

The European Public-Firm Audit Market: Some exploratory insights

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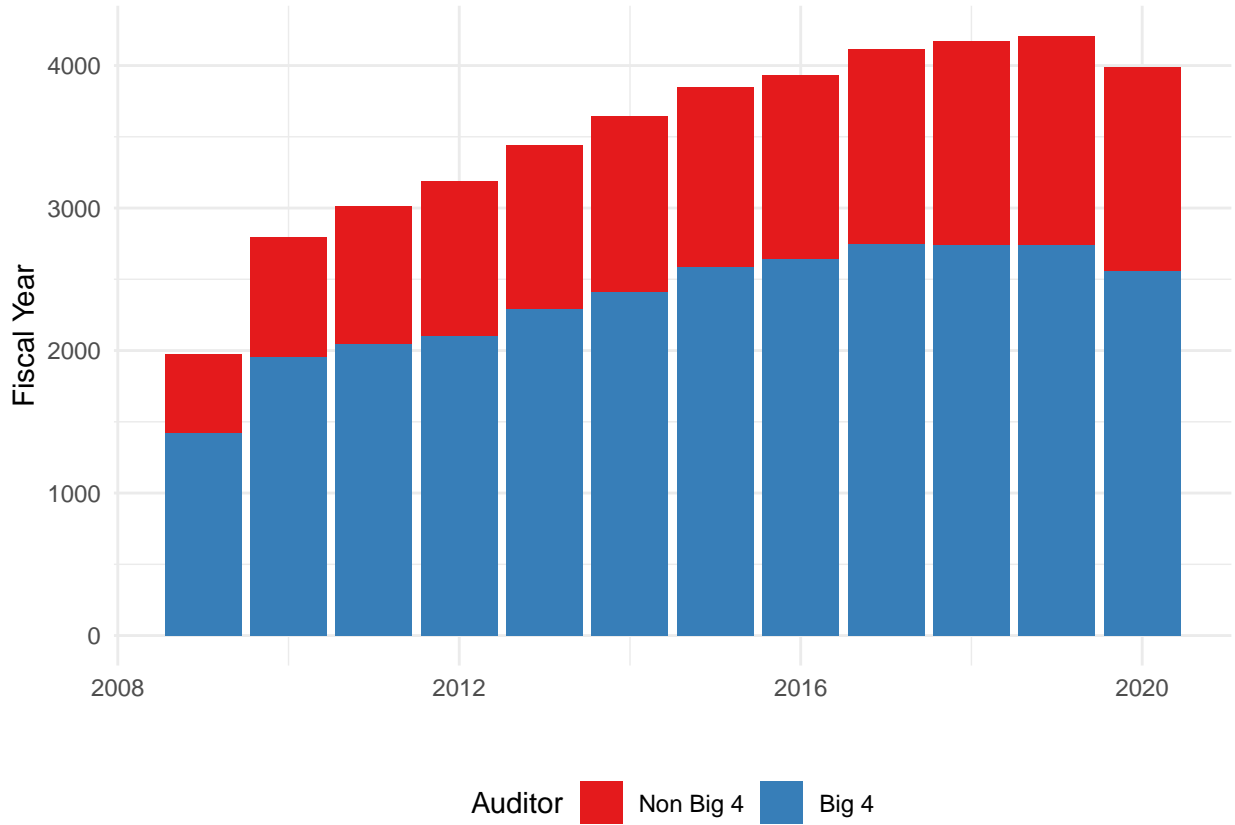
Abstract

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.

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.

