OECD Economic Surveys

Korea

ECONOMICS

OECD

September 2001

OECD ECONOMIC SURVEYS

2000-2001

Korea

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

Pursuant to Article 1 of the Convention signed in Paris on 14th December 1960, and which came into force on 30th September 1961, the Organisation for Economic Co-operation and Development (OECD) shall promote policies designed:

- to achieve the highest sustainable economic growth and employment and a rising standard of living in Member countries, while maintaining financial stability, and thus to contribute to the development of the world economy;
- to contribute to sound economic expansion in Member as well as non-member countries in the process of economic development; and
- to contribute to the expansion of world trade on a multilateral, non-discriminatory basis in accordance with international obligations.

The original Member countries of the OECD are Austria, Belgium, Canada, Denmark, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. The following countries became Members subsequently through accession at the dates indicated hereafter: Japan (28th April 1964), Finland (28th January 1969), Australia (7th June 1971), New Zealand (29th May 1973), Mexico (18th May 1994), the Czech Republic (21st December 1995), Hungary (7th May 1996), Poland (22nd November 1996), Korea (12th December 1996) and the Slovak Republic (14th December 2000). The Commission of the European Communities takes part in the work of the OECD (Article 13 of the OECD Convention).

Publié également en français.

Table of contents

Boxes

Annex

Tables

Figures

BASIC STATISTICS OF KOREA

THE LAND

Area (thousand sq. km)	99	Major cities, 1999 (million inhabitants):	
Agricultural area (thousand sq. km)	14	Seoul	10.3
Forests (thousand sq. km)	65	Pusan	3.8
		Taegu	2.5
		Inch'on	2.5

THE PEOPLE

Population, 2000 (million)	47.3	Civilian labour force, 2000 (million)	22.0
Per sq. km, 2000	474	Civilian employment	21.1
Annual rate of change of population, 2000	0.9	Agriculture, forestry, fishing	2.3
		Industry	4.2
		Construction	1.6
		Services	12.9

PRODUCTION

GDP, 2000 (trillion won)	571.1	Origin of GDP, 2000 (per cent of total):	
GDP per head (US$)	9 628	Agriculture, forestry, fishing	4.6
Gross fixed investment, 2000 (trillion won):	148.4	Industry	34.6
Per cent of GDP	28.7	Construction	8.2
Per head (US$)	2 764	Services	52.6

THE GOVERNMENT

Public consumption, 2000 (per cent of GDP)	10.2		Number
Central government revenue, 2000,		Composition of the National Assembly:	of seats
consolidated basis (per cent of GDP)	26.3	The Grand National Party	132
Central government budget balance, 2000,		The Millenium Democratic Party	115
consolidated basis (per cent of GDP)	1.3	The United Liberal Democrats	20
		Other	5
			272

FOREIGN TRADE

Commodity exports, 2000, f.o.b.		Commodity imports, 1998, c.i.f.	
(per cent of GDP)	37.8	(per cent of GDP)	35.2
Main exports (per cent of total exports):		Main imports (per cent of total imports):	
Light industry products	17.6	Consumer goods	10.0
Heavy industry products	74.1	Industrial materials and fuels	49.2
Electronic products	36.0	Crude petroleum	15.7
Cars	6.4	Capital goods	40.8

THE CURRENCY

Monetary unit: Won	Currency unit per US$, average of daily figures:	
	1999	1 187
	2000	1 131
	2001, June	1 294

Note: An international comparison of certain basic statistics is given in an annex table.

This Survey is based on the Secretariat's study prepared for the annual review of Korea by the Economic and Development Review Committee on 5 July 2001.

•

After revisions in the light of discussions during the review, final approval of the Survey for publication was given by the Committee on 30 July 2001.

•

The previous Survey of Korea was issued in September 2000.

Assessment and recommendations

Korea's post-crisis recovery, which had benefited from structural reforms...

Korea achieved a strong recovery from the 1997 crisis and 1998 recession, with output increasing nearly 11 per cent in 1999 and 9 per cent in 2000. The implementation of wide-ranging reforms to create a market-based economy laid the foundation for the expansion by boosting investor confidence, encouraging large capital inflows and helping to normalise financial-market conditions. The reforms included measures to boost competition, strengthen corporate governance and resolve problems in the financial sector, in part through the use of public money to address the non-performing loan problem and to re-capitalise financial institutions. With this new framework in place, the Korean economy benefited from buoyant world demand, particularly in the information and communications technology (ICT) sector, and its improved competitive position as a result of exchange-rate depreciation. Supportive macroeconomic policies also contributed to the strength of the recovery.

... came to an end in the final quarter of 2000 as a result of both external...

Korea's strong recovery came to an end in the fourth quarter of 2000 as output declined at a 1.7 per cent annual rate. The downturn was due to a mixture of negative external and domestic factors. On the external side, the sharp rise in oil prices had a major impact on Korea, which relies on oil imports for half of its energy needs. The resulting 12 per cent decline in the terms of trade limited the growth of national income to 2.3 per cent. This was accompanied by a deceleration of world growth, which reduced demand for Korean exports, particularly in the ICT sector. Such exports, which had been growing at a 139 per cent annual rate in volume terms in the second quarter of 2000, slowed to under 40 per cent in the final quarter.

… and domestic factors…

On the domestic side, there was a marked decline in confidence in both the household and business sectors during the course of 2000, despite output growth of nearly 10 per cent until the final quarter of the year. While the rise in oil prices certainly played a role, the deterioration in sentiment appears to have been linked to signs that the post-crisis restructuring drive was faltering and that the problems facing the economy were larger than initially thought. This sentiment reflected a number of factors, including the following. *First*, the provision of additional public funds for financial restructuring appears to have been delayed by elections in early 2000 and political disputes later in the year. Although legislative approval for the funds was finally granted in December 2000, the delay contributed to the marked worsening in credit conditions for firms during the course of 2000. *Second*, the workout programmes for Daewoo-affiliated companies revealed considerably higher levels of debt, while negotiations to sell Daewoo Motors to a major foreign producer collapsed in September 2000. *Third*, labour unrest indicated significant opposition to restructuring. The deterioration in confidence was reflected in the fall of the Korea Stock Exchange, which declined by half during 2000, resulting in turn in a negative wealth effect.

… leading to higher unemployment

These negative factors resulted in a deceleration of private consumption and fixed investment during the course of 2000. Unemployment, which had fallen to 3½ per cent in mid-2000, rose to above 4 per cent on a seasonally-adjusted basis in early 2001. Imports also slowed during 2000, leaving the current account in a substantial surplus of 2½ per cent of GDP. Meanwhile, the lagged impact of the increase in oil prices and public service fees boosted inflation from 2.3 per cent in 2000 to above 4 per cent in early 2001.

The stabilisation of the economy in the first quarter of 2001 raises the prospects for a recovery later in the year…

The economy appears to have stabilised in the first quarter of 2001 as output rose by 1 per cent at an annual rate from the preceding quarter. By May, the unemployment rate had fallen to about 3½ per cent. Moreover, there was a rebound in business and household confidence, suggesting that an economic recovery could begin in the second half of the year. This outcome, though, will depend on an upturn in overseas markets, notably the United States, which accounts for nearly a quarter of Korean exports. If such an upturn does materialise, an expansion led by exports could boost economic growth to around 4 per cent in 2001 and to 5½ per cent in 2002. Growth at this rate may be sufficient to keep the unemployment rate below 4 per cent. While wage gains are likely to be moderate, further increases in employment should lead to a pick up in private consumption, in the context of rising household confidence. The recovery should also boost imports, keeping the current account surplus near its present level. Inflation is projected to moderate to about 3½ per cent in 2002 as the impact of higher oil prices and the decline in the won dissipates.

… provided that restructuring of the corporate and financial sectors advances

In addition to a rise in overseas demand, the prospects for an early recovery in Korea also hinge on successful restructuring of the corporate and financial sectors. Despite the progress achieved during the past few years in establishing a new legal and institutional framework, the pace of actual restructuring has been slower than might have been hoped. In part, this is due to the enormity of the problems that Korea confronted in the wake of the crisis. But slow restructuring also reflects strong opposition from labour unions and, perhaps, hopes that further government assistance would be provided, thus postponing the need for restructuring. The corporate sector, which includes a large number of financially-troubled firms, remains the major concern. Despite buoyant growth, a quarter of the companies audited externally in 1999 and 2000 did not earn enough profits to pay even the interest cost on their debt, let alone repay principal. The problems in the corporate sector, in turn, threaten the health of the financial sector. It is essential, therefore, to address the remaining concerns in the corporate sector, in part through the exit of non-viable firms. While this could have negative short-run effects, as demonstrated by the collapse of Daewoo in 1999, failing to address these issues squarely creates uncertainty that tends to undermine confidence and risks increasing the eventual cost of restructuring. Indeed, tangible progress in restructuring, particularly of the most difficult cases, could launch a virtuous circle of improved confidence, resulting in faster economic growth.

The schemes used to assure the rollover of the large number of corporate bonds maturing in 2001...

With the new market-oriented framework in place, the rationale for government intervention has been greatly weakened, even if the authorities have a continued role to play in dealing with systemic risks that arise in the course of restructuring. One concern is the maturing of 65 trillion won of corporate bonds – three-fourths of the outstanding stock – in 2001. These include 25 trillion won below investment grade that are unlikely to be rolled over in the market. The bunching of maturities in a single year and the lack of a functioning market for low-rated debt could result in the bankruptcy of a large number of major firms over a short period, thus risking a systemic crisis in the financial market. To prevent such an outcome, the government launched "collateralised bond obligations" (CBOs) in 2000 to roll over maturing corporate bonds using partial government guarantees. This approach continues in 2001, supplemented by a bond-underwriting scheme run by the Korea Development Bank (KDB), a public institution, for six large companies, including four Hyundai-affiliated firms.

... may delay corporate restructuring and raise moral hazard problems

The KDB scheme has certain safeguards aimed at preventing support for non-viable companies. In particular, the companies selected for the programme had to have their restructuring plans approved by the KDB and creditor banks. Nevertheless, the reliance on a public institution and government guarantees to roll over the bonds of weak companies risks blunting the role of market forces in corporate restructuring, creating moral hazard problems and giving the impression that some firms are still too big to fail. To limit these negative consequences, it is important that the KDB and CBO schemes be short-term in duration, be judiciously restricted to firms making serious restructuring efforts and focused on alleviating systemic risk. It is also essential to ensure transparency about the liabilities assumed and the potential cost to taxpayers. Finally, the participation of financial institutions in the schemes should be entirely voluntary.

These measures should be phased out, combined with further improvements in the exit mechanism…

The KDB scheme, which uses government guarantees for corporate bonds, should end in 2001, since the problem related to the bunching of maturities recedes in 2002. In addition, the CBO scheme should be phased out as financial markets stabilise. This would allow market forces to drive more fully the corporate restructuring process, including the exit of non-viable firms. Such enterprises absorb resources that could finance more productive firms, thus eroding profit margins for healthy companies and distorting competition both domestically and abroad. In October 2000, the government instructed banks to review the status of 287 weak companies, repeating the screening process undertaken in June 1998. This led to the designation of 29 companies for court receivership or liquidation. However, the number of firms screened and chosen for bankruptcy procedures is small relative to the 563 firms identified as not having earned enough profits to cover interest payments for at least three consecutive years. Moreover, the screening of firms by financial institutions should not occur at thirty-month intervals, but instead should take place on a more regular basis and without government prompting. Legal bankruptcy procedures should be improved further, in part by the recent introduction of a "pre-packaged" bankruptcy system that limits the duration of legal procedures and gives creditors a larger role. In addition, workout programmes, which have consisted primarily of concessions on debt, should focus more on operational restructuring. Corporate restructuring vehicles, allowed since October 2000, could play a useful role in this regard.

… while activating the new corporate governance framework and enhancing transparency

While the problems of financially-troubled companies are serious, there is an impressive degree of dynamism in the business sector. New firms are created at a rate 50 per cent higher than the pre-crisis level and a growing number are classified as venture businesses. In addition, some of the surviving chaebol have begun to expand again, reversing the decline in the average number of firms in the top thirty business groups between 1997 and 2000. Given that over-expansion by the chaebol made Korea vulnerable to the crisis, it is important that such decisions are subject to oversight in the new corporate governance framework. The entrenched power of the principal owners of the chaebol as well as Korean business traditions complicate the task of activating the new governance framework. Nevertheless, there are a number of positive signs, such as the rise in shareholder activism and the introduction of outside directors. However, there are doubts as to the independence and influence of these outside directors, most of whom are appointed by the management and principal owners of the chaebol. The use of cumulative voting, one means of allowing minority shareholders a greater voice in the selection of directors, should be encouraged by the stock exchange as a good corporate governance practice. In addition, improved corporate governance requires enhanced transparency, in part through further increasing the reliability of external audits.

Addressing the corporate sector's problems is essential to the health of the financial sector…

In short, the new market-oriented framework should be used to the full to advance restructuring in the corporate sector. This is particularly important as the problems in the corporate sector are inextricably intertwined with those in the financial sector. Indeed, it is clear that the financial system cannot be put on a sound footing as long as the degree of credit risk and instability in the corporate sector remain high. Despite the strong recovery, the banking sector as a whole recorded large losses in 1999 and 2000 due to provisioning against further increases in non-performing loans. This was partly a result, though, of the introduction of a "forward-looking" loan classification system at the end of 1999. This change seems to have encouraged banks to become more risk-conscious, causing them to reduce their exposure to large companies while increasing lending to households. At the same time, the non-bank financial sector has shrunk considerably during the past few years, reflecting the closure of many institutions. This in turn contributed to a sharp decline in the corporate bond market, where these institutions had been major players. While greater awareness of risk on the part of banks and investors is a positive development, the deterioration in credit conditions for firms was also, in part, symptomatic of continuing problems in the financial sector.

… which is the focus of a second-stage restructuring programme

To address these weaknesses, the authorities launched in September 2000 the second-stage financial-sector restructuring plan, which includes 40 trillion won of additional public expenditure. Successfully completing this plan, so as to avoid a need for further rounds of restructuring programmes, should be a priority. Moreover, it would improve the efficacy of monetary policy (see below). The supervisory authorities should ensure that the "forward-looking" classification system is effectively implemented, which should help to expedite corporate restructuring. It is important that the financial holding company, which began operations in April 2001 with four weak banks, have managerial independence and achieve profitability in order to avoid additional injections of public funds. This is likely to require the closure of overlapping capacity. Most importantly, the privatisation of commercial banks and the development of a market-oriented financial system should be a priority. The government now owns a third of the commercial banks, possibly posing an obstacle to bank-led restructuring of the corporate sector. Finally, it will be important to successfully conclude financial-sector restructuring given the large amount of money at stake. The second-stage programme will boost net expenditures to more than 130 trillion won, a quarter of GDP. Successful restructuring will increase the amount of these public outlays that can be recuperated. The Korea Asset Management Corporation has had impressive success in this regard in selling non-performing loans acquired from financial institutions and this should continue.

The likely adverse impact of financial-sector restructuring on public debt is one reason for making sound fiscal policy a priority…

Given the significant rise in government debt that is likely as a result of public funding for financial restructuring, maintaining a sound fiscal policy is more important than ever. Korea achieved unexpected progress in this regard in 2000, with a record consolidated central government budget surplus, three years prior to the target under the medium-term plan to eliminate the deficit. The deficit had reached more than 4 per cent of GDP in 1998, as outlays to assist the record number of unemployed increased and tax revenues declined, before falling to below 3 per cent in 1999. In 2000, the deficit had been initially projected at 3½ per cent of GDP, but in the event, a surge in tax revenue and a shortfall in spending – 10.4 trillion won (2 per cent of GDP) – resulted in a surplus of 1.3 per cent. The increase in tax revenue, which came in 14 per cent higher than projected (3 per cent of GDP), was mainly due to a doubling in corporate tax receipts and some reforms in the tax system. Overall, there have been some improvements in the tax system in line with the recommendations in the 2000 *Economic Survey*, such as reforming the taxation of pension income, streamlining the corporate tax and eliminating some earmarked taxes. However, further steps are needed to broaden the base of the personal income tax and the value-added tax and to improve the taxation of capital income and property.

... along with reforms to improve the transparency and allocative efficiency of government spending

The complicated structure of Korea's government budget, which consists of a general account and 22 special accounts that are subject to legislative approval, plus 43 public funds, which only require cabinet approval and allow the responsible ministry considerable discretion, has a number of disadvantages. *First*, it makes spending difficult to predict. Expenditures on a consolidated basis are unknown when the budget is passed, thus reducing transparency and making it difficult to monitor fiscal policy. *Second*, relying on public funds tends to blur the distinction between the public and private sectors. *Third*, the compartmentalisation of spending reduces allocative efficiency by hindering the transfer of funds to their most productive use. It is important, therefore, that the government fulfill its plan to integrate all public funds – as well as extra-budgetary funds that are not even included in the consolidated budget – into the budget submitted to the National Assembly for approval. In addition, the "Fiscal Responsibility Law" currently under discussion should be approved. This law would require the government to provide a three-year fiscal plan on an annual basis and prohibit the use of supplementary budgets except in case of a crisis. Moreover, any proposals to boost spending or cut revenues would have to include a plan to offset the impact on the budget. The proposed law also requires the budget to provide information on contingent liabilities and quasi-fiscal activities, such as government guarantees on private-sector loans and bonds. In addition to the transparency and efficiency-related concerns noted above, a missing element in the fiscal framework is a measure of the general government balance, which should be the focus of the medium-term fiscal plan.

… in the context of rapid ageing of the population

The emergence of a budget surplus in 2000 provides some scope for allowing the automatic stabilisers to work if an economic recovery fails to materialise in 2001. Nevertheless, measures to remove remaining distortions in the tax system and to improve the allocative efficiency of expenditure are important to cope with the cost of increased economic co-operation with North Korea and population ageing – the special topic in this year's *Economic Survey*. The demographic transition underway will undoubtedly have a major impact on public expenditures. While the ageing process is occurring relatively late in Korea, it is among the most rapid in the OECD area. Indeed, Korea's elderly dependency ratio, which is currently the third lowest in the OECD, is projected to be the sixth highest in 2050. This reflects the large drop in the birth rate – from over five in the 1950s to 1.5 in the second half of the 1990s – and the largest gain in life expectancy in the OECD area over that period. The speed of the demographic transition will be complicated by the absence of a well-developed social safety net and the weakening of the traditional pattern of children caring for elderly parents. A second source of income for the elderly is the retirement allowance paid to departing employees, although it only covers 17 per cent of the working-age population and is actually a separation allowance. Given the traditional sources of income support and the hitherto relatively short life span, preparing for one's own retirement is a relatively new concept in Korea.

