ABSTRACT
Credit Linked Note (CLN) is a kind of structured financial derivative that is booming. Based on analysis and comparisons toward different kinds of CLN products from different countries, the current status of CLN products has been introduced. Specifically, the characteristics (e.g., rates and periods) are discussed, showing CLN has been experiencing significant progress. Subsequently, the potential risks of the CLN are discussed and evaluated from the view of the CLN issuer, reference entity, and eligible investment goods. These results shed light for investors who are going to make an investment or are interested in CLN. According to the analysis and evaluation, CLN can be considered to have a bright future.

Keywords: Credit-linked note, Financial Derivatives, Structured Finance.

1. INTRODUCTION

1.1. Description of CLN

A credit linked note (CLN) is a kind of funded credit derivative consisting of an embedded credit default swap [1, 2]. It enables note issuers to divert potential credit risk to credit investors. There will be no obligation for issuers if a credit event happens. The CLN plays the role of a structured note issued by a particular purpose company or trust.

With the introduction and improvement of CLN by more and more countries and regions recently, it is necessary to view CLN for better investments. In this paper, the CLN products worldwide have been analyzed to investigate the current stable status and the future potential for its market. Moreover, the risks of CLN have also been evaluated to be a reliable guide for the investors.

1.2. Function of CLN

Fig.1 presents a sketch of the principal for CLN. During the transaction of the CLN, the debtor wants to avoid the risks of the investment, i.e., the debtor will conduct a credit default swap with the risk seller, which also works like a special purpose vehicle (SPV). To collaborate with SPV, the debtor has to pay fees for the credit default swap, and the reference entity will be in charge of the responsibility when a credit event occurs. Subsequently, the risks seller will work as an issuer to start issuing the credit-linked note. The investor is also the protection seller, will buy the notes from the CLN issuer.

During the CLN transactions, if no credit event happens, the investor can get the principal and the interest. However, when a credit event happens, SPV needs to compensate the debtor and return the rest of the compensation to the investors. On this basis, the investor will have a loss.

Figure 1 A sketch of CLN Principle
1.2.1. CLN without credit event

Typically, there will be no credit event that happens. In this case, investors will get the maximum return by receiving the fixed coupon as the profit from the investment—besides, the redemption at the nominal amount, which is 100%, in cash.

1.2.2. CLN with credit event

However, unfortunately, if a credit event happens, the CLN transaction will be terminated. In this case, there will be no further coupon payments to the investors. Moreover, investors may not get 100% of the cash redemption but need to be determined by the auction value of the reference entity. According to the Union Bank of Switzerland (UBS), in the worst scenario, the redemption can also be 0 [3].

1.3. The scope of this paper

To make the statement more persuasive, the report of CLN products has been found and briefly analyzed. The potential risk of the CLN transaction has also been evaluated and provided.

The rest of the paper is organized as follows. In Sec. 2, the analysis result of the CLN products around the world will be introduced. Besides, it can be expected that several brief data will be compared to show the future potential of CLN products. In Sec. 3, the potential risks of CLN products are listed. There will be different view degrees to provide risks which can be a good reference for the CLN investors. Eventually, a conclusion will be presented in Sec. 4 to make a brief summary of the whole paper.

2. CLN PRODUCTS AROUND THE WORLD

In 1997, the first CLN was issued in the United States. Until now, the global markets of financial derivatives have become mature with many kinds of financial derivatives services.

CLN also has different extents of development around the world. From this part, the current status of CLN in several countries and regions will be introduced.

2.1. CLN Products in the United States

As introduced in the previous section, the United States is the origination of CLN products. Commercial banks, including JP Morgan, have many products related to the CLN. The current market for CLN is also huge.

Here, a specific product is presented for better illustration. As listed in Table 1, Investec Bank has issued a CLN product at the price of 5 million US dollars on February 17th, 2020, with a period of about five years due June 20th, 2025. According to the report of the product, it shows that the CLN is issued under the Impala Bonds Programme. It can be observed that the CLN product is expected to have a coupon rate of 7.54% per annual, which is relatively higher during the CLN market [4]. The coupon rate shows the mature of the United States on the transaction of CLN products.

<table>
<thead>
<tr>
<th>Table. 1 A sample CLN product in the US [4]</th>
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<tr>
<td><strong>Issuer:</strong> Investec Bank plc</td>
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<tr>
<td><strong>Currency</strong></td>
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<tr>
<td>USD</td>
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</table>

2.2. CLN Products in Europe

In Europe, CLN services have a stable development. The Union Bank of Switzerland (UBS) has several related products. According to UBS (listed in Table 2), if there is no credit event, investors may be able to achieve a 4.75% p.a. coupon with 100% redemption on the redemption date [3]. Comparing to other related financial derivatives, the return rate of the product places on a higher level.

Moreover, Table 3 also shows a sample CLN product in Europe issued by Vontobel Financial Products Ltd, at the price of 25 million CHF on July 28th, 2017, with a period of 6 years. Although it does not have such a tremendous coupon rate, as indicated in Tables 1 and 2, there is also a stable return of 1.25% per annual from this CLN product. In addition, the product allows investors to increase the volume at any time, reflecting the flexibility of the CLN trading. This means that investors can change their spending plans on the CLN product freely related to their various situations [5, 6].

