Are your non-financial KPIs useful?

Exploring the comparability of non-financial performance measures in annual reports

By L. Bayne[1], M. Wee[2] and A. Tarca[1]

[1]UWA Business School and [2]ANU College of Business and Economics

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Abstract

Purpose

The paper investigates the comparability of non-financial KPIs of companies in Australia and four comparator countries. By assessing current non-financial disclosure practices the study offers insights into best (and worst) practice, as well as country and sector differences and commonalities.

Design/methodology/approach

Data was drawn from the annual report narratives of 200 large listed companies from five countries and five sectors in 2016. The comparability of non-financial KPI disclosure was evaluated using company level and KPI level measures. Comparative analysis identified patterns within the Australian disclosure practices, including sector differences and similarities. The Australian data was also benchmarked against the four comparator countries.

Findings

Companies from Australia generally presented fewer KPIs in their annual report narratives and disclosed across fewer categories than the comparator countries. However, for the KPIs they did disclose, they ranked second highest in terms of the number of comparatives provided per KPI. The study highlighted the variety of non-financial KPIs disclosed in the narrative section of annual reports, reflecting a range of different formats and content, making comparability challenging.

Research limitations/implications

Practical implications

The study contributes hand collected empirical data providing a detailed account of current non-financial KPI disclosure practice. The principles of best reporting practice identified may benefit report preparers as well as standard setters and other stakeholders contemplating the role of standard setting in non-financial reporting, including the proposed revision of *IFRS*

Practice Statement 1: Management Commentary (2010) by the International Accounting Standards Board.

Originality/value

Contributions are made to voluntary disclosure literature by concentrating on the characteristic of comparability in the non-financial reporting context. The focus on non-financial KPIs differs from other studies considering non-financial information in general. An efficient and effective data collection method was developed for collecting KPIs from the narrative section of annual reports, which contributes to the methodology used in voluntary reporting content analysis.

Keywords:

Non-financial performance, voluntary reporting

Type:

Research Paper

1. Introduction

The usefulness of financial information has been recognised since the seminal studies of Ball and Brown (1968) and Beaver (1968) (see Kothari, 2001; Leuz and Wysocki, 2008, 2016). However, many calls have been made for the disclosure of more non-financial performance measures as well as the integration of financial and non-financial measures (see for example ICAEW (2009), the EU Commission's Directive on Non-Financial Reporting (EU Commission, 2014) and the International Integrated Reporting Council's framework (IIRC, 2013)). Non-financial information generally refers to "information which is included in the corporate report other than information in the financial statements" (ICAS, 2016, p.5). Others use the term to refer to sustainability, corporate responsibility or Environment, Social, and Governance (ESG) information. Non-financial performance disclosure is generally voluntary in annual reports and there is currently no universally accepted non-financial reporting standard, although the Global Reporting Initiative's (GRI) Sustainability Reporting Guidelines/Standards are the most referred to in the reports of large companies (KPMG, 2017).

There is growing interest in non-financial performance measures by investors, stock exchanges and regulators, voluntary and mandatory standard setters, as well as a wider sphere of other stakeholders, including employees, suppliers, and not-for-profit organisations (IASB, 2017). Yet many bemoan the lack of usefulness of these measures due to the lack of comparability between organisations as well as within a single organisation over time. For example, while investors profess interest in non-financial performance for investment decisions (Blackrock, 2016; EY, 2017), they often do not use non-financial performance information due to a perceived lack of comparability. This is highlighted in an EY investor survey where 42 percent of the respondents believe that "non-financial information is often inconsistent, unavailable or not verified" and that "non-financial measurements are seldom available for comparison with those of other companies" (EY, 2017, p.7).

Comparability is recognised as an important qualitative characteristic of useful financial information and is ingrained as an enhancing qualitative characteristic in the *Conceptual Framework for Financial Reporting* issued by the International Accounting Standards Board (IASB). The lack of comparability in non-financial measures has been attributed by many to the myriad of non-financial regulations and frameworks emanating from governments, stock exchanges, and mandatory and voluntary standard setters (Amel-Zadeh and Serafeim, 2017;

KPMG, 2017) that report preparers need to navigate. Although there have been attempts by voluntary standard setters to assist companies in navigating the interrelationships between various non-financial reporting frameworks (see for example the Corporate Reporting Dialogue (2017)), an uncertain non-financial reporting environment prevails.

While some suggest incremental improvements to corporate reporting are needed, others debate a more dramatic overhaul (ICAEW, 2009, 2017). There are advocates for a global umbrella organisation to take leadership in the non-financial reporting area and develop a global non-financial reporting framework/standards (ACCA/CDSB, 2016; Blackrock, 2016; Accountancy Europe, 2017). Some suggest that the IASB may be well positioned to lead this process (FEE, 2015; UNEP, 2017). In November 2017 the IASB decided to revise its *IFRS Practice Statement 1: Management Commentary* (2010) (IASB, 2017), following recent developments in narrative reporting, such as the United Kingdom's (UK's) Strategic Report (2013), the German Accounting Standard (GAS) 20 on the group management report (2012) and the EU Commission's Non-financial Reporting Directive (2014).

To provide evidence relevant to these discussions this paper aims to investigate the current disclosure practices and comparability of non-financial key performance indicators (KPIs) of companies in Australia and four comparator countries who have also adopted International Financial Reporting Standards (IFRS). By assessing current non-financial disclosure practices the study offers insights into best (and worst) practice, as well as country and sector differences and commonalities.

The research questions are as follows:

1. To what extent do Australian companies (and international comparators) disclose non-financial KPIs in the narrative section of annual reports?
2. To what extent are these non-financial KPIs comparable across companies, sectors and countries?
3. What are the principles of best practice to increase comparability of non-financial KPI reporting in the narrative section of annual reports?

