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Research Report

Galapagos Syndrome in South Korea's Real Estate PF, and the need for fundamental structural reform

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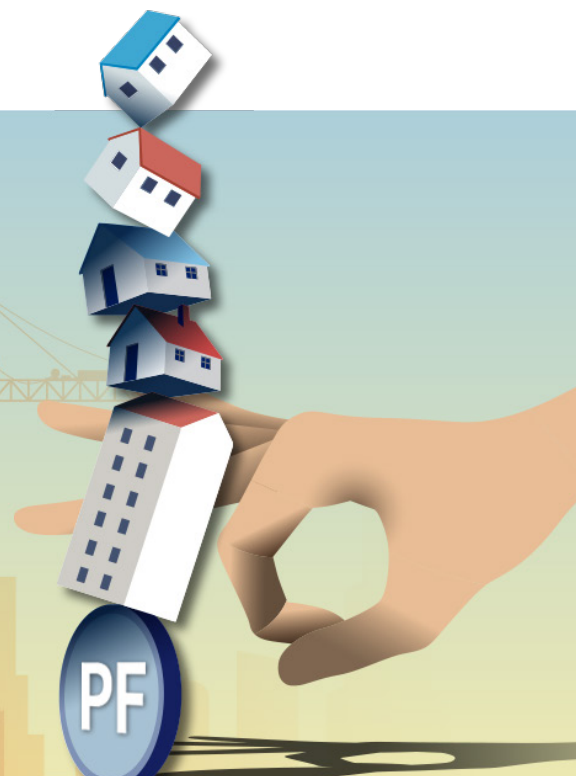
Video Report



Over the past several decades, real estate project financing (PF) has repeatedly triggered economic disturbances in Korea, with no fundamental remedies in sight until now. Project sponsors are at the heart of this issue, investing minimal equity while heavily relying on guarantees from third parties, such as construction firms, to push forward development projects entirely on debt. This financing structure is unheard of in major advanced countries. Korea needs to reform its unique PF structure by augmenting capital and reducing dependence on guarantees.

Galapagos Syndrome in South Korea's Real Estate PF, and the Need for Fundamental Structural Reform

Sunjoo Hwang, Fellow at KDI



I. Introduction: Deep-rooted Issue of Real Estate Project Financing

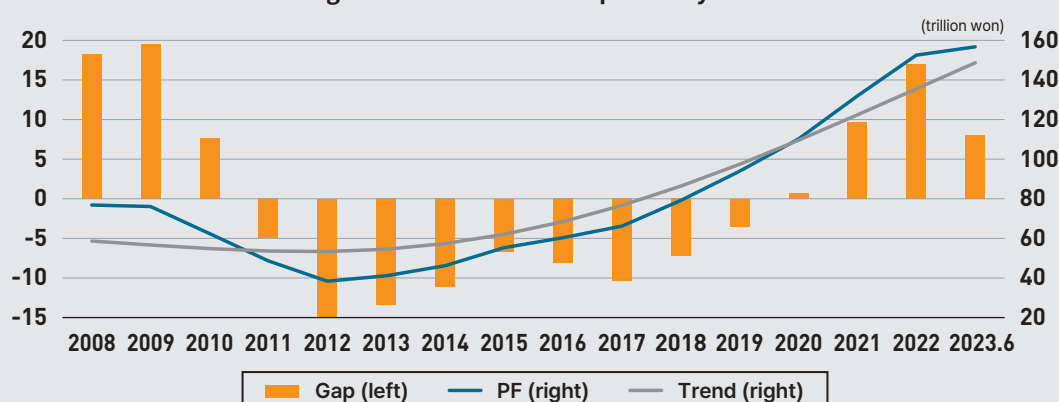
Over several decades, real estate project financing (PF) has repeatedly destabilized the Korean economy, but fundamental improvements have not been made.

Recently, project financing (PF) in the real estate sector has been a material risk factor for the Korean economy. In four years, PF exposure, encompassing both loans and guarantees, surged to approximately 160 trillion Korean won, up from below 100 trillion won in 2019 (Figure 1). When quasi-PF loans, such as those collateralized by land and loans from the Community Credit Cooperatives, or *Saemaul Geumgo*, are included, the total exposure climbs to a staggering 230 trillion won (Financial Supervisory Service, May 2024). Late last year, TAEYOUNG E&C filed for a workout program, and more than 20 general construction contractors declared bankruptcy. To prevent the PF crisis from spreading throughout the financial system and broader economy, including the construction sector, the Korean government has enacted short-term measures, such as expanding PF guarantees and providing emergency liquidity provisions.

However, the issue of real estate PF is not new but deep-rooted, recurring over several decades. PF insolvency is at the heart of the 2011 savings bank crisis, which led to bank runs that triggered the collapse of about 30 savings banks, affecting over 100,000 customers. In 2013, alarming growth in PF exposure, especially in the non-banking sector, raised calls for interventions to mitigate risk. By 2019, large-scale debt guarantees provided by securities firms to PF projects became a notable concern. In 2022, the Legoland crisis set off a credit crunch in the bond market.

Despite these repeated crises arising from real estate PF, fundamental improvements have not been made. What are the underlying causes of these persistent issues, and how can they be effectively addressed?

Figure 1. Real Estate PF Exposure by Year



Note: PF represents the total PF exposure amount, which includes the sum of PF loans and guarantees. Trend refers to the long-term trend value calculated using the Hodrick-Prescott filter (with a smoothing parameter of 100, commonly applied to annual data). Gap indicates the value obtained by subtracting the trend value from the PF exposure.

Source: Author's calculations based on raw data from the Bank of Korea (2022) and the Office of National Assembly Member Yoon Changhyun (2023).

II. Causes of PF Problems: Low Equity and High Reliance on Guarantees

The root cause of PF problems lies in the unique financing practice of relying almost entirely on debt, where developers invest very little equity and depend heavily on third-party guarantees.

