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SMEs and Junior Stock Markets: A Comparison between European and Japanese Markets

Caroline GRANIER[♣], Valérie REVEST[♦], Alessandro SAPIO[♠]

Abstract

The financing of SMEs has been a central concern for industrialized countries over the last couple of decades. Stock markets dedicated to SMEs, called junior markets, are increasingly seen as an alternative to bank financing. This article examines the functions of the junior markets that are located in continental Europe and in Japan. Based on the analytical framework developed by Lazonick and O'Sullivan (2004) and Lazonick (2007), we evaluate the functions performed by junior markets through the listing criteria and ongoing requirements and through the collection of market statistics. Market models appear to be heterogeneous: continental European markets lie between the UK Alternative Investment Market (AIM) and the oldest Japanese junior markets. According to their organization, they may stimulate more growth or exit. This contribution can play a useful role in informing policy makers about junior markets.

Keywords: junior markets, high-growth SMEs, functions, Europe, Japan

JEL Classification: G10 General Financial Markets, G24 Investment Banking, Venture Capital, Brokerage, Ratings and Ratings Agencies, 030 Innovation Research and Development Technological Change Intellectual Property Rights

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SMEs face minimal opportunities to receive loans due to information asymmetries and a lack of collateral, in particular within high-tech sectors and in the wake of the 2007-2008 financial crisis (see *e.g.* Filippetti and Archibugi, 2010; North *et al.*, 2013; Colombo et al., 2016). In order to overcome this financial gap, several large international bodies like the European Commission have promoted the development of capital markets appropriate for SMEs, the so-called junior stock markets (or second-tier stock markets) (Posner, 2005; Harwood and Konidaris, 2015; IOSCO 2015; Eberhart and Eesley, 2018). More recently, alternative financial channels such as crowdfunding (Assadi, 2018) has also been developing.

The junior stock markets are characterized by simplified listing processes and customized information standards in comparison with the rules in force on the main markets. The two most archetypal of markets regarding regulatory architectures and the most successful ones are the NASDAQ (National Association of Securities Dealers Automated Quotations) in the United States and the AIM (Alternative Investment Market) in the United Kingdom. They were initially expected to act as screening devices for promising companies that would eventually graduate to the main segment (Posner, 2005; Vismara *et al.*, 2012). They were also thought of as providers of exit opportunities for venture capitalists, *i.e.* a way to divest from risky and innovative projects[1].

Some puzzling facts challenge the performance of these functions. Doukas and Hoque (2016) show that some firms listed on the AIM could have been listed on the main segment in London but deliberately chose to be listed on the junior segment for strategic purposes. Furthermore, Vismara *et al.* (2012) note that there are few transfers from the AIM to the main segment of the London Stock Exchange. According to Revest and Sapio (2013), the AIM supports growth in firm employees but not in labor productivity. By means of a comparison between the characteristics of firms listed on AIM and Alternext, Lagneau-Ymonet and Riva (2014) conclude that the primary purpose of AIM was not that of financing SMEs. Carpenter et al. (2003), Lazonick and O'Sullivan (2004) and Lazonick (2009) show the various functions fulfilled by the NASDAQ during the boom of the New Economy, including the use of stocks as a currency in M&A and as a way to remunerate employees. In addition, little is known about the role played by junior markets in other countries. Indeed, while the two archetypes have been replicated in numerous countries, few studies offer insights into other junior markets (except Vismara *et al.*, 2012; Lagneau *et al.*, 2014, Nielsson, 2013, whereas Georgen *et al.*, 2002 focused on the now defunct "new markets" in continental Europe). Studying markets operating in other countries, which adopted different market organisations, could provide more and better information about the functions of junior markets.

We thus raise the following questions: How do companies use junior stock markets? What are the functions performed by junior stock markets for their listed companies, above and beyond providing cash and creating exit opportunities? Do the functions differ across markets characterised by different architectures?

We rely on the analytical framework proposed by Lazonick and O'Sullivan (2004) and Lazonick (2007), dealing with the following functions of stock markets: creation, control, combination, cash. In order to achieve our goal, we carry out a comparison of the most recent junior stock markets located in several countries: AIM, Alternext Paris (created in 2005 and called Euronext Growth since 2017), OMX First North Stockholm (2006), AIM Italia (2009), Market of the High Growth and Emerging Stocks (Mothers, 1999)/Tokyo Pro Market (TPM, 2009) in Japan. We also consider JASDAQ (Japanese Association of Securities Dealers Automated Quotations Index) due to its similarities with Mothers in terms of structure and goals.

[1] The NASDAQ remains the most famous stock market for high-tech and innovative companies.

The remaining part of the paper is structured as follows. First, we deal with the heterogeneity of the market organization identified by the literature on junior markets. Secondly, we describe the analytical framework of Lazonick and O'Sullivan (2004) and Lazonick (2007). Thirdly, we consider formal rules issued by the market operator of each junior market to encourage the listing of SMEs. Rules are collected on the stock exchanges' websites. In the fourth section, we use descriptive statistics to assess the main functions performed by the junior markets and to reveal how companies "use" the junior stock markets. We gathered data from the stock exchanges' official website and from Eikon, a Thomson Reuters database. The period under scrutiny is 2013-2017. The last section is dedicated to a discussion and concludes.

HETEROGENEITY IN THE ORGANIZATION OF JUNIOR MARKETS

The main characteristics of junior markets are summarized in their organization – or architecture –, defined here as the set of formal rules issued by the market operator that govern exchanges on a particular market. Formal rules include the listing requirements, the roles of financial intermediaries and the level of information disclosure before and after admission. Relying on the concept of "organization of markets" enables us to analyze the different modes of exchanges characterizing a market, following a Polanyian approach[2].
According to Posner (2005), the first markets introduced in Europe in the late 1970s ("*Mercato Ristretto*" in Italy, "*Compartiment Spécial*" in France) were characterized as having low listing requirements and low information standards, consistent with their task of screening promising issuers in order to feed them onto the official list. They failed after the 1987 crash and were replaced by the Euro New Markets (EuroNMs) alliance (which included the *Nieuwe Markt* in Amsterdam, Euro.NM Brussels, *Neuer Markt* in Frankfurt, *Nuovo Mercato* in Milan, *Nouveau Marché* in Paris) during the 1990s. Such markets were characterized by stricter disclosure measures in comparison with the main segments, while requiring lower listing requirements in terms of age, size and minimum profitability (Goergen *et al.*, 2003; Posner, 2005). Modeled on the NASDAQ created in 1971 and thought of as providers of exit opportunities for venture capitalists, they explicitly targeted companies with high growth potential and among them innovative companies (Bottazzi and DaRin, 2002). After the dot-com bubble, all these continental European junior markets were closed. In Japan, the Over-The-Counter Market was renamed JASDAQ in 1998 and Mothers was created in 1999 to target start-ups companies. According to Vismara *et al.* (2012), the current model in Europe is devoted to young companies on the supply side and to qualified institutional buyers on the demand side. Minimal regulatory requirements define these markets. The approval of a prospectus by a national listing authority is not required when firms decide to be listed without public offer, *i.e.* in the case of private placements[3]. Private placements may be viewed as an extension of the venture capital activity, since the equity shares move from the hands of the venture capitalist to the hands of "professional" investors. While this model was initially associated with the AIM, it also characterizes the European junior markets taking the "exchange-regulated" status created by the 2004 MiFID (Markets in Financial Instruments Directive).

