Fund Manager Allocation ☆

Jieyan Fang [a], Alexander Kempf [b], Monika Trapp [b],*

[a] Finance Area, University of Mannheim, D-68161 Mannheim, Germany
[b] Department of Finance and Centre for Financial Research (CFR), University of Cologne, D-50923 Cologne, Germany

A B S T R A C T

We show that fund families allocate their most skilled managers to market segments in which manager skill is rewarded best. In efficient markets, even skilled managers cannot generate excess returns. In less efficient markets, skilled managers can exploit inefficiencies and generate higher performance than unskilled managers. Fund families seem to be aware of the relation between skill, efficiency, and performance, and allocate more skilled managers to inefficient markets. They pursue this strategy when hiring new fund managers and when reassigning managers to funds within the family. Overall, we conclude that fund families allocate fund managers in an efficient way.

© 2013 Elsevier B.V. All rights reserved.

1. Introduction

This paper is the first to study whether fund families allocate fund managers to market segments so that manager skill is rewarded best. This issue is vital since fund performance depends crucially on the fund manager (e.g., Baks, 2003) and determines the money inflow into the fund (e.g., Sirri and Tufano, 1998). As a fund family typically charges a fixed percentage fee on its assets under management, manager allocation ultimately determines the profitability of the fund family.

Our first main hypothesis is that manager skill is rewarded more in less efficient markets. If a market is fully efficient, prices reflect all information and even highly skilled managers cannot generate excess returns. In less efficient markets,

however, skilled managers can exploit inefficiencies and generate excess returns, which unskilled managers are unable to do. Given that skill is rewarded more in less efficient markets, labor economics theory suggests that fund families should allocate more skilled managers to less efficient market segments. This is our second main hypothesis.

We test these hypotheses using data from the investment grade (IG) and high yield (HY) corporate bond market segments. We choose these market segments because they differ with respect to their efficiency: The HY segment is less efficient than the IG segment.

We first test whether skill pays off more in the less efficient HY segment. Our regression analysis supports this hypothesis, even after we control for various manager and fund characteristics. Skill pays off in the less efficient HY segment, but not in the more efficient IG segment. In our second set of tests, we analyze whether fund families allocate managers to market segments so that their skill pays off best. We find strong evidence for such behavior: Fund families allocate more skilled managers to the less efficient HY segment.

Our paper is related to two strands of the literature. First, it contributes to the literature analyzing the impact of manager skill on fund performance (e.g., Golec, 1996; Chevalier and Ellison, 1999b; Gottesman and Morey, 2006; Li, Zhang, and Zhao, 2011). Our study reconciles contradictory evidence on the impact of skill on performance provided in earlier studies by showing that this impact depends on market efficiency.

Second, our paper contributes to studies that explore how fund families allocate managers. Khorana (1996) and Chevalier and Ellison (1999a) analyze hiring and firing of fund managers. Drazin and Rao (2002) study how fund families allocate already-employed managers to newly founded funds. We add to this literature by demonstrating that fund families allocate managers to market segments according to manager skill and market efficiency.

The rest of the paper is structured as follows. In Section 2, we outline a conceptual model to substantiate our hypotheses. In Section 3, we provide evidence that the HY market is less efficient than the IG market. In Section 4, we describe our data and present summary statistics. In Section 5, we test our first main hypothesis: Manager skill pays off more in less efficient market segments. Section 6 presents results on our second main hypothesis: Fund families allocate more highly skilled managers to less efficient market segments. In Section 7, we provide several robustness checks. Section 8 summarizes and concludes.

2. Economic rationale of manager allocation

Our basic idea is that fund families allocate more highly skilled managers to less efficient market segments since skill pays off more in these segments. The rationale (which we outline in more detail in the Appendix) is that more highly skilled fund managers can better exploit market inefficiency. The less efficient the market is, the more prices can deviate from fair values. Hence, there is more scope for managers to exploit mispricing and outperform in that market. Therefore, it is optimal to assign highly skilled fund managers to those market segments.

Consider two fund managers who differ with respect to their skill at exploiting mispricing. The more highly skilled manager can better exploit mispricing than the less skilled manager so that the funds she manages will deliver a better performance. The performance difference due to the difference in skill is higher the larger the mispricing is, i.e., the less efficient the market is. This leads to our first main hypothesis: Skill is rewarded more in less efficient markets. We test this hypothesis in Section 5.

The fund family has to decide how to assign the managers to two funds, one operating in the inefficient market segment, the other operating in the more efficient segment. To maximize its profit, the fund family allocates managers to funds so that overall fund performance is maximized. The rationale is that fund performance determines fund growth and, given the industry's fee structure, fee income and profit at the fund family level.[1] Since skill

is rewarded more in the less efficient segment, it is optimal for the fund family to assign the more highly skilled manager to the less efficient market segment, and the less skilled manager to the more efficient segment. This leads to our second main hypothesis: Fund families allocate more skilled managers to less efficient market segments. We test this hypothesis in Section 6.

3. Classification of market segments

To test our main hypotheses, we need two market segments which differ with respect to their efficiency. In this section, we show that the HY and the IG segments clearly differ with respect to their efficiency[2]: The HY segment is less efficient than the IG segment.

We support this claim by two analyses. First, we look at the percentage of index funds in a market segment. High information efficiency and pricing efficiency are two signs of market efficiency. In such a market, active management does not pay off, and investors should buy index funds rather than actively managed funds. Therefore, the percentage of index funds should be higher in more efficient market segments. To test whether the percentages of index funds differ between the IG and the HY segments, we use data from the Center for Research in Security Prices (CRSP) Survivor Bias Free US Mutual Fund Database and aggregate total net assets of all IG and HY index and non-index funds for the period 2003 to 2010.[3] We do that for the IG segment and the HY segment separately, and then calculate the proportion of index funds in each segment by dividing the index funds' total net assets by the total net assets of all funds (index funds and non-index funds) in the segment. The proportion of index funds is much higher at 18% in the IG segment than in the HY segment with only 2%. This observation supports our claim that the IG segment is more efficient than the HY segment.

As a second test, we compare return predictability in the two market segments. A higher return predictability suggests lower efficiency. Kwan (1996) and Hotchkiss and Ronen (2002) provide early empirical evidence for higher return predictability in the HY segment than in the IG segment. We test whether this ranking also holds for more recent periods in a time-series analysis of the corporate bond market and the credit default swap (CDS) market. We estimate a vector autoregressive (VAR) model to analyze the extent to which bond returns are predictable in the two market segments.

For the IG market segment, we use daily changes of the Barclays US Corporate Investment Grade Index return and the CMA Dow Jones Investment Grade CDX return as dependent variables. For the HY market segment, the dependent variables are the daily changes of the Barclays US High Yield Composite Index return and the CMA Dow

---

[1] Chevalier and Ellison (1997), Sirri and Tufano (1998), and many subsequent papers show that good fund performance leads to subsequent fund inflows.

[2] In Section 4, we explain how we identify HY and IG funds.
[3] Source: CRSP™, Chicago Booth School of Business. Used with permission. All rights reserved. crsp.uchicago.edu. For a more detailed description of the CRSP database, see Carhart (1997) and Elton, Gruber, and Blake (2001). Our starting date is determined by the availability of the index fund flag in the database; the end date coincides with the end date of our empirical study.