Check for updates

Received: 23 April 2022 | Revised: 6 June 2022 | Accepted: 7 June 2022

DOI: 10.1002/jcaf.22577

The Journal of Corporate Accounting & Finance WILEY

RESEARCH ARTICLE

A qualitative analysis of bank credit risk disclosure: Evidence from the Canadian and Italian banking sectors

Kaouthar Lajili[1] | Sana Mohsni[2] | Salvatore Polizzi[3] | Enzo Scannella[3]

[1]Telfer School of Management, University of Ottawa, Ottawa, Canada

[2]Sprott School of Business, Carleton University, Ottawa, Canada

[3]Department of Economics, Business & Statistics, University of Palermo, Palermo, Italy

Correspondence
Salvatore Polizzi, University of Palermo, Palermo, Italy.
Email: Salvatore.Polizzi@unipa.it

Funding information
Telfer School of Management, University of Ottawa

Abstract

This paper aims to analyze bank credit risk disclosure practices in two different geographical contexts characterized by a homogeneous regulatory framework (Canada and Italy), by means of a qualitative content analysis methodology. We employ an innovative approach, which allows us to investigate both the qualitative and quantitative profiles of disclosures. Unlike an entirely quantitative approach, this comprehensive methodology allows us to analyze in depth the disclosure practices of Canadian and Italian banks and detect their commonalities, differences, points of strength, and weaknesses. Our results show that although there are some variations in the disclosure practices of Canadian and Italian banks, the quality of their disclosures is not significantly different. Among the most relevant differences, it emerges that while Italian banks provide more comprehensive disclosures, Canadian banks offer a more holistic view on credit risk. We contribute to the scant literature on credit risk disclosure by identifying room for improvement for both Canadian and Italian banks.

KEYWORDS
banking, Canadian banks, credit risk, disclosure, Italian banks

1 | INTRODUCTION

In an open economy, bank credit risk disclosure is important because it reduces the cost of capital (Barth & Schipper, 2008; Botosan, 1997), serves as an external mechanism to monitor the behavior of bank managers (Eng & Mak, 2003; Ratnovski, 2013), and supports investors in measuring bank and managerial performance (Bisoni et al., 2012; Nadotti, 2004; Rutigliano, 2020; Tutino et al., 2005). The quality of bank risk disclosure, especially that of credit risk, is fundamental as credit risk strongly affects the stability and profitability of commercial banks (Sironi & Resti, 2008; Tutino, 2015). Besides, well-functioning financial markets and adequate investor protection require a transparent banking sector with high disclosure quality and low information asymmetry (Dell'Atti & Labini, 2014). Therefore, better understanding banks' credit risk disclosure practices is crucial for a better assessment of a country's banking sector and the level of protection a banking system offers to its customers. In this paper, we use a mixed qualitative and quantitative content analysis to examine bank credit risk disclosure practices in two different geographical regions (Canada and Italy), characterized by a homogeneous regulatory framework but different supervisory regimes.

Over the last decades, the literature on risk disclosure in the banking industry has gained popularity and momentum (Barakat & Hussainey, 2013; Frolov, 2006;

This is an open access article under the terms of the Creative Commons Attribution License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.
© 2022 The Authors. *Journal of Corporate Accounting & Finance* published by Wiley Periodicals LLC.

10970053, 2022, 4, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/jcaf.22577 by University Degli Studi Di Palermo, Wiley Online Library on [18/10/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Polizzi, 2022), and it currently offers various quantitative frameworks within the content analysis methodology (see Krippendorf, 2004) to examine different aspects of risk disclosures. These include the use of binary indicators to capture the presence or absence of specific pieces of disclosure (Nahar et al., 2016; Woods et al., 2008); the use of disclosure dictionaries to count the occurrences of specific words (Altunbaş et al., 2022; De Andrés et al., 2021; Farina et al., 2019; Loughran & McDonald, 2011; Samanta & Dugal, 2016); and the analysis of graphical reporting (Jones et al., 2018). Despite its relevance in providing an in-depth analysis of different aspects of banking disclosures, qualitative content analysis is not widely employed within this literature, and outside of a few exceptions including Höring and Gründl (2011) and Scannella and Polizzi (2018, 2021), qualitative content analysis has rarely been used to examine this topic. We intend to fill this gap.

The risk disclosure literature has focused on various types of disclosures, including not only the disclosure on banking risks (Birindelli & Ferretti, 2017; Drago & Mazzucca, 2005; Malinconico, 2007), but also that on various emerging topics including information technology (Panetta et al., 2019), intellectual capital (Birindelli et al., 2020), and corporate social responsibility (Carnevale & Mazzuca, 2012). Surprisingly, the literature that focuses specifically on the disclosure on credit risk is particularly scant, although it is considered as the most important type of risk for commercial banks. Among the few contributions, we mention Frolov (2006) who focuses on the Japanese banking industry, and Scannella and Polizzi (2019, 2021), who focus on a sample of Italian banks, motivated by the features of the national supervisory enforcement regime.

In this paper, we employ an extended version of the comprehensive approach proposed by Scannella and Polizzi (2021) which allows us to assess both the qualitative and quantitative aspects of banks' credit risk disclosures. Unlike purely quantitative approaches, this mixed approach enables us to provide an in-depth analysis of the disclosure practices of Canadian and Italian banks, detect the differences between the two styles/models of disclosure, determine their strengths and weaknesses, and understand how each style can improve and develop.

We focus on the Canadian and Italian banking sectors since they are subject to a harmonized regulatory framework, making their disclosures comparable and suited for a qualitative content analysis. In this regard, it is important to remark that content analysis methodologies are powerful techniques to conduct comparative analyses of disclosures, if the documents being examined are not too different from each other and provided for the same purposes (i.e., to inform current and potential investors). In both countries, a small number of banks controls the sector, and therefore by focusing on the disclosure practices of a relatively small number of banks, we develop an overview of the disclosure practices of the sector overall. While the Canadian banking sector has traditionally been highly concentrated,[1] the Italian banking sector concentration has recently increased following a wave of mergers between Italian banks to create large financial institutions.[2] One major difference between the two countries is that the Canadian regulators, namely the Office of the Superintendent of the Financial Institutions (OSFI) and the Central Bank of Canada, adopt a non-interventionist approach and do not impose specific formats banks have to follow to comply with the international IAS/IFRS requirements; whereas the Bank of Italy adopts an interventionist regime and provides detailed formats banks must follow in the preparation of their financial reporting in accordance with IAS/IFRS, leaving less room for bank discretionary disclosure decisions (Bischof, 2009; Dell'Atti, 2009; Rutigliano, 2016; Tutino, 2019).

We offer several contributions to the literature. First, we add to the credit risk disclosure literature by using a comprehensive qualitative content analysis to better understand the disclosure practices of large banks. Second, to our knowledge, this is the first paper that produces a comparative analysis of the credit risk disclosure practices of Canadian and Italian banks. Comparative disclosure practices of different countries are rarely examined (see for instance, Dobler et al., 2011; Linsley et al., 2006; Grassa et al., 2021), particularly the risk disclosure practice using qualitative content analysis. Third, we compare the differences in disclosure practices of banks operating in two different supervisory enforcement regimes that could significantly impact the ways banks provide information to the public by means of their annual financial reports (Bischof, 2009).

The remainder of the paper is organized as follows: Section 2 describes the content analysis methodology and the sample of banks examined; Section 3 shows the detailed results of the empirical analysis; Section 4 discusses the results and Section 5 concludes.

2 | METHODOLOGY

In this section, we explain the methodology adopted to analyze the credit risk disclosure of the Canadian and Italian banking sectors. We use an extended version of the content analysis methodology proposed by Scannella and Polizzi (2021), which we tailor to fit the credit risk disclosure requirements of large banks with consolidated financial statements prepared in accordance with IAS/IFRS. The content analysis is carried out by

10970053, 2022, 4, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/jcaf.22577 by University Degli Studi Di Palermo, Wiley Online Library on [18/10/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

10970053, 2022, 4, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/jcaf.22577 by University Degli Studi Di Palermo, Wiley Online Library on [18/10/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 1 First section of the metric

SECTION 1 - Definitions
Credit risk definition
Expected loan loss definition
Unexpected loan loss definition
Credit risk components definition (PD, LGD, EAD)
Credit risk weighted assets definition
Back testing definition
Non-performing loans definition
SECTION 2 – Calculations and limitations
Amount of expected loan loss
Amount of unexpected loan loss
Amount of credit risk weighted assets
Limitations of expected loan loss calculation
Limitations of unexpected loan loss calculation
Limitations of internal credit rating system
Limitations of loan loss provisioning methodologies
Potential credit risk exposures (*on-balance sheet*)
Potential credit risk exposures (*off-balance sheet*)
SECTION 3 – Explanations
Explanation of expected loan loss models used
Explanation of unexpected loan loss models used
Explanation of provisioning for loan losses
Explanation of credit risk weighted assets calculation
Explanation of back testing models used
Qualitative disclosure on non-performing loans portfolio
Explanation of credit risk mitigation/transfer instruments
SECTION 4 – Other key disclosure parameters
Presence of graphs about expected and unexpected loan loss
Stress testing explanations
Stress testing results
Credit risk aggregation reported
Risk-adjusted performance indicators
Credit risk exposure limits and tolerance
Scenario analysis

means of a scoring model which draws on the methodological framework described by Krippendorff (2004). We employ this approach to examine the following disclosure reports: the notes to the consolidated financial statements; the Management Discussion and Analysis (MD&A) reports/management commentaries; and the pillar 3 disclosure report. The metric developed using this approach is split into two parts.

The first part of the metric (see Table 1) represents an array of disclosure indicators grouped under four sections and subject to a binary and objective valuation method. These indicators include: the definition of credit risk and its components, the calculation of loan losses and their limitations, the provisioning of loan losses and loan loss models used, and the presence of other key disclosure parameters. We assign a score of 1 when banks provide the information represented by the indicator, and 0 otherwise. This binary disclosure part of the metric is entirely objective and captures the presence or not of specific pieces of information, and therefore is not affected by the subjective evaluation of the researchers. The second part of the metric (see Table 2) is divided in 11 sections that relate to different aspects of credit risk as they relate to credit risk management strategies, credit risk components, exposure, mitigation and transfer instruments, loan loss and measurement models, credit rating disclosure items and capital requirements. Unlike the first part of the metric, the evaluation of the items in each section is judgment-based. Specifically, we assign a score from 0 to 5 for each item, according to four qualitative characteristics of the "Conceptual Framework for Financial Reporting" of the International Accounting Standard Board. These are: relevance, understandability, comparability, and reliability. A score of 0 means that the information provided on the item represented by the disclosure parameter is entirely inadequate or that no information is provided. A score of 5 means that the disclosure is fully informative for the users of the reports. To ease the interpretability of the empirical results, equal weights are assigned to all sections of the scoring rule. Our final credit risk disclosure index is equal to the sum of section one and section two of the metric developed, rescaled on a 0 to 100-point scale.

Although, the analysis of the first part of the metric is objective, this part of the metric cannot capture several qualitative aspects related to credit risk disclosure. The second part of the metric is affected by the subjective evaluation of the research analyst (Krippendorff, 2004), but captures numerous aspects that cannot be examined by means of binary indicators. Given that the concepts of disclosure quantity and disclosure quality are totally different (Beretta & Bozzolan, 2008), the qualitative approach of the second part of the scoring rule is crucial to examining various aspects of disclosure that would be otherwise overlooked.

To ensure that the scoring rule has been applied consistently in the time-series and cross-sectional dimensions of the sample, the authors and a research assistant independently analyzed overlapping samples of disclosure reports. In case of disagreement, the scores to be assigned to each bank in each year have been decided by assigning a disclosure index decided by the majority of the authors, after a detailed discussion of the reasons why different scores were previously attributed.

In line with previous studies (Polizzi & Scannella, 2020), and to enhance the replicability and reliability of our empirical analysis and strengthen the analysis across time and across series, we adopt a methodological expedient.

TABLE 2 Second section of the metric

SECTION A - Key aspects of credit risk management in banking
Explanation of credit risk management strategies
Explanation of credit risk management goals, procedures, processes, and policies
Explanation of credit risk measurements
Explanation of credit risk control systems
SECTION B - Credit risk management decision disclosure
Information on credit risk assumption and retention
Information on credit risk prevention and protection
Information on credit risk transfer
Information on credit risk elimination and avoidance
SECTION C - Credit risk components
Insolvency risk
Migration risk
Recovery risk
SECTION D - Information on credit risk exposures
Current credit risk exposures (on-balance sheet)
Potential credit risk exposures (on-balance sheet)
Current credit risk exposures (off-balance sheet)
Potential credit risk exposures (off-balance sheet)
Accuracy of potential credit risk exposures assessment
SECTION E – Loan losses and measurement models
Credit risk: expected loss
Credit risk: unexpected loss
Measurement models for expected loss
Measurement models for unexpected loss
Model risk
SECTION F – Credit risk mitigation/transfer instruments
Information on collateral
Information on personal guarantees
Information on insurance contracts
Information on credit derivatives
Information on loan securitization
SECTION G – Other key elements of bank credit risk
Provisioning for loan losses
Analysis of non-performing loans
Information on specialized lending
Credit risk: balance sheet ratios
SECTION H - Bank loan portfolio disclosure
Loan portfolio composition
Loan portfolio correlation
Loan portfolio concentration
Credit risk aggregation and methodologies
SECTION I - Credit rating disclosure issues
Information on internal/external credit rating
Rating assignment
Rating quantification
Rating validation
Information on accuracy of internal credit rating models
Implications of internal credit rating for bank management
SECTION L - Bank credit risk capital requirements disclosure
Credit risk-weighted assets (on- and off-balance sheet)
Measurement models for credit risk capital requirements
Capital adequacy for credit risk (regulatory perspective)
Economic capital for credit risk (internal and managerial perspective)
SECTION M - General credit risk disclosure issues
Backward-looking information on bank credit risk
Forward-looking information on bank credit risk
Provision of an integrated perspective on bank credit risk
SECTION N - Qualitative evaluation of binary indicators
Quality of definitions (section 1)
Quality of calculations and limitations (section 2)
Quality of Explanations (section 3)
Quality of other key disclosure parameters (section 4)

This expedient consists of the following steps. First, we start by evaluating the reports provided by Unicredit in 2012. These reports are considered the internal benchmark of the evaluation process. Past research has indicated that the size of the bank and the extent of its disclosure are positively related (Woods et al., 2008). Consequently, we use the largest Italian bank as the main benchmark for the assignment of the disclosure scores.[3] Second, we analyze the 2012 disclosure of all other banks within our sample using Unicredit 2012 as a point of reference. Third, we accomplish the year-to-year disclosure analysis for the period 2013–2020 by using the bank's previous year disclosure as a reference point.

