



The performance of hedge funds and mutual funds in emerging markets

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ABSTRACT

Use of short selling and derivatives is limited in most emerging markets because such instruments are not as readily available as they are in developed capital markets. These limitations raise questions about the value added provided by hedge funds, especially compared to traditional mutual funds active in these markets. We use five existing performance measurement models plus a new asset-style factor model to identify the return sources and the alpha generated by both types of funds. We analyze subperiods, different market environments, and structural breaks. Our results indicate that some hedge funds generate significant positive alpha, whereas most mutual funds do not outperform traditional benchmarks. We find that hedge funds are more active in shifting their asset allocation. The higher degree of freedom that hedge funds enjoy in their investment style might thus be one explanation for the differences in performance.

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1. Introduction

Institutional investors and high-net-worth individuals have put significant amounts of money into hedge funds, seeking high returns as well as diversification benefits promised by hedge fund managers (see Fung et al., 2008). Due to the absence of reliable data, academic literature on hedge funds in the 1990s was restricted to descriptive analysis and relatively simple performance metrics (e.g., Fung and Hsieh, 1997, 1999; Ackermann et al., 1999). However, as more information and data have become available, more sophisticated techniques from quantitative finance have been used to analyze hedge funds. One important stream of this literature has developed multifactor performance measurement models (Fung and Hsieh, 2001; Agarwal and Naik, 2004) that identify the sources of hedge fund returns and separate the risk premiums from different investments (beta) and the alpha that hedge fund managers provide.

Recent literature shows that classical, linear performance measurement models often cannot capture the dynamic trading

strategies in the different asset classes and markets that many hedge funds pursue (Agarwal and Naik, 2004; Capocci and Hübner, 2004). Moreover, hedge funds employ a variety of trading strategies, so analyzing all hedge funds using only one performance measurement framework that does not consider the characteristics of the specific strategies is of limited value. Hedge-fund-style specific performance measurement models are needed so as to capture the differences in management style (Fung and Hsieh, 2001, 2004; Agarwal and Naik, 2004).

In this paper, we use recent innovations from performance measurement literature (Agarwal and Naik, 2004; Fung and Hsieh, 2004; Fung et al., 2008) to analyze the performance of emerging market hedge funds. We define “emerging markets” as those countries or areas of the globe that are in the process of rapid growth and industrialization, such as China, India, and Latin America, as well as many eastern European and southeastern Asian countries. These markets exhibit significant growth opportunities, but also high political and economic risks, making emerging markets more volatile than mature markets (De Santis and Imrohoroglu, 1997). A main difference between emerging market hedge funds and other hedge funds is that use of short selling and derivatives was relatively limited in the previous two decades because such instruments were not as readily

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available as they are in developed capital markets.¹ These limitations raise questions about the value added provided by these funds, for example, compared to traditional long-only mutual funds.

Emerging market hedge funds have been analyzed as one among many strategies in hedge fund performance measurement literature such as Fung and Hsieh (1997, 2001), Agarwal and Naik (2004), and Capocci and Hübner (2004). However, all these authors do not analyze these funds in detail or try to extract the main differences between these funds and other hedge funds.² This is somewhat surprising, especially given the relative importance of emerging markets in the hedge fund industry.³ Further the underlying factors, such as emerging market stock and bond indices, are – at least recently – more readily available than for other hedge fund strategies which involve more complex arbitrage strategies. Our analysis will show that appropriate factor models can be derived much more easily for emerging market hedge funds than for other hedge funds. Among the few authors who focus on emerging market hedge funds are Sancetta and Satchell (2005). However, they analyze only a small sample of 15 emerging market hedge funds over a relatively short period (60 months). Furthermore, their aim is to apply a new test statistic for market timing on a data sample. More recently, Strömquist (2007) analyzes the skills of emerging market hedge fund managers. Her focus is on comparing emerging market hedge funds with other hedge fund strategies, while our focus is on comparing emerging market hedge funds with mutual funds active in this market. Abugri and Dutta (2009) analyze whether emerging market hedge funds follow a pattern similar to that reported for advanced market hedge funds after 2006. The focus of this paper also differs from this analysis, in that we compare hedge funds and mutual funds active in emerging markets, while these authors analyze whether emerging market hedge funds are comparable with hedge funds that are active in advanced markets. Furthermore, we analyze individual hedge fund data; Abugri and Dutta (2009) consider hedge fund indices.^{4,5}

The aim of this paper is to fill a gap in literature by providing a broad evaluation of the performance of emerging market hedge

funds and mutual funds. We build upon insights from both the hedge fund and mutual fund literature and analyze six factor models, some of which are representative of recent innovations in this growing field of research. For comparison purposes, we start with the classical single-factor (1) Capital Asset Pricing Model (CAPM) and then extend our analysis to more complex multifactor models, including, (2) Fama and French (1993), (3) Carhart (1997), (4) Fung and Hsieh (1997), and (5) Fung and Hsieh (2004). All these models are useful in identifying the risks underlying hedge funds and mutual funds, but they cannot account for the specific characteristics of emerging market hedge funds. We thus employ emerging market risk factors to set up our sixth model: an emerging market asset class factor model. In our analysis we compare the performance of hedge funds not only with traditional benchmark indices, but also with traditional mutual funds that have an investment focus in emerging markets. Most studies only consider either hedge funds or mutual funds; we analyze both investment vehicles active in this growing market.⁶