The opposition between the AIM and the NASDAQ can be specified around the differences between rules-based and principles-based regulatory approaches (Burgemeestre *et al.*, 2009).

[2] According to Harvey and Metcalfe (2010, p. 83) : "There are many forms of market organization, differing fundamentally in terms and the presence of functioning of 'market traders' and other intermediaries".
[3] This process was implemented by the European Directive 2003/71/EC ("Directive Prospectus").

In a rules-based regulatory system, the content of regulation is made up of specific, concrete and particular rules defined *ex-ante*, in other words, before adoption and implementation. In a principles-based regulatory system, on the other hand, the weights for pro- and con-reasons are assigned by the regulator or by a gatekeeper on a case-by-case basis. Therefore, participants in this regulative process hold discretionary power[4]. Rousseau (2007) applied the rules-based *vs* principles-based taxonomy to junior stock markets, with reference to the admission, overseeing, and disclosure processes. In markets regulated through a rules-based approach, listing requirements are objectively defined and listed companies are obliged to comply with formal rules. Conversely, in markets aligned with the principles-based approach, assessing the suitability of a company is outsourced to specialized financial intermediaries, who hold discretionary power to perform their assessment and stake their reputation (Espenlaub *et al.*, 2012). In line with this taxonomy, the AIM model relies on such "trusted intermediaries", which are referred to as Nominated Advisors (Nomads). Consequently, the AIM falls into the principles-based camp, while the NASDAQ falls into the rules-based camp. This opposition is associated to the literature dealing with regulatory approaches on stock exchanges. According to the bonding hypothesis, companies that willingly submit to high regulatory standards signal a higher level of quality to their investors (Coffee, 1999). For others, smaller publicly-held companies feel the presence of a regulatory burden on the main market and prefer either to go public on moderately regulated markets, such as the AIM (Piotroski and Srinivasan, 2008), or to go private (Carney, 2005).

THE ANALYTICAL FRAMEWORK

In order to examine the functions performed by the junior stock markets in Europe and Japan, we rely on the analytical framework based on the examination of the stock markets' functions in the United States, proposed by Lazonick and O'Sullivan (2004) and Lazonick (2007). They have investigated the change in the role of stock markets and its impacts on the real economy and on innovation. They have developed an analytical framework that allows to take a comprehensive view of the multiple roles played by stock markets, beyond the "standard" argument that the stock markets exist because they allow firms to raise money. While they answer to two main questions –how and why companies use stock exchange, we focus on the first step of the framework, *i.e.* the way companies use stock markets.

The authors have outlined five distinct and interrelated functions: creation, control, combination, compensation, and cash. The creation function refers to the ability of the stock market to encourage the flow of financial resources into new firm formation by providing a promise of liquidity at a later point in time. By offering a potential exit for initial investors, including venture capitalists where present, the stock market (and more especially the listing) may induce support to new firm creation and growth. In addition, liquid markets create incentives for long-run investments because of the ease of selling shares. The control function refers to the fact that, by impacting on the concentration or fragmentation of shareholding, the stock market influences the relationship between corporate owners and managers. More specifically it partly determines who holds strategic control over corporate resources allocation between owners (shareholder control) and managers (management control). The combination function defines corporate stock as currency in the transfer of strategic firm control (for example, in mergers and acquisitions). The compensation function refers to the use of corporate stock as remuneration for employees and managers. Finally, the stock market broadens the array of financial sources available - either for productive investments or for

[4] Rules-based regulation thus prescribes how business should be conducted, whereas principles-based regulation leaves companies free to decide how to align their conduct with the policy goals.

distributing cash to shareholders (dividends, stock repurchases) - to the listed companies at the time of IPO or later in secondary issues (SEOs), because of the liquidity it provides. This function is called the cash function.
We then study the functions performed by the junior markets[5] relying both on junior markets' rules and on statistics.

PRELIMINARY RESULTS REGARDING THE JUNIOR MARKETs ORGANIZATION

By definition, the creation function is the "*raison d'être*" of junior markets. Indeed, by lightening the admission and listing rules, junior markets allow, companies that could not access the main list, to go public. We provide a comparison of rules between European markets, that replicates the AIM, and Japanese markets, characterized by the coexistence of two market organizations. We rely on information disseminated by stock exchanges : the so-called Listing Rules.
In replicating the AIM in other countries, the rules were adapted to the local institutional contexts (Appendix A). In continental European markets, there is a minimum free float and/or a minimum number of shareholders required for admission, *i.e.*, criteria on liquidity. Firms also must meet a two years ongoing business requirement. However, like AIM, AIM Italia and Alternext enable firms with less than 2 years ongoing business to be listed through a lock-in agreement[6]. The small number of formal criteria is compensated, in theory, by the presence of particular sponsors approved by the financial market authority (Appendix B): the Nominated Advisers or Nomads on the AIM, the listing sponsor on Alternext etc. The basic function of sponsors on the junior markets is to support SMEs in their efforts to access public equity markets because SMES rarely experience with the formal and informal constraints and rules that govern the functioning of stock exchanges. The sponsors must assess whether companies seeking admission are suitable for listing, and later provide assistance in order to ensure that these same companies respect their continuing obligations. They assist firms while drafting the information document or admission prospectus. The role of the sponsor is particularly important in the case of private placements that do not require the approval of the stock exchange. The sponsor thus acts as gatekeeper, advisor and, ultimately, regulator of AIM-listed companies (Mendoza, 2008). In addition, companies looking for a quotation on European junior markets are not required to adopt specific corporate governance structures, such as the composition of the board of directors or the remuneration of managers, like those companies listed on the main markets (Appendix A). When the stock exchanges authorize private placements for admission, they target professional investors who, because of their experience and knowledge, do not need the same level of protection as retail shareholders. But firms may be encouraged by their sponsor to respect the common governance practices.

