DOES TAX PLANNING AFFECT FIRM VALUE OF EUROPEAN COMPANIES?

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ABSTRACT

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The purpose of this research is to examine whether firms' tax planning behavior affect firm value in European companies. In this research, tax planning is measured using Cash Effective Tax Rate (CETR) and Book Tax Difference (BTD) on company value, which is measured using Price-Earnings Ratio. The purpose of doing tax planning is to streamline corporate tax expenditures following applicable regulations. Thus, the existence of corporate tax planning enables the management to estimate firm's tax expenses. The control variables used in this study are Size and Leverage. The samples used in this study a sample of 10 finance service-related firms listed in the Euronext 100 index for the period from 2018 to 2022. This study uses the EViews 10 test tool and uses a multiple regression test. Results found that BTD has significant impact toward Firm Value, with negative relationship, where CETR has no impact towards Firm Value.

Keywords: tax planning, cash effective tax rate, book tax difference, firm value, price-earnings ratio

1. Introduction

Investor perceptions of the firm's level of success are often associated with firm value. High firm value will reflect a stable stock price which in the long run will increase. A high firm value increases the level of trust and interest of potential investors, and will make potential investors continually invest in the firm in the future.

Tax planning is one of numbers of factor that increase firm value (Dahar et al., 2019). If the firm's profit is high then the burden of paying taxes will also be high, however, often this conflicts the interest of managers. Thus, the managers choose to make an initial effort in tax management, namely tax planning so that tax payments can be minimized so that the firm's profits can still be stable, so does the firm value.

In essence, the company's motivation when carrying out tax planning actions is to minimize the tax burden that must be paid by the company, so that the company can increase profit after tax and can affect the value of the company itself. Thus, tax planning has a positive influence on firm value. However, Desai & Dharmapala in Ftouhi et al. (2014) argue that tax planning is costly on several margins. Aside from the direct costs of engaging in such activities, managers typically have to ensure that these actions are obscured from tax authorities. There are potential costs related to strategies to minimize taxes such as implementation and transaction costs, possible penalties imposed by the tax authorities and reputation risks that must be pondered. Thus, the existence of risks and benefits of tax planning may cause companies to consider tax planning implementation very carefully, since although the company's tax planning benefits in such a way, its implementation is not without risk.

Previous studies have indicated that tax planning efforts results two types of consequences, that they may affect firm value positively and negatively. Past research conducted by Pandu

& Achmad (2017) concludes that there is a positive relationship between tax planning towards firm value. Hidayat & Pesudo (2019) confirms this finding that tax planning has a positive effect on firm value. In the other hand, Desai and Dharmapala in Ftouhi et al. (2014) argue that the existence of information asymmetry between managers and shareholders for tax planning can help managers to manage earnings in their own interest resulting in a negative association between tax planning and firm value. Study by Angelina & Darmawan (2021) states that Tax Planning, proxied through Book Tax Difference, has negative impact toward firm value. Empirical findings indicate that Tax Planning may either benefit or cost the company.

Tax planning is an organized effort for both individual and business taxpayers to be able to utilize loopholes in order to minimize the tax burden in accordance with existing legislation (Pohan, 2013). The process of tax planning involves rigorous study, the use of available opportunities, and compliance with government laws. Tax planning's primary goal is to ensure that taxes are paid in accordance with the law. By employing measures outside of the tax regulations, it can be said that tax planning is done to reduce taxes. This was done to alter the actual tax liability, not to dodge it.

This study also considers the interesting phenomena of the decreasing tax planning efforts in European companies. Thomsen & Watrin (2018) suggest that tax planning indicators as shown by effective tax rate (ETR), are declining over time in EU firms. This finding also consistent with the findings of Dyreng et al. (2017) and Markle and Shackelford (2012), that indicators of Tax Planning in European firms has been decreasing over time. Thomsen & Watrin (2018) argues that these phenomena are caused by cost-benefit tradeoff of more tax planning efforts are less beneficial to European firms relative to the potential costs, compared to their US-based counterparts. Besides the contradictive empirical findings, these phenomena raise question on in the past recent years, how tax planning affects firm value of European companies, considering the cost-benefit tradeoff of tax planning strategies.