**Figure 1: Number of Clients by Year**

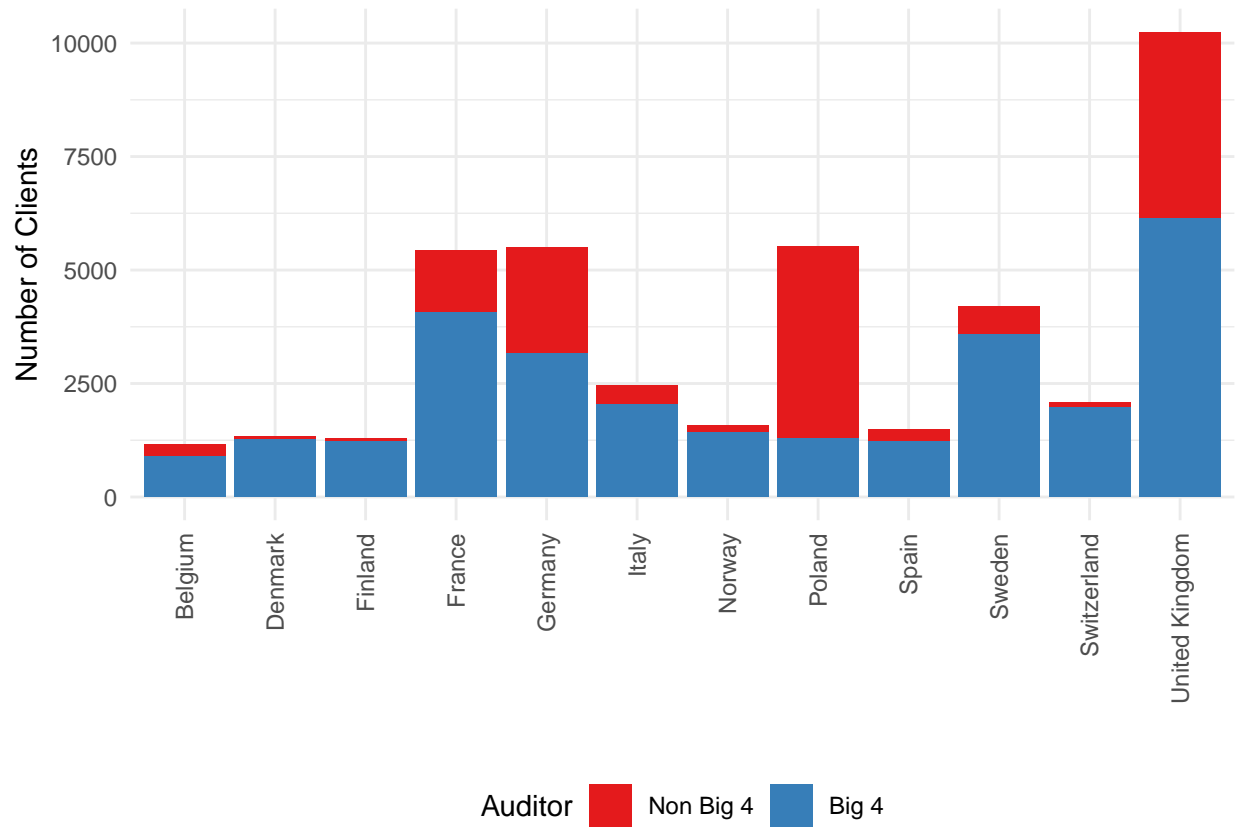


Figure 2: Number of Clients by Country

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.

