

Korea's ELS Market: Current Status and Future Tasks

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Korea's ELS market continued its growth from 2017 before it contracted due to financial unrest triggered by Covid-19 in 2020. With the recovery in Korea's and overseas stock markets, the size of early redemption in ELS increased in the second half of the year. But the overall size decreased as issuers cut back on new issuance while strengthening their risk management under some regulatory changes. Going forward, the market is expected to see the overall size slightly go down with step-down ELS on domestic and overseas stock indexes being mainstream. This requires market participants to come up with differentiated coping strategies, and financial authorities to formulate new policies.

Step-down ELS have been issued for a long enough period to make customers get accustomed to the structure, which is a positive aspect. Still, however, distributors of those products should closely monitor the inherent investment risk with continued investor protection measures. Also necessary is further effort at the individual issuer level for fully considering the overall market situation and also issuer-specific conditions in formulating a plan for stably managing the products and the risk. Financial authorities also need to closely monitor the market while devising their strategies to cope with a potential market shock.

* 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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Derivatives-linked securities¹⁾ have been on the continuous increase in size since the global financial crisis. Issuers have accordingly expanded the business to meet the demand for higher investment returns as low interest rates have cut the returns on low-risk financial products such as time deposits. Of derivatives-linked securities, equity-linked securities (ELS) represent the highest proportion with the step-down structure being the most prevalent type in Korea.²⁾ Due to the heavy losses incurred in ELS on individual stocks in the post-crisis era, most step-down ELS in the market these days are using domestic and overseas stock indexes as underlying assets.³⁾

Although the increase in the size of derivatives-linked securities gave rise to many issues, step-down ELS have been issued continuously. With the growth in step-down ELS, the issuers' investment activities related to ELS have been a primary revenue source for their proprietary trading, and also have gravely affected the financial markets during the spread of Covid-19. Against the backdrop, this article tries to explore Korea's ELS market conditions where the step-down structure is a mainstream, and discusses the future prospects and challenges ahead.

Korea's ELS and the step-down structure

The step-down structure accounts for a substantial part of ELS in Korea. Coupons to those ELS vary across underlying asset types, knock-in barrier levels, and other detailed terms and conditions. Most of those ELS discussed in this article use two to three stock indexes for underlying assets. There were several ELS on individual stocks, but the share of them has slid sharply since those products incurred heavy losses during the global financial crisis. The market once saw ELS taking wide-ranging structures. However, as ELS on domestic and overseas stock indexes tend to hardly incur losses and achieve sound returns, step-down ELS have been issued continuously to be a mainstream product. It is worth noting that step-down products include no-knock-in ELS, and callable ELS commonly referred to as "lizard ELS".

1) A derivatives-linked security in this article refers to an over-the-counter derivatives-linked security excluding equity-linked notes and equity-linked warrants. Depending on whether the principal is protected or not, and whether the underlying asset is equity or not, derivatives-linked securities are classified into ELS (equity linked, without principal protection), ELB (equity linked, with principal protection), DLS (non-equity linked, without principal protection), and DLB (non-equity linked, with principal protection). Note that "derivatives-linked securities" in this article mean structured products whose value is linked to a wide range of underlying assets including equities, bonds, and others, whereas the abbreviated term DLS here refers to a structured product whose underlying assets are non-equity like interest rates.

2) Although the share of ELS in the market has been about 50% since 2015, the actual proportion is more substantial because other types of those products are mainly used by retirement pension funds (ELB) or institutional investors (DLB). The step-down structure in this article refers to an autocallable product.

3) Of ELS issued in Korea after 2015, about 98% are tracking one or more domestic and overseas stock indexes (Korea Financial Investment Association), including mostly KOSPI200, EuroStoxx50, HSCEI, S&P500, and Nikkei225.



Such a phenomenon observed in Korea's ELS market is also reported by a study (Shin 2019), showing that today's investment demand for financial products tends to be determined by past investment performance. Figure 1 illustrates the annual sales of equity-linked retail structured products in the US, and the share of each product structure. According to the chart, the share of autocall products—equivalent to Korea's step-down ELS—increased during the period analyzed. Shin (2019) argued that such an increase was affected by past investment performance. This implies a high possibility that step-down ELS on stock indexes are expected to remain mainstream going forward. However, the study suggests the need for caution because past performance gives no guarantee for future performance. This is why investor protection is needed at the point of sales.