2.1 | Sample

Our sample consists of all (nine) publicly listed Italian banks analyzed in Scannella and Polizzi (2021) and all (eight) publicly traded Canadian banks. These banks represent a significant portion of the industry's total assets in each country (approximately 94% for the eight Canadian banks and 66% for the nine Italian banks in 2020).[4] Table 3 provides more detailed information about the sample. Our study covers the period 2012–2020. This decision was motivated by two reasons: first, the Canadian and Italian banks became more prone to comparison following the year 2012 enforcement of IAS/IFRS regulation in Canada. In Italy, such enforcement dates back to 2005. Second, given the lack of bank transparency which was considered

10970053, 2022, 4, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/jcaf.22577 by University Degli Studi Di Palermo, Wiley Online Library on [18/10/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

10970053, 2022, 4, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/jcaf.22577 by University Degli Studi Di Palermo, Wiley Online Library on [18/10/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 3 Sample

Company name	Total assets 2020
Data in thousand euro	
Italian banks	
INTESA SANPAOLO	1,002,614
UNICREDIT SPA	931,456
BANCO BPM SPA[a]	183,685
BANCA MONTE DEI PASCHI DI SIENA SPA	150,356
UNIONE DI BANCHE ITALIANE SPA	131,320
BANCA NAZIONALE DEL LAVORO SPA	95,896
MEDIOBANCA SPA[b]	78,949
BPER BANCA SPA	93,062
BANCA POPOLARE DI MILANO*	51,131
Canadian banks	
TORONTO DOMINION BANK	2,667,998
ROYAL BANK of CANADA	2,059,540
BANK of NOVA SCOTIA (THE) – SCOTIABANK	1,767,091
BANK of MONTREAL	949,259
CANADIAN IMPERIAL BANK of COMMERCE	1,143,617
NATIONAL BANK of CANADA	515,644
LAURENTIAN BANK	68,675
CANADIAN WESTERN BANK	52,770

[a]In January 1, 2017, the two former banks Banco Popolare and Banca Popolare di Milano merged to become Banco BPM. The total asset figure of Banca Popolare di Milano refers to 2016.
[b]Financial statement of Mediobanca as at June 30, 2020.

among the most important causes of the 2008 financial crisis, (Fortuna, 2010; Gorton, 2009; Sowerbutts et al., 2013), we decided to exclude this period from our sample.

We compare the disclosure of the listed banks in Canada and Italy for several reasons. Firstly, the two countries are characterized by different bank supervisory regimes (Maffei et al., 2014). Specifically, the national regulator in Italy (Bank of Italy) adopts the so called "interventionist" or "rule-based" enforcement regime, where the regulator (or the supervisor) provides specific norms and prescriptions that financial institutions are required to use in their disclosures (Bischof, 2009). On the other hand, Canadian banks are subject to a non-interventionist supervisory regime. Thus, the guidelines proposed by national regulators (OSFI and Bank of Canada) are more flexible and less detailed, and consequently banks have more room to select the disclosure models they deem most appropriate. Secondly, while the methodological approach used here has been employed to study European (Scannella & Polizzi, 2018) and Italian (Scannella, 2018, 2019) financial institutions, it has never been used to examine the disclosure of banks outside the European Union. Even though past literature investigates the disclosure practices of Canadian banks (Linsley et al., 2006), the content analysis methodologies adopted consider only binary indicators that cannot analyze some important qualitative aspects, and are therefore limited in terms of completeness and informativeness. The comparison between Canadian and Italian banks is particularly interesting as these two countries are characterized by a harmonized regulatory framework and an advanced level of disclosure (Baginski et al., 2002; Lajili & Zéghal, 2005; Linsley et al., 2006; Maffei, 2017), and although the sample used is not very large, the methodological approach adopted allows us to analyze bank disclosure practices with high precision and to enrich our understanding of the drivers of such disclosures across banks, countries, and over time.

3 | RESULTS OF THE QUALITATIVE CONTENT ANALYSIS OF BANK CREDIT RISK DISCLOSURES

Figure 1 shows the overall results of the disclosure scores of the banks of the sample.

It emerges that, although some banks are better than others, all of them tend to improve over the considered period of time. Unicredit is the bank that got the highest score (almost 75/100 at the end of the sample period), whilst the best Canadian bank is the Royal Bank of Canada, which is only slightly below the level reached by Unicredit.

From the comparison of the aggregated disclosure indices at country levels (see Figure 2), it emerges that the average disclosure index of Canadian and Italian banks is not significantly different, and in particular it is slightly higher for Canadian banks at the beginning of the time horizon, whilst the scores of the Italian banks are slightly higher toward the end of the sample period.

Although the overall results are similar between Canadian and Italian banks, there are significant differences which emerged from the qualitative content analysis. One of the most evident aspects is that Italian banks provide more comprehensive disclosure and higher amounts of information, while Canadian banks offer a more holistic perspective on credit risk. This is what clearly emerges from Figure 3, which shows the average total number of pages of the three reports analyzed for Canadian and Italian banks.

Figure 3 shows that the overall quantity of information provided by Italian banks is significantly higher, while Canadian banks provide less pages of disclosures. However, because of the holistic perspective of bank credit risk exposure and management offered by Canadian banks, the

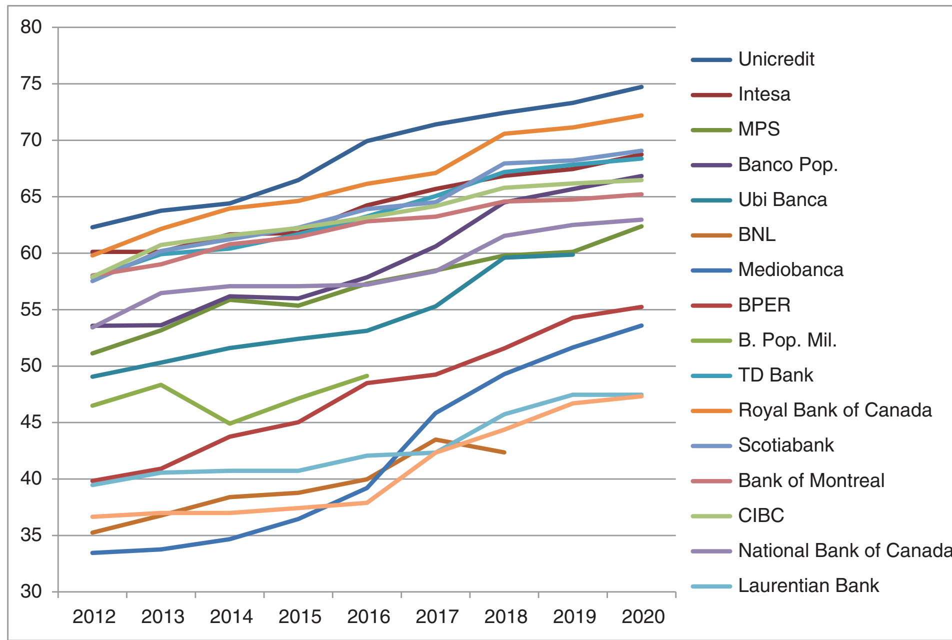

FIGURE 1 Results of the credit risk disclosure scores

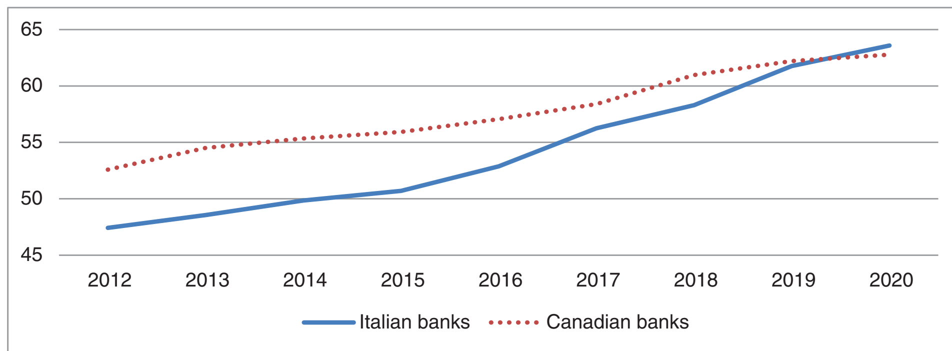

FIGURE 2 Average disclosure indexes for Italian and Canadian banks

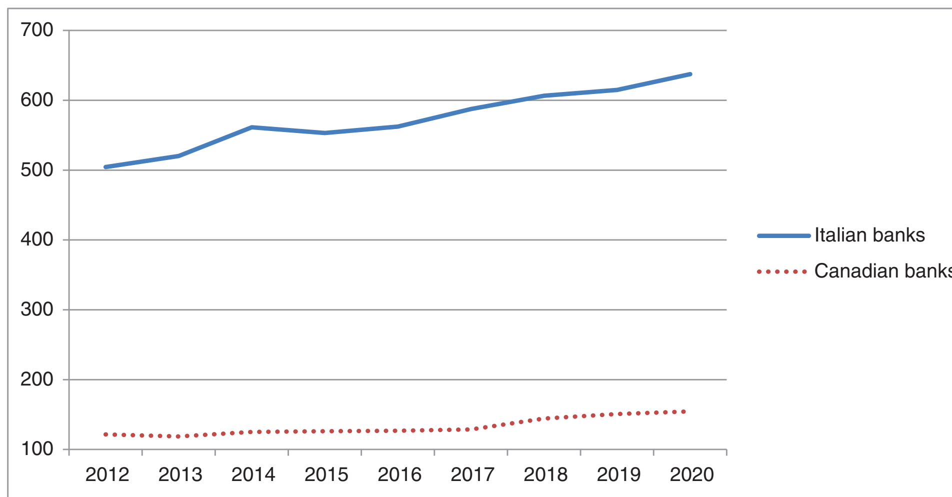

FIGURE 3 Average total number of pages of the three reports analyzed (aggregated by country)

10970053, 2022, 4, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/jcaf.22577 by University Degli Studi Di Palermo, Wiley Online Library on [18/10/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

10970053, 2022, 4, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/jcaf.22577 by University Degli Studi Di Palermo, Wiley Online Library on [18/10/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

overall results of the disclosure scores are not significantly different from those of the Italian banks.

Another noteworthy difference is related to the fact that most Canadian banks (six out of eight) do not publish any pillar 3 disclosure report. The lack of this document negatively affects the results of the section L of the metric (Bank credit risk capital requirements disclosure). Hence, the publication of this document represents an important area for improvement for Canadian banks.

The next sections provide the detailed results of the qualitative content analysis of each bank of the sample. Section 3.1 focuses on Canadian banks, while Section 3.2 analyzes Italian banks.

3.1 | Canadian banks

3.1.1 | Toronto dominion bank

Throughout the sample period, the amount of information provided by Toronto Dominion Bank is much less in comparison to Unicredit. The sections of the notes are different (there is no Section E - Information on risks and related risk management policies, which is present in all Italian banks' notes). In line with the majority of Canadian banks, Toronto Dominion Bank does not provide any pillar 3 report neither within the annual report nor as a standalone document. The lack of this document impacts the overall evaluation.

