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Partner's Message

Putting Active Currency Management at the Top of Your 2004 Agenda

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I heard an expert on health say the other day that 70% of the medical problems Americans suffer from are related to "lifestyle choices," implying that many of the causes of health problems are derived from choices that are under our own control. If we simply kept to our workout schedules, ate better, drank less and quit smoking, our healthcare needs would presumably decline substantially. Complex biological and pharmaceutical research hold important promise, but they do not provide the *only* answers to our healthcare needs. Sometimes the most important solutions are the ones most easily within reach, and yet we have a tendency to look right past these to focus instead on more exotic solutions.

Currency management is one of those simple sources of return enhancement that tends more often than not to be forgotten about as investors look to more complex ways to improve their investment returns. Your average hedge fund, not to mention your average fund of funds, tends to be substantially more complex than your average currency strategy. As evidence of their relative complexity, funds of funds managers are valuable, in part, because they are able to develop and utilize the specialized knowledge required in evaluating, selecting, and combining hedge fund strategies. The hurdle for putting together a portfolio of currency strategies is far less daunting (though that's not to say that experts can't help here as well – some of our own clients, and certain consultants, have become expert at this and add significant value through the selection and combination of currency managers).

We don't mean to suggest that active currency management is somehow a better choice. Just as complex drug research has produced some of the most important changes to the quality and longevity of life, so might hedge funds and funds of funds providers contribute highly valued enhancements to our investment returns. At the same time, why not put to work those solutions that are most readily within reach as well? Why not take better care of our bodies at the same time that medical research continues to push the frontier further and further forward?

For those who "see the light" and choose to take on active currency management, there are three important questions that one must answer to get started. First, do you take an overlay approach to currency management, or do you treat currency as an independent risk to be optimally exploited for its ability to enhance fund level returns at the margin? Second, you must decide on how much risk to allocate to active currency management. Are there reasons why you should take more active risk in currency management than you would in active stock or bond management? And finally, should you allocate this risk by hiring one currency manager or is it better to construct a portfolio of active currency managers in a similar way to the way you do with your active stock and bond managers?

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Overlay versus alpha-seeking approach

We've been managing active currency since 1992, and over that time, we've seen a significant migration in our own currency business from overlay-oriented applications of active currency management to alpha-oriented mandates. We've observed the same evolution in the way leading thinkers around the world approach currency. What's most interesting about this is that the change in orientation is principally the result of the increased familiarity, comfort level and understanding about currencies and currency management. It is not due to what you might expect, a change either in investors' objectives or a change in the types of investors employing active currency.

Let's first get clear on what the difference is. What distinguishes overlays from alpha-oriented currency programs? Largely it is the fact that alpha-oriented mandates are run independently from the underlying assets. No consideration need be given to the underlying assets on an on-going basis when running an alpha-oriented mandate. The investment decisions taken in an overlay approach, on the other hand, do depend significantly upon the existing underlying currency exposures.

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Risk in alpha-oriented mandates is principally constrained by an overall risk target, which leaves individual positions, or allocations of risk, to be constrained via an optimization that seeks to maximize the reward per unit of risk taken. Overlays, on the other hand, tend to be run with many additional constraints, constraints that are motivated by factors unrelated to maximizing the return to risk ratio. The term overlay implies that what is being managed is the exposure to an already existing asset or risk, so most of the constraints introduced in overlays might be described an "accident" of the underlying exposures. These accidents

Is Currency an Asset Class?

Treating currency as an independent risk to be managed does not mean that it must be considered an "asset class" in it's own right. We think that what most sensibly defines an asset class is its strategic return characteristic. Currency is not a source of strategic return. True, it may be used to profit from carry trades, but it is in and of itself a non-productive asset. Currency presents risk rather than return, and risks, of course, may be managed tactically to extract a risk premium and thereby enhance returns.

Currency in this respect resembles more closely certain imbedded risks such as liquidity risk, and default risk, for example, than it does an asset class. Take for example the return on a high yield bond. This yield includes both a "normal" rate of return on bonds, plus a premium paid for the higher risk of a high yield bond, a "default risk." Do you look for your bond managers to manage their exposure to default risk? Of course, you do. There are certain economic environments, such as during the early stages of an economic recovery, where you would believe it would be profitable to take on exposure to default risk, and there are other environments when you would assume that this risk would be unprofitable. Such a strategy seeks to enhance fund level returns through the management of a financial risk, which we would argue is quite distinct from a productive asset.

