

International Diversification, Excessive Growth, and Corporate Governance

Mengyang Guo¹, Justin Yiqiang Jin¹, Mary Li Zhi Ma²

¹Accounting and Financial Management Services Area, DeGroot School of Business, McMaster University, Hamilton, Canada

²School of Administrative Studies, York University, North York, Canada

Email: guom20@mcmaster.ca, jinjus@mcmaster.ca, mlizhi@gmail.com

How to cite this paper: Guo, M., Jin, J.Y. and Ma, M.L.Z. (2019) International Diversification, Excessive Growth, and Corporate Governance. *Theoretical Economics Letters*, 9, 2477-2507.

<https://doi.org/10.4236/tel.2019.97157>

Received: August 23, 2019

Accepted: October 8, 2019

Published: October 11, 2019

Copyright © 2019 by author(s) and Scientific Research Publishing Inc.

This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).

<http://creativecommons.org/licenses/by/4.0/>



Open Access

Abstract

This study examines the relationship between international diversification and firms' access to external capital to finance growth opportunities. We hypothesize that moral hazards, adverse selection, and home bias arise when firms expand across borders. These problems may hinder the portion of firm growth that is financed by external capital providers known to play a monitoring role. Using various measures of firms' excessive growth and international diversification, we show that external capital providers do not view the international expansion of operations as value-enhancing activities. We also find that efforts of corporate governance (e.g., through higher levels of corporate governance and the disclosure of segment earnings) can be an effective strategy to alleviate external capital providers' concerns and achieve higher growth rates through the expansion of international operations.

Keywords

International Diversification, Segment Earnings Disclosure, Corporate Governance, Information Asymmetry

1. Introduction

There are more internationally diversified firms today than there were 30 years ago. It is documented that the percentage of internationally diversified firms in the United States increased significantly in the last decade [1]. Among S&P 500 stock index-listed firms, about 40% of revenues and profits now come from foreign markets [2]. As a result, a broad stream of literature has investigated the relationship between international diversification and firm performance. Prior studies have provided mixed evidence about the effects of corporate international diversification on capital structure, costs of capital, and firm value. Some re-

searchers claim a positive relationship exists [3] [4] [5], whereas others support the view that there is a negative relationship [6] [7] [8] [9]. More recently, researchers have made efforts to consolidate these theories by proposing a non-linear relationship [10]-[15].

To reconcile the conflicting results of the previous works, we focus on a subset of the problem examined by prior literature. Instead of studying average investors' perception of international diversification, we ask different questions: How do external capital providers perceive firms' international diversification? How does firm growth reveal external capital providers' perception of international diversification? External capital providers are known to play a monitoring role [16]. As a result, their perceptions of international diversification can be reflected in their choice to supply capital to firms. In this research, we examine the portion of actual growth monitored and financed by external capital providers and focus on actual growth achieved through capital funded by external capital providers, who are known to play a monitoring role in corporate decisions. In this regard, our results expand prior evidence of the economic consequences of international diversification of operations based on the average investor's perception [17] or creditor's perception [18].

Another fact we should not ignore is that those internationally diversified firms are experiencing rapid growth. For example, the S&P 500 continues to outpace the US. GDP due to the large proportion of internationally diversified companies listed in the S&P 500 [19]. By operating in emerging markets like China and India, domestic companies can take advantage of the rapid growth of these emerging markets, earning higher profits than domestic firms and experiencing excessive growth. While experiencing rapid growth, internationally diversified firms must deal with growing costs of moral hazards, adverse selection [20], and investors' home bias [21] as they diversify their operations across borders. These costs rise rapidly to the point that they outweigh the benefits of international diversification [15]. Given the fact that excessive growth is the net operating result of external capital and that external capital is information sensitive [22] [23], we hypothesize that information asymmetry, agency cost, and investors' home bias can increase during a firm's international diversification process, thereby hindering the firm's ability to gain access to external capital and inhibiting its excessive growth.

These three channels are further summarized here. First, as a firm expands the number of host countries in which it operates, information processing becomes more demanding [13] [24], and managers are endowed with more discretion power and private information [25]. Such equity capital is the most information-sensitive security, so investors will charge risk premiums when they are exposed to firms with asymmetric information. Second, agency cost will increase during a firm's international diversification process. Managers may engage in self-interested behaviors such as diversifying into international market strategies to minimize their employment risks [26] or to increase their compensation [27].

However, these actions are not in the best interest of the firm owners. Third, it has been observed that investors favor familiar domestic firms and avoid investing in internationally diversified firms—a market anomaly documented as “home bias” [21]. Home bias may be exacerbated when firms are more dependent on foreign operations. It is predicted that these three channels can lead external capital providers to view the international expansion negatively and to increase the cost of external capital. Consequently, a firm may cease to finance its growth through external capital.

Researchers have found that the relationship between the cost of external funds and investment—cash flow sensitivity is non-monotonic. Investment–cash flow sensitivity decreases in relation to the cost of external financing when it is relatively low and increases in relation to the financing cost when it is high [28]. Instead of directly measuring a firm’s ability to obtain access to external capital, we use excessive growth as the proxy for the net operating result of external capital. The excessive growth can be measured by computing the firm’s constrained growth achieved by either internal cash flows or short-term borrowing and then subtracting the constrained growth from the realized growth rate [29] [30].

To test our hypothesis, we exploit a dataset consisting of all internationally diversified US firms from the Worldscope annual database and the Compustat annual industrial and research files, resulting in 3,703 firm-year observations. Following [30], we compute the firm’s growth that can be achieved by relying on either internal cash flows or short-term borrowing. We then calculate the difference between the realized sales growth rate and the two measures of constrained growth. For each firm, the realized annual sales growth rate that exceeds either of the two measures of constrained growth represents the level of excessive growth. We use three measures to proxy for a firm’s international diversification. We first construct the Herfindahl index of geographic segment sales by using the squared sum of the fractions of geographic segment sales. Besides, following [31], we also use the proportion of sales from operations outside the home country to total sales and the number of foreign countries in which a corporation operates subsidiaries as two alternative proxies for international diversification.

Our main specification is a firm-level linear regression of excessive short-term debt-financed and excessive internally financed growth on three measures of international diversification. To mitigate the endogeneity concern, we include an extensive set of control variables in line with current literature, such as a firm’s financial ratios and total assets, Tobin’s q , investment in prior period, as well as year and industry fixed effects. Therefore, our identification comes from cross-firm variation in the international diversification. Consistent with our hypothesis, we find the negative coefficients on three international diversification measures when we use the excessive short-term debt-financed growth and excessive internally financed growth as a dependent variable. All the coefficients of our interest are significant at the 1% level.

Although information asymmetry, agency cost, and home bias have been identified as the three channels for developing our hypothesis, they are difficult to measure directly and accurately. Thus, to further test the channel of our hypothesis, we instead consider two corporate governance measures: corporate governance strength and disclosure of geographic segment earnings. As shown below, these two measures can mitigate the problems of adverse selection, moral hazard, and home bias. If the three channels are correctly identified, we should observe that corporate governance measures can affect the link between international diversification and excessive growth by mitigating the negative impact of international diversification.

This reasoning is based on the evidence that corporate governance can mitigate an investor's concern about the agency problem and alleviate home bias. First, board independence is shown to have an impact on firms' information asymmetry between management and external investors [32]. Researchers have also found that forms of executive compensation can help mitigate adverse selection, preventing managers from acting in their own self-interest [33]. Second, in an attempt to explain the home bias, researchers have found that home bias is closely related to corporate governance [34]. Based on this rationale, we hypothesize that strong corporate governance promotes more excessive growth among internationally diversified firms.

To measure the corporate governance strength, we obtain the Corporate Governance Quotient (CGQ) ranking measures from ISS and define the corporate governance strength dummy variable as 1 if the firm's corporate governance index is higher than the median and 0 otherwise. To test the impact of corporate governance strength on the relationship between international diversification and excessive short-term debt-financed growth as well as internally financed growth, we include the corporate governance strength dummy variable and the interaction between corporate governance strength and three international diversification measures, respectively, in the baseline regression models. Consistent with our hypothesis, we find the interactions between the corporate governance strength measure and three international diversification measures to be positive and statistically significant when we consider excessive short-term debt-financed growth and excessive internally financed growth as the dependent variables.

In the same vein, corporate disclosure can also alleviate investors' concerns related to agency cost and mitigate home bias. Managers who adopt self-serving behavior that is not in the best interest of shareholders are more reluctant to reveal segment-level differences in growth [35]. Empirical studies have also suggested that disclosing the firm's segment earnings can cause managers to reveal more information, thereby reducing external investors' advantages in terms of investment information compared to domestic investors [36]. Therefore, we conjecture that the disclosure of geographic earnings governance promotes more excessive growth among internationally diversified firms.

Similarly, to test the impact of geographic segment earnings' disclosure on the relationship between international diversification and excessive short-term debt-financed growth as well as internally financed growth, we define the disclosure dummy variable as 1 if the firm discloses geographic segment earnings in the notes disclosures during the year and 0 otherwise. We include the disclosure dummy variable and the interaction between the disclosure dummy variable and the three international diversification measures, respectively, in the baseline regression models. Consistent with our hypothesis, we find the coefficients of interactions between the geographic segment earnings' disclosure and three international diversification measures to be positive and statistically significant when we use excessive short-term debt-financed growth and excessive internally financed growth as the dependent variables.

The calculation of excessive growth is based on the assumptions of the constant assets ratio used from production to sales and the constant rate of profit per unit of sales. To test the validity of our inference, we perform a battery of sensitivity tests on different assumptions of growth rate. First, following [29] [30], we modify the growth rate estimates to allow for a lower rate of earnings on new growth. The results indicate that the assumption of the equality of the profit rate on marginal sales is not crucial for our results. Second, following [30], we modify the estimates of the growth rate to allow for a higher rate of asset turnover on new growth. We find that our inferences are unaffected by the assumption of the ratio of asset turnover on new sales to the firm's average assets turnover.

Three caveats regarding our research design and dataset should be noted. First, [37] proposed that the choice of the international diversification level is not exogenous; rather, it is subject to self-selection bias. To mitigate potential endogeneity concern, we include many control variables in line with the current literature. However, we still cannot fully address the simultaneity concern that firms are making international diversification choices in anticipation of external capital providers' responses. Second, the dataset is an unbalanced panel with missing values. Although we did not find any evidence that the unbalanced dataset is self-selected, we believe the omission of data is random and the missing value does not challenge the validity of our inference. Third, our calculation of excessive growth at the firm level is based on several assumptions. A series of sensitivity tests are conducted and the results show that the model coefficients are not sensitive to these assumptions.

