The purpose of this research is to investigate reputational risk disclosure and also to study which drivers influence companies’ decisions on exhibiting voluntarily risk information in their annual reports. The paper is a multi-country study that emphasizes the differences in risk reporting practices, underling various cultural, economic and institutional variables that affect the related content of annual financial reports of a sample of European firms.

The research measures reputational risk information by conducting a content analysis of annual financial reports for a sample of 538 European listed companies (France, Germany, Italy, Spain and United Kingdom). Each report has been manually examined and coded, checking for narrative information about risk disclosure.

Our findings show that public visibility (size and income growth rates) and agency theory relationships (ownership structure) are important in explaining reputational risk disclosure.

Particularly, this paper contributes to the current literature stressing the importance of reputational risk disclosure which is, to the best of our knowledge, quite rare in existing literature.

The evidence of our analysis is relevant not only for scholars, but also for managers and regulators who must be aware of the importance of intelligible, specific and transparent disclosure about reputational risk to create and preserve a sustainable and durable corporate reputation.

Keywords: reputational risk - risk management – voluntary disclosure – content analysis – corporate reputation.

JEL Classification: M14, M42, G32
1 Introduction

Companies operate in a world that is becoming not only more risky, but also more volatile, uncertain, complex and ambiguous. In this context, reputation is undoubtedly a fundamental asset for an entity going concern. The increasingly global and interdependent nature of marketplace and the technological and media revolution makes managing reputation a strategic challenge.

A strong reputation, according the resource-based theory, can be a key competitive advantage, which is especially important in today's environment of increasing competition, deregulation, globalization and almost instantaneous flow of information. Reputation may confer advantages in accessing key markets, attracting capital, attracting and maintaining high quality workforce and in maintaining good customer and supplier relationships. This intangible asset can also influence disclosure practices and changes in the stock price. A growing academic literature supports this view (Fombrun, 1996; Fombrun and Shanley, 1990; Hammond and Slocum, 1996; Roberts and Dowling, 2002).

According to a study by the World Economic Forum, more than 25 percent of a company's market value is directly attributable to its reputation and specific risks include, firstly, reputational risk and other dangers to brands; secondly, potential loss of market share; thirdly, product boycotts and, lastly, disruption of established business models (World Economic Forum - The Global Risks Report 2016 - 11th Edition, 2016).

More than 80% of executive and non-executive board members from a wide range of industries and regions surveyed by The Economist (The Economist Intelligence Unit, 2014) report that reputational risk arising from unethical corporate behaviours has become a key area of focus. In case of an incident or scandal, board members declared to be more worried about the damages to their company's reputation than about direct financial costs or falling share price. Despite the importance placed on protecting a company's reputation, companies are still focusing their attention and disclosing in their annual report only more traditional risks, such as financial and compliance risk. Nevertheless, devoting time and energy on such easily identifiable and well-understood risks means that others (often new and emerging) will receive inadequate attention, despite being potentially able to seriously damaging a company's reputation.

The need for effective risk management, internal control and transparent risk reporting has become an important corporate governance principle and a predominant issue in business. Since 1987, the AICPA has stated that shareholders are increasingly demanding to include in financial statements more information concerning the risks and uncertainties companies are facing (Schrand and Elliott, 1998). Abraham and Cox (2007) claim that this information can help investors to determine the risk profile of a company and estimate its market value.

Reputation risk is likely to be increasingly critical in the last years, which means companies should continue to improve their capabilities to manage it as a strategic issue, as reported also in other recent studies (Deloitte - Global survey...
on reputation risk, 2014), in which board members declare that they are explicitly focusing their attention on reputation risk as a key business challenge.

Why so much emphasis is now put on the management of good corporate reputation and the risks of losing it?

Reputation is an intangible asset that can only be defined by what others perceive, so, if the opinions of customers, employees, analysts, regulators and other key stakeholders shift against a company, the negative impact wrought by a bad reputation can send shock waves through nearly every aspect of the organization – from recruiting the best talent to stock value and consumer opinion - up to and including its ability to survive (A risk Intelligent view of reputation, Deloitte, Risk Intelligence Series, Issue n. 22). It’s no wonder that reputation is firmly on the radar of executives and boards that commonly referred to it as the most valuable asset that the company must protect and nurture.

To dig deeper into what European listed companies – following the prior literature (e.g. Marshall and Weetman, 2007) we excluded financial firms to their special nature - are doing to get in front of the critical issue of reputational risk, our study examines, through the analysis of the annual reports of a sample of listed companies, if the disclosure highlights underline an effective management of reputational risk and factors influencing on it.

