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Outlook for Infrastructure Finance in South Korea

Partnerships at Work

Analysts
William Streeter, Tokyo
+813 3288 2634
william.streeter@fitchratings.com

Michael Hermans, Brisbane
+61 7 3222 8615
michael.hermans@fitchratings.com

MiKyung Kwon, Seoul
+822 2076 8360
mikyung.kwon@fitchratings.com

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Summary

South Korea offers a maturing and interesting Asian-grown model for infrastructure finance. The country has developed a protective legal environment for private sector participation in infrastructure projects that has demonstrated both enforceability and sustainability. Project selection follows a statutorily determined process that is outlined in an annual plan issued by the Ministry of Planning and Budget or MoPB ("the annual plan"). This incorporates the government's evolving views on the ambitiousness of its infrastructure development program and the direction of regulations for garnering concession and financing agreements. Although, as in other countries, this process has bumps along the way, the overall direction of South Korea's expectations and regulation is reasonable and progressive.

The level of documentation at the concession agreement stage – and, increasingly, at the financing agreement stage, too – is sophisticated by global standards. Most impressively, the level of recognition and cross-referencing between concession and financing documents is very strong. This may, in part, reflect the fact that most infrastructure project financing so far has been achieved domestically. Nevertheless, it is also testimony to the degree of communication and coordination between the public and private sectors with respect to these projects.

Government support for project concessions and their debt financings is multi-faceted and extensive, and Fitch Ratings believes it is developing in an increasingly realistic and sustainable direction, which bodes well for the continuation of the country's private participation in infrastructure ("PPI") program. So far, the central government has proven to be a fair and reliable partner. In Fitch's opinion, the more contractually conservative rates of return for toll road projects since 2000 better reflect the strategic value of these roads as part of a national or regional transportation network, their long useful project life and a public policy desire to maintain affordable toll rates, as well as an understanding of how toll road project risks differ from those of other infrastructure asset classes.

The gradual reduction in government revenue guarantees for new, though not existing, projects will require a commensurate production of higher-quality traffic and revenue forecasts in South Korea. In the future, longer-term debt structures, reserve levels, tolling strategies and expected rates of return will depend upon the reliability of these initial traffic and revenue forecasts. Many of today's operating projects rely on some level of minimum revenue guarantee.

Another important transition for Korea's program should entail a gradual shift of public support away from operating revenue guarantees and toward public equity as an offset to debt issuance for construction costs. This support could take the form of government construction grants, subordinated debt or subordinated lines of credit. If the reliability of traffic and revenue forecasts improves, this will allow for the optimization of project debt, and public and private equity contributions. This will improve the ability of project revenues to support ongoing financial obligations.

Refinements to the most recent Annual Plan expand the permissible range of infrastructure assets to other governmental services, and broaden the concession types beyond build-transfer-operate ("BTO") to also include build-transfer-lease ("BTL"). As a result, the tax regime for BTL projects may also need to be re-examined, since government-supported leases may not achieve the same level of returns as user-based project concessions.

Expanded project supply is only one positive feature of South Korea's infrastructure program. Increasing investor demand for infrastructure project debt and equity is the other noteworthy characteristic. The presence of a strong Korean infrastructure fund (the Korean Road Infrastructure Fund or "KRIF"), and the potential for bond market participation stimulated by continuing advances in project documentation make South Korea an attractive niche market for infrastructure finance.

Investor participation in the form of project sponsorship is also likely to result in better construction cost estimates, and place responsibility for making equity decisions with counterparties that have a long-term investment horizon; this marks an important change from the past, when construction conglomerates dominated project sponsorship. This is more good news for South Korea's infrastructure finance market.

South Korea's Legal Framework for Infrastructure Finance

The country's legal framework for public-private partnerships in infrastructure finance is advanced and flexible by global standards. It permits many types of concession arrangements, varied methods of project solicitation, and the participation of relevant government authorities (central, state and local) in the process of awarding concession grants. It also provides an independent agency interface between the prospective public and private partners, adequate means of resolving disputes and the opportunity for a concessionaire to earn a reasonable rate of return on its investment.

The framework provides various levels of government support for projects throughout their life cycle and an administrative process for refining rules and guidelines under the program. It also calls for the production of the annual plan, which outlines infrastructure projects that are operating, under development or under consideration. The principal components of this legal framework for PPI projects include the Act on Private Participation in Infrastructure (the act, or PPI Act), the PPI Act Enforcement Decree and the Annual Plan.

