Comparative Analysis of Listing Routes to the KOSDAQ Market

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There are four routes for an unlisted company to get listed on the KOSDAQ: regular listing, listing transfer from the KONEX, listing through a reverse takeover (RTO), and listing through a merger with a special purpose acquisition company (SPAC). The comparative analysis of firms, which have been listed on the KOSDAQ since 2007 through each of the four routes, finds that listing transfer from the KONEX and listing through a SPAC merger are more effective routes than others. The two routes exhibit differences from the regular listing route in the level of information asymmetry, incentive structure of stakeholders, capital raising features, and listing requirements and procedures. Such differences allow us to conclude that these routes provide more choices for SMEs to get listed, and contribute to identifying healthy new firms listed on the stock market. In particular, the analysis reveals that listing transfer from the KONEX market reduces the capital raising cost for newly listed firms because of its strikingly low level of IPO underpricing. But listing through a RTO would very likely lead to poor post-listing stock performance.

Growing emphasis is placed on the need to build an ecosystem for innovative startups in order to foster them as Korea's new economic growth engine. Accordingly, the KOSDAQ comes to the fore. Innovation initiatives require long-term investment, and are risky and uncertain. The equity financing is thus important because it enables the sharing of risks and growth opportunities, does not require collateral, and has no impact on the company's financial risks.

* All opinions expressed in this paper represent the author's personal views and thus should not be interpreted as Korea Capital Market Institute's official position.

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The stock market discovers price, provides liquidity, and offers opportunities for portfolio diversification. All of these would stimulate investments in innovation activities and bring down barriers to starting a business. The KOSDAQ is one of key infrastructures for the innovative startup ecosystem in the sense that it not only acts as a major channel for small-and medium-sized enterprises (SMEs), venture businesses and tech companies to raise capital but also offers exit channels for investors in early stage startups.

Whether the KOSDAQ successfully serves as the startup ecosystem infrastructure rests on how to identify quality companies and help them access the stock market. An effectively designed listing regime, which is critical to address information asymmetry, could enhance the reputation of the stock market and create demands for listings and investments. However, there is a conflicting relationship between the quantity and quality of listed firms, which is cited as the inherent problem involved in designing the listing regime. If listing requirements are eased to give greater opportunities for companies to get listed, unhealthy firms are more likely to enter the stock market. If listing requirements are tightened to protect investors, then this would limit listing opportunities for companies. This conflicting relationship is more pronounced in the KOSDAQ that is home to SMEs, venture firms and tech firms, as well as individual investors. This is why the KOSDAQ has faced criticism due to a lack of reliability and market speculation whereas it has enjoyed quantitative growth.

To assess the efficiency of the KOSDAQ listing regime, in this article, I compare the institutional characteristics of four listing routes to the KOSDAQ - listing through an initial public offering (hereinafter referred to as “regular listing”), transfer of stock listing from the KONEX, listing though a reverse takeover (RTO) and listing through a merger with a special purpose acquisition company (SPAC), and then analyze the features and post-listing stock performances of companies listed through each of the four routes. It can be inferred that differences in the level of information asymmetry, incentive structure of stakeholders, financing characteristics, and listing requirements and procedures among the pathways to get listed give rise to differences in firm characteristics and post-listing performance among companies that choose different listing routes.

For starters, I explore and compare the characteristics of each listing route (see Table 1). The first route through which a company can opt to get listed on the KOSDAQ is regular listing. It is the route through which an unlisted company that meets KOSDAQ listing criteria undertakes an initial public offering (IPO) and lists its shares on the KOSDAQ. The second route is for a company to list its shares on the KONEX and later transfer its stock listing to the KOSDAQ. The transfer of listing is similar to regular listing in that a company goes through the IPO process. However, a firm moving from the KONEX is a far cry from an unlisted firm. First, the KONEX-listed firm has its shares admitted to trading in the stock exchange and fulfills disclosure obligations, resulting in less information asymmetry. Second, it has adapt to the stock market environment with the support of a nominated adviser (NOMAD) who assists the company to prepare corporate disclosure, financial reporting and IR reports, and serves as a liquidity provider. Moreover, KONEX companies, once they satisfy certain requirements, can qualify for a fast track listing transfer program which allows companies to obtain a time-saving listing review and be subject to relaxed listing requirements.