The National Pension Scheme, which was established in 1988, has a number of weaknesses…

To supplement private sources of support for the elderly, the government established the National Pension Scheme (NPS) in 1988. However, the current public pension system, which also includes occupational schemes for civil servants, the military and private-school teachers, has a number of weaknesses. *First*, it is projected that the contribution rate for the NPS will have to rise from the current 9 per cent to over 17 per cent during the next few decades to provide the average income worker with forty years of contributions a pension equal to 60 per cent of his or her average lifetime wage. Consequently, public spending on pensions will rise by 8 percentage points of GDP, one of the largest increases projected among OECD countries. Combined with the retirement allowance, pension costs will exceed a quarter of the wage bill, with likely negative consequences for labour markets and potential growth. Moreover, this will impose a large burden on today's younger generation, which may well have to bear, in addition, the cost of national unification. *Second*, less than half of the labour force contributed to the NPS in 1999, reflecting a low level of participation among the self-employed. Moreover, the self-employed significantly under-report their income. The large rise in the contribution rate needed to sustain the NPS is likely to discourage greater participation. *Third*, total replacement rates are rather high, approaching 90 per cent for employees who receive retirement allowances. *Fourth*, the lack of linkages between the NPS and the occupational schemes limits labour mobility. *Fifth*, the concentration of assets in the National Pension Fund – which according to some estimates could rise to as much as 50 per cent of GDP under the current contribution rates – poses some risks.

… which should be overcome through systemic reforms…

Korea has a window of opportunity to overcome these weaknesses by systemic reform of the current system, since the NPS does not begin paying regular pensions until 2008. While the government is faced with many difficult restructuring issues, pension reform should be addressed now as it will become increasingly difficult as the current system matures. Pension reform should aim at increasing the role of private-sector savings for retirement and expanding coverage. In addition, it should limit contribution rates to around 15 per cent, as recommended by Korea's Pension Reform Task Force.

… to introduce a multi-pillar system that places greater emphasis on private-sector saving…

These goals could be accomplished by the establishment of a three-pillar system.

– The *first pillar*, a mandatory public pension, might consist of two parts. First, a tax-financed universal welfare pension, which would achieve the redistributive goals and overcome the problem of low participation. The second aspect of this pillar might be an earnings-related defined-benefit pension that is actuarially fair. It is important to ensure that the social welfare system adequately covers the elderly until such a system is operational. The financial imbalances of the public occupational pension schemes, which are already in deficit, need to be addressed, and portability with the NPS introduced. Finally, the National Pension Fund should be operated in a way that promotes the development of long-term capital markets in Korea.

– The *second pillar* could be created by the conversion of the retirement allowance system into a mandatory corporate pension that is a fully-funded defined-contribution scheme. The allowance, which was created as a substitute for both unemployment insurance and a public pension system, has outlived its usefulness. Moreover, there is no requirement that the funds set aside for such payments be invested externally, thus making the allowances vulnerable to the financial health of the firm. Workers would benefit from the replacement of the current unfunded retirement allowance by a more secure source of retirement income. The corporate pension should be portable in order to promote labour mobility and allow participation by the self-employed.

– The *third pillar* would be a more effective system of individual pension accounts.

… while, at the same time, improving the health and nursing care systems

Health and nursing care are other areas where public expenditure is expected to rise with ageing. Korea has recently taken some bold steps to change some aspects of its healthcare system, such as separating the prescription and sale of drugs and unifying the various health insurance systems into a nation-wide scheme. The effect of these reforms is as yet uncertain. However, it is important to ensure that the current system is efficient in order to limit the impact of ageing on expenditures. A number of options could be considered, including pre-funding of medical expenditures as well as the cost of long-term nursing care, a responsibility that has been mainly borne by families. Moreover, given the increasing participation of women in the labour force and the smaller number of children per family, the traditional pattern of elderly care will need to be supplemented by a larger government role.

Policies to promote growth, including maintaining low inflation, are important

Coping with ageing, as well as corporate and financial-sector restructuring, will be made easier by policies that promote growth over the long run. One crucial aspect is price stability. In this regard, it is essential to establish the credibility of the new inflation-targeting framework introduced in 1998. At the same time, the Bank of Korea was made independent and responsible for meeting the objective. Inflation in 1999 and 2000 came in below the central target, set at 3 and 2.5 per cent, respectively, as the appreciation of the won helped limit price increases. In 2001, the central objective was boosted by ½ percentage point to 3 per cent, plus or minus one percentage point. With the target measure – the core consumer price index – up 4.3 per cent year-on-year during the first four months of 2001, inflation for the year is likely to be at the top end of the range.

Achieving the medium-term inflation target will likely require higher interest rates once the recovery is firmly established…

The Bank of Korea has also switched from targeting monetary aggregates to an interest rate-based policy, although the impact of changes in short-term rates is particularly uncertain at present and probably somewhat limited in the context of significant restructuring of the financial sector. The overnight call rate has remained within 25 basis points of 5 per cent since 1998, with the most recent action being a 25 basis-point cut in July 2001. The current 4.75 per cent level implies that the real short-term rate is at a historically low level of less than 1 per cent. Since demand is still weak, interest rate hikes would be premature at this point. However, once a recovery is firmly established, the Bank of Korea should move promptly to raise interest rates to demonstrate its commitment to the 2.5 per cent medium-term inflation target. Given the long and variable time lags inherent in monetary policy, setting an annual inflation target is not useful, especially in the context of an interest rate-based policy. Finally, the continued use of "aggregate credit ceiling loans" provided to banks based on their lending to small and medium-sized enterprises seems inconsistent with the shift to an interest rate-based policy.

… while taking into account exchange-rate developments

The exchange rate is taking a larger profile in monetary policy following the opening of the capital account and the adoption of a floating exchange rate in 1998. Given the rapid decline in the won in early 2001, the Bank of Korea appeared to intervene in the exchange market to avoid any excessive overshooting of the currency. While the exchange rate should be closely monitored, given its influence on price developments, the effectiveness of sterilised foreign-exchange market intervention is likely to be limited in most cases. A floating exchange rate remains the best option, while encouraging companies and financial institutions to take foreign-exchange risks into account.

Korea's growth potential would also be enhanced by policies to boost competition...

In addition to low inflation, policies to enhance competition would sustain Korea's high growth potential. The Korea Fair Trade Commission (KFTC) and the Regulatory Reform Committee have launched efforts to increase competition and reform regulations in specific industries. It is important that shareholders and financial institutions increase their monitoring of intra-chaebol activities. Further progress in these areas should allow an easing of regulations applied to the chaebol. This would enable the KFTC to devote more resources to traditional competition concerns. It is also crucial to maintain the momentum of the Regulatory Reform Committee in abolishing regulations that limit competition and in screening proposed legislation. Publication of the "Regulatory Impact Analysis" statements, which are required for proposed regulations, would help increase support for the reform process. In addition, the effort to harmonise Korean standards with international norms should be carried out fully to ensure that standards do not act as impediments to imports. The trend towards reducing and streamlining government protection and support for small and medium-sized enterprises is welcome and should continue. In addition, ensuring labour mobility is essential to restructuring, while providing an adequate social safety net. The fact that only 11 per cent of the unemployed receive benefits makes restructuring more difficult. Moreover, the new social welfare programme introduced last year should be available to all those meeting the eligibility criteria and provide enough support to bring income levels at least to the minimum cost of living.

... accompanied by reforms in key sectors

Policies to boost competition have been accompanied by reforms in key sectors. However, the ten-year plan launched in 1999 to introduce competition into the *electricity* *sector* has fallen behind schedule. Implementing this plan, which includes the separation and privatisation of the publicly-owned generating and distribution facilities, would bring significant benefits to consumers. In the *telecommunications sector*, the government should also follow through on its plan to fully privatise Korea Telecom by June 2002. This measure, combined with steps to reduce government intervention in this sector and to introduce an independent regulatory authority, would strengthen competition. In *agriculture*, the government is decreasing price supports, while expanding direct payments to farmers, as agreed in the Uruguay Round. The ultimate goal, though, should be to increase the efficiency of the agricultural sector, in part through boosting the size of farms.

In sum, implementing the new market-oriented framework, stepping up corporate restructuring and moving ahead with the privatisation of banks, combined with appropriate macroeconomic policies to achieve stability, will be required to sustain high growth in Korea

In summary, Korea has made impressive progress since the crisis in establishing a market-oriented framework and in achieving a strong economic recovery. However, this framework needs to be implemented effectively in order to restructure the corporate and financial sectors and ensure that the hard-won gains obtained as a result of the crisis and severe recession are not squandered. Although significant progress has been achieved, corporate restructuring should be stepped up, in part through allowing non-viable firms to exit. It is important to ensure that the exit mechanism functions properly, so as to avoid having non-viable companies continue to absorb resources at the expense of their competitors and thereby reduce potential growth. Moreover, corporate restructuring should be based on active corporate governance and transparency in accounting, disclosure and auditing procedures. The authorities should ensure that government guarantees do not distort competition or delay restructuring and should move ahead with the privatisation of banks. Progress in restructuring would not only improve the prospects for an early economic recovery, but would also reduce Korea's vulnerability to crisis and enhance the long-term growth potential. The country's growth capacity also depends on maintaining macroeconomic stability, in particular by establishing the credibility of the inflation-targeting approach. This might be better accomplished by moving away from annual inflation targets and focusing instead on the central bank's medium-term target. At the same time, it is important to develop a medium-term framework for fiscal policy, which integrates all government expenditures and is more transparent. While automatic stabilisers should be allowed to operate to help achieve an economic recovery, a sound fiscal position is essential to cope with the future costs of North-South co-operation and population ageing. Given the rapid demographic transition and the immaturity of the present pension system, establishing a system of old-age support that relies more on private-sector savings and covers a larger share of the population should be a top priority. Overall, implementing the new market-oriented framework and accelerating corporate restructuring, combined with policies to ensure macroeconomic stability in the long run, would help Korea maintain high growth rates, thus continuing its convergence to the highest income countries.

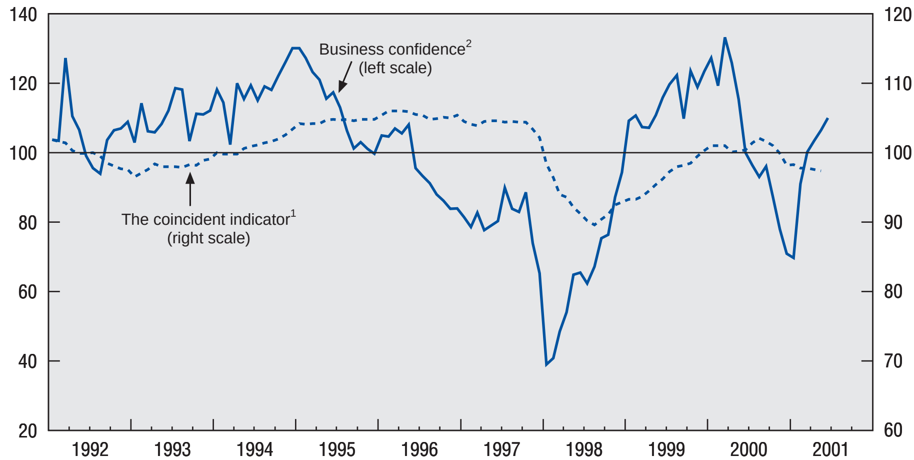
I. Recent trends and prospects

An economic downturn in the final quarter of 2000, with output falling 1.7 per cent at a seasonally-adjusted annual rate, ended Korea's strong recovery from the 1997 economic crisis and 1998 recession. The expansion, which began in the third quarter of 1998, peaked in the autumn of 2000, according to the coincident indicator of economic conditions (Figure 1). The foundation for the recovery was laid by the wide range of structural reforms introduced to establish a more market-oriented economy, which increased confidence, as reflected in strong capital inflows and the doubling of equity prices in 1999. The V-shaped recovery, which produced growth of nearly 11 per cent in 1999 and 9 per cent in 2000, was fuelled by strong world demand for Korean exports, particularly in the information and communication technology (ICT) sector, and the depreciation of the won, which strengthened Korea's competitive position. The favourable external environment was accompanied by supportive macroeconomic policies. However, the relatively short duration of the upturn has raised questions about the extent of Korea's success in implementing the new market-oriented framework examined in the past three OECD *Economic Surveys of Korea*. There are also concerns that the downturn will hinder the restructuring of the corporate and financial sectors. This chapter begins by identifying the factors responsible for the downturn. It then analyses the impact of those factors – both domestic and foreign – on domestic demand, inflation and labour markets and the external balance. The chapter concludes by discussing the prospects for the Korean economy.

Factors responsible for the downturn

Production data indicate a gradual slowdown throughout 2000, though this was partly masked by soaring demand in the ICT sector. With slowing growth and falling capacity utilisation, investment began to decline while private consumption stagnated in the second half of the year. Exports, another important source of growth during the expansion, also declined in the fourth quarter of 2000 from the previous quarter. However, imports also fell, helping to preserve a substantial current account surplus of 2½ per cent of GDP for the year. The downturn pushed the unemployment rate up by half a percentage point to over 4 per cent in seasonally-adjusted terms in early 2001. Nevertheless, inflation continued to accelerate to over 5 per cent (year-on-year) by the second quarter of 2001.

Figure 1. **The business cycle**



1. Cyclical component.
2. Seasonally adjusted. A score of 100 means that production is expected to be the same as the previous month.

Source: National Statistical Office and Federation of Korean Industries.

While some deceleration from the double-digit growth pace of 1999 was inevitable, problems in the restructuring of the corporate and financial sectors appeared to undermine confidence, thus contributing to the sharper than expected slowdown at the end of 2000. Following the crisis, Korea established the framework for a more market-oriented economy by introducing reforms in the corporate and financial sectors and in the labour market. In addition, competition has been strengthened through a reform of the regulatory framework and a lowering of barriers to imports and inflows of foreign direct investment. Significant progress has been achieved in implementing this new framework, although some of the consequences of restructuring, notably the failure of Daewoo, then the second-biggest chaebol, in mid-1999 had a negative impact on confidence and activity. Nevertheless, output growth remained at or near double-digit levels through the autumn of 2000. Despite buoyant growth, there was a marked deterioration in business (Figure 1) and household confidence during the course of 2000 that appeared related in part to concerns that the restructuring process had ground to a halt.

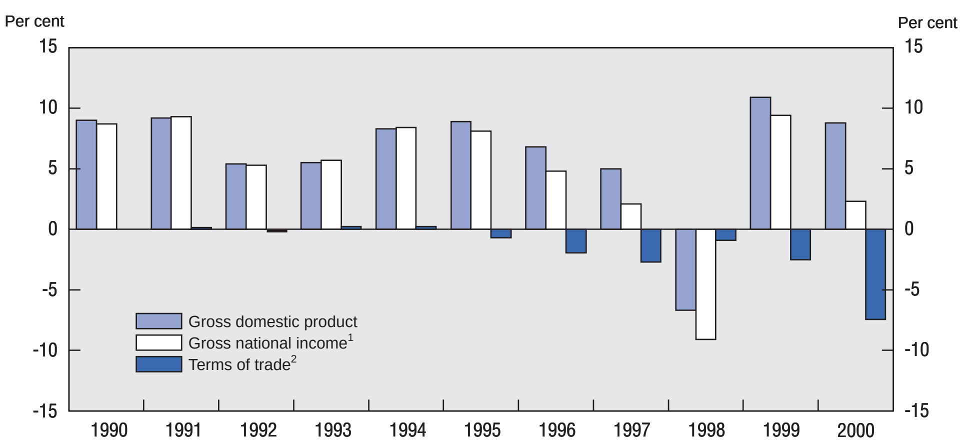
A number of factors may have contributed to the deterioration in confidence. *First*, the provision of additional funds for financial-sector restructuring was delayed by elections in the spring of 2000 and political disputes later in the year.

Although additional outlays were finally approved in December 2000, the delay probably contributed to worsening corporate credit conditions during the year. In particular, banks faced continued increases in non-performing assets, while the bond market was unavailable to most companies in 2000. *Second*, the workout programme for companies affiliated with Daewoo revealed levels of debt that were significantly higher than expected. This was compounded by the collapse of negotiations in September 2000 to sell Daewoo Motors to Ford. *Third*, labour union opposition to further restructuring in both the corporate and financial sectors remained strong. *Fourth*, it was clear that a significant portion of the corporate sector, including some companies affiliated with the largest chaebol, continued to experience balance-sheet problems, despite buoyant growth. The deterioration in confidence was reflected in a 50 per cent fall in the stock market in 2000 – among the largest in the world – despite record net purchases of Korean equities by foreigners. The negative wealth effect, in turn, reinforced the slowdown in consumption.

These domestic problems were compounded by negative external shocks, notably the marked deterioration in the terms of trade during 2000 (Figure 2) and the slowdown in demand in Korean export markets in the latter part

Figure 2. **The terms of trade and national income**

Annual percentage change



1. Gross national income includes the compensation of employees, proprietors' income, rental income of individuals, corporate profits and net interest.
2. Contribution to growth.

Source: Bank of Korea.

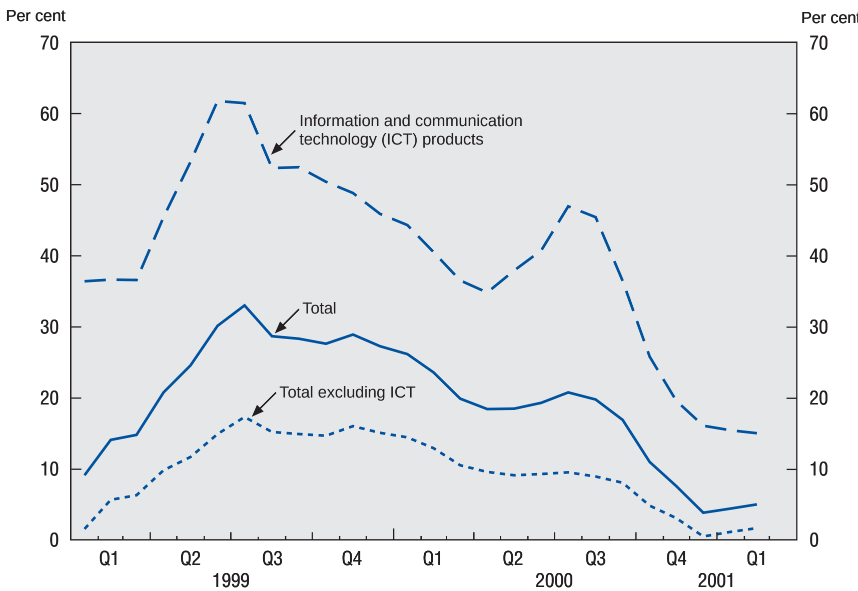
of the year. The sharp rise in oil prices had a profound effect on Korea, which relies on imported oil for about half of its energy needs. Higher oil prices boosted the import bill by $11 billion – an amount equivalent to 2¼ per cent of GDP. With the downward trend in semiconductor prices continuing, Korea recorded a 12.4 per cent fall in the terms of trade, its sixth consecutive annual decline. This reduced the growth of gross national income, a measure that reflects the impact of trade prices on purchasing power, to 2.3 per cent in 2000 – well below the 8.8 per cent rise in output. The negative impact on household income and business profits damped consumption and investment during the course of the year. In addition, the sudden fall in demand experienced in a number of OECD countries in the fourth quarter of 2000 had an immediate effect on Korean exports. After rising at an annual rate of 21 per cent during the first three quarters of 2000 on a national account basis, exports fell almost 3 per cent at an annual rate in the final quarter. The effect on export growth was most marked in the ICT sector (see Box 1). Indeed, global semiconductor sales, which were increasing by 60 per cent (year-on-year in US dollar value) in mid-2000, turned negative by the end of the year.