Our paper contributes to the literature in two ways. First, extending prior studies, our study links international diversification to one specific portion of firm growth monitored by external investors. Although mixed evidence has been found on the effects of corporate international diversification on capital structure, costs of capital, and firm value [1] [38] [39] [40], our research suggests that external capital providers do not view the international expansion of operations as value-enhancing activities. Second, our results further suggest that efforts by

corporate governance (e.g., through higher levels of corporate governance and the disclosure of segment earnings) may effectively alleviate external capital providers' concerns and help firms achieve higher growth rates through the expansion of international operations. This finding potentially confirms our hypothesis that adverse selection and moral hazard play a pivotal role and provides possible ways to mitigate their negative consequences. In this regard, the evidence provided in this study will be of importance to investors, managers, and regulators.

This study proceeds as follows. In the following section, we discuss the literature and develop a set of empirically testable hypotheses. We then describe the research design and the sample selection procedure in Section 3. In Section 4, we discuss the results. In Section 5, we present our conclusions.

2. Literature Review and Hypothesis Development

2.1. Background

Two broad streams of literature are closely related to this study: international management and corporate finance. In the international management literature, competing theories have shown that international diversification confers both benefits and costs [15]. In terms of benefits, one stream of researchers focuses on the unique advantages of foreign markets, showing that firms can take advantage of different input and output prices across different foreign markets to reduce costs and increase revenue; consequently, international firms have stronger market power over their suppliers, distributors, and customers [25] [41] [42]. Another stream of researchers examines the efficiency of international diversification and concludes that international firms can fully exploit economies of scale and scope [43]. Diversifying a firm's operation risk across both developed countries and emerging markets can help reduce uncertainties and fluctuations in sales [44]. Recently, a series of researchers examined international diversification from an organizational learning perspective and claimed that operating across borders can promote a firm's technology learning and help it cultivate its ability to manage diverse hazards in foreign countries [45] [46] [47]. Economic theory suggests that these benefits should increase with international expansion up to a point of diminishing returns [48]. At the same time, some costs related to international diversification can be classified into two categories. The first category of costs is related to newly established foreign subsidiaries and it only exists in the short term. This category of costs is reduced with more exposure to foreign markets and the accumulation of experience [45] [49]. Most costs that fall under this category are due to the challenges posed by the native foreign firms in the market in which the international firm is operating [50]. The second category of costs is long-term costs, which increase with the expansion of foreign subsidiaries. This category of costs can rise rapidly to the point that they outweigh the benefits of international diversification [31] [51] [52]. Examples of long-term costs are coordination costs and governance costs [24].

As both the benefits and costs are associated with the international diversification process, there is a significant debate regarding the relationship between a firm's international diversification and its performance. Some researchers claim that there is a positive linear relationship between the degree of international diversification and firm performance [3] [4] [5] [53]. For example, a recent study by [17] documented that the degree of global diversification is positively associated with a firm's value. In the same vein, [18] show that internationally diversified firms receive higher valuation from creditors. In contrast, another group of researchers claim that a negative linear relationship exists between the degree of international diversification and a firm's performance [6] [7] [8] [9]. More recently, researchers have started thinking about this relationship in a non-linear way, proposing that the relationship between international diversification and firm performance might be U-shaped [10] [11] or inverted U-shaped [13] [14]. Consolidating all the prior literature modeling this relationship, numerous researchers have proposed three-stage S-shaped relationship models [14] [15] [54]. This three-stage view echoes the classification of benefits and costs based on their persistence. To give an illustration, the short-term costs are high at an initial stage, but they decrease significantly with the international expansion. In comparison, governance and coordination costs are low in the initial stage but increase exponentially with international expansion. With the diminishing return of diversification benefits in mind, we conjecture that—although international diversification confers benefits and costs simultaneously [1] [38] [39] [40]—the increasing governance and coordination costs can play a pivotal role and can make international expansion costly.

In the corporate finance literature, significant theoretical and empirical work has been conducted to investigate the determinant of firm growth [55] [56]. Both the environmental factor [57] [58] and financial resources [59] have been identified to play a key role in predicting future growth, although organizational strategy [60] [61] or organizational structures are essential as well [62].

While the availability of financial resources has been identified as a necessary condition for a firm to grow, a firm's financial resources can assume various forms to finance its growth. The pecking order theory suggests that managers prefer internal financing over external capital because external capital incurs significant adverse selection costs due to the information asymmetry between the firm managers and external investors [22] [23]. Consequently, when corporate investment opportunities arise, internal financing is used first; only when those funds are depleted do firms seek help from external capital providers. This fact poses difficulty for us to measure how international diversification affects a firm's ability to access external capital. As [29] point out, such effects may not impact all firms in the same manner. Firms that can finance their corporate investment opportunities with internal funds do not need to access external capital.

The pioneering study that solved this endogeneity concern was conducted by

[29], who examined how the development of financial markets affects firms' use of external financing to fund their growth. To control for endogeneity, the authors break down firm growth into two parts—internal financing and external long-term financing—and gauge the growth ratio of firms financed via external capital. Given a certain amount of corporate investment opportunity and the same financial and legal system, [29] propose the existence of a linkage between excessive growth and external capital cost, claiming that, when the cost of external capital increases, the proportion of firms that grow faster than the maximum constrained growth rate (*i.e.* excessive growth) tends to decrease. Next, we show that corporate international diversification can increase the cost of external capital by affecting capital providers' perceptions.

2.2. International Diversification and Excessive Growth

There are three channels that could explain why and how a firm's international diversification can be linked to a higher cost of external financing. First, regarding information asymmetry theory, [63] state that equity capital is the most information-sensitive security and is associated with the highest adverse selection cost. Empirical evidence has also confirmed this view [64] [65]. Prior literature suggests that information asymmetry is further aggravated by international diversification. Assuming each country has a unique business environment, the first theoretic study by [66] shows that information asymmetry exists in multinational firms between the headquarters and subsidiary managers. This finding can be further explained by the fact that the efficiency of coordination among a firm's foreign subsidiaries decreases with the number of different countries in which the subsidiary operates [24]. This inefficient management of a large number of complex transactions is highly demanding on the management's ability to process information [13] [67]. For example, [68] have shown a negative relationship between international diversification and the accuracy of analysts' earnings forecasts and indicated that geographical diversification causes the firm to have more complex financial information. Along the same lines, [25] argues that, when a firm involves itself in the international market more, managers are endowed with more discretionary power as the complexity of the business structure and transactions increases. This operational flexibility enables firms to take better advantage of the opportunities that arise while simultaneously decreasing the information flow between investors and management. Consequently, equity investors will become less informative when they make investment decisions. As equity is the most information sensitive security, we conjecture that external capital providers may perceive the increasing cost of adverse selection as negative signal and require higher risk premium to compensate for the cost.

Second, due to information asymmetry, agency problems arise as a result of the conflict of interest between stockholders and managers because the stockholders cannot fully monitor the behavior of the managers [20] [69] [70]. Agency problems are further aggravated by international diversification. On the one hand, managers of international diversified firms wish to pursue growth strate-

gies by diversifying into foreign markets to minimize their employment risks [71] [72] [73] or to increase their compensation [27] [74] [75]. Likewise, managers may choose to enjoy the “quiet life” by not investing in profitable projects and not pursuing firms’ growth opportunities [76] [77]. These managers’ behaviors may not be in the best interest of the shareholders and may not always result in enhancing the value of the firm [78] [79]. On the other hand, governance costs increase as the number of internal transactions rises, which is influenced by the number of foreign subsidiaries a firm establishes [31] [51]. Internationally diversified firms tend to adopt complex organizational structures, which raises the costs of hierarchical governance and makes monitoring the behavior of managers more difficult [67] [80] [81]. In anticipation of moral hazards, lenders may decrease the supply of external capital, thereby increasing the cost of capital.

Third, it has been empirically observed that investors favor the domestic firms with which they are familiar and avoid investing in firms that are diversified internationally, even though the benefits of investing in internationally diversified firms have been clearly documented for investors [21] [82] [83]. This phenomenon, known as home bias, has been explained from different angles. Researchers contend that investors may suffer from restrictions on international capital flows as well as access to information about domestic firms or economic conditions [84] [85] [86]. Researchers in this area recently claimed that investors intentionally choose to access only domestic information because specializing in domestic information has been theoretically shown to be a more profitable strategy [87]. Therefore, we assert that external investors might perceive international diversification as a negative signal due to their preference for domestic operation, which in turn restricts the supply of capital to these multinational firms and hinders their growth.

Per the discussion thus far, if external investors perceive international diversification as negative signal, then we anticipate that international diversification may also hinder firm’s excessive growth. Based on such reasoning, we develop the first hypothesis as follows:

Hypothesis 1: *All other factors being equal, international diversification hinders firms’ excessive growth.*

2.3. Role of Corporate Governance Strength

A growing literature is examining the benefits of strong corporate governance and how corporate governance could overcome moral hazards and adverse selection problems while also mitigating investors’ home bias. First, [32] [88] [89] [90] [91] [92] have found that strong corporate governance, especially by promoting board independence, can mitigate adverse selection problems. They reason that increasing board independence advances the interests of minority investors by mitigating the problem of underinvestment. In the same vein, [33] [93] have shown that forms of executive compensation can help mitigate adverse selection, preventing managers from acting in their own self-interest. It has been

documented that strong corporate governance can mitigate conflicts of interest, influencing managers' behavior by reducing the information asymmetry between insiders and outsiders and implementing monitoring systems via numerous mechanisms, such as independent directors and compensation schemes [94]. Second, in an attempt to explain the home bias problem, [34] have found that home bias is closely related to corporate governance. Specifically, concentrated ownership is prevalent in countries with poor investor protection, which results in the rights of minority shareholders being poorly protected. Therefore, corporate governance can impact the way that investors perceive multinational corporations.

If strong corporate governance can overcome moral hazards and adverse selection problems while also mitigating investors' home bias problem, we should observe that given the same level of international diversification, firms with strong corporate governance will be less affected by the negative effects of international diversification and, thus, experience more excessive growth. Based on such reasoning, we develop the second hypothesis as follows:

Hypothesis 2: All other factors being equal, strong corporate governance promotes internationally diversified firms to experience more excessive growth.

