Industry Effects on The Opening Price Performance of Initial Public Offerings of Common Stock

By: Fang Zhou

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Approved: _____
Faculty Advisor

Approved: _____
MFIN Director

Date: _____

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Abstract

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In a large percentage of research studies, we find the degree of underpricing uses offer-to-close return as initial return to study factors influencing the degree of IPO underpricing. The objective of this study is to analyze the specific industry effects on the mispricing of new issues. In this research, we divide the initial return into an opening price return and an intraday return. After introducing a least squares dummy variable estimator to do the regression analysis, this paper shows some interesting results. The results demonstrate that companies belong to different industries don't have significant difference in the degree of underpricing of IPOs. The only significant result is that companies with higher Tobin's Q ratio tend to have a lower degree of underpricing of IPOs. This may be explained by the aggressive risk-taking phenomenon. Companies with higher growth potential are more desired to recent investors. Consequently, underwriters are able to sell the new issues at higher offer prices. Companies with a greater proportion of intellectual capital tend to have a lower degree of underpricing of IPOs.

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Chapter 1

Introduction

1.1 Overview

Commonly, empirical studies from the west use offer-to-close (first trading day) return as initial return to measure the degree of underpricing indicating the greater initial return the primary market investors will generate, the higher degree of underpricing of IPOs. Namely, with more underpriced IPOs, the greater the profits are to primary market investors.

The objective of this study is to analyze the effect of some specific industry factors on the degree of common stocks' IPOs initial return on the London AIM. This research will investigate various companies from different industries to examine whether those features exert any influence on the mispricing of issuers' IPOs. Furthermore, the research will explore the extent those factors attribute to the degree of underpricing or overpricing. This research will go further and divide the initial return horizon into an opening price return and an intraday return to analyze the influence of industry factors on mutual returns. I will use offer-to-open (first trading day) return as the opening price return and open-to-close (first trading day) return as the intraday return.

1.2 Background

Alternative Investment Market (AIM) of the London Stock Exchange is a junior

market for more risky companies to go public (Smithson & Firer, 2007). More

explicitly, it is a sub-market of the London Stock Exchange that assists smaller

and growing companies in raising capital for expansion. Since its launch in

1995, more than 16,000 domestic and international companies have joined

the AIM and more than £70 billion including over £35 billion for new issues

has been raised (AIM Statistics, June 2012). "In principal, valuing IPOs is no

different from valuing other stocks. The common approaches of discounted

cash flow (DCF) analysis and comparable firms' analysis can be used" (Ritter,

1998).

Numerous studies have advanced several explanations for IPOs underpricing.

In general, most theoretical explanation implies that valuation uncertainty of

the IPO results in new issues underpricing (Ritter, 1998). Plenty of factors

influencing the degree of IPO underpricing have been debated. For instance,

abundant academic literature states that the factors including size of the issue,

type of market for the issue, reputation of underwriter and age of the firm

before going public, will all influence the degree of underpricing of IPOs. In

addition, adequate empirical research demonstrates remarkable initial return

for primary market investors. Most of the measurements of the degree of

underpricing are using offer price to first trading day closing price as the

difference. Christopher and Robert in 1993 narrowed the return horizon and analyzed the contributions of offer-to-open return and intraday return to initial return separately (Christopher & Robert, 1993).

1.3 Need for Study

While early studies advance a number of hypotheses to explain extraordinary initial return phenomenon of new issues, the significance of industry effects on the opening price performance of IPOs hasn't been given much attention. The logic behind this is that different industries are associated with a different degree of uncertainty. High technology industries which have a higher growth potential are embedded with a higher degree of uncertainty and should have a higher degree of IPO mispricing. A few issues arise when company IPOs are from industries other than technology.