For a parallel in the equity arena, we might look to those stocks with greater uncertainty attached to their future growth in earnings, or greater expected price volatility. Again, the return on such stocks could be decomposed into a return based upon the economic growth of the firm plus a risk premium paid for the investor bearing higher than normal risk. While currency may not be a productive asset, it does represent a financial risk quite similar to the risks that we've just outlined.

At the end of the day, however, the debate over whether currency represents a separate asset class or not probably doesn't matter very much. What matters is whether we manage the risk or not, and whether we exploit the risk to earn incremental return that improves overall fund results.

can be grouped into three categories: (1) the investment universe, (2) asymmetry of the active ranges, and (3) inequality in the distribution of the active risk.

Start with the investment universe. When one looks to active currency management as a source of alpha, the natural starting point is to ask what the universe of currencies is with which the manager has skill in producing value added, and to define the universe according to that. Skill would define the universe. In an overlay, on the other hand, the universe of currencies to be managed is limited to those currencies that are associated with the underlying stock and bond exposures. If there are no underlying investments in Australia, New Zealand, or Sweden, then the Australian and New Zealand dollars, and the Swedish krona, will be excluded from the currency manager's universe of allowed currencies regardless of whether their inclusion in the universe would improve the performance of the program or not.

Next we would ask what latitude is to be given the currency manager in terms of position size on the currencies selected for the currency universe. In our experience, many clients prefer to define some kind of maximum range of exposures for the currencies regardless of whether the mandate is an overlay or not. In alpha-seeking mandates, the ranges tend rarely, if ever, to be binding, however. The ranges will tend to be there to provide comfort to the client that extreme individual positions won't result from the optimization, positions that would result in an overly concentrated allocation of active risk. In other words, the ranges provide comfort to the client that the optimization won't produce highly undesirable portfolios. Because optimization algorithms tend to have problems when working with a small number of assets, the comfort factor is not unwarranted, even if it tends to have no material impact on the actual decisions taken.

In overlays, on the other hand, the ranges defined almost always have a very significant impact on the investment decisions. In the first place, the ranges tend to create asymmetries in the active risk taken on individual currencies. If the underlying assets are unhedged, then the investment manager won't be allowed to do anything but reduce (i.e., hedge) the exposure to foreign currencies and, by doing so, increase the exposure to the domestic currency. If the underlying assets are fully hedged, then just the opposite would apply. In both cases, there is no symmetry whatsoever.

When the underlying assets are partially hedged varying degrees of symmetry may exist, depending upon the hedge ratio. At a 50% hedge ratio, the ranges would allow full symmetry, allowing the investment manager to add value by both increasing and decreasing exposure to each currency. Currency mandates that allow symmetry make more complete use of the manager's skill set, and will result in superior performance results. Alpha-oriented mandates allow for complete symmetry.

The ranges in overlays will tend to have another adverse impact on performance resulting from the fact that the underlying stock and bond exposures will tend to be weighted in some form, e.g., capitalization weighting or GDP weighting, that assigns greater weight to larger markets. There will typically be more home currency, US dollar, pound sterling and yen exposure than Aussie dollar, and Danish krone, for example. This leaves less room to move for the active manager in terms of active exposures in currencies associated with smaller stock and bond markets. Active risk, as a result, is systematically constrained to be concentrated in a small number of large market currencies. Less diversification of active risk is possible and the skill set of the manager is unequally employed.

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Each of these three attributes of overlays - restrictions on the investment management universe, asymmetries in the active ranges, and inequalities in the distribution of active risk – degrades the performance of the currency program. Less manager skill is translated into realized gains. Why then would anyone ever

choose to employ an overlay approach with its obviously sub-optimal characteristics relative to the alpha-oriented approach? There are a couple of reasons. First, many investors are motivated initially to employ active currency management because they recognize that they can better manage their *existing* currency risk. This initial motivation is more defensive in orientation with its more limited goal of hedging away currency risk when it is most timely to do so. Second, the overlay approach is intuitively a more natural starting point for most investors, and because of this more intuitive nature, it will be less difficult to get approval from an investment board or committee. Being quite practical about it, it's much better to have an overlay in place than to have no currency management at all!

