The influence of conditional conservatism on ownership dispersion: An international analysis *

La influencia del conservadurismo condicional en la dispersión de la propiedad: un análisis internacional

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ABSTRACT We study the influence of conditional accounting conservatism on domestic investor diversification decisions. We argue that a conservative accounting system that promotes the dissemination of bad news and which constrains managers from engaging in opportunistic activities reduces the need for investors to concentrate their ownership, and consequently helps investors to diversify their investments. Through a country-level analysis we show that increased domestic conditional conservatism and higher domestic diversification opportunities lead to higher levels of domestic ownership diversification. Our results are robust to alternative estimates of conditional conservatism, and indicate that conditionally conservative accounting systems improve risk sharing. These results suggest that the accounting system, and in particular accounting conservatism, is part of the institutional settings embedded in the infrastructures of capital markets.

KEYWORDS Conditional conservatism; Asymmetric reporting; Ownership diversification; Diversification opportunities; Governance and information problems.

RESUMEN Este trabajo analiza la influencia del conservadurismo contable condicional en las decisiones de inversión doméstica de los inversores. Argumentamos que un sistema contable conservador que hace que las empresas proporcionen las malas noticias al exterior a la vez que limita las posibilidades de que los directivos lleven a cabo actividades oportunistas reduce la necesidad de que los inversores se protejan concentrando su propiedad, lo que fomenta la diversificación de sus inversiones. Mediante un análisis a nivel pa's mostramos que el mayor conservadurismo combinado con mayores oportunidades de diversificación conlleva más diversificación en la propiedad. Nuestros resultados son robustos a estimaciones alternativas del conservadurismo condicional, e indican que los sistemas contables caracterizados por ser conservadores en forma condicional mejoran la diversificación del riesgo. Estos resultados sugieren que el sistema contable, y en particular el conservadurismo contable, es parte del entramado institucional que conforma la infraestructura del mercado de capitales.

PALABRAS CLAVE Conservadurismo condicional; Información asimétrica; Diversificación de propiedad; Oportunidades de diversificación; Problemas de gobernanza e información.

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1. INTRODUCTION

The present paper explores the possibility that the average quality of accounting within a particular country influences the level of ownership concentration. This is important because, although it is well known that corporate governance and country specific investor protection measures affect accounting quality (e.g. Ball, Kothari and Robin, 2000; Leuz, Nanda and Wysocki, 2003; Haw, Hu, Hwang and Wu, 2004; Dargenidou, McLeay and Raonic, 2007), the possibility that accounting quality affects such a key aspect of corporate governance has not previously been demonstrated. It is rather surprising that although it has been widely recognized that the accounting system is one important component of the infrastructure that the security market needs for its well-functioning (Ball, 2001; Black, 2001; Leuz, 2001), it has been largely overlooked as an explanation for the portfolio choices of investors. In this paper we try to fill this gap, and consequently we look at its role in helping investors to make their domestic investment decisions. In particular, we focus on the differential timeliness recognition of good and bad news in earnings (Basu, 1997), later known as conditional conservatism, as a key feature of the accounting system, and we ask if cross country differences in conditional conservatism help explain cross country differences in domestic investor diversification.

Conventional portfolio theory recommends that investors should diversify their portfolios to eliminate all unsystematic risk (Markowitz, 1952; Sharpe, 1964). Nevertheless if investors perceive high information and governance problems, they might respond by holding disproportionate stakes in some firms, and by monitoring the progress of the firms they do hold more closely. By doing so, they try to mitigate their information disadvantages through better monitoring of management and by exercising the control rights associated with significant ownership stakes. In other words, investors might choose not to diversify their portfolios to the fullest extent because they might think it would be better to maintain a controlling (or at least significantly influential) ownership so they could monitor managers and influence managerial decisions. We argue that an accounting system that promotes the dissemination of company-specific news and which constrains managers from engaging in opportunistic activities reduces the need for investors to concentrate their ownership, and, consequently, helps investors to diversify their investments.

While we discuss the causal mechanism of how a conservative accounting system can achieve these benefits in more detail below, intuitively the idea is as follows. To the extent that bad news is recognized early, managers are forced to deal with the negative consequences of value-reducing investments as they face declining reported earnings. Thus, governance problems that arise because managers engage in investment projects that do not benefit shareholders are mitigated by conservative accounting systems. Accounting systems can reduce information asymmetries between informed and uninformed investors because they credibly disclose private (bad) news early and thus reduce the incentives for private information gathering. This suggests accounting conservatism may be seen as a governance mechanism (Ball and Shivakumar, 2005). At the same time, conservative accounting systems focus on the dissemination of bad news, which provides incentives to professional information intermediaries to increase their information gathering activities for good news, which in turn improves the

overall information environment (LaFond and Watts, 2008). Consequently, conditional conservatism reduces the value to investors of concentrated shareholdings.

In order to test the idea that conditional conservatism affects portfolio diversification, we exploit the fact that countries differ not only in their levels of accounting conservatism, but also in the extent to which they provide opportunities for diversification. Morck, Yeung and Yu (2000), show that countries vary significantly in their levels of stock price synchronicity. High (low) levels of stock price synchronicity imply that the opportunities for diversification are low (high). Thus we assume that domestic investors trade-off the benefits of diversification against the costs of diversification. The outcome of this trade-off varies across countries, because countries differ both in their level of conditional conservatism (which we expect to be negatively associated with the costs of diversification) and in their level of stock price synchronicity (which is negatively associated with the benefits of diversification).

The evidence in this paper is consistent with the proposed role of (conservative) country-level accounting systems in mitigating governance and information problems. We provide direct evidence that conservative accounting systems help investor exploit diversification opportunities. In other words conditional conservatism reduces the need for investors to hold imperfectly diversified portfolios in order to protect their interests.

This is new evidence that has not been documented in prior accounting literature. The study highlights the important role that the accounting system plays in ensuring the well-functioning of the capital market, and shows that the interplay of accounting conservatism and diversification opportunities allows a reduction in the risk investors face.