2.4. Role of the Disclosure of Geographic Segment Earnings

To further test and confirm the reasoning in Hypothesis 2, we focus on one specific aspect of corporate governance—the disclosure of geographic segment earnings—and explore the role of this disclosure in promoting excessive growth. In the literature on segment earnings disclosure, researchers have found that firms can mitigate the problem of moral hazards by disclosing their segment earnings. Some early work in this area highlighted that disclosing financial accounting information creates opportunities for outside investors to monitor the moral hazard risk of a firm's management [95] [96]. More recently, [35] contend that managers who adopt self-serving behavior that is not in shareholders' best interest are more reluctant to reveal segment-level differences in growth. In the same vein, [97] investigate the disclosure of supplemental executive retirement plans and show that managers see insufficient disclosure as an opportunity to increase their own pay. In other words, the flexibility that allows managers to take advantage of the complexity of their firms also allows them to conceal low growth resulting from some segments and to avoid reporting segment earnings. Likewise, [36] suggest that the disclosure of geographic earnings can curb managers' empire-building behavior, thereby reducing agency costs.

If segment disclosure can mitigate agency problem, then it is anticipated that, given the same level of international diversification, firms willing to disclose segment earnings are less impacted by the negative effects of international diversification and thus experience more excessive growth. Following this reasoning, the third hypothesis is developed as follows:

Hypothesis 3: All other factors being equal, the corporate disclosure of geo-

graphic earnings promotes internationally diversified firms to experience more excessive growth.

3. Research Design and Sample Selection

3.1. Measurement of Excessive Growth

To measure excessive growth, we follow the firm-based financial planning model from [29] [30] to estimate the maximum rate of growth that can be internally financed. [29] examine the financial environment at the country level, whereas [30] apply this model to examine the financial environment at the firm level within the US. We follow [30] to examine excessive growth at the firm level within the US. The model is based on three assumptions: 1) the assets ratio used in production to sales is constant, 2) the firm's rate of profit per unit of sales is constant, and 3) the economic depreciation of existing assets is the same as reported in the financial statements. Under this framework, the demand for external capital is characterized as the difference between the required investment for a firm growing at a certain percentage and the internally available capital for investment (taking the firm's dividend payout as given).

First, we compute the firm's growth that can be achieved by relying on either internal cash flows or short-term borrowing. We then calculate the difference between the realized sales growth rate and the two measures of constrained growth. The excess growth rate that exceeds either of the two measures of constrained growth represents the level of excessive growth. Our measures of constrained growth are denoted as the short-term debt-financed growth rate (SFG) and the internally financed growth rate (IG). SFG_t represents the maximum growth rate of a firm achieved through short-term debt financing in year t and is computed using Equation (1).

$$SFG_t = \text{ROLTC}_t / (1 - \text{ROLTC}_t) \quad (1)$$

where ROLTC_t is the ratio of earnings after interest and taxes to long-term capital.¹ Meanwhile, IG_t represents the maximum growth rate that can be achieved if a firm relies only on its internal cash flows. We estimate IG_t using Equation (2).

$$IG_t = (\text{ROA}_t * b_t) / (1 - \text{ROA}_t * b_t) \quad (2)$$

where ROA_t is the ratio of earnings after interest and taxes to assets and b_t is the proportion of the firm's earnings retained for reinvestment.

For each firm, we denote the difference between its realized annual sales growth rate and its predicted short-term financed growth rate as EXCESS_SFG. We also denote the difference between its realized sales growth rate and its predicted internally financed growth rate as EXCESS_IG. EXCESS_SFG and EXCESS_IG are our proxies for excessive growth—namely, the excess of realized sales growth rate over the constrained growth rate, which is an output measure. We predict that a firm's international diversification will likely increase infor-

¹Following [29] [30], we define the assets of the firm not financed by short-term debt as "long-term capital," which is obtained by multiplying a firm's total assets by 1 minus the ratio of short-term liabilities to total assets.

mation asymmetry and, therefore, limit its access to external capital. Limited access to external capital means limited input for excessive growth. The empirical design we employ assumes that excessive growth is positively associated with external capital.

3.2. Test Variables

To test Hypothesis 1, we estimate the following OLS regression models:

$$\begin{aligned} \text{EXCESS_GROWTH} = & \beta_0 + \beta_1 \text{NUMBER_GEO_SEGMENT} \\ & + \beta_2 \text{NUMBER_PRODUCT_SEGMENT} + \beta_3 \text{DIV/TA} \\ & + \beta_4 \text{NI/NS} + \beta_5 \text{SIZE} + \beta_6 \text{TOBIN'S_Q} + \beta_7 \text{INVESTMENT} \\ & + \text{YEAR \& INDUSTRY FIXED EFFECTS} + e \end{aligned} \quad (3)$$

$$\begin{aligned} \text{EXCESS_GROWTH} = & \beta_0 + \beta_1 \text{NEG_HERF_GEO_SALES} \\ & + \beta_2 \text{NEG_HERF_PRODUCT_SALES} + \beta_3 \text{DIV/TA} \\ & + \beta_4 \text{NI/NS} + \beta_5 \text{SIZE} + \beta_6 \text{TOBIN'S_Q} + \beta_7 \text{INVESTMENT} \\ & + \text{YEAR \& INDUSTRY FIXED EFFECTS} + e \end{aligned} \quad (4)$$

$$\begin{aligned} \text{EXCESS_GROWTH} = & \beta_0 + \beta_1 \text{FOR_SALES} + \beta_2 \text{DIV/TA} \\ & + \beta_3 \text{NI/NS} + \beta_4 \text{SIZE} + \beta_5 \text{TOBIN'S_Q} + \beta_6 \text{INVESTMENT} \\ & + \text{YEAR \& INDUSTRY FIXED EFFECTS} + e \end{aligned} \quad (5)$$

where EXCESS_GROWTH is proxied by the excess of short-term debt-financed growth (EXCESS_SFG) and excess of internally financed growth (EXCESS_IG). The three international diversification variables are NUMBER_GEO_SEGMENT, NEG_HERF_GEO_SALES, and FOR_SALES. Following Tallman and Li (1996), we define our international diversification measure, NUMBER_GEO_SEGMENT, as the number of foreign countries in which a corporation operates subsidiaries.² The Herfindahl ratio is the most traditional measure of concentration. We construct the Herfindahl index of geographic segment sales, HERF_GEO_SALES, by using the squared sum of the fractions of geographic segment sales. This index is calculated across n geographic segments as the sum of the squares of each segment i 's sales, S_i , as a proportion of total sales:

$$\text{HERF_GEO_SALES} = \sum_{i=1}^n \left(\frac{S_i}{\sum_{i=1}^n S_i} \right)^2. \quad (6)$$

As the Herfindahl index of geographic segment sales, HERF_GEO_SALES, is a measure of concentration of geographic segment sales, a firm with more diversified geographic segment sales will generate a lower Herfindahl index of geographic segment sales than a firm with less diversified geographic segment sales. Therefore, we multiply HERF_GEO_SALES by minus one and use the new variable NEG_HERF_GEO_SALES to represent the negative HERF_GEO_SALES. NEG_HERF_GEO_SALES represents the diversification level of geographic ²[31] define the measure for the geographical scope of international operations, *Country Scope*, as the number of foreign countries in which a multinational enterprise has operating subsidiaries.

segment sales, which has the opposite sign as the concentration of geographic segment sales.

[31] define their second measure for international diversity as the proportion of sales from operations outside the home country to total sales. We follow [31] to define FOR_SALES as the ratio of foreign sales to total sales. Based on Hypothesis 1, we predict that the coefficients on NUMBER_GEO_SEGMENT, NEG_HERF_GEO_SALES, and FOR_SALES will be negative.

We include a number of control variables. NEG_HERF_PRODUCT_SALES is the negative Herfindahl index of product segment sales, which is defined as the squared sum of the proportional sales to each product segment. DIV/TA refers to total dividends divided by total assets. NI/NS indicates earnings after interest and taxes divided by net sales. TA is the natural logarithm of total assets. TOBIN'S_Q is the market value of equity plus the book value of liability, scaled by total assets. INVESTMENT is the sum of research and development expenditures, capital expenditures, and acquisition expenditures less cash receipts from the sale of property, plant, and equipment in year $t - 1$ multiplied by 100 and scaled by lagged total assets.

To test Hypothesis 2, we augment the baseline regressions with an interaction term between the corporate governance proxies and international diversification. We use a binary variable, CGS, to proxy for our corporate governance strength. We define CGS as 1 if the firm's corporate governance index is higher than the median and 0 otherwise. The interaction between CGS and the international diversification measures (*i.e.*, CGS*NUMBER_GEO_SEGMENT, CGS*NEG_HERF_GEO_SALES, and CGS*FOR_SALES) represents the impact of corporate governance strength on the association between international diversification and excessive growth.

To test Hypothesis 3, we define a binary variable, DGSE, as 1 if the firm discloses geographic segment earnings and 0 otherwise. A firm-year observation is classified as a discloser of geographic segment earnings if the firm discloses geographic segment earnings in the notes disclosures during the year. After we identify the disclosers of geographic segment earnings, the remainder is classified as non-disclosers of geographic segment earnings. We then interact the variable DGSE with the international diversification measures (*i.e.*, DGSE*NUMBER_GEO_SEGMENT, DGSE*NEG_HERF_GEO_SALES, and DGSE*FOR_SALES), and this interaction term represents the impact of corporate disclosures on the association between international diversification and excessive growth.

3.3. Sample Selection

The sample consists of all internationally diversified US firms for the 2000-2008 period for which the necessary data are available in the Worldscope annual database and the Compustat annual industrial and research files. We obtain geographic and product segment data from the Worldscope database. We acquire accounting data from the Compustat database to compute the variables neces-

sary to estimate regression models (3)-(5). The sample is restricted to US firms so that domestic and foreign sales reported for each firm have the same meaning across the firms. The final sample consists of 3703 firm-year observations over the 2000-2008 period.³ We use cross-sectional time-series data to run our regression models. Our sample covers 853 firms. The sample is an unbalanced panel because of the data available for the dependent and independent variables. We control for the SIC industry and year-fixed effects in all of the regression models. Out of the sample of 3703 firm-year observations, 751 firm-year observations disclose geographic segment earnings while 2952 firm-year observations do not. For the firm-year observations that have missing data in the regression variables, we drop these observations from the sample.

We obtain the Corporate Governance Quotient (CGQ) database from ISS. The CGQ ranking measures the quality of a firm's governance relative to firms in its industry or within an index in which the firm is included.⁴ The 44 attributes cover four sub-categories: 1) *board* (25 attributes), 2) *audit* (3 attributes), 3) *anti-takeover* (6 attributes), and 4) *compensation and ownership* (10 attributes). *Board* captures the functions of the board of directors that relate to board independence, composition of committees, size, transparency, and how work is conducted. *Audit* concerns the independence of the audit committee and the role of auditors. *Anti-takeover* provisions relate to the firm's charter and by-laws and refer to the dual-class structure, role of shareholders, poison pill, and blank check preferred. Finally, *compensation and ownership* concerns executive and director compensation on matters such as options, stock ownership, and loans as well as how these types of compensation are determined and monitored.