Box 1. **The information and communication technology sector**

The information and communication technology (ICT) sector has played a driving role in Korea's recovery from the crisis and the 1998 recession (Figure 3). Manufacturing industries in this sector include telecommunications, information (including computers) and broadcasting equipment, as well as electronic components, including semiconductors. Manufacturing production in the ICT sector accounted for a third of the increase in industrial output in 1999 and 2000. Much of the expansion in production was prompted by external demand; exports of ICT products rose by more than 50 per cent in both 1999 and 2000 in volume terms. Given the significant decline in prices for these products, the growth in US dollar terms was somewhat slower at about 34 per cent in both years (Figure 4). Over the two-year period, the dollar prices of Korea's ICT exports fell by a fifth, led by semiconductors,* while overall export prices declined by less than 2 per cent. Despite these falling prices, the ICT sector's share of exports rose from 26 per cent in 1998 to 36 per cent in 2000 (Panel B). Semiconductors alone accounted for 12 per cent of Korea's total exports in 2000. Increased output in the ICT sector led to a high level of capacity utilisation, stimulating a surge in investment in this area. In the telecommunication equipment (including televisions and radios) industry, capacity increased by 76 per cent between 1998 and 2000, well above the 19 per cent overall rise in the manufacturing sector.

Box 1. **The information and communication technology sector** (*cont.*)

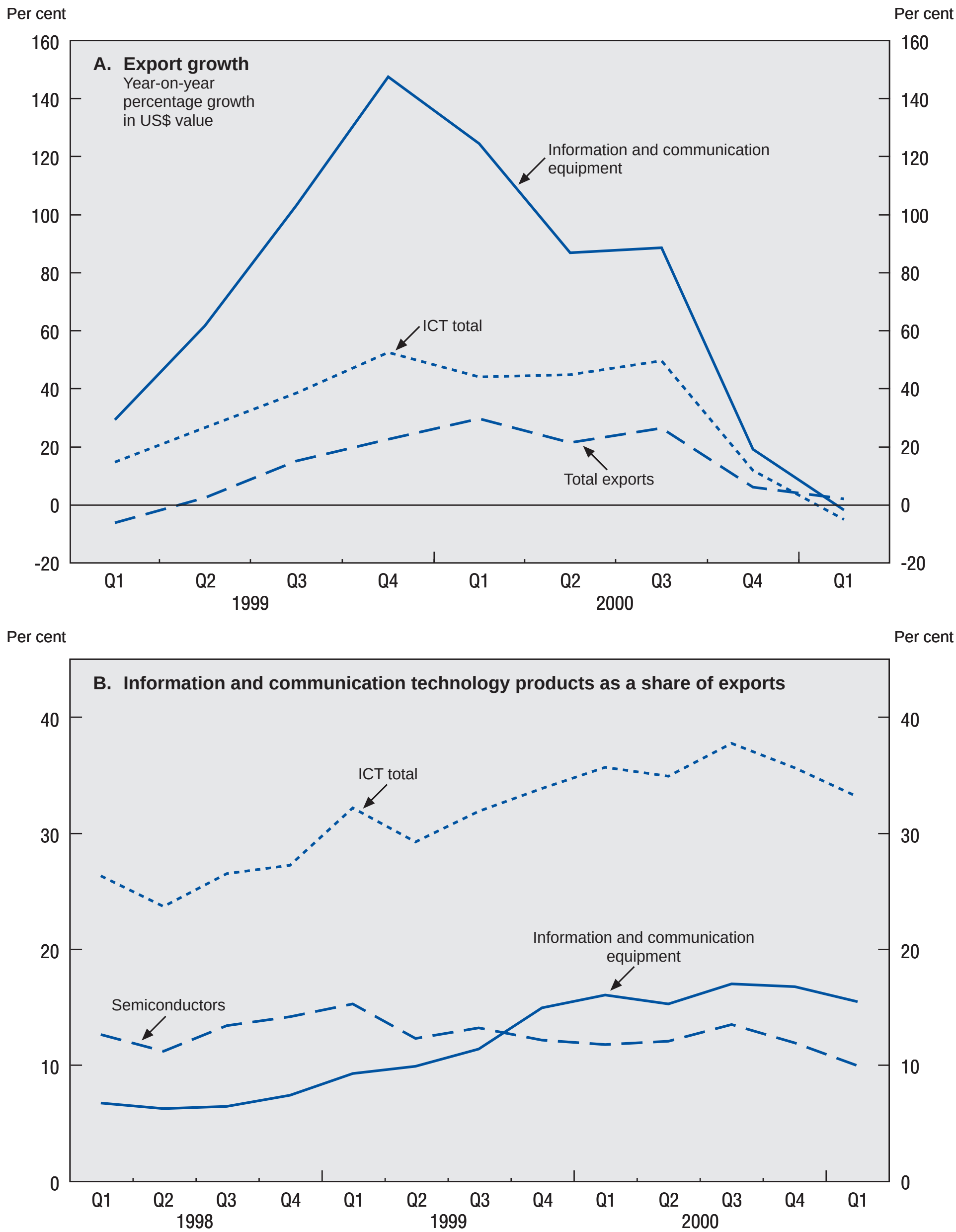
Figure 3. **Industrial production by sector**
Year-on-year percentage change, three-month moving average



Source: National Statistical Office.

The worldwide downturn in the electronics sector in the second half of 2000 had a heavy impact on Korea, given the ICT sector's growing share of the economy. Korea's ICT export growth in volume terms slowed suddenly from a 139 per cent rate from the previous quarter (at an annual rate) in the second quarter of 2000 to under 40 per cent in the fourth. The deceleration in volume was compounded by a further 8 per cent decline in prices over that period. The slowdown was not limited to the US market, which purchases 30 per cent of Korea's ICT exports. While the growth in sales to the United States fell from 63 to 14 per cent (in value terms) during the last two quarters of 2000, exports to Japan, which has a smaller share at 10 per cent, recorded an even sharper slowdown from 100 to 12 per cent. The declining trend at the end of 2000 continued into the first quarter

Figure 4. **Exports of information and communication technology products**



Source: Bank of Korea.

Box 1. **The information and communication technology sector** (*cont.*)

of 2001, as Korea's ICT exports in volume terms fell more than 50 per cent from the previous quarter (at an annual rate). While the ICT sector boom has brought great benefits, the risks are evident as well. *First*, the increasing role of this highly cyclical sector leaves the economy vulnerable to instability. Indeed, one company – Samsung Electronics – accounted for a substantial share of profits at listed companies in 2000. *Second*, Korea's debt-financed growth is problematic in this sector which is characterised by intense competition, large variation in prices, short product cycles and large investment needs. Given that firms' revenue may vary widely, leading to balance-sheet problems during downturns, expansion based on equity finance may be more appropriate.

* In 2000, Korea's semiconductor export prices fell 12 per cent – a relatively modest drop compared to the decline in spot prices for memory chips, which fell from $11 at the beginning of 2000 to $3.50 in December. This suggests that most Korean semiconductors are sold on a long-term contract basis.

The impact on domestic demand

Final domestic demand was the main factor in strong output growth of 8.8 per cent in 2000. During the year, however, both private consumption and fixed capital formation slowed progressively (Table 1), reflecting the negative developments cited above. This led to involuntary stockbuilding in the latter half of the year.

Private consumption and housing

Private consumption slowed in 2000 despite a recovery in the growth of real disposable income (Figure 5). Several factors contributed to the reduced pace of consumption growth. *First*, there was a significant decline in household confidence (Panel B), reflecting worries about the health of the corporate and financial sectors noted above. The weakening in confidence played a role in the sharp slowdown in purchases of durables from a 44 per cent year-on-year growth rate in the first quarter of 2000 to under 10 per cent in the second half of the year, though this may also have reflected the satiation of pent-up demand. The deterioration in household confidence limited the decline in the household saving rate. *Second*, the terms-of-trade effect noted above is estimated to have reduced consumption by one percentage point. *Third*, the decline in asset prices resulted in a

Table 1. **Demand and output**

Percentage change

	1991-97	1998	1999	2000	2000[1] Q1	2000[1] Q2	2000[1] Q3	2000[1] Q4	2001[1, 2] Q1
Private consumption	6.4	–11.7	11.0	7.1	5.8	4.8	1.3	1.2	–4.0
Government consumption	3.7	–0.4	1.3	1.3	1.9	1.2	0.3	3.5	–13.3
Gross fixed capital formation	5.3	–21.2	3.7	11.0	30.1	–4.6	–3.5	–18.1	10.9
Construction	4.7	–10.1	–10.3	–4.1	–3.4	2.9	–5.0	–3.1	12.0
Machinery and equipment	6.3	–38.8	36.3	34.3	83.3	–12.1	–1.8	–32.4	9.7
Final domestic demand	5.7	–14.0	7.6	7.7	12.6	1.3	–0.3	–5.1	–0.6
Stockbuilding[3]	–0.1	–5.5	5.4	–0.9	–14.6	–1.9	5.0	1.4	–5.8
Total domestic demand	5.4	–19.8	14.7	6.7	–5.5	–0.8	5.5	–3.6	–7.5
Exports	14.7	14.1	15.8	21.6	47.6	1.4	18.8	–2.8	16.8
Imports	11.2	–22.1	28.8	20.0	25.7	–5.1	27.2	–6.6	–11.5
Foreign balance[3]	0.5	12.5	–1.0	3.5	11.8	2.6	0.4	1.0	13.1
Gross domestic product	6.4	–6.7	10.9	8.8	6.6	6.4	9.8	–1.7	1.3

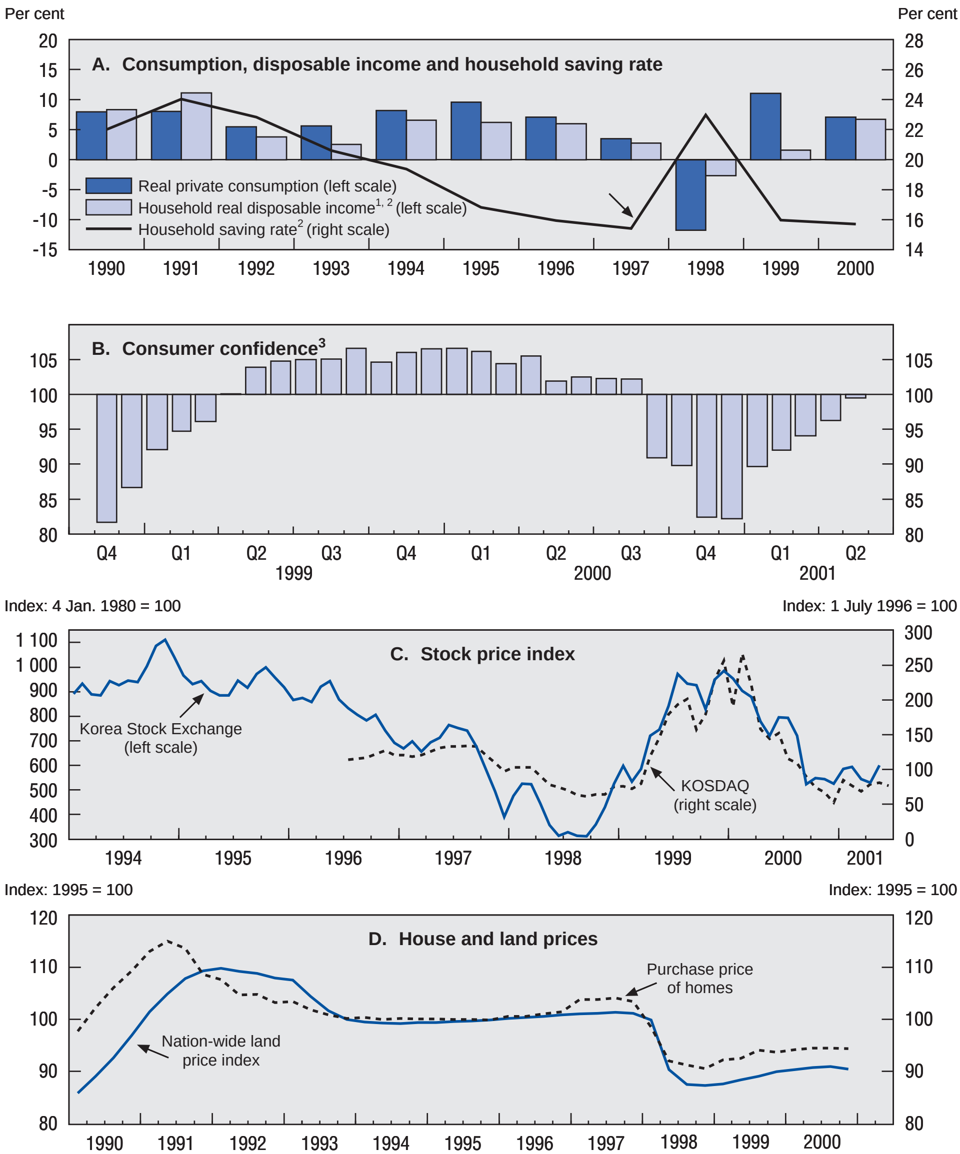
1. Seasonally-adjusted annual rate.
2. GDP growth was lower than suggested by the components due to a –4.7 percentage point negative contribution from the statistical discrepancy.
3. Contribution to growth.

Source: Bank of Korea.

negative wealth effect. The 50 per cent fall in the Korea Stock Exchange was accompanied by an 80 per cent drop in the KOSDAQ during 2000 (Panel C). While equity ownership is limited to about 15 per cent of households, the size of the stock price declines suggests that they may have had a significant impact. In addition, the recovery in land and housing prices from their steep fall after the crisis was reversed in the last quarter of 2000 (Panel D).

Investment in housing fell in 2000 for the fourth consecutive year (Figure 6) despite a 7 per cent rise in the number of housing construction permits issued. Given that apartments account for the bulk of new housing, there is a considerable lag between the issue of construction permits and the completion of housing units. The downward trend in residential investment appears to be partly structural; its share of GDP has declined from 9 per cent at the beginning of the 1990s to the OECD average of 4 to 5 per cent. The falling share reflects a 6 per cent decrease in the number of young people in the 20 to 30 age group during the last decade. In addition, the high level of investment in the early 1990s largely eliminated the housing shortage. Indeed, the "housing supply rate" – the number of housing units as a share of households – rose from 72 per cent in 1990 to 94 per cent in 2000.

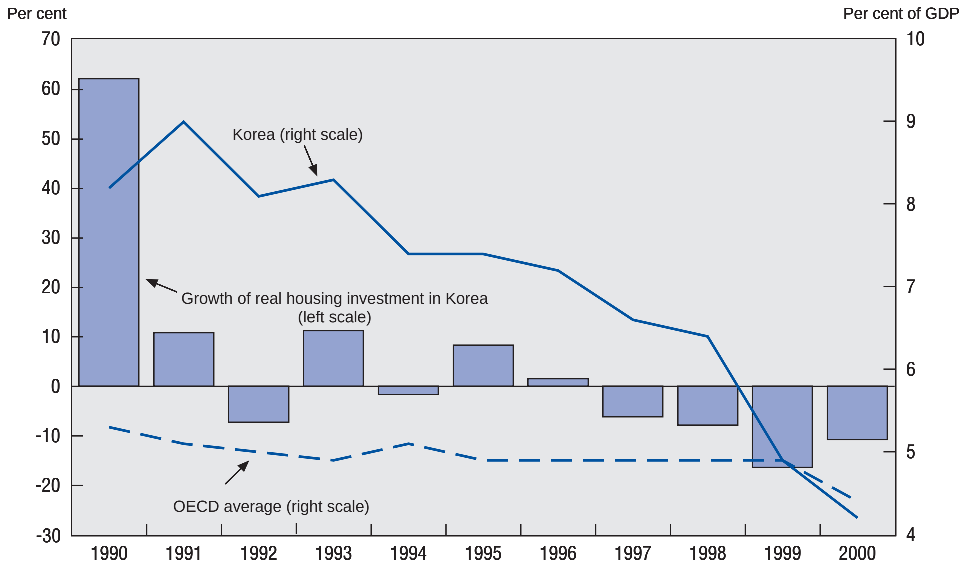
Figure 5. **The forces shaping private consumption**



1. Deflated by the private consumption deflator.
2. OECD estimates for 2000.
3. A score of 100 means that consumption is expected to be the same in six months as at present.

Source: Ministry of Finance and Economy, National Statistical Office and Korea Stock Exchange.

Figure 6. **Investment in housing construction**
Per cent of GDP

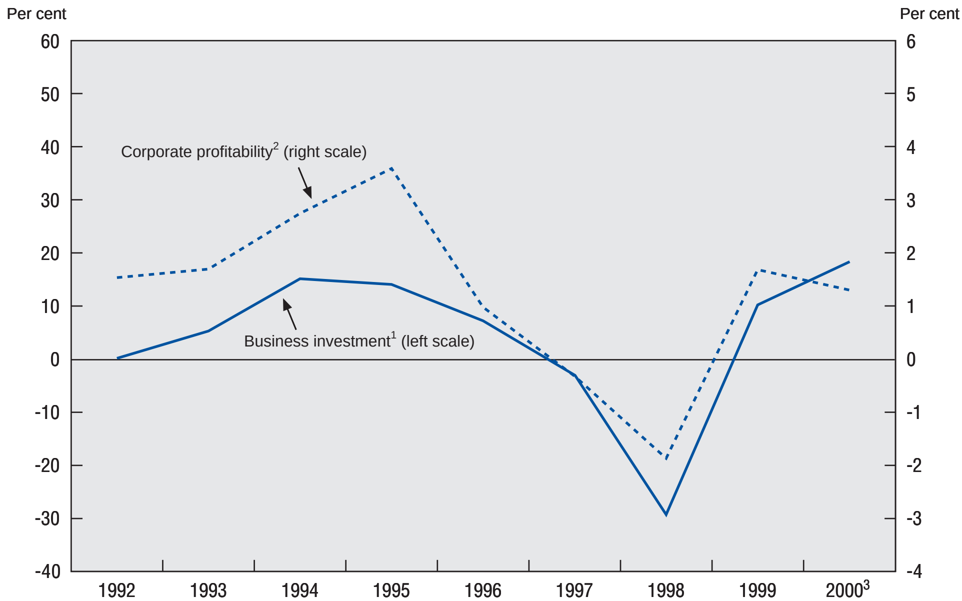


Source: OECD.

Fixed investment

Business investment[1] expanded strongly in the first half of 2000, growing at around a 40 per cent annual rate. The surge in investment was closely linked to the rebound in profits, since firms have increasingly relied on internal funds to finance investment following the crisis (Figure 7). In the manufacturing sector, which accounts for over half of the assets of non-financial corporations, ordinary profits jumped to 5 per cent of sales in the first half of 2000 (Table 2), the highest level in the past two decades.[2] Compared to the losses recorded during 1998, this measure of profitability rose by 7 percentage points. About a third of the increase was due to higher operating profits, while gains from asset sales also contributed. The most important factor, however, was the fall in financial costs by 4 percentage points to 5 per cent in the first half of 2000. The easing of financial costs reflects the reduction in interest rates as well as de-leveraging by firms. Compared to 1997, the debt to equity ratio fell by half to under 200 per cent by mid-2000. One indicator of the improving financial situation of the manufacturing sector was the "interest coverage ratio" which compares a firm's operational profits to its debt

Figure 7. **Business investment and corporate profitability**



1. Real increase in business investment, which equals total investment minus residential construction and public investment. OECD estimates for 1999 and 2000.
2. Ordinary profit to sales ratio for 1807 manufacturing firms surveyed by the Bank of Korea.
3. In the first half of the year, the ordinary profit to sales ratio was 5.1.