This study aims to close three gaps. First, this paper takes part to clarify how tax planning may affect firm value, particularly those of European companies, considering the inconclusive empirical findings. Second, this study acts as extension of past findings by Markle & Shackelford (2012), Dyreng et al. (2017), and Thomsen & Watrin (2018), and third, this study is the update of the Ftouhi et al. (2014) study of similar problem, which utilizes the 2008-2012 European companies' data.

2. Literature Review

2.1. Agency Theory

Agency theory explains the relationship between the agent as the party who manages the company and the principal as the owner, both of whom are bound by a cooperation contract (Putri & Lawita, 2019). The relationship between principal and agent is called an agency relationship that occurs when a company owner delegates authority to a manager to perform a service or work for the company (Dayanara et al., 2019).

In agency theory, which is reflected in the agency relationship, there is often information asymmetry or differences in information received between the principal and the agent. Where the principal or company owner has less information about the company than the agent or company manager. This encourages managers to act alone and benefit themselves. In agency theory, financial reports prepared by company management are caused by opportunistic motivation and signal motivation (Sutomo & Djaddang, 2017).

Opportunistic motivation is where management reports the firm's financials with higher profits to get incentives, while signal motivation is where management reports quality financial reports to give a positive signal to investors.

2.2Tax Planning

Tax planning (tax planning) is the process of organizing the business of taxpayers, both personal and business entities, in such a way as to take advantage of various possible loopholes that can be taken by companies within the corridor of tax regulations, so that companies can pay taxes in a minimum amount. (Pohan, 2013).

Companies as corporate taxpayers have goals in conducting tax planning, including: (1) Minimizing the tax burden payable (2) Maximizing profit after tax (3) Minimizing the occurrence of tax surprises in the event of tax audit (4) Fulfilling tax obligations correctly, efficiently and effectively in accordance with tax provisions. (Pohan, 2013)

Some of the benefits that can be obtained from careful tax planning, namely cash outflow savings, since the tax burden (which is an element of costs) can be reduced. Furthermore. with careful tax planning, cash needed for paying taxes can be estimated, thus cashflow can be managed more efficiently. Tax planning also enables firm to determine when payments are made so the firm can develop cash budget more accurately. (Pohan, 2013)

Several ways of measuring tax planning include: (1) Cash Effective tax rate (CETR) which according to Dyreng et al. (2008) is good for describing tax avoidance activities, because CETR is not affected by changes in estimates such as differences in valuation or tax protection. (2) Long run CETR is used with the hope of being able to eliminate permanent differences so that it truly reflects tax avoidance behavior. (3) Book tax difference (BTD), which is the difference between the amount of profit calculated based on accounting and the amount of profit calculated based on tax on the average value of assets. BTD is expected to describe tax planning activities (4) Tax sheltering activity, or the activity of exploiting the inconsistent implementation of tax rules by the government from the purpose of legislation. Current study uses CETR and BTD.

2.3 The Impact of Book Tax Difference (BTD) on Firm Value

Book Tax Difference (BTD) is the difference between accounting income and tax revenue, BTD represents the tax paid by a business and comes from the average price of an asset. Based on the agency theory, managers (agents) take tax planning measures to minimize the tax burden. A previous study by Efendi (2014) states that when accounting profit is greater than tax profit, firms carry out tax planning, and when accounting profit is less than tax profit, firms do not carry out tax planning.

