction of the cost of owning the individual mutual funds themselves. Potentially higher returns and definitely lower expenses: That's the compelling combination that led Klein Decisions to work with Active Index Solutions (AIS) to extend this concept to investable products. Drawing on the results of KFR and applying the AIS cutting-edge technology, we created the nine AlphaCycle Klein Indexes. While investing in the actual indexes is not possible, Separately Managed Accounts based on them are currently available and other products including ETFs and ETNs are scheduled for availability by yearend.

Although Klein Fund Ratings are very useful in evaluating and ranking funds, they do not constitute an entire investment process. In creating the AlphaCycle Klein Indexes, Klein Decisions and AIS added a structured process to incorporate the results of KFR into the selection process. For initial index construction, the chief criteria require:

- The inclusion of the top ten unique funds based on data from the prior yearend. “Unique fund” means that any fund with multiple share classes can only have one representative in the index. For categories with less than 100 unique funds, 10% of the unique funds will be selected. A minimum of six funds will be included in each index.
- Index funds and funds of funds are not eligible for inclusion.
- Each fund initially receives equal weighting in the index. Funds are rebalanced back to equal weightings once a quarter.
- Once added, funds remain in the index until the next annual restructuring.

The annual restructuring occurs on February 15th or the next trading day thereafter. Funds are ranked based on data as of the preceding December 31st. The initial index construction procedure is again applied with one exception: Any fund from the prior year’s index with a total score within four points of the 10th place fund in the new rankings will remain in the new index. This is employed to reduce unnecessary turnover.

The American Stock Exchange has calculated performance back to inception⁷ based on the constituents of each index. These calculations follow the procedures for reconstitution and rebalancing as outlined

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above. The accompanying tables show the results⁸. Table 1 shows the one- and three-year performance for the period ending 12/31/2007. Even though the risk level (beta) of each of the AlphaCycle Klein Indexes is equal to or lower than that of the market, the returns still compare quite favorably.

Table 2 shows the consistency of performance over rolling three-year periods relative to market benchmarks and peers. Over this time period, 56.7% of the AlphaCycle Klein Indexes ranked in the top quartile vs. peers. Another 35.4% ranked in the 2nd quartile and none were in the 4th quartile. Table 2 also shows return and alpha since inception. Interestingly, there are a few categories where only a few funds perform well. Consider, for example, mid-cap value where our index was consistently above average relative to its peers but still underperformed the market index. In this instance, when even the best funds failed to beat the market index, the superior funds simply fell less short.

Despite their encouraging performance, the portfolios of funds that make up our indexes often have a few funds that underperform over the next year. This actually points up one of the strengths of the AIS approach. Securities modeled on the AlphaCycle Indexes are really a *portfolio* of managed funds rather than a single fund and manager. By effectively owning a portfolio of funds, the effect of an underachiever is significantly reduced.

Finally, products based on the AlphaCycle Indexes will be purchased with a single transaction and will have the potential for lower expenses

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ASK FELIX

Painless Profiles

By Dr. Felix Kleinstein

QUESTION FROM RESPECTED COLLEAGUE:

Sometimes I hear about new funds or see some I'm not familiar with in new client accounts. K⁴ Fund Selection's two-page Profile Report is just what I need to get up to speed on them, but can I run it without having to know what scenario they're in?

ANSWER FROM FELIX:

Your question reminds me of a problem that perplexed me for years as a child: Every time I'd ask my mom how to spell a word, she'd say, "Look it up in the dictionary." I could never understand how I could look it up if I didn't know how to spell it in the first place. You've got a similar issue here because you want to learn about a fund but don't know where to find it to get the information you need. Although I've never figured out how to look up a word I couldn't spell, I do know the answer to your question.

There are two ways to access the Profile Report. The quickest is by simply clicking on the "Profile" link under the fund's name on the results page of a completed scenario. But that doesn't answer your question. The only way this will work is if you can locate the fund in the appropriate scenario.

The second way is to use the "Find" feature located in the green bar at the top right of any K⁴ Fund Selection page once you leave Scenario Management. When you click on this link, you can either enter part of the fund's name or its ticker. K⁴ will return a list of funds meeting your criteria. Click on the one you're interested in and you'll get a list of reports you can run for that fund. If your fund is in that particular scenario, one of the links will be "K⁴ Profile" and you can run the report from that link. Then again, if the fund isn't in the scenario, you won't get that option and you're right back at square one.