Source: Bank of Korea and OECD.

service obligations on a flow basis. In 1997 and 1998, this measure was less than one, indicating that the average firm was unable to cover its interest expenses – let alone principal – with the cash flow from its operations. In the first half of 2000, the ratio improved to 1.7.[3]

The situation deteriorated significantly in the second half of 2000, reducing the profit to sales ratio for the year to 1.3 per cent. Indeed, the 500 major listed companies reported a 23 per cent decline in ordinary profits in 2000 as the economic downturn and the worsening of the terms of trade took a heavy toll on corporate profitability in the latter half of the year. At the same time that the amount of internal funds available for investment was being reduced, the climate for external financing also deteriorated (see Chapter II). The stock market fell by nearly 40 per cent in the latter half of the year, raising the cost of capital to firms. In addition, access to the bond market was limited, in practice, to affiliates of some of the top chaebol. Finally, access to loans became more difficult as banks,

Table 2. **Performance indicators for the manufacturing sector**

Per cent

	1997	1998	1999	2000: 1H	Change[1] 1998 to 2000: 1H	2000
Financial indicators						
Debt-equity ratio	396.3	303.0	214.7	193.1	–109.9	210.6
Total borrowings-assets ratio	54.2	50.8	42.8	41.4	–9.4	41.2
Current ratio[2]	91.8	89.8	92.0	95.3	3.5	83.2
Asset turnover ratio	0.92	0.82	0.78	0.88	–0.04	0.96
Profitability indicators						
Operating profit-sales ratio	8.3	6.1	6.6	8.6	2.5	7.4
Labour cost-sales ratio	11.4	9.8	9.8	9.5	–0.3	9.7
Ordinary profit-sales ratio	–0.3	–1.8	1.7	5.1	6.9	1.3
Financial expense-sales ratio	6.4	9.0	6.9	5.1	–3.9	4.7
Average interest rate	11.3	14.0	11.3	10.3	–3.7	10.5
Interest coverage ratio[3]	0.95	0.79	1.24	1.70	0.75	1.57

1. Percentage points.
2. The ratio of liquid assets to short-term liabilities.
3. The ratio of operating profits to interest expenses.

Source: Bank of Korea.

concerned about maintaining high capital adequacy ratios during a period of restructuring, became more careful in lending to firms and shifted more of their activities to households. In this context of falling profits and output, reduced capacity utilisation ratios and more limited access to direct and indirect finance, business investment declined at a 13 per cent annual rate in the second half of 2000.

The aggregate measures of profitability – themselves not overly comforting – obscure the balance-sheet problems at large companies that have become a major risk hanging over the Korean economy. Much of the concern is focused on the Hyundai group, which prior to 2001 was the largest chaebol. If Hyundai affiliates are excluded, the operating income for listed companies declined 1 per cent rather than the 23 per cent noted above. A commonly-used measure of financial distress is the number of companies with interest coverage ratios below one. A survey of externally-audited firms – which total almost 8 000 – found that a quarter had a ratio of less than one in 1999 (Table 3). Of those firms, 99 were in workout programmes and 53 were in court receivership or composition. However, the remainder – more than 90 per cent of the 2 000 firms with an interest coverage ratio below one – were not formally recognised as having serious problems. Together, firms with a ratio below one had a total of 186 trillion won of debt, equivalent to almost 40 per cent of GDP or 31 per cent of total corporate debt. Perhaps even more troubling is that 532 of the firms had recorded interest coverage ratios

Table 3. **Financial distress in the corporate sector**
Number of firms with an interest coverage ratio[1] below one in 1999

Period below one:	1999 only	1998 and 1999	1997 to 1999	1996 to 1999	Total in 1999
Total number of firms	915	565	362	170	2 012
In workout programmes	44	33	18	4	99
In court receivership	21	17	12	3	53
Normal	850	515	332	163	1 860
Total (trillion won)	112.7	37.4	26.5	9.2	185.8
(Per cent of GDP)	23.3	7.7	5.5	1.9	38.5
In workout programmes	60.6	12.3	7.5	0.7	81.1
In court receivership	2.3	2.3	2.1	0.4	7.1
Normal	49.8	22.8	16.9	8.1	97.6

1. The ratio of a firm's operational profits to its debt service obligations on a flow basis. This study is limited to externally-audited firms, which totalled 7 805 in 1999.
Source: Lim (2001*b*).

below one for at least three consecutive years. Not surprisingly, a ratio below one over an extended period has been found to be a good predictor of firm failure (Lim, 2001*b*). In the first half of 2001, a Bank of Korea study of 1 800 manufacturing firms found that about a quarter still had an interest coverage ratio below one, even though the average ratio had risen to 1.7.[4] As part of the second-round restructuring plan (see Chapter IV), banks designated 29 firms for court receivership or liquidation.

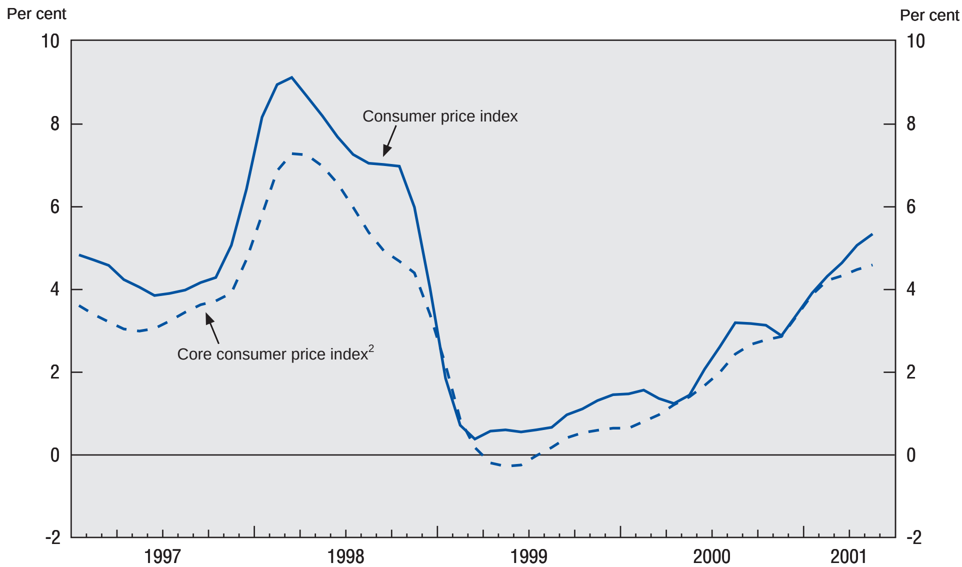
Stockbuilding

Stockbuilding made a negative contribution of almost 1 percentage point to growth in 2000, reversing its large positive effect during the preceding year. However, the decline was concentrated in the first half of 2000. With sales slowing more sharply than expected in the latter part of the year, there was unintended inventory accumulation. By the final quarter of 2000, producer inventories in the industrial sector – a narrower definition that excludes agriculture and retailers – were rising at an 18 per cent rate (year-over-year).

The impact on inflation and the labour market

Despite the slowdown in economic growth in the second half of last year, inflation, as measured by the consumer price index, accelerated sharply from a 1 per cent year-on-year rate in the spring of 2000 to 5¼ per cent in the second quarter of 2001 (Figure 8). Consequently, the average for the year 2000 rose to 2.3 per cent, compared to the 1999 rate of 0.8 per cent, the lowest on record in Korea. The increase in oil prices and hikes in public service charges were mainly

Figure 8. **Consumer price trends**
Year-on-year percentage changes[1]



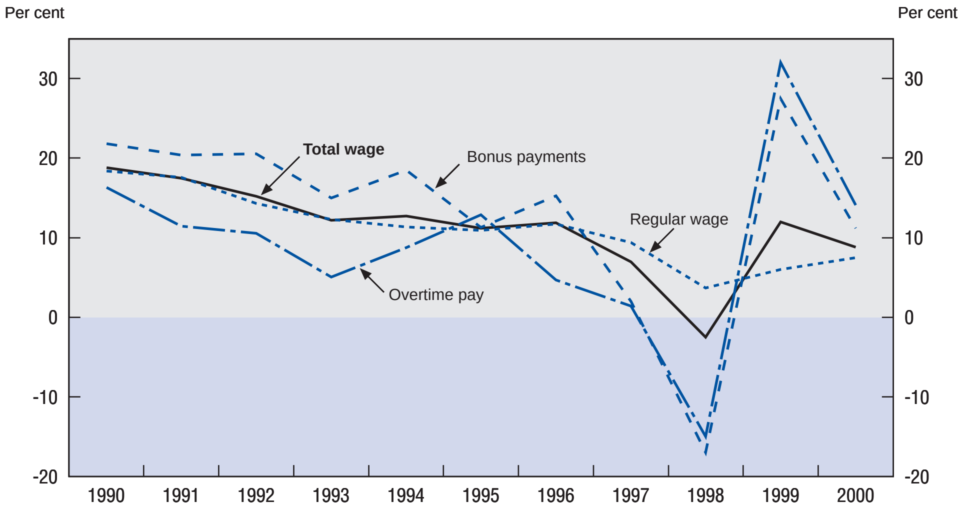
1. Thee-month moving average.
2. Excludes energy and agricultural products (apart from grains).

Source: National Statistical Office.

responsible for the acceleration of inflation during a period of slowing growth.[5] The jump in the average price of imported oil from $17 a barrel in 1999 to $28 in 2000 directly boosted the rate of inflation by ¾ of a percentage point.[6] In addition, public service charges, which account for 13 per cent of the consumer price index, rose 7 per cent. The most significant increases occurred in the areas of medical care fees, as a result of the reforms introduced last year, and public transportation fees, reflecting higher petroleum prices. In sum, the rise in public service charges boosted inflation by another percentage point. Food prices also jumped in the third quarter of 2000 as a result of bad weather but declined during the following quarter, keeping the increase in food prices below that of the overall price index in 2000.

Core inflation, which excludes energy and most agricultural products, was limited to under 2 per cent in 2000, which was within the central bank's target range of 2.5 per cent, plus or minus 1 percentage point. However, core inflation caught up with the rise in the overall consumer price index in the latter part

Figure 9. **Wage growth by components**[1]



1. Firms in the non-agricultural sector employing more than ten workers.
Source: Ministry of Labour.

of 2000 as the impact of higher oil prices permeated throughout the economy. In the first half of 2001, core inflation accelerated to almost 4½ per cent year-on-year, reflecting price hikes in both the industrial and service sectors. The pick up in inflation in 2001 appears to be driven by the lagged indirect effect of oil prices and the depreciation of the won, which fell by 16 per cent relative the dollar between September 2000 and March 2001.

The labour market, however, does not appear to have been a source of inflationary pressure as wage growth slowed to 8 per cent in 2000 from 12 per cent the preceding year (Figure 9). The deceleration was due to a halving of the growth rate of bonus payments (22 per cent of total compensation) and overtime (9 per cent). Regular wages, which had been subdued following the crisis, was the only component of compensation to accelerate in 2000. This reflects the fact that regular wages are fixed for a one-year period in annual negotiations occurring in the spring of each year. In the manufacturing sector, where the average wage rose 8.5 per cent, unit labour costs stabilised after falling for three straight years.

Employment growth also slowed in the second half of 2000, leaving a considerable degree of slack in the labour market by the beginning of 2001 (Table 4). Rapid job growth in the first half of 2000 had reduced the unemployment rate to

Table 4. **Labour market developments**

Percentage changes from previous year

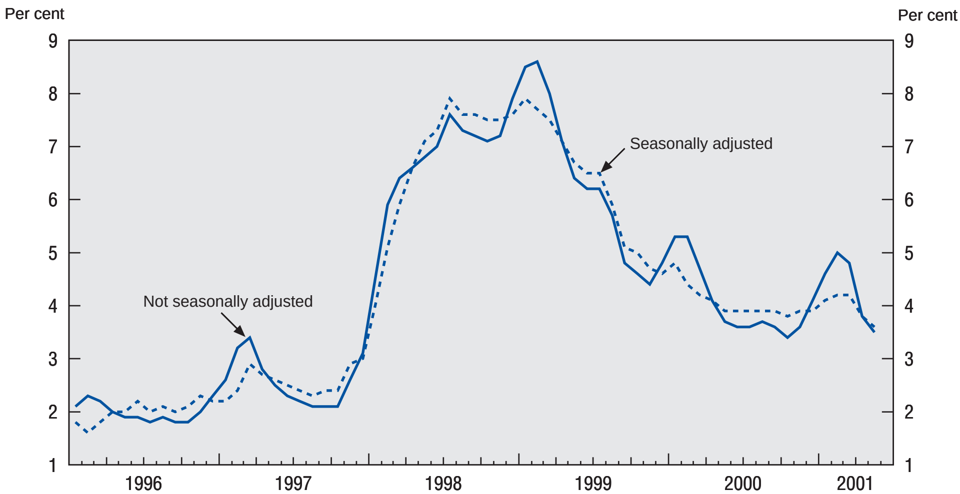
	Share in 2000	1991-97	1998	1999	2000	2000 First half	2000 Second half	2001 Q1
A. Employment		2.0	–5.3	1.4	3.8	5.4	2.4	0.4
By sector								
Agriculture	10.9	–4.9	4.0	–5.3	–2.6	–0.3	–4.4	–7.9
Construction	7.5	6.5	–21.3	–6.5	7.2	10.2	4.8	0.1
Manufacturing	20.2	–0.8	–13.0	2.8	5.9	8.6	3.5	–0.4
Services	61.5	5.4	–1.6	3.4	4.0	4.9	3.1	2.0
By type of employment								
Self-employed	28.5	2.2	–3.4	1.1	2.7	3.0	2.5	2.4
Family workers	9.1	–1.2	6.8	–5.4	0.1	1.4	–1.1	–3.2
Employees	62.4	2.5	–7.8	2.7	5.0	7.1	2.9	0.1
Regular	29.7	2.1	–9.7	–6.3	3.3	2.8	3.9	4.2
Temporary	21.4	4.1	–4.4	4.6	7.8	10.9	4.9	–0.2
Daily	11.3	0.5	–8.3	31.9	3.9	11.8	–2.9	–10.7
B. Participation and unemployment								
Population 15 years and over		1.7	1.5	1.1	1.0	1.0	1.1	1.0
Labour force		2.1	–1.0	0.8	1.5	2.0	0.9	0.1
Total participation rate[1]		61.5	60.7	60.5	60.7	60.4	61.1	58.9
Men[1]		75.9	75.2	74.4	74.0	73.8	74.1	72.0
Women[1]		48.0	47.0	47.4	48.3	47.8	49.0	46.7
Employment to working-age population		60.0	56.5	56.7	58.3	57.7	58.9	56.1
Unemployment rate[2]		2.4	6.8	6.3	4.1	4.5	3.7	4.8
C. Wages								
Total economy								
Earnings[3]		11.0	–2.5	12.1	8.0			
Hours worked		–0.4	–1.9	4.5	–0.9			
Earnings per hour		11.5	–0.6	7.3	9.0			
Real earnings per hour[4]		4.3	–7.6	6.4	6.6			
Manufacturing sector								
Earnings		11.8	–3.1	14.9	8.5			
Unit labour costs		1.7	–10.1	–9.6	–1.5			

1. As per cent of population over the age of 15.
2. As per cent of the labour force.
3. Firms in the non-agricultural sector employing more than ten workers.
4. Deflated by the consumer price index.

Source: Bank of Korea, National Statistical Office and Ministry of Labour.

3½ per cent (Figure 10).[7] However, slower job creation, combined with seasonal factors, boosted the unemployment rate in February to the 5 per cent level. For the 20 to 30 age group, the rate surpassed 7 per cent, due in part to the entry of recent graduates into the job market. Adjusted for seasonal factors, the overall unemployment rate rose by half a percentage point to over 4 per cent. However,

Figure 10. **The unemployment rate**
Per cent of labour force



Source: OECD.

by May 2001, the rate (both on a seasonally adjusted and unadjusted basis) had fallen to 3½ per cent. Despite recent gains, though, the participation rate in the second quarter of 2001 remained ½ percentage point below its 1997 level. With participation down and unemployment up, the employment to working-age population ratio is still almost one percentage point below its pre-crisis level.

The impact on the external balance

The current account surplus narrowed from $25 billion in 1999 to $11 billion in 2000 (Table 5), largely as a result of oil imports. As noted above, the run-up in prices increased Korea's oil import bill by about $11 billion last year. In addition to oil, the buoyant economy during the first three quarters of the year boosted imports. However, the 20 per cent rise in volume terms – triple the increase in domestic demand – suggests that some other factors were at work. One element was some additional "catch-up" from the 1998 recession, when import volume fell by almost a quarter. Indeed, the import share of GDP (in constant-price terms), which declined 5.5 percentage points to 27.7 per cent in 1998, was still below its pre-crisis level in 1999 (Table 5, Panel C). In 2000, the import share surpassed that level, reflecting in part the progress made in reducing trade barriers. Most important was the phasing out of the Import Diversification Programme,

