

The European Public-Firm Audit Market: Some exploratory insights

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Abstract

Building on sample of European publicly-listed clients and their audit fees I explore the market share of Big 4 auditing firm across time, countries and industries. I further assess the audit fee differential between Big 4 and non Big 4 firms.

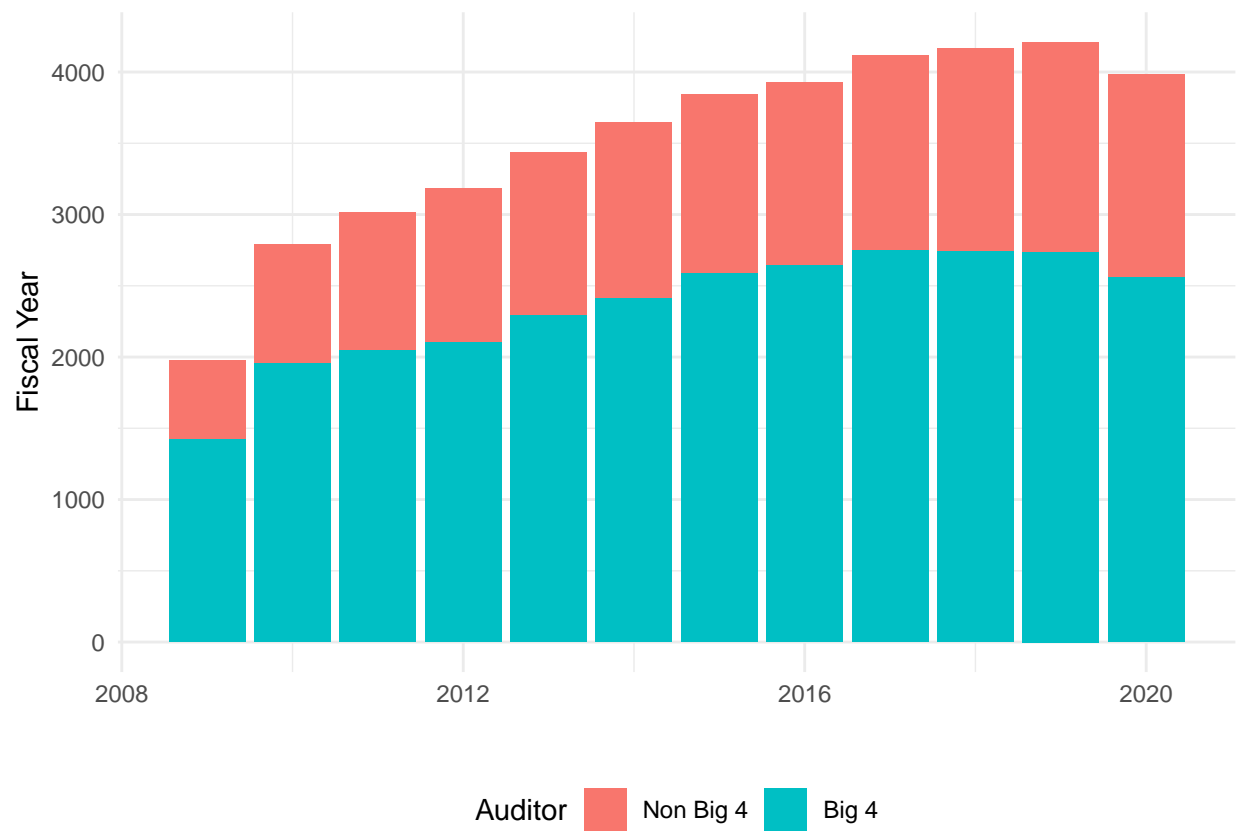


Figure 1: Number of Clients by Year

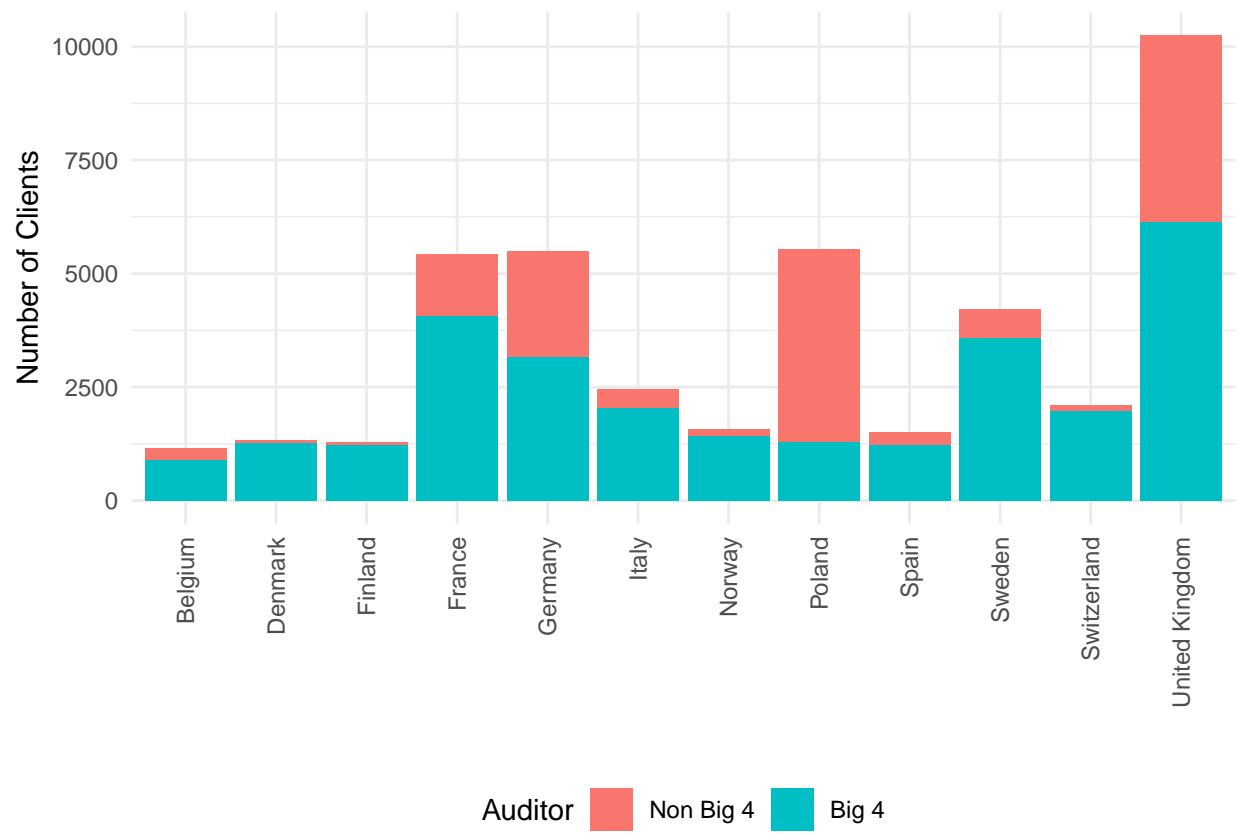


Figure 2: Number of Clients by Country