South Korea's PPI Act

The primary purpose of the PPI Act is to encourage private sector participation in infrastructure investment as an important way of promoting the country's continued economic development. Fitch has noted that several countries, including Chile, Panama and South Korea, have developed comprehensive and transparent concession laws setting out clear public-sector goals and objectives with respect to private participation. Equally clear is the process by which the private sector is to bid on an infrastructure project or system, operate after winning a concession contract and recover a return on its investment.

Finally, South Korea's PPI Act offers investor protection in the event that the concession agreement is terminated. Termination payments for a breach by either counterparty require the authorizing governmental entity to make a termination payment that covers all or most (depending on the concession agreement) of the amount of outstanding senior debt.

The PPI Act, originally enacted in 1994, was amended in 1998 and again in 2005. Amendments have focused on changes to the concession project rate of return, authority for concession companies to issue debt, provisions for a minimum revenue guarantee of project cash flow, the introduction of BTL projects, and requirements for the creation and registration of an infrastructure fund. We believe these amendments generally promote the sustainability and long-term interest of private investment in infrastructure.

To date, the act has been applied widely across South Korea, especially for toll road concession projects (see graph below, *Trend of Approved Korean PPP Projects).* Since 1997, 61 approved toll road projects have been designated for private participation, of which 18 are operating, while the remainder are in various stages of construction or negotiation. Four executed concessions were also under construction and another four under negotiation for transit and commuter rail projects. Several seaport projects and many small sewage water treatment projects have also been implemented under the act. Although investment levels for approved projects fluctuate depending upon the scope and nature of the individual projects, the government has managed to maintain a steady stream of project approvals over the years, which is crucial for the continued success of its PPP program.

Trend of Approved Korean PPP Projects

Year	Projects Approved	Investment Amount (USDbn)
1997	14	5.5
1998	7	4.8
1999	11	0.6
2000	13	2.1
2001	19	5.8
2002	12	2.7
2003	16	4.8
2004	14	5.4
2005	12	6.3

Source: Korea Development Institute

The act effectively provides a broad framework for private participation in all sorts of infrastructure investment, including toll roads, rail, ports, airports, water, sewage, waste disposal, energy and parking projects, etc, as prescribed by separate and related legislation regulating the development of each infrastructure asset class. It also permits the submission of projects by any number of parties, including the central government, local governments or private parties.

Solicited versus Unsolicited Projects

The private investment program includes projects selected and proposed by the central or local governments for concession bids (solicited projects). An infrastructure project that would be owned by a local governmental entity can also be reviewed and selected by the relevant central government authority as a solicited project. Other projects can be submitted to the central government by a private concern or local government for selection as a concession project (unsolicited projects).

Projects with a total project cost of KRW50 billion or more, and which are projected to require government subsidies of KRW30bn or more, must undergo a preliminary feasibility study and consultation with relevant authorities prior to being designated as solicited projects. A relevant government authority could mean a central government ministry that is responsible for regulating a certain type of asset class or a local governmental entity that is authorizing a concession project.

Solicited projects seem to receive more favourable treatment under the private investment program. Private bids for solicited projects are not subjected to counterproposals after the original bidding terms have been publicly announced by the government. However, innovation can still be rewarded, as private bidders can suggest alternatives to the government's bidding terms and, if these are accepted, will receive a more favourable evaluation than they would otherwise have done. Counterproposals are a requirement for unsolicited projects, and submissions with modifications may also be considered. In addition, solicited project sponsors are eligible for slightly higher minimum revenue guarantees during the first 15 years of operation. The minimum revenue guarantee program and other public sector supports for infrastructure concessions are discussed further below.

Concession Types Allowed Under the Act

The types of concession projects allowed under the act include the following:

1. BTO, where the concessionaire transfers ownership of the facility to the authorizing government upon completion of construction but retains a right to operate the facility for the life of the concession agreement. So far, this type of concession agreement has dominated South Korea's PPI program, since most of the projects involve toll road assets to be owned as part of the central or local governmental highway transportation network.

2. Build-Own-Transfer ("BOT"), where the concessionaire assumes ownership of a constructed infrastructure facility and then transfers ownership of that asset back to the authorizing government body upon termination of the concession period.

3. Build-Own-Operate ("BOO"), where the concessionaire owns, operates and controls the infrastructure project upon completion of construction.

4. The act assumes that there will be other concession methods and, in fact, the 2005 amendment of the act allowed BTL concessions where the concessionaire constructs the facility and transfers it back to the government in return for lease payments from the authorizing governmental entity.

