INACCURACIES OF EARNINGS PER SHARE IN IFRS IN EUROPE

Earnings per share (EPS) are nothing short of "probably the primary focus of security analysts' attention", according to the CFA Institute.

Indeed, comparing how much profit is generated per share to the price of one share naturally enables one to form an opinion on whether a company is fairly valued or not (see below).

The IFRS Accounting Standards require companies public companies to report two amounts, *basic* and *diluted* earnings per share. *Diluted* earnings per share are a calculation of the lowest possible value for earnings per share, considering outstanding financial instruments that could be converted into or generate shares.

Given the direct and prevailing use of earnings per share in comparing companies and driving investment decisions, it is exceedingly important that these amounts be calculated and reported correctly.

EXAMPLE USES OF EARNINGS PER SHARE

- Earnings per share can be used to view how the market interprets the company's risk profile and growth potential:
  - A company that generates on average €1 yearly profit per share with shares valued €40 each is usually a company the market expects to generate much more profit in the future.
  - A company that generates on average €1 yearly profit per share with shares valued €2 each is usually a company the market does not trust to be able to keep generating that much profit in the future.
- Reciprocally, if one considers two companies to have similar risk and growth profiles, but one generates significantly profit per share relative to the cost of a share, then it is a more profitable investment.

EXAMPLE OF A COMMON ISSUE
DRAWN FROM A 2023 ANNUAL REPORT

	2023	2022 (*)
Earnings per share:		
Basic	(0.44)	(0.44)
Diluted	(0.29)	(0.29)

Diluted EPS > Basic EPS.
The company reports no discontinued activities.

THE STANDARD

Contrary to the example shown just above, when an entity records a net loss from continuing operations for a period, instruments that would decrease loss per share (e.g. change loss per share from -0.44 €/share to -0.29 €/share) are NOT dilutive and should not be included the calculation of diluted earnings per share (EPS).

For instance, when an entity records a net loss from continuing operations for a period, instruments that would increase the number of ordinary shares without affecting the loss are NOT dilutive. **See IAS 33, illustrative example 12, fourth quarter for another example.**

> *Potential ordinary shares are antidilutive when their conversion to ordinary shares would increase earnings per share or decrease loss per share from continuing operations.*
> *The calculation of diluted earnings per share does not assume conversion, exercise, or other issue of potential ordinary shares that would have an antidilutive effect on earnings per share.*
>
> **IAS 33, paragraph 43**

MEASURING APPLICATION OF THE RULE

As the example shown in introduction illustrates, diluted EPS are not always calculated correctly in Europe.

The exact extent to which that is the case is not **directly** measurable. Indeed, if a company includes both dilutive and antidilutive potential shares in its calculation of diluted EPS, the aggregated disclosure might not seem wrong.

There are also many cases where the report does not show whether the standard is understood, simply because there are no potential antidilutive ordinary shares, or too few to have a visible effect on diluted EPS.

Earnings per share	2023	2022
Profit for the year attributable to ordinary shares (t.kr.)	-81.863	102.829
Number of shares to calculate earnings per share	60.993.463	48.486.602
Dilution effect of outstanding warrants, number of units	213.144	256.600
Number of shares to calculate diluted earnings per share	61.206.607	48.743.201
Earnings per share (EPS)	-1,34	2,12
Diluted earnings per share (EPS-D)	-1,34	2,11

Diluted EPS > Basic EPS, but the rounding conceals the difference.

Consequently, the figures shared thereafter are so to speak "the tip of the iceberg", but we estimate the phenomenon to be sensibly more widespread.

READ MORE

Other reviews on the topic, based on samples, have been conducted previously. I especially would recommend this Thematic Review (click to open) by the United Kingdom Financial Reporting Council.

Iceland, Seljalandsfoss

BEFORE YOU READ FURTHER

In the rest of the paper, for the sake of brevity, I will simply mention “basic EPS” or “diluted EPS” when talking about the basic and diluted earnings per share **from continuing activities**, that is to say either the explicitly reported EPS from continuing activities, or the total EPS if no EPS from continuing activities is separately reported.

