

# **The Impact of Industry Characteristics on Initial Public Offering Underpricing**

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With deepest appreciation,

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## **Abstract**

This project investigates the phenomenon of initial public offering (IPO) underpricing in the context of companies listed on the London Stock Exchange between January 1, 2018, and December 31, 2022. Drawing upon existing literature and employing Ordinary Least Square (OLS) regression analysis, we examine the relationship between industry characteristics and IPO underpricing across ten industries as classified by the FTSE criteria. Specifically, we focus on two key industry Characteristics: industry heat, representing growth potential, and industry concentration, indicating competition levels. Our study explores the relationship between industry heat and IPO underpricing, contributing to understanding IPO pricing. The methodology encompasses data collected from the London Stock Exchange and GOV.UK and regression analysis serves as the primary analytical tool. We elucidate the implications of industry characteristics on IPO underpricing through regression analyses. The conclusions drawn from this study provide valuable insights for investors, policymakers, and market participants while also acknowledging the limitations inherent in the research approach.

## 1. Introduction

Stock exchanges worldwide have a phenomenon whereby share prices rise on the day of an initial public offering (IPO). Ibbotson (1975) verified this and found an average undervaluation of 11.4% in the offer, which disappeared within a few weeks of the issue. Four main theories explain this: companies reduce prices to attract investors eyeing high stock growth; investment banks ensure successful share issuance by lowering prices; Rock's (1986) "winner's curse" theory addresses information asymmetry, compensating uninformed investors' risk with lower prices; and Ibbotson's (1975) legal liability hypothesis believes the company chose to lower the issue price to avoid the legal risks associated with poor performance.

Various studies have explored factors contributing to IPO underpricing. Guo, Li, Yu, and Wei (2021) link R&D investment to higher underpricing, while Kim, Pukthuanthong-Le, and Walker (2008) associate it with financial leverage. However, few examine the role of industry characteristics in underpricing. This project fills the gap by analysing how industry heat and concentration affect IPO underpricing. These factors reflect industry growth potential and competition levels, which are crucial for understanding stock price trends. This project demonstrates the relationship between industry characteristics and industry average IPO underpricing. They are chosen as the variables for this project. Industry heat indicates the growth potential of an industry over time; industry concentration explains the degree of competition within an industry. These two industry characteristics reflect an industry's current status and growth potential.

This project focuses on companies that made initial public offerings on the London Stock Exchange between 1 January 2018 and 31 December 2022. Based on the FTSE classification criteria, we aggregate the 273 companies into 10 sectors to discuss the effects within the sectors. The paper also applies the Ordinary Least Square (OLS) regression to find the relationship between average IPO underpricing and industry characteristics.

The thesis is structured as follows: Part II reviews the existing literature on IPO underpricing and presents the research objectives of this project. The third section describes the secondary data from the London Stock Exchange and GOV. UK, explaining the criteria used to screen the data. The fourth part describes the research

methodology of this project, multiple linear regression. The fifth part is the interpretation of the data, including variable descriptions and regression analyses. The sixth part presents the conclusions and limitations analysis of the study.

## **2. Literature Review**

When a company goes public, there is a possibility that the stock value is underestimated during the initial public offering (IPO), leading to a significant surge in stock price on the first day of trading. This phenomenon is referred to as IPO underpricing (Ljungqvist, 2007).

Though IPO underpricing results in lower anticipated financing, it remains a favoured choice for newly listed companies, driven by market conditions and the opportunity for future cash returns for shareholders (Ritter & Welch, 2002). Lower initial stock prices may attract irrational investors despite underpricing, leading to excessive investment. This can widen the investment gap for companies with undervalued IPOs, causing employment declines (Hau & Lai, 2013). Thus, IPO price suppression is a significant concern.