The overlay approach is, therefore, an entirely appropriate solution to the more limited, defensive goal, especially when there are institutionally imposed, or regulatory constraints that prohibit doing otherwise. In some countries and with some funds, net short positions aren't allowed in individual portfolio. When these constraints don't apply, however, and as the investor grows more familiar and comfortable with such a program, the next step in the evolution occurs quite naturally. As with any other active decision, active currency management has an impact on fund-level risk, and the goal shifts away from managing existing risks, and towards a goal of maximizing return per unit of risk. Risk is risk. Currency risk, is no different from any other risk in the portfolio, and is ideally, therefore, managed with the same goal in mind as other risk exposures in the portfolio.

How much risk?

How much active risk should you take in your currency management program? This decision should not merely be a function of the amount of strategic currency exposure you already have. For those funds or consultants with the deepest quantitative infrastructure, this will tend to be considered an optimization problem. The goal at the fund level is to maximize the risk-adjusted return associated with the overall active risk taken on, which means one wants to optimize the expected marginal contribution to the overall active risk's Information Ratio.

This may be more complicated than it looks at first glance. For example, what do you use to form expectations of the future excess returns that managers will produce? Some combination of past, realized returns, along with a judgment about the likelihood that the managers are going to continue to deliver similar returns in the future as they've delivered in the past will go into forming the expectation. And how are these judgments arrived at? Commonly, the better the manager is able to articulate and rationalize the process by which market inefficiencies are identified and exploited, the more confidence one will tend to have in past successes continuing into the future. Without that, it's hard to know how to form expectations for the future based upon anything more than past performance. This is one area where more fundamentally oriented products have an advantage over more technically-, or statistically based products. *Suffice it to say, the optimization problem will require thoughtfully derived inputs if it is going to be meaningful.*

The outcome of such an optimization should be that currency deserves at least as much active risk as, if not more than, other sources of active risk in the fund. There are five attributes of currency that support this perspective.

1. **Low or Negative Correlation:** Most importantly, the value added derived from active currency management tends to have a low, if not negative, correlation with other active investment strategies. It acts, therefore, as a very valuable diversifier of overall fund active risk, and may, in some cases, actually reduce fund level active risk. This argues for an outsized allocation to active currency management.

2. **High Translation of Skill into Profit:** When forming expectations for future performance of any active strategy, consideration should be given to how difficult it is to translate skill into realized profit. Transactions costs are the single most significant impediment in this translation, and currencies are amongst the cheapest assets to transact. They have a material advantage, therefore, over most other active strategies, and expectations for the future should reflect this advantage.

3. **Most Liquid:** The currency markets are the most liquid of all asset markets in the world. Active currency, therefore, is amongst the most liquid investments an investor can make. This has a bearing on the translation of skill into profit because it leads to the low transactions costs that currencies have, but it also provides the comfort that a currency program may be entered or exited with relative ease as well.

4. **Most Transparent:** Currency exposures and pricing allow currency mandates to be amongst the most transparent of all active mandates.

5. **Little Competition for Alpha:** Wall Street and Main Street share in common the fact that the more competition you face, the more difficult it becomes to earn excess returns. As one of the most overlooked active strategies, the competition for profits in the currency area is relatively light still today.

Because of these advantages, active currency management deserves at least as large an allocation of active risk from the risk budget as other active strategies.

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Single Manager versus Multi-manager Approach

The largest, most sophisticated funds have tended to build multi-manager currency programs rather than hiring just one. Does this make sense for everyone? We say that it does for the simple reason that diversifying your active risk across currency managers will improve the results of the program substantially.