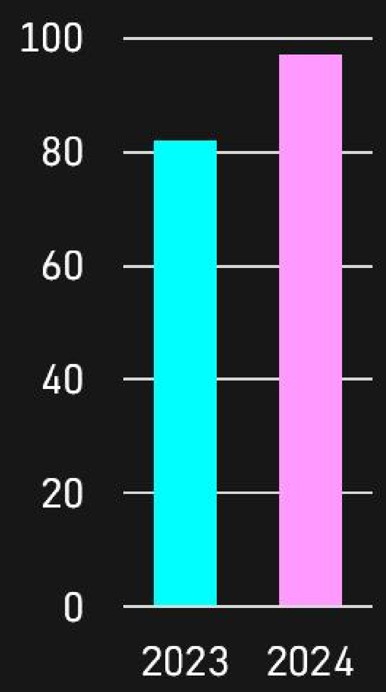
OVERALL TRENDS

Our sample for the study comprises 2447 companies in Europe.

We counted **82 instances in 2023** of diluted EPS reported to be greater than basic EPS.

This amount rises to **97 instances in 2024**, of which:

- 78 instances related to **negative** EPS.
- 19 instances related to **positive** EPS.

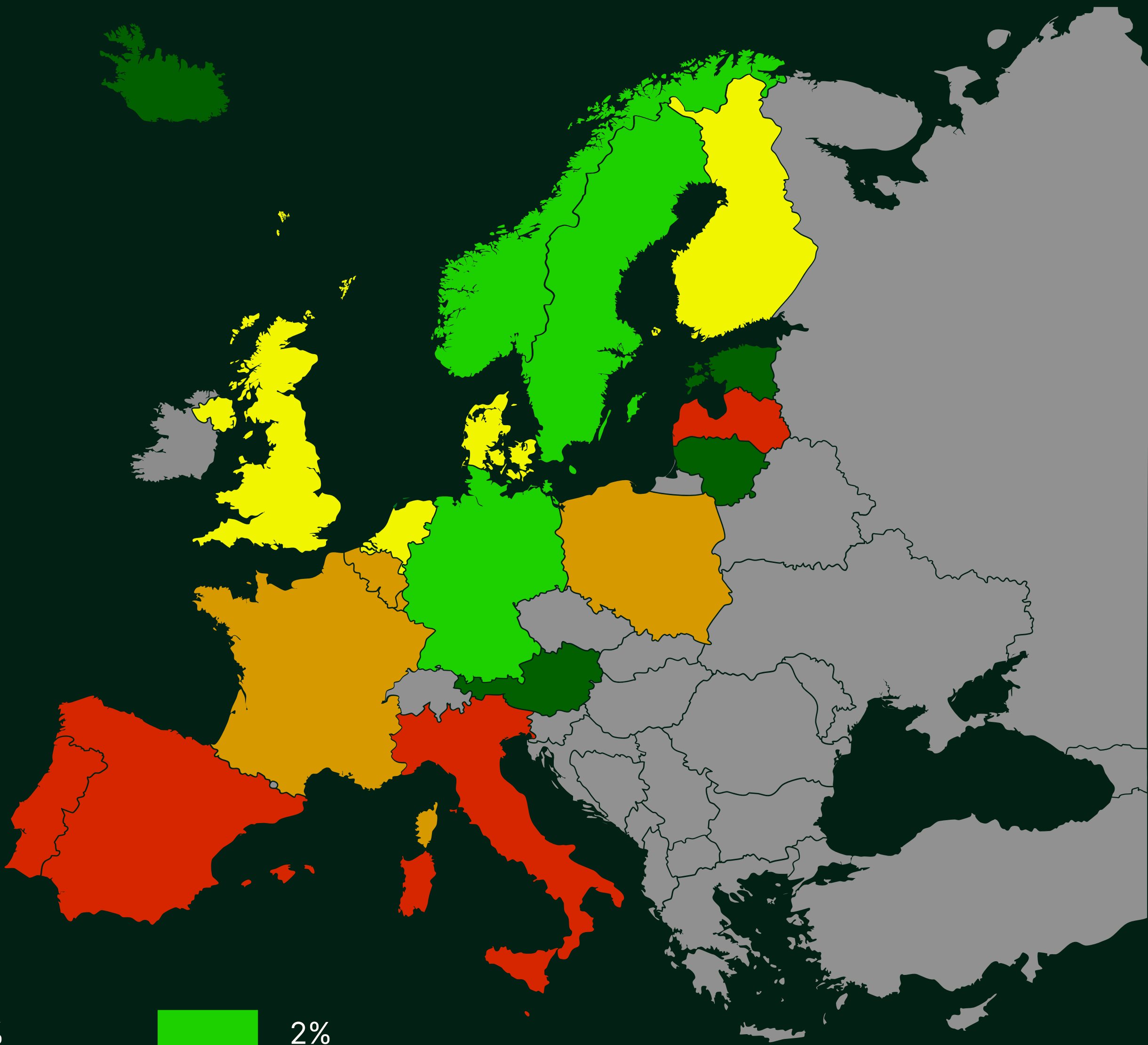


+18%

inconsistent earnings per share from 2023 to 2024

BY COUNTRY

If you read a negative diluted EPS in a 2023 report, here are the minimum chances the basic or diluted EPS was wrong:



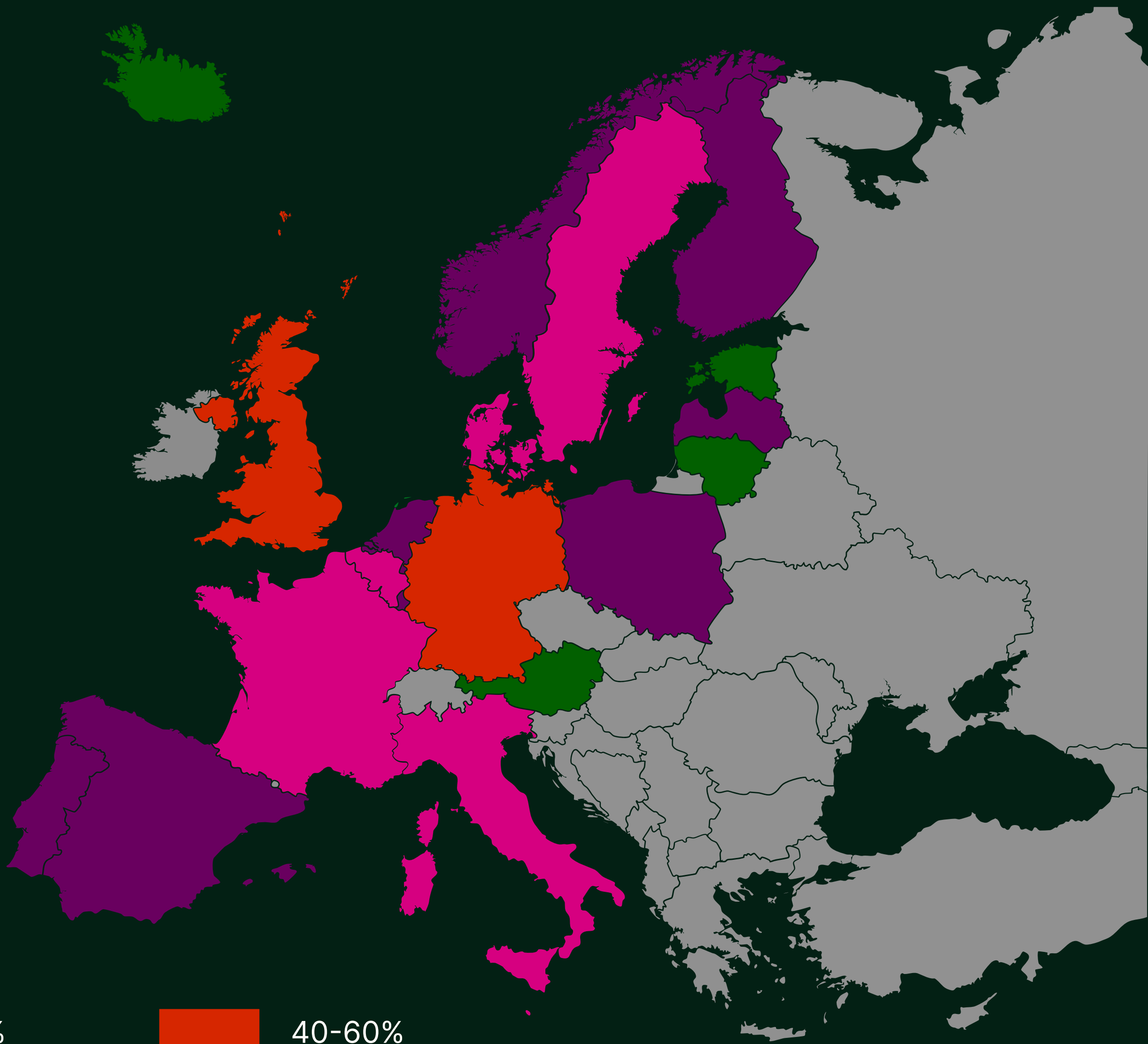
0%
2%
5-6%
8-12%
16%+
Insufficient data

corporatings

Feel free to ask us for other geographic benchmarks!