The root cause of real estate PF problems stems from an outdated financial structure characterized by minimal equity and high reliance on guarantees. Typically, developers, as project sponsors, invest only 3% of the total project cost as equity, financing the remaining 97% through debt. An analysis of over 300 PF projects launched in 2021~23, totaling 100 trillion won, finds that while the average total project cost per project was 374.9 billion won, developers invested only 11.8 billion won (3.2%) as equity, with the overwhelming majority of 363.1 billion won (96.8%) secured through debt (Table 1).¹⁾ The project breakdown by type shows that the equity ratio was lower for residential projects (2.9%) compared to commercial ones (4.3%) and lower in provincial regions (2.3%) than the capital area (3.9%). Such heavy debt dependence is not a recent phenomenon but has been a long-standing practice. A survey of 464 real estate PF loans, including 366 housing PF loans, held by four major banks back in 2009 finds that the equity ratio was just 4.2% for housing PF and 6.0% for non-housing PF (Kim and Sakong, 2009; Kim and Seo, 2010).

Table 1. Capital Structure of Real Estate PF in Korea (2021~23)

(100 million won, %)

	Total	Residential	Commercial	Capital Area	Provincial Regions
Total project cost	3,749	3,937	3,092	4,023	3,489
Equity capital	118	115	134	157	81
Equity ratio	3.15	2.92	4.33	3.90	2.33
Proportion	100.0	72.4	18.8	48.7	51.3

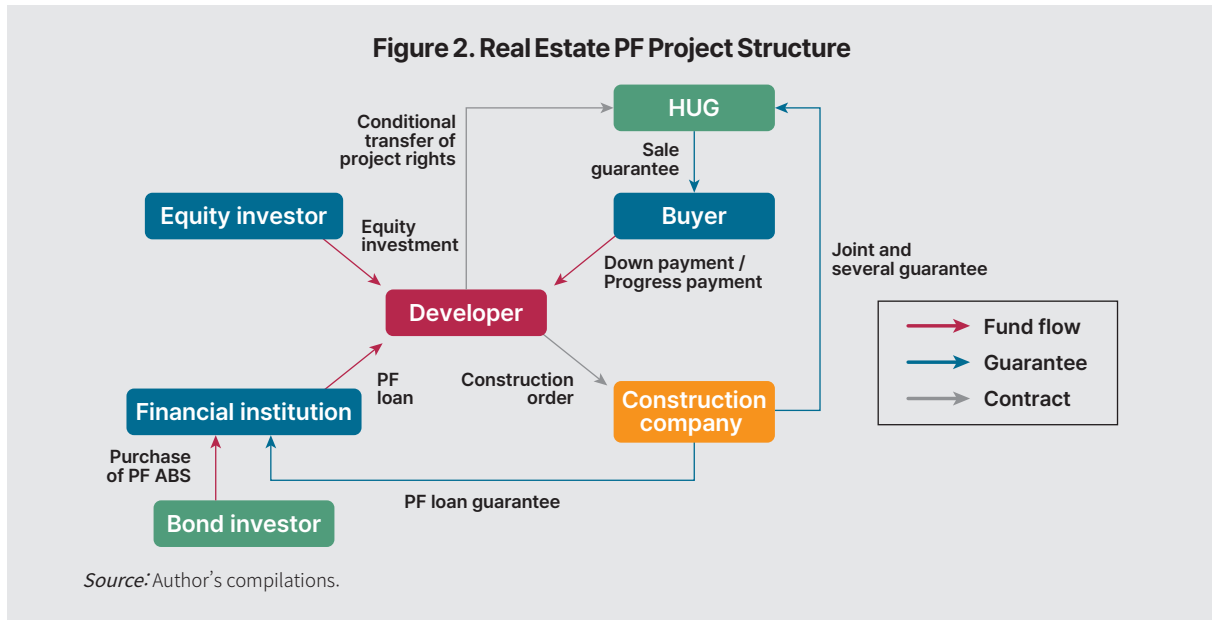
Note: The figures represent the average for approximately 300 projects (with a total project cost of about 100 trillion won) from which KDI obtained relevant data among all real estate PF projects for 2021~23.

Source: KDI internal data.

Due to the high-risk nature and uncertain success prospects of real estate PF projects, along with minimal equity investment from project sponsors (developers), financial institutions cannot readily provide PF loans. In Korea, however, construction firms that secure contracts from developers effectively guarantee the repayment of PF loans (Figure 2) and commit to completing the construction under any circumstances through a completion guarantee agreement. If the developer fails to pay construction costs on time, this agreement obligates the construction firm to complete the project, even out of its pocket. Often, the completion guarantee agreement includes a

1) The calculation of equity capital sums up the capital directly invested by developers and the capital contributed by external investors.

provision stipulating that if the developer fails to repay the PF loan, the construction firm will assume the repayment obligation. When the construction firm has a low credit rating or is small or medium-sized, real estate trust firms or securities companies sometimes step in to provide the necessary guarantees.

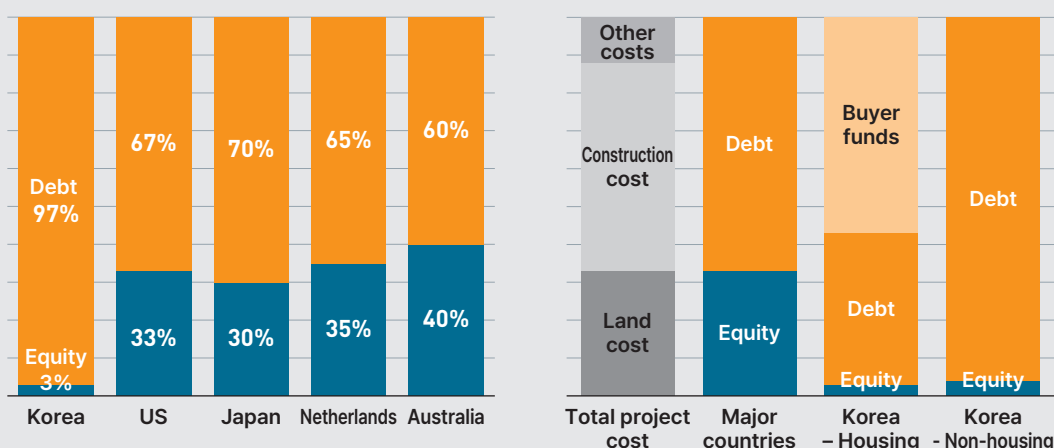


In Korea, the equity ratio of developers is around 3%, while in major advanced countries, it exceeds 30%.