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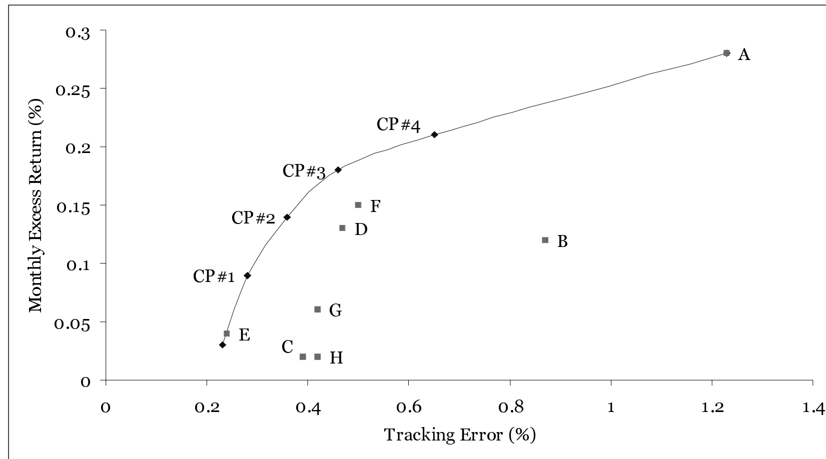
Even with hindsight, where we know which currency managers performed best, it would have been better to hire more than one currency manager than it would have been to have just hired the one with the best performance! Without the benefit of hindsight, it makes even more sense to diversify the risk, in effect, diversifying the risk that we don't choose that manager who will deliver the best performance in the future. The key point, however, is not that we might not choose the best manager. The point is that even if we did choose the best manager, hiring two managers, or even three managers would turn out to be even better.

Just how much better is the multi-manager approach? Let's look at some actual performance numbers based on data collected by Watson Wyatt. To avoid any perception of this exercise being overly self-serving, let us point out that First Quadrant's numbers are not included in the analysis. The traditional mean-variance optimization yields an efficient frontier, as shown in the graph on the next page, with four custom portfolios, each consisting of different bundles of three managers and indicated as CP# 1 thru CP #4 with different degrees of risk preference. The increase in annualized information ratios (IR) derived from combining managers is significant. The range of IR's for the multi-manager, or custom, portfolios is 1.12-1.33 versus 0.12-1.03 for the eight currency overlay managers included in the study.

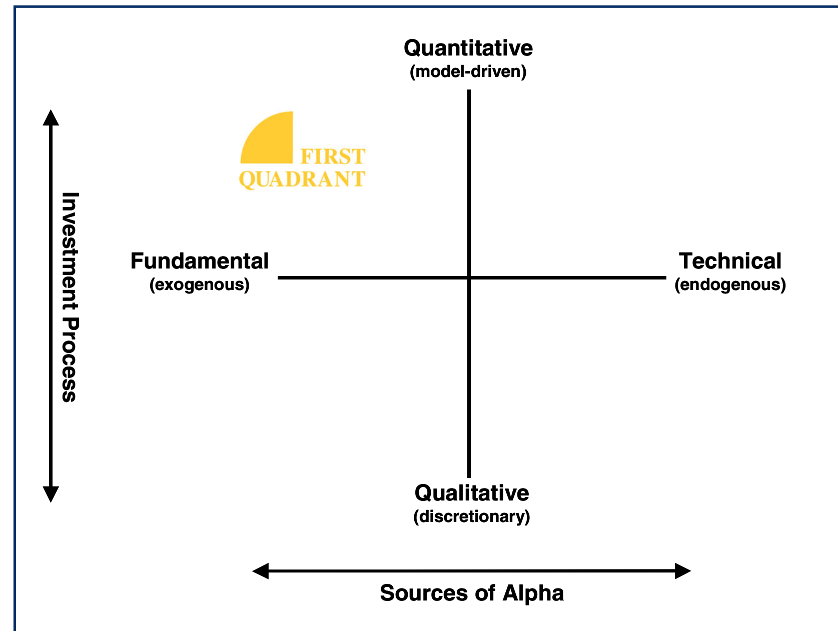
Efficient Frontier of Currency Managers



We should point out that the constraints used in the optimization are a maximum allocation of 50% to any one manager and, of course, a minimum of zero. Moreover, the custom portfolios on the frontier are chosen so that there are three managers in each. The performance of the multi-manager currency product is very impressive as the combination of managers adds significantly to the financial efficiency of the overall portfolio, as measured by the information ratio defined as the excess return divided by tracking error.

Here no focus was given to diversification across styles, which opens up an interesting issue. When managers are grouped into style categories, we find diversification still exists within the style boxes. One reason for this, we believe, is that style definitions in the currency arena are fuzzy. Most fundamental managers use some amount of momentum, or trend-following, components, while most managers use some kind of fundamental components as well. There are managers who would describe themselves as pure technical managers and others who would describe themselves as pure fundamental managers, but the majority of managers don't fit cleanly into one of the buckets. First Quadrant is one of the managers that would describe themselves as pure fundamental.

