THE DETERMINANTS OF FLOWS INTO RETAIL INTERNATIONAL EQUITY FUNDS*

Xinge Zhao

Associate Professor of Finance
China Europe International Business School (CEIBS)
699 Hongfeng Road, Pudong
Shanghai, China, 201206
Tel: 86-21-28905601
Email: zxinge@ceibs.edu

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Abstract

International equity fund investors flee from funds with poor raw returns. In addition, they chase risk-adjusted performance leaders instead of raw return leaders. While international growth fund investors flock into larger funds, regionally focused fund investors invest more in smaller funds presumably due to price impact concerns. Regionally diversified funds tend to receive higher flows if their fund families offer more choices of investment objectives. A stronger U.S. dollar leads investors to increase their investments in European equity funds but to stay away from the riskier developing markets equity funds. International equity fund investors do not appear to be sensitive to expenses or load structures.

JEL classification: G23

Keywords: International Equity Funds; Investor Behavior; Fund Flows

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I. Introduction

International equity funds provide a sensible opportunity for individual investors to achieve international diversification at a reasonable cost, while the high trading costs and inconvenience make it almost infeasible for the vast majority of individual investors to trade stocks listed on foreign stock exchanges directly. Despite the growing importance of international equity funds, little research has been done to study the determinants of flows into international equity funds, or, ultimately, the long-term behaviors of international equity fund investors, such as whether they chase past performance or whether they are sensitive to expenses.[1] Even though there is a large literature on the determinants of flows into domestic equity funds, it might not apply to international equity funds, because international equity funds differ from domestic equity funds in both the profile of investors and fund characteristics. For instance, it is well documented that domestic equity fund investors chase past performance (e.g. Gruber (1996), Sirri and Tufono (1998)). However, Investment Company Institute (1996) shows that international mutual fund shareholders on average are wealthier, better educated, and more sophisticated than domestic fund shareholders. Therefore, there is a higher likelihood that they might understand that good performance is less likely to persist and refrain from chasing performance leaders. In addition, domestic fund investors are found to be sensitive to expenses (e.g., Sirri and Tufano (1998)), because higher fees lead to poorer performance for domestic funds. Nonetheless, Droms and Walker (1994) find that, for international funds, fund performance is not related to expense ratios. Consequently, flows into international funds might not be significantly correlated with fund expenses. In summary, the behaviors of international

[1] Several studies (e.g., Greene and Hodges (2002), Goetzmann et al. (2001)) investigate the day trading of international equity funds. The focus of these studies is the fair pricing issue and the interaction between daily flows and returns for international equity funds, instead of investors' long-term behaviors. The rest of the literature on international equity funds focuses on their performances (e.g., Droms and Walker (1994), Cumby and Glen (1990)).

equity fund investors might differ from those of domestic equity fund investors and entail separate investigation. This paper intends to fill this void in the current literature.

In addition to studying the determinants of flows into international equity funds as a whole, I also disaggregate international equity funds according to their investment objectives and study the determinants of flows for each investment objective separately. Different international equity funds might focus on different investment objectives, such as developing markets equity or European equity. These various investment objectives have very different risk and return characteristics, and might appeal to different investors. As a result, investors might exhibit different behaviors toward the different investments. Further disaggregation of international equity funds allows for a comparison of the behaviors of investors of international equity funds with different investment objectives.

I find that, unlike domestic equity fund investors, international equity fund investors flee from funds with poor raw returns. In addition, they chase risk-adjusted performance leaders instead of raw return leaders. While international growth fund investors flock into larger funds, regionally focused fund investors invest more in smaller funds presumably due to price impact concerns. In addition, regionally diversified funds tend to receive higher flows if their fund families offer more choices of investment objectives. A stronger U.S. dollar leads investors to increase their investments in European equity funds but to stay away from the riskier developing markets equity and international small company funds. International equity fund investors do not appear to be sensitive to expenses or load structures.

The remainder of the paper is organized as follows. Section II outlines the data, the determinants, and the methodology to be used. Section III discusses the hypotheses and estimation results. Section IV concludes.

II. Data, Determinants, and Methodology

Data

Using the CRSP Survivor-Bias Free US Mutual Fund Database, I create a new data set of quarterly data from the first quarter of 1992 to the third quarter of 2001 of 1,603 open-end international equity funds. Exchange Traded Funds (ETFs), such as iShares, are not included, because their operation is very different from that of traditional mutual funds. The time frame is selected because the Fund Objective Codes of the Investment Company Data, Inc. (ICDI) and Strategic Insight, fund family, and 12b-1 fee data are only available after 1992 in the CRSP mutual fund database.[2] All identified by ICDI's Fund Objective Code as International Equity Funds, which invest primarily in securities traded outside the United States, these funds can be further categorized into the following nine investment objectives based on the Strategic Insight Fund Objective Code: International Developing Markets Equity Funds, International Growth Funds, International Small Company Funds, International Total Return Funds, Japanese Equity Funds, Latin America Equity Funds, Pacific Equity including Japan Funds, Pacific Equity excluding Japan Funds, and European Equity Funds.[3]

Around 65 percent of the funds are different share classes of a common portfolio. To examine the effects of loads, 12b-1 fees, and operating expenses, which are specific to each share class, on flows, following Greene and Hodges (2002), I study flows to each share class instead of each portfolio.[4] About 73 percent of all funds target retail investors, and these retail international

[2] Even if all data back to 1962, the first year of the CRSP data, are included, observations from 1992 to 2001 will still account for 93.04% of all observations. International equity funds were rare before 1992. The number of international equity funds did not reach 50 until 1987. Given the dominance of the 1992-2001 data, I believe the same qualitative results will still be obtained even if I use data back to 1962.

[3] For the description of each investment objective, please refer to Appendix A to the CRSP Survivor-Bias Free US Mutual Fund Database Guide.

[4] I also conduct tests using data at the portfolio level and obtain the same qualitative results, which are not reported in the paper.

equity funds can be disaggregated into four categories by load types: front-end load funds, back-end load funds, level-load funds, and no-load funds.

