

European Banks' Legal Provisions and Financial Crises: The Influence of Corporate Governance and Institutional Environment*

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Abstract

We study the legal provisions of 92 European systemic banks from 18 countries over the years 2008-2017. Since legal provisions may be viewed as a mechanism for disclosing information to capital markets, the creation of legal provisions is determined by the risk taken by the bank and the managerial incentives to disclose information. Our results show an initial negative relationship between managers' discretionary investments and legal provisions, even when we control for risk taking. We also find that board of director independence has a moderating effect in order to guard against future lawsuits. Similarly, a better institutional framework amplifies the positive influence of the board of directors.

1. Introduction

Just over ten years after the onset of the 2007-2009 global financial crisis, banks worldwide have had to face an endless number of lawsuits, whose risk is supposed to have been covered by legal provisions. Whereas in recent years we have witnessed some of the consequences of such lawsuits, we still lack sufficient studies about the drivers of the legal provisions. The aim of this paper is to cover this gap in the literature by exploring legal provisions as a disclosure tool.

In this regard, some anecdotal evidence on recent issues may prove to be illustrative. In 2014, the Banco Espírito Santo was rescued by the Portuguese Government and divided into a good bank, Novo Banco, and another bad bank which was destined to disappear. In December 2015, Novo Banco bonds were transferred to the bad bank, with the corresponding loss of value. As a result, the legal provisions of Novo Banco reached very high values in this period, soaring from EUR 42.7 million in 2014 to EUR 132.9 million in 2015. In 2016, international bond holders, such as BlackRock and Pimco, took legal action against Banco de Portugal. In Spain, in June

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2017, the failure of the Banco Popular generated a multitude of complaints from different stakeholders. Worth noting is the concentration of control in Ángel Ron, who was CEO and chairman of the board at the same time, and the risky strategy in mortgage investments. As a consequence, the Santander (the acquiring bank) had to create certain legal provisions in anticipation of the expected increase in litigation. The Spanish Stock Market Commission has observed the importance of provisions in the last years of this bank, and affirmed that, if it had provisioned well (in accordance with the criteria for late payments) between 2010 and 2015, it would have caused losses on its balance sheet. In 2012, it did indeed report them. Losses on the balance sheet are an obvious signal to the inexperienced investor, as high provisions are for the expert investor. Another example is Lloyds Bank, for which a simple search in Google shows some potential sources of risk for the bank: personal slips by the CEO in 2016 that affected the bank and a computer attack in 2017. Over the last few years, there has been a dramatic increase in the legal provisions of Lloyds Bank, which rose from EUR 1,339 million in 2016 to EUR 2,778 million in 2017.

In addition to this anecdotal evidence, there is a growing concern about banks' legal responsibilities in the aftermath of the crisis, with particular interest focusing on enforcement actions (Delis, Staikouras et al. 2019). In this context, legal provisions can be seen as a recognition of the legal risks and as a tool for anticipating possible accounting losses arising from legal claims. The years prior to the crisis can be characterized by the deregulation and low interest rates that enabled the availability of money. This abundant money supply could have led some banks to overinvest and to erroneous risk management (Acharya and Naqvi 2012; Huang, Chen et al. 2018; Chen, Lee et al. 2019). Thus, banks' legal provisions are closely related to the risk taken by these institutions and emerge as a topic that calls for research in order to know to what extent the creation of provisions has been a sensible response to the likelihood and estimated impact of the claims.

Most firms have had to develop and invest in their compliance departments, as shown by the increase in consulting services; and banks are no exception. Partially related to this increasing responsibility, banking regulation has grown considerably in recent years. Although this regulation aims to improve the health of the financial system, it might have unintended side-effects (Barucci and Milani 2018; Danisewicz, McGowan et al. 2018; Nguyen, Gan et al. 2019). For instance, banks may have been forced to formally comply with capital requirements even at customers' expense (Ertürk 2016; Banerjee and Mio 2018).

Managerial motivation to recognize risks and, consequently, to create provisions can be curbed both by internal and external control mechanisms. In turn, we study the effect that both the board of directors and the legal and institutional framework may have on legal provisions. The board of directors lies at the apex of corporate governance mechanisms and provides an effective means to supervise managers' discretionary decisions (Jensen 1993). Each country's degree of investor protection and its institutional characteristics may improve disclosure on banks' risk policy. Similarly, the level of corruption in the country may exacerbate possible discretionary use of legal provisions.

We find an initial negative relationship between free cash flow (our measure of managers' discretionary investments (Jensen 1986; Richardson 2006)) and legal provisions even when we control for risk taking. This means that more discretionary

decisions on the part of managers does not indicate greater recognition of future legal responsibilities. Furthermore, managers seem to hide risk taking by creating less provisions. Nevertheless, we also find that board of director independence has a moderating effect, such that independent boards lead to more provisions being created as a guard against future lawsuits. We also find that a better legal framework complements the influence of the board of directors.

We contribute to the literature in two ways. First, we offer a pioneering study of the quantitative analysis of legal provisions. Although legal provisions must be reported in annual financial statements following International Financial Reporting Standards, there are not strict enough requirements on the report format. As far as we are aware, our research is the first step in quantifying banks' legal provisions in the international arena. Second, we go a step further by analysing how the recognition of risks is shaped by both internal and external corporate governance control mechanisms.

The remainder of the paper study is structured as follows. Section 2 discusses the theoretical arguments and develops our testable hypotheses. Section 3 sets out the empirical design and introduces the data and empirical method. Section 4 presents the results. Finally, Section 5 concludes by summarizing the most important implications and suggesting some directions for future research.

2. Theoretical Framework and Hypotheses

The basic accounting rules for provisions are standardized in the International Financial Reporting Standards (1998), which defines provisions as "liabilities of uncertain timing or amount." The IFRS also establish that "a provision should be recognized when, and only when: (a) an entity has a present obligation (legal or constructive) as a result of a past event; (b) it is probable (i.e., more likely than not) that an outflow of resources embodying economic benefits will be required to settle the obligation; and (c) a reliable estimate can be made of the amount of the obligation." The IFRS note that it is only in extremely rare cases that a reliable estimate will not be possible¹.