The third route is listing through a RTO. This allows an unlisted company to become listed through a business combination with an existing listed company. After the business combination, the unlisted company's majority shareholders become majority shareholders in the combined company and as a result the unlisted company gets a listing on the stock exchange. Also, synergies through the combination of the two companies can be expected. This pathway enables a company to get listed without an IPO, meaning that no additional capital is raised for the company, but instead the company can gain immediate status as a listed corporation. Especially, it took much less time to become listed before the introduction of a qualitative listing examination for listing through a RTO in 2011.

Table 1. Main features of the four listing routes to the KOSDAQ

	Regular listing	Listing transfer	Listing through RTO	Listing through SPAC merger
Listing requirements	• Quantitative examination: distribution of stocks, business performance /market valuation, auditor's opinion, and corporate governance • Qualitative examination: business sustainability, management transparency/stability, and investor protection	• Listing requirements are the same as those for regular listing. • Fast-track listing is available.	• Listing requirements are similar to those for regular listing. • Qualitative examination was not undertaken before 2010.	• Listing requirements are similar to those for regular listing. • Fast-track listing is available.
Funding	• IPO	• IPO	• Almost none	• Capital raised through the IPO and bond issuance of a SPAC
Key features	• Affected by the IPO market conditions. • Likelihood of IPO underpricing • IPO underwriter is required to own a part of IPO shares	• Affected by the IPO market conditions. • Stocks are traded on the exchange. • Subject to corporate disclosure requirements. • NOMAD support • IPO underwriter is required to own a part of IPO shares	• Quick listing • Less affected by the IPO market conditions. • Creation of synergies through business combination. • Likelihood of business combination with an distressed firm, and overvaluation of an unlisted company	• SPAC sponsor as a shareholder has incentives to discover quality firms. • Less affected by the IPO market conditions. • Introduction of this listing route as a countermeasure against the poor performance of firms listed through a RTO.

Source: Korea Capital Market Institute (KCMI)

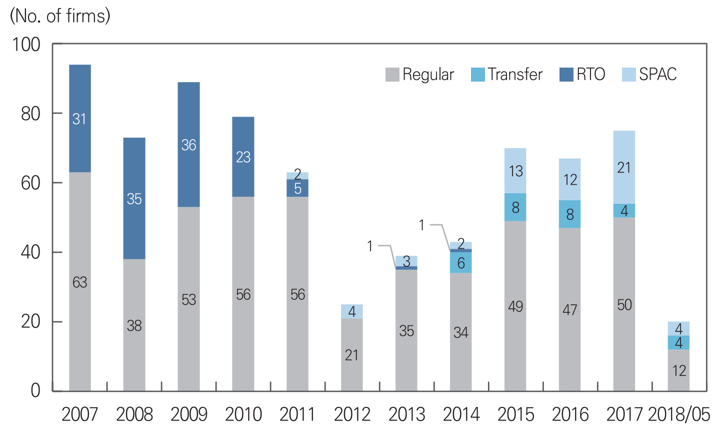
The fourth route that a company can take to get listed is listing through a SPAC merger. This listing route is structurally the same as listing through a RTO, but a target company is not an operating company but a paper company that has financial assets only. Listing through a SPAC merger provides a path to raise capital for an unlisted company and reduces the likelihood of the company having poor stock returns after listing. In the case of listing through a RTO, a private company selects a financially weak listed company as the target to easily obtain the listing status while the target company accepts the overvaluation of the unlisted company in return for avoiding delisting and taking block premiums. The combination of the overvalued unlisted company and the distressed listed company is highly likely to result in poor post-combination stock performance. In the case of listing through a SPAC merger, on the other hand, cash held by the SPAC is transferred to the merged company, which means the provision of access to capital as is the case with an IPO. Moreover, SPAC sponsors have incentives to pursue a merger with a company in good shape so as to maximize the value of their equity stakes but have no incentives to overvalue an unlisted company. Accordingly, this listing route shows the lower likelihood of poor post-merger stock returns than listing through a RTO.[1)]

Taking into account their institutional and structural characteristics discussed so far, I compare and analyze the four listing routes by examining the current state and features, financing efficiency, and post-listing stock returns of companies that got listed through each of the four routes. The analysis covers the firms that were newly listed on the KOSDAQ from January 2007 to May 2018.