Our paper is exploratory in nature and potentially controversial. In particular other papers, such as Bona-Sánchez, Pérez-Alemán and Santana-Mart'n (2011), Cullinan, Wang, Wang and Zhang (2012), and Ramalingegowda and Yu (2012) provide evidence that suggests that ownership characteristics explain conditional conservatism. Our paper argues that conditional conservatism also potentially affects ownership. In general it is possible that ownership and conditional conservatism may mutually determine each other. However, more sophisticated methods and more detailed data will be needed to test this possibility. For now we simply seek to demonstrate that the possibility that ownership patterns may in part be influenced by conditional conservatism finds some support in our country-level analysis.

The paper proceeds as follows. In section two we develop the hypothesis. In section three we describe the empirical analysis, sample and model. Section four gives the results and in section five we include the main conclusions of the analysis.

2. PRIOR LITERATURE AND HYPOTHESIS DEVELOPMENT

2.1. Prior evidence on the governance and informational role of conservatism

Traditional portfolio theory recommends investors to fully diversify their portfolios as a strategy to minimize the level of risk for a given level of expected return, but some empirical studies suggest that even if there are diversification opportunities investors

choose to forego them, and maintain under-diversified portfolios (French and Poterba, 1991). In relation to investment in corporate securities, two main explanations are offered for under-diversification: Governance and information problems.

Agency theory predicts that one way to alleviate governance problems is to concentrate ownership, if investors exercise control over the firm they might protect their interests against expropriation by managers. However not only are these blockholders less than fully diversified, but because they hold a disproportionate stake in the company, other investors are likely to be under-diversified as well (Dahlquist, Pinkowitz, Stulz and Williamson, 2003; Kho, Stulz and Warnock, 2009).

Informational asymmetries between informed and uninformed investors also affect the market liquidity of the firm's equity. Indeed the rational response by investors with high levels of information asymmetry is either to avoid investing in such companies altogether, or to buy and hold securities for the long term in order to avoid trading with informed investors, all of which will have a negative impact in the firm's value. Either way the outcome is reduced liquidity for the securities in question and a reduction in the average level of diversification into such securities.

If these problems could be reduced, one would expect investors' degree of diversification to be higher. In fact, prior theoretical studies argue that large investors trade-off the costs of having a high stake, that is the higher exposure to the firm's diversifiable risk, against the benefits in terms of enhanced incentives and ability to improve the firm's performance. In other words there is a contradiction between monitoring and reducing the risk level of the investment (Admati, Pfleiderer and Zechner, 1994; DeMarzo and Urosevic, 2006).

In this regard La Porta, Lopez-de-Silanes, Shleifer and Vishny (1998) find that ownership concentration is negatively related to the country's investor protection measures, as they help to limit the impact of the governance and information problems referred above. They document that ownership concentration is extremely high around the world. In an average country, close to half the equity in a publicly traded company is owned by the three largest shareholders. Furthermore, they perform a country-level analysis to examine empirically the determinants of ownership concentration (including, among others, enforcement quality, accounting standards, and shareholders rights) and conclude that ownership concentration is indeed a response not only to lack of legal investor protection measures but also to poor accounting standards.

Prior literature has identified the verification standards used for recognizing news in earnings as a central feature of the accounting system with respect to its suitability for addressing information and governance problems (Ball, 2001). The present study builds on this tradition. The distinction between conditional and unconditional conservatism is central to understanding the role of conservatism in efficient contracting with the firm. Unconditional conservatism relates to the deliberate undervaluation of net assets, while conditional conservatism refers to the asymmetric recognition of gains and losses [i.e., conditional on the presence of bad news (Beaver and Ryan, 2005)]. Ball and Shivakumar (2005) point out that unconditional conservatism is unlikely to improve contracting between rational agents, because such agents can simply invert the bias. In contrast, as explained in more detail below, the asymmetric timeliness of economic losses recognition relative to economic gains recognition (Basu, 1997),

known as conditional conservatism, can constrain the ability of managers to transfer wealth from outside investors to themselves and can serve to reduce information asymmetries between investors (Ball, 2001; Watts, 2003; LaFond and Watts, 2008). Consequently conditional conservatism can serve to improve contracting between the firm and its stakeholders.

Ball and Shivakumar (2005, 87) argue that the governance effect of timely loss recognition is due to mitigating agency problems related to managers' investments decisions. If managers know ex ante that losses will be recognized during their tenure, then they are less likely to make negative-NPV investments, while if they can defer loss recognition to periods when the reduced cash flows underlying negative NPVs are realized, then the earnings consequences of their investment decisions can be passed on to subsequent generations of managers. In summary, timely loss recognition increases managers' incentives to act quickly to limit economic losses, and thereby increases the efficiency of contracting between firms and managers. The results of Brown, He and Teitel (2006) are consistent with conditional conservatism serving as an efficient contracting role to reduce managers' opportunistic behavior in the use of accruals in an international setting.

Recent papers show that conservatism leads to improved firm efficiency. Thus García Lara, García Osma and Penalva (2010) show that conservatism constrains both over- and under-investment; Francis and Martin (2010) evidence that more conservative firms make more profitable acquisitions; Ahmed and Duellman (2011) conclude that firms with more conservative accounting have higher future profitability and lower likelihood and magnitude of special items charges. Bushman, Piotroski and Smith (2011) consider an international setting and find a positive relation between the sensitivity of corporate investments to decreased investment opportunities and conservatism worldwide. These results suggest that investors who wish to hold well diversified portfolios, and remain passive with respect to managerial monitoring, will be attracted by those firms that follow conservative practices.