Chambers and Dimson (2009) noted a steady increase in IPO underpricing rates in the UK stock market since World War II. Initially, at 3.80% before 1945, it rose to an average of 9.15% between 1946 and 1986, with a continued upward trend. One theoretical explanation Rock (1986) proposed is the "Winner's Curse" hypothesis, suggesting underpricing stems from information asymmetry. Baron (1982) also cited the Agency Theory as another reason for IPO. According to this theory, investment banks tend to set relatively lower IPO prices for issuing companies to ensure a smooth new stock issuance process. Besides, Ibbotson (1975) introduced the Legal Liability Hypothesis, which thinks companies actively choose to lower issue prices to mitigate the risk of post-IPO lawsuits arising from poor company performance. However, some studies have challenged this theory. Philip D. Drake (1993) suggests that "setting aside funds" to minimise liability through price suppression is not a practical solution to IPO-related litigation.

IPO underpricing involves stakeholders like the government, the market, companies, and investors. While it can bolster stock performance and raise funds for development, it may also foster irrational investor behaviour. Despite high growth potential,

sustainability is not guaranteed for newly listed companies due to various influencing factors.

Irrational investor behaviour may prompt industry overinvestment, while a surge of hot money into the stock market could have economic consequences. Concentrated IPOs within an industry could destabilise the market, affecting overall stock performance. In conclusion, studying industry impact factors of IPO underpricing is crucial for understanding its broader implications.

Several company factors can lead to IPO underpricing. IPO underpricing is associated with specific intrinsic characteristics of the listed company itself. Guo, Li, Yu, and Wei's (2021) research indicates that the higher the company's research and development (R&D) investment, the greater the IPO underpricing. Interestingly, the venture capital (VC) intervention did not alleviate information asymmetry; instead, it played a contrary role by exacerbating the positive correlation between R&D investment and IPO underpricing. The IPO prices of highly leveraged enterprises are underestimated compared to the pricing of low-leverage enterprises. Higher leverage implies increased pre-uncertainty and risk (Kim, Pukthuanthong-Le, & Walker, 2008). It is noteworthy that this conclusion applies to high-tech enterprises. Mahardika and Ismiyanti (2021) conducted a diversified return analysis of the financial indicators (asset-liability ratio, asset return rate, flow ratio) and non-financial indicators (company size, company age) of the Indonesian stock market—the impact of hands on the influence of insufficient IPO pricing. Apart from the specific characteristics of listed companies that contribute to IPO underpricing, the question arises of whether industry-specific features can influence the extent of IPO underpricing among companies within that industry.

Studies highlight industry factors impacting IPO underpricing. Yu, Zhang, and Zheng (2015) found that fraud in an industry diminishes investor trust, affecting overall sector enthusiasm and subsequently influencing underpricing. Ang (2009) suggests that IPO firms in emerging industries yield lower returns than mature ones, indicating lower risk and less underpricing. Initial IPO pricing in emerging sectors closely reflects actual values, limiting the potential for exceptionally high returns post-ownership. However, additional factors may contribute to underpricing. Helwege and Liang (2004) pointed out that the number of listed companies determines whether the

IPO market is cold or hot, with both cold and hot IPO markets often occurring within individual industries. This phenomenon is attributed to the industry cluster effect, where companies from the same industry tend to go public in clusters. Companies listing during periods of industry cluster effects may exhibit poorer performance in subsequent stages, reflecting investors' excessive investment in popular industries (James Ang, 2009). The emergence of a new initiative does not necessarily preclude the occurrence of industry cluster effects (Helwege & Liang, 2004).

Jain and Kini (2006) noted that industries with a concentration of IPOs tend to exhibit higher levels of IPO underpricing. The correlation between industry growth and the extent of industry IPOs is positive, suggesting that more IPOs within an industry indicate a favourable industry outlook and intense competition. Therefore, the number of IPOs within an enterprise can serve as one indicator of industry prospects. In a study using the manufacturing sector in New Zealand as a sample, Ratnayake (1999) highlighted New Zealand's efforts to enhance market competition and reduce market monopolies, leading to a decrease in market concentration. This implies that the concentration ratio (CR) can reflect the level of industry competition. Concentration measures the percentage of a firm's size to the overall size of its industry. It can reflect the degree of monopoly of an enterprise. The closer the concentration ratio is to 100%, the higher the degree of monopoly in the industry and the smaller the competition. I will do an industry concentration analysis on the targeted sectors for this study and whether the conclusions drawn by Ratnayake (1999) in the New Zealand market apply to the UK market.