Unlike Korea, major advanced countries maintain a high equity ratio of 30~40% for real estate PF projects (Figure 3, left). In the US, financial institutions require at least one-third, or 33%, of the total project cost as equity for PF loan approval. While this ratio may be slightly lower depending on project feasibility, it rarely falls below 20%. As expected, developers do not shoulder the entire equity burden alone. They generally directly put in at least 10% of the total equity capital and raise the remaining 90% by bringing in other equity investors, such as real estate investment trusts (REITs), pension funds, construction firms, and financial institutions.

Japan, the Netherlands, and Australia also maintain a relatively high equity ratio of 30~40% for real estate PF projects. Developers directly invest 33~50% of the total equity capital and raise the remainder by attracting other investors. Examples are Japan's large commercial facilities in Tokyo, such as Roppongi Hills and Akihabara UDX, which had equity ratios of 37% and 36%, respectively. In Australia, although loans were approved for establishments with equity ratios of 20% or less before the 2008 global financial crisis, the required ratio was raised from 25% to 40% after the crisis and further raised beyond 40% in 2022 to ensure financial soundness.

Figure 3. Real Estate PF Capital Structure by Country



Note: In *Korea-Housing*, debt is categorized into financial debt and home buyer funds (down payment and progress payment). *Debt* refers to typical financial debt, whereas *Buyer funds* correspond to the down payment and progress payment made by home buyers before the project's completion.

Source: Author's compilations based on Jung *et al.* (2013); Choi (2012); Bryant (2012); Glancy and Kurtzman (2022); Long (2011); and Pallas Capital (2022).

In major countries, land is secured with equity capital, and only construction costs are financed through loans. This approach prevents the issue of refinancing bridge loans into main PF loans, which is typical in Korea.

In major countries, it is rare for third parties, rather than developers, to guarantee PF loans, unlike in Korea.

In most advanced economies, including the US, Japan, and the Netherlands, the common practice is to finance the construction costs only through PF loans after using equity capital to secure land and obtain construction permits. In the US, PF loans primarily refer to construction loans (Figure 3, right). These loans are obtained solely to cover construction costs after securing land and permits. The Netherlands allows bank loans accessible only after acquiring construction permits following land purchase. In contrast, in Korea, developers have very minimal equity capital, which results in financing most land and construction costs and other expenses through PF loans. Their equity capital covers only about 10% of the land cost as a down payment, with the balance financed through a bridge loan.²⁾ Afterward, the bridge loan is refinanced into the main PF loan upon obtaining permits and commencing construction. Accordingly, Korea is susceptible to refinancing risks, as refinancing may fail due to permit rejection or doubts about project feasibility, leading to insolvency. However, major economies do not face such refinancing risks since equity capital covers land costs.

Meanwhile, in major countries, it is rare to find third-party payment guarantees from entities other than developers. Developers, who are also project sponsors, agree to repay loans using their other assets in case of contingencies. Generally, third parties like construction

2) Construction firms often provide guarantees for bridge loans to secure construction rights.

companies do not provide these guarantees. Instead, construction firms only commit to completing construction as scheduled. Because this completion guarantee is tied solely to the timely payment of construction costs, it fundamentally differs from Korea's completion guarantee agreement, where the construction firm must complete the project unconditionally and may even have to repay the developer's debt in some cases.

III. Problems with the Low-Equity, High-Guarantee Structure

The low-equity and high-guarantee structure leads to more developers becoming smaller in scale and underfunded.

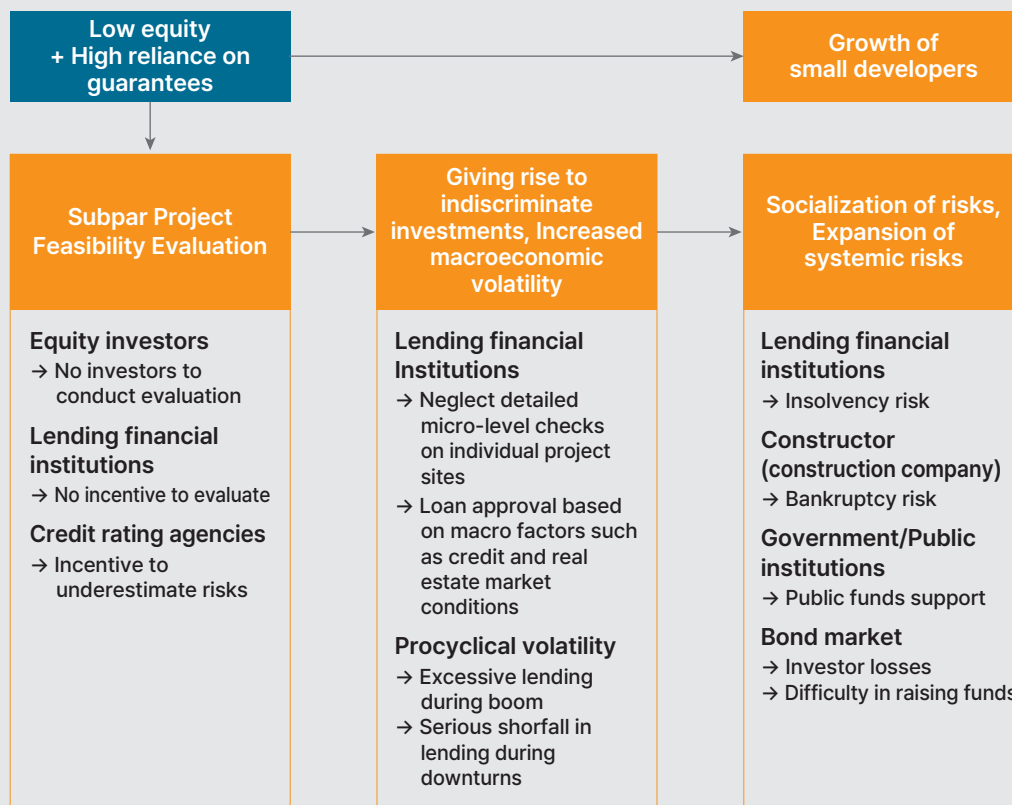
The low-equity and high-guarantee structure leads to poorer assessments of project feasibility, no-questions-asked investments, and increased macroeconomic volatility.

