# Contrasting mandatory and voluntary disclosure environments: quantity of risk disclosure in the US and the UK

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#### ABSTRACT,

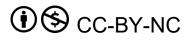
This paper investigates the impact of regulatory disclosure framework on quantity of risk disclosure in the annual report narratives of USA and UK non-financial companies. The USA was chosen to represent a mandatory disclosure environment, because the annual reports are filed within the structure of form 10-K, prescribed by the SEC. The UK represents a voluntary environment, where each company may use a different structure for their annual reports and institutions like ICAEW and IASB give recommendations on how to disclose company risk information while not mandating any specific reporting structure. The research explores, in which country the quantity of risk disclosure, measured by counting the number of words related to risk, is higher. The companies were chosen from the UK FTSE 100 and S&P 500. 50 companies with the highest market share were chosen from each of the stock exchanges. Financial companies were excluded because different regulations apply for them. It is found that UK sample reports.

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Keywords risk disclosure, mandatory, voluntary, disclosure environment, annual report, UK, USA, SEC, ICAEW

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### **1. INTRODUCTION**

Over the last decades, risk reporting gained increased recognition among scholars. (Abraham & Cox, 2007) (Linsley & Shrives, 2006) (Miihkinen, 2012) "Changing economic and regulatory environments, more complex business structures and risk management and prominent corporate crises gave rise to risk reporting in non-financial sectors." (Dobler, 2008) The relevance of the topic was stimulated by accounting scandals and frauds at the beginning of the 2000s. (Mazumder & Hossain, 2018) Nowadays, recent corporate crises including the wirecardscandal continue to stimulate increased demand from stakeholders who ask for more transparency in annual reports. Especially recently, concerns arose about diminishing utility of risk reports provided by companies, resulting in limited transparency to external stakeholders. "Despite calls for more detailed reporting and related regulatory changes towards more transparency, the relevance of corporate financial communication seems to be lost

(Svetlova, 2021) External stakeholders desire risk communication, in the hope to become informed about how the company conducts business and thereby being able to make better-informed investment decisions. With regards to risk information, investors are reading through annual reports to get an idea of what levels of risk the company faces and how the company manages risks, because these dynamics may reflect upon the financial performance of the company. (Dobler, 2008) "According to the findings of prior studies it can be said that nonmanagerial stakeholders can have more protection and make better economic decisions by using risk disclosure. (...) Moreover, investor confidence can be enhanced through risk reporting." (Mazumder & Hossain, 2018) Complete risk reports reflect good risk management, as signaling theory suggests. (Akerlof, 1970) The following literature section reviews insights into the determinants of risk disclosure and questions the relevance of mandatory requirements as a characteristic of country-specific risk disclosure framework. The research contributes insights that guide regulators who consider whether a mandatory approach or a voluntary approach should be adopted. Designing a well suited risk reporting regulation that is based on empirical evidence from research will lead to better investor communication and a more appropriate allocation of capital in the economy. (Mazumder & Hossain, 2018)

"Risk disclosure is still one of the most ambiguous and unexplored areas of corporate disclosure." (Miihkinen, 2012) Although the field of risk disclosure is growing in recognition and diverse stakeholders are increasingly aware of its capabilities for improving investor communication, some annual reportpreparers remain hesitant to produce extensive risk reports. Still now, in most of the economies, risk reporting practice is discretionary (Abraham & Shrives, 2014). Researchers and regulators are still at the beginning of the process of exploring how to achieve the goal of improving investor communication by designing an appropriate regulatory risk reporting framework. The trade-off for regulators when choosing to go for a more mandating or more voluntary approach, may well be introduced with this quote from the literature: "If standard-setters give overly directive disclosure requirements, they receive highly comparable information that includes mostly boilerplate discussion that lacks relevance to investors. In contrast, if standard-setters do not require disclosure on a specific issue, some firms will not voluntarily disclose anything." (Miihkinen, 2012)

#### 1.1 Research Objective & Research Question

This research aims at exploring whether the mandatory regulatory approach is more effective in stimulating risk disclosure quantity than a voluntary aproach.

