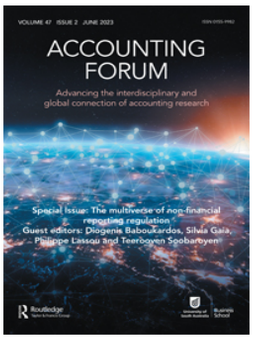

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Non-financial reporting in non-profit organisations: the case of risk and governance disclosures in UK higher education institutions

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ABSTRACT

This paper investigates non-financial reporting in non-profit organisations. Specifically, it examines the extent to which UK higher education institutions (HEIs) make voluntary disclosures relating to risk management practices, and investigates whether composite governance quality index and senior management team characteristics can influence such risk disclosures. Using a sample of UK HEIs over a number of years and drawing insights from neo-institutional theory, our findings are three-fold. First, our baseline findings contribute to the literature by showing that the level of risk disclosure among HEIs in the UK is relatively low, especially when compared to the findings of prior studies that have been conducted on similar-sized publicly traded corporations. Second, we contribute to the literature by providing timely evidence on the impact of governance quality on risk disclosure. In particular, our evidence contributes to the existing literature by demonstrating that better-governed HEIs tend to engage in higher risk disclosures than their poorly-governed counterparts. Finally, our study contributes to the extant literature by providing new evidence that offers support for the "shared" governance model among UK HEIs. Specifically, our findings show that the positive governance quality–risk disclosure relationship is moderated/explained largely by the characteristics of the senior management team. Our findings are robust to controlling for endogeneities and alternative estimation techniques, with major implications for non-financial reporting.

HIGHLIGHTS

- This paper examines non-financial reporting (NFR) in non-profit organisations, with specific focus on risk disclosures by UK higher education institutions (HEIs)
- We examine the effect of UK HEIs' governance quality on the level of risk disclosures; We investigate whether management

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team characteristics moderate the governance quality-risk disclosures nexus in UK HEIs
- We find that better-governed UK HEIs tend to engage in higher levels of risk disclosures
- We show further that the positive governance quality-risk disclosure relationship is moderated/explained largely by the characteristics of the senior management team

1. Introduction

The past decades have witnessed increased demand by activists/non-governmental organisations, capital markets, investors/professional bodies, multinational/supra-national agencies, national governments, regulators/policy-makers, and standard-setters for non-financial reporting (NFR) by both profit and non-profit organisations (Baboukardos, 2018; Gaia & Jones, 2019). In particular, observable increases in NFR globally relating to enhanced carbon/climate change, corporate governance, corporate social responsibility, environment, social and governance, human/intellectual capital, risk and sustainability reporting, including those relating to the UN sustainable development goals, amongst many others, are evident (Baboukardos, 2018; Gaia & Jones, 2019). Discernibly, whilst most of these NFR and their associated studies have focused essentially on large profit-oriented publicly listed/traded organisations (Abraham & Cox, 2007; Dixon & Coy, 2007; Ntim et al., 2013), a few of them relate to non-profit, charitable, local government and public sector organisations operating in areas, such as education and health (Coy et al., 1997, 2001; Gaia & Jones, 2019). In this paper, we seek to address this crucial lacuna in the extant accounting literature by investigating NFR in non-profit organisations, with specific focus on risk reporting by higher education institutions (HEIs). In particular, this study attempts to contribute to the extant literature by addressing the following three research questions:

- To what extent do UK HEIs voluntarily engage in risk disclosures in their annual reports?
- What is the effect of UK HEIs' governance quality on the level of risk disclosures?
- Do senior management team characteristics moderate the governance quality–risk disclosures nexus in the UK HEIs?

The decision to address these questions is motivated by the fact that worldwide HEIs have and continue to experience rapid changes and regulatory reforms (Browne Report, 2010; Augur (Review), 2019). Specifically, the Higher Education (HE) sector is gradually moving towards private/hybrid sources of financing, and this is often largely due to significant cuts in central government funding available to HEIs (Parker, 2013). At the same time, the introduction of market/quasi market-oriented regulatory reforms among HEIs, which are usually aimed at reducing costs and promoting student choice, has increased uncertainty, operational complexity and competition in the HE sector (Taylor, 2013). Additionally, HEIs in general, and in the UK in particular, are increasingly becoming large and complex corporations, which usually need to meet diverse and mostly conflicting performance targets (i.e. debt and financial sustainability, widening access, and building and maintaining reputation via national and international rankings), and this has arguably increased the levels of complexity, uncertainty and risk, and thereby posing

serious threats to the long-term sustainability of the HE sector.[1] Despite increasing importance of good governance, risk management and disclosure reforms that have been pursued in the UK (HEFCE, 2005; Taylor, 2013), no (to the best of our knowledge and extensive literature search) prior research has investigated voluntary risk disclosures in the annual reports of HEIs and their determinants. This study, therefore, seeks to investigate the extent to which UK HEIs voluntarily engage in risk disclosures in their annual reports, and consequently ascertain the extent to which the composite governance quality–risk disclosure nexus is moderated by senior management team characteristics.

From a theoretical standpoint, neo-institutional theory (Ntim & Soobaroyen, 2013; Suchman, 1995) proposes that coercive, mimetic and normative institutional pressures, which can influence the implementation of good organisational practices (e.g. good governance and risk practices), are mainly driven by efficiency and legitimisation reasons. Briefly, the efficiency perspective of neo-institutional theory (Ntim & Soobaroyen, 2013) suggests that coercive, mimetic and normative institutional drivers may intensify competition among HEIs for crucial resources in order to protect the interests of stakeholders, as well as maintain sustainable operations. Consistent with this view, committing to good governance practices (e.g. the "shared" governance model) can compel HEIs to engage in increased voluntary risk disclosures in order to demonstrate greater accountability and transparency to the wider community, as well as gain access to crucial resources (Abraham & Cox, 2007). In addition, the legitimisation perspective of neo-institutional theory (Suchman, 1995) indicates that committing to good governance practices may not only improve HEIs' efficiency, but also can improve their legitimacy and social acceptance. Consistent with this view, we argue that a major goal for engaging in greater risk disclosures among HEIs can be to show that their norms and values are congruent with those of the wider community, as well as to demonstrate that their operations/activities are legitimate.

Empirically, a number of prior studies have investigated accountability disclosure practices in HEIs around the world (Cameron & Guthrie, 1993; Dixon & Coy, 2007; Gray & Haslam, 1990). However, these studies seem to be impaired by a number of discernible weaknesses. First, much of the existing studies in HEIs have either focused largely on the effect of general institutional attributes (i.e. revenue and size) on accountability disclosures (Banks et al., 1997; Coy & Pratt, 1998; Nelson et al., 2003),[2] or have mainly been descriptive with limited theoretical insights (CUC, 2006; Gordon et al., 2002 Schofield, 2009). Second, none of the existing studies have examined risk disclosures in HEIs to-date (Coy et al., 1994, 1997, 2001). Third, despite increasing evidence that indicates that the decision to disclose information relating to institutions, including risk ones, are mainly a function of their governance quality, existing studies investigating the influence of governance quality on disclosures are generally rare (Abraham & Cox, 2007; Ntim et al., 2013), but particularly acute in HEIs (Gordon et al., 2002; Ntim et al., 2017). Finally, despite increasing

[1]There is early anecdotal evidence that suggests that the implementation of the recommendations coming out of the influential 2010 Browne Report is not only increasing financial debt, but also risk in the HE sector (Bartlett, 2019). This has sharply put even the short-term financial sustainability of some institutions at risk (e.g., Bazaraa, 2019). For example, six UK universities located in the North West and South East of the country were reported to be on the "verge" of bankruptcy in 2019 and taking short-term bridging loans in order to survive following drastic falls in their student numbers (Bartlett, 2019; Bazaraa, 2019).

[2]Despite increasing suggestions that risk disclosures have more direct implications on the long-term sustainability and survival of institutions compared to general disclosures (Abraham & Cox, 2007), prior HE studies (Elmagrhi et al., 2021; Ntim et al., 2017) have mainly focused on general accountability, governance and voluntary disclosures.

theoretical/normative suggestions that senior management has significant influence on a HEI's strategic decisions, including those relating to engaging in risk disclosures (Breakwell & Tytherleigh, 2008), none of the existing studies has examined the moderating effect of senior management characteristics on the internal governance quality–risk disclosures nexus. We contend, therefore, that these weaknesses together limit current knowledge and understanding of the extent to which governance structures of HEIs may impair or facilitate risk-related disclosures among HEIs.

Consequently, and in this paper, we seek to address these observable limitations of past studies, and in the process, make a number of new contributions to the extant literature. First, we contribute to the existing research by offering timely evidence on risk disclosure levels by UK HEIs, and this is done by: (i) developing a comprehensive risk disclosure framework for UK HEIs; and (ii) employing content analysis method to measure the extent of risk disclosures in UK HEIs' annual reports. Our six-year longitudinal evidence indicates that the levels of voluntary risk disclosure among UK HEIs are relatively low, especially when compared to the findings of prior studies that have been conducted on similar-sized publicly traded organisations. Second, our research contributes to past HE studies by offering evidence on the extent to which a composite governance quality can determine risk disclosures by UK HEIs in a period of increased funding constraints, regulatory changes and market reforms (Browne, 2010; Augur (Review), 2019). Using multivariate regression analysis technique, we find that, on average, better-governed UK HEIs tend to engage in higher levels of risk disclosures. Finally, traditional HEI governance structures have a "shared" origins, requiring close/smooth interactions among three major HEIs' governance organs, consisting of the university council (governing board), the academic arm (senate) and the vice-chancery (senior management team) in order to be successful. However, with increasing competition, "corporatisation" and managerialism in HEIs (Parker, 2012; Soobaroyen et al., 2014), the "shared" governance model is under severe risk. Therefore, and spurred on by the assumptions underlying the "shared" governance model, we contend that governance quality influence on risk disclosures in HEIs may be improved when the three governance structures are interacted together instead of operating individually. Thus, our study contributes to the extant research by offering new evidence on whether the characteristics of HEIs' senior management team moderate the internal governance quality–risk disclosure nexus. Our multivariate regression evidence shows that the governance quality-risk disclosures relationship is moderated/explained largely by the characteristics of HEIs' senior management team.

The remaining sections of this paper are organised as follows. The next section will discuss governance, risk management, regulations and disclosure framework within UK HEIs. The following sections will outline the theoretical underpinnings of the study, review the empirical literature and develop hypotheses, present the methodology, and report and discuss the empirical findings, whilst the final section concludes the paper.

