

# Successful Business Strategies for Insurers Entering and Growing in Emerging Markets

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## ABSTRACT

Entering new markets and growing in existing ones is an area of major interest within the insurance industry across the globe. Insurance market growth rates in emerging markets are far in excess of those available in most developed countries. While these growth rates have attracted new and existing firms to these markets, corporate managers face a number of important strategic decisions as they consider establishing or expanding operations in emerging markets. This study evaluates the impact of several strategies on insurer performance in emerging markets. The main findings suggest that overall, successful business strategies for insurers entering or growing in emerging markets involve a high growth rate, increased size and more emphasis on life insurance. When performance is adjusted for risk, lower financial leverage and mutual organizational form are associated with better performance. However, differences in successful business strategies arise across countries when we control for country-level economic and market characteristics.

**Key words:** Emerging markets, diversification, insurance company operations

## Introduction

Entering new markets and growing in existing ones is an area of major interest within the insurance industry across the globe. Insurance market growth rates in emerging markets are far in excess of those available in most developed countries. While these growth rates have attracted new and existing firms to these markets, corporate managers face a number of important strategic decisions as they consider establishing or expanding operations in emerging markets. Decisions such as choosing the degree to which they will diversify their firm's product mix, determining how heavily to focus on life v. non-life insurance, setting targets for how quickly to grow the business, establishing levels for the financial leverage of the firm and determining the optimal size are some of the important ones that must be reached. Although the opportunities available to insurers in emerging markets seem very attractive, little research has been done to

identify and assess successful business strategies for insurers entering or expanding in emerging markets. In fact, we are not aware of any academic study that has utilized performance data from individual insurers operating in a wide range of emerging markets to identify successful business strategies. The goal of this study is to identify and assess successful business strategies for insurers entering or expanding in these emerging markets.

Utilizing data on insurers operating in 50 countries we are able to measure the value of some critical business strategies in emerging markets. It is important to note that it is very likely that the results that we find for emerging markets may differ significantly from the results for developed countries. Taking diversification as one example, the recent consensus in the literature for firms operating in developed countries is that a focus strategy dominates diversification. However, it is an open question whether that same result will hold for emerging markets. In fact, the trade off between the economies of scope associated with diversification benefits and the control of agency costs that favours focus may well balance out differently in emerging markets. While our primary focus is on identifying successful business strategies in emerging markets, contrasts with the answers we see in developed countries would not be surprising.<sup>1</sup>

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<sup>1</sup> The value of diversification and focus strategies has been the topic of debate in both the academic literature and the trade press for many years. Based on various samples and time periods, prior studies find contradictory results on the value implications of these strategies. The diversification and focus literature has found evidence of value-enhancing motivations for both strategies. During the 1960's and 1970's, research suggested that companies realized firm value benefits from diversification strategies (e.g. Hubbard and Palia, 1999; and Matsusaka, 1993). However, in more recent years, research indicates that firms utilizing focus strategies achieved enhanced value (e.g., Comment and Jarrell, 1995; Berger and Ofek, 1995; Lang and Stulz, 1994; John and Ofek, 1995; Servaes, 1996; Denis, Denis, and Sarin, 1997; Cummins, Weiss and Zi, 2003; Laeven and Levine, 2007; and Liebenberg and Sommer, 2008).

The decision to diversify or focus is balanced by a series of offsetting costs and benefits. Traditional motivations for diversification center around the benefits of smoother earnings, increased internal capital markets, and capturing new expertise in changing environments (e.g. Lawellen, 1971; Teece, 1980; Myers and Majluf, 1984; and Markides, 1992). The benefits of diversification are similar to the benefits of corporate hedging discussed by several authors (e.g., Stulz, 1996; Colquitt and Hoyt, 1997; Leland, 1998; and Graham and Rogers, 2002). In both cases, firms seek to increase value through a reduction in earnings volatility. Firms electing diversification or focus strategies must examine these costs and benefits and select the appropriate strategy. The important decision of

The study is organized as follows. In the next section we describe our methodology and related literature. Second, we discuss the data analysis. Third, we then review the sample and the data that we use in the study. Fourth, we provide summary data by country for the insurers in our sample. Fifth, we present empirical results from four different analyses that evaluate the five strategic decisions that we consider in this study. Finally, we offer conclusions.

## **Methodology and Related Literature**

Using data on 456 insurance companies across 50 developing countries over the period 2004 through 2007, we examine the impact of various business strategies on the performance of insurance groups. As mentioned above, our focus is on the following strategic decisions facing management of insurers in emerging markets: (1) choosing the degree to which they will diversify their firm's product mix, (2) determining how heavily to focus on life v. non-life insurance, (3) setting targets for how quickly to grow the business, (4) establishing levels for the financial leverage of the firm; and (5) determining the optimal size. These are some of the important strategic decisions that must be reached.

Although few studies have focused on firm-level data across multiple countries, a number of prior papers have studied various aspects of insurance internationally. Browne and Kim (1993), Browne et al. (2000), and Hussels et al. (2005) have studied factors affecting insurance demand across countries. Other authors have focused on assessing the relation between economic growth and insurance markets in various countries (see Arena, 2008; Outreville, 1990,

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diversification within a single industry has only been addressed more recently and to a much lesser extent (e.g., Laeven and Levine, 2007; and Liebenberg and Sommer, 2008). Few studies have looked at firms across different countries and, to our knowledge, no study has considered the trade-offs for this important strategic decision in less developed countries. This gap in the literature is all the more important given the rapid growth in insurance operations in emerging markets.

1996; Ward and Zurbruegg, 2000; and Webb et al., 2002). Ma and Pope (2008) look at performance and market structure at the country level.

## **Data Analysis**

We use return on equity (ROE) and risk adjusted return on equity (RAROE) as our two measures of insurer performance. First, we provide comprehensive summary data by country for returns, premium growth, insurer size and market penetration. Second, we evaluate differences between high performing and low performing insurers in our sample, focusing specifically on firm size, degree of financial leverage, business mix (life v. non-life), pace of growth and group affiliation. Third, we evaluate specific strategies that contribute to performance overall, again focusing on diversification, growth rates, business mix, size and financial leverage. Fourth, we consider the implications of country specific effects on the importance of three different strategies: diversification, growth and business mix. Following Arena (2008), the country specific characteristics that we use to capture a county's economic development or market characteristics are: GDP per capita, insurance market concentration, insurance penetration, credit to private sector, stock market turnover (total shares traded to average market capitalization), trade openness, and a corruption index.

## **Sample and Data**

We use company-level data from A.M. Best's Statement File Global for the years 2004 through 2007. Our initial sample consists of all listed insurance companies operating in developing countries. The classification of developing countries used in this study is the one provided by the International Monetary Fund. First, we eliminate all companies classified as

reinsurers or pure holding companies. We then aggregate affiliated insurers operating in one country, controlling for potential double counting of intra-group shareholding. Such an aggregation is appropriate since strategic decisions are usually made or directed on the group level and not by individual subsidiaries (Berger, Cummins, Weiss and Zi, 2000). We exclude insurers with missing data on basic accounting variables, including total assets, policyholder surplus, profit before taxes, life insurance premium earned and non-life insurance premiums earned. Since we use historic risk measures which require 5 years of data, we exclude firm-year observation for which the preceding 5 years of data are not available. Finally, we exclude extreme outliers. Our first outlier screen is to eliminate firm-year observations with reported life (non-life) insurance premiums in excess of the overall premium volume of the corresponding country's life (non-life) insurance market.<sup>2</sup> Next, we follow Laeven and Levine (2007) and eliminate observations where the variables are more than four standard deviations from the sample mean. Finally, we eliminate observations if the return on equity (ROE) has a value above one or below minus one (Berger and Ofek, 1995). The resulting sample consists of 1,588 firm-year observations with a maximum of 456 unique insurers in 2004. The sample includes insurers from 50 different countries over the period 2004 through 2007.<sup>3</sup>

In our analysis, we use additional variables that might influence insurer performance, including GDP per capita, inflation, market concentration, insurance penetration, credit to the private sector, stock market turnover, trade openness, and a corruption index. Premium data on

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<sup>2</sup> Country aggregates of life insurance premiums and non-life insurance premiums are obtained from Swiss Re's *Sigma* publications.

