

The European Public-Firm Audit Market:

Some exploratory insights

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Abstract

Building on a 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 premium of Big 4 Auditing firms.

Table 1: Descriptive Statistics

	N	Mean	Std. dev.	Min.	25 %	Median	75 %	Max.
<i>Audit fees</i>	41,490	1.055	3.966	0.000	0.041	0.136	0.478	102.4
<i>Assets</i>	41,490	11,263.230	90,925.221	0.001	31.501	175.835	1,150.535	2,488,491.0
<i>Revenues</i>	41,490	2,192.505	10,601.380	0.000	14.909	89.891	576.462	365,634.6
<i>Market Capitalization</i>	41,490	2,319.441	10,391.513	0.000	22.487	118.739	742.289	441,075.4
<i>Big 4</i>	41,490	0.668	0.471	0.000	0.000	1.000	1.000	1.0

Notes: The data is obtained from Audit Analytics EU as provided by WRDS. The sample covers the periods 2009 to 2020 and 4,799 unique clients from 12 countries. Countries with less than 1,000 client-fiscal year 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 client values and measured at the fiscal year end. *Revenues* represents client 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: Descriptive Statistics by Auditor Type

	Big 4 (n = 27,723)			Non Big 4 (n = 13,767)		
	Mean	SD	Median	Mean	SD	Median
Audit fees	1.535	4.777	0.264	0.087	0.237	0.038
Assets	16,733.53	110,795	461.885	247.524	3,844.974	26.757
Revenues	3,231.897	12,837.36	238.333	99.452	547.64	15.347
Market Capitalization	3,416.106	12,558.43	319.139	111.055	737.737	19.781
Log(Audit fees)	12.643	1.674	12.484	10.348	1.551	10.551
Log(Assets)	20.15	2.447	19.951	17.073	1.965	17.102
Log(Revenues)	19.236	2.616	19.289	16.225	2.469	16.546
Log(Market Capitalization)	19.66	2.231	19.581	16.767	1.877	16.8

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Figure 1: Number of Clients by Year