Banks can report different kinds of provisions but, as the IRFS affirm, legal provisions display a particular lack of clarity. From this standpoint, provisions can be seen as the recognition of potential obligations faced by banks and which may arise from prior investment or financial decisions. Thus, legal provisions are driven by a two-level motivation: at the firm level, legal provisions are a result of potential liabilities with the bank's stakeholders (employees, depositors, shareholders, customers, etc.). At the managerial level, legal provisions are supposed to be related to managers' assessment of corporate risk, as "the estimates of outcome and financial effect are determined by the judgement of the management of the entity, supplemented by experience of similar transactions and, in some cases, reports from independent experts."² Consequently, legal provisions are not only affected by the estimation of the consequences of possible claims but also by the managerial interests and incentives to recognize such claims. In turn, our theoretical framework should cover two levels of decision: corporate disclosure policy and the mechanisms (both internal and external to the bank) that can curb managerial self-interested decisions.

¹ IAS 37, Introduction, n. 2

² IAS 37, n. 38

2.1 Legal Provisions and Managerial Discretionary Decisions

Easy credit and low interest rates in the years before the 2008 crisis led to an environment with abundant cash flow available for firms, which may have resulted in firms overinvesting. The combination of these high free cash flows and the decreasing risk-adjusted investment opportunities might have triggered corporate overinvestment (Schnabl and Hoffmann 2008; Hoffmann 2010; Ying, Danglun et al. 2013). Although the problem of overinvestment has in fact been widespread, banks and financial institutions have been accused of being major actors and of having exacerbated the financial crisis (Kirkpatrick 2009; Acharya and Naqvi 2012; Akbar, Kharabsheh et al. 2017; Huang, Chen et al. 2018; Chen, Lee et al. 2019).

Due to the lack of reference to the risk-return relationship, overinvestment in many cases may result in excessive corporate risk, which should somehow be reflected in financial statements. Given that legal provisions are the recognition of possible obligations arising from prior risky decisions, provisions should—depending on the impact and probability—reflect the situation resulting from stakeholder reaction to overinvestment or excessive risk taking. Loan loss provisions can also be considered as a disclosure tool (Wahlen 1994; Leventis, Dimitropoulos et al. 2011; Elnahass, Izzeldin et al. 2014). Moreover, the literature concludes that the non-discretionary component of loan loss provisions is the most relevant (Bouvatier and Lepetit 2008; Caporale, Alessi et al. 2018; Aristei and Gallo 2019). Given such a standpoint, legal provisions provide a unique opportunity for research since they may be considered as mainly discretionary.

Consequently, as managers are supposed to estimate provisions, the riskier managerial decisions permitted by greater free cash flow should be translated into more abundant legal provisions. However, the recognition implied by legal provisions is conditional on managers' personal interests. In fact, prior literature shows that managers' personal traits and incentives may moderate risk taking in banks (Guo, Jalal et al. 2015; Palvia, Vähämaa et al. 2015). Managers may be reluctant to admit to having taken excessive risk, and the previously stated relationship between free cash flows and legal provisions may be blurred by managerial self-interest.

Therefore, we expect the relationship between free cash flow and legal provisions to be driven by two opposing forces. On the one hand, the bank's disclosure policy to provide stakeholders with relevant information should lead to a positive relationship in the sense that more overinvestments should be translated into a greater recognition of risk. On the other hand, managers' self-interest in hiding overinvestments or managers' overconfidence would lead to a negative relationship. In turn, the relationship between free cash flow and legal provisions can be stated in a dual way, as follows:

H1a: There is a positive relationship between banks' free cash flows and legal provisions.

H1b: There is a negative relationship between banks' free cash flows and legal provisions.

2.2 Legal Provisions and Boards of Directors

As is widely known, corporate governance mechanisms can attenuate managers' discretionary behaviour. The board of directors emerges as one of the most

effective internal corporate governance mechanisms. Boards are usually charged with three main duties: managerial oversight, provision of critical resources, and strategic guidance (Adams, Hermalin et al. 2010). Although conditional on a number of issues, the literature has often underlined the monitoring of managers as the main duty of the board of directors (Huse, Hoskisson et al. 2011).

There are a number of board characteristics that can impact their functioning: size, independence, activity, CEO duality (Andrés and Vallelado 2008; Fracassi and Tate 2012; Chou, Chung et al. 2013; Kim, Mauldin et al. 2014; Muravyev, Berezinets et al. 2014; Villanueva-Villar, Rivo-López et al. 2016; Aldamen, Duncan et al. 2019). As far as risk taking strategies are concerned, previous literature has shown a conflicting relationship between board size and corporate risk (Pathan 2009; Nakano and Nguyen 2012; Huang and Wang 2015), and a negative relationship between board independence and risk taking (Gonzalez and André 2014).

Specifically in the financial sector, banks' boards of directors display several particular features, among which we highlight greater independence (Arun and Turner 2004; Andrés, Romero-Merino et al. 2012; García-Meca, García-Sánchez et al. 2015; John, De Masi et al. 2016). Board independence is likely to be one of the most influential issues for managerial oversight (Lei and Deng 2014; Muravyev, Berezinets et al. 2014; Akbar, Kharabsheh et al. 2017). Independent directors are supposed to act on behalf of minority shareholders and to improve corporate transparency. Indeed, organizations with less independent boards and with a chairman who is at the same time the CEO seem to have lower disclosure (Chen and Jaggi 2000; Eng and Mak 2003; Gul and Leung 2004; Cheng and Courtenay 2006; Huafang and Jianguo 2007; Sihombing and Pangaribuan 2017). Interestingly, Akbar, Kharabsheh et al. (2017) find a negative relationship between independent non-executive directors and corporate risk-taking behaviour in British banks. In the same vein, Erkens, Hung et al. (2012) underline the importance of corporate governance in bank performance during the crisis through firms' risk taking.

We posit that board independence is an effective issue to force managers to disclose information on risk taking. Since the availability of greater cash flows can lead to more and riskier corporate investments, more independent boards should result in incentives to managers for a timelier recognition of this risk through legal provisions. Thus, the influence of an independent board will be positive vis-à-vis strengthening the alignment of interests with other stakeholders. Consequently, our second hypothesis is stated as follows:

H2. The independence of the board of directors positively moderates the relationship between banks' free cash flows and legal provisions.

2.3 Legal Provisions and the Institutional Setting

Corporate risk-taking decisions can be affected by legal, institutional and cultural factors from the setting in which the firm operates (Acharya, Amihud et al. 2011; Li, Griffin et al. 2013; Wei, Li et al. 2019). Among all these factors, we focus on those to which the literature has paid much attention (La Porta, López de Silanes et al. 1998; La Porta, López de Silanes et al. 2000; Molyneux 2019). These authors classify countries into two groups (common law and civil law countries), with the former providing better legal protection for investors. Acharya, Amihud et al. (2011),

Levine (1998), and Peni and Vähämaa (2012) show that the relationship between investors' legal protection and corporate risk taking is conditional on a number of factors. Nevertheless, in terms of disclosure, common law countries are associated with higher financial disclosure compared to firms from civil law countries (Casu, Deng et al. 2017).

