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ВЫСШАЯ ШКОЛА ЭКОНОМИКИ
НАЦИОНАЛЬНЫЙ ИССЛЕДОВАТЕЛЬСКИЙ УНИВЕРСИТЕТ
ПРИ УЧАСТИИ ВСЕМИРНОГО БАНКА
И МЕЖДУНАРОДНОГО ВАЛЮТНОГО ФОНДА

XV АПРЕЛЬСКАЯ МЕЖДУНАРОДНАЯ НАУЧНАЯ КОНФЕРЕНЦИЯ ПО ПРОБЛЕМАМ РАЗВИТИЯ ЭКОНОМИКИ И ОБЩЕСТВА

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СОДЕРЖАНИЕ

ТЕОРЕТИЧЕСКАЯ ЭКОНОМИКА

СПЕЦИАЛЬНЫЙ СЕМИНАР: DIVERSITY, SOCIAL INTERACTION AND ECONOMIC DEVELOPMENT

СПЕЦИАЛЬНЫЙ СЕМИНАР: IMPERFECT MARKETS ANALYSIS AND INTERNATIONAL TRADE

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MARKET PREMIA FOR BRIC COUNTRIES: A PRELIMINARY ANALYSIS OF PERFORMANCE AND RISK

1. Introduction

Some authors [Abel, Fletcher, 2004; Stromqvist, 2007], find that some hedge funds tend to outperform the benchmarks, but most traditional mutual funds do not. One possible reason could be more active management of hedge funds than of mutual funds. Eling et al. [2010] find support for this hypothesis from the tests for structural breaks, the factor exposure, and from the analysis of the performance in different market environments.

Cremers et al. [2007] find that active management predicts fund performance: the funds with the highest Active Share significantly outperform their benchmark indexes both before and after expenses, while the non-index funds with the lowest Active Share underperform. Conventional wisdom, and classical portfolio theory, suggests that investors should widely diversify their holdings across industries to reduce their portfolios' idiosyncratic risk. Fund managers, however, might want to hold concentrated portfolios if they believe some country areas or style management or sectors will outperform the overall market or a benchmark representing it. Indeed skilled fund managers could have informational advantages in specific sectors, and take advantage of this vantage to get superior performance by holding more concentrated portfolios and selecting profitable stocks in specific sectors. Consistent with this hypothesis, we would expect to observe a positive relation between fund performance and industry concentration. Nanda, Wang, and Zheng [2004] provide evidence that fund families following more focused investment strategies across funds

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perform better, likely due to their informational advantages. Lakonishok et al. [1994] find that more concentrated funds perform better after adjusting for risk and style differences using the four-factor model of Carhart [1997]. Mutual funds with above-median industry concentration yield an average abnormal return of 1,58% per year before deducting expenses and 0,33% per year after deducting expenses, whereas mutual funds with below-median industry concentration yield an average abnormal return of 0,36% before and –0,77% after expenses. They also confirm the relation between fund concentration and performance using panel regressions controlling for other fund characteristics.

In addition to the theory of informational advantage, there are other several potential reasons why, ceteris paribus, portfolios with a greater degree of style consistency should produce superior returns. In a very recent paper, Huij et al. [2011], starting from a dataset of global equity funds, show that concentrated funds with higher levels of tracking error display better performance than their more broadly diversified counterparts. The relation between portfolio concentration and performance is mostly driven by the breadth of the underlying fund strategies, that is having holdings concentrated in multiple market segments simultaneously, not just by fund managers willingness to take big bets. Following Brown et al. [2009], it is likely that more style-consistent funds exhibit both less portfolio turnover and transaction costs than funds that allow their style to drift. Second, regardless of dynamic turnover, managers who address their asset allocation decisions, in style factors, near to a declared benchmark, are less likely to perform strategic and tactical asset allocation errors than those who try to set a stock picking process according to own internal style decision process, in the sense of Barberis and Shleifer [2003]. More, as shown by Huang, Sialm, and Zhang [2008], it is likely that managers who act opportunistically will end up changing the risk of their portfolios so to lead to sub-optimal performance. It is also likely that investor community evaluate more accurately managers with consistent styles that is not rolling their investment style to one to another, period by period. As a consequence, best managers, they will want to be evaluated more precisely, and so they try to maintain a style consistent portfolio so they can signal their superior skill to potential investors. Ainsworth, Fong, and Gallagher [2008] document that Australian equity fund managers appear to alter their security holdings specifically to avoid drifting too far away from their self-stated investment styles.

