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When great minds think alike[1]

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Abstract

Success in active management depends on taking the right active positions, or bets, relative to a benchmark. The key insight in this paper is that the bets that are common to multiple skilled managers are more likely to pay off than those that are unique to an individual manager. When it comes to active management, two heads are better than one, and three heads are even better! Building portfolios that successfully harness this insight is a complex portfolio construction problem, requiring the ability to identify and blend skilled managers and carve out those bets most likely to add value.

Introduction

If an equity manager has skills in stock selection, an overweight position should signal the stock is likely to outperform the market. If two skilled managers, each using their own unique investment process, share the same view on a stock, then intuitively this should provide a stronger signal than if only one manager held that view. If a third manager turns out to hold the same view, this further strengthens the signal. Importantly, this simple intuition holds true both theoretically and empirically; when great minds (and great managers) think alike, this improves the chances of them being correct. The more skilled the managers, and the more different their investment processes, the stronger the signal. This result has also been noticed in fields other than funds management. For example, in a recent book called "The Difference" Scott Page demonstrates how thought diversity allows the predictive power of groups to rise above that of its individual members, a phenomenon known as the 'wisdom of crowds'.

Only recently have practitioners and academics begun to notice and attempt to exploit this result. Russell Investment Group was the first to formally document the result in 2003 [see Goodwin, Mahtani and Wiltshire (2003)], and launched the first fund aimed at directly exploiting the overlap between skilled managers in the US in 2004. A limited number of academic papers have since approached the subject, generally supporting the conclusion that fund managers' stock holdings contain predictive information for subsequent stock returns [see for example Fong, Gallagher and Lee (2007), Wermers, Yao and Zhao (2007), and Frank, Poterba, Shackleford and Shovan (2004)].

In this paper we outline the rationale for why stocks that are commonly held by multiple skilled managers are likely to outperform both the market and underlying managers themselves. We also show how it is possible

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to use this insight to construct high alpha portfolios, not just in theory but in practice as well. These portfolios tend to be highly concentrated, which further boosts the potential for higher excess returns. For example, Gunning (2006), Kacperczyk, Sialm and Zheng (2006) and Brown, Brands and Gallagher (2006) all document a positive relationship between portfolio concentration and investment returns.

We discuss a number of issues and complexities surrounding the construction of such portfolios. Most important is the ability to identify skilled managers and successfully blend those with complementary styles. Another key requirement is access to the underlying fund managers' holdings data. Multi-managers that use discrete mandates are best placed to capture and utilise this information. Constructing these portfolios also requires a sophisticated quantitative process for capturing the alpha signal from multiple managers while balancing constraints such as turnover and tracking error.

A hidden gem

Understanding common and offsetting positions

A misconception often levelled against multi-manager structures is that divergent manager views result in offsetting positions, which dilute the alpha potential of the fund. This misconception is driven by a seemingly intuitive argument that offsetting positions lead to smaller active bets, and that smaller active bets must therefore lead to lower excess returns (assuming of course the managers generate positive excess returns in the first place). Eggins and Parish (2007) dispel this myth, pointing out that although the size of active positions falls when manager are combined, excess returns do not.

The missing ingredient in this misconception is skill. Eggins and Parish (2007) show that if the underlying managers have skill, the multi-manager process efficiently calibrates bet sizes according to the level of combined wisdom of the managers. Essentially, the bets that are more likely to be correct (where the managers agree) are retained while those that are less likely to pay off (where the manager views diverge) are neutralised. The end result is that the multi-manager portfolio displays a higher level of 'skill' than the underlying managers, which offsets the decline in the active bets[2].

The goal of Eggins and Parish (2007) is to dispel the myth that combining managers leads to lower returns. Although not the focus of that paper, their results also highlight a rarely noticed, 'hidden gem' that occurs naturally within multi-manager portfolios; the common bets of skilled managers are more likely to add value than those that are offset. In the next section we show how this hidden gem can be isolated and enhanced into an alpha signal for selecting stocks.

Enhancing the alpha signal

Treating manager bets as alpha signals is reminiscent of the way many fund managers (especially quantitative managers) generate stock forecasts. Managers often combine a wide range of factors (eg. valuation, earnings, momentum) to derive their final view on a stock, a process called composite forecasting.

[2] There a number of subtleties to this argument – see Eggins (2007) and Eggins and Parish (2007) for more details.

The rationale for this is analogous to security diversification; combining more than one forecast, as long as they are not perfectly correlated, reduces forecast errors, which improves accuracy [see Ambachtsheer and Farrell (1979) for an application and proof of this concept].