In the case of Europe where structured products are listed for trading, data on listed structured products are available. The European Structured Investment Products Association provides the name, definition, and characteristics of detailed product structures.⁴⁾ Figure 2 demonstrates the overall product volume with each structure in the German listed structured product market. Express certificates—Germany's equivalent of step-down ELS—account for the second largest proportion after capital protection with coupon products, and the highest proportion in the non-capital-protected category.

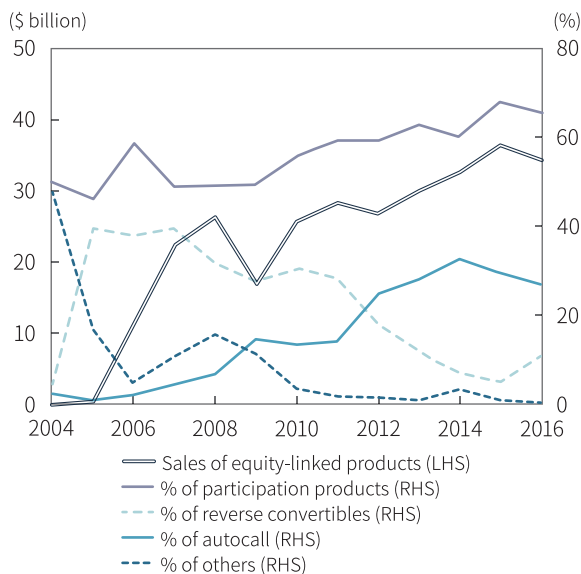
Since the issue of herding towards step-down ELS (in terms of products and underlying assets) came to the fore in 2016, many different types of derivatives-linked securities have been launched only to produce disappointing results, for example, massive principal losses from one derivatives-linked security on overseas interest rates. Some other products—such as the German Heritage DLS and another DLS on Gen2 Partners' bond fund in Hong Kong—used illiquid assets as underlying assets, which led to a redemption delay at expiration. More recently, concerns are rising over distress in some DLS on overseas alternative investment assets (Financial Supervisory Service, January 4, 2021). Also found is inadequacy in post-issuance procedures related to product development and sales.

Taken altogether, using stock indexes for underlying assets offers benefits in terms of stability and transparency. With outstanding investment performance, step-down ELS are expected to continue to remain mainstream in Korea's ELS market despite a slight size decrease expected

4) For details on the classification and payouts of listed structured products, please refer to EUSIPA website (https://eusipa.org/wp-content/uploads/European_map_20200213_web.pdf), and Jang (2020).

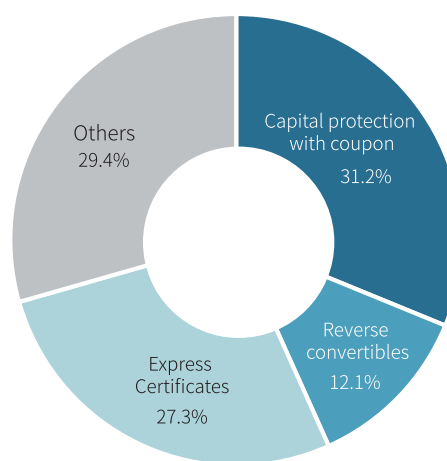
in the near future. Market participants need to thoroughly review what happened during the market unrest, which will surely help improve and stabilize Korea’s ELS market.

Figure 1.
Annual sales of US equity-linked retail structured products



Note: Participation products took up the largest proportion, with the share of autocall on the rise.
Source: Shin (2019)

Figure 2.
% of investment product amount outstanding by category



Note: Investment products totaled 65.5 billion euro as of end-June 2019.
Source: DDV

Emerging issues in derivatives-linked securities market and regulation

With a surge in the volume of derivatives-linked securities including ELS (Figure 3), the market has been faced with some issues related to investor protection and issuer’s hedging activities. The former was first brought up between 2015 and 2016 when concerns were raised about principal losses on ELS products tracking Hong Kong’s Hang Seng China Enterprises Index. This triggered Korea to bolster its investor protection scheme with the pre-investment cooling-off period and mandatory audio-recording. When some DLS products on overseas interest rates reported heavy losses in 2019, Korea’s financial authorities introduced a new classification scheme to introduce a concept of “highly complex” investment products that are subject to tougher rules⁵⁾ such as a new sales process with stronger investor protection, and a cap on the