Backs et al. [2006], document a positive relation between mutual fund performance and managers' willingness to take big bets in a relatively small number of stocks. Focused managers outperform their more broadly diversified counterparts roughly 4% annualized. The results hold for mimicking portfolios based on fund holdings as well as when returns are measured net of expenses.

Finally according to Brown et al. [Ibid.], it may also be true that fund managers have different capture ratios (i.e., the proportion of an index return the active manager produces in up and down market conditions) and that this skill is related to the style consistency decision. If so, less style consistent managers might outperform more consistent ones during certain market cycles and, so they try to add value to their performance, by switching between high and low-consistency strategies given the market conditions.

To date, little research on portfolio concentration and local risk factors for BRIC markets is available. We will try to build novel findings with respect to this segments.

2. Empirical analysis

We obtain return data on BRIC equity funds from the Bloomberg database. All equity funds are mutual funds. The database covers monthly returns for BRIC equity funds. Our sample covers the period June 2007 to December 2013.

According, among others, to Huij et al. [Ibid.] methodology we first investigate the performance of concentrated versus diversified funds. Author confirm what several empirical studies have found on US mutual funds, namely that funds with concentrated holdings deliver superior performance with regard to funds exhibit lower levels of tracking error. This observation is consistent with the hypothesis that managers with superior information about specific market segments tend to take advantage from this and holds portfolios with relatively high concentration in those segments. Next, we examine the relation between fund performance and the breadth of the underlying strategies. In order to test whether diversifying loadings across multiple market segments affects performance.

Finally we examine the impact of local and global risk factor, by means of several specialized measures.

2.1. The performance of concentrated versus diversified funds

To see whether a positive relation between portfolio concentration and performance also exists for our sample of BRIC markets equity funds, we run a market model analysis and rank funds with different levels of tracking-error. To take account of these different levels of tracking errors, we consider, following literature in this issue, the R-squared value from regressing fund returns relative to market returns as a measure of fund managers' skill to hold less diversified portfolios and invest, consistent amount of under management wealth on few assets

$$r_{i,t} = \alpha_i + \beta_{1,i} RMRF_t + \varepsilon_{it}, \quad (1)$$

where $r_{i,t}$ is the return of fund i at month t, and $RMRFt$ is the excess return on the BRIC market index at month t. The one-month T-bill rate from Bloomberg is taken as a measure of the risk free rate to compute excess returns. The market model in Eq. (1) is estimated for each fund based on the fund's entire return history.

A first distinction is made according to the level of the track error from the benchmark MSCI, funds that have a below-median R-squared value in this regression, are funds with relatively high levels of tracking error and are grouped into the HIGH tracking-error group. Funds that have an above-median R-squared value are grouped into the LOW tracking-error group.

Using the coefficient of determination in conjunction with a survivorship bias-free universe of mutual funds over the period from January 1980 to December 2006, Brown et al. [Ibid.] show that, on average, those funds that are the most consistent in their investment styles and over time produce better absolute and relative performance than those funds demonstrating less style consistency.