4. Results and Discussion

Table 1 reports descriptive statistics for the variables. The mean and median values of EXCESS_SFG are 0.287 and 0.068, respectively, suggesting that firms grow much faster than their short-term financed growth rate constraint. Similarly, the mean and median values of EXCESS_IG are 0.297 and 0.095, respectively, suggesting that firms grow much faster than their internal growth rate constraint. The range of minimum and maximum values for EXCESS_SFG and EXCESS_IG suggests that a wide variation exists in excessive external financing. The mean value of NUMBER_GEO_SEGMENT is 2.062. The mean value of NEG_HERF_GEO_SALES is -0.820. The median value of NUMBER_GEO_SEGMENT is 1.000, indicating that the majority of firms have only one geographic segment. The mean value of FOR_SALES is 0.015. The mean value of the natural logarithm of firm size is 5.374, which translates into \$216 million in total assets.

³Our sample is limited to 2000-2008 because our corporate governance quotient data covers 2000-2008 only.

⁴ISS compiles 55 governance attributes for each firm. We exclude 11 of the 55 attributes from our analysis because either none of the firms satisfied the minimally accepted criteria for these attributes or ISS replaced them with other attributes. Thus, our CGQ index includes 44 attributes for US firms.

Table 1. Descriptive statistics.

Variable	N	Mean	Median	Minimum	Maximum	Standard Deviation
<i>EXCESS_SFG</i>	3703	0.287	0.068	-0.706	11.165	0.901
<i>EXCESS_IG</i>	3703	0.297	0.095	-0.748	11.111	0.850
<i>NUMBER_GEO_SEGMENT</i>	3703	2.062	1.000	1.000	10.000	1.699
<i>NUMBER_PRODUCT_SEGMENT</i>	3703	1.746	1.000	1.000	9.000	1.208
<i>NEG_HERF_GEO_SALES</i>	3703	-0.820	-1.000	-0.176	-1.000	-0.251
<i>NEG_HERF_PRODUCT_SALES</i>	3703	-0.845	-1.000	-0.189	-1.000	-0.235
<i>FOR_SALES</i>	3703	0.015	0	0	0.100	0.023
<i>FOR_ASSETS</i>	3703	0.006	0	0	0.100	0.014
<i>DIV_TA</i>	3703	0.012	0	0	1.257	0.049
<i>NIINS</i>	3703	-1.529	0.025	-84.478	0.333	7.324
<i>SIZE</i>	3703	5.374	5.319	-1.487	11.545	2.064
<i>TOBIN'S_Q</i>	3703	2.300	1.587	0.310	27.781	2.389
<i>INVESTMENT</i>	3703	2.369	2.498	-2.889	6.609	1.299
<i>CGS</i>	579	0.470	0	0	1.00	0.356
<i>DGSE</i>	3703	0.203	0	0	1.00	0.117

Table 1 presents descriptive statistics for the variables of the full sample in the period of 2000-2008. The sample contains 3703 firm-year observations. We collect the sales and assets data of geographic and product segments from the Worldscope annual database and collect all other data from Compustat annual database. We winsorize the top and bottom 1% of each continuous variable. Refer to **Appendix** for variable definitions.

Panel A of **Table 2** presents OLS regressions that test the correlations between international diversification and excess short-term debt-financed growth (*EXCESS_SFG*). All three proxies for international diversification have the predicted negative signs, with the coefficient being negative and significant at the 1% level: *NUMBER_GEO_SEGMENT* *t*-value is -5.22, *NEG_HERF_GEO_SALES* *t*-value is -6.84, and *FOR_SALES* *t*-value is -5.72.⁵ As a more internationally diversified firm has higher values of *NUMBER_GEO_SEGMENT*, *NEG_HERF_GEO_SALES*, and *FOR_SALES*, negative and significant coefficients on all three international diversification measures are consistent with Hypothesis 1—namely, more internationally diversified firms have less excessive externally financed growth.

Among the control variables, the coefficients for *NUMBER_PRODUCT_SEGMENT* and *NEG_HERF_PRODUCT_SALES* are insignificant at the 10% level, indicating that firms' product diversification level is not correlated with excessive growth. As predicted, the coefficient for *SIZE* is negative and significant, suggesting that smaller firms can achieve higher excessive growth. The coefficients for *TOBIN'S_Q* and *INVESTMENT* are positive and significant, indicating that the market value of stocks and investment expenditures provide opportunities for firms to achieve higher excessive growth.

⁵To test the error terms, we analyze the results using *t*-statistics based on White's standard errors, which estimates true standard errors under heteroscedasticity.

Table 2. International diversification and excessive growth. (a) Panel A: International diversification and excessive short-term debt financed growth (EXCESS_SFG); (b) Panel B: international diversification and excessive internally financed growth (EXCESS_IG).

(a)				
Variable	Predicted Sign	Dependent Variable: EXCESS_SFG		
Intercept	?	-0.312 (-0.95)	-0.904*** (-2.69)	-0.368 (-1.13)
<i>NUMBER_GEO_SEGMENT</i>	-	-0.050*** (-5.22)		
<i>NEG_HERF_GEO_SALES</i>	-		-0.468*** (-6.84)	
<i>FOR_SALES</i>	-			-3.963*** (-5.72)
<i>NUMBER_PRODUCT_SEGMENT</i>	-	-0.002 (-0.19)		
<i>NEG_HERF_PRODUCT_SALES</i>	-		-0.059 (-0.86)	
<i>DIV/TA</i>	+	0.206 (0.71)	0.234 (0.81)	0.199 (0.69)
<i>NI/NS</i>	+	0.0005 (0.22)	0.001 (0.49)	0.0003 (0.15)
<i>SIZE</i>	-	-0.028*** (-3.42)	-0.019** (-2.21)	-0.027*** (-3.37)
<i>TOBINS_Q</i>	+	0.029*** (4.43)	0.029*** (4.45)	0.029*** (4.38)
<i>INVESTMENT</i>	+	0.133*** (11.05)	0.132*** (11.07)	0.135*** (11.33)
<i>YEAR FIXED EFFECTS</i>		YES	YES	YES
<i>INDUSTRY FIXED EFFECTS</i>		YES	YES	YES
Adjusted R-square		0.147	0.152	0.148
Number of observations		3703	3703	3703

(b)				
Variable	Predicted Sign	Dependent Variable: EXCESS_IG		
Intercept	?	-0.236 (-0.76)	-0.751** (-2.34)	-0.294 (-0.95)
<i>NUMBER_GEO_SEGMENT</i>	-	-0.038*** (-4.23)		
<i>NEG_HERF_GEO_SALES</i>	-		-0.381*** (-5.86)	
<i>FOR_SALES</i>	-			-3.283*** (-4.99)
<i>NUMBER_PRODUCT_SEGMENT</i>	-	-0.008 (-0.65)		
<i>NEG_HERF_PRODUCT_SALES</i>	-		-0.085 (-1.31)	

Continued

<i>DIVITA</i>	+	-0.090 (-0.33)	-0.066 (-0.24)	-0.096 (-0.35)
<i>NIINS</i>	+	-0.0002 (-0.08)	0.0003 (0.17)	-0.0003 (-0.14)
<i>SIZE</i>	-	-0.011 (-1.42)	-0.003 (-0.35)	-0.011 (-1.39)
<i>TOBINS_Q</i>	+	0.029*** (4.70)	0.029*** (4.71)	0.029*** (4.67)
<i>INVESTMENT</i>	+	0.118*** (10.35)	0.118*** (10.35)	0.121*** (10.64)
<i>YEAR FIXED EFFECTS</i>		YES	YES	YES
<i>INDUSTRY FIXED EFFECTS</i>		YES	YES	YES
Adjusted R-square		0.133	0.137	0.134
Number of observations		3703	3703	3703

This table presents coefficients from OLS regressions on growth in excess of short-term debt financed growth and growth in excess of internal growth. The sample contains 3703 firm-year observations. We collect the sales and assets data of geographic and product segments from the Worldscope annual database and collect all other data from Compustat annual database. We winsorize the top and bottom 1% of each continuous variable. Refer to [Appendix](#) for variable definitions. *, **, *** are significant at the 10%, 5%, and 1% levels, respectively, based on a two-tailed test.

Panel B of [Table 2](#) presents OLS regressions that test the correlations between international diversification and excess internally financed growth (*EXCESS_IG*). Similar to the results in Panel A, all three proxies for international diversification have the predicted negative coefficients significant at the 1% level (t -value = -4.23, -5.86, and -4.99 for *NUMBER_GEO_SEGMENT*, *NEG_HERF_GEO_SALES*, and *FOR_SALES*, respectively). These similar results are also consistent with Hypothesis 1.

[Table 3](#) presents OLS regressions testing the relationship between excessive growth (*EXCESS_SFG* and *EXCESS_IG*) and international diversification, conditional on the corporate governance strength measure. Panel A shows that the coefficients of corporate governance strength (*CGS*) are significantly positive in the three regression models, suggesting that a higher quality of corporate governance is associated with higher excessive growth. More importantly, the interactions between the corporate governance strength measure and three international diversification measures (*CGS*NUMBER_GEO_SEGMENT*, *CGS*NEG_HERF_GEO_SALES* and *CGS*FOR_SALES*) are consistently significant and positive. The positive signs of the coefficients for the interactive terms are predicted, suggesting that the higher degree of corporate governance not only eliminates the negative association between international diversification and excessive short-term debt-financed growth, but also creates a positive association between international diversification and excessive short-term debt-financed growth. These results are consistent with Hypothesis 2, which predicts that higher corporate governance between corporate insiders and outsiders promotes internationally diversified firms to grow based on externally financed capital.

Table 3. The impact of corporate governance on the relation between international diversification and excessive short-term debt financed growth. (a) Panel A: The impact of corporate governance strength on the relation between international diversification and excessive short-term debt financed growth; (b) Panel B: The impact of corporate governance strength on the relation between international diversification and excessive internally financed growth.