The paper makes both academic and practical contributions. Prior research has contemplated the meaning, measurement and effects of the quality of corporate disclosure (see for example Beattie *et al*. (2004), Wiseman (1982), Hooks and van Staden (2011) and Elzahar *et al.*(2015)). The current study extends this research into disclosure quality by focusing on the

attribute of comparability. Prior voluntary reporting literature is also extended by exploring the concept of comparability in the context of non-financial performance rather than the more common context of financial performance reporting. Further, the current study adds to limited extant literature focusing exclusively on KPIs as opposed to evaluation of more general non-financial information in the narrative section of annual reports (Elzahar *et al.*, 2015). The study also contributes an efficient method for data collection using search words which can be adapted to other content studies. Further, company level and KPI level measures of comparability are provided which contributes to extant studies of the quality of voluntary reporting. On the practice side, the study contributes hand collected empirical data providing a detailed account of current disclosure practice. The principles of best reporting practice may benefit report preparers as well as standard setters and other stakeholders contemplating the role of standard setting in non-financial reporting, including questions such as whether non-financial reporting could and should be mandatory.

The remainder of the paper is laid out as follows. Section 2 provides a review of extant literature, while Section 3 discusses the research methods. The results are presented in Section 4, followed by discussion and conclusions, including recommendations and policy implications, in Section 5.

2. Literature review

Non-financial performance measures: current practice, best practice, comparability across companies and sectors

Non-financial performance measures have previously been studied in a number of research streams, such as management accounting (Abdel-Maksoud *et al.*, 2005; Chenhall and Langfield-Smith, 2007), management compensation and earnings management (Ibrahim and Lloyd, 2011), sustainability reporting and voluntary disclosure studies (Haque and Deegan, 2010; Loh *et al.*, 2015). Non-financial performance measures have long been used internally by management accountants to improve and measure internal company performance (Malina and Selto, 2004). Over the last few decades there has been increased external disclosure of non-financial information, such as in annual reports and sustainability reports (KPMG, 2017). Extant studies have addressed what and where non-financial information is disclosed (Deegan and Rankin, 1997; Othman and Ameer, 2009). Studies have also explored the relationship between performance and disclosure. For example, Hummel and Schlick (2016) investigated the relationship between sustainability performance and sustainability disclosure,

finding that better sustainability performers provide higher quality sustainability disclosure.

In addition to remuneration and sustainability reports, many companies discuss non-financial performance measures in the narrative section of annual reports, such as in a management commentary report, presented to accompany the financial statements. Although a significant part of the management commentary addresses financial measures, there is also guidance about including non-financial measures that are relevant to understanding performance (see the IASB's *IFRS Practice Statement 1: Management Commentary* (2010) and the Financial Reporting Council's *Guidance on the Strategic Report* (FRC, 2014)). Studies commonly investigated the content of narrative disclosures, using checklists and exploring topics, quantity and quality of disclosure (Beattie, 2014). Elzahar *et al.* (2015) investigated KPI disclosure quality for a sample of UK listed companies based on the UK Accounting Standards Board's guidelines for best practice KPI disclosure and the economic consequences of financial and non-financial KPI disclosure quality. Their findings suggested that only the disclosure quality of financial KPIs matter. Cole and Jones (2005) argued that changes in measures (in their case, financial measures) were particularly revealing.

Another stream of research concludes that disclosure reflects both company specific and country factors. For example, Vanstraelen, Zarzeski and Robb (2003) reported differences between countries in the content of non-financial disclosures. Investigating the impact of variation in regulation on disclosure, Elshandidy, Fraser and Hussainey (2015) found differences in mandatory and voluntary risk disclosures made by companies in the United States, UK and Germany. The current study adds to the cross-country literature in this area by focusing on cross-country disclosure of non-financial KPIs.

Evaluating non-financial performance measures

Management accountants have long recognised the problems with using traditional financial performance measures in isolation when measuring performance. For example, traditional financial performance measures focus on the financial consequences of decisions and activities, not the causes (Langfield-Smith *et al.*, 2015). Langfield-Smith *et al*. (2015) highlight the benefits of non-financial over financial performance measures, such as their emphasis on strategy, drivers of future financial performance, and being more actionable, timely and understandable. Limitations of non-financial performance measures have also been acknowledged. For example, there are a wide range of available measures which affect comparability between companies and over time; necessity for trade-offs meaning that there

is difficulty in deciding which non-financial measures are most important; the measurement system may lack integrity; and some measures are not easy to translate into financial outcomes (Langfield-Smith *et al.*, 2015). Based on their review of management compensation research Maines *et al*. (2002, p.356) suggest that "the usefulness of non-financial performance measures is not universal, depending instead on firm-specific characteristics".

Maines *et al*. (2002) evaluated non-financial performance measures against the same criteria used to evaluate financial performance according to the accounting conceptual framework, that is the characteristics of relevance, reliability and comparability. Due to their uniqueness to industry and company characteristics, Maines *et al*. (2002) recommended that non-financial disclosures remain voluntary and are given the 'safe harbour approach' (i.e. protections in the case of litigation).

The IASB's *IRFS Practice Statement 1: Management Commentary* (2010) stated that the management commentary should display the qualitative characteristics of relevance and faithful representation as well as the enhancing qualitative characteristics of comparability, verifiability, timeliness and understandably. The practice statement recommended that:

> "Management should disclose performance measures and indicators (both financial and *non-financial*) that are used by management to assess progress against its stated *objectives*. Management should explain why the results from performance measures have changed over the period or how the indicators have changed" (Para 37, p.15) (italics added).