Potential Determinants

The determinants of flows into domestic equity funds have been the subject of a growing number of academic studies. Many of these determinants might also apply to international equity funds. Gruber (1996), for instance, finds that domestic equity fund investors chase past performance. Chevalier and Ellison (1997) and Sirri and Tufano (1998) not only corroborate this finding but also detect the non-linearity in the performance-flow relationship: domestic equity fund investors flock to funds with the highest recent returns, but fail to flee from poor performers. Sirri and Tufano (1998) also find domestic equity fund investors are fee-sensitive in that funds with higher total fees (expense ratio plus amortized load assuming a seven-year holding period) have lower flows. Using more recent data, Barber et al. (2005) study the effects of front-end loads, 12b-1 fees, and other operating expenses separately. They find negative relations between load fees and fund flows, no relation between total operating expenses and fund flows, as well as positive relations between 12b-1 fees and fund flows. They argue that domestic equity fund investors are more sensitive to salient in-your-face fees, such as loads, than operating expenses. Sirri and Tufano (1998) and Nanda et al. (2004) both study the spillover effects — a fund may enjoy higher flows if the fund family it belongs to has larger size or a star fund with superior performance. In addition, the effects of other factors, such as fund size, previous flows, fund age, turnover ratio, and fund risk, have also been studied in the above-mentioned papers.

In addition to the determinants already studied in previous research, I introduce two new factors to investigate the effects of fund families and investment objectives on the flows into international equity funds. First, I consider the number of investment objectives based on ICDI's Fund Objective Codes (including domestic equity and fixed-income investment objectives)

offered in the fund family. I include this variable to capture the spillover effects within a fund family from a different angle. Second, because I follow Sirri and Tufano (1998) in measuring fund performance as its percentile performance relative to other funds with the same Strategic Insight investment objective, such as international growth or Japanese equity, in the same period, I also include the asset-weighted average raw return of the corresponding investment objective to test whether investors also chase objective performance.

Furthermore, it is of interest to consider the effect of changes in exchange rates between the U.S. dollar and foreign currencies on flows to international equity funds. It should be noted first that fund and objective returns already contain an exchange rate component, because fund returns are computed using dollar denominated fund net asset values (NAV).[5] Nevertheless, to test whether flows to international equity funds are directly associated with changes in exchange rates, following Brennan and Cao (1997), I also add a separate measure of changes in exchange rates. Unfortunately, data limitation prevents further analysis of the effect of currency risk. For example, no data can be obtained as to how a fund predicts exchange rate changes or whether a fund hedges currency risk.

Finally, Goetzmann et al. (2003) document that investors tend to rebalance among different asset classes. Their findings suggest that flows into international equity funds might also be associated with domestic equity market returns. As a result, I also test the potential effect of domestic equity market returns.

Measurement of Flows

The vast majority of current literature measures fund flows as the fund asset growth rate net of fund holding period return (percentage flows), rather than the dollar amount of net flows (dollar flows) to control for fund size. This measure is based on the presumption that larger funds tend to have larger net dollar flows (e.g., Gruber (1996)). However, as shown later in Table 3,

such a significant positive relationship only exists for international growth funds, while for regionally focused investment objectives, such as Japanese equity or Latin America equity, larger funds actually receive smaller net dollar flows. Contrary to the presumption behind using percentage flows, these findings apparently do not support the use of such a measure for most investment objectives.

In addition, regardless of the relationship between fund size and dollar flows, as argued by Del Guercio and Tkac (2002), using dollar flows as the dependent variable while "controlling for a potential size effect in a multiple regression format, rather than by scaling the flows, preserves this information for analysis." Consequently, following Del Guercio and Tkac (2002), I focus on dollar flows in the study of determinants of international equity fund flows and, in particular, test the relationship between dollar flows and fund size for international equity funds.

Definitions of Variables

Flows Consistent with the literature, I define *dollar flows* (*FLOW*) as the change in total assets in excess of appreciation. I especially follow Zheng (1999) in also removing the increase in total assets due to merger so that the flow measure clearly represents only net new investments made by investors:[6]

$$FLOW_{i,t} = ASSET_{i,t} - ASSET_{i,t-1}(1 + R_{i,t}) - MASSET_{i,t} \quad (1)$$

where $ASSET_{i,t}$ is the total assets of fund i at the end of quarter t, $R_{i,t}$ is the holding period return of fund i during quarter t, and $MASSET_{i,t}$ is the assets added to fund i during quarter t through

[5] See Chapter 2 of the CRSP Survivor-Bias Free US Mutual Fund Database Guide for details.
[6] Del Guercio and Tkac (2002) also try to control for any effect to flows due to merger.

acquisition of other funds. I also follow Del Guercio and Tkac (2002) in excluding observations from funds closed to new investors, since these funds' flows are artificially restricted.[7]

Fund Size $ASSET_{i,t}$ is used to represent the size of a fund.

Performance and Risk Following Sirri and Tufano (1998), I measure the performance of a fund as its fractional performance rank (*RANK*), which represents the percentile of its raw return (*RAW*) relative to other funds with the same Strategic Insight investment objective in the same quarter. To apply a piecewise linear regression to test any non-linearity in the flow-performance relationship, I continue to follow Sirri and Tufano (1998) to create three performance range variables defined as follows using splines:

$$LOWPERF_{i,t-1} = \min [RANK_{i,t-1}, 0.2]$$
$$MIDPERF_{i,t-1} = \min [RANK_{i,t-1} - \text{LOWPERF}_{i,t-1}, 0.6]$$
$$HIGHPERF_{i,t-1} = \min [RANK_{i,t-1} - \text{LOWPERF}_{i,t-1} - \text{MIDPERF}_{i,t-1}, 0.2] \quad (2)$$

$LOWPERF_{i,t-1}$ represents the bottom performance quintile, $MIDPERF_{i,t-1}$ represents the middle three performance quintiles, and $HIGHPERF_{i,t-1}$ represents the top performance quintile. I also calculate $OAWRET_{i,t-1}$ as the asset-weighted average of the raw holding period returns of all international equity funds with the same Strategic Insight investment objective to measure investment objective performance.

I also follow Sirri and Tufano (1998) in using the standard deviation (*SDRET*) of monthly raw returns of fund *i* in the past 12 months to measure the risk of a fund and to study the effect of risk on fund net flows. In addition, I also measure the risk-adjusted performance of a fund using the Sharpe ratio (*SHARPE*), which is computed as:

[7] As a result, 218 observations are excluded, which account for 0.94 percent of all observations.

$$SHARPE = \frac{\overline{R}_i - \overline{R}_f}{SDRET_i} \tag{3}$$

where $\overline{R}_i$ and $\overline{R}_f$ are the average monthly raw return of fund *i* and risk-free rate in the past 12 months, respectively, and $SDRET_i$ is the standard deviation of the monthly raw returns of fund *i* in the past 12 months.[8] Performance ranks and performance range variables — $LOWSHARPE_{i,t-1}$, $MIDSHARPE_{i,t-1}$, and $HIGHSHARPE_{i,t-1}$ — are computed in the same fashion as in Equation (2), and used to study the effect on flows of risk-adjusted performance.

