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Korean Capital Injections: KDIC 1997

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Yale Program on Financial Stability Case Study
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Abstract

After the devaluation of the Thai baht in July 1997, international banks reduced their exposures to Korean financial institutions, rating agencies downgraded Korea's sovereign rating, and the Korean won lost half its value. The government guaranteed all financial institution deposits and provided emergency liquidity support to the financial sector, but these measures did not restore market confidence. In December, Korea sought an International Monetary Fund (IMF) Stand-by Arrangement. As part of the IMF program, the Korean National Assembly consolidated financial sector supervision into a new Financial Supervisory Commission (FSC) and broadened the scope of the Korea Deposit Insurance Corporation (KDIC). The KDIC injected capital into both bank and nonbank financial institutions, beginning with the largest banks in January 1998. The first round of capital injections, between January 1998 and August 2000, focused on financial sector restructuring. The second round, between September 2000 and September 2002, focused on resolving insolvent financial institutions and improving financial supervision and corporate governance. From 2003 onward, the KDIC's deposit insurance fund was divided into a new deposit insurance fund and a restructuring fund dedicated to ad hoc crisis-related activities. Through 2018, the KDIC and other agencies injected a total KRW 82 trillion of capital by contributing capital directly and purchasing subordinated debt, common stock, and preferred equity. Funded by government-guaranteed bonds, the KDIC injected capital into insured financial institutions, including banks, merchant banks, securities companies, mutual savings banks, and insurance companies. The Korean government argued that the first round of restructuring had succeeded in reducing systemic risk by resolving nonviable institutions and injecting capital into viable ones. Recurring criticisms include concerns with moral hazard and the Korean government's asymmetric focus on the banking sector. By year-end 2018, the KDIC had recouped about KRW 50 trillion of the KRW 69.4 trillion it spent on capital injections.

Keywords: Asian Financial Crisis, bank resolution, capital contribution, capital injections, equity participation, financial restructuring, KDIC, Korea

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[1] This case study is part of the Yale Program on Financial Stability (YPFS) selection of New Bagehot Project modules considering the responses to the Asian Financial Crisis that pertain to broad-based capital injections. Cases are available from the *Journal of Financial Crises* at https://elischolar.library.yale.edu/journal-of-financial-crises/.

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Korean Capital Injections: KDIC 1997

At a Glance

During the Asian Financial Crisis, the Korean government injected capital into both banking and nonbanking financial institutions to facilitate purchase and assumption (P&A) operations and to restore their capital adequacy ratios. Commercial banks, merchant banks, mutual savings banks, insurance companies, and investment companies could participate. Both the Korea Deposit Insurance Corporation (KDIC) and the Financial Supervisory Commission (FSC) could examine financial institutions and designate failed financial institutions; however, the KDIC actually performed capital injections. The FSC mandated most capital injections. Non-participating depository institutions were able to apply for government assistance if they were interested in acquiring or merging with another institution. Along with large-scale financial restructuring efforts, capital injections took place in two phases: between January 1998 and August 2000, and between September 2000 and September 2002. The KDIC funded these activities by issuing government-guaranteed bonds in two rounds. The FSC and Financial Supervisory Service (FSS) required recipients of public funds to sign Memoranda of Understanding (MOUs) and the KDIC held recipient institutions responsible for satisfying performance targets. The KDIC sought to recoup the cost of equity participation by selling its equity stakes, collecting dividends, and selling assets. With no defined maximum investment amount, the KDIC injected about KRW 69.4 trillion into 64 institutions: commercial banks, merchant banks, mutual savings bank, insurance companies, and investment companies. The KDIC has recovered KRW 50 trillion by the end of 2018. As of December 31, 2018, the KDIC had outstanding investments in 4

Summary of Key Terms	
Purpose: "When there is an application for financial assistance or when it is necessary to ensure that a merger of a failed institution goes smoothly, the KDIC may provide financial assistance in accordance with a decision made by the policy committee. In cases where the KDIC finds it necessary to improve a failing financial institution's financial status for the protection of depositors and to maintain the stability of the financial system, it may provide financial assistance in the form of liquidity support, contributions, or equity participation."	
Announcement date	December 5, 1997
Operational date	1997 – present
Funding window	November 1997 – December 2002; Deposit Insurance Fund Bond Redemption Fund
Legal authority	FSC, KDIC
Peak utilization	Approximately KRW 69.4 trillion from KDIC to 1,117 participants (pre-merger)
Eligible institutions	Insured financial institutions (commercial banks, merchant banks, mutual savings banks, insurance companies, investment companies), determined to be "failed" or "failing"
Administrators	Korea Deposit Insurance Corporation

institutions with a market value of about KRW 6.4 trillion, representing about 12.6% of the KDIC's total disbursement.

Summary Evaluation

While the KDIC was praised for quickly restructuring and injecting capital, the Korean government was criticized for encouraging moral hazard with taxpayer money and pursuing asymmetric economic reforms by focusing mostly on banks. By end-2018, the KDIC had recouped about KRW 50 trillion of the KRW 69.4 trillion it spent on capital injections.

Korean Context 1997	
GDP (SAAR, Nominal GDP in LCU converted to USD)	$582.7 billion in 1997
GDP per capita (SAAR, Nominal GDP in LCU converted to USD)	$12,398 per capita in 1997
Sovereign credit rating (5-year senior debt)	Fitch: BBB- (12/23/1997) Moody's: Baa1 (12/04/1998) S&P: BBB- (12/22/1997)
Size of banking system	$300.0 billion in total assets in 1997
Size of banking system as a percentage of GDP	51.5% in 1997
Size of banking system as a percentage of financial system	Banking system assets equal to 86.8% of financial system in 1997
5-bank concentration of banking system	68.3% of total banking assets in 1997
Government ownership of banking system	30% of banks owned by the state in 2001
Existence of deposit insurance	KRW 20 million cap (June 1996–November 1997) 100% insurance on deposits (December 1997– December 2000) KRW 50 million cap (January 2001–present)
Sources: Bloomberg; World Bank Global Financial Development Database; Deposit Insurance Dataset; Depositor Protection Act, Enforcement Decree.	

I. Overview

Background

After the devaluation of the Thai baht in July 1997, international banks reduced their exposures to Korean financial institutions, and rating agencies downgraded Korea's sovereign rating (Lindgren et al. 1999). The Korean won lost half its value during the second half of the year (Lindgren et al. 1999). The government responded by guaranteeing all financial institution deposits and providing emergency liquidity support to the financial sector (Lindgren et al. 1999). Those measures were insufficient. By late 1997, Korea's government was depleted of foreign reserves, and its corporations were unable to roll over short-term debt (Lindgren et al. 1999).

On December 4, 1997, Korea entered into a three-year Stand-by Arrangement worth $21 billion with the International Monetary Fund (IMF) (Lindgren et al. 1999). Korea also received financial aid from the Asian Development Bank ($4 billion), World Bank ($10 billion), and a support line ($23.35 billion) from 13 foreign countries (Kyu-Sung Lee 2011). In total, $58.35 billion of rescue funding was made available (Kyu-Sung Lee 2011).

As part of the rescue package, the Korean government employed macroeconomic policy interventions, financial restructuring, and other structural measures recommended by the IMF (IMF 1997). The government suspended the operations of nine insolvent merchant banks on December 2, 1997, and five additional merchant banks later in the month (Kyu-Sung Lee 2011). Financial restructuring included regulatory reform and the consolidation of supervisory bodies into the newly established Financial Supervisory Commission (FSC) (IMF 1997). The FSC was responsible for the systematic evaluation, and subsequent resolution or rescue, of all financial institutions in Korea (Lindgren et al. 1999).

The FSC ordered capital injections as part of larger financial sector restructuring efforts (Lindgren et al. 1999). By the end of 1997, most banks were undercapitalized. Banks struggled with nonperforming loans (NPLs) that exceeded 8.5% of GDP, based on lax accounting standards; NPLs would rise during the next two years, as the government tightened those standards (Baliño and Ubide 1999; M. Kang 2009). Bank lending contracted as financial institutions scrambled to meet the prescribed Bank for International Settlements (BIS) capital standards and became wary of the high default risk of corporate debtors (Kyu-Sung Lee 2011). In response, the government sought to inject capital immediately, both to prevent banks from further curtailing lending and to recover public funds as soon as possible (Kyu-Sung Lee 2011). The Korea Deposit Insurance Corporation (KDIC) executed those injections.

Program Description

The cost of financial restructuring efforts from the 1997 crisis ultimately totaled KRW 168.7 trillion, which was about 1.7 times larger than what the Korean government originally planned (KDIC 2018; M. Kang 2009). Korean government agencies collectively injected capital[3] in amounts of KRW 63.5 trillion (about 15% of 1998 GDP) through equity participation (open bank assistance)[4] and KRW 18.6 trillion (about 4% of 1998 GDP) through capital contributions to acquirers in purchase and assumption (P&A) transactions[5] (KDIC 2018). The KDIC's "Deposit Insurance Fund Bond Redemption Fund" (DIFBRF)[6] funded KRW 50.8 trillion (80%) of total government equity participation and KRW 18.6 trillion (100%) of direct capital contributions (KDIC 2018). Non-DIFBRF/non-KDIC capital injections came from the Bank of Korea, the Korean Asset Management Corporation (KAMCO), and other fiscal expenditures (BOK 2001). The KDIC financed the DIFBRF by issuing bonds with government-guaranteed principal and interest repayment (D. S. Kang 2010). It injected capital in financial institutions by purchasing common stock, preferred equity, and subordinated debt (Baliño and Ubide 1999; KDIC 2003). About 90% (measured by total disbursement) of KDIC capital injections occurred between November 1997 and December 2002 (KDIC 2002; KDIC 2018). After the beginning of 2003, the KDIC injected additional capital as deemed necessary to complete restructuring efforts related to the 1997 crisis (KDIC 2010).

Though there was no explicit maximum allocation of public money, the KDIC had to seek approval from the National Assembly to issue the bonds that funded the intervention, and the National Assembly set an initial limit of KRW 31.5 trillion for the financing of public fund injections (KDIC 1998). By late 1999, the financial sector still needed more funding, so in 2000 the National Assembly approved a second round of public fund mobilization, worth KRW 40 trillion (Shin 2003). The KDIC created and outlined individual participation limits within publicly disclosed Memoranda of Understanding (MOUs) (FSC 2000; *Asian Banker* 2000; US SEC 2000).

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[3] The author uses the phrase "recapitalization" to reflect language used by original sources. "Recapitalization" is a blanket term that includes capital injections, so any description of the former automatically applies to the latter.

[4] "Equity participation" refers to the public funds used to increase equity through stock purchases (M. Kang 2009; KDIC 1999). This is similar to the open bank assistance that the US Federal Deposit Insurance Corporation provided to many failing banks during the banking crises of the 1980s (US FDIC 2018).