In 2012, and from the beginning of the annual report, a forward-looking perspective is noted (paragraph "focused on the future" and "looking ahead"). This bank provides numerous overview sections that enhance the overall readability. However, the level of details is much lower than the benchmark of the evaluation process (Unicredit 2012). The MD&A is more developed in comparison to Unicredit. Overall, for Toronto Dominion banks and also for the other Canadian banks, the MD&A represents the most important document when it comes to risk disclosure. The MD&A is mainly qualitative in nature, but it is more detailed than that of Unicredit. The information on the economic capital is much less detailed and narrative in comparison to that of the regulatory capital, which is however scarcer in comparison to Unicredit. While Unicredit is more focused on the most traditional types of risk, Toronto Dominion Bank takes more into account other types of risk such as strategic risk, regulatory risk, reputational risk, environmental risk, and their relationships with credit risk. The presence of the glossary enhances the readability. However, it is not very developed, and not really focused on credit risk. The information on the provision for credit losses is mainly quantitative, with poor narrative explanations. Although the information on credit risk transfer is not as detailed as that provided by Unicredit in terms of securitization, the information on credit risk transfer is comparable to that of Unicredit. The section Credit Portfolio Quality is very useful for understanding the information on the composition of the loan portfolio. Overall, this kind of information is in line with that of Unicredit. The information on internal and external rating is less detailed from both qualitative and quantitative viewpoints. Especially the one on internal rating is poor (also in this case affected by the absence of the pillar 3 disclosure report). The evaluation of section L (Bank credit risk capital requirements disclosure) is affected by the lack of several pieces of information which are usually reported by Italian banks in the pillar 3 disclosure report. Overall, the difference between backward looking and forward-looking disclosure is less evident for Toronto Dominion Bank in comparison to Italian banks, though it is still present. The information is generally presented in a clearer way, but the level of details is lower. An important point of strength is the MD&A that provides several qualitative and narrative information. This document is much better than that provided by Italian banks. As for the notes, the level of details is low. In general, the quantitative information is worse than that of Unicredit. The lack of the pillar 3 disclosure report has a significant impact in the final evaluation. However, the complementarity of the MD&A and the notes improves the integrated perspective of Toronto Dominion bank's disclosure.

In 2013, the disclosure is approximately the same as that of 2012 (several sections are almost identical). The information on the calculation of expected loss, that of the internal rating models and that of the credit risk components have improved. See for instance table 53 "Retail Advanced IRB Exposures." The limitations of their VaR methodologies have now been explained as follows "VaR is a valuable risk measure but it should be used in the context of its limitations, for example: VaR uses historical data to estimate future events, which limits its forecasting abilities; it does not provide information on losses beyond the selected confidence level; and it assumes that all positions can be liquidated during the holding period used for VaR calculation." There is an entire new section about "Model Risk Management." The disclosure on this aspect has significantly improved, although there is still no quantitative information.

In 2014, the number of pages has increased (almost 10% more pages). Surprisingly, there is less information about some credit risk determinants (Probability of Default, PD and Loss Given Defauls, LGD). This aspect negatively affects various parts of the metric. There is more information about Risk Weighted Assets (RWAs), especially with reference to credit value adjustment (CVA). The information on correlation is slightly

improved because of additional information on fair value measurement.

In 2015, the structure of the annual report has slightly changed. The section "Principal Subsidiaries" has been eliminated. However, the information missing in comparison to the previous year is not related to credit risk. The glossary is extended in comparison to that of the previous year. It includes explanation of new terms related to credit risk such as Credit Value Adjusted (CVA), Enhanced Disclosure Task Force (EDTF), etc. (which were previously defined only in the notes), etc. The information on IFRS 9 is improved in comparison to that of the previous year. Although they state that "The Bank is currently assessing the technology requirements for tracking credit migration under the new ECL model as well as the impact on risk parameters and credit risk modelling processes," the information on migration risk has not yet been improved.

In 2016, both the structure and the number of pages are exactly the same as the previous year. The additional information provided to explain the regulatory changes in general and IFRS 9 specifically, induce the bank to disclose more about credit risk components. The information on risk weighted assets is slightly improved. See for instance the paragraph "Capital Position and Capital Ratios" which is now extended. The model risk is now part of the "Major risk categories" described in the annual report.[5]

In 2017, the information on credit risk management strategy is slightly improved. See for instance the revised section "TD Framework and Strategy." The bank has now implemented the new ECL model. The information on some quantitative aspects of the migration risk is improved. See for instance the revised version of the paragraph "IFRS 9 Impairment Program." Also in this case, the information is very similar to that of the previous year.

In 2018, the structure of the annual report has changed in comparison to that of the previous year. However, the change of structure is not accompanied by a radical change on credit risk disclosure. The new table named "Forward-Looking Information" provides some useful information on the computation of the expected credit losses and in general on credit risk measurement. The main improvement compared to the previous year are mainly related to the expected credit loss model, which is related to IFRS 9.

In 2019, in line with other banks, various disclosures related to IFRS 9 have been eliminated. However, this aspect does not significantly impact the results of the metric. There is additional information on migration risk, from both a narrative and a quantitative viewpoint (mostly related to provisions for credit losses). There are also additional explanations on the relationship between expected credit losses and allowances.

In 2020, there are various disclosures related to the COVID-19 pandemic. The most important pieces of information related to the pandemic are the following: strategic response of the bank; impacts on balance sheet and income statement; response from regulators; macroeconomic environment; impact on the measurement of expected credit losses; deferral options for residential mortgages. There is additional information on internal ratings, especially from a methodological viewpoint.[6] Overall, the results of the metric are just slightly improved compared to the previous year.

3.1.2 | Royal Bank of Canada

The amount of information provided by this bank is also less in comparison to Unicredit. All information is reported in one single document (the annual report) which is divided into MD&A and financial statement. Similarly, it is not possible to clearly identify a pillar 3 disclosure report. The lack of this document significantly affects the final evaluation of its credit risk disclosure. However, the two documents provided by this bank are less overlapping in comparison to Unicredit. This aspect is important to enhance the comprehensibility of credit risk disclosure. The MD&A is more quantitative in nature in comparison to that of Toronto Dominion Bank. Also in this case, this is the most important document for credit risk disclosure. In 2012, the information provided in the notes is mostly quantitative, while narrative explanations are scarcer. The presence of a quite detailed glossary only partially compensates for the lack of detailed narrative disclosures. The information on credit risk components is mostly quantitative. Although several aspects of the first part of the metric are present, the information is not very detailed. The bias towards quantitative disclosure is even more evident for the disclosure on NPLs and impaired loans. Royal Bank of Canada provides a useful table that compares their internal rating scores with those of external rating agencies (internal ratings map). The information on the provisioning for credit losses is mostly quantitative. In contrast, the information on stress test is mostly narrative, without any explanation of the results of this methodology.[7] The information on risk tolerances and limits is clearer and more developed in comparison to Unicredit (see for instance the paragraph "Risk framework"). The quantitative disclosure provided, and several tables of expected and unexpected loss influence the evaluation of the section "SECTION E – Loan losses and measurement models" of the metric. However, the information is not better than that of Unicredit for any disclosure category of this section. The only exception is model risk. In this case, there is almost no information (just briefly mentioned in the paragraph "Validation of measurement models"). Also, for this bank the information on regulatory capital is much more

10970053, 2022, 4, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/jcaf.22577 by University Degli Studi Di Palermo, Wiley Online Library on [18/10/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

complete than that on economic capital. However, in terms of regulatory capital, the information is less detailed in comparison to Unicredit, whilst the disclosure on the economic capital is slightly better. The provision of an integrated perspective is better than that of Unicredit, because, using a much smaller number of pages, this bank provides a credit risk disclosure which is only slightly worse than that of Unicredit. Another important aspect to notice is that its disclosure is more readable than Unicredit, although it is undoubtedly less complete. This bank would benefit from more narrative disclosures.

In 2013, the new section "Risk in the context of our business activities" provides a useful overview of the risk of each business area of the bank and on risk management strategy. The disclosure on RWA has improved.[8] Overall, there are some improvements in 2013 in comparison to the disclosure of the previous year, especially for backward looking information.

In 2014, the overall amount of information on credit risk has increased. The information on counterparty credit risk is more detailed.[9] The information on stress testing is more detailed (see the extended "stress testing" paragraph), although stress test results are not provided. The new paragraph "risk pyramid" is useful as it explains how the bank identifies and categorizes their principal risks (including credit risk).

In 2015, there is a more detailed explanation on the major components of the risk appetite framework. It is important to notice that also in this case, the MD&A is the most important one in terms of credit risk disclosure. The information on credit risk control system is also improved.[10] In general, most of the credit risk disclosure is almost identical to that of the previous year. In line with other banks, Royal Bank of Canada often provides the same information from 1 year to another, changing just a few words and keeping most content of their credit risk disclosures unchanged. In 2016, the disclosure related to various aspects of IFRS 9 has improved in comparison to the previous year.[11] The extended paragraph "Regulatory developments" provides additional information on capital adequacy under the Basel framework. However, this information does not compensate for the lack of the pillar 3 disclosure report. Broadly speaking, also in this case the disclosure is very similar to that of the previous years, with a few minor exceptions. However, similarly to other Italian and Canadian banks, the introduction of IFRS 9 has induced this bank to improve some aspects of its disclosure.

In 2017, the distinction of different categories of risk drivers (transactional, positional, execution, strategic, and macroeconomic) enhances the readability of the annual report. The new paragraph on "credit risk administration" provides additional information on credit provisioning. The enhanced readability and the improvements of the previous year provide a more integrated perspective on credit risk. This bank is very careful in avoiding redundant information. Although this is a point of strength and increases readability, sometimes this bank overlooks some aspects that would improve its risk disclosure (such as some aspects related to forward looking disclosure). Once again, this bank tends to maintain the disclosure almost identical to that of the previous year, with just minor adjustments.

In 2018, Royal Bank of Canada publishes a pillar 3 disclosure report. This additional document significantly impacts the results of our evaluation.[12] In line with Italian banks, the pillar 3 disclosure report mainly provides quantitative information. It consists of several tables mostly related to regulatory capital requirements. However, it also provides some useful narrative and qualitative disclosure, such as general information on credit risk and qualitative disclosure on the credit quality of assets. As for the other two documents (i.e., MD&A and the notes to financial statements), the disclosure is not different from that of the previous year.

In 2019, the amount of information of the pillar 3 disclosure report substantially increased compared to the previous year. Numerous additional sections have been added.[13] These additional disclosures positively affect two items of the metric, namely measurement models for credit risk capital requirements and capital adequacy for credit risk (regulatory perspective). Although various disclosures on IFRS 9 that were reported the year before disappeared, this aspect does not impact the results of the metric. In the MD&A, additional information is provided with reference to exposure to default of derivatives.

In 2020, there are various pieces of information related to the COVID-19 pandemic, especially in the annual report[14]. Overall, credit risk disclosure is very similar to that of the previous year. There is just a small increase in the disclosure index.

3.1.3 | Bank of Nova Scotia – The Scotiabank

In line with the other Canadian banks covered in this analysis, for the Bank of Nova Scotia, the MD&A is also the most important document for credit risk disclosure purposes. This document is characterized by a good balance between tables and figures and narrative explanations. The notes are quantitative in nature, with various tables that describe credit risk exposure, RWA, capital requirements, asset quality, impaired loans, among others. Also, this bank does not provide any pillar 3 disclosure report. Overall, the amount of information provided is scarcer in comparison to Unicredit. Although the information is

10970053, 2022, 4, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/jcaf.22577 by University Degli Studi Di Palermo, Wiley Online Library on [18/10/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

easier to read, various details are missing. The presence of a well-developed glossary enhances the readability of the annual report.

In 2012, the disclosure on stress testing is only narrative, without any quantitative figure. Like most Italian banks, this bank tends to avoid the use of the term "unexpected loss," which is used only once. However, this bank provides various disclosures on this aspect. The disclosure on model risk is poor, but slightly better in comparison to the other Canadian banks (see for instance the information on "Model review"). The information on credit risk components is sufficiently detailed, especially from a quantitative viewpoint. The forward-looking disclosures of the financial statement cannot be considered fully satisfactory because they are not as detailed as those of our benchmark. Although the narrative disclosure on collaterals, guarantees and off-balance sheet is satisfactory, the quantitative disclosure is less detailed in comparison to Unicredit. The disclosure on specialized lending is more detailed in comparison to Unicredit (see the paragraph "Structured finance entities"), although it is still unsatisfactory. Also in this case, the lack of the pillar 3 disclosure report negatively affects various parts of the metric, especially section L. Although the disclosure is more readable, this bank would benefit from a more detailed narrative disclosure and most importantly using tables and quantitative disclosure to describe the most important aspects related to credit risk disclosure.

In 2013, the new table "Principal risk types" provides an overview of the most important types of risks the bank is exposed to.[15] Overall, the documents provided by Bank of Nova Scotia in 2013 are characterized by various improvements that have enhanced the level of details and the readability of the document, providing a more integrated perspective on credit risk.

In 2014, there is new information related to IFRS 9 (see the paragraph "Presentation of own credit risk IFRS 9"). It also provides slightly more detailed disclosures on potential credit risk exposure, and it induces the bank to explain better some credit risk management policies. Default correlation is now considered one of the most significant unobservable inputs of the sensitivity analysis and is useful to understand portfolio correlation. Overall, the disclosure is very similar to that of the previous year.

In 2015, the new disclosure related to IFRS 9 focuses on impairment methodology, classification and measurement and hedging.[16] The narrative disclosure on risk appetite is slightly more detailed in comparison to the previous year in both documents, as well as that on risk tolerance. Aside from these minor changes, the disclosure is very similar to that of the previous year. In line with the other Canadian banks analyzed, only minor changes are usually observed from one year to another.

In 2016, the additional information related to IFRS 9 affects various parts of the metric, resulting in an improvement of the forward-looking disclosure.[17] Moreover, the information on the backward looking approach related to on-balance sheet exposure is more detailed, especially from a narrative point of view. The paragraph "Definition of Default and Write-off" provides useful information on credit risk elimination as an outcome of default.

In 2017, although this bank explains that the Basel Committee issued an enhanced framework for pillar 3 disclosure requirements, it still does not provide any pillar 3 disclosure report. The disclosure on internal rating is slightly improved. This improvement is related to some explanations on the advanced internal rating approach for capital requirements. The disclosure on economic capital is slightly improved. The improvements are related to the disclosure on the internal capital adequacy assessment process.