Expenses and Load Dummies As in Barber et al. (2005), I subtract 12b-1 fees (*12B*) from the expense ratio to create a new variable, *NON12B*, which only represents operating expenses. To test whether any type of load international equity funds might receive higher flows than no-load international equity funds, I create three load fund dummy variables, *FLDUMMY*, *BLDUMMY*, and *LLDUMMY*, which take the value of one if the fund is a front-end load fund, back-end load fund, and level load fund, respectively, and zero otherwise.

Fund Age and Turnover Ratio The age (*AGE*) and turnover ratio (*TURNOVER*) of a fund are also included in the analysis to test their possible effects.

Number of Investment Objectives in the Fund Family *NUMOBJ* represents the number of investment objectives based on ICDI's Fund Objective Codes offered in the fund family.

Changes in the Exchange Rates *FX* measures the quarterly percentage changes in the period average indirectly quoted exchange rates between the U.S. dollar and foreign currencies.[9] For Japanese equity funds, the exchange rate between the U.S. dollar and the Japanese Yen is used. For European equity funds, the exchange rates between the U.S. dollar and

[8] Goetzmann and Kumar (2002) calculate the Sharpe ratio in the same fashion.
[9] As an example of indirectly quoted exchange rates, US$1 = 100 Yen. An increase in the exchange rate indicates that the U.S. dollar appreciates.

the European Currency Unit (ECU) and between the U.S. dollar and the Euro are used for time periods before and after 1999, respectively. For all other funds, the nominal effective exchange rate of the U.S. dollar, which practically measures the exchange rate between the U.S. dollar and the currencies of the rest of the world, is employed. All exchange rate data are obtained from the International Monetary Fund (IMF).

Domestic Equity Market Returns I adopt the Fama/French benchmark factor *RM*, which is the value-weighted return on all NYSE, AMEX, and NASDAQ stocks, as the measure of domestic equity market returns.[10]

Summary Statistics

I compute the medians and interquartile ranges, which equal the difference between the 3rd and the 1st quartiles, of various characteristics of international equity funds with different investment objectives. The results are reported in Panel A of Table 1. International growth funds have by far the largest median size ($33.86 million), while Japanese equity funds are the smallest. Latin America equity funds have the highest median raw return (2.30 percent), followed by international small company funds (2.26 percent). Japanese equity funds and Pacific equity excluding Japan funds, on the other hand, experience the lowest raw returns. While developing markets funds, Latin America equity funds, and Pacific equity excluding Japan funds charge the highest ongoing fees, international growth funds appear to be the low cost leader. It should be noted that Latin America equity funds also charge the highest 12b-1 fees. Developing markets funds, Latin America equity funds, and Pacific equity excluding Japan funds also have the most volatile returns, as shown by their standard deviations, which are considerably higher than those of funds with other investment objectives. With a combination of moderate raw returns and low risks, European equity funds boast the highest Sharpe ratios. On the other hand,

[10] Data on *RM* are downloaded from Ken French's website (http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html).

poor raw returns and above average risks explain why Japanese equity funds and Pacific equity excluding Japan funds have the lowest Sharpe ratios. International small company funds and developing markets funds have their portfolios replaced most often, while a median international growth fund has a relatively stable portfolio, as shown by their respective turnover ratios. International growth funds and international small company funds have the highest median flows. I also report the means and standard deviations of these fund characteristics in Panel B of Table 1. Using means generally generates the same ranking among different investment objectives.

The Statistical Model

To study the determinants of flows into international equity funds, I estimate the following random effects panel regression using the full sample of retail international equity funds:[11]

$$FLOW_{i,t} = \alpha + \beta_1 \bullet ASSET_{i,t-1} + \beta_2 \bullet FLOW_{i,t-1} + \beta_3 \bullet LOWPERF_{i,t-1} + \beta_4 \bullet MIDPERF_{i,t-1} + \beta_5 \bullet HIGHPERF_{i,t-1} + \beta_6 \bullet NON12B_{i,t-1} + \beta_7 \bullet 12B_{i,t-1} + \beta_8 \bullet AGE_{i,t-1} + \beta_9 \bullet TURNOVER_{i,t-1} + \beta_{10} \bullet SDRET_{i,t-1} + \beta_{11} \bullet NUMOBJ_{i,t-1} + \beta_{12} \bullet OAWRET_{i,t-1} + \beta_{13} \bullet FX_{i,t-1} + \beta_{14} \bullet FLDUMMY_i + \beta_{15} \bullet BLDUMMY_i + \beta_{16} \bullet LLDUMMY_i + u_i + \varepsilon_{i,t} \quad (4)$$

where all variables are as defined earlier, and u_i is the random disturbance characterizing the i^{th} fund and is constant through time. In separate regressions, *LOWPERF*, *MIDPERF*, and *HIGHPERF* are replaced by *LOWSHARPE*, *MIDSHARPE*, and *HIGHSHARPE* as an alternative performance measure.

Pairwise correlations (not reported) for independent variables are found to be low enough to reduce concern over multicollinearity problems in the regressions. The absolute values of all

[11] The panel regression method is used to account for the fact that observations from the same fund are not independent relative to one another in this time-series cross-sectional (panel) data set.

correlations are less than 0.30, while the majority of them are less than 0.10. A separate study also reveals that domestic equity market returns (*RM*) and the international investment objective returns (*OAWRET*) are highly correlated to each other (0.742). The high correlation is consistent with findings in the literature, which suggest that foreign stocks respond contemporaneously to common news that affects U.S. stock prices (e.g., Goetzmann et al. (2001), Eun and Shim (1989)). As a result, *RM* is not included in the model due to multicollinearity concerns. In separate regressions (not reported) including *RM* instead of *OAWRET*, I find that *RM* is significantly positively correlated to flows for European equity funds, but has an insignificant effect on flows for other investment objectives and for international equity funds as a whole.