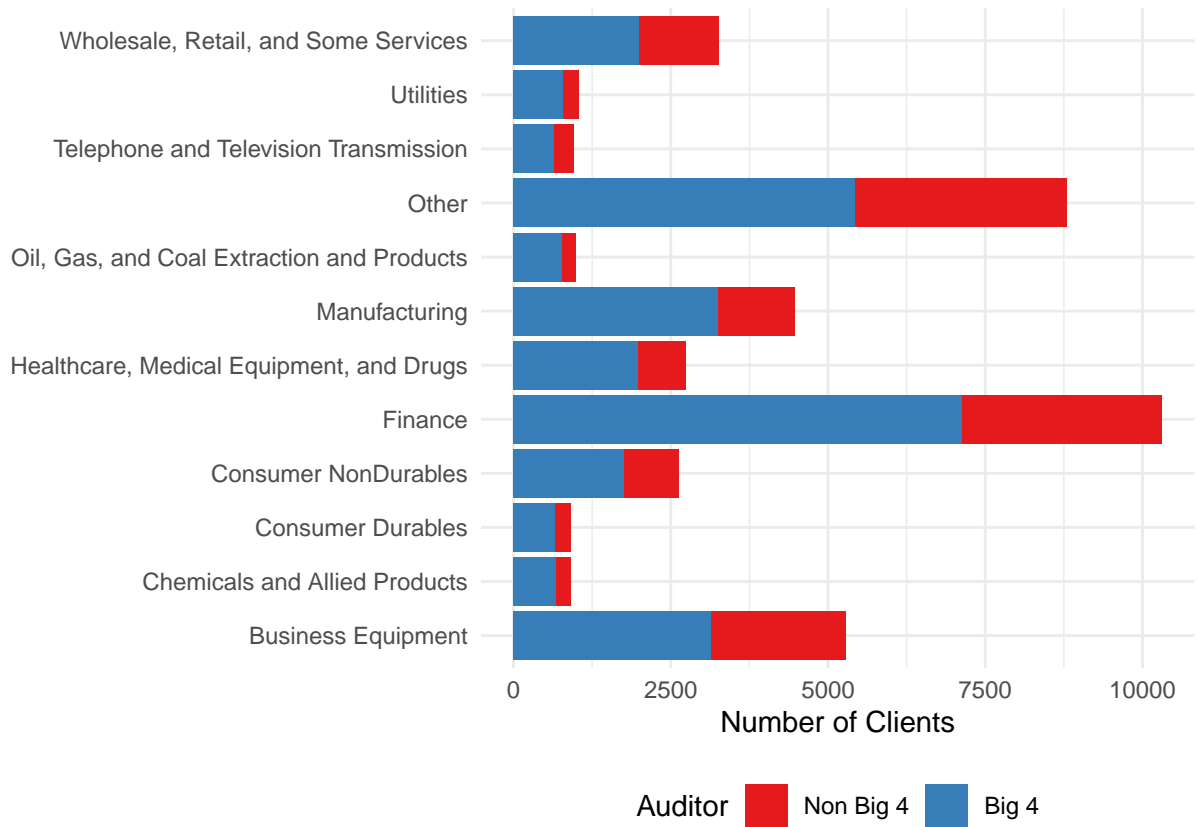


Figure 3: Number of Clients by Industry

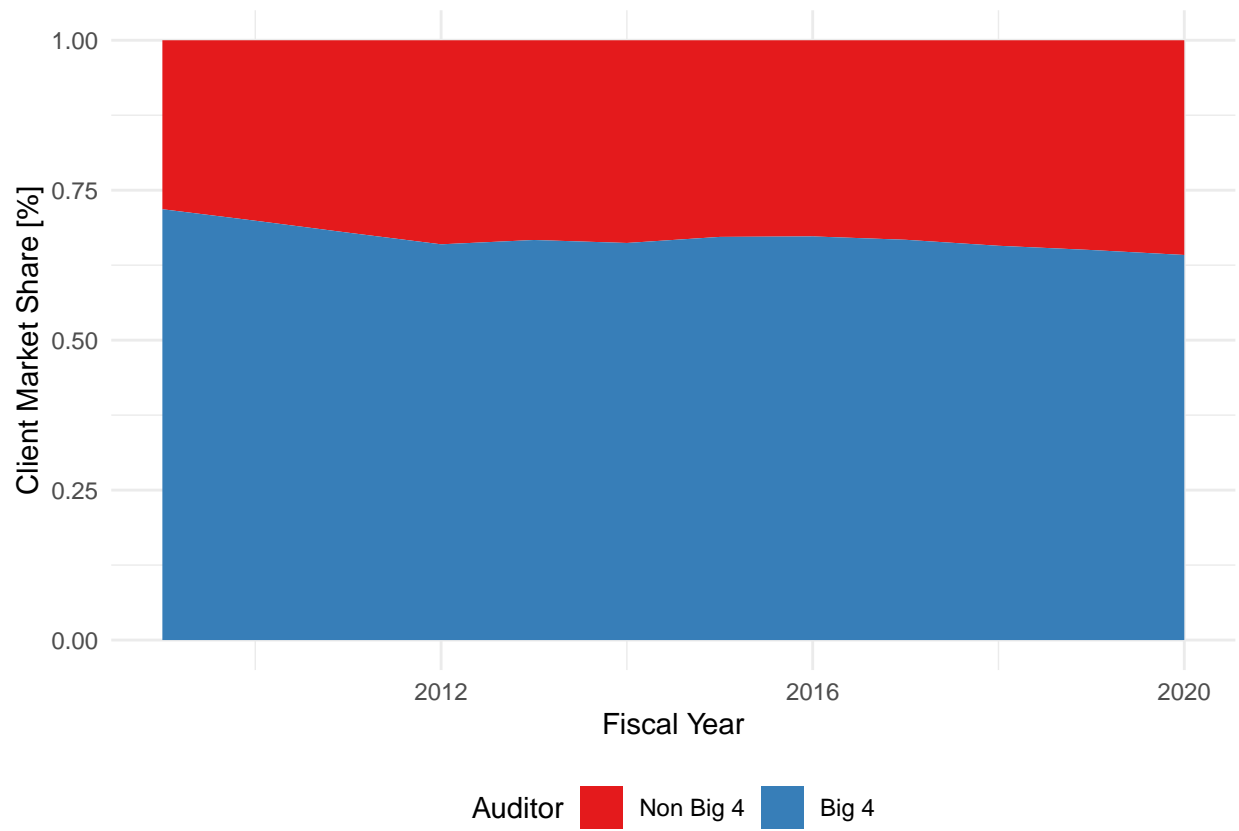