<sup>3</sup> The 50 countries included in our sample are: Antigua & Barbuda, Argentina, Bahamas, Bahrain, Barbados, Bolivia, Bosnia & Herzegovina, Brazil, Bulgaria, Chile, Croatia, Czech Republic, Dominican Republic, Ecuador, Egypt, El Salvador, Estonia, Ghana, Hungary, India, Indonesia, Jamaica, Jordan, Kazakhstan, Kuwait, Latvia, Lithuania, Malaysia, Mexico, Morocco, Nigeria, Oman, Pakistan, Panama, Peru, Philippines, Poland, Qatar, Romania, Russian Federation, Saudi Arabia, Slovakia, South Africa, Tanzania, Thailand, Trinidad & Tobago, Tunisia, Turkey, United Arab Emirates, and Uruguay.

the country level, the corruption index, and data on other country characteristics are obtained from Swiss Re's *Sigma* publications, Transparency International's website, and the World Bank's World Development Indicators database, respectively. Some of these variables are not available for all 50 countries and all 4 years in our sample. Thus, the number of observations used varies slightly across our estimated models.

Table 1 contains summary statistics of selected variables for the overall sample, as well as for all 50 countries in the sample separately. The two performance measures used in this study are the return on equity (ROE) which is calculated as profit before taxes divided by policyholder surplus, and the risk adjusted return on equity (RAROE) which is the ROE divided by the standard deviation of the ROE over the past 5 years. Both performance measures vary substantially across insurers in our sample. The median ROE ranges from -6.4% for insurers operating in Uruguay to 48.19% for insurers operating in Pakistan, and the RAROE ranges from -0.32 for insurers operating in Romania to values over 5.9 for insurers operating in Egypt, Jordan, Kuwait and Bosnia & Herzegovina. The sample median for ROE is 13.49% and the sample median for the one-year premium growth variable is 24.58%, documenting fast growth and solid earnings for insurers operating in emerging markets over the period 2004 to 2007. However, the median size of an insurance company in a developing country is still relatively small (US\$ 117 million in total assets), and the median insurance penetration defined as total life and non-life premiums as a percent of a country's GDP is only 4.31% which is well below the 2007 world average of 7.5%, leaving room for substantial future growth of the insurance industry in many of these emerging markets.<sup>4</sup>

**[ insert Table 1 here ]**

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<sup>4</sup> Premium data on the country level is obtained from Swiss Re's *Sigma* publications.

## **Differences between High-Performance and Low-Performance Insurers**

We first highlight some differences between high-performance and low-performance insurers in our sample. Table 2 presents means and medians of selected variables for the top 10% of insurers, the top 20% of insurers, and the bottom 80% of insurers. We classify insurers for each of the four years in our sample separately. Hence, a specific company could be classified as top 20% in one year and as bottom 80% in the other three years. The classification in Panel A of Table 2 is based on insurers' ROE and the classification in Panel B is based on insurers' RAROE.

**[ insert Table 2 here ]**

Based on *t*-tests for differences in means, non-parametric tests for differences in medians, and  $\chi^2$  tests, the top 10% ROE insurers: are larger; have a lower surplus to assets ratio; have a higher percentage of life insurance business; are growing faster; and belong to a group. Top 10% RAROE insurers: are larger; have a higher percentage of life insurance business; are diversified (write both life and non-life business); and are growing faster. Fast Growth Dummy is a dummy variable coded as 1 if an insurer is above the 66<sup>th</sup> percentile of the distribution of premium growth in a given year, and 0 otherwise.

## **The Impact of Insurers' Business Strategies on their Performance**

To examine the impact of insurers' business strategy choices on their performance, we regress ROE and RAROE on variables describing insurers' strategies and additional variables controlling for differences in insurer and country characteristics. We specifically examine whether a diversification strategy results in better performance than a focus strategy by including a Diversification Dummy. This variable is coded as 1 for insurers operating in both the life and

non-life market segment, and 0 otherwise. We also examine whether a fast growth strategy results in superior performance by including the Fast Growth Dummy and the Low Growth Dummy in our model. The Fast Growth Dummy is coded as 1 if an insurer is above the 66<sup>th</sup> percentile of the distribution of premium growth in a given year, and 0 otherwise, and the Low Growth Dummy is coded as 1 if an insurer is below the 33<sup>rd</sup> percentile of the distribution, and 0 otherwise. The omitted category is medium growth. We also include the Life Premium/Premium variable in our model to analyze whether the life insurance market segment or the non-life insurance market segment is more profitable in developing countries. Life Premium/Premium is the ratio of an insurer's premium earned in the life insurance segment to its total premium earned. All regression specifications include country and year dummies (not reported in the table); standard errors are adjusted for clustering at the company-level.

The results of this portion of the analysis are presented in Table 3. The results suggest that: diversification does not matter; fast growth is good; life insurance is more profitable than non-life; and size is good. A high surplus to asset ratio is only important for RAROE, but not for ROE. This latter result reflects the importance of considering risk when relating financial leverage to performance.

**[ insert Table 3 here ]**

### **Mediating Effects of Country Characteristics**

In order to assess whether the relationship between insurers' strategic choices (e.g., diversification, business mix, size, degree of financial leverage and pace of growth) and their performance depends on the characteristics of the country they operate in, interaction terms are included in the performance regressions. Following a methodology similar to that used in Arena

(2008), the Diversification Dummy variable, the Fast Growth and Low Growth Dummy variables, and the Life Premium/Premium variable are interacted with dummy variables capturing different levels of economic development across countries (below the 33<sup>rd</sup> percentile value of the distribution across our sample in a given year, between the 33<sup>rd</sup> and 66<sup>th</sup> value of the distribution, and above the 66<sup>th</sup> percentile value of the distribution). Measures capturing a country's economic development or other country specific characteristics in this study are the following: (1) GDP per Capita; (2) Market Concentration which is calculated as the sum of premiums earned for the 5 largest insurers in the sample divided by the industry's premiums written as reported in Swiss Re's *Sigma* publications; (3) Insurance Penetration; (4) Credit to Private Sector which is the amount of credit banks give to the private sector as a percent of GDP; (5) Stock Market Turnover which is the ratio of total shares traded to the average market capitalization; (6) Trade Openness which is calculated as the natural logarithm of the ratio of exports and imports to GDP; and (7) Transparency International's Corruption Perceptions Index.<sup>5</sup> All regression specification include country and year dummies (not reported); standard errors are adjusted for clustering at the company-level. These results are presented in Table 4.

**[ insert Table 4 here ]**

The results in Table 4 are as follows:

*Diversification:* It does not matter for ROE. Diversification seems to be positively related to RAROE in certain countries: in high corruption countries (low levels of corruption perceptions index), in countries with high trade barriers (low trade openness), and in countries

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<sup>5</sup> We define each of these variables as done in Arena (2008). The specific definitions are as follows: GDP per capita: Ratio of total GDP to total population. GDP is in 1995 PPP-adjusted US\$; Trade openness: Log of ratio exports and imports (in 1995 US\$) to GDP (in 1995 US\$); Stock market turnover ratio: Ratio of the value of total shares traded and average real market capitalization; Insurance penetration: Insurance premium volume as a share of GDP; Inflation rate: Annual change in CPI; Credit to private sector: Private credit by deposit money banks to GDP.

with low market concentration (strong competition). In countries with low trade barriers (high trade openness) diversification seems to hurt.