A number of country specific studies document a positive relationship between firm governance measures and conditional conservatism. For the US Ahmed and Duellman (2007), García Lara, García Osma and Penalva (2009), and Ettredge, Huang and Zhang (2012) find a positive relation between governance quality and conditional conservatism. Beekes, Pope and Young (2004) report similar results for the UK. Also for the UK Mak, Strong and Walker (2012) evidence that corporate refocusing events result in increases in conservatism. In an international setting Jayaraman (2012) provides evidence of an increase in conservatism after the introduction of insider trading enforcement laws. Similarly Jayaraman and Shivakumar (2011) conclude that antitakeover laws affect the demand for asymmetric timeliness of loss recognition, although this effect seems to emanate from debtholders and not from equity holders. Overall the evidence is consistent with conditional conservatism assisting in the reduction of agency costs. Despite this general consensus on the positive association between conservatism and governance, Lim (2011) documents weak evidence that Australian firms with good governance report more conservatively. The author suggests that this is likely to be due to the relatively lower litigation risks in Australia.

In addition to the governance role of conservatism, as mentioned above it has been argued that the accounting system could reduce the information asymmetries between informed and uninformed investors because it credibly forces managers to disclose

private (bad) news early and thus reduces the incentives for private information gathering. At the same time, conditionally conservative accounting systems focus on the dissemination of bad news, which provides incentives to professional information intermediaries to increase their information gathering activities for good news, which in turn improves the overall information environment. LaFond and Watts (2008) and Khan and Watts (2009) evidence that managers increase accounting conservatism as a reaction to the existence of information asymmetries. In this regard, García Lara, García Osma and Penalva (2011a) find that managerial commitment to conservative asymmetric reporting lowers firm cost of equity capital by increasing bad news reporting precision, thereby reducing information uncertainty and the volatility of future stock prices. Moreover in a later paper these authors provide evidence that conservatism improves the firm information environment (García Lara, García Osma and Penalva 2011b).

In summary, it can be argued that higher conditional conservatism is related to lower information asymmetries and less governance problems. If this is the case then it follows that investors who wish to hold well diversified portfolios will be more attracted to the firms that are more conditionally conservative.

Finally we refer to some papers that have directly studied the link between conditional conservatism and ownership. LaFond and Roychowdhury (2008) and Chi, Liu and Wang (2009) provide evidence of a negative association between managerial ownership and conditional conservatism in the US and Taiwan respectively. Since prior studies suggest that managerial ownership is an effective way to alleviate governance problems (Shleifer and Vishny 1997), the substitution effect documented by these papers supports the governance role of conditional conservatism. Cullinan, Wang, Wang and Zhang (2012) extend the LaFond and Roychowdhury (2008) paper and consider the influence on conservatism of other types of shareholders in a different environment, China; they find a negative association of conditional conservatism with the percentage of shares owned by the largest shareholder, particularly if it exceeds 30%. Similarly, for Spanish listed companies, Bona-Sánchez, Pérez-Alemán and Santana-Martín (2011) conclude that conditional conservatism is negatively associated with two aspects of the ultimate controlling shareholder, its ownership share and the divergence between its voting and cash flow rights. These results are consistent with the existence of a demand for timely loss recognition by minority shareholders with the aim of protecting their investments. LaFond (2005) examines the influence of closely held ownership on conservatism in an international setting, and finds that firms with greater closely held ownership report less conservative earnings in all legal regimes. More recently, Ramalingegowda and Yu (2012) find that higher ownership by institutions that are likely to monitor managers is associated with more conservative financial reporting by US firms. This positive association is more pronounced among firms with more growth options and higher information asymmetry, where direct monitoring is more difficult and the potential governance benefits of conservatism are greater. Further, lead-lag tests of the direction of causality suggest that ownership by monitoring institutions leads to more conservative reporting.

2.2. Hypothesis development

This study builds on La Porta, Lopez-de-Silanes, Shleifer and Vishny (1998) who find that ownership concentration is negatively related to the country's investor protection

measures, thus ownership concentration becomes a substitute for legal protection. We add conditional conservatism as a potential additional device that by reducing governance and information problems can encourage greater diversification.

The present paper focuses on the diversification choices of domestic investors, and in a related paper Cascino, Giner, Tahoun and Walker (2012) document that cross-country variations in conditional conservatism are associated with the diversification choices of foreign investors. Their results show that international investors are more willing to hold equities of firms in countries with higher levels of conditional conservatism as part of an internationally diversified portfolio; and they are more likely to enter a foreign market as a foreign direct investor when the level of conditional conservatism is low. These results indicate that conditional conservatism seems to be one of the conditions that make investors more willing to hold non-block shareholdings in foreign countries.

Prior theoretical studies argue that investors trade-off the costs of diversification (i.e. the benefits from ownership concentration) against the benefits (Admati, Pfleiderer and Zechner, 1994; DeMarzo and Urosevic, 2006). It is likely that investors are more diversified within their home markets when there are sufficient diversification opportunities. We argue, following Morck, Yeung and Yu (2000), that the benefits of domestic diversification are higher in countries where the stocks within that market do not move together. However, even if domestic diversification opportunities are high, investors may still choose not to diversify if they reside in countries where there are severe governance and information problems. Since higher conditional conservatism in home markets implies less severe governance and information problems and lower benefits from ownership concentration at home; we hypothesize that:

H: The association between ownership dispersion and domestic diversification opportunities is an increasing function of conditional conservatism.

3. RESEARCH DESIGN

3.1. Model and variables

The relationship between the ownership structure and the properties of accounting earnings has been recently subject to attention, and ownership has been measured following different proxies; either dummy variables that proxy for the existence of controlling shareholders, or more precise variables that take into account the complexity of this property structure, such as the percentage of shares in the hands of the managers, the largest shareholders, the institutional shareholders, or even the ownership of the ultimate owner (e.g. Carlson and Bathala, 1997; Gabrielsen, Gramlich and Plenborg, 2002; Jung and Kwon, 2002; LaFond, 2005; LaFond and Roychowdhory, 2008; Bona-Sánchez, Pérez-Alemán and Santana-Martín, 2012). This research aims to consider the impact of conditional conservatism on domestic ownership diversification at the country-level, and as in Leuz, Nanda and Wysocki (2003) we use a well know data-base constructed by La Porta, Lopez-de-Silanes, Shleifer and Vishny (1998) that takes into account the ownership of the three largest shareholders in private firms in 1993. As the authors recognize, their measure ignores some of the complexities of the ownership structure, such as pyramidal structures and the fact that corporate

shareholders themselves might have owners, or that are shareholders that are affiliated with each other, and firms who own their own shares.

