BAIL-IN: STRATEGY TO EASE THE SYSTEMIC RISK OF FINANCIAL CRISIS AND ITS IMPLEMENTATION IN KOREA

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ABSTRACT

After the financial crisis in 2008, governments around the world faced the systemic risk of financial institution that had been grown into large scale. ‘Bail-out’, which was pumped by tax payers, was implemented to temporarily mitigate the demolition of systemically important financial institutions (SIFI). However, bail-out strategy was costly and superficial to handle the risk posed by too-big-to-fail (TBTF). To touch the core of financial system and to buff the impact of potential crisis, various strategies have been undertaken by international governments and one most prevailing strategy is ‘Bail-in’.

Bail-in is a statutory power of a resolution authority to restructure the liabilities of a distressed financial institution by writing down its unsecured debt and converting it to equity. Unlike Bail-out that additionally supplies capital from external members to prevent bankruptcy, Bail-in restructures the participants (the financial institutions) to lower the risk of bankruptcy without additional capital supply. Bail-in strategy is intended to cut the systemic risk associated with disorderly liquidation and balance sheet recession by protecting the asset value that would be lost under the deleveraging pressure of price shock.

This paper discusses about rationale of ‘Bail-in’ and its effectiveness as a buffer of financial crisis. Furthermore, the necessity of bail-in in Korea will be rationalized by checking the present situation of Korea financial institutions and comparing other resolution tools, such as P&A and bridge bank. Also in implementing bail-in in Korea, instead of introducing the international standard itself, the paper suggests four design features based on Korea’s unique position.

Keywords: Bail-in, Systemic risk, Disorderly liquidation, Debt rebalancing, financial stability

1. INTRODUCTION

In July 8th, Moody’s revises outlook on Canadian bank system downward. Moody’s report was surprising to people around the world, especially considering that Canada was one of the stable financial market. Their downgrade was rooted in the system called ‘bail-in’.

After the financial crisis of 2008, systemically important financial institutions (SIFI) and government has accumulated uncontrollable amount of debt and they were even more contaminated by the institution’s continual liquidation. As financial institutions accumulate debt, they tend to focus on repaying them, thereby reducing consumptions and investment, which eventually slows down the pace of economic recovery. It is called as balance sheet recession. More badly, the relationship between financial institutions has grown more dependent and intricate after the subsidies they got from government through ‘bail-out’: if one fails, all the others fail, too. All these problems are referred as ‘the systemic risk’ of the market.

To reduce the risks posed by too-big-to-fail (TBTF), various reform initiatives have been undertaken at both national and international levels, including expanding resolution powers and tools: One example is bail-in. Bail-in is not a unique solution that Canada proposed, but has grown into the megatrend to mitigate the systemic risk that all countries are sharing. Canada, U.S, Irish, Greece have taken this law into action and E.U. have resolved to take the law. It is almost inevitable to avert ‘bail-in’; so, every government should focus on their own unique situation to implement bail-in. This paper will analyze rationale and effectiveness of bail-in and its potential risk, to suggest the proper
design considering the current financial situation.

2. DEFINITION AND RATIONAL OF BAIL-IN

2.1 Concept of bailout

Bailout is a situation in which an individual, business or government provides money to failing business in order to take precautions to the consequences that arise from a business’s insolvency. The form of money can be loans, bonds, stocks or cash. The lent money may or may not be required to reimbursement. Another form of bailout is delaying the due date of existing liabilities.

Bailouts have traditionally occurred in industries or businesses that may be perceived as no longer being viable, or are just sustaining huge losses. However, a financing institution, even a country can be the one who need bailouts. If a financing institution needs bailout, the government would buy some distressed-debt of the institution, or buy some shares of the institution in order to prevent the huge damage to the nation’s economy. Most of the bailouts are implemented during the financial crisis of 2008. One of the biggest bailouts is the one proposed by US government, that funded $700 billion put toward bailing out various large financial institutions and those affected by the credit crisis, such as General Motors and Chrysler. The financial institutions have largely repaid the money and the net cost of this bailout may eventually be in the range of $30 billion. There was several other bailouts during 2008, first is occurred when effectively nationalizing mortgage giants Fannie Mae and Freddie Mac, total amount is $200 billion.