The greater the BTD difference, the lower the quality of the profits obtained, meaning the higher the earning management conducted, which affects the depreciation of firm value. The smaller the BTD difference, the lower the earning management conducted. In this way, the company produce greater earning quality. Thus, it can be said that BTD is negatively biasing firm value. This means that tax planning as measured by BTD has a negative impact on enterprise value. So, based on the explanations given, the hypotheses are:

H1: Book tax difference has a negative effect on company value

2.4 The Impact of Cash Effective Tax Rate (CETR) on Firm Value

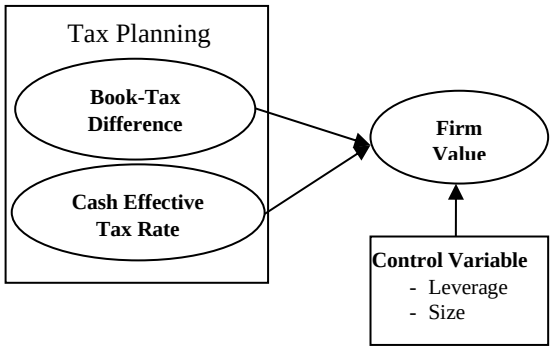
CETR is used to describe tax planning activities. Tax planning measurement allows

firm to estimate the amount of tax you will file to affect the value of your business. Based on the agency theory, when a manager (agent) takes tax planning steps to reduce tax expenditure, an information gap arises between the manager (agent) and the company owner (principal). According to previous research, Dyreng et al. (2008) stated that the CETR is used to account for all tax planning activities.

The higher the CETR value, the lower the tax planning and vice versa. The smaller the CETR, the larger the tax planning. For large tax planning, this affects firm value. It can be said that CETR has a negative impact on firm value. Based on this explanation, the hypothesis can be formulated as follows.

H2: CETR *has a negative effect on firm value*

Based on the explanation of the development of the hypothesis above, the research model is as follows:



3. Research Method

A quantitative approach is used to test the hypothesis in this study. The reason the authors use a quantitative approach in this study is related to the sources of data used, the annual reports and financial statements of companies listed on the Euronext index from 2018 to 2022. It comes from secondary data in the form of tables and reports generated by the companies. A quantitative approach is taken to help determine relationships between variables within a population. The independent variable in this study is tax planning which determined by CETR and BTD, and the dependent variable is Firm Value determined by PER (Price Earnings Ratio). The study has two control variables: leverage and company size (size).

3.1 Operational Definition and Indicators

Dependent Variable – Price Earnings Ratio

The Price Earnings Ratio (PER) is how current and prospective investors evaluate the company's potential for future profits. This ratio can be used by investors to identify the stocks that will yield the greatest future returns. Companies with high potential for growth typically have high PERs, whereas those with low potential for growth typically have low PERs. In general, if a company is growing quickly, it will also be giving investors a high rate of return, luring them in and driving up the price of the stock.

PER is also a ratio used by investors and potential investors to evaluate a company's shares, according to Fahmi (2014). It is a comparison between market price per share and earnings per share (EPS). Tandeilin (2017) on the other hand, claimed that the Price Earnings Ratio (PER) represents the number of dollar/euro from the current profits of investors and potential investors willing to pay for their shares. The Price Earnings Ratio,

then, is the cost for every dollar/euro of profit. Following is the formula for calculating the Price Earnings Ratio.

$$PER = \frac{\text{Market value per share}}{\text{Earnings per share (EPS)}}$$

Independent Variable – Book Tax Difference (BTD)

The book tax difference (BTD) is the variation between the profit amounts determined by accounting and tax calculations. There are two categories of book tax differences: permanent differences and time differences. If a component is included in one of the previous measures but not in another profit measure, the difference still holds true. Taxable income is the result of dividing the income tax expense of the period by the maximum tax rate (Marques et al., 2017). If a component is interpreted to be one that is part of the accounting profit, it is excluded from the calculation of the fiscal profit. The formula used in this study is as follows, according to Weber (2008):

$$\text{Book Tax Difference} = \frac{\text{Pretax income-Tax Income}}{\text{Average Asset}}$$

Independent Variable – Cash Effective Tax Rate (CETR)

Tax avoidance activities is measured by Cash ETR (Effective Tax Rate). CETR can assess tax payments from the cash flow statement, so that it can find out how much cash is actually issued by the company. The higher the percentage level of CETR, which is close to the corporate income tax rate of 25%, indicates that the lower the level of corporate tax avoidance. Conversely, the lower the percentage level of CETR indicates that the higher the level of corporate tax avoidance (Dewinta & Setiawan, 2016).