The solution is to have a scenario you know the fund will be in. Since you know very little about the fund, you need a really broad scenario. For example, an equity scenario covering all stock funds — regardless of whether they're large cap, small cap, growth, value, foreign, domestic, or specialty — will do the trick. As long as you know the fund you're evaluating is a stock fund, you can use "Find" within that scenario to locate and print its Profile Report.

You can actually create a scenario just for this purpose and then use it every time you need a profile report for a particular fund. It's not hard at all. Start by giving it a name like "Profile for Equity Funds" or something equally original. On the Category Selection page, select all track records for stock funds and ETFs. On the Asset Selection page, check all boxes in the grey bars (Domestic Equity, Specialty Equity, Foreign Equity, World Equity, Regional Foreign Equity, and Emerging Markets Equity). This will populate all the check boxes on the page. Save the selections and go directly to the Results tab. (You really don't need to select any attributes since you won't be using the scenario for rankings anyway.) Click on "Find" at the top of the page, enter part of the name or the ticker of your fund, and create a Profile Report from the resulting links.

You'll need a similar scenario for bond funds and, if you use hybrid (blended) funds, you'll need one for them, too. To create them, simply copy your broad equity model and rename it "Profile for Bond Funds" or "Profile for Hybrid Funds." On the Category Selection page, change the fund type from "Stock" to "Bond" or "Hybrid," update selections, and again check off all the boxes in the grey bars on the Asset Selection page. Once you update and save selections, you can then look up your bond or hybrid fund using the Find link.

When you're done, you'll have three scenarios that will enable you to pull up Profile Reports on any fund you may encounter. Even if you aren't sure if it's a stock, bond, or hybrid fund, you only have three places to have to look. So K⁴ can easily take care of getting you quickly up to speed on any fund you encounter. Now all we need is someone to figure out how to look up words you don't know how to spell.

Solving For The Final Answer

The Process That Makes K⁴ Decision Tools So Unique

Like all choices, investment decisions involve compromises among conflicting goals and outcomes. We expect high return, but we also want low risk. We know we'll need to save a substantial sum for retirement, but we really need our cash flow now. Although we know we should focus on the long term, we're often tempted to act based on short-term developments. As we all realize, our investment decisions are ultimately shaped by the way we resolve these conflicts.

This is not much of a problem when we're confronted with only two choices. It may take some thought, but we can usually decide which is more important and act accordingly. Unfortunately, investment decisions usually aren't that easy and typically involve more than two conflicting factors. Consider, for example, a worker saving for retirement. He has to balance his current savings rate (which inversely affects his current spendable income) with the amount needed to provide a comfortable income to last throughout retirement. He also needs to balance the need for investment growth with his level of risk aversion. The entire plan has to come together by the time he plans to retire or he will have to work longer. Is he willing to do that to save less now? Does he want to invest more aggressively so he can save less or retire sooner? Can he stomach the increased risk and stay the course?

Then consider the investment advisor seeking the appropriate managers or mutual funds for her clients. She wants them to invest for the long term, but she also realizes her clients will evaluate results in a much shorter time frame. She needs to assess the risk as well as the consistency for all the alternatives. To top it all off, the importance of each factor differs from client to client and she needs a way to include that in the decision.

Both of these examples illustrate the complexity of even the most fundamental investment decisions. Both are a far cry from a simple choice between two alternatives and both require compromises among a number of conflicting issues. This is certainly not an insurmountable task; we do it everyday. Where we often fail, however, is in doing it confidently, efficiently, and well.

ASSUMPTIONS AND ITERATIONS

The decision process typically goes like this:

1. Select the factors that are important to the decision.
2. Assign values to elements you can estimate.
3. Solve for one you can't.
4. Review the results – if not satisfactory, change the assumptions in Step 2 and repeat the process until they are okay or until there is no more time available.

In our examples, the future retiree may be willing to work until age 65, needs \$50,000 a year in retirement, expects to live to age 90, and feels he can safely earn 8% per year on his savings while working and 6% per year after retirement. He can then solve for the savings rate necessary to achieve his objective. The investment manager may want all of her funds or managers to have one- and five-year returns in the top 5% of their peer groups, below-average standard deviation, a positive alpha, and r-squared greater than 0.8 to the benchmark index. This will provide a list of managers and funds meeting all criteria.