2.2 Advent of bail-in

After facing the financial crisis of 2008, the government had to decide between implementing bail-out strategy to revive the financial institutions or letting them collapse. Most of countries choose bail-out which injects money to help SIFI to handle debt payment, usually funded by taxpayers and government. Therefore, continual spending led to large debt of government and bought resentment of taxpayers. Keeping the strategy was even more costly when this safety net created moral hazard.

Also, large-scale of governmental support fed SIFI up to the level of too-big-to-fail (TBTF). Because connections between the institutions have become more intricate and SIFIs are typically holding large position in financial derivatives, insolvency of one bank would lead to continual collapsing chain of entire financial market; SIFI also are too-important-to-fail. However, the stability of SIFI got worse even after the bail-out; its balance sheet and debt composition have also grown bigger under the recent financial crisis.

Bail-out, in this case, is the external and additional capital flow that only rejuvenates the financial institution temporarily, but cannot touch the core of the problem. The core lies in the systemic risk of financial institutions, specifically in their instability caused by holding excessive liabilities and continual disorderly liquidation. To mitigate such systemic risk of financial market, both national and international interested parties coined various reform initiatives; one example is bail-in.

2.3 Definition of bail-in

Bail-in is a statutory power to restructure the liabilities of a distressed SIFI by converting and/or writing down unsecured debt on a “going concern basis.”(IMF 2012, p.6) Unlike bail-out that main agent lies outside of the institution, bail-in is concerned with SIFI’s internal structure and reform.
The idea is to eliminate the systemic risk by giving officials the authority to recapitalize or curtail institution’s liabilities and to restore capital to a level above the regulatory requirement that ensure the institution’s viability.

Banks’ capital structures tend to be determined by the tradeoff between the marginal costs of debt (e.g., bankruptcy costs) and the marginal benefits of debt (e.g., tax incentives, cash flow incentives). To the extent that bail-in increases the marginal cost of debt, its share in total liabilities could fall. Banks might just increase their total capital to lower the cost on senior debt—this is reflected in the renewed interest in contingent capital securities, which is the desired and stable result.

While both bail-in and bail-out is designed to keep financial institutions afloat, bail-in differs from bail-out that no public money is consumed. While bail-out protects creditor on the harm of taxpayers, bail-in protects public sector by liquidizing creditors’ capital. Bail-in strategy’s aim is to have private sector solution.

3. STRUCTURE AND IMPLEMENTATION OF BAIL-IN

3.1 Procedure structure of bail-in

A well-designed and comprehensive framework is necessary to ensure the effectiveness through the whole bail-in implementation. It should contain a number of different qualitative and quantitative thresholds for empowering the resolution authority. And secondly, the design of a bail-in framework should take its potential impact on short-term creditors and other SIFIs into consideration, along with mitigating measures.

*Trigger*

There are two kinds of triggers, insolvency-related triggers and pre-insolvency triggers. In the first case, bail-in power would be triggered when a financial institution is close to being insolvent, while the disadvantage of it is that it may be too late for restoring the bank to viability. The second case is that bail-in could be implemented at an early stage before insolvency actually happen. However it may raise legal questions, which may require compensation to debt holders if the losses are not as large as imagined. The conclusion is that the bail-in power should be triggered at a point that is close to, but before the institution is balance-sheet insolvent. However, the trigger should not be seen as arbitrary, it only activated when the criteria are met.

*Debt Rebalancing*

Financial stability could be achieved by debt rebalancing: either by converting existing debt to equity as part of the debt restructuring or by injecting capital brought in by new shareholders. The following table illustrates how converting existing debt can secure the stability of financial institution. Suppose there is a bank with total assets of $100 billion, financed by deposits ($50 billion), repos and other short-term funding ($20 billion), and long-term unsecured senior debt ($20 billion). Hence, the bank’s equity position is $10 billion. Assume that its capital is eliminated due to a large loss ($10 billion) in its long-term assets. A mandatory recapitalization under a bail-in power would restore the equity position to $10 billion by converting 50 percent of unsecured senior debt into equity, without the bank having to resort to asset sales. In this example, pre-restructuring shares are completely written off, but deposits, repos, and other short-term funding are not affected by the bail-in power,
while restructured senior debt holders are now shareholders (with downside as well as upside potential) (IMF 2012, p.7)

Table 1. Effects of Bail-in on Bank Balance Sheet

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Other Procedure Elements

There are also some important elements in bail-in procedure. One is to make the intervention criteria as transparent and predictable as possible; necessary to minimize the uncertainty generated by discretionary use of bail-in power and to avoid surprising market participants. The role of the judiciary is another important issue. And it is important to minimize the role of the courts – judicial review should not be able to reverse the decision of resolution; it should be limited to review of the legality of the action. Another consideration is the necessity of additional test, such as a “no creditor worse off” test, before the bail-in power is implemented. Also, when bail-in is triggered, it should be applied to not only existing debt but also debt issued after the implementation of bail-in.