## **2.1 Research gaps and aims**

The research on the correlation between industry characteristics and IPO underpricing has yet to be extensive. Analyses of industry traits are often restrictive and need more generalizability. Most studies focus on IPO price suppression in a particular industry without comparing the suppression rate across multiple sectors. No studies compare IPO underpricing rates in the UK stock market's internet, healthcare, manufacturing, consumer goods, services and energy sectors. No research has demonstrated the relationship between industry outlook, industry competition, and IPO underpricing. In my study, I aim to find which of the above sectors has a higher rate of underpricing in the UK stock market.



Also, the project employs the CR-Concentration Ratio from Ratnayake (1999) to calculate the industry concentration for the UK's internet, healthcare, manufacturing, consumer goods, services, and energy sectors. The degree of competition in the industry is captured by calculating the industry concentration. The project attempts to reflect the degree of competition in the selected industries by calculating the industry concentration and determining whether the degree of competition in the industry correlates with the IPO suppression rate.

This project plans to study the IPO underpricing rates of the above sectors in the UK stock market between 2018 and 2022. multiple linear regression is conducted to investigate the relationship between the two characteristics of the above sectors: the industry outlook and the degree of industry competition. Industry outlook, industry competition degree, and concentration ratio are explanatory variables that explain IPO underpricing. Data is collected from the London Stock Exchange's website. Issue prices for companies listed on all markets (including all IPO types<sup>1</sup>) from 2018-2022 and the closing price on the first day after the IPO.

### **3. Data**

This section explains the data applied in this project. The first subsection discusses the firm-level and industry-level data, and the second subsection describes the variables, including the average IPO under-pricing, industry heat, and industry concentration.

#### **3.1 Company and Industry**

This project's scope is companies newly listed on the London Stock Exchange between 1 January 2018 and 31 December 2022. The primary market of the London Stock Exchange consists of two types of markets, the Main Market and the Alternative Investment Market (AIM), and this project does not differentiate between IPOs in these two markets but includes all successful IPOs in the study.

There are 343 businesses in the timeframe set for the survey. This excludes 70 companies delisted as of December 2023, for which trading data is unavailable on the London Stock Exchange. Therefore, 273 newly listed companies meet the requirements for this study as a sample.

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<sup>1</sup> There are two markets for trading on the London Stock Exchange: the Main Market and the Alternative Investment Market. The main market is for large companies; the alternative investment market is an international market for smaller companies.

The 273 companies studied were categorised according to the FTSE Industry Classification Standard<sup>2</sup>. The industries covered in this study include Utilities, Real Estate, Telecommunications, manufacturing, technology, internet, healthcare, Industrials<sup>3</sup>, energy, the mining industry, Consumer goods, and Financials. In the FTSE industry classification, "Industrials" refers to the industrial sector, including construction and materials, industrial goods and services, industrial engineering, industrial transportation, etc.

### **3.2 Variable Description**

This subsection explains the variables and the criteria for selecting data for the variables.

#### **3.2.1 Average IPO Underpricing**

The undervalued IPO price must be calculated from the company's issue price and the closing price on the first trading day. Of the 273 sample companies, 25 had excessive IPO underpricing rates. The regression analyses in this project use the data from these 25 companies that were removed.

#### **3.2.2 Industry Heat**

Industry heat has been famous for a while. Industry heat can be measured by the number of people working, the number of companies registered, and whether the industry is growing. If the number of newly listed companies in an industry is large, it also means that the sector is hot. In this project, industry heat is indicated by counting the number of newly listed companies in each industry from 2018 to 2022.