In 2018, the disclosure on some aspects related to IFRS 9 is significantly improved.[18] The disclosure on internal rating has improved in relation to the use of the so called "internal grade" to measure the probability of default. Year 2018 is the only exception, because the bank provides additional useful forward and backward-looking information (mostly related to IFRS 9). Overall, the most relevant drawback of the disclosure of this bank is related to lacking information on some aspects related to regulatory aspects, credit rating and loan portfolio disclosure. The evaluation of this bank would have significantly improved if it had prepared the pillar 3 disclosure report, which is never published by this bank throughout the sample period.

In 2019, the structure of the annual report is very similar to that of the previous year. Although there are some minor improvements related to the regulatory perspective on capital requirements (see for instance the new paragraph entitled "Capital Adequacy and Leverage Requirements"), they are not sufficiently relevant to impact the results of the metric. Several disclosures on IFRS 9 have been eliminated, but the results of the metric are not affected.

In 2020, there are two additional sections in the MD&A, namely: the "Impact of COVID-19" section and the "Impact of divested operations" section.[19] These disclosures impact sections G and L of the metric. There are additional disclosures on model risk, including an exact definition for this type of risk and explanations of the Model Risk Management Policy (MRMP).

3.1.4 | Bank of Montreal

In line with other Canadian banks, Bank of Montreal does not provide any pillar 3 disclosure report. Similar to other Canadian banks, it would benefit from a more quantitative

10970053, 2022, 4, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/jcaf.22577 by University Degli Studi Di Palermo, Wiley Online Library on [18/10/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

disclosure and more information on regulatory aspects that should be disclosed in the pillar 3 report. The most useful and important document for this bank is MD&A, which consists in a combination of both narrative and quantitative information. In contrast, the disclosure provided in the notes is mainly quantitative, represented mostly by means of tables. The information overlapping of the two documents is very limited.

In 2012, the "Risk-Weighted Asset Approaches" paragraph is particularly useful to understand the approaches the banks use to calculate their RWAs. There is an entire section on model risk. Although it is not very detailed, it is more comprehensive than those provided by the other banks in the sample, but still not fully satisfactory, because it is almost exclusively narrative. Although the disclosure on unexpected loss is quite developed, the disclosure is mostly related to market risk rather than to credit risk. Like the other banks, the disclosure on stress testing is mainly narrative and there is no information on its results. The disclosure on NPLs and impaired loans is characterized by a good balance between a narrative and a quantitative perspective. The information on concentration risk is better than that of Unicredit (see for instance the "Concentrations of credit" paragraph in MD&A). However, the information is too generic to be considered fully satisfactory. The disclosure on economic capital is more detailed than that of our benchmark, from both a qualitative and quantitative point of view. However, it is still not as good as that on regulatory capital and not fully satisfactory. Broadly speaking, also for this bank the backward-looking disclosure is more detailed and comprehensive than the forward-looking one, although this gap is less evident compared to Italian banks. In 2013, the disclosure on credit risk component has improved and it is more detailed, especially from a quantitative viewpoint (see for instance the subparagraph "Parameter Modelling Details"). Overall, it seems that the disclosure is more focused on quantitative aspects in comparison to the previous year. The disclosure on backtesting and on the accuracy of the credit risk computations of the bank has improved (see for instance the paragraph "Model Back-testing").

In 2014, the disclosure on RWA is improved in the MD&A, but only from a narrative perspective. In general, this bank would benefit from a more quantitative disclosure on this aspect. The disclosure on the validation of credit risk measure has improved. See for instance the paragraph "Model Validation, Outcome Analysis & Back-Testing." The new disclosure on "Risk Control Assessment (RCA)" provides further details on the bank's credit risk control system.

In 2015, the disclosure on capital adequacy (regulatory perspective) is slightly improved. Surprisingly, the improvements are mainly related to the MD&A, rather than to the notes. However, this improvement is not sufficient to affect the evaluation of the metric. Considering the lack of pillar 3 disclosure report, the MD&A only partially compensates it. Additional narrative disclosure on risk-adjusted performance indicators is provided, but no quantitative figure is reported. The disclosure on "Loan portfolio correlation" has benefitted from the disclosure on wrong-way risk (see the paragraph "Wrong-way Risk" in the MD&A).

In 2016, various aspects related to IFRS 9, risk management processes and policies have improved.[20] There is also additional information on regulatory capital ratios.

In 2017, the disclosure on credit risk concentration is improved from a narrative viewpoint. See for instance the paragraph "Portfolio Management and Concentrations of Credit and Counterparty Risk." Also, the disclosure on credit risk exposure is slightly improved. In line with other banks in the sample and with the previous years' disclosure, the information related to credit risk is very similar from 1 year to another. Several paragraphs are almost identical.

In 2018, this bank provides a new disclosure on "Environmental Events," which is also related to credit risk as they analyse also the "evaluation of credit risk associated with assumptions around the global transition to a low carbon economy." Italian banks are generally less concerned about these aspects. The amount of information related to IFRS 9 has increased. The most affected areas are those related to the provisions for credit losses (mainly from a qualitative viewpoint) and credit risk exposure (quantitative viewpoint). The disclosure on expected credit losses has benefitted from the new paragraph "ECL Sensitivity and Key Economic Variables," which provides a more forward-looking perspective on credit risk.

In 2019, the number of pages of the annual report is slightly higher compared to 2018. The content of the annual report is approximately the same as that of the previous year, with just minor changes. Differently from other banks, the amount of information on IFRS 9 is not significantly reduced compared to the previous year. Overall, the result of the metric is just slightly higher compared to the previous year.

In 2020, in line with the other banks of the sample, Bank of Montreal provides some information on the COVID-19 pandemic.[21] Sections D, G, and L of the metric are positively impacted by these changes.

3.1.5 | Canadian Imperial Bank of Commerce

Canadian Imperial Bank of Commerce prepares only the notes to the financial statement and the MD&A. The pillar 3 disclosure report is not provided. Also in this case,

10970053, 2022, 4, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/jcaf.22577 by University Degli Studi Di Palermo, Wiley Online Library on [18/10/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

the most important document is the MD&A, which consists of a balanced narrative and quantitative disclosure. The lack of a pillar 3 disclosure report is once again among the main problems for this bank. Although the amount of information related to credit risk is less in comparison to other Canadian banks, the comprehensibility is satisfactory and the overlap of information between the two documents published is low.

In 2012, the disclosure on credit risk assumption and retention is scarcer in comparison to other banks and far from being fully satisfactory. The disclosure on RWA and regulatory capital is much lower compared to Unicredit and other Canadian banks., whilst that on economic capital is in line with the other Canadian banks in the sample. The disclosure on risk management strategy is too vague to be considered fully satisfactory, whilst the disclosure on credit risk measurement is quite precise. The information on migration risk is better than other banks analyzed, as it provides relevant quantitative figures. The disclosures on personal guarantees, insurance contracts, and credit derivatives are far from being satisfactory. However, this is common for all banks of the sample. The information on specialized lending is almost absent. Project financing is mentioned only once in the MD&A, and the information provided is not very useful. Also, for this bank, backward looking disclosure is better than forward looking information, especially from a quantitative viewpoint. The provision of an integrated perspective on credit risk cannot be considered fully satisfactory because, although the readability is good, the amount of information provided is quite low.

In 2013, the disclosure on RWA, credit quality, back testing, stress testing and risk concentration is improved.[22] The disclosure on credit quality has also improved. The new paragraph "Credit quality of the loans portfolio" provides a combination of narrative and quantitative information. The disclosure on back testing has improved from both a narrative and quantitative viewpoint in the MD&A. The disclosure on stress test has significantly improved. The disclosure on credit risk concentration has improved from a narrative viewpoint.[23] Overall, this bank has changed various aspects of credit risk disclosure in comparison to the previous year. The improvements positively affect the metric, and they are more significant in comparison to other improvements observed for other banks.

In 2014, Canadian Imperial Bank of Commerce increased the "key groups within Risk Management" from 7 to 10.[24] The disclosure on risk weighted assets is slightly improved from a quantitative viewpoint. See for instance the disclosure related to CVA. Overall, there are minor changes compared to 2013.

In 2015, the new disclosure on expected credit loss in both the MD&A and the notes provides additional narrative information on the measurement model of expected credit loss. The disclosure on the assumption on credit risk has improved from a narrative viewpoint. The disclosure on capital ratios and above all on leverage ratio, has also improved from a narrative point of view. As for the other aspects analyzed through the analytical grid, the disclosure provided in 2015 is very similar to that provided in 2014.

In 2016, the disclosure on credit risk assumption and credit risk management has improved from a narrative viewpoint. See for instance the new paragraph "Policies" and the subparagraph "credit risk limits." The additional information described above also affects the disclosure on internal rating (especially quantification) because of the disclosure on the advanced internal rating based (AIRB) approach for regulatory capital purposes. However, this bank still does not provide explanations on the drawbacks of their internal rating credit system.

In 2017, this bank changed again the structure of its risk management function. However, this aspect does not affect the credit risk disclosure. The disclosure on measurement models for expected credit losses and on migration risk have improved.[25]

In 2018, once again the "Key groups in Risk Management with credit risk responsibility" have changed. There are various improvements related to IFRS 9.[26] The disclosure on internal rating has improved because of a better disclosure of the AIRB approach for credit risk. Overall, the disclosure provided by this bank can be considered satisfactory for most of the aspects analyzed by the metric. However, the lack of the pillar 3 disclosure report is a severe drawback.

In 2019, the number of pages of the annual report is slightly increased. The information on IFRS 9 is only slightly reduced, without impacting the results of the metric. The structure of the annual report is the same as that of the previous year. There is some additional information on RWA, especially to explain the increase in the amount of RWA compared to the previous year.

In 2020, there are various disclosures on the impact of COVID-19. The most important ones related to credit risk are the following: OSFI's response in terms of capital requirement, government support for client in financial distress, impact on financial results and impact on the provisions for credit losses. These disclosures affect sections E, G, and L of the metric. The additional pieces of information on RWA introduced in 2019 have been eliminated in 2020. This is probably due to the fact that these disclosures were introduced to explain just the reasons of the increase in RWA compared to the previous year. This negative affects section L of the metric.

10970053, 2022, 4, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/jcaf.22577 by University Degli Studi Di Palermo, Wiley Online Library on [18/10/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

10970053, 2022, 4, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/jcaf.22577 by University Degli Studi Di Palermo, Wiley Online Library on [18/10/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

3.1.6 | National Bank of Canada

In line with other Canadian banks, National Bank of Canada prepares MD&A and financial statement (which includes the notes). Differently from other Canadian banks, the information overlapping between the documents is more evident.

In 2012, similarly to other Canadian banks, VaR measures are mainly employed for market risk purposes rather than for credit risk. Moreover, the information provided is mainly narrative, and therefore the disclosure on the measurement models for unexpected loss is far from being satisfactory. The main problem for this bank is the information overlapping between the two documents provided. Although it is stated that "Risk-adjusted return on capital (RAROC) and shareholder value added (SVA), which are obtained from the assessment of required economic capital, are calculated quarterly for each of the Bank's business segments," they do not provide any quantitative figure for risk-adjustment performance indicators. The disclosure on explanation of credit risk management goals, procedures, processes, and policies is in line with that of Unicredit. The disclosure on guarantees, insurance contracts and credit derivatives is far from being satisfactory because of the lack of quantitative information on these aspects, consistent with the other banks of the sample. Surprisingly, the disclosure on economic capital (also called by the bank capital at risk) is only slightly worse and less detailed in comparison to the regulatory perspective on capital adequacy. Also in this case, the disclosure on backward-looking information is more detailed than the forward looking one.

In 2013, the disclosure on RWA has improved from a quantitative viewpoint, especially in MD&A. See for example the additional information on "Risk-Weighted Assets Movement by Key Drivers." The disclosure on credit risk measurement validation has improved, but only from a narrative viewpoint. It is interesting to notice that the information about stress testing is almost identical in the two documents. While the amount of information has doubled (disclosure quantity) the informativeness of the financial statement (disclosure quality) has not changed in this regard. The disclosure on credit risk assumption has benefitted from a more extensive disclosure on risk appetite (mainly narrative).

In 2014, the new table "Internal Default Risk Ratings" in the MD&A provides additional information on the relationship between internal and external ratings. Some information overlapping between the two documents is no longer present. As an example, some narrative information on credit risk exposure and definition has now been eliminated from the notes. This holds also for the information on stress testing, which is no longer reported in the notes. Overall, there are only minor improvements compared to the previous year.

In 2015, there are some additional explanations on the differences between IFRS 9 and IAS 39. However, these explanations are only related to the accounting principle per se, without any additional disclosure on credit risk that can be considered relevant for our purposes. In sum, there is no relevant difference in comparison to the disclosure provided in 2014.

In 2016, the disclosure on the measurement model for expected loss has improved because of the additional information provided with reference to IFRS 9. The disclosure on measurement models for credit risk capital requirements has improved from a quantitative viewpoint.[27]

In 2017, the disclosure on migration risk is affected by the new disclosure related to IFRS 9 (see the new paragraph "Assessment of Significant Increase in Credit Risk"). The disclosure on expected credit loss has increased from a quantitative viewpoint (see the new paragraph "Measurement of Expected Credit Losses").