As for the country-level accounting system conservatism we use several proxies based on Bushman and Piotroski (2006). All of them are designed to capture the asymmetric verification standards for bad news, which is the accounting system feature that plays the hypothesized role of mitigating governance and information problems.

Before considering the role of conservatism, we estimate a regression where we include the diversification opportunities variable, which is the *Inverse of Stock Market (SM) Synchronicity*. In addition we include a number of controls taken from La Porta, Lopez-de-Silanes, Shleifer and Vishny (1998) that have shown to be associated with ownership concentration/diversification. Thus we estimate the following basic country-level OLS (ordinary least square) regression:

$$Ownership\ Concentration_i = \beta_0 + \beta_1\ Inverse\ of\ SM\ Synchronicity_i + \beta_2\ Controls_i + \varepsilon_i \quad (1)$$

where *Ownership concentration* for country *i* is the average ownership stake of the largest three shareholders in the ten largest privately owned non-financial firms in country *i* [(1)]. Higher ownership concentration in country *i* implies less dispersed ownership in this country.

The rationale behind choosing the *Inverse of SM Synchronicity* as the proxy for diversification opportunities is as follows. Portfolio diversification cannot play its predicted role (i.e., to diversify firm-specific risk) if stock prices move in the same direction. Morck, Yeung and Yu (2000) show that stocks move together since their return variations are mainly explained by market wide movements rather than firm-specific variations, they refer to this phenomenon as *Stock Market Synchronicity*. They measured it as the average R^2 of firm-level regressions of 1995 bi-weekly stock returns on local and US market indexes in each country. In summary this is the inverse proxy for the benefits of diversification. As these authors do [(2)], we apply the logistic transformation to the synchronicity measure. In addition to avoid the negative sign of this relationship we invert it, so that our variable will be increasing in diversification opportunities.

Lower synchronicity implies higher diversification benefits, and consequently one would expect more dispersed ownership in markets with low synchronicity. This means that the coefficient of the *Inverse of SM Synchronicity* variable should be negative. However, as argued in the previous section, even if synchronicity is low, investors may still choose not to diversify if they perceive high governance and information problems. Low synchronicity is a necessary condition for diversification benefits, but before such benefits can be obtained investors would need to be assured that they will not face information or governance problems. It is here that conditional conservatism can make a difference, thus in our next model we introduce a variable that captures this conservatism. The *Accounting Conservatism* variable also interacts with the investment opportunities variable, as we expect that holding constant the investment

(1) A firm is considered privately owned if the state is not a known shareholder in it.
(2) Morck, Yeung and Yu (2000) apply the logistic transformation to the synchronicity measure: *[log (Synchronicity/1-synchronicity)]*.

opportunities, the more conservative accounting system should have more dispersed ownership. Thus we estimate the following expanded country-level OLS regression:

$$\begin{aligned} &\textit{Ownership Concentration}_{\ i} = \beta_0 + \beta_1\, \textit{Inverse of SM Synchronicity}_i + \beta 2\, \textit{Accounting} \\ &\textit{Conservatism}_i * \textit{Inverse of SM Synchronicity}_i + \beta_3\, \textit{Accounting Conservatism}_i + \beta_4\, \textit{Controls}_i + \varepsilon_i \end{aligned} \quad (2)$$

We expect that high levels of conservatism and low synchronicity lead to high levels of dispersed ownership. Accordingly, we expect that the sign on the interaction term between *Inverse of SM Synchronicity* and conditional conservatism in model (2) should be negative.

We use two country-level proxies for the accounting conservatism variable: *Timely economic loss recognition* (*TLR_BP_BKR*) and *Incremental timeliness of economic losses* (*INCR_BP_BKR*), as reported in Bushman and Piotroski (2006) who follow the methodology in Ball, Kothari and Robin (2000). Using ten annual cross-sectional estimations of the Basu (1997)'s model over the period 1992-2001, Bushman and Piotroski (2006) compute for each country both: *(i)* the average timeliness with which economic gains are recognized in earnings, and *(ii)* the average incremental timeliness of economic losses. The sum of these two averages is the average timely economic loss recognition measure. We realize that there is a temporal mismatch as these variables are measured at a different period of time from that of ownership dispersion, but as long as they are sticky this should not have a major impact in our results.

As a robustness test, we also use an alternative measure of Timely loss recognition (*TLR_BP_BS*) over the same time period measured by Bushman and Piotroski (2006) based on the accruals-cash flow model of Ball and Shivakumar (2005) [(3)].

Bushman, Piotroski and Smith (2011) argue that although these cross-country conservatism proxies are computed using firm-level data, they capture the accounting system differences across countries rather than across firms. Their argument is summarized as follows. The conservatism practice of a firm is determined by three components; firm-specific characteristics, industry-specific characteristics and country-specific characteristics. If the firm- and industry- specific components are not perfectly correlated across firms and industries within the same country, they will cancel out by measuring conservatism using data on all firms in all industries within the same country. This procedure, thus, yields an estimate of the country component of conditional conservatism only.