According to Dyreng et al. (2008), cash ETR is a term used to describe corporate tax avoidance practices. Measurement using Cash ETR can address the issues and constraints with measuring tax evasion. Researchers use the following equation to determine the effective cash rate (Cash ETR) suggested by Hanlon & Heitzman (2010).

$$\text{Cash ETR} = \frac{\text{Cash paid i,t}}{\text{Pretax income i,t}}$$

Control Variable – Size

A scale of a company's size can be determined by looking at its total assets and sales. The size of the company increases with its assets, sales, and market capitalization. The more assets, money invested, sales, money turnover, and market capitalization a company has, the more well-known it is to the general public. According to Garcia-Teruel & Martinez-Solano (2007) study, company size is determined by the natural logarithm of total sales.

Control Variable – Leverage

In order to compare the number of debt-financed purchases to capital purchases and determine an organization's capacity to cover interest and other costs, leverage is used. Because the benefits of using debt are outweighed by the costs, debt can either increase or decrease a company's value. The formula of leverage is as follows:

$$\text{Leverage} = \frac{\text{Total Debt}}{\text{Total Asset}}$$

3.2 Sample Selection and Data Source

All finance-related companies listed on the Stock Exchange for four straight years, from 2018 to 2022, in Euronext 100 index, served as the study's subject of investigation. Banks, insurance firms, payment services and shadow-banking companies are what refer to finance-related companies in this study. A number of criteria listed in Table 1 were used to select the samples. 13 companies were initially included in the study's samples, but some of those companies did not meet the requirements. As a result, there are 10 firms each year that meet the criteria (10 samples over 5 years, or 50 samples). Table 1 displays how many samples were used.

Table 1. Sample Selection

Description	Number of Companies
ted companies throughout the period in Euronext	100
ance-related companies	13
mpany data that suffered losses	3
al Sample Period 2018-2022	10

3.3 Data Analysis Technique

Considering each sample can be represented annually and displays a historical relationship between the current year and the previous year, panel data are used in this study with the intention of allowing for a more thorough analysis. The program EViews 10 is used in this study's panel data processing.

There are three techniques in determining estimation models according to Widarjono (2009) namely Common Effect or Pooled Least Square (PLS) Model, Fixed Effect Model Approach, and Random Effect Approach Model (Random Effect Model). To choose the most appropriate model among Common Effects, Fixed Effects, and Random Effects in managing panel data, it is necessary to carry out several tests as follows: Chow Test, Hausman Test, and Lagrange Multiplier (LM) Test.

3.4 Regression Model

The regression model is estimated using the formula below to look at how tax planning affects the firm's value.

4. Results and Discussion

4.1 Descriptive Statistics

Sample firms utilized in this research has met the criteria requirement of purposive sampling. There are 10 finance-related European companies observed within the period of 2018-2022, meaning there are 50 observations. In this study, these observations are based on several variables, namely Firm Value (PER), Book-tax difference (BTD), and Cash Effective Tax Ratio (CETR), with BTD and CETR as the variables of Tax Planning. Furthermore, the descriptive statistics results for each variable in Table 2 below.