To measure performance, we take the Jensen's [1969] alpha, from the market model in Eq. (1). This intercept, reflects the return of a portfolio of securities predicted by a market model, not due to its sensitivity to returns of a broad benchmark (i.e. the MSCI BRIC). To ensure that results are free from outliers bias, in the line of Huij et al. [Ibid.], we normalize and winsorize fund alphas:

$$z_{alpha_i} = \min\left(3, \max\left(-3, \frac{\alpha_i + \mu_\alpha}{\sigma_\alpha}\right)\right), \tag{2}$$

where μ_α is the average fund alpha obtained from the global market model and σ_α is the standard deviation. Besides to take into account that the error terms in Eq. (1) can have not a vary from one fund to another we also introduce a modified version of Eq. (2), which incorporates fund-specific σ_ϵ as follows:

$$z_{alpha_{adj_i}} = \min\left(3, \max\left(-3, \frac{\frac{\alpha_i}{\sigma_{\epsilon,i}} + \frac{\mu\alpha}{\sigma_\epsilon}}{\frac{\sigma\alpha}{\sigma_\epsilon}}\right)\right), \tag{3}$$

where $\frac{\mu\alpha}{\sigma_\epsilon}$ is the average ratio of funds' alphas divided by σ_ϵ and $\frac{\sigma\alpha}{\sigma_\epsilon}$ is the standard deviation.

As first step of analysis, we evaluate the standardized alphas and adjusted alphas for the HIGH and LOW tracking-error groups. The results are in Table 1. It appears that HIGH tracking-error funds have a relatively higher standardized alpha com-

pared to LOW tracking-error funds: 0,06 versus –0,06 for BRIC markets. Given the cutting procedure of the two subgroups is not surprising that HIGH tracking-error funds have a lower R-squared from the market model regression, compared to LOW tracking-error funds.

Table 1. Tracking error and performance – BRIC Markets Funds

	# Funds	Z_Alpha			Z_Alpha-adjusted			Rsq_ Market
		Coef-ficient	*t*-statistic	*p*-Value	Coef-ficient	*t*-statistic	*p*-Value	
Low	36	–0,06	–0,30	0,38	–0,10	–0,51	0,31	0,82
High	36	0,06	0,57	0,29	0,10	0,78	0,22	0,67

The results are not characterized by statistically significant, independent of the performance measure we consider. These results are not in the line with the findings of Huij et al. [Ibid.], Kacperczyk et al. [2005], Baks et al. [Ibid.], Cremers and Petajisto [2009] and Amihud and Goyenko [2009] and not support the hypothesis that fund managers taking big bets and who hold more concentrated portfolios could perform better than passive managers by holding more diversified portfolios. In a very recent study Fama and French [2012] found on Asia-Pacific equity portfolios statistical significance negative Jensen' alphas when running multifactor return regression models, when data are double ranked for size and book to market value.

2.2. Fund performance and risk concentration

According to author and Chincarini and Kim [2006], we examine the relation between fund performance and the breadth of the underlying strategies. To approximate the breadth of the underlying fund strategies, we consider the number of factors in a predictive model to which the funds are exposed. In particular, we investigate whether being exposed to multiple factors simultaneously is important for improving performance.

According to Barberis and Shleifer, "to test any predictions that emerge from a model of style investing, it is important to have a concrete way of identifying styles" [2003]. So following Brown et al. [Ibid.], returns-based style analysis can be viewed as a straightforward application of an asset class factor model.

We select factors in order to capture distinctive market segments, which represent investment opportunities that might be considered as diversification components, independent one from each other. The model we consider are based on styles (i.e., market capitalization and valuation multiples). Unlike what has implemented

by Huij et al. [Ibid.], we have not considered model based on countries because our sample, contains a country specialization being focused on BRIC market.

This approach that focuses on identifying styles is widely used in the investment management community. Empirical evidence is provided by Kumar [2009] and Froot and Teo [2008], who show that retail and institutional investors allocate capital at the style level and it is now commonplace to define both investment portfolios and equity indexes along just two dimensions: (i) size and (ii) value-growth characteristics. Fama and French multi-factor asset pricing model [1992; 1993], accounts for these attributes, and it is useful to explore the role that some factors play in explaining the cross-section of equity returns.

There is some literature suggest that the size of a fund affects its ability to outperform the benchmark. In a theoretical paper, Berk and Green [2004] introduce a model with rational agents. In this framework, skilled active managers do not outperform passive benchmarks after deducting expenses because of a competitive market for capital provision combined with decreasing returns to scale in active management. In a related empirical study, Chen, Hong, Huang, and Kubik [2004] find that smaller funds tend to outperform larger funds due to diseconomies of scale.

