The Prominence of Natural Capital Within the Integrated Reports of South African Banks

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Abstract The impact of Banks on natural capital is significant. The integrated reporting framework (IR Framework) prescribes that integrated reports should include specific 'content elements' (sections). The purpose of this study is to examine the disclosures of natural capital from a South African banking perspective in integrated reports. Within the global context of climate change and biodiversity collapse, the research aims to determine to what extent natural capital is afforded prominence on the whole and within each of the prescribed content elements. A qualitative approach was followed in order to examine the contents of integrated reports. Purposive sampling was used to select a sample of the five largest banks from the total population of all South African banks. The study found that the prominence afforded to natural capital varied widely across the sample. Whilst the content elements of 'Performance'; 'Strategy and resource allocation'; 'Risk and opportunities' and 'Organisational overview and external environment' enjoy the bulk of focus in terms of natural capital prominence, there is limited mention of natural capital in the 'Business model'; 'Outlook' and 'Basis of preparation' content elements. It is concluded that there is a wide range of interpretation of the IR framework with regards to the requirements for reporting on natural capital. It is recommended that future iterations of the framework should take steps towards closing this interpretation gap and that prepares should endeavour to make further disclosures with regards to natural capital in the 'outlook' sections of their integrated reports.

Keywords Integrated reporting · Natural capital · Environmental sustainability and governance (ESG) · Sustainability · Banking · Climate change · South Africa

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1 Introduction

> The conservation of natural resources is the fundamental problem. Unless we solve that problem, it will avail us little to solve all others. (Roosevelt, 1907, p. 44)

Climate change and biodiversity collapse have become two of the most pressing issues of our time for humanity. The scientific evidence exposing the extent to which climate change and biodiversity collapse have progressed in the last century is overwhelming (McMichael, 1993; World Wide Fund For Nature, 2016). The Intergovernmental Panel on Climate Change (IPCC) has reported that the Earth's surface temperature has increased by approximately 1 °C since the pre-industrial era, and this increase is primarily due to human activities such as burning fossil fuels and deforestation (IPCC, 2022). This increase in temperature is causing widespread impacts on the planet's ecosystems, including sea level rise, more frequent and severe heatwaves, droughts, floods, and storms, which are threatening human societies and economies (IPCC, 2022).

Biodiversity collapse is also a significant concern, as the planet is currently experiencing a mass extinction event due to human activities, such as habitat destruction, pollution, and climate change (IPBES, 2019). The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) has reported that up to one million species are at risk of extinction in the coming decades, which would have significant impacts on the planet's ecosystems and human societies (IPBES, 2019).

The key drivers of climate change and biodiversity collapse are human activities, including the burning of fossil fuels, deforestation, land-use change, and unsustainable agricultural practices (IPCC, 2022; IPBES, 2019). These activities are causing the release of greenhouse gases into the atmosphere, which are trapping heat and causing global temperatures to rise. The destruction of natural habitats and the fragmentation of ecosystems are also reducing the planet's capacity to store carbon and provide critical ecosystem services such as water filtration, pollination, and nutrient cycling (IPBES, 2019).

These adverse effects (largely driven by the activities of business and industry) have given rise to increased pressure from stakeholders for corporate entities to disclose more non-financial information as part of their annual reporting in order to communicate their impacts on natural capital (Sciulli & Adhariani, 2023). Several alternative reporting frameworks that extend beyond the purely financial in order to present a more wholistic picture of how businesses impact their environments and stakeholders have been born of this increased stakeholder pressure. One such framework that has enjoyed support, especially in South Africa where it is mandatory for listed companies, is integrated reporting (PWC, 2013).

As significant funders of the abovementioned destructive industrial activities, Banks have a responsibility to report on their impacts on natural capital to stakeholders and society at large (Rainforest Action Network, 2023). Integrated reporting is one of the conduits through which banks can communicate these impacts to these stakeholders. This study aims to take a closer look at the integrated reports prepared

by South African banks in order to determine what level of prominence is afforded to items of natural capital significance.

2 Literature Review

2.1 The Evolution of Integrated Reporting

An integrated report is defined as 'a concise communication about how an organization's strategy, governance, performance and prospects, in the context of its external environment, lead to the creation, preservation or erosion of value over the short, medium and long term' (IFRS foundation, 2021, p. 10).