In 2018, National Bank of Canada provides a 38-page pillar 3 disclosure report. This document provides mainly a quantitative disclosure, accompanied by a glossary. Although it is not as detailed as that provided by Italian banks, it provides relevant information that impacts various aspects of the metric.[28] There is a clear cross-reference between the information of the notes and that of the pillar 3 report, which enhances the overall readability of the disclosure. There are additional scenario analyses in comparison to the previous year. See for instance "Sensitivity Analysis of Allowances for Credit Losses on Non-Impaired Loans". The disclosure of the three stages of IFRS 9 provides additional information on migration risk. Information on collateral has improved from a quantitative viewpoint. See for instance the table "CCR5 - Composition of collateral for CCR exposure" in the pillar 3 report. The introduction of a pillar 3 disclosure report has positively impacted various aspects of credit risk disclosure. Although this document is not very comprehensive (just 38 pages) it represents a relevant improvement in comparison to the previous year.

In 2019, National Bank of Canada provides an extended version of the Pillar 3 disclosure report, which includes additional sections[29]. Although these disclosures are exclusively quantitative, they positively impact the evaluation of the metric (sections I and L). The disclosure on environmental risk of the annual report has improved compared to that of the previous year.[30] Also in this case, while there is less information on IFRS 9 compared to 2018, the overall evaluation is not impacted.

In 2020, there is a slight increase in the number of pages of the annual report. In line with the other banks of the sample, there are some disclosures on COVID-19 related

to credit risk. Amongst the most important ones: regulatory reactions, impact on provisions for credit losses and expected losses, impact on financial results. Whilst the sections G and E of the metric have been positively affected by these changes, the improvements related to credit risk capital requirement are not sufficiently relevant to impact section L.

3.1.7 | Laurentian Bank

Laurentian Bank provides only the annual financial report throughout the sample period. This document includes the notes to the consolidated financial statement and the MD&A. No pillar 3 report is provided.

In 2012, the amount of information provided is much less compared to the other banks of the sample (the annual report consists of 175 pages). The amount of information on credit risk is also much less compared to other banks. Surprisingly, there is no single reference to the concepts of neither unexpected nor expected loss. This disclosure is only partially compensated by some narrative disclosures on individual and collective allowances. The disclosure on RWA is worse and less detailed compared to the other Canadian banks, although some disclosure on capital adequacy is provided. The information on securitization consists of relevant quantitative disclosure, and it is adequately supported by narrative disclosures, although it is not as detailed as that of Unicredit. The disclosure on loan portfolio concentration is better compared to other banks (see the paragraph "Concentration of credit risk"), although higher levels of details would be necessary to consider it fully satisfactory. All items of section I of the metric are negatively affected by the fact that this bank started adopting the AIRB only in 2012. Hence, it is normal that most of the evaluation of these parts of the metric are worse compared to other banks of the sample that enjoy a more mature AIRB approach. Although the backward-looking disclosure is substantially better compared to the forward-looking disclosure, also the former cannot be considered fully satisfactory.

In 2013, while the number of pages of the annual report was not reduced compared to 2012, the amount of information on credit risk has not changed. This aspect, together with other enhancements, contributed to improve the provision of an integrated perspective of bank disclosure. The new brief section "Exposure to credit risk" provides additional information on potential exposures for on-balance sheet instruments. The disclosure on regulatory capital has improved from a qualitative viewpoint (see the new disclosure on "Capital Adequacy Requirements Guideline"). A small paragraph on model risk has been added.

In 2014, surprisingly, and contrarily to the majority of the other banks analyzed, Laurentian Bank has reduced the number of pages of the annual report. The disclosure on RWAs has benefitted from a small improvement because of additional graphical information on RWA variations and explanations on leverage ratio requirements related to Basel 3. This is the only relevant change observed.

In 2015, in line with the previous years, there is a small reduction in the number of pages of the annual report. Although there is more comprehensive disclosure on impairment, they are mostly related to financial assets not affected by credit risk (e.g., impairment of goodwill). Apart from these changes, the disclosure is substantially identical to that of the previous year.

In 2016, there are additional explanations on the implementation process of IFRS 9, including information on the three stages of the fair value hierarchy, which positively affects the disclosure on migration risk. In addition, although it is not comprehensive, additional disclosure on the various stages of loans contributes to improve the evaluation. It is specified that the AIRB approach will be adopted in fiscal year 2020. The new paragraph "Key assumptions supporting the Bank's medium-term objectives" provides additional information on credit risk strategy, including medium-term targets in terms of loan loss provisions.

In 2017, additional information on measurement models for expected loss is provided within the disclosure on IFRS 9. The disclosure on securitization has improved from a narrative viewpoint.[31] Also in 2017, no substantial improvement is observed.

In 2018, some explanations on the adoption of the AIRB are provided (the end of the transition is expected to be completed in late 2020). The information on the "Assessment of significant increase in credit risk" results in an improvement of the disclosure on migration risk. The bank explains that it uses qualitative methods for credit risk management purposes[32]. Overall, various relevant improvements have been observed in 2018.

In 2019, the management of the bank has postponed the adoption of the AIRB approach, which is planned to be completed in 2022. Additional narrative explanations are provided with reference to the expected credit losses of impaired exposures. There is new quantitative information on the comparison between the probability of default and the ratings provided by external credit rating agencies. Additional quantitative data on the derecognition of financial assets of the 3 stages are provided.

In 2020, Laurentian Bank provides a comprehensive disclosure on the effects of the COVID-19 pandemic, including the effects on credit risk exposure, operating results, economic outlook, and performance. It is interesting to observe that the first paragraph of the annual

10970053, 2022, 4, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/jcaf.22577 by University Degli Studi Di Palermo, Wiley Online Library on [18/10/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

10970053, 2022, 4, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/jcaf.22577 by University Degli Studi Di Palermo, Wiley Online Library on [18/10/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

report that analyses this aspect is titled "a unique opportunity," indicating that the pandemic is considered as an opportunity, rather than as a threat. The new paragraph "COVID-19 impact on credit risk and measurement uncertainty of expected credit loss estimates" provides narrative information on how bank management is planning to adjust the measurement of expected credit losses under different scenarios. While some disclosures related to IFRS 9 that were reported in 2018 and 2019 have been eliminated, they do not impact the results of the metric. As for the implementation of the AIRB approach for credit risk, it has been further postponed to 2023.

3.1.8 | Canadian Western Bank

Canadian Western Bank provides the annual financial report throughout the sample period, which includes the notes to the consolidated financial statement and the MD&A. This bank does not provide any Basel pillar 3 disclosure report. The amount of information provided is the lowest of all banks in the sample.

In 2012, the annual report is around 100 pages, compared to more than 750 pages provided by Unicredit in total in 2012. Contrarily to other banks, Canadian Western Bank does not provide any glossary. In line with most of the other Canadian banks, the gap between backward-looking disclosure and forward-looking disclosure is not very large. See for instance the various "outlook" sections, in which there are some predictions on the trend of variables that could potentially affect bank management. The use of narrative and graphical disclosure is more balanced compared to other banks of the sample, as well as the balance between narrative and quantitative disclosure. Canadian Western Bank adopts the Basel 2 standardized approach to calculate RWAs for credit risk. The disclosure on this regard is slightly better compared to the other Canadian bank that uses the standardized approach (i.e., Laurentian Bank). The disclosure on current credit risk exposure is better than that on potential exposure (for which there is only indirect information). However, in both cases, the disclosure is generally worse compared to most of the other banks of the sample. While there are several disclosures on derivatives, those specifically related to credit derivatives are very poor. It might be related to the fact that "CWB does not utilize, nor does it have exposure to, collateralized debt obligations or credit default swaps," as it is specified in the annual report.

In 2013, the total amount of pages of the annual report has been reduced compared to 2012. It is stated that various improvements in the risk management governance have been implemented, including the finalization of the risk appetite framework and formalization of a transitional Chief Risk Officer role (who will be appointed in 2014). It is stated that this bank is implementing measures to facilitate an eventual migration to an advanced approach for RWA. There is no substantial improvement compared to 2012.

In 2014, some details of the activities that are carried out by the chief risk officer are explained, although they do not impact the evaluation. There is no noteworthy change in credit risk disclosure compared to the previous year. Even the number of pages of the annual report is the same as that of 2013.

In 2015, Canadian Western Bank "commenced its IFRS 9 transition project focused on the three main areas of IFRS 9: classification and measurement, impairment, and hedge accounting." However, no information on this regard is yet provided. It is specified also that there is an "initial development of certain models in support of CWB's eventual transition to the AIRB approach for calculating RWAs." There are additional disclosures on the role of the new risk committee at board level, with reference to the control and oversight of the risk management function, establishment of lending limits, etc.

In 2016, Canadian Western Bank started a "three-year program to transition from the Standardized approach for calculating risk-weighted assets to the AIRB approach" (pilot phase). Additional information on impaired loans is provided. In this regard, Canadian Western Bank provides disclosures that are generally avoided by the other banks. There is some additional information on collaterals. See for instance the quantitative information on derivative collateral in the "other assets" and "other liabilities" section of the notes.

In 2017, the description of the three stages of the IFRS 9 impairment model positively affect the disclosure on migration risk. This information is also accompanied by basic definitions of the three credit risk components and an explanation of the expected loan loss model. A more detailed narrative description of the risk appetite framework contributes to enhancing the disclosure on risk assumption and retention. There are some brief narrative disclosures on model risk that provide information also on the accuracy of the models. There are also some additional narrative disclosures on specialized lending. Overall, compared to the other years, various improvements that positively impact the metric have been observed in 2017.

In 2018, it is clarified that there was a "significant progress toward transition to the AIRB approach for capital and risk management, with final application for transition anticipated in fiscal 2019." In this regard, some additional information on transitional risk management processes is provided. It is also provided a brief explanation of the limitations of the expected credit loss methodology, while most of the other banks of the sample do not provide this disclosure.

In 2019, the new paragraph titled "Expected Credit Loss Approach" contributes to improving the disclosure on credit risk measurement, especially with reference to expected loss. There are various additional disclosures that incorporate forward-looking analyses, including information on potential credit risk exposures. These improvements contribute to enhancing the level of forward-looking disclosure. There is also additional information on the review and assignment of borrower risk ratings.

In 2020, in line with the other banks of the sample, some disclosures on IFRS 9 have been eliminated, but the result of the metric is not affected. As for the implementation process of AIRB, it is stated that they submitted their final application to OSFI and they are waiting for regulatory approval. Although there is comprehensive information on the effects of the pandemic, most information is not related to credit risk. Among the few disclosures on this regard, the "risk management" section provides narrative information of the relationship between the pandemic, credit risk, and credit risk management strategy. The additional qualitative and quantitative disclosures on loan allowance contribute to improve the section H of the metric. The improvements observed in 2020 contribute to enhance the overall backward-looking disclosure.

3.2 | Italian banks

In the following sub-paragraphs, we provide a detailed evaluation of the qualitative content analysis of the Italian banks of our sample for the years 2018, 2019, and 2020. As for the remaining years (from 2012 to 2017), they are analyzed by Scannella and Polizzi (2019).

3.2.1 | Unicredit

In 2018, to enhance the overall comprehensibility of the financial information, some overlapping between different documents has been eliminated.[33] This change slightly improves the comprehensibility of credit risk disclosure. In the Pillar 3 disclosure report, in the "Model performance: comparison between estimated and actual results" section, additional narrative and quantitative information is provided with reference to important measures (see for instance Observed Loss Given Liquidation vs. Estimated Loss Given Liquidation). There are additional narrative explanations on "Stressed Expected Loss" measures that provide additional information on potential credit risk exposure. There is additional information on ratings (see the paragraph "Classification of credit exposure based on internal and external ratings").

In 2019, there are additional quantitative data on NPLs (see the new table "Credit quality of forborne exposures"). There is also a new section on total loss absorption capacity. While there are less details on stress testing in the pillar 3 disclosure report, there is a cross-reference with the information provided in the annual report that counterbalances this decreased level of details. In the annual report, there is a small paragraph titled "Systemic threats associated with coronavirus outbreak." However, there is no information on the possible consequences in terms of credit risk. There is additional quantitative information with reference to asset backed securities.[34]

In 2020, there is extensive information related to COVID-19 in the annual report and in the pillar 3 report.[35] The table "Information on newly originated loans and advances provided under newly applicable public guarantee schemes introduced in response to COVID-19 crisis" provides additional information on collaterals. The new paragraph titled "Valuation of Credit Exposures" contributes to improve the disclosure on credit risk measurement.

3.2.2 | Intesa San Paolo

In 2018, in both the annual report and the pillar 3 report, there is additional information on the transition to IFRS 9, which is important with reference to the implications of credit risk measurement for bank management. The information on the change of the three stages of the IFRS 9 also improves the disclosure on migration risk (see also the new paragraph "Significant increase in credit risk SICR").[36] For some of the new disclosures provided in 2018, there is a clear overlapping between the pillar 3 disclosure report and the annual report (clear examples are the Basel 3 regulation and the credit risk appetite framework disclosures). Additional information on specialized lending has been provided in the notes.

In 2019, although most of the information on the transition to IFRS 9 has been eliminated, the information relevant in terms of credit risk disclosure has been kept. In the pillar 3 report, the new paragraph "Quality of forbearance" provides qualitative and quantitative disclosures on the forborne loans that do not meet the criteria to leave the "non-performing" category. The new disclosure on GARC securitization (an Italian public guarantee on NPL securitization) positively impacts the disclosure item "information on loan securitization" and the disclosure on credit risk transfer. In 2019, Intesa Sanpaolo has set up a Model Risk Management Function. The disclosure on this regard is important with reference to model risk.