What specific challenges arise from the low-equity and high-guarantee financing structure? First of all, the share of small-scale developers continues to expand, hindering the sound growth of the industry (Figure 4). Suppose a developer invests only 10 billion won as equity capital in a large-scale project worth 400 billion won, with potential dividends of several tens of billions of won upon completion. This combination of low equity investment and high profitability incentivizes opportunistic behaviors among developers, who seek quick returns. As a result, small-scale developers flood the market. By 2020, the number of registered developers exceeded 60,000.³⁾ This structure makes it difficult for large and reliable developers with substantial capital and extensive experience to emerge.

Moreover, the low-equity and high-guarantee structure compromises the assessment of project feasibility. Feasibility assessment is crucial given the inherent high risks of real estate development projects. Which party is best positioned to evaluate project feasibility? In general, investors who put their own money into risky projects or their creditors would be the most diligent in checking it. However, in Korea, because developers do not increase their equity input, they do not attract investors. That is, there are no equity investors to carry out rigorous assessments. On the lender's side, since large construction companies, real estate trust companies, or securities firms provide loan guarantees, financial institutions like banks have little incentive to look closely into the feasibility. Also, credit rating agencies are in a tight spot to issue meaningful risk warnings, as they cannot help but be conscious of their clients, the developers, because they typically assess project feasibility at the request of developers, despite being professional evaluation institutions.⁴⁾

3) Chosun Ilbo, "Number of Domestic Real Estate Development Firms Doubles in 5 Years, with 33% in Gyeonggi Province," October 3, 2020 (in Korean).

Figure 4. Problems with Low Equity and High Reliance on Guarantees



Source: Author's compilations.

In the broader economy, issuing loans primarily reliant on third-party guarantees without proper feasibility tests exacerbates macroeconomic volatility. Because of guarantees, lenders often overlook project feasibility and other microeconomic details in their lending decisions. Instead, they prioritize macroeconomic variables such as interest rates and real estate market conditions, which are more easily assessed. All in all, this approach leads to increased loan issuance during economic booms and sharp declines during recessions. In 2008~22, PF exposure grew by an annual average of 26% (15 trillion won) above the long-term trend, followed by an average annual decrease of 13% (8 trillion won) in 2011~19 due to the savings bank crisis. However, following the COVID-19 crisis, PF exposure again surged by an annual average of 10% (13 trillion won) until 2022, before the steep slowdown after the Legoland crisis in late 2022 (Figure 1, Gap). The US Office of

4) Upon receiving PF loan applications from developers, financial institutions often require project feasibility assessment results from credit rating agencies. While credit rating agencies verify information at the stage of PF lending, they usually lack detailed project information, such as progress status and final outcomes, including insolvency. Consequently, predicting project success and final outcomes that affect profitability is difficult at the initial PF project stage, indicating significant limitations in the feasibility assessment.

The low-equity and high-guarantee structure shifts all risks to the national economy, not developers.

the Comptroller of the Currency (OCC) also identified the key risk associated with commercial real estate loans as economy-dependent volatility (OCC, 2022).

From the standpoint of individual financial institutions, guarantees enhance microprudential stability but can also induce “no-question-asked-investments,” thereby undermining macroprudential stability and causing systemic risks. A common example is the payment guarantees provided for mortgage-backed securities (MBS) just before the 2008 global financial crisis. At that time, many financial firms invested heavily in MBS without adequately evaluating the soundness of the underlying subprime mortgages, relying instead on these payment guarantees. When the underlying assets became insolvent, massive losses ensued from these large-scale investments, triggering the financial crisis (Holmstrom, 2015).

After all, the low-equity and high-guarantee structure metastasizes risks into society by subpar assessments for project feasibility, no-question-asked investments, and higher volatility. In the event of default, small-sized developers have already gone out of business, leaving construction firms that provided guarantees to repay the loans in full. While some large ones may survive, others like TAEYOUNG E&C collapse. Defaults by construction firms hurt the soundness of the lending financial institutions. To prevent the spread of systemic risks reverberating into the construction and financial industries, the government resorts to direct and indirect public funds, such as expanding PF loan guarantees and providing emergency liquidity. As a result, taxpayers' money is used to fix developers' failures. As seen in the Legoland crisis, when securities issued with PF loans as collateral default, the bond market tightens, leading to losses for investors and high interest rates for securities issuers (Figure 2).

IV. Understanding Korea's Distorted PF Structure

What led to Korea's distorted low-equity and high-guarantee PF structure, unlike advanced countries? Developers in both major countries and Korea prefer to minimize their investment to maximize their share of development profits because attracting equity investors would mean sharing these profits. In major countries, insufficient equity from developers halts PF projects, whereas, in Korea, projects can proceed even with minimal equity investment. Korea's distinct financing structure is born of this difference.