(a)				
Variable	Predicted Sign	Dependent Variable: EXCESS_SFG		
Intercept	?	-0.641 (-1.37)	-0.010 (-0.01)	-0.618 (-1.41)
<i>CGS</i>	+	0.039*** (2.89)	0.017 (0.64)	0.034*** (3.24)
<i>NUMBER_GEO_SEGMENT</i>	-	0.064 (0.76)		
<i>CGS*NUMBER_GEO_SEGMENT</i>	+	0.006** (2.41)		
<i>NEG_HERF_GEO_SALES</i>	-		0.699 (1.15)	
<i>CGS*NEG_HERF_GEO_SALES</i>	+		0.052**** (2.72)	
<i>FOR_SALES</i>	-			8.487 (1.15)
<i>CGS*FOR_SALES</i>	+			0.567* (1.69)
<i>NUMBER_PRODUCT_SEGMENT</i>	-	-0.015 (-0.59)		
<i>NEG_HERF_PRODUCT_SALES</i>	-		-0.113 (-0.88)	
<i>DIVITA</i>	+	-1.106 (-1.37)	-1.189 (-1.45)	-1.238 (-1.54)
<i>NIJNS</i>	+	0.003 (0.73)	0.003 (0.71)	0.003 (0.63)
<i>SIZE</i>	-	-0.046** (-2.54)	-0.043** (-2.37)	-0.051*** (-2.93)
<i>TOBIN'S_Q</i>	+	0.027* (1.95)	0.026* (1.90)	0.026* (1.91)
<i>INVESTMENT</i>	+	0.072*** (2.95)	0.073*** (3.01)	0.080*** (3.31)
<i>YEAR FIXED EFFECTS</i>		YES	YES	YES
<i>INDUSTRY FIXED EFFECTS</i>		YES	YES	YES
Adjusted R-square		0.209	0.209	0.204
Number of observations		579	579	579
(b)				
Variable	Pred. Sign	Dependent Variable: EXCESS_IG		
Intercept	?	-0.645 (-1.43)	0.041 (0.06)	-0.581 (-1.37)

Continued

<i>CGS</i>	+	0.035*** (2.71)	0.021 (0.82)	0.028*** (2.74)
<i>NUMBER_GEO_SEGMENT</i>	-	0.104 (1.27)		
<i>CGS*NUMBER_GEO_SEGMENT</i>	+	0.007*** (2.77)		
<i>NEG_HERF_GEO_SALES</i>	-		0.711 (1.21)	
<i>CGS*NEG_HERF_GEO_SALES</i>	+		0.049*** (2.70)	
<i>FOR_SALES</i>	-			8.423 (1.18)
<i>CGS*FOR_SALES</i>	+			0.544* (1.89)
<i>NUMBER_PRODUCT_SEGMENT</i>	-	-0.020 (-0.84)		
<i>NEG_HERF_PRODUCT_SALES</i>	-		-0.132 (-1.07)	
<i>DIVITA</i>	+	0.080 (0.10)	0.030 (0.04)	0.018 (0.02)
<i>NIINS</i>	+	0.005 (1.12)	0.005 (1.12)	0.004 (1.06)
<i>SIZE</i>	-	-0.030* (-1.75)	-0.027 (-1.57)	-0.035** (-2.08)
<i>TOBINS_Q</i>	+	0.038*** (2.87)	0.038*** (2.81)	0.038*** (2.83)
<i>INVESTMENT</i>	+	0.070*** (2.97)	0.071*** (3.01)	0.077*** (3.32)
<i>YEAR FIXED EFFECTS INDUSTRY</i>		YES	YES	YES
<i>FIXED EFFECTS</i>		YES	YES	YES
Adjusted R-square		0.200	0.201	0.197
Number of observations		579	579	579

This table presents coefficients from OLS regressions on growth in excess of short-term debt financed growth (*EXCESS_SFG*) and growth in excess of internally financed growth (*EXCESS_IG*) by testing the interaction between corporate governance strength (*CGS*) and international diversification measures. We collect the geographic and product segment data from Worldscope and all other data from Compustat annual database. We winsorize the top and bottom 1% of each continuous variable. Refer to **Appendix** for variable definitions. *, **, *** are significant at the 10%, 5%, and 1% levels, respectively, based on a two-tailed test.

Similarly, Panel B of **Table 3** shows that the coefficients of corporate governance strength (*CGS*) are also positive in the three regression models, suggesting that a higher quality of corporate governance is associated with higher excessive internally financed growth. Again, the interactions between the corporate governance strength measure and three international diversification measures (*CGS*NUMBER_GEO_SEGMENT*, *CGS*NEG_HERF_GEO_SALES*

and $CGS*FOR_SALES$) are consistently significant and positive. The predicted positive signs of the coefficients for the interactive terms suggest that the higher degree of corporate governance creates a positive association between international diversification and excessive internally financed growth, thereby further supporting Hypothesis 2.

The OLS regressions testing the relationship between excessive growth ($EXCESS_SFG$ and $EXCESS_IG$) and international diversification, conditional on the corporate disclosure measure are summarized in **Table 4**. Panel A of **Table 4**

Table 4. The impact of corporate governance on the relation between international diversification and excessive internally financed growth. (a) Panel A: The impact of disclosures of geographic segment earnings on the relation between international diversification and excessive short-term debt financed growth; (b) Panel B: The impact of disclosures of geographic segment earnings on the relation between international diversification and excessive internally financed growth.

(a)				
Variable	Predicted Sign	Dependent Variable: EXCESS_SFG		
Intercept	?	-0.677** (-1.99)	-0.768** (-2.24)	-0.620* (-1.86)
<i>DGSE</i>	+	0.350*** (3.78)	0.114 (0.95)	0.245*** (3.55)
<i>NUMBER_GEO_SEGMENT</i>	-	0.007 (0.40)		
<i>DGSE*NUMBER_GEO_SEGMENT</i>	+	0.062** (2.57)		
<i>NEG_HERF_GEO_SALES</i>	-		-0.086 (-0.48)	
<i>DGSE*NEG_HERF_GEO_SALES</i>	+		0.362*** (2.84)	
<i>FOR_SALES</i>	-			-0.611 (-0.44)
<i>DGSE*FOR_SALES</i>	+			3.017* (1.84)
<i>NUMBER_PRODUCT_SEGMENT</i>	-	-0.0002 (-0.02)		
<i>NEG_HERF_PRODUCT_SALES</i>	-		-0.053 (-0.77)	
<i>DIVITA</i>	+	0.234 (0.81)	0.248 (0.86)	0.234 (0.81)
<i>NIINS</i>	+	0.001 (0.40)	0.001 (0.59)	0.001 (0.38)
<i>SIZE</i>	-	-0.024*** (-2.84)	-0.018** (-2.15)	-0.024*** (-2.98)
<i>TOBINS_Q</i>	+	0.030*** (4.56)	0.029*** (4.52)	0.029*** (4.45)
<i>INVESTMENT</i>	+	0.132*** (11.06)	0.132*** (11.06)	0.134*** (11.29)

Continued

<i>YEAR FIXED EFFECTS INDUSTRY</i>		YES	YES	YES
<i>FIXED EFFECTS</i>		YES	YES	YES
Adjusted R-square		0.150	0.153	0.151
Number of observations		3703	3703	3703
(b)				
Variable	Pred. Sign	Dependent Variable: EXCESS_IG		
Intercept	?	-0.553* (-1.71)	-0.658** (-2.02)	-0.484 (-1.52)
<i>DGSE</i>	+	0.306*** (3.48)	0.085 (0.74)	0.183*** (2.80)
<i>NUMBER_GEO_SEGMENT</i>	-	0.012 (0.69)		
<i>DGSE*NUMBER_GEO_SEGMENT</i>	+	0.060*** (2.67)		
<i>NEG_HERF_GEO_SALES</i>	-		-0.125 (-0.74)	
<i>DGSE*NEG_HERF_GEO_SALES</i>	+		0.249** (2.33)	
<i>FOR_SALES</i>	-			-0.707 (-0.53)
<i>DGSE*FOR_SALES</i>	+			2.410* (1.94)
<i>NUMBER_PRODUCT_SEGMENT</i>	-	-0.006 (-0.49)		
<i>NEG_HERF_PRODUCT_SALES</i>	-		-0.081 (-1.24)	
<i>DIVITA</i>	+	-0.067 (-0.25)	-0.057 (-0.21)	-0.071 (-0.26)
<i>NI/NS</i>	+	0.0001 (0.07)	0.001 (0.24)	0.0001 (0.04)
<i>SIZE</i>	-	-0.007 (-0.89)	-0.002 (-0.31)	-0.008 (-1.09)
<i>TOBINS_Q</i>	+	0.030*** (4.81)	0.029*** (4.76)	0.029*** (4.71)
<i>INVESTMENT</i>	+	0.118*** (10.35)	0.118*** (10.34)	0.120*** (10.60)
<i>YEAR FIXED EFFECTS INDUSTRY</i>		YES	YES	YES
<i>FIXED EFFECTS</i>		YES	YES	YES
Adjusted R-square		0.136	0.138	0.136
Number of observations		3703	3703	3703

This table presents coefficients from OLS regressions on growth in excess of short-term debt financed growth (EXCESS_SFG) and growth in excess of internal growth (EXCESS_IG) by testing the interaction between the corporate disclosure variable (DGSE) and international diversification measures. We collect the geographic and product segment data from Worldscope and all other data from Compustat annual database. We winsorize the top and bottom 1% of each continuous variable. Refer to [Appendix](#) for variable definitions. *, **, *** are significant at the 10%, 5%, and 1% levels, respectively, based on a two-tailed test.

shows that the coefficients of corporate disclosure of geographic segment earnings (DGSE) are positive in three regression models; thus, a higher quality of corporate disclosures is associated with higher excessive short-term debt-financed growth. More importantly, the interactions between the corporate disclosure measure and the three international diversification measures (DGSE*NUMBER_GEO_SEGMENT, DGSE*NEG_HERF_GEO_SALES and DGSE*FOR_SALES) are consistently significant and positive. The interactive terms' positive coefficients, as predicted, suggest that the higher degree of corporate disclosures creates a positive association between international diversification and excessive short-term debt-financed growth. These results support Hypothesis 3, which predicts that higher corporate disclosures promote internationally diversified firms to grow based on externally financed capital.

As shown in Panel B of **Table 4**, the coefficients of corporate disclosure of geographic segment earnings (DGSE) are also positive in the three regression models, suggesting that a higher quality of corporate disclosures is associated with higher excessive internally financed growth. More importantly, the interactions between the quality of corporate disclosures and three international diversification measures (DGSE*NUMBER_GEO_SEGMENT, DGSE*NEG_HERF_GEO_SALES, and DGSE*FOR_SALES) are consistently significant and positive, as predicted, indicating that the higher degree of corporate disclosures creates a positive association between international diversification and excessive internally financed growth. These findings are also consistent with Hypothesis 3.