#### **3.2.3 Industry Concentration**

This study will also use industry concentration data. According to a report by the Chancellor and the Business Secretary, in conjunction with the CMA, assessing the state of competition in the UK, industry concentration can be seen as an indicator of competition in the market. Higher concentration levels mean fewer firms control a larger market share in an industry. This is potentially weakening competitive

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<sup>2</sup> Industry Classification Benchmark (ICB) is an industry classification standard launched by FTSE and Dow Jones. It consists of 11 industries in total. In this project, Consumer Staples has no new IPO companies from 2018 to 2022, so this project only involves 10 industries of ICB.

<sup>3</sup> Here, "Industrials" is different from the "Industry" in the title. The industry in the title refers to the sector.

pressures and expanding market power in the industry. (GOV. UK, 2022) The data is sourced from the GOV. UK<sup>4</sup>.

For industry concentration, CR<sub>n</sub> (Pavic et al., 2016) is used as a criterion for calculating concentration. Industry concentration, measured by the CR5 index, measures the market share held by the top five firms in the industry, indicating market dominance and competitive dynamics. The 273 companies studied are classified according to the FTSE Industry Classification Standard. The industries covered in this project include utilities, Real Estate, Telecommunications, Manufacturing, Technology, Internet, Health care, Industrials, Energy, Basic Materials, Consumer Discretionary and Financials. In the FTSE industry classification, "industrial" refers to the industrial sector, which includes construction and materials, industrial products and services, industrial engineering, and industrial transport.

#### **4. Model Specification**

This project uses the following OLS regression model to study the impact of industry heat and industry concentration on IPO Underpricing.

$$Y = \alpha + \beta_1 \times X_1 + \beta_2 \times X_2 + \varepsilon$$

Where Y denotes the average IPO under-pricing of industries, industry heat is denoted by X<sub>1</sub>, and the industry concentration is denoted by X<sub>2</sub>.  $\alpha$  represents a constant, which is the expected value of Y when all variables are 0.  $\varepsilon$  is the error term of the regression. The paper uses the equation to show the relationship between the independent and dependent variables.

Multiple linear regression analyses are conducted on this question to determine whether industry heat and industry concentration affect IPO Underpricing and whether the effect is positive or negative. The regression can also be used to analyse the extent to which the two variables impact the level of IPO Underpricing. Robust standard errors are used to account for heteroskedasticity and improve the reliability of the coefficient estimates. These variables are included based on prior empirical research suggesting that industry activity and concentration may significantly affect the pricing dynamics of new market entry. The analysis is based on a dataset of 273

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<sup>4</sup> Website of UK Government: [www.gov.uk/government/statistics/uk-business-sectors-indicators-of-concentration](http://www.gov.uk/government/statistics/uk-business-sectors-indicators-of-concentration)

firms listed on the London Stock Market between 2018 and 2022, providing a contemporary view of IPO suppression related to industry conditions.

## **5. Data Analysis**

This section is an analysis of the data. The first part analyses the number of IPOs by industry; the second part analyses the average IPO underpricing by industry; the third part analyses the industry concentration data by sector; and the last part analyses the regression results.

### **5.1 Number of IPOs in Each Industry**

The Real Estate sector has four newly listed companies, one of which (GRIT REAL ESTATE INCOME GROUP LIMITED) has a significant deviation of 7,534 per cent in IPO depression. Two of the remaining three companies did not have IPO depression.

There are four newly listed companies in the Telecommunications sector, three of which have undervalued IPOs.

Utilities had three newly listed companies; one company's IPO price was undervalued (MAST ENERGY DEVELOPMENTS PLC), and one company's IPO price was overvalued (AB "IGNITIS GRUPE"). One company's (SDIC POWER HOLDINGS CO., LTD) IPO price did not differ from the closing price on the first day of listing.

In the Energy sector, out of 16 newly listed companies, three had significant deviations in their IPO price suppression rates: PREDATOR OIL & GAS HOLDINGS PLC (188%), SERINUS ENERGY PLC (917%), and DEV CLEVER HOLDINGS PLC (17,047%). Additionally, seven companies had undervalued IPO prices, while six had no IPO depression.