*Growth:* This has a positive effect in countries with high GDP per Capita, low insurance penetration, and low trade openness. The interaction effects with market concentration, corruption, credit to private sector and stock market turnover are unclear with respect to the Fast Growth Dummy. Slow Growth seems to hurt ROE in high trade openness, low corruption (high corruption index) environments, and other factors are not significant or the effect is unclear.

*Life Business vs. non-life business:* The life business generates higher profitability in high GDP countries, low market concentration countries, low insurance penetration countries, low stock market turnover countries,<sup>6</sup> low trade openness countries, high corruption (low corruption index) countries. The interaction effect of credit to private sector is unclear.

### **Do the Same Strategies which Improve Performance also Explain Top Performance?**

To examine whether the same business strategy choices which improve an insurer's performance also explain top performance, we classify each insurer as being a top performing insurer or not, and estimate logistic regression models explaining this classification. A logistic regression model simply allows us to statistically identify characteristics that are related to whether an insurer falls into one category or another. In this case, whether it is a top performing insurer or not. The Top 10% Insurers (Top 20% Insurers) dummy variable is coded as 1 if a insurer is above the 90<sup>th</sup> percentile (80<sup>th</sup> percentile) value of the distribution of ROE across our sample for a given year. We code the same dummies for the RAROE performance measure as well. The logistic regressions include the same variables describing insurer and country

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<sup>6</sup> This result appears to support a substitution effect for life insurance. That is, if people cannot invest in capital markets they may buy more life insurance as an investment.

characteristics used in our standard regression models; again, we control for year- and country-fixed effects. The results of this analysis are presented in Table 5.

**[ insert Table 5 here ]**

The results suggest that Fast Growth is consistently positive and significant, diversification is only significant for Top 10% RAROE insurers (the impact is positive), Life insurance business is more profitable; surplus to assets ratio is negative and significant for ROE and positive and significant for RAROE. This highlights the importance of considering risk when judging the impact of financial leverage on performance.

## **Conclusion**

Entering new markets and growing in existing ones is an area of major interest within the insurance industry across the globe. Insurance market growth rates in emerging markets are far in excess of those available in most developed countries. In our sample of over 450 insurers from over 50 countries the median ROE is 13.49% and the median one-year premium growth rate is 24.58%, documenting fast growth and solid earnings for insurers operating in emerging markets over the period 2004 to 2007. While these growth rates have attracted new and existing firms to these markets, corporate managers face a number of important strategic decisions as they consider establishing or expanding operations in emerging markets.

Our results suggest that overall, successful business strategies for emerging markets involve a high growth rate, increased size and more emphasis on life insurance. When performance is adjusted for risk, lower financial leverage and mutual organizational form also are associated with better performance. Our analysis further evaluates which country-specific characteristics contribute to better performance by insurers adopting the three core strategies of

diversification, growth and emphasis on life insurance. A diversification strategy leads to better performance in countries with higher corruption ratings, lower market competition and lower trade openness. A growth strategy is associated with better performance when per capita GDP is higher, when insurance penetration is lower, and when trade openness is lower. A business focus on life insurance leads to better performance in countries with higher GDP, strong market competition, lower insurance penetration, lower stock market turnover, lower trade openness and higher corruption ratings. Finally, reinforcing our other results, top performing insurers in our sample focused more on life insurance, were larger and had faster premium growth. When performance was adjusted for risk, they also tended to be mutuals.

Obviously, in the increasingly global marketplace insurers must assess the opportunities to enter new markets and to grow in existing ones. As our data confirm, insurance market growth rates in emerging markets are far in excess of those available in most developed countries. However, as we have also demonstrated in this study, important differences exist across developing countries in terms of successful business strategies. A number of factors will affect whether an insurer operating in emerging markets will achieve top performance or disappointment. Nevertheless, the results of this study give corporate managers some sense for what those successful business strategies might be.

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**Table 1. Descriptive Statistics of Insurer and Country Characteristics, 2004-2007**