In 2020, there is an increase in the number of pages of both the annual report and of the pillar 3 report. There are

10970053, 2022, 4, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/jcaf.22577 by University Degli Studi Di Palermo, Wiley Online Library on [18/10/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

various disclosures on the COVID-19 pandemic.[37] These disclosures are more comprehensive compared to other banks of the sample (especially Canadian banks) and positively affect various parts of the metric.

3.2.3 | Monte dei Paschi di Siena

In 2018, there is additional information on IFRS 9 in both the pillar 3 report and the notes. In particular, the new paragraph "IFRS 9 impairment methodology based on expected losses (ECL)" is particularly relevant. The definitions of the various credit risk components are now reported also in the notes, together with other qualitative and quantitative details. New credit risk ratios are computed (ex. Bad loans/Loans to Customers, Gross NPL ratio). These ratios are accompanied by narrative disclosures on NPLs. Additional information is provided with reference to the loan loss provisions for off-balance sheet exposures.

In 2019, in the pillar 3 report, there is additional information on NPLs and related aspects (see the new tables "Quality of non-performing exposures by geography" and "Quality of forbearance"). While the allocation of the internal capital for concentration risk has increased from 2% to 3% in 2019, no explanation on the reasons of this increase has been provided. The additional information on specific decisions related to the Supervisory Review and Evaluation Process (SREP) in the annual report contributes to enhance the disclosure on measurement models for credit risk capital requirement. Furthermore, this bank provides some information on the COVID-19 spread, but there is no explanation on the potential effects of the pandemic. Apart from these minor changes, the disclosure is similar to that of 2018.

In 2020, there is a significant increase in the number of pages of both the annual report and the pillar 3 report. In line with other banks, there is extensive disclosure related to the COVID-19 pandemic[38]. The new paragraph "Inclusion of state guarantees in the ECL calculation for IFRS 9 purposes" provides additional disclosures on expected credit loss. There is additional information on credit risk transfer by means of synthetic securitization (paragraph entitled "Synthetic securitisation transactions"). Within the context of the disclosure on update of IFRS 9 LGD model, additional narrative information on the accuracy of credit risk measures is provided. Some information on model risk is provided, including the quantification of internal capital. It is specified that the group entered an insurance contract with Euler Hermes that can be considered a credit risk mitigation technique.

3.2.4 | Mediobanca

In 2018, the number of pages of the annual report decreased, while those of the pillar 3 report increased.[39] The new disclosures provided on this regard positively affect the evaluation of section I of the metric. The new information on the three stages of IFRS 9 contributes to improve the disclosure on migration risk. In the subsection "Validation and back-testing," there is some basic information on the back-testing model adopted by the bank. There are a few mentions of the concepts of specialized lending and structured finance in the pillar 3 disclosure report. Overall, relevant improvements have been observed compared to the previous year.

In 2019, there is a substantial increase in the number of pages of the annual report. In the pillar 3 report, there are clear cross-references with the other reports prepared by the bank. Along the same line, the annex "CRR mapping" provides useful information to identify the disclosures required by the Capital Requirement Regulation. This information contributes to improve the provision of an integrated perspective on credit risk. The new section "Non-performing credit exposures" in the notes provides narrative disclosures on the NPL portfolio. There are additional quantitative data on write-offs and write backs in various tables in the annexes of the annual report. The new tables "Credit quality of exposures" (by exposure class, instrument, counterparty type and geography) provides additional information on various breakdown of the current credit risk exposure of the bank.

In 2020, there is also an increase in the number of pages, especially in the annual report. There is extensive information related to the pandemic, which is partially related to the EBA guidelines "Guidelines on Covid -19 measures reporting and disclosure".[40] There are additional narrative disclosures on expected credit loss, which is partially related to the new disclosures related to COVID-19. The new table "PD and LGD values by geographical area" in the pillar 3 report provides relevant quantitative information on insolvency risk.

3.2.5 | Banco BPM

In 2018, an interesting aspect of the disclosure of this bank is that, contrarily to the majority of the other banks, Banco BPM tends to avoid using exactly the same wording as the previous years. Apart from this aspect, other more relevant changes have been observed. Specifically, there is additional information on the impact of IFRS 9. The new paragraph titled "Impact of IFRS 9 on own funds as at 1 January 2018" provides relevant information on the capital

10970053, 2022, 4, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/jcaf.22577 by University Degli Studi Di Palermo, Wiley Online Library on [18/10/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

adequacy for credit risk and loan loss provisioning. There are various improvements in the explanations of credit risk measurements (see the paragraphs that estimate PD, LGD, and EAD). The results of the EU-wide stress test are reported, although they are not very detailed. Additional information on the risk appetite framework is provided, surprisingly, in the pillar 3 report. Additional narrative and quantitative disclosures are also provided with reference to derecognition and write-offs.

In 2019, there is some disclosure on the (preliminary) consequences of the spread of COVID-19. See for instance the paragraph titled "Declaration of the international emergency due to the Coronavirus outbreak." In line with the other banks, various disclosures on IFRS 9 have disappeared, but this aspect does not impact the results of the metric. In the pillar 3 report, the new subsection titled "Guidelines on reporting on non-performing exposures subject to forbearance measures" provides quantitative information on forbearances, impaired loans and NPLs. There are various improvements related to additional narrative disclosures on measurement models for expected losses and internal ratings.[41]

In 2020, while there is an increase in the amount of information of the annual report, the number of pages of the pillar 3 report has been significantly reduced. In line with the other banks, there are various additional disclosures on the COVID-19 pandemic.[42] The glossary of the pillar 3 report has been eliminated, negatively affecting section 1 of the metric, although other improvements compensate this lack of information. There are additional explanations on the accuracy of credit risk measurements (see the paragraph titled "Comparison between expected and observed LGD values by risk segment"). There is additional information on the so called "Risk-adjusted profit approach," which supports the bank risk management function in assessing the effects of the pandemic on financial performance. There is new quantitative information on specialised lending. See for instance the data on the table entitled "EU CR1-A – Credit quality of exposures by exposure class and instrument." Overall, the disclosure is slightly better compared to that of 2019.

3.2.6 | UBI Banca

In 2018, there are various additional disclosures on IFRS 9. The new paragraph titled "Stage Allocation" provides information on migration risk. There are additional quantitative and narrative disclosures on the impairment losses for credit risk. It is noteworthy also the additional information on the "significant increase in credit risk" and on the "Purchase or originated credit impaired" exposures. The disclosure on lifetime PD contributes to improve the disclosure on potential credit risk exposure. The new paragraph "Strategic NPL Plan Transactions" provides relevant information on the most important strategic aspects related to credit risk management strategies. There is additional information on loan loss provisions and collaterals. See for instance the table "Provisions for credit risk relating to commitments and guarantees granted." Overall, some significant improvements have been observed in 2018.

In 2019, the new paragraph titled "Non-performing exposures" provides relevant quantitative information on NPLs, including disaggregation at portfolio and industry level. Also in this case, various disclosures on IFRS 9 have been eliminated, but this elimination does not significantly affect the results of the metric. There is additional information on the disposal of bad loans and their consequent elimination from the balance sheet (see the two paragraphs titled "disposal of a portfolio of bad loans by Prestitalia"). There are additional quantitative data on all credit risk components.[43]

In 2020, UBI Banca merged with Intesa San Paolo, therefore it did not publish its financial reports.

3.2.7 | Banca Nazionale del Lavoro

In 2018, the amount and the type of disclosures provided are substantially different than those of 2017. In particular, while in 2017 there was one single document titled "Relazione Finanziaria" [Financial report], in 2018 two separate documents are provided, (the consolidated financial statement and the pillar 3 report). The two documents provided in 2018 were contained in the financial report document provided in 2017, and the latter also included additional information such as the management commentary, which, surprisingly, is not provided in 2018. However, this reduced number of pages is mostly related to the fact that the unconsolidated financial statement of BNL is not included in the document analyzed.[44] There is comprehensive disclosure on the impact of IFRS 9. Although the amount of information on securitization has been reduced, the new disclosure on GACS (NPL securitization backed by a public guarantee mechanism) compensates this reduced level of information. Overall, although the disclosure has worsened compared to the previous year, it is only marginally worse compared to the 2017, because, while the lack of a management commentary does impact various parts of the metric, in many cases this impact is not very significant, given that most of the information is provided also in the notes. This finding supports the fact that the potentialities of the management commentary are not fully exploited (Polizzi & Scannella, 2020).

In 2019 and 2020, the consolidated version of the financial statement is not available in the bank's website.

10970053, 2022, 4, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/jcaf.22577 by University Degli Studi Di Palermo, Wiley Online Library on [18/10/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

3.2.8 | BPER Banca

In 2018, there are numerous additional disclosures on IFRS 9.[45] The new forward-looking information on expected losses results in an improvement of the disclosure on potential risk exposure. The incorporation of a disposal scenario of specific loans improves the disclosure on credit risk elimination. The new table “Financial assets, commitments to distribute funds and financial guarantees granted” provides useful information on collaterals. Additional quantitative information on external rating is provided (see for instance the new tables titled “Long-term rating for exposures to companies” and “Long-term rating for exposures to securitisations”). The new table “OTC trading credit derivatives” provides quantitative information on the credit risk exposure related to OTC credit derivatives. In the section “Breakdown of guaranteed credit exposures by type of guarantee”, there is additional quantitative information on personal guarantees.

In 2019, there is additional information on risk control systems. See for instance the new paragraph titled “Control and Risk Committee.” There is information on the effects of COVID-19, which is also incorporated in sensitivity analyses. There is a clear distinction of the methodologies to distinguish between performing and non-performing exposures at counterparty level that contributes to enhance the disclosure on migration risk. The new table “Collateral valuation – loans and advances” in the pillar 3 report provides relevant information on collaterals. There is new information on stress testing. Together with the improvements related to IFRS 9 (especially in 2018), this information contributes to improve the forward-looking perspective. See for instance the paragraph titled “Programme of risk forecasting and internal stress testing.”

In 2020, BPER Banca provides comprehensive information on the pandemic that is related to credit risk.[46] There is an increase in the number of pages of both the annual report and the pillar 3 report. The former consists of almost 1000 pages. There is additional information on collaterals, especially in the pillar 3 report (see the new paragraph titled “Physical risk assessment of the properties used as collateral”). Because of the explanations on certain specific extraordinary operations (see for instance the information on the repurchase of the securitized loan portfolio from Unipol), the disclosure on loan portfolio has improved.

4 | DISCUSSION

The results of the empirical analysis demonstrated that there is some variability in the quality of the disclosures on credit risk for the Italian and the Canadian banking sectors. Although there are relevant differences in bank disclosure practices and in their risk disclosure models, the empirical results showed that the quality of the credit risk disclosures (measured by means of our credit risk disclosure score) of the banks of the two countries are not significantly different from each other. However, the detailed results of the qualitative content analysis of the reports analyzed in this paper provided evidence that there are numerous differences between Canadian and Italian banks, even though they are subject to a highly homogeneous regulatory framework (Basel regulation and IAS/IFRS), which has played a significant role in the harmonization of accounting practices. On the one hand, the disclosures of Italian banks are more comprehensive and detailed than those of Canadian banks, but they are characterized by higher levels of redundancy between the three reports, which results in lower levels of understandability and worsens the provision of a holistic perspective on credit risk, and of its integration with the other main banking risks. On the other hand, while the quantity of information provided by Canadian financial institutions is lower than those of Italian banks, they offer a more holistic and integrated perspective on credit risk. Overall, the Canadian banks of the sample analyze more in depth the relationships between credit risk and the other traditional (liquidity risk, operational risk, and market risk) and emerging risks (such as reputational and environmental risk) in the banking industry. Another important difference between the two countries analyzed is related to the main source of information for the users of financial reporting. On the one hand, for Canadian banks, the most important and comprehensive report is the MD&A (which corresponds to the management commentary for the Italian ones). On the other hand, Italian banks provide most of the information in the notes to the financial statement, and specifically in section E. With specific reference to the management commentary, there is room for improvement for Italian banks, and they could follow the approach adopted in Canada to improve their disclosures by providing an in-depth analysis of the inter-relationships between credit risk and the other types of risks. This is particularly important, considering the connections amongst the different types of risk in banking (Tutino, 2013). In contrast, surprisingly, most Canadian banks do not publish any pillar 3 reports, regardless of the enforcement of Basel regulatory requirements. The absence of this report worsens the overall quality of disclosures, especially with reference to the information on regulatory capital and RWA. Thus, if Canadian banks adopt the same approach as Italian banks with reference to the preparation of their pillar 3 report, they will significantly enhance the quality of their disclosures.

The main implication of our study is that bank managers, regulators and supervisors at the international level

10970053, 2022, 4, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/jcaf.22577 by University Degli Studi Di Palermo, Wiley Online Library on [18/10/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

should exploit the advantages of the two disclosure models adopted by Canadian and Italian banks, while at the same time avoiding the disadvantages of a redundant and sparse information within the annual reports. Hence, on the one hand, similarly to Italian banks, Canadian banks should provide detailed information on credit risk on the main areas addressed by our credit risk disclosure metric (e.g., measurement, risk components, risk mitigation, provisioning, etc.), while at the same time, in line with Canadian banks, Italian banks should offer a holistic view on credit risk and its relationship with the other main types of banking risks.

