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Financial Internet Quarterly „e-Finanse" 2019, vol. 15 / no. 2, p. 87-94

DOI: 10.2478/fiqf-2019-0014

eFinanse
financial internet quarterly

UNDERPRICING ON THE SELECTED EUROPEAN ALTERNATIVE INVESTMENT MARKETS

Dominika Hadro[1], Marek Pauka[2]

Abstract

The phenomenon of underpricing is the subject of many studies on the stock markets, but there is still a research gap referring to the European Alternative Investment Markets, markets for small and medium companies. They are a source of capital and such an anomaly as underpricing could be a barrier for development of young companies. It means so-called money left on the table, which constrain the effectiveness of the market. The purpose of the paper is to analyze whether lower entry regulations on the European Alternative Investment Markets are correlated with the higher value of underpricing as the demonstration of higher investing risk. We calculate raw initial returns with different equilibrium prices for three European Alternative Investment Markets and confirm that NewConnect, the market with the lighter legal environment, has the highest initial returns for the first day of trading, however after one month returns turn out to be significantly lower than on the other two markets and differs for aftermarket rate of returns. Our results suggest that there is a premium for higher risk on NewConnect, but only after one month rate of returns turn out to be negative, which can suggest that market participants verify very quickly the quality of issuers.

JEL classification: G12, G14
Keywords: underpricing, alternative investment market, IPO

Received: 23.07.2018 Accepted: 30.07.2019

[1] Wroclaw University of Economics, Faculty of Economic Sciences, e-mail: dominika.hadro@ue.wroc.pl, OR-CID: https://orcid.org/0000-0001-7904-7685.
[2] Wroclaw University of Economics, Faculty of Economic Sciences, Department of Finance, e-mail: marek.pauka@ue.wroc.pl, OR-CID: https://orcid.org/0000-0001-8148-4438.

Introduction

The behaviour of stock prices in relation to the first day of trading has been widely studied since the 1960s. Rock (1986) was the first to explain why the offering price is discounted when a company goes public. Rock's well-known model (1986) assumes that investors divide into the informed and uninformed. To attract uninformed investors, issuers underpriced stock value to guarantee the success of the initial public offering (IPO) process. One of the key assumptions of the theory and Rock's followers is that the stocks that are sold to investors in the process of IPO are intentionally undervalued to give investors the opportunity of positive returns. One of the reasons often indicated as an explanation for the underpricing phenomenon is the asymmetry of information. A particularly high level of asymmetry of information between market participants can be observed in European markets dedicated to small and medium-sized enterprises. At the same time, the problem of price behaviour in the first period after the debut is relatively rare in research in these markets. Therefore, we conduct our research on the European alternative investment markets (AIMs), which operate under different regulations. AIMs operated by European Stock Exchanges have recently established their significance as an option to raise capital for companies that do not meet the criteria to enter the regulated market. In the Markets in Financial Instruments Directive (MiFID II), the opinion is that: *It is desirable to facilitate access to capital for smaller and medium-sized enterprises (SMEs) and to facilitate the further development of specialist markets that aim to cater for the needs of smaller and medium-sized issuers* (subparagraph (132), DIRECTIVE 2014/65/EU). Under the rule of MiFID II, the SME growth market (multilateral trading facility, MTF) mainly differs from the regulated market in the legal environment. MTFs are subject to effective rules, systems and procedures, where regulated markets operate under the public law of the home Member State (DIRECTIVE 2014/65/EU). This regulation allows SME growth market operators to design requirements that are less restrictive than acts for regulated markets and are specially designed to meet the needs of particular capital market participants. Consequently, AIMs' regulations differ substantially among Member States, which not only influences their level of development but also the quality of issuers and other market participants.

The first European SME growth market is London AIM, launched by the London Stock Exchange in 1995 and operating as an MTF since 2004. There are two main features that distinguish AIM (*London AIM, but then followed by every European SME growth market*) from the regulated market: the reduction of increasing capital cost and the appointment of a Nominated Advisor (NOMAD), which are advisors which accompany the issuer before and after the IPO process (Gerakos, Lang & Maffett 2013). As Mallin and Ow-Yong (2010) point out, *The NOMAD's role is a core concept of AIM*.

The role of a NOMAD is first to evaluate whether the company is suitable to enter AIM. It then prepares companies and documents for admission and acts as an advisor, especially to fulfil the disclosure requirements and corporate governance issues in the aftermarket. The key point here is, *that the NOMAD is in a position of trust from a number of viewpoints, that is, of the regulatory authorities, the AIM company and its shareholders/ stakeholders*. *If a NOMAD is not performing its role as a trusted advisor as envisaged then there are ethical implications, and indeed wider financial and reputational implications* (Mallin & Ow-Yong, 2010). The concept of NOMAD and its role is present on every European AIM under different names[3]. In Poland, the name Authorised Advisor (AD) is used.