The primary body of research on integrated reporting is focused on exploring the objectives and use-cases for as a means of corporate communication (Beattie & Smith, 2013; Brown & Dillard, 2014; Lodhia, 2015). A number of studies unpack the main challenges and successes of integrated reporting since the release of the initial integrated reporting framework in 2013 (Adams et al., 2016; Sierra-Garcı'a et al., 2015). There is also a significant volume of research investigating the outcomes and effects that arise from the employment of integrated reporting (Barth et al., 2017; Lee & Yeo, 2016; Mervelskemper & Streit, 2017; Vitolla & Raimo, 2018).

Fundamental to the principles of the IR framework is the concept of 'Capitals' of which there are six: Financial, Manufactured, Intellectual, Human, Social and relationship and the focus of this study: Natural capital. The concept of natural capital has gained significant attention in recent years due to the increasing awareness of the impacts of business activities on the environment and society. Natural capital can be defined as all renewable and non-renewable stocks of natural resources, such as forests, water, and minerals, that provide goods and services to an organization or society (IFRS Foundation, 2021). The integration of natural capital considerations into corporate reporting is a key aspect of integrated reporting, which seeks to provide a comprehensive and integrated view of an organization's performance across multiple dimensions, including financial, environmental, and social (IFRS Foundation, 2021).

The evolution of corporate reporting on natural capital has been significant since the 1990s as companies have increasingly recognized the need to account for their impacts on the environment and society. In the 1990s, environmental reporting was primarily focused on compliance with regulatory requirements, and reporting tended to be voluntary and unstructured (Gray et al., 1996). However, as the awareness of the environmental impacts of business activities increased, companies began to adopt more systematic approaches to environmental management, which included the development of environmental management systems and the use of environmental performance indicators (EPIs) (Unerman et al., 2007).

In the early 2000s, sustainability reporting emerged as a key trend in corporate reporting, driven by the increasing demand for transparency and accountability from

stakeholders (Gray et al., 1996). Sustainability reporting focused on the social and environmental impacts of business activities and provided a broader view of corporate performance beyond financial metrics (Simnett et al., 2009).

Since the development of the IR framework as by the International Integrated Reporting Council (IIRC) in 2013, there has been a shift towards integrated reporting, which seeks to provide a more comprehensive and integrated view of an organization's performance across multiple dimensions, including financial, environmental, and social (IFRS Foundation, 2021). Integrated reporting encourages companies to report on their natural capital impacts and dependencies, and to consider natural capital as a key aspect of their business strategy (IFRS Foundation, 2021).

However, there are still challenges to the effective integration of natural capital considerations into corporate reporting, including the lack of standardized natural capital accounting frameworks, difficulties in measuring and valuing natural capital impacts, and the need for more stakeholder engagement and disclosure (Bebbington & Unerman, 2018).

The evolution of corporate reporting on natural capital has been significant over the past few decades, as companies have increasingly recognised the need to account for their impacts on the environment and society (Atkins & Maroun, 2015). From voluntary and unstructured reporting in the 1990s to the emergence of sustainability reporting and integrated reporting, corporate reporting on natural capital has evolved to provide a more comprehensive and integrated view of corporate performance. However, challenges still exist in the effective integration of natural capital considerations into corporate reporting.

Integrated reporting has been lauded for its potential to promote sustainability and accountability in corporate reporting (King, 2012; PWC, 2013). However, some scholars have raised concerns about the potential for integrated reporting to be used as a tool for greenwashing (Milne & Gray, 2013; Flower, 2014). Greenwashing refers to the practice of making false or misleading claims about a company's environmental performance to give the impression of being more sustainable than it actually is. Greenwashing can also be the more subtle act of simply omitting the true extent of negative practices.

In the context of integrated reporting, companies may use the IR framework to selectively report positive sustainability initiatives while downplaying negative environmental impacts or risks. This selective reporting can undermine the credibility of the integrated reporting framework (Adams et al., 2016).

Some studies have shown evidence of greenwashing in integrated reports. For example, Sciulli and Adhariani (2023) conducted a content analysis of integrated reports and found that companies tend to emphasize positive sustainability initiatives while underreporting negative environmental impacts or risks. Similarly, Marquis et al. (2016) found that companies use vague and ambiguous language to report on sustainability, which can obscure the true environmental impact of their operations. These findings suggest that integrated reporting may be susceptible to greenwashing and highlight the need for companies to be more transparent and comprehensive in their reporting.