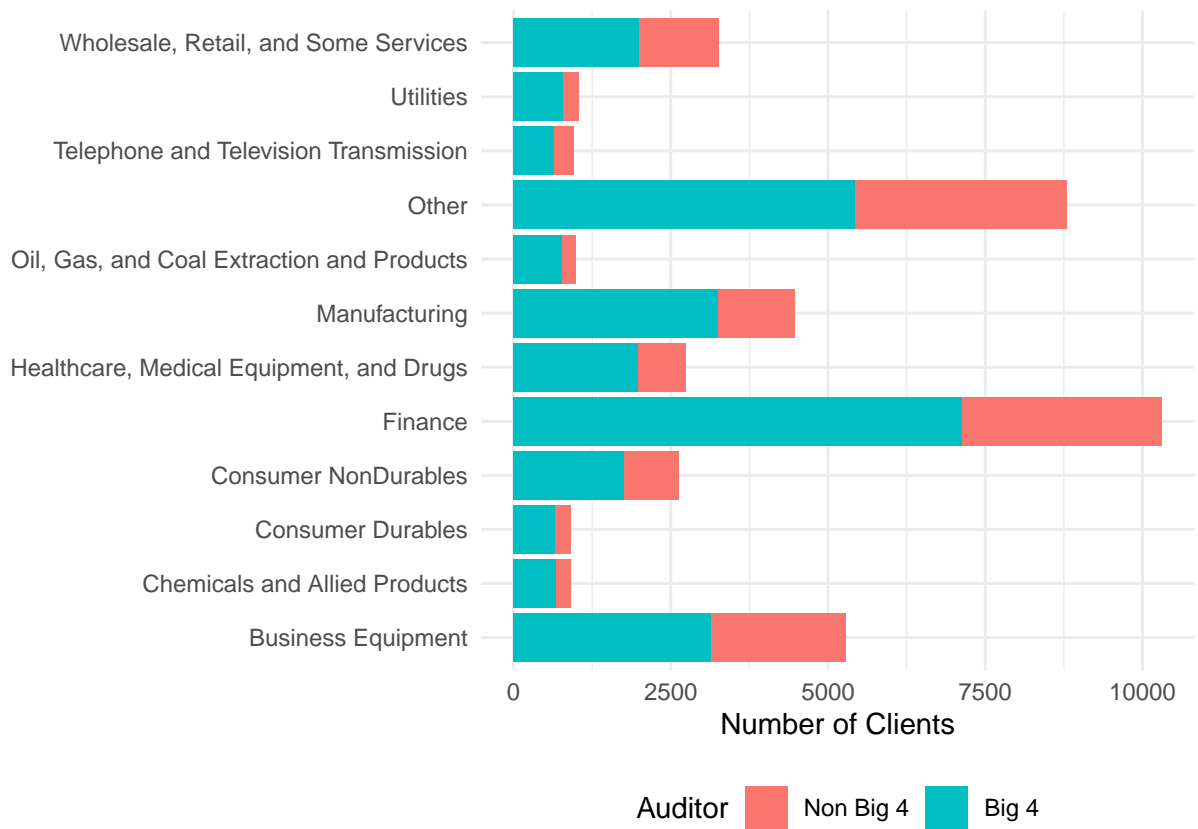


Figure 3: Number of Clients by Industry

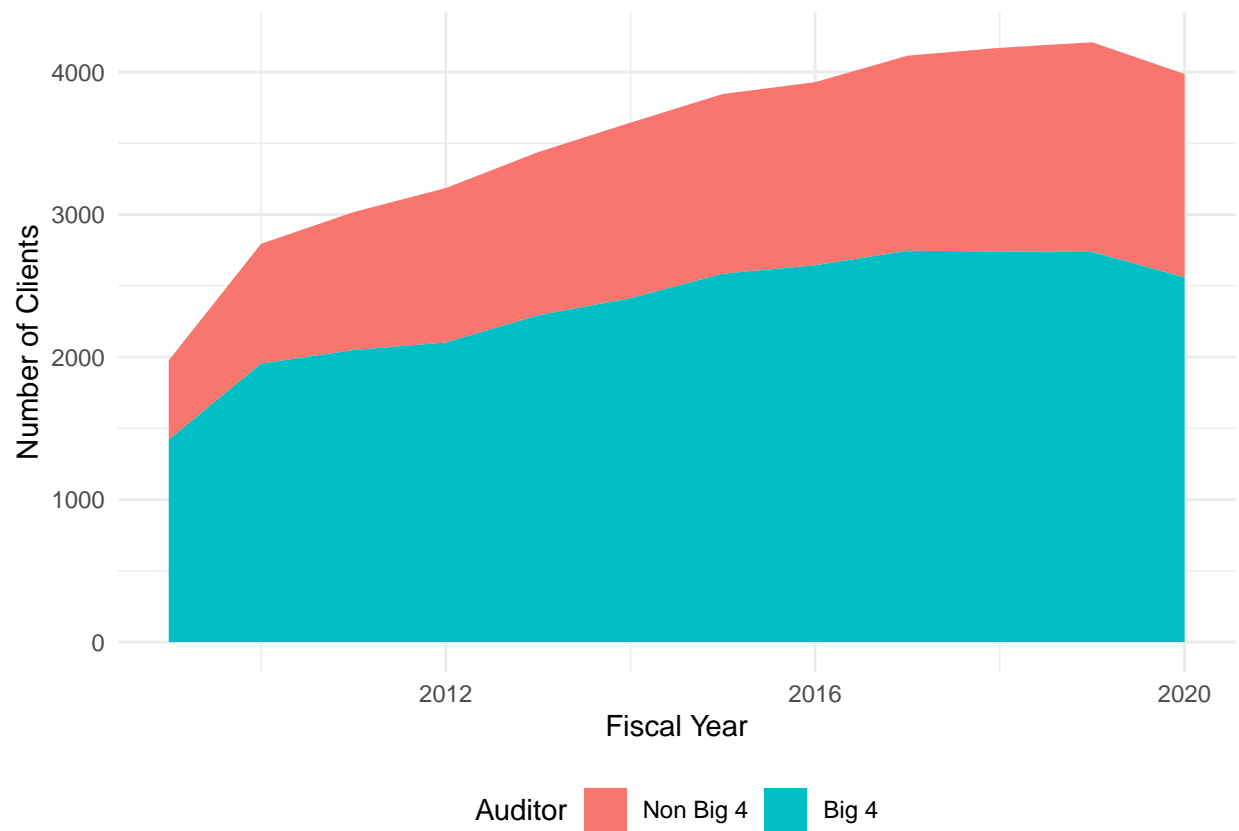


Figure 4: Absolute Client Market Shares Over Time

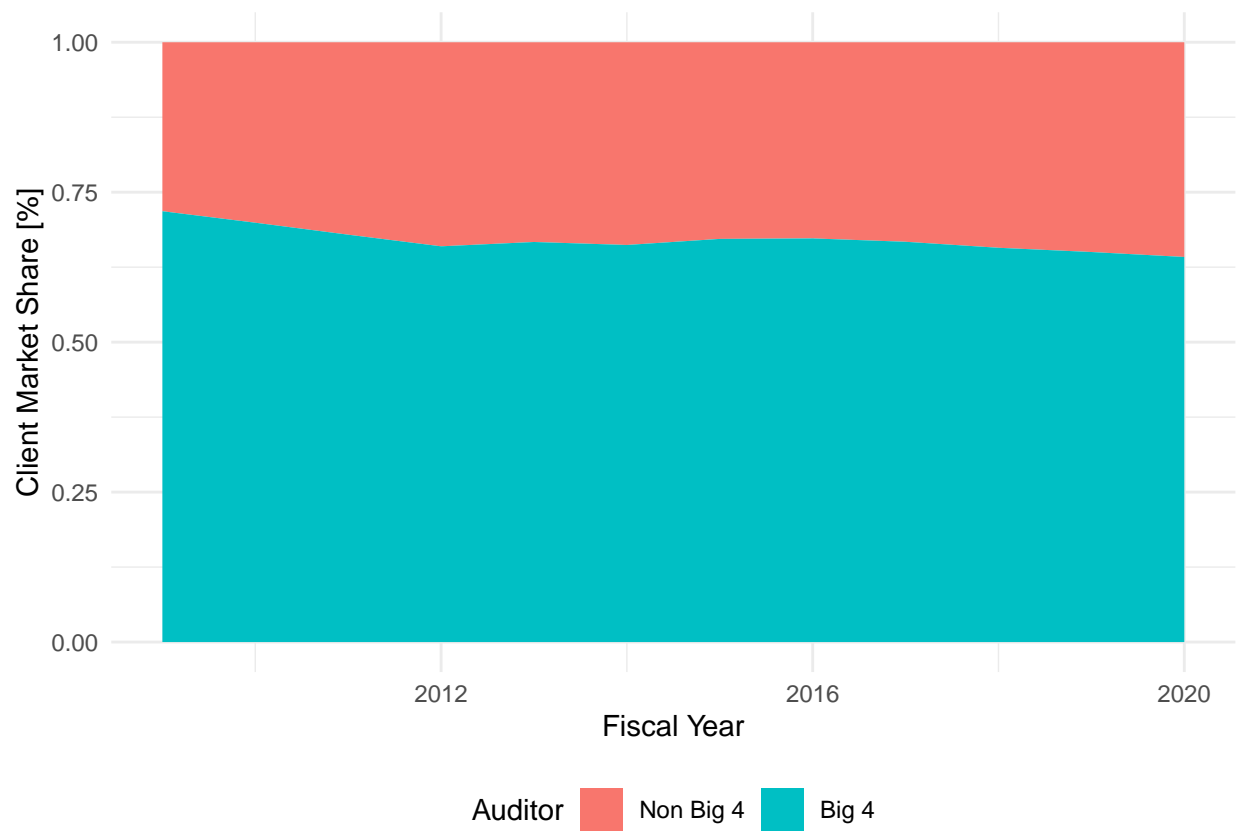


Figure 5: Realtive Client Market Share Over Time

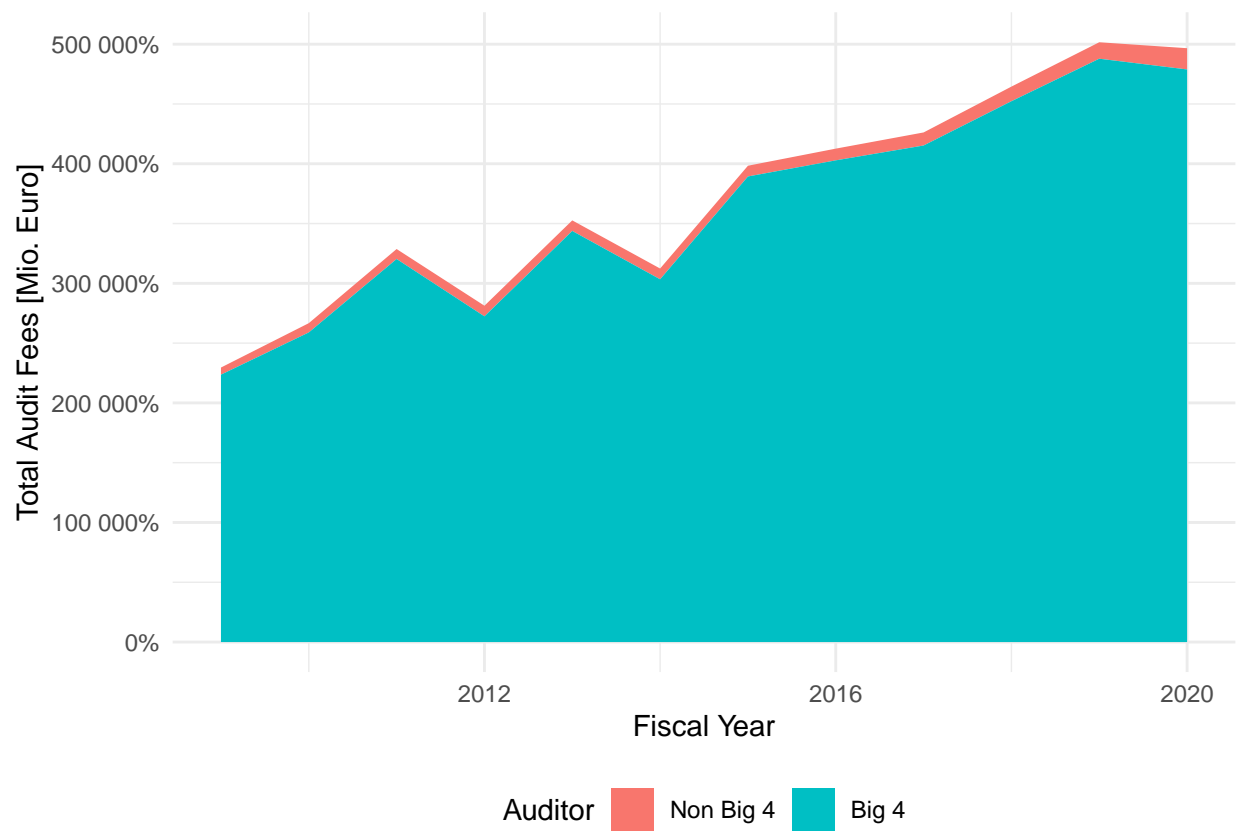


Figure 6: Absolute Fee Market Share Over Time

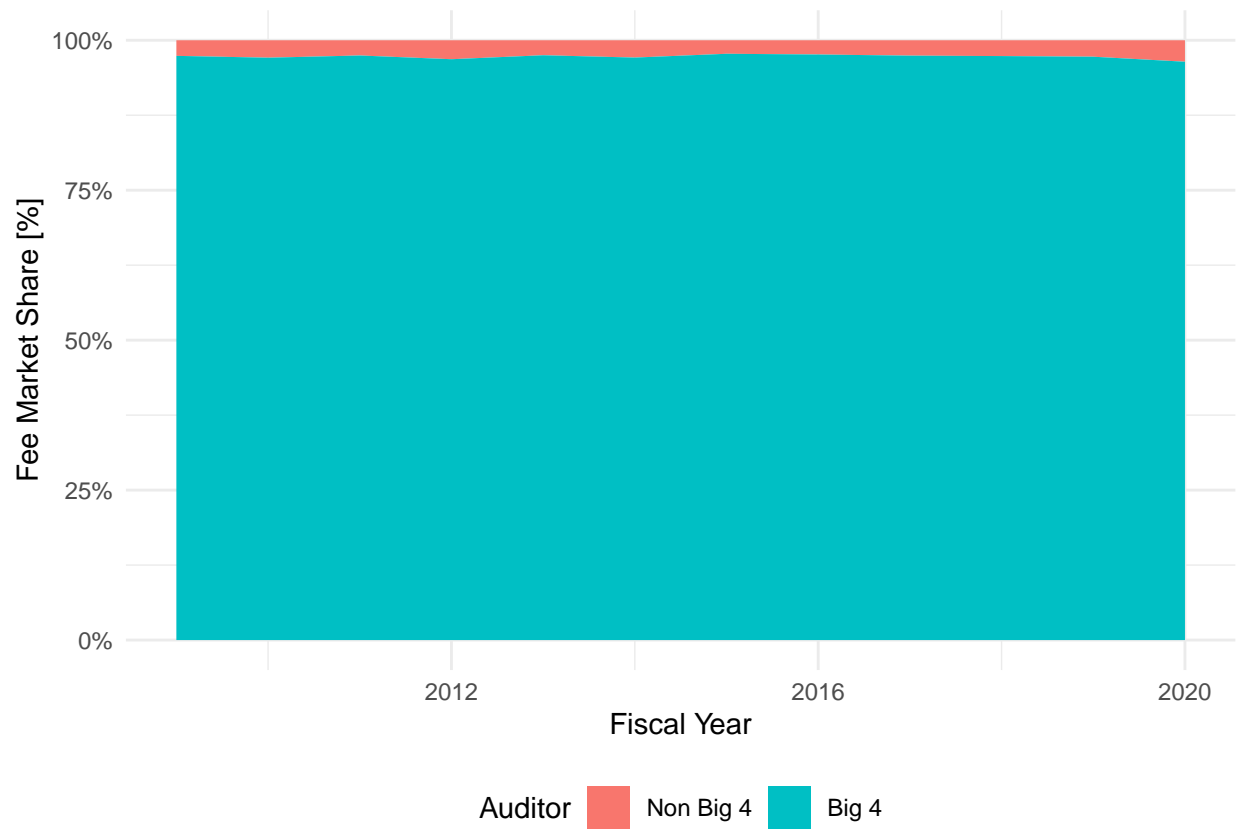


Figure 7: Relative Fee Market Share of Big 4 Firms Over Time

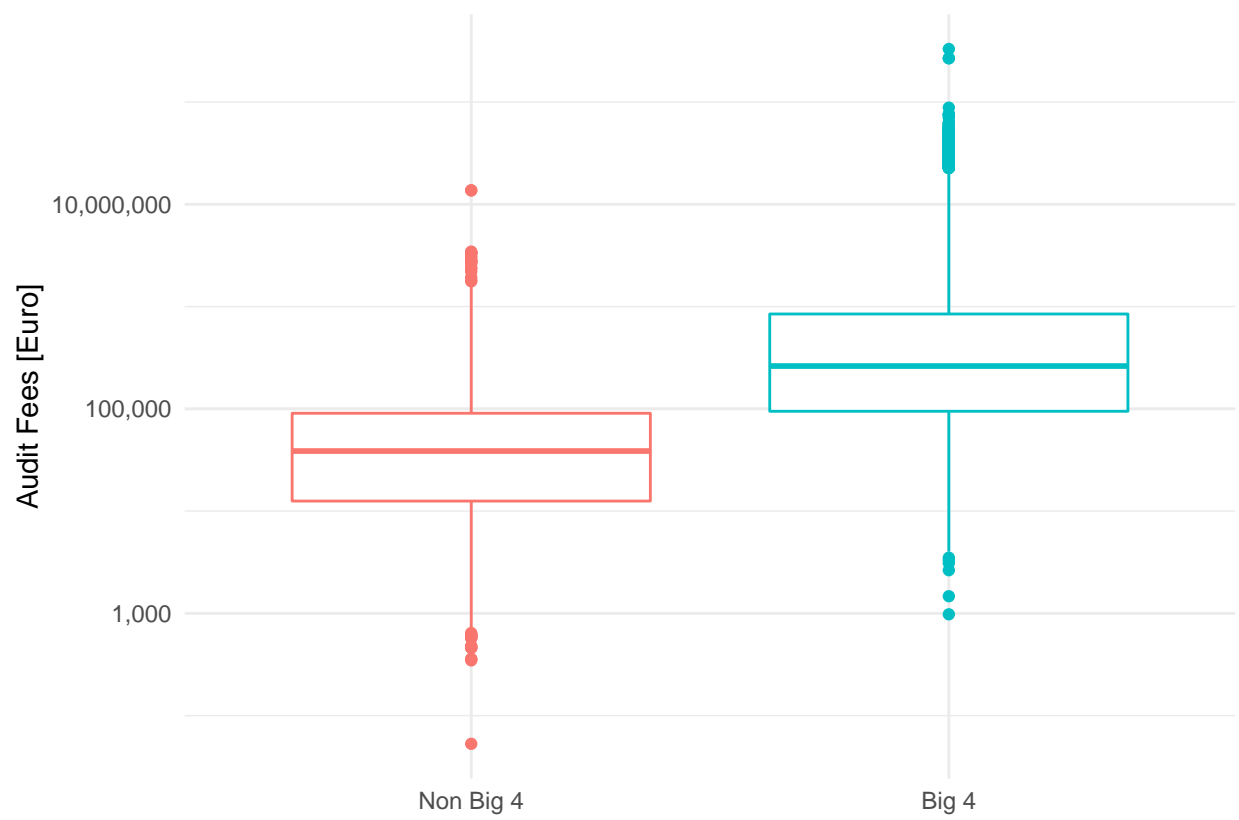


Figure 8: Audit Fees by Audit Type