|                      | Median |       |                |                       |                             |                       |                |           |                                  |                       | Fraction of Sample Population |                   |                     |                |
|----------------------|--------|-------|----------------|-----------------------|-----------------------------|-----------------------|----------------|-----------|----------------------------------|-----------------------|-------------------------------|-------------------|---------------------|----------------|
|                      | ROE    | RAROE | Premium Growth | Life Premium/ Premium | Total Assets in US-\$ mill. | Surplus/ Total Assets | GDP per Capita | Inflation | Market Share, 5 Largest Insurers | Insurance Penetration | % Diversified Insurers        | % Mutual Insurers | % Insurer in Groups | Firm-Year Obs. |
| Middle East          | 17.51  | 4.23  | 22.91          | 8.09                  | 368.13                      | 42.39                 | 6,479          | 4.87      | 11.48                            | 0.87                  | 48.48                         | 0                 | 22.73               | 66             |
| Bahrain              | 11.82  | 2.71  | 16.54          | 4.04                  | 262.07                      | 37.96                 | 10,677         | 2.35      | n/a                              | n/a                   | 16.67                         | 0                 | 58.33               | 12             |
| Egypt                | 19.04  | 5.90  | 20.79          | 47.63                 | 620.43                      | 24.64                 | n/a            | 7.64      | 46.42                            | 0.81                  | 100.00                        | 0                 | 0                   | 15             |
| Jordan               | 23.07  | 6.43  | 3.01           | 7.04                  | 93.92                       | 67.50                 | 894            | 3.49      | 18.95                            | 3.05                  | 100.00                        | 0                 | 0                   | 3              |
| Kuwait               | 19.12  | 6.48  | 26.26          | 13.49                 | 311.43                      | 60.25                 | n/a            | 3.60      | n/a                              | 0.90                  | 50.00                         | 0                 | 50.00               | 8              |
| Oman                 | 30.06  | 1.89  | -2.32          | 41.20                 | 143.26                      | 29.43                 | 6,271          | 2.53      | n/a                              | 1.18                  | 75.00                         | 0                 | 100.00              | 4              |
| Qatar                | 14.68  | 3.77  | 49.59          | 0.00                  | 247.52                      | 67.15                 | n/a            | 11.83     | n/a                              | n/a                   | 0                             | 0                 | 0                   | 5              |
| Saudi Arabia         | 20.68  | 3.28  | 18.63          | 0.00                  | 1,142.85                    | 49.58                 | 6,571          | 1.46      | n/a                              | 0.66                  | 0                             | 0                 | 0                   | 2              |
| United Arab Emirates | 20.13  | 3.54  | 45.70          | 0.00                  | 535.97                      | 62.30                 | 25,686         | n/a       | 10.57                            | 2.17                  | 29.41                         | 0                 | 0                   | 17             |
| Western Hemisphere   | 10.88  | 0.70  | 25.61          | 0.00                  | 56.66                       | 32.70                 | 3,908          | 4.42      | 21.00                            | 3.33                  | 12.55                         | 4.55              | 28.85               | 988            |
| Antigua & Barbuda    | 35.63  | 5.47  | 7.03           | 0.00                  | 58.83                       | 32.49                 | 8,812          | n/a       | n/a                              | n/a                   | 0                             | 0                 | 0                   | 4              |
| Argentina            | 8.94   | 0.46  | 30.02          | 0.00                  | 27.89                       | 36.54                 | 5,157          | 9.64      | 19.59                            | 2.38                  | 5.45                          | 6.54              | 16.89               | 367            |
| Bahamas              | 15.59  | 0.72  | 5.18           | 0.00                  | 60.29                       | 27.17                 | n/a            | 1.59      | 41.73                            | n/a                   | 16.67                         | 0.00              | 58.33               | 24             |
| Barbados             | 17.19  | 1.31  | 12.79          | 0.00                  | 123.68                      | 32.04                 | n/a            | 6.08      | n/a                              | n/a                   | 4.55                          | 18.18             | 72.73               | 22             |
| Bolivia              | 11.82  | 1.19  | 11.25          | 0.00                  | 9.17                        | 44.42                 | 464            | 4.28      | n/a                              | n/a                   | 5.88                          | 0                 | 5.88                | 17             |
| Brazil               | 12.28  | 1.21  | 40.38          | 0.00                  | 107.59                      | 35.54                 | 1,901          | 6.60      | 44.94                            | 4.92                  | 10.49                         | 0                 | 30.25               | 162            |
| Chile                | 11.18  | 1.16  | 23.93          | 100.00                | 192.69                      | 24.18                 | 3,055          | 3.05      | 33.13                            | 5.51                  | 10.60                         | 8.61              | 24.50               | 151            |
| Dominican Republic   | 26.98  | 3.22  | 17.48          | 4.26                  | 198.73                      | 31.12                 | 929            | 6.86      | n/a                              | 4.69                  | 100.00                        | 0                 | 0                   | 4              |
| Ecuador              | 1.80   | 0.11  | 17.10          | 0.00                  | 19.63                       | 35.60                 | 608            | 2.74      | 13.29                            | 4.31                  | 36.54                         | 0                 | 5.77                | 52             |
| El Salvador          | 8.87   | 1.11  | 14.08          | 0.00                  | 38.61                       | 53.57                 | 1,029          | 4.58      | 23.83                            | 2.95                  | 0                             | 0                 | 50.00               | 6              |
| Jamaica              | 20.05  | 3.10  | 19.70          | 0.00                  | 132.54                      | 29.02                 | 2,837          | 13.63     | n/a                              | 8.95                  | 28.57                         | 0                 | 85.71               | 7              |
| Mexico               | 11.46  | 0.87  | 21.00          | 0.00                  | 174.15                      | 25.96                 | 3,977          | 3.99      | 31.78                            | 2.56                  | 22.22                         | 3.42              | 56.41               | 117            |
| Panama               | 9.47   | 1.41  | 13.27          | 54.47                 | 137.44                      | 38.00                 | 2,893          | 2.10      | n/a                              | 3.23                  | 100.00                        | 0                 | 57.14               | 7              |
| Peru                 | 14.25  | 1.21  | 16.11          | 100.00                | 311.95                      | 17.19                 | 1,110          | 2.00      | 59.52                            | 1.72                  | 14.81                         | 0                 | 25.93               | 27             |
| Trinidad & Tobago    | 12.35  | 1.65  | 12.89          | 44.76                 | 304.95                      | 44.16                 | 6,509          | 6.89      | 59.88                            | 10.84                 | 15.38                         | 0                 | 100.00              | 13             |
| Uruguay              | -6.40  | -0.14 | 43.97          | 0.00                  | 15.56                       | 31.63                 | 4,333          | 9.16      | n/a                              | n/a                   | 12.50                         | 0                 | 50.00               | 8              |
| Asia                 | 14.41  | 2.35  | 15.53          | 0.00                  | 177.59                      | 36.77                 | 1,938          | 3.61      | 36.91                            | 6.41                  | 13.11                         | 0                 | 31.69               | 183            |
| India                | 6.99   | 0.97  | 20.59          | 0.00                  | 3,476.40                    | 49.04                 | 117            | 5.03      | 70.47                            | 6.29                  | 10.00                         | 0                 | 10.00               | 20             |
| Indonesia            | 21.47  | 4.69  | 25.64          | 0.00                  | 138.65                      | 37.99                 | 260            | 6.41      | 8.65                             | 3.20                  | 0                             | 0                 | 30.77               | 13             |
| Malaysia             | 16.37  | 2.44  | 13.68          | 0.00                  | 201.52                      | 31.69                 | 1,998          | 2.96      | 36.91                            | 7.05                  | 22.00                         | 0                 | 41.00               | 100            |
| Pakistan             | 48.19  | 2.64  | 27.85          | 0.00                  | 47.35                       | 40.77                 | 179            | 7.60      | 55.11                            | 1.28                  | 0                             | 0                 | 0                   | 17             |
| Philippines          | 7.62   | 2.63  | 21.35          | 0.00                  | 39.66                       | 42.45                 | 268            | 5.98      | 11.73                            | 1.73                  | 0                             | 0                 | 42.11               | 19             |
| Thailand             | 6.64   | 3.02  | 15.31          | 0.00                  | 70.23                       | 54.65                 | 789            | 4.54      | 3.62                             | 4.54                  | 0                             | 0                 | 21.43               | 14             |

(continued)

(continued)

|                      | Median |       |                |                          |                                |                          |                   |           |                                     |                       | Fraction of Sample Population |                   |                     |                |
|----------------------|--------|-------|----------------|--------------------------|--------------------------------|--------------------------|-------------------|-----------|-------------------------------------|-----------------------|-------------------------------|-------------------|---------------------|----------------|
|                      | ROE    | RAROE | Premium Growth | Life Premium/<br>Premium | Total Assets in<br>US-\$ mill. | Surplus/<br>Total Assets | GDP per<br>Capita | Inflation | Market Share,<br>5 Largest Insurers | Insurance Penetration | % Diversified Insurers        | % Mutual Insurers | % Insurer in Groups | Firm-Year Obs. |
| Russia               | 7.29   | 1.41  | 53.80          | 0.00                     | 485.34                         | 22.34                    | 668               | 9.68      | 12.42                               | 12.54                 | 36.84                         | 0                 | 10.53               | 19             |
| Kazakhstan           | 34.83  | 1.46  | 61.41          | 0.00                     | 386.13                         | 62.25                    | 635               | 9.68      | n/a                                 | 4.34                  | 0                             | 0                 | 100.00              | 2              |
| Russian Federation   | 6.66   | 1.41  | 46.54          | 0.00                     | 535.79                         | 21.15                    | 668               | 9.68      | 12.42                               | 12.54                 | 41.18                         | 0                 | 0                   | 17             |
| Europe               | 15.31  | 0.98  | 32.00          | 15.64                    | 199.35                         | 21.35                    | 2,245             | 3.55      | 57.68                               | 6.52                  | 53.78                         | 0                 | 42.23               | 251            |
| Bosnia & Herzegovina | 20.92  | 7.04  | 49.66          | 0.00                     | 54.78                          | 20.35                    | n/a               | n/a       | n/a                                 | n/a                   | 0                             | 0                 | 0                   | 3              |
| Bulgaria             | 6.66   | 0.69  | 30.48          | 0.00                     | 186.70                         | 19.80                    | 580               | 7.26      | 42.08                               | 6.29                  | 0                             | 0                 | 0                   | 6              |
| Croatia              | 14.55  | 4.59  | 17.86          | 5.08                     | 625.49                         | 32.37                    | 2,409             | 3.04      | 43.67                               | 6.40                  | 50.00                         | 0                 | 0                   | 8              |
| Czech Republic       | 22.57  | 1.19  | 24.82          | 36.67                    | 402.30                         | 17.67                    | 2,560             | 2.54      | 65.54                               | 8.38                  | 75.81                         | 0                 | 56.45               | 62             |
| Estonia              | 18.33  | 1.22  | 31.16          | 0.00                     | 66.69                          | 38.55                    | 2,946             | 4.43      | 56.82                               | 5.01                  | 24.00                         | 0                 | 36.00               | 25             |
| Hungary              | 23.62  | 2.68  | 21.72          | 44.44                    | 170.67                         | 17.69                    | 2,110             | 3.88      | 37.33                               | 7.55                  | 100.00                        | 0                 | 80.00               | 20             |
| Latvia               | 4.55   | 0.53  | 38.96          | 0.00                     | 32.82                          | 40.73                    | 2,359             | 6.76      | n/a                                 | 4.76                  | 25.00                         | 0                 | 0                   | 12             |
| Lithuania            | 11.38  | 0.58  | 52.79          | 0.00                     | 36.15                          | 29.13                    | 1,983             | 3.84      | 60.37                               | 3.19                  | 36.36                         | 0                 | 25.00               | 44             |
| Poland               | 18.12  | 1.29  | 35.61          | 20.39                    | 544.06                         | 22.05                    | 2,349             | 2.11      | 61.09                               | 6.52                  | 34.29                         | 0                 | 60.00               | 35             |
| Romania              | -6.12  | -0.32 | 24.93          | 16.10                    | 614.35                         | 14.41                    | 705               | 5.71      | n/a                                 | 11.50                 | 75.00                         | 0                 | 0                   | 4              |
| Slovakia             | 4.74   | 0.26  | 45.34          | 51.67                    | 148.60                         | 14.76                    | 1,596             | 4.48      | 13.88                               | 8.86                  | 93.33                         | 0                 | 60.00               | 15             |
| Turkey               | 11.99  | 0.71  | 52.45          | 0.37                     | 1,602.59                       | 27.74                    | 2,116             | 10.51     | 29.77                               | 5.64                  | 58.82                         | 0                 | 29.41               | 17             |
| Africa               | 32.91  | 2.84  | 17.87          | 0.00                     | 288.16                         | 25.95                    | 1,182             | 4.64      | 24.85                               | 26.42                 | 28.40                         | 0                 | 43.21               | 81             |
| Ghana                | 18.57  | 1.62  | 40.02          | 0.00                     | 42.24                          | 48.56                    | 36                | 12.62     | n/a                                 | n/a                   | 0                             | 0                 | 0                   | 3              |
| Morocco              | 18.36  | 1.70  | 16.88          | 46.02                    | 861.97                         | 4.75                     | 523               | 1.49      | n/a                                 | 3.37                  | 100.00                        | 0                 | 0                   | 3              |
| Nigeria              | 7.62   | 2.37  | 51.89          | 10.12                    | 166.00                         | 57.16                    | 208               | 8.24      | n/a                                 | 2.45                  | 100.00                        | 0                 | 0                   | 3              |
| South Africa         | 37.69  | 2.94  | 15.27          | 0.00                     | 436.36                         | 25.03                    | 1,227             | 4.64      | 24.85                               | 32.33                 | 23.44                         | 0                 | 50.00               | 64             |
| Tanzania             | 37.92  | 0.33  | 49.59          | 0.00                     | 11.00                          | 24.88                    | 162               | 6.42      | n/a                                 | n/a                   | 28.57                         | 0                 | 28.57               | 7              |
| Tunisia              | 7.68   | 3.56  | 25.71          | 0.00                     | 159.15                         | 45.80                    | 757               | 3.63      | n/a                                 | 2.66                  | 0                             | 0                 | 100.00              | 1              |
| Total                | 13.49  | 1.10  | 24.58          | 0.00                     | 117.36                         | 31.92                    | 2,510             | 4.41      | 31.78                               | 4.31                  | 21.73                         | 2.83              | 31.55               | 1588           |