Contrary to the other junior markets under scrutiny, the Japanese markets, the JASDAQ and Mothers, are characterized by highly centralized power held in the hands of the market operator, *i.e.*, the Japan Stock Exchange. They are closer to the NASDAQ in terms of market

[5] We leave the compensation function aside because we do not have the data to illustrate it. We do not study Germany because of the lack of data available for STAR, the German junior market, on the Deutsche Börse's website. Our prime objective is not to demonstrate how the stock markets are highly financialized, as Lazonick (2017) does, we use the functions' definition to increase our understanding of the roles (real and potential) achieved by the junior markets. Thus, we do not use the same data and statistics as Lazonick (2007), whose objective was to illustrate the extent to which major US financial markets have been characterized by "value" extraction during the last decades.
[6] This contract prohibits insiders from selling any shares for a maximum period of one year.

organization. No dedicated intermediaries are present on these markets; as is the case with the main market listing, an underwriter should accompany the firm in the process of an IPO. The implementation of a large number of formal listing requirements to scrutinize the growth potential of companies replaces the role of the intermediary and only public offerings with approved prospectuses are allowed. Consequently, the listing process is longer and more costly than on other junior markets. Japanese stock markets are also characterized by strict requirements on information disclosure and corporate governance practices. The recent TPM replicates the UK AIM and thus possesses similar properties as the AIM, *i.e.* in regards to the absence of quantitative criteria and nomination of a sponsor. This market, targeting "specified or professional investors" and "certain" non-residents, constitutes a way to introduce private placements onto the Japanese stock exchange and, as such, distinguishes it from the other junior markets in Japan.

After admission, ongoing disclosure requirements are also lighter on junior markets than on the main markets. For example, the European markets demand yearly and half-yearly reports while quarterly report is the rule on main markets. Again JASDAQ and Mothers differ from the European markets by requiring quarterly reports. Besides firms do not have to comply with the corporate governance codes in force for companies listed on the main segments (Appendix C). Rather, corporate governance standards for SMEs, called "Quoted Companies Alliance" (QCA) guidelines in UK or Middle Next Code in France, have been drawn from codes in force on the main segment but are less strict than them (Mallin and Ow-Yong, 2010). It is worth noting that since 2018, the "comply or explain principle" has been written into the AIM rules, revealing a path towards stricter requirements. There is no such code in the other countries under scrutiny.

To summarize, we reveal a continuum of markets between the AIM and Japanese markets regarding requirements to be listed and the level of regulation outsourcing. At first sight, the Japanese markets seem to make less easy both the companies' access and their exit than the European markets.

EMPIRICAL RESULTS ON FUNCTIONS

Methodology

We examine the functions performed by the junior markets through the collection of statistics on the exchanges' websites as well as from Eikon (Thomson Reuters) which aggregates databases such as Worldscope and Thomson Deals.

To evaluate the creation function, Lazonick (2007) used the number of venture-backed firms with the idea that an active stock exchange, and thus the possibility of exit, generates incentives to create ventures upstream[7]. Instead Vismara *et al.* (2012) and Revest and Sapio (2016b) consider that junior markets and VC may be substitutes, *i.e.*, privately-held firms can choose between going public or being funded by venture capitalists. Revest and Sapio (2016b) regress the number of entrants in manufacturing sectors based on measures of AIM's liquidity to assess its creation function and find results confirming it[8]. Consequently, the attractiveness of junior markets may be seen as a way to characterize the creation function of junior markets. This hypothesis makes sense because there are differences in the development of venture capital and private equity across the different countries under scrutiny (see Bedu and Montalban, 2013). We examine the number of newly listed firms to evaluate the

[7] In the same vein, Michelacci and Suarez (2004) show that public markets exercise a recycling function.

[8] More specifically, they show that the sectors that attract more new companies are the sectors in which firms raise more capital at IPO and in which the proportion of small caps is higher.

attractiveness of junior markets for VC and privately-held firms. We also study the market entry modes (IPOs, private placements, transfers from smaller segments to junior markets and from main markets to junior markets, others) in order to characterize the type of exit opportunities considered by companies when they go public. A high number of private placements relative to the number of IPOs indicates the extent to which firms make use of the opportunity offered by MiFID to shorten the admission process and have a "fast" exit. Besides, as underlined in the introduction, one role of the junior market is to allow a firm's transfer from the junior to the main list, or "graduation". Consequently, we document the number of transfers from the junior segment to the main segment for each market under scrutiny, as a percentage of newly listed firms on the main segment. A large number of transfers indicates that junior markets act as feeders for the main list and, therefore, perform a creation function. Indeed, we consider transfers as indicative of the creation function: graduation represents an additional strategic option for entrepreneurs that wish to enact a multi-stage divestiture strategy.

In order to evaluate the control function, *i.e.*, the extent of the dissociation between ownership and managerial control, we focus on the type of offering (see above) as well as the percentage of closely-held firms once they are listed for Japan and the UK in 2015[9]. We measure this percentage by differentiating firms according to their listing date. Indeed many SMEs are manager or family-owned before going public. Private placements allow the AIM companies to expand their shareholders' base, compared to remaining private (Hornok, 2014). At the same time, they limit the ownership dispersion at the time of admission, since private placements target a small group of (mostly) professional investors. Consequently, firms are more likely to exhibit concentrated shareholdings in the first years of listing.

The combination function can be evaluated by understanding the extent to which firms use stock exchanges to fuel their growth or to exit through M&A. Except for Vismara *et al.* (2012), no papers have studied M&A in the case of junior markets. Acquisitions induce an increase in firms' size or/and a decrease in the probability of being a takeover target. The combination function is linked to the control function because the M&A market is a market for corporate control. By changing the ownership of a firm, M&A modify the control function[10]. We examine the types of deals (merger, acquisition of partial or majority interest) for both acquirers and targets, and the way M&A are financed, *i.e.*, cash or stock. No official statistics exist and some information, such as the deal value, can be confidential. Academic papers and press articles mainly use the Thomson Reuters database (see Barnes *et al.*, 2013 who positively evaluate the representativeness of the database). We collected data on the deal module from Eikon. We selected completed and pending/in progress deals (whose announcement date was not before 2014). We removed deals concerning investment funds (SIC 6430, 6722, 6733, 6798) and other investment vehicles (6282 and 6799), because our question is about the real economy sector. The database documents the M&A deals according to the status of firms: target or acquirer. When we analyze if firms access to the stock market to grow, we consider them as acquirers on the M&A market (external growth); in this case, the consideration structure, *i.e.* how the deal is financed, as defined in Thomson Reuters is studied. When firms are classified as targets, M&A are perceived as a way to exit from the market.

Lastly, we turn to the study of the cash function. Stock repurchases depend on the extent to which firms use stocks as compensation. Such use may lead to a decrease in firm stock prices and stock repurchases may be seen as a way of sustaining prices. In order to assess the cash function, the following data are observed: seasoned equity offerings (SEO), dividends and

[9] The data concerning companies listed on other stock exchanges are missing on Eikon.