<table>
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<tr>
<th>Table. 2 CLN Sample Products from UBS [3]</th>
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<tr>
<td><strong>Currency</strong></td>
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<td>USD</td>
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<th>Table. 3 CLN Sample Products in Europe [5, 6]</th>
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<tr>
<td><strong>Issuer:</strong> Vontobel Financial Products Ltd, DIFC Dubai (kein Rating)</td>
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<tr>
<td><strong>Currency</strong></td>
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<td>CHF</td>
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*with possibility to increase at any time
2.3. CLN Products in China

On September 23rd, 2016, the National Association of Financial Market Institutional Investors of China (NAFMII) announced the release of the Guidelines on Credit Linked Notes, giving birth to the CLN services in China. The introduction of CLN is expected to enrich credit risk management tools in the interbank market, improve the market credit risk diversification and sharing mechanism, as well as promote the sustainable and stable development of the market [7].

Although the products numbers of credit-linked note services available publicly in China are limited as the CLN has just been set off, the future development of CLN in China will be expected.

2.4. CLN Products in Japan

According to Japan Credit Rating Agency, Ltd., Japan has also developed the CLN services as a financial derivative. The principle of CLN in Japan is similar to the one in other countries. Fig. 2 has illustrated the detailed process of CLN transactions in Japan. It can be observed that there are only slight differences from the CLN transactions in the United States.

![Figure 2 CLN procedures in Japan](image)

The credit rating of those credit-linked products will be conducted by a Japanese credit rating company (JCR) based on their underlying asset, reference entity, and swap counterparty. These products can be the CLN issuer with an appropriate rate to publish related products [8]. Contemporarily, companies in Japan (e.g., Daiwa Securities and SMBC Nikko Securities) have CLN products. Table 4 summarized a past specific product from SMBC Nikko Securities Inc, in Japan. As shown in the table, a CLN was issued from October 11th, 2011, to January 11th, 2017, at 1 billion JPY. According to the report of the CLN products, there was not a specific coupon rate but a fixed rate instead. To some extent, a fixed rate can provide a stable condition of the product. Under the situation, it will be less risky when investors make investments in such CLN products [9].

<table>
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<th>Table. 4 A CLN product sample from Japan [9]</th>
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<tbody>
<tr>
<td>Issuer: SMBC Nikko Securities Inc.</td>
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</table>

<table>
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<tr>
<th>Currency</th>
<th>Issue Volume</th>
<th>Coupon Rate</th>
<th>Initial Date</th>
<th>Due Date</th>
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<tbody>
<tr>
<td>JPY</td>
<td>JPY 1,000,000,000</td>
<td>Fixed</td>
<td>2011.10.11</td>
<td>2017.1.11</td>
</tr>
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2.5. Foreseen from Current Global CLN Products

As discussed in previous sections, CLN is emerging around the world. For the countries that have injected CLN decades ago, they are still developing the products. Moreover, many countries are going to inject the service of CLN to make a more active financial market to encourage more positive investment.

Undoubtedly, the future for CLN products will be great. It can be foreseen that the CLN will be developed better and more mature worldwide in the near future.

3. POTENTIAL RISKS OF CLN

As it is known to all, almost all investments, including CLN, have potential risks to various extents. Hence, it is necessary to learn about these risks before starting an investment.
3.1. The Risks from Reference Entity

For investors, the reference entity will be the riskiest and the most uncertain parts of the CLN transaction. As investors will not directly determine or control the choice of the reference entity, it will be entirely decided by the side of the CLN issuer, which is also the counterparty. Consequently, if the CLN issuer made contracts with a reference entity without suitable qualification or any accidents happen on the reference entity’s end, the entire transaction of the CLN will be influenced. Thus, the investor will eventually be affected by the uncontrolled part [7].

3.2. The Risks from CLN Issuer

The CLN issuer plays a vital role in the whole process of the CLN transaction since the CLN issuer needs to pay a couple of fees to different ends and compensate if necessary. It is also crucial to determine whether the CLN issuer will be reliable enough to pay all the required fees to avoid the happening of credit events [7].

3.3. The Risks from Eligible Investment Goods

The eligible investment goods determine the return value, and there are related risks for the goods. The devaluation of the investment goods will result in a decrease in the achievable return of investors. Moreover, the default of the eligible investment goods will lead to an interruption to the CLN transactions and may cause the risk of credit events [7].

3.4. Results from Potential Risks of CLN

Based on the potential risks of CLN introduced earlier, it can be understood that the happening of each risk will interrupt the regular transaction of CLN. All risks and the interruption to CLN will result in depreciation of the derivatives on investors’ end. More severely, the occurrence of most risks listed above will cause a termination of the CLN transaction as well as severe losses. As a result, the reliability of the parts in the whole CLN transaction process needs to be carefully judged before making the decision.

3.5. Limitations

As most of the reports for the CLN products are not opening publicly, only a limited number of reports worldwide can be referred for the research. It is expected that more CLN reports will be published in the future.

4. CONCLUSION

In summary, the CLN currently has a relatively higher return for the investors, and its risks are controllable from the analysis of state-of-art CLN products. CLN market can be predicted to be very positive and valuable in the near future. The positive status of CLN products over the world can be a signal for the CLN investing. Although there are always risks in the investment, these results offer a guideline for investors interested in CLN.

REFERENCES

[5] Credit Linked Note in CHF auf Gelncore. Available at: https://services.payoff.ch/api/products/CH0372090461/documents/term sheet