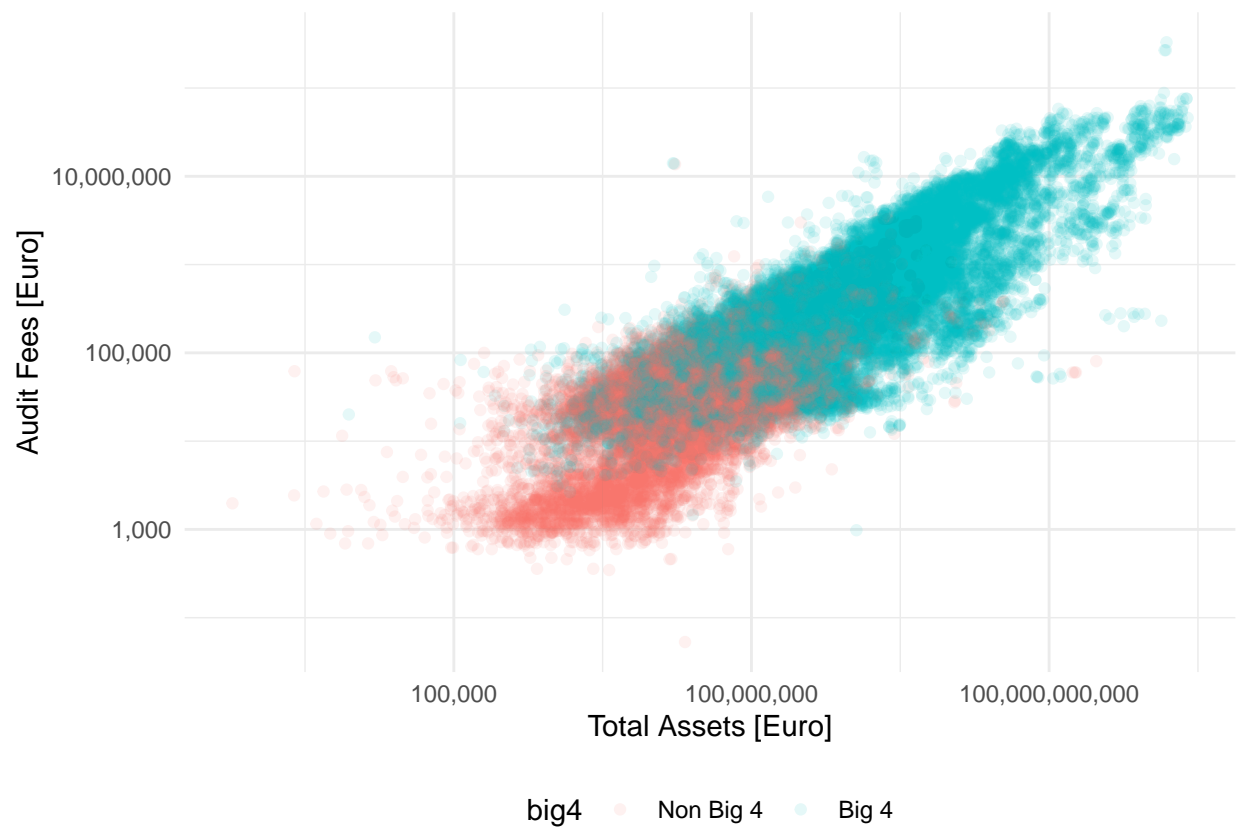


Figure 9: Audit Fees by Firm Size

Table 1: Descriptive Statistics

| | N | Mean | Std. dev. | Min. | 25 % | Median | 75 % | Max. |
|------------------------------|--------|------------|------------|-------|--------|---------|-----------|-------------|
| <i>Audit fees</i> | 42,313 | 1.057 | 4.565 | 0.000 | 0.041 | 0.135 | 0.473 | 330.0 |
| <i>Assets</i> | 42,313 | 11,282.094 | 92,313.816 | 0.001 | 31.605 | 174.905 | 1,143.705 | 2,488,491.0 |
| <i>Sales</i> | 42,313 | 2,161.241 | 10,427.672 | 0.000 | 15.106 | 89.804 | 563.992 | 365,634.6 |