Since advanced countries base loan issuance on project feasibility and financial structure per PF principles, capital augmentation is a prerequisite for developers to obtain loans.

However, when Korea introduced PF, the market consisted of small developers and large construction firms. This disparity led to a low-equity, high-guarantee structure, which was reinforced by the pre-sale system.

Most advanced countries, including the US, Japan, and Australia, adhere to PF principles, making it unworkable to pursue PF projects without adequate equity capital. The core principle is to raise funds based on project feasibility rather than the creditworthiness of project participants. Even when guarantees are necessary, they are provided solely by project sponsors, not third parties. During the loan screening process, financial institutions require an equity capital investment of around 30%, as the developer's equity is crucial in determining both project feasibility and the borrower's repayment ability.

On the contrary, Korea adheres to (i) the circumstances unique at the time of PF introduction and (ii) the pre-sale system, which together create the unique PF structure that allows developers to pursue projects with minimal equity and reliance on guarantees. Following the 1997 Asian financial crisis, the government required construction firms to lower their debt-to-equity ratios from 900% to below 200%, prompting the adoption of PF as construction companies could no longer afford large-scale debts themselves (Choi and Jang, 2021). Back then, developers were small-sized entities without equity investors, and construction firms were relatively larger, leading to the creation of a distorted form of PF where developers borrowed and construction companies provided guarantees.⁵⁾

The pre-sale system further reinforced this structure (Figure 2). Korea uniquely permits the use of down payments and progress payments from buyers of pre-sold apartments or multi-housing complexes (with 30 or more units) as construction costs. This system enables developers to cover construction costs with buyer funds, needing to finance only land costs. Consequently, the proportion of the loan amount in the total project cost is reduced, allowing developers to undertake projects with minimal equity investment.

For developments to use buyer funds, a pre-sale guarantee from the Korea Housing & Urban Guarantee Corporation (HUG) should

5) As the 2011 version of the International Financial Reporting Standards (IFRS) was introduced to listed companies in Korea, construction firms' PF guarantee obligations, previously recognized as contingent liabilities and not recorded on financial statements, are now regarded as provisions if the probability of becoming actual obligations exceeds 50%. Many expected this change to eliminate the existing guarantee-dependent PF structure. However, the structure persists due to the insufficient effectiveness of the revised accounting standards and the means for construction companies to bypass them. Firstly, the probability of construction firms' payment guarantees converting into actual liabilities is largely based on qualitative judgment. Since IFRS allows these firms to make this judgment themselves, they lack the incentive to actively recognize PF guarantees as liabilities on their financial statements. Secondly, while previously credit enhancements were available in the direct form of financial contracts such as "joint and several guarantees" or "debt assumption," after the revision, credit enhancements are now provided as performance guarantees, not credit guarantees, including "completion guarantees," "replenishment of funds," "conditional debt assumption," and "guaranteed sale." Several cases were noted where construction firms did not disclose their credit enhancement details in their financial statements or notes, prompting the Financial Supervisory Service to request correction (Financial Supervisory Service, February 2018; January 2024).

be obtained (Figure 2). However, HUG requires a prerequisite for this guarantee called “conditional transfer of project rights” from the developers. This agreement stipulates that in case a “pre-sale guarantee incident” occurs due to prolonged construction suspension caused by reasons like the project sponsor’s bankruptcy, the developer transfers all associated rights, including those related to the project site and the building under construction, to HUG, excluding the PF loan obligations. In such contingencies, this legal instrument effectively makes PF-loan-providing financial institutions subordinate creditors to HUG without any collateral. Therefore, guarantees from construction firms or other entities are required in advance.⁶⁾ Additionally, HUG put forth another prerequisite that mandates construction firms to provide joint guarantees for the obligations HUG bears to home buyers.⁷⁾ Since HUG requires third-party guarantees throughout the process of utilizing buyer funds, development projects can proceed without developers needing to invest much equity.⁸⁾

Table 2. Correlation Coefficients between PF Exposure (=Loans + Guarantees) and Interest Rates / Real Estate Market Conditions (2012~23)

	PF (Amount)	PF (Relative to GDP)	Real Estate Market Condition
Interest rate in the previous year	−0.71	−0.86	−0.84
Real estate market conditions	+0.94	+0.94	.

Note: 1) Correlation coefficients are calculated based on annual data. The correlation coefficients use the first difference of PF, instead of the original series, relative to interest rates and economic conditions, and they showed similar values to those calculated using the original series.

2) Real estate market conditions are measured by the housing price index.

Source: Author's calculations.

6) When assessing whether to provide a pre-sale guarantee, HUG mandates the cancellation of all existing rights, including on-site mortgages held by financial institutions, thereby causing these institutions to lose their collateral rights. Because HUG does not establish its own encumbrances like mortgages, it does not have collateral rights either. However, under the conditional transfer of project rights agreement, HUG acquires all rights, including those to the project site and the building under construction, without incurring any obligations in the event of a pre-sale guarantee incident. Thus, unlike financial institutions, HUG can mitigate losses by disposing of the project site and building, effectively becoming a senior creditor.

7) When a real estate trust company receives land from a landowner in trust for a multi-housing complex development project, HUG requires the trust firm to provide joint and several guarantees as a precondition for the pre-sale guarantee. In this case, the trust firm provides this guarantee in its capacity as a financial entity rather than as the entrusted developer for the landowner. Accordingly, if a pre-sale guarantee incident occurs, the trust firm must fulfill its obligations using all its assets, not just those in the landowner's trust account, risking bankruptcy if it fails. Naturally, they are highly alert to this risk in each and all of their entrusted performance for multi-housing complex projects. HUG applies the same requirements to projects where trust companies bear direct or indirect financing obligations, such as borrowing-type or guaranteed completion-type land trusts, as well as management-type land trusts without financing obligations. Consequently, projects managed by trust firms have shown significantly lower guarantee incident rates relative to those directly undertaken by developers, construction companies, or associations (Baek *et al.*, 2012).