It is important to compare which companies will have higher degree of underpricing of IPOs. Will technology companies with more intangible assets and products, or will mining and energy companies with more physical assets and products be more underpriced when they go public? Further, will the companies with more intellectual capital and innovation, or will the companies with more understandable business model be more underpriced when they go public? In summary, this paper is going to discuss whether all these factors will produce higher initial returns for investors.

The purpose of this paper is to investigate the effects of various industry factors including industry difference, intellectual capital and assets structure on a company's IPO initial return, offer-to-open return and intraday return. The Chapter two of this paper will review literature of previous theoretical and empirical studies on IPO underpricing. After that, in Chapter three, this paper will elaborate on the various methodologies used and data resources used to test the influence of industry factors on the opening price performance of IPO of common stock. Chapter four will perform results of the regression model and test the significance of the result. In addition, this chapter will also discuss the result of this analysis. Finally, the last chapter will draw conclusions, make recommendations and discuss limitations of this research.

Chapter 2

Literature Review

Companies start to offer their shares for sale when they are seeking additional capital to fulfill their demand for future investment. Initial Public Offering is the first time that those private companies list their securities on a public exchange. The companies attempt to transform themselves into publicly traded companies, to obtain new funds and enjoy the improved liquidity of raising expansion capital.

2.1 Underpricing of IPO

The most famous phenomenon for a company's Initial Public Offerings is significant underpricing of new shares as well as their extraordinary initial returns for common stock investors in the primary market. Adequate theoretical and empirical research documents this pattern. Ritter (1998) claimed that numerous early studies demonstrate the distribution of highly skewed initial returns with positive mean value. He also updated a table of global average initial returns, in his research, reinforcing his previous statement that the underpricing phenomenon is generally observed in every stock market around the world, although the degree varies across different countries (Loughran & Ritter, 1994).

Current research focuses on a wide range of sectors. Kooli and Suret (2001) study IPOs from the natural resources sector in Canadian market. They investigate 102 IPOs from the mining sector in Canada, discovering that the average initial return was 35.7% and those stocks underperformed the market in the following years. Similarly, Smithson and Firer (2007) investigate newly listed mining stocks on the London AIM and Toronto TSX-V stock exchange market. They find that stocks on the TSX-V provided higher initial returns than those on AIM, since companies listed on TSX-V had a higher risk profile and a larger amount of capital raised.

In addition to basic material sectors, Yu and Feldhaus (2004) research new issues underpricing research in the property and insurance industry, and discover that, for insurance firms, the degree of underpricing during non-constrained periods is much higher than that in capacity-constrained periods. This is consistent with the theory that capacity constraints help to screen out poor performers. Therefore, IPOs are less underpriced during capacity-constrained periods.

While these early investigations use offer price to the closing price of first trading day to compute the initial return for IPOs, Christopher and Robert (1993) divided the return horizon into an offer price to the opening price of first

trading day return and an intraday return. They conclude that virtually all the credible initial return of new issues is contributed by offer-to-open return.

2.2 Hypotheses Explaining Underpricing

The reason for IPOs underpricing has been put forward in a large number of theories. For instance, the large first-day return results from informational asymmetry between underwriters and issuers, according to Baron.

Winner's Curse Hypothesis

Rock (1986) develops a model fully explaining that the probability of getting an allocation of an overpriced issue was no less than the probability of receiving an underpriced issue. He claims that new shares were issued at a discount so as to attract more uninformed investors. Because of the existence of this allocation bias, uninformed investors were likely to revise downward their new shares' valuation. In other words, they faced a winner's curse: uninformed investors could get all the desirable new issues, only if the informed investors disliked these shares. Consequently, the issuer had to discount the new shares being offered sufficiently, in an attempt to appeal to the uninformed investors. Namely, uninformed investors had to be compensated to receive a disproportionate amount of overpriced shares.