3.2 Potential impact of bail-in

The objective of bail-in is to return the viability of the distressed SIFI, allowing it to continue as an open and operating legal entity and leading to the mitigation of the systemic risks related to the insolvency-induced disorderly liquidation. Moreover, by excluding insolvency risks, they can minimize liquidity risks and prevent runs on repos and other contracts. Also, bail-in would reduce the need for assisted mergers, thus provide an alternative to even larger SIFIs.

The removal of the too-big-to-fail premium will help restore market discipline by aligning bank funding costs more closely with risks. This will also help differentiate banks on the basis of their risk-taking activities and reintroduce a level playing field between SIFIs and non-SIFIs. Therefore, by bringing funding more in line with risks, the least viable parts of the banking systems may be ultimately consolidated or simply eliminated, with positive implications for financial stability. On the
other hand, once bail-in succeeds in restoring the viability of a distressed financial institution, it could create value by providing creditors with higher returns, since the loss-given default under bail-in is likely to be smaller than under disorderly liquidation.

Moreover, bail-in could break the observed negative feedback loops between sovereign risks and bank funding costs. The current pressure on sovereigns has exacerbated pricing pressures on bank senior debt, because bail-out can be seen as a government put. Since bail-in implies the termination of such a put option, the correlation between senior bank and government spreads would be reduced, thereby stabilizing the financial institution more.

### 3.3 Potential risk of bail-in

Bail-in, the solution to reduce or even eliminate the implicit too-big-to-fail, has side effects on other sectors in implementing it, because the financial market has grown too big and intricately related.

**Potential risk in bond market**

Bond market acts negatively to bail-in. Since the core of bail-in is to convert debt into equity without additional monetary compensation to bondholders, the value of bond decreases and the risk increases for individual bondholders. Therefore, the yield that investors demand to lend money to financial institutions will increase, finally resulting in permanent increase in interest rate.

Also, the stability of bond market could grow worse after implementation of bail-in. In the unstable bond market like Greece, bail-in can incite anxiety of investors for bond speculation, thereby causing excessive fluctuations or bubble. Increased bond yield and instability of bond market can result in higher funding cost, which acts as a burden for SIFI undergoing bail-in.

**Increased Funding Cost**

Bail-in could have an impact on the funding costs. Besides the effect from bond market with higher yield, banks also face the increase in funding cost by the downgrade of credit ratings. When bail-in is carried out, banks’ senior ratings are expected to be adjusted downwards to reflect the loss of government guarantees. Since the banks’ ratings are based strongly on a degree of public’s expectation built into them, underestimation from the public sector will finally result in downgrade in bank’s rating. In real, Moody’s cuts outlook for 7 major Canadian bank debts to negative over bail-in regime.

Also, the removal of the ratings’ uplift may result in an average downgrade of senior, unsecured debt. For instance, in Europe, JP Morgan estimates the percentage of EU banks shifting to non-investment grade would increase from 2 percent to 33 percent.

**Effects on Liability Structure**

The general trend of increased funding costs could weigh on banking systems currently under pressure. For instance, at the end of 2010, 10 out of 33 of the largest international banks were refinancing themselves as if they were rated at speculative levels. Higher cost of funding over a long period of time could prompt bank managers to seek riskier assets or simply deleverage, resulting in changes in bank’s liability structures. A system-wide bank deleverage could hinder economic recovery
and worsen the systemic risk.

Higher funding costs for unsecured debt could stabilize banks’ liability structures. However, banks could also shift toward short-term and secured borrowing (e.g., covered bonds) to lower funding costs and possibly to circumvent bail-in. In the case of covered bonds, while they bring benefits to banks (lower costs) and investors (protection), they have a potentially undesirable impact on issuer balance sheets and on the efficacy of bank resolution frameworks (including bail-in) and deposit insurance schemes.