2.2 The Role of Banks and Their Impact on Natural Capital

The banking industry plays a critical role in shaping the economy and influencing corporate behavior (Elliott & Lofgren, 2022; Cogan, 2008). The direct impact of banks on natural capital is somewhat limited due to the nature of the business. Banks are quick to define this direct impact as water usage, carbon emissions and other minor waste metrics (e.g. paper usage). They are open and transparent when including this quantitative data in their integrated reports. What is less obvious but potentially much more impactful, is the indirect impact these businesses may have on natural capital through their business activities.

One significant indirect impact of their activities is the environmental impact caused by their investment in business and industry. This section outlines how the banking industry may have an impact on the environment through these investment activities and explore some of the potential consequences of this impact.

The banking industry is a significant source of funding for business and industry, providing capital for investment and expansion. The investments made by banks are not only limited to companies in the financial sector but also in sectors such as energy, transportation, agriculture, and manufacturing. The environmental impact of these investments varies, but it can range from significant contributions to greenhouse gas emissions, deforestation, and water pollution, to habitat destruction and the depletion of natural resources.

For example, the fossil fuel industry, which is one of the largest recipients of bank financing, is a major contributor to greenhouse gas emissions, causing climate change and its associated impacts (Rainforest Action Network, 2023). Agriculture and food production, which is another significant recipient of bank financing, are responsible for significant land-use changes, deforestation, and biodiversity loss. These investments can have long-term consequences for the environment and human well-being (Rainforest Action Network, 2023).

2.3 Consequences of Banking Investment in Business and Industry

The consequences of banking investment in business and industry are not limited to environmental impacts but also include financial, social, and reputational risks for banks. Environmental issues such as climate change, biodiversity loss, and natural resource depletion are not only critical for society at large, but they also pose significant risks to businesses, which can ultimately impact the financial performance of banks and their clients (Sustainable Banking & Finance Network, 2021). Additionally, banks can face reputational risks if their clients engage in environmentally harmful practices, which can damage their brand and stakeholder relationships (Eccles & Serafeim, 2013).

In response to these risks, some banks have started to adopt sustainable finance practices, such as responsible lending, green bonds, and impact investing (Global

Alliance for Banking on Values, 2022). Sustainable finance practices can help to reduce the environmental impact of banking investments, enhance the resilience of businesses to environmental risks, and improve stakeholder relations. However, the adoption of sustainable finance practices is still in its early stages, and there is a need for more significant efforts to align banking investments with environmental and social sustainability goals.

2.4 Integrated Reporting, Natural Capital and the Banking Industry

Whilst there is a wealth of literature exploring integrated reporting in the banking sector on a global level, there is very little research narrowing in on the South African banking sector and still less research directed specifically at natural capital in this context. This further reinforces the motivation and need for focused research in this area. The following section outlines some of the prominent studies relating to Integrated reporting in the banking sector.

Doni, et al. (2019) explored the Development Bank of Singapore (DBS) as one of the pioneering banks from an integrated reporting perspective. The study investigated the banks approach to the accounting for multiple capitals and found that this approach was useful in making tradeoffs between capitals (e.g. financial versus natural capital) visible to stakeholders. This study is however not specific to natural capital and furthermore, considers only one bank outside of South Africa.

In 2019 a sample of listed South African banks was found to show a direct positive correlation between the quality of a banks integrated reporting and its earnings per share (Matemane & Wentzel, 2019) There study does not however specifically address the prominence or direct impact of natural capital specific disclosures.

Vitolla et al. (2020) investigated the determinants of quality integrated reports in the financial sector across multiple territories and found that profitability and size were key determinants when observing the quality of integrated reports. Although there were some South African banks included in the study, there has not been a specific study on South African institutions in this regard. However one could reasonably assume that a similar trend might follow if such a study was performed and that large banks such as the ones sampled in this research could be expected to produce integrated reports of a high quality as they are well funded and resourced.

3 Research Objective

This research was undertaken with the intention of determining the extent to which the major South African banks afford reporting prominence to their impacts on natural capital within the various content elements prescribed by the integrated

reporting framework in their integrated reports. The focus of the study is narrow, it does not seek to comment on the quality of the observed reporting but rather to establish the status quo of natural capital prominence in integrated reports, and to draw conclusions from these findings.

4 Underlying Theory

This research is underpinned by the capital theory approach. The capital theory approach is widely recognised as the de facto theoretical basis for sustainability. Capital theory, in the context of sustainability, refers to an economic framework that emphasises the importance of different types of capital in determining long-term well-being and sustainable development. It recognises that economic growth and development should not be solely measured based on financial capital, but also on natural, social, and human capita (Stern, 1997). This study is focused on the natural capital pillar of this approach.