The research objective of the thesis is to scrutinize the effectiveness of the UK and US financial reporting regimes, which are characterised by contrasting regulatory approaches. Investigating the effectiveness of risk reporting regimes may result in improved investor communication. Improved investor communication enables individual investors to make more informed investment decisions guided by his or her personal risk appetite and collectively, a better understanding of the determinants and restrictions of corporate risk disclosure (CRD) improves the allocation of capital in the economy as a whole (Mazumder & Hossain, 2018) (Svetlova, 2021)

The research question is: How does the country-specific riskreporting-regulation of the UK and the US influence quantity of risk disclosure in the annual report narratives of non-financial firms listed on the UK FTSE 100 and S&P 500 stock exchanges? It is tested whether there a statistically significant deviation between quantity of risk disclosure in the annual reports produced in the two different regulatory environments of the sample companies.

### 2. LITERATURE REVIEW

#### 2.1 Disclosure environment

To define "voluntary" regulatory environment, the role of the following institutions in the UK, which represents a voluntary regulatory environment in this research, is highlighted: In the UK setting, listed companies are encouraged by the Institute of Chartered Accountants in England and Wales (ICAEW) to disclose business risk information on a voluntary basis. (Mazumder & Hossain, 2018) Neither the UK Accounting Standards Board (IASB) nor the International Accounting Standards Board (IASB) has issued a comprehensive mandatory risk reporting standard. (Hussainey & Elshandidy, 2013) Since the standards issued by these authorities are not enforced legally, the extent of risk disclosure compliance with standards issued by the IASB was, on average, 43%. (over the six year period of 2007-2014) (Masoud, 2022)

The ICAEW highlights the "minimisation of cost of capital as an incentive for voluntary disclosure." (ICAEW, 1997) If companies provide well-informing risk reports, investors will be attracted and may become more interested to invest in that particular stock, which minimises cost of capital, if the demand for the shares of the company increases as a result. The ICAEW argues that there is no need for confining mandatory guidelines, because the incentives for voluntary disclosure are sufficient in stimulating extensive risk reports, because well-managed companies usually report on risks and are incentivised to do so by the promise of minimisation of cost of capital. Next to the ICAEW, other institutions in the UK provide recommendations in the form of standards, to guide company managers' risk reporting decisions without mandating any specific structures or mandatory guidelines for the annual reports. "In the U.K., the Companies Act requires a description of principal risks and uncertainties faced by the firm and main factors likely to affect the firm's future development supplemented by disclosure on the firm's risk management." (Dobler, Kaouthar, & Zeghal, Attributes of Corporate Risk Disclosure: An International Investigation in the Manufacturing Sector, 2011)

To contrast the voluntary UK approach with a "mandatory" disclosure framework the institutions in the US are now introduced: In the USA, the Securities and Exchange Commission (SEC) mandates listed firms to provide risk disclosures in the "Item 1A-Risk Factor" section of 10-K annual

reports. (Mazumder & Hossain, 2018) Mandatory disclosure implies that the reports are formulated within a given structure where some prescribed elements need to be provided. Differences are observable between the structures of the annual reports of USA and UK companies, which are related to the mandatory requirements that establish the structure of the reports: USA has the mandatory 10-K-Form resulting in a clear structure of the respective annual reports. The structure is therefore the same among all US companies of the sample used for this research. By contrast, UK sample companies' reports are each structured differently, for example Unilever refers to their risk disclosure section as "our risks" while other companies named the risk section differently. In UK companies, the risk section is often called "principal risks and uncertainties" or "risks and uncertainties". The sample company Glencore does not even have any explicit, separate risk disclosure section in their annual report. Glencore provides occasional mentions of the role that risk management plays during different sections of the annual report (for example in the "Corporate governance report", there is one paragraph called "Risk management and internal control" and in the audit committee-section there is a section about Covid risks and the company's response.

