8 Time Effects, Extreme Flows and Capacity Constraints

8.1 Research Questions and Hypotheses

In the previous chapter 7, the empirical evidence indicates that fund flows and manager changes are important equilibrium mechanisms explaining mean reversion in mutual fund performance. In this chapter, these effects are analyzed in more detail, first, with respect to the relevant time dimension and, second, with respect to the relationship between the magnitude of fund flows and the associated performance reversal. Both approaches can be interpreted as an analysis of what effect a larger difference in cumulated fund flows has on subsequent performance. This larger difference, however, can be achieved by two ways: either the time interval over which fund flows are accumulated is extended to a longer period or the sorting into subgroups is based on more extreme split points by setting a stricter condition for the inclusion of funds in the high- or low-inflow subgroups.

So far, the analysis was based on 12-month formation and 12-month evaluation periods. Thus, the first question to be investigated is whether the effects that have been observed depend on the length of the time interval studied (section 8.2). For example, it might be of interest whether it is possible that fund performance reacts more quickly to manager changes than on fund flows. In addition, this additional analysis serves as a robustness test. Because fund flows occur and accumulate over time, a stronger response of performance to past fund flows would be expected when the formation period is longer, both for winner and loser funds. In the case of winner funds, a relatively immediate negative reaction of performance on positive net inflows is expected for short evaluation periods because the transaction costs associated with liquidity-induced trading are already a drag on fund performance. However, in the very short run, winner funds with strong inflows might benefit from price pressure of their own stock purchases in positions they already own in their portfolio (Bernhardt and Davies, 2009). In the case of loser funds, the transaction costs associated with liquidity-induced trading are a drag on performance in the short term as documented by Edelen (1999). Thus, the beneficial impact of a reduced asset base on fund performance probably sets in
only with a time delay, if at all.\footnote{Note that based on a single sorting loser funds could not benefit significantly from outflows (section 7.4.1).} In the case of manager replacements, a new manager would first shift the portfolio to a neutral position and then start investing according to his assessment, especially among loser funds. Thus, in both cases the reaction of performance to manager changes should be relatively immediate. A stronger response is expected for short formation periods and for evaluation periods with short to medium length.

After having analyzed the impact of the time dimension on the response of fund performance to the equilibrium mechanisms, the empirical analysis goes on to focus only on the fund-flow mechanism. Specifically, the question is raised how the reaction of fund performance is related to the magnitude of fund flows (section 8.3). This is especially interesting for loser funds because three potential explanations for the weak support of the Berk and Green (2004) hypothesis among loser funds reported in section 7.4.1 can be identified: (1) the negative short-term impact of transaction costs from liquidity-induced trading; (2) a disposition effect among fund managers, i.e. managers do not respond to outflows by reorganizing the portfolio; (3) a disposition effect among fund investors, i.e. due to their hesitant response to past underperformance outflows are just not large enough to positively affect fund performance in the sense of Berk and Green (2004). It is the third explanation which is analyzed explicitly in section 8.3 by focusing only on loser funds that do in fact experience large outflows.

In order to investigate how the level of fund flows is related to the performance reversal, a similar analysis as that in chapter 7 is performed. However, instead of using median net inflows as the split point between the decile subgroups with high and low net inflows, the upper and lower quintiles are used as the split points. Thus, high-inflow funds are those with the highest 20 percent of net inflows, i.e. above the 80th percentile, and low-inflow funds are those with the lowest 20 percent of net inflows of each decile, i.e. below the 20th percentile. If higher levels of inflows and outflows have a stronger impact on investment performance as compared to lower levels, then the performance reversals observed in this chapter should be larger than those observed in chapter 7.

In addition to the sorting on more extreme fund flows, a sorting on fund size is performed in section 8.3, which is based on the following reasoning. Two assumptions are crucial for the hypothesis of Berk and Green (2004). First, investors