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THE IMPACT OF PRUDENTIAL REPORTING DISTORTIONS: TIME TO PRIORITIZE DATA INTEGRITY

FIRST EVIDENCE FROM THE LARGE EXPOSURE REPORTING DATA QUALITY

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ABSTRACT

Consistent reporting of supervisory information by individual credit institutions is paramount for the integrity of the data that underpins sound financial information and regulatory capital and liquidity requirements. In this context, recent findings of severe inconsistencies in sectoral attribution of credit institutions' counterparties in key prudential reporting templates have emerged as issues warranting closer investigation.

This paper takes a deep dive into the extent and impact of statistical mis-reporting using Large Exposure data from 2,759 credit institutions from the European Economic Area ('EEA'), as of 31 December 2023. Under some simplifying assumptions, we quantify the scale of misclassifications and assess their impact on regulatory compliance, supervisory analysis, and capital and liquidity requirements.

The findings of this analysis reveal systemic data quality weaknesses that, if left unaddressed, have the potential to distort both public and private sector risk assessments, credit institution capital requirements and supervisory policy decisions. The findings also suggest that the identified misclassifications could only represent a lower bound for problems in the quality of prudential reporting.

The conclusions of the analysis call for increased focus on reporting practices and data integrity across the EU prudential framework.

KEYWORDS

Prudential reporting; Data quality; Large Exposures; NACE codes; Credit institutions.

JEL CODES

G00; G21; G28.

1. Background

In the domains of financial stability and regulatory oversight, the integrity of data and the robustness of the associated control mechanisms are of paramount importance. Sound decision-making is contingent upon the availability of accurate, complete, and rigorously validated information. Should these foundational elements be compromised, the ramifications could extend well beyond technical reporting errors – potentially influencing policy formulation, market stability, and public trust.

Examples of consequences of data mismanagement can be found both in the fields of academia and official statistics. The study by Reinhart and Rogoff, "Growth in a Time of Debt" (2010), posited that sovereign debt levels exceeding 90% of GDP were associated with significantly diminished economic growth. This conclusion rapidly gained traction among policymakers and underpinned widespread fiscal austerity policies. However, the study was later found to suffer from a spreadsheet error that excluded critical data points; once corrected, the purported debt threshold lost its statistical significance[1]. In summer 2025, exceptionally large revisions to the US labour market statistics – due to data quality issues based on unreliable survey samples – triggered a political backlash. These cases underscore that misreporting or neglect of data quality can result in substantial damaging consequences. Whether due to insufficient resources, analytical oversight or supervisory inertia, the absence of stringent data governance can lead to erosion of institutional credibility, erroneous policy decisions and elevated risk of financial instability.

1.1. Issues in Large Exposure reporting by European Economic Area ('EEA') credit institutions

The reporting by EEA credit institutions of Large Exposures is a key element of the prudential reporting framework. Over the years, the European Banking Authority ('EBA') has assessed specific elements of this database, such as the use of exemptions to the exposure limits that EEA credit institutions have been granted by their supervisors. The findings of these targeted assessments prompted the EBA to embark on a more general study of data quality issues, focusing on potential misreporting of sectors under which exposures are to be allocated. These investigations have thus far unearthed systematic and recurring inconsistencies. Different reporting credit institutions often assign different sector classifications, or NACE codes, to the same counterparty. While these may initially appear to be minor technical discrepancies – perhaps attributable to internal classification policies, template misalignments, or simple misunderstandings, widespread misreporting can give rise to significant problems.

[1] *The Reinhart-Rogoff error – or how not to Excel at economics*, by Jonathan Borwein and David H. Bailey 23 April 2013, The Conversation.

Such inconsistencies can distort not only the prudential large exposure requirements but also broader micro- and macroprudential analyses, sectoral risk assessments, and regulatory metrics. Sector classifications directly influence the computation of Risk-Weighted Assets ('RWAs'), both under the Standardised Approach and Internal Ratings-Based (IRB) models, particularly after the introduction of Basel III output floor. Furthermore, these classifications also have an impact on liquidity ratios, concentration risk evaluations, and stress test outcomes.

What may initially look like a trivial classification error can therefore cascade into misreported exposures, inaccurate capital requirements, and flawed supervisory judgments. Moreover, the discrepancies in sector and NACE code classifications reported in this paper likely represent only a lower bound when it comes to issues of data quality and supervisory harmonisation.

The present paper takes a deep dive into the scope, implications, and root causes of Large Exposure reporting inconsistencies, highlighting relevant examples. It also puts forward some recommendations aimed at enhancing the reliability of regulatory reporting and, by extension, improving the quality of policy decisions, risk quantification, and the overall supervisory framework.

1.2. Literature review

To the best of our knowledge, in the context of supervisory reporting by EEA credit institutions, the specific issue of inconsistent sector and NACE code classifications for identical counterparties has not been comprehensively addressed in the academic or regulatory literature.

Existing literature on Large Exposure reporting has primarily concentrated on the identification of groups of connected clients[2], without particularly addressing sectoral classification divergences. Related to sectors, some research has highlighted the issue of heterogeneous classification – across jurisdictions – of their government-related entities[3]. Concerning NACE codes, while certain studies have explored the methodological challenges associated with their assignments[4], these typically focus on definitional ambiguities rather than inconsistencies across individual institutions' reporting practices.[5] Therefore, while related themes have been explored, no targeted investigation into the misalignment of sectoral and NACE classifications by credit

[2](i) *Financial Stability Institute Insights on policy implementation No 52 – Challenges in supervising banks' large exposures – November 2023*, (ii) *EBA Guidelines on connected clients under Article 4(1)(39) of Regulation (EU) No 575/2013*.

[3](i) *Financial Stability Institute Insights on policy implementation No 52 – Challenges in supervising banks' large exposures – November 2023*, (ii) *Eurostat – Manual on Government Deficit and Debt – Implementation of ESA 2010 – 2022 edition*.

[4](i) *Eurostat – NACE Guidance webpage*, (ii) *Eurostat NACE Rev. 2.1 – Statistical classification of economic activities in the European Union 2025 edition*.

[5]EBA report *EBA/Rep/2021/11: "Mapping climate risk: Main findings from the EU-wide pilot exercise"* briefly quotes discrepancies in the NACE code level 4 classifications, but this appears more of an incidental observation rather than a core issue that raises major concern. Furthermore, our paper is concentrating on NACE code Level 1 discrepancies (which should normally be less subject to inconsistencies than further levels, and more specifically level 4).

institutions has been carried out thus far. The present study aims at partially filling this gap by focusing on identical counterparties being classified differently by various EEA credit institutions.

1.3. Objectives of the paper

This paper has the following four main objectives:

- To raise awareness among relevant stakeholders regarding the critical issue of inconsistent sectoral and NACE code classifications in prudential reporting.
- To assess the potential quantitative and qualitative impacts of these discrepancies. The estimations presented in this paper are based on a set of underlying assumptions and a preliminary corrective classification exercise. While the potential variability of the results could be illustrated with further sensitivity analysis, such analyses was not an objective of this paper.
- To encourage both credit institutions and supervisory authorities to re-evaluate current practices and prioritisation of data governance.
- Ultimately, to support the development of a more consistent and reliable regulatory reporting framework, thereby enhancing risk management, supervisory decision-making, and the integrity of micro- and macroprudential analysis.

2. Findings in Large Exposure reporting

2.1. Overview of Large Exposure reporting

Large Exposure reporting constitutes a cornerstone of the prudential supervision regime established under the Capital Requirements Regulation ('CRR'). Its primary objective is to monitor and mitigate concentration risk arising from significant exposures to individual clients or groups of connected clients. All credit institutions operating within the EEA are mandated to submit Large Exposure reports to their respective competent authorities on a quarterly basis.

The Large Exposure reporting process utilises standardised templates developed by the European Banking Authority which capture detailed information on each reported exposure, including counterparty identification, exposure amount, instrument type, collateral, and credit risk mitigation techniques.

An exposure[6] qualifies as "large" if it exceeds 10% of the reporting credit institution's Tier 1 capital. Credit institutions are required to report all exposures meeting or surpassing this threshold. However, the scope of reporting extends beyond those exposures to include, for example, some exposures to shadow banking entities or exposures exceeding possibly lower thresholds set by national authorities.

This comprehensive reporting framework ensures that supervisory bodies maintain a holistic view of credit institutions' risk profiles.

2.2. Sectoral and Economic Classification of Exposures

Pursuant to Commission Implementing Regulation (EU) 2021/451, which establishes the Implementing Technical Standards on supervisory reporting (the 'ITS'), credit institutions are required to provide granular data for each reported exposure in the Large Exposure ('LE') reporting templates. This includes the classification of counterparties by sector and, where applicable, by economic activity using the NACE codes. These classifications are reported at the level of individual counterparties[7].

The ITS defines (see Box 1) seven sectors for the purposes of the LE reporting:

- Central Banks
- General Governments
- Credit Institutions
- Investment Firms ('IF')
- Other Financial Corporations excluding Investment Firms ('OFC\{IF}')

[6]"Exposure" as defined in Articles 389 and 390 of the CRR.
[7]For groups of connected clients, sector and NACE code classifications are not required.

- Non-Financial Corporations ('NFC') and
- Households

Box 1. Definitions of sectors

For the purposes of sectoral classification in the LE reporting, the ITS stipulate that *"One sector shall be allocated to every counterparty on the basis of FINREP, Annex V, Part 1, paragraph 42, economic sector classes".* In the case of Investment Firms, the ITS refers directly to the definition provided in the CRR. Credit institutions must allocate the counterparties to sectors based primarily on the definitions set out in the ITS, and subsequently – where applicable – on the legal texts referenced therein (e.g., CRR, European System of Accounts 'ESA' 2010). It is important to highlight that, although the ITS occasionally refers to the ESA for specific elements, the definitions provided in ESA 2010 are not fully aligned with those in the ITS. Therefore, credit institutions cannot rely solely on ESA classifications for the sectors' allocations. Moreover, the ITS clearly states that *"The counterparty sector allocation shall be based exclusively on the nature of the immediate counterparty"* and this implies that each counterparty must be assigned to one and only one sector.
The following parts present the sectors definitions, along with comments where necessary:

Central Banks: The ITS defines it as *"central banks"* and the definition is to be taken from the CRR which states that *"'central banks' means the ESCB central banks and the central banks of third countries"*.

General Governments: The ITS defines it as *"central governments, state or regional governments, and local governments, including administrative bodies and non-commercial undertakings, but excluding public companies and private companies held by these administrations that have a commercial activity (which shall be reported under 'credit institutions', 'other financial corporations' or 'non-financial corporations' depending on their activity); social security funds; and international organisations, such as institutions of the European Union, the International Monetary Fund and the Bank for International Settlements;"*. As the term *"commercial activity"* is not explicitly defined in either the CRR or the ITS, a potential challenge arises in the classification of *"public companies and private companies held by these administrations that have a commercial activity".* However, Q&A EBA 2015_1758 offers clarification, stating that *"Once a counterparty has been determined as to being government controlled a further 'market test'* (i.e. as defined in the ESA 2010) *is applied".* Accordingly, for the purpose of classifying exposures related to companies held by public administrations, credit institutions are required to conduct the market test as outlined in ESA 2010. If the companies in question 'pass' this market test, they should not be classified under the 'General Government' sector.

Credit Institutions: The ITS defines it as *"any institution covered by the definition in point (1) of Article 4(1) CRR ('undertaking the business of which is to take deposits or other repayable funds from the public and to grant credits for its own account') and multilateral development banks (MDBs)"*.