2. Governance, risk management, regulations and disclosure framework in UK HEIs

The UK HE sector regulatory bodies have issued several best practice regulations relating to good risk management and governance for use by UK HEIs (e.g. Higher Education

Funding Council – HEFCE, 2001a, 2001b, now replaced by the Office for Students – OfS; Committee of University Chairs – CUC, 2006, 2008, 2009, 2013 and 2014; Leadership Foundation for Higher Education – LFHE, now Advance HE, 2009; Committee of Scottish Chairs – CSC, 2013). Thus, this study focuses on two types of best practice regulatory documents, those relating to good: (i) governance; and (ii) risk management, practices. In terms of best governance practices, we relied on the existing literature in addition to the following documents: (i) 2009, 2013 and 2014 governance codes/guidelines published by the CUC; (ii) 2013 governance code published by CSC; and (iii) 2008 audit committee guidelines published by the CUC. These codes/guidelines cover the following five areas: (i) social, environmental responsibility and stakeholders' engagement; (ii) accounting, auditing and accountability; (iii) performance evaluation, rewards and pay; (iv) procedures and structures; and (v) governing board. The first area relating to *social, environmental responsibility and stakeholders' engagement* seeks to enhance communication with stakeholders, as well as improve social and environmental practices among HEIs. *Accounting, auditing and Accountability* provisions aim to improve internal controls and risk management systems by addressing issues relating to financial/non-financial reporting, as well as providing recommendations on the role and structure of audit committee and the function of internal and external auditors, amongst others. Governance provisions relating to *performance evaluation, rewards and pay* deal with areas relating to the performance/effectiveness of the governing board, committees and vice-chancellors, as well as the composition and function of the remuneration committee. The final two areas (*procedures and structures,* and *governing board*) aim to improve monitoring and control over governing board activities by requiring greater transparency on issues relating to the governing board composition, independence and meetings, as well as requiring greater disclosure on issues relating to public fund utilisation, amongst others.

In terms of the best risk regulations and management practices documents relied on in addition to those drawn from the prior literature are the: (i) 2008 audit committee guideline published by CUC; (ii) 2009 risk management guideline published by LFHE (now Advance HE); and (iii) 2001a, b/2005 risk management guidelines published by HEFCE (now OfS). The HEFCE (2001a, p. 4) defines risk as "the threat or possibility that an action or event will adversely or beneficially affect an organisation's ability to achieve its objectives". This definition makes a tight link between managing risks and achieving organisational objectives, implying that if risks are left unaddressed, then, they can pose serious threat to the short and/or long-term sustainability of an institution. The HEFCE (2001a, 2001b, 2005) produced a prompt list of *51* major risks that can be faced by HEIs. These risks are categorised into *8* groups: (i) financial issues with 11; (ii) organisational issues with 7; (iii) estates and facilities issues with 7; (iv) student experience with 6; (v) IT information technology with 6; (vi) commercial issues with 5; (vii) reputation issues with 5; and (vii) staffing issues with 4; identified risks. It also offers specific examples about factors contributing to these risks and how to manage those risks. For example, failure to attract sufficiently high-quality students can impact negatively on reputation (reputational risk), which may be: (i) caused by targeting inappropriately; (ii) identified early through close monitoring of student recruitment numbers; and (iii) mitigated through strategic discussion and direction by the governing board. The LFHE (2009) guide offers similar guidance, but provides

more compact classification of risks to include: (i) reputational; (ii) major project; (iii) financial; (iv) operational; (v) strategic; and (vi) legal risks.

Drawing from the above best practice regulatory documents and previous studies, we categorised risk management disclosures into the following three areas: (i) financial risks; (ii) strategic risks; and (iii) operational risks. In terms of the financial risk, it relates to disclosure of issues relating, for example, to commodity/equity prices, exchange/interest rate and capital adequacy/insolvency risks. For strategic risk, it measures disclosure of issues relating to managing risk arising from the external business environment, such as, changes in regulations and natural disasters (e.g. COVID-19). Finally, we classified operational risk into ten sub-sections, namely disclosure on: (i) reputational issues; (ii) staffing issues; (iii) student experience issues; (iv) IT and information issues; (v) major project issues; (vi) facilities and estate risks; (vii) health and safety issues; (viii) governance issues; (ix) legal issues; and (x) business environment risks.

3. Theory, empirical literature review and hypotheses development

3.1. Governance quality and voluntary risk disclosures

Theoretically, the efficiency perspective of neo-institutional theory (Ntim & Soobaroyen, 2013) predicts that greater monitoring on managerial activities, which is often associated with good governance, can reduce information asymmetry, and thereby have a positive impact on risk practices. Further, neo-institutional theory (efficiency view) proposes that committing to good governance practices can increase pressure on organisations to engage in greater transparency and disclosures in order to demonstrate accountability and good stewardship (Nelson et al., 2003), and this in turn may impact positively on risk disclosure practices. Similarly, and from the legitimisation perspective (Ntim et al., 2012; Suchman, 1995), complying with good governance practices through greater risk disclosures can legitimise the operations of HEIs by improving their reputation and image, which can provide better connection with powerful stakeholders of HEIs (e.g. alumni, students, parents, employers and government) and further offer access to critical resources (e.g. alumni donations). Therefore, and according to the efficiency and legitimisation perspectives of neo-institutional theory, HEIs with good governance practices are likely to engage in greater risk disclosures in order to demonstrate public accountability, operational efficiency and gain access to critical resources. However, Conway et al. (2015) argue that non-profitable organisations may use impression management to respond to legitimacy threats through engaging in increased disclosures in their reports. This implies that HEIs with weak governance structures may also engage in greater risk disclosures in order to demonstrate accountability and maintain their social legitimacy and acceptance.

Empirically, no prior study has examined the effect of a good composite governance index on risk disclosures in HEIs, and this offers a great chance to make original contributions to the extant risk disclosure research. A large number of studies have explored general public accountability disclosures in HEIs' annual reports (Banks et al., 1997; Cameron & Guthrie, 1993; Coy et al., 1997, 2001; Gray & Haslam, 1990). The findings of these descriptive studies generally reveal that accountability disclosures by HEIs in their annual reports are patchy. Further, the findings of these studies generally offer

limited insights on the drivers for engaging in risk disclosures, as they are largely descriptive in nature.

In addition, few studies have examined the effect of governance structures on general voluntary disclosure practices among not-for-profit organisations in general (Saxton et al., 2012; Saxton & Guo, 2011) and HEIs in particular (Elmagrhi et al., 2021; Gordon et al., 2002; Ntim et al., 2017; Schofield, 2009; Soobaroyen et al., 2014), with the findings of most of these studies demonstrating that governance mechanisms tend to impact positively on voluntary disclosure practices. For example, and of closer relevance to our current study, Ntim et al. (2017)[3] present evidence that suggests that individual board structure variables, including board independence, diversity, and the existence of a governance committee, have a positive effect on general public accountability disclosures among 130 UK HEIs.

However, the extent to which composite good governance indices affect disclosure behaviour in non-profitable organisations in general, and HEIs in particular, has rarely been examined. For example, Feng et al. (2019) report that standards for excellence certification is positively associated with good governance (measured by a composite index) among 228 US non-profitable organisations. Further, Harris and Neely (2021) provided evidence that good governance is positively associated with greater transparency among 6,309 US non-profitable organisations. Similarly, Harris et al. (2015) find a statistically positive relationship between good governance practices and doner support (i.e. government funding and donations) among 10,846 non-profitable organisations.

With respect to the UK HEI context, good governance codes (e.g. CSC, 2013; CUC, 2009, 2014) and risk codes/guidelines (HEFCE, 2001a, 2001b, 2005; LFHE, 2009) expect HEIs to engage in good risk, governance, and disclosure practices. A unique requirement of funding councils, such as DFE, OfS, HEFCW and SFC (representing respective governments of Northern Ireland, Wales, England and Scotland) is that all UK HEIs have to submit annual accountability returns, which include financial sustainability, governance and risk management plans and practices. Together, the evidence suggests that good quality governance, captured by using a good composite governance

[3]Our study differs from the existing HE studies in a number of ways. First, and unlike existing HE literature that focuses on general accountability disclosures (Coy et al., 1994, 1997, 2001; Ntim et al., 2017), our current study focuses on voluntary risk disclosure practices of UK HEIs by developing a comprehensive index, consisting of 127 items capturing three major different types of risk disclosures (i.e., financial, operational and strategic risk disclosures). Prior studies (Abraham & Cox, 2007) suggest that risk disclosures have more direct implications on the long-term sustainability and survival of institutions compared to general disclosures. We, thus, contend that it is important to conduct this study in order to better understand the extent to which UK HEIs make voluntary risk disclosures, and whether internal governance quality and senior management team characteristics influence such risk disclosures, especially as a timely response to ongoing market, policy and regulatory reforms in the sector. Second, and despite increasing suggestions that in order to implement good practices (e.g., good governance and risk disclosure practices), organisations (e.g., HEIs) are expected to commit resources over a long-period of time in order to secure positive outcomes (Banks et al., 1997), existing literature (e.g., Ntim et al., 2017) have been conducted over a relatively short period of time (i.e., one year). This, arguably, may impair the current understanding of the extent to which governance quality can influence risk disclosures over a long-period of time. Third, and despite increasing suggestions that governance quality is a complex and multi-dimensional phenomenon that cannot easily be measured using individual governance variables (Harris et al., 2015), past HE studies (e.g., Ntim et al.,2017) have mainly examined the impact of a small set of individual governance (e.g., governing board size, meetings, and diversity) mechanisms as drivers of general accountability disclosures in UK HEIs. Finally, and unlike prior HE studies (Ntim et al., 2017), which employed multi-theoretical framework to explain relationships of interest, our study relies on insights from both legitimisation and efficiency perspectives of neo-institutional theory to explain the main drivers of voluntary risk disclosures among UK HEIs.

quality index, is likely to have a positive link with the extent of risk disclosures, and thus, we hypothesise that:

H1: *The extent of voluntary risk disclosure is positively associated with governance quality.*