Table 2. Tracking error, concentration in multiple market segments, and fund performance — BRIC Markets Funds

	# Funds	Z_Alpha				Z_Alpha — adjusted			Rsq_ Market
		Coef-ficient	*t*-sta-tistic	*p*-Value		coef-ficient	*t*-sta-tistic	*p*-Value	
Sample 2007–2013									
Group 1 — Low	32	–0,02	–0,21	0,42	32	0,02	0,13	0,45	0,82
Group 1 — High	26	–0,09	–0,46	0,32	26	–0,15	–0,76	0,23	0,70
Group 2 — Low	4	0,75	2,73	0,04	4	0,77	2,74	0,04	0,82
Group 2 — High	9	0,02	0,03	0,49	9	–0,01	–0,02	0,49	0,63

To measure funds' exposures to styles we take the incremental adjusted R-squared values of two multifactor models. The first multifactor model, represent Fama and French [1993] model, as follows:

$$r_{i,t} = \alpha_i + \beta_{1,i} RMRF_t + \beta_{2,i} SMB_t + \beta_{2,i} HML_t + \in_{i,t} \quad (4)$$

where SMB_t is the difference in return between the MSCI BRIC Small Cap index and the MSCI BRIC Market index at month t, and HML_t is the difference in return between the MSCI BRIC Market Value index and the MSCI BRIC Market Growth index at month t.

Given the multifactor models in Eq. (3), we test whether the positive relation between portfolio concentration and performance is principally driven by fund managers being concentrated in multiple market segments (or risk factors) simultaneously or by fund managers' will to take a chance for big bets. After performing a double-sort (first sorting funds based on their tracking-error levels into HIGH and LOW tracking-error groups and then within each group) of all funds based on the funds' levels of tracking error and the number of market exposure, at the same time, to each underlying fund strategies (strategy breath). Table 2 shows the results.

2.3. Risk adjusted performance measure

We now rede ne fund performance with respect to the following BRIC and non-BRIC benchmarks:

- IBOV: Brasil Sao Paulo Stock Exchange Index
- RTSI: Russian Trading System Index.
- NIFTY: India National Stock Exchange CNX Index
- SHSZ300: Shanghai Shenzhen CSI 300 Index
- S&P500: NYSE or NASDAQ S&P 500 Index

Figure 1 sorts geographical portfolios with respect to Sharpe, Sortino-Satchell, Farinelli-Tibiletti risk measures (see [Eling et al., 2009]) with respect to local BRIC indices.

Sharpe/Sortino-Satchell	
Russia	1,000
India	0,997
China	0,991
Brazil	0,976
Sharpe/Farinelli-Tibiletti	
Russia	0,818
India	0,602
China	0,569
Brazil	0,143
Sortino-Satchell/Farinelli-Tibiletti	
Russia	0,816
India	0,628
China	0,559
Brazil	0,262

Fig. 1. Spearman correlation among RAP measures with respect to local BRIC indices

Figures 2, 3, 4 plot each measure for each BRIC country, comparing the effect of the local and global benchmark.