The sample is made up of 538 non-financial listed firms from five European countries (France, Germany, Italy, Spain and United Kingdom). For each company, we analysed the annual report for the year 2014 focusing on a specific disclosure about reputational risk. The analysis is limited to one year because firm’s disclosure policies are expected to remain constant over time (Abrham and Cox, 2007; Botosan, 1997; Hail, 2002). We utilized annual reports, since external investors still perceive them to be a major and credible source of data (e.g. Beattie et al., 2004; Donnelly and Mulcahy, 2008).

The reputational risk information increases levels of disclosure and reduces the possibility of information asymmetries.

Results show that public visibility (size and income growth rates) and agency theory relationships (ownership structure) are important in explaining reputational risk disclosure.

The paper proceeds as follows: theoretical background and review of the prior literature, research design and methodology and then we present the empirical results, discuss conclusions and draw avenues for future researches.

2 Theoretical background and relevant literature

In recent years, the concepts of risk and risk management have received considerable attention (Power, 2004). In particular, risk may be defined as any event “affecting or potentially affecting the entity’s performance and financial position” (Carlon et al., 2003).
Linsley and Shrives (2006) note that, in the pre-modern era, risks were merely considered as negative events, whereas the modern view of risk incorporates both the positive and the negative outcomes of events.

Crouhy et al. (2006) consider risk factors in a systematic way and group risk factors into eight categories: market risk, credit risk, liquidity risk, operational risk, legal and regulatory risk, business risk, strategic risk and reputation risk. Linsley and Shrives (2006) regroup the categories in order to obtain four risk dimensions: financial risk, operational risk, legal, tax & regulatory risk and business risk.

To understand the qualitative distinctions among the types of risks that organizations face, Kaplan and Mikes (2012) research shows that risks fall into one of three categories:

1. **preventable or internal risks**, arising from within the organization, that are controllable and ought to be eliminated or avoided; in general, companies should seek to eliminate these risks since they get no strategic benefits from taking them on and they can be managed through a rules-based control model;

2. **strategy risks**, that a company voluntarily accepts in order to generate superior returns from its strategy and managing those risks is a key driver in capturing the potential gains. They can be managed with a risk-management system designed to reduce the probability that the assumed risks actually materialize;

3. **external risks**, that arise from events outside the company and that lie largely outside the company’s influence or control; they cannot typically be reduced or avoided through the approaches used for managing preventable and strategy risks.

Companies should tailor their risk management processes to these different categories. While a compliance-based approach is effective for managing preventable risks, it is wholly inadequate for strategy risks or external risks, which require a fundamentally different approach based on open and explicit risk discussions.

What about **reputational risk**? A risk to reputation occurs when the organisation fails to meet the expectations of a specific stakeholder group. The key to effective reputation risk management is therefore the management of expectations (CIMA, 2007). Stakeholders’ expectations are constantly changing and thus reputational risk is dynamic and varies between geographies, groups and individuals. Negative perceptions destabilize the previously assumed strengths of a company – its strategic positioning, technical competence, and the hard financials of performance.

Reputational risk remains one of the more “blurred” risks, considering the difficulty in measuring it as well as a lack of understanding of the situations that can generate this risk. The Board of Governors of the Federal Reserve System (2004) defined reputational risk as “the potential that negative publicity regarding an institution’s business practices, whether true or not, will cause a decline in the customer base, costly litigation, or revenue reductions”.

The term “reputation risk” or “reputational risk” is frequently bandied about as if it was a discrete risk category alongside “financial risk” or “operational risk”.

Reputation risk can be awkward to characterize. For some people, it is a specific risk with clear drivers and tangible business consequences, even if these are hard to quantify. For others, it is a risk of risks that does not exist on a standalone basis. A third perspective is that reputation risk is not a risk at all, simply an outcome of other risks. Indeed, reputation risk most often appears as an amplifier of other risks and corporate vulnerabilities. In turn, however, reputational damage can provoke other risks, thus giving rise to additional challenges (Smith-Bingham, 2014).

### Table 1 Types of events giving rise to reputational risk.

<table>
<thead>
<tr>
<th>Bad Conduct</th>
<th>Questionable Judgment</th>
<th>Operational Shortcomings</th>
<th>External Attacks</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Disputable exposure to controversial clients or countries</td>
<td>- Unexpected exposures in non-core markets</td>
<td>- Major product or service quality failure</td>
<td>- Collateral damage from a peer company incident</td>
</tr>
<tr>
<td>- Misuse of customer data or information</td>
<td>- Unfortunate behavior by company leaders</td>
<td>- Badly executed business strategy</td>
<td>- Incorrectly unfounded rumors and accusations</td>
</tr>
<tr>
<td>- Doing business in an unethical manner</td>
<td>- Overly aggressive tax avoidance and other regulatory &quot;bending&quot;</td>
<td>- Poor customer relations</td>
<td>- Negative public remarks by politicians/public institutions</td>
</tr>
<tr>
<td>- Misrepresentation of company position to the market</td>
<td>- Excessive executive compensation</td>
<td>- Non-performance of core infrastructure (including IT)</td>
<td>- Protest group opposition to business activities</td>
</tr>
<tr>
<td>- Illegal or fraudulent activities by rogue individuals/groups</td>
<td>- Business activities that contradict core brand values</td>
<td>- Poor labor standards and approach to labor issues</td>
<td></td>
</tr>
<tr>
<td>- Workplace violence</td>
<td>- Mishandled response to operational/conduct failure</td>
<td>- Local or larger disaster caused by the company or its suppliers</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Business disruption from a natural or man-made disaster</td>
<td></td>
</tr>
</tbody>
</table>