BY COUNTRY

If you read a negative diluted EPS in a 2023 report and the diluted EPS was not equal to the basic EPS, here are the minimum chances the basic or diluted EPS was wrong:



corporatings

Latvia, Turaida Castle

ERRORS THAT BECOME COMMON PRACTICE

- As the second map illustrates, the erroneous disclosures are prevalent enough that they may look like common practice.

- Overall, **82% of negative diluted EPS that are different from basic EPS visibly include antidilutive instruments in their calculation**.

- An accountant looking into reports of peers of their company, looking for guidance, would probably be led to make incorrect conclusions, and use a wrong definition for their own diluted EPS.

- Such a high rate of error is also dangerous for analysis. Financial analysts, having less expertise than accountants on the accounting standards, may be led to trust the common practice and misinterpret the meaning of diluted earnings per share.

- Machine learning algorithms are designed to learn patterns from data and will obviously come to wrong conclusions on that data.
  - This is ironically how the author of this paper came to discover this issue. Our error detection algorithm brought up conformant diluted EPS as being dubious outliers. We had to specifically replace that with a hand-written rule.

Positive diluted EPS

The awareness issue on the dilution rules does not seem to be limited to negative EPS. As we reported earlier, we found 19 instances of positive diluted EPS higher than the corresponding basic EPS. Here is an example:

	Year ended 31 March 2024	Year ended 31 March 2023
PROFIT FOR THE YEAR FROM CONTINUING OPERATIONS	**108,968,821**	**105,277,571**
PROFIT FROM DISCONTINUED OPERATIONS	**-**	**-**
PROFIT FOR THE YEAR	**108,968,819**	**105,277,571**
Attributable to non-controlling interests	88,480	205,643
Attributable to equity holders of the parent	108,880,339	105,071,928
Basic earnings per share	2.49	2.24
Diluted earnings per share	2.53	2.42

As at 31 March 2024, the Parent held 583,260 own shares (31 March 2023: 3,305,632 shares) and had no other equity instruments with a potential dilutive effect, implying diluted earnings per share in FY 2023/24 of 2.53 euros (FY 2022/23: 2.42 euros).

THE STANDARD

The above example illustrates another relatively not-so-rare source of miscalculation. However, this time, the miscalculation is on the basic EPS themselves.

“Outstanding ordinary shares” do not include equity instruments held by the entity itself (“treasury shares”).

A non-negligible number of companies use all shares ***issued***, rather than shares ***outstanding*** to calculate their basic EPS or both EPS. The difference can be quite significant.

> *The weighted average number of ordinary shares outstanding during the period is the number of ordinary shares outstanding at the beginning of the period,* ***adjusted by the number of ordinary shares bought back*** *or issued during the period multiplied by a time-weighting factor.*
>
> **IAS 33, paragraph 20**

EXAMPLE OF IMPACT
DRAWN FROM A 2023 ANNUAL REPORT

	31/12/2023	31/12/2022
Earnings per share (€)		
. Base	**0,18**	**-0,06**

	31/12/2023	31/12/2022
Net income attributable to shareholders of the parent entity	1 077	-382
Weighted average number of shares for basic earnings per share	6 133 828	6 133 828

As of December 31, 2023, the share capital consisted of 6,133,828 ordinary shares with a nominal value of €0.06

Treasury-held shares: the number of treasury ordinary shares held by the Group amounted to 392,449 as of 31/12/23 (identical to that at 31/12/22)

	31/12/2023	31/12/2022
Equity		
Issued capital	368	368

The basic earnings per share disclosed in the income statement are consistent with the declared profit, 1 077 000 €, and the number of shares used in the calculation, 6 133 828 shares, giving 0.176 €/share.

There is little doubt that 6 133 828 is indeed the number of shares issued rather than outstanding, consistently with the disclosed value of issued capital, as indeed 6 133 828 × 0.06€ = 368 029€.

The actual number of shares outstanding is then 6 133 828 - 392 449 = 5 741 379.
And the actual basic EPS is 1 077 000 / 5 741 379 = 0.188 €/share

The company true basic EPS is therefore **6.8% higher than disclosed**.
This in turns means that the company's **price-earnings ratio** (none other than the most used ratio to determine whether a company is fairly valued) should also be **6.8% higher** than what the report discloses to its readers.

