FIRST QUADRANT

Wine Lovers Guide To Active Investing

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FQ Perspective

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The search for enhanced returns is on! Do you know where to look?

The search for enhanced returns is on! Do you know where to look? Do you know how to judge and compare the potential of one active strategy from another? The best sources of alpha are, perhaps, just as elusive as the best bottles of wine, but with wine, we at least have help! We *do* know something about how to identify the better wines before we buy, open, smell and drink.

Knowing which regions to buy from and knowing which vintages from those regions have been amongst the best tells you a great deal about how to find good wine. Just about any bottle you can get your hands on from the 1997 vintage of Sangiovese-based Tuscan wines has good odds of having something wonderful bottled up inside. Imagine the advantage we'd have in doing our jobs if picking active managers was like selecting good wine. *Are* there similar principles that should be put to work in the search for the best ways to enhance fund returns?

What We'd Want the Guide to Tell Us

With most investors expecting more modest returns from the conventional asset classes – stocks, bonds and real estate - sources of potential incremental return are more in demand than they have been in a long time. In what forms might such incremental returns come in?

In the first place, there are alternative asset classes. If you don't like the prospective returns offered by the conventional asset classes, why not look to other, less conventional asset classes? Investments in alternative asset classes such as timber, emerging markets or high yield debt may improve fund returns, at the margin, if these asset classes are poised to outperform the conventional asset classes.

Alternatively (no pun intended), one can seek to enhance return through value added, or alpha strategies. Active equity and bond strategies, currency management, hedge funds, and tactical strategies are all approaches that seek to enhance returns by exploiting market inefficiencies. Alpha seeking strategies are an entirely different means of enhancing returns from strategic investments in alternative asset classes. Unfortunately, they are both often bundled together under the title "Alternatives."

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What most differentiates alpha strategies from investments in alternative asset classes is the role that skill plays in alpha seeking strategies. The success of an investment in an alternative asset class depends entirely upon how the markets turn out to behave. Performance is subject to "the whim" of the markets. The success of active investing almost entirely depends upon skill, that is, so long as the opportunities they seek to exploit continue to exist (i.e., so long as the market inefficiencies continue their cycle of creation and destruction). The other key difference between these two forms of incremental return is the investment horizon. Strategic investments in alternative asset classes are, by definition, long-term in nature. Active investment strategies tend to have shorter time horizons over which the rewards are expected to be generated.

Tactical approaches are interesting in that in some sense, they straddle both by seeking to profit from investments in asset classes, and by simultaneously seeking to add value by varying the exposure to these asset classes over time. In essence, however, tactical approaches are

Past performance is no guarantee of future results. Potential for profit is accompanied by possibility of loss.

skill-based forms of investing that belong in the alpha strategy category. Like other active strategies, tactical approaches also seek to profit in the short to intermediate term. They seek to do so by "getting in" at those points in time when most of the long-term benefits are generated. For most asset classes, long-term returns are typically delivered through a sequence of periods of disappointing returns, quiet periods, and periods of strong, positive returns, in no particular order. Knowing when to get in and get out is clearly an active decision.

Incremental returns of either kind are hard enough to capture. The effort to identify *which* active strategies will be able to capture, in the future, the best incremental returns is even more difficult, particularly if we find few, if any, principles to guide us. If we could have a guide, however, this is what we'd want it to tell us: which active strategies are most likely to deliver the goods in the future.

Bottle Size as a Measure of Quality

They'd only put the best wines in those big magnum bottles, right? If so, then how do you explain jug wines? Bottle size tells us as much about the quality of the wine inside as the magnitude of return variation tells us about the quality of the alpha that might be earned from a given asset class.

In a recent paper[1] published in the Journal of Portfolio Management, Kritzman and Page presented their view on which investment decisions are the most important. According to the hierarchy they describe, skill in stock selection is more valuable than skill in setting a strategic asset allocation. Country selection and sector rotation both fall somewhere between these two extremes. Stock selection gets 90+ points on the Wine Spectator scale, while strategic asset allocation is your jug wine. We say that they mistook the size of the bottle for a measure of quality.

Kritzman and Page see their paper as addressing a 1986 paper from Gary Brinson. [2] Notably, Brinson's paper is one of the most widely cited papers in our industry, and what many people believe that that paper demonstrates is that the asset allocation decision is the most important decision. You've heard that, right? How many times has that statement made by conference speakers? How many times have you read this claimed in the press? What few realize is that Brinson didn't really demonstrate or claim what many people think he did.