Table 2. Descriptive Statistics

	PER	BTD	CETR	LEV	SIZE
Mean	24.57	0.0025	0.2271	0.8480	9.5807
Median	10.45	0.0018	0.2150	0.9135	9.9185
Max.	220.7	0.0326	0.9630	0.9770	11.548
Min.	4.000	-0.0404	0.0000	0.0270	6.4220
SD	39.96	0.0111	0.1418	0.1642	1.3833

(Source: Data Processed)

PER, as the indicator of Firm Value, has a minimum value of 4.6000 in 2021 and this value accounts for NN Group, NV. The maximum value of PER accounts for Adyen, NV, with 220.7 in 2020. and a standard deviation value between the lowest and highest value of 39.969. The average PER value of the 10 companies is 24.576. This means that on average, the stock price of European finance-related companies are 25 times larger than earnings.

Results shows that CETR has a minimum value of 0.0000, which accounts for NN Group, NV, in 2019. The maximum value for CETR accounts for AXA, SA with 0.963 in year 2018. The standard deviation value between the lowest and highest value is 0.1418, while the average CETR value of the 10 companies is 0.2272. This means that European financial companies' average CETR value is 22.72% during 2018-2022. This concludes that European financial firms tend to take tax planning actions, since it can be said that CETR is smaller than average statutory tax rate in Europe (26.9%).

BTD has a minimum value of -0.040430, which accounts for 2018 data of Euronext, NV. The maximum value for this variable is of 0.032690 in 2022 Wolters Kluwer, NV data. Standard deviation value for BTD is 0.011123. The average value of 135 companies is 0.001830. This means on average, tax income for sample companies is 0.18% less than their book income, relative to their total assets.

This research employs two control variables, namely firm size (SIZE) and Leverage (LEV). The minimum firm size variable of 6.4220 in 2018, accounts for Euronext, NV. The maximum value of firm size is 11.5480 which accounts to AXA, SA. During 2018-2022. Table 3 shows that firm size has no impacts toward firm value, this means that firm size is not a significant control variable in this research.

Leverage (LEV) has the minimum value of 0.02700, which was Adyen, NV 2022 leverage data. This shows that the company's debt is very small so that the possibility of debt can be repaid with assets is very likely. In the other hand, the maximum value of 0.97700 in which was Euronext, NV 2022 leverage data. This shows that the company's capital structure is highly leveraged, so that the possibility of debt can be paid using assets is very low. The average value of the leverage ratio of all companies is 0.164216, which concludes that in general, European financial companies' assets are funded with 16% debt, and their ability of repaying the debt with assets is very high.

4.2 Data Analysis

Based on the hypothesis testing involving independent variables, dependent variables and control variables, the summary of the results is seen in Table 3 as follows:

Table 3. Linear Regression Results

Variable	Coefficient	t-Statistic	Prob.
C	-254.4405	-1.718442	0.0943
BTD	-1180.472	-2.081994	0.0445

CETR	6.206853	0.31413	0.7552
LEV	120.2491	3.897556	0.0004
SIZE	18.6418	1.340071	0.1886
R-squared			0.883145
Adjusted R-squared			0.840948
F-statistic			20.92887
Prob(F-statistic)			0.0000

(Source: Data Processed)

Table 3 shows the results of the hypothesis test, which displays t-test results (partial), f-test/f-statistics results (simultaneous), and coefficient of determination results (R-Squared and Adjusted R-Squared).

First, hypothesis test results indicate that BTD have significant effect on firm value. Results shows that Prob. value is below 0.05 (0.0445 < 0.05). Thus, hypothesis H1 is accepted. BTD's negative coefficient results indicates inverse relationship between BTD and PER, meaning that the higher the BTD value is, the lower PER will be, and vice versa. Since high BTD translates to a more aggressive tax planning, this results to lower firm value.

Second, results indicate that CETR does not have significant effect on firm value. Results shows that Prob. value is above 0.05 (0.7552>0.05). Thus, hypothesis H2 is rejected. Converse to BTD's relationship with PER, CETR has positive relationship with PER. This means that the higher the CETR is, the higher PER will be.