A 6.8% difference is more than enough to make a difference in an investment decision.

RELATION TO AUDIT

All earnings per share reviewed in our study are part of consolidated financial statements, for issuers listed on a regulated market. As such, all such figures were subject to audit. It is therefore natural to study whether any correlation exists between the surprising disclosure and their audit firm.

Since we are studying issuers listed on a regular market, a large majority of reports are audited by one of the four firms known as the "Big 4".
Overall, "only" **69**% of inconsistent disclosures per share had been audited by one of the four firms.

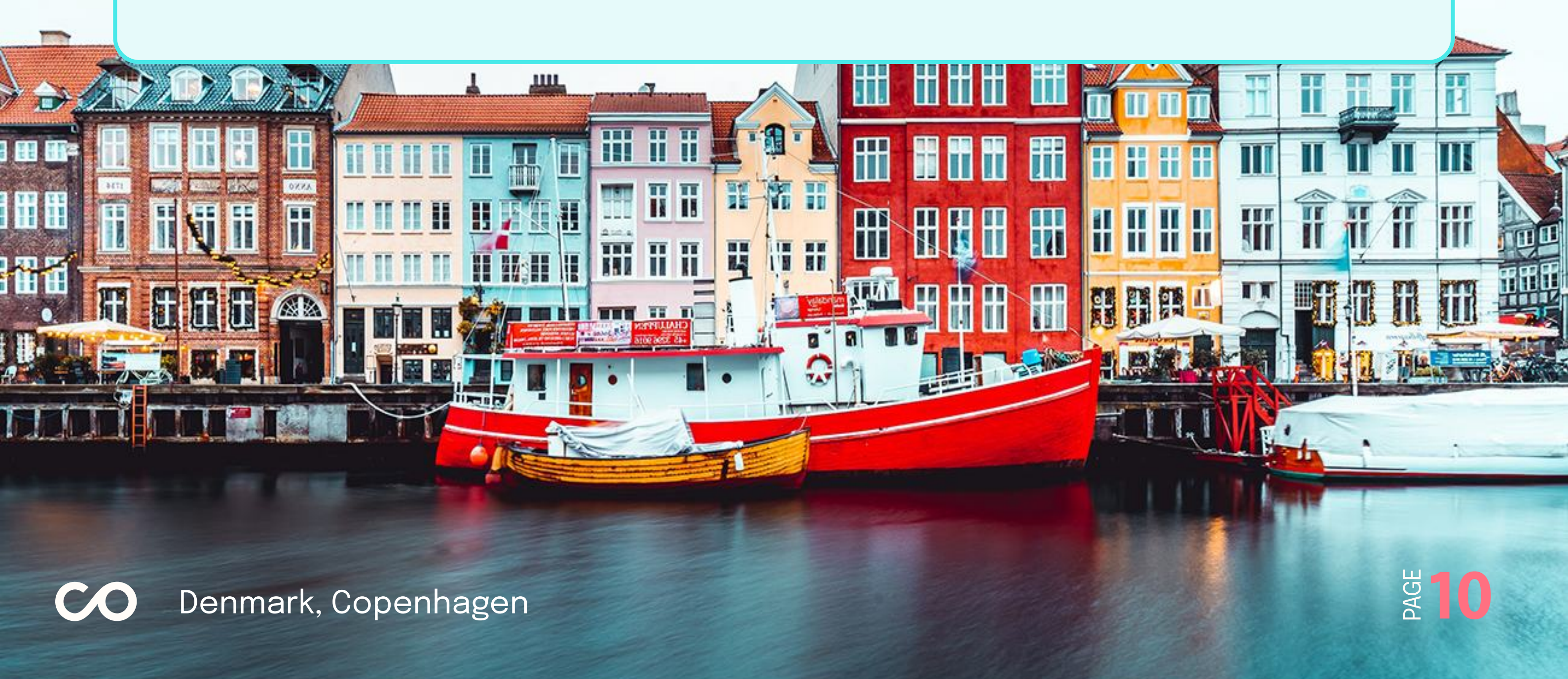
This figure varies by country, from **46**% in Poland and **68**% in France, to countries where **100**% of inconsistencies were on a report audited by one of the four firms, such as Spain, Belgium or the United Kingdom.