*Source: Smith-Bingham, 2014.*

But what is reputational risk precisely? Rayner (2003) suggests that there is no such thing as “reputation risk” – only risks to reputation. In fact, the term of “reputation risk” is a convenient catchall for all those risks, from whichever source, that can impact on reputation.

Reputation risk is driven by a wide range of other business risks that must all be actively managed.

In the 22nd whitepaper in Deloitte’s series on Risk Intelligence (2011), reputational risk is regarded as a “meta risk”, standing at the forefront of key strategic and operations concerns, right alongside new competition, technology failures, talent issues, and changing regulations. Those risks cannot be managed with traditional approaches, but with an “outside-in” perspective, relating enterprise reputation matters to strategic outcomes, value protection and value creation.

The study underlines that reputation, as a “meta risk” is an important factor across all four major risk areas: strategic, operational, financial and compliance.

The peculiarity of reputational risk is its “cross-sectional dimension” so that it cannot be easily reduced to one of the risk categories identified by Kaplan and Mikes (2012).

In his paper, Scandizzo (2011) makes a distinction between internal and external drivers of reputational risk. Internal drivers are those that influence our
ability to perform, financially and/or operationally, according with stakeholders’ expectations. The second dimension of reputational risks is the external drivers that stems not directly from our failure to live up to others’ expectations, but from other entities’ failures that, being mediated, are associated with us in the minds of our stakeholders.

The communication of risk information by companies to stakeholders is one of the points about debate on risk:

1. American Accounting Association/Financial Accounting Standards Board (AAA/FASB) since 1997 has suggested that US companies were providing insufficient risk information within their annual reports. (Schrand and Elliott, 1998);

2. the Institute of Chartered Accountants in England and Wales (ICAEW) published a guide on Risk Management Standard that defines processes, organization structure and objectives, encouraging UK company directors to report upon risks in greater depth;

3. a survey on UK institutional investors supported the AAA/FASB and ICAEW view, as a significant number of respondents agreed that directors needed to provide more detailed risk information rather than generalised statements of risk management policy (Solomon et al., 2000).

In defining risk for this study information in annual reports have been judged to be risk disclosure if the reader is informed of any opportunity or prospect, or of any hazard, danger, harm, threat or exposure, that has already impacted upon the company or may impact upon the company in the future or of the management of any such opportunity, prospect, hazard, harm, threat or exposure. This is a broad definition of risk and embraces “good” and “bad” “risks” and “uncertainties”. The rationale for the adoption of this definition is that it accords with Lupton’s (1999) discussions of how risk is most widely understood (Linsley and Shrives, 2006).

The process of value creation requires risk-taking, but investors like to know the types of risks involved and how these are (or will be) managed (Eccles et al., 2001). As a consequence, they demand a transparent risk disclosure in companies’ annual reports. Beretta and Bozzolan (2004) define risk disclosure as “the communication of information concerning firms’ strategies, characteristics, operations, and other external factors that have the potential to affect expected results”.

To manage reputation effectively, both an understanding of drivers and a method of measuring changes are required. As CIMA reported in its study (2007), the best way to express financial value for reputation is via non-financial or narrative reporting, due to its spurious nature.

Risk disclosure mitigates information asymmetry between management and external shareholders and can have positive effects on the trust and confidence stakeholders have in the firm’s management. It may decrease the firm’s perceived risk because an open disclosure strategy supposedly results in a better assessment of the firm’s future performance. This, in turn, can lead to a decline in the firms cost of capital (Linsley and Shrives, 2006; Abraham and Cox, 2007;
ICAEW, 1999) and to a reduced possibility of financial failure (Beretta and Boz-
olana, 2004; Solomon, 2000).

Risk disclosure is therefore an accountability process; in this context, agency
theory suggests that effective audit committees reduce information asymmetry
between management and outside stakeholders (McMullen, 1996).