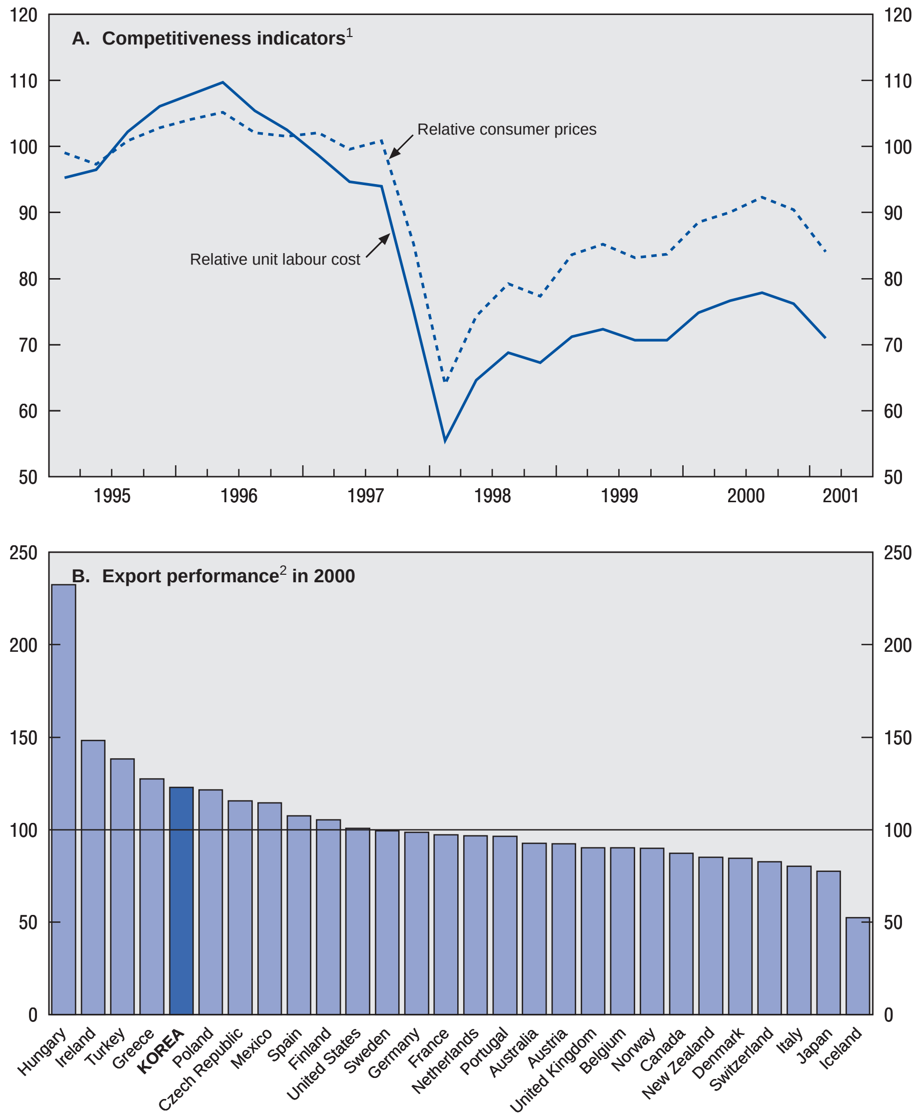
Table 5. **The current account**

	1990-96	1997	1998	1999	2000	2001 Q1
A. Values (US$ billion)						
Merchandise trade						
Exports	91.7	138.6	132.1	145.2	175.8	40.7
Imports	96.1	141.8	90.5	116.8	159.2	37.2
Balance	–4.4	–3.2	41.6	28.4	16.6	3.5
Non-factor services						
Exports	15.2	26.3	25.6	26.5	29.7	7.2
Imports	17.9	29.5	24.5	27.2	33.7	7.8
Balance	–2.7	–3.2	1.0	–0.7	–4.0	–0.6
Investment income						
Credit	2.9	3.9	2.7	3.2	6.8	2.2
Debit	3.6	6.3	8.3	8.4	9.0	2.1
Balance	–0.7	–2.5	–5.6	–5.2	–2.2	0.1
Transfers, net						
Public	–0.1	–0.4	–0.4	–0.3	–0.4	–0.1
Private	1.0	1.0	3.8	2.3	1.0	0.2
Current account	–7.0	–8.2	40.4	24.5	11.0	3.1
As per cent of GDP	–1.7	–1.5	12.7	6.0	2.4	3.1
	2000 Share	1997	1998	1999	2000	2001 Q1
B. Trade volume (percentage change)						
Total exports	100.0	14.6	19.2	12.0	20.9	11.7
Light industry[1]	17.6	8.4	9.6	–4.9	–1.1	–1.4
Heavy industry[1]	74.1	16.4	23.1	23.4	33.2	16.6
Passenger cars	6.4	13.8	8.1	15.0	13.9	–7.1
Electronic products	36.0	23.1	26.7	60.0	51.6	25.7
– Semiconductors	12.4	36.4	67.8	28.3	33.7	80.9
– Telecommunications	16.3	27.4	24.4	78.1	93.2	32.7
Total imports	100.0	1.9	–25.0	29.1	18.9	2.4
Consumer goods	10.0	15.4	–31.7	22.4	14.4	9.6
Industrial materials and fuels	49.2	5.4	–16.1	23.6	6.2	0.9
Capital goods	40.8	–7.3	–35.4	41.6	43.3	1.6
C. Imports as a share of GDP[2]		33.3	27.8	32.3	35.7	34.5

1. Light industry includes textiles, apparel, and rubber products. Heavy industry includes all other manufactured products, except food.
2. On a national accounts basis using 1995 prices.
Source: Bank of Korea.

which had restricted imports of certain products from Japan (see Chapter V). In the first complete year since the elimination of this programme, Korean imports of Japanese consumer goods – the area most affected by the Import Diversification Programme – rose 45 per cent. Total imports of consumer goods, in contrast, increased only 14 per cent, well below the 43 per cent jump in imports of capital goods.

Figure 11. **Competitiveness indicators and export performance**
1995 = 100



1. Calculated *vis-à-vis* forty countries. A decline indicates a gain in competitiveness. OECD estimates for 2001.
2. Calculated as the ratio of manufactured export volumes to export market growth, with 1995 set at 100.

Source: OECD.

Export volume growth accelerated from 16 per cent in 1999 to 21.6 per cent in 2000 (Table 1), buoyed by strong overseas demand. Indeed, Korea's export market growth[8] doubled to 16 per cent, offsetting the decline in competitiveness recorded last year. The stabilisation of unit labour costs (in domestic currency), combined with the 5 per cent appreciation of the won in the year 2000, led to a deterioration in competitiveness. Despite a decline in the final quarter of 2000, the annual average unit labour cost relative to forty major countries was almost 7 per cent higher than in 1999 (Figure 11). Consequently, the growth of Korean exports of manufactures failed to match its export market growth for the first time since 1996. Nevertheless, Korea's export performance is the fifth highest in the OECD area since 1995 (Panel B). The gains in market share have been led by Korea's electronics sector, which accounted for almost 60 per cent of the increase in export value over the past five years despite persistent declines in prices (Box 1). Indeed, the prices of Korean electronics exports fell 15 per cent in 2000 alone, offsetting a small net gain in the other product categories. With overall export prices essentially flat in 2000, the terms of trade were determined by the sharp rise in import prices, notably for oil. The increasing importance of the ITC sector has made Korean exports increasingly focused on other OECD countries, particularly the United States. Since the 1997 crisis, the US share of Korean exports has climbed 6 percentage points to almost 22 per cent, while the shares of the European Union and Japan each rose by 1 percentage point (Table 6). In contrast, the share of Southeast Asia fell significantly in the wake of the crisis. Moreover, the sharp decline in Korean exports to this region was a major cause of the overall fall in exports in the latter part of 2000.[9]

Three years of large current account surpluses, averaging 7 per cent of GDP and totaling $76 billion, have made Korea a net creditor nation and enabled it to accumulate significant foreign exchange reserves. Useable reserves, which fell to under $10 billion at the time of the crisis, reached $96 billion at the end of 2000 (Figure 12), the second highest in the OECD area. At present, they are more than

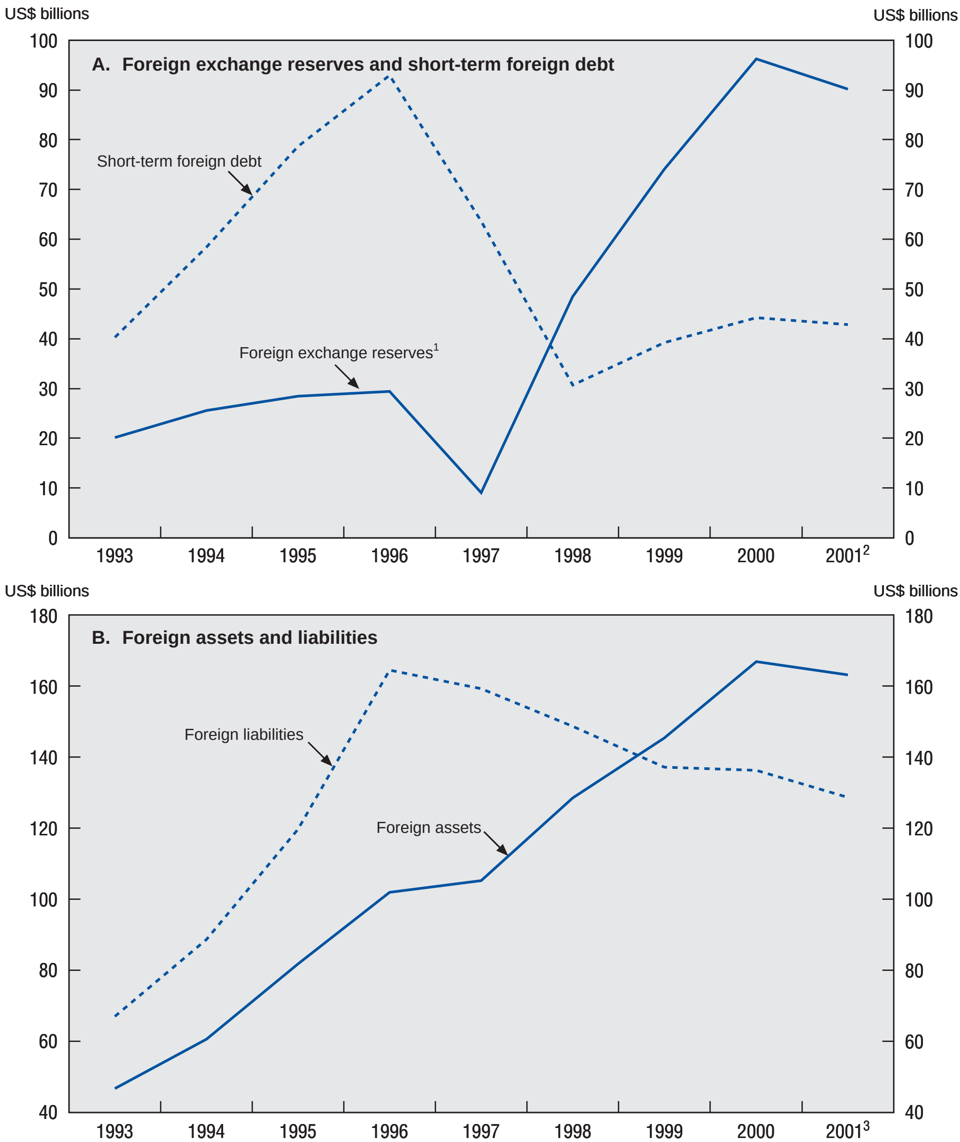
Table 6. **Korean exports by destination**

Per cent of total exports

	United States	European Union	Japan	Southeast Asia[1]	China	Middle East	Other
1997	15.9	12.4	10.8	27.0	10.1	3.8	20.2
1998	17.2	13.7	9.2	22.5	9.0	5.0	23.3
1999	20.5	14.1	11.0	23.0	9.5	4.5	17.3
2000	21.8	13.6	11.9	22.5	10.7	4.4	15.0
Change[2]	6.0	1.2	1.0	–4.4	0.6	0.6	–5.2

1. The ten ASEAN countries plus Taïwan and Hong Kong.
2. Percentage points.
Source: Bank of Korea.

Figure 12. **Korea's foreign exchange reserves and net asset position**
US$ billions at end-year



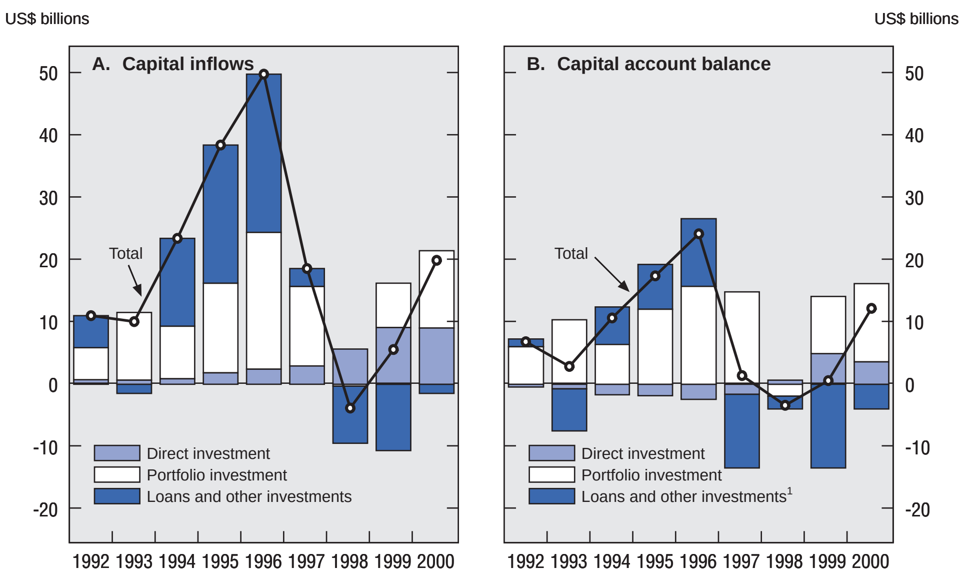
1. Useable reserves only; *i.e.* excludes illiquid deposits at offshore Korean banks.
2. End-June for foreign exchange reserves and end-May for short-term foreign debt.
3. End-May.

Source: Ministry of Finance and Economy.

double Korea's short-term liabilities. With its overseas assets rising, Korea's net external assets topped $30 billion (6½ per cent of GDP) at the end of 2000 (Panel B).

Rising foreign exchange reserves and the increased net asset position helped maintain foreign confidence in Korea at the same time that business and household sentiment within the country was deteriorating. Indeed, capital inflows reached nearly $20 billion in 2000, the highest since 1996 (Figure 13). Foreign direct investment (FDI) inflows remained at around $9 billion[10] (see Chapter V), and overseas investment into the Korean stock markets more than doubled to $12 billion. While the bulk of the inflows were in the first half of 2000, net purchases by foreign investors were positive in the third and fourth quarters as well. The investment by foreigners brought their holdings in the Korea Stock Exchange to 30 per cent of its total capitalisation, double its share prior to the crisis. The surpluses in FDI and portfolio investment were partially offset by an outflow in loans, as Korea paid back foreign debt. Capital outflows from Korea also increased in 2000 but by a much smaller amount. The net result was a surplus of almost $12 billion in the capital account (Panel B). Foreign purchases of

Figure 13. **The capital account**
US$ billions



1. Including balance of capital transfers.
Source: Bank of Korea, *Monthly Bulletin*.

Korean equities continued in the first quarter of 2001, leading to at least a temporary rebound in the stock market.

Economic prospects

Outlook for 2001 *and* 2002

There are positive signs in some of the most recent indicators that suggest that the economic downturn may be short. *First*, GDP in the first quarter of 2001 increased by 1 per cent (at a seasonally-adjusted annual rate) compared to the preceding quarter. *Second*, the unemployment rate fell to 3½ per cent by May 2001. These factors indicate that the economy may have stabilised in the first quarter of 2001. A rebound in business (Figure 1) and household (Figure 5) confidence in early 2001 also suggests that the worst may be over for the Korean economy. The business confidence index surpassed 100 in March, meaning that no further output declines are expected, while the consumer index is approaching 100. These indicators suggest that a recovery could begin in the second half of this year. An early upturn, leading to growth of 4¼ in 2001 and 5½ per cent in 2002 is projected (Table 7) based on the following assumptions, which were built into the OECD *Economic Outlook* of June 2001:

– The exchange rate stabilises at its April 2001 average level of 1323 per dollar and 10.7 won per yen.[11]

– Growth in Korea's export markets picks up from 7¾ per cent in 2001 to 8½ per cent in 2002.

– Oil prices decline gradually from $26 per barrel in the first half of 2001 to $24.50 in the second half of 2002.

– The short-term interest rate (91-day CD rate) remains at its June 2001 level of 5¾ per cent, while the five-year government bond yield rises 100 basis points to around 7¾ per cent by the end of 2002.

– Fiscal policy aims at a balance on the consolidated central government budget, in line with the medium-term target.

Exports are expected to play a leading role in the recovery, although given the weak first half, the annual growth rate may be substantially lower than last year. The pick up in export market growth, reflecting a projected recovery in the United States in the second half of the year, and the gain in competitiveness resulting from the 15 per cent decline in the won relative to the dollar since last autumn should boost exports. However, the impact of the weaker won will be limited by the 13 per cent decline in the Japanese yen relative to the dollar over the same period. While exports are projected to accelerate in the second part of the year, fixed investment may fall in 2001, given the current low rate of capacity utilisation in the industrial sector and the harsh credit environment. Investment in machinery and equipment is

Table 7. **Short-term prospects**[1]

Percentage change in constant 1995 prices

	Share of GDP in 2000[3]	1998	1999	2000	2001	2002
Demand and output						
Private consumption	57.3	–11.7	11.0	7.1	2.5	4.5
Government consumption	10.2	–0.4	1.3	1.3	1.0	0.8
Gross fixed capital formation	28.7	–21.2	3.7	11.0	–0.9	4.0
Machinery and equipment	12.8	–38.8	36.3	34.3	–3.0	6.0
Construction	15.8	–10.1	–10.3	–4.1	1.0	2.2
Final domestic demand	96.2	–14.0	7.6	7.7	1.3	4.0
Stockbuilding[2]	0.0	–5.5	5.4	–0.9	0.9	0.0
Total domestic demand	96.2	–19.8	14.7	6.7	2.4	4.0
Exports of goods and services	45.0	14.1	15.8	21.6	11.0	12.0
Imports of goods and services	42.2	–22.1	28.8	20.0	9.8	12.0
Foreign balance[2]	2.8	12.5	–1.0	3.5	2.2	2.1
GDP	100.0	–6.7	10.9	8.8	4.2	5.5
Prices						
GDP deflator		5.1	–2.0	–1.5	1.5	1.6
Private consumption deflator		7.9	0.5	2.0	4.0	3.5
Labour market						
Employment growth		–5.3	1.4	3.8	0.5	2.0
Participation rate[4]		60.7	60.5	60.7	60.7	61.2
Average wage		–2.5	12.1	8.0	6.3	6.8
Unemployment rate		6.8	6.3	4.1	4.1	4.0
Balance of payments						
Current account (US$ billions)		40.4	24.5	11.0	11.4	12.1
As a percentage of GDP		12.7	6.0	2.4	2.7	2.7
Government budget balance[5]		–4.2	–2.7	1.3	–0.1	0.0

1. These projections are identical to those presented in OECD, *Economic Outlook* 69 (June 2001).
2. Contribution to GDP growth.
3. The expenditure components do not sum to GDP in 2000 due to a statistical discrepancy equivalent to 1.1 per cent of GDP.
4. Labour force as a share of population age 15 and over.
5. Consolidated central government balance as a share of GDP.

Source: OECD.

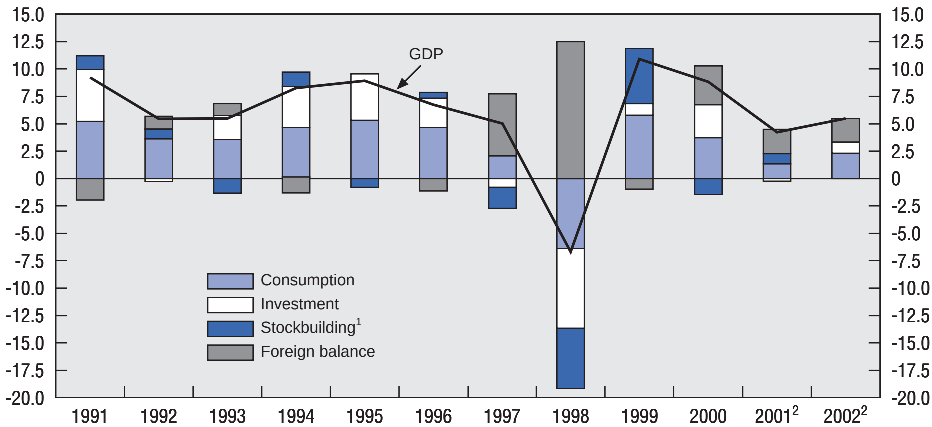
likely to be particularly weak: the index of machinery orders at the end of 2000 was 14 per cent below a year earlier. In contrast, construction investment, which has declined in every quarter except one during the past three years, is expected to finally turn around, given the rise in housing construction permits. Wages are likely to decelerate but should be sufficient, in the context of improving confidence, to allow some gains in consumption in both 2001 and 2002. Finally, stockbuilding, which on a national account basis has fallen dramatically since the crisis, may make a positive contribution to growth in 2001, before inventory adjustment ends in 2002.