The final step of the process is to review the results. If the future retiree is satisfied with the suggested savings rate, he can implement his plan. If he thinks he can't afford to put aside that much now (or if he feels he could comfortably save more), he can adjust his earlier assumptions (e.g., he could retire at a different age, use a different expected return by adjusting the aggressiveness of his investments). He can repeat this process again and again until he arrives at a result that he is willing to accept. The same holds true for the investment advisor. If not satisfied with the initial results, she can adjust the limits on her various screens until she gets a list of managers and funds she could confidently recommend to her clients.

There are tools available to help in both instances. Retirement savings calculators are readily available via the web as stand-alone software or even as simple paper-based questionnaires. Investment screening tools are also available from a number of different sources. These tools will help with the process and you will eventually reach an acceptable result given enough time. However, the iterative nature of the process is inefficient; It won't necessarily yield the optimal result and, even if it does, the user has no way of knowing it.

The basic problem lies not with the tools but with the approach. Rather than solving for the optimal combination of all factors, it relies on setting acceptable levels for some and then solving for another. In order to reach even that result, the user has to create and enter various combinations of inputs, all of which may be more or less acceptable. The solution may work, but, without enduring numerous iterations, there is no way to know if there was another combination of factors that would have yielded greater overall satisfaction. To get this result, you need an approach that will truly solve for the highest degree of satisfaction for all factors simultaneously. This is precisely what the K⁴ Decision Tools are designed to do.

ONE SOLUTION, NO ITERATIONS

The patented K⁴ Process is the basis for each of the K⁴ Decision Tools. It utilizes a widely accepted statistical methodology known as "conjoint analysis" to measure investor preferences, resolve trade-offs, and produce a single, complete, ranked solution set. By solving for multiple variables in a single step, the K⁴ Process enables the user to reach a superior, definitive solution in less time without the need for trial and error. Not only that, the user is assured it is the optimal solution.

Conjoint analysis has been successfully used in the field of marketing research since the late 1970s and has been considered a mainstream technique for assessing consumer preferences for over 15 years. Klein Decisions has an exclusive license to use this patented process in its investment decision tools. The K⁴ Process guides the user to assign importance weights for different attributes of an investment decision, resolves inherent conflicts, and produces a comprehensive ranked solution set for all variables. This is accomplished through five basic steps:

1. Select the factors that are important to the decision.
2. Rank the importance of each factor independently of the others.
3. Choose the level of importance between two factors at a time.
4. Solve for the highest level of satisfaction on all factors simultaneously.
5. Review the complete rank-ordered solution set.

With the K⁴ Process, there is no need for additional iterations. Its complete solution set rank orders all alternatives so the user sees all options and, more importantly, knows that the top-ranked solution best matches his or her preferences across all factors.

Klein Decisions has developed four applications of the K⁴ Process in four decision tools: K⁴ Fund Selection, K⁴ Manager Selection, K⁴ Portfolio Selection, and K⁴ Plan Goals. Going back to the earlier examples and using K⁴ Decision Tools for the decision, K⁴ Plan Goals would not require the future retiree to set specific estimates for any of the factors. Instead, it would present a series of questions asking him to rank the importance of each. Next, based on those responses, it would ask him to choose his level of preference between two factors at a time. Like that simple decision discussed earlier, he never has to choose between more than two options at a time, yet this is enough to enable K⁴ Plan Goals to generate a ranked order of alternatives with varying degrees of satisfaction across all factors: retirement age, savings rate, investment portfolio, and retirement income. The top-ranked option offers him the

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POTENTIALLY HIGHER RETURNS, DEFINITELY LOWER EXPENSES

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than the actual funds in the portfolios. These efficiencies enhance the likelihood of superior performance. It's amazing what you can create with research, a few inputs, and a fund analysis tool like Klein Decisions' *K⁴ Fund Selection*. Keep an eye out for these innovative and exciting products, especially if you'd like to enjoy better returns or a more comfortable retirement.

More information about the AlphaCycle Indexes is available at the AIS web site www.activeindexsolutions.com. Active Index Solutions is an F-Squared Investments company. If you'd like to learn more about *K⁴ Fund Selection* and the Klein Fund Ratings, please visit us at www.kleindecisions.com or call us at 919.233.6767.