'OFC\{IF}': The ITS defines *"other financial corporations: all financial corporations and quasi corporations, other than credit institutions, such as investment firms, investment funds, insurance companies, pension funds, collective investment undertakings, and clearing houses as well as remaining financial intermediaries, financial auxiliaries and captive financial institutions and money lenders"* and the CRR defines the 'IF' as *"an investment firm as defined in point (1) of Article 4(1) of Directive 2014/65/EU which is authorised under that Directive but excludes credit institutions"*.

'NFC': The ITS defines it as *"corporations and quasi corporations not engaged in financial intermediation but principally in the production of market goods and non-financial services, as defined in the Table of Part 3 of Annex II to the ECB BSI Regulation"* and the ECB BSI Regulation refers then to the ESA 2010.

Households: The ITS defines it as *"individuals or groups of individuals as consumers and producers of goods and non-financial services exclusively for their own final consumption, and as producers of market goods and non-financial and financial services provided that their activities are not those of quasi-corporations. Non-profit institutions which serve households ('NPISH') and which are principally engaged in the production of non-market goods and services intended for particular groups of households shall be included."*.

Source: The ITS, the CRR, ESA 2010, Q&A EBA 2015_1758, ECB BSI Regulation.

These categories are considered as essential in that they form the basis of the prudential reporting framework.

The NACE code classification[8] is structured hierarchically across four levels[9]:

- Level 1: 21 sections (letters A–U)
- Level 2: 88 divisions (two-digit codes)
- Level 3: 272 groups (three-digit codes)
- Level 4: 615 classes (four-digit codes)

The system of NACE codes enables stakeholders to consistently analyse exposures by economic activity[10] and to derive related policy decisions.

2.3. Inconsistencies in sectoral and NACE code classification – Practical examples

A relatively superficial analysis of LE reporting data already revealed significant inconsistencies in the classification of identical counterparties across reporting credit institutions. These discrepancies pertain both to sector designations and to NACE code assignments.

A concrete anonymised example, which illustrates the inconsistent sector classification by EEA credit institutions of a single counterparty (referred to as 'Exposure A'), is presented in Figure 1. This exposure was reported by 379 EEA credit institutions, with a total aggregated Direct Balance Sheet[11] ('DBS') exposure amount of EUR 43 bn. The inconsistency in sector classification is demonstrated by the fact that four different sectors are assigned to this single exposure by the 379 credit institutions concerned. Among these, 340 credit institutions correctly[12] classified the counterparty under the 'Credit Institutions' sector, accounting for EUR 26 bn of DBS exposure amount (62% of the total). However, 24 credit institutions incorrectly classified the same counterparty as 'General Government', representing EUR 12 bn of DBS exposure amount. Additional 15 credit institutions incorrectly allocated 'Exposure A' to some other sectors. In total,

[8]The ITS does not provide specific rules for NACE code classifications and only refers directly to the statistical rules: *"For the economic sector, the NACE codes (Nomenclature statistique des activités économiques dans l'Union européenne = Statistical Classification of Economic Activities in the European Union) shall be used".* Hence, in contrast to sector classifications, statistical and regulatory NACE code classifications should be fully aligned.

[9]In the context of LE reporting, NACE codes are provided at the section level (e.g., 'F – Construction') for 'Non-Financial Corporations', and at the division level (e.g., 'K65 – Insurance, reinsurance and pension funding, except compulsory social security') for 'Other Financial Corporations (excluding investment firms)'.

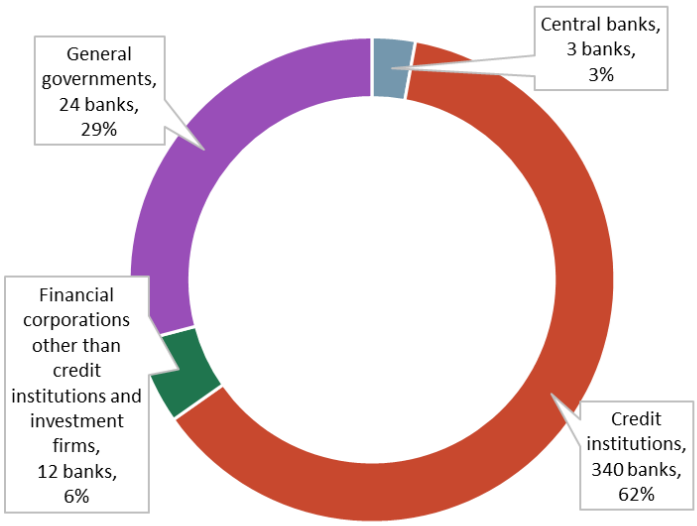
[10]The ITS specifies that each counterparty may be assigned only one NACE code, based on its principal activity. Indeed, the ITS instructions for Large Exposure reporting (Annex IX) state that the NACE code *"shall be derived from the FINREP counterparty breakdown",* while the ITS instructions for FINREP (Annex V) indicate that the NACE code should be determined *"based on the principal activity of the counterparty"*.

[11]As defined in the ITS, *"Direct exposures shall mean the exposures on 'immediate borrower' basis"* and the Balance Sheet exposures are 'Debt instruments' (*"Debt instruments shall include debt securities, and loans and advances"*), 'Equity instruments' and 'Derivatives'. This metric has been chosen for the purpose of this paper as it can be more appropriately compared to credit institutions' assets.

[12]The inconsistency in sector classification is indicated by multiple sectors being assigned to a single exposure, regardless of which one is correct. To provide an overview of the underlying automatic misclassification, we indicate here the correct sector that should be reported for the example exposure. A similar approach was applied to the example concerning the NACE code.

39 credit institutions misclassified 'Exposure A', amounting to EUR 16 bn (38%) of total DBS exposure amount.

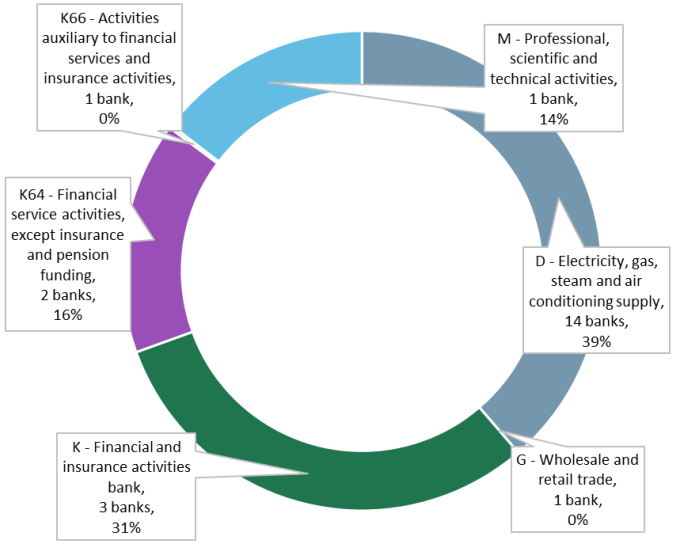
Figure 1. Sector inconsistencies: the case of a single exposure ('Exposure A') reported by 379 EEA credit institutions



Percentages and doughnut portions are related to each reported sector's DBS exposure amount weight.
Source: LE reporting 31 December 2023.

A similar pattern emerges in the NACE code classification of exposures. Figure 2 presents the case, also anonymised, of 'Exposure B', reported in total by 22 EEA credit institutions for a total DBS exposure amount of EUR 3.5 bn. The correct NACE code for 'Exposure B' is 'K64 – Financial service activities, except insurance and pension funding'. However, only two credit institutions correctly classified the counterparty under this NACE code, representing EUR 0.6 bn of DBS exposure amount. Fourteen credit institutions classified the counterparty under NACE code 'D – Electricity, gas, steam and air conditioning supply', representing EUR 1.4 bn of DBS exposure amount. In total, 20 credit institutions misclassified the exposure, accounting for 84% of the total DBS exposure amount.

Figure 2. NACE code inconsistencies: the case of a single exposure ('Exposure B') reported by 22 EEA credit institutions



Percentages and doughnut portions are related to each reported NACE code's DBS exposure amount weight.
Source: LE reporting 31 December 2023.

These examples illustrate the nature of the problem, concerning both the sector and NACE code classifications. The following sections quantify such identified discrepancies in the LE reporting submitted by the EEA credit institutions as of 31 December 2023.

3. Quantification of classification inconsistencies

The following analysis is based on the LE reporting data submitted by EEA credit institutions as of 31 December 2023. To eliminate duplication, the scope is restricted to credit institutions' reports at the highest level of consolidation within the European Economic Area. This methodological choice yields a non-redundant dataset encompassing 2,759 EEA credit institutions, thus providing a robust foundation for the assessment of classification inconsistencies.

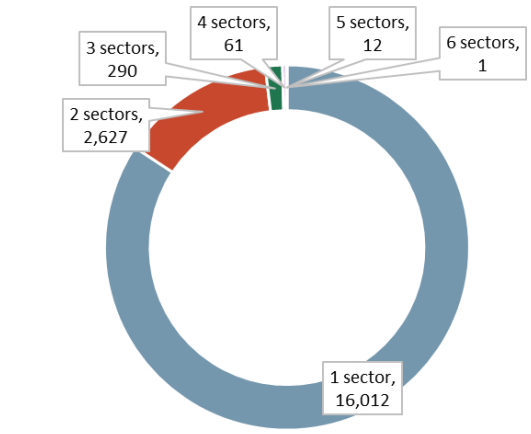
3.1. Sector classification inconsistencies: Descriptive statistics

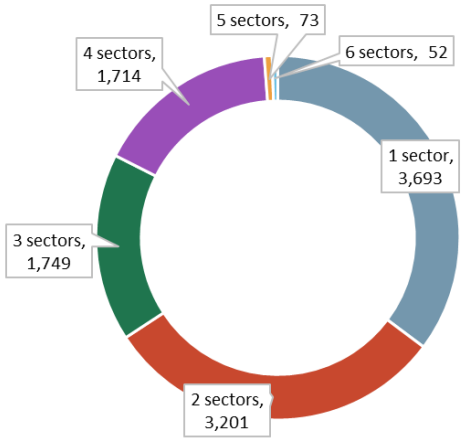
This section presents descriptive statistics based solely on the observed inconsistencies in sector assignments. This preliminary analysis offers an indication of the materiality of the sector classification inconsistencies issue. A more refined investigation – incorporating a corrected classification based on a non-official, preliminary sectoral corrective exercise – is presented in Section 4 with an estimation of the impact of the sectors misclassifications.

As of 31 December 2023, the 2,759 EEA credit institutions collectively reported 144,744 distinct counterparties, representing a total aggregated DBS exposure amount of EUR 12,949 bn. Among these, 19,003 counterparties – accounting for EUR 10,482 bn in DBS exposure amount – were reported by more than one credit institution[13]. It is within this subset that sectoral inconsistencies can be clearly identified. A more complete exercise would assess the correctness of the sectoral allocation of all reported exposures, even when reported by only one credit institution. Such a task was however considered beyond the scope of this investigation, and the findings of the current paper should therefore be taken as representing a lower bound for all misreported exposures in the EEA prudential framework.

Figure 3 and Figure 4 illustrate the number of sectors assigned to these exposures which are reported by multiple credit institutions, both in terms of the number of counterparties and the corresponding DBS exposure amounts.

Figure 3 and Figure 4. Number of sectors assigned to counterparties reported by multiple EEA credit institutions – by number of counterparties (left – Figure 3) and by DBS exposure amount (EUR bn) (right – Figure 4)





Source: LE reporting 31 December 2023.