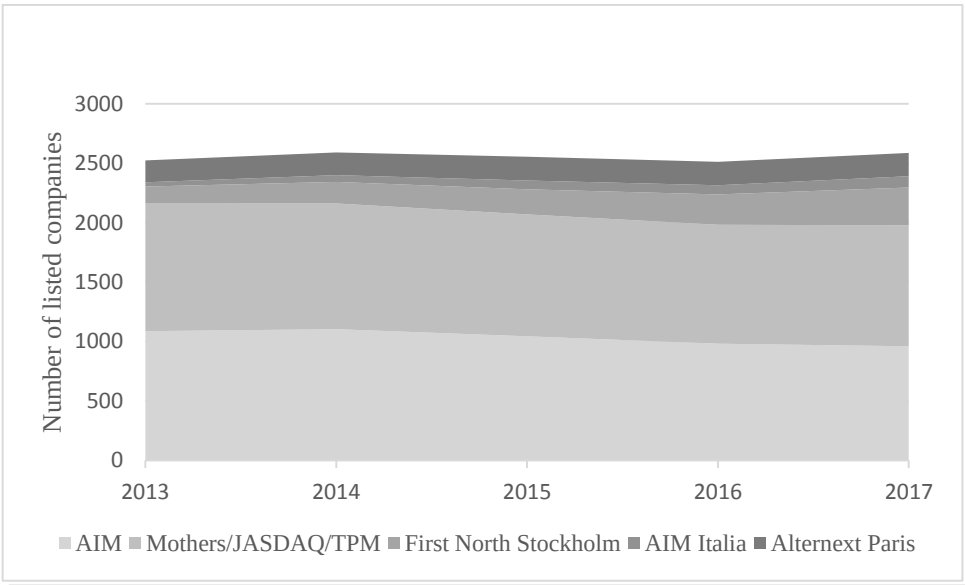
[10] The market for M&A and, more especially hostile takeovers, operates as a tool for managers' discipline.

stock repurchases. We first assess the degree of liquidity of the market. Then we measure to what extent cash is distributed to shareholders through dividends and stock repurchases.

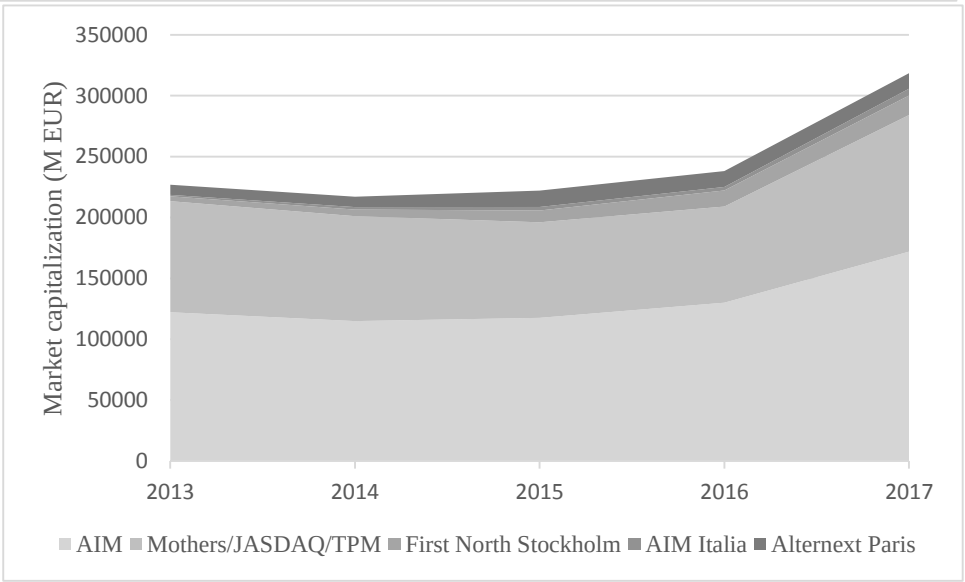
General results

According to Figure 1, the AIM is the largest junior market in terms of market capitalization and the number of listed companies. In 2017 960 firms were listed on the AIM with a market capitalization above EUR 170 billion. However, taken together, the Japanese markets include 1017 firms and account for 65% of the AIM market capitalization. First North Stockholm is the second most important junior market in Europe, before Alternext. AIM Italia and TPM, *i.e.*, the most recent junior market, are the smallest.

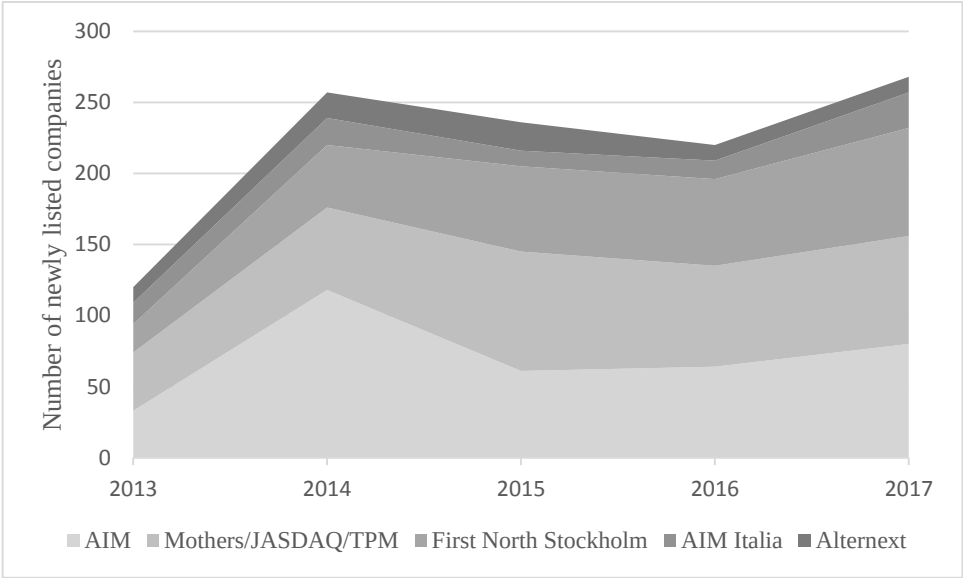
Figure 1 - Number of listed companies (a), market capitalization (in EUR M) (b), newly listed firms on AIM, AIM Italia, TPM, Mothers, JASDAQ, Alternext Paris, First North Stockholm (c) for the 2013-2017 period



a)



b)