1-YEAR AND 3-YEAR ANNUALIZED RETURNS - ACTIFINDEX VS. BENCHMARK

Style	Ticker	2007 ActiFindex	2007 Benchmark	2007 Excess Return	Beta	3-Year Annualized ActiFindex	3-Year Annualized Benchmark	3-Year Annualized Excess Return
LCV	AIRALVG	1.49	(0.17)	1.66	0.94	10.18	9.32	0.86
LCB	AIRALCG	11.36	5.49	5.87	1.00	11.75	8.62	3.13
LCG	AIRALGG	15.39	11.81	3.58	0.98	11.67	8.68	2.99
MCV	AIRAMVG	5.76	(1.42)	7.18	0.90	10.62	10.11	0.51
MCB	AIRAMCG	10.31	5.60	4.71	0.91	12.43	11.09	1.34
MCG	AIRAMGG	22.45	1.43	11.02	1.01	16.08	11.39	4.69
SCV	AIRASVG	(0.87)	(9.78)	8.91	0.73	7.13	5.27	1.86
SCB	AIRASCG	2.91	(1.57)	4.48	0.82	10.60	6.80	3.80
SCG	AIRASGG	17.16	7.05	10.11	0.86	13.01	8.11	4.90
	Median	10.31	5.49	5.87	0.91	11.67	8.68	2.99
	Average	9.55	3.16	6.39	0.91	11.50	8.82	2.68

CONSISTENCY OF PERFORMANCE RELATIVE TO BENCHMARKS AND PEERS

Style	Ticker	Annualized Excess Return Since Inception	Annualized Alpha Since Inception	Beta	Rolling 3-Year Pct. in Top Quartile	Rolling 3-Year Pct. in Second Quartile	Rolling 3-Year Pct. Above Median	Rolling 3-Year Pct. Above Benchmark
LCV	AIRALVG	0.46	0.39	1.01	100	0	100	91
LCB	AIRALCG	2.27	2.21	0.98	83	17	100	100
LCG	AIRALGG	2.16	2.00	1.04	46	54	100	100
MCV	AIRAMVG	(1.62)	(1.33)	0.99	6	46	57	6
MCB	AIRAMCG	(0.37)	(0.16)	0.98	60	40	100	14
MCG	AIRAMGG	1.77	1.77	0.98	29	71	100	34
SCV	AIRASVG	0.83	2.28	0.88	9	65	78	22
SCB	AIRASCG	2.40	3.40	0.90	91	9	100	100
SCG	AIRASGG	3.50	3.74	0.88	83	17	100	100
	Median	1.77	2.00	0.98	60	40	100	91
	Average	1.27	1.59	0.96	56	35	93	63

¹The seminal research on this topic is provided by Gary P. Brinson, L. Randolph, Hood, and Gilbert L. Beebower in their two articles, "Determinants of Portfolio Performance", *Financial Analysts Journal*, (July/August 1986):39-44, and "Determinants of Portfolio Performance II: An Update", *Financial Analysts Journal*, (May/June 1991): 40-48.

²See www.kleindecisions.com/research.htm for links and references to such articles.

³More details on the Morningstar Categories are available at: www.corporate.morningstar.com/US/documents/MethodologyDocuments/MethodologyPapers/MorningstarCategory_Classifications.pdf.

⁴This band could be set higher to evaluate more aggressive funds or lower for more conservative funds. Our goal here was to evaluate "moderate" funds with betas around that of the category index.

⁵*K⁴ Fund Selection* uses a process known as Adaptive Conjoint Analysis (ACA) to help determine factor weights. ACA has been successfully used in the field of market research since the late 1970s and has been a mainstream technique for assessing consumer preferences for over 15 years. Respondents are asked two types of questions: importance and trade-offs. The first asks the user to rate the importance of the difference between a positive outcome and a negative outcome for each attribute in the evaluation. Based on these rankings, pairs of attributes are then presented to assess the respondent's reaction to compromise. By analyzing these responses, it is possible to determine the value the respondent places on each specific attribute. For KFR, the attributes are the fund characteristics deemed important to performance persistence.

⁶For more detail on historical results, see "Research, Development and Testing" at www.kleindecisions.com/Fund_ratings_research.htm.

⁷Inception is February 15, 2002 for all indexes except Small Cap Value and Small Cap Blend which have a February 18, 2003. The latter two categories did not have the minimum number of funds passing the index construction criteria in 2002.

⁸The performance tables are based on gross returns before expenses and so do not represent the actual returns that would have been obtained by investing in the funds within the indexes.