We include in our regressions the full set of ownership concentration determinants identified by La Porta, Lopez-de-Silanes, Shleifer and Vishny (1998) as control variables. These variables are: *Log of GNP* and *Log of GNP per capita*, these are the Gross National Product and the same variable per capita in constant dollars; *Gini Coefficient*, which measures income inequality in each country; *Antidirector Rights*, an index aggregating shareholder rights that ranges from 0 to 6; *Creditor Rights*, an index aggregating creditor rights ranging from 0 to 4; *Mandatory Dividends*, this is the percentage of net income that the Company Law or the Commercial Code requires firms to distribute as dividends among ordinary stockholders (0 if no restriction); *Legal Reserve Required*, this is the minimum percentage of total share capital mandated by

(3) We obtain the *TLR_BP_BS* from the 2005 version of Bushman, Piotroski and Smith (2011).

Corporate Law to avoid the dissolution of an existing firm and takes a value of zero for countries without such restriction; *One Share One Vote*, it equals one if the Company Law or the Commercial Code of the country requires that ordinary shares carry one vote per share, and zero otherwise; *Rule of Law*, assessment of the law and order tradition in the country, it scales from 0 to 6; *CIFAR*, this is an index that measure the inclusion or omission of 90 items in the annual reports computed by the Center for International Financial Analysis and Research (CIFAR); and *Civil Law*, this is an indicator variable that takes value 1 if the country is a civil-law country, also called code-law country, and zero otherwise [(4)]. In additional tests, we also include a proxy for the benefits that can be extracted by being a large shareholder, *Private Benefits of Control*. Full details about these controls are provided in appendix A.

As mentioned above this study could be seen as an extension of La Porta, Lopez-de-Silanes, Shleifer and Vishny (1998), as both examine the determinants of ownership concentration, and take into account some legal investors protection measures as well as the quality of the accounting regime (measured through the CIFAR index), but differently to them we consider accounting conservatism and diversification opportunities as the main drivers of the investors' decisions.

3.2. Sample and descriptive statistics

We use the country-level data set constructed by La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1998) [(5)]. This data set provides data on ownership concentration across 45 countries and its main determinants. Although portfolio theory suggests that investors should be highly diversified, the data shows that widely dispersed ownership is an exception and not the rule. The average concentration measure is under 30 percent only for the United States, Australia, United Kingdom, Taiwan, Japan, Korea and Sweden. However, as the authors note this could have been influenced by the size of the companies under consideration, and if smaller companies had been considered, the numbers for ownership concentration would have been even larger.

The descriptive statistics of the all our variables are provided in table 1. The mean (median) *Ownership Concentration* is high as expected 44.64% (48%), and the mean (median) *Stock Market Synchronicity* is not as high 17.28% (16.25%). As for the accounting quality measures, the mean Timeliness of economic losses (*TLR_BP_BKR*) and the mean Incremental timeliness of economic losses (*INCR_BP_BKR*) are 0.2788 and 0.2474 respectively (median values 0.296 and 0.265 respectively), in line with the mean value of the common countries reported in Ball, Kothari and Robin (2000) which is 0.31, but larger than in Brown, He and Teitel (2006), as the mean value of the incremental coefficient is 0.1545 for the 20 countries under their analysis. The alternative measure of Timely loss recognition (*TLR_BP_BS*) is negative -0.3586, as it relates cash flows to accruals. The *CIFAR* variable has also high mean and median values of about 64 (being 90 the maximum score).

(4) See La Porta, Lopez-de-Silanes, Shleifer and Vishny (1998) for the rationale behind including each of these variables. There are only two items that were used but not reported in their paper: *Gini Coefficient* and the *Log of GNP*. We obtain GNP for the year 1994 from the World Bank Indicators, while we obtain the *Gini Coefficient* for the year 1990 from the Euro Monitor Database.

(5) We obtain the data from http://mba.tuck.dartmouth.edu/pages/faculty/rafael.laporta/publications.html

TABLE 1
DESCRIPTIVE STATISTICS

	N	*Mean*	*SD*	*P1*	*P25*	*Median*	*P75*	*P99*
INCR _BP_BKR	32	0.2474	0.1850	-0.145	0.108	0.265	0.362	0.618
TLR _BP_BKR	32	0.2788	0.1897	-0.042	0.1105	0.296	0.398	0.687
TLR_BP_BS	32	-0.3586	0.3784	-1.214	-0.473	-0.33	-0.0925	0.5
Ownership Concentration	34	0.4464	0.1424	0.18	0.36	0.48	0.56	0.67
Stock Market Synchronicity	34	0.1728	0.1013	0.021	0.093	0.1625	0.209	0.429
Log of GNP per Capita	34	9.0614	1.1929	5.7038	8.052	9.6435	9.9828	10.357
Log of GNP	34	12.3960	1.2683	10.821	11.377	12.188	13.087	15.709
Legal Reserve Required	34	0.1568	0.2021	0	0	0.1	0.2	1
CIFAR	34	63.7350	10.8690	36	57	64	71	83
Gini Coefficient	34	38.897	11.2570	20.7	31.2	37.8	47.7	62.7
Rule of Law	34	7.6534	2.4563	2.0833	6.1833	8.5417	10	10
Antidirector Rights	34	3.1471	1.3736	0	2	3	4	5
One Share One Vote	34	0.2353	0.4306	0	0	0	0	1
Mandatory Dividends	34	0.0485	0.1384	0	0	0	0	0.5
Creditor Rights	34	2	1.2792	0	1	2	3	4
Civil Law	34	0.6765	0.4749	0	0	1	1	1
Private Benefits of Control	31	0.1210	0.1528	-0.04	0.02	0.06	0.16	0.65

INCR_BP_BKR and *TLR_BP_BKR* are the incremental timeliness of economic losses and the timely economic loss recognition, respectively, as reported in Bushman and Piotroski (2006) who follow the methodology in Ball, Kothari and Robin (2000). *TLR_BP_BS* is the timely loss recognition as measured by Bushman and Piotroski (2006) based on the methodology of Ball and Shivakumar (2005). *Ownership Concentration* is the average ownership stake of the largest three shareholders in the ten largest privately owned non-financial firms in each country. *Stock Market Synchronicity* is the average R^2 of firm-level regressions of bi-weekly stock returns on local and US market indexes in each country in year 1995. The synchronicity measure summarized in this table is the raw measure without being transformed or inverted. The rest of the variables are defined in appendix A.