During the entire sample period, 737 companies listed on the KOSDAQ, among which 514 firms chose regular listing, and 132 listing through a RTO, 61 listing through a SPAC merger, and 30 listing transfer from the KONEX (see Figure 1). The companies listed through alternative routes other than regular listing accounted for a sizable proportion (nearly 30%) of the newly listed firms. Out of 132 listings through RTO during the sample period, only two listings were initiated after the qualitative examination for listing through RTO was introduced in 2011. This implies that a major reason behind the choice of listing through a RTO was the listing examination that exempts qualitative requirements. Unlisted companies started opting to get listed through a SPAC merger from 2011, two years after the introduction of SPACs in Korea. This type of listing route took up 15% of the new listings undertaken from 2011 through the rest of the sample period. From 2014, one year after the KONEX was launched, listing transfers from the KONEX began and represented 11% of the new listings conducted from 2014 onwards. The findings suggest that instead of listing through a RTO that plummeted due to the tougher regulation in 2011, listing transfer from KONEX and listing through a SPAC merger have been used as alternative listing routes to regular listing.

1) Such feature of a SPAC merger, which is very different from that of a RTO, is one of the major reasons for the introduction of SPACs in the Korean market.

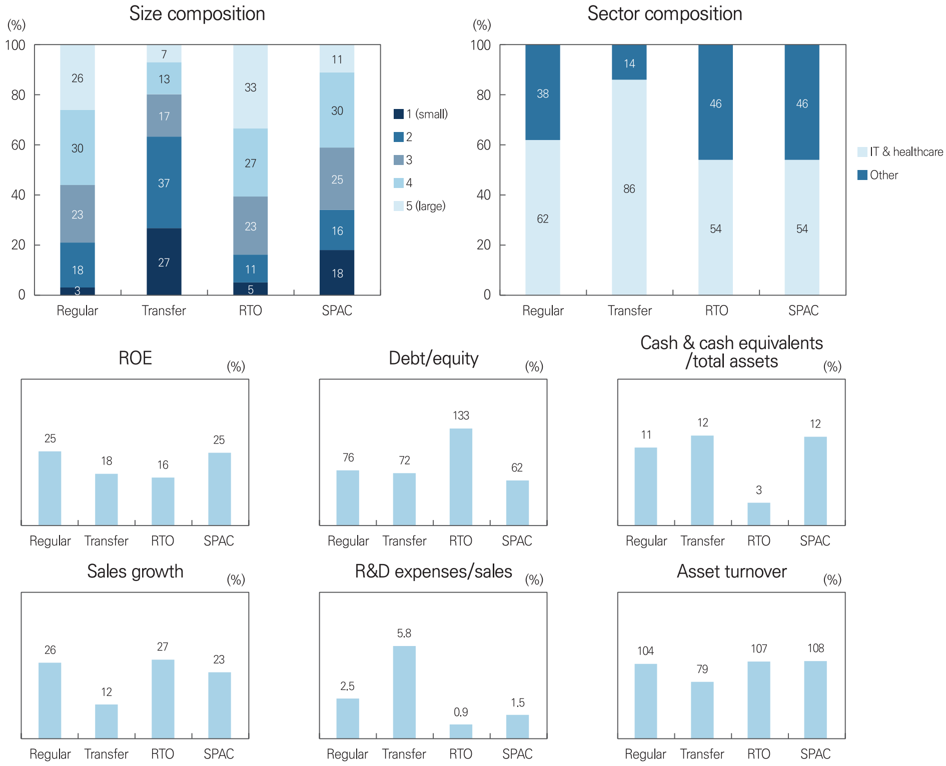
Figure 1. Number of newly listed firms by listing route



Source: Korea Exchange (KRX), KCMI

Let's look at the breakdown of companies that got listed through each of the four routes by firm size and by sector (see Figure 2). The newly listed firms are assigned into five quintiles based on the KOSDAQ listed companies' market value. The listed companies are divided into ten sectors according to the FnGuide Industry Classification Standard (FICS). By firm size, large-cap companies take the largest share of regular listings while small-cap companies account for the majority of listing transfers from the KONEX. Listings through a SPAC merger were evenly distributed. The proportion of small-cap firms (the 1st and 2nd quintiles) in regular listings, listing transfers, and listings via a SPAC merger represented 21%, 64%, and 34%, respectively. The regular listing route exhibits the lowest portion of small-cap companies. The proportion of large-cap firms (the 4th and 5th quintiles) in regular listings, listing transfers, and SPAC mergers made up 56%, 20%, and 41%, respectively. Regular listings show the largest portion of large-cap companies. Because listing through a RTO involves the combination of two operating companies, it is difficult to directly compare with the other routes. As to the composition of sectors, noteworthy differences are found in the proportion of the IT & healthcare sectors, which is the highest in listing transfer (86%), followed by regular listing (62%), and listing through a SPAC merger and listing through a RTO (each 54%). The results reveal that SMEs tend to choose alternatives to the regular listing route, and the transfer of stock listing from the KONEX is the most preferred route to listing for companies in the IT & healthcare sectors.