TIPS FROM THE KLEIN BOTTLE

Filters For “Dummies”

How to Use “Dummy Filters” to Add Factors to Data Exports

By Dr. Felix Kleinstein

The “Export Selected” function in Klein Decisions’ K⁴ Fund Selection is a helpful feature that sends scenario results directly to Excel. The exported data includes the fund rankings as well as each fund’s actual result and score on each factor and filter. This is a convenient way to view and use all the data for a group of funds, particularly if it is a group you are periodically monitoring such as a watch list or funds for further review.

But sometimes you want to track information on factors that weren’t part of your scenario. For example, you may want to see how the funds on your watch list have performed over the past one-year period even though that isn’t one of your factors or filters. While you don’t want to add it as a factor in your scenario, you would like to be able to see it every time you export your results.

You can do this by using a “dummy filter.” K⁴ Fund Selection allows you to export data for up to ten different filters. In most instances, you probably aren’t using that many so there’s your chance to export that additional information. The trick is to use filters to do this without altering your results. From the earlier example, you can add the “1-year return NAV” filter in order to export the one-year return data, but you have to be careful not to eliminate any additional funds. You can do this by entering an extreme value for minimum return when you add the filter. In the example illustrated here, we’ve used “-100” which would eliminate any fund that lost more than 100% over the past year. You’d be pretty safe using that as a dummy filter. It shouldn’t eliminate any funds (funds that lose 100% in a year tend to go out of business!) and will allow you to see each fund’s actual one-year return. You can come up with similar entries to make just about any filter a dummy filter.

You aren’t just limited to one dummy filter per scenario. If there are other data items you want to export, you can add filters for them, too, as long as you don’t exceed a total of ten. As you can see, sometimes it’s good to work with “dummies.”

The screenshot shows a software interface for adding filters. A scrollable list of filter categories is visible, including 'Fund and Management' (Total Assets (mil.), Years Fund Offered, Average Manager Tenure (years), Expense Ratio, Index or Active, Socially Conscious Objective) and 'Return' (Morningstar Return, 3-year Morningstar Return, 5-year Morningstar Return, 10-year Morningstar Return, 3-year Total Return NAV, 5-year Total Return NAV, 10-year Total Return NAV, 1-year Return +/- Category, 3-year Return +/- Category, 5-year Return +/- Category, 10-year Return +/- Category, 1-year Return +/- Primary Index). Below the list is an 'Add Filter' button. A row below shows a filter named '1-year Total Return NAV' with a 'Minimum value:' field containing '-100' and a 'Remove' button. At the bottom right is an 'Apply Filters' button.

If you would like to ask Felix a question, please send him an email at felix@kleindecisions.com.



Solving For the Final Answer

Continued from page 4

highest level of satisfaction in this decision across all factors. There is no need for additional iterations.

Similarly, K⁴ Manager Selection and K⁴ Fund Selection employ these steps in ranking investment managers and mutual funds, respectively. The advisor selects the factors to use in the evaluation, ranks the importance of each, chooses her level of preference between two at a time, and then receives a rank-ordered list of the products based on her preferences across all factors simultaneously. Again, there is no need for additional iterations, no need to adjust screens to get an acceptable answer, and no need to choose subjectively between the remaining multiple alternatives.

It is the K⁴ Process that enables the K⁴ Decision Tools to yield concise, complete, and definitive results. Further iterations are not needed because it gives you the complete solution set. No time is wasted with additional iterations. The user is not left wondering if all possible alternatives have been considered. Not only are all options presented, they are rank ordered based on the user’s unique preferences. As they say on the game show, it is the “final answer” and this is the unique value-added proposition of all K⁴ Decision Tools.

MODEL OF THE QUARTER

Defensive Equity Funds

BASIS FOR MODEL DESIGN

Most investors want to pare back their portfolio's risk whenever the market becomes more volatile. Those with less tolerance may want to liquidate their equity funds while others may simply want to reduce their weighting in equity. Another and often better alternative is to maintain the equity exposure in the portfolio but employ more defensive funds. This allows the investor's allocation between stock, fixed income, and cash to remain unchanged while offering some additional downside protection. It can actually improve the portfolio's long-term return performance by minimizing the risk inherent in market timing. By retaining a relatively constant equity allocation, the investor will be able to benefit whenever stocks turn back up without having to gauge when to jump back into the market.

Defensive equity funds are less volatile than more aggressive bull market funds. They tend to have less market risk (beta) as well as lower overall risk (standard deviation). This doesn't mean they're immune to losses, but they typically don't fall as much as their benchmark or their peers (low down market ratio). On the other hand, their low risk often makes them less attractive in performance when stocks are steadily moving up. As a result, long-term and possibly even recent returns aren't critical distinguishing features for rating these funds. Other frequently used factors such as batting average or up market ratio aren't very helpful either.