Reputation of Underwriter Hypothesis

Beatty and Ritter (1986) demonstrate a significant relationship between new issues mispricing and underwriters' reputation. They find empirical evidence that investment bankers who significantly misprice new issues in one sub period tend to lose their market share in the subsequent sub period. This result positively supports their proposition that "investment bankers enforce the underpricing equilibrium" (Beatty et al. 1986). If investment bankers excessively overprice new issues, they will lose potential investors. If they consistently underprice new issues, potential issuers are unlikely going to do business with them.

In addition, the best interest for investment bankers is to take advantage of their reputation so as to generate repeated business earnings and higher underwriting fees in the long-run rather than benefiting from speculative behavior in the short-run. Therefore, it is conceivable that investment bankers would like to maintain a well-established reputation to retain and improve their market share. In other words, underwriters with a strong reputation tend to experience a lower degree of mispricing of new issues.

Ex-ante Uncertainty Hypothesis

Beatty and Ritter (1986) also argue that the ex-ante uncertainty of value per share has a significantly positive correlation with the expected initial return of

new issues. In their research, one of the proxies used to measure the degree of ex ante uncertainty is the number of uses of proceeds listed. It is conceivable that companies are unlikely to disclose their plans in detail with their net proceeds. Nevertheless, less established issuers are required to provide more explicit plans with their proceeds by SEC. As a consequence, companies which have a larger number of uses of proceeds listed are likely to have a higher degree of ex ante uncertainty. Based on a few regression results, they obtain empirical evidence to support their proposition (Betty and Ritter, 1986).

Issuers' Size Hypothesis

Álvarez-Otero and Víctor M. González-Méndez (2006) provide empirical evidence that the size of the issuers exerts strong influence on degree of underpricing of new issues by analyzing Spanish capital market IPOs. Specifically, since smaller companies appear to have more behavior volatile, they tend to generate greater abnormal initial return with regard to industry from going public compared to larger firms.

Signaling Hypothesis

Su and Fleisher (1999) used data of all the firm-commitment IPOs of A-share common stocks occurring from 1987 to 1995 to investigate IPOs in Chinese A-share market, finding that:

"The degree of IPO underpricing is positively related to proxies for the issuer's intrinsic value and issuers with larger IPO underpricing are more likely to raise larger amount of capital through SEOs and to do so more quickly than issuers with a smaller degree of IPO underpricing."

This empirical evidence strongly supports the signaling hypothesis for IPOs underpricing. The intuition behind is: issuers are assumed to have prior information on intrinsic value of their own firm over underwriters and investors. In other words, issuers are better informed about the companies' regular performance and potential growth than the other two groups. If the issuers are high value firms, they would like to send a signal to investors through underpricing the new issues to distinguish themselves from low value companies. It is not uncommon that bad firms would just take the capital as much as possible and run away from their initial offering. (Su & Fleisher, 1999)

Chapter 3

Methodology and Data Selection

3.1 Methodology

Initial return

Plenty of empirical research uses the difference between offer price and first trading day closing price to measure the degree of underpricing and initial return of the new issues. This paper will use the same methodology to calculate the initial return of IPOs in the first place as well.

Equation 3.1

$$Roc_i = \frac{(Pc_i - OP_i)}{OP_i}$$

Where Roc_i is the offer-to-close return of stock i, Pc_i is the closing price of stock i on the first day of trading, OP_i is the IPO offer price of stock i. The offer-to-close return can be positive, negative or equivalent to zero. When Roc_i is greater than zero, it implies that the new issues are underpriced by underwriter. In contrast, new issues are overpriced.

Offer-to-open return and intraday return

In addition, this paper will narrow the return horizon and divide it into an offer-to-open return and an intraday return.

Equation 3.2

$$Roo_i = \frac{(Po_i - OP_i)}{OP_i}$$

Where Roo$_i$ is stock i's offer-to-open return, Po$_i$ is the first trading day opening price of stock i, OP$_i$ is the stock i IPO's offer price.