III. Hypotheses and Estimation Results

Hypotheses

Sirri and Tufano (1998) show that domestic equity fund investors flock into funds with the highest recent raw returns, but fail to flee from poor performers. It then becomes interesting to see whether international equity fund investors also chase past performance in the same fashion. As shown in Investment Company Institute (1996), international mutual fund shareholders differ substantially from domestic fund shareholders. The median household financial assets of international fund shareholders are 60 percent higher than those of domestic fund shareholders. International fund shareholders are also better educated. With higher wealth and better education, international fund investors are apparently more sophisticated than domestic fund investors, and there is a higher likelihood that they might understand that persistence in fund returns is more likely to be observable among poor performers rather than good performers (e.g., Hendricks et al. (1993)). As a result, I conjecture that international fund investors might refrain from chasing funds with the highest raw returns and might also punish poor performers. Also, the more

sophisticated international fund investors might pay more attention to risk-adjusted performance measures.

Domestic fund investors are found to be sensitive to expenses (e.g., Sirri and Tufano (1998)), because, as shown in several studies (e.g., Elton et al. (1993), Carhart (1997)), domestic funds with higher fees do not perform as well as domestic funds with lower fees. However, Droms and Walker (1994) find that, for international funds, risk-adjusted and unadjusted investment returns are not related to whether a fund is load or no-load, and neither are expense ratios or turnover ratios related to fund performance. Consequently, I conjecture that flows into international funds are not significantly correlated with fund expenses or load structures.

Investment Company Institute (1996) also finds that international fund investors are twice as likely as domestic fund investors to exchange or move money from one fund to another fund, presumably with a different investment objective, within the same fund family. Therefore, I hypothesize that international funds from fund families offering a greater number of investment objectives (including domestic equity and fixed-income objectives) might receive higher flows, because such fund families offer more options for international fund investors to alter asset allocation within the fund family.

The effect of fund size on flows might be mixed. On one hand, as shown by Sirri and Tufano (1998), larger funds receive higher media coverage and therefore might receive higher flows. On the other hand, the performance of larger funds might deteriorate because funds with larger sizes tend to have higher average trading costs as a result of the tremendous adverse market impacts from trading large blocks of stocks (e.g., Keim and Madhavan (1996), Berk and Green (2004), Chen et al. (2004)). The adverse price impacts should be the most serious for regionally focused funds, which invest in the much smaller regional markets. As a result, investors might stay away from larger regionally focused funds. I expect to observe mixed effects for fund size among international funds with different investment objectives.

The changes in exchange rates might also exert mixed effects on flows into international funds. A stronger U.S. dollar makes foreign stocks cheaper and more attractive but might also lead to the fear that a further decline in the value of the foreign currency might hurt fund returns in the future. I predict that the dominant effect might be different among different investment objectives.

Determinants of Flows for All Retail International Equity Funds

Table 2 reports the estimation results using the full sample of retail international equity funds. Model 1 uses performance measures based on raw returns, while Model 2 uses performance measures based on Sharpe ratios.

As predicted, unlike domestic equity fund investors, the more sophisticated international fund investors do not chase individual funds with the highest raw returns, even though they exhibit an interest in investment objectives with better returns.[12] In addition, international equity fund investors also punish funds with the worst raw returns with huge outflows. As indicated by the significantly positive estimate for *LOWPERF*, a one percentile decrease in *LOWPERF* is associated with $265,000 net outflows for an international equity fund.[13] Furthermore, Model 2 shows a significantly positive and convex relationship between Sharpe-ratio-based performance percentile ranks and flows, except for funds in the bottom performance quintile. The estimates from the piecewise regression of the performance ranges show that, the same increase in

[12] Because the studies of the determinants of domestic equity fund flows all use percentage flows and mostly use data ending in early 1990s, to make the results on international equity funds comparable to those on domestic equity funds, I replicate the analysis in this paper to study the determinants of domestic equity fund flows, also using dollar flows and 1992-2001 data. In results not reported, I find that the major findings for domestic equity funds in the literature, such as the positive and convex performance-flow relationship and sensitivity to expenses, still hold.

[13] The fact that the coefficient of *LOWPERF* is significantly positive and higher than that of *MIDPERF* cannot be interpreted as that funds with lower raw performance receive higher flows. Instead, the results show that the sensitivity to performance is higher in the bottom performance range. In other words, for the same magnitude of performance decrease, funds in the bottom performance range experience higher outflows than funds in the middle performance range.

performance percentile ranks leads to more than twice as many dollar flows in the top performance quintile as in the middle three quintiles.

Consistent with my hypotheses, international equity fund investors do not appear to be sensitive to expenses or load structures, as shown by the insignificant estimates obtained for *NON12B*, *12B*, *TURNOVER* and all load dummies.

As expected, international equity funds from fund families offering a greater number of investment objectives receive higher flows. This positive spillover effect from offering more investment objectives in the fund family indicates that investors do value the potential options to alter asset allocation by switching within the fund family.

In this study using the full sample of retail international equity funds, the effect of fund size on flows appears to be positive, while the changes in exchange rates do not seem to be significantly associated with fund flows. Their effects will be studied in more details later.

International equity fund flows are found to be highly autocorrelated, as shown by the significantly positive estimates for lagged flows. Because Warther (1995) shows that aggregate flows follow an AR (3) process, I also estimate a new model including $FLOW_{i,t-2}$ and $FLOW_{i,t-3}$ in the estimation. The estimates are significantly positive for all three lags of flows (not reported). The autocorrelation decreases over time, though, as evidenced by the fact that the coefficient of the third lag is less than one fifth of that of the first lag in magnitude. In addition, international equity fund investors appear to be very sensitive to the risks involved in their investments and to prefer younger funds.

Determinants of Flows for Retail International Equity Funds with Different Investment Objectives

Different international equity funds might focus on various investment objectives, such as developing markets equity or European equity. As shown in Table 1, these various investment objectives have very different characteristics, and might appeal to different investors. As a result,

one determinant might not have the same effect on the flows into international equity funds with different investment objectives.

I re-estimate the models in Table 2 for each international equity fund investment objective separately and compare the results, which are reported in Table 3 and Table 4.[14] Table 3 reports results using performance measures based on raw returns, while Table 4 reports results using performance measures based on Sharpe ratios.

I first observe that a few factors have consistent effects across all investment objectives. Among them, international equity fund investors do not seem to be sensitive to expenses or chase funds with the highest raw returns in any of the nine investment objectives, as shown by the insignificant estimates for *NON12B*, *12B*, and *HIGHPERF* across all investment objectives. With very few exceptions, turnover ratio and load dummies are not significantly associated with flows for the vast majority of the investment objectives, either. In addition, flows are all significantly positively correlated to lagged flows.