The data presented in Figure 3 and Figure 4 reveal that:

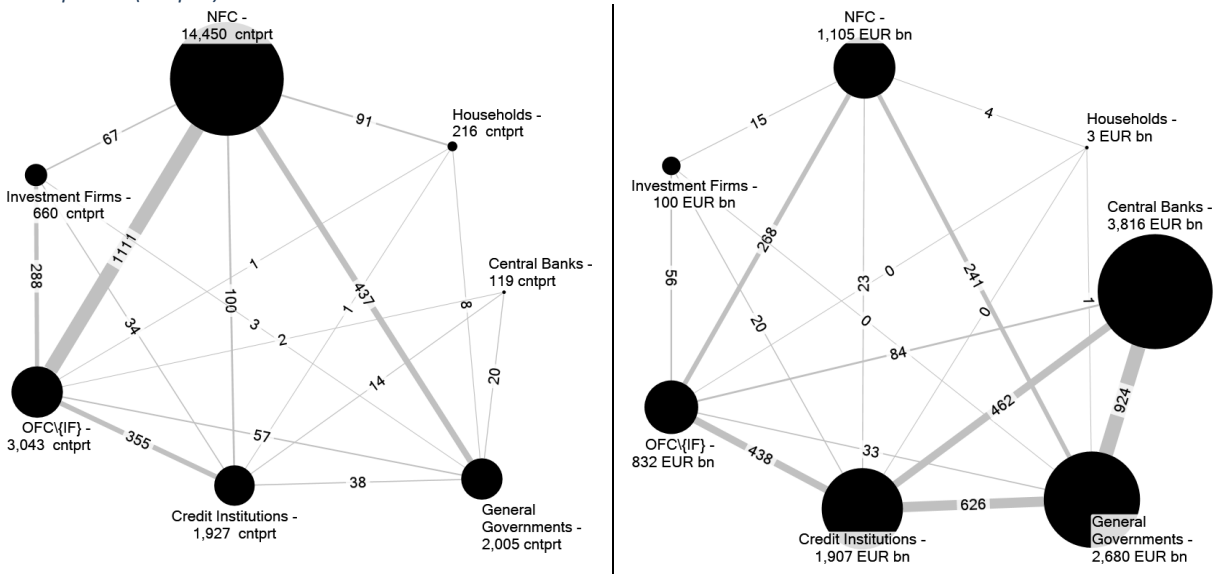
- Counterparties reported under two or more different sectors represent 16% (i.e., 2,991 counterparties) of the total 19,003 counterparties. In terms of total DBS exposure amount, these inconsistencies represent 65% of the total DBS exposure amount.
- Specifically, 2,627 counterparties (14% of the 19,003 counterparties – see the orange portion) are reported in two different sectors, corresponding to a DBS exposure amount of EUR 3,201 bn (31% of the total).

Figure 5 and Figure 6 provide a cross-sector network-based visualisation of the counterparties that are reported under two[14] different sectors.

[13]To identify similar counterparties across all the credit institutions' LE reporting, the 'Code' – as defined in the ITS and reported in the LE templates – was used.

[14]For simplification and better visualisation, only the counterparties reported in two separate sectors (i.e., 2,627 counterparties) are included in the charts. In numbers, they represent 88% of all 2,991 inconsistently

Figure 5 and Figure 6. Sectoral overlap network – Number (Figure 5) and DBS exposure amount (Figure 6) of shared counterparties ('cntprt')



In Figure 5 (left panel), the size of each node is proportional to the number of counterparties reported in the sector. The thickness of the connecting lines reflects the number of counterparties reported simultaneously in both linked sectors. Similarly, in Figure 6 (right panel), the size of the nodes is related to the DBS exposure amount reported in each sector, while the thickness of the connecting lines shows the DBS exposure amount of counterparties reported in both linked sectors. An illustrative example: In Figure 5, the number "1111" on the line between the nodes 'NFC' and 'OFC\{IF}' means that 1,111 counterparties – out of the 2,627 reported in two different sectors – are at least once reported simultaneously as 'NFC' and as 'OFC\{IF}'. Likewise, in Figure 6, the amount "268" on the line between the nodes 'NFC' and 'OFC\{IF}' means that the 1,111 counterparties are reported for a total DBS amount of EUR 268 bn (i.e. this amount is the sum of these counterparties' DBS exposure amounts reported under 'NFC' and 'OFC\{IF}').
Source: LE reporting 31 December 2023.

Figure 5 and Figure 6 reveal that all sectors are affected[15]. The following could also be made:

- 'OFC\{IF}' has an important proportion of counterparties subject to classifications in at least one other sector. Out of 3,043 'OFC\{IF}' counterparties, 1,111 are also reported as 'NFC', 355 as 'Credit Institutions', 288 as 'Investment firms', 57 as 'General Governments', 2 as 'Central Banks' and 1 as 'Households'. In aggregate, these represent in total 1,814 counterparties (60%). In terms of DBS exposure amount, the proportion is even more noticeable: 106%[16].
- In terms of the number of cases where the same counterparty is classified into two different sectors, the highest frequencies are observed for 'NFC' vs 'OFC\{IF}' and 'NFC' vs 'General Governments'. Regarding DBS exposure amount, the most significant overlaps are observed for 'General Governments' vs 'Central Banks' and 'General Governments' vs 'Credit Institutions'.

classified counterparties and in DBS exposure amount they represent 47% (i.e., EUR 3,201 bn divided by EUR 6,789 bn). Cf. Figure 3 and Figure 4.

[15]The 'Households' sector is small due to the nature of the LE reporting.

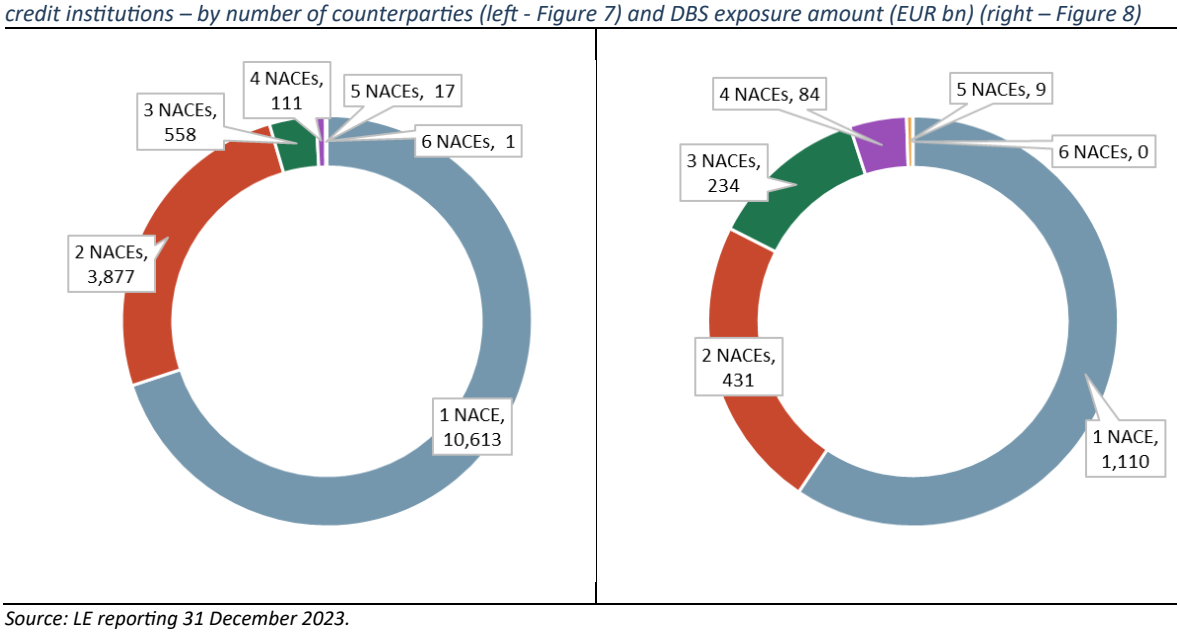
[16]It is indeed possible that the proportion exceeds 100%: The DBS exposure amount between two sectors shown in Figure 6 is the sum of the DBS exposure amounts reported in both sectors for the shared counterparties.

The above four Figures clearly demonstrate the high prevalence of sectoral classifications inconsistencies. Additionally, it is important to stress that for the 125,741 counterparties[17] reported by only one credit institution, and for the 16,012 counterparties (cf. Figure 3) similarly classified by at least two credit institutions, this analysis does not assert that the reported sector is necessarily the correct one[18]. The focus here remains solely on the clearly identifiable inconsistencies in the LE reporting.

3.2. NACE code classification inconsistencies : Descriptive statistics

A parallel analysis was conducted to assess inconsistencies in the assignment of NACE codes, specifically for exposures to Other Financial Corporations (excluding investment firms) and Non-Financial Corporations. As of 31 December 2023, the 2,759 EEA credit institutions reported 115,181 distinct 'OFC{IF}' and 'NFC' counterparties, with a total DBS exposure amount of EUR 3,356 bn. Among these, 15,177[19] counterparties – representing EUR 1,869 bn in DBS exposure amount – were reported by more than one credit institution. It is within this subset that NACE code inconsistencies can be identified in the current exercise.

Figure 7 and Figure 8. Number of NACE codes assigned to 'OFC{IF}' and 'NFC' counterparties reported by multiple EEA credit institutions – by number of counterparties (left - Figure 7) and DBS exposure amount (EUR bn) (right – Figure 8)



Source: LE reporting 31 December 2023.

[17]EEA credit institutions collectively report 144,744 distinct counterparties among which 19,003 counterparties are reported by more than one credit institution (cf. first paragraph of this section). It follows that 125,741 counterparties (= 144,744 - 19,003) are reported by only one credit institution.

[18]Furthermore, inconsistencies could also arise between (i) the sector classifications assigned by certain credit institutions in their LE reporting to specific counterparties, and (ii) the sector classifications assigned by other credit institutions to similar counterparties but that are not included in their LE reporting.

[19]This figure is not reconcilable with the figures from the previous section as we do not take into account the 'NFC' and 'OFC\{IF}' counterparties for which no NACE code have been reported by credit institutions.

Figure 7 and Figure 8 illustrate the number of Level 1[20] NACE codes assigned to the 15,177 counterparties, both by count and by DBS exposure amount. The findings are as follows:

- 30% of these counterparties are reported under at least two different NACE codes. They account for 41% of the total DBS exposure amount.
- Specifically, 3,877 counterparties out of 15,177 (26%) are reported under two different NACE codes, corresponding to a DBS exposure amount of EUR 431 bn (23% of the total).

The inconsistencies in NACE code classification are evident from the above Figures. Additionally, similarly to the sectoral analysis, it is important to clarify that this assessment does not assert that the NACE codes assigned to the 100,704 counterparties[21] reported by only one credit institution, or to the 10,613 counterparties consistently classified by at least two credit institutions, are necessarily correct[22]. The objective here is to highlight the clearly observable inconsistencies in the LE reporting.

[20]The inconsistency between Level 2 NACE codes has not been analysed in this paper (except, for illustration, in the example shown in Figure 2). The issues identified would be further aggravated by the inclusion of level 2 NACE code inconsistencies.

[21]EEA credit institutions collectively report 115,881 distinct 'OFC{IF}' and 'NFC' counterparties, among which 15,177 counterparties are reported by more than one credit institution (cf. first paragraph of this section). It follows that 100,704 counterparties (= 115,881 - 15,177) are reported by only one credit institution.

[22]Inconsistencies could also arise between (i) the NACE code classifications assigned by certain credit institutions in their LE reporting for specific counterparties, and (ii) the NACE code classifications assigned by other credit institutions for similar counterparties that are not included in their LE reporting.

4. Impact estimation

Since only one sector – or NACE code – should be assigned to an exposure, the inconsistencies identified in the previous section would, in the normal course of things, lead to misclassifications. The present section provides a preliminary assessment of the impact of misclassified exposures in supervisory reporting[23], focusing on both sectoral and economic activity (NACE code) classifications. The analysis aims at estimating the magnitude of misclassified assets and the implications of correcting such misclassifications.