This highlights that non-financial performance measures are firm and industry specific and relevant measures may change over time, aspects which are explored empirically in the current study. Similarly, ICAEW (2009) concluded that:

> "there seems no realistic possibility of a prescriptive reporting model that would cover all non-financial reporting and provide a detailed blueprint applicable to businesses generally. The information that different businesses disclose and should disclose is too diverse to be captured by such a model" (p.vi).

However, ICAEW (2009) supported the idea of the general applicability of high-level principles for non-financial reporting such that businesses "disclose information that is relevant to the particular circumstances; vary their disclosures as circumstances change; and experiment in their reporting" (p.vii).

The Australian setting

The disclosure of non-financial KPIs in annual reports in Australia remains mostly voluntary. Since Australia adopted IFRS in 2005, Australian companies' non-financial KPI reporting in annual reports is guided by the IASB's *IFRS Practice Statement 1: Management Commentary* (2010) (IASB, 2017), as well as limited requirements in the Corporations Act (Cth) of 2001 (Australian Government, 2017). Listed companies are further guided by the listing rules of Australian Securities Exchange Limited (ASX) and the third edition of the ASX Corporate Governance Council's Principles and Recommendations (ASX Corporate Governance Council 2014). The ASX corporate governance principles require publicly listed companies to disclose exposure to economic, environmental and social sustainability risks; companies are required to comply with the principles or provide detailed reasons for their non-compliance. Given this regulatory environment, the current study provides empirical evidence of current disclosure practices of listed companies to see how these regulations and principles are operationalised.

3. Research method

3.1 Data

Data was drawn from the annual reports of 200 large listed companies from five countries where IFRS is used (Australia, Canada, Germany, Japan and the UK) and five sectors (Consumer Discretionary, Financial Services, Materials, Telecommunication Services and Utilities) in 2016. Australia had adopted IFRS from 2005 for all reporting entities; Germany and the UK adopted IFRS from 2005 for listed companies' consolidated accounts; Canadian companies adopted from 1 January 2011; and in Japan some listed companies voluntarily adopt IFRS.

Companies were randomly sampled from the largest 200 listed companies in each country (based on market capitalisation). Forty companies were chosen for each country. For some countries there were small numbers of companies in particular sectors, in which case companies from the other four sectors were randomly chosen. The unbalanced number of companies per sector was taken into account when analysing the results. For example, the average number of KPIs per company, rather than the total number of non-financial KPIs per sector, is used.

3.2 Data collection

A repeatable and efficient data collection method was developed to identify and record non-financial KPIs from the narrative section of annual reports, which was defined as the whole annual report except for the financial statements and notes. The data collection method was developed using an initial pilot study of 50 company annual reports from 2016. The pilot study companies were randomly selected from the sample of 200 sample companies so that countries and sectors were equally represented. Two principal researchers manually reviewed and analysed the non-financial KPIs disclosed in the pilot company annual reports from Australia, Germany and the UK to develop a list of instructions for the research assistant to identify (using search words) and summarise the necessary data from the annual reports.

The method uses eight search words/phrases namely: KPI, Performance, Non-financial, Non financial (no hyphen), Supply chain, Goal, Target, and Objective. Adobe Acrobat was used to search the annual report pdfs for each word/phrase in turn. The data surrounding the search word was scanned and any non-financial KPIs identified were recorded in the data collection template for each annual report. The choice of these eight key words/phrases was based on analysis of the disclosure of non-financial KPIs in the pilot study, paying attention to the headings and structure used for presentation of non-financial KPIs as well as the terminology used to discuss non-financial performance in annual reports. For example, some companies used headings which included the words “KPI”, “Performance”, “Non-financial”, or “Non financial” (no hyphen). Further, the narrative discussing non-financial KPIs in the pilot study tended to use the words “Performance”, “Goal”, “Target” or “Objective”; hence their inclusion as search words. “Supply chain” was included as a search phrase since the pilot study showed the use of this phrase when discussing the non-financial performance of other companies in the supply chain.

The use of the above search words/phrases was more efficient than searching for common non-financial KPI categories, such as *Environment* or *Community* since searching for such words led the researchers to discussions involving non-financial information, in addition to non-financial performance measures. Non-financial performance measures were carefully differentiated from non-financial *information* as well as *financial* performance measures by adopting the definition below.

A non-financial KPI is defined as having the following characteristics:

- *Current year result*. A current year result or outcome needs to be provided. For example, "Company A supports women in the workforce" has no result and is merely non-financial information, whereas "Number of women in the workforce: 50%" is identified as a non-financial KPI;
- *Not a financial KPI*. The KPI should not directly relate or explain items in the financial statements. For example, "return on assets" and "gross profit percentage" are regarded as financial rather than non-financial KPIs. These traditional financial KPIs are well-researched and not the focus of this study; and
- *Intention*. The data needs to be intended to be a performance measure rather than merely information. The intention may be reflected by explaining why the measure is presented and/or disclosing a target.

Companies may disclose non-financial KPIs using various media other than the annual report (such as online and sustainability reports). However, the focus in this study is non-financial KPIs in the annual reports as the annual report is an important and widely used communication tool for engagement with external users. Also, the focus of current policy making is on the Management Commentary in annual reports. Therefore the study is interested in the comparability of non-financial performance reporting provided in the annual report narratives to inform this debate.

3.3 Measures of comparability

The comparability of non-financial KPI disclosure was evaluated in the following ways, at both company and KPI levels.