It should then be noted that, since international growth funds account for 40 percent of the total observations, many results in Table 2 are driven primarily by the results from international growth funds. For example, it appears that only international growth fund investors chase funds with high risk-adjusted performance and drop funds with poor raw returns. Furthermore, the significantly positive relationship between fund size and flows can only be observed for international growth funds, while for most regionally focused funds, such as Japanese equity funds and Latin America equity funds, the estimates of the coefficients of fund

[14] *RM* is still not included due to multicollinearity concerns. It turns out that domestic equity market returns are highly correlated to the returns of each and every international investment objective. The correlations with returns of regionally focused objectives (except European equity) are around 0.60, while the correlations for all other investment objectives are higher than 0.70. In addition, *FX* is not included in the estimations for Japanese equity funds or Pacific equity including Japan funds also due to multicollinearity concerns. I compute the correlation between *FX* with *OAWRET* for each investment objective, and find that *FX* and *OAWRET* are highly negatively correlated for Japanese equity funds (-0.464) and Pacific equity including Japan funds (-0.371), while the absolute values of correlations for other investment objectives are all less than 0.30. Apparently, the poor returns of Japanese equity funds and Pacific equity including Japan funds are to a great extent related to the appreciation of the U.S. dollar.

size (*ASSET*) are shown to be significantly negative. These findings are consistent with my hypothesis that investors tend to stay away from larger regionally focused funds due to price impact concerns.

A clear distinction can be seen among different investment objectives as to whether the potential to alter asset allocation within the fund family affects investors' decisions. Those who invest in more regionally diversified objectives (international growth, international small company, and international total return) and Pacific equity including Japan funds apparently value such options, as shown by the significantly positive effects on flows of the number of investment objectives offered by a fund family. This finding suggests that the investments in these funds, which have a more general appeal, are more likely to be affected by investors' general asset allocation strategies. On the other hand, investors of the more specialized developing markets and regionally focused funds pay less attention to other options in the fund family and presumably make their investments in these funds for the exposure to these specific markets.

As predicted, the changes in exchange rates also exert opposite direct effects on flows to funds with certain investment objectives. If the U.S. dollar appreciates, investors tend to stay away from developing markets equity funds and international small company funds, apparently because the fear that further decline in the value of foreign currencies might worsen the risky fund returns dominates the appeal of cheaper stock prices. However, it appears that a stronger U.S. dollar leads investors to increase their investments in European equity funds to take advantage of the cheaper share prices, when a dramatic decline in the value of the ECU or the Euro is less of a concern.

Across most investment objectives, international equity fund investors appear to chase funds with better risk-adjusted performance in the middle performance range. In addition, investors also flock into investment objectives with high returns, with the exception of the three

investment objectives with the most volatile returns (see Table 1): developing markets, Latin America equity, and Pacific equity excluding Japan. Given the volatile nature of their returns, their investors apparently are reluctant to follow the momentum and even show some contrarian behavior for Pacific equity excluding Japan funds.

IV. Conclusion

In this paper, I study the determinants of net flows into retail international equity funds both as a whole and by investment objective, using a new data set of retail international equity funds from 1992 to 2001.

I find that, unlike domestic equity fund investors, international equity fund investors flee from funds with poor raw returns. In addition, they chase risk-adjusted performance leaders instead of raw return leaders. While international growth fund investors flock into larger funds, regionally focused fund investors invest more in smaller funds presumably due to price impact concerns. I also find that regionally diversified funds tend to receive higher flows if their fund families offer more choices of investment objectives, suggesting that investments in these funds are more likely to be affected by investors' general asset allocation strategies. A stronger U.S. dollar leads investors to increase their investments in European equity funds but to stay away from the riskier developing markets equity and international small company funds. International equity fund investors do not appear to be sensitive to expenses or load structures.

International equity funds exhibit increasing importance for both individual investors and the globalization of financial markets. As the first comprehensive study of the determinants of flows into international equity funds, this paper sheds light on the long-term behaviors of international equity fund investors with various investment objectives. Using the results in this paper, international equity fund portfolio managers and financial advisors can better understand what drives the decisions of international equity fund investors. The findings in this paper can

also help senior executives and boards of directors of mutual fund families better formulate their policies regarding the change in fees, the selection of distribution channels, and the expansion of investment objectives.

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TABLE 1. Summary Statistics of International Equity Funds with Different Investment Objectives