It should be emphasized that the estimations presented in this section are based on a set of underlying assumptions (notably the fact that sector/NACE code classifications are similar in LE reporting and in FINREP/COREP) and a preliminary corrective classification exercise. As such, they are indicative and should not be interpreted as definitive or conclusive. When interpreting the results, readers are advised to consider the inherent limitations and potential variability associated with these assumptions[24]. However, the assumptions made here do not undermine the core finding of the paper, namely that sectoral and NACE code inconsistencies – which, in the normal course of things, entails misclassifications[25] – are both highly prevalent and impactful.

For the sectoral impact assessment, a preliminary classification exercise was conducted to determine the correct sector classification for 2,615 counterparties[26] out of those exposures that

[23]As of 31 December 2023.

[24]The impact estimation could be further illustrated by conducting sensitivity analysis with, for instance, alternative scenarios - for correcting the sectors - than the current scenario which takes into account the results of the preliminary corrective exercise : (i) one could imagine a 'worst case' scenario where, for each exposure reported in different sectors by different credit institutions, the correct sector would be the one reported by the lowest number of credit institutions (ii) one could imagine a specific scenario providing highest reclassification increases/decreases for the sector 'General Government' by, for the lower band, excluding all 'General Government' exposures reported at least once by a credit institution in another sector and, for the upper band, including all exposures not reported as 'General Government' but that at least one credit institution classify as such. This sensitivity analysis is not in the scope of this paper but could be considered for further illustration of the problem.

[25]Since an exposure should be assigned to only one sector or NACE code, even if our preliminary classification exercise (see below) incorrectly identifies the correct sector, this does not alter the fact that some exposures are misclassified.

[26]The exercise was conducted on 2,975 counterparties. The difference, with the 2,615 mentioned, comes principally from the fact that for some counterparties the corrective classification exercise is still in progress. This exercise consisted of the review of the 2,975 related counterparties' sectors. The review, made in consultation with members of one EBA technical sub-group, was done on the basis of the ITS, texts referred to in the definitions of these ITS but also - being a preliminary exercise - with external lists or registers (which could be seen as 'proxies' of the ITS classifications) and supervisory judgment. In addition, it is considered non-official and non-definitive as it was not subject to a formal validation process (i.e. the correct sector defined in this exercise has not necessarily been subject to policy expert review and/or the four-eyes principle). As a matter of fact, the implementation of a formal validation process of a such review is one of the proposed solutions (see section 5.2) and the estimations provided thanks to the non-official and non-definitive exercise aim to demonstrate the need for this solution and encourage its adoption.

were reported under multiple counterparty sectors by various credit institutions. Regarding the NACE code inconsistencies, no detailed classification exercise has yet been undertaken. Therefore, for the purposes of the present estimation, the most frequently reported NACE code for each counterparty is assumed to be the correct one.

The impact estimation section proceeds as follows:

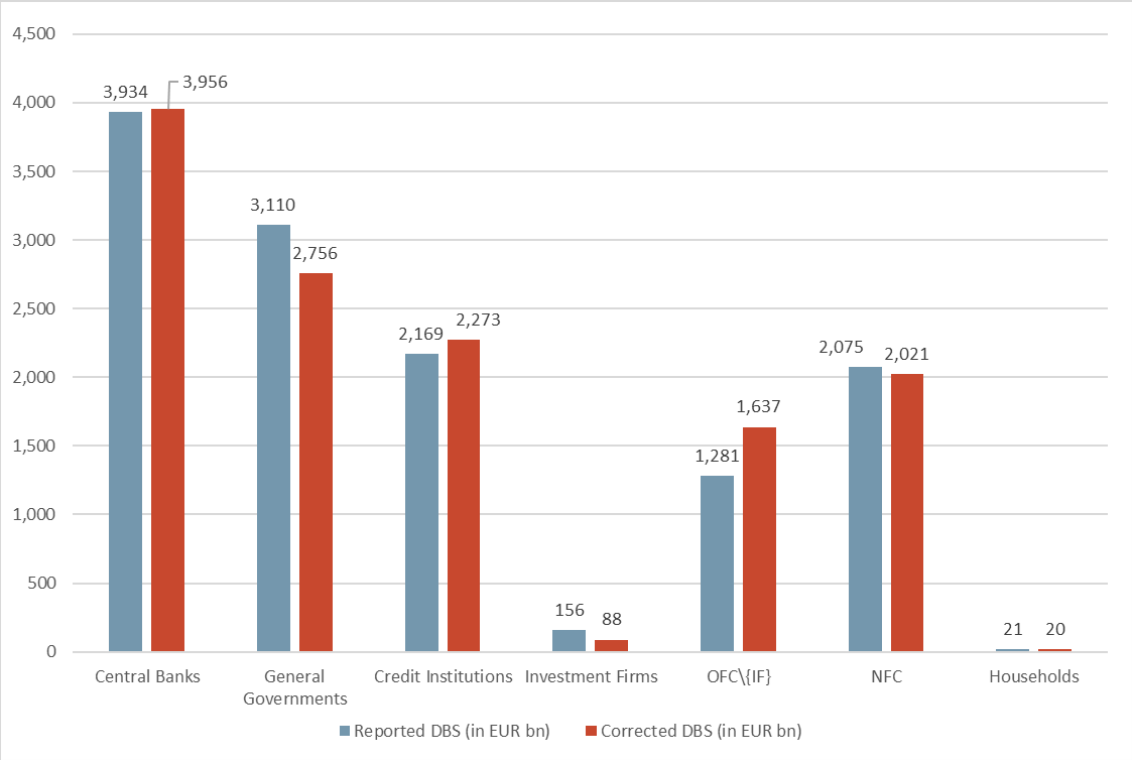
- First, the impact on LE reporting and regulatory thresholds is assessed.
- Second, the implications for supervisory analysis and prudential policy are examined.
- Third, the consequences for Own Funds and liquidity requirements are considered.
- Finally, the impact of NACE code misclassification is addressed.

4.1. Impact on LE reporting and requirements

4.1.1. Quantitative estimation of sectoral corrections

Figure 9 provides a quantified estimation of the impact resulting from the correction of sector misclassifications, highlighting the scale of the reporting adjustments that would be required.

Figure 9. Reported vs corrected DBS exposure amounts by sector



Source: LE reporting 31 December 2023 and preliminary sector classification exercise.

Figure 9's results indicate that all sector categories are affected by misclassifications. Notably:

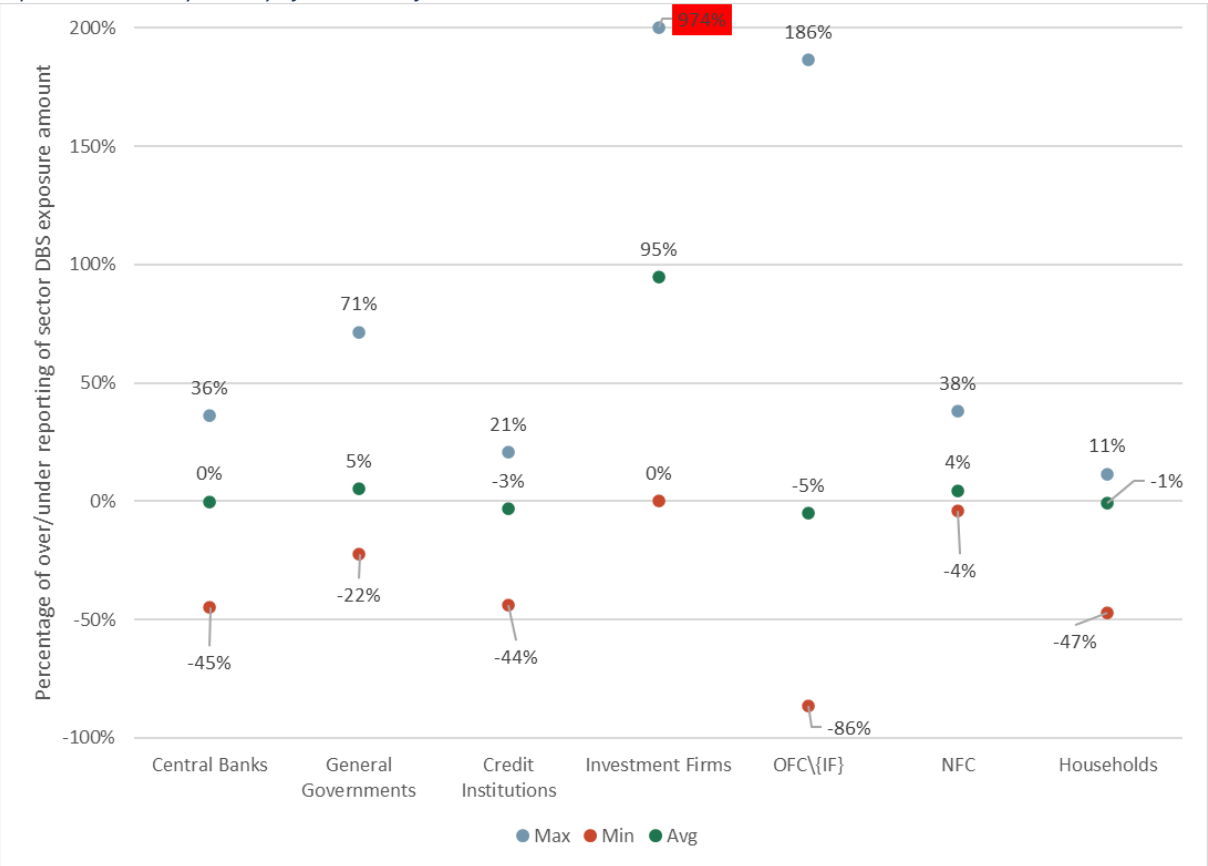
- General Government exposures are over-reported by 13%, with an aggregate reported DBS exposure amount of EUR 3,110 bn versus a corrected value of EUR 2,756 bn.
- Investment Firms exposures are over-reported by 77% (although the actual DBS exposure amounts are relatively small).

- Other Financial Corporations (excluding investment firms) exposures are under-reported by 22%.

It is important to note that these figures reflect net misclassifications. For example, the under-reporting of DBS exposure amount towards Credit Institutions by EUR 104 bn (i.e., EUR 2,169 bn - EUR 2,273 bn) is the result of a gross under-reporting by EUR 224 bn, which is partially offset by a gross over-reporting of EUR 120 bn.

Figure 10 below disaggregates the impacts by country of residence of the reporting credit institutions, illustrating the variability of misclassifications across jurisdictions.

Figure 10. Maximum, Minimum and Average of percentages of over/under reporting of counterparty sectors' DBS exposure amount by country of residence of EEA credit institutions



For each EEA county, the percentages are computed by aggregating the reported exposures by their resident credit institutions and calculating the variation between the reported DBS exposure amount in the LE reporting and the related corrected DBS exposure amount after sector classification corrections.

Source: LE reporting 31 December 2023 and preliminary sector classification exercise.

While the aggregate results in Figure 9 suggest minimal impact for certain sectors (e.g., Central Banks), country-level observation in Figure 10 reveals significant discrepancies. For instance, while aggregate under-evaluation of exposures to 'Central Banks' is around 0.6% (cf. Figure 9), Figure 10 highlights that one EEA country over-reports the DBS exposure amount to 'Central Banks' by 36% whereas another country under-reports the 'Central Banks' DBS exposure amount by 45%.

Presumably, a disaggregation at the credit institutions level would reveal even higher under/over-evaluations. The impact at the credit institutions level is discussed in a later part of this paper.

The above findings underscore the material impact that would result in the event that the sector classification of counterparties were correctly reported.