Since legal provisions are a way of corporate financial disclosure, we posit that the effectiveness of internal corporate governance mechanisms (i.e., the board of directors) is complemented by the external environment. This can be applied particularly to banks, given their sensitivity to the environment as a result of stronger regulation (Laeven 2013). Moreover, the suitability of legal provisions may be an outcome of investor protection. Thus, we expect a better legal environment to lead to a more effective influence of the board of directors on the relationship between managers' discretionary behaviour and legal provisions. In turn, our third hypothesis can be stated as follows:

H3. The legal environment moderates the influence of board independence on the relationship between banks' free cash flows and legal provisions.

3. Empirical Design

3.1 Sample and Method

In line with our aim of analysing European systemic banks, we study a sample of 92 listed banks from 18 European countries (Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Republic of Ireland, Italy, the Netherlands, Poland, Portugal, Spain, Sweden, Switzerland, and the United Kingdom) between 2008 and 2017, as shown in Table 1. Our sample is smaller than that of Hanzlík and Teplý (2019), who also analyse an international sample of banks but cover a longer period. Initially, we selected the 118 European systemic entities supervised by the Single Supervisory Mechanism. After removing banks whose information on legal provisions was ambiguous or not available, the final sample includes 92 banks. Therefore, our sample can be considered as sufficiently representative of the European banking landscape. The combination of cross-section and time series data gives a final sample of 920 observations. Data on the balance sheet, board structure and market prices were obtained from the Thomson Reuters Eikon database. Legal provisions were obtained after a careful scrutiny of the notes to the financial statements of each entity and each year. Information on the countries' legal and institutional setting is taken from the World Bank databases (Kaufmann, Kraay et al. 2011).

The empirical analysis includes a descriptive analysis of the main characteristics of the sample. We then check our hypotheses with the subsequent explanatory analysis. Our database consists of a panel. For adequate estimation thereof, the panel data technique is applied (Arellano 2003). This technique allows banks' fixed effects and possible endogeneity problems to be considered.

3.2 Variables and Model

The definition of all the variables is summarized in the Appendix. Our dependent variable is legal provision in each year (LP). As previously stated, legal provisions are found in the notes of banks' annual reports and reflect the risks of

litigation, legal proceedings and other claims that banks are exposed to. The provision of each year is scaled by total assets.

Collecting values on legal provisions is a challenging process due to the differences among countries and even among banks. For instance, some of them call these provisions legal provisions, while others refer to provisions for litigation or for legal disputes. In many cases, a more in-depth search was needed to find the right amount, since it was subsumed in other provisions or other liabilities. In order to show the many issues related to legal provisions and to gauge the relative importance of each, Figure 1 displays the frequency of the terms used in the annual reports through the size of each word³.

Table 1 Distribution of the Sample by Country

Country	Obs.	Percent
Austria	40	4.35
Belgium	10	1.09
Czech Republic	20	2.17
Denmark	50	5.43
Finland	10	1.09
France	30	3.26
Germany	40	4.35
Greece	50	5.43
Hungary	10	1.09
Republic of Ireland	20	2.17
Italy	170	18.48
Netherlands	20	2.17
Poland	100	10.87
Portugal	10	1.09
Spain	80	8.70
Sweden	60	6.52
Switzerland	90	9.78
United Kingdom	110	11.96
Total	920	100

FCF is the free operating cash flow, calculated as cash from operations for the fiscal period minus capital expenditures and dividends paid for the same period, divided by total assets. This variable can be seen as indicative of the manager's discretionary power. As Jensen (1986) pointed out, managers have incentives to overinvest in order to seek more reputation, power and prestige. Overinvestment is usually concealed to external markets and is funded with internally generated funds. Consequently, the higher the free cash flow of the firm, the greater the possibilities for managerial discretionary investments which generate agency costs (the so-called "free cash flow hypothesis"). In fact, the FCF variable has been used as a proxy for these agency costs in numerous studies (Richardson 2006; Chen, Sun et al. 2016; Ding, Knight et al. 2019). To test board of director ability to curb a manager's discretionary behaviour, we introduce board independence (IND), measured as the proportion of independent directors on the total size of the board. To test the specific moderating effect of board independence on the relationship between FCF and LP, we compute the interacted variable IND*FCF, defined as the product of FCF and IND. We also use CEO duality (CEOCH), a common variable in the literature (Judge, Naoumova et al. 2003; Gul and Leung 2004; Stockmans, Lybaert et al. 2013; Singh and Delios 2017).

³ Data are available from the authors on request. Literal accounts have been also gathered.

This equals 1 if a CEO simultaneously chairs the board or if the chairman of the board has been CEO of the company.

Figure 1 Legal Provisions Literal Account Frequency



We control for the following firm-level issues: ROA measures a company’s operating performance and is calculated as EBITDA divided by total assets. MB is the equity market to book ratio (Adam and Goyal 2008). SIZE is a measure of the size of the bank as the logarithm of total assets. LEV is the leverage calculated as total liabilities over total assets. ZSCORE is a measure of risk that captures the probability of a bank defaulting as the distance to insolvency. It compares capitalization and returns with the volatility of those returns. As shown in the appendix, it is measured as the return on assets and the weight of equity over assets, both divided by the standard deviation of the return on assets (Boyd, Graham et al. 1993; Boyd, De Nicolò et al. 2006; Zigrainova 2015). TIER1 is the ratio of Tier 1 capital as a percentage of total risk-weighted assets. The ratio represents high-quality sources of capital that banks and other financial institutions are required to keep in order to be protected against bankruptcy. It is also referred to as the core capital ratio, or as the going-concern capital ratio.

We introduce a number of country level variables. First, PROTECT is the strength of investor protection, provided by the World Bank, based on Djankov, La Porta et al. (2008), and which measures the degree of minority investor protection to

prevent their expropriation. Second, RULELAW reflects perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. Third, REGQUA reflects perceptions of the government's ability to formulate and implement sound policies and regulations that permit and promote private sector development. Fourth, CORRUPTCONTROL reflects perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as state capture by elites and private interests. These latter three variables are reflected in Worldwide Governance Indicators (WGI) established by the World Bank. Finally, we use CORRUPTSC, which reflects perceptions of the degree of corruption as seen by business people and country analysts, and which ranges between 10 (highly clean) and 0 (highly corrupt). It is obtained from the Transparency International website.