1) Company level - Number of KPIs

The number of KPIs per company was measured which offers insight into comparability of non-financial performance between and within companies. For example, if Company A discloses 20 KPIs and Company B two KPIs, it is suggested that it is more difficult for the user to compare these two companies than if they both reported on the same number of KPIs, unless the user is provided with details of how the company chooses the KPIs they report. The same argument applies within Company A if they report on 20 KPIs in year 1 and two KPIs in year 2.

2) KPI level - Provision of comparatives

Each KPI was assessed based on the extent of comparative information provided, namely 1) prior year results, 2) targets, 3) competitor scores and 4) other benchmarks. In addition to considering the use of these four types of comparative information individually, each KPI was also given a Summary Comparability score. This is a score ranging from zero to four depending on how many types of comparatives are provided out of the above four types. For example, if a KPI is presented along with prior year results and a target, then it is awarded a Summary Comparability score of two (out of 4). The provision of comparative information is considered to provide the user with better information with which to interpret the KPI results.

3) Company level - Breadth

The third way of assessing the comparability of KPIs is based on the range of non-financial KPIs disclosed by a company. The KPIs recorded were organised into seven main categories based on the topics covered by the non-financial KPIs collected, guided by commonly used categories in the voluntary reporting literature, namely *Business and Innovation*, *Community and Social*, *Customer*, *Employee*, *Environment*, *Supply chain management* and *Awards and Indices.* Each company was given a score ranging from zero to seven based on the number of main KPI categories a company reports on out of the seven categories. For example, if Company C reports 20 non-financial KPIs in the *Environment* category and 10 KPIs in the *Employee* category, the breadth score is two (out of seven). Whereas, if Company D provides KPIs under all seven categories, the score for Company B is seven.

It is suggested that when comparing the performance of Company C and D above, the difference in breadth of KPIs covered may leave the report user with questions as to why certain categories are not covered, unless the user is informed as to the choice of KPIs and categories covered. It is expected that certain categories may be more relevant to particular industries, which is explored empirically.

3.4 Data analysis

Comparative analysis was used to identify patterns within the Australian disclosure practices, including industry differences and similarities. The Australian data was also benchmarked against the four comparator countries to provide context to current Australian practices.

4. Results

Over 4,000 non-financial KPIs (4,325) were collected from the narrative sections of the 2016 annual reports of the 200 sample companies, averaging 22 non-financial KPIs per company. The forty Australian companies reported 440 KPIs, with an average of 11 KPIs per company. One hundred and sixty eight companies (84% of the sample) disclosed non-financial KPIs in their annual reports, indicating that reporting non-financial KPIs is widespread. The following sections discuss trends in the comparability measures of non-financial KPI disclosures in 2016 across categories, countries and sectors. Examples illustrating best practice KPI disclosure, which informs the recommendations made in section 5, are presented in Appendix A.

4.1 Number of KPIs

Table 1 summarises the number of non-financial KPIs per category (columns 2 to 8) for each country (rows 1 to 5) for 2016. The countries are ordered from highest to lowest average number of KPIs per company.

[insert Table 1 about here]

Australia (row 4) is ranked second lowest in terms of the average number of KPIs per company (column 10). Companies from the UK (with an average of 36 non-financial KPIs per company) and Germany (34 KPIs per company) disclose the most non-financial KPIs in their annual report narratives, followed by companies from Japan (20 KPIs per company) and trailed by companies from Australia (11 KPIs per company) and Canada (7 KPIs per company).

Row 8 indicates that the *Employee* and *Environment* categories together account for 72 percent of total KPIs recorded. The *Employee* category, representing 42 percent of non-financial KPIs, contains KPIs related to employee diversity, health and safety, board composition, employee levels, training and employee turnover. The *Environment* category (30% of non-financial KPIs) includes KPIs related to emissions, energy, waste, water, environmental compliance and paper. The other five categories show lower quantities of KPIs. The third highest category is *Awards and Indices* representing ten percent of total KPIs. This category reflects externally generated KPIs such as awards, accreditations, indices, rankings and affiliations. The *Community and Social* category, representing eight percent, covers KPIs related to donations, volunteering and community education.

The least number of KPIs fall into the *Business and Innovation*, *Customer* and *Supply chain management* categories. The *Business and Innovation* category includes non-financial KPIs related to research and development and patents. The *Customer* category mainly relates to KPIs measuring customer satisfaction. The *Supply chain management* category includes KPIs concerning supplier audits and procurement.

Table 1 shows the patterns of non-financial KPI categories in each country, highlighting the prevalence of *Employee* and *Environment* categories in all countries. The *Employee* category has the highest number of KPIs for all countries except Japan where it is second. The *Environment* category is in the top two for all countries except Canada where it is third after *Awards and Indices*. The *Supply chain management* category of KPIs features more strongly in Germany than in the other countries. *Awards and Indices* feature consistently in the middle-range across all countries. Japanese companies disclose the greatest quantity of KPIs in the *Community and Social* category. The *Business and Innovation* category ranks last throughout except for Germany where the *Customer* category is the lowest. Row 4 shows that Australia follows the overall category trends, with category rankings similar to the overall category rankings in row 8.

Table 2 summarises the average number of non-financial KPIs per company for each category for the five industry sectors. Column 11 shows that companies in the Materials sector disclosed the highest average number of KPIs per company (33 KPIs per company) in 2016. Companies from the Utilities sector averaged 22 KPIs per company, followed by Consumer Discretionary (20 KPIs per company). Lower levels of KPIs per company were found in the Financial Services sector (17 KPIs per company) and Telecommunications sector (13 per company).