Assessment of Project Costs Under the Act

The act specifies how to assess total project costs. This is important, since so much rides on the validity of this figure (the length of the concession, level of government supports, extent of management and operating rights, and the calculation of a reasonable rate of return, for example). Allowable project costs can include the costs of the survey, design, construction, right-of-way, resettlement, feasibility report, operation, taxes and public utility charges, as well as reserves for operation. The free-use period under the concession is determined by the range of total project costs, as well as the effects of government-provided financial support and net profit from any supplementary project.

Policy Arm for the PPI Program

The act created the Private Investment Project Committee, which falls under the jurisdiction of MoPB, as the primary policy arm of central government for private investment projects. Its chief responsibilities include preparing and modifying the annual plan, issuing instructions for project proposals and designating concessionaires.

Annual Plan for PPI Projects

The act requires the central government to formulate an annual plan for private participation in infrastructure. The purpose of this plan is to weigh up national and regional infrastructure priorities, provide any modifications to the list of solicited projects or administrative rules governing the PPI program, and announce any adjustments in public support to be provided for new projects under the program. Although it does not carry the enforceability of law, the annual plan provides guidelines to which all levels of government have shown commitment when implementing their relevant PPI project.

For instance, the 2005 annual plan included provisions for sharing gains from the refinancing of project debt. First of all, the concessionaire must acquire the consent of the competent government authority for its debt-refinancing plan. The annual plan specifies that refinancing gains will be shared on a 50:50 basis between the concessionaire and the government authority that granted the concession. The government’s portion can be used to reduce the toll rate, the minimum revenue guarantee or the concession period. This amendment also requires concession agreements to be amended to reflect this refinancing gain provision.

PPI Act Enforcement Decree

The enforcement decree of the PPI Act directs the central government to establish regulations for enforcement of the act. Importantly, the committee that promulgates these regulations is represented by a broad range of ministries, each with its own regulatory interests, that participate in the approval or oversight of concession-based infrastructure projects throughout the concessionaire’s selection, construction or operating phases. Fitch has noted that a country’s regulatory interests and edicts should focus on the lifecycle of the project, from design to construction and operation, through to the project’s eventual return to the public sector. In South Korea, the potential for this kind of regulatory transparency is maximized. To the extent that the process works in South Korea, it mitigates the risk of unseen regulatory hurdles as the project progresses from one stage in its lifecycle to another.

■ Public Sector Participation in PPI Projects

The range of government supports for concession-based financing is comprehensive, indicating a serious commitment on the part of government to the success of its private infrastructure investment program. Fitch notes that an advanced legal framework for public infrastructure financings is usually consistent with a reasonably strong sovereign rating. In October 2005, the agency upgraded the Long-term foreign currency rating of the Republic of Korea to ‘A+’ from ‘A’ and its Long-term local currency rating to ‘AA’ from ‘AA-(AA minus)’.

Downward adjustments to minimum revenue guarantees in recent years suggest that the central government may have some concerns about growth in its budgetary exposure as the portfolio of concession-based projects expands. Nevertheless, it seems to have honoured its financial commitments under the concession agreements to date.

South Korea has an active technical support entity that provides an important interface with private investors and concessionaire companies. It has an effective risk allocation program, in which substantial government grants mitigate pre-construction and construction phase project costs. Most importantly, it has a multi-level system for the provision of revenue guarantees and loans in support of project cash flow. If the concession agreement is terminated, the authorizing governmental entity is required to make provisions for a termination payment that protects all or most of a project’s senior debt investors (depending on the calculation method outlined in the respective concession agreement).

Korea’s Sovereign Ratings

In addition to upgrading South Korea’s Long-term foreign and local currency ratings, as mentioned above, Fitch also upgraded the foreign currency country ceiling to ‘AA-(AA minus)’ and affirmed the Short-term rating at ‘F1’. The Outlook on Korea’s ratings is Stable. The upgrade was based on Fitch’s assessment that North Korea’s agreement in September to abandon its nuclear weapons programme reduced security risks across the Korean Peninsula.

South Korea's sovereign ratings are supported by continued prudent public finance management and the country's strong external position, even though its recent macroeconomic performance has been disappointing and Fitch's short-term outlook assumes GDP growth of 4.7% in 2006. The 2006 general government surplus – the seventh consecutive annual surplus – is forecast at 3.0% of GDP. At 35% of GDP, government debt is below the rating peer group median. Exports are approaching 40% of GDP, which is high for a large economy and underpins ongoing current account surpluses and the continued accumulation of foreign exchange reserves. Net public external credit was projected to reach USD211bn by year-end 2006.