Equation 3.3

$$IR_i = \frac{(Pc_i - Po_i)}{Po_i}$$

Where IR$_i$ is the intraday return of stock i, Po$_i$ is the opening price of stock i on the first trading day, Pc$_i$ is the closing price of stock i on the first trading day.

Regression Model

Equation 3.4

$$Roc = \beta_1 X_1 + \ _2 X_2 + \ _3 X_3 + \ _4 PB\_Ratio + \ _5 TobinQ + e_i$$

Where:

The first four explanatory variables are dummy variables defined as follows:

Category/Dummy Variable	X_1	X_2	X_3
Basic Materials	0	0	0
Oil & Gas	1	0	0
Financials	0	1	0
Technology	0	0	1

PB_Ratio stands for the market price per share to book price per share ratio to measure a company's assets structure, especially for intangible assets;

TobinQ represents the Tobin's Q ratio to measure a company's

"intellectual capital";

In the end, e_i is the error term.

In addition, this research will do regression analysis on both offer-to-open

return and first day's intraday return.

Equation 3.5

$$Roo = \beta_1 X_1 + {}_2X_2 + {}_3X_3 + {}_4PB\_Ratio + {}_5TobinQ + e_i$$

And

Equation 3.6

$$IR = \beta_1 X_1 + {}_2X_2 + {}_3X_3 + {}_4PB\_Ratio + {}_5TobinQ + e_i$$

3.2 Data Selection

Since the launch of London AIM on Jun 19, 1995, there have been a total of

1,114 stocks that listed on the alternative investment market up until Jun 2012.

A total of 891 stocks were UK companies and 223 were international

companies. Companies in the Materials and Oil & Gas sectors have more

physical assets and products. In contrast, companies in the Financials and

Technology sectors have more intangible assets and products. This research

will study the industry effects on the opening price performance of IPO of

common stocks. Therefore, this study will narrow the industry analysis horizon

into those four industries: Oil & Gas, Materials, Technology and Financials.

The scope of this research examines the common stock IPOs before August 01, 2012. By using the Bloomberg system. we find 251 common stocks listed on London exchange from FTSE AIM All Share Index

This research uses the offering price, first trading day opening price and closing price which are derived from the Bloomberg system to compute the offer-to-close return, the offer-to-open return and the first trading day intraday return. This paper also obtains the companies' Tobin's Q from the Bloomberg system. By Tobin's Q, this paper uses a one year periodic ratio for each company during the year when the company went on public. If the ratio is not available from the Bloomberg system at the company's IPO year, it is replaced by the ratio available closest to the company's IPO year. In addition, this research acquires the companies' price to book ratio from the Bloomberg system as well. By price to book ratio, the periodic ratio was derived from the same period horizon with that of Tobin's Q ratio. To differentiate companies from different industries, this paper introduces four dummy variables to represent companies from each industry respectively.

3.3 Expectation

In general, valuation uncertainty leads to IPOs mispricing. Companies with more intellectual capital and intangible assets possess greater uncertainty in valuation. Thus, it is not inconceivable to expect that companies with less

physical assets and products tend to have higher degree of IPO mispricing. In general, the Technology and Financials industries are more likely to obtain a greater proportion of intangible assets, coupled with a less understandable and predictable business model than those companies in the Oil & Gas and Materials industries. Thus, based on these assumptions, it is expected that, $_2$ and $_3$ are larger than $_1$. Meanwhile, the market price per share to book price per share ratio indicates a company's asset structure and the Tobin's Q ratio implies an indirect measurement of a corporation's intellectual capital. Therefore, we expect a positive $_4$ and a positive $_5$ if the hypothesis that greater uncertainty results in higher degree of underpricing holds.

Chapter 4

Result and Analysis

This chapter is going to summarize the outcome of my regression model. In addition, based on the result, I'm going to make some analysis.

4.1 Summary of Returns

First and foremost, I compute three different rates of return for all stocks. Offer-to-close return is computed from the new issues offer price and the first trading day closing price. Offer-to-open return is calculated from the first trading day opening price and closing price of new issues. Additionally, the intraday return is computed from the new issues opening price and closing price of the first day of trading.