V. Reform Directions for the Mid-to- Long Term

The prudent direction would be to raise the equity ratio to the level of advanced economies and abolish third-party guarantees. To that end, Korea should introduce regulations on capital augmentation.

Despite the recent slowdown in the upward trend in PF loans, it may accelerate again as interest rates decline, potentially triggering another crisis. Because of a clear tendency of real estate market improvement when interest rates decline, the number of PF loans tends to rise as interest rates fall and real estate market conditions are more favorable (Table 2). What are the strategic remedies to fundamentally overhaul real estate PF, which has tenaciously persisted through the past and present, and also potentially the future?

As clear as the causes of the PF issue are, the direction for reform becomes equally apparent: raising the equity ratio to levels comparable to those in major advanced countries and abolishing third-party guarantees, such as those provided by construction companies. In principle, individual firms should have the autonomy to determine their capital structure. However, institutional intervention is deemed necessary due to negative externalities, such as subpar assessments of project feasibility, indiscriminate investments, and the expansion of systemic risks.

What are the ways to increase the equity ratio? This calls for regulations mandating equity capital increases, together with support measures to be discussed later. As examined earlier, the underlying reason for Korea's lower equity ratio for developers is its financing structure that allows development projects to move along with little equity investment. Expanding capital requires tearing down this structure. Specifically, "direct regulation," which imposes a minimum equity ratio when developers take on PF loans, or "indirect

8) Other factors identified as causes of the low-equity and high-guarantee structure include (i) a strong belief that investing in real estate is fail-proof, (ii) high permit risks, (iii) tunneling, (iv) implicit government payment guarantees, and (v) the jeonse system. (i) If prevailed, a firm belief that real estate prices only rise and never fall will make financial institutions readily provide loans. Also, if real estate projects are perceived as fail-proof, financial companies would not need to require guarantees that incur significant costs to stakeholders. This is how faith in real estate profitability explains the low-equity structure, albeit not the low-equity and high-guarantee structure. (ii) Obtaining permits involves numerous official seals, persuading hundreds of landowners and original owners, and addressing civil complaints about environmental issues. One view suggests that the low-equity and high-guarantee structure arises from construction firms offering guarantees despite developers' low equity inputs, in return for carrying out these arduous tasks. However, permit risks are a major development project risk globally, so they alone do not sufficiently explain the difference between Korea and other advanced countries. (iii) Though unverified, some suspect that construction conglomerates use this structure to guarantee small-scale developers owned by parties with special affiliations, allowing them to misappropriate lucrative development profits. (iv) Another viewpoint is that construction companies and securities firms actively take up guarantee risks expecting government intervention in contingencies. However, given over 20 general construction firms filing for bankruptcy and hundreds of small and medium-sized ones closing last year, such expectations for a government bailout seem unlikely. As major financial entities, securities firms can expect implicit government guarantees. They provide guarantees in the process of issuing asset-backed securities for PF loans, but their full introduction was after the 2008 global financial crisis. Since the low-equity and high-guarantee structure continued to exist before that, the government's implicit payment guarantee as a major is unlikely. (v) The jeonse system can reinforce the impact of pre-sales on the low-equity and high-guarantee structure by enabling home buyers to raise funds through gap investments—using the difference between the jeonse price and the purchase price. Various public guarantee programs related to jeonse can further strengthen this impact, possibly stimulating jeonse transactions.

While regulations to increase capital may constrain the quantity of housing supply, they are expected to improve its stability.

regulation,” which mandates financial institutions to set aside a larger amount of loan loss provisions when providing PF loans to developers with lower equity ratios, can be considered. For instance, under the business lending category of “High-Volatility Commercial Real Estate,” the US requires banks to reserve the amount of loan loss provisions (or bank capital) 1.5 times greater than general business loans. This regulation applies to loans for projects where project sponsors do not meet the minimum investment of 15% equity capital based on the total project value (=total project cost + development profit) (OCC, 2022). In addition, another essential regulation is limiting third-party guarantees. Without such regulations, the policy objective of encouraging more equity investment would be hard to achieve. Even with various support measures in place, developers will avoid seeking equity investors and monopolize substantial development profits without them.

Some express concerns that transitioning to the advanced economy's financial structure may constrain the housing supply. Despite such a possibility, the reform should not go for maintaining a structure that allows small-sized developers to monopolize profits and socialize risks. This policy shift can lower housing supply costs by increasing equity and reducing dependency on guarantees. A survey of about 100 major PF market participants by Choi (2012) finds that respondents expected construction firms to reduce construction costs by an average of around 10% if their guarantee provisions were scrapped, as their burden would decrease. Lower construction costs can contribute to mitigating the potential reduction in housing supply. Also, the proposed structure can improve the stability of the housing supply rather than just increasing its quantity. Since low-feasibility projects cannot attract sufficient equity investment, they lack the impetus to launch from the outset, eliminating risk factors beforehand. Conversely, promising projects with sufficient equity investment can run to completion more smoothly, withstanding external shocks such as interest rate hikes or real estate market downturns. Nevertheless, if housing supply concerns remain strong, it would be worth considering applying stricter equity requirements to non-residential development projects first and gradually expanding to residential ones.⁹⁾

On the other hand, some others argue that capital increase is

9) Non-residential development projects, involving office buildings, logistics centers, and Knowledge Industry Centers, typically carry higher risks than residential projects. Accordingly, an approach that applies capital augmentation regulations to non-residential development projects before residential ones can be justified given their higher need for the safety mechanism provided by capital increases.

Even in environments unfavorable for scaling up, some developers have started small and grown into conglomerates, while others are affiliates of large corporations.

The pool of potential equity investors is not limited.

impractical in effect given Korea's prevalence of small-sized developers and a limited pool of equity investors. However, even in a business environment unfavorable to scaling up developers, there are examples of small developers growing into conglomerates, such as MDM and SHINYOUNG, as well as developers affiliated with large corporate groups like SK D&D and kt estate. Other than those, as of 2022, there are more than 25 large developers in Korea with annual sales exceeding 30 billion won. More proactive efforts should be made to promote the growth of developers to achieve a larger scale.