The increase in skill when combining managers can be shown mathematically. Using Grinold and Khan's (2000) definition of skill, the information coefficient (defined as the correlation between manager forecasts and realised outcomes), Sorenson et al (2004) show that the combined information coefficient from two sources (IC_A and IC_B) is:

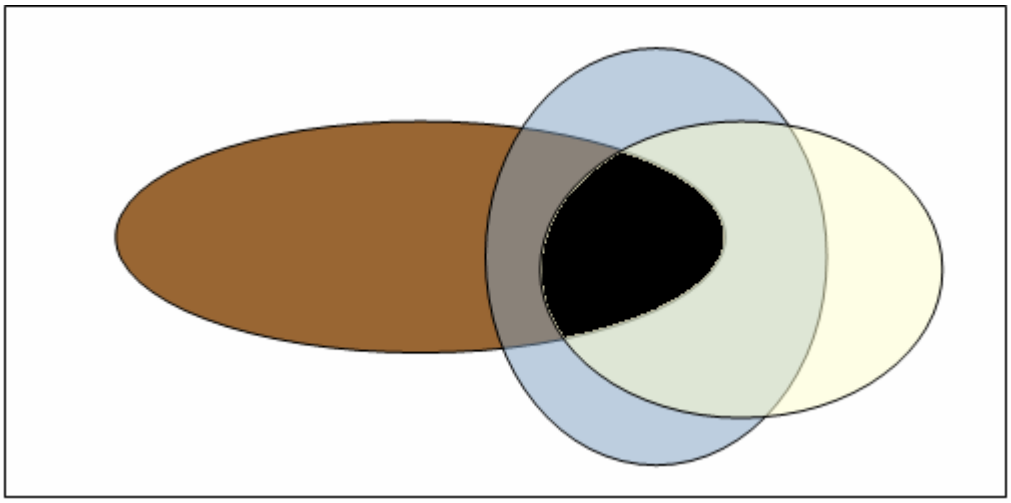
$$(1) \qquad IC_{Combined} = \frac{w_A IC_A + w_B IC_B}{\sqrt{1 - 2w_A w_B (1 - \rho)}},$$

where w_A and w_B are the weights allocated to each source and ρ is the correlation between them.

Equation (1) is generally couched in terms of composite forecasts. However, the result equally applies to combining the forecasts inherent in manager portfolios. The equation states that combined skill is a function of the skill of the underlying managers and the correlation of their forecasts. Higher skill and lower correlations lead to more accurate forecasts. Multi-manager portfolios achieve this naturally. Understanding this process, however, can lead not just to risk reduction (the traditional domain of multi-managers), but return enhancement as well. A portfolio could be constructed, for example, by purchasing only those stocks that are commonly held by different skilled managers.

Figure 1 is a visual representation of this concept. The three ellipses represent the stocks held by three different managers. A portfolio that exploits the beneficial overlap between skilled managers will hold only those stocks that are common to at least two, or preferably all three managers (shaded in black). The goal is to scale up the multi-manager portfolio to exploit the alpha signals contained in the managers' common bets.

Figure 1: Identifying common active positions



Source: Russell Investment Group

A worked example: simulating skilled management

This section works through a simple example to illustrate the increased skill from combining the active positions of skilled managers. It also points to the dangers of blending the common holdings of managers without skill.

The model

We construct a hypothetical investment universe with 1000 stocks and five managers. Stocks are equally weighted in the benchmark and manager portfolios. The returns for each stock are generated using a random draw from the normal distribution.

We define skill as the proportion of active bets each manager gets correct; a measure we call the success ratio. The success ratio captures broadly the same concept as the information coefficient presented in equation (1). Each of the five managers is initially assigned a positive level of skill, with a success ratio of 60%. We also simulate the case where managers have a success ratio of 40%, indicating no skill.

Manager skill is controlled through a second random draw from the normal distribution; draws above a particular threshold are deemed 'correct' while draws below the threshold are incorrect. A correct draw denotes an overweight (underweight) position in a stock that outperforms (underperforms) the benchmark, and vice versa for an incorrect draw.

Table 1 presents summary results from the simulation model. It shows the success ratio of bets that are common to one, two, three, four and all five managers. The skilled simulation, where the managers each have a 60% success ratio, is presented in the first row. The bets that are unique to an individual manager

pay off only 25% of the time. By contrast, bets that are common to three of the five managers are correct 65% of the time. When all five managers agree, the hit rate rises to 89%[3].

The second row displays the results for the unskilled managers. Note the pattern is reversed, with unique bets now far more likely to add value than common bets. Attempting to exploit the common bets of unskilled managers is likely to be a losing strategy, which once more highlights the importance of selecting skilled managers.