| <i>Market Capitalization</i> | 42,313 | 2,285.312 | 10,333.478 | 0.000 | 22.230 | 116.105 | 725.368 | 441,075.4 |
| <i>Big 4</i> | 42,313 | 0.667 | 0.471 | 0.000 | 0.000 | 1.000 | 1.000 | 1.0 |

Note: The data is obtained from the Audit Analytics as provided by WRDS. The sample covers the period 2009 to 2020 and 4,889 unique clients from 12 countries. Countries with less than 1,000 observations are excluded. For audits involving multiple audit firms, audit fees are aggregated at the client-fiscal year level so that Audit fees represents the audit fees that the client incurred during a fiscal year. Assets and market capitalization are measured at the fiscal year end. Revenues represent net sales during the fiscal year. All values are measured in Mio. Euro. Big 4 is a binary variable taking the value of one whenever a Big 4 auditing firm (KPMG, PWC, EY or Deloitte) is involved in the audit.

Table 2: Correlations

| | A | B | C | D | E |
|------------------------------|-------------|-------------|-------------|-------------|-------------|
| A: Ln(Audit fees) | | 0.84 | 0.82 | 0.81 | 0.55 |
| B: Ln(Assets) | 0.83 | | 0.86 | 0.89 | 0.53 |
| C: Ln(Revenues) | 0.84 | 0.88 | | 0.80 | 0.48 |
| D: Ln(Market Capitalization) | 0.78 | 0.90 | 0.83 | | 0.54 |
| E: Big 4 | 0.56 | 0.56 | 0.51 | 0.55 | |

This table reports Pearson correlations above and Spearman correlations below the diagonal. Number of observations: 42,313. Correlations with significance levels below 5% appear in bold print.

Table 3: Regressions

| | laudit_fees | laudit_fees | laudit_fees | laudit_fees |