4.1.2. Regulatory implications

Article 430 of the CRR

The sectoral misclassifications identified in this analysis constitute a breach of Article 430 of the CRR, which mandates accurate and complete supervisory reporting. Based on the preliminary sector classification exercise, an estimated 869 EEA credit institutions are affected by counterparty misclassifications in their LE reporting. These credit institutions are domiciled across 28 EEA countries, suggesting that the issue is systemic rather than isolated.

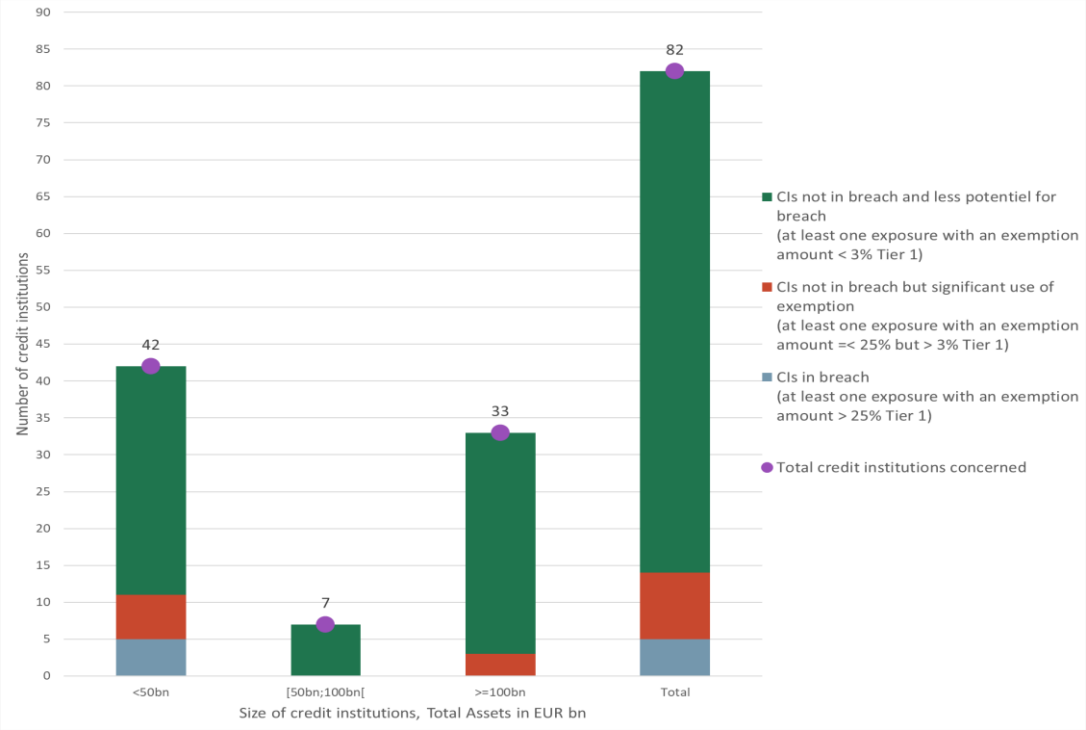
Articles 395(1) and 400(1)(a) of the CRR

Beyond reporting obligations, sectoral misclassifications have direct implications on the application of LE prudential limits under the CRR framework. Here are some key examples:

- Article 395(1) permits credit institutions with Tier 1 capital below EUR 600 million to increase their exposure limit to 'Credit Institutions' and 'Investment Firms' from 25% to 100% of Tier 1 capital. Sector misclassification may lead to unjustified applications of this derogation. Our analysis identified 307 EEA credit institutions with Tier 1 capital below the threshold that incorrectly classified counterparties[27] as 'Credit Institution' or 'Investment Firm', potentially enabling them to apply the higher limit inappropriately.
- Article 400(1)(a) authorises credit institutions to exempt exposures to 'General Governments', 'Central Banks', or 'Public Sector Entities' ('PSEs') from the LE limit. Preliminary findings suggest that 247 exposures were reported as 'General Government' or 'Central Banks' but did not qualify as such (nor as 'PSEs').[28] These exposures may therefore be inappropriately benefiting from the exemption under Article 400(1)(a). The exposures were reported by 82 credit institutions, and in 13 cases (reported by 5 credit institutions), the amount of exemption applied exceeded 25% of Tier 1 capital, suggesting potential breaches of prudential limits[29]. Figure 11 details the impact, for those 82 credit institutions when the exemptions deemed inappropriate have been eliminated.

[27]Those counterparties should instead be classified as 'Households', 'NFC' or 'OFC\{IF}'.
[28]The PSE qualifier is not available in LE reporting. An exercise was conducted, on a best-effort basis, to identify exposures that likely qualify as 'PSE'.
[29]While acknowledging that other credit risk mitigation techniques or exemptions may apply.

Figure 11. Misapplication of exemptions under Article 400(1)(a), compared to Large Exposures Limit



Source: LE and COREP reporting 31 December 2023 and preliminary sector classification exercise.

Figure 11 illustrates that, in addition to the 5 credit institutions that would be in breach if the exemption was not wrongly applied, additional 9 credit institutions are incorrectly applying exemptions – on at least one of their exposures – which represent between 3% and 25% of the credit institutions' Tier 1 capital. Consequently, these 9 credit institutions may be at risk of future breaches, as they may not be adequately monitoring the regulatory limits. Furthermore, Figure 11 highlights that, with respect to breaches, smaller banks are more significantly affected.

4.2. Impact on supervisory analysis and on policy decisions

Sectoral misclassification has implications that extend beyond potential breaches of the LE limits. It can materially distort supervisory assessments and policy decisions, particularly those relying on sector-based segmentation. These distortions affect both general micro- and macroprudential evaluations and more targeted analyses – such as for instance those concerning non-bank financial intermediation (NBFI), or sovereign exposures by jurisdiction.

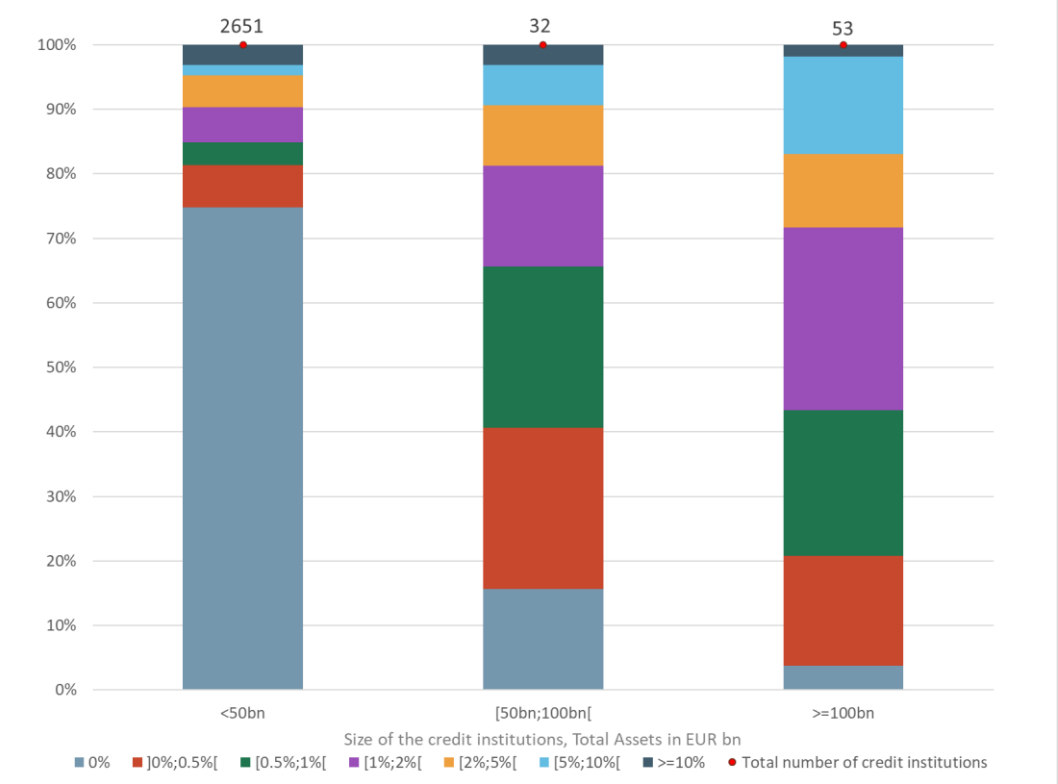
This paper primarily focuses on the sector classifications under the LE framework. It is relevant to note that sectoral classifications in other regulatory frameworks – such as FINREP and COREP – may differ[30]. Nevertheless, for the purpose of this analysis, it is assumed that sectoral

[30]Even though it may seem reasonable to assume that credit institutions use a consistent classification for a given counterparty across all reporting frameworks, observations suggest that it is not always the case. In general, the LE reporting templates are less aligned with COREP than with FINREP. This can be attributable to the fact that COREP employs a more granular sectoral classification, which can lead credit institutions to prepare COREP templates separately.

misclassifications observed in LE reporting are indicative of similar issues in FINREP and COREP datasets.

Figure 12 illustrates the estimated impact of accurate sectoral classification on credit institutions' total assets[31].

Figure 12. The impact of sector reclassification as a percentage of total Assets



For each credit institution, the impact percentage is determined by dividing (i) the total DBS exposure amount that would be adjusted – without applying netting[32] – with correcting the sector, by (ii) the credit institution's total assets. Based on their asset size, institutions are then grouped into categories according to the range of their impact percentages. For instance, in green in the first column is shown the proportion of credit institutions having total assets below EUR 50 bn and for which the reclassification impact would be between 0.5% and 1% of their total assets. The reclassifications related to Investment Firms have not been taken into account, as the aim here is to present a view more closely aligned with FINREP.
Source: LE reporting 31 December 2023, Leverage ratio templates and preliminary sector classification exercise.

Key observations of Figure 12 include:

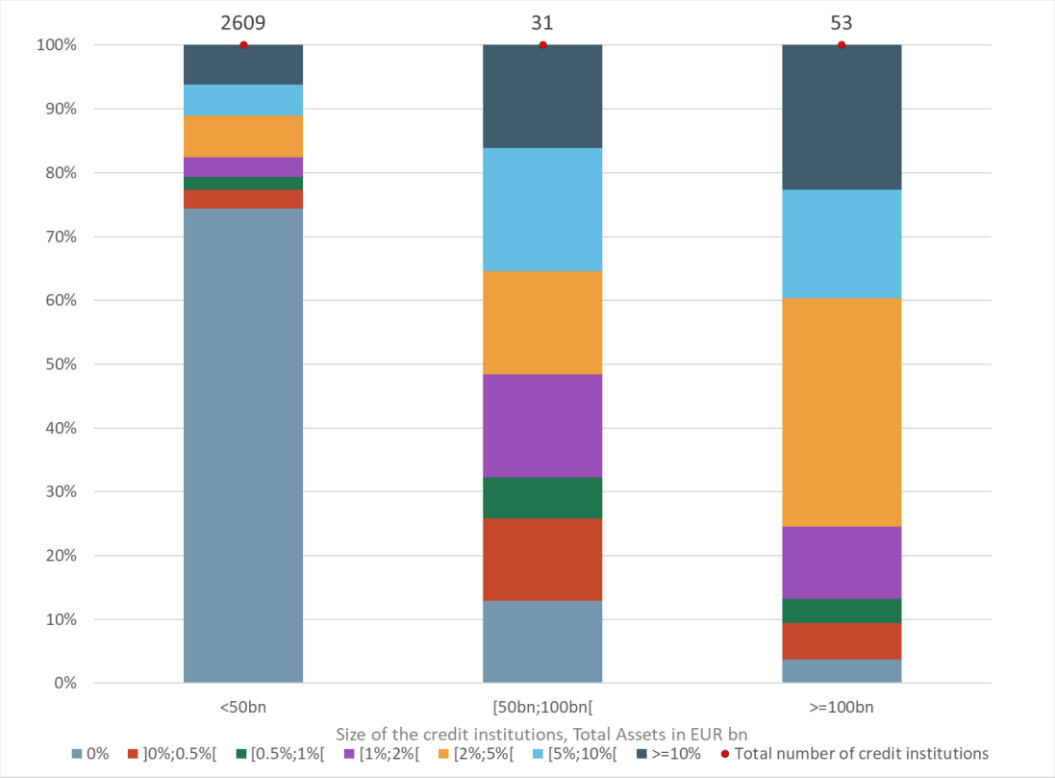
- The impact is more significant for large credit institutions.
- Nearly all large credit institutions are impacted, and 57% of them exhibit reclassification impacts exceeding 1% of total assets.
- In each asset size category, approximately 3% of credit institution show an impact exceeding 10% of total assets. In both the large and mid-size categories, the result is driven by a single credit institution.