Figure 4: Realtive Client Market Share Over Time

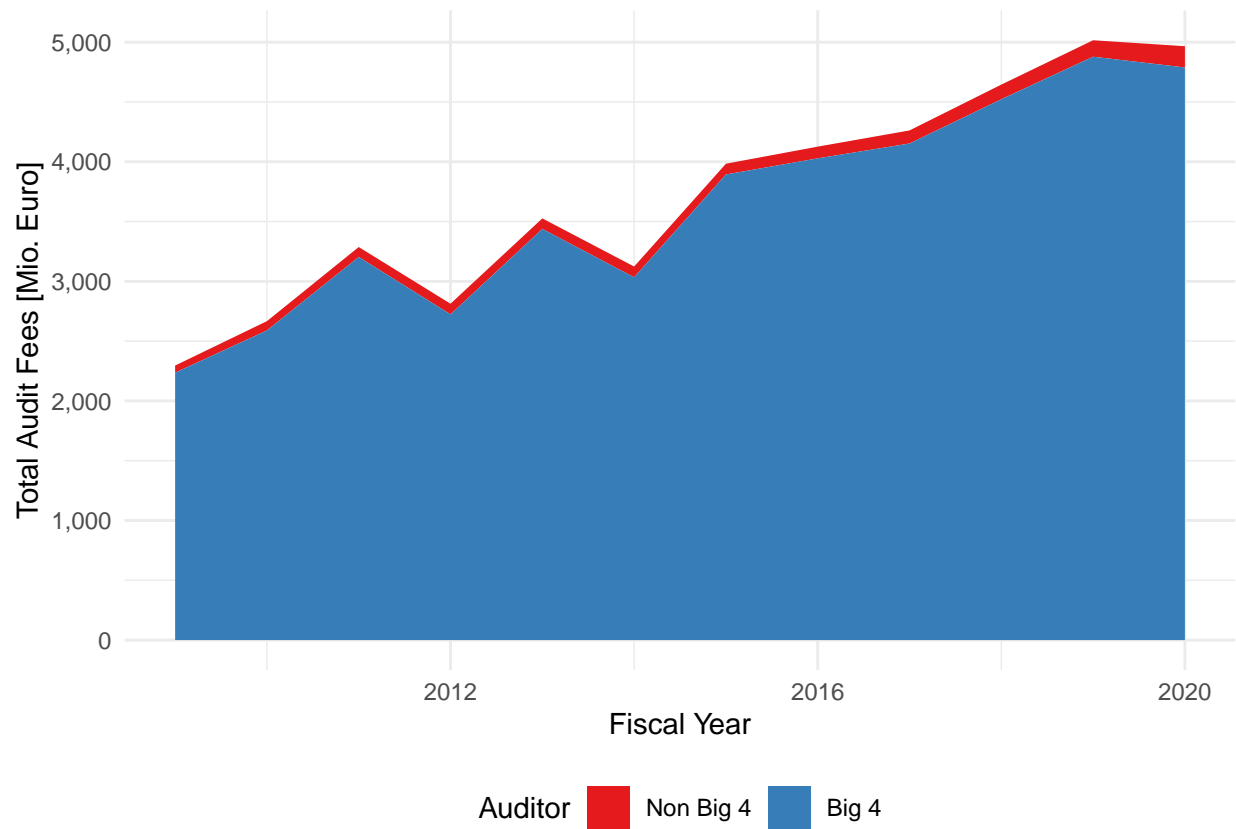


Figure 5: Absolute Fee Market Share Over Time