3 Research Design and Methodology

Our study can be divided in two steps, one following the other, with two re-
lated objectives:

1. starting from the consideration that reputational risk disclosure is a vol-
untary activity as no accounting laws nor GAAP require this kind of spe-
cific risk information, we analyzed the level of its disclosure in annual fi-
nancial statements of European non-financial listed companies;

2. we investigated the relationship between the reputational risk disclosure
and a set of different variables that were significant on risk disclosure in
previous studies. In other words we used as regressors variables that in
previous studies have already been found significantly correlated with
risk disclosure.

Research questions

Given these objective, the general research questions are the following:

RQ1: do European non-financial listed companies disclose reputational risk in
their corporate annual financial reporting?

RQ2: what does reputational risk disclosure mainly depend on?

To investigate RQ2 we considered a linear OLS regression model with 8 ex-
planatory variables and 3 control variables.

The independent variables were: firm size, firm growth, firm profitability,
firm liquidity, capital structure, ownership structure, book-to-market and share
price volatility. The control variables were: country, industry and risk manage-
ment disclosure. In the following paragraph each variable is explained in details
and the expected sign is discussed.

Explanatory variables

We measured firm size (SIZE) with the log of total asset, which is the most
frequently adopted measure for the firm dimension. In literature the relationship
and the impact of firm size on risk disclosure is still debated. Some studies finds
a positive relation, as Linsley and Shrives (2006) or Abraham and Cox (2007),
others find the opposite situation, with a negative relation, as Campbell et al.
(2014), while, finally, other literature finds no significant impact at all. We expect
the effect of firm size on reputational risk disclosure to be positive as bigger
firms tend to have a higher level of attention and perception of their reputation.

RQ2.1: do bigger firms have a higher level of reputational risk disclosure?

According to the classical agency theory and other more recent studies, firms
with higher growth (GRW) are likely to have a positive relation with risk disclo-
sure, as there are at the same time greater information asymmetry and higher agency costs (Gaver and Gaver, 1993). Even if a recent paper of Elshandidy et al. (2013) found no evidence of this relation, we expect a positive association between reputational risk disclosure and firm growth, measured as the percentage earnings increase of the current year (with respect to the previous year).

**RQ2.2: do firms with a higher profit growth disclose more about reputational risk?**

We measured **profitability** (PROF) with the standard Return On Equity (the ratio between net income and total equity) as in Elshandidy and Neri (2014), expecting a positive relation as in previous literature (Chavent et al., 2006).

**RQ2.3: do firms with higher return disclose more about reputational risk?**

We measured **liquidity** (LIQ) with the current ratio (total current assets to total current liabilities) as Marshall and Weetman (2007), that found a positive relation between liquidity and risk disclosure in both US and UK firms.

**RQ2.4: do more liquid firms have a higher level of reputational risk disclosure?**

We considered **firm capital structure** (LEV) as leverage ratio (total debt to total equity), even if previous literature provides uncertain results about this factor. Some studies have found a positive influence of leverage on risk disclosure (Dobler et al., 2011; Miihkinen, 2012), while others reported a negative correlation.

**RQ2.5: do firms with higher leverage have a higher level of reputational risk disclosure?**

More **concentrated ownership** (OWN), according to classical agency theory, should lead to better management control. On the other hand, this control may also have very high costs. In literature there is an unclear relationship between ownership concentration and information disclosure (Faccio and Lang, 2002; Brammer and Pavelin, 2006; Oliveira et al., 2011; Elshandidy and Neri, 2014). It is also important to underline that different countries have different corporate ownership structures, reflecting also distinctive cultural aspects: more concentrated ownerships in “Mediterranean” countries like Italy and Spain, more dispersed in anglo-saxon countries like UK (Gros-Pietro et al., 2001; Cantino, 2007). This effect has been neutralized using the country as a control variable.

We measured ownership concentration (OWN) using the BVD Independence index that provide a rating ranging from A (“independent companies”: no shareholder with more than 25% of direct total ownership) to D (“Directly majority owned”: one shareholder recorded with more than 50% of direct ownership). Intermediate values are B (no shareholder recorded with more than 50% of direct, indirect or total ownership and one or more shareholders recorded with more than 25% of direct or total ownership) and C (“indirectly majority owned”: no shareholder recorded with more than 50% of direct ownership and one shareholder recorded with more than 50% of total ownership).

**RQ2.6: do independent firms (with lower ownership concentration) exhibit higher levels of reputational risk disclosure than directly majority owned companies?**
**Book-to-market** (BtM), measured as the equity book value divided by its market value, following Campbell et al. (2014) and Elshandidy and Neri (2014), can affect positively or negatively the market perception of firm’s future growth and, consequently, its risk and its reputation.