Table 2 Factorial Analysis

	<i>F_PROT</i>	<i>F_ENV</i>
PROTECT	0.9997	-0.0019
RULELAW	0.0640	0.9715
REGQUA	-0.0685	0.9612
CORRUPTCONTROL	0.0042	0.9869
CORRUPTSC	-0.0152	0.9315
Accounted variance	20.17%	74.19%
Eigenvalue	1.008	3.709
KMO	0.829	
Bartlett test (Chi-square)	5969.86	
p-Value	0.000	
Observations	920	

Given the similar information provided by the country level variables, in order to summarize the information related to the legal quality of the environment we apply a factor analysis, which gives rise to two new variables: *F_PROT* and *F_ENV*. The first is mainly the strength of investor protection, and the second represents the level of legal quality by country, quantifying the rule of law, the quality of regulation and the level of corruption as well as how it is controlled. The results are shown in Table 2. The first factor (i.e. *F_PROT*) explains 20.17% of the variance and the second factor (i.e. *F_ENV*) 74.19%. The Kaiser-Meyer-Olkin (KMO) measure of sample suitability is 0.829, above 0.5, and the Bartlett test of sphericity is significant at the 99.9% confidence level, meaning that the results obtained provide an adequate basis for the empirical examination of factorial analysis (Hair, Anderson et al. 1998).

Our baseline model is as follows:

$$LP_{i,t} = \beta_0 + \beta_1 \cdot FCF_{i,t} + \beta_2 \cdot IND_{i,t} + \beta_3 \cdot IND \cdot FCF_{i,t} + \beta_4 \cdot ROA_{i,t} + \beta_5 \cdot MB_{i,t} + \beta_6 \cdot SIZE_{i,t} + \beta_7 \cdot LEV_{i,t} + \beta_8 \cdot ZSCORE_{i,t} + \sum_{t=1}^{10} \gamma_t + \epsilon_{i,t}$$

We apply this model to the whole sample to test hypotheses 1 and 2 (the relationship between free cash flow and legal provisions, and the moderating effect of the board of directors). Bearing in mind that the role of the board can be conditional on the external framework, we split our sample into two different groups (depending on the legal quality of the environment) and then apply the model in each sub-sample.

We control for time effects through a set of year dummies.

4. Results

4.1 Descriptive Analysis

Figure 2 Evolution of Legal Provisions

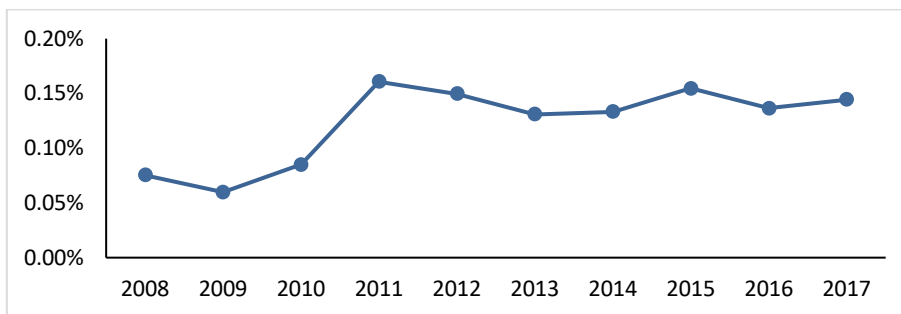
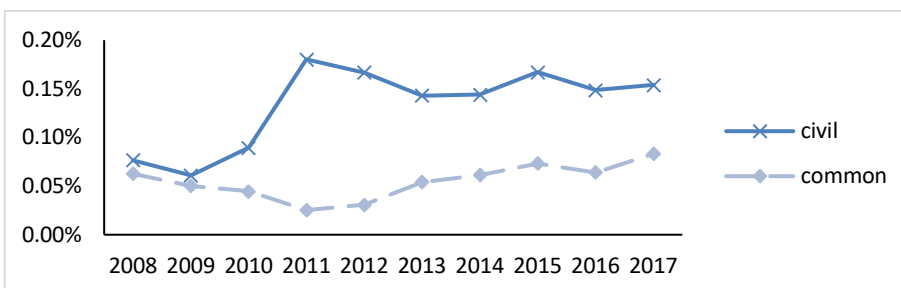


Figure 3 Evolution of Legal Provisions by Legal Origin



The evolution of legal provisions is displayed in Figure 2. An increase in legal provisions, which double over the period studied, can be seen. Nevertheless, this period could be split into two more different periods: one, reflecting an initial jump in the years 2008-2011, namely the years after the 2007-2008 collapse when there might have been some pressure on banks to create abundant legal provisions; and another, flat evolution since 2012. However, this overall evolution may conceal different patterns across countries. Accordingly, in Figure 3, we report the evolution for common law and civil law countries. Despite beginning at a similar level, common law countries use fewer legal provisions than civil law countries. In addition to the different level of legal provisions, the timing is also different. Whereas in civil law countries the greatest increase took place in the early years of the crisis, it was not until 2011 that banks began to create more provisions in common law countries. Likewise, despite the difference in the time-pattern, there is a convergence between the two groups of countries.

Table 3 reports the mean value, the standard deviation, and quartiles (Q25, Q50 and Q75) of the main variables of our whole sample during the period 2008-2017. The mean legal provision is around 0.117% of total assets, as scaled by 1000. It is worth noting the independence percentage (49.76%), since banks are characterized by highly

independent boards compared to nonfinancial firms. Our descriptive statistics are homogeneous and similar to those found in previous literature (Lepetit, Nys et al. 2008; Farag and Mallin 2017).

Table 3 Descriptive Statistics of the Variables

	<i>Obs.</i>	<i>Mean</i>	<i>Std. dev.</i>	<i>Q25</i>	<i>Q50</i>	<i>Q75</i>
LP	811	1.176	4.780	0.106	0.439	0.919
FCF	851	0.003	0.054	-0.012	0.002	0.022
IND	615	49.761	26.973	28.570	54.550	70.000
ROA	862	0.014	0.036	0.007	0.012	0.019
MB	788	1.243	1.162	0.619	0.976	1.572
SIZE	864	24.845	1.942	23.573	24.664	26.253
LEV	864	0.917	0.078	0.910	0.933	0.950
ZSCORE	549	1.672	2.589	0.514	0.923	1.697
TIER1	783	0.139	0.054	0.110	0.130	0.160

Notes: Mean, standard deviation, and quartiles (Q25, Q50 and Q75) of the variables. LP is legal provision divided by total assets, scaled by 1000. FCF is the free operating cash flow divided by total assets. IND is the percentage of independent board members. ROA is the return on assets. MB is the ratio between market capitalization and total equity. SIZE is the logarithm of total assets. LEV is the leverage ratio as total liabilities over total assets. ZSCORE is a measure of risk (see Appendix for the definition). TIER1 represents the ratio of Tier 1 capital as a percentage of total risk-weighted assets.