[31]As only a few EEA credit institutions report FINREP, total assets proxies were taken from credit institutions' Leverage ratio reporting.

[32] For instance, if credit institution 'E' (total assets of EUR 50 bn) reports counterparty 'X' – for a DBS exposure amount of EUR 0.3 bn – under sector 'Credit Institutions' instead of sector 'Central Banks' and counterparty 'Y' – for a DBS exposure amount of EUR 0.1 bn – under sector 'Central Banks' instead of sector 'Credit Institutions', the impact percentage for credit institution 'E' is computed as: (0.3+0.1) / 50 = 0.8%.

It is important to repeat that the above results undoubtedly represent only the lower bound for all mis-reporting. Indeed, it is worth recalling that this analysis is based on a subset of LE data – specifically, exposures reported by at least two credit institutions – and that, additionally, the exposures covered by LE reporting represent only a portion of a credit institution's total assets. To provide some perspective on the potential extrapolation of this underestimation, Figure 13 presents the same impact metric. However, instead of showing the impact as a share of total assets, it is shown as a proportion of each credit institution's total DBS exposure amount, as reported in its LE reporting submission.

Figure 13. The impact of sector reclassification as a percentage of total DBS exposure amount



Source: LE reporting 31 December 2023, Leverage ratio templates and preliminary sector classification exercise.

Under this alternative metric:

- Approximately 87% of large credit institutions are impacted by more than 1% of their total DBS exposure amount.
- 23% of large credit institutions are impacted by more than 10% of their total DBS exposure amount.

These findings underscore the potential for sectoral misclassification to significantly distort supervisory analysis and policy formulation.

4.3. Impact on own funds and liquidity requirements

4.3.1. Own Funds

Sectoral misclassification can materially affect the computation of own funds requirements, particularly through the influence on Risk-Weighted Assets ('RWA')[33]. Two obvious channels of impact can be identified:

Systemic Sectoral Risk Buffers ('SyRB') – Article 133 of the CRD

Under Article 133 of Directive 2013/36/EU (CRD), as amended by CRD V, competent authorities may impose Systemic Sectoral Risk Buffers ('SyRBs') on exposures to specific sectors to address systemic risks not covered by other capital buffers. Misclassification of exposures may result in credit institutions knowingly or unknowingly wrongly applying these buffers.

The SyRB currently applied in France is particularly illustrative, as it targets exposures to highly leveraged 'NFCs' – a sector that is closely aligned[34] with the LE framework, where classification inconsistencies have already been identified.[35]

Risk-Weighted asset miscalculation – CRR

It is also evident that sector misclassification can directly affect the accuracy of the risk weights applied under the Standardised Approach ('SA'). Since these risk weights are sector-dependent, any misclassification of exposures may result in incorrect calculation of Risk-Weighted Assets ('RWA'). As an example, a counterparty 'A' which is an 'NFC' (and that would qualify, under the SA, for the asset class 'Corporates') but is wrongly classified by credit institution 'B' as 'General Government' (and that would qualify, under the SA, for the asset class 'central governments or central banks') would be under-risk-weighted by credit institution 'B'. The following tables illustrate the risk weights scales applicable to these two exposure classes:

Exposures to central governments or central banks (Article 114 CRR)

Credit quality step	1	2	3	4	5	6
Risk weight	0 %	20 %	50 %	100 %	100 %	150 %

Exposures to corporates (Article 122 CRR)

Credit quality step	1	2	3	4	5	6
Risk weight	20 %	50 %	75 %	100 %	150 %	150 %

[33]See the second paragraph of section 4.2 for the assumption regarding the propagation of LE sectoral misclassification into the COREP.

[34]As far as the 'NFC' criteria is concerned (the leverage criteria is not an available filter in the LE reporting).

[35]While the French buffer applies to a single sector that is globally aligned with the LE framework, other SyRBs – such as those on retail exposures secured by residential property that are in place in Belgium, Germany and Portugal – also rely on subsets of broader sectoral categories. These, too, may be vulnerable to misclassification, potentially leading to undetected breaches and ineffective risk mitigation.

In this example, if counterparty 'A' would be rated according to Credit quality step 2, credit institution 'B' would wrongly apply – on its exposure to counterparty 'A' – a risk weight of 20% instead of 50%.

Under the Basel III output floor, such misclassifications will also affect credit institutions using the Internal Ratings-Based ('IRB') approach as the floor for IRB risk weights is set as a proportion of the SA risk weights.

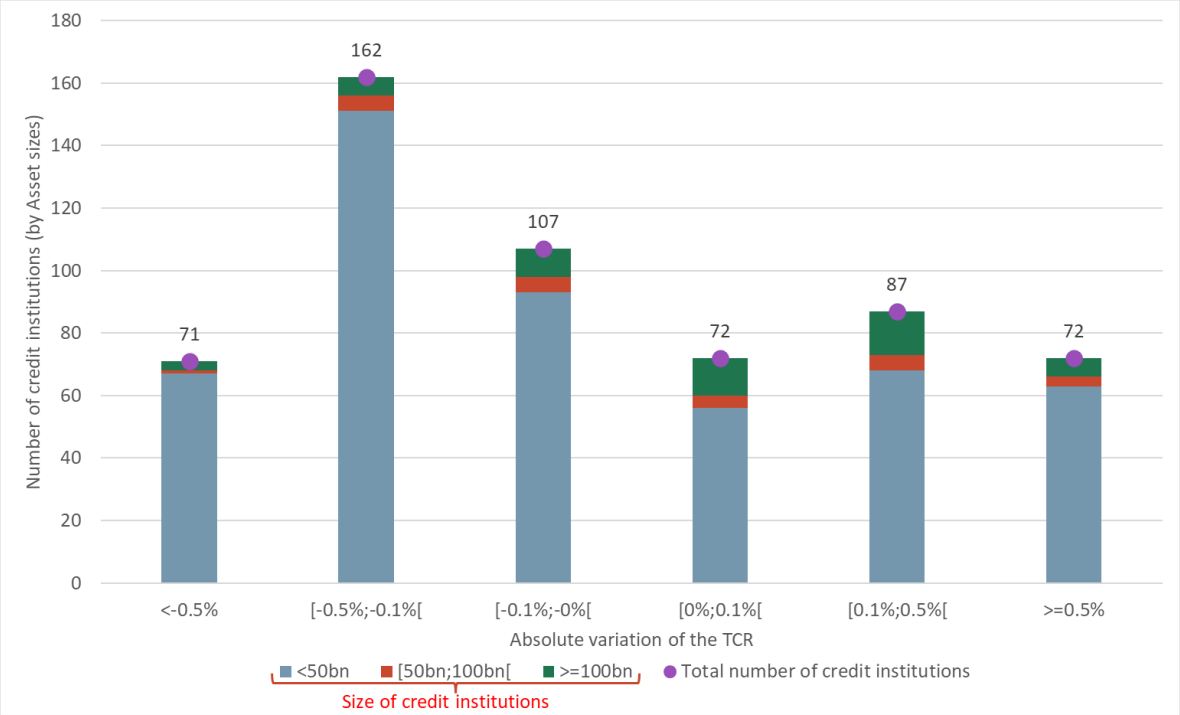
Underestimated RWAs could in turn lead to distorted capital ratios and cause credit institutions to, knowingly or unknowingly, fall below regulatory thresholds should the mis-calibrated RWAs be corrected. To illustrate[36] the potential impact of sectoral misclassification on the own funds ratios of credit institutions, all LE reported counterparties were first allocated to Credit Quality Step 2 (and long maturity), with the exception of exposures to 'Households' which were treated under the retail exposure class (with a standard risk weight of 75%). Accordingly, the applicable risk weights used for the present impact estimation were:

Sector of counterpart	Risk weight
General Governments and Central Banks	20%
Credit Institutions	30%
Corporates	50%
Households	75%

These risk weights were applied to the counterparty exposure amounts[37] after the sector allocations had been corrected.[38] The resulting adjustments were then extrapolated to the total assets of the credit institutions.[39] These adjustments were incorporated into the credit institutions' RWA calculations which were then used to compute the revised Total Capital Ratios ('TCR'). As a result of this process, the TCR of altogether 571 credit institutions needed to be revised. Figure 14 and Figure 15 respectively present the absolute and relative variations in TCR after the application of the corrected sectoral classifications.

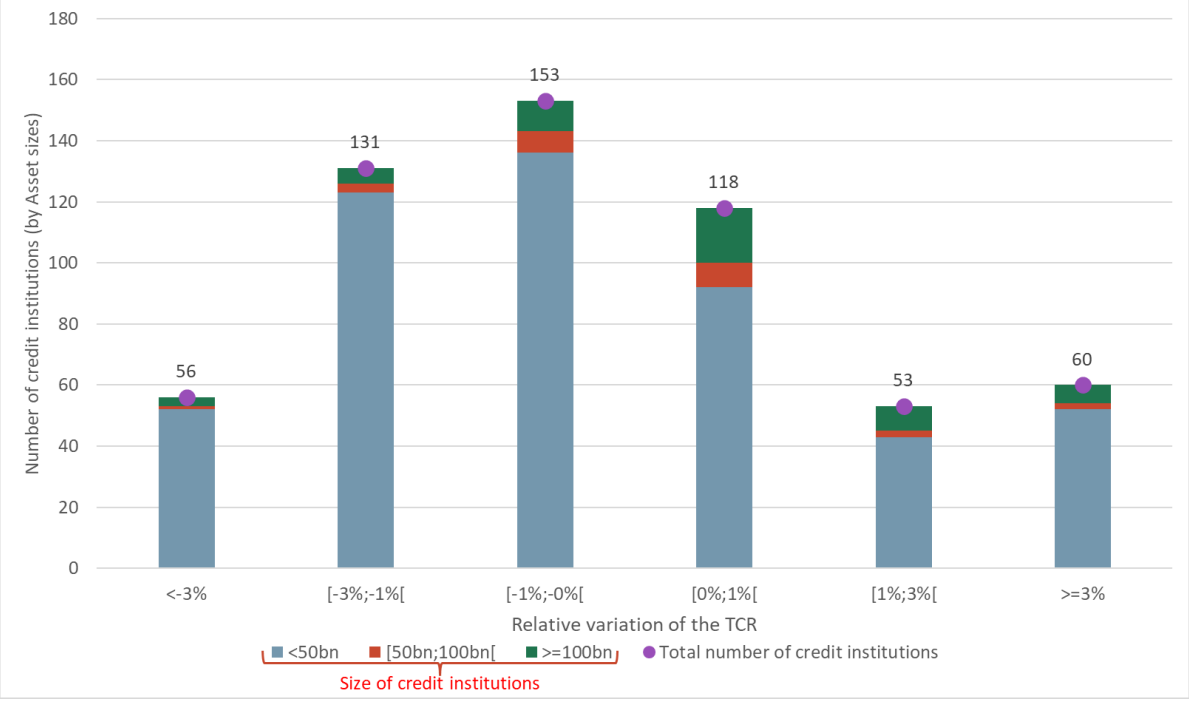
[36]For this illustration, we assume that all EEA credit institutions evaluate their credit risk under the SA.
[37]Exposure amount after Credit Risk Mitigation but before the application of Large Exposures (LE) exemptions as reported in the LE framework.
[38]For instance, for an exposure of EUR 2 bn that was reported as 'Corporates' but for which the correct sector is 'Credit Institutions', we decreased the risk-weighted assets ('RWA') by: (EUR 2 bn) * (50%-30%). Similarly, we would increase the RWAs by (EUR 2 bn) * (30%-20%) for an exposure that was reported as 'General Governments' but for which the correct sector is 'Credit Institutions'.
[39]Since the LEs are a subset of the credit institutions total assets, and assuming that the proportion of inconsistencies in the LE reporting is analogous in the total relevant assets, for each credit institution the resulting adjustment was multiplied by the ratio between (i) the total relevant assets (assets excluding mainly non-financial assets and other non-relevant assets like tax assets – an average of these exclusions was calculated among credit institutions that report FINREP data and then applied to all credit institutions' total assets) and (ii) the LE DBS exposure amount.