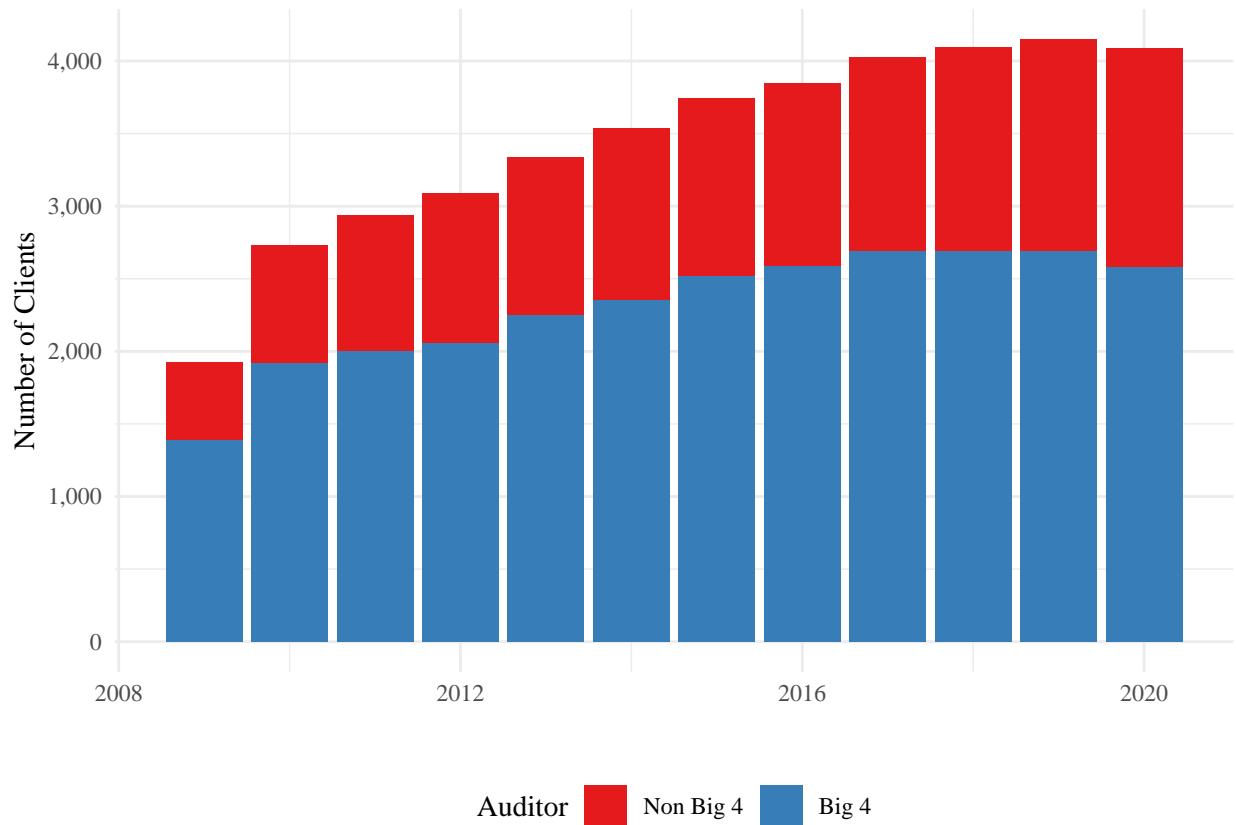


Figure 2: Number of Client Years by Country

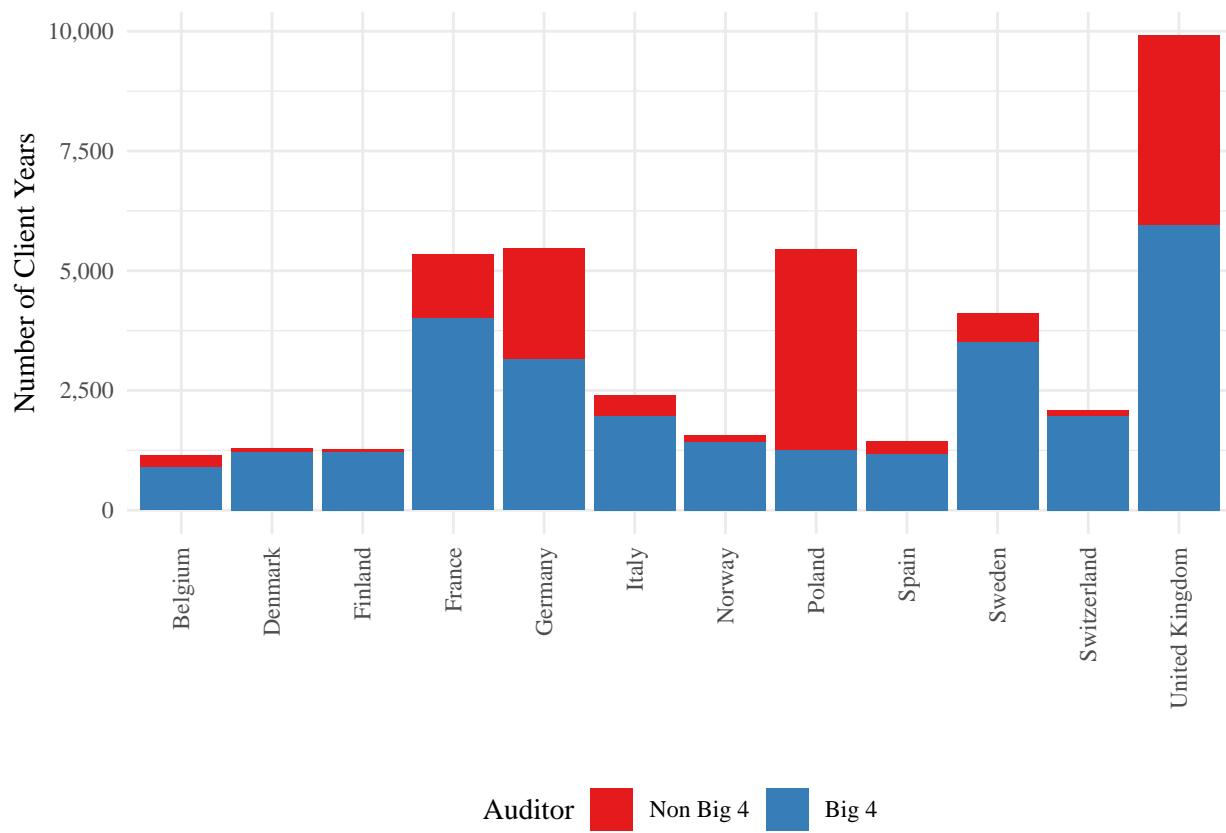


Figure 3: Number of Client Years by Industry

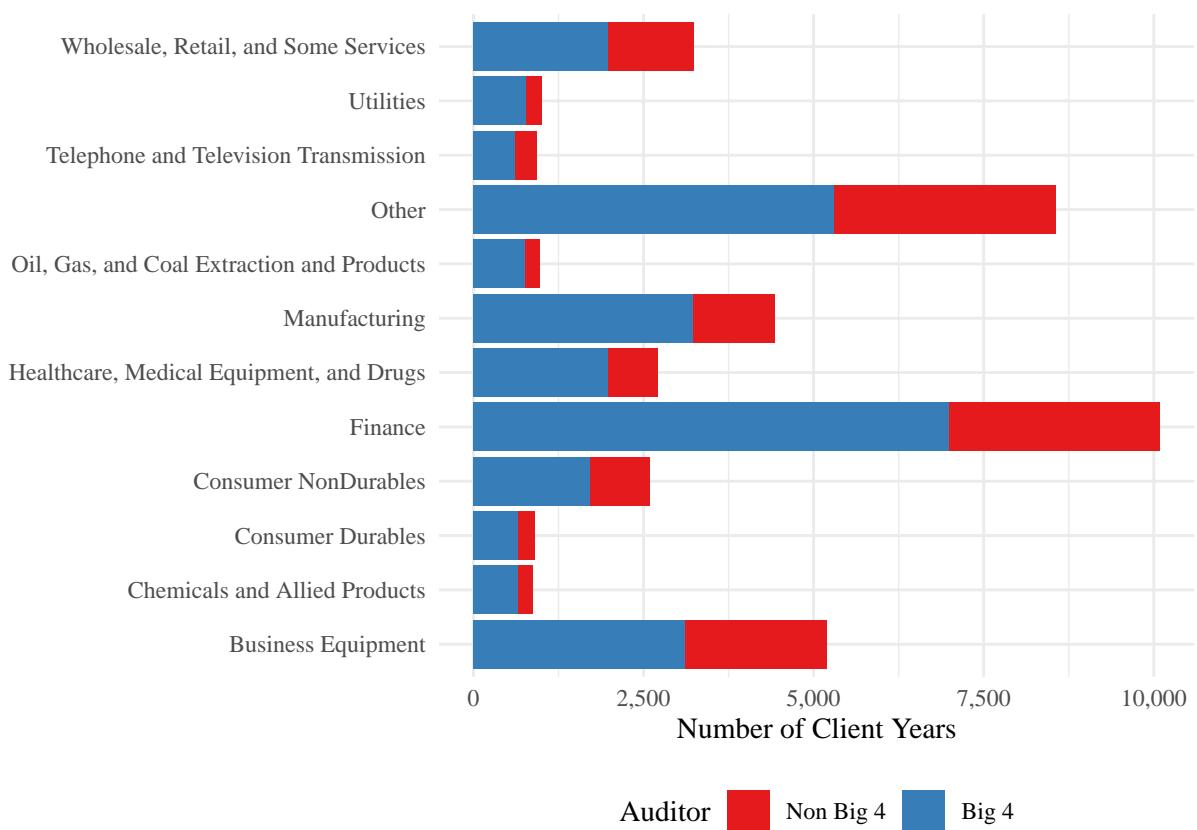


Figure 4: Relative Client Market Share Over Time