Moreover, the pool of prospective equity investors is not as narrow as some suggest. Capital contributions to development projects present a high-risk, high-return investment opportunity due to the potential for substantial development profits. Over 100:1 subscription rates for pre-sale apartments in prime locations illustrate the significant profit-sharing potential for home buyers. If potential equity investors, including construction companies, pension funds, financial firms, and REITs, can also share in these high-profit margins, they would be incentivized to bear these risks for high returns. Construction firms and pension funds are not constrained by regulatory restrictions on real estate development investments, and some are already participating in equity investments. According to financial laws like the Act on the Structural Improvement of the Financial Industry, while financial institutions can own 5~20% of the common stock of non-financial companies, they can make investments within this upper limit, with few restrictions on preferred stock investments. Recently, aside from conservative banks, insurance companies, securities firms, asset management firms, and real estate trusts have shown interest in equity investments or directly undertaking projects.¹⁰⁾¹¹⁾ While construction companies, pension funds, and financial firms remain cautious about equity investments due to possible civil complaints and a sluggish real estate market, they are expected to increase equity investments if social consensus or governmental initiatives favor this approach to resolving the structural issues in real estate PF.

In particular, REITs, which are indirect real estate investment firms, are

10) According to independent interviews and surveys conducted by the author, some insurance companies have expressed intentions to enter the rental-type real estate development business. Additionally, certain securities firms have raised blind funds to commit substantial capital to real estate development projects or directly undertake such projects. Furthermore, several real estate trust companies have shown interest in investing in or directly managing entrusted projects.

11) Some securities firms affiliated with financial holding companies have established private equity funds worth 200 billion won in collaboration with other financial entities within the holding group. These firms have decided to invest in 5~6 projects through equity investment or direct undertakings (*Yonhap Infomax*, "NH Investment & Securities Launches First Domestic Real Estate PEF Valued at 200 Billion KRW," February 28, 2024).

Because REITs socialize development profits and are already subject to equity ratio regulations, it is desirable to revitalize their equity investments or foster their direct participation as project sponsors.

not subject to investment restrictions and are well-capitalized. They also have accumulated expertise in development projects and have expressed willingness to invest substantial amounts if developers seek equity investors.¹²⁾ In the US, REITs serve as major equity investors and direct participants in real estate projects as developers.

Since REITs serve two positive functions, invigorating their equity investments or nurturing their direct involvement as project sponsors would benefit society. Firstly, REITs socialize massive development profits. They are required by law to offer at least 30% of their shares for public subscription. To be exempt from this obligation, public investment institutions such as pension funds and mutual aid associations, representing the general public's interests, must own at least 50% of the REIT's shares. Either way, the development profits benefit society. Secondly, REITs maintain equity ratios comparable to those in the major advanced countries per minimum equity ratio regulations under the Real Estate Investment Company Act (REIT Act). According to the Act, REITs can borrow only up to twice their equity, which equates to a minimum equity ratio of 33% of the total project cost (= total assets = equity + debt). As an exception, REITs can borrow up to ten times their equity through a special decision by the general meeting of shareholders, which requires votes from at least two-thirds of the attending shareholders and at least one-third of the total issued shares. Even then, a minimum equity ratio of 9% is still required. As of 2023, the average equity ratio of 137 development REITs undertaking projects was 27.3%, and the average equity ratio of general development REITs, excluding policy-type development REITs with the public sector, was 40.6% (Table 3). These figures are significantly higher than the average equity ratio of 3% for typical PF projects.

Table 3. Equity Ratio of Development REITs (Q3 2023)

	(% , number of projects)		
	Total Development REITs	General Development REITs	Policy-type Development REITs
Avg. equity ratio	27.3	40.6	24.2
Med. equity ratio	17.8	37.4	16.3
No. of REITs	137	26	111

Note: Development REITs are REITs that invest 30% or more of their total assets in real estate development projects, and policy-type REITs are REITs created solely for development projects linked to the public sector, such as public-led private rental projects.

Source: Author's calculations based on raw data from the Korea Real Estate Board (2023).

12) REITs are indirect real estate investment companies that raise funds from retail and institutional investors to invest in real estate development, transactions, leasing, and asset management. By the end of 2023, there were 370 REITs managing total assets of 94 trillion won. Among them, 23 were listed REITs, accounting for 7.5 trillion won in market capitalization.

During the transition, it is necessary to implement support policies that encourage capital increases.

Considering the long-term policy directions discussed above, what short-term steps should be taken? Korea has long suffered from the low-equity and high-guarantee structure, so increasing the equity ratio all at once would be challenging and might even cause serious side effects. Therefore, during the transition, introducing lenient capital augmentation regulations should be the first step to create a need for developers to increase their capital or attract equity investors, simultaneously with various support policies to encourage capital increases.¹³⁾

There should be detailed and practical discussions to determine specific policies and support mechanisms for capital augmentation. Below are examples of support policies from major advanced countries that can serve as references for future policy discussions.

(Tax Incentives) The Low-Income Housing Tax Credit (LIHTC) program in the US offers tax reduction benefits to developers that increase the housing supply for low-income households through residential development projects. If a developer allocates 20~40% of total project units to low-income families, the US government grants a tax credit equivalent to approximately 9% of the project cost to the developer, who then shares the credits with equity investors, attracting them more easily.