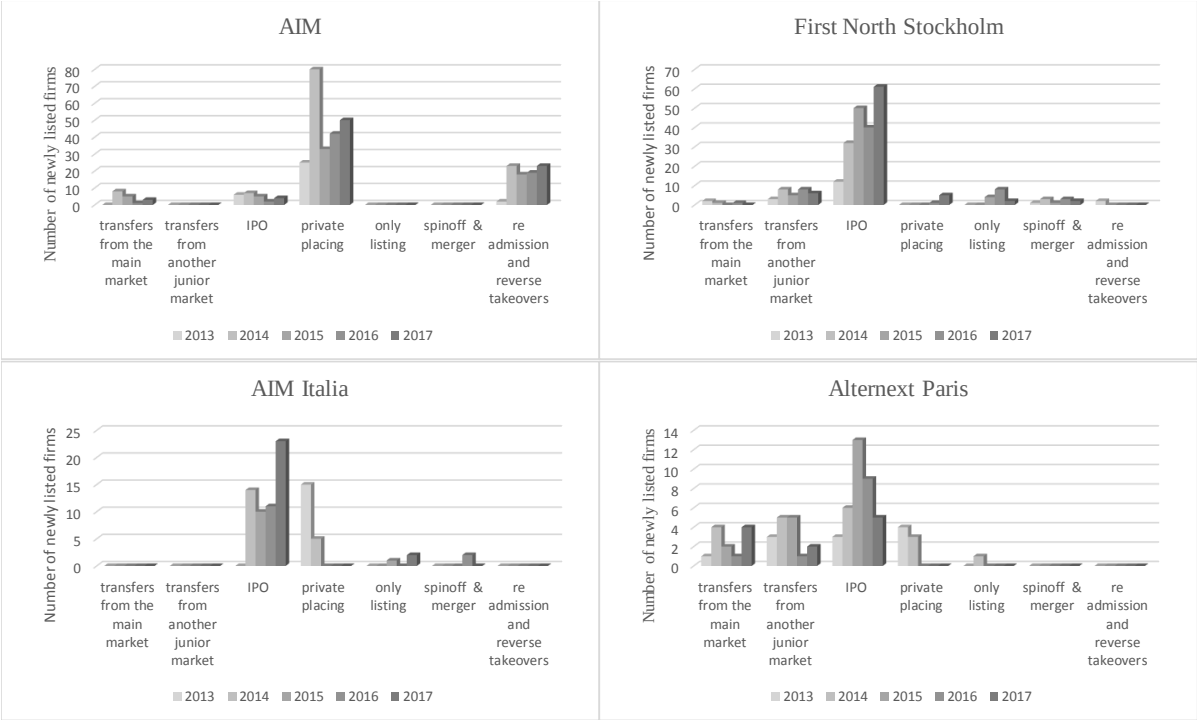
c)

Source: www.londonstockexchange.com, www.borsaitaliana.it, www.euronext.com, www.jpx.co.jp, www.nasdaqomxnordic.com, accessed September 18, 2018.

The creation function

Regarding the number of newly listed firms (Figure 1), the AIM remains the most attractive market but the Japanese markets and most surprisingly First North attract as many companies as the AIM does. Besides the use of private placements is more frequent on AIM UK, while the offerings on the other European markets are mostly public, *i.e.*, IPOs (see Figure 2), meaning that companies on such countries do not use the opportunity offered by the MiFID regulation to be listed faster and to only offer shares to professional investors. Interestingly Alternext is characterized by a high share of transfers between different markets (between Alternext and *Marché Libre*, a market segment with less requirements than Alternext, and between Alternext and the main segment Euronext), meaning that it fulfilled a role of 'transitory room' where firms grow before going to a more constrained market. Indeed Boutron *et al.* (2014) show that companies listed on Alternext choose to go public mainly for growth purposes, by examining the prospectus available to the public during the IPO process.

Figure 2 - Type of offerings by markets for the period 2013-2017



Source: www.londonstockexchange.com, www.borsaitaliana.it, www.euronext.com, www.nasdaqomxnordic.com, accessed September 2018.
Note: JASDAQ and Mothers do not allow private placements. No statistics about the types of offerings are available on the Tokyo Stock Exchange website.

The last feature of the creation function is the possibility of graduation. In absolute terms, we do not observe many transfers from the AIM to the main segment of the London Stock Exchange. This result is confirmed by previous empirical studies showing that the number of transfers from the AIM to the main list is sparse (Campbell and Tabner, 2014; Vismara *et al.*, 2012). In Italy and France, transfers account for a minority share of newly listed firms; transfers only started in Italy in 2013. Interestingly, transfers account for between 44 and 80% of newly listed firms in Japan: Mothers and JASDAQ clearly fulfill a role of feeder market. The Nordic markets are also characterized by a relatively large number of transfers compared to the number of newly listed firms, between 20 and 70% according to years[11]. Interestingly the London Stock Exchange has performed more transfers from the main market to the AIM than the opposite (Table 1 and Figure 2). This result resonates with the findings in Doukas and Hoque (2016) concerning the strategic choice between segments by firms going public.
To summarize, the stock exchanges in which IPOs constitute the main means of offering are more likely to fulfill a role of feeder (*e.g.*, Japanese, Nordic markets). Junior markets associated with a larger number of private placements, such as AIM UK and to a lesser extent AIM Italia, are also characterized by few transfers, meaning that they are used mainly because they allow a fast exit from previous investments. It could also be the case that firms accessing AIM and AIM Italia through private placements perceive less risk than those going public

[11] It is worth noting that First North created a specific segment called First North Premier for companies that wish to be transferred from First North to OMX. They have to comply with the International Financial Reporting Standards for reporting and disclosure, *i.e.* the standards in force on the main markets.

through IPOs because their capital is in the hands of professional investors. Thus they do not need to graduate to the main list contrary to firms through IPOs listed on the Japanese and Nordic junior market.

Table 1 -Number of firms transferred from the junior market to the main market

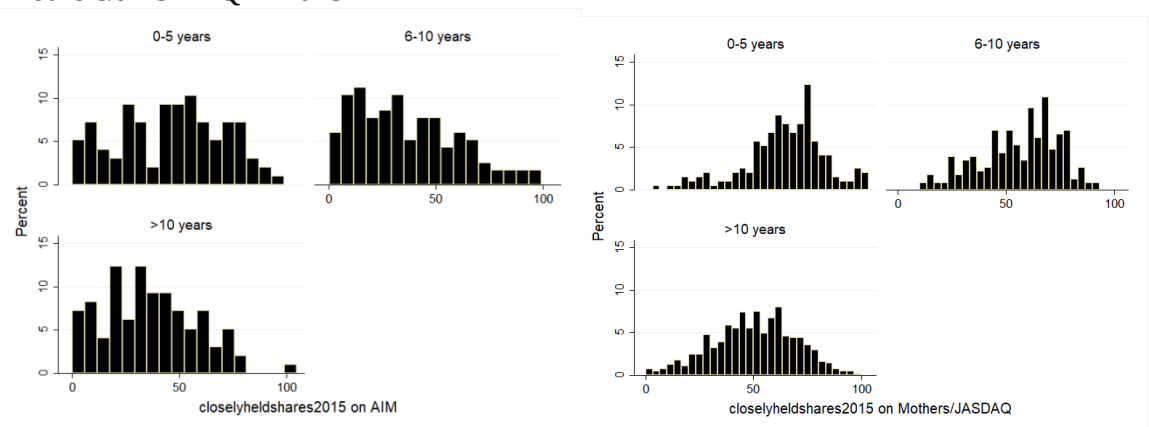
	2012	2013	2014	2015	2016	2017
AIM	1	0	2	5	5	4
Mothers	11	14	30	44	42	28
JASDAQ	0	17	30	44	28	21
First North Stockholm	4	7	6	15	6	7
AIM Italia	0	1	0	0	1	1
Alternext Paris	0	1	1	2	1	0