We focus on the three European alternative investment markets which differ in terms of regulations. The purpose of the paper is to analyze whether lower entry regulations on the European alternative investment markets are correlated with the higher value of underpricing as the demonstration of higher investing risk. We compare raw initial returns after debut on those markets for the first day of trading and after one month.

Literature review

The phenomenon of abnormal positive stock returns (underpricing) in relation to Initial Public Offering of issuers that are listed on regulated markets has already been widely studied.

The aim of the article is not to analyse all theories that address the problem of explaining the causes of this phenomenon. We can indicate among others factors

[3] For instance: on Euronext Growth (Euronext) is a Listing Sponsor, on Mercado Alternativo Bursatil (BME) is a Registered Advisor, on First North (Nasdaq) is a Certified Advisor, on NewConnect (WSE) is an Authorised Advisor.

related to book building (Spindt, 1989; Benvenisite & Wilhelm, 1990) or the agency cost (Loughran & Ritter, 2004), as well as legal regulations (Ibbotson, 1975; Lowry & Shu, 2002). With the increasing popularity of behavioral finance, some authors also sought to explain the phenomenon of price growth shortly after the debut (Ljungqvist, Nanda & Singh, 2006; Purnanandam & Swaminathan, 2004). However, the most common theory to explain IPO underpricing is the asymmetric information and negative selection theory, the so-called Akerlof's lemon problem (Akerlof, 1970). Theoretical models created by Ritter (1984), Beaty and Ritter (1986) and Rock (1986) assume the existence of two groups of investors: those who have superior information about the true value of shares – better informed investors, and all of the other investors – uninformed investors (Rock, 1986). The higher uncertainty about the real value of new shares, the bigger the advantage of the better-informed investors, who only bid for attractively priced IPOs (winners' curse). To ensure the fulfilment of IPO allocation, issuers have to offer a high level of discount to encourage uninformed investors. This may be followed by uninformed investors' negative selection and the free-riding problem, as they do not take any action to gain more information about the offered securities (Ritter, 1984; Beatty & Ritter, 1986; Rock, 1986). Using Rock's model (Rock, 1986), Beatty and Ritter (1986) prove the positive relations between ex-ante uncertainty about the value of an issue and expected underpricing. Ex-ante uncertainty appears, when an investor submitting a purchase order cannot be certain about an offering's value once it starts publicly trading (Beatty & Ritter, 1986, p. 213).

A substantial number of academic studies empirically proved the relation of Beatty and Ritter 1986, however in the majority of cases the analyses were conducted on the single market, where the ex-ante uncertainty was associated with companies' (issuers') and issue's specific characteristics, like: underwriter reputation (Habib & Ljungqvist, 2001; Loughran & Ritter, 2004), standard deviation of after-market returns (Corwin & Harris, 2001) and sales (Loughran & Ritter, 2004).

Empirical research on the regulated markets confirms the existence of underpricing all around the world. For example, in the updated article (on the March 2018) Ritter and Rydqvist (1999) compare results from research articles of equally weighted average initial returns for 54 countries with different time period and sample size. Even if there are substantial differences in the value of average initial return all over the world, every study confirms the existence of underpricing at the time of IPO (Ritter & Rydqvist, 1999).

The pan-European studies by Gajewski and Gresse (2006) conducted on the sample of 2,104 European domestic companies that went public between 1995 and 2004 in 15 different countries show that the average initial underpricing amounts to 22% over the sample and is observed at various levels in each of the 15 countries of the sample, with the highest for Greece (46.52%) and the lowest for Turkey (4.72%) (Gajewski & Gresse, 2006).

Also, analysis on the European AIMs stays in line with the findings from regulated markets, however due to data availability problems (many companies delist and often their information is no longer present in databases) and low share liquidity, only selected markets have been studied. The biggest number of studies has been conducted on London AIM, where Hoque (2014) and Hoque and Lasfer (2015) find that between 1999 and 2006 the lowest annual average underpricing was 7.5% and the highest 30.6%, with the average of 22.5% for the given period (Hoque, 2014, p. 89; Hoque & Lasfer, 2015, p. 184). In the 4 European markets study of Vismara et al. (2012) for the period 1995 – 2005 the average initial rate of return was 19.5%, with the highest value of 32.7% on Deutsche Borse and the lowest of 11.3% on the London Stock Exchange (Vismara et al., 2012).