*Potential Contagion Risk*

Systemic risk that is ought to be solved by bail-in, can simply be shifted to other part of the financial sector. This contagion of risk is caused by the high co-relationship between financial institutions. A large share of debt instruments, including senior debt, is purchased by other financial institutions, although their share has steadily declined from close to 20 percent (on average) in 2007 to 17 percent in 2010 for the Euro area banks and from 15 percent to 12.5 percent during the same interval for U.S. banks. (IMF 2012, p.11) Therefore, by applying the bail-in power, debt cutoff will have potential effects on the balance sheets of other bank.

Cyprus, which got the second bail-out deal on March 25th to bail-in the creditors of its two biggest banks- the Bank of Cyprus and Laiki Bank - is the victim of such contagion. It was the bail-in of Greek government, restructuring it debt, led to the problem faced by the Cypriot banks, which were big holders of Greek bonds. By the restructuring bond collapsed and as Cyprus’ finance minister Vassos Shiarly said, "Effectively because of our close proximity (to Greece) we were called upon to pay a very heavy price because of our financial connection, contagion of risk forced a country into asking for euro aid that it would otherwise not have needed.

*Negative implication for insolvency*

Individual banks and the banking system are vulnerable to bank runs and banking panics, which can be caused by weak fundamentals or self-fulfilling shifts in market sentiment.(Diamond and Dybvig 1983, pp.405-407) The aim of bail-in was to enhance the confidence of investors that market believes the viability of a distressed SIFI would be restored with the recapitalization under a bail-in power, and by this, to construct a positive chain actions to stabilize finance market. However, if the use of a bail-in power is perceived negatively by the market as a sign of insolvency, bail-in could trigger a bank run by creditors.

This bank run under the bail-in process is more destructive than that of normal, because the bondholder, presuming the approaching insolvency of bank, will obstinately refuse to convert liability or to follow the bail-in. As a result, bail-in fails by itself; no restructuring takes place, but bankruptcy happens and deposit insurance and bail-out should be implemented to mitigate the situation. The severity of this situation lies in that the bankruptcy could not have been taken place, and is not rooted in real instability but in people’s mind believing bail-in as instable.
4. RESTRUCTURED BAIL-IN STRATEGY IN KOREA

4.1 Previous strategy to overcome 2008 financial crisis in Korea

The financial crisis of 2008 had bad influence on financial markets in Korea and a sense of crisis for financial markets upsurge. As seen before, the government of Europe and U.S. actively implemented bail-out strategy for each financial institution distressed by crisis. But Bail-out wasn't offered to each financial institution in Korea. In Korea, the supports for financial institutions were actualized through supplying liquidities to entire financial markets with a global liquidity easing cooperation.

The way of supplying liquidity to financial markets in Korea was divided into methods using bonds and methods using other devices. Above all, one of the methods using bonds was realized through RP(Repurchase Agreement), which is an object of the open market operation. The bank of Korea decided to enlarge target institutions and securities of RP. At December 2008, the Bank of Korea appointed 12 additional securities firms as target organizations of the RP purchasing trade to diversify way of supplying the liquidity. (IMF 2012, p.7) And to extend a range of securities for RP trading, bank bond, special bond (2008. 10), and the bond of Housing finance corporation (2008. 12) were added to existing government bond and currency stabilization bond. (Baek 2010, pp.45-47) At the same time, there is no question that the Bank of Korea directly increased purchase of RP as the liquidity easing policy. Except for increasing purchase of RP, currency stabilization bonds of $70 million were repurchased midway at 2008 and the government bonds of one billion dollar were directly purchased. Through these measures, financial institution suffering from poor financial condition can be supported half of amount of investment to the extent that it didn't exceed 5 trillion won. (Baek 2010, pp.45-47)

Besides the adjustments of credits, the Bank of Korea twice increased aggregate credit ceiling, which settles a ceiling for each bank to adjust the market liquidity when the Bank of Korea aids banks as policy financing, from $6 billion to $10 billion. (Baek 2010, pp.45-47) Through increasing the aggregate credit ceiling, each bank could receive more loans from the Bank of Korea in the financial crisis. Also adding the interest for reserve deposit was introduced in order to increase profitability and expand capability for loan. At 2008 Dec. 11th, the banks which had reserve deposit were provided with $5 million as interest. In this way, it is presumed that bank’s ability to give credits was extended to four billion sixty hundred million dollar. (Baek 2010, pp.45-47) These measures show different forms, but they commonly mean supports for financial institutions by increasing the liquidity in financial markets. This was because the banks in Korea suffered the financial crisis less seriously than financial institutions of U.S. and Europe. Thus the Bank of Korea didn’t have need to implement the bail-out strategy to Korea banks. However, there is a possibility that the matters similar with U.S. and Europe would happen, as supplying the liquidity to the financial markets uses the government finance like the bail-out strategy. Also a possibility of systemic risk still remains unsettled perfectly.