As Ibbotson and Kaplan[3] explained (14 years later), Brinson never meant to answer the question, which investment decision is *necessarily* the most important? Brinson's paper represents a historical observation, and history is about *what happened*, not about what *had* to happen. While Brinson's article presented clear evidence that differences in asset allocation decisions, specifically strategic or policy decisions, *had* accounted for as much as 94% of differences in pension fund returns, he did not, and would not, say that that is because the asset allocation decision is a more important decision. Had investors allocated risk differently, the asset allocation decision might not have turned out to be nearly as important. His results do not imply a theoretical hierarchy of investment decisions whereby asset allocation decisions stand at the top of the heap. Brinson told us which wines investors were drinking, not which wines were the best.

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[1] *Mark Kritzman and Sebastien Page, "The Hierarchy of Investment Choice: A Normative Interpretation," Journal of Portfolio Management, Summer, 2003*

[2] *Brinson, Gary P., L. Randolph Hood, and Gilbert L. Beebower. "Determinants of Portfolio Performance," Financial Analysts Journal, July/August, 1986. See also, Brinson, Singer and Beebower, "Determinants of Portfolio Performance II: An Update," Financial Analysts Journal, May/June, 1991.*

[3] *Ibbotson, Roger G., and Paul D. Kaplan, "Does Asset Allocation Policy Explain 40, 90, or 100 Percent of Performance," Financial Analysts Journal, Jan/Feb, 2000.*

In their own paper, what Kritzman and Page reveal for us is where the *biggest* active returns can be found, not where the *best* can be found. They show us that return differentials across asset classes are smaller than return differentials across individual stocks, sectors and countries.[4] What does this mean? It means that if you bet a dollar on whether stocks would outperform bonds or visa versa, you stand to gain or lose less than if you bet a dollar on whether one stock will outperform another. Said another way, this means that a decision on how to allocate a certain number of dollars to stocks or bonds - an asset class decision - would be expected to have a smaller return impact than a decision as to how to allocate the same number of dollars to individual stocks – a stock selection decision.

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What's wrong with all of this is that the way to measure the relative value of investment decisions is to make a *risk-adjusted* comparison, not to merely compare the relative magnitude of returns. If the mere magnitude of returns were the deciding factor, then why would you ever consider allocating active risk to an active bond manager? The dispersion of returns within the bond market is much lower than the dispersion of returns within the equity market. The reason you do is that the reward you earn in actively managing bonds is attractive *per unit of active risk*. Quality is not a matter of size.

The Nose Knows Potential When It Smells It

You can tell a lot about a wine just by the smell. Stick your nose deep into the glass and you'll pick up smells of fruit, vegetables, wood and even the smell of the soil from which the grapes came. You may also pick up the smell of petroleum, sulfur, vinegar, or rotten eggs. In the nose you may find the promise of a good wine, and yet it will only be that, a promise. It may still disappoint, or it may pleasantly surprise.

Grinold and Kahn gave us a guide we'd like to call, The Smell of Alpha. They called it the *Law of Active Management*, so I'm pretty sure they weren't drinking much wine when they named it. The *Law* tells you how to judge the *potential* that an active strategy may hold. As with the nose of wine, we need to emphasize the word "potential" here. You're still going to have to taste it to find out just how good it is, or isn't.

The *Law* tells us that skill and the number of independent "bets" are essential ingredients to producing a fine alpha. Formally, the equation reads,

$$IR = IC * sqrt(Breadth)$$

where IR, or the risk-adjusted value added, will be determined by the level of predictive skill, IC, times the square root of the number of independent bets, Breadth.

For even the best active investment managers, the number of successful decisions will not greatly exceed the number of failed decisions. Successful active management requires that one be able to win *on average*, therefore, and this implies that skill cannot be identified by looking at the results until a sufficient number of decisions have been made for there to be enough observations to see skill show through clearly.

If an active manager has only one bet on at a time, it will take longer to see whether he's winning on average than if he has many (independent) bets on simultaneously. If he has skill, the risk that he appears to be wrong in any one period of time decreases with the number of independent bets. This seems quite straightforward, doesn't it? As it turns out, this is not as simple as it may appear, and the smells that we pick up with this equation will often lead us to misjudge the relative efficacy of active investment strategies.