[insert Table 2 about here]

Table 2 shows the patterns of KPI categories across sectors. At the sector level *Employee* and *Environment* are again the top two categories, except for the Financial Services sector where *Environment* KPIs are the third lowest category. This low level of *Environment* KPIs in the Financial Services sector is expected, given the relative immateriality of direct environmental impact of their business operations. The data suggests the Financial Services sector focuses instead on the *Awards and Indices* and *Community and Social* categories, being the sector with the highest number of KPIs in these categories. *Supply chain management* KPIs are

most prevalent in the Consumer Discretionary and Materials sectors and low in the Financial Services, Telecommunication Services and Utilities sectors. The sector analysis highlights the importance of certain KPI categories for all companies in all sectors, such as *Employee*. The analysis also shows that certain categories are much less relevant to some sectors, such as *Environment* in the Financial Services sector.

4.2 Provision of comparatives

Table 3 shows the percentages of KPIs presented with comparatives, for the various countries. Row 6 indicates that 39 percent of the KPIs reported in 2016 are presented together with prior year results. Column 1 shows that KPIs are most likely to be disclosed together with prior year results for companies from Japan (48% of KPIs are disclosed together with prior year results), followed by Germany (41%) and the UK (39%). As seen in Column 2 it is surprising that only 18 percent of the non-financial KPIs are presented in relation to a target which would improve the information content of the KPI. Companies from Australia are the most likely to disclose targets along with their KPIs; 24 percent of the 2016 non-financial KPIs are disclosed with a target. The provision of competitor scores is very uncommon for all countries, with only ten KPIs (0%) providing this comparator in Column 3. The "Other benchmark" category shown in column 4 mainly includes KPIs which by nature represent a comparison to other companies, such as rankings and awards. Hence the *Awards and Indices* category KPIs all encompass this comparator. Canada uses this comparator the most where 29 percent of KPIs have this characteristic.

[insert Table 3 about here]

Table 4 provides the sector analysis. Column 1 shows that the Utilities sector provides prior year results for 45 percent of KPIs disclosed, followed by the Financial Services sector where 41 percent of KPIs are presented together with prior year results. Column 2 shows that the Telecommunication Services sector most frequently disclosed KPIs together with targets, where 20 percent of KPIs are disclosed with targets. Column 3 indicates the low disclosure of competitor scores across all sectors. The "Other benchmark" score reflects the use of the *Awards and Indices* category.

[insert Table 4 about here]

Another feature of the data was that 65 percent of KPIs were presented with a definition, which may be considered essential for interpretation by users especially for more complex KPIs.

Summary Comparability scores

The four comparability aspects in columns (1) to (4) of Tables 3 and 4 were summed to form a Summary Comparability score for each KPI. For details of the computations refer to section 3.3. The Summary Comparability score is associated with the quantity of KPIs because of the way it is computed. Therefore it is useful to use the average score per KPI when comparing across categories, countries and sectors.

Table 5 shows the average Summary Comparability scores per KPI by country from highest to lowest. Row 6 indicates that on average less than one (0.69) type of comparator (prior year results, target, competitor score or other benchmark) is provided per KPI. Column 3 shows that companies from Australia rank second in terms of the amount of comparative information per KPI. Thus, while Australia was ranked second lowest in terms of the number of KPIs provided, for the KPIs that companies in Australia do provide, they rank second highest in terms of comparatives provided.

[insert Table 5 about here]

Table 6 shows the sector comparison of Summary Comparability scores per KPI showing similar amounts of comparative information per KPI across sectors. The Financial Services sector shows the most comparative information per KPI (0.80), followed by the Telecommunication Services (0.73) and Consumer Discretionary (0.70) sectors.

[insert Table 6 about here]

4.3 Breadth

Table 7 summarises the breadth scores for the 200 companies in 2016. Only three percent of companies disclosed KPIs in all seven categories. Column 3 shows a cumulative 43 percent of companies report on four or more categories which may be considered to provide a broad spectrum of KPIs for a user to assess the main non-financial performance areas relevant to a particular company.

[insert Table 7 about here]

The country analysis in Table 8 reveals that companies from Australia rank second lowest (after Canada) in terms of breadth of KPI disclosure, covering on average 2.4 categories. Companies from the UK cover the most non-financial KPI categories (averaging 4.6), followed by companies from Germany and Japan covering 3.1 KPI categories on average.

[insert Table 8 about here]

Sector analysis in Table 9 shows that the Materials sector scores highest in breadth (3.2), followed by Telecommunication Services and Consumer Discretionary.

[insert Table 9 about here]

5. Discussion and conclusions

The study highlighted the variety of non-financial KPIs disclosed in the narrative section of annual reports, reflecting a range of different formats and content. The number of KPIs, the amount of comparatives per KPI and breadth of KPIs presented differed by company, country and sector, making comparability challenging. The variation in disclosure between countries is likely to be influenced by national mandatory and voluntary reporting requirements, legislation, stock exchange listing requirements as well as social and economic factors. It is noted that both the UK and Germany have national guidelines for the narrative in annual reports (in addition to guidelines in the non-mandatory *IFRS Practice Statement 1: Management Commentary* (IASB, 2010)). The introduction of the Strategic Report requirements in the UK for periods ending on or after 30 September 2013 may have contributed to the higher number of non-financial KPIs found in the UK annual reports. German companies' high level of non-financial KPI reporting may be influenced by the German Accounting Standard (GAS) 20 for the group management report (2012). Australia currently has no similar country specific guidelines relating to the narrative section of annual reports.