4.2 Current position and structure of bank and financial institution

The financial markets of Korea seemed to overcome crisis of 2008 successfully through the direct supply of the liquidity. In this view, the Bank of Korea has kept financial circumstances favorable for many banks since 2008. And many people are saying that Korean banks don’t have any
problem externally despite the past financial crisis. But there exists serious problems in core; management soundness of banks is worsening recently in profitability and asset quality. The main reason of this situation is poor business environment caused by low interest economic condition. In detail, the profitability is mostly affected by spread between deposits and loans and the non-performing loan, which is caused by continuous insolvency of main companies of shipbuilding and construction industries like STX, Ssangyong, Byucksan, is directly worsening asset quality problems.

First, the profitability becomes objects of attention. Net profit during the term, which means absolute quantity of the profitability, shows downward tendency. Net profit during the term decreased from $6.7 billion (2012) to $4.5 billion (2013). This amount of falling is as many as 31.8%. Return on Asset (ROA), which is a representative profitability index of banks, is also decreasing from 0.54% (2012) to 0.37% (2013). (Lee 2014, pp.55-68) At the same time, structural rate of return, which means the maintainable ability yielding the profit, drops as many as 1.03% from 1.24%(2012). (Lee 2014, pp.55-68) The primary factors of this deterioration are a decline in the interest gain caused by decreasing the spread between deposit and loan interest and the falling of one-shot dealing gain of stocks.

**Picture1: The worsening profitability of Korean banks**

![The worsening profitability of Korean banks](source)


Second, the asset quality of Korean banks is going steadily downhill. The ratio of sub-standard loan increases from 1.28% (2012) to 1.7% (2013). This is because the large companies in shipbuilding and construction industries sustainably have made new non-performing loan, despite bank’s effort to dispose non-performing loan disposal. Recently, a workout program of the creditor banks and a corporate rehabilitation proceeding of the court is accelerated by slumps of the corporate performing. For this reason, the amount of the distressed debts of banks is expanding. Before the crisis of 2008, that was just $10 billion, but the average annual amount has been around $30 billion since 2009. (Lee 2014, pp.55-68)
Until now, BIS capital adequacy ratio of Korean domestic banks normally remains at about 15%.(Lee 2014, pp.55-68) Accordingly, it seems that the short-term finance burden like decline in profitability and capacity of loss absorption would not hinder management soundness of banks seriously. However, there is a chance that management soundness of banks will drop considering business restructuring will be continued for some time. Actually, the credit risk of companies is still maintaining high level and the asset quality is worsening on the borrowers of the large companies. Therefore, the particular attention must be paid to the soundness of banks.

4.3 Comparison with other resolution tools

As shown in 4.2, the soundness of the financial institutions isn’t fine in recent years. So the financial markets of Korea should prepare for the worst beforehand. There are a lot of resolution tools as a coping plan for this risk. Except for the bail-out and the bail-in, P&A and Bridge Bank can be suggested as the representative way of resolution.

First, P&A (purchase and assumption) transaction or resolution is one in which a healthy bank or group of investors purchase some or all of the assets and assume some or all of the obligations, of the insolvent bank. In principle, an accepting bank has an option to choice the asset in the limit of the debt takeover. Therefore, the healthy bank embraces only fine assets and liabilities and distressed debts are left to the failing financial institutions. At the same time, the healthy bank doesn’t have to employ the workers of the insolvent financial institutions. For these reasons, the burdens of acceptors are smaller than the burdens of the general M&A and a possibility that the acceptors become insolvent together rarely happens.