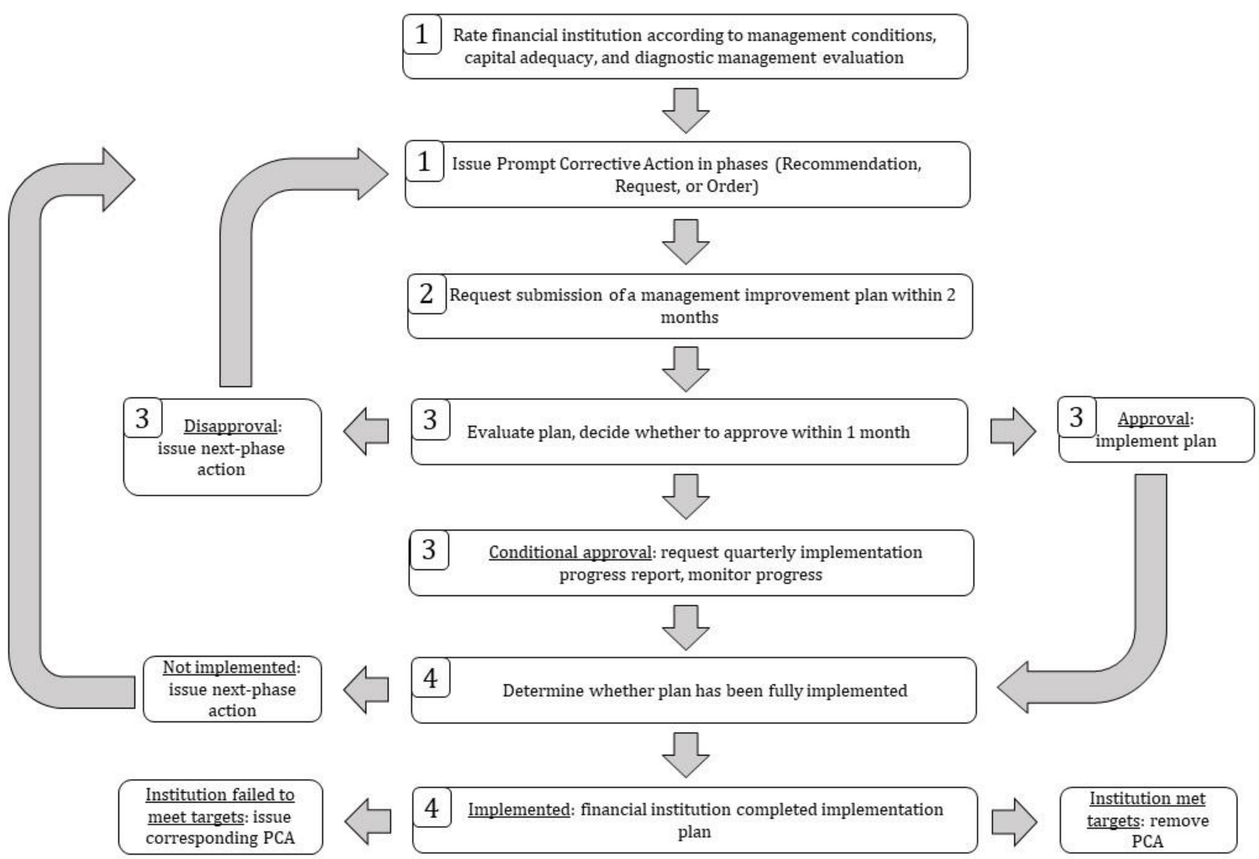
[5] "Contributions" refers to the public funds used to supplement a capital deficit when an insolvent financial institution was merged or acquired by a third party in a purchase and assumption (P&A) agreement (M. Kang 2009; KDIC 2018).

[6] The restructuring efforts (including capital injections) made before 2003 were originally recorded under the "Deposit Insurance Fund" (KDIC 2003). In 2003, the Deposit Insurance Fund was renamed the "Deposit Insurance Fund Bond Repayment Fund" (KDIC 2003). The author follows the most recent rhetorical convention and refers to "Repayment Fund" as the "Redemption Fund" (KDIC 2018).

With respect to capital injection eligibility, the KDIC could provide financial assistance to insured financial institutions, which were protected by the KDIC and subject to the Depositor Protection Act (DPA) (KDIC 1998).

Capital injections were the result of a four-step evaluation process: (1) the supervisory body assessed capital adequacy ratios and issued Prompt Corrective Action (PCA),[7] (2) the financial institution submitted a rehabilitation plan, (3) third-party experts evaluated the plan, and (4) the Financial Supervisory Commission (FSC) decided and directed the appropriate course of action for the financial institution (D. S. Kang 2010). See Figure 1 for details.

Figure 1: Prompt Corrective Action Process



Source: Kwon 2016.

[7] "Prompt corrective action" (PCA) is a prudential tool that allows regulators to intervene in the activities of financial institutions and to restore their financial health (Kyu-Sung Lee 2011).

Step One

By December 1997, the Korean government's priorities were to determine the health of all financial institutions, to close nonviable ones, and to restructure or recapitalize the viable ones (Lee and Lim 1997). From December 1997 to April 1998, the Ministry of Finance and Economy (MOFE)[8] evaluated the capital adequacy ratios of credit institutions, merchant banks, commercial banks, and specialized and development banks (Kyung-Shik Lee and Lim 1997; D. S. Kang 2010; Chopra et al. 2001). The MOFE first determined the viability of commercial and merchant banks because the MOFE considered them the most systemically important financial institutions (Chopra et al. 2001). Before the FSC formally codified and executed PCA procedures in mid-1998, the MOFE suspended business operations and ordered rehabilitation plans ad hoc (Kyung-Shik Lee and Lim 1997; Kyu-Sung Lee 2011).

After the Korean National Assembly passed the Act on the Structural Improvement of the Financial Industry (ASIFI)[9] in January 1997, the FSC first exercised PCA on September 14, 1998 (FSS 2000; Kyu-Sung Lee 2011). Under PCA, the FSC (and later FSS) could warn or suspend the senior management and employees and demand recapitalization, stock write-offs,[10] asset sales, business transfers, and mergers and acquisitions (M&A) if a company's capital ratios were below predetermined standards (Kyu-Sung Lee 2011). ASIFI amendments in September 1998 also expanded the list[11] of distressed institutions eligible for government capital injections (Kyu-Sung Lee 2011). The extremity of PCA depended on the financial status of the given institution (Kyu-Sung Lee 2011). When a financial institution received PCA, it had to respond with a management rehabilitation plan (Kyu-Sung Lee 2011).

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[8] At the recommendation of the World Bank, the Korean government created a restructuring authority, the "Structural Reform Unit" (SRU), within the MOFE on March 7, 1998 (D. S. Kang 2010; Kyu-Sung Lee 2011). Its crisis-related tasks included monitoring institutions and markets, designing big-picture financial reforms, restructuring the corporate sector, and preparing contingency plans (Lindgren et al. 1999; D. S. Kang 2010). The SRU migrated from the MOFE to the FSC on April 30, 1998 (D. S. Kang 2010; Kyu-Sung Lee 2011). Gradually, the FSC became the head financial restructuring authority—in addition to the main supervisory authority (Kyu-Sung Lee 2011). On January 1, 1999, the Korean government integrated banking, securities, and insurance supervisory authorities into a single institution, the Financial Supervisory Service (FSS) (Kyu-Sung Lee 2011).

[9] The government first enacted the Act Concerning Merger and Conversion of Financial Institutions in March 1991 (FSS 2000). In January 1997, the government "wholly amended" and renamed the Act to the Act on the Structural Improvement of the Financial Industry (ASIFI) (FSS 2000).

[10] In April 1998, the government amended the ASIFI so that the government could order shareholder-capital reductions (Kwon 2016). The government also amended commercial law to approve shareholder write-downs at board meetings (for "exceptional cases")—instead of general shareholder meetings (Kwon 2016).

[11] When it was first amended in January 1997, the ASIFI (effective March 1997) expanded the the scope of "timely corrective actions" from banks only to include securities companies, insurance companies, merchant banks, credit unions, and other financial institutions (Kwon 2016). In September 1998, the government formally codified the PCA process by outlining its "specific and objective" criteria, included trust companies in the scope of PCA, and mandated that PCA happen automatically—contingent on a business's performance (Kwon 2016; ASIFI 1997).

Step Two

Management rehabilitation plans outlined sources and quantity of new capital and schedules to meet capital adequacy standards and provisioning requirements; provided confirmation from the supplier of funds; indicated changes in management and ownership, if appropriate; presented business plans going forward; outlined cost-cutting measures; and described steps to improve internal governance, risk assessment and pricing, and loan recovery (Kyu-Sung Lee 2011). By the FSC's orders, financial institutions were given between one and two months to draft management rehabilitation plans (Kyu-Sung Lee 2011).

Step Three

Before financial institutions could implement rehabilitation plans, the FSC had to approve them (Kyu-Sung Lee 2011). The FSC requested third-party experts, including international audit firms and in-house appraisal committees, to evaluate the plans (D. S. Kang 2010). After review, the FSC approved, conditionally approved, or disapproved the rehabilitation plans (D. S. Kang 2010). An "approved" plan obliged the institution to enter into a managerial contract or MOU[12] with the relevant supervisory authority, and the approved institution had to submit implementation plans on a quarterly basis (Kyu-Sung Lee 2011; D. S. Kang 2010). "Conditional approval" required the institution to submit an implementation plan within one month (D. S. Kang 2010). "Disapproval" permitted the supervisory authority to directly control the underlying institution and required the institution to merge or to transfer its business via purchase and assumption[13] agreements (Kyu-Sung Lee 2011; D. S. Kang 2010). If financial institutions voluntarily merged or entered into P&A agreements, the FSC did not require them to cease their business operations (D. S. Kang 2010).

Step Four

The FSC or MOFE had to request the KDIC to inject capital prior to injections (KDIC 1999; FSS 2000). The KDIC could inject capital into three types of institutions: (1) a healthy institution about to acquire an unhealthy/failing institution, (2) an unhealthy/failing institution about to be acquired or merged, and (3) an institution at risk of failing (KDIC 1998). The KDIC injected capital to offset balance sheet losses stemming from P&A operations, to prepare institutions for mergers, and to restore BIS capital adequacy ratios

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[12] MOUs were agreements to hit performance goals such as financial ratio targets and non-financial requirements (US SEC 2000). From MOUs, the KDIC maintained broad informational authority, and could request the institution to provide documentation at regular intervals, to create Implementation Plans, and to notify the KDIC of any interruptions to the institution's completion of responsibilities (US SEC 2000). The KDIC could also request information indirectly from the FSC or the Financial Supervisory Service (FSS) (KDIC 1999). The KDIC could directly manage institutions when they failed to abide by the terms of the MOUs (US SEC 2000).

[13] "Purchase and Assumption" refers to a "resolution method in which a healthy bank or group of investors assume some or all of the obligations, and purchase some or all of the assets of a failed bank" (IADI n.d.2.).

(KDIC 1998; 1999; 2000; 2001; 2002; 2003). All prospective capital injections were subject to the final approval of the KDIC Policy Committee (DPA 1995).

To restore tier-1 capital, the KDIC paid for common stock with cash, shares of publicly owned enterprises, and KDIC bonds (Enoch, Garcia, and Sundarajan 1999). To raise tier-2 capital, the KDIC paid for subordinated debt with shares of publicly owned enterprises (Enoch, Garcia, and Sundarajan 1999).

The Korean government required capital injection recipients to raise private capital from new shareholders, existing shareholders, or other stakeholders (for example: creditors, borrowers) (Baliño and Ubide 1999). The KDIC also collected contributions as a percentage of the capital injection amount (KDIC 1998). In 1998, the government agreed to support banks that did not merge by matching their private capital raises (Claessens, Ghosh, and Scott 1998). Upon receiving KDIC capital, financial institutions were expected to fulfill their rehabilitation plans or follow MOUs that contained self-rescue timelines and financial objectives (KDIC 2000; US SEC 2000).

The KDIC purchased preferred shares from five banks, whose rehabilitation plans were rejected in June 1998, to facilitate their P&A agreements (PFOC 2000). The preferred shares were non-cumulative, non-voting, and paid 1% annual dividends (PFOC 2000). The KDIC purchased preferred shares at KRW 5,000 per share (PFOC 2000). Each recipient institution and the KDIC designed a schedule for the repurchase of preferred shares, and if the institution did not repurchase the preferred shares on time, the shares were converted into common shares (PFOC 2000). The author was unable to find other capital terms at this time. English translations of the KDIC's annual reports do not specify the types of securities that the KDIC purchased from each institution.