Robustness Tests

We conduct several robustness checks in order to address potential concerns regarding potential model misspecification issues. Following [29] [30], we modify the growth rate estimates to allow for a lower rate of earnings on new growth. We introduce the parameter z , which measures the ratio of the profit rate on new sales to the firm's average profit rate to derive a modified SFG and a modified IG rate given by:

$$SFG_t = ROLTC_t / (1 - z * ROLTC_t) \quad (7)$$

$$IG_t = (ROA_t * b_t) / (1 - z * ROA_t * b_t) \quad (8)$$

We also re-estimate the specifications in **Table 2** and **Table 3** for $z = 0, 0.25, 0.50,$ and 0.75 . The unreported regression results are very similar to those reported in **Table 2** and **Table 3**, in which z is set to 1. This evidence indicates that the assumption of the equality of the profit rate on marginal sales is not crucial for our results regarding the relationship between the excessive growth rate and international diversification.

Following [30], we modify the estimates of the growth rate to allow for a higher rate of asset turnover on new growth. We introduce the parameter y , which measures the ratio of the asset turnover on the new sales to the firm's av-

verage assets turnover to derive a modified SFG and a modified IG rate:

$$SFG_t = ROLTC_t / (1 * y - ROLTC_t) \quad (9)$$

$$IG_t = (ROA_t * b_t) / (1 * y - ROA_t * b_t) \quad (10)$$

We re-estimate the specifications in **Table 2** and **Table 3** for $y = 1.05$ and $y = 1.10$. The results (not tabulated) are very similar to those reported in **Table 2** and **Table 3**, where y is set to 1. These results indicate that the variation in the ratio of asset turnover on new sales to the firm's average assets turnover does not change our conclusions on the relationship between the excessive growth rate and international diversification.

We have tested our regression model for serial correlation, heteroscedasticity, function form misspecification, parameter stability and normality. Our regression results remain robust using these tests.

5. Conclusions

The purpose of this study is to examine the relationship between international diversification and firms' access to external capital to finance growth opportunities. Although some have argued that firms diversify internationally to have better access to resources and to achieve growth [43] [98], others have argued that managers might seek international diversification to pursue their personal interests given the difficulty of monitoring managerial performance in different legal, economic, and cultural environments [20]. Prior studies examining shareholder benefits from international diversification provide mixed evidence on the effects of corporate international diversification on capital structure, costs of capital, and firm value [1] [38] [39] [40]. Extending these studies, we examine the portion of actual growth monitored and financed by external capital providers. This approach does not rely on average investor perception of international diversification, but instead focuses on actual growth achieved through capital funded by external capital providers known to play a monitoring role in corporate decisions. In this regard, our results extend prior evidence on the economic consequences of the international diversification of operations.

The results of regressions for our sample of US firms provide consistent evidence that more internationally diversified firms experience less excessive growth. We use two proxies to represent excessive growth: the rate of growth that exceeds short-term debt-financed growth and the rate of growth that exceeds internally financed growth. We find that both excessive growth measures are negatively associated with international diversification. We conclude that more internationally diversified firms are more constrained in their ability to finance their growth through external capital. We further study the impact of the corporate governance on the negative association between international diversification and excessive growth. Using two corporate governance measures (*i.e.*, corporate governance strength index and disclosure of geographic segment earnings), we obtain evidence that strong corporate governance promotes the

internationally diversified firms to have excessive growth.

Our results suggest that, on average, external capital providers do not view the international expansion of operations as necessarily value-enhancing activities, contrary to the concepts underlying the majority of international diversification theories. Our results further suggest that corporate governance efforts (e.g., through higher levels of corporate governance and notes disclosure on segment earnings) may be an effective strategy to alleviate external capital providers' concerns and achieve higher growth rates through the expansion of international operations.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

- [1] Denis, D.J., Denis, D.K. and Yost, K. (2002) Global Diversification, Industrial Diversification, and Firm Value. *The Journal of Finance*, **57**, 1951-1979. <https://doi.org/10.1111/0022-1082.00485>
- [2] Shell, A. (2017) What's Driving America's Profits? Overseas Demand. USA Today. <https://www.usatoday.com/story/money/markets/2017/05/03/wall-street-earnings/101168864>
- [3] Han, J.K., Kim, N. and Srivastava, R.K. (1998) Market Orientation and Organizational Performance: Is Innovation a Missing Link? *Journal of Marketing*, **62**, 30-45. <https://doi.org/10.1177/002224299806200403>
- [4] Vernon, R. (1971) Sovereignty at Bay: The Multinational Spread of US Enterprises. *The International Executive*, **13**, 1-3. <https://doi.org/10.1002/tie.5060130401>
- [5] Kim, W.S. and Lyn, E.O. (1987) Foreign Direct Investment Theories, Entry Barriers, and Reverse Investments in US Manufacturing Industries. *Journal of International Business Studies*, **18**, 53-66. <https://doi.org/10.1057/palgrave.jibs.8490406>
- [6] Brewer, H.L. (1981) Investor Benefits From Corporate International Diversification. *Journal of Financial and Quantitative Analysis*, **16**, 113-126. <https://doi.org/10.2307/2330669>
- [7] Siddharthan, N.S. and Lall, S. (1982) The Monopolistic Advantages of Multinationals: Lessons from Foreign Investment in the US. *The Economic Journal*, **92**, 668-683. <https://doi.org/10.2307/2232556>
- [8] Michel, A.J. and Shaked, I. (1986) Country and Industry Influence on Dividend Policy: Evidence from Japan and the USA. *Journal of Business Finance & Accounting*, **13**, 365-381. <https://doi.org/10.1111/j.1468-5957.1986.tb00502.x>
- [9] Collins, J.M. (1990) A Market Performance Comparison of US Firms Active in Domestic, Developed and Developing Countries. *Journal of International Business Studies*, **2**, 271-287. <https://doi.org/10.1057/palgrave.jibs.8490335>
- [10] Ruigrok, W., Amann, W. and Wagner, H. (2007) The Internationalization-Performance Relationship at Swiss Firms: A Test of the S-Shape and Extreme Degrees of Internationalization. *Management International Review*, **47**, 349-368. <https://doi.org/10.1007/s11575-007-0020-6>
- [11] Qian, G. (1997) Assessing Product-Market Diversification of US Firms. *MIR: Man-*

- agement International Review*, **37**, 127-149.
- [12] Gomes, L. and Ramaswamy, K. (1999) An Empirical Examination of the Form of the Relationship between Multinationality and Performance. *Journal of International Business Studies*, **30**, 173-187. <https://doi.org/10.1057/palgrave.jibs.8490065>
- [13] Hitt, M.A., Hoskisson, R.E. and Ireland, R.D. (1994) A Mid-Range Theory of the Interactive Effects of International and Product Diversification on Innovation and Performance. *Journal of Management*, **20**, 297-326. <https://doi.org/10.1177/014920639402000203>
- [14] Contractor, F.J., Kundu, S.K. and Hsu, C.C. (2003) A Three-Stage Theory of International Expansion: The Link between Multinationality and Performance in the Service Sector. *Journal of International Business Studies*, **34**, 5-18. <https://doi.org/10.1057/palgrave.jibs.8400003>
- [15] Lu, J.W. and Beamish P.W. (2004) International Diversification and Firm Performance: The S-Curve Hypothesis. *Academy of Management Journal*, **47**, 598-609. <https://doi.org/10.2307/20159604>
- [16] Tadesse, S. (2004) The Allocation and Monitoring Role of Capital Markets: Theory and International Evidence. *Journal of Financial and Quantitative Analysis*, **39**, 701-730. <https://doi.org/10.1017/S0022109000003185>
- [17] Gande, A., Schenzler, C. and Senbet, L.W. (2009) Valuation Effects of Global Diversification. *Journal of International Business Studies*, **40**, 1515-1532. <https://doi.org/10.1057/jibs.2009.59>
- [18] Li, S., Qiu, J. and Wan, C. (2011) Corporate Globalization and Bank Lending. *Journal of International Business Studies*, **42**, 1016-1042. <https://doi.org/10.1057/jibs.2011.29>
- [19] Brzenk, P. (2018) The Impact of the Global Economy on the S&P 500. S&P Global. <https://www.spglobal.com/en/research-insights/articles/the-impact-of-the-global-economy-on-the-sp-500>
- [20] Jensen, M.C. and Meckling, W.H. (1976) Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. *Journal of Financial Economics*, **3**, 305-360. [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)
- [21] Fletcher, J. and Marshall, A. (2005) An Empirical Examination of the Benefits of International Diversification. *Journal of International Financial Markets, Institutions and Money*, **15**, 455-468. <https://doi.org/10.1016/j.intfin.2004.11.002>
- [22] Myers, S. C. (1984) The Capital Structure Puzzle. *The Journal of Finance*, **39**, 574-592. <https://doi.org/10.1111/j.1540-6261.1984.tb03646.x>
- [23] Shyam-Sunder, L. and Myers, S.C. (1999) Testing Static Tradeoff Against Pecking Order Models of Capital Structure. *Journal of Financial Economics*, **51**, 219-244. [https://doi.org/10.1016/S0304-405X\(98\)00051-8](https://doi.org/10.1016/S0304-405X(98)00051-8)
- [24] Bartlett, C.A. and Ghoshal, S. (1989) *Managing across Borders*. Harvard Business School Press, Boston.
- [25] Kogut, B. (1985) Designing Global Strategies: Comparative and Competitive Value-Added Chains. *Sloan Management Review*, **26**, 15. <https://doi.org/10.1002/tie.5060280105>
- [26] Palich, L.E., Cardinal, L.B. and Miller, C.C. (2000) Curvilinearity in the Diversification-Performance Linkage: An Examination of Over Three Decades of Research. *Strategic Management Journal*, **21**, 155-174. [https://doi.org/10.1002/\(SICI\)1097-0266\(200002\)21:2<155::AID-SMJ82>3.0.CO;2-2](https://doi.org/10.1002/(SICI)1097-0266(200002)21:2<155::AID-SMJ82>3.0.CO;2-2)
- [27] Anderson, R.C., Mansi, S.A. and Reeb, D.M. (2003) Founding Family Ownership