Technical Support Entity for the PPI Program

The central government's primary administrative entity for interfacing with the private sector on infrastructure investment projects is the Public and Private Infrastructure Investment Management Center ("Pimac"), formerly known as the Private Infrastructure Investment Center of Korea ("Picko"). Pimac is organized under the Korea Development Institute ("KDI"), a think tank that reports to the Office of the President of Korea. Its role has migrated over the years from the Ministry of Communication and Transportation ("MoCT") to the MoPB and, finally, to its current home under the KDI.

It remains to be seen if this latest migration will further isolate Pimac's activities from the sphere of political influence, or merely shift the source of potential influence from entrenched bureaucratic interests to elected official interests. The spectre of political influence in the PPI process is present in every country, but the clear definition of Pimac's role and the dedication of its top officials bode well for South Korea's PPI program.

The role of Pimac is to review solicited and unsolicited project proposals, help negotiate concession contracts and mediate disputes, as well as offering educational workshops and investor road shows to increase private sector interest in infrastructure finance and conducting research on the infrastructure market. Pimac will often work closely with the ministerial authorities responsible for a particular infrastructure asset class, especially for the review of feasibility studies. In recent years, the central government has reportedly been conducting its own independent feasibility studies for proposed projects. Since the concessionaire also provides for an additional project feasibility study, this new level of peer review improves the quality of the process. In addition, Pimac serves to protect the interests of local government authorities in their undertakings with private sector concessionaires.

Pre-Construction/Construction Phase

For solicited projects, the central government covers the cost of the feasibility study and the preliminary design costs. For unsolicited projects, the government will reimburse a portion of the project preparation costs of the second-best bidder.

Typical government supports for approved concession projects during the pre-construction and construction phase include the provision of the necessary administrative assistance, licenses and permits, site acquisition (right-of-way), resident resettlement costs and compensation for construction delays caused by government action. In many cases, concessionaires have also received a construction subsidy.

Operating Phase

Under the concession agreements, once substantial completion of construction is certified, the authorizing governmental entity can assign the rights to manage and operate the project to the concessionaire. This includes setting the initial toll rate and providing for toll rate adjustments throughout the operating period.

The Minimum Revenue Guarantee Provision

As mentioned above, one of the most important aspects of South Korea's PPI program is the eligibility of project concessions for a minimum guaranteed level of operating revenue. The guaranteed amount is subject to concession bid offers and to negotiation with the relevant government authority before becoming a contractual commitment of the government under the executed concession agreement. Nevertheless, guarantee provisions for new concessions will generally follow the table shown below (note that provisions for solicited and unsolicited projects differ).

Some of the earlier project concessions have longer-term revenue guarantees, but amendments to the PPI Act have resulted in gradual reductions in this form of support; indeed, one recently awarded concession project did not request a minimum revenue guarantee. The most recent annual plan (2005) offers guidelines whereby the revenue guarantee commitment is nullified for a specific year if annual project revenue falls below 50% of the original forecast. This provision will affect only new concession projects and will not be retroactively applied to outstanding concessions. Nevertheless, it indicates the government's efforts to redress an imbalance in the responsibilities for project risk sharing.

2005 Annual Plan – Minimum Revenue Guarantee
(% of Forecast Operating Revenue)

Operating Period	Solicited Project	Unsolicited Project
First 5 Years	90	80
Second 5 Years	80	70
Third 5 Years	70	60
If Revenues are Below 50% of Forecast	0	0

Source: PIMAC

There is no doubt that the minimum revenue guarantee provision played a large role in the initial success of South Korea's PPI program, especially given the strong correlation between existing guarantee provisions and senior debt structure. Fitch has seen similar programs in other countries, especially where domestic financial markets are shallow or unaccustomed to evaluating infrastructure finance risk. At the same time, it is also reasonable for the Korean government and local governments to seek ways to curtail their budgetary exposure to revenue guarantees, especially as the portfolio of concessions-based projects grows.

The current stair-step guarantee program is generously supportive of project cash flow, especially during those critical traffic ramp-up years for toll roads. As mentioned above, project debt is often structured around these guarantee obligations. Funding of the minimum revenue guarantee is channeled through the authorizing government's annual budget, even where a contractual agreement binds the government during the concession period.

The trigger for the guarantee is retroactive and based on the concessionaire's annual traffic and revenue report. Project cash flows may be exposed for between 6 and 15 months, given the time it takes for the report to be published, for the government to receive notification of a guarantee claim and for the trustee to obtain payment from the authorizing government's budgetary appropriation cycle. For this reason, South Korea also established a guarantee fund (described more fully below) that is designed to make the initial payment and then seek reimbursement via the minimum revenue guarantee.