Figure 2. Features of newly listed companies by listing route



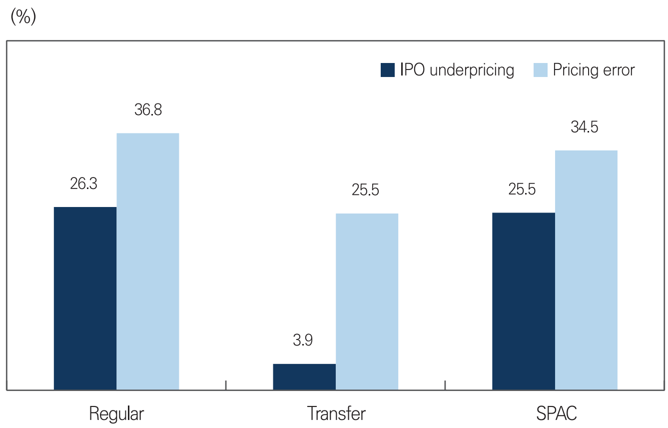
Source: FnGuide, KCMI calculation

In addition, the newly listed companies display different financial characteristics (as at the fiscal year-end prior to listing) depending on which listing route they opted for (see Figure 2). I examine the financial characteristics of the newly listed firms using the metrics of profitability (ROE), financial stability (debt/equity, and cash & cash equivalents/total assets), growth (sales growth and R&D expenses/sales), and operating activity (assets turnover). Overall, similarly good financial characteristics are observed in the companies that were listed either through regular listing or listing through a SPAC merger. On the other hand, different financial characteristics are found in the companies that chose either listing transfer or listing through a RTO. The firms that moved from the KONEX reported weak operating performance as measured by ROE, sales growth and assets turnover, but showed financial stability and active R&D investments. The firms that listed through a RTO posted robust performance in sales growth and assets turnover, but showed disappointing profitability and financial stability with languid R&D investments.

Turning to financing efficiency, it can be measured using IPO underpricing and pricing error. IPO underpricing occurs when the post-listing market price of a company's stock is higher than the offer price of the stock. It suggests that the offer price has failed to fully reflect the firm value, which in turn increases the capital raising costs for the company. Although the underpricing is widely accepted as a universal phenomenon, the overpricing often occurs as well, which eventually brings losses to IPO investors. The price error for stock indicates the absolute difference between the offer price and the post-listing market price of the stock. This measure considers both IPO underpricing and overpricing. The IPO underpricing is calculated by subtracting market return (in log) (from KOSPI-KOSDAQ weighted-average index) from the IPO stock returns (computed from the offering price to the closing price ten days after listing). The absolute value of this is used as the pricing error.

For companies listed by merging with a SPAC, the net asset value (NAV) of the SPAC can be regarded as the amount raised through an IPO and the NAV per share as the offer price to measure the underpricing and the pricing error. When the SPAC's market value is greater (smaller) than the SPAC's NAV, the post-listing stock price, even if an unlisted company is properly valued, is higher (lower) than the offer price, namely, the NAV per share. Given that, the impact of the difference between the market value and the SPAC's NAV on each metric is adjusted. The analysis excludes the route to get listed through a RTO that provides no equity financing.