- and the Agency Cost of Debt. *Journal of Financial Economics*, **68**, 263-285. [https://doi.org/10.1016/S0304-405X\(03\)00067-9](https://doi.org/10.1016/S0304-405X(03)00067-9)
- [28] Lyandres, E. (2007) Costly External Financing, Investment Timing, and Investment-Cash Flow Sensitivity. *Journal of Corporate Finance*, **13**, 959-980. <https://doi.org/10.1016/j.jcorpfin.2007.07.001>
- [29] Demirgüç-Kunt, A. and Maksimovic, V. (1998) Law, Finance, and Firm Growth. *The Journal of Finance*, **53**, 2107-2137. <https://doi.org/10.1111/0022-1082.00084>
- [30] Khurana, I.K., Pereira, R. and Martin, X. (2006) Firm Growth and Disclosure: An Empirical Analysis. *Journal of Financial and Quantitative Analysis*, **41**, 357-380. <https://doi.org/10.1017/S0022109000002106>
- [31] Tallman, S. and Li, J. (1996) Effects of International Diversity and Product Diversity on the Performance of Multinational Firms. *Academy of Management Journal*, **39**, 179-196. <https://doi.org/10.2307/256635>
- [32] Holm, C. and Schøler, F. (2010) Reduction of Asymmetric Information through Corporate Governance Mechanisms—The Importance of Ownership Dispersion and Exposure Toward the International Capital Market. *Corporate Governance: An International Review*, **18**, 32-47. <https://doi.org/10.1111/j.1467-8683.2009.00777.x>
- [33] Kang, S.H., Kumar, P. and Lee, H. (2006) Agency and Corporate Investment: The Role of Executive Compensation and Corporate Governance. *The Journal of Business*, **79**, 1127-1147. <https://doi.org/10.1086/500671>
- [34] Dahlquist, M., Pinkowitz, L., Stulz, R.M. and Williamson, R. (2003) Corporate Governance and the Home Bias. *Journal of Financial and Quantitative Analysis*, **38**, 87-110. <https://doi.org/10.2307/4126765>
- [35] Berger, P.G. and Hann, R.N. (2007) Segment Profitability and the Proprietary and Agency Costs of Disclosure. *The Accounting Review*, **82**, 869-906. <https://doi.org/10.2308/accr.2007.82.4.869>
- [36] Hope, O.K. and Thomas, W.B. (2008) Managerial Empire Building and Firm Disclosure. *Journal of Accounting Research*, **46**, 591-626. <https://doi.org/10.1111/j.1475-679X.2008.00289.x>
- [37] Dastidar, P. (2009) International Corporate Diversification and Performance: Does Firm Self-Selection Matter? *Journal of International Business Studies*, **40**, 71-85. <https://doi.org/10.1057/palgrave.jibs.2008.57>
- [38] Lee, K.C. and Kwok, C.C. (1988) Multinational Corporations vs. Domestic Corporations: International Environmental Factors and Determinants of Capital Structure. *Journal of International Business Studies*, **19**, 195-217. <https://doi.org/10.1057/palgrave.jibs.8490381>
- [39] Reeb, D.M., Kwok, C.C. and Baek, H.Y. (1998) Systematic Risk of the Multinational Corporation. *Journal of International Business Studies*, **29**, 263-279. <https://doi.org/10.1057/palgrave.jibs.8490036>
- [40] Reeb, D., Mansi, S.A. and Allee, J.M. (2001) Firm Internalization and the Cost of Debt Financing: Evidence from Non-Provisional Publicly Traded Debt. *Journal of Financial and Quantitative Analysis*, **36**, 395-414. <https://doi.org/10.2307/2676289>
- [41] Hennart, J.F. (1982) A Theory of Multinational Enterprise. University of Michigan Press, Ann Arbor.
- [42] Kogut, B. and Chang, S.J. (1991) Technological Capabilities and Japanese Foreign Direct Investment in the United States. *The Review of Economics and Statistics*, **73**, 401-413. <https://doi.org/10.2307/2109564>
- [43] Caves, R.E. (1996) Multinational Enterprise and Economic Analysis. Cambridge

University Press, Cambridge.

- [44] Kim, W.C., Hwang, P. and Burgers, W.P. (1993) Multinationals' Diversification and the Risk-Return Trade-Off. *Strategic Management Journal*, **14**, 275-286. <https://doi.org/10.1002/smj.4250140404>
- [45] Barkema, H.G. and Vermeulen, F. (1998) International Expansion through Start-Up or Acquisition: A Learning Perspective. *Academy of Management Journal*, **41**, 7-26. <https://doi.org/10.2307/256894>
- [46] Delios, A. and Henisz, W.I. (2000) Japanese Firms' Investment Strategies in Emerging Economies. *Academy of Management Journal*, **43**, 305-323. <https://doi.org/10.5465/1556397>
- [47] Zahra, S.A., Ireland, R.D. and Hitt, M.A. (2000) International Expansion by New Venture Firms: International Diversity, Mode of Market Entry, Technological Learning, and Performance. *Academy of Management Journal*, **43**, 925-950. <https://doi.org/10.5465/1556420>
- [48] Kalra, R., Stoichev, M. and Sundaram, S. (2004) Diminishing Gains from International Diversification. *Financial Services Review*, **13**, 199-214.
- [49] Vermeulen, F. and Barkema, H. (2002) Pace, Rhythm, and Scope: Process Dependence in Building a Profitable Multinational Corporation. *Strategic Management Journal*, **23**, 637-653. <https://doi.org/10.1002/smj.243>
- [50] Barkema, H.G., Bell, J.H. and Pennings, J.M. (1996) Foreign Entry, Cultural Barriers, and Learning. *Strategic Management Journal*, **17**, 151-166. [https://doi.org/10.1002/\(SICI\)1097-0266\(199602\)17:2<151::AID-SMJ799>3.0.CO;2-Z](https://doi.org/10.1002/(SICI)1097-0266(199602)17:2<151::AID-SMJ799>3.0.CO;2-Z)
- [51] Hitt, M.A., Hoskisson, R.E. and Kim, H. (1997) International Diversification: Effects on Innovation and Firm Performance in Product-Diversified Firms. *Academy of Management Journal*, **40**, 767-798. <https://doi.org/10.2307/256948>
- [52] Jung, Y. (1991) Multinationality and Profitability. *Journal of Business Research*, **23**, 179-187. [https://doi.org/10.1016/0148-2963\(91\)90027-U](https://doi.org/10.1016/0148-2963(91)90027-U)
- [53] Grant, R.M., Jammine, A.P. and Thomas, H. (1988) Diversity, Diversification, and Profitability among British Manufacturing Companies, 1972-1984. *Academy of Management Journal*, **31**, 771-801. <https://doi.org/10.5465/256338>
- [54] Geringer, J.M., Tallman, S. and Olsen, D.M. (2000) Product and Geographic Diversification among Japanese Multinational firms. *Strategic Management Journal*, **10**, 109-119.
- [55] Delmar, F., Davidsson, P. and Gartner, W.B. (2003) Arriving at the High-Growth Firm. *Journal of Business Venturing*, **18**, 189-216. [https://doi.org/10.1016/S0883-9026\(02\)00080-0](https://doi.org/10.1016/S0883-9026(02)00080-0)
- [56] McKelvie, A. and Wiklund, J. (2010) Advancing Firm Growth Research: A Focus on Growth Mode Instead of Growth Rate. *Entrepreneurship Theory and Practice*, **34**, 261-288. <https://doi.org/10.1111/j.1540-6520.2010.00375.x>
- [57] Covin, J.G. and Slevin, D.P. (1990) New Venture Strategic Posture, Structure, and Performance: An Industry Life Cycle Analysis. *Journal of Business Venturing*, **5**, 123-135. [https://doi.org/10.1016/0883-9026\(90\)90004-D](https://doi.org/10.1016/0883-9026(90)90004-D)
- [58] Eisenhardt, K.M. and Schoonhoven, C.B. (1990) Organizational Growth: Linking Founding Team, Strategy, Environment, and Growth among US Semiconductor Ventures, 1978-1988. *Administrative Science Quarterly*, **35**, 504-529. <https://doi.org/10.2307/2393315>
- [59] Lee, C., Lee, K. and Pennings, J.M. (2001) Internal Capabilities, External Networks,

- and Performance: A Study on Technology-Based Ventures. *Strategic Management Journal*, **22**, 615-640. <https://doi.org/10.1002/smj.181>
- [60] Baum, J.R., Locke, E.A. and Smith, K.G. (2001) A Multidimensional Model of Venture Growth. *Academy of Management Journal*, **44**, 292-303. <https://doi.org/10.5465/3069456>
- [61] Chandler, G.N. and Hanks, S.H. (1994) Founder Competence, the Environment, and Venture Performance. *Entrepreneurship Theory and Practice*, **18**, 77-89. <https://doi.org/10.1177/104225879401800306>
- [62] Gilbert, R.J. (2006) Competition and Innovation. *Journal of Industrial Organization Education*, **1**, 1-23. <https://doi.org/10.2202/1935-5041.1007>
- [63] Myers, S.C. and Majluf, N.S. (1984) Corporate Financing and Investment Decisions When Firms Have Information That Investors Do Not Have. *Journal of Financial Economics*, **13**, 187-221. [https://doi.org/10.1016/0304-405X\(84\)90023-0](https://doi.org/10.1016/0304-405X(84)90023-0)
- [64] Easley, D. and O'hara, M. (2004) Information and the Cost of Capital. *The Journal of Finance*, **59**, 1553-1583. <https://doi.org/10.1111/j.1540-6261.2004.00672.x>
- [65] Lambert, R., Leuz, C. and Verrecchia, R.E. (2007) Accounting Information, Disclosure, and the Cost of Capital. *Journal of Accounting Research*, **45**, 385-420. <https://doi.org/10.1111/j.1475-679X.2007.00238.x>
- [66] Harris, M., Kriebel, C.H. and Raviv, A. (1982) Asymmetric Information, Incentives and Intra-Firm Resource Allocation. *Management Science*, **28**, 604-620. <https://doi.org/10.1287/mnsc.28.6.604>
- [67] Jones, G.R. and Hill, C.W. (1988) Transaction Cost Analysis of Strategy-Structure Choice. *Strategic Management Journal*, **9**, 159-172. <https://doi.org/10.1002/smj.4250090206>
- [68] Duru, A. and Reeb, D. (2002) International Diversification and Analysts' Forecast Accuracy and Bias. *The Accounting Review*, **77**, 415-433. <https://doi.org/10.2308/accr.2002.77.2.415>
- [69] La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and Vishny, R.W. (1997) Legal Determinants of External Finance. *The Journal of Finance*, **52**, 1131-1150. <https://doi.org/10.1111/j.1540-6261.1997.tb02727.x>
- [70] Miller, J.L. (2002) The Board as a Monitor of Organizational Activity: The Applicability of Agency Theory to Nonprofit Boards. *Nonprofit Management and Leadership*, **12**, 429-450. <https://doi.org/10.1002/nml.12407>
- [71] Denis, D.J., Denis, D.K. and Sarin, A. (1997) Agency Problems, Equity Ownership, and Corporate Diversification. *The Journal of Finance*, **52**, 135-160. <https://doi.org/10.1111/j.1540-6261.1997.tb03811.x>
- [72] Hoskisson, R.E. and Hitt, M.A. (1990) Antecedents and Performance Outcomes of Diversification: A Review and Critique of Theoretical Perspectives. *Journal of Management*, **16**, 461-509. <https://doi.org/10.1177/014920639001600210>
- [73] Tihanyi, L., Johnson, R.A., Hoskisson, R.E. and Hitt, M.A. (2003) Institutional Ownership Differences and International Diversification: The Effects of Boards of Directors and Technological Opportunity. *Academy of Management Journal*, **46**, 198-211. <https://doi.org/10.2307/30040614>
- [74] Hoskisson, R.E. and Turk, T.A. (1990) Corporate Restructuring: Governance and Control Limits of the Internal Capital Market. *Academy of Management Review*, **15**, 459-477. <https://doi.org/10.5465/amr.1990.4308828>
- [75] Jensen, M.C. and Murphy, K.J. (1990) Performance Pay and Top-Management Incentives. *Journal of Political Economy*, **98**, 225-264. <https://doi.org/10.1086/261677>