Second resolution tool is the Bridge Bank. Bridge banks are temporary institutions created by the resolution authority to take over the operation of the failing institution and preserve its going concern value, while the resolution authority seeks to arrange a permanent resolution of the failure. The bridge bank tool allows the resolution authority to bridge the gap between an institution’s failure and the time when a suitable purchaser has been found. These bridge banks are operated temporarily. And they will be closed immediately, if the resolution works of failing bank ends. This tool mainly used for large and complex organizations, where due diligence examinations of assets and

![The worsening asset quality of Korea banks](image-url)
liabilities by a potential purchaser can take time and where it is important to keep up critical services, such as payment and infrastructure services provided the firm. Using the bridge bank, the financial market can avoid the sudden bankruptcy and afford to deal with the distressed financial institutions.

These two resolution tools weren’t new way in Korea. P&A was mainly used to resolute the distress financial institutions in IMF crisis. The IMF crisis of Korea made not only many general companies but also financial institutions hard to survive. Because the debts of these distressed banks exceeded the entire wealth, the possibility to revive the distressed banks didn’t exist. So, to overcome this crisis, Financial supervisory commission implemented P&A that five healthy banks (Kukmin, Housing& Commercial, Shinhan, Han-min, Hana bank) which had higher BIS ratio than 9% assumed the fine assets and debts of five insolvent banks(Dae-dong, Dong-nam, Dong-hwa, Kyung-gi, Chung-cheong bank) which had lower BIS ratio than 8%. (Shin 1999, pp.22-24) Each P&A was implemented considering that accepting banks should be suitable to the distinctive quality of the insolvent banks and the condition of the comparative advantage. And the bridge bank was the principal way to solve the problem of systemic risk at the situation of the saving mutual banks insolvency in Korea. The situation of the saving mutual banks happened because the accumulation of saving bank’s had been deepened by the moral hazard of managers and the extreme dependence on the real estate markets. To solve this insolvency problems, Korea Deposit Insurance Corporate (KDIC) assumed the assets and debts of the insolvent banks and financed all necessary funds to construct the bridge banks. And the KDIC directly operated these bridge banks like Yenarae, Yesung, Yeju to maintain the business of the mutual saving banks and prevent the systemic risk. And the disposal of these bridge banks is maintaining. (Lee 2011, pp.4-5). But these two resolution tools have had obvious limitations in comparison to the bail-out strategy, considering the examples of Korea. First, they have higher execution cost than the bail-out strategy. Though the fine debts would be asset of the accepting banks in P&A, the distressed debts left by healthy bank became the responsibility of government finance. Because the cost to construct the bridge banks also aggravated government finance deficit in the bridge bank strategy, these two tools commonly meant burden on the taxpayers. Also in an aspect of the time cost, the bail-in strategy establishes superiority over other resolution tools. Because bail-in does not involve a transfer of business operations, it will not require time of the legal due diligence by the resolution authority prior to the resolution, which is necessary in a P&A to assess the practical and legal effects of the transfer on critical contracts and business functions. And in the case of the bridge bank, there was the case that the process to dispose the bridge banks which finished the entire operation will make slow progress. Second, P&A and bridge bank strategies can’t be the ultimate solution of systemic risk. These two resolution tools just aimed at a disposal of the distressed financial institution. So they superficially dealt with the systemic risk and couldn’t find a solution to the source of the systemic risk. In the end, these two resolution tools have had the defeats similar with the bail-out.

4.4 Restructured bail-in for Korea with risk mitigation strategies

In the previous chapters, the appropriateness of bail-in comes to the front mostly through Korean domestic factors. In addition to these domestic factors, the international pressure for the bail-in also has enlarged. This pressure results from Financial Stability Board (FSB), which is an international body that monitors and makes recommendations about the global financial system. The member
countries of FSB, which include Korea, should fulfill Key Attributes of Effective Resolution Regimes for Financial Institutions until 2017. Key Attributes of Effective Resolution Regimes for Financial Institutions consists of many factors, but the most important material is bail-in. For such a reason, Korea can’t be turned over, when Korea also should fulfill international standards of the bail-in with the flow of global regulations. However, to implement the bail-in without any change from international obligatory standards or the system of other countries can’t help raising a problem. Therefore, the proper application for Korea should be selected, considering the limits of bail-in itself, the environment of Korea financial markets, and the different laws of resolution for the financial institutions. Following four ways can be applied to the bail-in for Korea.