5) The FSC presented two conditions to be classified as a “highly complex” financial product. The first category includes products whose valuation is difficult for investors to understand due to its linkage to derivatives, etc. The second condition is the maximum principal loss exceeding 20% (Financial Services Commission, December 12, 2019).



size of ELS a bank can sell via a trust. This was also followed by another plan for introducing a new classification standard for derivatives-linked securities depending on product characteristics and risk, and building an integrated information platform (Financial Services Commission, July 31, 2020).

Another problem is concerning ELS hedging from which the issuers incurred losses in 2016. At that time, however, this was not as bad as fueling concerns about systemic risk. During the financial unrest triggered by Covid-19 in 2020, the surging demand for margin on overseas derivatives sent a shock to the FX and money markets, which caused systemic risk concerns. This is mainly because of the large size of step-down ELS, including those on overseas equity indexes. To address the issue by improving securities firm prudence and preventing systemic risk from spreading further, financial authorities introduced tougher liquidity (the Korean won and foreign currencies) and leverage ratios, and established rules limiting the diversification of hedging assets (Financial Services Commission, July 31, 2020).

After a persistent rise, the outstanding issuance of ELS fell about 23% from end-2019 to KRW 37.1 trillion in end-2020 due to the unrest in the ELS hedging market (Figure 3). Figure 4 depicts the changes in the outstanding balance by issuer. Most of the issuers analyzed are located below the blue dotted line, meaning a decline in the outstanding balance in 2020. The decline was particularly evident in large-scale issuers. This is attributable to regulatory impacts and a heavier focus on risk management, which made issuers cut their new issuance despite an increase in early redemption in the second half of the year. As shown in Figure 5, the sizes of early redemption and new issuance tend to move in sync, except for the second half of 2020. During the period, new issuance only reached KRW 18.8 trillion although early redemption was as high as KRW 32.8 trillion due to the recovery in major global stock markets.

Figure 3.
DLS outstanding

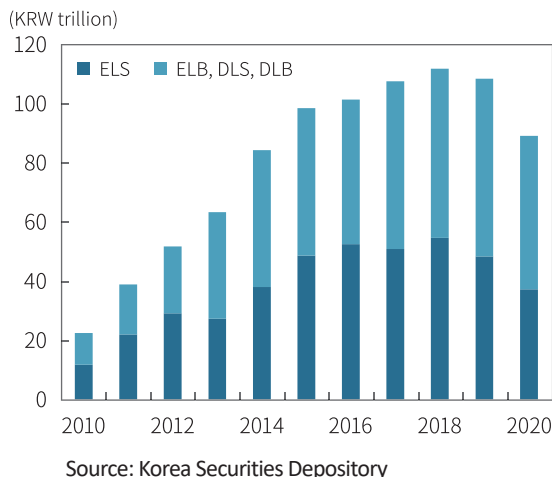
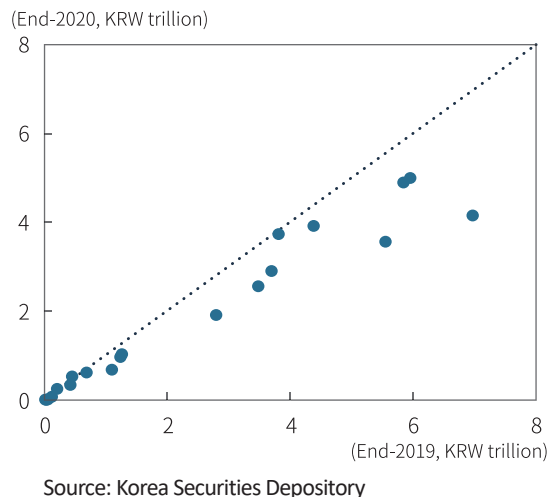


Figure 4.
ELS outstanding by issuer (2019-2020)



ELS market conditions and prop trading revenues

In practice, the increase in the size of ELS issuance and the revenues could impose a significant impact on operating revenues from proprietary trading. The outstanding balance of ELS has been steady around KRW 50 trillion (KRW 37.1 trillion at the end of 2020). Under the assumption of a 2% loss, the size of losses would total KRW 1 trillion.⁶⁾ The losses incurred during the process of managing ELS could be a major factor behind the sluggish prop trading revenues in Korea’s securities firms in 2016, and the first quarter of 2020.