- [76] Bertrand, M. and Mullainathan, S. (2003) Enjoying the Quiet Life? Corporate Governance and Managerial Preferences. *Journal of Political Economy*, **111**, 1043-1075. <https://doi.org/10.1086/376950>
- [77] Giroud, X. and Mueller, H.M. (2010) Does Corporate Governance Matter in Competitive Industries? *Journal of Financial Economics*, **95**, 312-331. <https://doi.org/10.1016/j.jfineco.2009.10.008>
- [78] Comment, R. and Jarrell, G.A. (1995) Corporate Focus and Stock Returns. *Journal of Financial Economics*, **37**, 67-87. [https://doi.org/10.1016/0304-405X\(94\)00777-X](https://doi.org/10.1016/0304-405X(94)00777-X)
- [79] Lang, L.H. and Stulz, R.M. (1994) Tobin's Q, Corporate Diversification, and Firm Performance. *Journal of Political Economy*, **102**, 1248-1280. <https://doi.org/10.1086/261970>
- [80] Bergh, D.D. and Lawless, M.W. (1998) Portfolio Restructuring and Limits to Hierarchical Governance: The Effects of Environmental Uncertainty and Diversification Strategy. *Organization Science*, **9**, 87-102. <https://doi.org/10.1287/orsc.9.1.87>
- [81] Hill, C.W.L. and Hoskisson, R.E. (1987) Strategy and Structure in the Multiproduct Firm. *Academy of Management Review*, **12**, 331-341. <https://doi.org/10.5465/amr.1987.4307949>
- [82] De Roon, F.A., Nijman, T.E. and Werker, B.J. (2001) Testing for Mean-Variance Spanning with Short Sales Constraints and Transaction Costs: The Case of Emerging Markets. *The Journal of Finance*, **56**, 721-742. <https://doi.org/10.1111/0022-1082.00343>
- [83] Li, K., Sarkar, A. and Wang, Z. (2003) Diversification Benefits of Emerging Markets Subject to Portfolio Constraints. *Journal of Empirical Finance*, **10**, 57-80. [https://doi.org/10.1016/S0927-5398\(02\)00027-0](https://doi.org/10.1016/S0927-5398(02)00027-0)
- [84] Pástor, L. (2000) Portfolio Selection and Asset Pricing Models. *The Journal of Finance*, **55**, 179-223. <https://doi.org/10.1111/0022-1082.00204>
- [85] Brennan, M.J. and Cao, H.H. (1997) International Portfolio Investment Flows. *The Journal of Finance*, **52**, 1851-1880. <https://doi.org/10.1111/j.1540-6261.1997.tb02744.x>
- [86] Portes, R., Rey, H. and Oh, Y. (2001) Information and Capital Flows: The Determinants of Transactions in Financial Assets. *European Economic Review*, **45**, 783-796. [https://doi.org/10.1016/S0014-2921\(01\)00138-6](https://doi.org/10.1016/S0014-2921(01)00138-6)
- [87] Graham, J.R., Harvey, C.R. and Huang, H. (2009) Investor Competence, Trading Frequency, and Home Bias. *Management Science*, **55**, 1094-1106. <https://doi.org/10.1287/mnsc.1090.1009>
- [88] Cai, C.X., Keasey, K. and Short, H. (2006) Corporate Governance and Information Efficiency in Security Markets. *European Financial Management*, **12**, 763-787. <https://doi.org/10.1111/j.1468-036X.2006.00276.x>
- [89] Hillier, D. and McColgan, P. (2006) An Analysis of Changes in Board Structure during Corporate Governance Reforms. *European Financial Management*, **12**, 575-607. <https://doi.org/10.1111/j.1468-036X.2006.00332.x>
- [90] Kanagaretnam, K., Lobo, G.J. and Whalen, D.J. (2007) Does Good Corporate Governance Reduce Information Asymmetry around Quarterly Earnings Announcements? *Journal of Accounting and Public Policy*, **26**, 497-522. <https://doi.org/10.1016/j.jaccpubpol.2007.05.003>
- [91] Chen, E.T. and Nowland, J. (2010) Optimal Board Monitoring in Family-Owned Companies: Evidence from Asia. *Corporate Governance: An International Review*, **18**, 3-17. <https://doi.org/10.1111/j.1467-8683.2009.00778.x>

- [92] Alves, S. and Martins, J. (2010) The Impact of Intangible Assets on Financial and Governance Policies: UK Evidence. *International Research Journal of Finance and Economics*, **36**, 147-169.
- [93] Wruck, K.H. (1993) Stock-Based Incentives and Investment Decisions: A Comment. *Journal of Accounting and Economics*, **16**, 373-380.
[https://doi.org/10.1016/0165-4101\(93\)90018-B](https://doi.org/10.1016/0165-4101(93)90018-B)
- [94] Stein, J. (2003) Agency Cost, Information, and Capital Investment. In: Constantinides, G., Harris, M. and Stulz, R., Eds., *Handbook of the Economics of Finance*, Elsevier North Holland, Amsterdam, 111-165.
- [95] Bushman, R.M. and Smith, A. (2001) Financial Accounting Information and Corporate Governance. *Journal of Accounting and Economics*, **32**, 237-333.
[https://doi.org/10.1016/S0165-4101\(01\)00027-1](https://doi.org/10.1016/S0165-4101(01)00027-1)
- [96] Healy, P.M. and Palepu, K.G. (2001) Information Asymmetry, Corporate Disclosure, and the Capital Markets: A Review of the Empirical Disclosure Literature. *Journal of Accounting and Economics*, **31**, 405-440.
[https://doi.org/10.1016/S0165-4101\(01\)00018-0](https://doi.org/10.1016/S0165-4101(01)00018-0)
- [97] Kalyta, P. and Magnan, M. (2008) Executive Pensions, Disclosure Quality, and Rent Extraction. *Journal of Accounting and Public Policy*, **27**, 133-166.
<https://doi.org/10.1016/j.jaccpubpol.2008.01.002>
- [98] Barney, J.B. (1991) Firm Resources and Sustained Competitive Advantage. *Advances in Strategic Management*, **17**, 203-227.
[https://doi.org/10.1016/S0742-3322\(00\)17018-4](https://doi.org/10.1016/S0742-3322(00)17018-4)

Appendix: Variable Definitions

<i>EXCESS_SFG</i>	=	The difference between a firm's actual sales growth rate and its predicted short-term debt financed growth rate. For each firm, the predicted short-term debt financed growth rate is defined as $ROLTC/(1-ROLTC)$, where <i>ROLTC</i> is the ratio of earnings after tax and interest to long-term capital.
<i>EXCESS_IG</i>	=	The difference between a firm's actual sales growth rate and its predicted internally financed growth rate. For each firm, the predicted internally financed growth rate is defined as $ROA*b/(1-ROA*b)$, where <i>ROA</i> is the ratio of earnings after taxes and interest to assets, and <i>b</i> is the proportion of the firm's earnings that are retained for reinvestment.
<i>NUMBER_GEO_SEGMENT</i>	=	Number of geographic segments.
<i>NUMBER_PRODUCT_SEGMENT</i>	=	Number of product segments.
<i>NEG_HERF_GEO_SALES</i>	=	The negative Herfindahl index of geographic segment sales. We multiply Herfindahl index of geographic segment sales by minus one. Herfindahl index of geographic segment sales equals the sum of the squared proportional sales of each geographic segment.
<i>NEG_HERF_PRODUCT_SALES</i>	=	The negative Herfindahl index of product segment sales. We multiply Herfindahl index of product segment sales by minus one. Herfindahl index of product segment sales equals the sum of the squared proportional sales of each product segment.
<i>FOR_SALES</i>	=	The ratio of foreign sales to total sales.
<i>DIV_TA</i>	=	Total dividends divided by total assets.
<i>NIINS</i>	=	Earnings after interest and taxes divided by net sales.
<i>SIZE</i>	=	Natural log of total assets.
<i>TOBIN'S_Q</i>	=	(Market value of equity + book value of liabilities)/total assets.
<i>INVESTMENT</i>	=	The sum of research and development expenditure, capital expenditure, and acquisition expenditure less cash receipts from sale of property, plant, and equipment in year $t - 1$ multiplied by 100 and scaled by lagged total assets.
<i>CGS</i>	=	An indicator variable that equals one if the corporate governance CGQ index is higher than the median, and equals zero otherwise. We obtain the Corporate Governance Quotient (CGQ) database from ISS. The CGQ index is the sum of the 44 attributes that cover four sub-categories: 1) <i>Board</i> (25 attributes), 2) <i>Audit</i> (3 attributes), 3) <i>Anti-takeover</i> (6 attributes) and 4) <i>Compensation and Ownership</i> (10 attributes). Each attribute is either 1 or 0. The sum of the 44 attributes is the CGQ index.
<i>DGSE</i>	=	An indicator variable that equals one if the geographic segment earnings (or operating income) information is disclosed in Worldscope database, and equals zero otherwise. The geographic segment data is given for up to ten geographic segments of a company. OPERATING INCOME represents the operating income generated from the geographic region updated in the respective description.