Source: www.londonstockexchange.com, www.borsaitaliana.it, www.euronext.com, www.jpx.co.jp, www.nasdaqomxnordic.com, accessed April 6, 2017 and September 20, 2018

The control function

As reported in Figure 3, ownership tends to be rather concentrated the first years after the listing on both Japanese and UK markets but after five years starts to be more dispersed. Thus, at the time of introduction, both markets are characterized by a higher ownership concentration. Then, after a while, a growing separation between ownership and control, relating to the status of public corporations, is observed. The growing dispersion of shareholdings is necessary if the aim of the market is to feed the main segment or is the exit from previous investments (see above).

Figure 3 -The evolution of shareholdings for companies listed on the AIM and Mothers/JASDAQ in 2015



Source: Eikon Datastream
Note: Companies listed on the AIM in 2015 and whose IPO date was before 2005 (>10 years) have a more dispersed ownership structure than recently listed companies.
Note: the results for the AIM should be interpreted with care because our sample accounts for only half of the total listed companies.

The combination and cash functions

Overall, both an exit and a growth role of M&A on the junior markets can be documented. The fewer ongoing disclosure requirements do not impede M&A activity. Hence junior

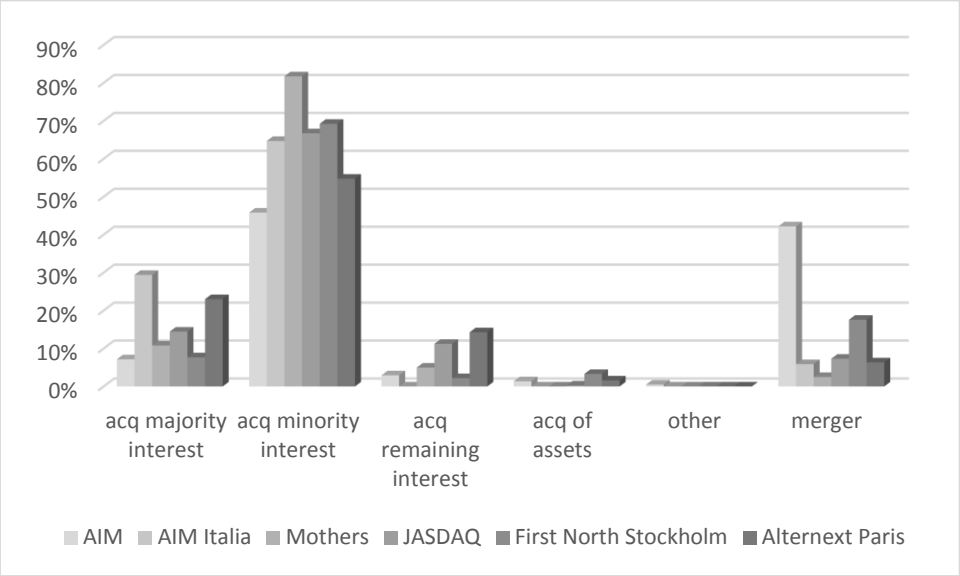
markets, even if housing mainly SMEs, are dynamic in terms of M&A. More precisely, we observe lower activity on the Italian M&A market than on other markets. Generally, regarding the whole set of junior markets, there is a higher number of deals in which the markets under scrutiny are acquirers instead of targets, illustrating a tendency toward external growth (Figure 4). Most of the deals targeting continental European and Japanese firms aim at acquiring minority interest; this is less the case on the AIM, where mergers account for a large share of reported transactions (Figure 5). In the latter case, the exit takes the form of the firm's disappearance.

Figure 4 - Number of deals where firms are involved either as acquirers or targets on stock exchanges since their creation

Source: Thomson Reuters Eikon Datastream
Note: The number of deals is considered over a different period according to countries because the date of their creation differs: AIM (1995-2015), Alternext (2005-2015), First North (2006-2015), AIM Italia (2009-2015), Mothers (1999-2015), JASDAQ (1995-2015).

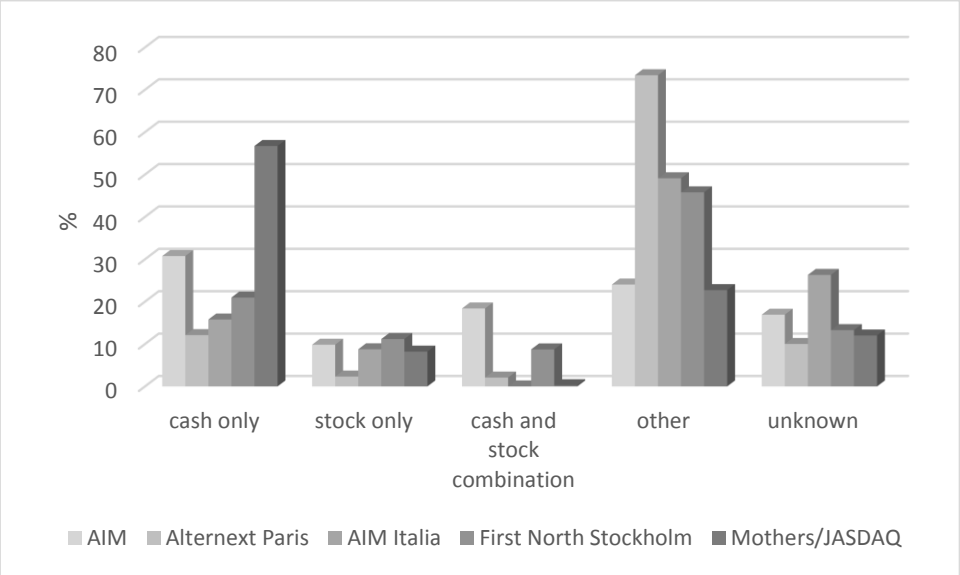
Moreover, when we consider firms as acquirers, we observe that the way to finance deals differ across countries. Japanese firms use cash, while UK firms also mobilize stock as a currency (Figure 5). Continental European firms favor other structures to finance acquisitions such as the use of proceeds from asset sales. Thus, only firms listed on the AIM follow the path described by Lazonick (2007), *i.e.*, AIM firms use shares to fund an acquisition or a merger instead of using either cash or borrowings.