Klein Decisions' K⁴ Fund Selection can help you find defensive funds in all equity categories. Along with risk factors and down market capture, you'll also want to consider expense ratio. Not only have studies shown that it's inversely correlated with fund return, its impact is much more noticeable when returns decline. Finally, a measure of short-term return can give you an idea of recent performance, although it's not as important as risk and down market ratio.

STEP BY STEP GUIDE

Here's what a Defensive Equity Model might look like:

1. Begin by selecting "Create New Scenario" and give it the name "Defensive LC Growth."
2. On the next screen, leave "Fund" for the Product Type and "Stock" for the Asset Type. Change Track Record to "5 Years" to limit the analysis to funds with a minimum of five years of history. Click on "Update Classes."
3. On the next screen, select "Large Cap" and "Growth" in the Domestic Equity section. Click on the "Update Selections" button at the bottom of the page and, when it updates, click on the "Save Selections" button at the bottom of the page.
4. Click "Continue" on the next two screens to bring you to the Attribute Selection page.
5. Select the following K⁴ factors to reflect the associated investment criteria

Criteria	K ⁴ Factor	Importance
Drag on Net Return	Expense Ratio	Lowest
Short-Term Return	1-Year Return +/- Category	Lowest
Total Risk	5-Year Relative Standard Deviation	High
Market Risk	5-Year Beta (Category Index)	Highest
Downside Protection	5-Year Down Market Ratio	Medium

6. Click "Continue" and, on the next page, select a method to weight the five factors. (Unless you already have some definite percentages in mind, the first option, "Complete the Preference Questionnaire," is probably the best choice.) Provide necessary responses for the selected method.
7. On the Results page, click on "Add" to the right of Filter Status. Hold down the Control key and select the seven filter items from the first column of the table below, then click on "Add Filter."

Filter	Limits
Average Manager Tenure	> 3 Years
5-Year Beta (Category Index)	≤ 0.95
5-Year R-Squared (Category Index)	≥ 75
5-Year Down Market Ratio	≤ 95
Closed to New Investors	No
Closed to All Investors	No
Distinct Portfolio	Yes

8. Enter the corresponding limit from the second column of the above table for each filter in the first column. Click on "Apply Filters" at the bottom of the page. This will take you back to your filtered results.

Beta and down market capture are used as both preference factors and filter items; the former use gives funds higher scores for low market risk and down market capture while the latter ensures that both factors are below the market and category average. The r-squared requirement establishes the statistical significance of the category-relative factors. The distinct portfolio filter eliminates multiple share classes, making the final rank ordering more meaningful. The other filters ensure that the current manager was responsible for the results and that the funds are open to new investment. Although this example is for Large Cap Growth, this model can be created in or copied to other categories.

The January 2008 selloff allowed us to test models created with December 31, 2007 data. Through January 28, across all domestic styles and capitalizations, 67% of the funds surviving the filters were ahead of their category averages and 59% beat their respective category indexes. The figures jump to 70% and 66%, respectively, when only considering the ten top ranked funds in each category. The model worked particularly well for blend and growth, especially for Large Cap (83% above category, 69% above index) and Mid Cap (86%, 78%). Keep in mind that this was a short measurement period and results will vary with differing market conditions.

THE ReKLEINER

Find Felix

Our very own Dr. Felix Kleinstein recently went to a Carolina Hurricanes hockey game. While at the game, he thought of many K^4 tips. We included the tips in this newsletter and caught a picture of him at the hockey game. He is hidden somewhere in this photo. **When you FIND FELIX, contact us at felix@kleindecisions.com.**

If you are the fourth person to FIND FELIX, you will receive your very own Klein Bottle to impress your friends and colleagues. These elegant bottles make outstanding desk displays, splendid gifts, and inferior mousetraps.

If you are the fourth person to Find Felix, you will receive your very own Klein Bottle.



DR. FELIX KLEINSTEIN



Dr. Felix Kleinstein is an adjunct professor of operations research at Klein Decisions. He has done significant work in adaptive conjoint analysis and is a strong proponent of Klein's patented K^4 process. His head is simply full of words extolling the virtues of the process and results. He is a descendent of Dr. Albert Kleinstein and, when he is not studying new applications of the K^4 process, he enjoys the North Carolina beaches and mountains, and Carolina Hurricanes hockey games.

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