*RQ2.7: do firms with higher market-to-book value disclose more on risk reputation?*

Share price volatility (VOL), measured as the equity price volatility on a 360 days basis (ending at December 26th 2014), is a clear measure of financial risk and, according to previous literature (Elshandidy and Neri, 2014), is found to be negatively related to mandatory risk disclosure, while the effect on voluntary risk disclosure is uncertain. Moreover, markets immediately react to the reputational consequences of some events. According to Bravo (2015), from an agency perspective, the disclosure of value-relevant information reduces the uncertainty about a company and therefore mitigates information asymmetries, affecting stock return volatility. In other words, larger disclosure of reputational risk information may lead to a reduction of stock return volatility. Here a problem of cause-and-effect relationship may arise, hence we assume the following hypothesis:

*RQ2.8: do firms with higher share volatility disclose less on reputational risk?*

**Control variables**

We introduced in our model three control variables: the industry/sector, the country where the company is listed and the level of risk management disclosure (measured with the number of times the word “risk management” appears in the annual financial report, weighted by the length of the reports in number of pages).

We control for some effects that arise from the assumption that each sector and industry has its own specificity and peculiarity, both concerning the product and the production processes. We expected that companies of different sectors differ significantly in the reputational risk disclosure from others.

We also expect that a company which presents a high level of disclosure of its risk management activity will also pay more attention on reputational risk than other companies.

**Sample and Data**

In our research, in order to capture risk and reputational risk disclosure, we used a textual content analysis, which has been largely used in the accounting research literature, particularly for examining social and environmental disclosures (e.g., Guthrie and Parker, 1990; Milne & Adler, 1999; Zeghal and Ahmed, 1990). We adopted this methodology in the current paper mainly because risk disclosures, particularly non-financial types, are largely disclosed qualitatively. Content analysis may capture better than other methods the extent and volume of such qualitative disclosures.

Following previous literature on risk, we drew up a word list including: risk, risk management, reputation*, reputation* risk, reputation* damage, (* indicates that also derivatives and plurals of each word have been included in the re-
We also considered Italian, Spanish and French translations, but only if needed for the financial reports that were not available in English.

To answer to our research questions, we selected five European markets: Italy, UK, Germany, France and Spain. As in most of the literature, we completely excluded financial companies from the universe, not only for the nature of their business, but also because they are governed by a strict and specific regulation that also affects their mandatory risk disclosure (for example Basel and Solvency rules for banking and insurance industry).

From the universe of the listed company in these 5 Countries we extracted a random sample of 538. The number of companies chosen from each Country depends on the size of the market (i.e. the sample reflect the total number of companies listed in each country stock exchange).

Table 2  Sample distribution by Country.

<table>
<thead>
<tr>
<th>Country</th>
<th>DE</th>
<th>ES</th>
<th>FR</th>
<th>GB</th>
<th>IT</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Companies</td>
<td>122</td>
<td>38</td>
<td>98</td>
<td>217</td>
<td>63</td>
<td>538</td>
</tr>
<tr>
<td>%</td>
<td>22,68%</td>
<td>7,06%</td>
<td>18,22%</td>
<td>40,33%</td>
<td>11,71%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: own elaboration.

We collected the data from different sources following different steps:
1. in the first step, economic and financial data of the sample companies were collected from BvD Amadeus Database;
2. then, in a second step, for each company we have developed the content analysis with an hand-made data collection in each financial report;
3. the last step was to fill in with the missing financial data and to check for coherences, analyzing directly each company financial statement and, if necessary, both the company website investors’ relation section and the official stock exchange website (for different countries).

Descriptive statistics for the variables are provided in table 3.

**Empirical model**

In order to answer to RQ2 and to investigate on what does reputational risk disclosure mainly depend on, we considered a linear OLS regression model with the 8 explanatory variables and 3 control variables previously listed.

The dependent variable is the reputational risk disclosure, measured with the number of repetition of “reputation* risk”, weighted with the “size” of the financial report in terms of pages.

We used equation (1) to regress the 8 explanatory variables, controlling for the country, Industry and risk management disclosure, on reputational risk disclosure.

\[ Y_i = \beta_0 + \sum_{n=1}^{8} \beta_n X_{n,i} + \sum_{m=1}^{3} \gamma_m Z_{m,i} + \epsilon_i \]  