Table 4 Correlation Matrix

	<i>LP</i>	<i>FCF</i>	<i>IND</i>	<i>ROA</i>	<i>MB</i>	<i>SIZE</i>	<i>LEV</i>	<i>ZSCORE</i>
FCF	-0.3340							
	0.0000							
IND	0.1084	0.0230						
	0.0083	0.5717						
ROA	0.0366	0.0680	-0.0199					
	0.2965	0.0467	0.6209					
MB	0.3391	-0.1007	-0.0373	0.3196				
	0.0000	0.0048	0.3598	0.0000				
SIZE	-0.2451	0.0459	0.2984	-0.0582	-0.3783			
	0.0000	0.1792	0.0000	0.0867	0.0000			
LEV	-0.3088	0.0387	0.1640	-0.0178	-0.2408	0.4476		
	0.0000	0.2580	0.0000	0.5997	0.0000	0.0000		
ZSCOE	-0.0271	-0.0435	0.0021	0.1078	0.0903	-0.1312	-0.2466	
	0.5342	0.3095	0.9636	0.0111	0.0382	0.0020	0.0000	
TER1	0.0694	-0.1053	-0.0332	0.0341	0.1993	-0.2978	-0.6011	0.1041
	0.0584	0.0031	0.4306	0.3404	0.0000	0.0000	0.0000	0.0194

Notes: Correlation ratio and p-value. LP is legal provision divided by total assets, scaled by 1000. FCF is the free operating cash flow divided by total assets. IND is the percentage of independent board members. ROA is the return on assets. MB is the ratio between market capitalization and total equity. SIZE is the logarithm of total assets. LEV is the leverage ratio as total liabilities over total assets. ZSCORE is a measure of risk (see Appendix for the definition). TIER1 represents the ratio of Tier 1 capital as a percentage of total risk-weighted assets.

Table 4 shows that LP is statistically negatively related to size; that is, larger firms have fewer legal provisions. This could be due to economies of scale and scope for legal issues as well as to large firms having specific legal departments that may possess the expertise to cut the legal costs involved. Interestingly, ROA is statistically positively related to FCF, consistent with successful banks generating more cash flows.

However, the higher ROA may stem from riskier investments or higher fees. Were it to be the result of riskier investments, banks having higher free cash flows would be less valued by the market, consistent with MB being negatively related to FCF. Correlation coefficients are low, such that multicollinearity is not an issue which affects the reliability of our results.

4.2 Explanatory Analysis

Based on the Hausman test (not tabulated), we run the fixed effects model. In the first column of Table 5, we report the results of the baseline model. The free cash flow (FCF) is negatively and significantly related to legal provisions. This result supports hypothesis H1b and can be understood as proof that the discretionary power of bank managers has led to fewer legal provisions, and may be due to managers' self-interest in hiding overinvestments or the result of managerial overconfidence.

In the second column, we test the effect of board of director independence in the relation between free cash flow and legal provisions. Whereas IND has no significant direct relationship, we obtain a positive and significant coefficient for IND*FCF, thus supporting hypothesis 2. This means that board of director independence works as a control mechanism, such that greater managerial power (and presumably greater risk) translates into more legal provisions in firms with more independent boards. The results obtained for the control variable ZSCORE is consistent, since there are more legal provisions when the bank is closer to insolvency. The negative coefficient of SIZE could be explained by diversification and a reputation effect: big banks are more likely to have a diversified portfolio (Demsetz and Strahan 1997; Anderson and Fraser 2000) or to have a better reputation (Carnevale and Mazzuca 2014), such that the risk they need to recognize is lower.

In order to test the effect of the institutional environment, we include the new variable F_PROT and F_ENV obtained from the factor analysis of the level variables shown in Table 2. In Table 6, we thus run differentiated estimates depending on certain characteristics of the institutional setting. Specifically, in columns 1 and 2, we separate banks from countries that offer lower or greater minority investor protection, respectively, according to the median of the variable F_PROT. In columns 3 and 4, we include the results for the banks of countries with low or high levels of legal quality, using the median of the comprehensive variable F_ENV which results from factor analysis.

Although the results reported in column 1 do not show any relationship between FCF and legal provisions, the results from column 2 point to some interesting insights. In this case, both free cash flow (FCF) and interaction with the board's independence (IND*FCF) are significantly related to legal provisions. Therefore, banks being in an environment with high investor protection would disclose better, and their board would be more effective. Both results are in line with our hypotheses H1b and H2.

Table 5 Results of the Estimation

	(1)	(2)	(3)	(4)
FCF	-1.092*** (0.402)	-4.204*** (1.238)	-1.625*** (0.551)	-4.926*** (1.641)
IND		0.001 (0.002)		-0.001 (0.002)
IND*FCF		0.037* (0.021)		0.052* (0.028)
ZSCORE			-0.020** (0.009)	-0.021** (0.010)
ROA	1.663 (2.338)	2.586 (2.607)	5.051 (3.415)	4.410 (3.901)
MB	-0.058** (0.027)	-0.033 (0.034)	-0.111*** (0.042)	-0.058 (0.075)
SIZE	-0.270*** (0.100)	-0.268** (0.120)	-0.437*** (0.139)	-0.419** (0.174)
LEV	-0.931 (1.311)	0.530 (1.585)	-0.857 (2.507)	0.622 (3.052)
Intercept	8.382*** (2.314)	7.059*** (2.692)	12.765*** (3.558)	10.989*** (4.193)
Observations	733	561	497	420
Adjusted R-squared	0.059	0.078	0.110	0.105
F-test	2.834***	2.518***	3.320***	2.310***

Notes: Estimated coefficients (standard errors) from the fixed effect estimation. The dependent variable is LP, the legal provision divided by total assets, scaled by 1000. FCF is the free operating cash flow divided by total assets. IND is the percentage of independent board members. ROA is the return on assets calculated as EBITDA divided by total assets. MB is the ratio between market capitalization and total equity. SIZE is the logarithm of total assets. LEV is the leverage ratio as total liabilities over total assets. ZSCORE is a measure of risk (see Appendix for the definition). All the estimates include time controls. ***, **, and * indicate significance at the 99%, 95%, and 90% confidence level, respectively.