While SIZE shows insignificant impact as control variable (0.1886>0.05), results show LEV (Leverage) has significant impact as control variable. This means that proportion of a firm's debt relative to its total assets impacts firm value and explains the level of tax planning of firms. Companies with high leverage ratios are highly efficient at minimizing tax. Firms with higher leverage usually has lower ETR, since they reduce the amount of corporate tax using debt deductions (Ftouhi et al., 2014)

Statistical results also show that Prob (F-statistic) has the value of 0.000 (below 0.05) meaning simultaneously, all independent variables (BTD and CTR) significantly impact PER. The R-Squared results of 0.883145 indicates that both independent variables determine 88.31% of PER change.

4.2 Discussion

Effect of Book Tax Difference on Firm Value

This study states that Book Tax Different (BTD) affects the value of the company. It is also found that BTD has inverse relationship with firm value. This means that higher (positive) BTD translates to higher tweak of firms earning on certain period, leads to the decrease of firm value. The findings are in line with an agency cost theory of tax planning, according to which the information asymmetry often associated with earnings management and tax planning might lead to moral hazard or other hazards, such as smoothing of earning in order to signal the investor, or even the danger of being inspected by tax authorities. This finding is consistent with Ftouhi et al. (2014) study which also confirmed by Angelina & Darmawan (2021) which found that BTD has negative relationship with Firm value.

Effect of Cash ETR on Firm Value

Result of this study states that Cash Effective Tax Rate (CETR) has no significant

impact towards the value of the firm. Additionally, it is also found that CETR has inverse relationship with firm value. This means that higher the CETR leads to lower Firm Value. The absence of CETR significant impact of CETR on Firm Value also stated by Herawati & Ekawati (2016) and Kifli & Juliarto (2022).

5. Conclusion

This research examines the relationship of tax planning, as operationalized with variables such as Book-tax Differences (BTD) and Cash Effective Tax Rate (CETR) towards firm value. Results found that BTD has significant impact toward Firm Value, with negative relationship, where CETR has no impact towards Firm Value. Furthermore, this research is limited to Finance-related European companies, which brings to future research suggestion to include various industries and firms from other countries. Future research may also include moderating variables such as Corporate Governance.