Fund Characteristics	All International Equity	Developing Markets	International Growth	International Small Company	International Total Return	Japanese Equity	Latin America Equity	Pacific Equity including Japan	Pacific Equity excluding Japan	European Equity
Panel A: Median (Interquartile Range = 3rd Quartile – 1st Quartile)										
ASSET ($ million)	21.65 (95.95)	10.02 (52.06)	33.9 (138.2)	15.94 (80.45)	28.7 (115.3)	7.05 (55.25)	12.49 (41.74)	19.37 (75.5)	11.80 (49.7)	24.79 (99.18)
RAW (%)	0.83 (13.60)	-0.72 (20.41)	1.15 (10.60)	2.26 (17.21)	1.41 (19.25)	-2.67 (21.32)	2.30 (19.90)	-0.23 (16.40)	-1.42 (17.40)	0.84 (10.70)
SDRET (%)	4.94 (2.91)	7.14 (3.64)	4.41 (2.08)	5.26 (2.91)	4.28 (1.94)	5.89 (2.28)	9.10 (4.27)	5.57 (2.74)	7.78 (4.04)	4.48 (2.35)
SHARPE (%)	6.23 (54.43)	-3.74 (57.18)	9.10 (47.78)	10.17 (61.81)	8.76 (42.05)	-8.92 (82.37)	12.06 (53.99)	-4.66 (66.12)	-6.69 (58.63)	17.90 (52.78)
FLOW ($ million)	0.12 (3.76)	0.05 (2.05)	0.32 (5.49)	0.28 (4.59)	0.16 (4.08)	0.01 (2.24)	-0.03 (2.45)	0.03 (3.73)	-0.04 (2.42)	0.10 (3.70)
NON12B (%)	1.50 (0.50)	1.85 (0.44)	1.37 (0.43)	1.60 (0.39)	1.47 (0.52)	1.53 (0.50)	1.81 (0.41)	1.58 (0.71)	1.70 (0.45)	1.48 (0.52)
12B (%)	0.25 (1.00)	0.25 (1.00)	0.25 (0.95)	0.25 (1.00)	0.25 (0.87)	0.25 (0.99)	0.50 (1.00)	0.30 (1.00)	0.25 (1.00)	0.30 (1.00)
TURNOVER (%)	71 (75)	87 (77)	63 (70)	96 (146)	68 (84)	67 (77)	69 (81)	79 (83)	74 (73)	72 (63)
AGE (months)	34 (47)	29 (38)	36 (50)	31 (35)	39 (55)	30 (44)	34 (43)	43 (59)	33 (39)	30 (48)
Panel B: Mean (Standard Deviation)										
ASSET ($ million)	229 (1108)	106 (348)	382 (1699)	128 (346)	220 (651)	67 (138)	58 (132)	126 (298)	93 (270)	163 (486)
RAW (%)	0.64 (12.68)	-0.67 (15.07)	0.90 (10.52)	2.09 (15.04)	1.02 (9.86)	0.01 (15.47)	1.34 (16.03)	0.02 (13.94)	-0.71 (17.09)	1.26 (11.29)
SDRET (%)	5.46 (2.52)	7.15 (2.61)	4.52 (1.68)	5.51 (2.79)	4.38 (1.64)	6.10 (2.24)	9.02 (3.37)	5.77 (2.05)	7.64 (2.69)	4.74 (2.13)
SHARPE (%)	2.90 (51.46)	-3.91 (39.01)	5.27 (53.99)	5.43 (66.00)	6.59 (50.23)	-7.86 (55.63)	6.81 (35.66)	-6.48 (67.29)	-7.48 (42.05)	11.70 (44.22)
FLOW ($ million)	5.30 (63.71)	3.80 (31.95)	8.84 (83.49)	5.80 (38.26)	5.14 (87.86)	0.92 (24.72)	-0.01 (18.91)	2.18 (29.34)	0.71 (33.46)	2.65 (34.93)
NON12B (%)	1.51 (0.55)	1.83 (0.58)	1.32 (0.45)	1.65 (0.36)	1.38 (0.45)	1.57 (0.53)	1.84 (0.70)	1.70 (0.84)	1.65 (0.40)	1.46 (0.50)
12B (%)	0.42 (0.42)	0.45 (0.42)	0.38 (0.41)	0.44 (0.42)	0.38 (0.42)	0.41 (0.40)	0.50 (0.41)	0.49 (0.42)	0.47 (0.41)	0.47 (0.42)
TURNOVER (%)	86 (67)	101 (65)	77 (59)	128 (100)	77 (62)	82 (64)	90 (71)	91 (68)	91 (74)	86 (63)
AGE (months)	47 (51)	35 (35)	52 (59)	37 (29)	55 (54)	54 (79)	39 (28)	56 (51)	40 (38)	43 (39)

Note: This table reports summary statistics of various characteristics of international equity funds with different investment objectives. *ASSET* is the total assets of a fund. *RAW* is the raw quarterly return of a fund. *SDRET* is the standard deviation of monthly returns of a fund in the past 12 months. *SHARPE* stands for the Sharpe ratio, a measure of risk-adjusted performance, which is calculated as average monthly return in excess of T-bill return in the past 12 months divided by *SDRET*. *FLOW* measures *dollar flows*, and is defined as change in total assets in excess of appreciation and assets added through acquisition. *12B* represents the 12b-1 fees of a fund while *NON12B* is created by subtracting 12b-1 fees from expense ratio to represent operating expenses. *TURNOVER* is the turnover ratio of a fund, while *AGE* represents the age of a fund.

TABLE 2. Determinants of Flows into International Equity Funds

Variables	Model 1	Model 2
ASSET (t-1)	3.040***	2.947***
	(0.000)	(0.000)
FLOW (t-1)	0.503***	0.497***
	(0.000)	(0.000)
LOWPERF (t-1)	0.265**	
	(0.041)	
MIDPERF (t-1)	0.096***	
	(0.001)	
HIGHPERF (t-1)	0.146	
	(0.241)	
LOWSHARPE (t-1)		-0.076
		(0.577)
MIDSHARPE (t-1)		0.166***
		(0.000)
HIGHSHARPE (t-1)		0.405***
		(0.002)
NON12B (t-1)	0.332	-0.401
	(0.759)	(0.707)
12B (t-1)	-1.558	-2.264
	(0.647)	(0.505)
AGE (t-1)	-0.038***	-0.038***
	(0.000)	(0.000)
TURNOVER (t-1)	-0.004	-0.012
	(0.646)	(0.122)
SDRET (t-1)	-0.707***	
	(0.001)	
NUMOBJ (t-1)	0.366***	0.356***
	(0.001)	(0.001)
OAWRET (t-1)	0.227***	0.251***
	(0.000)	(0.000)
FX (t-1)	0.025	0.059
	(0.886)	(0.737)
FLDUMMY	-1.597	-1.347
	(0.278)	(0.360)
BLDUMMY	-2.227	-1.139
	(0.518)	(0.741)
LLDUMMY	-1.591	-0.753
	(0.637)	(0.823)
INTERCEPT	-3.796	-2.384
	(0.217)	(0.441)
Number of observations	15,745	15,746
Overall R^2	0.2736	0.2752

TABLE 2 (Continued)

Note: To study the determinants of flows into international equity funds, Model 1 estimates the following random effects panel regression using the full sample of retail international equity funds excluding observations from funds closed to new investors:

$$FLOW_{i,t} = \alpha + \beta_1 \cdot ASSET_{i,t-1} + \beta_2 \cdot FLOW_{i,t-1} + \beta_3 \cdot LOWPERF_{i,t-1} + \beta_4 \cdot MIDPERF_{i,t-1} + \beta_5 \cdot HIGHPERF_{i,t-1} + \beta_6 \cdot NON12B_{i,t-1} + \beta_7 \cdot 12B_{i,t-1} + \beta_8 \cdot AGE_{i,t-1} + \beta_9 \cdot TURNOVER_{i,t-1} + \beta_{10} \cdot SDRET_{i,t-1} + \beta_{11} \cdot NUMOBJ_{i,t-1} + \beta_{12} \cdot OAWRET_{i,t-1} + \beta_{13} \cdot FX_{i,t-1} + \beta_{14} \cdot FLDUMMY_i + \beta_{15} \cdot BLDUMMY_i + \beta_{16} \cdot LLDUMMY_i + u_i + \varepsilon_{i,t}$$