Our analysis builds upon the Center for International Securities and Derivatives Markets (CISDM) database, which is one of the largest hedge fund databases ever analyzed for this purpose. It contains data on 566 hedge funds which have an emerging market focus. Additionally, we select 1542 mutual funds active in emerging markets from the Thomson Financial Datastream database. The analysis covers the years 1995 through August 2008, which is advantageous for three reasons. First, the results will not suffer as much from the survivorship and backfilling biases that plague much of the older hedge fund research.⁷ Second, this period contains bull as well as bear markets, allowing us to analyze the performance of emerging market hedge funds in different market environments; many other studies are limited to the analysis of bull markets.⁸ Third, the analyzed time period contains some critical events for emerging market hedge funds, such as the Asian crises in 1998 and the technology bubble in 2000. We consider these events in detail in our analysis of structural breaks, subperiods, and market environments.

Our main findings can be summarized as follows. (1) Hedge fund returns and alphas are much higher than those of traditional mutual funds. (2) Some hedge funds outperform traditional benchmarks, whereas most mutual funds tend to underperform traditional benchmarks. (3) In bad or neutral market environments, hedge funds outperform mutual funds while generating the same returns in good environments. Overall, our analysis indicates that emerging market hedge funds perform better than their traditional competitors. We also discuss potential reasons for the performance differences, i.e., higher flexibility, liquidity risk, lower regulation, and technical problems such as return smoothing.

The remainder of the paper is organized as follows. Section 2 covers the methodology, i.e., the six performance measurement models we use in the empirical part. Section 3 presents our data and discusses how we deal with the several data biases inherent in hedge fund data. In Section 4 we present our empirical findings, and we conclude in Section 5.

¹ There is some evidence that in recent years emerging market hedge funds have had a growing set of instruments for trading in emerging markets. For example, Abugri and Dutta (2009) note that emerging market hedge funds have begun to accommodate distressed, relative value arbitrage, quantitative directional and activist strategies. Chen (2009) notes that by June 2006, 62.7% of the emerging market hedge funds in the TASS database were already using derivatives. Although this is one of the lowest values compared to other hedge fund strategies, it shows that emerging market hedge funds now face more trading opportunities and might thus have changed their strategy. This hypothesis is supported by the empirical findings of Abugri and Dutta (2009). Following Abugri and Dutta (2009), we will also analyze whether hedge funds have changed their strategy. See also Frino et al. (2009) for an analysis of derivative use in investment management.

² Fung and Hsieh (1997, 2001), Agarwal and Naik (2004), and Capocci and Hübner (2004) all develop performance measurement models for the whole hedge fund and funds of hedge funds market, but they do not consider emerging markets in detail.

³ Based on the number of funds, emerging market hedge funds are the second largest hedge fund strategy group after long/short equity (see, e.g., Capocci and Hübner, 2004; Eling, 2009).

⁴ In an analysis of different subperiods, we also analyze the hypotheses developed by Abugri and Dutta (2009) that since 2006 emerging market hedge funds have behaved like regular hedge funds, while traditionally before 2007 they behaved like mutual funds. Our empirical analysis of different subperiods thus extends the findings by Abugri and Dutta (2009) in that we analyze individual hedge fund data instead of hedge fund indices.

⁵ Another stream of literature analyzes mutual funds with a focus on emerging markets, i.e., funds that do not use leverage, derivatives, and short selling (even if such might be possible in some emerging markets). Abel and Fletcher (2004) analyzes UK unit trusts with a focus on emerging market equity using stochastic discount factors and finds no evidence of superior performance. Overall, the literature reports mixed findings with regard to the performance of emerging market mutual funds (see, e.g., Tkac, 2001). Aggarwal et al. (2007) analyze the investment allocation decision of emerging market mutual fund managers with regard to American Depositary Receipts (ADRs).

⁶ Chen and Chen (2009) analyze conflicts of interest with concurrent management of mutual and hedge funds for funds active in developed markets.

⁷ Major hedge fund data vendors did not cover dissolved funds prior to 1994. Hedge fund data before 1994 are thus not very reliable. For this reason, Capocci and Hübner (2004) decided to exclude the largest part of their hedge fund data from 1984 to 2000 in their study of hedge fund performance. For the same reason, Liang and Park (2007) start their analysis in 1995. The unreliability of data before 1994 is also discussed by Fung and Hsieh (2000), Liang (2000), and Li and Kazemi (2007).

⁸ See, e.g., Amenc et al. (2003), Baquero et al. (2005), and Brown et al. (1999). Although many hedge funds do not use trend-following strategies, Capocci et al. (2005) found that the market phase may influence the results. It thus seems important to have bullish as well as bearish market phases in the study. Ding and Shawky (2007) emphasizes the importance of considering different market cycles when analyzing hedge fund performance.

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