Note: Median values for continuous variables and means for dummy variables are based on the pooled sample for the years 2004-2007. Return on Equity (ROE) is calculated as profit before taxes/policyholder surplus and reported in %. RAROE is the ROE divided by the standard deviation of the ROE over the past 5 years. Premium growth is the one-year growth rate in the insurer's premiums earned and reported in %. Life Premium/Premium is the ratio of an insurer's premium earned in the life segment to total premium earned and reported in %. Total Assets are in millions of 2000 US\$. Surplus/Assets is the ratio of policyholder surplus to total assets and reported in %. GDP per Capita is the ratio of GDP to total population in 2000 PPP-adjusted US\$. Market Share, 5 Largest Insurers is calculated as the sum of premiums earned for the 5 largest insurers in the sample divided by the industry's premiums written as reported in Swiss Re's *Sigma* publications; reported values are in %. Insurance Penetration is the ratio of the industry's premiums written to GDP and reported in %. % Diversified Insurers is the fraction of insurers which write both life and non-life business. % Mutual Insurers is the fraction of mutuals in the sample. % Insurers in Groups is the fraction of insurers which belong to a group. Data are for the years 2004 through 2007.

**Table 2. Univariate Comparison between High-Performance and Low-Performance Insurers****Panel A: ROE**

|                       | Top 10% Insurers |            | Top 20% Insurers |            | Bottom 80% Insurers |         |
|-----------------------|------------------|------------|------------------|------------|---------------------|---------|
|                       | mean             | median     | mean             | median     | mean                | median  |
| Total Assets          | 2,029.526        | 211.773*** | 1,651.358        | 105.997*** | 1,002.525           | 164.905 |
| ln (Total Assets)     | 12.297***        | 12.263***  | 12.082***        | 11.571***  | 11.471              | 12.013  |
| Surplus/Assets        | 0.277***         | 0.257***   | 0.294***         | 0.336***   | 0.363               | 0.270   |
| Life Premium/Premium  | 0.512***         | 0.392***   | 0.440***         | 0***       | 0.318               | 0.246   |
| Diversification Dummy | 0.217            |            | 0.253*           |            | 0.208               |         |
| Fast Growth Dummy     | 0.429**          |            | 0.409**          |            | 0.336               |         |
| Mutual Dummy          | 0.019            |            | 0.013*           |            | 0.323               |         |
| Group Dummy           | 0.404**          |            | 0.366**          |            | 0.303               |         |
| No. of observations   | 161              |            | 320              |            | 1268                |         |

Countries with more top 20% insurers than sample average: Antigua & Barbuda, Czech Republic, Hungary, Kazakhstan, Oman, Pakistan, South Africa, Tanzania

**Panel B: RAROE**

|                       | Top 10% Insurers |            | Top 20% Insurers |           | Bottom 80% Insurers |         |
|-----------------------|------------------|------------|------------------|-----------|---------------------|---------|
|                       | mean             | median     | mean             | median    | mean                | median  |
| Total Assets          | 2,789.423***     | 213.917*** | 2,246.623***     | 90.647*** | 852.300             | 203.386 |
| ln (Total Assets)     | 12.561***        | 12.273***  | 12.460***        | 11.415*** | 11.376              | 12.223  |
| Surplus/Assets        | 0.332            | 0.307      | 0.339            | 0.322     | 0.352               | 0.317   |
| Life Premium/Premium  | 0.368            | 0.111**    | 0.315            | 0.000     | 0.349               | 0.000   |
| Diversification Dummy | 0.342***         |            | 0.297***         |           | 0.197               |         |
| Fast Growth Dummy     | 0.416*           |            | 0.391*           |           | 0.341               |         |
| Mutual Dummy          | 0.043            |            | 0.047**          |           | 0.024               |         |
| Group Dummy           | 0.348            |            | 0.391***         |           | 0.297               |         |
| No. of observations   | 161              |            | 320              |           | 1268                |         |

Countries with more top 20% insurers than sample average: Antigua & Barbuda, Bahrain, Barbados, Bosnia & Herzegovina, Croatia, Egypt, Hungary, Indonesia, Jamaica, Jordan, Kuwait, Malaysia, Philippines, Poland, Qatar, South Africa, Tanzania, Thailand, Trinidad & Tobago, Tunisia, United Arab Emirates

*Note:* Statistical significance of difference in means between Top 10% insurers and Bottom 90% insurers and between Top 20% insurers and Bottom 80% insurers is based on a t-test. Statistical significance of difference in medians is based on a non-parametric median test. For the dummy variables, the reported significance is based on a  $\chi^2$ -test. The listed countries have significantly more Top 20% insurers than the sample average based on a  $\chi^2$ -test and a 10 percent significance level. \*\*\*, \*\*, and \* denotes statistical significance at the 1, 5, and 10 percent level, respectively. Data are for the years 2004 through 2007.