Table 6 Results of the Estimation by Institutional Variables

	by F_PROT		by F_ENV	
	(1)	(2)	(3)	(4)
FCF	-1.152 (2.677)	-7.961** (3.577)	-2.285 (1.414)	-13.517*** (3.975)
IND	0.001 (0.003)	-0.002 (0.005)	0.001 (0.002)	-0.002 (0.004)
IND*FCF	-0.017 (0.048)	0.123** (0.615)	0.010 (0.036)	0.156*** (0.057)
ZSCORE	-0.007 (0.012)	-0.049** (0.021)	0.004 (0.008)	-0.079*** (0.022)
ROA	0.945 (6.532)	0.908 (7.021)	-1.496 (3.249)	15.978* (8.966)
MB	-0.073 (0.075)	-0.099 (0.199)	-0.029 (0.075)	-0.084 (0.132)
SIZE	-0.472** (0.204)	-0.527 (0.342)	-0.271 (0.181)	-0.898** (0.361)
LEV	-2.793 (4.491)	3.070 (5.272)	-3.538 (2.449)	11.541 (7.203)
Intercept	15.449*** (5.766)	11.902 (8.124)	11.033** (4.569)	13.507* (7.511)
Observations	216	199	208	212
Adjusted R-squared	0.122	0.139	0.156	0.226
F-test	1.233	1.282	1.711**	2.744***

Notes: Estimated coefficients (standard errors) from the fixed effect estimation. In models (1) and (2), the sample is divided by the median of F_PROT (column 1 for observations below the median and column 2 for observations above the median).

observations above the median value). In models (3) and (4), the sample is divided using F_ENV (column 3 for observations below the median and column 4 for observations above the median value). The dependent variable is LP, the legal provision divided by total assets, scaled by 1000. FCF is the free operating cash flow divided by total assets. IND is the percentage of independent board members. ROA is the return on assets calculated as EBITDA divided by total assets. MB is the ratio between market capitalization and total equity. SIZE is the logarithm of total assets. LEV is the leverage ratio as total liabilities over total assets. ZSCORE is a measure of risk (see Appendix for the definition). All the estimates include time controls. ***, **, and * indicate significance at the 99%, 95%, and 90% confidence level, respectively.

Similarly, when we split the sample based on the quality of the institutional environment (F_ENV), both FCF and IND*FCF prove significant in column 4; i.e., for the subsample of firms in environments which display better institutional quality. Taken together, the results reported in Table 6 confirm our hypothesis 3. This means that the influence of the board of directors on the creation of legal provisions is affected by investor protection and by the quality of the institutional setting.

The results in Table 6 confirm that the significance of free cash flow (either directly or interacting with board independence) and the ZSCORE would only hold in settings that display the best scores. For European banks, it seems that internal corporate governance mechanisms (i.e., the board of directors) require external mechanisms to function more effectively in terms of greater risk disclosure through the creation of the required legal provisions.

Furthermore, in order to test the robustness of the result concerning the greater transparency obtained for European banks that have closer relations between internal and external mechanisms, Table 7 includes a set with more institutional variables. In particular, we use the four variables combined in the F_ENV factor: rule of law (columns 1 and 2), control of corruption (columns 3 and 4), regulation quality (columns 5 and 6), and the corruption score (columns 7 and 8).

The results are fully consistent with previous ones and substantiate the notion that board independence only affects legal provisions in the most protective environments, i.e., where the rule of laws prevails or when corruption is fought (columns 2, 4, 6, and 8). In contrast, in the least protective settings (columns 1, 3, 5, and 7) board independence does not play any relevant role.

In Table 8, we run an analogous examination, but this time focusing on internal rather than on external mechanisms. We use CEO duality to divide the sample. Whereas in columns 1 and 2 we study firms in which the CEO chairs or has chaired the board of directors, in columns 3 and 4 we report the results when there is a separation of roles between two different people. Once again, free cash flow, the ZSCORE, and the board of directors are significantly related to legal provisions when there is a separation of roles.

Thus, a chairman who is not at the same time the CEO can enforce board of director independence and facilitate the creation of banks' legal provisions, thus confirming hypothesis 2 concerning the positive influence of free cash flow in banks which display greater board independence.

Table 7 Results of the Estimation by Institutional Sub-Variables

	by RULELAW			by CORRUPTCONTROL			by REGQUA			by CORRUPTSC	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
FCF	-2.817** (1.385)	-13.134*** (4.111)	-2.349* (1.390)	-15.156*** (4.187)	-2.432* (1.381)	-14.654*** (4.056)	-3.012** (1.502)	-12.727*** (3.404)			
IND	0.001 (0.002)	-0.002 (0.004)	0.001 (0.002)	-0.002 (0.004)	0.001 (0.002)	-0.002 (0.004)	-0.001 (0.002)	0.000 (0.004)			
IND*FCF	0.022 (0.036)	0.148** (0.058)	0.016 (0.034)	0.176*** (0.060)	0.013 (0.035)	0.169*** (0.058)	0.023 (0.037)	0.149*** (0.051)			
ZSCORE	0.002 (0.008)	-0.081*** (0.021)	0.005 (0.008)	-0.082*** (0.022)	0.004 (0.008)	-0.080*** (0.022)	0.016 (0.011)	-0.066*** (0.018)			
ROA	-1.814 (3.129)	20.223** (9.390)	-1.735 (3.172)	20.769** (9.656)	-1.674 (3.186)	15.374 (9.337)	-2.146 (3.138)	18.079* (9.281)			
MB	-0.072 (0.073)	0.004 (0.134)	-0.031 (0.073)	-0.18 (0.161)	-0.028 (0.074)	-0.057 (0.1349)	0.017 (0.077)	-0.157 (0.145)			
SIZE	-0.201 (0.177)	-0.907** (0.360)	-0.298* (0.174)	-0.984** (0.381)	-0.294 (0.178)	-0.944** (0.366)	-0.350* (0.206)	-0.933*** (0.332)			
LEV	-3.531 (2.439)	12.376 (7.562)	-3.370 (2.383)	12.509* (7.521)	-3.673 (2.387)	11.412 (7.260)	-1.384 (2.674)	13.290* (7.323)			
Constant	9.312** (4.474)	12.865* (7.688)	11.582*** (4.440)	14.920*** (7.870)	11.786** (4.559)	14.815* (7.638)	11.374** (5.285)	12.380* (7.245)			
Observations	212	208	218	202	210	210	194	226			
Adjusted R-squared	0.143	0.248	0.156	0.245	0.174	0.239	0.188	0.234			
F-test	1.559*	3.000***	1.780**	2.862***	1.961**	2.883***	1.851**	3.010***			