[4] *Kritzman and Page allowed this comparison to be biased in a manner that inflates the relative importance of stock selection by allowing country selection and sector selection effects to be included in calculating the magnitude of individual stock return differentials, but this is a technicality. The relative ranking still stands even after you correct for this bias.*

The problem starts when we assume that we can judge the efficacy of active investment strategies based upon the *number of assets* in the investment universe. There are more liquid stocks in the US equity market than there are liquid currencies in the forwards market. A too simplistic reading of the Law suggests that active equity managers have available to them a better opportunity to display skill over short periods of time by putting on more equity positions than a currency manager would have available to him.

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One could challenge this on the basis of independence: a large number of assets doesn't imply that there are a large number of *independent* bets that a manager may make. Many of those assets may be highly correlated, which means that the number of independent bets available would shrink. This, problem, while important, and while addressed by Grinold and Kahn, is probably less important than some other issues that arise in the context of actually trying to apply predictive skill in the real world.

The smell of a wine is much like the Law: *it's only an indication of what you may find.*

The *Law of Active Management* is a theoretical construct. Like certain physics laws that apply in strict conditions found largely only in laboratories – such as testing the speed at which objects fall in a vacuum – once you enter the real world, you quickly find that there are other issues that significantly affect the relevance of the *Law*. In a sense, the smell of a wine is much like the *Law:* it's only an indication of what you may find. You may be surprised.

Only by Tasting Will You Ever Really Know

Skill and good vines upon which your grapes are grown aren't enough to make a good wine. Wine making depends upon a number of other elements, some of which are not in the wine makers control. First, there's the weather: too much rain or too little rain can ruin a good crop of grapes. Then there's the production facility and materials itself. Good quality aged oak barrels – whether French or American – are essential to producing a high quality Cabernet or red Bordeaux. Finally, the food you're consuming along with your wine can have a significant impact on your experience of the quality of the wine. These practical matters play as important a role in the translation of a winemaker's skill into fine wine as the quality of the vines upon which the grapes are grown.

This is no less true for the production of alpha. Practical issues have substantial bearing on the ultimate quality of the alpha. Of equal importance to the measure of breadth and skill are transactions costs and real-world portfolio constraints. Roger Clarke and Harindra de Silva raised the latter issue in an article published in the Financial Analysts Journal in the Fall of 2002.[5] Ken Ferguson and myself raised the importance of transactions costs, and the relevance it had for the Law of Active Management, in a First Quadrant Partners Message in November of 2000.

Portfolio constraints matter because they can have a very significant impact upon the ability of a manager to translate skill into realized profit. One of the most important arguments for the advantages of hedge fund strategies or absolute return seeking mandates is that managers are less handicapped by traditional portfolio constraints, and are better able, therefore, to translate the skill they have into return. Clarke and de Silva refer to the measure of this translation as a "Transfer Coefficient," and examine the effects that a variety of common portfolio constraints affect the realized Information Ratio.

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The best-known illustration of this issue is found in the comparison of long-only equity portfolios with long-short or market neutral equity portfolios. Because there are typically

[5] *Roger Clarke and Harinda de Silva, "Portfolio Constraints and the Law of Active Management," Financial Analysts Journal, Sept/Oct 2002.*

a great many stocks in a long-only equity portfolio that have insignificant weights in the benchmark, there are many stocks for which the skill a manager has for identifying the worst stocks is eroded. The lack of material benchmark weight means that no material underweight positions may be taken. This is not a problem in long/short or market neutral portfolios where the allowance of net-short positions give the manager latitude for taking material underweight positions in stocks which are expected to underperform.

We think transactions costs are of even greater importance in differentiating between the potential strategies have for delivering a risk-adjusted return. Transactions costs don't merely erode the magnitude of the profit that one captures from active management, but it affects quite profoundly the number of decisions the active manager *really* has to make. Take a simple equity portfolio manager who has skill in predicting individual stock returns. There will be, for example, some stocks that she will expect to see outperform the market by, say 30 basis points, and others that she will expects to outperform the market by less than 30 basis points. If it costs 30 basis points to trade round-trip the stocks she follows – a very liberal assumption, mind you – then she won't be able to take action on those stocks where the expected outperformance is equal to, or smaller than, the transactions costs that it will cost to pursue this alpha.

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An equity manager may easily see the number of independent bets, as Grinold and Kahn refer to it, shrink as much as 60% or more when transactions costs are modest or high. For an active equity manager following 50 to 100 stocks, that means that the *effective* number of independent bets has just shrunk to 20 or 40. Compare that with your typical TAA manager who only had 30 assets to make decisions on. The costs of transacting in futures and forwards is so low that the number of bets will hardly be altered at all, if at all, by transactions costs.