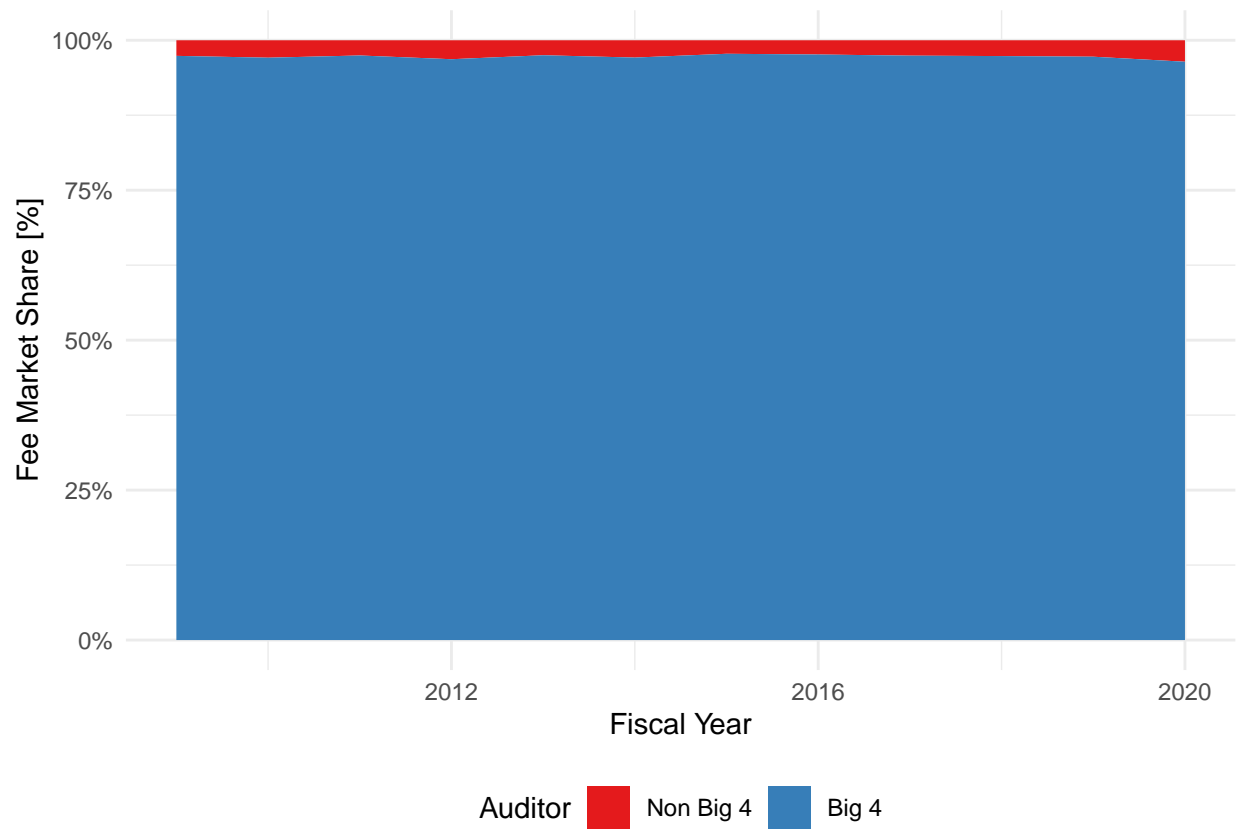


Figure 6: Relative Fee Market Share of Big 4 Firms Over Time