Table 1 indicates mean returns and the estimates of the standard deviation of returns. Roc, Roo and IR are the offer-to-close return, the offer-to-open return and the first day's intraday return respectively. The table also shows that a maximum offer-to-close return can be as high as 39999 times of the initial investment. However, these offer-to-close return and offer-to-open return are incredibly too high. This may jeopardize the entire statistical analysis result.

Table 1

Variable	Obs	Mean	Std. Dev.	Min	Max
Roc	235	182.6352	2609.526	-.9333333	39999
Roo	235	57.38715	696.4853	-.9296666	10624
IR	246	.1376479	.9445766	-.4809783	13.33333

Therefore, I winsorize all the three returns at the 1% level of both tails to exclude the outliers in all those variables, producing a second summarization table.

Table2 presents returns and estimates of the standard deviation of returns as well. The mean offer-to-close return and offer-to-open return are still considerably high. The absolute value of each return is even greater than ten. The average first day's intraday return is about 8.69%, indicating profitable opportunities for the secondary market investors.

Table 2

Variable	Obs	Mean	Std. Dev.	Min	Max
Roc_W	235	12.42583	60.81007	-.644	483.5487
Roo_W	235	12.90546	68.18747	-.644	569.0563
IR_W	246	.0869496	.3735887	-.2911979	2.764706

4.2 Regression Analysis

To examine the industry effects on the opening price performance, I introduce intercept dummy variables in the regression models. This model use dummy variables to denote different industries that the companies belong to. To avoid dummy variable trap, the value $X_1 = 1$ defines the Oil & Gas sector; the value $X_2 = 1$ defines the Financials sector; the value $X_3 = 1$ defines the Technology sector. When all the dummy variables equal to zero, that defines the Materials sector.

If the number of individuals is small, an estimation of regression model with intercept dummy variables can be done by the least squares dummy variable estimator (Principles of Econometrics, p.544). Therefore, I apply this method to my regression analysis by using a statistical software, Stata.

Table 3 presents the regression outcomes for equation 3.4. The result shows that the r-square is as low as 1.43% indicating that we cannot explain the change of dependent variable by the changes in the independent variables. Although the positive coefficient of $_3$ is extraordinarily large, the p-value indicates that the coefficient is not significant at the 5% significance level. Similarly, the p-value for all the other coefficients present that the coefficients are not significant. The results from Table 4 and Table5 also present the same conclusion.

Table 3

Source	SS	df	MS			
Model	22818604.7	5	4563720.94			
Residual	1.5699e+09	208	7547441.93			
Total	1.5927e+09	213	7477401.54			

Number of obs = 214
F(5, 208) = 0.60
Prob > F = 0.6964
R-squared = 0.0143
Adj R-squared = -0.0094
Root MSE = 2747.3

Roc	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
d1	9.199786	522.0112	0.02	0.986	-1019.911	1038.311
d2	-49.90611	576.6511	-0.09	0.931	-1186.736	1086.924
d3	643.0134	488.2601	1.32	0.189	-319.5595	1605.586
mtobinsq	-61.38729	77.87783	-0.79	0.431	-214.9183	92.14378
mpb	5.697344	24.81822	0.23	0.819	-43.23016	54.62485
_cons	168.4602	398.4649	0.42	0.673	-617.0873	954.0077

Table 4

Source	SS	df	MS				Number of obs =	214
							F(5, 208) =	0.69
Model	1851536.76	5	370307.353				Prob > F =	0.6313
Residual	111585172	208	536467.173				R-squared =	0.0163
							Adj R-squared =	-0.0073
Total	113436709	213	532566.708				Root MSE =	732.44