Table 1: Simulation model: success ratios for commonly held bets

Success Ratios	1mgr	2mgr	3mgr	4mgr	5mgr
With Skill	25%	35 %	65%	75%	89%
Without Skill	77%	58%	42%	23%	10%

Source: Russell Investment Group

Constructing 'best ideas' portfolios

Although useful for illustrating the main results, simulation models necessarily assume away many real world complexities. This section uses actual fund manager data to show how these insights can be applied in actual portfolios. We refer to these portfolios as 'best ideas' portfolios.

Methodology

We construct 27 hypothetical manager combinations using data on Australian equity managers. To be included in a combination, managers need continuous monthly holdings in Russell's database from December 2001 to March 2007. Past performance is not considered[4].

There are six managers in each combination. We require each six-manager combination to contain two value manages, two growth managers and two market-oriented managers. This ensures the resulting portfolios are relatively balanced across investment styles. The choice of six managers of varying styles is, in our opinion, a realistic representation of how many multi-manager portfolios are constructed.

For each manager combination we compute the monthly returns on an equally weighted multi-manager portfolio. We then construct 'best ideas' portfolios from each of the 27 manager combinations. The 'best ideas' portfolios are constructed as follows[5]:

- Each month, all stocks held by at least two of the six managers are added to a broad buy-list

[3] The actual numbers presented here vary slightly if the simulation is re-run with new draws from the normal distribution. Importantly, the broad pattern of the results – rising success ratios as more skilled managers agree, and falling success ratios as more unskilled managers agree – can not change.

[4] There is no performance bias in the managers selected. In fact, the average annualised excess return for the managers selected is 0.9%, which is slightly lower than the average for the Mercers universe over the same period. This means the results presented are, if anything, a conservative estimate of the benefits from constructing 'best ideas' portfolios.

[5] The algorithm for ranking stocks, along with the final weights allocated to stocks in the portfolio, are simplified versions of those used in the Russell Select Holdings strategy. They are proprietary to Russell Investment Group.

- These stocks are then ranked according to an algorithm which takes into account factors such as the number of managers overweight each stock and size of manager overweights
- The top 20 stocks are then selected from the buy-list and weights are assigned to each stock
- The portfolio is rebalanced using the same procedure at the end of each month

Portfolios constructed in this manner can have extremely high turnover – up to 150% per annum. In practice, it is possible to apply trading rules to reduce turnover without reducing returns. The results presented below are for the unconstrained case where no trading rules have been applied, although consistent results are achieved using a range of methods for controlling turnover.

The 'best ideas' portfolios are constructed in a similar spirit to Russell's Select Holdings strategies. For the purposes of this paper, however, the process has been significantly simplified. The goal here is not to describe the finer details of how Russell manages its portfolios, but rather to illustrate how a relatively simple approach to exploiting the overlap between managers can generate significant excess returns.

Results

Table 2 presents the average annualised excess returns, tracking error and information ratios across all 27 manager combinations. It also displays the standard deviations across the 27 combinations to describe the range of outcomes.

Table 2: Return characteristics of 'best ideas' portfolios

	Multi-manager portfolios	**Best ideas portfolios**
Excess Returns		
Average	**0.94**	**2.41**
St. Dev	0.34	0.82
Tracking Error		
Average	1.50	3.85
St. Dev	0.15	0.39
Information Ratios		
Average	0.63	0.63
St. Dev	0.23	0.24

Source: Russell Investment Group

The most important result in Table 2 is the outperformance of the 'best ideas' strategies vis-à-vis the underlying multi-manager portfolios, with the 'best ideas' portfolios outperforming the underlying managers by an average of 1.47% per annum (2.41% minus 0.94%). Recall that the multi-manager returns are merely

the average of the underlying manager returns. This means the 'best ideas' portfolios have substantially outperformed the single manager portfolios that form the basis for these strategies.

The 'best ideas' portfolios display significantly higher tracking errors than the underlying multi-manager portfolios[6]. However, the pickup in excess returns compensates for this additional risk, with the information ratio remaining unchanged between the multi-manager and 'best ideas' portfolios.

Scaling up excess returns

The level of absolute performance achieved by the 'best ideas' strategies is less important than the relationship between their returns and the performance of the multi-manager structures. If the common positions of multiple managers really do outperform unique positions, then the 'best ideas' portfolios should essentially scale-up the excess returns of the underlying multi-manager funds.

To help understand the sources of return in the 'best ideas' portfolio, we estimate the following regression model. The model seeks to explain the portion of the 'best ideas' portfolios' excess returns that are explained by the underlying multi-manager portfolio.