The main contributions of our empirical analysis to the extant literature are related to the use of an innovative and comprehensive content analysis approach for an in-depth understanding of banks' disclosure practices. This approach allowed us to provide a thorough comparative analysis of the credit risk disclosure of two different countries, thereby identifying useful advice and recommendations that banks can follow to enhance their level of transparency. In a wider perspective, we contribute to the literature by identifying the point of strength and weaknesses of two different supervisory enforcement regimes, namely an interventionist supervisory regime (Italy) and a non-interventionist, market-oriented but highly regulated regime (Canada) (Bischof, 2009).

5 | CONCLUSION

This paper analyzed the credit risk disclosure practices of a sample of Canadian and Italian banks by means of a qualitative content analysis methodology. We employed an innovative mixed content analysis methodology to study the credit risk disclosure practices, allowing us to examine the quantitative and qualitative profiles of bank disclosures.

Disclosure practices in the banking industry are particularly important because financial institutions must find an appropriate and satisfactory balance between information disclosure and retention, aiming to communicate effectively with investors and stakeholders (Spence, 1973; Suchman, 1995), while at the same time avoiding to disclose proprietary information that could pose a threat to their competitive position (Verrecchia, 1983). Bank disclosures are particularly relevant when it comes to credit risk, because it is the most important type of risk that directly affects the core business of commercial banks (Tutino, 2015). In addition, we focus on this type of risk because it has not been investigated in depth in the literature so far, notwithstanding its theoretical and practical importance in the banking sector.

The main findings of our paper are that Italian and Canadian banks have different disclosure practices, in that Italian banks provide a more detailed and comprehensive disclosure characterized by a certain level of redundancy, while Canadian banks offer a more integrated and holistic view on bank risks, although the level of detail is lower. These findings offer important suggestions to bank managers, regulators and supervisors, and provide some guidance to enhance the overall quality and transparency of credit risk disclosures in the banking industry.

In conclusion, this paper calls for greater attention by regulators, practitioners, and scholars to credit risk disclosure in banking. Canadian and Italian banks can improve the quality of their risk disclosures by focusing on areas of improvement that we identified by means of the qualitative content analysis conducted in this paper. These improvements in credit risk disclosure practices would result in higher levels of transparency and the reduction of information asymmetries between the banking industry's insiders and outsiders, and consequently in a more efficient functioning of global financial markets.

ACKNOWLEDGEMENTS

We acknowledge financial support from Telfer School of Management, University of Ottawa.

Open Access Funding provided by Universita degli Studi di Palermo within the CRUI-CARE Agreement.

ORCID

Enzo Scannella https://orcid.org/0000-0001-5522-232X

ENDNOTES

[1] For further information see OSFI's financial data for banks in its website (https://www.osfi-bsif.gc.ca/Eng/wt-ow/Pages/FINDAT.aspx).

[2] For additional information, see the Bank of Italy's website (https://infostat.bancaditalia.it/inquiry/GetDocumentFile?type=PDF&docId=208675&cubeId=BAM_STATICISSUE1), the latest banks' and financial institutions' reports (https://www.bancaditalia.it/statistiche/tematiche/moneta-intermediari-finanza/intermediari-finanziari/index.html) and the ABI monthly outlook (https://www.abi.it/Pagine/Mercati/Analisi/Scenario-e-previsioni/ABI-Monthly-outlook.aspx).

[3] Unicredit is the largest Italian bank considering the whole 2012 to 2020-time horizon, even though Intesa San Paolo's total asset figure is the largest among Italian banks in 2020.

[4] Sources: OSFI (https://www.osfi-bsif.gc.ca/Eng/wt-ow/Pages/FINDAT.aspx) and Bank of Italy (https://infostat.bancaditalia.it/inquiry/GetDocumentFile?type=PDF&docId=208675&cubeId=BAM_STATICISSUE1).

[5] It is defined as follows: "Model risk is the potential for adverse consequences arising from decisions based on incorrect or misused models and their outputs. It can lead to financial loss, reputational risk, or incorrect business and strategic decisions."

10970053, 2022, 4, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/jcaf.22577 by University Degli Studi Di Palermo, Wiley Online Library on [18/10/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

[6] See for instance the information on "U.S. NonRetail portfolios"; the bank is in a transition phase from the standardized approach to the AIRB approach.

[7] This information is generally considered highly relevant for investors (Petrella & Resti, 2013).

[8] See for instance the new paragraph "Basel 3 RWA" that describes and computes the capital requirements under Basel 3 regulation. The information on stress testing has improved. See for instance the new paragraph "Stress testing." It improves the information on how the bank is protected against credit risk and on how it prevents additional exposures.

[9] See the new paragraph titled "Counterparty credit risk." The information on RWA is slightly more detailed. See for instance the paragraph "Attributed capital in the context of our business activities."

[10] See for example the new table on "Supporting Risk-Specific Enterprise-Wide Frameworks and Policy," which includes the credit risk framework.

[11] See the new paragraph on "Expected credit loss impairment model" and the paragraph "Movement between stages" which provides information on the transition between stages.

[12] More specifically, the introduction of the pillar 3 disclosure report has mainly impacted the following aspects: credit RWAs, regulatory capital requirements, bank risk management approach, credit quality of assets, defaulted and impaired loans, risk mitigation techniques, external and internal ratings, credit derivatives, backtesting, probability of default, securitization and associated capital requirements, stress testing, insured exposures.

[13] The most important ones are the following: leverage framework, TLAC framework, RWA: Risk-Weighted Assets by Regulatory Approach, leverage and TLAC disclosure requirements. More specifically, the leverage framework and the TLAC framework sections describes the new OSFI's leverage requirements and TLAC framework guideline respectively. The Risk-Weighted Assets by Regulatory Approach section provides quantitative information on RWAs by types of risk (with a good level of detail), distinguishing between standardised and IRB approach.

[14] The following ones are the most important: stress test related to the pandemic; description of the macroeconomic environment; impact on bank business; regulatory reactions; impact on financial performance (including provisions for credit losses) and financial position; relationship with cyber risk; relationship with migration risk, rating quantification and credit risk determinants; impact on NPLs; relief programs for mortgage.

[15] The new paragraph "Credit risk-weighted assets" provides useful additional information on RWA with special reference to credit risk. The new table "Index of all credit risk disclosures" provides useful information on the location of the most important disclosures on credit risk. This document allows the reader to identify with ease the specific information he/she is looking for. It enhances the overall readability of the document.

[16] They are relevant aspects related to credit risk. The disclosure on the provisions for credit losses is slightly more detailed from a quantitative point of view. See for instance the information provided in the "Financial instruments – risk management" paragraph in the notes and the "Financial Performance" paragraph in the MD&A.

[17] More specifically, the paragraph "Macroeconomic Factors, Forward Looking Information (FLI) and Multiple Scenarios" is characterized by interesting insights on the forward-looking approach adopted for credit risk disclosure purposes. However, it is not relevant enough to increase the parameter "Forward-looking information on bank credit risk" of the metric. Also, the paragraph "Assessment of Significant Increase in Credit Risk" provides useful forward looking disclosure related to migration risk.

[18] The main aspects impacted by this new disclosure are the information on impaired loans, and that on regulatory capital (see for instance the table "T25 Changes in regulatory capital").

[19] The main topics discussed related to the COVID-19 pandemic (and on credit risk) are the following ones: general potential impacts of the pandemic, impact on performance, regulatory interventions from the government, OSFI's response to the pandemic in terms of increased capital requirements, potential impact on credit losses and on credit migration, impact on credit quality.

[20] Among the most important improvements, see for instance, the table that explains the differences between credit risk determinants under Basel and IFRS 9 approach, the disclosure on expected credit loss (ECL) and the information on impairment. As for the risk management process and policies, see the paragraphs "Risk Principles" and "Risk Types" in the MD&A.

[21] The most important pieces of information related to credit risk are the following ones: regulatory interventions from OSFI with reference to capital requirements, overall impact on the economy, impact on provisioning for credit losses, support for customers who experience financial distress, impact on credit portfolio.

[22] See for instance the new paragraph "Continuous enhancement to risk-based capital requirements."

[23] See for example the extended "Credit concentration limits" paragraph.

[24] Among them, it has been added the "Global Credit Risk Management," which is a "unit includes our regional Chief Risk Officers, and is responsible for the adjudication and oversight of credit risks associated with our commercial and wholesale lending activities globally, management of the risks in our investment portfolios, as well as management of special loan portfolios."

[25] See for instance the new paragraphs "Key groups in Risk Management with credit risk responsibility" in MD&A and "Expected Credit Loss Methodology" in the notes. The disclosure on migration risk has also improved because of the new disclosure related to IFRS 9.

[26] See for instance the sub-paragraphs "Determining when a significant increase in credit risk has occurred" and "Inputs, assumptions and model techniques" (that affects the disclosure on expected credit loss), etc.

[27] See for instance the comparison between the calculation of the credit risk components for IFRS 9 and regulatory capital purposes.

[28] Specifically: regulatory capital, RWAs, credit risk exposure & backtesting, credit derivatives & exposure, internal rating (IRB approach), credit risk mitigation techniques, securitization.

[29] The most important are the following: Composition of capital and TLAC; Leverage Ratio; Credit Risk Exposure - Back-Testing. The Composition of capital and TLAC section provides quantitative information on the composition of regulatory capital, the composition of total loss absorption capacity and creditor ranking. The leverage ratio section provides quantitative information on leverage ratio exposure. The Credit Risk Exposure - Back-Testing section proposes a useful comparison between the estimated levels of PD, LGD, and EAD and their actual values.

10970053, 2022, 4, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/jcaf.22577 by University Degli Studi Di Palermo, Wiley Online Library on [18/10/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

[30] While it is not strictly related to credit risk, in the section "Incorporation of Risk" it is specified that "Given that environmental risk is associated with credit risk and operational risk, the Bank recognizes the importance of incorporating several additional control measures into its existing risk management processes."

[31] See for instance the new paragraph "structured entities securitisation vehicles," which provides additional information on the bank's securitization program.

[32] It is noteworthy that the bank management admits that certain mortgage loans "were inadvertently portfolio insured and sold into CMHC securitization programs." It is further clarified that "The CMHC then completed an audit of a sample of the Bank's portfolio insured mortgage loans. The audit highlighted similar issues as those identified in 2017, as certain mortgage loans were inadvertently portfolio insured while they did not meet CMHC portfolio insurance eligibility criteria." This type of disclosure is interesting because other banks usually avoid to admit their own mistakes.

[33] Specifically, Unicredit introduced the following change: "Starting from 2018, UniCredit prepares a single document called "Annual report and accounts 2018" replacing the two documents relating to the UniCredit group consolidated financial statements and the UniCredit S.p.A. company financial statements. The integration of the contents of the two previous financial statements into a single document has led to the elimination of duplications of the qualitative information previously presented in both files and, in order to facilitate the reading, the adoption of a system of cross-references between the chapters dedicated to the consolidated financial statements and the company ones, pursuant to which the contents of the single paragraphs referenced are entirely reproduced in the paragraphs containing the reference."

[34] See the new table "Exposure in Asset Backed Securities different from Simple, Transparent and Standardised (non-STS) broken down by seniority - banking book."

[35] It includes the following disclosures: the analysis of the macroeconomic environment, impact on profitability, impact on loan loss provisioning, analysis of future scenarios related to the pandemic, description of new strategies and control systems to cope with the pandemic, assessment of significant increase in credit risk and insolvency risk, countercyclical capital buffer as a reaction to the pandemic.

[36] There is a new paragraph on de-risking in which it is stated that "in the 2018-2021 Business Plan, de-risking is the first pillar through which the Group aims to reduce the level of gross nonperforming loans as a proportion of total loans." This improvement positively affects the disclosure on NPLs.

[37] The most important ones related to credit risk are the following ones: economic consequences of the pandemic, effect on potential credit risk exposure and on its measurement, consequences on terms of financial performance, impact on provisions, regulatory reactions, changes in the classification of credit exposures, public guarantee schemes on loans.

[38] The following aspects are considered: regulatory interventions, impact on profitability, impact on the stock of NPLs, strategic response of the group, change in accounting policies (including loan classification), macroeconomic forecasts, measurement of significant increase in credit risk, information on public guarantees.

[39] With reference to the advanced internal rating system, it is stated as follows: "With reference to the authorization process to use AIRB models to calculate the regulatory capital requirements for credit risk, the Group has been authorized by the supervisory authorities to calculate its capital requirements using its own internal rating system (based on the Probability of Default and Loss Given Default indicators)."

[40] Available at the following link: https://www.eba.europa.eu/regulation-and-policy/supervisory-reporting/guidelines-covid-19-measures-reporting-and-disclosure. In particular, the following aspects are considered: impact on balance sheet and income statement; impact on loan loss provisions; regulatory reactions; additional capital requirements; moratoria and collaterals for loans; macroeconomic environment; impact of the pandemic on migration risk.

[41] See for instance the additional information on exposure at default, loss given default, expected loss best estimate and loss given nonperformance. In the new paragraph "Synthetic securitisations," there is additional information on credit risk transfer.

[42] The ones related to credit risk are the following ones: economic consequences of the pandemic, regulatory reactions, impact on bank performance, effects in terms of migration risk, measurement of expected credit losses, impact on capital adequacy. These disclosures affect sections A, C, and L of the metric.

[43] See for instance the new section titled "Quantitative information introduced by Guidelines on disclosure of non-performing and forborne exposures."