5 Research Approach and Method

Data was collected through the examination of text included in publicly available integrated reports for the sample. As the data collected is not numerical, a qualitative approach was deemed appropriate. Lehman (2010) outlines how interpretative research can be used as a particularly useful tool within the discipline of accounting to 'Obtain an improved understanding of everyday accounting practice' and so, an interpretive approach was used to analyse the data collected.

5.1 Sample Selection

The population considered for sampling included all south African banks. The Prudential Authority annual report for 2022 notes that South Africa's banking landscape is dominated by five banks that together carry over 90% of the country's banking assets (SARB, 2022). Purposive sampling was used to select these five banks as the sample. The institutions are listed entities and are therefore required to prepare integrated reports in terms of the Johannesburg Stock Exchange listing requirements. The latest available integrated reports (2022) for these five banks represent the sample for the study providing a high level of coverage over the total Rand value of all banking assets held in South Africa.

5.2 Ethical Considerations

Written ethical clearance was received from the University of Johannesburg School of Accounting research ethics committee. In addition, the data analysed is obtained

from publicly available reports, and the names of the banks have been omitted from the study as an additional precaution.

5.3 Qualitative Content Analysis of Integrated Reports

Qualitative Content Analysis, also known as 'QCA,' is a research method used to analyse and interpret qualitative data (Schreier, 2012). It is particularly useful when working with data collected from sources like documents that require interpretation. Given that this study involves extracting qualitative data from documents, specifically the integrated reports of the top 5 South African Banks, QCA is considered an appropriate approach.

A coding system was used to assess the prominence of reporting on natural capital for the sample. The integrated reporting framework (<IR> Framework) is considered the global standard for entities preparing integrated reports. In terms of this framework, preparers should include the following content elements in their reports (IFRS Foundation, 2021):

Organisational overview and external environment
Governance
Business model
Risk and opportunities
Strategy and resource allocation
Performance
Outlook
Basis of preparation and presentation

For the reports examined, each section was scrutinised for evidence of terminology used to provide information on natural capital in order to make a judgement on the prominence of natural capital in the tested reports. For each mention of these natural capital elements, a score of '1' was awarded. At the end of the report review, the total score was summed to calculate a natural capital prominence score (NCPS) depicting the level of prominence enjoyed by natural capital in each of the different sections and in the reports as a whole.

It is not enough to simply search for the term 'natural capital' as this is a general term and there are many other more specific terms that would fall within the scope of natural capital. Identification of these terms was an iterative process, and the list of relevant terminology was extended for each report to include all possible variations of terms that could be used to indicate natural capital implications. The following list (and their acronyms) represents all terminologies identified during the review of the reports:

Biodiversity
Carbon
Carbon Dioxide
Climate
CO_2

Decarbonise
Emissions
Energy
Environment
Equator principles
Extreme weather
GHG
Global Warming
Green
Greenhouse gasses
Natural capital
Nature
Net-zero
Planet
Paris agreement
Renewable energy
Renewables
United nations sustainable development goals
Water
Wildlife

It is important to note that the context in which each of these terms was used is important. A score of '1' was only awarded where the term was being used within the context of natural capital. For example, for the following sentence 'the management team displayed renewed energy when tackling their post covid responsibilities...' 'energy' would not attract a score as it was used in within a context not related to natural capital. Similarly, the general use of terms or acronyms such as 'ESG' or 'UN sustainability goals' did not attract a score unless the term was being specifically used within the context of reporting on natural capital.

6 Study Results

This section presents the findings of the study and interprets the results. The top 5 South African banks (based on asset value) were analysed using the content analysis method described in Sect. 5.3. These banks were evaluated against a checklist of natural capital related terminology in order to establish the extent of prominence afforded to natural capital in the various content elements of integrated reports and in the reports as a whole.

6.1 Overall Prominence of Natural Capital

This section presents and interprets the findings of the study with regards to the overall prominence of natural capital reported in the integrated reports of the sample.

Refer to Table 1 and Fig. 1 below where the overall natural capital prominence score is plotted for each bank tested for the reporting period ended 2022.