3.2. Senior management team characteristics and voluntary risk disclosures

As noted in the introduction, UK HEIs have traditionally relied on "shared" governance model, whereby the governance responsibilities are shared among three main governance organs, consisting of the board of governors (the "HEI council/court"), academic body (the "senate"), and the vice-chancery (the "HEI senior management team") (Middlehurst, 2013; Shattock, 2013). Briefly, the HEI council typically consists of (i) independent (lay/outside) members; (ii) the vice-chancellor; (iii) employee and student union representatives; and (iv) local community representatives (e.g. county/city council and church missions). The independent/lay members are typically expected to be businessmen, public servants, entrepreneurs, politicians and professionals, who have successfully run businesses or commercial organisations in the past. Formerly, councils of UK HEIs were largely controlled by academics (Shattock, 2013; Taylor, 2013), but with increasing "corporatisation", "commercialisation" and managerialism in HEIs, independent members form a clear majority. Like the board of directors of a public corporation, the HEI council has the ultimate responsibility of running its HEI, including its academic, governance, risk and financial management, and other non-financial issues. Due to the multiplicity of issues that it has to address, the governing board tends to set up and operate through a number of subcommittees (e.g. audit, nomination, governance, remuneration and risk management committees). In this case, the risk, audit and governance committees are particularly relevant to this study, as they tend to provide leadership in risk and financial matters of the affected HEI. Second, the VC acts as the CEO of an HEI and has the responsibility of setting out the overall vision and mission of the HEI, as well as the day-to-day management of the HEI. In line with the behaviour of CEOs of public companies, the VC appoints a number of senior members to form the senior management team (the vice-chancery – the vice-chancellor office). In this case, the senior management team is not always, but usually made up of the VC and deputy, pro-vice chancellors, schools/colleges/faculties deans, professional services' directors, and HEI secretary/registrar. The senior management team, including the VC are often accountable to the HEI council. Finally, the "academic senate" is formed exclusively by academics, who are responsible for managing all issues of academic in nature, including developing the curricula, improving teaching and research quality, academic standards, and integrity and reputation of the institutions' status (degree awarding powers) and awarded degrees. The senate reports directly to the HEI senior management team, especially the VC. It is, therefore, apparent that some lines of clear responsibilities, interdependencies and accountabilities exist among the three bodies in order for an HEI to be run successfully.

Theoretically, the efficiency perspective of neo-institutional theory (Taylor, 2013) indicates that each of the three major HEIs' governance organs (council/board of governors, academic body/senate, and vice-chancery team) have substantive power, and individual independence/effectiveness, and hence, smooth interactions among these three

bodies may result in better outcomes by enhancing the impact of internal governance quality on risk disclosures. In contrast, the neo-institutional theory (legitimisation perspective) suggests that the "shared" governance model exists for symbolic reasons, perhaps with one body (e.g. vice-chancery team) dominating the board's decision-making over the other bodies (e.g. council or senate) (Ntim et al., 2017; Parker, 2012). Therefore, the interaction among the three major HEIs' bodies (council, senate, and vice-chancery team) may be dysfunctional, which can lead to sub-optimal outcomes, such as poor risk management and disclosure practices. Specifically, and in terms of senior management team size, the efficiency perspective of neo-institutional theory (Ntim et al., 2017) suggests that larger senior management teams are often associated with greater diversity in skills, experience, expertise and better business networks, and hence such teams are expected to be more effective in monitoring and controlling managerial activities, and this consequently may impact positively on risk disclosure practices. Similarly, and from neo-institutional (legitimisation view) perspective, large senior management teams may not only improve an organisation's efficiency, but can also enhance its legitimacy and image by increasing the representation of broad public interests (Ntim et al., 2017), and this, consequently, can increase pressure on HEIs to engage in greater risk disclosures. However, Ragland and Plante (2021) suggest that large leadership teams may not necessarily bring benefits to non-profitable organisations, since large leadership teams may suffer from lack of communication and coordination among their members, and this can diminish their monitoring effectiveness, which can impact negatively on risk disclosure practices. Further, greater senior management team gender and ethnic diversity, from the efficiency view of neo-institutional theory, can improve leadership performance and efficiency by improving senior management independence, as well as bringing ideas, experience, skills and abilities of diverse group of members (Elmagrhi & Ntim, 2022), and this may pressurise HEIs to engage in greater risk disclosures. Similarly, and from the neo-institutional legitimisation perspective, greater gender and ethnic diversity of senior management team can enhance organisation legitimacy and image by incorporating stakeholders' views and opinions into decision making processes (Ntim & Soobaroyen, 2013), and this can impact positively on HEIs outcomes, including risk disclosure practices. However, Tomlinson and Schwabenland (2010) suggest that non-profitable organisations may appoint women and ethnic minorities into executive leadership positions for symbolic reasons, including to show that their norms, values and goals are aligned with those of the large community, and hence such executives tend to have less influence on their organisations' strategic decisions. This implies that women and ethnic minorities may be appointed into leadership roles for symbolic reasons, and hence they may have less influence on HEIs' strategic choices, including those relating to risk disclosures.

Finally, and from the efficiency perspective of neo-institutional theory, holding regular senior management team meetings is considered as an important mechanism that can improve leadership performance and efficiency by allowing managers more time to reach agreements and make better decisions through sharing ideas and critically discussing issues that impact an organisation's operations (Van Puyvelde et al., 2018). Similarly, neo-institutional legitimisation perspective indicates that holding regular senior management team meetings can improve an organisation's reputation and legitimacy by increasing the representation of broad public concerns (Ntim et al., 2017), and hence regular

senior management team meetings may increase pressure on HEIs to engage in greater risk disclosures in order to address stakeholders' concerns. However, Vafeas (1999) suggests that regular meetings can diminish managerial monitoring effectiveness by increasing the possibility of disagreement among the leadership team members, and this can have detrimental impact on risk disclosure practices. Therefore, and consistent with the view that senior management team play an important role in influencing HEIs voluntary disclosure practices (Ntim et al., 2017), we argue that large, diverse (gender and ethnicity) senior management teams, and those which hold regular meetings, are likely to increase pressure on HEIs to engage in greater risk disclosures.

Empirically, studies examining the potential interactions among these three governance bodies on any outcomes within HEIs are limited, and hence, there is a great opportunity to contribute to the existing risk disclosure literature. The only exception is Ntim et al. (2017), whose findings show that HEI senior management team positively moderates the governance structures–public accountability disclosure link using a sample of 130 UK HEIs. Hence, our final hypothesis is that:

H2: *HEI senior management team significantly moderates the governance quality–risk disclosure nexus.*

4. Research design

4.1. Data and sample

To test the two hypotheses, we first identified the list of all UK HEIs using the Higher Education Statistics Agency (HESA) website as at 31 July 2014. There was a total population of 164 UK HEIs, consisting of universities, university colleges and other HEIs. HEIs included in our final sample needed to have annual reports for all of the period of investigation from 2009 to 2014 and this resulted in excluding 47 HEIs with missing annual reports for one or more years. Therefore, our final sample, as shown in Table 1, consists of 117 institutions made up of 3, 8, 16 and 90 Northern Irish, Welsh, Scottish and English HEIs (58 Pre-1992 and 59 Post-1992), respectively. The sampling period starts in 2009, because the 2007/08 financial crisis has had adverse effects on funding available to public institutions, including HEIs (Parker, 2013). The sampling period ends in 2014 since it was the year the

Table 1. Study's sample.

	Northern Ireland	Wales	Scotland	England	Pre-1992	Post-1992	No. HEIs
Total Sampled HEIs in UK	4	10	19	131	79	85	164
Less:							
HEIs with 1 year missing reports	1	1	1	16	8	11	19
HEIs with 2 years missing reports	0	1	0	15	7	9	16
HEIs with 3 years missing reports	0	0	0	5	2	3	5
HEIs with 4 years missing reports	0	0	0	0	0	0	0
HEIs with 5 years missing reports	0	0	1	0	1	0	1
HEIs with 6 years missing reports	0	0	1	5	3	3	6
Final (total) sample	**3**	**8**	**16**	**90**	**58**	**59**	**117**

required data, including the annual reports, of the examined HEIs was available until 2014 when data collection started, as well as due to the labour-intensive nature of manually collected data. We primarily relied on annual reports to collect governance, financial and risk data, and this is due to the fact that UK HEIs are required by the Office for Students (OfS) to publish and submit annual returns, including annual reports, which make them a reliable source to obtain such information. We have also used other sources, including information published in the reports of audit committee, as well as those published on HEIs' websites, to collect our research data.

4.2. Variable definition and model specification

The definitions of our study variables are provided in Table 2. To test *H1* and *H2*, we created our research model and variables as follows. First, we employed HEI risk

Table 2. Summary of measures and variables.

	Risk disclosure (RDI) – dependent variables
HERDI	Is the total HEI risk disclosures index containing 127 provisions based on 3 categorises as follows: 29 items on financial risks (HEFRD); 83 items on operational risks (HEORD); and 15 items on strategic risks (HESRD). All the 127 provisions are awarded a value between 0 and 6, leading to having a potential total of 762 points, which is then scaled to a value between 0% and 100%.
Internal governance structures – independent variables	
HEGQI	Is the total HEI governance disclosure index containing 100 provisions based on 5 categorises as follows: 27 items on governing board – (GOVB); 24 items on procedures/structures (PROS); 22 items on performance evaluation, rewards and pay (PERP); 20 items on accounting, auditing and accountability (AAAC); and 7 items on social, environmental responsibility and stakeholders' engagement (SERSE). All the 100 provisions are awarded a value between 0 and 1, leading to having a potential total of 100 points, which is then scaled to a value between 0% and 100%.
*Interaction variables – senior management team characteristics*HEGQI*	
I × HEGQI	Interaction variable HEGQI and the characteristics of senior management team (i.e. SMTSZE, SMTGED and SMTM).
SMTSZE	Natural log of the number of a HEI executive/senior management team.
SMTGED	Percentage on women (SMTGD) and ethnic minority (SMTED) in HEIs executive/senior management team.
SMTM	Natural log of the number of a HEI executive/senior management team meeting.
Controls (vice-chancellor (VC) characteristics)	
VCAGE	Refers to VC age. It is computed as the natural log of VC age.
VCGEN	Refers to VC gender. Awarded 1 if the VC is male, 0 otherwise.
VCACD	Refers to VC academic discipline. It is a continuous variable, which is awarded a value of: (i) 1 if the VC's academic background is medicine; (ii) 2 if the VC's academic background is engineering; (iii) 3 if the VC's academic background is accounting/finance/business/management; (iv) 4 if the VC's academic background is social sciences; (v) 5 if the VC's academic background is computing/maths/statistics; and (vi) 6 if VC's academic background is humanities/natural sciences backgrounds.
VCTEN	Refers to VC tenure. It is computed as the natural log of the number of years since an individual remained in the VC position of a HEI.
Controls (general HEI characteristics)	
POST-92	Indicator variable that equals 1 for HEIs established after 1992 or 0 otherwise.
RUSSG	Indicator variable that equals 1 for Russell Group HEIs or 0 otherwise.
HEISZE	Natural log of book total assets of HEIs.
HEIAGE	Natural log of the age of HEIs.
LEVE	The ratio of total debt/book total assets.
LIQUD	The ratio of net operating cash flow/total revenue.
GRTH	Growth rate of the total income.
IFUNDC	Proportion of total revenues from funding councils to total income.
FRISK	Standard deviation of financial deficit/surplus to total assets.
AFSZE	Indicator variable that equals 1 for HEIs that are audited by one of the BIG4 accounting firms (Deloitte, PwC, KPMG, and EY) or 0 otherwise.
CEXP	Proportion of capital expenditure to total assets.
YEARD	Dummies for each of the examined six years (2009–2014).