#### 2.2 Determinants of disclosure quantity

Consensus based on empirical evidence with regards to the influence of determinants of quantity of risk disclosure exists only about a limited number of factors. It was found by research that firm size has a positive correlation with quantity of risk disclosure (Linsley & Shrives, 2005) as well as corporate governance (Abraham & Cox, 2007), leverage, which increases bankruptcy risks and makes the firm more vulnerable to risks (Dobler, Kaouthar, & Zeghal, Attributes of Corporate Risk Disclosure: An International Investigation in the Manufacturing Sector, 2011), and firm risk levels, because firms that face more risks tend to report more extensively on them, as they have more potential information to disclose. (Miihkinen, 2012) A subsection that has only partially been observed in the extant risk disclosure-literature, is the influence of country-specific regulatory environment. While a diverse set of theories exists on the incentives of managers for disclosing risks, only a limited amount of research has been conducted specifically on the influence of regulatory environment on quantity and quality of risk disclosure. Some researchers argue that mandatory environments stimulate extensive risk reports (Elshandidy, Shrives, Bamber, & Abraham, 2018) while others state that voluntary environments, like the UK tend to produce risk reports that "do not reflect underlying risk levels." (Hussainey & Elshandidy, 2013) Linsley & Shrives (2005) argue that, although the public companies of the UK are disclosing on risk, these disclosures are minimal and incomplete in nature.

On the one hand, mandatory disclosure regulations provide "a level of public accountability and enforceability that would increase the credibility of disclosure." (Elshandidy, Shrives, Bamber, & Abraham, 2018) On the other hand, mandatory disclosure frameworks carry potential costs, including engendering competitive disadvantages as companies are forced to publish sensitive information and the potential loss of meaning due to the production of boilerplate information (Elshandidy, Shrives, Bamber, & Abraham, 2018). While there are downsides to the mandatory approach, other papers also highlight the beneficial elements of the UK approach. (Elshandidy, Fraser, & Hussainey, 2013)

# 2.3 Management incentives theories for risk disclosure

Management incentives for disclosure act as a fundamental determinant of disclosure quantity and quality. (Dobler, 2008) Management incentives theories can be applied to discuss the relevance of mandatory requirements as a characteristic of the country-specific regulation style.

Institutional theory suggests that extensive regulatory requirements tend to stimulate the production of boiler-plate risk reports that originate from the motivation of firm managers to fulfill institutional requirements rather than representing a dedicated attempt to inform investors about firm risk levels. (Mazumder & Hossain, 2018) A mandatory institutional environment provides coercive pressures as a management incentive. Such an incentive can be reasonable if there is no other incentive to disclose. (Dobler, 2008)

Signalling theory (Akerlof, 1970), when applied to risk reporting, suggests that risk disclosure serves as a display of risk management skills. "Managers may signal their quality and ability in identifying, measuring and managing risk, thus distinguishing themselves from other managers who may be perceived to manage risk less effectively." (Hussainey & Elshandidy, 2013) According to this theory, managers face a powerful incentive to provide risk reports on a voluntary basis to reduce cost of capital by presenting a display ("signal") of risk assessment and management capabilities which would enhance investor trust. (Abraham & Cox, 2007) (Mazumder & Hossain, 2018). It could be interpreted from signaling theory and institutional theory that a naturally occurring motivation for voluntary disclosure exists which incentivises managers to produce risk reports voluntarily. From that viewpoint, it might be argued that mandatory requirements would not contribute to effective disclosure, because it might not be necessary and would establish confining structures for annual reports. Added to that, "opponents to mandatory risk reporting raise concerns of disclosure cost" (Dobler, 2008)