From Table 1, it can be seen that the mean NCPS for the sample tested was 130, suggesting that on average, items of a natural capital nature were mentioned 130 times in each report. The relevance of this figure is, however, questionable when one considers the standard deviation of 111 for the data set. This high standard deviation suggests that there is a large variance (visible in Fig. 1) between reports and in general, an inconsistent result across the sample. In addition, when considering the sample maximum of 293 and minimum of 6, there is a large variance across the sample in terms of the overall prominence afforded to reporting on natural capital items. It is worth noting that the score of 6 was as a result of the report specifically excluding natural capital from the integrated report and referring users to a separate report on the matter. With the above in mind there appears to be no discernable trend or identifiable norm in the prominence of reporting on natural capital in this sample. This was an unexpected result as one of the guiding principles of the IR framework is 'Comparability' between reports. A possible explanation for this variance is the fact that the IR Framework adopts a principles-based approach rather than a rules-based

Table 1 Overall NCPS Score for the reporting period ended 2022

Bank	NCPS		
A	176	Mean	130
B	6	Max	293
C	63	Min	6
D	111	Std deviation	111
E	293		

Source: Author

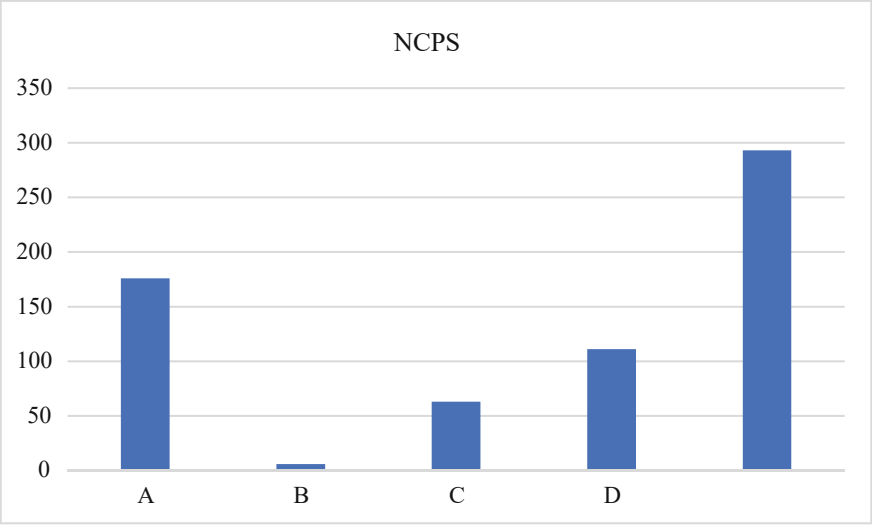

Fig. 1 Overall NCPS Score for the reporting period ended 2022. Source: Author

approach. The framework provides a set of guidelines and as such, there is much room for preparers to interpret the guidelines and provide a wide range of outputs based on their materiality definitions and the importance that they place on natural capital. Whilst it is understandable that there would be some variance between the various reports in the prominence they afford to natural capital, one would expect a closer range given that the reports are prepared for entities in the same sector that are using the same IR framework which includes 'Comparability' as a fundamental guiding principle.

6.2 *Prominence of Natural Capital Reporting Across the Content Elements*

Here we zoom in and analyse the distribution of the NCPS across the content elements of the sampled integrated reports (Fig. 2):

Table 2 shows the distribution of natural capital reporting as measured by the NCPS for each bank as a whole and also as it pertains to each content element. This