Close to our approach is the research of Engelen and van Essen (2010), where they associate ex-ante uncertainty with a country's legal framework. Their first argument says that weaker legal systems can influence the ex-ante uncertainty about the firm value, for example by discouraging investment in research and development as the quality of intellectual property is low. While the second one presents that poor quality of institutions and regulations can increase ex-ante uncertainty as the risk of the expropriation by managers and controlling shareholders is very high. On the sample of IPOs from 21 countries they prove that about 10% of the variation in level of underpricing is explained by the country – specific characteristics regarding institutional factors. In general, in countries with more developed legal systems on average the initial rates of return are lower (Engelen & van Essen, 2010).

We investigate three European Alternative Investment Markets: Alternext (Brussels, Paris), Marche Libre (Brussels, Paris) and NewConnect (Warsaw). As on the Polish AIM

during the research period the highest number of issuers went public with the lowest value of capital raised, so our research question is whether lower entry regulations are correlated with the higher value of underpricing as the demonstration of higher investing risk.

In NewConnect, admission requirements are modeled on the London AIM and, like in the AIM, they are very low compared to the Alternext (Asygnier, 2013). There is no possibility to list the shares of companies with no history in the Alternext market. The minimum age of companies is 2 years (1 year in Marche Libre). The minimum capitalization is EUR 4.5 million and the minimum free float is EUR 2.5 million (EUR 1 mln). The initial and annual fee is many times higher than in Poland, which also leads to restrictions in market access, as it significantly affects the cost of using capital. There were not large differences between Alternext and Marche Libre (Hadro & Pauka 2018, pp. 35-43), therefore they were considered similar and the companies from both markets were included in one sample.

Research methods

Our sample consists of companies that went public on the Alternext, Marche Libre and NewConnect between year 2005 and 2012. We choose the time period due to the large number of IPOs (Table 1). The end date results from the fact that in the 2013 the Board of Warsaw Stock Exchange implemented a reform tightening the entry rules for NewConnect.

For measurement of the first-day performance (short-run) we calculate as the initial raw return by the difference between the post-listing equilibrium price (*EP*) and the final offering price – issue/offering price (*OP*) divided by the offering price: (Gajewski & Gresse, 2006, p. 27), using the following formula for each security:

$$U = \frac{EP - OP}{OP}, \quad (1)$$

where U = short term rate of return,

EP = post-listing equilibrium price,

OP = issue/offering price.

As equilibrium price we choose first traded price and first day closing price. We calculate also raw returns for 1st month's end price in relation to issue price and to first day closing price. Then we calculate mean median and standard deviation for Alternext (AN) and Marche Libre (ML) jointly and NewConnect (NC) separately as to have two comparable subsamples. Finally, to answer the research question, we use t – Test and t – Welch test for mean values of each raw return for the two subsamples.

In many studies the rate of return is adjusted by the value of the index (e.g. Jewartowski & Lizińska, 2012). In our research, we adopted, like Gemzik and Perz (2013) or Perz (2017), the simple rate because it is more reliable and comparable due to the problem of determining the exact end dates of the subscription. In particular on the Polish market, there is a problem with defining precisely one offer price because there are usually a few private issues at different prices placed on the market before entering NewConnect, called the reverse cascade phenomenon (Hadro & Pauka, 2018).

Results

Generally, our results confirm previous findings from

Table 1: Number of companies and value of capital raised

Year	Alternext + Marche Libre no. of new issuers	Alternext + Marche Libre capital raised (thousand Euro)	NewConnect no. of new issuers	NewConnect capital raised (thousand Euro)
2005	44	101 596		
2006	88	489 029		
2007	95	481 390	24	40 600
2008	54	52 158	61	42 303
2009	33	10 993	26	12 426
2010	27	1 787	86	36 866
2011	49	96 186	172	124 610
2012	26	1 516 845	89	50 327

Source: Own elaboration

Table 2: Raw initial returns (underpricing) for Alternext and Marche Libre

Year	1st traded price/ Issue price	1st day close price/ Issue price	1st month's end price/ Issue price	1 day close price/ 1st traded price	1st month's end price/ close price
2005	7.6%	1.6%	25.0%	-4.8%	23.9%
2006	6.6%	7.3%	11.3%	0.7%	4.6%
2007	10.6%	27.5%	41.1%	-1.6%	8.7%
2008	9.5%	8.1%	18.5%	-1.2%	8.8%
2009	0.8%	4.4%	43.3%	3.6%	38.3%
2010	3.0%	5.6%	5.9%	2.5%	0.4%
2011	5.6%	7.0%	2.7%	1.7%	-3.9%
2012	3.7%	0.5%	9.0%	-2.9%	7.8%