DIALOGUE WITH AUDITORS

Our usual action after finding seemingly inconsistent disclosures in a report is to reach out to auditors, in particular to understand whether there could be some missing context in the report.

To give credit where credit is due, this topic was actually brought up to us by Big 4 auditors after we flagged consistent disclosures at outliers, as mentioned earlier.

Our subsequent reach-out to others was unfortunately not so successful and did not allow us to gain an understanding of why the disclosures contradicted the standard.

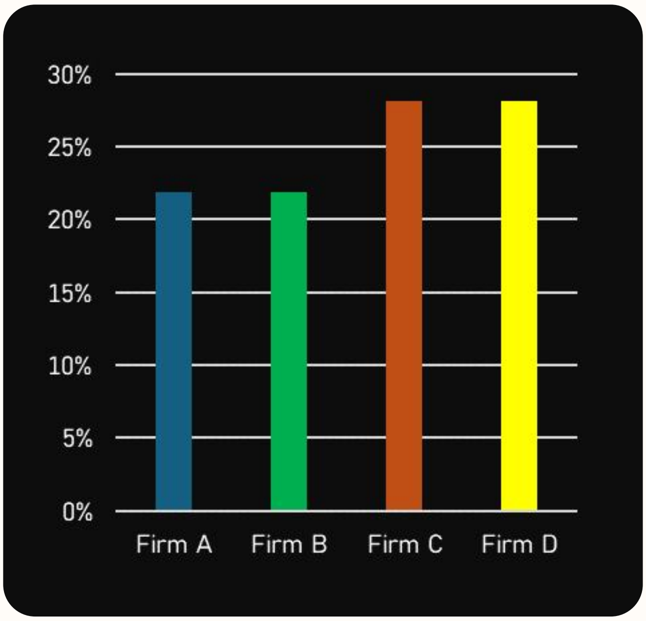


Denmark, Copenhagen

We display above the distribution of the noted inconsistencies between the four firms.

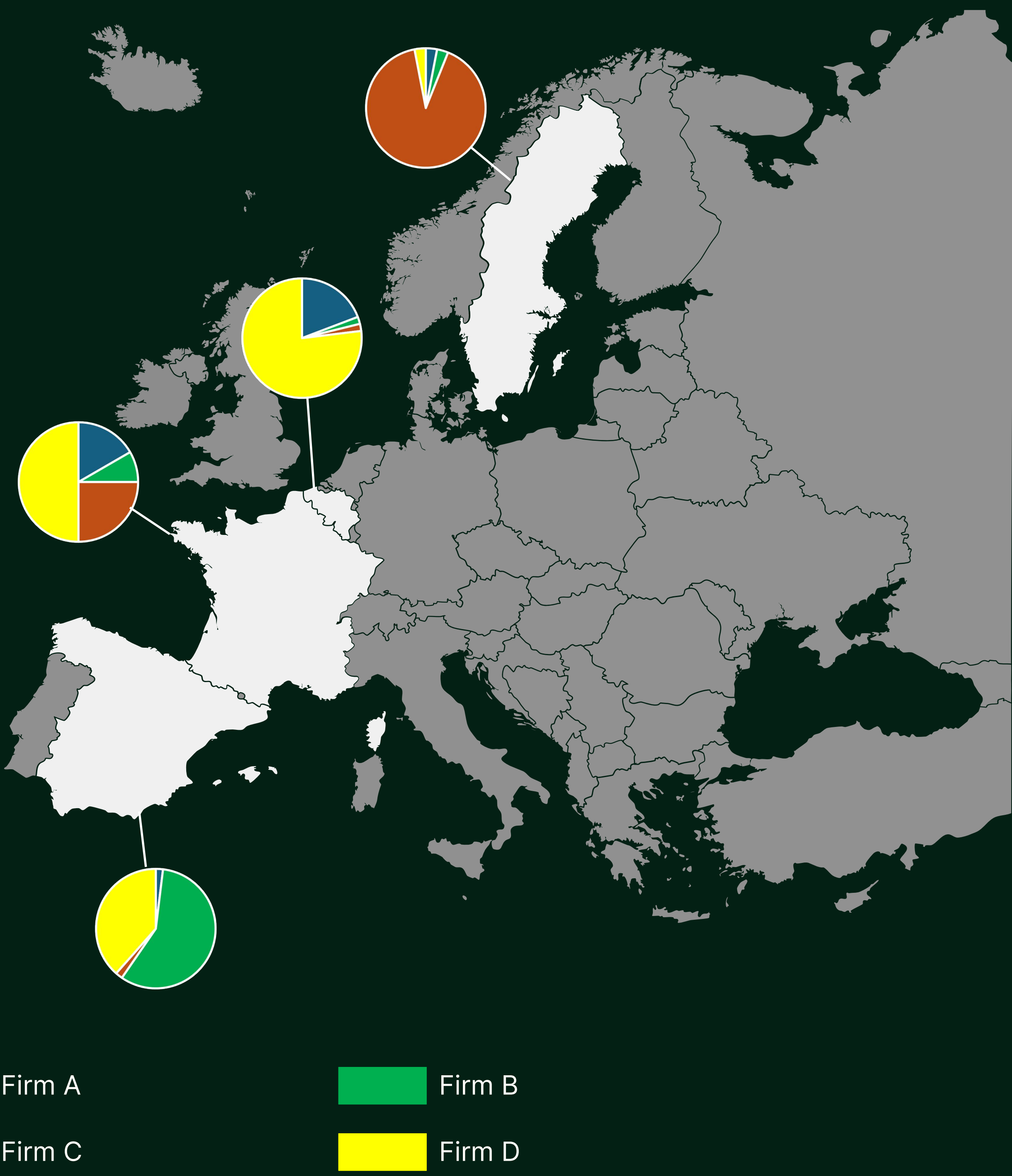
While two perform marginally better, the difference cannot be called statistically significant. All four firms signed reports that included this type of inconsistency.