Figure 3. IPO underpricing and pricing error by listing route



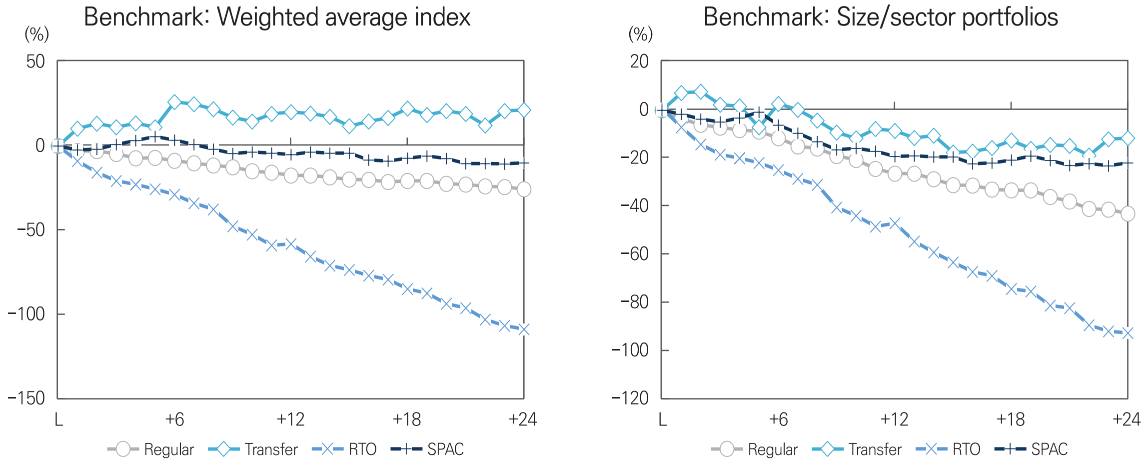
Source: KCMI

As a result of measuring the IPO underpricing over the period since the three listing routes became available in 2014, IPO underpricing is 3.9%, 26.3%, and 25.5% for listing transfers, regular listings, and listings through a SPAC merger, respectively. The underpricing is substantially low among the firms that transferred from the KONEX (see Figure 3). The differences in the IPO underpricing between listing transfers and the other two listing routes are statistically significant. On the other hand, no statistically significant difference is found between SPAC mergers and regular listings. In addition to the low level of the underpricing, the pricing error is the lowest in the firms that opted for listing transfer, which mean the offer price closest to the post-IPO market price. The results imply that the listing transfer route helps a company reduce the capital raising costs, and listing through a SPAC merger is also not the inefficient way to raise funds.

A last look is taken at the post-listing stock performance of the firms listed through each of the routes. When computing 24-month cumulative abnormal returns (in log) using the KOSPI-KOSDAQ weighted average index as a benchmark, stocks transferred from the KONEX returned 20%, and those listed through a SPAC merger returned –10%. Stocks via a regular listing gave –26% returns while the stocks listed through a RTO produced –108% returns (see Figure 4). The cumulative abnormal returns for the companies transferred from the KONEX are higher than those for the companies listed through the other routes, but the cumulative abnormal returns for the firms listed through a RTO are lower than those for the companies listed through the other routes, both of which are statistically significant. Given the varying sizes of the companies that chose each of the listing routes and the different sectors that they belong to, the size/sector portfolios returns[2)] are also used as a benchmark to compute the cumulative abnormal returns. The firms listed through listing transfer, SPAC merger, regular listing, and RTO returned –13%, –22%, –44%, and –93%, respectively, which shows no change in the ranks of the returns for the companies listed through each of the routes. It should be noted, however, that the cumulative abnormal returns for the companies transferred from the KONEX or listed through a SPAC merger are higher than those for the companies listed through the other routes. This result has statistical significance.

2) To build size/sector portfolios, all listed companies in the KOSPI and KOSDSAQ markets are divided into five groups according to market capitalization at the end of each month, and then each group is classified into 10 sectors.

Figure 4. Cumulative abnormal returns after listing by listing route



Source: KCMI

So far, I have compared the current state and characteristics, financing efficiency and post-listing stock performances of the new KOSDAQ-listed firms by listing route. The results of the comparative analysis reveal that listing transfer from the KONEX and listing through a SPAC merger are effective listing routes. The two routes exhibit statistical differences from the regular listing route in the level of information asymmetry, incentives of stakeholders, capital raising features, and listing requirements and procedures. Such differences allow us to conclude that these routes provide more choices for companies, especially, SMEs to get listed, and contribute to identifying healthy newly listed companies. Notably, relatively superb post-listing stock performance is observed in the companies transferred from KONEX, along with the lower IPO underpricing and the resultant decline in the capital raising costs. Meanwhile, the analysis results find that the firms listed through a RTO had poor post-listing returns rather than enjoying synergies through the business combination.

Innovative companies are subject to high risk and uncertainty in business, and their information is not sufficiently available. Further, their businesses are difficult to classify according to the existing classification methods. Unless greater information asymmetry in innovative firms is resolved, the KOSDAQ is likely to experience market failure because of a lemons problem, and to play only a limited role as the infrastructure for the innovative startup ecosystem. Considering the narrow base of institutional investors in the KOSDAQ that are capable of addressing the asymmetric information problems, the listing regime for the KOSDAQ could be a crucial tool to remove the information asymmetry. Easing or diversifying the quantitative listing requirements may help creating more opportunities for innovative firms to get listed but does not ensure lowering information asymmetry. Thus, it is necessary to accurately understand the characteristics and outcomes of listing transfer from the KONEX, the route to mitigate the information asymmetry, by making companies exposed to the capital market discipline ahead of being listed on the KOSDAQ, or listing through a SPAC merger that incentivizes a group of professionals as stakeholders to discover quality firms. In addition, policy efforts need to be made for them to be utilized as effective alternative listing routes.