Figure 14. Absolute variation of the corrected TCR versus current TCR



Source: LE reporting 31 December 2023, Leverage ratio templates, COREP templates and preliminary sector classification exercise.

Figure 15. Relative variation of the corrected TCR versus current TCR



Source: LE reporting 31 December 2023, Leverage ratio templates, COREP templates and preliminary sector classification exercise.

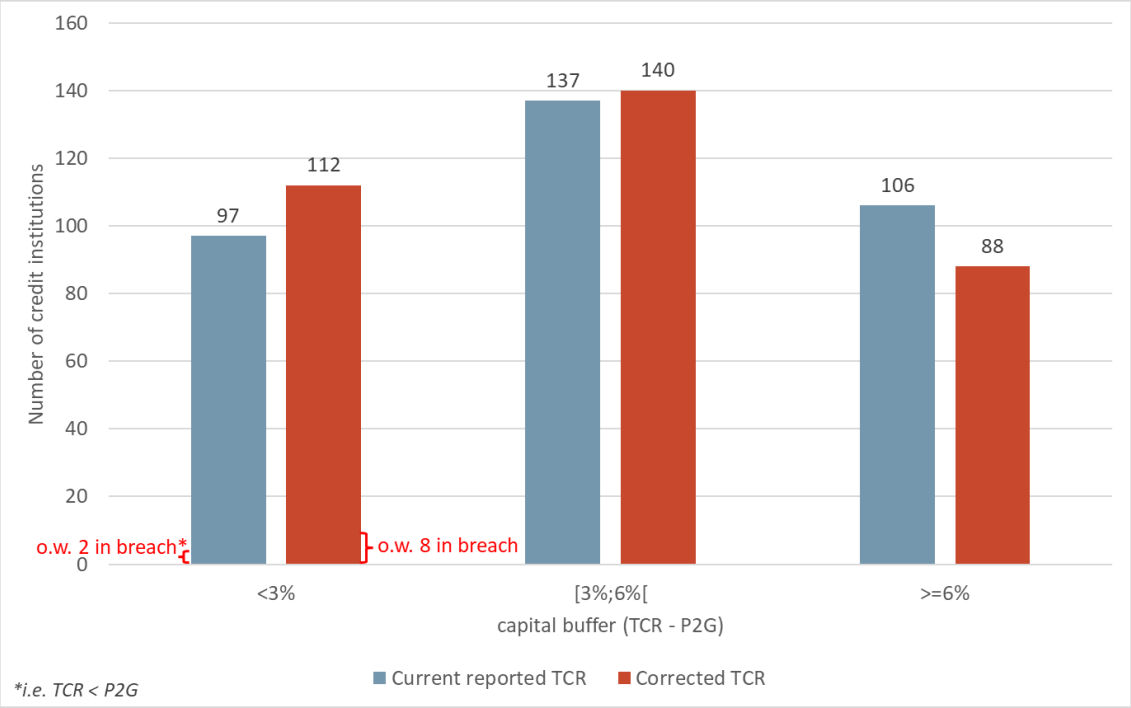
The data illustrated in Figure 14 and Figure 15 yield the following key observations:

- Among the 571 credit institutions affected by the adjustments, 340 credit institutions – or approximately 60% – would see a reduction in their TCR in comparison to the originally reported ratios.

- A total of 71 credit institutions would see an absolute reduction in their TCR of at least 0.5%[40].
- 187 credit institutions would experience a relative decline in their TCR exceeding 1%.

Given the significance of the findings, we conducted a further analysis of the 340 credit institutions whose TCR would decline following the sector corrections. We compared their capital buffer – defined as the difference between TCR and Pillar 2 Guidance ('P2G') – before and after the adjustment. Figure 16 presents this comparison.

Figure 16. Capital buffer (versus P2G) before and after TCR correction



Source: LE reporting 31 December 2023, Leverage ratio templates, COREP templates and preliminary sector classification exercise.

Key insights from Figure 16 are as follows:

- 18 credit institutions that previously had a capital buffer equal to or exceeding 6% would see it fall below this threshold following the sector corrections.
- 15 credit institutions with a capital buffer above 3% would drop below that level.
- 6 additional credit institutions would breach their Pillar 2 Guidance.

Under the stated assumptions[41], the analysis suggests that in terms of own funds, the impact of sector misclassification is indeed material.

[40]To provide some context, the average Countercyclical Capital Buffer ('CCyB') rates over the past three years were 0.2% in 2023, 0.6% in 2024, and 0.7% in 2025. *Source: Chart 3* ECB Speech on Capital Buffers, 2025.

[41]The following key assumptions underpin this analysis: (i) sectoral allocations are aligned between LE reporting and COREP, (ii) all credit institutions are assigned to the Standardized Approach, (iii) counterparties are categorized into only four SA asset classes, (iv) all counterparties are allocated to Credit Quality Step 2 and long maturity (for example, under Credit Quality Step 3, 'General Governments and Central Banks' and 'Credit Institutions' with an ECAI credit assessment would receive the same 50% weighting – unlike in our

4.3.2. Liquidity requirements

Liquidity Coverage Ratio ('LCR')

Sector misclassifications can lead to assets being incorrectly identified as High-Quality Liquid Assets ('HQLA'), or to outflow and inflow rates being wrongly applied. Indeed, some criteria for determining and evaluating HQLAs, inflows and outflows are sector-specific. Such misclassification could mask actual liquidity shortfalls and result in undetected breaches of regulatory minimum requirements.

Net Stable Funding Ratio ('NSFR')

Similarly, the NSFR is sensitive to sectoral classification, particularly in the assignment of Available Stable Funding ('ASF') and Required Stable Funding ('RSF') under Articles 427 and 428 of the CRR. Misclassification may conceal structural funding mismatches and result in non-compliance with NSFR requirements.

4.4. Impact of NACE code misclassification

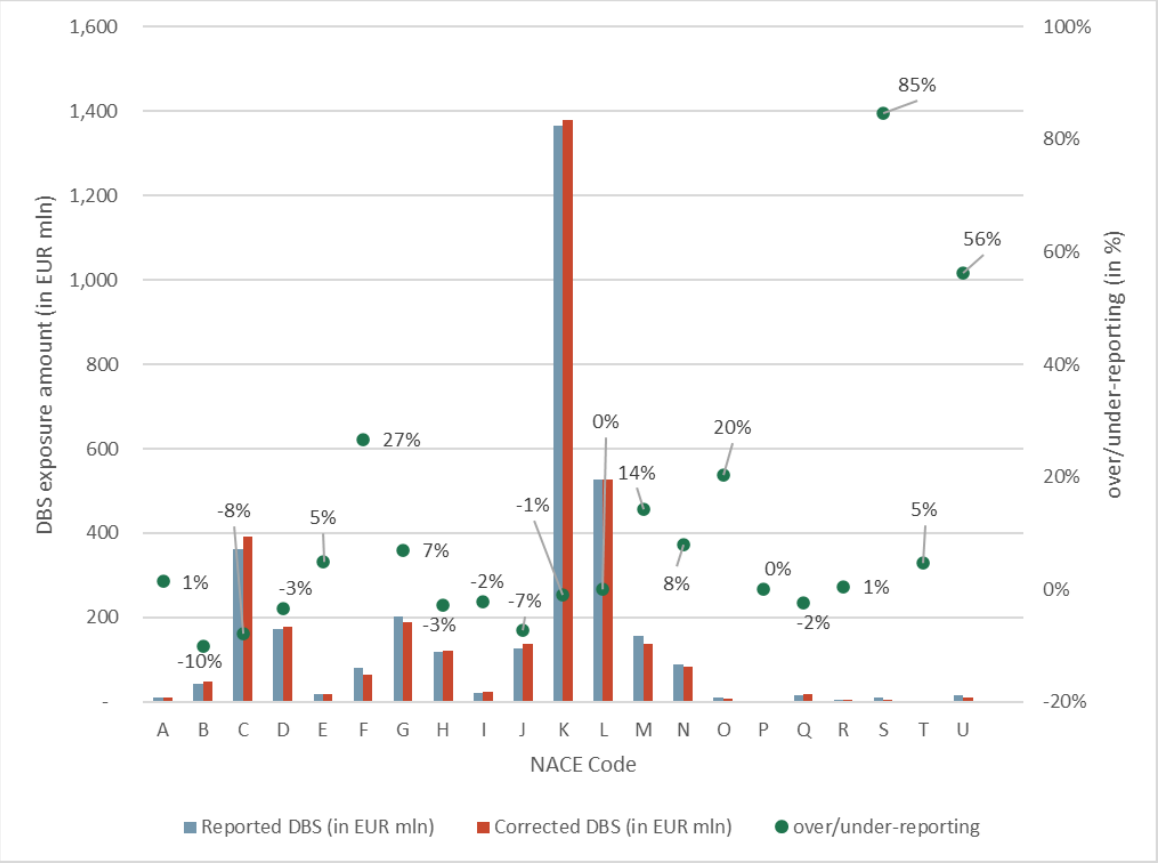
As previously noted, no formal validation exercise has yet been conducted to determine the correct NACE code for each concerned counterparty. For the purpose of the impact estimation analysis in this section, the most frequently reported NACE code is assumed to be correct. This assumption was applied only to counterparties for which a clear "majority NACE code" could be identified[42]. Following this rule, out of the 4,564 counterparties reported under multiple NACE codes (see Section 3.2), NACE code corrections were applied to 2,252 counterparties.

To highlight the extent of the reporting adjustments required, Figure 17 provides an estimate of the impact – for the 'NFC' and 'OFC\{IF}' sectors – resulting from the revision of incorrect NACE code classifications.

assumption – so any misclassification between those sectors would have no impact), and (v) inconsistencies observed in LE reporting are assumed to occur in similar proportion across total relevant assets.

[42]We were able to correct the NACE code only for counterparties for which there was a NACE code reported by the majority of reporting institutions. In contrast, we did not correct the NACE code when e.g. a counterparty was reported by only two credit institutions using two different NACE codes, or by four credit institutions using four different NACE codes.

Figure 17. Estimated impact of NACE code corrections – 'NFC' and 'OFC{IF}'



Source: LE reporting 31 December 2023.