**Gradual introduction from contractual bail-in to statutory bail-in**

Bail-in can be divided into two types. One is the contractual bail-in, which mainly uses contractual contingent capital based on private contract, and the other is the statutory bail-in, which is compelled legally by the decision of resolution authorities. Before directly introducing statutory bail-in, it is desirable that the authorities introduce the contractual bail-in first and observe closely the financial markets implementing contractual bail-in. Because the issue of the contingent convertible bonds (CoCo bonds) is limited now in Korea, several additional measures necessary for vitalization of the contingent convertible bonds must be demanded to implement the contractual bail-in. Above all, the policy making authorities must enable many financial institutions to issue CoCo bonds through revisions of act on the structural improvement of the financial industry. Furthermore they must make the issue of the CoCo bonds obligatory for SIFI in the limit to maintain the soundness of capital. Through this introduction of the contractual bail-in, the contingent capital will absorb the losses as the first step. If it is not enough, the debt-equity swap by statutory bail-in can be used as the second step.

**Setting the object securities of bail-in**

When bail-in strategy is really implemented, there is an incentive to raise fund through securities which isn’t the object of bail-in. This incentive cause potential risk like effects on the liability structure. Consideration could therefore be given to imposing minimum requirements upfront on banks for issuing unsecured debt (as percent of total liability) or setting limits on the encumbrance of assets. In this two measures, a minimum requirement on unsecured senior debt might be more effective and easier to monitor and implement than a limit on secured debts, because the market could work around encumbrance limits through securitization. These measures would help reassure the market that bail-in would be sufficient to recapitalize the distressed institution and restore its viability. Besides these measures, the ultimate solution for effects on the liability structure is to include the maximum range of securities. The important point is the deposits. If the deposits become the object of bail-in, the side effect like collisions with the deposit insurance system, the backlash of a depositor, violating rights and interests of the financial consumers will happen. Because the expected side effect is excessively big, it is right to exclude the deposits from bail-in

**The preemptive Restructuring of financial institutions**

In Korea, the notion of the preemptive restructuring doesn’t exist, because the distressed financial institutions are always resoluted after the insolvency. In this process, the burden of resolution has been concentrated on the government or the policy bank. This has made imbalance between financial institutions and governments, which causes serious problems of the moral hazard. Therefore,
the preemptive restructuring of the financial institutions is important to manage systemic risk fundamentally. The preemptive restructuring means to choose pre-insolvency triggers between insolvency-related triggers and pre-insolvency triggers. Naturally, the question will be what the pre-insolvency triggers are. The trigger must be based on a combination of quantitative and qualitative assessments, such as a combination of a breach of regulatory minima like minimum capital adequacy ratio and concerns about the distressed institution’s liquidity problems. The resolution authorities must judge the time of the bail-in on the basis of these criteria. Finally, the establishment of the preemptive restructuring of the financial institutions can not only minimize the reckless management and the pain of interested parties caused by restructuring but also solve problems of the moral hazard to fill insolvency of the financial institutions through using tax.

*Use of Buffer fund*

There is a way to combine further measures to bail-in. In a case that all losses of banks can’t be settled by bearing a loss, so the fund supports are necessary to block the system risk, the bail-in alone can’t find a solution for this case. In the case of EU, they have overcome this situation using Single Bank Resolution Fund, to which the banks donated beforehand. This Single Bank Resolution Fund are called as buffer fund, which are used to supply liquidity in the situation of the crisis after being accumulated in normal days. Because the buffer fund is accumulated by bank itself, it can solve the moral hazard problems like bail-in strategy. At the same time, they can become a solution for government finance deficit problem.

5. CONCLUSION

Until now, this paper discusses about rationale of Bail-in and its effectiveness as a buffer of financial crisis. Furthermore, the necessity of bail-in in Korea is rationalized by checking the present situation of Korea financial institutions and comparing other resolution tools, such as P&A and bridge bank. Also in implementing the bail-in in Korea, instead of introducing the international standard itself, the paper suggests the four design features based on Korea’s unique position. In short, the main purpose of this paper is to notify the unfamiliar definition and process of the bail-in and to propose the bail-in suitable for Korea. In Korea, the effort to implement the bail-in is maintaining. Actually, TF to reform resolution system for financial institutions was instituted with the Bank of Korea and Financial Services Commission, including non-government expert like university professors, at Feb, 2014. And this TF will discuss the introduction of the bail-in in detail after the G20 summit meeting of Nov, 2014. If this paper is referred to in this situation, it is expected that more desirable introduction of bail-in will be possible.
REFERENCE LIST