Notes: Estimated coefficients (standard errors) from the fixed effect estimation. In columns 1, 3, 5, and 7 the observations are below the median value of the dividing variable; in columns 2, 4, 6, and 8 the observations are above the median value. The dependent variable is LP, the legal provision divided by total assets, scaled by 1000. FCF is the free operating cash flow divided by total assets. IND is the percentage of independent board members. ROA is the return on assets calculated as EBITDA divided by total assets. MB is the ratio between market capitalization and total equity. SIZE is the logarithm of total assets. LEV is the leverage ratio as total liabilities over total assets. ZSCORE is a measure of risk (see Appendix for the definition). All the estimates include time controls. ***, **, and * indicate significance at the 99%, 95%, and 90% confidence level, respectively

Table 8 Results of the Estimation by CEO – Chairman Duality

	<i>coincide</i>		<i>do not coincide</i>	
	(1)	(2)	(3)	(4)
FCF	1.718 (2.341)	4.271 (6.190)	-1.506** (0.617)	-5.567*** (1.842)
IND		0.002 (0.006)		-0.001 (0.002)
IND*FCF		-0.065 (0.124)		0.063** (0.0310)
ZSCORE	-0.015 (0.023)	-0.028 (0.035)	-0.027** (0.012)	-0.032** (0.013)
ROA	12.578** (4.843)	9.837 (6.708)	5.003 (4.533)	5.019 (5.162)
MB	0.017 (0.174)	0.133 (0.265)	-0.098** (0.048)	-0.063 (0.087)
SIZE	-0.996*** (0.341)	-1.015 (0.709)	-0.301* (0.172)	-0.311 (0.214)
LEV	-6.451 (3.960)	-8.559 (5.630)	-2.023 (3.376)	1.087 (4.108)
Constant	32.686*** (10.910)	35.048 (20.017)	10.435** (4.434)	7.818 (5.011)
Observations	48	42	392	350
Adjusted R-squared	0.803	0.766	0.093	0.100
F-test	4.899***	2.120	2.127***	1.762**

Notes: Estimated coefficients (standard errors) from the fixed effect estimation. In models (1) and (2), the CEO is also the board chairman; in models (3) and (4) the opposite holds. The dependent variable is LP, the legal provision divided by total assets, scaled by 1000. FCF is the free operating cash flow divided by total assets. IND is the percentage of independent board members. ROA is the return on assets calculated as EBITDA divided by total assets. MB is the ratio between market capitalization and total equity. SIZE is the logarithm of total assets. LEV is the leverage ratio as total liabilities over total assets. ZSCORE is a measure of risk (see Appendix for the definition). All the estimates include time controls. ***, **, and * indicate significance at the 99%, 95%, and 90% confidence level, respectively.

To check the robustness of our analysis, we change some of the control variables and the estimation method. In Table 9, we report the results of the baseline model estimations when we control for tier 1 ratio instead of leverage. Results bear out the previous ones: the negative effect of free cash flow (H1b), the moderating role of board independence (H2), and the relevance of the institutional environment (H3). We also use the General Method of Moments as an alternative method of estimation (Arellano and Honore 2001). Although we do not expect endogeneity to be a problem given that legal provisions are not likely to affect the independent variables, we use this method to check the robustness of our results. The results, reported in Table 10, confirm the validity of the previous ones.

Table 9 Results of the Estimation Using TIER1

	by F_PROT			by F_ENV				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
FCF	-1.135*** (0.423)	-4.132*** (1.246)	-1.580*** (0.560)	-4.760*** (1.604)	-1.641 (2.805)	-10.408*** (3.693)	-3.195** (1.425)	-11.527*** (4.170)
IND		0.001 (0.002)		0.003 (0.002)	0.002 (0.003)	-0.002 (0.005)	0.001 (0.002)	0.001 (0.005)
IND*FCF		0.038* (0.022)		0.054* (0.028)	-0.011 (0.050)	0.185*** (0.037)	0.026 (0.037)	0.135*** (0.059)
ZSCORE			-0.024** (0.010)	-0.025** (0.011)	-0.010 (0.014)	-0.050** (0.021)	-0.005 (0.009)	-0.075*** (0.022)
ROA	2.466 (2.292)	2.817 (2.579)	5.192 (3.326)	4.116 (3.825)	1.337 (5.972)	-0.972 (6.915)	-0.296 (3.247)	10.713 (9.078)
MB	-0.070*** (0.025)	-0.039 (0.032)	-0.116*** (0.042)	-0.078 (0.075)	-0.075 (0.079)	-0.163 (0.191)	-0.077 (0.077)	-0.023 (0.131)
SIZE	-0.419*** (0.106)	-0.389*** (0.119)	-0.567*** (0.142)	-0.506*** (0.164)	-0.525** (0.205)	-0.776** (0.334)	-0.351* (0.181)	-0.659** (0.302)
TIER1	-0.900 (0.817)	-1.160 (0.968)	-1.717 (1.119)	-2.033 (1.309)	-0.463 (1.469)	-9.587*** (3.365)	0.008 (1.962)	-2.901 (1.885)
Constant	11.415*** (2.687)	10.793*** (3.088)	15.572*** (3.658)	14.072*** (4.290)	14.302*** (5.370)	22.549** (8.792)	9.851*** (4.657)	18.407*** (8.123)
Observations	684	526	461	392	205	183	196	196
Adjusted R-squared	0.073	0.094	0.133	0.128	0.122	0.223	0.148	0.230
F-test	3.255***	2.852***	3.737***	2.674***	1.140	2.012**	1.490	2.524***

Notes: Estimated coefficients (standard errors) from the fixed effect estimation. In models (3) and (4), the sample is divided by the median of F_PROT (column 3 for observations below the median and column 4 for observations above the median value). In models (5) and (6), the sample is divided using F_ENV (column 5 for observations below the median, and column 6 for observations above the median value). The dependent variable is LP, the legal provision divided by total assets, scaled by 1000. FCF is the free operating cash flow divided by total assets. IND is the percentage of independent board members. ROA is the return on assets calculated as EBITDA divided by total assets. MB is the ratio between market capitalization and total equity. SIZE is the logarithm of total assets. TIER1 is the ratio of Tier 1 capital as a percentage of total risk-weighted assets. ZSCORE is a measure of risk (see Appendix for the definition). All the estimates include time controls. ***, **, * and * indicate significance at the 99%, 95%, and 90% confidence level, respectively.