(2) $$R_{BI,t} - R_{I,t} = \alpha_p + \beta_p (R_{MTM,t} - R_{I,t}),$$

where $R_{BI,t}$ = monthly return on the 'best ideas' portfolio, $R_{I,t}$ = return on the benchmark index (S&P/ASX 300), $R_{MTM,t}$ = return on the underlying multi-manager portfolio, α_P = risk-adjusted excess return of the 'best ideas' strategy over the multi-manager portfolio, and β_P = sensitivity of the 'best ideas' strategy to the returns on the multi-manager strategy.

We estimate equation (2) for all 27 'best ideas' portfolios. Table 3 presents the summary regression coefficients and t-statistics from these models.

[6] These portfolios also display high tracking errors relative to single managers. For example, the average 'best ideas' tracking error of 3.85% places it in the top quartile of the Mercers universe over the period.

Table 3: Impact of the underlying multi-manager portfolios on 'best ideas' strategies

	R-Squared	□*P*	□ *P*	*t*□	*t*□
Average	0.54	0.05	**1.88**	0.53	8.61
Maximum	0.69	0.24	2.30	2.20	11.68
Minimum	0.33	-0.09	1.62	-0.93	5.51
St. Dev	0.09	0.07	0.16	0.69	1.51

Source: Russell Investment Group

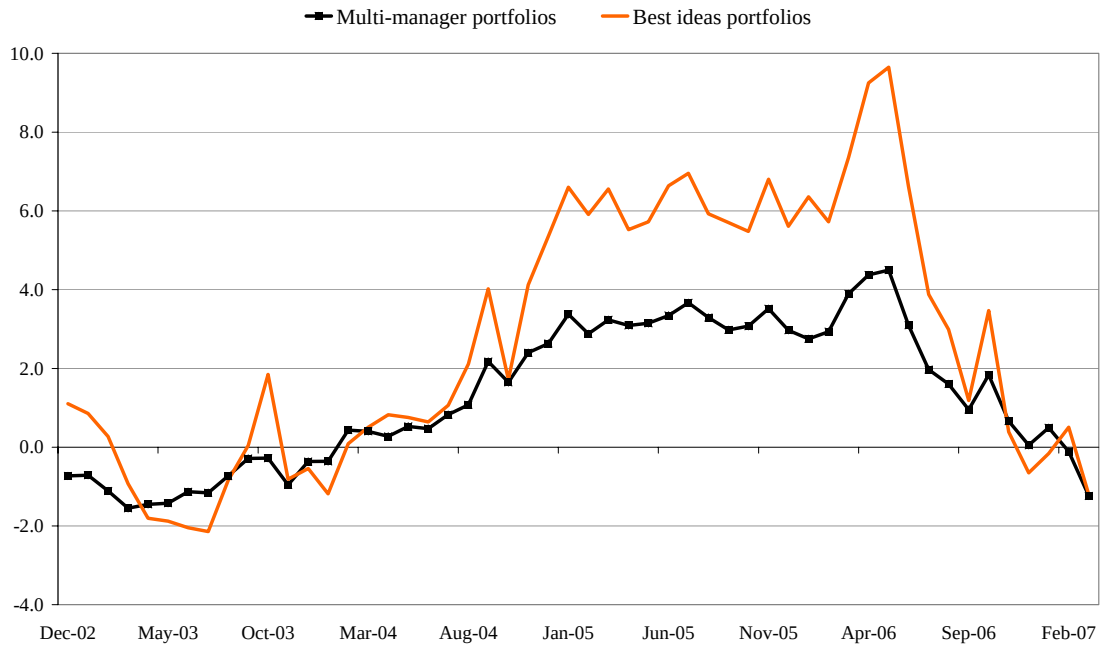
Table 3 shows that all of the 'best ideas' strategies have high values of β_P (also, all are statistically greater than one at the 1% level). This suggests that the 'best ideas' portfolios successfully scale-up the returns of the underlying multi-manager portfolios. For example, $\beta_P = 1.88$ indicates that when the underlying multi-manager portfolio outperforms the benchmark by 1%, the 'best ideas' strategy tends to outperform by 1.88%. The better the underlying managers, the more attractive a 'best ideas' strategy will be.

Only a handful of the α_P's are significantly different from zero, which suggests that although the 'best ideas' portfolios successfully scale-up the excess returns of the multi-manager portfolios, they do not generate any additional 'skill'. Importantly, the process does not detract skill either. This result should not be a surprise; we noted earlier that multi-manager portfolios display a higher level of skill than the underlying managers. These results therefore suggest that the 'best ideas' portfolios effectively leverage the increase in skill from the multi-manager portfolios, without detracting from it[7].