Source: Own elaboration

Table 3: Raw initial returns (underpricing) for NewConnect

Year	1st traded price/ Issue price	1st day close price/ Issue price	1st moth's end price/ Issue price	1 day close price/ 1st traded price	1st month's end price/ close price
2007	175.0%	134.9%	155.0%	1.2%	9.0%
2008	87.7%	45.0%	23.6%	-6.0%	-9.5%
2009	16.8%	23.8%	6.9%	22.3%	-7.2%
2010	56.1%	58.2%	55.5%	0.2%	8.9%
2011	35.8%	31.8%	31.0%	-3.3%	-6.9%
2012	-51.4%	-51.4%	-57.1%	0.0%	-11.8%

Source: Own elaboration

Table 4: Descriptive statistics of underpricing

	1st traded price/ Issue price	1st day close price/ Issue price	1st moth's end price/ Issue price	1 day close price/ 1st traded price	1st month's end price/ close price
Median [%]					
AN+ML	2.3	2.7	4.7	0.0	0.0
AN+ML (2007-12)	0.6	2.9	5.6	0.0	0.0
NC	20.0	8.5	1.7	-3.6	-9.9
Mean					
AN+ML	7.0	11.6	22.2	-0.1	9.1
AN+ML (2007-12)	6.8	13.5	24.9	0.1	9.3
NC	54.7	45.0	41.0	-1.3	-2.7
St. dev.					
AN+ML	0.129	0.861	1.139	0.095	0.478
AN+ML (2007-12)	0.128	0.994	1.311	0.105	0.537
NC	1.799	1.442	1.876	0.315	0.596
No. of observations					
AN+ML	286	290	290	288	292
AN+ML (2007-12)	216	216	216	216	216
NC	306	306	306	306	306

Source: Own elaboration

Table 5: T - test of underpricing for mean values on the NC and AN+ML

	1st traded price/ Issue price	1st day close price/ Issue price	1st moth's end price/ Issue price	1 day close price/ 1st traded price	1st month's end price/ close price
T - Test					
u	4.6260	3.4502	1.4880	0.6356	2.6858
p-value	0.0000	0.0006	0.1367	0.5250	0.0072
T - Welch					
t	4.6260	3.4502	1.4880	0.6356	2.6858
p-value	0.0000	0.0006	0.1373	0.5254	0.0074

Source: Own elaboration

regulated and alternative investment markets. For the Alternext and Marche Libre the positive initial returns (underpricing) appear in each year during the whole analyzed period (Table 2). In the case of NewConnect, in year 2012 for each calculated return we receive negative values (Table 3).

From descriptive statistics (Table 4) it is clear, that NewConnect is characterized by very high standard deviation for each rate of return. Mean and median of aftermarket rate of returns for Polish market are higher in relation to issue price, but in relation to 1st traded price they take negative values. A similar pattern can be observed for the one month period, where mean and median of the rate of returns calculated with issue price have positive values, while with 1st day closing price for NewConnect they turn into negative values. A negative sign may indicate that investors were interested in selling shares to a greater extent than buying them. In 2012, it can be noted that prices in the first month show a downward trend.

Positive values for one-day rates of return indicate that underpricing occurs here. However, price behavior on the first day from market opening to closure shows a downward trend for the Polish market. Similarly, the monthly rate based on the price at the end of the first day in the NC market shows a negative value, confirming that in the secondary market we can observe a downward trend in the first month. This phenomenon can be explained by the willingness to make profits on an illiquid market by investors who buy shares on the primary market.

From t – Test and t – Welch test (Table 5) we can notice that significant differences in mean values for initial rate of return between the two subsamples are for first day prices in relation to issue price and for one month in relation to closing price from the first day of trading.

Table 5 presents the results of testing hypotheses for a significant difference between the averages determined for individual prices.

It can be seen that for the rate of return from the first day counted between the Polish and two foreign markets, it shows a significant difference in the rate of return between the first open price on the secondary market and the offer price and between the closing price at the end of the first day and the offer price. There was no significant difference in other rates of return.

Conclusion

We analyze the raw initial rate of returns with different equilibrium price and time periods for three European Alternative Investment Markets. We confirm our expectations that for the first day of trading the underpricing on the market with lower regulation entry (NewConnect) are significantly higher, which can suggest that investors consume abnormal returns due to high investment risk. However, just after one-month rate of return on NewConnect turns out to be negative, which shows that the market very quickly verifies the quality of issuers.

Acknowledgments

This project was financed with fund support of National Science Center based on decision number DEC-2011/01/D/HS4/05926.

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