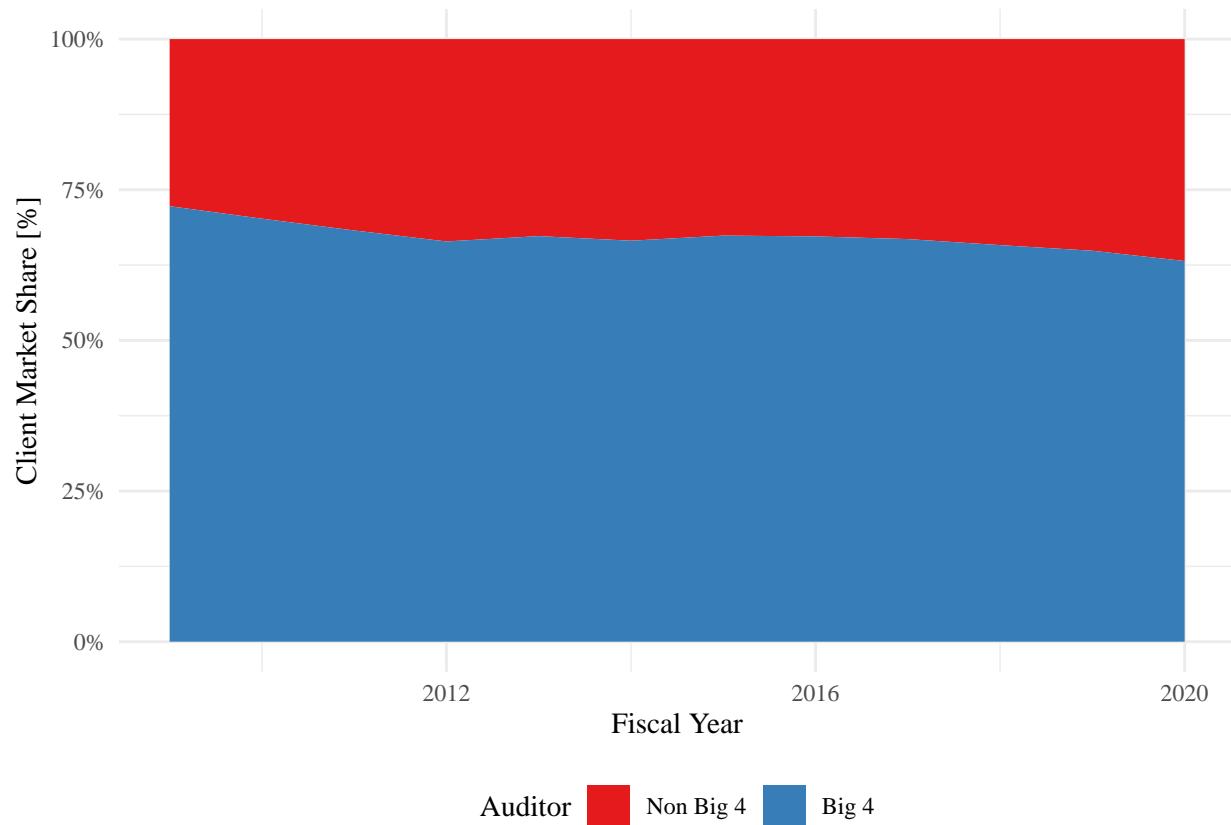


Figure 5: Absolute Fee Market Share Over Time

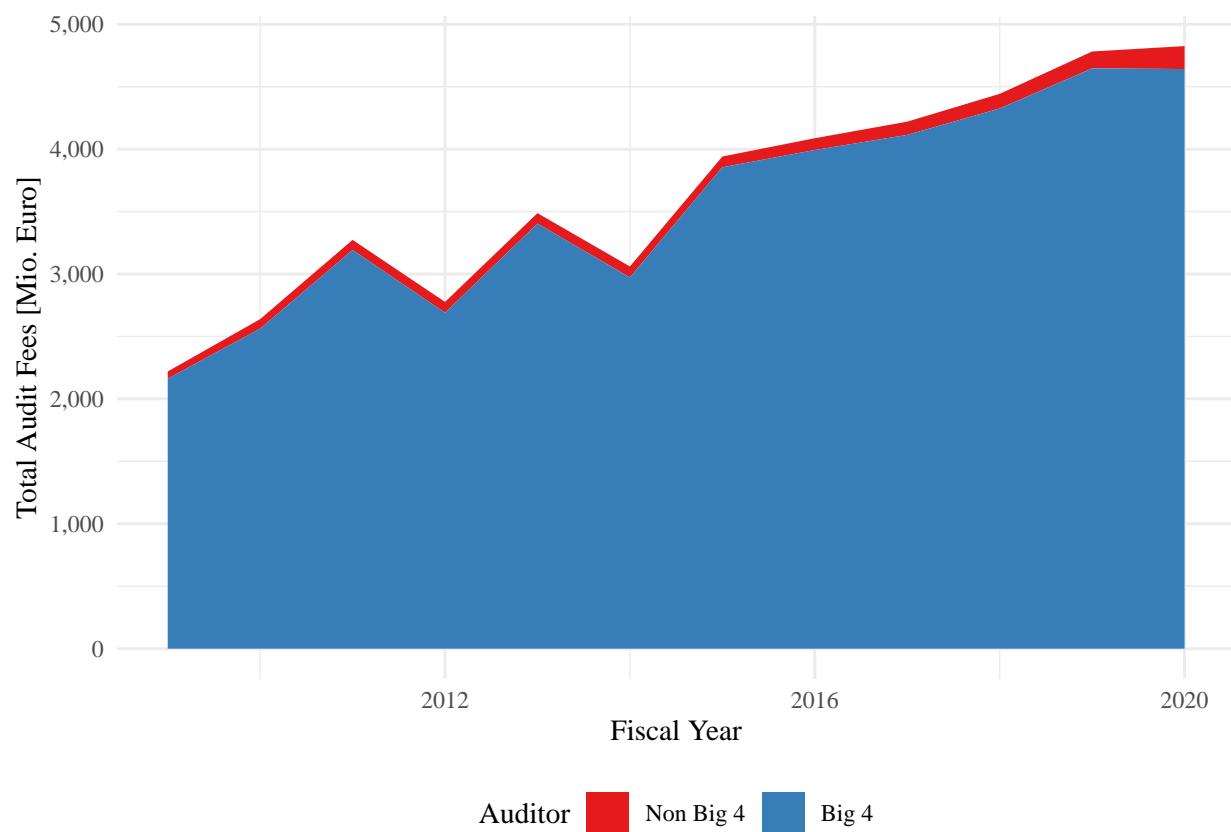


Figure 6: Relative Fee Market Share Over Time

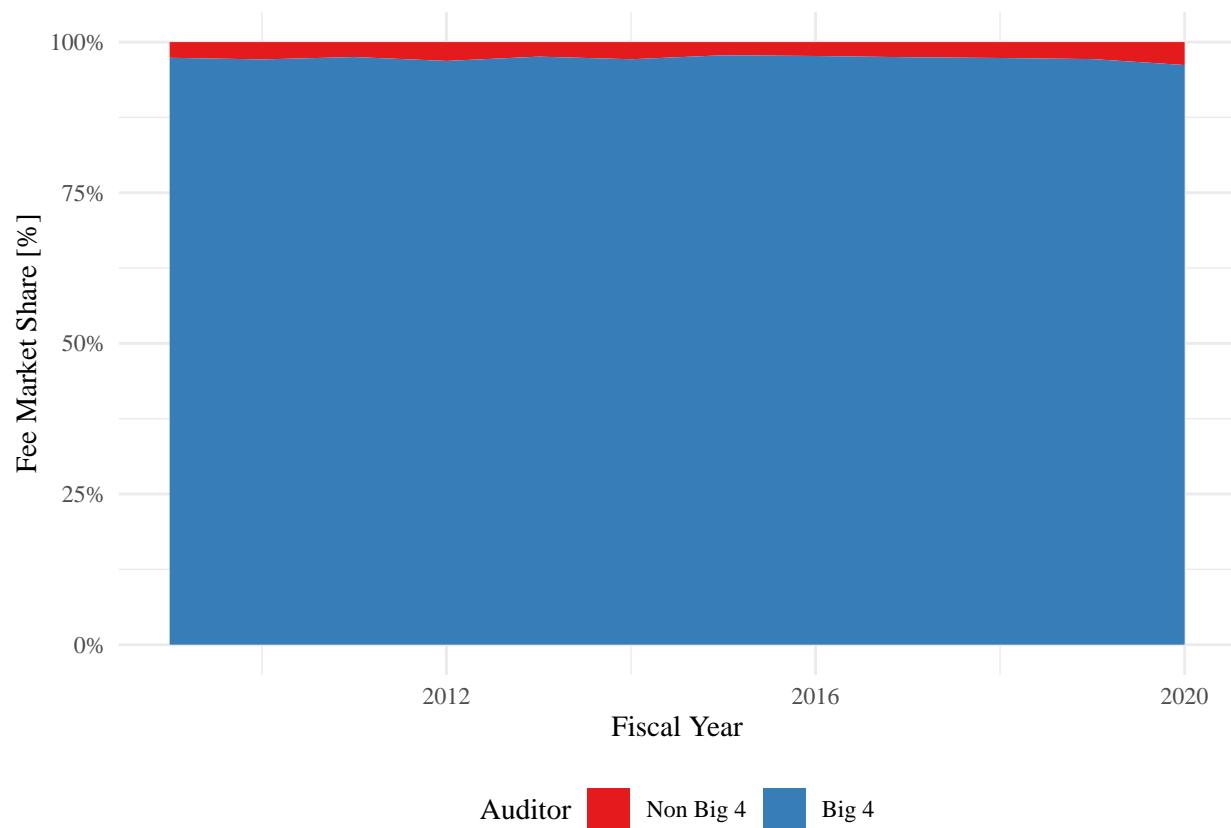


Figure 7: Audit Fees by Auditor Type