The current sizing of the revenue guarantees also suggests two areas for potential improvement. The first is the need to improve the quality of independent traffic and revenue forecasts in Korea. The second is for the government to weigh up the efficiency of its revenue guarantee provision against the alternative of a higher initial public investment, which would reduce the amount of debt-servicing costs (the single largest expenditure item for many infrastructure projects). The current revenue guarantee provision has been designed and applied to toll roads, but Fitch expects other asset classes to require very different types of revenue support provisions.

It is important to note that, while the guidelines provided in the latest annual plan curtail the level of guarantees or the revenue guarantee period, South Korea has a strong track record of honouring its guarantee commitments. Fitch has commented on ways of evaluating government guarantees, including how well the government performs according to its contractual commitments, and the mechanical process by which it delivers (see Fitch report *"Public Private Partnerships: The Next Generation of Infrastructure Finance"*, published on 6 August 2004 and available at www.fitchratings.com). This is especially important for the development of bond market activity, where the relevant questions should be whether the revenue guarantee enhances the full and timely payment of debt service or the ultimate recovery prospects of repayment after a default.

Korea Infrastructure Credit Guarantee Fund

South Korea's unique answer to this timeliness issue is the Korea Infrastructure Credit Guarantee Fund ("KICGF"). The KICGF, which commenced operations in 1995 in accordance with the original PPI Act, is governed by the Korea Credit Guarantee Act ("the KCG Act") promulgated in 1974. The Korea Credit Guarantee Fund ("KCGF"), which was also created under the KCG Act, is the operator of KICGF.

Capital funds for its guarantee program come from the central government, revenue guarantee fees and independent financial institutions. Government capital is subject to annual budgetary considerations. Nevertheless, the Korea Credit Guarantee Act restricts the amount of guarantees in relation to the fund's level of capital. A 20:1 ratio is the current legal restriction for the infrastructure fund, although the actual ratio was 9.7:1 as of the end of fiscal year 2004.

At first blush, this level of collateralization seems conservative, but given the risk profile of the existing PPI toll road concession projects, this seems justified (considering the concentration of single-asset projects, primarily of a single asset class, many of which are economically underperforming). In fact, in 2004, the KCGF requested an additional contribution from the government, which was provided, to meet demand for infrastructure guarantee services in 2005. The government has demonstrated a continuing and strong commitment to both the KCGF and KICGF, based on growth in guarantees outstanding, and annual contributions from the government.

Companies incorporated under Korean law and whose investment plans were approved by a relevant government authority are eligible for infrastructure credit guarantees. KICGF has its own Social Overhead Capital department that reviews guarantee applications. Guarantee fees vary according to the guaranteed amount and the credit rating of the company.

Financial institutions contractually provide a facility that amounts to a revolving line of credit, which is sized according to the guarantee amount approved by KICGF for that concessionaire. The guarantee can take the form of a term loan structured to protect the project's senior debt service (available upon demand), or a revenue guarantee loan. KICGF's guarantee has a program limit of KRW200bn for a single company or concession project.

Ironically, there is currently a practical correspondence but not a legal relationship between the credit guarantee program and the minimum revenue guarantee obligation. This is because of the current dependence of project revenues on minimum revenue guarantees. A revenue shortfall of a certain size under the concession agreement triggers the minimum revenue guarantee provision. The KICGF-guaranteed line of credit mitigates concessionaire cash flow difficulties related to either revenue flow or senior lien debt service payments that arise while it awaits receipt of the minimum revenue guarantee payment. The KICGF guarantee protects the private financial institution which provided the facility to the concessionaire, while ultimate receipt of the minimum revenue guarantee payment in many ways protects the KICGF. This is an interesting and workable system for ensuring the timeliness of project cash flow requirements.

Dispute Resolution Mechanism

In many countries dispute resolution mechanisms look good on paper but do not work well in practice. The evidence in South Korea suggests that these mechanisms are satisfactory. In recent years, arbitration has reportedly been enhanced and practice now includes the use of an ombudsman system. The Ombudsman of Korea is an administrative institution established in 1994, whose members are appointed by the president of South Korea, and whose operations are carried out under the direction of the prime minister. The Ombudsman of Korea has authority to conduct investigations into grievances and to recommend corrective actions. Although its recommendations are not legally binding, it seems to be a popular and effective body. Project concession agreements also contain provisions whereby the counterparties must submit to an adjudication panel for final arbitration.