Roo	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
d1	-4.027633	139.1719	-0.03	0.977	-278.3959	270.3406
d2	-16.0908	153.7393	-0.10	0.917	-319.1777	286.9961
d3	179.0948	130.1736	1.38	0.170	-77.53401	435.7235
mtobinsq	-17.9696	20.76278	-0.87	0.388	-58.90207	22.96287
mpb	1.768554	6.616714	0.27	0.790	-11.27586	14.81297
_cons	57.65016	106.2336	0.54	0.588	-151.7824	267.0827

Table 5

Source	SS	df	MS				Number of obs =	222
							F(5, 216) =	0.77
Model	3.79673359	5	.759346718				Prob > F =	0.5746
Residual	213.871829	216	.990147358				R-squared =	0.0174
							Adj R-squared =	-0.0053
Total	217.668563	221	.984925624				Root MSE =	.99506

IR	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
d1	-.205482	.1860065	-1.10	0.271	-.5721021	.1611381
d2	-.132362	.2037525	-0.65	0.517	-.5339598	.2692358
d3	-.0796275	.1754307	-0.45	0.650	-.4254027	.2661478
mtobinsq	.0257172	.0281135	0.91	0.361	-.0296946	.0811291
mpb	.0064035	.0089568	0.71	0.475	-.0112505	.0240575
_cons	.1395696	.1441563	0.97	0.334	-.1445636	.4237027

After that, I winsorize all the variables in the regression models at the 1% level of both tails to exclude the outliers in all the variables, generating a second set of summarization table.

After excluding the outliers in all the variables, Table 6, Table 7 and Table 8 exhibit similar results with earlier outcomes. However, in Table 6 and Table 7,

the p-value of the coefficient of variable Tobin's q represents that β_5 is

significantly negative. Table 8 indicates that none of the independent variables

are likely to have significant relationship with the dependent variable, which in

this case, is the first trading day intraday return. Namely, there is no

remarkable difference in trading opportunities among different industries for

the secondary market investors. The results from Table 6 and Table 7 reveal

an opposite conclusion with my previous expectation. In Chapter 3, it is

estimated that the β_5 tends to be positive. The statistical result implies that

stocks with the higher Tobin's Q ratio tend to possess lower offer-to-close

return and the offer-to-open return. In other words, corporations with greater

intellectual capital are likely to obtain a lower degree of initial return from IPO.

Namely, a low degree of underpricing means that the price of securities that

the investment banker resets to primary market investors is unexpectedly

high.

This interesting result may be explained by the aggressive risk-taking

phenomenon within recent investors. Those equities with high degree of

certain containing low returns cannot satisfy aggressive investors any more.

Primary market investors are aggressively willing to invest in companies with

higher potential return even the companies possess high uncertainty and less

predictable future. Consequently, companies with uncertainty are more

desired and underwriters are able to sell the new issues at higher offering

prices. Therefore, companies with higher Tobin's Q ratio tend to obtain lower

degree of underpricing of IPO. In this research, the low degree of underpricing

means both low offer-to-close return and offer-to-open return. Interestingly,

these results coincident with a recent Facebook IPO's case.

Table 6

```
Linear regression                                    Number of obs =      214
                                                     F(  5,   208) =     1.54
                                                     Prob > F       =  0.1801
                                                     R-squared      =  0.0310
                                                     Root MSE       =  63.367
```

Roc_W	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf. Interval]	
d1	-7.202039	7.722804	-0.93	0.352	-22.42704	8.022964
d2	.4588693	13.00962	0.04	0.972	-25.18874	26.10648
d3	11.73113	13.05462	0.90	0.370	-14.0052	37.46746
mtobinsq_W	-3.907601	1.833122	-2.13	0.034	-7.521481	-.2937207
mpb_W	.9802626	.7312019	1.34	0.182	-.4612542	2.421779
_cons	18.53402	9.511064	1.95	0.053	-.2164206	37.28446