**Table 3. Regression of Insurer Performance on Business Strategy Variables and Controls**

|                       | ROE                |                    |                    | RAROE              |                    |                    |
|-----------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
|                       | (1)                | (2)                | (3)                | (4)                | (5)                | (6)                |
| Diversification Dummy | -0.005<br>(-0.23)  |                    | -0.006<br>(-0.30)  | 0.539<br>(1.39)    |                    | 0.528<br>(1.37)    |
| Fast Growth Dummy     |                    | 0.038***<br>(3.18) | 0.038***<br>(3.18) |                    | 0.408**<br>(2.15)  | 0.406**<br>(2.14)  |
| Slow Growth Dummy     |                    | -0.014<br>(-0.96)  | -0.014<br>(-0.96)  |                    | -0.055<br>(-0.31)  | -0.048<br>(-0.28)  |
| Life Premium/Premium  | 0.074***<br>(3.80) | 0.074***<br>(3.87) | 0.075***<br>(3.84) | 0.485**<br>(2.30)  | 0.525**<br>(2.36)  | 0.484**<br>(2.29)  |
| ln (Total Assets)     | 0.023***<br>(3.00) | 0.023***<br>(3.14) | 0.023***<br>(3.12) | 0.295***<br>(5.05) | 0.331***<br>(5.18) | 0.304***<br>(5.17) |
| Surplus/Assets        | 0.072<br>(1.19)    | 0.079<br>(1.30)    | 0.079<br>(1.31)    | 1.438***<br>(2.94) | 1.519***<br>(3.06) | 1.503***<br>(3.07) |
| Growth in Assets      | -0.003<br>(-0.83)  | -0.003<br>(-0.85)  | -0.003<br>(-0.85)  | -0.027<br>(-1.38)  | -0.027<br>(-1.32)  | -0.027<br>(-1.38)  |
| Growth in Income      | 0.000<br>(0.97)    | 0.000<br>(1.40)    | 0.000<br>(1.37)    | 0.000<br>(0.27)    | 0.000<br>(0.34)    | 0.000<br>(0.52)    |
| Mutual Dummy          | -0.015<br>(-0.17)  | -0.011<br>(-0.13)  | -0.010<br>(-0.12)  | 1.966**<br>(2.02)  | 2.069**<br>(2.01)  | 2.008**<br>(2.06)  |
| Group Dummy           | -0.000<br>(-0.00)  | -0.000<br>(-0.01)  | 0.001<br>(0.05)    | 0.022<br>(0.09)    | 0.147<br>(0.65)    | 0.032<br>(0.13)    |
| GDP per Capita Growth | 0.763*<br>(1.71)   | 0.747*<br>(1.65)   | 0.752*<br>(1.66)   | 10.163<br>(1.35)   | 10.472<br>(1.40)   | 10.050<br>(1.34)   |
| Inflation             | 0.004<br>(1.62)    | 0.004<br>(1.58)    | 0.004<br>(1.60)    | -0.010<br>(-0.30)  | -0.005<br>(-0.16)  | -0.010<br>(-0.30)  |
| R-squared             | 0.190              | 0.200              | 0.200              | 0.244              | 0.246              | 0.248              |
| No. of Observations   | 1501               | 1501               | 1501               | 1501               | 1501               | 1501               |

*Note:* The regressions include country and year dummies (not reported here). Standard errors are adjusted for clustering at the company-level. Data are for the years 2004 through 2007. \*\*\*, \*\*, and \* denotes statistical significance at the 1, 5, and 10 percent level, respectively.

**Table 4. Interaction of Business Strategy Variables with Country Characteristics**

| <b>Panel A</b>   |                    |                    |                      |                    |                       |                    |
|--|--------------------|--------------------|----------------------|--------------------|-----------------------|--------------------|
| Mediator Variable:   | GDP per Capita     |                    | Market Concentration |                    | Insurance Penetration |                    |
| Dependent Variable:  | ROE                | RAROE              | ROE                  | RAROE              | ROE                   | RAROE              |
| <b>Interactions</b>  |                    |                    |                      |                    |                       |                    |
| Diversification Dummy*Mediator-Variable<br>(below 33 <sup>rd</sup> percentile)                             | -0.026<br>(-0.67)  | 1.170<br>(1.33)    | 0.038<br>(1.20)      | 1.596**<br>(1.99)  | 0.032<br>(1.17)       | 0.337<br>(1.20)    |
| Diversification Dummy* Mediator-Variable<br>(between the 33 <sup>rd</sup> and 66 <sup>th</sup> percentile) | -0.028<br>(-0.77)  | -0.061<br>(-0.13)  | -0.019<br>(-0.77)    | 0.395<br>(0.76)    | -0.016<br>(-0.50)     | 0.701<br>(1.05)    |
| Diversification Dummy* Mediator-Variable<br>(above the 66 <sup>th</sup> percentile)                        | 0.015<br>(0.64)    | 0.767<br>(1.43)    | 0.013<br>(0.34)      | -0.224<br>(-0.48)  | -0.018<br>(-0.55)     | 0.651<br>(0.88)    |
| Fast Growth Dummy* Mediator-Variable<br>(below 33 <sup>rd</sup> percentile)                                | 0.025<br>(1.02)    | 0.860<br>(1.28)    | 0.047**<br>(2.38)    | 0.177<br>(0.61)    | 0.043**<br>(2.08)     | 0.312<br>(1.60)    |
| Fast Growth Dummy* Mediator-Variable<br>(between the 33 <sup>rd</sup> and 66 <sup>th</sup> percentile)     | 0.038*<br>(1.80)   | 0.495<br>(1.29)    | 0.040**<br>(2.23)    | 0.723***<br>(2.67) | 0.036*<br>(1.89)      | 0.467<br>(1.24)    |
| Fast Growth Dummy* Mediator-Variable<br>(above the 66 <sup>th</sup> percentile)                            | 0.042**<br>(2.35)  | 0.203<br>(1.19)    | 0.048*<br>(1.80)     | 0.946***<br>(2.76) | 0.031<br>(1.48)       | 0.597<br>(1.38)    |
| Slow Growth Dummy* Mediator-Variable<br>(below 33 <sup>rd</sup> percentile)                                | -0.022<br>(-0.62)  | -0.150<br>(-0.34)  | -0.015<br>(-0.59)    | -0.268<br>(-1.26)  | -0.011<br>(-0.42)     | -0.118<br>(-0.73)  |
| Slow Growth Dummy* Mediator-Variable<br>(between the 33 <sup>rd</sup> and 66 <sup>th</sup> percentile)     | -0.017<br>(-0.73)  | -0.057<br>(-0.18)  | -0.019<br>(-0.89)    | 0.199<br>(0.84)    | -0.027<br>(-1.23)     | -0.581<br>(-1.61)  |
| Slow Growth Dummy* Mediator-Variable<br>(above the 66 <sup>th</sup> percentile)                            | -0.011<br>(-0.57)  | -0.058<br>(-0.28)  | 0.003<br>(0.12)      | 0.043<br>(0.12)    | -0.005<br>(-0.24)     | 0.541<br>(1.25)    |
| Life Premium/Premium* Mediator-Variable<br>(below 33 <sup>rd</sup> percentile)                             | 0.001<br>(0.03)    | -0.075<br>(-0.16)  | 0.154***<br>(5.47)   | 0.954***<br>(3.16) | 0.125***<br>(4.60)    | 0.604***<br>(2.87) |
| Life Premium/Premium* Mediator-Variable<br>(between the 33 <sup>rd</sup> and 66 <sup>th</sup> percentile)  | 0.073*<br>(1.73)   | 0.453<br>(1.04)    | 0.029<br>(1.07)      | 0.156<br>(0.58)    | 0.036<br>(0.98)       | 0.740<br>(1.51)    |
| Life Premium/Premium* Mediator-Variable<br>(above the 66 <sup>th</sup> percentile)                         | 0.085***<br>(3.62) | 0.600**<br>(2.37)  | 0.036<br>(0.89)      | 0.432<br>(0.81)    | 0.010<br>(0.29)       | -0.163<br>(-0.34)  |
| <b>Control Variables</b>   |                    |                    |                      |                    |                       |                    |
| ln (Total Assets)  | 0.024***<br>(3.17) | 0.316***<br>(5.06) | 0.027***<br>(3.51)   | 0.344***<br>(5.76) | 0.027***<br>(3.41)    | 0.328***<br>(5.21) |
| Surplus/Assets   | 0.079<br>(1.30)    | 1.452***<br>(2.97) | 0.075<br>(1.13)      | 1.689***<br>(3.33) | 0.069<br>(1.10)       | 1.570***<br>(3.05) |
| Growth in Assets   | -0.003<br>(-0.83)  | -0.026<br>(-1.25)  | -0.003<br>(-0.80)    | -0.027<br>(-1.31)  | -0.003<br>(-0.86)     | -0.027<br>(-1.34)  |
| Growth in Income   | 0.000<br>(1.27)    | 0.000<br>(0.60)    | 0.000**<br>(2.01)    | 0.000<br>(0.79)    | 0.000<br>(0.80)       | 0.000<br>(0.27)    |
| Mutual Dummy   | -0.008<br>(-0.09)  | 2.029**<br>(2.12)  | 0.010<br>(0.12)      | 2.136**<br>(2.21)  | 0.017<br>(0.19)       | 2.089**<br>(2.14)  |
| Group Dummy  | 0.001<br>(0.07)    | 0.057<br>(0.23)    | -0.007<br>(-0.32)    | 0.029<br>(0.11)    | -0.004<br>(-0.20)     | 0.062<br>(0.25)    |
| GDP per Capita Growth  | 0.816*<br>(1.82)   | 9.576<br>(1.31)    | -0.128<br>(-0.25)    | -0.100<br>(-0.01)  | 0.703<br>(1.54)       | 6.742<br>(0.95)    |
| Inflation  | 0.004*<br>(1.68)   | -0.014<br>(-0.40)  | -0.001<br>(-0.35)    | -0.050<br>(-0.93)  | 0.003<br>(1.50)       | -0.017<br>(-0.50)  |
| R-squared  | 0.203              | 0.253              | 0.203                | 0.238              | 0.201                 | 0.248              |
| No. of Observations  | 1501               | 1501               | 1371                 | 1371               | 1453                  | 1453               |