Buyout Right Provisions

Under the act, if a concessionaire of a facility that is revertible to a state or local government is unable to construct, manage or operate an infrastructure project owing to "unforeseeable circumstances," the concessionaire can request that state or local government to purchase the project under the conditions prescribed by a presidential decree (which specifies that the amount payable to the concessionaire should consider the value of the infrastructure and its operating rights).

Exchange Rate Protections

According to the provisions of the Foreign Exchange Transactions Act and the Foreign Investment Promotion Act, a concessionaire can borrow from outside South Korea. The annual plan for 2000 clarified risk-sharing rules between the concessionaire and state and local governments for exchange rate losses and gains on such foreign currency borrowings. This guideline states that the concessionaire will bear the initial 20% of a foreign exchange loss or gain, while a loss above 20% could trigger an extraordinary toll rate increase or some form of government-provided support. Exchange rate gains above 20%, however, could result in a downward toll rate adjustment, or redemption of that gain by a state or local government.

Termination Payment Provisions

When a concession is terminated, the PPI Act calls for the government to make a termination payment to compensate the concessionaire. The calculation for termination payments is detailed in the respective concession agreements and varies according to the cause of termination (e.g. *force majeure*, government default or concessionaire default). Generally, termination payment calculations provide for the greater of outstanding senior debt, some percentage of the value of the project facilities or the net present value of remaining project cash flow. The 2005 annual plan guidelines indicate that the government will introduce calculations for new concessions where termination payments reflect actual traffic volumes in cases where the project is terminated once it is already operating.

Government Guarantee Provisions and Senior Project Debt Ratings

Fitch deems the counterparty risk of the minimum revenue guarantee to be a notch below the sovereign, state or municipal rating, depending upon the relevant authorizing governmental entity. The credit enhancement value of a revenue guarantee to senior project debt depends upon the counterparty risk of the authorizing governmental entity, an evaluation of appropriation risk for that payment, the relationship of senior debt service to the minimum revenue guarantee provision, the expected lag times between receipt of the guarantee payments and the required debt service payment, and the underlying rating of the senior project debt (including liquid reserves that can mitigate potential timeliness-of-payment issues with the guarantee).

Fitch considers the counterparty risk of the KICGF term loan and revenue guarantee loan products to be equal to the sovereign rating. Appropriation risk in this case is mitigated by the capital-based restrictions on the amount of guarantees available under the fund, and the government's funding commitment to it. As mentioned above, the KICGF-guaranteed line of credit mitigates a concessionaire's cash flow difficulties for either revenue flow or senior lien debt service payments while it awaits receipt of the minimum revenue guarantee payment.

The credit enhancement value of this product to senior debt depends upon the KICGF's counterparty risk, the relationship between the amount the KICGF has committed to a project and the outstanding senior project debt, and the nature of the loan or line of credit repayment obligation relative to senior debt payment obligations. Fitch also takes into consideration conditions precedent to a drawdown under the line of credit. While the expectation is that a minimum revenue guarantee payment will ultimately repay a senior debt obligation, there is no guarantee that in every concession transaction there will be a perfect mathematical correspondence between minimum revenue guarantee, senior debt service and KICGF streams of payments.

Fitch considers the counterparty risk of a government-provided termination payment to be at the sovereign, state or municipal rating level, depending upon the relevant authorizing governmental entity, and taking into account the statutory authority for this payment. Nevertheless, the credit enhancement value of the termination payment to the recovery value depends upon the size of the termination payment in relation to outstanding debt (which can vary from concession to concession), and the value of remaining and recoverable project assets under the control of the concessionaire at the time of termination.

■ The State of Project Documentation

Concession Agreements

Fitch conducted a legal review of the concession agreements for projects in KRIF, although it did not assign ratings or credit assessments to any of the concession project debt. The agency notes with some surprise the extent of common provisions from concession to concession, given the time span covered by the agreements and the number of amendments made over that time period to the PPI Act, the presidential decree and the annual plan. This consistency appears to demonstrate the government's steadiness of purpose in awarding these concession agreements.

The Korean PPI concession agreement documents that we examined meet global standards. They include very clear descriptions of the obligations, responsibilities and rights of the concessionaire and the granting governmental authority during the pre-construction, construction and operating periods of the project. Risk-sharing seems appropriate for each project phase, although – as we have noted – some re-examination by the government of the economic trade-off between minimum revenue guarantees and public construction subsidies is warranted.