After 2000, the KDIC injected capital and guided public fund recipients on three principles: least cost,[14] loss sharing,[15] and self-help effort[16] (KDIC 2000). The KDIC recovered the costs of capital injections by selling equity stakes, accumulating equity dividends, and collecting bankruptcy dividends (KDIC 2001). The Public Fund Oversight Committee (PFOC), which was housed inside the MOFE, created a Sales Screening Subcommittee that decided when and how to dispose of the KDIC's securities holdings (BOK 2001). The KDIC was able to appoint financial advisors for equity disposition (Im, Lim, and Park 2010). It is not clear how the KDIC evaluated prospective buyers; however, to speed up the recovery, the KDIC also performed bankruptcy liquidator and administrator roles (KDIC 2000).

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[14] "Least cost" meant that the KDIC decided the amount of support after private sector experts and accountants performed due diligence with the goal of resolving insolvent financial institutions at the minimum cost (KDIC n.d.1.).

[15] According to the loss-sharing principle, shareholders, management, and employees were expected to contribute when institutions relied on public funds to recapitalize (KDIC n.d.1.).

[16] To maximize self-help efforts, the KDIC required the public-fund-injected financial institution to sign an MOU on business normalization before receiving the capital injection (KDIC n.d.1.).

Outcomes

The KDIC moved all its crisis-related assets and liabilities—including those from capital injections—to the DIFBRF (KDIC 2018). Following the Korean government's "Public Fund Redemption Plan,"[17] the KDIC agreed to repay the federal government and KDIC bondholders KRW 82.4 trillion in costs related to financial restructuring (KDIC 2018). By the end of 2018, the KDIC paid KRW 30.8 trillion with recovered funds, and KRW 45.7 trillion with government contributions (fiscal loans) (KDIC 2018). The KDIC will repay the remaining KRW 5.85 trillion balance with future recovered funds and special contributions[18] from insured financial institutions through 2027 (KDIC 2018).

Of KRW 69.4 trillion in capital injections, KDIC has recovered KRW 29.3 trillion in equity investments and KRW 20.2 trillion in bankruptcy dividends[19] by the end of 2018 (KDIC 2018). As of December 31, 2018, the KDIC held equity stakes in four institutions[20] collectively worth about KRW 6.4 trillion (KDIC 2018). Of the 14 MOUs signed between 1999 and 2001, 12 have been terminated because the underlying institution was sold or merged with another institution (KDIC 2018). According to Myung-Koo Kang (2009), capital injections resulted in the consolidation, nationalization, and privatization of the Korean financial sector (M. Kang 2009).

The Korean government relied on mergers—usually through P&A transactions—as the main tool for resolving unsound institutions (Ro 2001). The Korean government believed that mergers would make Korean banks more competitive internationally and more efficient in terms of organization and management (Ro 2001). Incentives for mergers included preferential tax treatment for merged institutions and the legalization of financial holding companies (Ro 2001). Especially during the second round of recapitalization, the government encouraged mergers between healthy banks and placed some nationalized banks under government financial holding companies to enhance financial soundness and competitiveness (Tsutsumi, Jones, and Cargill 2010; Ro 2001). The government believed that mergers between healthy banks would "also help address lingering problems plaguing domestic banks, including excessive bad assets, low profitability, weak IT investment, and a failure to achieve economies of scale" (*Asian Banker* 2000; FSC 2000).

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[17] On September 5, 2002, the Korean government finalized and announced a plan for the repayment of public funds (KDIC 2002). The plan identified the repaying institutions, amounts, periods, and methods (KDIC 2002).

[18] From 2003 through 2027, KDIC will continue to collect annual contributions worth 0.1% of all insured deposits from insured financial institutions (KDIC 2002).

[19] Not all bankruptcy dividends were related to capital contributions. The KDIC also collected bankruptcy dividends from institutions whose depositors the KDIC paid off (KDIC 2018). KDIC annual reports from the early to mid-2000s suggest that the KDIC contributed capital to banks and insurance companies and recovered bankruptcy dividends from the same types of institutions through 2018 (KDIC 2003; KDIC 2006; KDIC 2018).

[20] This includes Woori Bank, Seoul Guarantee Insurance Corporation, Hanwha Life Insurance, and Special Account of the Credit Business Unit of the National Federation of Fisheries Cooperatives (KDIC 2017)

The KDIC's merger strategy extended to nonbank financial institutions. Article 3 of ASIFI allowed financial institutions to change to different types of financial institutions or to merge with different types of financial institutions while maintaining or changing their types[21] (Ro 2001; ASIFI 1997). Starting in 2001, the KDIC also merged institutions by incorporating them into government-run financial holding companies (Hahm and Kim 2006). The Korean government hoped that financial holding companies would retain more employees and lessen employee resistance—in contrast with the previous P&A approach (Hahm and Kim 2006). The Korean financial sector underwent heavy consolidation after 1997; about 39% of total Korean financial institutions had engaged in restructuring efforts (such as revocation of license, merger, liquidation, business transfer) that shrank the financial sector from 2,101 companies at the end of 1997 to 1,363 companies at the end of 2003 (KDIC 2003).

The Korean government nationalized many financial institutions—particularly commercial banks—after tending to their severe capital deficits (Ro 2001). By October 1998, the government controlled banks that collectively held about one-third of total bank assets in Korea, which raised questions about interim governance (Claessens, Ghosh, and Scott 1998). Both political pressure to recover public funds and underdeveloped Korean capital markets pushed the government to rapidly sell nationalized firms to foreign investors (M. Kang 2009). Facing hesitant buyers, the Korean government opted to sell its financial sector stakes directly and without first screening foreign capital (M. Kang 2009). In 1998, the Korean government eliminated caps on foreign ownership of Korean companies, and Korean companies were relatively cheap due to the depreciated Korean won (M. Kang 2009). The first buyers were foreign investment funds, who aimed to re-sell Korean banks to other buyers, which consisted of foreign banks interested in purchasing Korean banks rather than establishing new branches of their own (M. Kang 2009). Foreign ownership of the Korean commercial bank sector rose from 12.3% in 1998 to more than 70% in 2006 (M. Kang 2009). Additionally, loans from foreign-controlled and foreign-located banks tripled between 1998 and 2006—a trend that distinguishes Korea from other countries in the aftermath of the Asian Financial Crisis (M. Kang 2009).

[21] In other words, merchant banks could merge with commercial banks, and the resultant institution could elect to be a merchant bank or a commercial bank. The same principle extended to M&A between any two types of financial institutions.

II. Key Design Decisions

1. Legal Authority: Capital injections were part of a larger public spending scheme known as "public fund injections."

In January 1997, the Korean government passed the Act on the Structural Improvement of the Financial Industry (ASIFI)—legislation that permitted the government to invest in insolvent financial institutions (FSS 2000; ASIFI 1997). When the government responded to the Asian Financial Crisis in late 1997, its top priority was to resolve insolvent financial institutions (D. S. Kang 2010). However, government institutions such as Bank of Korea and KDIC lacked sufficient resources to cover all restructuring costs (D. S. Kang 2010). Korea's sovereign credit rating declined within international markets, so Korean companies could not easily raise capital from other financial institutions, corporations, or foreign investors (D. S. Kang 2010). Given constraints on financing its restructuring efforts, the Korean government decided that public funds were necessary to resolve nonviable institutions (D. S. Kang 2010).

The Korean government uses the term "public funds"[22] to describe "capital raised by the Korean Asset Management Corporation (KAMCO) and the Korea Deposit Insurance Corporation (KDIC) through the issuance of bonds with a government guarantee on the payment of principal and interest" (D. S. Kang 2010). KAMCO used public funds to purchase non-performing assets, while KDIC drew on public funds to pay out deposit insurance for failing financial institutions, acquire assets of closed banks,[23] and recapitalize financial institutions with weak balance sheets (D. S. Kang 2010). Capital injections, as part of the public funds injections, were subject to the same criteria as public funds injections; these criteria are described by the Special Act on the Management of Public Funds (SAMPF). Before injecting public funds, the KDIC required financial institutions to sign Memoranda of Understanding (MOUs) that outlined financial goals (*Asian Banker* 2000; FSC 2000). See Key Design Decisions Nos. 10 and 12 for further discussion of SAMPF in the KDIC's capital injections.

[22] Other sources of public funds included budgetary allocations and asset exchanges (Baliño and Ubide 1999).

[23] The KDIC compensated for losses associated with purchase and assumption (P&A) operations by purchasing the insolvent portion of the acquirers' assets (KDIC 1999). KDIC asset purchases were also the product of counterparties that executed put-back options after acquiring a Korean financial institution (Kwon 2016). When the KDIC funded asset purchases by the Resolution and Finance Corporation (RFC), a KDIC subsidiary, the KDIC recorded the RFC's expenses on its own financial statements—even though the RFC managed the assets (KDIC 2000).

2. Part of a Package: The Presidential Commission on Financial Reform drafted financial restructuring frameworks and supervisory reforms that later became part of IMF conditionalities.

By 1997, the Korean government recognized the need for regulatory and supervisory reform due to changes in surrounding Asian financial systems: the lack of a clear boundary between bank/non-bank activities, financial market liberalization, deregulation, and globalization (FSS 2018). In January 1997, the Korean government assembled the Presidential Commission for Financial Reform (PCFR) to brainstorm new supervisory protocol and procedures (D. S. Kang 2010; FSS 2018). Comprised of 31 members from business, financial, and academic sectors, the PCFR published two sets of policy recommendations in 1997 to reform the Korean financial sector (D. S. Kang 2010). The PCFR's main objectives were to strengthen the financial industry competitiveness,[24] to foster financial market efficiency, and to stabilize the financial system (D. S. Kang 2010). On December 4, 1997 the Korean state committed to a Stand-by Arrangement[25] with the International Monetary Fund (IMF) for Special Drawing Rights (SDR) 15.5 billion (Baliño and Ubide 1999). The IMF's conditions and policy agenda had already been discussed in the PCFR[26] (Baliño and Ubide 1999; D. S. Kang 2010).

The PCFR also recommended the consolidation of financial supervisory bodies (D. S. Kang 2010). On December 29, 1997, the Korean Assembly approved the Act on the Establishment of Financial Supervisory Organizations (AEFSO)[27] to consolidate financial supervision into one entity (FSS 2018). Supervisory consolidation occurred in two stages to make necessary preparations and to not detract from crisis management (Lindgren et al. 1999). The resultant Korean financial supervisory system was two-tiered: while the Financial Supervisory Commission[28] (FSC) handled rule-making and enforcement, the

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[24] The PCFR believed that establishing Prompt Corrective Action and Early Resolution frameworks was a key part of financial sector competitiveness (D. S. Kang 2010). To achieve this, the PCFR recommended: (1) Prompt Corrective Action (PCA) for undercapitalized financial institutions, (2) mergers and acquisitions (M&A) for insolvent financial institutions, (3) improving the liquidation and bankruptcy procedures for failing financial institutions, and (4) improving measure to protect depositors and investors against the failure of financial institutions (D. S. Kang 2010). The PCA framework, later enacted in April 1998, was triggered by low capital adequacy ratios and explained the conditions that would require the KDIC to inject capital (D. S. Kang 2010).

[25] The aims of the IMF program were: (1) to commercialize the financial system and to strengthen its supervision, (2) to restructure the corporate sector, and (3) to restructure and recapitalize the banking system by cleaning up the stock of bad loans and restoring capital bases (Baliño and Ubide 1999).

[26] Research from the Korean Development Institute document suggests that the IMF enacted the PCFR's policy recommendations "without a major revision to the original draft," an act that "enabled Korea to save time and resources in overcoming and rebounding from the crisis" (D. S. Kang 2010).

[27] The AEFSO was submitted to the National Assembly for ratification on August 23, 1997, but was not ratified until December 29, 1997 (D. S. Kang 2010). The "Act on the Establishment of Financial Supervisory Organizations" was renamed "Act on the Establishment of the Financial Services Commission" in 2008 (FSS 2018).