At around 4 per cent on a year-on-year basis, inflation is projected to be substantially higher in 2001 than in 2000, reflecting cost-push factors, notably the lagged effect of higher oil prices and the depreciation of the currency. In the second half of 2001, though, inflation is likely to moderate in the absence of strong demand-side pressures. Indeed, the labour market is likely to see slower growth of both employment and wages in 2001, reflecting the deceleration in overtime and bonus payments. Moreover, the annual wage negotiations currently underway are likely to result in a smaller rise in regular wages than in 2000 as unions' bargaining power has been weakened in the context of corporate restructuring. Employment growth may slow to around 1 per cent, which is sufficient to keep the unemployment rate near 4 per cent for the year, assuming that the participation rate remains at its 2000 level. With some slack in the labour market and the waning of the two inflationary pressures noted above, inflation may moderate in 2002 to around 3½ per cent.

Imports are projected to slow in line with the deceleration of domestic demand, helping maintain a substantial trade surplus. The rising deficit on the services account in 2000 was offset by a falling deficit on investment income, and this pattern is likely to continue in 2001, as Korea's net external assets continue to increase. Hence, in both 2001 and 2002, the current account is expected to be in surplus at around 2¾ per cent of GDP and net exports to make a two-percentage point contribution to output growth (Figure 14). In terms of the saving-investment balance, the sustained external surplus reflects the substantial drop in the share of investment in GDP since the crisis.

There are both domestic and external risks to this projection of an early recovery in the second half of the year. On the external side, the outlook presented above is based on a pick up in world demand in the second half of the year, particularly in the United States, which accounts for almost a third of Korea's ICT sector exports. If this rebound fails to materialise, the projected acceleration in exports and domestic demand would be delayed. On the domestic side, there continues to be considerable uncertainty about the credit risks of some of the large chaebol. The financial difficulties at firms with interest coverage ratios below one – a quarter of all enterprises in 2000 – have been exacerbated by the downturn. Past difficulties in this regard have negatively affected financial markets and worsened access to financing for the corporate sector. The challenge is to advance restructuring of the corporate and financial sectors in a way that effectively reduces market uncertainty (see Chapter IV). Visible progress in restructuring the corporate sector is essential to normalise the financial sector, although it may have negative short-term effects on employment and growth. While there are important risks to a recovery in the second half of 2001, the probability of a second foreign-exchange crisis appears to be very small in the context of Korea's large foreign exchange reserves relative to its short-term overseas debt and its net creditor nation status. However, as an increasingly open economy, Korea will be more

Figure 14. **Contributions to growth**
Percentage points



1. Including statistical discrepancy.
2. OECD projection.

Source: Bank of Korea and OECD, *Economic Outlook 69*, June 2001.

vulnerable to shocks from abroad in the future. This will be accentuated by the large share of semiconductors and other cyclical ICT industries in Korean exports.

Medium-term growth perspective

Effective restructuring is important not only for the short-term prospects, but also for Korea's growth potential over the medium term. In the past two decades, the sources of economic growth have been split roughly equally between factor accumulation – increased inputs of labour and capital – and productivity growth (Table 8). During the 1980s, factor inputs contributed 4½ points of growth per year, slowing to 3½ points during the 1990s. A further deceleration in factor inputs is likely during the first decade of the new century as labour inputs are expected to slow sharply for demographic reasons. Moreover, capital accumulation may make a smaller contribution than projected by the Korea Development Institute (KDI), given that investment as a share of GDP is unlikely to return to its pre-crisis level. Firms have become more aware of the risks of borrowing, making them likely to scale back investment. Thus, the contribution from factor accumulation may turn out to be smaller than the 2.4 percentage points projected during the coming decade.

Table 8. **Potential GDP growth rate**
Annual percentage change

	1981-1990	1991-2000	2001-2010
Actual GDP	9.1	5.8	
Potential GDP	8.0	6.7	5.1
Factor inputs	4.5	3.4	2.4
Labour	2.6	1.5	0.3
Capital	2.0	1.9	2.1
Total factor productivity growth	3.5	3.4	2.7
Economies of scale	1.7	1.5	0.9
Resource allocation	0.8	0.7	0.6
Technical progress	1.1	1.2	1.2

Source: Korea Development Institute.

Given the slowdown in factor accumulation, growth at the 5 per cent rate projected by KDI would require maintaining the contribution of total factor productivity growth at close to 3 percentage points. Moreover, the productivity contribution would have to be even larger if the rebound in investment failed to materialise. Such productivity gains will be more difficult to maintain given that the contribution from advances in knowledge will tend to fall as the technology gap between Korea and the leading industrial nations narrows. A stable macroeconomic environment maintained by sound monetary and fiscal policies, which are the subject of Chapter II, would be conducive to supporting the growth of total factor productivity. In particular, dealing with the rapid ageing of the population over the next fifty years in a way that maintains work incentives while providing for the elderly will be a major challenge. This issue is analysed in Chapter III. The rate of productivity growth will depend heavily, as well, on the effective implementation of the structural reforms introduced since the crisis to establish a more market-oriented economy. Chapter IV discusses the application of these reforms in the corporate and financial sectors. Other policies that would be helpful in boosting productivity growth are discussed in Chapter V:

– Ensuring efficient factor markets for labour and land.

– Enhancing competition through regulatory reform, vigorous competition policy, lower trade barriers, increased foreign direct investment and the privatisation of state-owned enterprises.

– Improving efficiency in key markets, including telecommunications, electricity and agriculture.

Korea's success in these areas will play an important role in determining its economic performance in the decades to come.

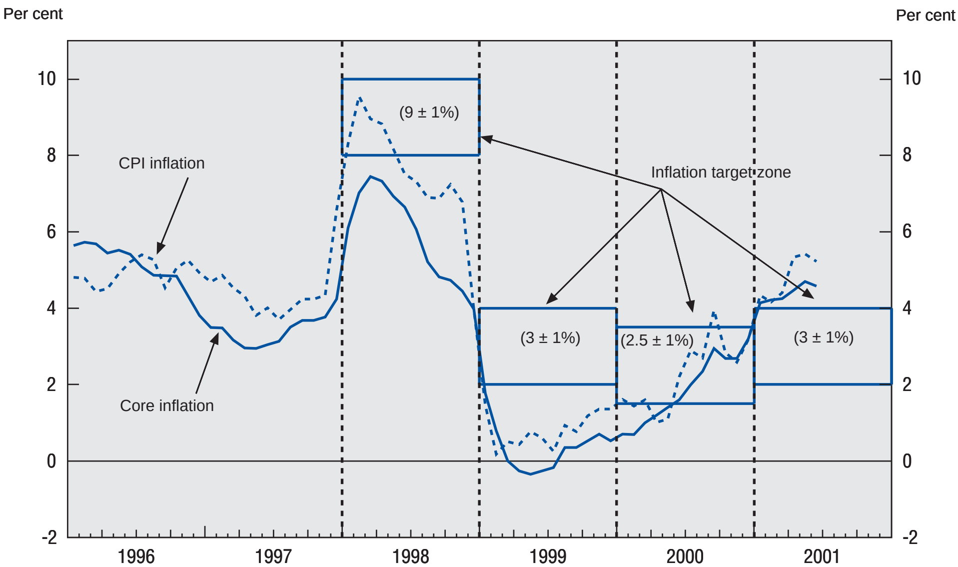
II. Monetary and fiscal policies

The relaxation of macroeconomic policies played a key role in attenuating the 1998 recession and in laying the foundation for the economic recovery. During the past year, monetary policy has continued to aim at supporting growth. Short-term rates have been kept at around 5 per cent and have fallen significantly in real terms in 2001. Monetary conditions have been eased further by the decline in the won, which was so sharp that the central bank appears to have intervened in the foreign-exchange market. However, the impact of the relaxed stance of monetary policy was limited to some extent by financial-market conditions. In particular, banks have been reluctant to lend to the corporate sector and capital market conditions were not accommodating for direct financing. As for fiscal policy, the priority shifted to bringing the budget back into balance. With a large surge in tax revenue, a budget surplus was achieved three years earlier than scheduled in the medium-term plan. However, concerns remain about the transparency and efficiency of government expenditures. This chapter begins with a discussion of monetary policy and the factors affecting the corporate sector's access to finance, as well as exchange rate developments. It concludes with an examination of fiscal policy issues.

Monetary and exchange rate policies

The Bank of Korea achieved its inflation target of 2.5 per cent, plus or minus one percentage point, in 2000 (Figure 15). Inflation had came in below the target zones in 1998 and 1999, the first two years under the revised Bank of Korea Act, which guarantees the Bank's independence and requires it to set an annual inflation target. In 2001, the central bank ended its long-time practice of targeting the growth of monetary aggregates, which had become an unreliable guide to monetary policy during a period of rapid change in the financial sector, in favour of an inflation-targeting approach. The new regime, which draws on a wide range of indicators, appears appropriate for an economy that is undergoing rapid structural change. One such indicator is the foreign exchange value of the won, which has declined significantly, along with some other Asian currencies, since the autumn of 2000.

Figure 15. **Inflation targets and outcomes**
Year-on-year percentage changes

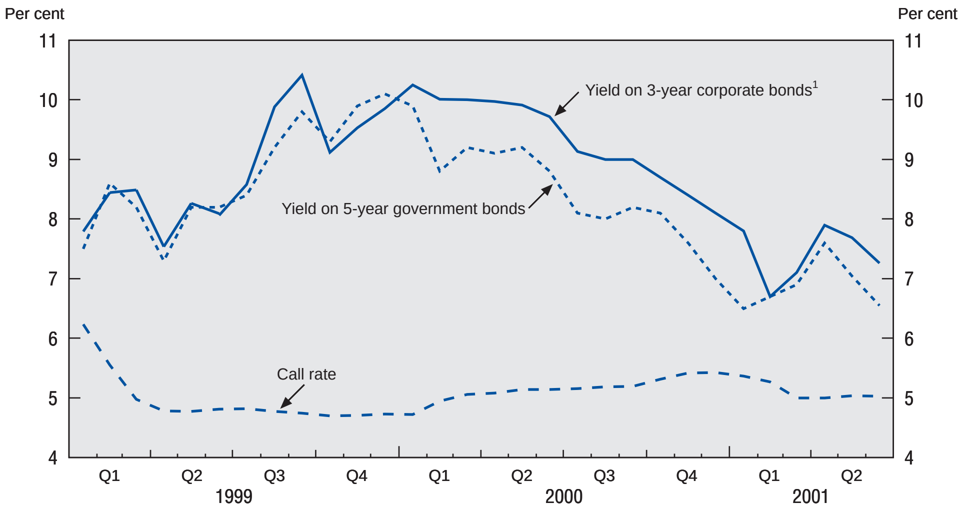


Source: Bank of Korea.

Monetary and credit conditions in 2000

The Bank of Korea kept the key short-term interest rate – the overnight call rate – near 5 per cent throughout 2000 (Figure 16) in view of concerns about problems in restructuring the financial and corporate sectors. Although buoyant output growth had raised fears of a pick up in inflation, the overnight call rate was left unchanged between February and October 2000, "as the emphasis was placed on financial-market stability".[12] However, with inflation reaching 3 per cent year-on-year, the Bank of Korea boosted the overnight rate by 25 basis points to 5.25 per cent in October. Still, the rate was only 50 basis points above the historically low level which supported the economic recovery in 1998 and 1999. Meanwhile, the yield on corporate bonds (three-year, A-grade) fell from a double-digit rate in mid-2000 to 8 per cent by the end of the year. This was accompanied by strong growth in bank lending, which was supported both by progress in resolving non-performing loans and by the large injections of public funds into the banking sector. Despite some deceleration in the second half of 2000, bank loans at the end of the year were 24 per cent above the year-earlier level (Figure 17). The

Figure 16. **Interest rates**



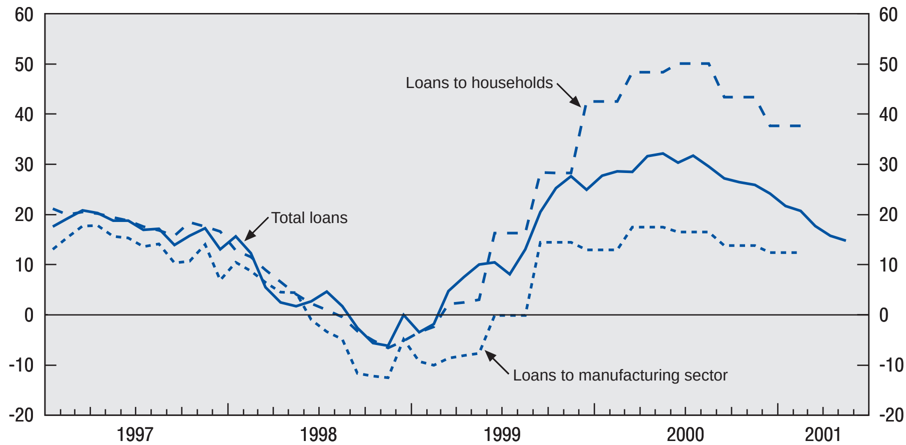
1. With a credit rating of A+ until September 2000 and a rating of AA- since October 2000.
Source: Bank of Korea.

strong expansion in credit, in turn, boosted money supply growth (M2) to 26 per cent for the year (Figure 18). However, M3, a broader measure that was the central bank's target variable from 1998 to 2000, increased only 7 per cent, reflecting the contraction in non-bank financial intermediation noted below.[13]

Despite these favourable indicators, a business survey reported a deterioration in credit conditions beginning in the spring of 2000 (Figure 19). By the end of the year, a large majority of companies felt that the financial situation had worsened, although not to the same extent as in early 1998. Nevertheless, the recurrence of a "credit crunch" – a key factor in the deep 1998 recession (see the 2000 *Survey*) – contributed to the decline in output growth recorded at the end of 2000. The deterioration in credit conditions despite the central bank's decision to maintain low short-term interest rates reflected instability in the financial markets stemming from external shocks and concerns about corporate restructuring. In particular, there was a "flight to safety" after the collapse of Daewoo in mid-1999, reflecting greater investor sensitivity to credit risk.[14] Funds left investment trust companies, merchant banks and bank trust accounts, which had played major roles in the corporate bond market, in favour of bank deposits. This outflow of funds greatly reduced the financial intermediary functions of these institutions. Indeed, during the two years from the end of 1998, banks' share of total deposits

Figure 17. **Growth of bank lending**[1]

Year-on-year percentage changes

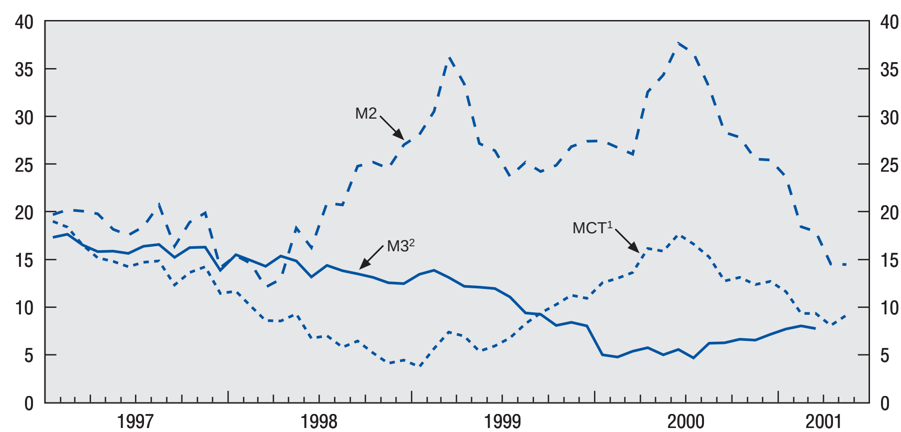


1. Loans and discounts of deposit money banks.

Source: Bank of Korea, *Monthly Bulletin.*

Figure 18. **Growth of monetary aggregates**

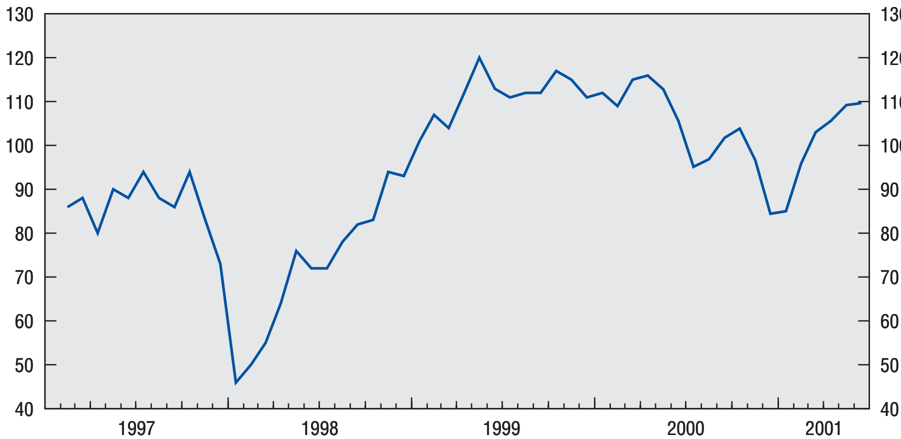
Year-on-year percentage changes



1. MCT = M2 + CD + Money in trust.
2. M3 = M2 + OFI deposits + debentures issued + commercial bills sold + CD + RP + cover bills.

Source: Bank of Korea, *Monthly Bulletin.*

Figure 19. **Credit conditions in the corporate sector**[1]



1. A score of 100 indicates that companies believe the financial situation in the future will be unchanged from the previous month. The poll includes the 600 members of the Federation of Korean industries, which are among the largest in Korea.

Source: Federation of Korean Industries.

in financial institutions increased by 14 percentage points to 47 per cent, while the proportion in investment trust companies, merchant banks and bank trust accounts fell (Table 9).