disclosure index (*HERDI*) as our main dependent variable. The *HERDI* has been developed based mainly on the following sources: (i) 2008 audit committee guideline published by CUC; (ii) 2009 risk management guideline published by LFHE; and (iii) 2001a, b/2005 risk management guidelines published by HEFCE, in addition to the prior risk disclosure literature (Ntim et al., 2013). Therefore, and drawing from the above best practice regulatory documents and previous studies, we identified 127 items, that were classified into three broad categories as follows: 29 items on financial risk disclosures – *HEFRD*; 83 items on operational risk disclosures – *HEORD*; and 15 items on strategic risk disclosures – *HESRD*. Operational risks were classified into ten sub-sections due to their diverse nature, which as follows: 16 items on reputational issues; 8 items on staffing issues; 6 items on student experience issues; 5 items on IT and information issues; 6 items on major project issues; 6 items on facilities and estate risks; 5 items on health and safety issues; 8 items on governance issues; 5 items on legal issues; and 18 items on business environment risks. Items contained in the *HERDI* were coded by employing a 7-point scale (a value of "6" denotes highest quality of risk disclosure information, whereas "0" denotes no risk disclosures). Following this coding scheme, each item included in the *HERDI* is awarded a score ranging from 0 (indicating no risk disclosures) to 6 (denoting highest levels of risk disclosures in the annual report), given a total possible score of 762 points (6×127). The actual risk disclosure score is then expressed as a percentage of the total possible score. Using this approach, a HEI total risk disclosure score can range from 0% (0 out of potential 762 points, $0/762 \times 100$) to 100% (762 out of potential 762 points, $762/762 \times 100$), with higher scores indicating strong disclosures on risk management practices and vice-versa. We followed the same process for the *HERDI's* sub-indices (*HEFRD, HEORD* and *HESRD*). The full 127 items that form the *HERDI* and the process of testing the reliability/validity of constructed index are presented in the "Online Appendix 4". In addition, and given that our *HERDI* mainly consists of three sub-indices (*HEFRD, HEORD* and *HESRD*), we used these three sub-indices as alternative measures of risk disclosures in our alternative regression models.

Second, the HEI good governance quality index (*HEGQI*) is our main independent variable. We relied on the following documents: (i) 2009, 2013 and 2014 governance codes/guidelines published by CUC; (ii) 2013 governance code published by CSC; and (iii) 2008 audit committee guideline published by CUC to develop our *HEGQI*. Consequently, and drawing from these best governance practice documents, we identified 100 individual items covering the following five areas: 7 items on social, environmental responsibility and stakeholders' engagement – *SERSE*; (iii) 20 items on accounting, auditing and accountability – *AAAC*; (iii) 22 items on performance evaluation, rewards and pay – *PERP*; (iv) 24 items on procedures/structures – *PROS*; and (v) 27 items on governing board – *GOVB*. Items contained in the *HEGQI* were scored by employing the widely used binary/dichotomous scoring method ("1" is awarded for disclosed governance provisions, "0" otherwise). Using this scoring method, the *HEGQI* score can range from 0% (0/100 points x 100%, indicating poor governance quality) to 100% (100 points/100 points x 100%, indicating strong governance quality). We also followed the same procedures for *HERDI*, to ensure that our *HEGQI* is reliable and valid measure for governance quality. The full 100 individual items that form the *HEGQI* are presented in the "Online Appendix 5". Further, and given that our *HEGQI* consists of five sub-indices (*GOVB*, *PROS*, *PERP*,

AAAC, and *SERSE*), we used these five sub-indices as alternative measures of governance quality in our alternative regression models. Therefore, *GovQuality* in Table 4 refers to *HEGQI, GOVB, PROS, PERP, AAAC,* and *SERSE*, respectively. The detailed descriptive statistics of the *HEGQI* are reported and briefly discussed in the "Online Appendix 2".

Third, and as suggested by several studies (Breakwell & Tytherleigh, 2008) vice-chancellors (VC) characteristics may influence HEIs' disclosure practices, we included four attributes of VC as controls (*VCControls*), which are VC age (*VCAGE*), VC gender (*VCGEN*), VC academic discipline (*VCACD*), and VC tenure (*VCTEN*). Fourth, we control for a number of general HEIs characteristics (*HEIControls*) in order to reduce the possibility of omitted variable bias. These variables are growth (*GRTH*), proportion of income from funding councils (*IFUNDC*), leverage (*LEVE*), liquidity (*LIQUD*), dummy for post-1992 (*POST-92*), Russell group dummy (*RUSSG*), financial risk (*FRISK*), HEI size (*HEISZE*), HEI age (*HEIAGE*), size of the audit firm (*AFSZE*), capital expenditure (*CEXP*) and year dummies (*YEARD*). To save space, we do not discuss why/how these control variables can influence our risk disclosure proxy, however, there is a large number of rigorously developed literature that suggests that these variables can influence non-profitable organisations disclosure behaviour (Gordon et al., 2002; Ntim et al., 2017; Saxton et al., 2012; Saxton & Guo, 2011). Accordingly, we estimate our baseline model as follows:

$$HERDI_{it} = \alpha_0 + \beta_1 HEGQI_{it} + \sum_{j=1}^{4} \beta_j VCControls_{it} + \sum_{l=1}^{12} \beta_k HEIControls_{it} + \varepsilon_{it} \quad (1)$$

where *HERDI* refers to HEI risk disclosure index; *HEGQI* refers to the governance quality index; *VCControls* represents the above mentioned 4 vice-chancellor (VC) characteristics, and *HEIControls* refers to the above mentioned 12 general HEIs characteristics.

Finally, as UK HEIs' governance is "shared" arrangement among senior management bodies (HEI council/court, senate, and vice-chancery teams), and to test *H2* (moderating effect of the senior management team on the governance quality–risk disclosures nexus), we created interaction variables between the characteristics of senior management (meetings – *SMTM,* gender and ethnicity diversity – *SMTGED,* gender diversity – *SMTGD,* ethnicity diversity – *SMTED*, and size – *SMTSZE*) and the *HEGQI*. We also controlled for the same *VCControls* and *HEIControls* variables. Accordingly, model 2 is specified as follows:

$$HERDI_{it} = \alpha_0 + \beta_1 HEGQI_{it} + \sum_{j=1}^{3} \beta_j SMTC_{it-1} + \sum_{j=1}^{1} \beta_k I{*}HEGQI_{it} \sum_{j=1}^{4} \beta_l VCControls_{it} + \sum_{l=1}^{12} \beta_m HEIControls_{it} + \varepsilon_{it} \quad (2)$$

where *HERDI* and *HEGQI* remain the same as specified in the previous model; *SMTC* denotes senior management characteristics, consisting of senior management team meeting (*SMTM*), senior management team diversity [(gender and ethnicity

Table 3. Descriptive statistics of the governance quality index, interaction and control variables for UK higher education institutions.

Variables	Mean	Median	Std. Dev.	Min	Max
Panel 1: Overall HEI risk disclosure index					
HERDI (%)	17.31	16.80	4.89	6.96	31.76
HEFRD (%)	30.83	31.61	6.35	13.22	50.00
HEORD (%)	12.66	12.25	4.72	3.21	29.92
HESRD (%)	16.91	17.78	6.71	2.22	36.67
Panel 2: Overall HEI governance index					
HEGQI (%)	40.02	40.00	9.20	8.00	75.00
SERSE (%)	40.07	42.86	21.30	0.00	100.00
AAAC (%)	49.67	50.00	11.56	0.00	75.00
PERP (%)	24.98	22.73	13.04	0.00	72.73
PROS (%)	31.52	29.17	11.85	0.00	79.17
GOVB (%)	52.65	55.56	10.99	14.81	74.07
Panel 3: Executive/management group variables					
SMTSZE (no. members)	11.73	10.00	6.02	3.00	35.00
SMTGED (%)	29.83	30.00	11.59	0.00	53.85
SMTGD (%)	25.69	26.92	9.38	0.00	42.86
SMTED (%)	11.36	12.50	4.87	0.00	21.00
SMTM (no. meetings)	14.13	12.00	6.49	3.00	48.00
Panel 4: Controls (Vice-chancellor (VC) characteristics)					
VCAGE (no. years)	57.41	58.00	5.22	41.00	73.00
VCGEN (%)	83.00	100.00	38.00	0.00	100.00
VCTEN (no. years)	6.15	5.00	3.37	2.00	21.00
VCACD (continuous)	4.33	4.00	1.74	1.00	6.00
Panel 5: Controls (HEI general characteristics)					
POST-92 (%)	48.00	0.00	50.00	0.00	100.00
RUSSG (%)	21.00	0.00	40.40	0.00	100.00
HEISZE (£m)	330.33	228.26	375.92	2.78	3,033.40
HEIAGE (no. years)	85.29	43.00	143.98	2.00	918.00
LEVE (%)	30.28	30.03	12.13	8.38	74.59
LIQUD (%)	2.02	1.23	5.72	−19.82	25.91
GRTH (%)	4.74	4.56	5.78	−11.70	44.36
IFUNDC (%)	32.77	32.18	12.15	6.95	72.00
FRISK (%)	1.30	0.86	1.43	0.00	9.62
AFSZE (%)	73.50	100.00	44.16	0.00	100.00
CEXP (%)	58.96	59.08	19.39	−73.05	98.04

Note: Please see Table 2 for variable definitions.