Table 10 Results of the Estimation with System GMM

	(1)	(2)
FCF	-2.551**	-5.307***
	(1.020)	(1.997)
IND		-0.007
		(0.005)
IND*FCF		0.153***
		(0.054)
ZSCORE	-0.021**	-0.049*
	(0.009)	(0.028)
ROA	-2.552	-3.663
	(2.568)	(2.339)
MB	0.117***	0.040
	(0.037)	(0.060)
SIZE	0.229***	0.205***
	(0.045)	(0.044)
LEV	-3.712**	-5.125*
	(1.485)	(2.899)
Constant	-1.695**	0.668
	(0.726)	(2.209)
Observations	375	329
Sargan test	0.362	0.235
AR(2) test	0.166	0.127

Notes: Estimated coefficients (standard errors) from the Generalized Method of Moments estimation. The dependent variable is LP, the legal provision divided by total assets, scaled by 1000. FCF is the free operating cash flow divided by total assets. IND is the percentage of independent board members. ROA is the return on assets calculated as EBITDA divided by total assets. MB is the ratio between market capitalization and total equity. SIZE is the logarithm of total assets. LEV is the leverage ratio as total liabilities over total assets. ZSCORE is a measure of risk (see Appendix for the definition). The m2 is a test to check the absence of second order correlation, and the Sargan test is the test for the over-identification of restrictions. ***, **, and * indicate significance at the 99%, 95%, and 90% confidence level, respectively.

5. Conclusions

In the years after the global financial crisis, banks worldwide have had to face a wave of lawsuits arising from legal claims. Irrespective of the causes of the claims, in this paper we study the policy that banks have followed to create the legal provisions with which they have sought to cover the liabilities stemming from such lawsuits. Since legal provisions may be viewed as a mechanism for disclosing information to capital markets, the creation of legal provisions is determined by two main factors: the risk taken by the bank, and managerial incentives to disclose the information on the risk taken.

Our results support both views, since we find an initial negative relationship between free cash flow (our measure of managers' discretionary investments) and legal provisions, even when we control for risk taking. This result suggests that managers seem to conceal the risk taken by creating fewer provisions. Nevertheless, we also find that certain internal and external corporate governance mechanisms do play a moderating role. In this vein, we find that board of director independence has a moderating effect, such that independent boards lead to the creation of more provisions as a safeguard against future lawsuits. Similarly, we also find that a better institutional framework (both in terms of quality of the laws and lack of corruption) amplifies the positive influence of the board of directors, such that the two mechanisms may be considered as complementary.

Even though our research has the limitation of being unable to clearly distinguish between the discretionary and non-discretionary components of legal provisions, the findings to emerge from this paper have practical implications for policymakers, investors, and bank directors alike. Given the role of legal provisions as a mechanism for information disclosure, accounting and legal norms should foster fast and accurate recognition of such risks. In turn, a firm's legal and institutional framework should be designed to ensure that such a recognition is provided in due course. In so doing, the interests of managers and other stakeholders become aligned, and the possible destabilizing effect of any legal claims is cut short. Given the relevance of the financial system for the economic welfare of society as a whole, this issue should be on the agenda of capital market reforms. Investors would also benefit from a more transparent legal provisions policy since they would have more reliable information about the future prospects and earnings quality of the firm. Finally, our research also underlines the importance of the board of directors as a mechanism for managerial monitoring. Thus, directors' expertise and attitude may prove to be a valuable asset vis-à-vis enhancing the bank's reputation.

Our paper opens up several avenues for future work. First, new research should address the role of central banks and how regulation affects risk disclosure and banking transparency policies (Gersl, Jakubík et al. 2013). Second, future papers may consider the subjective assessment of risk. This subjectivity also affects the identification of provisions, since banks have different ways for referring to these accounts, such that gathering information on provisions may be subjectively biased. Third, given the prominent role played by managers, it would be interesting to study bank manager profile—their personal and family relationships, culture, training, professional development, etc.—and how these issues impact risk recognition, as some authors have indeed already begun to explore (Chiang and He 2010; Allini, Manes Rossi et al. 2016). Other corporate governance mechanisms, both internal and external, such as scrutiny by the media or ownership structure, might also shed further light on this topic.

APPENDIX

Variables definition

<i>Variable</i>	<i>Definition</i>	<i>Source</i>
LP	Legal Provisions reported over total Assets reported, scaled by 1000.	Annual reports
FCF	Free Operating Cash Flow over Total Assets reported. Free Operating Cash Flow is calculated as Cash from Operations for the fiscal period minus Capital Expenditures and Dividends paid for the same period.	Eikon
IND	Percentage of independent board members as reported by the company.	Eikon
CEOCH	Does the CEO simultaneously chair the board or has the chairman of the board been the CEO of the company? Equals 1 if true.	Eikon
ROA	EBITDA over Total Assets reported. EBITDA is EBIT for the fiscal year plus the same period's Depreciation, Amortization of Acquisition Costs and Amortization of Intangibles.	Eikon
MB	Equity market-to-book ratio	Eikon
SIZE	The decimal logarithm of total assets reported.	Eikon
LEV	Total liabilities over total assets.	Eikon
ZSCORE	$\frac{ROA + \frac{\text{Total Equity}}{\text{Total Assets}}}{ROASD}$; ROASD is the standard deviation of ROA. It is scaled by 100.	Eikon
ROASD	The statistical standard deviation of all estimates included in the summary calculation.	Eikon
TIER1	Ratio of Tier 1 capital as a percentage of total risk-weighted assets.	Eikon
PROTECT	The strength of minority investor protection to prevent their expropriation in a given country and year, based on Djankov, La Porta et al. (2008).	World Bank
RULELAW	Reflects perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence.	World Bank
REGQUA	Reflects perceptions of government ability to formulate and implement sound policies and regulations that permit and promote private sector development.	World Bank
CORRUPTCONTROL	Reflects perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as state capture by elites and private interests.	World Bank
CORRUPTSC	Perceptions of the degree of corruption as seen by businesspeople and country analysts, ranging between 10 (highly clean) and 0 (highly corrupt).	Transparency

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