Table 9. **Deposits at financial institutions**

Per cent of total, trillion won at end of year

	1998	1999	2000	Change[1]	Outstanding amount
Bank deposits	32.9	39.3	47.2	14.3	430.3
Investment trust companies	17.1	14.5	9.8	–7.3	89.1
Bank trusts	14.7	11.2	7.6	–7.1	69.3
Insurance companies	11.8	12.2	13.0	1.2	118.4
National Post Office	1.6	1.8	2.6	1.0	23.7
Merchant banks	1.9	1.1	0.7	–1.2	6.4
Other[2]	20.0	19.9	19.1	–0.9	174.4
Total	**100.0**	**100.0**	**100.0**	**0.0**	**911.6**

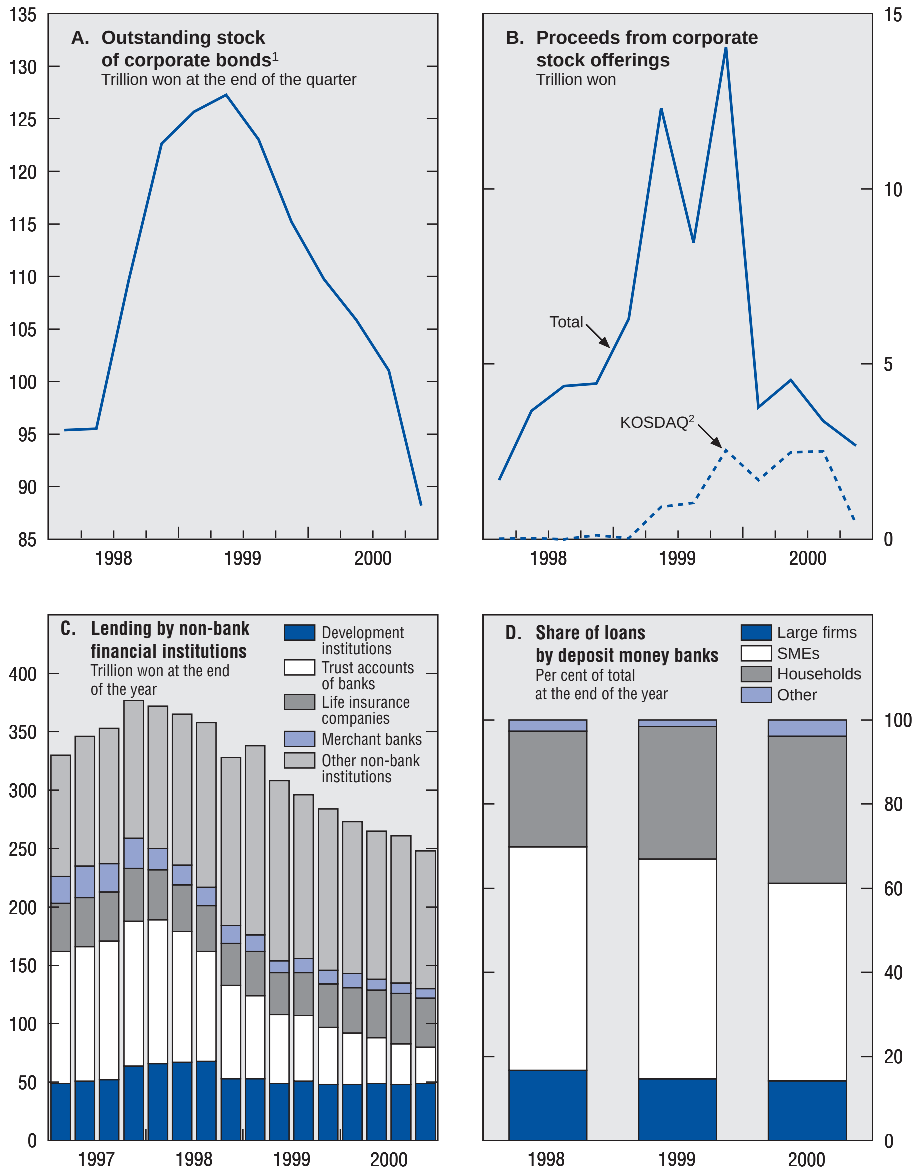
1. Percentage point change between 1998 and October 2000.
2. Includes the National Agricultural Co-operative Federation, mutual saving and finance companies and credit co-operatives.

Source: Bank of Korea.

The shift of funds to banks limited the amount of direct financing for the business sector. In 1999, corporate bond issues totalled 26 trillion won. With 34 trillion won of bonds maturing that year, the rollover ratio was 78 per cent. In 2000, however, corporate bond issues fell by a third, to 18 trillion won, while the amount of maturing bonds increased to 46 trillion won. Consequently, the rollover ratio declined to around 40 per cent. Indeed, access to the bond market was restricted, in practice, to blue-chip companies, which saw the yields on their bonds fall due to the flight to quality. Meanwhile, the market for bonds rated below "A" temporarily ceased to exist (MOFE, 2001), making it difficult for other firms to roll over their maturing bonds. In particular, firms in the manufacturing sector, which recorded a 17 per cent rise in production, issued only about half as many bonds in value terms in 2000 as during the preceding year. Overall, the stock of corporate bonds (excluding asset-backed securities) has fallen by a third from its peak in mid-1999 (Figure 20).[15] The depressed state of the corporate bond market was reflected in a fall in trading volume in 2000 to a level only a third of that in 1999. Meanwhile, the sharp fall in the stock market reduced corporations' proceeds from stock offerings by 65 per cent in 2000 to 14.3 trillion won (Panel B), with much of the decline occurring in the second half of the year. There were no initial public offerings in 2000, compared to 15 the previous year, while only 84 listed companies made rights offerings, compared to 250 in 1999. In sum, direct financing for the corporate sector fell by more than half.

The reduction in financing from the capital markets was accompanied by a deterioration in the climate for lending to the corporate sector. In the statement following its November 2000 meeting, the Monetary Policy Committee urged financial institutions "to expand their supply of loans in order to avoid deepening the credit crunch". The following month, however, it noted that "financial institutions' conservative attitude to lending to the corporate sector has not changed". One aspect was the continuing contraction of the non-bank financial sector and bank trust accounts during 2000. By the end of the year, total lending by these institutions was only 68 per cent of its pre-crisis level (Figure 20, Panel C), reflecting large falls for bank trust accounts and merchant banks. At the same time, commercial bank-lending practices have become more cautious in the new regulatory environment, which includes stricter loan classification standards and an emphasis on capital adequacy ratios. To avoid credit risks in the corporate sector, banks have increasingly focused on the household sector. Moreover, those banks that focus on households – and consequently are relatively sound – have attracted a growing share of deposits during the past few years. The shift to strong banks was accelerated during 2000 by the adjustment in anticipation of the introduction of partial deposit insurance at the beginning of 2001 in place of complete coverage. The household sector's share of bank lending has increased from 28 to 35 per cent of the total in just two years (Panel D). Moreover, within the corporate sector, an increasing share of lending has gone to small and medium-sized enterprises (SMEs),

Figure 20. **Factors affecting credit conditions**



1. Excludes asset-backed securities.
2. The remainder is from the Korea Stock Exchange.

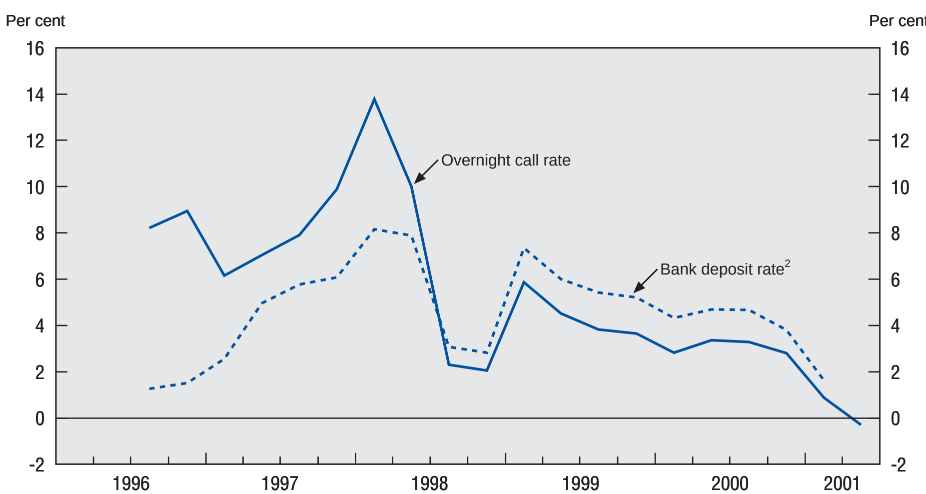
Source: Bank of Korea and Financial Supervisory Service, *Monthly Financial Bulletin.*

in part due to public guarantees on such loans, reducing large firms' share of total loans from 22 to 15 per cent during the past two years.[16] The change in behaviour from the pre-crisis period, when banks paid insufficient attention to credit risks, is a positive development. However, the fact that it coincided with the reduced role of other lending institutions and the negative developments in bond and equity markets has been problematic for the corporate sector.

The stance of monetary policy in 2001

The Bank of Korea raised its inflation target for 2001 to 3 per cent, plus or minus one percentage point (Figure 15), while keeping the medium-term objective at 2.5 per cent. Since 2000, the target has been core inflation, which excludes energy and non-grain agricultural products that account for about 10 per cent of the consumer price index. The conduct of monetary policy in 2001 is complicated by the combination of slowing economic growth and rising inflation. Following the decline in output in the fourth quarter of 2000, the core consumer price index accelerated to 4¼ per cent, above the top of the target zone, in the first quarter of 2001, and to 4½ per cent in the second quarter. The pick up in inflation appeared to be primarily the result of the lagged pass through of higher oil prices

Figure 21. **Real interest rates**[1]

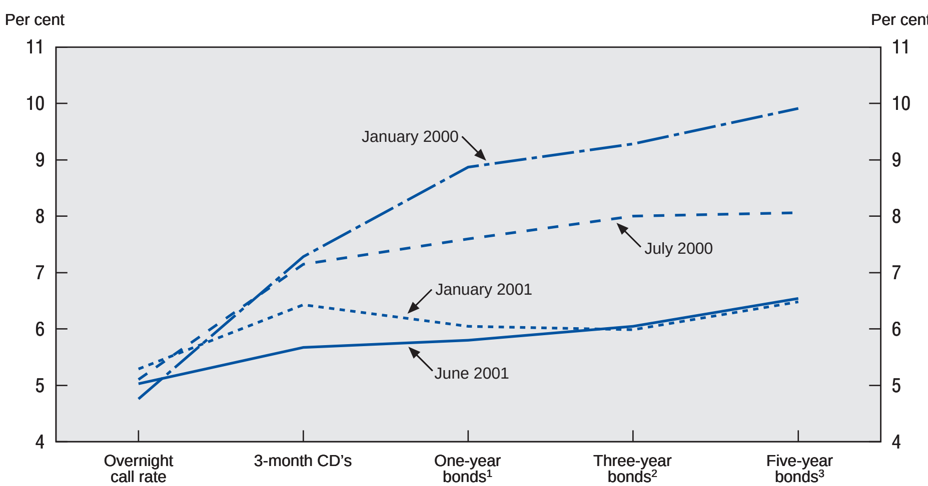


1. Deflated by the year-on-year change in the consumer price index.
2. Rate on time deposits of less than six months.
Source: Bank of Korea.

and the hike in public service charges at the end of 2000 (see Chapter I). As the influence of these factors dissipates, inflation is likely to slow in the second half of the year, given weak demand pressures. However, the renewed fall in the won in early 2001 may put upward pressure on prices. The 3 per cent inflation target was set in the context of an exchange rate of 1 180 won per dollar, compared with around 1 290 at the end of May. There is also a risk of another round of hikes in public service fees, such as those for transportation and water.

Concerned about slowing growth, the Bank of Korea cut the overnight call rate by 25 basis points in February 2001 and another 25 basis points in July 2001. The rate is again at its historically low level of 4.75 per cent, which is below the rate of overall inflation (measured on a year-on-year basis), indicating that the real rate is negative. In contrast, the real short-term rate averaged more than 5 per cent between 1991 and 1997 (Figure 21). Following the February rate cut, though, the rise in three and five-year bond yields was reversed, with the yields falling back to their levels at the beginning of the year. The rather flat yield curve (Figure 22) does not suggest that a significant acceleration in inflation is expected. Moreover, credit crunch conditions in the financial market, which limited the stimulative impact of low short-term interest rates during 2000, are likely to continue during 2001. A

Figure 22. **The yield curve**



1. Monetary stabilisation bonds.
2. Treasury bonds.
3. National housing bonds.

Source: Bank of Korea.

total of 65 trillion won of corporate bonds (12 per cent of GDP) is maturing this year, with about 25 trillion won below investment grade. As noted in Chapter I, a quarter of the companies in the manufacturing sector have insufficient operating income to cover their interest costs. With the continuing concern over corporate credit risk, the usual monetary transmission mechanism in which lower short-term rates induce declines in long-term rates, boosting lending for corporate investment, is unlikely to function fully, if at all.

However, low short-term rates have kept bank deposit rates low, thus helping to reverse the "flight to safety" experienced since 1999. While bank deposit rates have stayed roughly constant in nominal terms,[17] they have fallen in real terms from over 5 per cent in the second half of 1999 to under 2 per cent in early 2001 (Figure 21) as a result of the pick up in inflation. The low return on safe investments has shifted funds to ITCs and bank trust accounts since the beginning of 2001. During the first three months of the year, deposits at these institutions rose by around 12 per cent (21 trillion won), while commercial bank accounts increased by only 1 per cent (5.5 trillion won). The deposits at ITCs, as well as other non-bank financial institutions, were also boosted by increased confidence in this sector as a result of the failure of many weak institutions and the restructuring of the surviving ones (Chapter IV). Consequently, the April 2001 statement of the Monetary Policy Committee noted that "the fund-raising conditions of the corporate sector have continued to improve", in part, due to the use of government guarantees and underwriting schemes.

In sum, low short-term interest rates may have the positive effect of encouraging investors to return to the capital market, where returns, as well as risks, are greater. Re-activating the bond and equity markets would have an important beneficial impact on business and consumer sentiment and hence on economic activity. However, real interest rates should not be left at their exceptionally low current levels once a recovery is underway. Indeed, given the long time lag between changes in interest rates and their impact on economic activity – estimated at three to four quarters – a rate increase would likely be necessary once the next upturn is firmly established in order to limit inflation to the medium-term objective of 2½ per cent. Such an approach would allow the central bank to maintain the low-inflation performance of the past few years and prevent a return to the pre-crisis situation of the 1990s, when price increases averaged around 6 per cent a year.

Medium-term issues in the conduct of monetary policy

The Bank of Korea needs to establish the credibility of the new inflation-targeting approach under which it is responsible for achieving the inflation objective. Over the medium term, conducting an effective monetary policy will require experience in operating an interest-rate policy as well as market-based allocations of funds. In this regard, achieving the medium-term inflation target through an interest rate-based policy is likely to be difficult in Korea in the post-crisis environment, given the restructuring of the financial sector and the flight to quality observed in the past year. For example, the three-year government bond yield fell from 8 per cent to 5.7 per cent between October 2000 and March 2001 while the yield on corporate bonds rated BBB- increased from 11.3 to 11.9 over the same period. Meanwhile, the overnight call rate was 5 per cent both at the beginning and at the end of the period. Such divergent trends in interest rates make it difficult to know which rate to focus on and how changes in short-term rates will influence the longer-term rates that affect investment and purchases of housing and consumer durables. In sum, movements in long-term rates appear to be dominated by factors other than the short-term rate.

The continued use of "aggregate credit ceiling loans", aimed at encouraging bank lending to SMEs, also appears problematic. Such loans are operated as a rediscount facility to supply credit to banks on the basis of their loans extended to SMEs, within the aggregate quantity ceiling set by the Monetary Policy Committee. The interest rate on such loans, which is currently set at 3 per cent, is well below market rates. At the end of 2000, aggregate ceiling loans amounted to 7.4 trillion won (92 per cent of the central bank's loans to financial institutions) and were increased to 9.3 trillion won in January 2001. The Bank of Korea acknowledges that it has been difficult to adjust the aggregate credit ceilings in line with their intended changes in monetary policy. To overcome this problem, the central bank introduced "liquidity adjustment loans" in August 2000 in order to signal its policy changes more effectively. At present, the rate on these one-month loans is 4.5 per cent, 25 basis points below the overnight call rate. To prevent their excessive use, the rate jumps by one percentage point for financial institutions that use this facility for more than three consecutive months. Liquidity adjustment loans appear to be a step towards more reliance on a market-based monetary policy in which credit conditions are determined by price rather than quantity rationing. However, moving further away from the quantity approach inherent in the aggregate ceiling loans would be desirable, especially since the access of SMEs to loans from financial institutions – the objective of the aggregate ceilings – has improved significantly since the crisis.

In addition, ensuring the independence of the central bank, which was legally established in 1998, in practice is crucial to the success of an inflation-targeting policy, as discussed in the 2000 *Survey*. It is especially important that the government refrain from commenting on monetary policy during this credibility-building stage. There are two additional issues of concern in this regard. *First*, the government's control of public service fees has an important impact on the ability of the Bank of Korea to meet its annual inflation target. *Second*, the central bank sets its annual inflation target each December for the following year in consultation with the government. However, given the long and unpredictable transmission mechanism of monetary policy changes on the economy and the rate of inflation, setting an annual inflation target does not appear to be appropriate. Instead, the Bank of Korea should focus on its medium-term target. One reason for uncertainty regarding monetary policy is the recent opening of the capital account and the adoption of a floating exchange rate in the wake of the crisis. To the extent that monetary policy influences exchange rates, it will have a significant impact on activity not only through changes in the relative prices of traded goods, but also by its impact on firms' balance sheets.[18]

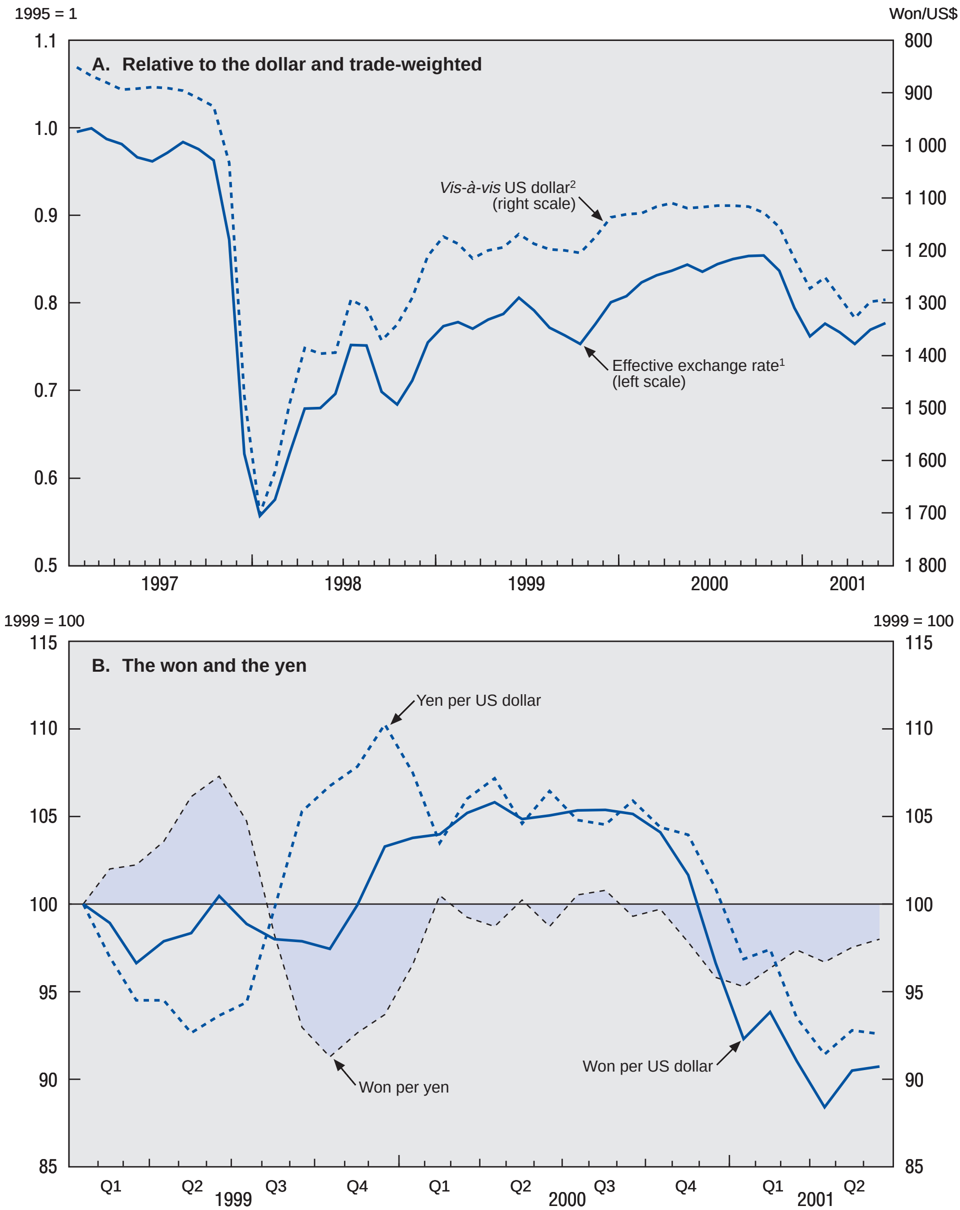
Exchange rate policy

The appreciation of the won, which rose more than 50 per cent relative to the dollar as well as on a trade-weighted basis between the beginning of 1998 and September 2000 (Figure 23), has helped the Bank of Korea achieve its inflation objectives. During the following six months, however, the won fell 16 per cent relative to the dollar. The central bank has acknowledged that the weakness of the won since the autumn of 2000 has influenced monetary policy. The decline of the won has occurred in the context of significant declines in other Asian currencies. Most importantly, the Japanese yen fell 14 per cent relative to the dollar from September 2000 to March 2001 (Panel B), during which time the yen and the won exhibited a 95 per cent degree of correlation. The close link between the two currencies reflects the high degree of competition between a significant proportion of Korean products with Japanese goods in international markets. Since a decline in the yen weakens the outlook for Korean exports and, in turn, economic growth, it tends to trigger a decrease in the won. However, the won also lost about 2 per cent of its value against the yen, although in real terms, it was almost constant.

