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Effects of Revolving Doors in the Financial Sector: Evidence from Korea*

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"The revolving door practice, i.e. the recruitment of ex-regulators by regulated firms, has long been subject to criticism in Korea. Despite its importance, however, there are few studies on the economic impact of the revolving door. By applying a unique dataset of financial firms in Korea, it was found that the practice does not improve the financial soundness of the recruiting firms. Additionally, it was observed that firms, shortly after hiring former regulators, are less likely to receive regulatory penalties. This result appears to be associated with Korea's financial supervisory system, wherein the majority of supervisory tasks are concentrated within a single agency."

Ⅰ. Introduction

Despite the long standing and sweeping criticism over the practice, the majority of financial firms continue to hire ex-regulators as executives.[1] This 'revolving door' trend can also be witnessed from corporate governance data from 2011 to 2016, in which 16.3% of incumbent

Despite the public's criticism, there have been few empirical studies on the effects of the 'revolving door' practice.

* Based on Hwang, Sunjoo and Rhee, Keeyoung, "Effects of Former Financial Bureaucrats Employed as Executives of Financial Firms on Their Business Operation," in Jaehoon Kim, ed., A Political Economic Study on Korea's Financial Supervisory System, Research Monograph, 2017-09, Korea Development Institute, 2017 (in Korean).

1) Based on the analysis of documents submitted by financial institutions, lawmaker Kim Ki-Shik, a member of the 19th National Assembly, claimed during an inspection of government offices in 2014 that of the executives in publicly-owned financial institutions and their affiliated financial companies (34), about 40% were from political groups or government offices. Moreover, lawmaker Je Youn-kyung of the 20th National Assembly, after analyzing the submitted data, "Current Status of Financial Company Executives with a Bureaucratic Background," stated that from 2008 to 2016, 33.3% of all listed executives in financial firms were from financial government authorities, including the Ministry of Economy and Finance (formerly, Ministry of Strategy and Finance), Financial Services Commission (FSC) and Financial Supervisory Service (FSS).

executives have a past career in public institutions and 66.2% served in financial regulatory agencies.[2)3)] Many critics argue that the prevailing revolving door practice deters Korea's financial development.[4)] Accordingly, by responding to the public's criticism, lawmakers are pushing harder to tighten laws and regulations on the recruitment of former financial officials by private financial firms.[5)]

In contrast to the criticism, related literature do not conclude that the practice always entails negative economic consequences. On the one hand, executives with past experience as a financial regulator could use their expertise, accumulated during the years of public service, to improve the financial soundness of hiring firms. And on the other hand, the revolving door practice could be socially undesirable if the financial firms enjoy unjust benefits by exploiting personal connections between the hired ex-regulators and incumbent regulators.

This study provides analysis of the economic impact of the revolving door for financial regulators in Korea.

In this regard, it is necessary to analyze the economic impact of the revolving door practice; for financial regulators specifically. In spite of its importance, however, only a handful of papers on Korea's revolving door practice can be found. To fill this gap, this study uses a unique dataset of financial companies in Korea to empirically analyze the economic effects of ex-regulator employment by regulated financial firms. To this end, two contrasting hypotheses on the revolving door are presented and an empirical analysis is conducted to find which of the two is more statistically reliable. Lastly, the policy implications are discussed by comparing the findings to previous literature.

Ⅱ. Two Contrasting Views on the Revolving Door

As discussed above, there may be both positive and negative aspects to financial firms hiring former financial regulators. Previous studies have attempted to explain the effects with the following two opposing hypotheses.

The 'expertise hypothesis' argues that former financial officials can contribute to improving the risk management of recruiter-firms due to the officials' expertise.

According to the 'expertise hypothesis,' former financial officials, who are equipped with expertise and experience, can play an important role in the risk management of the recruiting firm (Che, 1995). During their time at the regulatory authorities, financial officials develop the skills and knowledge needed to maintain the financial soundness of regulated firms. Accordingly, by being employed by private firms after retirement, officials can meaningfully contribute to improving the stability of individual financial firms and thus, the stability of the overall financial system.

The 'collusion hypothesis' claims that financial firms recruit former officials to seek unduly gains, such as evading regulatory enforcement.

On the contrary, the 'collusion hypothesis' views the revolving door as a form of side contract that private firms offer to financial authorities for regulatory capture (Laffont and Tirole, 1991). For instance, incumbent financial supervisors may turn a blind eye to supervised firms' poor risk management in exchange for an executive position at the firms upon retirement.

2) Financial authorities here refer to the Ministry of Economy and Finance (formerly, Ministry of Strategy and Finance), Financial Services Commission (FSC), Financial Supervisory Service (FSS) and Bank of Korea (BOK).

3) Hwang and Rhee (2017).