[28] In 2008, the "Financial Supervisory Commission" assumed the policy functions of the Ministry of Finance and Economy's Financial Policy Bureau and was renamed the "Financial Services Commission" (FSS 2018).

Financial Supervisory Service (FSS) conducted safety/soundness examinations, educated and protected consumers, and administered the FSC's rule-making and licensing activities (FSS 2018).

As Korea's first integrated financial supervisory body, the FSC led financial reform and restructuring efforts—including capital injections—in the wake of the 1997 crisis (D. S. Kang 2010). The FSC was established on April 1, 1998 under the AEFSO (FSS 2018; D. S. Kang 2010). The FSC was the government agency charged with setting financial market policies, proposing legislative changes to the National Assembly, granting regulatory licenses,[29] and enforcing the rules (FSS 2018).[30]

On January 1, 1999, the Office of Bank Supervision (OBS), Securities Supervisory Board (SSB), Insurance Supervisory Board (ISB), and Nonbank Supervisory Authority (NSA) were consolidated into a single supervisory entity: the Financial Supervisory Service (FSS)[31] (D. S. Kang 2010). The FSS examined and supervised financial institutions to ensure they operated safely and soundly, served consumers and investors, and followed financial rules and regulations (FSS 2018). The FSS also supervised capital markets and mediated disputes between financial institutions, investors, depositors, and creditors (FSS 2018; D. S. Kang 2010).

3. Legal Authority: The KDIC was established under the DPA as a financial stability institution, and it was unable to recapitalize financial institutions until it had assumed their depositor protection operations.

The government enacted the Depositor Protection Act (DPA) on December 29, 1995, and established the KDIC on June 1, 1996 (KDIC 1998). The KDIC's purpose under Article 1 of the DPA is "to contribute to [the] protection of depositors, etc. and maintenance of the stability of the financial system by efficiently operating the deposit insurance system, etc. in order to cope with a situation in which a financial company is unable to pay back deposits, etc. due to its bankruptcy, etc." (DPA 1995).

Between June 1, 1996, and January 1, 1997, the KDIC was a special juridical entity with no capital; thereafter, it launched bank protection operations—including capital injections—while nonbank financial institutions[32] still had separate insurance agencies (KDIC 1998;

[29] In April 1999, the FSC acquired the power to license and de-license financial institutions and to supervise specialized development banks (Lindgren et al. 1999).

[30] Housed within the FSC, the Securities and Futures Commission (SFC) oversaw securities and futures markets, directed investigations of market misconduct and abuse, and established accounting and auditing standards (FSS 2018).

[31] Legally, the FSS was a quasi-government supervisory authority responsible for all the financial sector (FSS 2018). To examine and supervise institutions, FSS regularly coordinated activities and shared information with the Bank of Korea, the Korea Deposit Insurance Corporation, and the Financial Supervisory Commission (FSS 2018).

[32] "Nonbank financial institutions" included securities companies, insurance companies, merchant banks, mutual savings and finance companies, and credit unions (KDIC 1998).

DPA 1995). On April 1, 1998, all depositor protection functions were collected under one institution; the KDIC assumed the assets and liabilities of the Insurance Guarantee Fund, the Korea Non-Deposit Insurance Fund, and Credit Union's Security Fund (KDIC 1998). Given its stated purpose, the KDIC was both legally obligated and enabled to recapitalize any insured financial institution—not just banks—on April 1, 1998 (Lindgren et al. 1999). Following 1998 changes to the Act on the Structural Improvement of the Financial Industry (ASIFI) and DPA, non-depository institutions such as insurance companies and credit unions were also required to hold insurance[33] with the KDIC on deposit-like liabilities (KDIC 1998; Kyu-Sung Lee 2011). The KDIC also offered blanket deposit coverage from December 1997 to July 1998,[34] in response to financial market instability (KDIC 2001). After markets stabilized, the KDIC decided in October 2000 to raise the limit to KRW 50 million per depositor, beginning January 2001 (KDIC 2001).

Within the KDIC, the Policy Committee[35] was the highest decision-making body (KDIC 1999). In 1999, its membership included 14 individuals: the Vice Minister of the Ministry of Finance and Economy (MOFE), the Assistant Director of the Budget Planning Office, the Vice Chairman of the Financial Supervisory Commission, the Vice President of the Bank of Korea, the President of the National Bankers Association, representatives of seven financial industries, and two appointees of the MOFE Minister (KDIC 1999). The responsibilities of the Policy Committee included funding support for financial resolution institutions and institutions looking to acquire, merge, absorb, or take over the operations of other failed institutions (KDIC 1999). The Policy Committee's decisions regarding resolution were subject to approval of the KDIC Board of Directors (KDIC 1999).

4. Funding Source: Under the DPA, the KDIC funded capital injections by issuing Deposit Insurance Fund bonds in two rounds, and the KDIC separated crisis-related funds from the non-crisis deposit insurance fund.

In May 1998, the Korean government estimated that KRW 64 trillion would cover the costs of financial restructuring and secured approval from the National Assembly to raise bonds through the KDIC and Korean Asset Management Corporation (KAMCO) (Shin 2003). This KRW 64 trillion was later regarded as the first "phase" of financial restructuring (KDIC 2003). By late 1999, the financial sector still needed more funding, and in 2000,[36] the

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[33] The KDIC also expanded the scope of insurable deposits to "maintain the stability of the financial system" (KDIC 1998). From 1998 to 2001, the KDIC insured the deposits of the government, certificates of deposit, money raised by selling bonds under repurchase agreements, and bank bonds, among other securities (KDIC 2001).

[34] In July 1998, the KDIC decided to insure principal and designated interest up to KRW 20 million per individual depositor (KDIC 2001). Concerned about moral hazard, the KDIC only covered principal for deposit accounts with more than KRW 20 million (KDIC 2001).

[35] The "Policy Committee" was renamed the "Deposit Insurance Committee" following an amendment to the DPA on May 29, 2003 (DPA 1995). The shorthand for both is still "the Committee" in relevant documents and legislation.

[36] Second-round public fund operations were delayed due to "ill-coordinated policy dialogues and political agenda" (D. S. Kang 2010). The Korean government recognized the need to raise more public funds to head

National Assembly approved a second round[37] of public fund mobilization worth KRW 40 trillion (Shin 2003). The amount of money used for restructuring does not equal the amount of bonds raised because recouped public funds were re-spent on financial restructuring, and the government relied on multiple funding sources (Shin 2003).

Article 24 of the DPA established the Deposit Insurance Fund (DIF) on April 1, 1998, the same day that the KDIC assumed the assets and liabilities of the Insurance Guarantee Fund, the Korea Non-Deposit Insurance Fund, and Credit Union's Security Fund (DPA 1995; KDIC 1998). The DIF funded deposit payoffs and financial assistance—including capital injections—to distressed financial institutions (KDIC 1998). The DIF's financial statements were separated into six different accounts: banks, securities companies,[38] insurance companies (life and non-life), merchant banks, mutual savings & finance companies, and credit unions (KDIC 1998).

Article 26-2 of the DPA permitted the KDIC to issue government-guaranteed[39] bonds for the purposes of financial restructuring;[40] the KDIC bond issuances funded KDIC capital injections (DPA 1995; D. S. Kang 2010). The KDIC's subcommittees (for example: Banking Subcommittee, Insurance Subcommittee) discussed prospective bond issuances before submitting them to the Policy Committee, who submitted them to the National Assembly for approval (KDIC 1998; KDIC 1999; D. S. Kang 2010). The KDIC raised about KRW 87.2 trillion in bond issuances between 1998 and 2002 (KDIC 2018). The KDIC issued most

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off any unforeseen complications with financial and corporate sector restructuring and convened in early 1999 to discuss if and how much additional public funds ought to be raised after the first round had been depleted (D. S. Kang 2010). However, an "unanticipated happening in the high level meeting masked further discussions on the necessity of public funds" (D. S. Kang 2010). After a national election for lawmakers in April 2000, the government formally declared the second round of fundraising in mid-2000 (D. S. Kang 2010). Some scholars suggest that the Korean government sought to avoid political backlash before the election, and that the National Assembly waited until financial markets became sufficiently turbulent before expressing the need to raise additional public funds (Lim and Hahm 2004).

[37] Second round objectives were to: (1) recapitalize distressed banks to enhance BIS capital adequacy ratios, (2) uphold Seoul Guarantee Corporation's capital base (so that it could guarantee Daewoo Group and non-Daewoo workout companies), and (3) offset shortfalls that caused more NPL sales (Kang 2010).

[38] Before February 2009, the Korean government used "securities companies" and "financial investment companies" interchangeably (KDIC 2009). After the enactment of the Capital Market Consolidation Act in February 2009, "financial investment companies" included securities companies, investment dealers, and brokerage firms (KDIC 2009).

[39] In 1998, the National Assembly guaranteed payment of (DIF) bond principal, and KDIC borrowed from the central government to pay DIF bond interest payments (KDIC 1998). Specifically, KDIC borrowed from the government's "Special Account for Financial Loans" in the form of three-year, zero-interest loans (KDIC 2002). KDIC borrowed a total of KRW 18.6 trillion from 1998 through 2002 to make DIF bond interest payments (KDIC 2003). Under the Public Fund Redemption Fund Act, KDIC was exempted from repaying previous fiscal borrowings (KDIC 2003).

[40] Other sources of DIF funding included contributions (from insured financial institutions and the government), the gratuitous transfer of state property, borrowings, collected insurance premiums, recovery (from deposits purchased, or from funds provided for the resolution of failed financial institutions), and income from the operation of the DIF (KDIC 1998).

bonds with maturities of at least five years because it expected repayment to take that long (KDIC 1999). A comprehensive list of bond terms, rates, and volume by sector can be found in Figures 5, 6, and 7 of the Appendix.

On January 1, 2003, and under the "Public Fund Redemption Plan," the first Deposit Insurance Fund was renamed the "Deposit Insurance Fund Bond Redemption Fund" (DIFBRF) to alleviate public concerns about the loss and recovery of public funds (KDIC 2003). An amendment to the DPA separated the DIFBRF from the new Deposit Insurance Fund ("new DIF")[41] (DPA 1995; KDIC 2003). The DIFBRF was responsible for completing financial restructuring efforts related to the 1997–1998 crisis, including the relevant recovery efforts and repayment of public funds (KDIC 2003). The DIFBRF received the assets, debts, and other rights and duties[42] of the original DIF registered before January 1, 2003 (BOK 2003). KDIC paid for the original DIF bonds with special assessments levied on insured deposits, contributions from the DIFBRF, money raised from DIFBRF bond issuances, and other borrowings (KDIC 2003). The original DIF bonds were all repaid by the end of 2008 (KDIC 2018).

5. Communication: The Korean government announced capital injections through press releases and regular reports. Law required insured institutions to publicly disclose their relationship with the KDIC.

As capital injections were part of massive restructuring efforts, it appears that they did not receive any dedicated announcement before they were conducted. The first English-language mention of recapitalization efforts took place on December 5, 1997: an International Monetary Fund press release states that troubled Korean financial institutions would be restructured or recapitalized if deemed viable (IMF 1997). Later public dialogue between the Korean government and IMF officials confirms that capital injections were a part of the government's restructuring plans (Lee and Lim 1998; Chon and Lee 1998).

The Korean government usually announced the type, size, and recipient of capital injection on an ad hoc basis (MOFE 1999). Other forms of public disclosure included public fund management reports, reports from institutions themselves (as required by law), and press releases from various regulators. The MOFE Minister was required to write quarterly reports on the use of public funds to the Korean National Assembly, and the Public Fund Oversight Committee was required to publish an annual white paper on public fund management by the end of August (BOK 2001). All financial supervisors, including the KDIC, Bank of Korea (BOK), MOFE, FSC, and Financial Supervisory Service (FSS), publish

[41] The new DIF ran normal deposit insurance operations, collected insurance premiums, and dealt with new insolvencies from 2003 onward (KDIC 2003).