There are 27 newly listed companies in the Technology sector; ANEMOI INTERNATIONAL LTD and AIQ LIMITED have huge deviations in IPO price depression of 8025% and 175%, respectively. Of the remaining companies, 18 had undervalued IPOs, six had overvalued IPOs, and one had an IPO price the same as the closing price on the first day of trading.

Among 19 newly listed companies in the healthcare sector, IPO suppression rates for VERICI DX PLC and CELLULAR GOODS PLC stand out with significant skewness

at 155% and 280%, respectively. Only GENINCODE PLC's issue price was overvalued, while 15 companies were undervalued. Notably, OXFORD CANNABINOID TECHNOLOGIES HOLDINGS PLC had a depression rate of 0%.

The Basic Materials sector has 29 newly listed companies, and GREAT SOUTHERN COPPER PLC has experienced a significant IPO depression (9,700%). 9 companies have no IPO underpricing. Nineteen companies have undervalued IPOs.

There are 30 newly listed companies in the industrial sector; TAYLOR MARITIME INVESTMENTS LIMITED has a considerable deviation of 6,237% in IPO depression. Six companies have no IPO depression, and 23 companies have IPO depression.

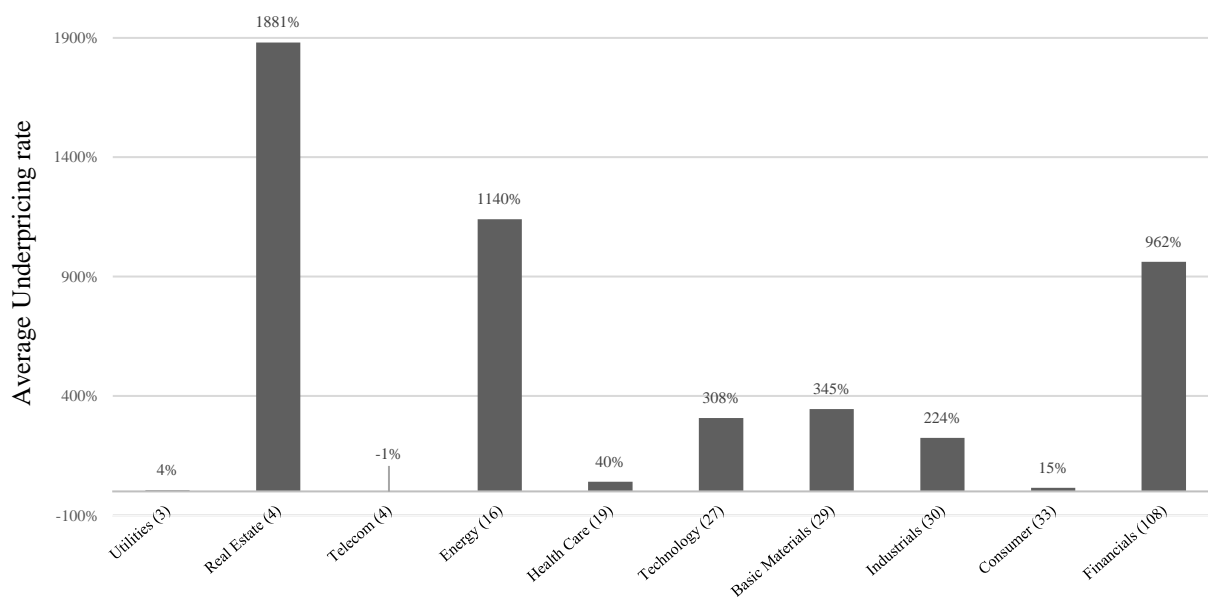
The Consumer Discretionary industry has 33 companies: THEWORKS.CO.UK PLC and VARIOUS EATERIES PLC have an overvalued IPO price, and 29 companies have an undervalued IPO price. The IPO price of INSPECS GROUP PLC and MARKS ELECTRICAL GROUP PLC was the same as the closing price on their first day.