Figure 2 below charts the average rolling yearly excess return for the 'best ideas' portfolios versus the average from the 27 multi-manager portfolios. Once again, we see that the 'best ideas' portfolios successfully amplify the multi-manager excess returns.

[7] We should not confuse the multi-manager portfolios with the underlying single managers. The 'best ideas' portfolios still exhibit significantly more 'skill' than the single managers, just no additional skill on top of the multi-managers (which have already generated the additional skill).

Figure 2: Rolling excess returns: 'best ideas' portfolios versus underlying managers



Portfolio construction issues

The alpha signal described in this paper is relatively simple. In theory, translating this signal into an actual portfolio should also be quite simple, comprising three key steps; 1) identify skilled managers, 2) blend managers with the most divergent processes possible, 3) buy the stocks that are commonly held by these managers. Like any quantitative process, however, if poorly implemented the realised excess returns will deteriorate.

The most important aspect is to select skilled managers. Equation (1), for example, shows that combining uncorrelated skilled forecasts increases the accuracy of composite forecasts. However, if the underlying managers are not skilled (i.e, if the $IC < 0$), the accuracy of the combined forecast actually deteriorates. Similarly, the hypothetical 'best ideas' portfolios show the ability to scale up the excess returns of the underlying multi-manager portfolios. Clearly this strategy is only attractive when it is scaling up positive, not negative, excess returns.

Once skilled managers have been identified, it is also important to ensure they have diverse investment approaches. Equation (1) highlights this, pointing out that lower correlations between managers lead to more accurate forecasts. For example, although there is information content in knowing two value managers are overweight the same stock, the information signal is likely to be much stronger when managers with very different approaches (e.g. a value and growth manager) are both overweight.

Finally, there can at times be an imperfect link between manager alpha forecasts and their active bets. For example, managers may fail to capture their highest conviction alpha forecasts due to poor portfolio construction techniques. The absolute size of active positions is also an imperfect indicator of manager

forecasts. For example, a 1% overweight may be a substantial position for some managers, but only a small position for others. Further, for many managers overweight positions convey more information than underweights, since although overweights are generally a deliberate active decision, often underweights are not [this is supported in Goodwin, Mahtani and Wiltshire (2003)].

Implications for investors

'Best ideas' portfolios provide a powerful way to enhance returns with a modest increase in risk. This type of strategy may be therefore be appropriate for investors willing to take on the extra risk in search of higher returns, or as a high conviction component in a multi-manager portfolio, where risks are controlled at the total fund level but alpha potential is retained. Many financial advisors adopt a 'core and satellite' approach to equity management. A 'best ideas' portfolio could therefore also appeal as high conviction satellite to boost returns.

The amount investors decide to allocate to such a strategy depends on risk tolerance and how the structure fits in with their existing equities exposure. From a balanced fund perspective, the allocation will generally come at the expense of an existing equities allocation, since the decision should be based on excess return and tracking error preferences rather than the investor's strategic asset allocation.

Without doubt, the hardest part of constructing a best ideas portfolio is identifying skilled managers. Unfortunately, this is not as easy as simply observing past performance and selecting top-quartile funds. First, past performance tends to be a poor predictor of long term outperformance [see Oberhofer (1998) and Goodwin and Ross (1999)]. Further, managers selected based on strong recent performance will inevitably have similar styles. For a multi-manager, this is undesirable since it reduces the diversification benefits of combining managers. For a 'best ideas' strategy this is equally concerning, since using more diverse approaches leads to better results.

In our opinion the best way to evaluate managers is to undertake quality qualitative manager research combined with an active visitation program. This can then be combined with quantitative techniques, including examining performance patterns, stock holdings and trades. This level of analysis needs to be applied not just to the managers currently being used, but also to evaluate potential replacements. Few investors have the resources to undertake this level of oversight.

Conclusion

This paper outlines the value of a new and relatively untapped source of alpha for investors. This new alpha source takes advantage of the overlap that occurs naturally in multi-manager portfolios by concentrating stock selection on those companies held overweight by multiple managers.

The most important conclusions are: 1) bets that are common to more than one skilled manager are more likely to add value than those that are unique to a single manager, 2) the more different the managers are in terms of process, the greater the benefit from exploiting any overlap of active bets, 3) the above conclusions only hold for managers with skill; if the underlying managers have no skills in stocks selection then their

common bets will actually be more likely to detract value, 4) although complex, it is possible to take advantage of these insights to construct high alpha portfolios.

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