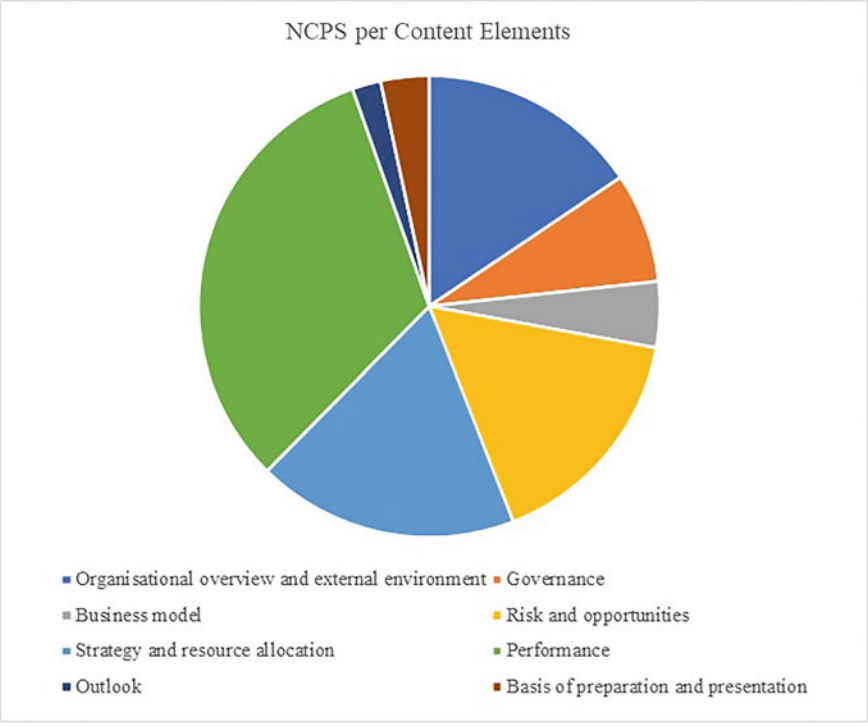

Fig. 2 NCPS per content elements. Source: Author

Table 2 NCPS per content elements

	Banks														
	A		B		C		D		E		Total				Std
Content elements	NCPS	%	NCPS	%	NCPS	%	NCPS	%	NCPS	%	NCPS	%	Max	Min	Deviation
Organisational Overview and external environment	49	28	1	17	6	10	7	6	38	13	101	16	49	1	22
Governance	2	1	0	0	0	0	2	2	46	16	50	8	46	2	20
Business model	5	3	0	0	12	19	13	12	0	0	30	5	13	0	6
Risk and opportunities	7	4	0	0	26	41	42	38	30	10	105	16	42	4	17
Strategy and resource allocation	59	34	0	0	1	2	16	14	43	15	119	18	59	1	26
Performance	42	24	0	0	13	21	23	21	131	45	209	32	131	0	52
Outlook	7	4	3	50	3	5	0	0	0	0	13	2	7	0	3
Basis of preparation and presentation	5	3	2	33	2	3	8	7	5	2	22	3	8	2	3
Total	176	100	6	100	63	100	111	100	293	100	649	100			

Source: Author

table is particularly useful as it provides insight into how banks consider reporting their impacts on natural capital on a more granular level.

From the table, we can see that across the sample, 32% of the total natural capital reporting prominence was focused in the 'Performance' content element section suggesting that the banks tested place the most importance on this section when communicating natural capital impacts to users.

18% of natural capital prominence was concentrated in the 'Strategy and resource allocation'. This indicates that the sampled banks consider the communication of natural capital impacts to users when communicating the businesses overall strategy and how natural capital resources are allocated towards production of similar importance to the communication of 'Risks and opportunities' and 'Organisational Overview and external environment' which each received 16% of the distribution.

The 'Outlook', 'Basis of preparation and presentation', 'Governance' and 'Business model' content elements all received less than 10% each of the natural capital reporting prominence. For 'Basis of preparation and presentation' (3%) this was to be expected as this is generally a shorter section in integrated reports. This argument could potentially also be applied to the 'Governance' and 'Business model' sections, however the 2% 'Outlook' allocation is considered low and suggests that reporting enterprises are not fully considering and disclosing the future impacts of their operations on natural capital. The IR framework states that 'An integrated report should answer the question: What challenges and uncertainties is the organization likely to encounter in pursuing its strategy, and what are the potential implications for its business model and future performance?' (IFRS foundation, 2021, p. 46). The 'Risks and opportunities' content element section returned 16% of the total natural capital prominence suggesting that natural capital was well identified and documented as a risk to the reporting entities, however the low 'Outlook' allocation suggests that the preparers did not sufficiently communicate the implications for these risks for the future.

7 Conclusion and Recommendations

It was found that as a whole, there was a wide variance between the scores across the sample tested with no discernable trend as to what level of natural capital prominence can be expected from an integrated report in the South African banking sector. The distribution of the natural capital reported in each content element section was then analysed where it was found that most emphasis on natural capital reporting was placed on the 'Performance' section with very little prominence evidenced in the 'Outlook' section. It is recommended that preparers increase the level of prominence of natural capital disclosures in the 'Outlook' section of their integrated reports in order to more closely address the fact that they have identified it as a significant risk area in the 'Risk and Opportunities' section of the report. It is further recommended that future iterations of the IR Framework take steps to address the ample room for preparers to interpret the framework (be it through materiality, the guiding principles

or other means) in order to foster a more standardised output with regards to natural capital reporting across the banking sector in South Africa.

During the study, the following areas for further research were identified: There is room to expand the study across multiple reporting periods in order to gain insight as to how/if reporting prominence on natural capital has changed over time. Furthermore, while this study focuses on the prominence (volume) of natural capital reporting, there is room to analyse the quality of this reporting in future studies.

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