# 2.4 Relevance of mandatory risk reporting regulations

By contrast, regulatory theory suggests that mandatory regulations may be fruitful and sometimes necessary, because "Imperfect markets require some degree of mandatory disclosure to protect investors and mitigate information asymmetry." (Elshandidy, Fraser, & Hussainey, 2013) Some firms are not incentivized to provide disclosure on a voluntary basis, so they would need to be mandated to provide risk information. (Dobler, 2008). For example, some firms may fear that the disclosure reveals sensitive information that engenders competitive disadvantages. In practice, research has found that some UK companies fail to provide complete risk reports on a voluntary basis. (Elshandidy, Shrives, Bamber, & Abraham, 2018) Mandating disclosure by designing a mandatory disclosure framework encourages higher disclosure levels for some companies when there is no other incentive to disclose.

Another theory that plays a central role throughout the discussions in risk disclosure literature, is called agency theory (Jensen & Meckling, 1976). Separation of ownership and control results in conflicts of interest that create agency problems. Owners should monitor the agents who act on their behalf and use incentives to align their interests. Interests can be aligned by forcing them to behave according to their wishes, for example with labor contracts that define what they ought to do or incentivising them through performance-based compensation. Thereby the owners can link their interests together with the managers who act on their behalf, to avoid conflicts of interest.

(Malin, 2019) Risk disclosure can reduce agency problems by reducing information asymmetry through providing information about the risk levels and the companies' risk management. The extended agency theory includes consideration of external stakeholders like the public press and potential investors that are not (yet) owners. "Various groups of stakeholders have urged regulators to act to ensure that users of financial statements are protected from material levels of information asymmetry." (Elshandidy, Shrives, Bamber, & Abraham, 2018) Risk disclosure can serve as a mechanism that reduces information asymmetry among the managers (in agency theory called *agents*) and the shareholders (principals). However, agents might not be interested in avoiding the agency problems or reducing information asmmetry, because they intend to sustain a power position of "managerial hegemony" (Malin, 2019, p.23). Managerial hegemony is established if the managers being in the day-to-day operations of the company have access to proprietary information that other stakeholders do not have access to. The managers may try to retain the power position of managerial hegemony through sustaining the information asymmetry and thereby circumventing control away from directors and shareholders. In such a situation where managerial hegemony is a significant factor reducing the amount of risk information available to investors, the appropriate regulatory response would be to design a mandatory disclosure framework. According to agency theory, when applied to risk disclosure, a mandatory disclosure environment would be appropriate if the company managers do not disclose sufficient risk information on a voluntary basis. In the absence of any voluntary incentives to disclose, coercive pressures may be necessary to stimulate risk reports and thereby reduce information asymmetry for the investors. (Elshandidy, Shrives, Bamber, & Abraham, 2018) (Dobler, 2008)

#### 2.5 Hypothesis development

It is hypothesized that there is a significant difference between the two samples of USA and UK.

**H0.** There is no statistically significant difference between the quantity of risk disclosure in the sample companies of US and UK

**H1.** The coercive effect of the US institutional environment results in different disclosure quantities for US sample companies compared to UK companies. There is a statistically significant difference between the quantity of risk disclosure for the two samples.

The hypothesis is two-sided because of the mixed evidence found in the literature. On the one hand, mandatory regulation has a solid theoretical background justifying why it may be assumed to stimulate higher quantities of risk disclosure. On the other hand, voluntary disclosure incentives are widely established due to the promise of minimisation of cost of capital.

#### **3. METHODOLOGY**

Company risk can be defined as "uncertainty as to the amount of benefits" (Aryani, 2016, p.73). Risk "can be an uncertainty, a threat, a volatility or an opportunity that must be managed by companies." (Mazumder & Hossain, 2018) Risk factors comprise politics, regulation and market as well as finance, business process and personnel. Any and all of them potentially affect an entity's future performance.

Previous research has used content analysis to measure corporate disclosure levels. (Hussainey & Elshandidy, 2013) "Manual and/or automated content analysis using either number of sentences or words" (Elshandidy et al., 2018) is the most

common form of data collection to measure quantity of risk disclosure in annual reports.