That is of no surprise to us. As noted in some of our earlier studies, the significant differences usually appear at more local levels, and it is indeed true here again, as we show next page.



While the overall distribution is rather uniform, some countries inconsistencies were skewed towards one or two firms in particular.

For instance, in **Sweden** only 3 reports had inconsistencies, but all 3 of them were reviewed by Firm C.



DIGITAL REPORTING

All 98 inconsistencies we report on in reports published in 2024 were examined each individually, on the base of the 'human-readable' layer of the report (equivalent to the old PDF).

However, finding among the 2447 reports in our study, which ones were worth focusing our attention on could only be done by taking advantage of the 'ESEF' digital format in which these annual reports are now published.

Our screening of suspect reports using the electronic disclosures initially yielded a total of **108** issues. As mentioned earlier:

- **97** of these reflected a genuine problem in the disclosed information
- **11** were false positives, related to errors in the digital layer of the report.

The digital screening for error therefore yields a **89.8**% efficiency to detect actual miscalculations of the EPS. Far more issues detected related to the information disclosed than to their digitalisation.

The remaining 11 'false positives' are false positives only relative to the matter of detecting misinterpretations of IAS 33; they remain actual errors, when it comes to the application of the reporting requirements. Here are the observed errors:

- 6× : misdeclaration of the sign of their diluted EPS in the digital layer.
- 2× : tagging of *comprehensive income per share* as "diluted EPS".
- 2× : tagging of both figures in their 2023 column as basic EPS and both figures in their 2022 column as diluted EPS
- 1× : tagging of basic EPS as diluted and their diluted EPS as basic

Greece, Santorini

UNCOMMENTED EXAMPLE 1

On this page and the following, we share a few examples of disclosures on earnings per share where the disclosed amounts either contradict the previously mentioned rules, or were surprising in other ways that do not seem to be clarified by the disclosures.

	Fiscal year ended December 31 2023	2022
EARNINGS PER SHARE (euros per share)		
Basic	(0,23)	0,05
Diluted	(0,09)	0,04

a) Basic

Basic earnings per share are calculated by dividing the profit attributed to the controlling entity by the weighted average number of ordinary shares outstanding during the year (Note 15).

	2023	2022
Profit/(loss) attributed to the controlling entity (Thousands of euros)	(21.891)	5.006
No weighted average of common shares outstanding (thousands)	96.000	96.000
Basic earnings/(loss) per share (euros per share)	**(0,23)**	**0,05**

b) Diluted

Diluted earnings per share are calculated by adjusting the weighted average number of common shares outstanding to reflect the conversion of all potentially dilutive common shares. In fiscal years 2023 and 2022, the Group has considered the conversion of type A and C obligations, calculating the weighted average number of potential ordinary shares in circulation during the year.