The agreements clearly spell out the toll-setting mechanism for the projects, beginning with the initial toll rates, and continuing with subsequent adjustments either on an annual basis or as a result of extraordinary circumstances, such as an event of *force majeure*, or lower-than-expected toll revenue. If toll revenues exceed the original forecast, provisions exist for several options, including the negotiation of a toll rate reduction.

Should revenues fall below the original forecast, the concessions benefit from the minimum revenue guarantee provisions described above. Reportedly, the guarantees have always been provided as a cash payment to concessionaires, although governments generally have the option of a toll rate modification or an extension of the free-use (operating right) period. For cash payments from either the central, state or local government, many of the agreements specify time periods for notification and receipt of the guarantee, as well as an interest accretion factor for late payment. This is an innovative clause.

The concession agreements recognize that the concessionaire will enter into financing agreements with lenders, and tailors certain provisions for their protection, such as termination payments that cover outstanding senior debt and consultation with lenders if the concession agreement is to be amended.

Termination benefits are provided for a breach by either the concessionaire or the government (including for failure of financial closing), and payments are generally calculated as the greater of outstanding senior debt, some percentage of the value of the project facilities or the net present value of remaining project cash flow. These provisions serve both as a deterrent to contractual political risk and a powerful incentive to see the projects through to the end of their intended useful life. In no instances to date has a concession agreement been terminated and a consequential termination payment required.

South Korea also has successful precedents for the sale and purchase of concession rights and concession company shares. The best evidence for this is the now-ample KRIF portfolio, which consists of purchased shares and/or subordinated debt in many of the original concession projects. The fund completed its initial public offering in March of this year, selling KRW940bn (USD963 million) in shares in London and Seoul. From a financial markets perspective, it is interesting to see the active appetite for these concession project assets, even though some of the projects are still under construction. From the standpoint of an infrastructure investment program, it is important to note that equity sponsorship is shifting away from construction company conglomerates and towards long-term investors.

Another innovative aspect of South Korea's infrastructure concessions is that a large number were granted by state and municipal governments, including Busan City, the metropolitan cities of Seoul and Kwangju, and the province of Gyeongsangnam-do. States and municipalities can also be shareholders in an infrastructure concession company, although amendments to the PPI Act restrict public sector ownership to less than 50% of the shares and also limit local government voting rights. Municipal participation in either granting a concession or entering into an ownership share in a concession company requires the passage of a municipal ordinance. Central government approval is also required for solicited projects where the concession is granted by a state or local government.

Although the concession agreements for the various projects have more commonalities than differences, it is also worth noting some of the unique provisions.

- For one of the most recent large toll road projects, the minimum revenue guarantee provision will be nullified in any year where the revenue falls below 50% of the original forecast.

- One tunnel project's concession agreement contained a provision whereby the toll rates were recalculated after a separate but adjacent toll road project became operational. Most countries' concession documents do not yet incorporate recognition of the economic effects that two projects within the same transportation corridor can have. Its inclusion here was innovative.

- In the Woomyunsan Tunnel Project, the Seoul Metropolitan Development Corporation has a 25% shareholding in the project company. This is one of the few examples of municipal ownership in a concession project.

- In a large operating toll road project with the central government, the concession agreement has been amended to include the provision that any minimum revenue guarantee payments will be made by budgetary appropriations for the year, while outstanding amounts will be paid in cash in accordance with an agreed schedule.

Financing Documents

To ascertain the "state of the art" of Korean project financing documentation, Fitch examined the credit facility documents from a recently executed project transaction. It also wanted to ascertain their applicability as a template for future infrastructure project financings, including publicly traded bonds. The intention was not to survey the general quality or security provisions of outstanding toll road financing documents in Korea, but only of a recently completed and representative transaction. On this basis, the agency concluded that toll road project financing documents in Korea have evolved to a state that is highly compatible with the needs of a diversifying and growing bond market.

The borrower's representations and warranties, events of default, flow of funds and reserve requirements, as well as construction progress and independent engineer reports, traffic and financial reports, annual operating budget and security registration, all meet international project finance standards. The conditions for drawing down facility proceeds are conservative and, furthermore, the issuer cannot create any indebtedness or encumbrance other than what is permitted by the financing agreement.

These provisions would be both familiar and comfortable to a US, European or Australian project finance investor. The provisions for structuring a trust estate are also very advanced for Asia. Many Asian countries are still at the mortgage lien stage, even where the asset is owned or highly regulated by a governmental entity. Trust assignment of operating rights, including future project revenue flows and issuer funds and accounts, is still an emerging security concept throughout much of Asia.