This research for this thesis applies automated content analysis using number of words as unit of analysis to measure quantity of risk disclosure in annual report narratives. The words are counted using the Nvivo software.

The risk word catalogue includes the following terms that were derived from a synonyms dictionary by the name of "Thesaurus" and the work of Hussainey & Elshandidy (2013). *Risk OR danger OR exposure OR liability OR peril OR uncertainty OR contingency OR exposedness OR liableness* (retrieved from Thesaurus Website)

fail OR threat OR viable OR catastrophe OR shortage OR challenge OR uncertain OR chance OR fluctuate OR differ OR diversify OR probable (Hussainey & Elshandidy, 2013). Words also include derivatives based on the word stem (e.g. "risk", "risking").

Some words from the Thesaurus synonyms-dictionary were not chosen for inclusion in the research, because they are not direct synonyms and can be represented in annual reports to describe other topics than risk exposure, therefore concept validity is not given for these terms. *prospect, opportunity, hazard, accident, fortuity, possibility,* and *fortune* were not taken in this research, although they appear as synonyms of "risk" in the Thesaurus dictionary. The same holds for the words *loss, decrease, against, unable, gain, peak* from Elshandidy et al. (2013), which were also not included in the word list of this thesis.

#### 3.1 Data collection

50 UK companies were selected from the UK FTSE 100 and 50 from the S&P 500, excluding financial companies, because different disclosure regulations apply for them (Dobler, Kaouthar, & Zeghal, 2011) (Linsley & Shrives, 2006) Financial firms are governed by "distinctive regulation and accounting practices." (Hussainey & Elshandidy, 2013)

The selection criteria were to select the 50 companies with the highest market share from each of the stock exchanges. In the US sample, the annual reports were all structured in the 10-K format. Annual reports from both samples were from the financial year 2021.

UK financial firms that were excluded: HSBC Holdings; London Stock Exchange Group; Ocean Wilson Holdings; Standard Chartered; Bridgepoint Group; BlackRock World Mining Trust; Schröder European REIT; Investec; Artemis Alpha Trust; Segro; JTC Group; RIT Capital Partners; London Metric REIT; Tritax Eurobox; XPS pensions; City of London Investment Group; LXI REIT; ICG Enterprise Trust; JPMorgan Russian Securities; Triple Point Social Housing REIT; Brewin Dolphin Holdings.

US financial firms that were excluded: United Health Group; JP Morgan Chase; Visa; Mastercard; Bank of America; Wells Fargo

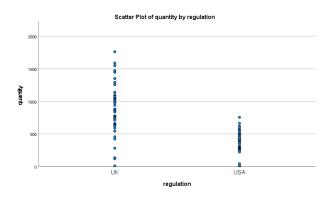
#### 4. **RESULTS**

A first look at the results already suggests that the quantity of risk disclosure was notably higher in the UK sample than in the USA, with a mean more than double as high in the UK than in the USA.

Group	Statistics
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	regulation	Ν	Mean	Std. Deviation	Std. Error Mean
quantity	UK	50	887,88	370,300	52,368
	USA	50	380,84	161,397	22,825

Figure 1. Mean and Standard Deviation



#### Figure 2. Scatterplot

Figure 2 depicts the n=50 values that were collected by counting the number of risk words for each sample company; 50 companies from the USA and 50 from the UK are represented in the dataset. On the left side of the plot, the UK quantities are visible and the USA quantities are there on the right side. Each dot on the y-axis represents the number of risk words measured in the annual report of one of the companies.

The large intra-sample dispersion or deviation of values within the UK sample may be explained by the influence of voluntary regulation: In the absence of mandatory pressures for risk disclosure, some companies are motivated to disclose more about risk because they anticipate it would be beneficial for given reasons to report on them, while other companies are not incentivized to report on risk issues and there are no coercive pressures from the institutional environment. (Dobler, 2008)

The relatively lower deviation among intra-sample-values for the US companies, also reflected in a smaller standard deviation of 161 compared to 370 may be explained through the mandatory 10-K structure which establishes mandatory guidelines on how much risk information must be provided in the annual report narratives. The coercive pressures in the U.S. motivate each company to approximate the mean quantity of risk disclosure, because each report needs to fit within the requirements that specify the amount of information mandated.