[42] The DIFBRF ought to be fully liquidated before December 31, 2027—afterward, the remaining assets, debts, and other rights and duties will be turned over to the Treasury or the new Deposit Insurance Fund (BOK 2003).

reports at quarterly and/or annual intervals—each describes capital injections in varying levels of detail.

Each insured institution had to publicly report the contents of its relationship with the KDIC in accordance with public guidelines established on August 10, 1998 (KDIC 1999). To investigate compliance, the KDIC could examine passbooks and promotional materials, public availability of pamphlets and posters provided by the KDIC for public distribution, and public availability of pamphlets containing a list of insured financial products (KDIC 1999). Furthermore, the KDIC publicly disclosed the contents of MOUs to improve the transparency of public fund injections (D. S. Kang 2010).

6. **Eligible Institutions: The KDIC could inject capital into any failed insured institution or systemically important failing institutions, and the government prioritized systemically important institutions.**

The KDIC could assist an insured financial institution in three scenarios: (1) an institution applied for financial assistance to smooth a merger, or the KDIC deemed financial assistance necessary to facilitate a merger; (2) the KDIC determined that financial assistance was necessary for depositor security and the "stability of credit order," or (3) the FSC requested[43] the KDIC to provide financial assistance (DPA 1995).

The ASIFI authorized the KDIC and FSC to designate a financial institution as insolvent/failed[44] if: (1) liabilities exceeded assets due to business operations, major financial scandal, or accrual of non-performing loans; (2) payments of claims (including deposits and money borrowed from other financial institutions) were suspended; (3) the institution was unable to pay claims without outside support or separate borrowings (excluding borrowings ordinary financial transactions) from the FSC or KDIC's Policy Committee (Oh 2018; ASIFI 1997; DPA 1995). Any institution at risk of becoming insolvent/failed was regarded as "insolvency-threatened" or "failing" (KDIC 1998; DPA 1995).

With respect to *insolvent/failed* institutions, the KDIC could make deposit payoffs to depositors, arrange mergers, assign the transfer of contracts, or provide financial assistance in support of either of the previous processes (KDIC 1998; DPA 1995). "Financial assistance" referred to: extending loans or depositing funds, purchasing assets, guaranteeing or accepting obligations, and contributing capital (KDIC 1998; DPA 1995). The Policy Committee decided which type of financial assistance to use (KDIC 1998; DPA 1995) (KDIC 1998; DPA 1995). The KDIC could also arrange a merger or contract transfer

[43] Article 12 of the ASIFI permitted the Financial Services Commission to request the purchase of securities from an inviable financial institution (ASIFI 1997). Article 5-5 of the ASIFI Enforcement Decree clarified that "securities" referred to government bonds, subordinated bonds issued by the inviable institution, or any security recognized by the FSC to be equivalent to the other two types of securities (ASIFI ED 1997).

[44] Before 1998 amendments to the ASIFI, the definition of "insolvency" was limited to the suspension of deposit payments (Kwon 2016).

by establishing new resolution financial institutions to take over the failed institutions (KDIC 1998; DPA 1995).

The KDIC could aid *insolvency-threatened/failing* institutions if the Policy Committee determined that supporting an individual institution was necessary to protect depositors and to maintain the stability of the financial system (KDIC 1998; DPA 1995). Methods of assistance for failing institutions included liquidity support, contributions, or equity participation (KDIC 1998; DPA 1995). The Ministry of Finance and Economy determined the list of securities that the KDIC Policy Committee could purchase from the failing financial institution (KDIC 1998; DPA 1995).

The Korean government focused on the most systemically important institutions at the onset of the crisis, so the first wave of public support in late 1997 and 1998 was aimed at insolvent commercial and merchant banks (Chopra et al. 2001). In 1998, public funds capitalized Seoul Bank and Korea First Bank, because if two prominent banks were liquidated, all remaining Korean banks likely would have endured bank runs with "severe systemic risk for the financial industry" (D. Kim 1999). Nonbank financial institutions were initially restructured under majority shareholders' responsibility without government support because they were presumed free from systemic risk; exceptions were Korea Investment Trust Company and Daehan Investment Trust Company, which received public fund support in late 1999 (Shin 2003).

The Korean government diluted shareholder equity[45] to avoid moral hazard (Chopra et al. 2001). In August 1998, Korean authorities amended the ASIFI to further reduce the value of shareholder capital in the event of a write-down (Baliño and Ubide 1999; Kataoka 1999).

In 1998, the government agreed to support banks that did not merge by matching their private capital raises (Claessens, Ghosh, and Scott 1998). Thereafter, the KDIC had the right to review and assess management performance, and to take appropriate corrective action.

[45] Writing down capital was a frequent phenomenon during the restructuring process. For example: when four small banks were recapitalized at the end of 2000, all shareholder equity was written down (Chopra et al. 2001). Before the KDIC nationalized Seoul Bank and Korea First Bank in 1998, the FSC ordered them write down capital from KRW 820 billion to KRW 100 billion each, and the shareholders had to take losses (Chopra et al. 2001). In September 1998, the government demanded workforce reductions from Korea First Bank and Seoul Bank in exchange for capital injections (Kyu-Sung Lee 2011).

7. Eligible Institutions: For potentially nonviable institutions, the Financial Supervisory Commission conducted Prompt Corrective Action (PCA) and could order a capital injection at any stage of PCA.

Prompt Corrective Action is a regulatory framework in which financial supervisors can automatically issue orders to institutions that fail to meet management standards (S. M. Kim, J. Y. Kim, and Ryoo 2006). The Korean government relied on PCA to minimize regulatory forbearance and to ease the taxpayer burden from rescuing financial institutions (D. S. Kang 2010). To determine whether PCA ought to be used for banks, supervisors relied on measures of bank health, such as the Basel capital adequacy ratio and CAMELS ratings (FSS 2000). The FSC/FSS issued PCA recommendations, requirements, and orders; the severity of PCA reflected the institution's financial status (D. S. Kang 2010). Though PCA alone did not permit the KDIC to directly inject capital, the FSC could order a capital injection at any stage of PCA—subject to the approval of the KDIC Policy Committee (ASIFI 1997; DPA 1995). The KDIC could also request the FSC to act against a distressed financial institution (KDIC 1998). A full list of PCA enforcement criteria and actions from the year 2000 can be found in Figures 1 and 2 of the Appendix.

In January 1997, the Korean government established the ASIFI (effective March 1997) and laid the legal foundation for what would later become PCA procedures in September 1998 (Kataoka 1999; ASIFI 1997). Following IMF recommendations, the Korean government announced in late 1997 that all banks failing to meet the Basel minimum capital adequacy ratio of 8% by the end of 1997 would be identified as "potentially nonviable" (FSS 2000; De Luna-Martinez 2000). After the Korean government established the FSC, the FSC subjected 12 banks to PCA for the first time on June 28, 1998, although PCA would not take effect until September (De Luna-Martinez 2000). The MOFE evaluated merchant banks at the same time as commercial banks (Kyu-Sung Lee 2011). The FSC (and later FSS) began to evaluate nonbank financial institution[46] (insurance companies, investment and securities companies, mutual savings and finance companies, credit unions, and credit-specialized financial companies) and to issue PCA orders in the second and third quarters of 1998, respectively (Kyu-Sung Lee 2011). Nonbank financial institutions followed similar PCA procedures, with different measures of capital adequacy. Amendments to the ASIFI in September 1998 included trust companies in the list of financial institutions eligible for government support, formally codified PCA procedures, and increased the number of institutions subject[47] to PCA by financial supervisory authorities (BOK 1999; ASIFI 1997).

[46] The March 1997 amendments to the ASIFI granted a supervisory grace period to securities companies and credit-specialized financial companies, which did not face PCA until 2000 and 2001, according to an external reviewer.

[47] In addition to those institutions whose assets exceed liabilities or suspended deposit liabilities, "insolvent" or "failing" institutions also included those suspected to be insolvent (BOK 1999). Financial scandal or non-performing assets—in addition to insufficient capital adequacy ratios—could warrant PCA (BOK 1999).

8. Amendments to Regulation: Amidst capital injections and other rescue efforts, the government aligned financial supervision and prudential regulations with international standards.

The Korean government's 1998 interventions were characterized by rescue, recapitalization, and resolution. The following year ushered in new legal frameworks for prudential regulation and supervision, in-line with the conditions of the IMF's large assistance package (Kyu-Sung Lee 2011). The prudential overhaul signaled Korea's shift toward a market-based financial system (Kyu-Sung Lee 2011). To bring the Korean financial system up to international standards and practices, the Korean government needed to toughen the state's lax financial supervision and bolster market oversight (Kyu-Sung Lee 2011).

Lawmakers modeled banking supervision after the Basel Core Principles for Effective Banking Supervision, which shifted the overall methods[48] of financial supervision in Korea (Kyu-Sung Lee 2011). The government improved the management evaluation of financial companies[49] by adopting CAMELS bank ratings in October 1996, and added sensitivity to risk in 1998 (Kyu-Sung Lee 2011).

On September 2, 1998, the Economic Policy Coordination Committee (EPCC) recommended that banks with BIS capital ratios lower than 8% raise them to at least 6% by March 1999, 8% by March 2000, and to 10% by December 2000 (Kyu-Sung Lee 2011). Along the same timeline, regional banks with no international clients faced targets of 4%, 6%, and 8% (Kyu-Sung Lee 2011). The target for domestic merchant banks was 8% by June 1999 (Kyu-Sung Lee 2011).

Beginning on July 1, 1998, supervisory authorities shortened the delinquency window for "precautionary" loans from three to six months to one to three months (Kyu-Sung Lee 2011). Loans delinquent for periods longer than three months were designated "substandard" (Kyu-Sung Lee 2011). Financial institutions also endured more stringent provision requirements for loan losses and write-offs in July 1998 (Kyu-Sung Lee 2011). The government also revamped loan management practices[50] and implemented risk-based supervision at the end of 1998 (Kyu-Sung Lee 2011). Forward-Looking Criteria (FLC), loan criteria that more accurately reflected the future abilities of borrowers to service their debt, became effective December 31, 1999 (D. S. Kang 2010; Kyu-Sung Lee 2011).

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[48] Financial supervision shifted from: direct to indirect regulation, positive-list to negative-list regulation, abstract and political supervisory standards to transparent and objective standards, institution-specific supervision to function-oriented supervision, unconsolidated to consolidated supervision (including parent, subsidiary, and overseas branches), and regulation-focused to service-oriented oversight (Kyu-Sung Lee 2011).

[49] Management evaluation ratings for securities firms, insurance companies, and investment trusts were introduced in January 1999 (Kyu-Sung Lee 2011).

[50] Practices revamped included the definition of equity capital, loans subject to the lending rules, and lending ceilings (to a single person, to a single business group, loans in excess of a certain amount, and to a large shareholder) (Kyu-Sung Lee 2011).

The government also changed definitions of capital. Starting January 1999, loan-loss provisions for non-performing assets were deducted from tier-2 capital within the capital adequacy ratio (Shin and Hahm 1998). Prior to May 1999, "equity capital" was the sum of paid-in-capital, reserves, and other surpluses (FSS 2000). After May 1999, "equity capital" referred to the sum of tier-1 capital and tier-2 capital, in accordance with Basel capital standards (FSS 2000).

Supervisory authorities gradually introduced mark-to-market accounting[51] to financial companies between the beginning of 1998 and the end of 1999 (Kyu-Sung Lee 2011). Other additions to the supervisory framework include Prompt Corrective Action, regulations on foreign exchange, reporting and disclosure requirements, and off-site surveillance (Kyu-Sung Lee 2011).