4) The Seoul Economic Daily, "High-handed Appointment of Board Executives Lacking Expertise Posing Obstacles to Financial Industry Development," Dec. 22, 2016.

5) To deal with the issues arising from former financial officials joining financial firms, lawmaker Park Yong-jin and ten other members of the National Assembly submitted an amendment bill in Dec. 2016 with respect to the Act on Corporate Governance of Financial Institution.

Additionally, financial firms may employ ex-regulators in order to utilize their connections to unduly avoid regulatory penalties. If incumbent regulators are captured through the revolving door, the financial authorities cannot effectively monitor whether regulated firms are prudently managing their financial risks. This will not only adversely increase the uncertainty of the overall financial system but also damage the welfare of financial consumers.

These two contrasting views imply that policymakers should carefully evaluate the true effect of the revolving door practice before taking action. For instance, if the positive effects outweigh the negative, countermeasures could hinder financial firms from enhancing their risk management by importing valuable human resources from the public sector. The following sections analyze whether the recruitment of ex-regulators subsequently leads to changes in risk management performance and probability of regulatory action against the hiring firms, and discuss the related policy implications.[6)]

III. Changes in Risk Management Performance

Has the appointment of former financial officials by private firms actually improved their risk management performance? The expertise hypothesis states that such ex-regulators contribute to improving financial soundness by exerting the knowledge and experience acquired from their public service. If this is true, the hiring firms should see the improvements in the performance indicators for risk management after recruiting ex-regulators.

Among the risk management indicators, focus was placed on the return on risk weighted assets (RORWA), where the risk weighted assets are a measure of a firm's total financial risks. Merely reducing the financial risks should not be deemed as a successful risk management strategy because lowering the risks usually comes with smaller returns according to the low-risk-low-return principle. Rather, firms are viewed to be prudently managing their risks if they generate relatively high returns while controlling their risks. On this front, this study uses RORWA as a key variable of risk management performance of financial firms.[7)]

The statistical analysis uses a dataset based on the financial statements of regulated financial firms in 2011-2017. The resumes of all executives at financial firms were also collected, including chief executives, managing directors, outside directors, auditors, etc. If the sample executives have work experience at a public institution, the exact dates for when they served before joining the board of financial firms were marked. In particular, focus was given to the effects of hiring former financial officials from the Financial Supervisory Service (FSS), Financial Services Commission (FSC), Ministry of Economy and Finance (MOEF, formerly Ministry of Strategy and Finance) and Bank of Korea (BOK). <Table 1> shows whether and how the RORWA of the sample firms changes after the appointment of ex-regulators as executives.

The empirical analysis found no indications of improvement in financial risk management performance after the appointment of former financial officials.

6) Refer to Hwang and Rhee (2017) for further details on statistical analysis methodology and source materials.

7) Even after taking into account other indicators, like the non-performing asset ratio, which reflect the risk management conditions of financial firms, the analysis found no indication of improvements in the financial soundness of financial companies that appointed former financial officials as executives.

<Table 1> Changes in Financial Risk Management Performance

Category	FSS	FSC	MOEF	BOK
3 months after appointment	No changes observed	No changes observed	No changes observed	No changes observed
6 months after appointment	No changes observed	No changes observed	No changes observed	3.94%p* increase

Note: 1) The no. of observations totals 799 samples (61 firms) and control variables include the total no. of executives, total assets, asset growth rate, long-term corporate value indicators, etc. in the previous quarter. Company- and year-fixed effects are applied.
2) The RORWA average of samples for the sample period is approximately 6.35%.
3) 'No changes' means that there were no statistically significant changes observed in the pertinent quarter of appointment.
4) One asterisk (*) implies that the statistical significance is at the 10% level.
Source: Hwang and Rhee (2017).

There were no significant changes in the risk management performance of firms hiring ex-regulators while the firms appointing former BOK officials exhibited some progress within six months after appointment.[8)]

Ⅳ. Changes in the Probability of Regulatory Action

This section analyzes whether financial firms are less likely to experience regulatory enforcement after hiring former financial officials as executives. Financial supervisors are authorized to require financial firms who are improperly managing their risks to take corrective action, and even impose penalties on those violating financial regulations. If a financial firm is less likely to face regulatory penalties after the appointment of a former financial official, even if their risks are not lowered significantly, the revolving door practice can be interpreted to be more associated with the collusion hypothesis.

For the empirical analysis, additional information was gathered (posted by the FSS) on the regulatory penalties and corrective action orders imposed on financial firms, executives or employees during 2011-2017. <Table 2> illustrates whether and how the probability that financial firms experience regulatory actions varies over time with the previous careers of the ex-regulators hired by the firms.