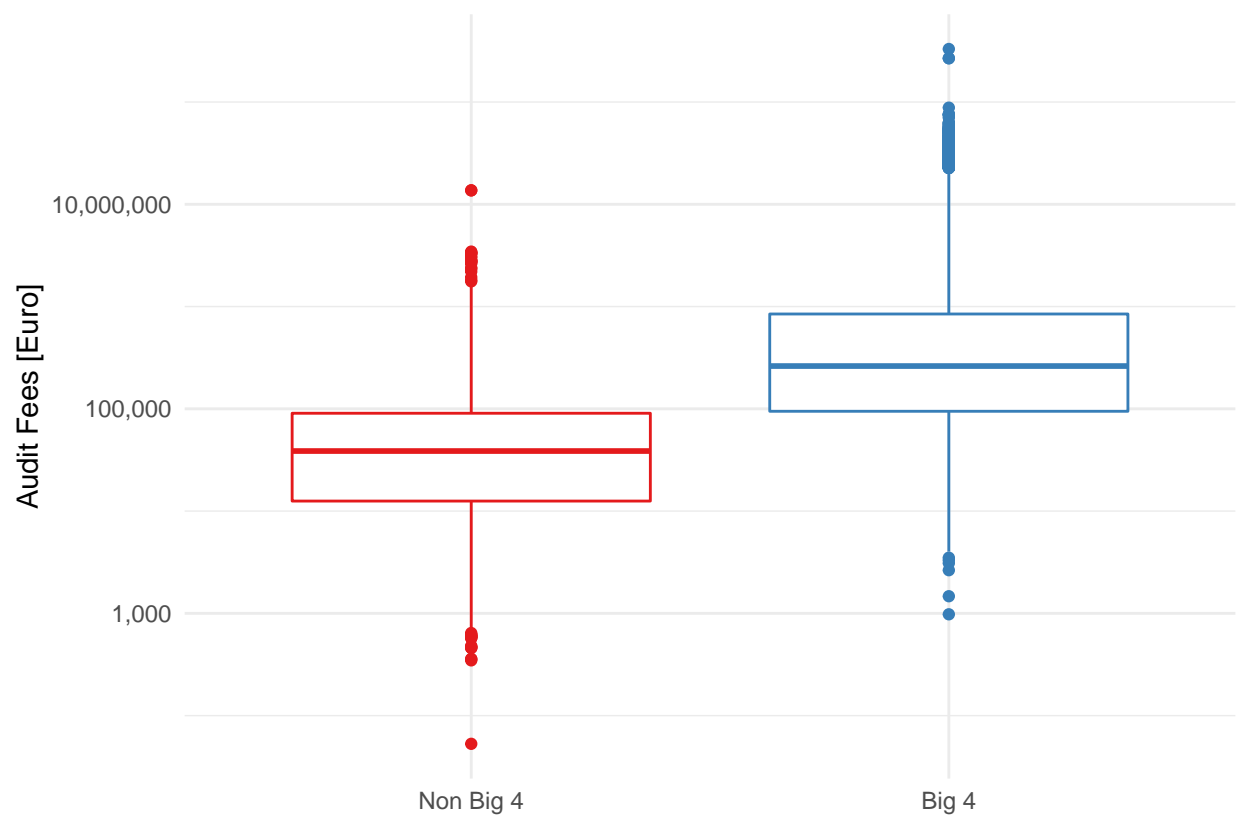


Figure 7: Audit Fees by Audit Type

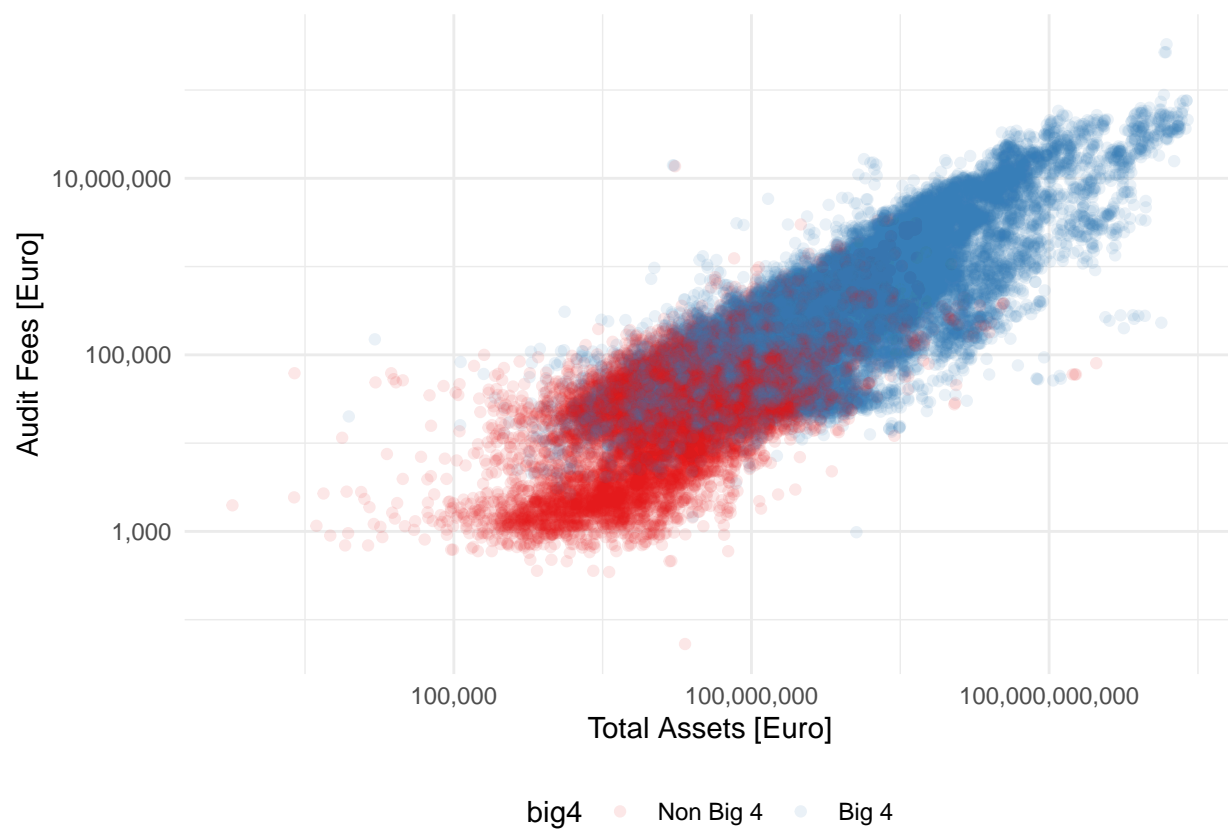


Figure 8: Audit Fees by Firm Size

Table 3: Regressions

<i>Dependent variable: Ln(Audit fees)</i>				
	(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.