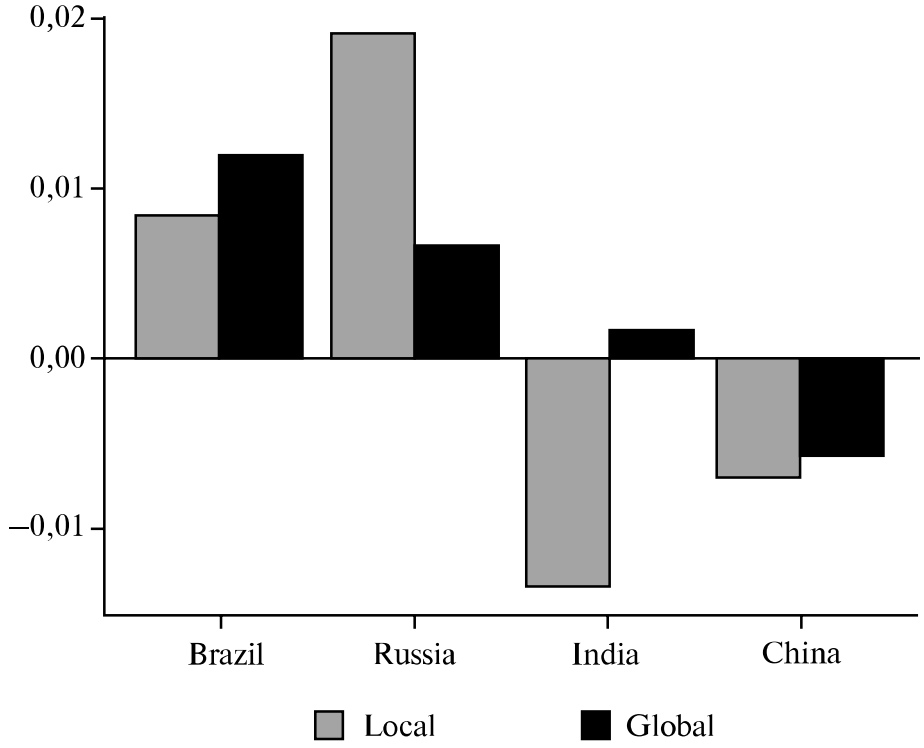

Fig. 2. Local and global Sharpe ratios

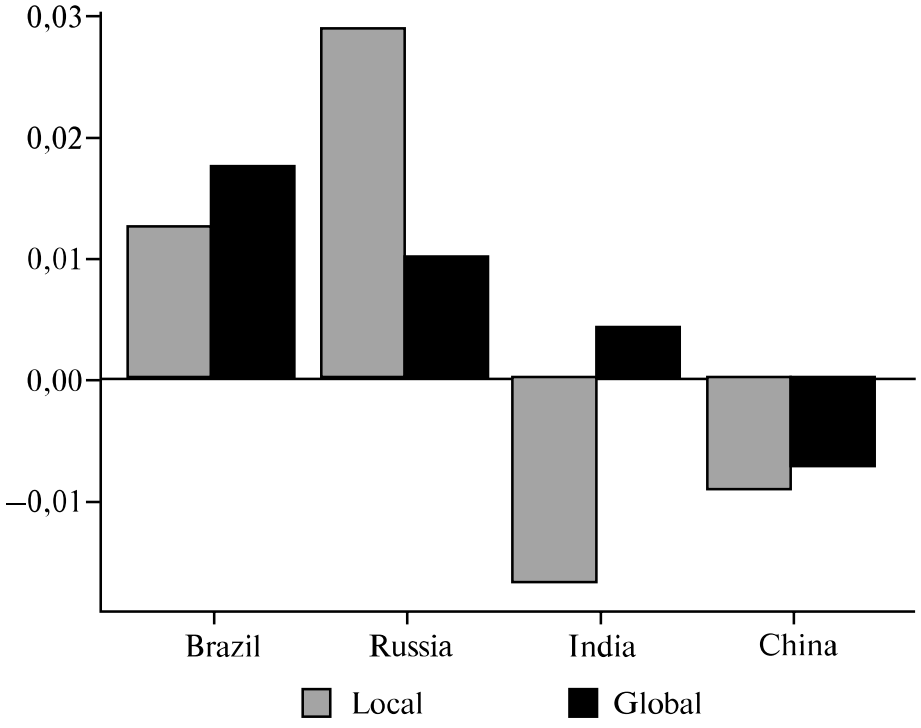

Fig. 3. Local and global Sortino-Satchell ratios

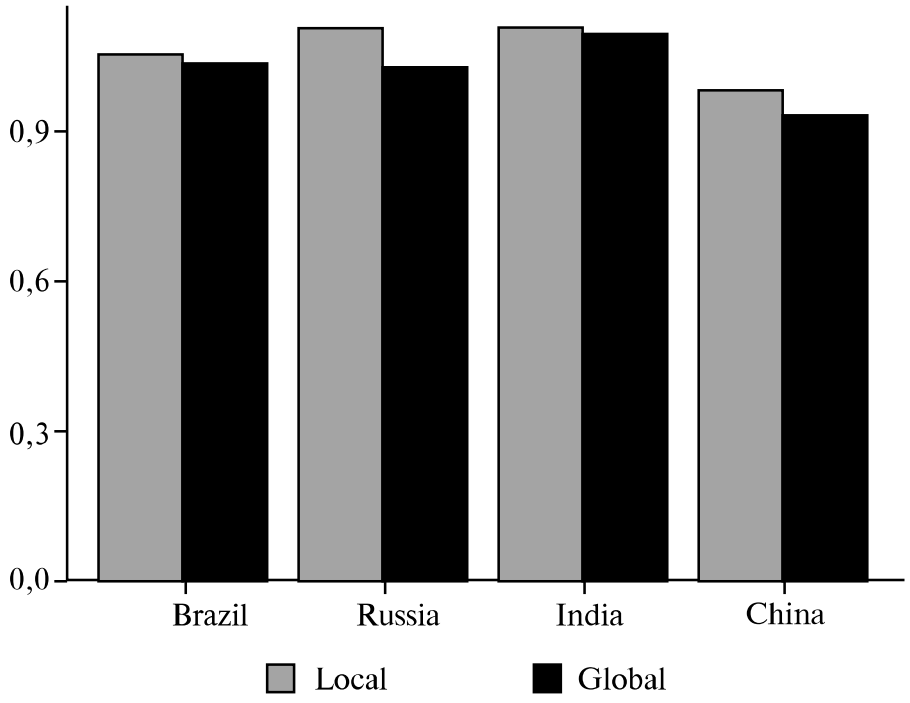

Fig. 4. Local and Global Farinelli-Tibiletti ratios

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LIQUIDITY PERFORMANCE PRE AND POST RTS AND MICEX CONSOLIDATION

Institutional and structural changes of organized trading have been particularly intense since 1990s due to a high level of international competition among exchanges and with electronic communications networks (ECN). Three major directions of these developments can be outlined. First, d*evelopments in ownership structure* involve a conversion of non-commercial entities (mutual societies controlled by their members) into for-profit private companies and to publicly listed companies within the demutualization and IPO processes. A good example is that of the London Stock Exchange (LSE). In 1986 LSE was converted from a closed-end association into a private limited company and later on, in 2000, the private limited company was converted into a public limited company. LSE own stocks have been traded on LSE since 2001. In 1998 only 38% of the members of the World Federation of Exchanges (WFE) were commercial entities; however, in 2006 the number rose to 75%[1]. Second, d*evelopments in the scope of geographical involvement* (*reduction of a geographical gap*) are a geographical proliferation of exchanges, often beyond national boundaries, enabled by recent technological advancements. A good example is that of the NYSE EURONEXT — in 2000 a consolidation of the Belgian, Dutch, and French trading platforms laid a foundation of a pan-European trading platform, EURONEXT. In 2002 the Portuguese stock exchange merged with EURONEXT and in 2006 a transatlantic consolidation of EURONEXT and NYSE formed a global trading platform NYSE EORONEXT. Third, *developments in portfolio of traded assets and offered services* involve a shift from a specialized exchange trading a limited set of financial assets into a diversified exchange trading multiple types of financial assets. That can be traced from dissolution of the Kyoto Stock Exchange (mainly deals in spot trading) into the Osaka Securities Exchange (mainly deals in futures and other derivatives trading) in 2001 and a subsequent merging of the latter exchange and the Tokyo Stock Exchange (mainly deals in spot trading) in 2013. That ensured a formation a trading platform offering a wide range of financial assets and services.

[1] World Federation of Exchanges <http://www.world-exchanges.org>.