(1)
Table 3 Descriptive statistics.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Min</th>
<th>Max</th>
<th>St. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log tot Assets</td>
<td>5.65</td>
<td>1.83</td>
<td>8.55</td>
<td>1.12</td>
</tr>
<tr>
<td>Net income 2014 (th EUR)</td>
<td>270.423</td>
<td>-7.914.917</td>
<td>12.143.408</td>
<td>1.229.986</td>
</tr>
<tr>
<td>Net income 2013 (th EUR)</td>
<td>398.361</td>
<td>-2.443.000</td>
<td>71.723.746</td>
<td>3.336.280</td>
</tr>
<tr>
<td>Net income GROWTH (%)</td>
<td>-16.08%</td>
<td>-7630.00%</td>
<td>3001.59%</td>
<td>615.81%</td>
</tr>
<tr>
<td>ROE 2014 (%)</td>
<td>-2.38%</td>
<td>-837,99%</td>
<td>788,71%</td>
<td>86,85%</td>
</tr>
<tr>
<td>Current assets 2014 (th EUR)</td>
<td>3.319.489</td>
<td>68</td>
<td>201.934.000</td>
<td>13.652.386</td>
</tr>
<tr>
<td>Current liabilities 2014 (th EUR)</td>
<td>2.524.496</td>
<td>137</td>
<td>110.586.000</td>
<td>9.022.225</td>
</tr>
<tr>
<td>Liquidity Ratio 2014</td>
<td>2.30</td>
<td>0.08</td>
<td>66.92</td>
<td>4.02</td>
</tr>
<tr>
<td>Leverage 2014</td>
<td>1.94</td>
<td>-9.78</td>
<td>43.42</td>
<td>3.21</td>
</tr>
<tr>
<td>B-t-M 2014</td>
<td>7.44</td>
<td>-0.20</td>
<td>1.862.09</td>
<td>94.27</td>
</tr>
<tr>
<td>Volatility 2014</td>
<td>0.36</td>
<td>0</td>
<td>1.58</td>
<td>0.20</td>
</tr>
<tr>
<td>Reports Pages (n.)</td>
<td>146</td>
<td>18</td>
<td>548</td>
<td>90</td>
</tr>
<tr>
<td>N. RISK</td>
<td>137.01</td>
<td>1</td>
<td>691</td>
<td>114.92</td>
</tr>
<tr>
<td>N. RISK MANAGEMENT</td>
<td>18.09</td>
<td>0</td>
<td>104</td>
<td>17.55</td>
</tr>
<tr>
<td>N. REPUTATION*</td>
<td>2.61</td>
<td>0</td>
<td>52</td>
<td>4.90</td>
</tr>
<tr>
<td>N. REPUTATION* RISK</td>
<td>0.49</td>
<td>0</td>
<td>8</td>
<td>1.22</td>
</tr>
</tbody>
</table>

Source: own elaboration.

The model assumes the classical form of a general multivariate linear regression where:

\( i \) represents the number of observations (companies), \((i = 1, 2, ... N)\);

\( Y_i \) is the vector of the dependent variables (reputational risk disclosure of company \( i \));

\( X_{n,i} \) is the vector of the 8 independent variables (or regressors) for company \( i \);

\( \beta_0 \) is the value of the dependent variables if all the regressors assume nil value;

\( \beta_n \) is the vector of the coefficients of the regressors;

\( Z_{m,i} \) is the vector of the three control variables (country, industry and risk management disclosure);

\( \gamma_m \) is the vector of the coefficients of the control variables;

\( \varepsilon_i \) is the vector in terms of error, for which we assume the standard hypothesis (zero mean, absence of correlation and constancy of the variance).

4 Empirical Results

In order to answer to RQ1 (whether or not European non-financial listed companies disclose reputational risk in their corporate annual financial reporting), we computed how many times words related to reputation (reputation* and
reputational* risk or reputational* damage) appear in the financial reports of the different countries. The results are shown in the following tables.

Table 4  
RQ1 – Results of computation of word reputation.

<table>
<thead>
<tr>
<th>N°</th>
<th>DE</th>
<th>ES</th>
<th>FR</th>
<th>UK</th>
<th>IT</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>40</td>
<td>17</td>
<td>53</td>
<td>71</td>
<td>45</td>
<td>226</td>
</tr>
<tr>
<td></td>
<td>32,79%</td>
<td>44,74%</td>
<td>54,08%</td>
<td>32,72%</td>
<td>71,43%</td>
<td>42,01%</td>
</tr>
<tr>
<td>1-5</td>
<td>64</td>
<td>7</td>
<td>21</td>
<td>106</td>
<td>18</td>
<td>216</td>
</tr>
<tr>
<td></td>
<td>52,46%</td>
<td>18,42%</td>
<td>21,43%</td>
<td>48,85%</td>
<td>28,57%</td>
<td>40,15%</td>
</tr>
<tr>
<td>6-10</td>
<td>15</td>
<td>6</td>
<td>15</td>
<td>28</td>
<td>0</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td>12,30%</td>
<td>15,79%</td>
<td>15,31%</td>
<td>12,90%</td>
<td>0,00%</td>
<td>11,90%</td>
</tr>
<tr>
<td>&gt;10</td>
<td>3</td>
<td>8</td>
<td>9</td>
<td>12</td>
<td>0</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>2,46%</td>
<td>21,05%</td>
<td>9,18%</td>
<td>5,53%</td>
<td>0,00%</td>
<td>5,95%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>122</td>
<td>38</td>
<td>98</td>
<td>217</td>
<td>63</td>
<td>538</td>
</tr>
</tbody>
</table>

Source: own elaboration.