<Table 2> Changes in the Probability of Regulatory Action

Category	FSS	FSC	MOEF	BOK
3 months after appointment	16.4%** decrease	No changes observed	No changes observed	No changes observed
6 months after appointment	No changes observed	No changes observed	No changes observed	No changes observed

Note: 1) The no. of observations totals 745 samples (51 firms) and control variables include RORWA, non-performing asset ratio, capital adequacy indicator, the total no. of executives, total assets, asset growth rate, long-term corporate value indicators, etc. in the previous quater. Company- and year-fixed effects are applied.
2) The average for the sample period is approximately 26%.
3) 'No changes' means that there were no statistically significant changes observed in the pertinent three-month term of employment.
4) Two asterisks (**) implies that the statistical significance is at the 5% level.
Source: Raw data from Hwang and Rhee (2017).

8) It should be noted that the statistical significance of the analysis results confirmed in this study was consistent with another analysis wherein the sample period was extended to one year.

The analysis shows that financial firms are approximately 16.4% less likely to receive regulatory penalties shortly after recruiting former FSS officials, substantially higher than when they manage their financial risks in general. For example, Hwang and Rhee (2017) showed that a 1%p reduction in the non-performing asset ratio by financial firms is associated with only a 2.3% decline in the probability of regulatory action—just one seventh of the overall effect from the appointment of a former FSS official.[9] However, the effect of hiring ex-FSS officials does not continue into the second quarter after recruitment, implying that the effect of the revolving door practice is short-lived.[10]

The probability of receiving regulatory action after hiring ex-FSS regulators as executives decreases 16.4% and it is statistically significant, while the probability does not change significantly after hiring ex-regulators from other institutions.

Unlike the case for the former FSS officials, no statistically significant changes were observed in cases for recruiting ex-regulators from the remaining financial regulatory authorities.[11]

Ⅴ. Interpretation of the Analysis Results

The results illustrated in <Table 1> and <Table 2> reveal that the probability of regulatory action decreases after recruiting a former FSS official while no improvements in financial risk management were observed. However, some may argue that it is too hasty to conclude that these results imply the existence of collusive ties between FSS officials and private financial firms. In fact, it is possible that these firms can significantly reduce their non-financial risks that are not captured by RORWA, such as personal information leaks of consumers and mis-selling of financial products, by utilizing the expertise of former FSS officials.

It is possible that executives who were formly in the FSS can help manage the non-financial risks. But, the empirical analysis found no indications of such a contribution when the probability of regulatory action decreased.

To see more precisely, an analysis was conducted to see whether regulatory operational risk indicators[12] change over time after hiring former FSS regulators. The results in <Table 3> show that financial firms hiring ex-FSS officials do not exhibit statistically signifiant changes in operational risks at the same time as when the probability of receiving regulatory penalties is reduced.

Nevertheless, this does not completely rule out the possibility that financial firms utilize the former FSS officials' expertise to improve their management of non-financial risks. Indeed, it is possible that the regulatory operational risk indicators used in the analysis may not be an adequate proxy for the actual level of non-financial risks to which each financial firm is exposed to. In order to reach a more accurate conclusion, it is necessary to gather more relevant quantitative information to analyze whether executives with a background at the FSS actually contribute to managing the non-financial risks or their employers evade certain regulations through inappropriate lobbying.

9) Hwang and Rhee (2017).

10) These results can be interpreted as follows. The risk management expertise of former financial officials is human capital and will likely remain so for a considerable period after their retirement. In comparison, influential power rooted in personal connections with incumbent government officials will likely weaken relatively quickly. So, it is not inconceivable to think that the effect of alleviated restrictions after former FSS members join the firm could be attributed by their personal ties with incumbent supervisory officials. However, the same interpretation could be true for the expertise hypothesis. For instance, the effect of lowered regulatory action was observed for a short period because the efficacy of the accumulated expertise of former officials quickly weakened due to a rapidly changing environment at home and abroad after the global financial crisis.

11) The statistical significance of the analysis results mentioned in this study remains consistent with another analysis wherein the sample period was extended to one year.

12) Suggested by the BIS and the FSS.

<Table 3> Changes in Operational Risks in Financial Firms

Category	FSS	FSC	MOEF	BOK
3 months after appointment	No changes observed	No changes observed	No changes observed	No changes observed
6 months after appointment	Decrease*	Increase*	Decrease*	Increase*

Note: 1) The no. of observations totals 789 samples (61 firms) and control variables include the total no. of executives, total assets, asset growth rate, long-term corporate value indicators, etc. in the previous quarter. Company- and year-fixed effects are applied.
2) 'No changes' means that there were no statistically significant changes while 'increase/decrease' means there were statistically meaningful increases/decreases in the variable after appointment.
Source: Raw data from Hwang and Rhee (2017).

VI. Comparison of the Results to Those in the US

The economic effects of the revolving door practice in Korea can be summarized as follows. First, there is no evidence that financial firms see any improvements in financial risks after hiring former officials. Second, a sharp decrease can be observed in the probability of receiving regulatory penalties within three months of hiring former financial officials. However, such an effect quickly disappears afterwards.