Despite the limiting[43] assumptions, the results indicate a significant impact on reported exposures by economic activity. As with sectors, it is important to note that these figures reflect net misclassifications. For instance, in Figure 17, the net under-reporting of DBS exposure amount towards NACE code "C - Manufacturing" by EUR 31 bn (i.e. "-8%") is the result of a gross under-reporting of EUR 52 bn, partially offset by a gross over-reporting of EUR 21 bn.

Example of supervisory impact: Sectors that significantly contribute to climate change

Under EU Commission Delegated Regulation (EU) 2020/1818, supplementing Regulation (EU) 2016/1011, counterparties classified under NACE codes "A" to "H" and "L" are considered high contributors to climate change and are subject to ESG prudential disclosures.

Based on the adjusted NACE codes, and aggregated at reporting country level, the results reveal that credit institutions in nine Member States under-report their exposures to these NACE codes by between -33.3% and -0.6%. In seven Member States, exposures are over-reported by between 0.2% and 7.1%. Exposures misclassified as "highly contributing to climate change" could be wrongly subjected to climate related policy requirements while exposures misclassified as not belonging to that category could avoid relevant policy interventions.

[43]Given the different ways we determined correct sectors and correct NACE codes, the limitations are more important for NACE code analysis.

5. Broader concerns and solutions

Having established the prevalence and impact of sectoral and NACE code misclassifications, this section suggests possible broader data quality concerns. It also proposes a set of practical and regulatory solutions to address the identified deficiencies and to enhance the overall quality of supervisory reporting.

5.1. Broader data quality concerns

It is important to stress that the findings presented thus far offer only a preliminary glimpse into broader data quality issues within regulatory reporting frameworks. Indeed, the following, non-exhaustive list of examples suggests that the misreporting identified in this paper could constitute merely a lower bound.

Limited scope of the misclassification analysis

The quantitative analysis was restricted to counterparties reported, in the LE reporting, by at least two credit institutions that classified the same counterparty under different sectors or NACE codes. For NACE codes, the scope was even narrower. Consequently, counterparties reported by only one credit institution – despite being equally susceptible to misclassification – were excluded. Moreover, even among counterparties consistently classified by multiple credit institutions, errors may remain undetected under the current methodology.

Inconsistencies in other counterparty attributes disclosed in LE reporting

Preliminary observations indicate inconsistencies in additional data fields within the LE reporting framework. For example, the reported country of residence for identical counterparties also varies across credit institutions. Similarly, some entities are inconsistently flagged as "shadow banking entities", further highlighting the lack of harmonisation in classification practices.

Partial coverage of credit institutions' exposures

It is important to remind that, by design, LE reporting captures only a subset of credit institutions' total exposures. Therefore, the issues identified within this dataset reflect only a partial impact. Given that Large Exposures typically involve sizeable counterparties, misclassifications in sectors composed of smaller entities (such as Households) may be significantly underestimated.

5.2. Proposed remedial action

The EBA published in 2025 the EBA REPORT ON THE EFFICIENCY OF THE REGULATORY AND SUPERVISORY FRAMEWORK44. The recommendations in this report aim, notably, to reduce the costs of reporting, improve its change management and remove overlaps in the reporting initiatives and requirements. Measures are therefore already under way to participate to some improvements of aspects raised in this paper. In particular, a better coordination of requests, i.e.

[44] *EBA Report on the efficiency of the regulatory and supervisory framework*

less overlaps in reporting and improved change management process will allow for more predictability in the requirements, which should hopefully also ensure a better quality in the future. That being said, additional measures and emphasis on the data quality aspects may be needed. This paper therefore fully aims at highlighting the data quality concerns that exist today and highlight aspects that can improve the quality of already requested and collected data, to make sure that it is useful and can be efficiently used by all stakeholders. Several practical and regulatory avenues may be considered to improve the consistency and reliability of sectoral and NACE code reporting. These solutions are grouped into two categories: immediate operational measures, and broader regulatory reflections.

Operational Measures

Development of a reference classification list: A centralised list of counterparties with validated sector and NACE code classifications – particularly those identified as frequently mis-reported – should be compiled. This list should be reviewed by subject-matter experts and made accessible to all reporting credit institutions.

Review of exposures at credit institution level: Credit institutions[45] should be formally asked to review the remaining LE reporting exposures not covered by the Reference List and, where necessary, to correct the data on counterparties, including sector and NACE code classifications.

Supervisory off-site review: National Competent Authorities ('NCAs') should integrate off-site reviews of sectoral and NACE code classifications into their supervisory programs to detect obvious specific misclassification practices.

Regulatory and structural enhancements

Alignment with European System of Accounts ('ESA') classification standards: A broader reflection could be initiated on aligning CRR sector classifications with the ESA classification (applied by Eurostat). While acknowledging that Eurostat data may also contain inaccuracies, such alignment would promote harmonisation and comparability across credit institutions and jurisdictions. It would also enable supervisory and statistical efforts to converge towards a single, high quality and centralised classification system. This would, in turn, simplify processes and controls for both credit institutions and supervisors.

Revision of ITS 2021/451: The current regulatory framework may benefit from further clarification. Challenges in interpreting sectoral classification rules[46] should be addressed through updated guidance or supplementary documentation.

Beyond the specific solutions addressing sectoral and NACE code misclassifications, the following measures could further enhance data quality across the entire prudential reporting framework:

Supervisory priorities

[45]It should be stressed, however, that the ultimate responsibility of the quality of the data lies at the credit institutions.

[46]For instance, the rules applicable to counterparties residing in third countries could be reviewed more carefully. Indeed, based on the observations made, the counterparties residing outside the EEA are twice as likely to be subject to inconsistent sector classifications compared to counterparties within the EEA.

Ensuring the quality of regulatory reporting data should be elevated to a top-tier priority within the supervisory work programs of National Competent Authorities ('NCAs') and the European supervisory bodies.

Credit institutions – Awareness and accountability

Credit institutions are responsible for the quality of their reported data. Strengthening the internal processes and accountability is therefore key. This could be achieved through strengthening the role of internal audit functions in this area. Additionally, enhanced supervisory oversight by NCAs should help foster a stronger "data quality culture" within credit institutions, encouraging proactive compliance and continuous improvement.

External auditors – Potential role

Higher level of involvement of External Auditors should be evaluated, not only for LE reporting, but more broadly across the entire prudential reporting framework.

6. Emerging Research Opportunities

6.1. Further analysis

The reading of the developments and results presented in this paper could logically raise the need of further analysis. Here below is a non-exhaustive list of areas that could necessitate further investigations:

Own funds requirements – Standardized approach asset classes

The Standardised Approach under the Capital Requirements Regulation ('CRR') comprises 17 distinct asset classes. Therefore, and given the extent of misclassifications observed only in the seven sectors of the LE reporting, further works on potential inconsistencies across the broader SA asset classes (that would also concern, indirectly via the output floor, the IRB approach) could be seen as a necessary analysis.

Liabilities – counterparties classification

Although this paper focused on asset-side exposures, similar classification issues on the liabilities side of the credit institutions' balance sheets area should warrants further investigation[47].

Investment firms

The present analysis focuses on the credit institutions reporting. However, similar classification issues might also concern Investment Firms (as supervised entities). This area should also warrants further investigation[48].

Other reporting

Our work has focused on inconsistencies observed in two basic credit institutions' reporting data elements within a single framework – sector and NACE code in the LE reporting. However, based on the magnitude and frequency of the issues identified, further works regarding data quality in other reporting templates and/or in more granular data points (e.g., for sectors: specific loan types or subcategories reported in FINREP templates) should be envisaged.

6.2. Further reflexion on prioritization

The quality of foundational data should be treated as a strategic priority – not only by reporting credit institutions, but also by supervisory and regulatory authorities. Reliable data is a prerequisite for sound analysis, effective policy formulation, and informed supervisory decision-

[47]Currently, in the reporting on 'CONCENTRATION OF FUNDING BY COUNTERPARTY' (COREP template C67.00), credit institutions disclose the sectors of their ten largest counterparties or groups of connected clients on the liability side. In a preliminary review, some inconsistencies in sector classification have been observed as in the LE reporting.

[48]Similar issues have been identified through anecdotal analysis of a limited sample of investment firms' reporting.

making. In this regard, prioritising data quality should be a central focus of ongoing reflection. Below are several examples of potential avenues for consideration. :

Review of the Standardised Approach

Discussions and decisions regarding the re-calibration of risk weights could be biased in case underlying data would be inconsistently reported. As such, the need of assessing the potential of asset classes misclassification could be evaluated before any review of risk weights under the Standardised Approach is undertaken.

Calibration of the Systemic Risk Buffer ('SyRB')

Similarly, the calibration and application of the Systemic Risk Buffer ('SyRB') should ideally be informed by a prior assessment of accuracy and consistency of reported sectoral exposures. Indeed, the presence of sectoral misclassifications could raise concerns regarding the appropriateness and effectiveness of the design and implementation of the SyRB.

IRB Benchmarking Exercises

A comparison of EEA credit institutions' internal credit risk models - the IRB benchmarking exercise - is conducted annually by competent authorities under Article 78 of the Capital Requirements Directive ('CRD'). This exercise naturally involves reconciling model-driven variability in risk weights, even though such variability is not prohibited by regulation and can even be justified. In contrast, potential irregular variability (i.e. similar exposures unequally weighted) in risk weights under the SA is not subject to a comparable review. In light of this, a reflexion on the prioritization of such review regarding SA - over the IRB benchmarking exercise - could be considered (also as SA correctness directly affects the integrity of both the SA and IRB - via the output floor - frameworks).

Pillar I vs Pillar II Perspective

As an illustrative comparison, as of 31 December 2023, the average estimated impact of sector reclassifications on total assets for the 734 affected EU credit institutions[49] was 4.2%. At the same time, the EU average Pillar 2 Requirement (P2R) stood at only 1.6%[50]. This anecdotal perspective should first necessitate deeper scrutiny and, subsequently, could prompt a reassessment of how supervisory resources and efforts are allocated between Pillar I and Pillar II requirements.

Regular Public and Private Sector Monitoring Reports

Examination of possible inaccuracies - related to findings of our analysis and of further analysis proposed - in publications issued by various stakeholders (including credit institutions and supervisory authorities) could also be performed. If such reports are considered essential for effective oversight and are intended to be informative, ensuring their accuracy should indeed be a priority. Conversely, if their practical value is limited, the extent of resources devoted to preparing them could be reassessed. In any case, a further analysis of the current situation – where potentially a substantial amount of resources could be allocated to producing imprecise overviews – appears relevant from an efficiency perspective.

[49]With FINREP sectorization (i.e. IF not excluded from OFC).
[50]Source: COREP reporting as of 31 December 2023.

Costs and Benefits of prioritization

The exploration of the comparisons of the costs and benefits related to enhancing the quality of basic prudential data versus the costs and benefits related to complex and resource-intensive regulatory initiatives currently underway could bring an interesting added value to the discussions about the efficiency of financial supervision.

7. Conclusions

The objective of this paper was to identify, quantify, and assess the implications of inconsistent sectoral and NACE code classifications within the regulatory reporting of EEA credit institutions.

The analysis revealed that reporting inconsistencies are not isolated but rather systemic in nature in the area of Large Exposures. By quantifying the scale of misclassifications and illustrating their impact, this paper underscores the critical importance of foundational data quality.

While this study is limited only to the Large Exposures framework, similar issues could exist in other areas, e.g. capital adequacy, liquidity requirements, climate-related disclosures. The data in these areas should be subject to further study, and should systemic issues be identified, improving the data quality in these areas should be a priority.

Even the most advanced regulatory frameworks are only as robust as the data upon which they rely on. Strengthening the accuracy and consistency of basic data elements is a prerequisite for sound supervision, effective policymaking, and the preservation of financial stability.

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