Table 5  
RQ1 – Results of computation of word reputational risk or reputational damage.

<table>
<thead>
<tr>
<th>N°</th>
<th>DE</th>
<th>ES</th>
<th>FR</th>
<th>UK</th>
<th>IT</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>101</td>
<td>23</td>
<td>90</td>
<td>145</td>
<td>59</td>
<td>418</td>
</tr>
<tr>
<td></td>
<td>82,79%</td>
<td>60,53%</td>
<td>91,84%</td>
<td>66,82%</td>
<td>93,65%</td>
<td>77,70%</td>
</tr>
<tr>
<td>1-5</td>
<td>20</td>
<td>14</td>
<td>8</td>
<td>63</td>
<td>4</td>
<td>109</td>
</tr>
<tr>
<td></td>
<td>16,39%</td>
<td>36,84%</td>
<td>8,16%</td>
<td>29,03%</td>
<td>6,35%</td>
<td>20,26%</td>
</tr>
<tr>
<td>6-10</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>9</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>0,82%</td>
<td>2,63%</td>
<td>0,00%</td>
<td>4,15%</td>
<td>0,00%</td>
<td>2,04%</td>
</tr>
<tr>
<td>&gt;10</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>0,00%</td>
<td>0,00%</td>
<td>0,00%</td>
<td>0,00%</td>
<td>0,00%</td>
<td>0,00%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>122</td>
<td>38</td>
<td>98</td>
<td>217</td>
<td>63</td>
<td>538</td>
</tr>
</tbody>
</table>

Source: own elaboration.

As it can be seen, in more than 40% of the financial reports of the sample companies the word “reputation*” does not appear and in another 40% it appears less than five times. In less than 6% of the sample, “reputation*” appears more than 10 times.

If we consider the word “reputational risk” (which is obviously a fraction of the previous research), 77,7% of the financial reports do not contain these words at all.

It has to be noted that Spain results are biased due to the presence in many reports of text of a standardized questionnaire, which a check-list of potential risks, among which also “reputation” is named. We partially corrected for this bias, but we do not eliminate the effect at all.
In order to answer to RQ2, the statistics of the regression are displayed in table 6. The R2 is equal to 0.2368 and the multiple R is 0.4866. The analysis of variance (ANOVA) for the entire regression, reported in table 7, with a 95% (\(\alpha = 0.05\)) confidence level, allows us to reject the null hypothesis (all the coefficients equal to zero) and therefore to state that there is a significant linear relation between the reputational risk disclosure and at least one of the regressors.

### Table 6  
RQ2 – Regression statistics.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
<td>0.4866</td>
</tr>
<tr>
<td>R Square</td>
<td>0.2368</td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>0.2208</td>
</tr>
<tr>
<td>Standard Error</td>
<td>1.0777</td>
</tr>
<tr>
<td>Observations</td>
<td>538</td>
</tr>
</tbody>
</table>

*Source: own elaboration.*

### Table 7  
RQ2 – Analysis of variance for the entire regression.

<table>
<thead>
<tr>
<th>Source</th>
<th>Df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>Significance F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>11</td>
<td>189.56</td>
<td>17.23</td>
<td>148E+01</td>
<td>3.42E-25</td>
</tr>
<tr>
<td>Residual</td>
<td>526</td>
<td>610.94</td>
<td>1.16</td>
<td>1.16</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>537</td>
<td>800.50</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Source: own elaboration.*