(*SMTGED*), gender (*SMTGD*) and ethnicity (*SMTED*) diversity)], and senior management team size (*AMTSZE*); *I*HEGQI* refers to the interaction between each of senior management characteristics and the *HEGQI* (*SMTM*HEGQI, SMTGED*HEGQI, SMTGD*HEGQI, SMTED*HEGQI* and *SMTSZE*HEGQI*); and *VCControls* and *HEIControls* remain the same as specified in model 1.

5. Empirical findings and discussion

5.1. Descriptive statistics and univariate analysis

Table 3 and the "Online Appendix 1" outline the descriptive statistics relating to the risk disclosures *(HERDI, HEFRD, HEORD and HESRD)*, governance quality (*HEGQI, GOVB, PROS, PERP, AAAC, and SERSE*), *VCControls* and *HEIControls*. Table 3 indicates that risk disclosure levels are relatively low, but the distribution varies widely among HEIs. The evidence of low levels of risk disclosures is consistent with the findings of prior studies that examined general voluntary disclosures among HEIs (Gordon et al., 2002;

Harris & Neely, 2021; Ntim et al., 2017). Specifically, Panel 1 of Table 3 indicates that the *HERDI* score ranges between 6.96% and 31.76% with an average (median) of 17.31% (16.80%) of HEIs in UK engage in voluntary risk disclosures. This is consistent with the findings of Gordon et al. (2002), who report that general accountability disclosures range between 17.59% and 59.05% with a mean value of 30.54% among 100 US HEIs. The low levels of risk disclosure among HEIs may be due to the fact that the notion of risk management practices is relatively new to HEIs (Grobler, 2017).

Further, *Panels 2–5* of Table 3 also show that there is wide variability in the distribution of governance quality index, senior management team characteristics, vice-chancellor characteristics and general HEIs characteristic among our sampled HEIs. For example, Table 3 shows that UK HEIs are dominated by male VCs, with a value ranging between 0% and 100%, with an average of 83%. A detailed discussion of the descriptive statistics of other study variables is included in the "Online Appendix 2". In addition, we run both *Pearson* and *Spearman* correlation matrices to check issues of multicollinearity/non-linearity. The results (as shown in the Online Appendix 3), indicate that there is no serious non-linearity/multicollinearity problems among the study's variables.

5.2. Regression results and discussion

Table 4 reports the results from regressing *HEGQI* on *HERDI*, whilst controlling for vice-chancellor characteristics [vice-chancellor (VC) age (*VCAGE*), gender (*VCGEN*), tenure (*VCTEN*), and academic discipline (*VCACD*)] and general HEIs characteristics [growth (*GRTH*), proportion of income from funding councils (*IFUNDC*), leverage (*LEVE*), liquidity (*LIQUD*), dummy for post-1992 (*POST-92*), Russell group dummy (*RUSSG*), financial risk (*FRISK*), HEI size (*HEISZE*), HEI age (*HEIAGE*), size of the audit firm (*AFSZE*), capital expenditure (*CEXP*), and year dummies (*YEARD*)].

First and to test *H1*, the coefficient on *HEGQI* in Table 4 (Model 1) is positive and statistically significant, implying that *H1*, which suggests that well-governed HEIs are likely to show high levels of transparency by engaging in increased risk disclosures, is empirically supported. Empirically, our finding generally offers support for the results of past studies, which indicate that good governance indices are positively associated with the outcomes of non-profitable organisations (Feng et al., 2019; Harris et al., 2015; Harris & Neely, 2021) and HEIs (Lokuwaduge & Armstrong, 2015; Ntim et al., 2017). For example, Lokuwaduge and Armstrong (2015) and Ntim et al. (2017) which reveal that good composite governance indices have positive effect on performance (financial, research and teaching performance) and accountability disclosures for 37 Australian and 130 UK HEIs, respectively. Theoretically, the evidence of this positive impact lends support for both the efficiency and legitimisation perspectives of neo-institutional theory. For example, neo-institutional (efficiency view) theory indicates that committing to good governance practices can impose greater pressure on HEIs to engage in increased risk disclosures in order to: (i) demonstrate accountability and transparency to the wider community (Abraham & Cox, 2007), (ii) gain competitive advantages and financial benefits by attracting critical resources (Coy et al., 2001); and (iii) minimise information asymmetry among different groups of stakeholders (e.g. current students, prospective students, parents and HEI managers) (Ntim & Soobaroyen, 2013). The positive effect of *HEGQI* also lends

Table 4. Effect of HEI governance quality index (HEGQI) on risk disclosures.

Dep. Variable (*Model*)	HERDI (1)	HERDI (2)	HERDI (3)	HERDI (4)	HERDI (5)	HERDI (6)	HEFRD (7)	HEORD (8)	HESRD (9)
HEI governance quality index:									
GovQuality	0.215(.000)***	0.170(.000)***	0.099(.000)***	0.115(.000)***	0.066(.000)***	0.063(.000)***	0.145(.000)***	0.231(.000)***	0.265(.000)***
Controls (Vice-chancellor (VC) characteristics):									
VCAGE	−0.022(.295)	−0.051(.018)**	−0.028(.214)	−0.015(.510)	−0.042(.072)*	−0.054(.016)**	−0.029(.273)	−0.003(.876)	−0.114(.000)***
VCGEN	−0.003(.569)	−0.003(.433)	−0.003(.460)	0.002(.618)	−0.003(.469)	−0.001(.893)	0.003(.568)	−0.003(.475)	−0.009(.140)
VCACD	0.001(.515)	0.001(.449)	0.001(.252)	0.000(.631)	0.001(.465)	0.001(.454)	−0.002(.140)	0.001(.158)	0.001(.471)
VCTEN	0.000(.904)	0.002(.477)	0.000(.975)	0.001(.671)	0.001(.878)	0.001(.870)	−0.006(.161)	0.000(.889)	0.005(.280)
Controls (general HEI characteristics):									
POST-92	0.005(.297)	0.005(.301)	0.005(.377)	0.006(.239)	0.006(.246)	−0.002(.807)	−0.007(.279)	0.009(.074)*	0.006(.376)
RUSSG	0.026(.000)***	0.026(.000)***	0.026(.000)***	0.020(.000)***	0.024(.000)***	0.020(.000)***	0.028(.000)***	0.023(.000)***	0.037(.000)***
HEISZE	0.008(.000)***	0.008(.000)***	0.010(.000)***	0.010(.000)***	0.010(.000)***	0.013(.000)***	0.013(.000)***	0.005(.011)**	0.010(.000)***
HEIAGE	0.005(.010)***	0.007(.000)***	0.006(.006)***	0.007(.000)***	0.007(.002)***	0.006(.010)***	0.008(.002)***	0.004(.066)*	0.008(.011)**
LEVE	0.022(.123)	0.013(.354)	0.023(.129)	0.029(.051)*	0.022(.153)	0.025(.095)*	0.038(.028)**	0.011(.459)	0.051(.013)**
LIQUD	−0.046(.092)*	−0.027(.326)	−0.039(.177)	−0.041(.150)	−0.034(.245)	−0.059(.042)**	−0.065(.054)*	−0.043(.120)	−0.022(.577)
GRTH	0.031(.318)	0.040(.280)	0.022(.516)	0.022(.500)	0.023(.504)	−0.000(.998)	−0.042(.278)	0.051(.110)	0.062(.167)
IFUNDC	−0.085(.000)***	−0.071(.000)***	−0.059(.005)***	−0.072(.000)***	−0.044(.038)**	0.010(.622)	−0.072(.003)***	−0.093(.000)***	−0.063(.026)**
FRISK	0.086(.480)	0.043(.726)	0.122(.347)	0.100(.428)	0.120(.367)	0.124(.336)	0.029(.848)	0.126(.314)	−0.025(887)
AFSZE	−0.021(.000)***	−0.021(.000)***	−0.023(.000)***	−0.025(.000)***	−0.025(.000)***	−0.023(.000)***	−0.026(.000)***	−0.020(.000)***	−0.015(.017)**
CEXP	−0.043(.000)***	−0.040(.000)***	−0.046(.000)***	−0.047(.000)***	−0.042(.000)***	−0.0.43(.000)***	−0.040(.000)***	−0.041(.000)***	−0.057(.000)***
YEARD	Included	Included	Included	Included	Included	Included	Included	Included	Included
Constant	0.114	0.213**	0.467*	0.109	0.205**	0.218**	0.247**	0.013	0.413***
Durbin-W. Stat.	1.324	1.286	1.320	1.311	1.217	1.114	1.327	1.566	1.210
F- value	19.505***	18.932***	13.854***	16.044***	12.080***	14.871***	17.915***	16.209***	15.287***
Adj. R^2	0.415	0.408	0.330	0.366	0.298	0.347	0.394	0.369	0.354
No. observations	702	702	702	702	702	702	702	702	702

Note: Model 1 presents the findings of the impact of HEGQI on risk disclosure index (HERDI). Models 2–6 present the findings of the impact of each sub-section of *HEGQI* (governing board – GOVB, procedures/structures – PROS, performance evaluation, rewards and pay – PERP, accounting, auditing and accountability – AAAC, and social, environmental responsibility and stakeholders' engagement – SERSE) on *HERDI*. Models 7–9 shows the findings of the impact of *HEGQI* on financial (HEFRD), operational (HEORD) and strategic (HESRD) risk disclosure, respectively. ***, **, and * means the coefficient is statistically significant at the 1%, 5% and 10% levels, respectively.

support to the neo-institutional legitimisation perspective (Suchman, 1995), in that complying with good governance practices, through greater risk disclosures can legitimise the operations of HEIs by improving their reputation and social acceptance, which can provide better connection with powerful stakeholders of HEIs (e.g. alumni, students, parents, employers and government) and further offer *access* to critical resources (e.g. alumni donations). Additionally, the positive effect of *HEGQI* on *HERDI* is consistent with the recommendations of governance codes (e.g. CSC, 2013; CUC, 2009, 2014) and risk codes/guidelines (HEFCE, 2001a, 2001b, 2005; LFHE, 2009), which expect HEIs to engage in good risk, governance, and disclosure practices.