Stronger asset classification criteria and higher scrutiny of NPLs aimed to make the Korean financial system more efficient and stable (Lim and Hahm 2004). The Korean government introduced forward-looking criteria so that financial institutions would "take decisive actions on distressed firms" and decrease regulatory forbearance[52] (Lim and Hahm 2004). See Figure 8 in the Appendix for details on changes to asset classification. In light of corporate failures and investor losses,[53] the Korean government's institutional reforms appeared credible (Lim and Hahm 2004).

The new loan classification and provisioning standards effectively classified most banks as undercapitalized (M. Kang 2009). Between 1998 and 1999, the new rules increased non-performing loans by about KRW 45 trillion (M. Kang 2009). After the Daewoo Group's insolvency and failure in 1999, additional financial restructuring efforts appeared inevitable (KDIC 2003). In addition to the new rules, overall economic contractions and tightening fiscal and monetary policy created KRW 93 trillion of additional NPLs in the banking sector (KDIC 2003; M. Kang 2009). In response to the deteriorating economic conditions, the Korean government launched the second phase of restructuring in September 2000: raising KRW 40 trillion of public funds bonds and injecting them into the financial sector (KDIC 2003; M. Kang 2009).

[51] Prior to the introduction of the new system, financial companies disclosed financial data to satisfy regulatory requirements rather than to inform investors and shareholders (Kyu-Sung Lee 2011). Under the old accounting regime, companies could easily distort financial statements by misrepresenting income and expenses (Kyu-Sung Lee 2011). Shin and Hahm (1998) argues that banks overstated their true BIS capital adequacy ratios through two practices: the recognition of parts of loan-loss provisions as capital, and the partial recognition of stock revaluation losses (22–25). The authors contend that in the early to mid-1990s, Korean banks overstated their true BIS capital adequacy ratios by 1–2% (Shin and Hahm 1998).

[52] "Forbearance" refers to the "granting of exemptions or delaying intervention action in relation to banks as regards compliance with minimum regulatory requirements or intervention criteria" (IADI n.d.1.).

[53] Daewoo was one of the top five chaebols, and it failed in 1999 (Lim and Hahm 2004). The government used taxpayer money to allow Daewoo creditors to redeem their corporate bonds at a 5% loss, which was a shift away from "too-big-to-fail" (Lim and Hahm 2004).

9. Part of a Package: Non-KDIC recapitalization measures included NPL purchases by KAMCO and securities exchanges with government-owned shares.

The Korean government recapitalized financial institutions by purchasing common stock, preferred equity, subordinated debt, NPLs, assets, the payout of deposit-insurance policies, and directly injecting cash (Baliño and Ubide 1999). The largest of these measures was KAMCO's mass purchases of non-performing loans (see Figure 9 in the Appendix). Non-KDIC government agencies financed these activities through KAMCO bond issuances, the government budget, and the exchange of government shares of subordinated debt, depending on the mode of recapitalization (Baliño and Ubide 1999). When banks' turnaround plans involved foreign capital, the government recapitalized them by purchasing subordinated bonds (Kyu-Sung Lee 2011). To recapitalize state-owned banks, the Korean government directly provided state-owned property[54] in addition to cash contributions (Kyu-Sung Lee 2011).

10. Fate of Existing Board and Management: Participating institutions in the capital injection were required to sign a Memoranda of Understanding with KDIC, and it could directly manage institutions when they failed to abide by the terms of the MOUs.

In addition to PCA, the FSC relied on informal supervisory actions to improve the relationship between financial institutions and supervisory authorities (D. S. Kang 2010). The FSC could require institutions to submit management improvement plans, letters of commitment, or Memoranda of Understanding (D. S. Kang 2010). Under the SAMPF, recipients of public funds were obliged to conclude MOUs with government agencies to prevent moral hazard (SAMPF 2000; SAMPF ED 2001). Fourteen financial institutions had to enter into MOUs with the KDIC after receiving capital injections, and the majority were signed in 2000 (KDIC 2018). The KDIC actively added and adjusted business performance targets from the date of origination through 2018 (KDIC 2018). The KDIC terminated 12 MOUs after institutions either merged with or were acquired by larger financial institutions (KDIC 2018).

Each MOU contained a main text, a business normalization plan, and document attachments[55] (KDIC n.d.2.). These plans included details on a financial institution's target

[54] Between September 15 and November 10, 1998, the Korean government infused cash worth KRW 1.35 trillion into the Korea Development Bank, KRW 100 billion into the Export-Import Bank of Korea, and KRW 200 billion into the Industrial Bank of Korea (Kyu-Sung Lee 2011). The government also transferred its own shares of KT&G and POSCO worth KRW 1.5 trillion to the Industrial Bank of Korea (Kyu-Sung Lee 2011). On December 31, 1998, the government transferred shares—including shares of the Korea National Housing Corporation—worth KRW 3.4 trillion to the Korea Development Bank (Kyu-Sung Lee 2011). The Export-Import Bank also received KRW 450 billion worth of government-owned shares (Kyu-Sung Lee 2011).

[55] The main text describes the institution's responsibility to follow the business normalization plan on an agreed-upon schedule (KDIC n.d.2). The business normalization plan describes the institution's plans to better its balance sheet and measures to strengthen other financial and non-financial indicators (KDIC n.d.2.).

capital adequacy ratio,[56] profit-to-assets ratio, bad-loan ratio, restructuring plans, and the written consent of the in-house labor union to restructuring (BOK 2001). The government standardized and publicly announced the contents of the MOUs (D. S. Kang 2010). The government evaluated MOU adherence on a quarterly basis, allowing financial supervisors to take punitive action against non-adherence (KDIC 2000). From MOUs, the KDIC maintained broad informational authority and could request the institution to provide documentation at regular intervals, to create Implementation Plans, and to notify the KDIC of any interruptions to the institution's completion of responsibilities (US SEC 2000, Articles 3–6). The KDIC could also request information indirectly from the Financial Supervisory Commission or the Financial Supervisory Service (KDIC 1999). The KDIC could directly manage institutions when they failed to abide by the terms of the MOUs (US SEC 2000, Article 9).

11. Fate of Existing Board and Management: KDIC managed and staffed institutions to strengthen their management.

To quickly recover public funds, the KDIC aimed to improve the value of the assets (including equity) by strengthening the financial status of the underlying institution (KDIC 1999). KDIC attempted to help the institution by fortifying their human resource management, supporting various restructuring efforts, and establishing and implementing new budgets (KDIC 1999). If the management did not comply, the KDIC could assume legal rights to take "appropriate legal actions to accomplish [the KDIC's] objectives" (KDIC 1999). From related government agencies, the KDIC could request information about the assets of failed institutions, their managers, and their officers (KDIC 1999). In January 1998, the government amended the ASIFI to order capital write-downs for the existing shareholders responsible for the insolvency of banks that the government has recapitalized or decided to recapitalize (Kataoka 1999). The KDIC could demand damage payments from the management ("managerial entity") of a failed institution (KDIC 1999). The KDIC monitored management's adherence to normalization plans on a quarterly basis and requested the FSC to take necessary action if the institution failed to hit the MOU targets (KDIC 2000).

"Regulations Concerning the Accountable Management of Financial Institutions and the Guarantee of the Transparency of the Financial Administration" was established on November 13, 2000 (BOK 2001). Its purpose was to aid the financial supervisory institution in establishing financial policy and to execute its supervisory responsibilities through "objective and transparent procedures" (BOK 2001). This law forbade the financial supervisory institution from making unwarranted interventions in its management of financial institutions (BOK 2001). The financial supervisory institution was required to

The attached documents include a pledge to implement the MOU and management/staff signatures (KDIC n.d.2.).

[56] Following an agreement with the World Bank, minimum BIS targets for banks were 10% after signing MOUs (FSC 2011). The Korean government believed 10% was necessary for financial soundness in the business normalization process (FSC 2011).

request support or cooperation (from financial institutions) through writing or at a formal meeting (BOK 2001). The government and KDIC were requested to dispose of their shareholdings in these financial institutions as quickly as possible (BOK 2001).

Other efforts to improve bank management included improvements to governance and ownership structures (Shin and Hahm 1998). While rights of minority shareholders were strengthened (Lim and Hahm 2004), controlling shareholders sometimes impeded the restructuring process (Lim and Hahm 2004).

12. Exit Strategy: To recover public funds, the Korean government created a Public Fund Oversight Committee, legalized holding companies, removed limits on foreign and investment trust ownership of domestic companies, and granted the KDIC administrator roles in bankruptcy proceedings.

The KDIC recovered the costs of capital injections by selling equity stakes, accumulating equity dividends, and collecting bankruptcy dividends[57] (KDIC 2001). However, the KDIC did not authorize equity dispositions on its own. The Special Act on the Management of Public Funds established a Public Fund Oversight Committee (PFOC)[58] at the Ministry of Finance and Economy; PFOC oversaw public funds, including approving and arranging their provision and collection (BOK 2001). Within the PFOC, a Sales Screening Subcommittee decided when and how the KDIC and other government agencies ought to dispose of assets (including stock holdings and equity participation) (BOK 2001). If a recipient of public funds were to become insolvent or to dissolve, the court was required to designate the KDIC or a member of its staff as a receiver or liquidator for a minimum of five years (BOK 2001; KDIC 2000).

Following a change to the DPA, the KDIC could recover public funds more efficiently by performing liquidator and bankruptcy administrator roles itself beginning in 2000[59] (KDIC

[57] To effectively recover public funds, including those used for recapitalization, the KDIC studied foreign schemes (KDIC 1999). From the United States, the KDIC obtained information on the US FDIC's failed bank resolution and the US Resolution Trust Corporation's (RTC) resolution of failed savings and loan associations (KDIC 1999). The KDIC also studied US and Japanese modes of debenture recovery through asset management/disposal contracts (KDIC 1999). To prevent moral hazard, the KDIC studied resolution procedures, relevant regulations, and legal actions taken by the U.S. and Japanese governments against financial crime. The KDIC attempted to create effective and preventive anti-failure measures by developing assumptions of damage claim rights (KDIC 1999).

[58] The use of public funds to manage and resolve financial institutions was politically contentious, and there were strong negative public reactions to "the injection of taxpayer money to rescue essentially private financial institutions" (M. Kang 2009). Korean authorities created PFOC in late 2000—after the majority of capital injections had already taken place (M. Kang 2009). Myung-Koo Kang (2009) suggests that the Korean government created PFOC in an attempt to divert public criticism (248).

[59] KDIC was able to actively seek recovery efforts by convincing courts and bankruptcy estate trustees to adopt an auditor system under Bankruptcy Law (KDIC 2000). Under the SAMPF, the KDIC developed criteria for how to dispose of and manage the assets held by bankruptcy estates (KDIC 2000; SAMPF 2000). To analyze performance, KDIC also developed annual plans for recovery and trustee dividend distribution for each estate (KDIC 2000).

1999; DPA 1995). With the goal of completing early bankruptcy proceedings, the KDIC also planned to file subrogation damage claim lawsuits and/or to participate in relevant lawsuits via the revised regulations (KDIC 1999).

A major objective of privatization was to recoup public funds injected for financial restructuring, so the Korean government began selling nationalized banks to foreign investors in late 1999 (S. M. Kim, J. Y. Kim, and Ryoo 2006). The Korean government encouraged foreign investment to increase the capital base of viable financial institutions[60] (Shin and Hahm 1998). The Korean government raised the ceiling on foreign ownership from 7% to 50% between November and December 1997 and eliminated it by May 1998, six months after the onset of the crisis (M. Kang 2009). In 1998, the Korean government also eliminated a rule that required the boards of directors to approve a foreign institution's purchase of at least one-third of a company's outstanding shares (Y. K. Lee 2004).

On September 16, 1998, the government amended the Securities Investment Trust Act, and repealed caps on equity ownership by individual investment trusts (Kyu-Sung Lee 2011). The move permitted controlling shareholders of investment trusts to aid in restructuring efforts via recapitalization (Kyu-Sung Lee 2011).