The characteristics that differentiate currency managers also cut across a different spectrum than just fundamental versus technical. Managers differentiate themselves also by being either quantitative (model-driven) or qualitative (discretionary). This spectrum doesn't tell us anything about where the alpha comes from, but rather how it will be produced. Systematic, model-driven managers will apply their skill in a consistent, repeatable fashion, while discretionary managers will



choose how to apply their skill on a case-by-case basis. First Quadrant, for example, would be appropriately described as quantitative, or model-driven. You can see where this places First Quadrant relative to these two different dimensions in the chart above.

Because managers can fall anywhere on this two-dimensional plane – and do – we must recognize that the style definitions are useful, but that they don't fully capture the differences between managers. Again, it is for this reason, we believe, that diversification is often found even within the conventional categories into which currency managers are grouped. The allocation process among currency overlay managers may work better, therefore, if the focus is on the inefficiencies exploited by individual manager rather than the just the styles. Specifically, this enhancement to the use of traditional categorization of managers into such styles as fundamental and technical, and the selection of the ex-post winner in each style, provides better outcomes with reduced correlations at times of extreme volatility. The results above don't depend so much upon diversifying across different "styles" of currency management as they do upon simply hiring more than one currency manager. Within the styles, significant diversification can be found.

Please note that we still favor style diversification, but we're arguing for a multi-dimensional view of styles rather than the classic style categorization. As a nearly universal principal for active management, we would assume that there is value in diversifying the sources of alpha to avoid the potential that the effectiveness of certain styles degrades in the future. We find that those who do build multi-manager currency portfolios have typically chosen to diversify across styles as well, presumably for the same reason.

Does the success of an active currency manager depend in any way on the home currency?

This is both a question of skill and a question of mandate structure. With regard to skill, we want to know whether a manager who has been successful in managing active currency for US Dollar based clients, should perform as well for Euro and Yen based clients. The answer is that the base currency shouldn't matter. We are unaware of any serious currency managers who look at the world from the perspective of an individual base currency. The managers we know of all appear to look at currencies from a multilateral perspective, which means that no particular currency is of any more importance than any other.

How does that work? The managers form views of the currencies as though they were a basket of assets to choose from. They don't evaluate each currency relative to the base currency alone. The portfolio of currency exposures they want to construct will not differ, for the most part, when the home currency is changed, therefore. Only risk-management aspects may change the desired portfolio of currency exposures at the margin.

As for mandate structure, the answer tends to depend upon whether the mandate is an overlay or not. Overlay mandates have a tendency to be structured so that the broadest latitude is given to shifts in the exposure to the base currency. As we've described elsewhere, equality in active risk ranges for each currency will lead to better risk-adjusted performance outcomes, but the reality is that many overlay mandate structures don't have this equality imbedded within their structure. The base currency tends to have an outsized influence, therefore, on the performance.

In alpha-oriented mandates, it shouldn't matter what currency is the base currency. Active currency management is, therefore, very portable!

Summary

Along with your New Years resolutions to get back into better shape, perhaps to drop a few pounds, eat better and get more sleep, we'd like to suggest that you also take advantage of one of the most immediately accessible sources of return enhancement, active currency management. Currencies don't have the more exotic characteristics that investors have sought out so fiercely in the most recent years. They are relatively easy to understand, and the risks are relatively easier to evaluate than some other sources of value added.

Putting a currency program in place, however, necessitates that you make a small number of key decisions. You need to decide how much risk to take. We've argued that there are several reasons to allocate somewhat more risk to currency than to the average active strategy. Suffice it to say, the risk allocated to active currency should have a large enough effect at the fund level to make a meaningful difference.

Deciding then whether to take the single manager or multi-manager approach is the other key decision. We've argued that there are significant advantages to taking the multi-manager approach. If the most experienced pension funds, endowments and foundations are to be looked to for guidance, their approach of choice seems also to be to use the multi-manager approach.

If one is looking for a specialized niche to boost returns over policy benchmarks, the currency overlay area stands as a very natural next choice for a largely untapped source enhancement in institutional portfolios.