Fitch does not currently rate the debt of any of South Korea's concession projects. Nevertheless, we have the impression that the debt-servicing capability of many projects is still predicated on the existence and reliability of the central government's revenue guarantee provisions. Given the current dependence of many project cash flows on this governmental support, it was surprising to find such a comprehensive level of structure (in terms of the array of security provisions) within the financing documents. This level of documentation is an important pre-condition for non-recourse project bonds.

Operating and debt service reserve requirements are comparable to those of project finance transactions in other parts of the world. Events of default are sufficiently restricted, being limited to failure to make a debt service payment, material breach of covenants (followed by acceptable cure periods), insolvency, final judgment by a court, the revocation of the security document and failure to meet the substantial completion date. A default interest rate applies to outstanding debt until the actual payment, with *pro rata* payments made to parity lenders.

Kun-Mortgage Agreement

In South Korea, the kun-mortgage secures both fixed- and floating-rate senior debt obligations. Mortgaged property can include concession rights, total private investment costs, the net aggregate amount of toll fees collected under the concession, project accounts, etc. The kun-mortgage agreement also specifies a kun-mortgage amount, which is generally calculated at 1.33x the secured senior debt amount. The kun-mortgage agreement terminates once the secured obligations have been retired and the facility or debt agreement terminated. The mortgagor is prevented from transferring its rights and obligations or materially changing the nature or condition of mortgaged property without the consent of the security agent. In the event of a default under the credit facilities agreement, the security agent has the power to exercise rights to the mortgaged property.

■ The Project Pipeline and the Future of Korea's Infrastructure Program

The 2003 annual plan for private participation in infrastructure gives us a good idea of the scope and intended direction of Korea's infrastructure program. Whether we look at identified investment needs across sectors or eligible projects to date, the scale of Korea's infrastructure investment needs is immense. Although no government ever funds its entire needs list, the scope and scale of these demands nonetheless strongly suggests ample opportunities for private investment in long-term infrastructure assets.

The central government identified infrastructure investment needs with a total cost of USD153bn across all sectors, including road, rail, port, airport and other projects. It estimates that traditional government budgeting and borrowing mechanisms will fund between 70% and 86% of these needs over time, although this largely depends upon prevailing economic and budgetary conditions. The government is seeking private investment participation for the remainder of these project costs, ranging from USD22 billion to USD46 billion, for which it is willing to provide varying levels of minimum revenue guarantees and other supports. Not surprisingly, road projects comprise between 38% and 46% of these total infrastructure investment needs.

As at 2003, the government's long-term plan had identified 179 projects that could participate or already were participating in the PPI plan (see table below: 2003 Infrastructure Plan Summary). The government expects that an average of 74% of the corresponding project costs will be funded through private capital and the remainder through government subsidies. The road and rail sectors dominate the identified projects.

In addition to the projects contained in the 2003 annual plan, the MoPB has identified a substantial project list under the government's new BTL initiative. The initial budget includes plans for 154 BTL projects valued at KRW6 trillion (roughly USD6bn). Major components of the plan include 62 school projects under the ministry of education, 17 sewage treatment plant projects under the ministry of environment, and a major railways project under the ministry of construction and transportation.

Attracting large-scale private investment is not without challenges: South Korea must continue to develop and approve projects that respond to demographic needs and economic development goals, minimizing the role of politically motivated decision-making. Both the country and its investor community must promote the development of viable user and user revenue projections, so that efficient decisions can be made about the allocation of capital between the public and private sector partners.

2003 Infrastructure Plan Summary

Infrastructure Asset Class	No. of Projects Under Consideration	Total Project Cost (USDbn)	% to be Funded Through Government Subsidies	% to be Funded Through Private Investment
Road	18	15.5	29.7	70.3
Rail	23	10.2	39.2	60.8
Port	29	5.3	39.6	60.4
Environmental Facility	89	3.0	43.3	56.7
Other	20	15.4	4.5	95.5
Total	**179**	**48.4**	**25.6**	**74.4**

Source: PIMAC

The government should consider introducing a preferential tax rate for infrastructure investments, relative to the tax rates for mainstream corporate profits and activities. Since infrastructure project margins are reasonably restricted by public policy design, taxation policy can become an important incentive or disincentive to private investment.

Finally, the country should begin a dialogue on the future role of the KICGF. As government minimum revenue guarantees become less relevant to future project cash flows, perhaps the fund's role could gradually shift away from wrapping the timeliness of government guarantee payments and toward providing subordinated credit enhancement products. This dialogue about the remaining challenges is only relevant because of the considerable opportunities that South Korea has already created for true public-private partnerships.