The list of practical issues wouldn't be complete without mentioning fees. Clearly fees will affect the *realized* Information Ratio. Clients aren't, and shouldn't be, interested in the gross of fee result. Their interest is in the final product, the net of fee result.

A Summary of Our Guide

So, can we know from what "regions" the best alphas come from so that we can focus our active risk taking in those areas where risk is most reliably, and most profitably rewarding? By "regions" we mean those categories of active management that active strategies are commonly separated into. In which categories of active strategies will we find the best quality alphas? Are they to be found amongst the active equity strategies, active bond selection, convertible arbitrage, emerging markets, tactical asset allocation, active currency management, or somewhere else?

We've established that the relative magnitude of returns doesn't imply a hierarchy of investment decisions. Strategic asset allocation is not necessarily more important than tactical asset allocation or the allocation of risk to more typical forms of active management. Which decision turns out to have been the most important in differentiating between funds' performance will depend upon how and where funds choose to take risk.

We've also established that skill is more likely to translate into success if three practical characteristics are in place. First, as Grinold and Kahn correctly pointed out, the greater the number of independent bets available to the manager, the more quickly skill will translate into success. The number of independent bets and the number of assets involved, however, do not correlate well. The second and the third characteristics have enormous impact upon that.

Second, then, one should look for active strategies where portfolio constraints will be least likely to erode the value of the manager's skill. Market neutral equity, hedge funds, and long/short strategies of all

kinds such as equity, bonds, active currency and Tactical Asset Allocation in its global form are all examples of active strategies where the portfolio management constraints tend to allow the greatest mapping of skill to realized success.

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Third, we know to look for active strategies where the transactions costs are low. Transactions costs are undoubtedly the greatest barrier to the translation of skill to profit. We don't think it's all that surprising that active currency management has been recognized by three major consulting houses as being a strategy worthy of greater attention. Currency managers, according to the naïve interpretation of the Law of Active Management should be at a severe disadvantage when it comes to generating a respectable Information Ratio. The typical active currency manager works with something in the neighborhood of only ten assets! So how is it that active currency managers in general have been able to deliver sufficiently attractive IR's to get the attention of the consultants? With the lowest transactions costs in the business, skill in currency management translates almost without barrier into success.

Transactions costs are the greatest barrier to the translation of skill to profit.

Finally, we want to leave the reader with two additional rules to apply in the search for active management. These are not formal rules that apply to the Law of Active Management, but are rules that apply to the search for alpha more generally. First, the lessons taught to us by Markowitz and Sharpe pertain just as much to the risk that individual stocks present and they do to the risks that active management strategies present. In other words, risk should always be managed in portfolio context. Don't think about the value of strategies as though they were to be utilized in isolation. The objective isn't to find the next active strategy with the best information ratio. The objective is to enhance the *portfolio* of active alphas!

Often the next best strategy to choose won't be the one that has the best information ratio, but rather will be the one where the source of value added is substantively different from the other sources of value added already built into your portfolio of active strategies. Adding yet one more traditional active equity manager to a large pool of traditional active equity managers is less likely to improve the overall performance of your equity program. Finding an equity manager with a different approach than the others is more likely to add real value at the margin to the overall performance. Finding a manager who adds value from an entirely different set of market inefficiencies altogether should be even more powerful. An active currency or TAA manager is more likely to add value at the margin to a set of active stock and bond managers than is another active stock or bond manager. When you fill your cellar with wine, be sure to buy a wide variety of good quality wines, and you'll find your collection to be far more rewarding.

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And lastly, but perhaps most importantly, look for alpha where others don't. Main Street and Wall Street aren't really all that different in the sense that profits are hard to come by. On Main Street, you're better off without a lot of competition, and on Wall Street, the profits that are to be had by exploiting market inefficiencies will be smaller and more difficult to capture at all when you face a large number of competitors.

At that, we should leave the subject. It's tempting to continue to draw parallels and ask more questions. Do the rules of wine production pertain here? Do the high volume producers deliver consistent, reliable, low quality alpha? Is there a parallel with cult wines where the price paid is too high even given the high quality of the product? Are the Fund of Funds managers the master mixologists, producing Bordeaux quality alpha streams through their blending?

You see now why we should stop.

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