Table 2 provides the pairwise correlation coefficients between all our variables. It is not surprising that correlations are relatively high and significant for some variables. We have computed the variance inflation factors, and the results suggest severe multicollinearity problems for two variables only, namely *Rule of Law* and *Log of GNP per capita*. We have taken this problem into account in the analysis as indicated in the next section.

4. RESULTS

Before running the complete model, that includes the accounting conservatism variable, we run the regression which includes the diversification variable only, as well as the controls [model (1)]. Due to data availability for all the variables used in this analysis, sample size is reduced to the thrity two countries listed in appendix B.

TABLE 2
THE CORRELATION MATRIX

		v1	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17
v1	*INCR _BP_BKR*	1																
v2	*TLR _BP_BKR*	0.91***	1															
v3	*TLR_BP_BS*	0.29	0.48***	1														
v4	*Ownership Concentration*	-0.17	-0.17	-0.25	1													
v5	*Stock Market Synchronicity*	-0.29	-0.31*	-0.35*	0.24	1												
v6	*Log of GNP per Capita*	0.39**	0.36*	0.03	-0.41**	-0.49***	1											
v7	*Log of GNP*	-0.06	-0.07	-0.07	-0.52***	-0.29*	0.43**	1										
v8	*Legal Reserve Required*	-0.10	-0.20	-0.32*	-0.15	0.45***	-0.05	-0.04	1									
v9	*CIFAR*	0.47***	0.50**	0.40**	-0.50***	-0.20	0.45***	0.22	-0.32*	1								
v10	*Gini Coefficient*	-0.40**	-0.37*	0.08	0.46***	0.33*	-0.61***	-0.26	-0.03	-0.37**	1							
v11	*Rule of Law*	0.42**	0.44**	0.21	-0.45***	-0.52***	0.89***	0.36**	-0.19	0.49***	-0.67***	1						
v12	*Antidirector Rights*	-0.01	0.01	0.58**	-0.37**	-0.15	-0.10	-0.01	-0.27	0.33*	0.18	0.00	1					
v13	*One Share One Vote*	-0.25	-0.43**	-0.28	0.06	0.34**	-0.18	-0.14	0.15	-0.19	0.32*	-0.27	0.09	1				
v14	*Mandatory Dividends*	-0.13	-0.32*	-0.16	0.36**	0.06	-0.33*	-0.19	0.29*	-0.37**	0.51***	-0.37**	0.00	0.39**	1			
v15	*Creditor Rights*	-0.34*	-0.25	-0.01	-0.16	0.06	0.12	-0.04	-0.20	0.34*	-0.17	0.23	0.22	0.06	-0.32*	1		
v16	*Civil Law*	-0.01	-0.08	-0.47***	0.18	0.13	0.08	-0.01	0.51***	-0.48***	-0.18	-0.07	-0.62***	0.09	0.25	-0.50***	1	
v17	*Private Benefits of Control*	-0.43**	-0.41**	-0.36*	0.59***	0.16	-0.41**	-0.05	0.15	-0.56***	0.41**	-0.37**	-0.50***	0.16	0.57***	-0.25	0.39**	1

INCR_BP_BKR and *TLR_BP_BKR* are the incremental timeliness of economic losses and the timely economic loss recognition, respectively, as reported in Bushman and Piotroski (2006) who follow the methodology in Ball, Kothari and Robin (2000). *TLR_BP_BS* is the timely loss recognition as measured by Bushman and Piotroski (2006) based on the methodology of Ball and Shivakumar (2005). *Ownership Concentratio*n is the average ownership stake of the largest three shareholders in the ten largest privately owned non-financial firms in each country. *Stock Market Synchronicity* is the average R^2 of firm-level regressions of bi-weekly stock returns on local and US market indexes in each country in year 1995. The synchronicity measure summarized in this table is the raw measure without being transformed or inverted. The rest of the variables are defined in appendix A. ***, **, and * indicate significance at the 1, 5, and 10% levels.

TABLE 3
RESULTS OF THE OLS REGRESSION MODELS (1) AND (2)

Independent Variables	*(1)*	*(2)*	*(3)*
Inverse of Synchronicity	-0.071 **	-0.007	-0.008
	[0.029]	[0.018]	[0.017]
Inverse of Synchronicity *INCR_BP_BKR		**-0.529 *** **	
		[0.135]	
Inverse of Synchronicity *TLR_BP_BKR			**-0.465 *** **
			[0.111]
INCR_BP_BKR		-0.373 ***	
		[0.124]	
TLR_BP_BKR			-0.304 **
			[0.133]
Log of GNP per Capita	0.112 ***	0.132 ***	0.133 ***
	[0.030]	[0.027]	[0.027]
Log of GNP	-0.048 ***	-0.050 ***	-0.050 ***
	[0.009]	[0.011]	[0.010]
Legal Reserve Required	-0.450 ***	-0.574 ***	-0.560 ***
	[0.083]	[0.083]	[0.081]
CIFAR	-0.006 ***	-0.007 ***	-0.008 ***
	[0.002]	[0.001]	[0.002]
Gini Coefficient	-0.001	-0.002	-0.002
	[0.001]	[0.002]	[0.001]
Rule of Law	-0.059 ***	-0.066 ***	-0.066 ***
	[0.016]	[0.014]	[0.015]
Antidirector Rights	-0.037 **	-0.030 **	-0.029 **
	[0.014]	[0.013]	[0.013]
One Share One Vote	-0.120 *	-0.127 **	-0.130 **
	[0.060]	[0.051]	[0.053]
Mandatory Dividends	0.622 ***	0.668 ***	0.675 ***
	[0.19]	[0.161]	[0.168]
Creditor Rights	-0.000	-0.004	0.000
	[0.016]	[0.020]	[0.017]
Civil Law	-0.057	-0.051	-0.047
	[0.047]	[0.054]	[0.048]
Constant	1.106 ***	1.142 ***	1.130 ***
	[0.268]	[0.278]	[0.274]
Observations	32	32	32
R-squared	0.7062	0.7505	0.7472

Ownership Concentration is the average ownership stake of the largest three shareholders in the ten largest privately owned non-financi al firms in each country (La Porta *et al.,* 1998). *INCR_BP_BKR* and *TLR_BP_BKR* are the incremental timeliness of economic losses and the timely economic loss recognition, respectively, as reported in Bushman and Piotroski (2006) who follow the methodology in Ball, Kothari and Robin (2000). The rest of the variables are described in appendix A. The standard errors reported in brackets are corrected for heteroskedasticity. ***, **, and * indicate significance at the 1, 5, and 10% levels, respectively, using two-tailed *t-test*.