There are 108 firms in the financial sector, of which 15 have massive deviations from the IPO underpricing rate. Twenty-three firms have no IPO underpricing, and 78 firms have IPO underpricing.

## **5.2 Average Underpricing in Each Industry**

Figure 1 reports the average IPO underpricing values for each industry for 273 companies.

**Figure 1: Average Underpricing in Each Industry (273 companies)**



*Notes:* The horizontal scale of this figure reports ten sectors and the number of new IPOs in each industry<sup>5</sup>. The data is from 1 January 2018 to 31 December 2022 from the London Stock Exchange. A total of 273 companies are shown in this chart. The vertical coordinate is the calculated average level of underpricing for industries<sup>6</sup>.

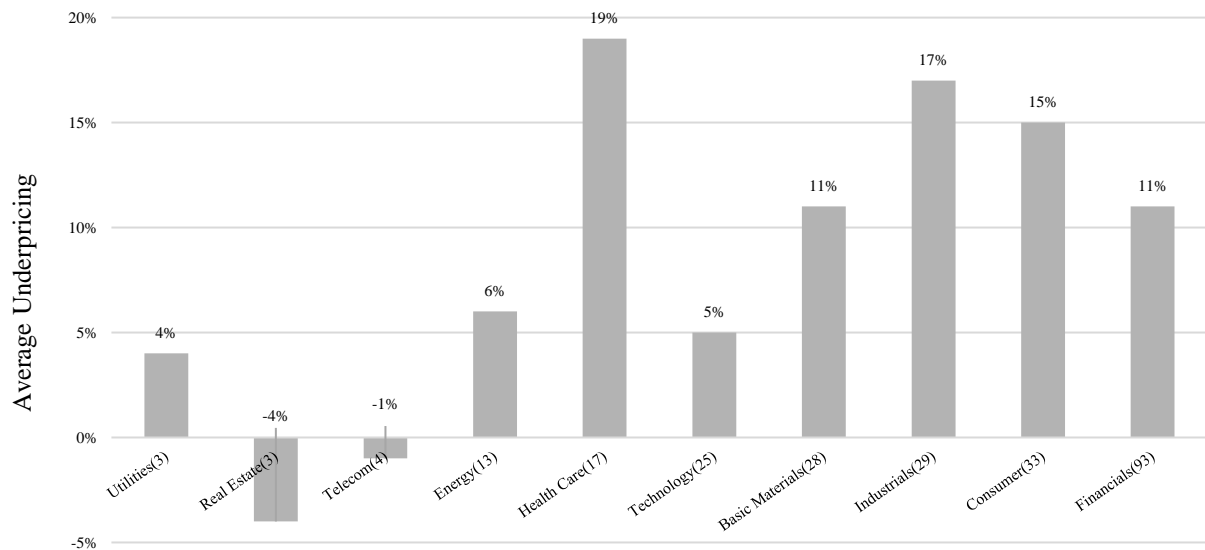
Based on a sample of 273 companies. Real Estate has the highest average underpricing at 1,881 %, while Energy and Financials have higher averages at 1,140 % and 962 %, respectively. Basic Materials, Technology and Industrials have 345%, 308% and 224%, respectively, while Health Care, Consumer Discretionary and Utilities have averages of 40%, 15% and 4%, respectively. Telecommunications has an average IPO underpricing of -1%.

<sup>5</sup> The "Telecom" in the graph refers to Telecommunications; Consumer Discretionary is replaced by "Consumer". The following figures and tables are the same as here.

<sup>6</sup> The industry average underpricing is obtained by dividing the sum of IPO Underpricing by the number of IPOs in the industry.

Figure 2 reports the average IPO underpricing values for each industry for 248 companies.