In the past, the Korean government had prohibited financial institutions from setting up financial holding companies (FHC) for fear that they would stifle the financial sector and create systemic risk (Ro 2001). Commercial banks' refusal to participate in mergers led the government to adopt FHC-friendly legislation[61] (Ro 2001). In October 2000, the Korean National Assembly passed the Financial Holding Company Act, which permitted the creation of financial holding companies with government approval (Ro 2001; FHCA 2000). In December 2000, the FSC/FSS created the Regulation on Supervision of Financial Holding Companies to establish authorization criteria for institutions to either start financial holding companies[62] or to join them as subsidiaries (S. M. Kim, J. Y. Kim, and Ryoo 2006).

On March 27, 2001, the KDIC established Woori Finance Holdings Company (FHC) as a wholly owned subsidiary through the stock transfers of four banks (Hanvit, Peace, Kwangju, and Kyungnam) and one merchant bank (Hanaro, later "Woori Merchant Bank") (KDIC 2001). Each member received a capital injection to raise its capital adequacy ratio above 10% before it became a subsidiary of Woori FHC (Hahm and Kim 2006). The KDIC suggested that Woori's establishment reflected the KDIC's own effort to recover public

[60] The banking sector depended on the flow of foreign capital because the Korean government was only willing to support part of the recapitalization, domestic capital markets were insufficient, and there were legal restrictions on chaebol ownership of banks (Shin and Hahm 1998).

[61] The Korean government hoped that staff resistance would be lower for takeovers by FHCs than takeovers by other banks because affiliated companies would be able to avoid employee downsizing, in contrast with the P&A approach of 1998, which incited employee resistance (Ro 2001, 97; Hahm and Kim 2006).

[62] As with mergers, the Korean government offered relatively healthier banks priority approval if they were willing to integrate voluntarily as holding companies (Ro 2001).

funds quickly (KDIC 2001). Later government FHCs include Shinhan Financial Group (September 2001) and Dongwon Financial Group (May 2003); both groups incorporated nonbank financial institutions (S. M. Kim, J. Y. Kim, and Ryoo 2006; Hahm and Kim 2006).

III. Evaluation

Evaluations of the Korean government's financial restructuring efforts are generally positive (D. S. Kang 2004). Popular topics of criticism include moral hazard, the health of financial institutions after capital injections, the consolidation of the financial system, and the asymmetric focus on the banking sector.

In a March 1999 discussion paper for Columbia Business School, Hinori Kataoka praised the Korean government for injecting public funds (and capital) promptly. However, he hypothesized the likelihood of further government spending, as Korean banks were not experienced in commercial risk management. The author also expressed concerns over moral hazard for banks that expected capital injections by the government. In the author's view, the 8% benchmark BIS capital adequacy ratio—industry standard for banks in 1999—was too low.

Hun-Jai Lee, the former Financial Supervisory Commissioner and Minister of Finance and Economy, argued that there was too much capital injected into banks during the second round of restructuring (D. S. Kang 2010). He was concerned that banks would have little incentive to self-restructure after receiving excess government capital, and that it would be a challenge for the government to privatize them. Lee was critical of the level of recapitalization in the financial restructuring process (D. S. Kang 2010).

Stijn Claessens, Swati Ghosh, and David Scott wrote a paper entitled "Korea's Financial Sector Reforms" for the October 1998 conference "Korean Economic Restructuring: Evaluation and Prospects." Yoon Je Cho[63] was a referee for the paper and commented, "The government just pumped money without ensuring that these things will come in conjunction with bank recapitalization. So, there is risk that the money the government has put in might have been wasted" (Claessens, Ghosh, and Scott 1998). Yoon Je Cho questioned the incentives that financial institutions would have to restructure management, improve credit management, or reorganize internally ("these things") after receiving capital injections (Claessens, Ghosh, and Scott 1998).

[63] At the time of writing, Yoon Je Cho is a member of Bank of Korea's Monetary Policy Board. Formerly, Dr. Cho was Korea's Ambassador to the United States and had previously held posts at the Korea Institute of Public Finance, World Bank, International Monetary Fund, and Sogang University (SUGSIS n.d.).

Gongpil Choi (2001) argued that the sharp revision of capital adequacy requirements contributed to a credit slowdown that disproportionately harmed small and medium-size enterprises (SMEs), which consequently suffered chronic depressions.

In a 2001 BIS paper, Hyung-Gon Ro claimed that the first round of restructuring "cannot be judged a success" because several banks, despite receiving large sums of public fund injections, had significant amounts of bad loans and could not hit the 8% BIS capital adequacy ratio by the end of 2000 (Ro 2001). The author also suggested that mergers did not guarantee better management performance; for example, KRW 3 trillion was injected to recapitalize Hanvit Bank (the product of the merger between Korea Commercial Bank and Hanil Bank), but it soon required an additional KRW 3 trillion of public funds (Ro 2001).

Chopra et al. (2001), written in October 2001, took a more positive tone: "The viability [of the financial system] has been enhanced." The authors highlighted the status of bank capital, which almost all Korean banks held above minimum requirements at the time of writing. The authors acknowledged that some small institutions (not systemically important) were nationalized rather than closed—partly for political purposes and partly from cost-benefit analyses of alternative resolution measures. They warned that the inclusion of four small banks (Peace, Kwangju, Cheju, and Kyongnam) with one large bank (Hanvit) under a single financial holding company could stifle the recovery of all the institutions involved. The authors also argued that creating financial conglomerates before properly revising supervisory and regulatory measures could create new vulnerabilities. The authors emphasized the need for an effective exit strategy from government capital injections; state ownership of banks may result in higher rates of public fund recovery, but it could hinder the banks' future profitability. Last, the authors suggested that foreign capital was vital in stabilizing the economy as well as recapitalizing the financial system. Considering the constraints on domestic investors, foreign capital was an important source of funding (Chopra et al. 2001). The alternatives—allowing *chaebol* to increase their control over banks, or relying on more public funds—would have been politically challenging and led to "disastrous" results (Chopra et al. 2001).

A 2010 Korean Development Institute (KDI) report about Korea's post-crisis financial reform suggested that the use of public funds to compensate for the failure of financial institutions and markets "[defied] fairness and the principle of market discipline" but was a necessary response to the threat of a systemic crisis (D. S. Kang 2010). The author argued that the Korean government employed the public funds with utmost scrutiny, as "not a single [Korean] won was used outside of aiding financial institutions" (D. S. Kang 2010). The report emphasized the speed and efficiency with which Korean public officials were able to mobilize public funds after the onset of the crisis (D. S. Kang 2010). The author contrasted the smooth roll-out of the first round of restructuring with the delayed second round of restructuring, which elongated the financial and corporate restructuring between 1999 and 2000 (D. S. Kang 2010).

The KDI authors recognized that the extended restructuring process forced the Korean government to establish a system of public fund management (D. S. Kang 2010). There was no formal cost-benefit analysis before the first round of restructuring, so the need for a second round of public funds galvanized the government into a systematic, transparent, and cost-saving approach (D. S. Kang 2010).

With respect to the Korean government's exit strategy, Myung-Koo Kang (2009) expressed skepticism about the increase of foreign ownership of domestic commercial banks and its effect on the competitiveness and efficiency of the Korean financial sector (M. Kang 2009). The author established a relationship between financial consolidation, nationalization through capital injections, and privatization—the so-called "Shock Therapy" approach. After the crisis, foreign owned banks engaged in more retail banking than domestically owned banks—which reduced loans to the corporate sector (M. Kang 2009). Furthermore, Korean households took out loans mostly to finance house purchases and began to post their homes as collateral (M. Kang 2009). The author argued that the government's large and fast financial restructuring scheme did not allocate financial resources to the most productive sectors of the Korean economy and that the government inadvertently shifted costs to "economically and politically underrepresented social groups, in particular, non-homeowners and small firms."

Some scholars were wary of the consolidation of the Korean financial sector. Joon-Ho Hahm and Joon-Kyung Kim suggested that consolidation raised the systemic risk potential through direct and indirect interdependencies[64] between large banking institutions. The authors argued that consolidation can also have lead to regulatory forbearance, concentration and difficulty of orderly workouts, and opacity and informational asymmetry (Hahm and Kim 2006). They also contended that Korean financial conglomerates faced greater risks from non-bank sectors and capital markets (Hahm and Kim 2006).

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[64] Factors of direct interdependencies include short-term inter-bank lending, medium- and long-term loans, and over-the-counter derivatives transactions (Hahm and Kim 2006). Factors of indirect interdependencies include homogeneous balance sheet structures, homogeneous business/profit structures, and common exposure to market risks (Hahm and Kim 2006).

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V. Key Program Documents

Summary of Program

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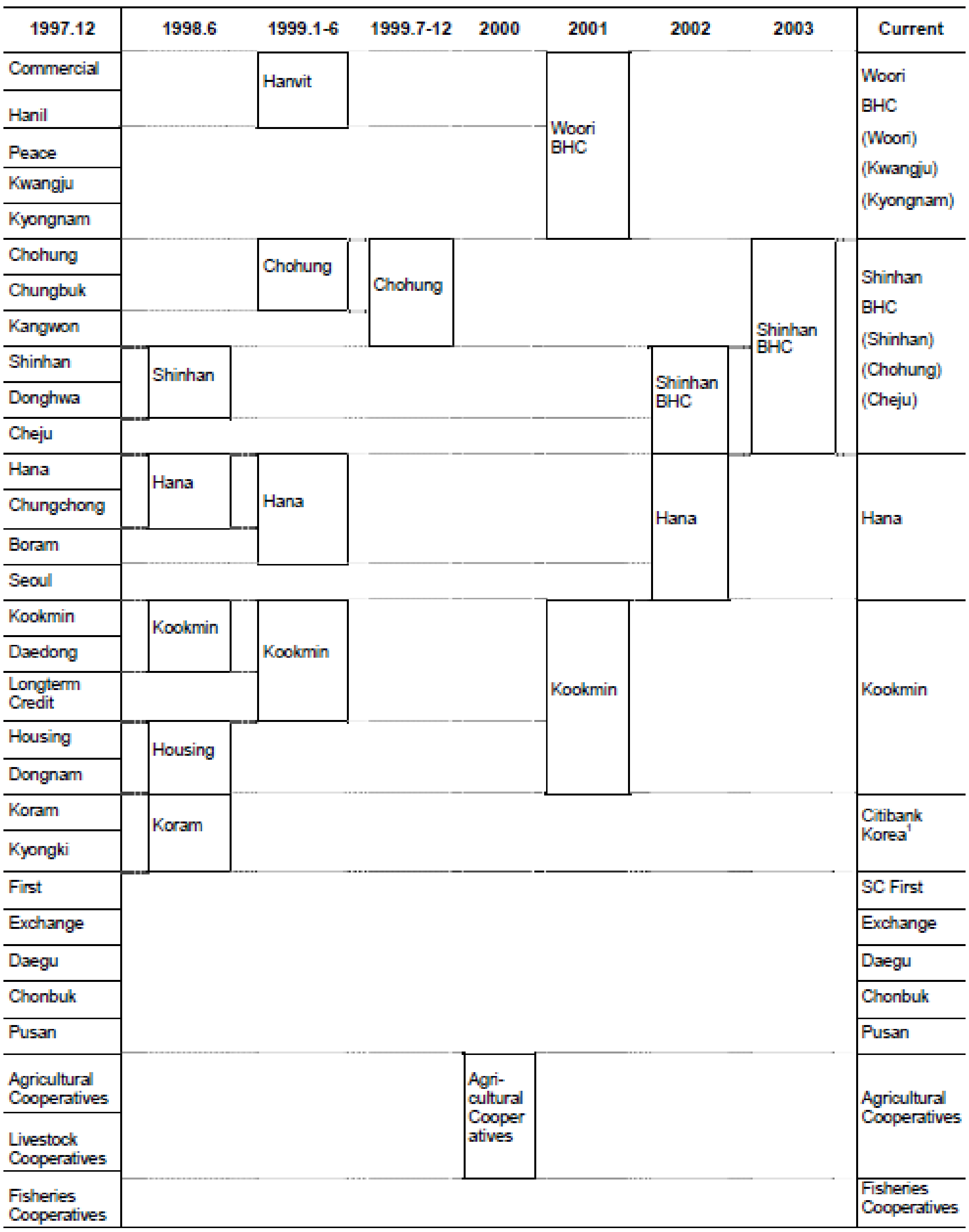
VI. Appendixes

Appendix A: Korean Bank Mergers During and After the Financial Crisis



[1] Citibank Korea was established by consolidating the fifteen branches of Citibank in Korea and Koram Bank on November 1, 2004.