|---------------------------|---------------------|---------------------|---------------------|---------------------|
| | (1) | (2) | (3) | (4) |
| Big 4 | 0.578*** (0.013) | 0.454*** (0.012) | 0.234*** (0.018) | 0.233*** (0.018) |
| Ln(Assets) | 0.553*** (0.002) | 0.237*** (0.004) | 0.306*** (0.014) | 0.263*** (0.015) |
| Ln(Revenues) | | 0.214*** (0.003) | | 0.065*** (0.007) |
| Ln(Market Capitalization) | | 0.157*** (0.004) | | -0.013 (0.008) |
| Constant | 0.921*** (0.038) | 0.216*** (0.038) | | |
| Estimator | ols | ols | ols | ols |
| Fixed effects | None | None | Client, Year | Client, Year |
| Std. errors clustered | No | No | Client, Year | Client, Year |
| Observations | 42,313 | 42,313 | 42,313 | 42,313 |
| R^2 | 0.722 | 0.763 | 0.183 | 0.195 |
| Adjusted R^2 | 0.722 | 0.763 | 0.076 | 0.090 |

This table presents the results of four OLS regressions. Sample and all variables are as defined in Table 1. Standard errors are presented in parentheses below the coefficients.

*/**/*** indicate two-sided significance levels below 10/5/1 %, respectively.