Figure 5 - Form of deal on stock exchanges since their creation when firms are targeted



Source: Thomson Reuters Eikon Datastream
Note: The number of deals is considered over a different period according to countries because the date of their creation differs: AIM (1995-2015), Alternext (2005-2015), First North (2006-2015), AIM Italia (2009-2015), Mothers (1999-2015), JASDAQ (1995-2015).

Figure 6 - Funding of M&A (% of the total number of deals) on stock exchanges since their creation until 2015 (except for Japan for which we have data for the 1995-2015 period) when firms are acquirers



Source: Thomson Reuters Eikon deals
Note: The number of deals is considered over a different period according to countries because the date of their creation differs: AIM (1995-2015), Alternext (2005-2015), First North (2006-2015), AIM Italia (2009-2015), Mothers (1999-2015), JASDAQ (1995-2015).

Lastly, Table 2 indicates that every junior market is characterized by a relatively important number of SEOs but associated with a small amount of money raised. This is consistent with

Vismara *et al.* (2012) and Khurshed *et al*. (2005)'s studies, meaning that firms use the stock exchange to raise funds once they are listed.

Table 2 - Descriptive statistics on SEOs on stock exchanges since their creation until 2015 (except for Japan for which we have data for the 1995-2015 period)

	mean	median	min	max	std deviation	total (M USD)	N
AIM	19,96	3,13	0,00	5 439,84	158,36	120 459,30	6034
AIM Italia	_	_	_	_	_	_	_
Mothers	27,16	7,72	0,11	409,38	54,63	8 391,39	309
Jasdaq	26,34	9,44	0,09	1 163,49	69,44	37 909,00	1439
TPM	2,35	0,73	0,09	12,60	4,24	18,76	8
First North	8,22	2,97	0,02	162,44	16,53	1 882,43	229
Alternext	8,45	2,03	0,01	247,47	26,22	2 873,11	340

Source: Thomson Reuters Eikon deals

Lastly, both the AIM and Japanese stock markets exhibit a small ratio of stock repurchases and to a lesser extent, dividends to net income (Table 3). However, parallel to the ownership dispersion over time observed above, we observe that stock repurchases and dividends increase with the years of listing. Interestingly, the Japanese markets seem to follow the same pattern as the AIM, i.e. toward a form of shareholder value distribution over time.

Table 3 –Dividends and stock repurchases as share of net income in 2015 on the AIM and Japanese markets according to IPO date: third quartile[12]

market	ratio	0-5 years	6-10 years	>10 years
AIM	repurchases/net income	0	0	0
	dividends/net income	0,21	0,23	0,3
Mothers/JASDAQ	repurchases/net income	0	0, 00007	0,0008
	dividends/net income	0,12	0,26	0,32

Source: Thomson Reuters Datastream
Note: we consider carefully the results for the AIM because our sample accounts for only half of the total listed companies.

DISCUSSION AND CONCLUSION

The aim of this article is twofold: to enlarge the scope of the analysis of junior markets beyond the AIM and to present exploratory results concerning the functions fulfilled by these markets. We use the analytical framework developed by Lazonick and O'Sullivan (2004) and Lazonick (2007) and adapt it to examine junior markets.
To begin with, we provide a comparison of the market organization across countries and highlight the coexistence of models. Our main results concerning junior markets and their functions are the following. On one side, the AIM is characterized by a large share of private placement, few transfers to the main market and the absence of quantitative admission criteria. It fulfills more an exit "role" than a way to support SMEs' growth for transfers. This result is confirmed by the large number of mergers for AIM target firms. On the other side, the Japanese markets are associated with a relevant number of transfers between the junior

[12] Below the third quartile, ratios take the value of 0.

and main markets, showing the feeder role fulfilled by these markets. Private placements are not allowed and, more generally, listing rules are stricter. The markets actively acquire minority interest; this result corresponds with the aim to grow to enter the main segment. The higher requirements of the Japanese markets and the associated high regulatory costs may decrease the probability of the firms exiting once they have been listed on the junior market, and may encourage companies to graduate to the main segment »

The European markets lie between these two extremes. The Nordic market tends to be closer to the Japanese than the French or Italian markets, mainly because of the role played by transfers and IPOs as well as the market for M&A. Some characteristics are common to junior markets, such as a growing dispersion of shareholdings over time, a relatively large number of SEOs associated with a small value of raised capital and a growing distribution of shareholder value through dividends and stock repurchases. In other words control and cash functions do not seem to differentiate junior markets.

We contribute to the existing literature on junior markets by broadening the range of junior markets examined, beyond the analysis of the AIM. In particular our study includes the Japanese and Nordic markets. We also add evidence on the heterogeneity of markets' organization around the world and on the various roles fulfilled by junior markets. We highlight the role played by graduation in the creation function, something that is absent from the Lazonick and O'Sullivan (2004) and Lazonick (2007)'s framework. Finally, our analysis contributes to the broader literature on funding dedicated to SMEs and innovation. Regarding the recent creation of the first dedicated stock exchange for Indian SMEs, Bhattacharya (2017, p. 73) mentions: "It is envisaged that a dedicated SMEs platform would encourage entrepreneurship and innovation by helping SME's and investors to come together".

In addition, as an increasing number of emerging markets are interested in implementing junior stock markets in order to support their SMEs (Harwood and Konidaris, 2015), the market organization issue appears to be crucial for decision-makers and stock markets' operators. Our contribution sheds light on the fact that SMEs do not always list to obtain financing and the choice of a junior market's organization is linked to the goal pursued. Besides the fact that junior stock markets fulfill a specific role, either exit or feed according to countries, show that they do not target all SMEs. Thus they cannot be viewed as a substitute to crowdfunding or microfinance or even lending.

Our analysis suffers from some limits. First our comparison focuses only on formal rules that are implemented by the market operator and do not deal with informal rules. Secondly, we do not test the link between market organization and functions. Finally, our analysis lays the ground for the study of financialized SMEs. As Lazonick and O'Sullivan (2004) advocates, we could provide an analysis of the link between companies, innovation and stock exchanges through case studies and interviews. The way these functions combine themselves and influence the innovative firms may change over time and orients the market either towards more speculation or more productive investments

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APPENDIX A: ADMISSION CRITERIA