(continued)

(continued)

Panel B

| Dependent Variable:  | Credit to Private Sector |                    | Stock Market Turnover |                    |
|--|--------------------------|--------------------|-----------------------|--------------------|
|  | ROE                      | RAROE              | ROE                   | RAROE              |
| Interactions   |                          |                    |                       |                    |
| Diversification Dummy*Mediator-Variable<br>(below 33 <sup>rd</sup> percentile)                             | 0.012<br>(0.48)          | 0.196<br>(0.66)    | -0.014<br>(-0.46)     | 0.039<br>(0.10)    |
| Diversification Dummy* Mediator-Variable<br>(between the 33 <sup>rd</sup> and 66 <sup>th</sup> percentile) | 0.024<br>(0.70)          | 1.747**<br>(2.00)  | -0.019<br>(-0.77)     | 0.430<br>(0.77)    |
| Diversification Dummy* Mediator-Variable<br>(above the 66 <sup>th</sup> percentile)                        | -0.049*<br>(-1.75)       | 0.130<br>(0.19)    | 0.031<br>(0.80)       | 1.089<br>(1.57)    |
| Fast Growth Dummy* Mediator-Variable<br>(below 33 <sup>rd</sup> percentile)                                | 0.039*<br>(1.95)         | 0.065<br>(0.31)    | 0.027<br>(1.31)       | 0.223<br>(0.83)    |
| Fast Growth Dummy* Mediator-Variable<br>(between the 33 <sup>rd</sup> and 66 <sup>th</sup> percentile)     | 0.042**<br>(1.99)        | 0.753*<br>(1.88)   | 0.054***<br>(3.21)    | 0.556**<br>(2.17)  |
| Fast Growth Dummy* Mediator-Variable<br>(above the 66 <sup>th</sup> percentile)                            | 0.035**<br>(1.98)        | 0.569<br>(1.37)    | 0.018<br>(0.81)       | 0.304<br>(0.64)    |
| Slow Growth Dummy* Mediator-Variable<br>(below 33 <sup>rd</sup> percentile)                                | -0.010<br>(-0.42)        | -0.325*<br>(-1.78) | -0.012<br>(-0.39)     | 0.051<br>(0.21)    |
| Slow Growth Dummy* Mediator-Variable<br>(between the 33 <sup>rd</sup> and 66 <sup>th</sup> percentile)     | 0.028<br>(1.18)          | 0.631*<br>(1.77)   | -0.012<br>(-0.68)     | -0.080<br>(-0.35)  |
| Slow Growth Dummy* Mediator-Variable<br>(above the 66 <sup>th</sup> percentile)                            | -0.052**<br>(-2.28)      | -0.086<br>(-0.22)  | -0.017<br>(-0.59)     | -0.045<br>(-0.12)  |
| Life Premium/Premium* Mediator-Variable<br>(below 33 <sup>rd</sup> percentile)                             | 0.122***<br>(4.43)       | 0.653***<br>(3.03) | 0.129***<br>(4.43)    | 0.455<br>(1.54)    |
| Life Premium/Premium* Mediator-Variable<br>(between the 33 <sup>rd</sup> and 66 <sup>th</sup> percentile)  | 0.014<br>(0.34)          | 0.478<br>(0.91)    | 0.058**<br>(2.52)     | 0.428<br>(1.62)    |
| Life Premium/Premium* Mediator-Variable<br>(above the 66 <sup>th</sup> percentile)                         | 0.057*<br>(1.67)         | 0.228<br>(0.50)    | 0.046<br>(1.11)       | 0.619<br>(1.30)    |
| Control Variables  |                          |                    |                       |                    |
| ln (Total Assets)  | 0.025***<br>(3.23)       | 0.308***<br>(5.01) | 0.024***<br>(3.19)    | 0.300***<br>(5.13) |
| Surplus/Assets   | 0.059<br>(0.99)          | 1.445***<br>(2.98) | 0.066<br>(1.08)       | 1.511***<br>(3.07) |
| Growth in Assets   | -0.003<br>(-0.95)        | -0.033*<br>(-1.84) | -0.003<br>(-0.88)     | -0.025<br>(-1.23)  |
| Growth in Income   | 0.000<br>(0.79)          | 0.000<br>(0.22)    | 0.000<br>(1.56)       | 0.000<br>(0.46)    |
| Mutual Dummy   | 0.016<br>(0.18)          | 2.111**<br>(2.09)  | 0.001<br>(0.01)       | 2.033**<br>(2.07)  |
| Group Dummy  | 0.000<br>(0.02)          | 0.028<br>(0.11)    | -0.001<br>(-0.04)     | 0.059<br>(0.23)    |
| GDP per Capita Growth  | 0.754*<br>(1.65)         | 8.901<br>(1.23)    | 0.800<br>(1.60)       | 11.148<br>(1.30)   |
| Inflation  | 0.004<br>(1.56)          | -0.003<br>(-0.09)  | 0.003<br>(0.89)       | -0.028<br>(-0.63)  |
| R-squared  | 0.213                    | 0.261              | 0.199                 | 0.247              |
| No. of Observations  | 1501                     | 1501               | 1477                  | 1477               |

(continued)

(continued)