Both the UK and Germany are likely to be influenced by the EU Commission's Non-financial Reporting Directive (2014). The Directive specifies requirements on disclosure of non-financial and diversity information in management reports[1] by large, public interest companies (EU Commission, 2014) and was transposed into national legislations by the 28 member states by December 2016, marking an important step in moving from a mostly

[1] Or separate report referenced in the management report.

voluntary to mandatory non-financial reporting regime. Included in the EU reporting requirements is disclosure of "non-financial key performance indicators relevant to the business" (GRI *et al.*, 2017). The EU Directive mandates categories for which companies need to provide disclosure at a minimum, yet it does not specify particular KPIs within the categories. The categories are environmental (including sub-categories), social and employee, respect for human rights, anti-corruption and bribery (GRI *et al.*, 2017). The Directive does not prescribe a particular reporting framework, instead suggesting that companies can rely on their choice of "national, EU-based or international reporting framework" (GRI *et al*., 2017). Although the Directive was not in effect in the data collection year, companies would have been aware of its imminent application, which may explain the higher number of KPIs in the UK and Germany.

It is acknowledged that relevant and material KPIs are likely to differ between sectors, resulting in the proliferation of industry specific sustainability reporting guidelines (such as the GRI industry supplements). However, the study pointed to the commonalties of relevance of many KPI categories across sectors, such as *Employee* and *Environment*. This suggests that sector differences need not confound the development of principles based non-financial reporting guidelines applicable across all sectors.

Based on the findings of this study the recommendations for companies disclosing non-financial KPIs in the narrative section of annual reports are summarised as follows:

- *Non-financial Policy statement*

  Disclose the company's approach to non-financial reporting including the reporting media used, the target audience, materiality considerations, reporting boundary decisions and measurement bases.
- *Presentation*

  Use headings such as "Non-financial performance indicators" and tabular format to increase clarity of disclosure for users.
- *Comparative information*

  Include the targets and prior year comparatives to allow the user to better interpret trends in performance. If a KPI is new, explain that this is why data is not presented for prior years. If a KPI is no longer relevant, state that a prior year KPI is no longer reported this year and give the reason why.

- *Use more sophisticated KPIs*

  Where possible use measures that increase comparability over time and companies, such as measures combining financial and non-financial aspects like carbon intensity ratios (tonnes of carbon emissions / revenue). These more sophisticated KPIs scale the non-financial performance measure (such as tonnes of carbon emissions) by a proxy for business activity (revenue), which enables more comparability across companies and within a company over time.
- *Explain why KPIs are presented*

  Give reasons why the company discloses the KPI and state if a KPI is presented in terms of legislation or regulations.
- *Question quantity versus quality*

  A balance needs to be reached between presenting multiple disjointed KPIs versus fewer but better explained KPIs. Focus on disclosing non-financial KPIs which link back to strategy and risks identified in other parts of the annual report.
- *Use graphical displays*

  Graphics may make it easier for the user to interpret trends over time.
- *Include externally generated non-financial KPIs*

  KPIs such as awards and inclusion in sustainability indices provide credibility to supplement internally generated measures.
- *Consider inclusion of non-financial KPIs in remuneration contracts*

  Inclusion of non-financial KPIs in remuneration contracts may demonstrate that non-financial performance is important to the company.
- *Obtain audit assurance*

  External assurance of non-financial KPI data may lend more credibility to KPIs.
- *Give balanced reporting*

  Provide balanced reporting by disclosing both positive and negative KPIs.

The study has highlighted the need for measures to increase comparability and hence usefulness of non-financial KPI reporting in the narrative section of annual reports. The great variety of formats, KPIs and the inconsistent disclosure of measurement bases and comparative information suggest a need for further, principles-based guidance concerning annual report narratives. The recommendations for companies disclosing KPIs above offer some ways to improve disclosures. Many of these recommendations are already incorporated

in the *IFRS Practice Statement 1: Management Commentary* and the UK Strategic Report requirements. However, the present variation in reporting suggests initiatives by standard setters and regulators need to be supported at a national level by preparers, users and other stakeholders to promote more adherence to best practice guidelines, thus leading to improvements in disclosure.

The specialised and evolving nature of various aspects of non-financial information means that it may be impossible for one global body to prescribe the full content of non-financial KPIs in the annual report. However, a global set of guiding principles from an umbrella organisation about basic principles, as recommended in this report, could lead to increased comparability and hence usefulness of non-financial KPI reporting in annual reports. In the absence of such global guidance, and given that Australia is currently lagging other countries in terms of the number and breadth of KPIs disclosed in the narrative of annual reports, the Australian Accounting Standards Board (AASB) may consider the development of national, principles based guidelines, as in the UK and Germany. Alternatively, it may be prudent and cost effective to instead contribute to the IASB's revision of the *IFRS Practice Statement 1: Management Commentary.* It remains to be seen whether the IASB will follow the EU Commission's mandatory approach by specifying headings under which companies need to disclose in the management commentary, or maintain a voluntary approach. Continued dialogue between mandatory and voluntary standard setters, institutions determining accreditations and sustainability indices, and other stakeholders is advocated to bring about increased streamlining, comparability and usefulness of non-financial KPI disclosure in annual reports over time.

The study has contributed to practice through its recommendations of best practice above. Further, it has provided empirical evidence of current practice to assist the AASB and IASB in their policymaking decisions relating to the revision *IFRS Practice Statement 1: Management Commentary.* Contributions have also been made to voluntary disclosure literature by concentrating on the characteristic of comparability in the non-financial reporting context. The focus on specifically defined non-financial KPIs differs from other studies considering non-financial information in general. The study has operationalised the analysis of comparability by considering measures at the KPI level (provision of comparators) and company level (number and breadth of KPIs). An efficient and effective data collection method has been developed for collecting KPIs from the narrative section of

annual reports, which contributes to the methodology used in voluntary reporting content analysis.