This finding is somewhat in contrast to previous studies conducted in the US, whose results mostly lean towards the expertise hypothesis. For instance, Shive and Forster (2016) find that US financial companies that hired former financial officials achieved noticeable improvements in their financial soundness but no significant changes in the probability of regulatory action.

However, it is very difficult to tell what exactly causes this discrepancy, because there are too many factors determining the differences between the respective financial regulatory systems in Korea and the US. Nonetheless, some useful policy implications can be extracted from the analysis by comparing the structural difference of financial supervisory systems of the two countries.

In the US, financial companies with former financial officials as executives exhibited noticeable improvements in their financial soundness while no meaningful changes were found in the probability of regulatory action.

One noteworthy difference between the financial regulatory systems is the concentration of regulatory authorities. The financial supervisory system in the US exhibits a decentralized structure in which the supervisory tasks are distributed to multiple authorities with overlapping jurisdictions. For instance, the Federal Reserve Bank (FRB), Office of the Comptroller of the Currency (OCC) and Federal Deposit Insurance Corporation (FDIC) share the authority of prudential regulation of banks, according to their jurisdictions and sub-sectoral types of business in banking. In Korea, however, the majority of the financial supervisory tasks are delegated to the FSS, which results in a highly centralized supervision system. In particular, the FSS is authorized to monitor business operations and risk management of regulated financial firms and collect the related information. Moreover, the FSS undertakes the major tasks of enforcing corrective actions or regulatory penalties when the malpractices of regulated firms are detected.

In relation, some previous papers such as Laffont and Martimort (1999) point out a potential hazard of centralizing the regulatory system: the regulatory staff members are more easily captured by the regulated groups if the system is centralized. The division of the supervisory roles among multiple authorities is naturally associated with mutual checks and balances,

leaving little room for each of the authorities to collude with regulated firms. Additionally, the regulated firms have little incentive to seek collusion because it requires a prohibitive amount of monetary (or non-monetary) transfers to capture all of the regulatory agencies.[13)]

In this respect, it is of great importance to carefully examine whether the highly centralized financial supervisory system in Korea could adversely incentivize financial firms to collude with regulators. If yes, policymakers may have to reconsider to maintain the current financial supervisory system. Where necessary, a shakeup of the current system may have to be on the table, wherein multiple agencies share the accountability of financial supervision. However, it is also important to take into account the ensuing uncertainty resulting from the complete reorganization of the financial supervisory system. From this aspect, a short-term measure may be implemented to provide disincentives for regulatory capture without a substantial change in the financial supervisory system.[14)] One example is to give all regulatory agencies free access to information on financial (and non-financial) soundness of regulated financial firms, which no one but the FSS has at present. Transparency in information sharing will naturally yield the mutual check and balance among financial regulators, leaving less room for inappropriate interaction with regulated firms.

Unlike the US' decentralized task structure run by multiple authorities, Korea's financial supervisory tasks are concentrated in a single institution.

According to relevant studies, such a centralized structure could incur more incentives for collusive ties between the pertinent government authority and financial firms.

Ⅶ. Conclusion

This study provides empirical analysis of the effects of hiring former financial officials by private financial companies, or the revolving door practice. The analysis revealed no tangible evidence that the practice improves the risk management of hiring financial firms. However, it was observed that financial firms hiring former FSS officials experience a short-term but significant decrease in the probability of receiving regulatory penalties. These findings are different from previous papers studying the corresponding issues in the US' financial system where, unlike Korea, multiple regulatory agencies share the authority of financial supervision.

It is hoped that the analysis will have useful implications for developing measures to curb inappropriate relationships between the financial supervisory authorities and private firms. However, it is acknowledged that there are limitations in the analysis. For example, the operational risk indices suggested by the BIS and FSS were used as the proxy for the non-financial risks of the sample firms, but these indices are known to only partially identify the non-financial risks. For this reason, follow-up studies should rigorously analyze the effects of the revolving door in the financial sector with much more detailed and concrete data, such as the reasons for regulatory penalties, the non-financial risks of individual firms, the information on career history of the incumbent and retired financial officials, etc.

13) This study only presented a comparison with the US due to limited availability of preceding empirical studies on the impact of this type of recruitment practice in other major countries with a centralized supervisory system (Canada, Australia, etc.).

14) When the supervisory command is shared by multiple authorities, it could leave certain areas or issues unchecked, meaning reduced efficiency of financial supervision. For instance, when the global financial crisis occurred in 2008, the Federal Reserve Bank received bail-out requests from non-commercial banks such as Lehman Brothers and AIG but went through difficulties in coming up with timely responses due to the lack of concrete information about their business operations (Geithner, 2015).

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