Second, and although our finding suggests that better-governed HEIs tend to be more transparent with their stakeholders through greater levels of risk disclosures, our *HERDI* (*HEGQI*) consists of three (five) disclosure sub-indices, namely, strategic risks – *HESRD*, operational risks – *HEORD* and financial risks – *HEFRD* (governing board – *GOVB*, procedures/structures – *PROS*, performance evaluation, rewards and pay – *PERP*, accounting, auditing and accountability – *AAAC*, and social, environmental responsibility and stakeholders' engagement – *SERSE*), it is possible for the link between summary *HERDI* and *HEGQI* to be differ according to the type of risk (governance) category that an *HEI* is exposed to, with the possibility that some types of risks may display strong relationships with the *HEGQI* and other can display weak associations with the *HEGQI*. Therefore, we replaced the *HERDI* (*HEGQI*) with either *HEFRD*, *HEORD* or *HESRD* (*GOVB*, *PROS*, *PERP*, *AAAC* or *SERSE*) at a time. The results are presented in Table 4 (Models 2–6) for *GOVB*, *PROS*, *PERP*, *AAAC* and *SERSE* and Models 7–9 presenting the findings for *HEFRD*, *HEORD* and *HESRD*, respectively. Observably, the coefficients remain positive and statistically significant from Models 2 to 9, and implying our findings are not affected by the use of sub-indices.

Third, Table 5 presents the findings relating to the moderating impact of HEIs senior management characteristics (size – *SMTSZE*, gender and ethnicity diversity – *SMTGED*, gender diversity – *SMTGD*, ethnicity diversity – *SMTED*, and meetings – *SMTM*) on the *HEGQI–HERDI* nexus. Discernibly, and as shown in Table 5 (Models 1–5), the coefficients on the *HEGOI* are statistically positive and noticeably larger in magnitude than those reported in Table 4. For example, the magnitude of the coefficient of *HEGQI* on *HERDI* has improved from 0.215 in Model 1 of Table 4, to 0.383 (Model 1), 0.179 (Model 2), 0.194 (Model 3), 0.355 (Model 4) and 0.514 (Model 5) of Table 5, respectively, implying that senior management characteristics moderate the governance–risk disclosure relationship. Specifically, the reported evidence suggests that the impact of internal governance quality on risk disclosures is strengthened by interacting it with HEIs' senior management team characteristics (size, meeting, and gender/ethnicity diversity). These findings are consistent with the expectations of neo-institutional theory (efficiency perspective) that UK HEIs' governance responsibilities are "shared" among senior management bodies (HEI council/court, senate, and vice-chancery teams), and close interactions among these bodies is required for greater effectiveness (Middlehurst, 2013; Shattock, 2013; Taylor, 2013). Further, this evidence lends empirical support for the results of Ntim et al. (2017), who provide evidence which indicates that the senior management team has a moderating effect on the governance structures–accountability disclosures relationship using 130 UK HEIs.

Table 5. Effects of HEI governance quality index (HEGQI) on risk disclosures: interaction effect.

Dep. Variable (*Model*)	HERDI (1)	HERDI (2)	HERDI (3)	HERDI (4)	HERDI (5)
HEI governance quality index:					
HEGQI	0.383(.000)***	0.179(.004)***	0.194(.002)***	0.355(.000)***	0.514(.000)***
Interaction variables:					
I × HEGQI	−0.076(.037)**	0.118(.532)	0.084(.693)	−1.018(.136)	−0.142(.002)***
Moderating variables:					
SMTSZE	0.044(.003)***	–	–	–	–
SMTGED	–	−0.098(.209)	–	–	–
SMTGD	–	–	−0.073(.415)	–	–
SMTED	–	–	–	0.207(.464)	–
SMTM	–	–	–	–	0.083(.000)***
Controls (Vice-chancellor (VC) characteristics)					
VCAGE	−0.011(598)	−0.018(.411)	−0.018(.395)	−0.024(.577)	0.040(.110)
VCGEN	−0.003(.473)	−0.002(.680)	−0.003(.503)	−0.021(.037)**	−0.002(.619)
VCACD	0.001(.494)	0.001(.505)	0.001(.399)	0.003(.169)	−0.002(.096)*
VCTEN	0.001(.846)	−0.001(.692)	−0.002(.645)	0.005(.402)	−0.006(.103)
Controls (general HEI characteristics):					
POST-92	0.006(.248)	0.005(.290)	0.004(.415)	0.004(.647)	0.010(.080)*
RUSSG	0.024(.000)***	0.024(.000)***	0.025(.000)***	0.016(.080)*	0.018(.000)***
HEISZE	0.007(.000)***	0.007(.000)***	0.007(.000)***	0.002(.422)	0.006(.008)***
HEIAGE	0.005(.025)**	0.005(.012)**	0.005(.023)**	0.006(.151)	0.003(.238)
LEVE	0.016(.255)	0.016(.275)	0.015(.294)	0.016(.524)	0.007(.651)
LIQUD	−0.038(.155)	−0.061(.027)**	−0.057(.039)**	−0.150(.011)**	−0.075(.016)**
GRTH	0.036(.258)	0.034(.284)	0.036(.260)	0.064(.275)	0.054(.150)
IFUNDC	−0.079(.000)***	−0.082(.000)***	−0.078(.000)***	−0.093(.026)**	−0.128(.000)***
FRISK	0.059(.627)	0.033(.791)	0.041(.744)	−0.096(.658)	0.180(.199)
AFSZE	−0.027(.000)***	−0.020(.000)***	−0.022(.000)***	−0.022(.032)**	−0.021(.000)***
CEXP	−0.045(.000)***	−0.043(.000)***	−0.043(.000)***	−0.072(.002)***	−0.047(.000)***
YEARD	Included	Included	Included	Included	Included
Constant	−0.018	0.137	0.126	0.176	−0.252**
Durbin-W. Stat.	1.401	1.409	1.368	1.593	1.587
F- value	19.107***	18.267***	17.662***	5.217***	13.983***
Adj. R^2	0.436	0.426	0.418	0.336	0.431
No. observations	702	702	702	702	702

Note: Models 1 presents the findings of the moderating impact of *SMTSZE* the governance-risk disclosure link. Models 2–5 present the interaction results among *SMTGED*, *SMTGD*, *SMTED*, *SMTM* and *HEGQI*, respectively. Please see Table 2 for variable definitions.

***Significance at the 1% level ($p < 0.01$).

**Significance at the 5% level ($p < 0.05$).

*Significance at the 10% level ($p < 0.10$).

Finally, with respect to the interaction variables, the negative coefficient of *SMTSZE*HEIGQI* in Model 1 of Table 5 provides support to *H2*, as well as the prediction that large leadership teams may not necessarily bring benefits to HEIs, since large leadership teams may suffer from lack of communication and coordination problems among their members (Ragland & Plante, 2021), and this can diminish their monitoring effectiveness, which can impact negatively on HEIs' risk disclosure practices. Additionally, the insignificant effect of *SMTGED*HEGQI*, *SMTGD*HEGQI* and *SMTED*HEGQI* on *HERDI* in Models 2–4 of Table 5 does not lend support to *H2*, as well as the findings of past studies (Elmagrhi & Ntim, 2022). The insignificant effects of *SMTGED*, *SMTGD* and *SMTED* on risk disclosures may be due to the fact that white-males dominate the leadership teams in UK HEIs, with only an average of 25.69% women and 11.36% ethnic minorities as shown in Table 3. Theoretically, the insignificant effect of gender and ethnic diversity of senior management team is consistent with the view that HEIs may appoint women and ethnic minorities into leadership positions for symbolic reasons, including to show that their norms, values and goals are aligned with those of the larger community, and hence such executives tend to have less influence on their organisations' strategic decisions, including those relating to risk disclosure practices (Tomlinson & Schwabenland, 2010). Finally, the reported results in Model 5 of Table 5 indicate that *SMTM* negatively moderates the governance–risk disclosures nexus, which implies that *H2* is partially supported. This negative moderating effect of *SMTM* lends support to the expectation that regular meetings tend to diminish managerial monitoring effectiveness by increasing the possibility of disagreement among the leadership team members Vafeas (1999), and this can have detrimental impact on risk disclosure practices.

5.3. Robustness tests

We perform additional tests to make sure that our main findings are not affected by various types of endogeneities. First, to control for potential unmeasured HEI-specific differences (e.g. operational, cultural and managerial differences) that can dynamically/jointly determine both *HEGQI* and *HERDI*, and following prior studies (Ntim et al., 2017), we implemented Hausman test, which suggested that fixed-effects model to be more appropriate for our data in comparison with random-effects model. The findings presented in Table 6 (Model 1) are relatively similar to those reported in Table 4 (Model 1), implying that our results do not appear to be influenced by potential unmeasured HEI-specific differences. Second, to control for reverse causality bias between *HEGQI* and *HERDI*, as well as to prevent correlation between *HEGQI* and the error terms, we replicate Model 1 (Table 4) by using one-year lagged values for all independent and control variables. The coefficients of the lagged-effect model presented in Table 6 (Model 2) remain very similar to what we have reported in Table 4 (Model 1), and hence our findings hold for using lagged-structure model. Finally, and to deal with any potential omitted variable, simultaneity and dynamic endogeneities that can influence our main estimates, and following Elmagrhi and Ntim (2022), we conduct a dynamic system generalised method of moments (GMM). We employ Arellano–Bond test for first-order (*AR1*) and second-order (*AR2*) serial correlation, as well as Hansen test of over-identification and difference-in-Hansen test of exogeneity to check the

Table 6. Additional analyses.