Table 7

```
Linear regression                                    Number of obs =      214
                                                     F(  5,   208) =     1.47
                                                     Prob > F       =  0.2001
                                                     R-squared      =  0.0278
                                                     Root MSE       =  71.191
```

Roo_W	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf. Interval]	
d1	-8.004988	9.016088	-0.89	0.376	-25.77962	9.76964
d2	-3.914289	12.67201	-0.31	0.758	-28.89632	21.06775
d3	13.59036	15.32572	0.89	0.376	-16.6233	43.80402
mtobinsq_W	-4.014489	1.801753	-2.23	0.027	-7.566527	-.4624512
mpb_W	.8563583	.6047321	1.42	0.158	-.3358314	2.048548
_cons	20.31936	11.10337	1.83	0.069	-1.570209	42.20892

Table 8

```
Linear regression                                    Number of obs =      222
                                                     F(  5,   216) =     1.09
                                                     Prob > F      =   0.3692
                                                     R-squared     =   0.0457
                                                     Root MSE      =  .38628
```

IR_W	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf. Interval]	
d1	-.0362959	.052597	-0.69	0.491	-.139965	.0673732
d2	.0285392	.0689012	0.41	0.679	-.1072655	.1643439
d3	.0642381	.0790708	0.81	0.417	-.0916111	.2200872
mtobinsq_W	.0176433	.0177066	1.00	0.320	-.0172565	.0525432
mpb_W	.0059605	.0037945	1.57	0.118	-.0015185	.0134395
_cons	-.0000795	.0680969	-0.00	0.999	-.1342989	.1341399

Chapter 5

Conclusions and Recommendations

This paper studies the industry effects on the opening performance of IPOs investigating common stocks IPOs before August 01, 2012 in different sectors. Based on the research from Bloomberg system, there are 251 common stocks listed on London exchange from FTSE AIM ALL Share index in Oil &Gas, Materials, Technology and Financials sector. Subsequently, I collect data and use Stata software to run the regression analysis.

In this paper, after analyzing the outcomes, I demonstrate that, except the Tobin's Q ratio, the independent variables included in my regression models fail to have a significant relationship with dependent variables introduced in my regression models. In addition, there is no significant difference in trading opportunities among different industries for the secondary market investors. More importantly, the relationship between Tobin's Q ratio and offer-to-close return, as well as, offer-to-open return is opposite to a general assumption. This may be explained by the recent aggressive risk-taking phenomenon within the financial market. Investors are willing to bear high uncertainty in attempt to enjoy high growth potential. Therefore, underwriters are able to reset the securities at a high offer price. Consequently, stocks with high Tobin's Q ratio tend to have low offer-to-close return and offer-to-open return.

Nevertheless, there may be some limitations on my research. First and

foremost, I only include stocks from four different sectors from London AIM.

There may be some different outcomes if I increase the sector horizon of four

industries into the sector horizon of all the industries. Secondly, I only analyze

industry effects on mispricing of IPOs, ignoring other possible effects on new

issues underpricing. The independent variables I introduce in the regression

model are limited. Therefore, the dependent variables are not well explained

by the independent variables. The other factor can possibly exert influence on

the IPO underpricing. Thirdly, some data of the independent variables are not

available before the IPO date. Supposing that they were available, I could get

more clear results from the regression analysis. Fourthly, all the data are from

the past seventeen years. Significantly then, the research represents only

what happened in history, which may not be a good indicator for the future.

In conclusion, even with the limited data available, my research results

suggest that for investors in the secondary market, there is no significant

difference in trading opportunities among different industries. In addition,

companies possessing higher Tobin's Q ratio tend to obtain low offer-to-close

returns and low offer-to-open returns. This may be explained by the

aggressive risk-taking phenomenon. Companies with higher growth potential

are more desired to recent investors. Consequently, underwriters are able to

sell the new issues at higher offer prices. Companies with a greater proportion

of intellectual capital tend to have a lower degree of underpricing of IPOs.

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