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APPENDIX

Appendix 1. Raw Data

N	Company	Year	Cash ETR	BTD	PER	Leverage	Size
1	Adyen	2018	0.131	0.016369457	106.8	0.68695	7.4
2	Adyen	2019	0.208	0.017011285	106.6	0.66718	7.9
3	Adyen	2020	0.223	0.017923939	220.7	0.70707	8.2
4	Adyen	2021	0.219	0.02360393	150.1	0.68654	8.7
5	Adyen	2022	0.208	0.015238668	70.8	0.02666	9.1
6	Ageas	2018	0.243	0.003885169	9.6	0.88671	9.1
7	Ageas	2019	0.170	0.005229129	10.3	0.87683	9.1
8	Ageas	2020	0.134	0.005394101	7.2	0.87638	9.0
9	Ageas	2021	0.214	0.003338162	10.1	0.87248	9.1
10	Ageas	2022	0.136	0.005343755	7.5	0.91394	9.1
11	BNP	2018	0.121	0.001863908	9.7	0.94819	10.7
12	BNP	2019	0.170	0.001488645	9.4	0.94833	10.7
13	BNP	2020	0.264	0.000924305	8.1	0.95284	10.7
14	BNP	2021	0.185	4.71757E-05	8.4	0.95350	10.7
15	BNP	2022	0.147	-0.00029107	6.8	0.95254	10.8
16	Credit Agricole	2018	0.087	0.001377797	6.7	0.95967	9.9
17	Credit Agricole	2019	0.179	0.002617935	8.7	0.95992	9.9
18	Credit Agricole	2020	0.404	0.000541583	12.9	0.96252	9.9
19	Credit Agricole	2021	0.210	0.001797477	6.8	0.96291	10.0
20	Credit Agricole	2022	0.157	0.000658612	5.9	0.96610	10.0
21	DNB	2018	0.165	0.003584275	9.5	0.91500	10.8
22	DNB	2019	0.065	0.002289086	10.6	0.91327	10.9
23	DNB	2020	0.386	0.001584229	14.0	0.91490	10.9
24	DNB	2021	0.218	-0.000428598	12.8	0.91645	10.9
25	DNB	2022	0.091	0.002114956	9.4	0.91994	11.1
26	Euronext	2018	0.315	-0.040428837	16.2	0.49807	6.4
27	Euronext	2019	0.302	-0.031407249	22.8	0.61207	6.5
28	Euronext	2020	0.259	-0.015920272	18.2	0.62249	6.8
29	Euronext	2021	0.371	-0.00036912	21.2	0.97441	7.2
30	Euronext	2022	0.359	-0.000229391	16.9	0.97693	7.3
31	ING Groep	2018	0.234	-0.001114117	7.8	0.94168	10.2
32	ING Groep	2019	0.343	-0.000800973	8.7	0.93870	10.3
33	ING Groep	2020	0.455	-0.001129004	12.0	0.94062	10.0
34	ING Groep	2021	0.276	-0.000763174	10.0	0.94255	10.0
35	ING Groep	2022	0.268	-0.00122342	11.6	0.94791	10.3
36	Wolters Kluwer	2018	0.263	-0.001577119	21.8	0.73619	8.4
37	Wolters Kluwer	2019	0.220	0.014617695	26.3	0.72877	8.4
38	Wolters Kluwer	2020	0.231	0.011123703	25.4	0.75104	8.4
39	Wolters Kluwer	2021	0.216	0.013845813	37.1	0.73228	8.5
40	Wolters Kluwer	2022	0.195	0.032690191	24.3	0.75710	8.6
41	AXA	2018	0.963	-0.002960028	23.9	0.92129	11.5
42	AXA	2019	0.252	0.001919634	16.6	0.90443	11.5
43	AXA	2020	0.280	7.00668E-05	15.6	0.90532	11.5
44	AXA	2021	0.166	0.004189368	8.8	0.90299	11.5
45	AXA	2022	0.154	0.002181834	9.2	0.93056	11.5
46	NN Group	2018	0.033	-0.001632876	11.0	0.88919	9.9
47	NN Group	2019	0.000	0.002874992	5.9	0.86809	9.9
48	NN Group	2020	0.106	0.002641471	6.0	0.85299	9.9
49	NN Group	2021	0.104	0.004594869	4.6	0.86121	10.0
50	NN Group	2022	0.258	0.001071082	7.5	0.91787	9.8

Appendix 2. Statistical Results

Descriptive Statistics

	PER	BTD	CETR	LEV	SIZE
Mean	24.57600	0.002515	0.227160	0.848020	9.580720
Median	10.45000	0.001830	0.215000	0.913500	9.918500
Maximum	220.7000	0.032690	0.963000	0.977000	11.54800
Minimum	4.600000	-0.040430	0.000000	0.027000	6.422000
Std. Dev.	39.96889	0.011123	0.141833	0.164216	1.383343

Hypothesis test results

Dependent Variable: PER
Method: Panel Least Squares
Date: 05/24/23 Time: 19:25
Sample: 2018 2022
Periods included: 5
Cross-sections included: 10
Total panel (balanced) observations: 50

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-254.4405	148.0646	-1.718442	0.0943
BTD	-1180.472	566.9909	-2.081994	0.0445
CETR	6.206853	19.75889	0.314130	0.7552
LEV	120.2491	30.85243	3.897556	0.0004
SIZE	18.64180	13.91105	1.340071	0.1886

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.883145	Mean dependent var	24.57600
Adjusted R-squared	0.840948	S.D. dependent var	39.96889
S.E. of regression	15.94012	Akaike info criterion	8.607052
Sum squared resid	9147.151	Schwarz criterion	9.142418
Log likelihood	-201.1763	Hannan-Quinn criter.	8.810922
F-statistic	20.92887	Durbin-Watson stat	2.445501
Prob(F-statistic)	0.000000		