Furthermore, in the 2023 calculation the group considers the convertible financial instruments explained in Note 20.b, as well as the credits obtained from [redacted] potentially convertible at the end of the year, being subject to subsequent capitalization in February 2024, after prior approval of the operation at the Extraordinary General Meeting of shareholders held on April 13, 2023, once the conditions for its disbursement have been met and pending a condition at the end of 2023 for its capitalization, fulfilled on January 30 2024 (Note 2.23 and Note 37).

	2023	2022
Profit/(loss) attributed to the controlling entity (thousands of euros)	(21.891)	5.006
No weighted average number of ordinary shares outstanding	235.652	116.472
(thousands) Basic earnings/(losses) per share (euros per share)	**(0,09)**	**0,04**

UNCOMMENTED EXAMPLE 2

PROFIT AND LOSS ACCOUNT		NOK 1000
	IFRS	IFRS
	2023	2022
Earnings per share	4,75	-4,74
Diluted earnings per share *	1,71	0,36

* Diluted earings per share calculated excl. value adjustment debt.

Restructuring agreements with the lenders mean that the lenders, upon conversion of tranche B after the end of the agreement period 31/12/24 or extended agreement period 31/12/25 or alternatively a combination of conversion times, can become owners of 47% of the shares in the company. This involves dilution of shareholders except [redacted], which has the right to maintain its ownership interest of 50.96% when converting shareholder loans. Other shareholders may be diluted from owning 49% of the company to owning 2% of the company.

Lenders' ownership is not affected by the size of non-interest-bearing debt at the end of the restructuring period, but by how much of the non-interest-bearing debt is converted to interest-bearing debt calculated on the basis of earnings for the individual ship in the 12-month period from 01/07/2023 to 30/06/2024.

If the earnings mean that non-interest-bearing debt is unchanged as a result of the earnings test, the lenders' share of the company after conversion will amount to 47% of the company. [redacted] will own 50.96% of the company and other shareholders will own 2.04% of the company. In that case, 547,779,288 new shares will be issued and the new number of shares will be 571,555,588.

Based on non-interest-bearing debt as of 31/12/23, the average subscription price will be NOK 2.96 per share and the capital increase will then have a diluting effect based on the share price at the end of 2023.

UNCOMMENTED EXAMPLE 3

This company declared more outstanding shares than issued shares.

(in € thousands)	**2023**	**2022**	***amount with related parties***
Basic earnings per share	**2.87**	**4.16**	
Diluted earnings per share	**2.87**	**4.15**	

10. Earnings per share

Basic earnings per share amounted to € 2.87 in 2023 (€ 4.16 in 2022) and diluted earnings per share amounted to € 2.87 (€ 4.15 in 2022). Basic earnings per shares were computed by dividing the net profit attributable to the shareholders by the weighted average number of shares outstanding during the year, equal to 55,745,935 in 2023 and 57,750,850 in 2022.

The dilutive effect of stock option plans granted by [redacted] is determined by excluding tranches assigned to a higher price than the average price of [redacted] ordinary shares in 2023.

Share capital

At December 31, 2023, the fully paid-in share capital consisted of 55,948,257 common shares, par value of € 1 each. No changes occurred compared with December 31, 2022.

Treasury shares

At December 31, 2023, the amount of treasury shares was 2,588,278, equal to 4.63% of the share capital, totaling € 296,797 thousand (€ 281,277 thousand at December 31, 2022).

The increase of € 15,520 compared to December 31, 2023 reflects the net effect deriving from the purchase of treasury shares (equal to € 28,689 thousand), and from the exercise of 132,781 total options relating to 2017 Stock Option Plan (5,000 options) and 2018 Stock Option Plan (127,781 options), for a total value of € 11,515 thousand, and from the assignment of the first tranche of shares in relation to the 2022 equity plan for an amount equal to € 1,653 thousand.

Share capital

At December 31, 2022, the fully paid-in share capital consisted of 55.948.257 common shares, par value of € 1 each. No changes occurred compared with December 31, 2021.

Treasury shares

At December 31, 2022, the amount of treasury shares was 2,435,372, equal to 4.35% of the share capital, totaling € 281,277 thousand (€ 120,022 thousand at December 31, 2021).

The increase of € 161,255 compared to December 31, 2021, reflects the net effect deriving from the purchase of treasury shares (equal to € 164,958 thousand) and from the exercise of 57,500 total options relating to 2016 Stock Option Plan (15,000 options) and 2017 Stock Option Plan (42,500 options), for a total value of € 3,703 thousand.