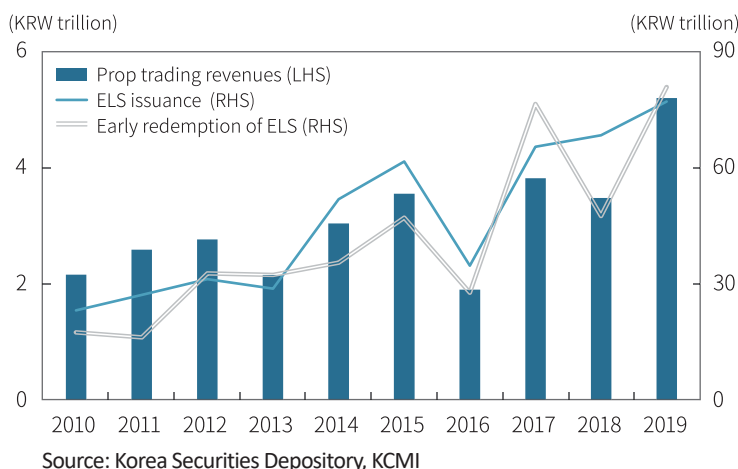
Korea’s ELS mostly have an autocallable, step-down structure. Under the structure, an autocall event occurs if the underlying indexes remain stable, which makes the investment return solid. Newly issued ELS tend to be received well during the period of frequent autocall events. Based on such tendencies, the sizes of early redemption and new issuance could serve as useful variables for ELS payouts or market conditions although it is virtually impossible to accurately predict them. Figure 5 demonstrates the time series data on prop trading revenues in Korea’s securities firms, and the sizes of their ELS early redemption and issuance. The chart indicates a similar trend between prop trading revenues and the sizes of ELS early redemption and new issuance. This evidences that the sizes of ELS early redemption and new issuance related to ELS market conditions are major factors behind prop trading revenues.⁷⁾

6) During the first quarter of 2020, the loss from issuing and managing derivatives stood at KRW 0.9 trillion (Financial Supervisory Service, July 2020). The size of loss from ELS alone is estimated to be larger.

7) A regression analysis was carried out with prop trading revenues being the dependent variable, and the independent variables



Figure 5. Prop trading revenues vs. ELS issuance and early redemption



Conclusion

Going forward, Korea’s ELS market is expected to see a continued trend of step-down ELS on stock indexes being the mainstream. Amid the lingering low interest rate, demand for ELS will be continuously high. This requires market participants as well as financial authorities to come up with differentiated strategies and policies for those products. Admittedly, those products gained popularity as they showed solid performance and were proved effective in preventing losses during a market downturn. However, they are not without tail risk: An abrupt decline in ELS underlying asset prices could incur losses as drastic as direct investments do. Those products certainly have some bright sides such as regulatory improvements made so far for investor protection, and their prevalence and familiarity to investors in the market. Still, however, distributors should closely watch for the inherent investment risk, while exerting effort to continuously monitor investor protection measures. On another front, ELS investors themselves should broaden their understanding about the characteristics and risks inherent in ELS, which should be supplemented by the integrated information platform Korea’s financial authorities are currently working on.

Another issue to be addressed is systemic risk that may arise during the process of managing ELS. Changes in ELS market conditions could push up the volatility of securities firms’ prop

including the size of new ELS issuance (or early redemption), the interest rate change, the return on KOSPI, and the size of equity capital. The result revealed that new ELS issuance (early redemption) and the interest rate change were significant. To increase the number of data, the analysis interval was adjusted to half-yearly data.

trading revenue, which could give a shock to the FX market and the money market as did in 2020. The decreased volume of ELS in 2020 is expected to help stabilize the market. Also necessary is further effort at the individual issuer level for stably managing ELS, for example, fully considering both overall market situations and also issuer-specific conditions. More concretely, it would be a good start to reduce management burden by using domestic stock indexes or less than two underlying assets depending on market conditions. Financial authorities need to enhance their monitoring effort while formulating strategies to cope with another potential market shock.

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