Source: S. M. Kim, J. Y. Kim, and Ryoo 2006.

Appendix B: Prompt Corrective Action (PCA) Enforcement Criteria, According to PCA Measures and Company Categories

	Banks	Merchant bank corporations (MBC)	Mutual savings & finance companies (MS&F)	Securities companies	Insurance companies
Management improvement recommendation	· BIS capital ratio less than 8% · Asset quality or capital adequacy is 4/5 AND the overall CAMELS evaluation is 1/2/3	· BIS capital ratio less than 8% · Asset quality or capital adequacy is 4/5 AND the overall CAMELS evaluation is 1/2/3	· BIS capital ratio less than 4%	· Equity capital ratio less than 150% · Overall management is grade 3/4/5 AND capital adequacy is also grade 4/5	· Solvency margin ratio between 100% and 50% · Solvency margin or asset soundness is grade 4/5 AND general evaluation is also grade 1/2/3 · Insurer expected to fall under one of the above conditions
Management improvement requirement	· BIS capital ratio less than 6% · Overall CAMELS evaluation is 4/5	· BIS capital ratio less than 6% · Overall CAMELS evaluation is 4/5	· BIS capital ratio less than 2%	· Equity capital ratio less than 120% · Overall management is grade 4/5	· Solvency margin ratio between 50% and 0% · Insurer is grade 4/5 in general evaluation · Insurer expected to fall under one of the above conditions

Management improvement order	· BIS capital ratio less than 2% · Bank determined to be "failing" according to the Act on Structural Improvement of Financial Industry (ASIFI; see footnote) · Normal operations are hindered; bank unable to implement management improvement plan	· BIS capital ratio less than 2% · Bank determined to be "failing" according to the Act on Structural Improvement of Financial Industry (ASIFI; see footnote) · Normal operations are hindered; bank unable to implement management improvement plan	· BIS capital ratio less than 1%	· Equity capital ratio less than 100% · Assets to liabilities ratio less than 1:1	· Solvency margin ratio below 0% · Insurer determined to be "failing" according to the Act on Structural Improvement of Financial Industry (ASIFI; see footnote)

Notes: There are three scenarios in which the KDIC or Financial Supervisory Commission (FSC) can designate a "failing" or "distressed" financial institution: (1) insured financial institutions whose liabilities exceed assets due to an inspection of management conditions, or the occurrence of significant financial losses or non-performing assets, (2) insured financial institutions that suspend deposit payments and other claims or redemption of borrowed money from other financial institutions, and (3) insured financial institutions that the KDIC or FSC determines is unable to pay deposits and other claims or redeem borrowed money without financial assistance or separate external borrowing (excluding borrowing from ordinary financial transactions) (KDIC 1998; DPA 1995; ASIFI 1997).

Source: FSS 2000.

Appendix C: Prompt Corrective Action (PCA) Enforcement Actions, According to PCA Measures and Company Categories

	Banks, nonbank financial institutions (MBC, MS&F)	Securities companies	Insurance companies
Management improvement recommendation	· Improvement of organizational structures · Establishment of specific allowances · Restrictions on investment into fixed assets · Restriction on entry to new business area, new investments, or profit dividends · Reduction or increase of capital · Reduction of non-performing assets	· Improvement of manpower and organization management · Curtailment of expenditures · Efficient management of branches · Disposition of non-performing assets · Restriction on any practices causing a decrease in net capital · Increase or decrease in paid-in capital · Freeze on new investments	· Caution or warning against an insurer or directors · Increase in, or reduction of paid-in capital · Curtailment of net operating expenses · Management improvement of business offices · Restrictions on investment of fixed assets · Disposal of non-performing assets · Improvement of manpower and institution management · Prohibition of acquisition of treasury stocks · Restrictions on dividends and policyholders' dividends · Restrictions of new businesses or new capital investments · Rate adjustment advice

Management improvement requirement	· "Recommendation" measures · Closure or consolidation of operating offices · Freeze on new investment · Reduction of risk assets · Control of deposit interest rates · Change of senior management and external auditors · Suspension from some parts of business · Submission of plan for merger with or acquisition by other financial institution(s)	· "Recommendation" measures · Restrictions on holding high-risk assets and disposition of assets · Closure, consolidation, or restrictions on opening places of business offices · Curtailment of organization · Disposal of subsidiaries · Demand for change in officers' duties · Suspension of part of business · Measures taken in case of management improvement recommendation	· "Recommendation" measures · Closure, consolidation, or restriction on opening places of business · Demand for change of officers · Suspension of part of business · Reduction of manpower and institution · Plan for a merger, acquisition by a third party, or assignment of all or part of a business · Restriction on holding risk assets and disposition of assets · Resettlement of subsidiaries · Reinsurance placement
Management improvement order	· "Requirement" measures · Write-down of stocks · Suspension from duty of top management · Appointment of a receiver · Inclusion in a financial holding company · Merger with or acquisition by other financial institution(s) · Suspension from operating business within six months or request for revocation of banking license, etc.	· "Requirement" measures · Partial retirement of stocks (including retirement of all stocks owned by some stockholders) or combination of shares · Suspension of business execution by officers and appointment of an administrator · Merger · Assignment of all or part of business · Acquisition of the securities company concerned by third party	· "Requirement" measures · Retirement of part or all issued stocks · Suspension of business execution by officers and appointment of insurance administrator · Suspension of all insurance businesses within six months · Transfer of all or part of contracts · Merger · Assumption of insurance business by third party · Assignment of all or part of business

Notes: Many of the extreme "Management Improvement Order" protocol, such as cancellation of share capital, cessation of business operations, etc., were added on September 14, 1998, by an amendment to the Act Concerning the Structural Improvement of the Financial Industry (ASIFI) (BOK 1999; ASIFI 1997).

Source: FSS 2000.

Appendix D: Issuance of Deposit Insurance Fund Redemption Fund Bonds by Financial Sector (KRW billions)

	1998	1999	2000	2001	2002	**Total**
Banks	12,065.0	15,859.1	6,030.7	7,761.7	3,660.0	45,376.5
Securities companies	16.0	0.3	–	3,218.5	–	3,234.8
Life insurance companies	1,153.4	4,142.2	–	2,412.0	–	7,707.6
Non-life insurance companies	–	67.8	1,000.0	6,769.9	–	7,864.7
Merchant banks	6,512.0	–	1,260.0	7,334.2	–	15,106.2
Mutual savings banks	991.7	1,597.7	650.0	3,333.2	–	6,572.6
Credit unions	276.9	817.9	–	202.8	–	1,297.6
Total	**21,015.0**	**22,485.0**	**8,940.7**	**31,059.3**	**3,660.0**	**87,160.0**

Source: KDIC 2003.

Appendix E: Issuance of Deposit Insurance Bond Redemption Fund Bonds by Maturity (KRW billions) and Issuance Date

	1998	1999	2000	2001	2002	2003	**Total**
3 year	–	–	–	2,650.0	–	–	2,650.0
3 year[1]	–	5,866.0	–	–	–	–	5,866.0
3 years, 3 months	329.5	–	–	–	–	–	329.5
5 years	8,112.1	6,566.6	8,940.7	14,528.8	3,660.0	–	41,808.2
5 years, 3 months	1,192.3	–	–	–	–	–	1,192.3
5 years, 6 months	1,625.0	–	–	–	–	–	1,625.0
6 years	1,625.0	–	–	–	–	–	1,625.0
6 years, 6 months	1,625.0	–	–	–	–	–	1,625.0
7 years	1,625.0	113.3	–	9,926.0	–	–	11,664.3
7 years[2]	4,881.1	9,949.1	–	3,954.5	–	–	18,784.7
Total	**21,015.0**	**22,485.0**	**8,940.7**	**31,059.3**	**3,660.0**	**–**	**87,160.0**

1. One-year deferred; paid 6.25% every three months seven times for two years and 56.25% at maturity. The Korean government exempted the KDIC and KAMCO from borrowings received from Special Accounts for Treasury loans for interest repayment on DIF/DIFBRF Bonds and NPL Resolution Bonds (BOK 2003). With less principal and interest to repay on DIF bonds, the KDIC had a lower overall financial burden.

2. Five-year deferred; paid four equal amounts semiannually for over a two-year period.

Source: KDIC 2003.

Appendix F: Issuance of Deposit Insurance Fund Redemption Fund Bonds by Interest Rate (KRW billions)

	1998	1999	2000	2001	2002	2003	**Total**
Fixed rate	9,201.5	4,950.0	8.940.7	25,216.4	3,660.0	–	51,968.6
Floating rate[1]	11,813.5	17,535.0	–	5,824.9	–	–	35,191.4
Total	**21,015.0**	**22,485.0**	**8,940.7**	**31,059.3**	**3,660.0**	**–**	**87,160.0**

1. Floating bond rates were originally linked to the yields of Korean National Housing Bonds (KDIC 2002). Beginning in 2003, interest rates became linked to government bonds of equivalent maturity length (KDIC 2003).

Source: KDIC 2003.

Appendix G: Changes in Standards for Asset Classification

	Previous standards	Forward-looking criteria
Character	· Uniform standards for all banks · Banks have no own standards	· Minimum guideline · Banks establish own standards
Assets subject to classification	· Limited to 13 items including loans, guarantees	· Expanded to all the assets that banks need to classify, including lease assets
Classification of loans	· Based mainly on past performance of borrowers · No distinction between corporate loans and household loans	· Based primarily on borrowers' capacity to repay and additionally on borrowers' past-due obligations and dishonor · Household loans are classified based solely on past due period
Classification of foreign bills bought	· Separate standards are applied	· In principle, the same standards of loans are applied, except when necessary due to guarantors' different credit
Classification of securities	· Primarily based on valuation and credit risks of issuers · Securities subject to market-to-market or equity methods are exempt from classification	· Based on issuers' credit ratings (by banks' own credit risk rating model or credit rating agencies') · All securities are subject to classification without exemption
Restructured loans	· No standards for restructured loans	· Separate standards for restructured loans

Source: FSS 2000.

Appendix H : Cost of Financial Restructuring in Korea through March 1999

Action	Method of finance	Amount in trillions of KRW [percentage of GDP]
December 1997 – January 1998 measures		
Equity purchase	Exchange of shares	4.5 [1.1]
	KDIC bonds	1.5 [0.3]
Subordinated debt purchase	Exchange of shares	4.4 [1.1]
Purchase non-performing loans (NPLs)	KAMCO bonds	7.5 [1.2]
Deposit insurance payout	KDIC bonds	5 [1.1]
May 20th plan		
Recapitalization	KDIC bonds	16 [3.7]
Purchase of non-performing loans (NPLs)	KAMCO bonds	25 [5.8]
Deposit insurance payout	KDIC bonds	9 [2.1]
August 1998 supplementary budget		
Recapitalization	Government budget	1.3 [0.3]
	Total:	74.2 [17.5]

Source: Baliño and Ubide 1999.