Ø: no criteria	AIM	Alternext	AIM Italy	First North
LIQUIDITY				
min number of investors	Ø	Ø	5 professional investors OR 12 investors with at least 2 professionnal investors	"sufficient" number of shareholders holding shares = or > to 500 EUR
min free float	Ø	EUR 2,5 M (received orders)	10% of the share class	10% of the share class
nominal value per share	Ø	Ø	Ø	min EUR 0,5
market cap	Ø	Ø	Ø	Ø
shareholders'equity	Ø	Ø	Ø	Ø
other	Ø	Ø	Ø	Ø
INFORMATION DISCLOSURE				
admission document without approval (if private placement)	✓	✓	✓	✓
approved prospectus (if public offering)	✓	✓	✓	✓
audited statements	✓	✓	✓	✓
accounting standards	national standards, IFRS, US/JAP/CAN GAAP, other	national standards or IFRS	national standards or IFRS	national standards or IFRS
language	english	english, national language	english or italian	english, national language
COSTS				
admission fees	[£ 7900; £ 89 180] based on market cap	[EUR 10 000; EUR 2 M] based on market cap	EUR 20 000; EUR 500 000 based on market cap	EUR 9 000
COMPANIES' FEATURES				
business continuity	2 years	2 years	2 years	2 years
exemption	✓ (lock-in)	✓ (discretionary conditions)	✓ (lock-in)	Ø (lock-in)
governance criteria	Ø	Ø	"appropriate provisions" + take-over provisions,	Ø
growth potential criteria	Ø	Ø	Ø	Ø
STAKEHOLDERS				
sponsor-adviser	Nominated Advisors (Nomads)	Listing Sponsor	Nominated Advisors (Nomads)	Certified Adviser
minimum time period	Ø	1 year	Ø	Ø

Source: Euronext (2017a, 2017b, 2018); London Stock Exchange (2014, 2015a, 2015b, 2016); Nasdaq OMX (2016, 2017); Tokyo Stock Exchange (2017 a, 2017b, 2017c)

Ø: no criteria	MOTHERS	JASDAQ standard	JASDAQ Growth	Tokyo Pro Market
LIQUIDITY				
min number of investors	200	200		Ø
min free float	25% of listed shares, 2000 units of tradable shares, 500 trading units , free float market cap : JPY 500M	min 1 000 trading units or or 10% of listed shares, free float market cap : JPY 500 M		Ø
nominal value per share	Ø	Ø		Ø
market cap	min JPY 1M	cap= JPY 5B or profit=JPY 100M	Ø	Ø
shareholders'equity	Ø	JPY 200M	> 0	Ø
other	Ø	Ø		Ø
INFORMATION DISCLOSURE				
admission document without approval (if private placement)	Ø	Ø		Ø
approved prospectus (if public offering)	✓	✓		✓
audited statements	✓	✓		✓
accounting standards	national standards or IFRS	national standards or IFRS		national standards, US GAAP, IFRS, other
language	japanese	japanese		japanese, english
COSTS				
admission fees	JPY 2 M (listing examination fee) + JPY 1 M (initial listing fee) + variable part based on shares	JPY 2 M (listing examination fee) + JPY 6 M (initial listing fee)		JPY 3 M (net of tax)
COMPANIES' FEATURES				
business continuity	2 years + 1 year with Directors	qualitative examination	Ø	1 year
exemption	Ø	Ø		Ø
governance criteria	compliance with the Corporate Code of Conduct and the Corporate Governance Code	compliance with the Corporate Code of Conduct and the Corporate Governance Code		"appropriate governance"
growth potential criteria	✓ (increase of sales and profit the last 2 years)	Ø	qualitative evaluation by TSE	Ø
STAKEHOLDERS				
sponsor-adviser	Ø	Ø		J-adviser
minimum time period	-	-		Ø

Source: Euronext (2017a, 2017b, 2018); London Stock Exchange (2014, 2015a, 2015b, 2016); Nasdaq OMX (2016, 2017); Tokyo Stock Exchange (2017 a, 2017b, 2017c)

APPENDIX B: SPONSORS' ADMISSION CRITERIA AND FUNCTIONS

Ø: no criteria	AIM	Alternext	AIM Italy	Nasdaq OMX-First North	Tokyo Pro Market
QUALIFICATION CRITERIA					
constraint on the legal status	Ø	additional obligations for non-credit firm or non- investment firm	bank, investment firm audit firm	Ø	Ø
years experience in corporate finance	2	2	2	2	2
number of transactions (last 2 years)	3	>0	>0	1	Ø
indemnity insurance	Ø	✓	Ø	Ø	Ø
minimum number of qualified employees	4	2	"adequate" number	2	3
criteria for qualified employees:					
relevant transactions the last few years	✓	Ø	Ø	✓	Ø
experience in corporate finance advices	✓	Ø	Ø	✓	✓
other	Ø	Ø	Ø	mandatory seminars and training sessions	knowledge of the Japanese market etc.
FUNCTIONS, DUTIES, LIABILITIES					
liability for decision	✓	Ø	Ø	Ø	Ø
certification of the company's appropriateness	✓	✓	✓	✓	✓
principles for companies' examination	visits to companies, due diligence and internal control system investigations, examination of Directors and governance practices	due diligence and internal control system investigations	visits to companies, due diligence and internal control system investigations	Ø	Ø
advices and guidance	✓	✓	✓	✓	✓
companies' monitoring	✓	✓	✓	✓	✓
INDEPENDENCE CRITERIA					
sponsor≠company	✓	✓	✓	✓	✓
exemptions with appropriate Chinese walls	✓	✓	✓	✓	✓
number (january 2016)	37	112	15	53	8

Source: Euronext (2017a, 2017b, 2018); London Stock Exchange (2014, 2015a, 2015b, 2016); Nasdaq OMX (2016, 2017); Tokyo Stock Exchange (2017 a, 2017b, 2017c)

Note: a relevant transaction implies the redaction of an admission document or a prospectus or an offer document.

APPENDIX C: ONGOING REQUIREMENTS

Ø: no criteria	AIM	Alternext	AIM Italy	First North	MOTHERS	JASDAQ	TPM
LIQUIDITY							
quantitative criteria (min number of investors, market cap etc.)	Ø	Ø	Ø	Ø	Ø	Ø	Ø
INFORMATION DISCLOSURE							
yearly reports of financial statements	✓	✓	✓	✓	✓	✓	✓
half-yearly reports of financial statements	✓	✓	✓	✓	✓	✓	✓
quarterly reports of financial statements	Ø	Ø	Ø	Ø	✓	✓	optional
price-sensitive information	✓	✓	✓	✓	✓	✓	✓
information concerning substantial events: (substantial or related-party transactions etc.)	✓	✓	✓	✓	✓	✓	✓
GOVERNANCE CRITERIA							
standards of corporate governance	Ø	Ø	Ø	Ø	✓	✓	Ø
COSTS							
annual fees	£ 6250	[EUR 2 940; EUR 24 150] based on market cap	EUR 6 300	[EUR 8000; EUR 42 800] based on market cap	[JPY 480 000; JPY 4,08 M] based on market cap	JPY 1M if cap < or = JPY 100 000M JPY 1,2M if cap > JPY 100000M	[JPY 480 000; JPY 4,08M] based on market cap

Source: Euronext (2017a, 2017b, 2018); London Stock Exchange (2014, 2015a, 2015b, 2016); Nasdaq OMX (2016, 2017); Tokyo Stock Exchange (2017 a, 2017b, 2017c)