An "independent samples t-test" is used to measure whether there is a significant difference between the two samples.

The t-value calculated using SPSS is 8.876, which is relatively high.

The null hypothesis is rejected, as the p-value is below 0.001 (see Figure 3 in Appendix).

While the null hypothesis is rejected, it is not necessarily the case that the alternative hypothesis is true, i.e. that the difference is explained by the disclosure regulation of the respective country of the sample. It can not be assumed with certainty that the difference is explained by a causal relationship between the independent variable "regulation style" and the dependent variable "quantity of risk disclosure". Other factors may cause the difference between the samples. Potential factors include the ones mentioned in the literature review: company size, corporate governance structure, leverage, company risk levels and management disclosure incentives.

#### 5. LIMITATIONS & DISCUSSION

The findings do not claim to imply that one type of regulatory environment is superior to the other type. The companies in the sample which reported less quantity in the annual report narratives might use additional methods for investor communication, to inform shareholders and potential investors about risk levels. For example, risk reporting does also appear in press conferences, shareholder meetings, road shows or other public events and social media.

Some firms are influenced through regulations differently than others because a multitude of factors plays into the dynamics that influence the quantity of risk disclosure provided by listed companies. Each company faces unique pressures in the environment and follows a different strategy to respond to them, which translates into the risk reporting sections of annual reports in different ways that depend significantly on incentives for disclosure. (Dobler, 2008) It has to be denoted, that both types of regulatory environment, mandatory and voluntary can have both upsides and downsides. In some cases, the mandatory regulatory approach is better at stimulating investor communication and in other cases a more voluntary regulatory approach fits best. Many factors determine the incentives of companies to disclose on risks, including the actual level of risk exposure. (Miihkinen, 2012) Added to that, the factors influencing mandatory risk disclosure differ from the factors influencing voluntary disclosure (Elshandidy, Fraser, & Hussainey, 2013) Due to the limited scope of the study conducted for this thesis, identification of the drivers motivating each disclosure category was not conducted for the sample.

Next, it needs to be considered that the quantity of risk disclosure does not necessarily reflect the quality of risk disclosure. For example, sample companies may have produced boiler-plate reports (Abraham & Shrives, 2014) which do not provide useful information to investors but rather represent an attempt of company managers to comply with regulatory pressures in the institutional environment by providing boiler-plate formulations. Next, the measurement method that was applied for the data collection of this research must be considered. The method of content analysis was chosen because it represents the most popular method among risk disclosure researchers measuring the construct "quantity of risk disclosure." (Hussainey & Elshandidy, 2013) (Elshandidy, Shrives, Bamber, & Abraham, 2018) Still, the method is not perfect, especially since quantity does not equate quality of risk disclosure. The contribution of this thesis to the academic field studying risk reporting, lies in is its emphasis on the role of regulatory environment and reviewing the relationship between disclosure environment and disclosure quantity. Future research may employ more sophisticated research designs that also take into account the quality of risk disclosure when investigating the impact of regulatory environment.

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## 7 APPENDIX

Independent Samples Test											
	Levene's Test for Equality of Variances			t-test for Equality of Means							
		-	Sia.		df	Significance Mean Std. Error One-Sided p Two-Sided p Difference Difference		Std. Error Difference	95% Confidence Interval of the Difference		
au antitu	Equal variances assumed	20,520		8,876	98	<.001		Difference 507.040	57,126	Lower 393,675	Upper 620,405
quantity		20,520	<,001				<,001				
	Equal variances not assumed			8,876	66,969	<,001	<,001	507,040	57,126	393,014	621,066

Figure 3. Outcome of the t-test