[44] Considering that some disclosures were previously provided in the management commentary, the following items of the metric have been negatively impacted: "Explanation of credit risk management strategies"; "Explanation of credit risk management goals, procedures, processes, and policies"; "Information on credit risk assumption and retention"; "Information on collateral"; "Credit risk: balance sheet ratios"; Loan portfolio composition; "Credit risk aggregation and methodologies"; "Capital adequacy for credit risk." The disclosure on credit risk elimination has improved compared to 2018 (see the information on write-offs).

[45] The information on IFRS 9 impairment model contributes to enhance the disclosure on migration risk. The new paragraph "Transitional provisions aimed at mitigating the impact of the introduction of IFRS 9 on Own Funds" provides additional information on the impact of the implementation of IFRS 9 on RWAs and regulatory capital. In the paragraph titled "Method for determining the extent of impairment," there is additional information on the measurement model for expected loss and credit risk measurement.

[46] The following disclosures impact the metric: economic consequences of the pandemic, regulatory reactions, changes on measurement models for capital requirements, impact on migration risk, support measures for distressed customers, impact on credit quality. These disclosures affect sections C, D, E, and L of the metric.

REFERENCES

Altunbaş, Y., Polizzi, S., Scannella, E., & Thornton, J. (2022). European Banking Union and bank risk disclosure: The effects of the single supervisory mechanism. *Review of Quantitative Finance and Accounting*, *58*(2), 649–683. https://doi.org/10.1007/s11156-021-01005-z

Andrés, P. D., Polizzi, S., Scannella, E., & Suárez, N. (2021). Corruption-related disclosure in the banking industry: Evidence

10970053, 2022, 4, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/jcaf.22577 by University Degli Studi Di Palermo, Wiley Online Library on [18/10/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

from GIPSI countries. European Corporate Governance Institute, Finance Working Paper n. 745/2021.

Baginski, S. P., Hassell, J. M., & Kimbrough, M. D. (2002). The effect of legal environment on voluntary disclosure: Evidence from management earnings forecasts issued in US and Canadian markets. *Accounting Review*, *77*(1), 25–50. https://doi.org/10.2308/accr.2002.77.1.25

Barakat, A., & Hussainey, K. (2013). Bank governance, regulation, supervision, and risk reporting: Evidence from operational risk disclosures in European banks. *International Review of Financial Analysis*, *30*, 254–273. https://doi.org/10.1016/j.irfa.2013.07.002

Barth, M. E., & Schipper, K. (2008). Financial reporting transparency. *Journal of Accounting, Auditing & Finance*, *23*(2), 173–190. https://doi.org/10.1177/0148558x0802300203

Beretta, S., & Bozzolan, S. (2008). Quality versus quantity: The case of forward-looking disclosure. *Journal of Accounting, Auditing & Finance*, *23*(3), 333–376. https://doi.org/10.1177/0148558x0802300304

Birindelli, G., & Ferretti, P. (2017). *Disclosure on OR: Evidence from a sample of Italian Banks, operational risk management in banks* (pp. 199–215). Palgrave Macmillan. https://doi.org/10.1057/978-1-137-59452-5_8

Birindelli, G., Ferretti, P., Chiappini, H., & Cosentino, A. (2020). Intellectual capital disclosure: Some evidence from healthy and distressed banks in Italy. *Sustainability*, *12*(8), 31–74. https://doi.org/10.3390/su12083174

Bischof, J. (2009). The effects of IFRS 7 adoption on bank disclosure in Europe. *Accounting in Europe*, *6*(2), 167–194. https://doi.org/10.1080/17449480903171988

Bisoni, C., Olivetti, S., Rossignoli, B., & Vezzani, P. (2012). *Il bilancio della banca e l'analisi della performance*. Bancaria Editrice.

Botosan, C. A. (1997). Disclosure level and the cost of equity capital. *Accounting Review*, *72*, 323–349.

Carnevale, C., & Mazzuca, M. (2012). Disclosure volontaria e valore di mercato: un'analisi empirica sull'impatto del bilancio sociale nel settore bancario europeo. *Banca Impresa Società*, *31*(1), 49–88. https://doi.org/10.1435/37240

Dell'Atti, A. (2009). *I principi contabili internazionali nell'economia e nei bilanci delle banche*. Cacucci.

Dell'Atti, S., & Labini, S. S. (2014). *La trasparenza informativa*. Egea.

Dobler, M., Lajili, K., & Zéghal, D. (2011). Attributes of corporate risk disclosure: An international investigation in the manufacturing sector. *Journal of International Accounting Research*, *10*(2), 1–22. https://doi.org/10.2308/jiar-10081

Drago, D., & Mazzucca, M. (2005). La risk disclosure nelle banche italiane quotate alla vigilia di Basilea II. *Economia & Management*, *3*, 103–128.

Eng, L. L., & Mak, Y. T. (2003). Corporate governance and voluntary disclosure. *Journal of Accounting and Public Policy*, *22*(4), 325–345. https://doi.org/10.1016/S0278-4254(03)00037-1

Farina, V., Galloppo, G., & Previati, D. A. (2019). Central Banks' Commitment to Stakeholders: CSR in the Eurosystem: 2006–2016. *Frontier topics in banking* (pp. 189–221). Palgrave Macmillan. https://doi.org/10.1007/978-3-030-16295-5_8

Fortuna, F. (2010). *L'informativa su rischi delle banche*. Franco Angeli.

Frolov, M. (2006). Bank credit risk disclosure in Japan. *Journal of Banking Regulation*, *7*(3), 221–242. https://doi.org/10.1057/palgrave.jbr.2350025

Gorton, G. (2009). Information, liquidity, and the (ongoing) panic of 2007. *American Economic Review*, *99*(2), 567–572. https://doi.org/10.1257/aer.99.2.567

Grassa, R., Moumen, N., & Hussainey, K. (2021). What drives risk disclosure in Islamic and conventional banks? An international comparison. *International Journal of Finance & Economics*, *26*(4), 6338–6361. https://doi.org/10.1002/ijfe.2122

Höring, D., & Gründl, H. (2011). Investigating risk disclosure practices in the European insurance industry. *The Geneva Papers on Risk and Insurance-Issues and Practice*, *36*(3), 380–413. https://doi.org/10.1057/gpp.2011.13

Jones, M., Melis, A., Gaia, S., & Aresu, S. (2018). Does graphical reporting improve risk disclosure? Evidence from European banks. *Journal of Applied Accounting Research*, *19*, 161–180. https://doi.org/10.1108/JAAR-07-2016-0068

Krippendorff, K. (2004). *Content analysis: An introduction to its methodology*. Sage.

Lajili, K., & Zéghal, D. (2005). A content analysis of risk management disclosures in Canadian annual reports. *Canadian Journal of Administrative Sciences*, *22*(2), 125–142. https://doi.org/10.1111/j.1936-4490.2005.tb00714.x

Linsley, P. M., Shrives, P. J., & Crumpton, M. (2006). Risk disclosure: An exploratory study of UK and Canadian banks. *Journal of Banking Regulation*, *7*(3), 268–282. https://doi.org/10.1057/palgrave.jbr.2350032

Loughran, T., & McDonald, B. (2011). When is a liability not a liability? Textual analysis, dictionaries, and 10-Ks. *The Journal of Finance*, *66*(1), 35–65. https://doi.org/10.1111/j.1540-6261.2010.01625.x

Maffei, M., Aria, M., Fiondella, C., Spanò, R., & Zagaria, C. (2014). (Un) useful risk disclosure: Explanations from the Italian banks. *Managerial Auditing Journal*, *29*, 621–648. https://doi.org/10.1108/MAJ-11-2013-0964

Maffei, M. (2017), *La disclosure sui rischi con particolare riferimento alle banche*, Giappichelli.

Malinconico, A. (2007). La disclosure dei rischi nelle banche: possibili effetti sulla disciplina di mercato. *Banche e Banchieri*, *5*, 369–383.

Nadotti, L. (2004), *Bilancio, interpretazione e analisi della gestione bancaria*, Giappichelli.

Nahar, S., Azim, M., & Jubb, C. A. (2016). Risk disclosure, cost of capital and bank performance. *International Journal of Accounting & Information Management*, *24*, 476–494. https://doi.org/10.1108/IJAIM-02-2016-0016

Panetta, I. C., Leo, S., Santoboni, F., & Vento, G. (2019). How do you disclose? Some evidence on it governance and performance in European banking system. *Journal of Financial Management, Markets and Institutions*, *7*(1), 1–36. https://doi.org/10.1142/S2282717x19400024

Petrella, G., & Resti, A. (2013). Supervisors as information producers: Do stress tests reduce bank opaqueness? *Journal of Banking & Finance*, *37*(12), 5406–5420. https://doi.org/10.1016/j.jbankfin.2013.01.005

Polizzi, S. (2022). *Risk disclosure in the European Banking Industry: Qualitative and quantitative content analysis methodologies*. Springer.

Polizzi, S., & Scannella, E. (2020). An empirical investigation into market risk disclosure: Is there room to improve for Italian banks?

10970053, 2022, 4, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/jcaf.22577 by University Degli Studi Di Palermo, Wiley Online Library on [18/10/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Journal of Financial Regulation and Compliance, *28*, 465–483. https://doi.org/10.1108/JFRC-05-2019-0060

Ratnovski, L. (2013). Liquidity and transparency in bank risk management. *Journal of Financial Intermediation*, *22*(3), 422–439. https://doi.org/10.1016/j.jfi.2013.01.002

Rutigliano, M. (2020). *L'analisi del bilancio delle banche: rischi, misure di performance, adeguatezza patrimoniale*. Egea.

Rutigliano, M. (2016). *Il bilancio della banca e degli altri intermediari finanziari*. Egea.

Samanta, P., & Dugal, M. (2016). Basel disclosure by private and public sector banks in India: Assessment and implications. *Journal of Financial Regulation and Compliance*, *24*, 453–472. https://doi.org/10.1108/JFRC-12-2015-0065

Scannella, E., & Polizzi, S. (2018). Market risk disclosure in banking: An empirical analysis on four global systemically important European banks. *Journal of Banking Regulation*, *19*(2), 87–100. https://doi.org/10.1057/s41261-017-0039-y

Scannella, E. (2018). Market risk disclosure in banks' balance sheets and the pillar 3 report: the case of Italian banks. In Contemporary issues in banking (pp. 53-90). Palgrave Macmillan, Cham.

Scannella, E., & Polizzi, S. (2019). *Credit risk disclosure practices in the Annual Financial Reporting of Large Italian Banks, frontier topics in banking* (pp. 245–292). Palgrave Macmillan. https://doi.org/10.1007/978-3-030-16295-5_10

Scannella, E., & Polizzi, S. (2021). How to measure bank credit risk disclosure? Testing a new methodological approach based on the content analysis framework. *Journal of Banking Regulation*, *22*(1), 73–95. https://doi.org/10.1057/s41261-020-00129-x

Sironi, A., & Resti, A. (2008). *Rischio e valore nelle banche: misura, regolamentazione, gestione*. Egea.

Sowerbutts, R., Zimmerman, & P., Zer, I. (2013). Banks' disclosure and financial stability, *Bank of England Quarterly Bulletin*, Q4.

Spence, M. (1973). Job market signaling. *The Quarterly Journal of Economics*, *87*(3), 355–374.

Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review*, *20*(3), 571–610.

Tutino, F. (2013). Analisi dei rischi finanziari delle banche: è necessario utilizzare gli strumenti dell'economia aziendale. *Bancaria*, *69*(10), 28–42.

Tutino, F. (2015). *La banca: economia, finanza, gestione*. Mulino.

Tutino, F. (2019). *Il nuovo bilancio delle banche*. Bancaria Editrice.

Tutino, F., Bastianini, G., & Parascandolo, M. (2005). *La performance delle banche: flussi informativi, analisi di gestione, valutazione*. Bancaria Editrice.

Verrecchia, R. E. (1983). Discretionary disclosure. *Journal of Accounting and Economics*, *5*, 179–194.

Woods, M., Dowd, K., & Humphrey, C. (2008). Market risk reporting by the world's top banks: Evidence on the diversity of reporting practice and the implications for international accounting harmonization. *Spanish Accounting Review*, *11*(2), 9–42.

AUTHOR BIOGRAPHIES

Kaouthar Lajili is Professor in Finance at the Telfer School of Management, University of Ottawa (Canada). She holds a Ph.D. from the University of Illinois and a CPA, CGA Professional designation. Her research interests include risk management and financial reporting.

Sana Mohsni is an Associate Professor of Finance at the Sprott School of Business, Carleton University (Canada). She holds a Ph.D from the University of Concordia. Her research interests include corporate finance, corporate governance, and risk management.

Salvatore Polizzi is an Assistant Professor of Banking & Finance, University of Palermo (Italy). His research interests include banking, risk management and disclosure. He is a member of the European Association of University Teachers in Banking and Finance.

Enzo Scannella is a Professor of Banking and Finance at the University of Palermo (Italy). His main research interests include risk reporting and bank management. He is a member of the European Association of University Teachers in Banking and Finance.

How to cite this article: Lajili, K., Mohsni, S., Polizzi, S., & Scannella, E. (2022). A qualitative analysis of bank credit risk disclosure: Evidence from the Canadian and Italian banking sectors. *Journal of Corporate Accounting & Finance*, *33*, 207–230. https://doi.org/10.1002/jcaf.22577

10970053, 2022, 4, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/jcaf.22577 by University Degli Studi Di Palermo, Wiley Online Library on [18/10/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License