The current study has some limitations. The data collection method developed in the project has the possibility of certain non-financial KPIs not being captured. Further, it is acknowledged that there are other ways of scoring comparability, beyond the measures investigated in this study. In future research, the use of externally provided non-financial KPIs (in the *Awards and Indices* category) could be analysed in more depth, by researching the methods used by the external organisations to include companies in indices, awards and certifications. These externally provided measures may enable increased comparability of non-financial performance between and within companies. A further area for future study is exploring companies' choices regarding the medium used for non-financial KPI reporting, such as online, stand-alone sustainability reports and/or annual reports. Currently the use of various reporting mediums for non-financial performance may be hindering comparability.

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Appendix A: Principles of best (and worst) practice

This section provides insights into principles of best practice using examples from the data of this study. Practices hindering comparability of non-financial KPIs in annual reports are also highlighted.

Principles of best practice

a) Presentation

Use of section headings

The use of section headers such as "Non-financial key performance indicators" makes it easier for the user to locate and identify important non-financial KPIs.

Example: ANZ Ltd (Australia) (2016) have a specific section headed "Non-financial key performance metrics", which makes it clear which non-financial metrics are important to the company.

Use of tabular format and summaries

Some companies use a tabular format to present non-financial KPIs. Sometimes the table deals with separate categories, for example a table for *Environment* and another for *Community*. Other companies present a single table of non-financial KPIs. Summary tables covering multiple categories are useful because they show the user the range of KPI categories relevant to the company. Some companies provide a five year summary of non-financial KPIs.

Example: Potash Corporation of Saskatchewan Inc. (Canada) (2016) provides a clear and understandable tabular format. A summary table is presented directly after the financial data summary under the heading "Non-financial data". Clear subheadings are provided (customers, community, employees, safety and environment) and 11 years of data are presented. Footnotes are used to explain how KPIs are computed and terms are explained in a section denoted "Non-financial terms" (directly after "financial terms").

Non-financial KPIs presented together with financial performance sections

Presenting non-financial KPIs in close proximity to financial KPIs lends importance to the non-financial KPIs and assists the user in interpreting the non-financial KPIs within the context of the financial KPIs.

Example: Nomura Holdings Inc. (Japan) (2016) provide a five year summary of non-financial KPIs, in tabular format, after the financial summary, with a heading "CSR Key facts" and subheadings, with KPIs clearly showing the units and the definition of the KPIs. The table also shows which KPIs have undergone independent assurance.

b) Provision of comparatives

Many companies present current year KPIs with comparatives (such as prior year results and targets) which assists comparability across companies and years.

c) Inclusion of non-financial KPIs in remuneration contracts

Some companies explain how non-financial KPIs are used in the remuneration contracts, pointing to the importance to the company of managing these KPIs. However, in many instances there is a lack of detail about the KPIs in remuneration contracts, such as definitions and results.

Example: ANZ Ltd (Australia) (2016) state in the remuneration report section: "The Group uses a number of non-financial measures to assess performance. These metrics form part of the balanced scorecard used to measure performance in relation to the Group's main incentive programs."

d) Use of more sophisticated non-financial KPIs

Some companies use ratios to make the KPIs more relevant and trend analysis more understandable. This takes into account the effect of differences in size, such as size of company, level of production and number of employees. For example, the absolute amount of carbon emissions in isolation or as a trend over time is a simple measure. A more sophisticated and potentially more useful measure is "Carbon emissions intensity" which is the ratio of tonnes of carbon emissions to revenue. The intensity ratio takes into consideration that larger companies and greater operational activities (as proxied by revenue) are likely to be related to higher carbon emissions, enabling users to better interpret whether the company is improving their carbon emissions, given changes in the level of business activities. Another more useful KPI is the ratio of donations to profits, showing the portion of donations in relation to profit, providing the user with a more informative measure than the amount of donations in isolation.

Examples: AMC 2016

- Greenhouse gas emission intensity (ratio of GHG emissions divided by revenue)
- Energy consumption per unit of production

e) Use of externally generated KPIs

Some companies use external indicators to communicate their non-financial performance, for example in the *Awards and Indices* category. In the example from Compass 2016 below, the company presents the icons of various external organisations that they are members of (such as the Dow Jones Sustainability Indices) or support (such as the UN Global Compact).

Example: Compass 2016 (UK) p.32

f) Balance of favourable and unfavourable performance indicators

Some companies show balance in their reporting of both favourable and unfavourable performance which could generate more credibility with users and improve comparability over time.

Example: Volkswagen (2016) list the indices in which they are no longer included, compared to prior years before the emissions scandal (BBC, 2015); thus reporting practice is more balanced than if the company did not report on this KPI.

g) Conciseness

Some companies communicate their non-financial performance concisely whereas other companies report the same information in a less structured and more verbose style.

Example: ENBW Energie Baden-Wurttemberg AG (Germany) (2016) demonstrate conciseness by eliminating repetition and avoiding scattering KPIs throughout the text. In contrast, Lanxess AG (Germany) 2016 provide many high quality KPIs and useful summary tables, however there is much repetition of KPIs throughout the report.

h) Independent assurance

Some companies specify which KPIs are externally assured, giving further validity to the KPI.

i) Explaining the reasons for choosing non-financial KPIs disclosed

Some companies give the reason for the KPI disclosure, such as the relevant legislation or regulation in terms of which they are reporting. This adds context enabling the user to interpret the KPI.