(Promoting REITs) In 1992, the US introduced the Umbrella Partnership Real Estate Investment Trust (UPREIT) program, which defers capital gains tax on land when it is contributed in kind to a REIT. Before UPREITs, landowners had to pay substantial capital gains tax immediately upon transferring the real estate property. However, UPREITs allow landowners to defer this tax until years after the land transfer when the development project is completed and profits are distributed. Consequently, in-kind contributions by landowners surged, and the REIT industry expanded by over 100% in just two years (Roh, 2023). For scaling up REITs, Japan introduced the Sponsor

13) However, utilizing home buyer funds as construction costs through the pre-sale system is not a problem in itself. It allows home buyers, who are mostly the general public, to benefit from development profits and contributes to revitalizing the housing supply. The issue arises as HUG requires joint and several guarantees from construction companies, rather than capital increases by developers, to protect home buyers. Also problematic is that HUG assumes a senior creditor position over financial companies through the conditional transfer of project rights agreement. While this measure increases the likelihood of repayment from HUG's standpoint at the microeconomic level, it renders the entire system vulnerable on a national economic scale. Some argue for a mechanism to mitigate the losses of HUG because, ultimately, taxpayers have to cover these deficits if HUG incurs large losses due to the absence of such safeguards. Even then, it would be more sensible to require capital increases by developers and raise pre-sale guarantee fees to realistic levels rather than relying on conditional transfers of project rights or joint and several guarantees by third parties such as construction companies and trust firms. This approach seeks to balance HUG's guarantee losses and guarantee fee income. Moreover, introducing a differentiated guarantee fee system, where project sponsors with lower equity ratios pay higher fees, could induce capital augmentation while reducing HUG's losses.

REIT system to facilitate the transfer of assets from large banks to REITs and to oversee financing and asset management. As a result, as of 2021, the top two REITs by market capitalization are sponsored by large banks in Japan (Kim, 2021).

(Limited Relaxation of the Separation of Banking and Commerce)

In Japan, the largest developers, including Mitsui Fudosan Realty and Mitsubishi Jisho Design Inc., are predominantly bank-affiliated real estate companies. These major developers were established before the 1960s when regulations restricting banks' investments in non-financial firms were less stringent. Currently, regulatory measures for the separation of banking and commerce prohibit banks from owning more than 5% of the voting shares of developers.¹⁴⁾ However, in 2017, banks were permitted to develop their real estate properties for rental purposes, provided there was a request from the local community to stimulate the local economy,¹⁵⁾ leading many regional banks to begin undertaking real estate development projects. For instance, Nakakyo Bank reconstructed its branch building into an 11-story complex, using the first two floors as its office and the remaining floors as rental housing from 2022. Japan's approach seems to be minimizing the adverse effects of relaxing the separation principle in allowing banks' participation in development projects for rentals, not sales, only at the request of the local community. In addition, the US permits the Federal Savings Associations, a type of bank, to engage in real estate development projects through their subsidiaries (OCC, 2022).¹⁶⁾

VI. Conclusion

In South Korea, the recurrent risk posed by real estate project financing (PF) has remained a persistent challenge since the 2011 savings bank crisis, with meaningful improvements still elusive. The crux of the issue lies in the financing structure, where project sponsors typically inject only minimal equity, approximately 3%, while the remaining 97% is borrowed and secured by third-party guarantees, primarily from construction companies. This financing model is virtually unheard of in major advanced economies. Moving forward, addressing these challenges requires cardinal reform of the PF structure by mandating higher equity investments from project

14) Under Article 16(4) of the Banking Act, Japan.

15) Notes 2 and 3 of V-3-2-2-(4) of the Comprehensive Guidelines for Supervision of Major Banks, Japan.

The acute lack of data on real estate PF makes it difficult to even stay current, which in turn only allows temporary measures during crises and hinders regular monitoring or early crisis detection.

A database system should be set up to collect official statistics on financial and business information by project and company.

sponsors and decreasing the dependency on external guarantees.

Furthermore, establishing a comprehensive database for real estate PF is a high priority. This sector lacks both financial data and project feasibility information. The widely accepted notion of a 5% equity ratio, often cited by previous studies, media reports, and industry insiders, is not based on official statistics. The Ministry of Land, Infrastructure and Transport, financial authorities, credit rating agencies, Housing and Urban Guarantee Corporation (HUG), and real estate trust companies do not systematically collect data on finances and businesses across all projects.¹⁷⁾ Effective policy-making cannot be done without the “eyes” to identify issues or the “tools” to address them. Presently, the absence of such “eyes” makes it difficult to understand the existing conditions, hindering regular monitoring and early risk detection. In other words, the current financing structure only allows for reactive measures after insolvencies arise. Therefore, it is essential to regularly collect and disclose comprehensive financial and operational data by project and company, as well as post-completion outcomes and profitability metrics for all development projects. This approach will foster transparency and proactive risk management in real estate project financing.¹⁸⁾ ■

16) According to the US Office of the Comptroller of the Currency (OCC) bank regulations (12 CFR § 5.59 (f) (5)), Federal Savings Associations, a type of federal bank, may develop, redevelop, purchase, and manage real estate for various purposes, including sale, arbitrage, leasing, or self-use, through their subsidiary, Service Corporation.

17) As securities firms face larger PF guarantee obligations, the Financial Supervisory Service established the “Comprehensive Management System for Real Estate Shadow Banking in the Capital Market” in 2019, focusing on monitoring and collecting data on the financial investment industry. This system has limitations, including being restricted to a part of the financial sector, difficulty in obtaining non-financial information, and frequent instances of non-submission, delayed submission, and omission (*Yonhap News*, “Financial Supervisory Service Chief Lee Bok-hyun Targets ‘Shadow Finance’ in Real Estate Market,” June 9, 2022).

18) By disclosing data, excluding sensitive information, with a short time lag and de-identification measures, market participants and experts can provide sound external monitoring. Potential developers can use this filtered data to reduce risks by more accurately analyzing the feasibility of similar projects before deciding whether to proceed. Policy authorities can access all data, including sensitive information, to operate an early warning system. In addition, analyzing the impact of early-stage financial and business information on the ultimate success and profitability of projects after completion can greatly improve the quality of project feasibility assessments.

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