Column 1 in table 3 shows that as expected the *Inverse of SM synchronicity* is highly significant and negatively associated with *Ownership Concentration* [6]. This result suggests that *ceteris paribus*, investors diversify domestically when there are benefits to be gained from diversification in their home markets. The accounting quality variable, *CIFAR*, also has a significant negative coefficient, suggesting that the higher

(6) The sample size is 32 countries due to the availability of the conservatism variables; otherwise we have complete data about 34 countries. We have replicated this regression adding the two countries and the results are very similar.

the accounting quality the less concentrated is ownership. The control variables have the signs consistent with those obtained by La Porta, Lopez-de-Silanes, Shleifer and Vishny (1998), and are significant with the exception of *Gini Coefficient*, *Creditor Rights* and *Civil Law*.

In the later analysis we introduce the conservatism variable as stated in model (2). As shown in columns 2 and 3, the coefficient on the interaction between the inverse of synchronicity and *TLR_BP_BKR* (*INCR_BP_BKR*) is negative and significant at the 1% level. These results support our hypothesis that higher levels of conditional conservatism combined with higher domestic diversification opportunities leads to higher levels of domestic diversification. Regarding the conservatism variable itself, it also has a negative and significant influence when measured using the two measures of conservatism *TLR_BP_BKR* (*INCR_BP_BKR*). The control variables maintain their signs and significance. The introduction of the conservatism variable increases the R2 of the regressions from about 70% to 75%, confirming that there is an improvement in the explanatory power of the independent variables.

As indicated above the variance inflation factors for *Rule of Law* and *Log of GNP per capita* suggested severe muticollinearity problems, therefore we have run these regressions without including these variables, first one by one and then excluding the two variables altogether; the results remain constant. Table 3 reports the results of the regressions with all variables as we try to be as close as possible to La Porta, Lopez-de-Silanes, Shleifer and Vishny (1998).

Sensitivity tests

We have also run the regressions adding a new control variable: *Private Benefits of Control* to account for the omitted variable bias problem. When private benefits of control are high, ownership concentration is likely to be high, and at the same time conservatism is likely to be low. Thus, the exclusion of private benefits of control could be what is driving the effect of conservatism on ownership concentration. This variable is measured as the country's average block premium based on transfers of controlling blocks of shares (Dyck and Zingales 2004). The introduction of this variable reduces the sample size by three countries, but as shown in table 4 the results of the main variables of interests are consistent with those reported earlier. The *Private Benefits of Control* itself is not significant, and two control variables are not significant anymore: *Antidirectors Rights* and *Mandatory Dividends*. Overall, these results confirm that the main variable of interest, *Accounting Conservatism*, plays an important role in investment decisions and helps to improve risk diversification.

As an additional robustness check we have used another proxy for the conservatism variable: the asymmetric timeliness proposed by Ball and Shivakumar (2005) that refers to the association between operating cash flows and accruals. As shown in the last column of table 4 similar results are obtained for the interaction variable that includes this new conservatism variable and diversification opportunities.

To mitigate the aforementioned mismatch problem, we dropped the conservatism variable and estimated the regression with *CIFAR* as the main proxy for the accounting quality. That is, we interacted CIFAR with the *Inverse of SM Synchronicity*. The unreported results have consistent signs and significance levels for all variables with the exception of the new interaction term. This suggests that the two proxies of

TABLE 4
ADDITIONAL RESULTS WITH MODEL (2)

Independent Variables	*(1)*	*(2)*	*(3)*
Inverse of Synchronicity	-0.015 [0.024]	-0.016 [0.023]	-0.134 *** [0.030]
Inverse of Synchronicity *INCR_BP_BKR	**-0.495 ***** **[0.140]**		
Inverse of Synchronicity *TLR_BP_BKR		**-0.433 ***** **[0.135]**	
Inverse of Synchronicity *TLR_BP_BS			**-0.094 *** **[0.048]**
INCR_BP_BKR	-0.326 ** [0.142]		
TLR_BP_BKR		-0.269 * [0.142]	
TLR_BP_BS			-0.009 [0.092]
Log of GNP per Capita	0.170 *** [0.051]	0.170 *** [0.050]	0.204 *** [0.050]
Log of GNP	-0.062 *** [0.020]	-0.062 *** [0.020]	-0.066 *** [0.017]
Legal Reserve Required	-0.531 *** [0.095]	-0.515 *** [0.095]	-0.456 *** [0.065]
CIFAR	-0.005 ** [0.002]	-0.006 ** [0.002]	-0.006 * [0.003]
Gini Coefficient	0.002 [0.003]	0.002 [0.003]	0.003 [0.003]
Rule of Law	-0.063 *** [0.020]	-0.062 *** [0.019]	-0.075 *** [0.018]
Antidirector Rights	-0.025 [0.027]	-0.023 [0.027]	-0.035 [0.029]
One Share One Vote	-0.106 ** [0.040]	-0.107 ** [0.043]	-0.110 ** [0.046]
Mandatory Dividends	0.386 [0.324]	0.373 [0.319]	0.368 [0.262]
Creditor Rights	-0.013 [0.031]	-0.01 [0.029]	-0.014 [0.025]
Civil Law	-0.02 [0.086]	-0.015 [0.082]	-0.025 [0.086]
Private Benefits of Control	0.203 [0.210]	0.215 [0.203]	0.248 [0.160]
Constant	0.579 [0.344]	0.552 [0.347]	0.34 [0.395]
Observations	29	29	29
R-squared	0.7378	0.7379	0.7371