FLOW measures *dollar flows*, and is defined as change in total assets in excess of appreciation and assets added through acquisition. *ASSET* is the total assets of a fund. Following Sirri and Tufano (1998), I measure the performance of a fund as its fractional performance rank (*RANK*), which represents the percentile of its raw return relative to other funds with the same Strategic Insight investment objective in the same quarter, and create three performance range variables defined as follows using splines: $LOWPERF_{i,t-1}$ = min [$RANK_{i,t-1}$, 0.2], $MIDPERF_{i,t-1}$ = min [$RANK_{i,t-1}$ - $LOWPERF_{i,t-1}$, 0.6], and $HIGHPERF_{i,t-1}$ = min [$RANK_{i,t-1}$ - $LOWPERF_{i,t-1}$ - $MIDPERF_{i,t-1}$, 0.2]. *LOWPERF* represents the bottom performance quintile, *MIDPERF* represents the middle three performance quintiles, and *HIGHPERF* represents the top performance quintile. *12B* represents the 12b-1 fees of a fund while *NON12B* is created by subtracting 12b-1 fees from expense ratio to represent operating expenses. *AGE* represent the age of a fund, while *TURNOVER* is the turnover ratio of a fund. *SDRET* is the standard deviation of monthly returns of a fund in the past 12 months. *NUMOBJ* represents the number of investment objectives based on ICDI's Fund Objective Codes offered in the fund family. *OAWRET* is the asset-weighted average of the raw holding period returns of all funds with the same Strategic Insight investment objective. *FX* measures the quarterly percentage changes in the period average indirectly quoted exchange rates between U.S. dollar and foreign currencies. *FLDUMMY*, *BLDUMMY*, and *LLDUMMY*, take the value of one if the fund is a front-end load fund, back-end load fund, and level-load fund, respectively, and zero otherwise. u_i is the random disturbance characterizing the i^{th} fund and is constant through time. Model 2 uses alternative performance range variables based on the Sharpe ratio, $LOWSHARPE_{i,t-1}$, $MIDSHARPE_{i,t-1}$, and $HIGHSHARPE_{i,t-1}$, which are computed in the same fashion as the performance range variables based on raw returns. The Sharpe ratio measures the risk-adjusted performance of a fund, and is calculated as average monthly return in excess of T-bill return divided by standard deviation of monthly returns in the past 12 months. *p*-values are reported in parentheses. ***, **, and * indicate statistical significance at the 1, 5, and 10 percent confidence levels, respectively.

TABLE 3. Determinants of Flows into International Equity Funds with Different Investment Objectives

Variables	Developing Markets	International Growth	International Small Company	International Total Return	Japanese Equity	Latin America Equity	Pacific Equity including Japan	Pacific Equity excluding Japan	European Equity
ASSET (t-1)	-0.869	2.303***	2.642	5.533	-103.168***	-30.237***	-7.297**	-19.520***	2.371
	(0.543)	(0.000)	(0.415)	(0.109)	(0.000)	(0.000)	(0.037)	(0.000)	(0.165)
FLOW (t-1)	0.537***	0.568***	0.453***	0.296***	0.214***	0.460***	0.411***	0.431***	0.527***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
LOWPERF	0.002	0.506**	-0.092	0.789	0.139	0.005	-0.252	0.055	-0.030
(t-1)	(0.990)	(0.048)	(0.763)	(0.170)	(0.685)	(0.976)	(0.298)	(0.853)	(0.890)
MIDPERF	-0.008	0.126**	0.111	0.101	0.059	0.033	0.068	0.044	0.083*
(t-1)	(0.800)	(0.037)	(0.119)	(0.441)	(0.387)	(0.390)	(0.204)	(0.477)	(0.079)
HIGHPERF	0.109	0.417	-0.200	0.133	-0.176	-0.056	-0.064	0.383	0.318
(t-1)	(0.419)	(0.110)	(0.474)	(0.807)	(0.516)	(0.723)	(0.761)	(0.152)	(0.118)
NON12B	1.315	2.432	-3.976	-9.565	0.262	-0.223	-1.407	-3.347	-0.951
(t-1)	(0.189)	(0.389)	(0.360)	(0.199)	(0.924)	(0.868)	(0.288)	(0.287)	(0.615)
12B (t-1)	-0.970	-3.166	-2.891	-4.355	7.481	4.785	-5.212	0.861	-5.576
	(0.749)	(0.678)	(0.750)	(0.769)	(0.312)	(0.289)	(0.433)	(0.914)	(0.353)
AGE (t-1)	-0.036**	-0.034*	0.009	-0.085*	0.091***	-0.061**	-0.050**	-0.034	-0.083***
	(0.016)	(0.057)	(0.828)	(0.068)	(0.000)	(0.044)	(0.015)	(0.228)	(0.000)
TURNOVER	-0.006	-0.007	0.012	-0.004	0.002	-0.010	-0.032**	-0.010	-0.011
(t-1)	(0.477)	(0.691)	(0.460)	(0.930)	(0.917)	(0.375)	(0.039)	(0.522)	(0.409)
SDRET (t-1)	-1.066***	-1.486**	-0.379	0.612	0.159	-0.182	0.567	-0.194	-0.146
	(0.000)	(0.020)	(0.397)	(0.665)	(0.769)	(0.387)	(0.241)	(0.644)	(0.735)
NUMOBJ	0.051	0.490**	0.813***	1.773***	0.109	0.099	0.416**	0.404	0.261
(t-1)	(0.696)	(0.035)	(0.005)	(0.003)	(0.648)	(0.560)	(0.025)	(0.127)	(0.159)
OAWRET	0.023	0.538***	0.510***	0.446*	0.137*	0.061	0.187**	-0.126*	0.657***
(t-1)	(0.536)	(0.000)	(0.000)	(0.100)	(0.084)	(0.170)	(0.021)	(0.055)	(0.000)
FX (t-1)	-0.420*	0.287	-1.291**	-0.143		0.012		-0.482	0.440**
	(0.062)	(0.503)	(0.011)	(0.878)		(0.964)		(0.279)	(0.030)
FLDUMMY	-3.695**	-2.350	5.122	8.430	-14.970***	-1.259	-3.970	-4.346	-1.649
	(0.015)	(0.427)	(0.163)	(0.257)	(0.000)	(0.581)	(0.175)	(0.220)	(0.529)
BLDUMMY	-3.042	-1.945	5.337	6.347	-17.504**	-2.639	-2.133	-4.329	0.461
	(0.320)	(0.797)	(0.544)	(0.683)	(0.022)	(0.591)	(0.760)	(0.602)	(0.941)
LLDUMMY	-2.642	-1.010	3.161	5.596	-17.905***	-5.328	-2.843	-5.512	2.586
	(0.382)	(0.893)	(0.725)	(0.711)	(0.007)	(0.262)	(0.670)	(0.509)	(0.667)
INTERCEPT	10.839***	-9.751	-2.832	-25.812	3.519	4.223	9.444	6.688	3.934
	(0.002)	(0.162)	(0.759)	(0.138)	(0.693)	(0.342)	(0.125)	(0.451)	(0.480)
Number of observations	2,209	6,098	749	1,800	514	711	1,062	988	1,614
Overall R^2	0.3541	0.3430	0.3383	0.1112	0.1893	0.3127	0.2246	0.2166	0.3530