Example: Deutche Bank Aktiengellschaft (2016) explain that their "percentage of women on the supervisory board is 35%" and go on to explain that "the statutory minimum of 30% pursuant to Section 96 (2) of the German Stock Corporation Act (AktG) is thereby fulfilled."

j) Balancing quality and quantity

A key issue is whether there is an optimal relationship between quantity and quality of KPIs. For example, if a company discloses 50 non-financial KPIs, are they providing more or less useful information than a company that only reports on five KPIs which are used to manage their operations, such as through their use as targets in remuneration contracts? For example, Puma (2016) present a vast number of non-financial KPIs, including an innovative environmental profit and loss statement, but do not use any of these measures directly in their remuneration report performance measures.

k) Providing performance measures not aspirations

Many companies explain their values, aspirations and targets in relation to non-financial KPIs without actually presenting results using measurable KPIs. In best practice examples, the results of non-financial KPIs are clearly disclosed and the intention of the measure is discussed along with its relevance to tracking performance.

Impediments to greater comparability

In addition to the principles of effective disclosure noted above, there are several issues which limit comparability:

- *Different names for the same KPIs*

  Some similar non-financial KPIs are called different names by different companies making comparability more difficult.

- *Subtle differences in KPIs*

  Some KPIs are similar but not the same between companies. For example, while Company A and Company B may both give KPIs relating to the age of employees, Company A may use “Under 30 years old” while Company B may use “Under 29 years old”. These subtle differences make intercompany comparisons more difficult.

- *Diverse measurement bases and reporting boundaries*

  Some companies explain measurement bases and state the companies within the group included in the computation of non-financial KPIs. In other cases companies do not disclose the measurement bases nor reporting boundaries used.

Tables

Table 1: Summary of the number of non-financial KPIs by category and country (2016)

	Country (1)	Business and Innovation (2)	Community and Social (3)	Customer (4)	Employee (5)	Environment (6)	Supply chain management (7)	Awards and Indices (8)	Total KPIs (9)	Average number of KPIs per company (10)
1	UK	20	97	62	656	457	37	117	1,446	36
2	Germany	50	78	20	626	405	100	84	1,363	34
3	Japan	16	98	57	260	272	26	82	811	20
4	**Australia**	**4**	**36**	**25**	**185**	**116**	**15**	**59**	**440**	**11**
5	Canada	1	31	9	100	44	8	72	265	7
6	Total	91	340	173	1,827	1,294	186	414	4,325	22
7	Category ranking	7	4	6	1	2	5	3		
8	Category percentage	2%	8%	4%	42%	30%	4%	10%		

Table 2: Summary of the average number of non-financial KPIs per company by category and sector (2016)

Sector (1)	Business and Innovation KPIs per company (2)	Community and Social KPIs per company (3)	Customer KPIs per company (4)	Employee KPIs per company (5)	Environment KPIs per company (6)	Supply chain management KPIs per company (7)	Awards and Indices KPIs per company (8)	Total KPIs (9)	Number of companies (10)	Average number of KPIs per company (11)
Materials	1	2	0	14	11	1	3	1,496	46	33
Utilities	0	1	1	10	8	0	1	783	36	22
Consumer Discretionary	1	1	0	7	7	2	2	938	47	20
Financial Services	0	3	2	8	2	0	3	758	45	17
Telecommunication Services	0	2	1	6	3	0	2	350	26	13
Total								4,325	200	22

Table 3: Summary of percentages of KPIs disclosed with comparators by country (2016)

	Country	Prior year results provided (1)	Target provided (2)	Competitor score provided (3)	Other benchmark provided (4)
1	**Australia**	**28%**	**24%**	**0%**	**17%**
2	Canada	17%	17%	1%	29%
3	Germany	41%	17%	0%	7%
4	Japan	48%	20%	0%	13%
5	UK	39%	16%	0%	10%
6	Total	39%	18%	0%	12%

Table 4: Summary of percentages of KPIs disclosed with comparators by sector (2016)

Sector	Prior year results provided (1)	Target provided (2)	Competitor score provided (3)	Other benchmark provided (4)
Consumer Discretionary	38%	19%	0%	12%
Financial Services	41%	19%	0%	21%
Materials	36%	19%	0%	10%
Telecommunication Services	40%	20%	1%	13%
Utilities	45%	14%	0%	5%
Total	39%	18%	0%	12%

Table 5: Analysis of average Summary Comparability scores per KPI by country (2016)

	Country	Summary comparability score total (1)	Number of non-financial KPIs (2)	Average Summary Comparability score per KPI (3) = (1)/(2)
1	Japan	654	811	0.81
2	**Australia**	**306**	**440**	**0.70**
3	Germany	907	1363	0.67
4	UK	953	1446	0.66
5	Canada	170	265	0.64
6	Total	2,990	4,325	0.69

Table 6: Analysis of average Summary Comparability scores per KPI by sector (2016)

Sector	Summary comparability score total (1)	Number of non-financial KPIs (2)	Average Summary Comparability score per KPI (3) = (1)/(2)
Financial Services	609	758	0.80
Telecommunication Services	257	350	0.73
Consumer Discretionary	657	938	0.70
Materials	969	1,496	0.65
Utilities	498	783	0.64
Total	2,990	4,325	0.69

Table 7: Breadth of disclosure across non-financial KPI categories (2016)

Number of categories covered (0-7) (1)	% companies (2)	Cumulative percent (3)
7	3%	3%
6	10%	13%
5	12%	25%
4	18%	43%
3	12%	55%
2	16%	71%
1	13%	84%
0	16%	100%

Table 8: Average breadth score per company by country (2016)

Country	Average breadth score per company (out of 7 categories)
UK	4.6
Germany	3.1
Japan	3.1
Australia	**2.4**
Canada	1.5
Total	2.9

Table 9: Average breadth score per company by sector (2016)

Sector	Average breadth score per company (out of 7 categories)
Materials	3.2
Telecommunication services	3.1
Consumer Discretionary	2.9
Financial Services	2.8
Utilities	2.6
Total	2.9