**Figure 2: Average Underpricing in Each Industry (248 companies)**



*Notes:* This chart shows the average industry IPO underpricing after removing companies with extraordinarily large IPO Underpricing<sup>7</sup>. There are 248 companies and ten industries in this chart. The data is sourced from the London Stock Exchange.

When the excessively high IPO underpricing is removed, there are 248 new public companies. Health Care has the highest industry average IPO underpricing at 19%.

Next is Industrials, which has a 17% average IPO underpricing. Consumer Discretionary has a 15% average underpricing. Basic Materials and Financials have the same average (11%). Energy and Technology have average IPO underpricing of 6% and 5%, respectively.

Utilities with an average IPO underpricing of 4%. Telecommunications and Real Estate have negative averages of -1% and -4% respectively.

<sup>7</sup> IPO Underpricing rate  $\geq 100\%$  is considered an extraordinarily large value. The following figures and tables are the same as here.

### 5.3 Industry Heat and Industry Concentration

Table 1 reports the industry heat and concentration for 273 companies aggregated at the UK industry level.

**Table 1: Industry Heat and Industry Concentration With 273 Companies**

Industry	Industry Heat	Industry Concentration (CR <sub>5</sub> )
Utilities	3	58%
Real Estate	4	5%
Telecom	4	53%
Energy	16	45%
Health Care	19	10%
Technology	27	28%
Basic Materials	29	45%
Industrials	30	32%
Consumer	33	28%
Financials	108	58%

*Notes:* This table shows the industry heat and industry concentration for each industry in the case of 273 companies. Sector heat = number of IPOs, and sector concentration from " UK business sectors: indicators of concentration" published by GOV.UK, the latest data updated in 2022.

When the sample is 273 companies, the industry heat and industry concentration are shown in the table above. Financials and Utilities have the most significant industry concentration: 58%. Telecommunications also has a high industry concentration value, 53%. Energy and Basic Materials have the same value, 45%. Industrials account for 32 %, technology and consumer discretionary have an industry concentration of 28 %, health care is 10 %, and real estate has the lowest industry concentration, 5 %.



Table 2 reports the industry heat and concentration for 248 companies aggregated at the UK industry level.

**Table 2: Industry Heat and Industry Concentration With 248 Companies**

<b>Industry</b>	<b>Industry Heat</b>	<b>Industry Concentration</b>
Utilities	3	58%
Real Estate	3	5%
Telecom	4	53%
Energy	13	45%
Health Care	17	10%
Technology	25	28%
Basic Materials	28	45%
Industrials	29	32%
Consumer	33	28%
Financials	93	58%

*Notes:* With 248 companies, the overall industry concentration is unaffected, so the industry concentration in Table 2 is the same as in Table 1.

When the data is based on 248 companies, there is no change in industry concentration and a small change in industry heat. Financials had the most significant decrease in industry heat, from 108 to 93. Fifteen financial companies have a huge IPO underpricing rate. Energy's industry heat decreased from 16 to 13. Health Care and Technology decreased by two units each. Industrials, Basic Materials, and Real Estate have all been reduced by 1 unit.

## 5.4 Regression Analysis

This subsection explains the results of the relationship between IPO underpricing and industry characteristics, industry heat and industry concentration. Table 3 below reports the results for the regression described in Section 4, Model Specification. The results do not differ between the two cases; only one table is shown.

**Table 3: Regression Result**

Dependent variable:	
----- Y -----	
<b>Panel A: Coefficients</b>	
Log(X <sub>1</sub> )	0.048** (0.017)
X <sub>2</sub>	-0.077 (0.103)
Constant	-0.020 (0.059)
<b>Panel B: Model Fit Statistics</b>	
Observations	10
R <sup>2</sup>	0.548
Adjusted R <sup>2</sup>	0.419
Residual St. Error	0.058 (df = 7)
F Statistic	4.241* (df =2; 7)
Note:	*p<0.1; **p<0.05; ***p<0.01

*Note:* This table shows the results of the regression analysis. The regression analysis is based on data from Table 3. Panel A of this table shows the regression equation coefficients, and Panel B shows the model fit

statistics. The note explains the significance level: \* means significant at a 10% significance level, \*\* is 5%, and \*\*\* is 1%.