TABLE 3. (Continued)

Note: The models and variables for Table 3 and Table 4 are as defined in Table 2. International Developing Markets Equity Funds invest primarily in equity securities whose main trading markets are non-industrialized or developing market countries; International Growth Funds invest primarily in equity securities whose main trading markets are outside the United States for capital appreciation; International Small Company Funds invest primarily in equity securities of small capitalization companies whose main trading markets are outside the United States; International Total Return Funds invest primarily in equity securities whose main trading markets are outside the United States for capital appreciation and current or future income; Japanese Equity Funds invest primarily in equity securities of companies in Japan; Latin America Equity Funds invest primarily in equity securities of companies in Latin America; Pacific Equity including Japan Funds invest primarily in equity securities of companies in the Pacific Region including Japan; Pacific Equity excluding Japan Funds invest primarily in equity securities of companies in the Pacific Region excluding Japan; and European Equity Funds invest in equity securities whose primary trading markets are confined to Europe or specific European countries. *p*-values are reported in parentheses. ***, **, and * indicate statistical significance at the 1, 5, and 10 percent confidence levels, respectively.

TABLE 4. The Effect of Alternative Performance Measure Based on the Sharpe Ratio

Variables	Developing Markets	International Growth	International Small Company	International Total Return	Japanese Equity	Latin America Equity	Pacific Equity including Japan	Pacific Equity excluding Japan	European Equity
ASSET (t-1)	-0.980	2.108***	2.434	4.612	-103.105***	-29.588***	-7.078**	-20.051***	2.188
	(0.493)	(0.000)	(0.453)	(0.182)	(0.000)	(0.000)	(0.043)	(0.000)	(0.201)
FLOW (t-1)	0.546***	0.555***	0.444***	0.285***	0.211***	0.462***	0.412***	0.434***	0.520***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
LOWSHARPE	0.017	-0.035	0.025	-0.520	0.091	0.125	-0.121	-0.087	-0.249
(t-1)	(0.907)	(0.895)	(0.944)	(0.368)	(0.774)	(0.518)	(0.648)	(0.781)	(0.260)
MIDSHARPE	0.097***	0.202***	0.070	0.353***	0.103	-0.005	0.007	0.119*	0.165***
(t-1)	(0.002)	(0.001)	(0.337)	(0.008)	(0.132)	(0.905)	(0.895)	(0.055)	(0.000)
HIGHSHARPE	-0.102	1.303***	0.214	0.509	-0.487*	-0.087	-0.254	-0.274	-0.140
(t-1)	(0.462)	(0.000)	(0.455)	(0.373)	(0.074)	(0.608)	(0.236)	(0.316)	(0.518)
NON12B	0.841	2.801	-3.832	-9.630	0.581	-0.395	-1.315	-3.294	-1.321
(t-1)	(0.401)	(0.319)	(0.378)	(0.193)	(0.832)	(0.769)	(0.321)	(0.294)	(0.484)
12B (t-1)	-2.356	-2.786	-4.934	-4.167	6.586	5.845	-4.316	2.357	-6.039
	(0.436)	(0.714)	(0.581)	(0.778)	(0.365)	(0.191)	(0.513)	(0.769)	(0.313)
AGE (t-1)	-0.036**	-0.028	0.006	-0.081*	0.089***	-0.072***	-0.045**	-0.034	-0.084***
	(0.018)	(0.117)	(0.891)	(0.082)	(0.000)	(0.010)	(0.025)	(0.229)	(0.000)
TURNOVER	-0.013	-0.025	0.002	-0.003	-0.001	-0.009	-0.032**	-0.013	-0.009
(t-1)	(0.115)	(0.172)	(0.886)	(0.945)	(0.948)	(0.430)	(0.035)	(0.387)	(0.492)
NUMOBJ	0.024	0.580**	0.857***	1.700***	0.124	0.126	0.394**	0.401	0.220
(t-1)	(0.854)	(0.012)	(0.003)	(0.004)	(0.597)	(0.464)	(0.032)	(0.133)	(0.233)
OAWRET	0.021	0.623***	0.529***	0.484*	0.139*	0.069	0.167**	-0.125*	0.668***
(t-1)	(0.585)	(0.000)	(0.000)	(0.073)	(0.076)	(0.119)	(0.037)	(0.056)	(0.000)
FX (t-1)	-0.204	0.374	-1.225**	-0.240		0.086		-0.464	0.451**
	(0.356)	(0.382)	(0.016)	(0.797)		(0.732)		(0.279)	(0.023)
FLDUMMY	-3.197**	-2.484	5.580	8.137	-14.810***	-1.534	-4.009	-4.755	-1.596
	(0.035)	(0.400)	(0.129)	(0.272)	(0.000)	(0.504)	(0.171)	(0.181)	(0.542)
BLDUMMY	-1.671	-1.679	7.451	6.564	-17.116**	-3.813	-3.016	-6.051	0.780
	(0.585)	(0.824)	(0.395)	(0.672)	(0.023)	(0.438)	(0.665)	(0.469)	(0.900)
LLDUMMY	-1.534	-1.623	5.317	6.554	-17.490***	-6.475	-3.672	-7.420	2.688
	(0.612)	(0.829)	(0.552)	(0.663)	(0.008)	(0.175)	(0.581)	(0.378)	(0.655)
INTERCEPT	1.738	-11.134*	-6.308	-7.240	4.456	1.941	12.199**	6.984	6.705
	(0.615)	(0.088)	(0.519)	(0.651)	(0.526)	(0.662)	(0.037)	(0.449)	(0.210)
Number of Observations	2,210	6,098	749	1,800	514	711	1,062	988	1,614
Overall R^2	0.3510	0.3469	0.3384	0.1155	0.1948	0.3115	0.2236	0.2148	0.3533