Dep. Variable (*Model*)	Fixed-effects HERDI (1)	Lagged-effects HERDI (2)	System-GMM HERDI (3)
HEI governance quality index:			
HEGQI	0.111(.000)***	0.227(.000)***	0.019(.001)***
Controls (Vice-chancellor (VC) characteristics):			
VCAGE	−0.031(.118)	−0.022(.364)	−0.002(.746)
VCGEN	−0.003(.532)	−0.002(.667)	0.078(.000)***
VCACD	−0.000(.506)	−0.001(.461)	0.001(.001)***
VCTEN	0.005(.011)**	0.000(.969)	−0.001(.001)***
Controls (general HEI characteristics):			
POST-92	−0.003(.794)	−0.005(.320)	−0.002(.717)
RUSSG	0.031(.002)***	0.028(.000)***	0.005(.000)***
HEISZE	0.009(.028)**	0.007(.004)***	0.002(.006)***
HEIAGE	−0.005(.277)	0.052(.023)**	−0.001(.182)
LEVE	0.005(.516)	−0.031(.053)*	−0.002(.500)
LIQUD	0.016(.035)**	−0.035(.255)	0.037(.000)***
GRTH	−0.005(.550)	0.023(.500)	0.017(.000)***
IFUNDC	0.008(.428)	−0.087(.000)***	0.009(.003)***
FRISK	0.027(.415)	−0.265(.066)*	−0.064(.000)***
AFSZE	−0.011(.002)***	−0.021(.000)***	−0.005(.000)***
CEXP	−0.008(.179)	−0.048(.000)***	−0.008(.001)***
YEARD	Included	Included	Included
Lagged-HEGQI	–	–	0.999***
Constant	0.159*	0.120	−0.045*
Adj. R^2	0.481	0.417	–
F- value	19.320***	20.437***	22.111***
AR1 (*p-value*)	–	–	0.003
AR2 (*p-value*)	–	–	0.242
Hansen test (*p-value*)	–	–	0.578
Difference in Hansen (*p-value*)	–	–	0.960
No. observations	702	585	702

Note: Please see Table 2 for variable definitions.
***Significance at the 1% level ($p < 0.01$).
**Significance at the 5% level ($p < 0.05$).
*Significance at the 10% level ($p < 0.10$).

validity of our instruments. The reported results in Model 3 of Table 4 indicate that *AR1* is significant, whilst *AR2* is not significant, suggesting that there is no serious auto-correlation problem in the residuals from this regression model. Further, the results of Hansen test of over-identification and difference-in-Hansen test of exogeneity indicate that our instruments are valid. Overall, results reported in Model 3 are comparable to those presented in Model 1 of Table 4, and thus our findings do not seem to be sensitive to omitted variable, simultaneity and dynamic endogeneities.

6. Summary and conclusions

Demand for, and importance of, non-financial reporting (NFR) relating to important issues, such as carbon/climate change reporting, corporate governance, corporate social responsibility, environment, social and governance, global reporting initiative, integrated thinking, human/intellectual capital, risk, and sustainability reporting, amongst others, have been increasing over the past three decades (Baboukardos, 2018; Gaia & Jones, 2019). Observably, the quality and quantity of research relating to NFR has also equally markedly increased (Abraham & Cox, 2007; Dixon & Coy, 2007; Ntim

et al., 2013). A major limitation with the research in this area so far, however, is that it has disproportionately concentrated on profit-oriented organisations to the neglect of their non-profit counterparts (Gaia & Jones, 2019). Consequently, and in this paper, we have sought to address this crucial lacuna in the extant literature by investigating NFR in non-profit organisations with specific focus on voluntary risk disclosures among UK HEIs. In particular, we have attempted to contribute to the literature by investigating: (i) the extent to which UK HEIs voluntarily engage in risk disclosures in their annual reports; (ii) whether composite corporate governance quality index influences the extent of risk disclosures; and (iii) whether the governance quality–risk disclosure nexus is moderated by senior management team characteristics.

Using a sample of UK HEIs over a number of years and drawing insights from neo-institutional theory, we find that risk disclosure levels among HEIs in the UK are relatively low, especially when compared to the findings of prior studies that have been conducted on similar-sized publicly traded organisations. Nevertheless, risk disclosures are on the upward trajectory, increasing from about 16% in 2009 to about 18% in 2014. Similarly, financial risk (average of about 31%) disclosures are relatively higher compared with operational risk (average of about 13%) and strategic risk (average of about 17%) disclosures. Second, we find that better-governed UK HEIs tend to engage in higher levels of risk disclosures. In additional analyses, we find the positive relationship between governance quality and risk disclosure holds irrespective of the type (financial, operational and strategic risks) of risk disclosure measure that we employ. These findings are consistent with the predictions of both efficiency and legitimisation perspectives of our neo-institutional theoretical framework that suggest that HEIs may engage in increased levels of risk disclosures not only to enhance the efficiency of their operations, but also to enhance the legitimacy of their operations by gaining the support of major stakeholders (e.g. OfS, staff, unions, alumni, parents and students), and thereby, gain access to critical resources. Finally, we show further that the positive governance quality–risk disclosure relationship is moderated/explained largely by the characteristics of the senior management team. Overall, our findings support the idea that the UK HEIs' governance arrangements are seen as a "shared" one, requiring close interactions among three major HEIs' organs, consisting of the university council (governing board), the academic arm (senate) and the vice-chancery (senior management team) in order to be successful. Therefore, the impact of internal governance quality on risk disclosures is strengthened when the three governance structures are interacted together instead of operating individually.

Our study has a number of implications for policy-makers, regulatory bodies (e.g. DFE, OfS, HEFCW and SFC, representing respective governments of Northern Ireland, Wales, England and Scotland) HEI governing bodies and researchers. In particular, evidence that better governed UK HEIs engage in better risk disclosure practices offers extra impetus to continue to pursue and implement good governance and risk management reforms that have been passed. By contrast, evidence that disclosures relating to risk in general is low provides a motivation to monitor the levels of compliance among UK HEIs regarding good governance and risk management standards. In this case, forming a compliance and enforcement unit that will be devoted to monitor the levels of compliance and disclosure relating to good governance and risk practices among UK HEIs can be a step in the right direction.

Further, we argue that our evidence of low levels of risk disclosure among UK HEIs offers support for the current intense debate that suggests that existing non-financial reporting (NFR) regulations are "soft" since they do not provide clear requirements about the content/format/structure of the disclosed information. For example, UK HEIs are required by regulators, such as the Office for Students (OfS) to publish and submit their annual returns, including risk management and governance information. However, there are no specific requirements detailing the structure, format and content of such risk information required to be disclosed. In addition, the lack of requirements that specify the content, structure and format of information being disclosed may serve as a motivation for HEIs to engage in symbolic risk disclosures, which are likely to be driven by economic incentives to improve their social legitimacy and acceptance. Consequently, and due to the lack of clear requirements that specify the content, structure, and format of the disclosed information, this may make comparison among HEIs not only in the UK, but also internationally, difficult. Therefore, we suggest that NFR requirements can go beyond what existing regulators, such as OfS require, for example, by specifying the content/format/structure of the disclosed information. In this case and informed by our findings, we suggest, for example, that a national or an international body can be set to issue common standards and regulate different types of NFR not only for risk, but also other types of NFR, such as those relating to CSR, environment, social and governance, global reporting initiative, human/intellectual capital, integrated thinking, sustainability, including sustainable development goals, and triple bottom line. Such a body may either be a new independent international body (International Non-Financial Reporting Standards Board) and/or sub-body of the International Accounting Standards Board (i.e. to be part of international accounting standards board), which can be set-up to regulate NPR in profit and non-profit organisations. The recently established International Sustainability Standards Board (ISSB) by the IFRS Foundation in conjunction with the Task Force on Climate-related Financial Disclosures (TCFD), Taskforce on Nature-related Financial Disclosures (TNFD), Climate Disclosure Standards Board (CDSB), Global Reporting Initiative (GRI), International Integrated Reporting Council (IIRC), Sustainability Accounting Standards Board (SASB), Value Reporting Foundation (VRF) and the World Economic Forum to issue international sustainability standards offers a blueprint for such a body. This may improve comparability of NPR not only among HEIs, but also among other profit and non-profit organisations (i.e. local governments, charities, national health boards, publicly traded firms and religious bodies), as well as across nations.

Further, our study has important implications for researchers, since we provide early evidence relating to the impact of governance quality (using a composite governance disclosure index) on risk-related disclosures among HEIs. This study also offers early evidence regarding the moderating effect of senior management team characteristics (senior management team size, meetings and gender/ethnic diversity) on the internal governance quality–risk disclosures nexus. Therefore, future studies may rely on our research to better understand other drivers of risk disclosures among HEIs. Further, our findings can be generalised to not only HEIs context, but also to other public sector institutions (e.g. national health trusts and local governments), and this is mainly due to them experiencing similar significant cuts in public funding over recent years that have resulted in introducing many market/quasi market-oriented regulatory

reforms, which place greater emphasis on the need for value-for-money by ensuring that publicly funded institutions use public resources efficiently and effectively.

Finally, whilst our study is robust and important, its limitations need to be explicitly acknowledged. For example, and in line with other archival research of this nature, our proxies for governance, risk and financial variables may or may not reflect practice. In this case, future studies may be able to offer new insights by conducting in-depth interviews and case studies with key stakeholders, such as governors, HEI executives and regulatory bodies relating to the issues examined. Additionally, due to the labour-intensive nature of manual data collection, our sample is limited to UK HEIs, and therefore, future studies may be able to offer new insights by expanding our sample over a number of countries. Further, and given that manually collecting data using annual reports is immensely tedious work, as well as due to the significant cut in funding from the UK central government to public institutions, including HEIs, following the 2007/08 global financial crisis, our analysis is restricted to the period between 2009 and 2014, which may impair generalisability of our results. Therefore, as more data becomes readily available and easily accessible, future studies may be able to offer new insights by examining risk disclosure practices among HEIs over a longer period. In addition, the 2010 Browne Report, which has served as a central policy motivation for our current study has been succeeded by a new 2019 Augur Review, which has made further comprehensive quasi-market reforms to UK further colleges and HEIs. However, the recommendations contained in the Augur Review are yet to be implemented, and therefore, likely to have limited effect on our findings. Consequently, as the recommendations contained in the Augur Review get implemented, future researchers may be able extend our study by addressing these research questions.

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No potential conflict of interest was reported by the author(s).

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References

Abraham, S., & Cox, P. (2007). Analysing the determinants of narrative risk information in UK FTSE 100 annual reports. *The British Accounting Review*, *39*(3), 227–248. https://doi.org/10.1016/j.bar.2007.06.002

Augur (Review), P. (2019). *Independent review of post-18 education and funding*. Department of Education, London.