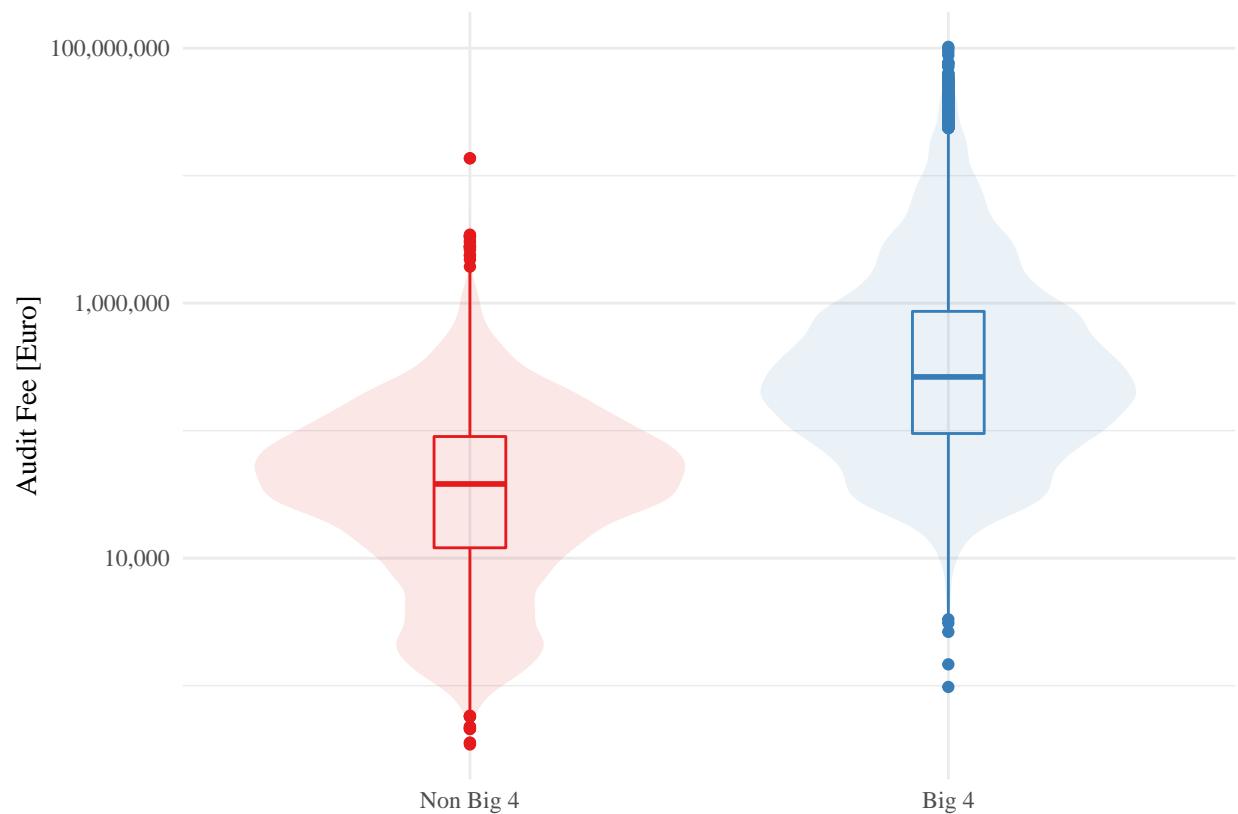


Figure 8: Audit Fees by Firm Size

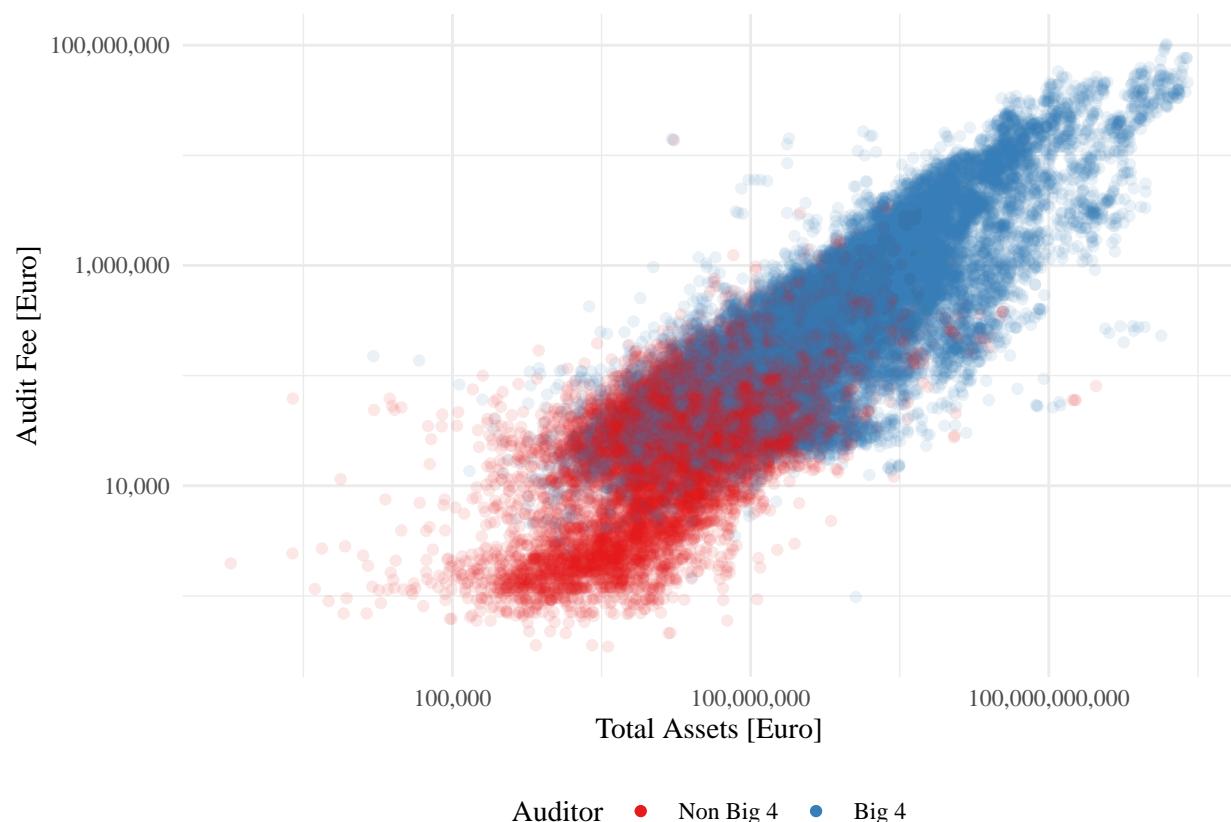


Figure 9: Audit Fees by Firm Size

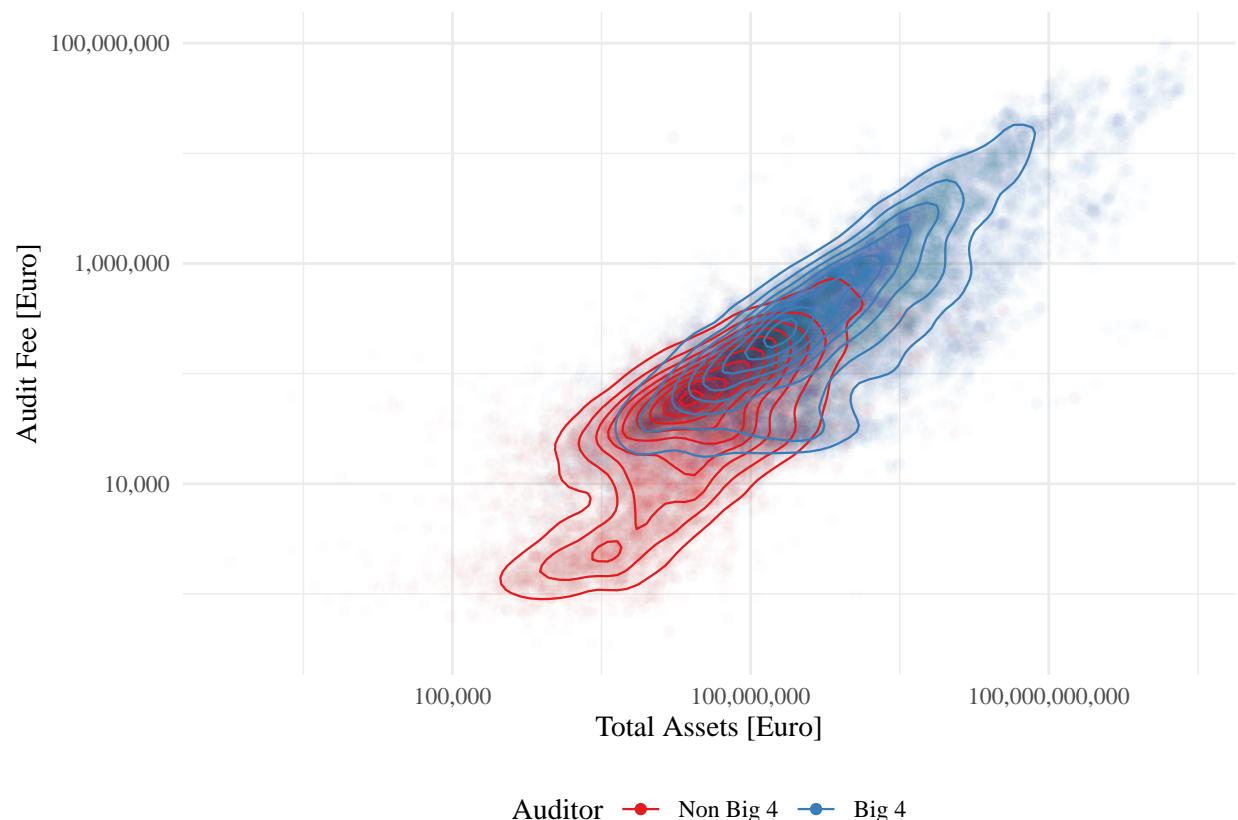


Table 3: Correlations

	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		0.81	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	

Notes: This table reports Pearson correlations above and Spearman correlations below the diagonal. Number of observations: 41,490. Correlations with significance levels below 5% appear in bold print.

Table 4: Audit Fee Premium Regressions

	Dependent variable: <i>Ln(Audit fees)</i>			
	(1)	(2)	(3)	(4)
Big 4	0.594*** (0.013)	0.468*** (0.012)	0.235*** (0.019)	0.235*** (0.018)
Ln(Assets)	0.553*** (0.002)	0.236*** (0.004)	0.300*** (0.013)	0.253*** (0.013)
Ln(Revenues)		0.212*** (0.003)		0.068*** (0.006)
Ln(Market Capitalization)		0.160*** (0.004)		-0.010 (0.008)
Constant	0.913*** (0.039)	0.203*** (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	41,490	41,490	41,490	41,490
<i>R</i> ²	0.725	0.765	0.179	0.193
Adjusted <i>R</i> ²	0.725	0.764	0.071	0.087

Notes: This table presents the results of four OLS regressions regressing audit fees on various sets of covariates. The 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.