Table 3 shows the results of the OLS linear regression analysis with average industry depression as the dependent variable and industry heat and industry concentration as the independent variables. The results for the two datasets with or without outliers are almost identical.

The regression formula is:

$$Y = -0.020 + 0.048 \times \log \text{Industry heat}(X_1) - 0.077 \times \text{Industry concentration}(X_2) + 0.058$$

The logarithmic transformation of the industry heat variable addresses potential nonlinearities and provides a proportionate. The regression analysis indicates that the logarithm of industry heat is positively correlated with the dependent variable Y and is significant at the 5% level. This suggests that an increase in industry heat corresponds with an increase in Y, albeit at a diminishing rate as industry heat rises. The impact of industry concentration on Y is insignificant, implying that within this study's sample and model specifications, industry concentration does not have a statistically significant relationship with Y. The error item  $\varepsilon$  in the regression equation is the residual standard error, with a value of 0.058.

The model's R-squared value is 0.548, which means that approximately 54.8% of the variation in Y is explained by industry heat and industry concentration. The remaining 45.2% is attributable to factors not included in the model or random error. The overall significance of the model, as indicated by an F Statistic of 4.241, is significant at the  $\alpha=0.1$  level, suggesting that at least one predictor variable significantly influences the dependent variable. However, the small sample size of 10 observations may affect the robustness of the model's results.

Based on the regression analysis results, it can be inferred that industry heat affects the industry's average underpricing. Industries with more newly listed companies tend to exhibit higher average underpricing. This is in line with the findings of Jain and Kini (2006). However, due to constraints such as the number of samples and the temporal scope of the sample, the present study cannot ascertain whether there is a correlation between industry concentration and the level of industry underpricing.

According to Ratnayake (1999), higher industry concentration correlates with less competition in the New Zealand market; similarly, Jain and Kini (2006) concluded that industry competition is directly proportional to the concentration of IPOs within an industry. However, in this project, industries with high concentration did not necessarily exhibit concentrated IPO activities. Therefore, the findings applicable to the New Zealand market differ from the UK market.

## **6. Conclusion**

This project categorised and analysed 273 companies that initiated IPOs on the London Stock Exchange between 2018 and 2022. It was found that the real estate sector exhibited the highest average level of underpricing. After removing 25 companies with exceptionally high underpricing values, Health Care showed the highest average underpricing, 19%. The financial industry displayed substantial IPO underpricing in both scenarios and had the highest number of new listings (108) during the study period and the highest probability of underpricing.

The regression model shows that the logarithm of Industry heat is positively related to the industry average IPO underpricing and is significant at a 5% significance level. Meanwhile, industry concentration does not have a linear relationship with the dependent variable. This implies that an increase in industry heat is associated with an increase in Y, the industry's average IPO underpricing. However, the rate of growth decreases with an increase in Industry heat. The effect of Industry concentration on Y is insignificant, which may imply that the relationship between industry concentration and Y is not statistically significant in the given sample and model setup. However, our findings do not confirm a significant relationship between Industry heat and industry concentration.

This study highlights the significant impact of industry heat on industry underpricing, offering valuable insights for investors and industry researchers. The findings of this study can help companies price their IPOs more reasonably and avoid underfunding due to underpricing. Future research avenues could explore additional industry characteristics and their effects on underpricing levels and investigate the relationship between industry characteristics and underpricing probability. Expanding the sample size and incorporating more variables could enhance the explanatory power of the statistical model. However, the study's temporal limitations and small sample size

suggest the need for further detail and caution in interpretation. Additionally, as the study focuses solely on the London stock market and utilises the FTSE industry classification standard, its findings may not be universally applicable across all industries and regions. Finally, including the COVID-19 pandemic period in the study timeframe adds complexity to the analysis, impacting the external validity of the findings due to macroeconomic fluctuations.

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