Baboukardos, D. (2018). The valuation relevance of environmental performance revisited: The moderating role of environmental provisions. *The British Accounting Review*, *50*(1), 32–47. https://doi.org/10.1016/j.bar.2017.09.002

Banks, W., Fisher, J., & Nelson, M. (1997). University accountability in England, Wales, and Northern Ireland: 1992–1994. *Journal of International Accounting, Auditing and Taxation*, *6* (2), 211–226. https://doi.org/10.1016/S1061-9518(97)90006-9

Bartlett, C. (2019). Three universities on the brink of bankruptcy: Institutions take last-gasp survival loans and consult on shutting departments as student numbers plunge. *The Daily Mail Online*. Retrieved June 22, 2021, from https://www.dailymail.co.uk/news/article-6340045/Three-universities-brink-BANKRUPTCY-student-numbers-plunge.html

Bazaraa, D. (2019). Three universities in England are 'on verge of bankruptcy and taking short-term loans to survive. *The Mirror Online*. Retrieved June 22, 2021, from https://www.mirror.co.uk/news/uk-news/least-three-universities-on-edge-13516261

Breakwell, G. M., & Tytherleigh, M. Y. (2008). UK university leaders at the turn of the 21st century: Changing patterns in their socio-demographic characteristics. *Higher Education*, *56*(1), 109–127. https://doi.org/10.1007/s10734-007-9092-2

Browne (Report), L.E.J.P. (2010). *Independent review of higher education funding and student finance*. HMSO, London.

Cameron, J., & Guthrie, J. (1993). External annual reporting by an Australian university: Changing patterns. *Financial Accountability & Management*, *9*(1), 1–15. https://doi.org/10.1111/j.1468-0408.1993.tb00141.x

Committee of Scottish Chairs. (2013). *The Scottish higher education code of governance*. CSC.

Committee of University Chairs. (2006). *Review of the effectiveness of university governing boards*. CUC.

Committee of University Chairs. (2008). *Handbook for embers of audit committees in higher education institutions*. CUC.

Committee of University Chairs. (2009). *Guide for members of higher education governing bodies in the UK*. CUC.

Committee of University Chairs. (2013). *The reasons to build resilience into the future of your university governance: A business guide for university governors*. CUC.

Committee of University Chairs. (2014). *The higher education code of governance*. CUC.

Conway, S. L., O'Keefe, P. A., & Hrasky, S. L. (2015). Legitimacy, accountability and impression management in NGOs: The Indian Ocean tsunami. *Accounting, Auditing & Accountability Journal*, *28*(7), 1075–1098. https://doi.org/10.1108/AAAJ-04-2012-01007

Coy, D., Dixon, K., Buchanan, J., & Tower, G. (1997). Recipients of public sector annual reports: Theory and an empirical study compared. *The British Accounting Review*, *29*(2), 103–127. https://doi.org/10.1006/bare.1996.0039

Coy, D., Fischer, M., & Gordon, T. (2001). Public accountability: A new paradigm for college and university annual reports. *Critical Perspectives on Accounting*, *12*(1), 1–31. https://doi.org/10.1006/cpac.2000.0416

Coy, D., & Pratt, M. (1998). An insight into accountability and politics in universities: A case study. *Accounting, Auditing & Accountability Journal*, *11*(5), 540–561. https://doi.org/10.1108/09513579810239846

Coy, D., Tower, G., & Dixon, K. (1994). Public sector reform in New Zealand: The progress of tertiary education annual reports, 1990–92. *Financial Accountability & Management*, *10*(3), 253–261. https://doi.org/10.1111/j.1468-0408.1994.tb00011.x

Dixon, K., & Coy, D. (2007). University governance: Governing bodies as providers and users of annual reports. *Higher Education*, *54*(2), 267–291. https://doi.org/10.1007/s10734-005-3146-0

Elmagrhi, M. H., & Ntim, C. G. (2022). Vice-chancellor pay and performance: The moderating effect of vice-chancellor characteristics. *Work, Employment and Society*, Forthcoming, https://doi.org/10.1177/09500170221111366

Elmagrhi, M. H., Ntim, C. G., Wang, Y., Elamer, A. A., & Crossley, R. (2021). The effect of vice-chancellor characteristics and internal governance mechanisms on voluntary disclosures in UK higher education institutions. *Journal of International Accounting, Auditing and Taxation*, *45*, 100428. https://doi.org/10.1016/j.intaccaudtax.2021.100428

Feng, N. C., Neely, D. G., & Slatten, L. A. D. (2019). Stakeholder groups and accountability accreditation of non-profit organizations. *Journal of Public Budgeting, Accounting & Financial Management*, *31*(2), 218–236. https://doi.org/10.1108/JPBAFM-08-2018-0088

Gaia, S., & Jones, M. J. (2019). Biodiversity reporting for governmental organisations. *Accounting, Auditing & Accountability Journal*, *33*(1), 1–31. https://doi.org/10.1108/AAAJ-05-2018-3472

Gordon, T., Fischer, M., Malone, D., & Tower, G. (2002). A comparative empirical examination of extent of disclosure by private and public colleges and universities in the United States. *Journal of Accounting and Public Policy*, *21*(3), 235–275. https://doi.org/10.1016/S0278-4254(02)00051-0

Gray, R., & Haslam, J. (1990). External reporting by UK universities: An exploratory study of accounting change. *Financial Accountability & Management*, *6*(1), 51–72. https://doi.org/10.1111/j.1468-0408.1990.tb00098.x

Grobler, A. (2017). Conceptualisation of an ethical risk assessment for higher education institutions. *South African Journal of Higher Education*, *31*(2), 154–171.

Harris, E., Petrovits, C. M., & Yetman, M. H. (2015). The effect of nonprofit governance on donations: Evidence from the revised form 990. *The Accounting Review*, *90*(2), 579–610. https://doi.org/10.2308/accr-50874

Harris, E. E., & Neely, D. (2021). Determinants and consequences of nonprofit transparency. *Journal of Accounting, Auditing & Finance*, *36*(1), 195–220. https://doi.org/10.1177/0148558X18814134

HEFCE. (2001a). *Risk management: A briefing for governors and senior managers*.

HEFCE. (2001b). *Risk prompt list for higher education institutions*.

HEFCE. (2005). *Risk management in higher education: A guide to good practice*.

LFHE. (2009). Getting to grips with risk: Resources for governors of UK universities and higher education colleges. Summers, E. and Boothroyd, K., edited by A. Scholfield. London: LFHE.

Lokuwaduge, C. D. S., & Armstrong, A. (2015). The impact of governance on the performance of the higher education sector in Australia. *Educational Management Administration & Leadership*, *43*(5), 811–827. https://doi.org/10.1177/1741143214535740

Middlehurst, R. (2013). Changing internal governance: Are leadership roles and management structures in United Kingdom universities fit for the future? *Higher Education Quarterly*, *67*(3), 275–294. https://doi.org/10.1111/hequ.12018

Nelson, M., Banks, W., & Fisher, J. (2003). Improved accountability disclosures by Canadian universities. *Canadian Accounting Perspectives*, *2*(1), 77–107. https://doi.org/10.1506/1H5W-R5DC-U15T-KJPH

Ntim, C. G., Lindop, S., Osei, K. A., & Thomas, D. A. (2013). Corporate governance and risk reporting in South Africa: A study of corporate risk disclosures in the pre- and post-2007/2008 global financial crisis periods. *International Review of Financial Analysis*, *30*, 363–383. https://doi.org/10.1016/j.irfa.2013.07.001

Ntim, C. G., Opong, K. K., & Danbolt, J. (2012). The relative value relevance of shareholder versus stakeholder corporate governance disclosure policy reforms in South Africa. *Corporate Governance: An International Review*, *20*(1), 84–105. https://doi.org/10.1111/j.1467-8683.2011.00891.x

Ntim, C. G., & Soobaroyen, T. (2013). Corporate governance and performance in socially responsible corporations: New empirical insights from a neo-institutional framework. *Corporate Governance: An International Review*, *21*(5), 468–494. https://doi.org/10.1111/corg.12026

Ntim, C. G., Soobaroyen, T., & Broad, M. J. (2017). Governance structures, voluntary disclosures and public accountability: The case of UK higher education institutions. *Accounting, Auditing and Accountability Journal*, *30*(1), 65–118. https://doi.org/10.1108/AAAJ-10-2014-1842

Parker, L. D. (2012). From privatised to hybrid corporatized higher education: A global financial management discourse. *Financial Accountability & Management*, *28*(3), 247–268. https://doi.org/10.1111/j.1468-0408.2012.00544.x

Parker, L. D. (2013). Contemporary university strategizing: The financial imperative. *Financial Accountability & Management*, *29*(1), 1–25. https://doi.org/10.1111/faam.12000

Ragland, L. G., & Plante, C. A. (2021). The association between board composition, board governance, and charity care provided by nonprofit hospitals. *Journal of Governmental & Nonprofit Accounting*, *10*(1), 50–85. https://doi.org/10.2308/JOGNA-19-004

Saxton, G. D., & Guo, C. (2011). Accountability online: Understanding the web-based accountability practices of nonprofit organizations. *Nonprofit and Voluntary Sector Quarterly*, *40*(2), 270–295. https://doi.org/10.1177/0899764009341086

Saxton, G. D., Kuo, J. S., & Ho, Y. C. (2012). The determinants of voluntary financial disclosure by nonprofit organizations. *Nonprofit and Voluntary Sector Quarterly*, *41*(6), 1051–1071. https://doi.org/10.1177/0899764011427597

Schofield, A. (2009). *What is an effective and high performing governing body in higher education?* LFHE.

Shattock, M. (2013). University governance, leadership and management in a decade of diversification and uncertainty. *Higher Education Quarterly*, *67*(3), 217–233. https://doi.org/10.1111/hequ.12017

Soobaroyen, T., Broad, M. J., & Ntim, C. G. (2014). *The role and effectiveness of audit committees in UK higher education institutions.* LFHE.

Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *The Academy of Management Review*, *20*(3), 571–606. https://doi.org/10.2307/258788

Taylor, M. (2013). What is good university financial management? *Perspectives: Policy and Practice in Higher Education*, *17*(4), 141–147. https://doi.org/10.1080/13603108.2013.835289

Tomlinson, F., & Schwabenland, C. (2010). Reconciling competing discourses of diversity? The UK non-profit sector between social justice and the business case. *Organization*, *17*(1), 101–121. https://doi.org/10.1177/1350508409350237

Vafeas, N. (1999). Board meeting frequency and firm performance. *Journal of Financial Economics*, *53*(1), 113–142. https://doi.org/10.1016/S0304-405X(99)00018-5

Van Puyvelde, S., Brown, W. A., Walker, V., & Tenuta, R. (2018). Board effectiveness in nonprofit organizations: Do interactions in the boardroom matter? *Nonprofit and Voluntary Sector Quarterly*, *47*(6), 1296–1310. https://doi.org/10.1177/0899764018762318