Ownership Concentration is the average ownership stake of the largest three shareholders in the ten largest privately owned non-financial firms in each country). *INCR_BP_BKR* and *TLR_BP_BKR* are the incremental timeliness of economic losses and the timely economic loss recognition, respectively, as reported in Bushman and Piotroski (2006) who follow the methodology in Ball, Kothari and Robin (2000). *TLR_BP_BS* is the timely loss recognition as measured by Bushman and Piotroski (2006) based on the methodology of Ball and Shivakumar (2005). The rest of the variables are described in appendix A. The standard errors reported in brackets are corrected for heteroskedasticity. ***, **, and * indicate significance at the 1, 5, and 10% levels, respectively, using two-tailed *t-test*.

accounting quality are not equivalent, and contrary to what happens with conservatism, the association between ownership dispersion and diversification opportunities is not affected by the level of accounting disclosure (as proxied by the CIFAR index).

Finally we have also estimated our regressions using the raw synchronicity measure without either transforming or inversing it. The unreported results of this test are consistent with those reported here.

5. CONCLUSION

In this research we explore the possibility that conditional conservatism influences a key corporate governance characteristic, i.e. the level of ownership concentration. Although it is well known that corporate governance affects accounting quality, the possibility that accounting quality, in particular earnings conservatism, affects such a key aspect of corporate governance has not previously been demonstrated. The rationale that supports our research is based on the idea that investors are more likely to diversify if the governance and information problems are not so severe that they cancel the potential diversification benefits. Thus, we examine whether a conservative accounting system, as a mechanism to alleviate governance and information problems, matters to investors' decision to diversify.

We argue that investors trade-off the benefits of diversification against the costs. We use a measure of the extent to which domestic stock returns move together as an inverse proxy for the benefits of diversification, and use conditional conservatism of a country's accounting regime as an inverse proxy for the costs of diversification.

Our results show that higher levels of conditional conservatism and higher domestic diversification opportunities lead to higher levels of domestic diversification. These results are robust to alternative estimates of conditional conservatism, and indicate that conditionally conservative accounting systems improve risk sharing holding constant the domestic diversification opportunities.

The paper is subject to a number of potential limitations. First of all our results do not prove that conditional conservatism is *per se* the feature that causes greater investor diversification. It is possible that other un-modeled institutional features that are positively correlated with conditional conservatism may be the fundamental drivers of domestic diversification. Thus our results should be viewed as exploratory rather than conclusive. Furthermore we are aware that the previous literature has found positive within country associations of conditional conservatism and ownership. This literature has argued that ownership diversification drives conditional conservatism. Our results raise the possibility that conditional conservatism may be mutually determined with ownership concentration. A complete test of this possibility will require firm level panel data for a large number of countries. Despite these limitations, however, our cross-country research design possesses the advantage that economically material variations in both ownership and conditional conservatism enhances our ability to find relations that are difficult to detect in a single country setting.

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APPENDIX A

Variables	*Description*
Stock Market Synchronicity	The systematic market-wide stock return variation as a percent of the total variation (i.e., the sum of market-wide stock return variation and firm-specific stock return variation). It is measured as the average R^2 of firm-level regressions of bi-weekly stock returns on local and U.S. market indexes in each country in year 1995. Source: Morck, Yeung, and Yu (2000).
GNP per Capita	Gross National Product per capita in constant dollars of year 1994. Source: La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1998).
GNP	Gross National Product for each county for the year 1994. Source: World Bank Indicators.
Legal Reserve Required	It is the minimum percentage of total share capital mandated by Corporate Law to avoid the dissolution of an existing firm. It takes a value of zero for countries without such restriction. Source: La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1998).
CIFAR	An index that measure the inclusion or omission of 90 items in the 1990 annual reports. Source: La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1998).
Gini Coefficient	Gini coefficient for income inequality in each country for the year 1990. Source: the Euro Monitor Database.
Rule of Law	Assessment of the law and order tradition in the country. Scale from 0 to 6, with lower scores for less tradition for law and order. Source: La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1998).
Antidirector Rights	An index aggregating shareholder rights. It ranges from 0 to 6. Source: La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1998).
One Share One Vote	Equals one if the Company Law or Commercial Code of the country requires that ordinary shares carry one vote per share, and zero otherwise. Equivalently, this variable equals one when the law prohibits the existence of both multiple-voting and non-voting ordinary shares and does not allow firms to set a maximum number of votes per shareholder irrespective of the number of shares she owns, and zero otherwise. Source: La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1998).
Mandatory Dividends	Equals the percentage of net income that the Company Law or Commercial Code requires firms to distribute as dividends among ordinary stockholders. It takes a value of zero for countries without such restriction. Source: La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1998).
Creditor Rights	An index aggregating different creditor rights. It ranges from 0 to 4. Source: La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1998).
Civil Law	An indicator variable that takes the value unity if the country is a civil-law country and zero otherwise. Source: La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1998).
Private Benefits of Control	The country's average block premium based on transfers of controlling blocks of shares in the period 1990-2000. Source: Dyck and Zingales (2004).

APPENDIX B

List of countries

Austria
Belgium
Brazil
Canada
Chile
Denmark
Finland
France
Germany
Greece
Hong Kong
India
Italy
Japan
Korea, South
Malaysia
Mexico
Netherlands
New Zealand
Norway
Philippines
Portugal
Singapore
South Africa
Spain
Sweden
Taiwan
Thailand
Turkey
United Kingdom
United States