Panel C

| Mediator Variable:<br>Dependent Variable:  | Trade Openness     |                     | Corruption Index    |                    |
|--|--------------------|---------------------|---------------------|--------------------|
|  | ROE                | RAROE               | ROE                 | RAROE              |
| Interactions   |                    |                     |                     |                    |
| Diversification Dummy*Mediator-Variable<br>(below 33 <sup>rd</sup> percentile)                             | 0.031<br>(0.79)    | 0.904**<br>(2.21)   | 0.031<br>(1.21)     | 1.144**<br>(2.14)  |
| Diversification Dummy* Mediator-Variable<br>(between the 33 <sup>rd</sup> and 66 <sup>th</sup> percentile) | -0.020<br>(-0.76)  | 1.535*<br>(1.86)    | 0.011<br>(0.37)     | 1.214**<br>(2.06)  |
| Diversification Dummy* Mediator-Variable<br>(above the 66 <sup>th</sup> percentile)                        | 0.002<br>(0.06)    | -1.166**<br>(-2.21) | -0.034<br>(-1.24)   | -0.272<br>(-0.48)  |
| Fast Growth Dummy* Mediator-Variable<br>(below 33 <sup>rd</sup> percentile)                                | 0.035**<br>(2.12)  | 0.550***<br>(2.72)  | 0.025<br>(1.18)     | 0.348<br>(1.29)    |
| Fast Growth Dummy* Mediator-Variable<br>(between the 33 <sup>rd</sup> and 66 <sup>th</sup> percentile)     | 0.068***<br>(3.09) | 0.255<br>(0.55)     | 0.065***<br>(3.24)  | 0.309<br>(0.87)    |
| Fast Growth Dummy* Mediator-Variable<br>(above the 66 <sup>th</sup> percentile)                            | 0.023<br>(0.87)    | 0.440<br>(0.87)     | 0.032<br>(1.63)     | 0.508<br>(1.37)    |
| Slow Growth Dummy* Mediator-Variable<br>(below 33 <sup>rd</sup> percentile)                                | -0.027<br>(-1.32)  | 0.059<br>(0.35)     | -0.027<br>(-1.10)   | -0.131<br>(-0.72)  |
| Slow Growth Dummy* Mediator-Variable<br>(between the 33 <sup>rd</sup> and 66 <sup>th</sup> percentile)     | 0.015<br>(0.60)    | -0.367<br>(-0.74)   | 0.043<br>(1.58)     | -0.212<br>(-0.59)  |
| Slow Growth Dummy* Mediator-Variable<br>(above the 66 <sup>th</sup> percentile)                            | -0.042*<br>(-1.70) | -0.269<br>(-0.64)   | -0.045**<br>(-2.14) | 0.187<br>(0.52)    |
| Life Premium/Premium* Mediator-Variable<br>(below 33 <sup>rd</sup> percentile)                             | 0.083***<br>(3.14) | 0.589***<br>(2.79)  | 0.103***<br>(3.28)  | 0.517**<br>(2.34)  |
| Life Premium/Premium* Mediator-Variable<br>(between the 33 <sup>rd</sup> and 66 <sup>th</sup> percentile)  | 0.073**<br>(2.34)  | 0.709<br>(1.28)     | 0.081**<br>(2.02)   | 0.787<br>(1.59)    |
| Life Premium/Premium* Mediator-Variable<br>(above the 66 <sup>th</sup> percentile)                         | 0.012<br>(0.26)    | 0.175<br>(0.26)     | 0.040<br>(1.24)     | 0.369<br>(0.90)    |
| Control Variables  |                    |                     |                     |                    |
| ln (Total Assets)  | 0.021***<br>(2.68) | 0.303***<br>(4.80)  | 0.025***<br>(3.38)  | 0.286***<br>(4.58) |
| Surplus/Assets   | 0.052<br>(0.85)    | 1.226**<br>(2.38)   | 0.067<br>(1.10)     | 1.386***<br>(2.77) |
| Growth in Assets   | -0.003<br>(-0.90)  | -0.028<br>(-1.55)   | -0.003<br>(-0.97)   | -0.032<br>(-1.63)  |
| Growth in Income   | 0.000<br>(1.53)    | 0.000<br>(0.47)     | 0.000<br>(1.20)     | 0.000<br>(0.62)    |
| Mutual Dummy   | 0.031<br>(0.33)    | 2.446**<br>(2.48)   | 0.006<br>(0.06)     | 2.128**<br>(2.06)  |
| Group Dummy  | -0.004<br>(-0.20)  | 0.043<br>(0.17)     | -0.001<br>(-0.06)   | 0.009<br>(0.04)    |
| GDP per Capita Growth  | 0.719<br>(1.39)    | 4.564<br>(0.60)     | 0.904**<br>(2.02)   | 11.957<br>(1.54)   |
| Inflation  | 0.004<br>(1.04)    | -0.055<br>(-1.09)   | 0.003<br>(1.19)     | -0.026<br>(-0.69)  |
| R-squared  | 0.213              | 0.258               | 0.210               | 0.257              |
| No. of Observations  | 1341               | 1341                | 1501                | 1501               |

Note: The regressions include country and year dummies (not reported). Standard errors are adjusted for clustering at the company-level. Data are for the years 2004 through 2007. \*\*\*, \*\*, and \* denotes statistical significance at the 1, 5, and 10 percent level, respectively.

**Table 5. Logistic Regression of Top-Performance Dummy on Strategy Variables and Controls**

|                       | ROE                |                    | RAROE               |                    |
|-----------------------|--------------------|--------------------|---------------------|--------------------|
|                       | Top 20% Insurers   | Top 10% Insurers   | Top 20% Insurers    | Top 10% Insurers   |
| Diversification Dummy | -0.267<br>(-1.18)  | -0.492<br>(-1.57)  | 0.100<br>(0.42)     | 0.586*<br>(1.95)   |
| Fast Growth Dummy     | 0.384**<br>(2.26)  | 0.535**<br>(2.30)  | 0.566***<br>(3.04)  | 0.617**<br>(2.52)  |
| Slow Growth Dummy     | -0.103<br>(-0.55)  | 0.062<br>(0.25)    | 0.243<br>(1.22)     | 0.234<br>(0.87)    |
| Life Premium/Premium  | 0.799***<br>(4.67) | 1.328***<br>(5.62) | -0.073<br>(-0.33)   | 0.514*<br>(1.78)   |
| ln (Total Assets)     | 0.102**<br>(1.97)  | 0.135*<br>(1.91)   | 0.294***<br>(5.20)  | 0.116<br>(1.60)    |
| Surplus/Assets        | -0.917*<br>(-1.92) | -1.297*<br>(-1.92) | 0.961*<br>(1.79)    | 0.416<br>(0.57)    |
| Growth in Assets      | 0.026<br>(1.49)    | -0.013<br>(-0.53)  | -0.006<br>(-0.29)   | 0.011<br>(0.62)    |
| Growth in Income      | -0.000<br>(-0.27)  | -0.003<br>(-0.99)  | 0.000<br>(0.14)     | -0.001<br>(-0.18)  |
| Mutual Dummy          | -0.141<br>(-0.26)  | 0.773<br>(1.20)    | 2.435***<br>(5.66)  | 2.233***<br>(3.77) |
| Group Dummy           | 0.134<br>(0.76)    | 0.413*<br>(1.75)   | 0.137<br>(0.73)     | -0.217<br>(-0.86)  |
| GDP per Capita Growth | 4.643<br>(0.58)    | 11.688<br>(0.86)   | -15.541*<br>(-1.73) | -3.351<br>(-0.28)  |
| Inflation             | 0.038<br>(1.05)    | -0.006<br>(-0.10)  | -0.002<br>(-0.04)   | -0.003<br>(-0.05)  |
| R-squared             | 0.1685             | 0.2569             | 0.2440              | 0.2593             |
| Chi-squared           | 258.08             | 259.46             | 354.63              | 237.80             |
| No. of Observations   | 1501               | 1501               | 1501                | 1501               |

*Note:* The regressions include country and year dummies (not reported). Data are for the years 2004 through 2007. \*\*\*, \*\*, and \* denotes statistical significance at the 1, 5, and 10 percent level, respectively.