### Table 8  
RQ2 – Results of the regression with respect to each variable.

<table>
<thead>
<tr>
<th>Source</th>
<th>Coefficients</th>
<th>St. Error</th>
<th>t-Stat</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-1.927</td>
<td>0.404</td>
<td>-4.770</td>
<td>2.38E-06</td>
</tr>
<tr>
<td>SIZE</td>
<td>0.296</td>
<td>0.053</td>
<td>5.594</td>
<td>3.55E-08 ***</td>
</tr>
<tr>
<td>GROWTH</td>
<td>0.010</td>
<td>0.004</td>
<td>2.292</td>
<td>0.022    **</td>
</tr>
<tr>
<td>ROE</td>
<td>-0.001</td>
<td>0.061</td>
<td>-0.017</td>
<td>0.987</td>
</tr>
<tr>
<td>LIQUIDITY</td>
<td>-6.34E-04</td>
<td>0.012</td>
<td>-0.051</td>
<td>0.959</td>
</tr>
<tr>
<td>INDEPEND.</td>
<td>0.045</td>
<td>0.016</td>
<td>2.831</td>
<td>0.005    ***</td>
</tr>
<tr>
<td>LEVERAGE</td>
<td>0.015</td>
<td>0.016</td>
<td>0.929</td>
<td>0.353</td>
</tr>
<tr>
<td>B-T-M</td>
<td>-4.17E-04</td>
<td>5.37E-04</td>
<td>-0.776</td>
<td>0.438</td>
</tr>
<tr>
<td>VOLATILITY</td>
<td>-0.140</td>
<td>0.084</td>
<td>-1.675</td>
<td>0.095    *</td>
</tr>
<tr>
<td>COUNTRY</td>
<td>0.096</td>
<td>0.037</td>
<td>2.577</td>
<td>0.010    **</td>
</tr>
<tr>
<td>INDUSTRY</td>
<td>2.18E-04</td>
<td>9.11E-05</td>
<td>2.390</td>
<td>0.017    **</td>
</tr>
<tr>
<td>Risk MANAG.</td>
<td>2.097</td>
<td>0.396</td>
<td>5.298</td>
<td>1.72E-07 ***</td>
</tr>
</tbody>
</table>

*Significance at 10%; ** significance at 5%; *** significance at 1%

*Source: own elaboration.*

In table 8 the results of the regression with respect to each variable included in the equation are displayed. In particular, among the explanatory variables, the regressors that have been found statistically significant were size (**), net in-
come growth (**), level of independence in ownership structure (***), and the market price volatility (*).

Size of the firm is statistically significant with 99% confidence level and the sign of the coefficient is positive, which means that bigger companies disclose more on reputational risk.

Also net income percentage growth is statistically significant (at 95% confidence) with positive relationship, showing that companies with higher growth rates probably disclose more on reputational risk, even if a cause-effect problem of interpretation may arise.

At 99% is also significant the level of independence, measured as ownership concentration, with a positive coefficient. This result provide empirical evidence that more independent companies tend to disclose more on reputational risk.

Finally, also share price volatility has been found statistically significant with a negative coefficient.

Table 9  
RQ2 – Most significant results.

<table>
<thead>
<tr>
<th></th>
<th>Expected sign</th>
<th>Result</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIRM SIZE</td>
<td>±</td>
<td>+</td>
<td>***</td>
</tr>
<tr>
<td>INCOME GROWTH</td>
<td>+</td>
<td>+</td>
<td>**</td>
</tr>
<tr>
<td>INDEPENDENCE</td>
<td>+</td>
<td>+</td>
<td>***</td>
</tr>
<tr>
<td>PRICE VOLATILITY</td>
<td>−</td>
<td>−</td>
<td>*</td>
</tr>
</tbody>
</table>

Source: own elaboration.

5 Conclusions

During the last decade reputation has captured an increasing attention not only from academic scholars, but also from managers and practitioners. A company reputation is perceived as a strategic intangible asset that should be carefully monitored and nurtured. Despite this declarations of intents and the growing emphasis on risk management, actually companies seems to be stuck to improve and disclose their action oriented to reputation risk management. While regarding many other risks (mainly financial), great improvement seems to have been made in the last two decades in their management system and disclosure, thanks also, for example, to the evolution and the widespread of internationally accepted classifications and rules, for reputational risk there is still quite a low level of (voluntary) disclosure.

Our major findings could be summarized up in the following points:

1. reputational risk disclosure in annual reports is quite low among listed European non-financial companies as more than 40% of the companies to not even use the word “reputation” in their statements;

2. the situation varies a little bit among European countries and may depend on cultural, legal, social and managerial differences;
3. the level of reputational risk disclosure depends on many different factors. Among them, we found empirical evidence of a statistical relationship between the reputational risk disclosure and the size of the firm, the increase in net income, ownership structure and stock price volatility. The cause-effect relationship is still to be defined and probably is a double-way relationship (for example, firms with higher income growth rates disclose more on reputational risk, but maybe they have high returns thanks also to the superior quality of their disclosure and reports);

4. public visibility (size and income growth rates) and agency theory relationships (ownership structure) are important in explaining reputational risk disclosure.

Several limitations and further improvements could be noted:
1. more variables could be added, mainly focusing on corporate governance;
2. the cause-effect relationship should be investigated more in details;
3. information about reputational risk can be disclosed in many other sources than annual reports and the quality of its disclosure can be measured not only with a content analysis (looking for specific words chosen a-priory), but also with other methods;
4. this content analysis may not be fair to measure the real reputational risk management activity (as it is strictly limited to its disclosure in annual reports);
5. our study is limited to one single year.

Future research should include other variables (mainly CG) in the regression and also consider a time-series analysis.

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