Since adopting a floating exchange rate policy at the end of 1997, the government reports that it has intervened in the exchange market only to smooth volatility. However, the speed of the decline since September 2000 – about 10 per cent on a trade-weighted basis – caused concern. In addition, this period was characterised by a high degree of volatility. The daily average change in the exchange rate was more than 5 won per dollar, compared to around 2 won in the first nine months of 2000. In this context of volatility, the Bank of Korea appears to have intervened in the foreign-exchange market. In any case, the Korean won, which fell as low as 1 365 per dollar, strengthened to around 1 290 in late May.

Given that the movement of the won has been highly correlated with the Japanese yen, sterilised intervention by the Bank of Korea would appear to have little chance of reversing the downward trend of the currency. Indeed, past episodes of such intervention, such as that in 1997, appeared to have a limited impact on the currency while depleting the country's foreign exchange reserves. As Korea's economic prospects improve, the path of the won is likely to diverge from that of the yen. However, an economy that is open and driven by exports will

Figure 23. **The exchange rate**



1. Calculated *vis-à-vis* forty trading partners. A rise indicates an appreciation of the won.
2. A rise indicates an appreciation of the won.

Source: OECD.

remain highly susceptible to external shocks, including movements in the exchange rate. In fact, the corporate sector experienced foreign-exchange losses of 6.7 trillion won (1.4 per cent of GDP) in 1999 and 4 trillion won in 2000. Given the high degree of vulnerability, it is somewhat surprising that a third of large firms and three-fourths of SMEs take no measures to protect themselves from foreign-exchange risk (Kim, 2001). To improve practices in this area, a number of policies could be considered. *First*, in evaluating the soundness of financial institutions, the Financial Supervisory Commission should determine whether they monitor the foreign-exchange risks of their borrowing corporations. *Second*, it would be helpful to develop the markets for hedging products, such as forward and futures markets, which are currently rather small in Korea. *Third*, measures to deepen the foreign-exchange market should be taken. In particular, allowing other financial institutions, such as securities and insurance companies, to participate along with banks and merchant banks would be beneficial. Finally, given that the current weakness of the won partially reflects concern about problems specific to Korea, accelerating the progress of restructuring would help prevent a further weakening of the won.

Fiscal policy

Fiscal policy in 2000 focused on reducing the deficit in the government budget, which had been in the red since the 1997 crisis (Table 10). Progress in this regard, though, went far beyond expectations with a record budget surplus (in won terms) in a year in which the government had forecast a deficit of more than 3½ per cent of GDP. The surplus – three years earlier than envisaged under the

Table 10. **Consolidated central government budget**

Trillion won

	1998	1999	2000		2001
			Initial budget	Outcome	
Revenue	96.7	107.9	120.8	135.8	142.1
Growth (per cent)	–2.6	11.6	11.9	25.9	4.6
Per cent of GDP	21.8	22.4	23.4	26.3	24.6
Expenditures	115.4	121.0	139.7	129.3	142.5
Growth (per cent)	15.1	4.9	15.5	6.9	10.2
Per cent of GDP	26.0	25.1	27.0	25.0	24.6
Balance	–18.8	–13.1	–18.9	6.5	–0.4
Per cent of GDP	–4.2	–2.7	–3.6	1.3	–0.1

Source: Ministry of Finance and Economy.

medium-term plan – resulted from an unexpectedly large rise in tax receipts, as well as a significant shortfall in spending. The surplus of 1.3 per cent of GDP provides some scope for allowing automatic stabilisers to boost the economy should the recovery expected in the second half of 2001 fail to materialise. Despite the early elimination of the budget deficit, there remains concern about the sharp rise in government debt and government-guaranteed debt in recent years, in part due to the costs of financial-sector restructuring. Improvements in the transparency and simplicity of the budgetary process and further reforms in the tax system should be a priority.

A surge in tax receipts and a shortfall in spending in 2000 eliminated the budget deficit

Government revenues on a consolidated basis jumped by a quarter in 2000, more than double the 12 per cent rise projected in the initial budget (Table 11). As a share of GDP, government revenues were 3 percentage points higher than predicted due to a surge in tax revenues. This outcome was even more surprising since the 7.1 per cent rise in nominal GDP in 2000 was well below the 8.7 per cent forecast by the government at the time of the initial budget.[19] Indeed, the increase in tax revenue was far beyond that predicted by the past relationship between revenue and income[20] and boosted its share of GDP (including social security contributions) to a record 21 per cent (Figure 24). About half of the extra tax receipts was due to a near doubling of corporate tax payments, reflecting the strong profit performance during the expansion primarily as a result of lower financial costs. The boom in the ICT sector was reportedly responsible for much of the increase in corporate profits and tax payments. Taxes on goods and services also increased strongly for several reasons. *First*, there was a large rise in value-added taxes, perhaps reflecting the elimination of the simplified scheme and the increased use of credit cards, thus narrowing the scope for tax evasion (see Box 2). *Second*, customs duties rose markedly as a result of a 30 per cent rise in imports in 2000. According to some analysts, the degree of fiscal consolidation achieved in 2000 played a role in the economic downturn at the end of the year.[21] However, as noted above, the exceptional rise in revenue last year was due largely to the surge in profits. While government receipts were also boosted by structural changes, such as the expansion of the public pension system, these are positive developments from a long-term perspective. Moreover, the timing of these changes, which were implemented during a period of double-digit growth when concerns about overheating were mounting, appeared to be appropriate.

The overshooting on revenues was accompanied by a 2.0 per cent of GDP undershooting on expenditures. The shortfall occurred in "public funds", while spending in the general account and the 22 special accounts – about 70 per cent of government outlays in the initial budget – was slightly higher than expected

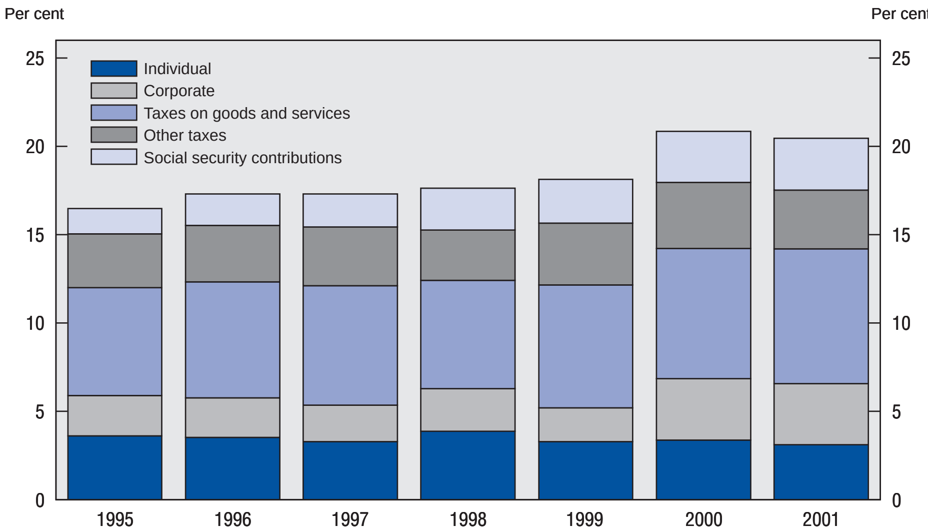
Table 11. **Consolidated central government revenue**

	1999	2000 initial budget[1]		2000 outcome	Change from		2001	
	Trillion won	Trillion won	Percentage change	Trillion won	1999 (in per cent)	2000 initial budget in trillion won	Trillion won	Percentage change
A. Total tax revenue	**75.7**	**79.8**	**5.4**	**92.9**	**22.7**	**13.1**	**95.9**	**3.2**
Individual income tax	15.0	14.8	–1.3	16.3	8.7	1.5	15.5	–4.9
Corporate tax	10.0	11.9	19.0	18.6	86.0	6.7	19.8	6.5
Capital gains	1.0	1.0	0.0	1.4	40.0	0.4	1.7	21.4
Value-added tax	20.4	21.7	6.4	23.2	13.7	1.5	24.0	3.4
Special consumption tax	7.0	6.6	–5.7	7.2	7.1	0.9	8.1	8.0
Transportation tax	8.3	10.8	30.1	9.7	16.9	–1.1	12.7	30.9
Customs duties	4.7	4.9	4.3	5.8	23.4	0.9	6.8	17.2
Property taxes	4.3	3.0	–30.2	5.1	18.6	2.1	4.9	–3.9
Other	4.8	5.1	6.3	5.3	10.4	0.2	2.4	–54.7
B. Other revenue	**30.1**	**39.0**	**29.6**	**42.9**	**42.5**	**3.9**	**46.2**	**7.7**
Social security contributions	12.0	17.5	45.8	14.8	23.3	–2.7	16.0	8.1
Non-tax revenue	16.8	20.2	20.2	26.7	58.9	6.5	28.4	6.4
Capital revenue	1.3	1.3	0.0	1.4	7.7	0.1	1.8	28.6
Total[2]	**105.8**	**118.8**	**12.3**	**135.8**	**28.4**	**17.0**	**142.1**	**4.6**
Per cent of GDP	21.9	22.9		26.2		3.3	25.3	

1. In the initial budget for 2000, the estimate for capital gains tax revenue is included with the personal income tax. Capital gains tax revenue is assumed to stay at the 1999 level. In addition, there is no separate estimate for property taxes, which are also assumed to remain at their 1999 level.
2. Excluding privatisation revenues.

Source: Ministry of Finance and Economy.

Figure 24. **Tax revenue as a share of GDP**



Source: Ministry of Finance and Economy.

(Table 12). Of the 39 public funds in 2000, three of the largest – the National Housing Fund, the National Pension Fund and the Employment Insurance Fund – accounted for about two-thirds of the undershooting on expenditures. The shortfall in spending on housing was due to depressed conditions in the housing market

Table 12. **The shortfall in government spending in 2000**

Trillion won

	1999	2000 initial budget	Percentage change	2000 outcome	Difference from initial budget	Percentage change from 1999
General and special accounts	96.0	101.3	5.5	102.5	1.2	6.8
Public funds	23.4	38.1	62.4	26.5	–11.6	13.2
of which:						
National Housing Fund	6.1	9.6	57.7	4.8	–4.8	–21.3
National Pension Fund	3.7	3.5	–4.6	1.4	–2.1	–62.2
Employment Insurance Fund	1.7	1.9	13.1	1.2	–0.7	–29.4
Other	1.6	0.4	–76.4	0.3	–0.1	–81.3
Total expenditures	121.0	139.7	15.4	129.3	–10.4	6.9
Per cent of GDP	25.1	27.0		25.0	–2.0	

Source: Ministry of Finance and Economy.

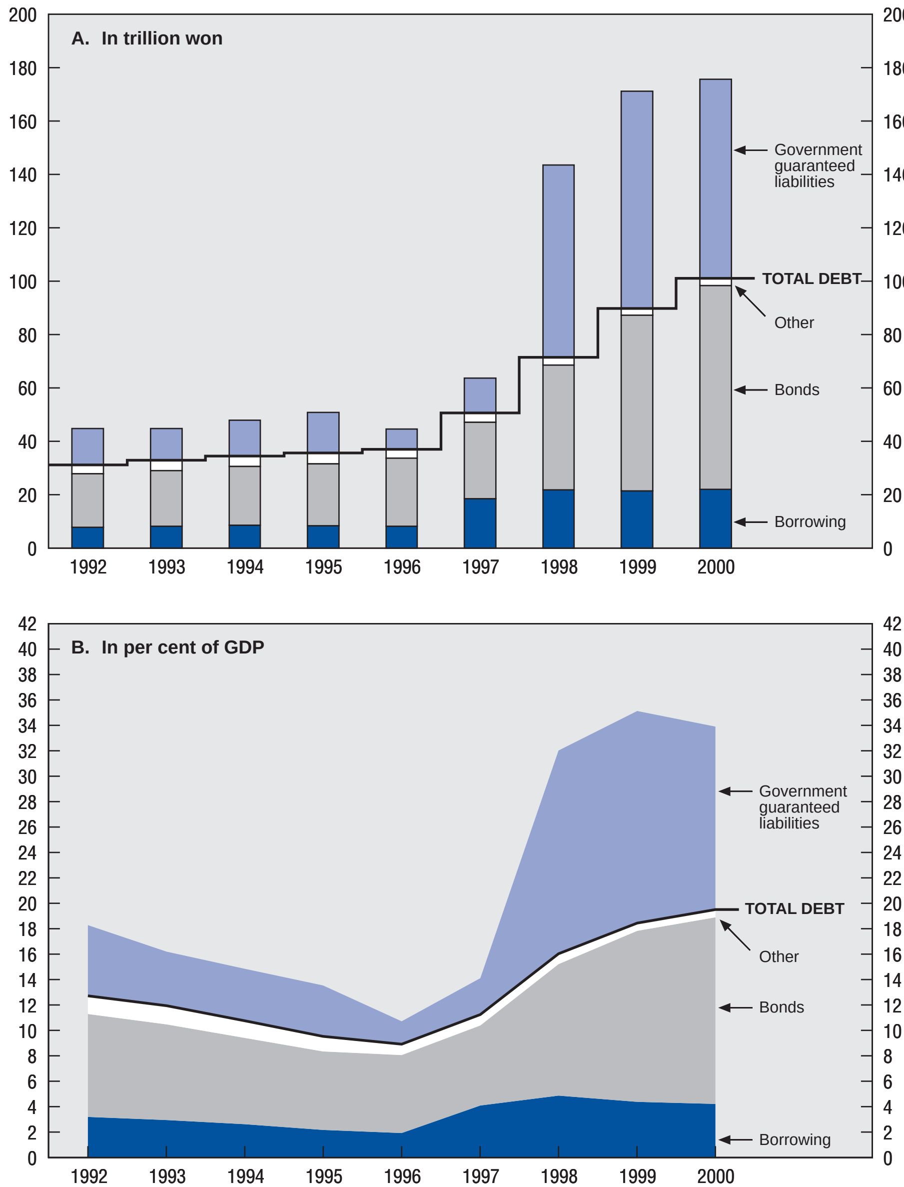
since the crisis (see Chapter I). As for pensions, the expansion of the National Pension Scheme in 1999 to include the urban self-employed ironically lowered pension outlays in 2000. Previously, employees who stopped working prior to qualifying for a pension, which is based on age and number of years of contributions, were paid a lump-sum refund of their contributions. With the expanded coverage, former employees are now regarded as urban self-employed and will eventually receive a monthly pension once meeting the eligibility conditions, rather than an immediate lump-sum refund. As a result, expenditures by the National Pension Fund fell by almost two-thirds in 2000. Finally, the decline in the number of unemployed, from an average of 1.4 million in 1999 to 0.9 million in 2000, reduced outlays by the Employment Insurance Fund.

The impact on government debt

Despite the unexpected surplus in 2000, central government gross debt continued to rise, surpassing 100 trillion won (Figure 25). Net bond issues of 7.8 trillion won (1.5 per cent of GDP) during 2000 were made for public funds, reflecting the fact that each is independently financed. Thus, the surpluses in some funds were not available to finance deficits in others, forcing them to borrow. In particular, the surplus in the National Pension Fund is no longer lent automatically to the government. Local government debt, meanwhile, was 3.6 per cent of GDP in 2000. Combining central and local government, gross government debt reached 23 per cent of GDP at the end of 2000, compared to less than 12 per cent in 1996, as a result of accumulated budget deficits through 1999 and external borrowing in the wake of the crisis. Nevertheless, Korea's gross government debt remains one of the lowest in the OECD area and is well below the average of around 70 per cent. Moreover, the government has accumulated a substantial stock of assets, making Korea one of only three OECD countries in which the government is a net creditor. Central government assets were 142.6 trillion won at the end of 2000,[22] with loans accounting for four-fifths of the total.

In contrast to the rise in central government debt, government-guaranteed debt fell slightly despite the rising costs of financial-sector restructuring (Table 13). The decline was due to the repayment of some external debt of the banking sector that had been guaranteed in the wake of the crisis. However, the amount of government-guaranteed bonds issued for the financial sector rose to 68 trillion won (13 per cent of GDP).[23] The increase resulted from issues by the Korea Deposit Insurance Corporation, which has used these funds to re-capitalise financial institutions and re-imburse depositors. The outstanding debt of the Korea Asset Management Corporation, in contrast, declined as sales of non-performing loans purchased from financial institutions has allowed it to retire maturing debt. In summary, government debt and guaranteed liabilities combined rose slightly in won terms but fell as a share of GDP to under 38 per cent at the end

Figure 25. **Central government gross debt and guaranteed liabilities**



Source: Ministry of Finance and Economy.

Table 13. **Gross government debt and guarantees**
Trillion won at end of year

	1997	Per cent of GDP	1998	1999	2000	Per cent of GDP
Total debt	**65.6**	**14.5**	**87.7**	**107.7**	**119.7**	**23.1**
Central government	50.5	11.1	71.4	89.7	100.9	19.5
Borrowing	18.5	4.1	21.8	21.4	21.9	4.2
Domestic	3.2	0.7	3.0	2.4	1.9	0.4
External	15.3	3.4	18.8	18.9	20.0	3.9
Bonds	28.6	6.3	46.6	65.8	76.3	14.8
Domestic	28.6	6.3	41.6	61.2	71.2	13.8
Treasury	n.a.	n.a.	18.8	34.2	42.6	8.2
Foreign exchange[1]	n.a.	n.a.	3.9	6.2	8.4	1.6
Cereals	n.a.	n.a.	4.9	4.9	2.5	0.5
National housing	n.a.	n.a.	14.0	15.9	17.8	3.4
Dollar-denominated	0.0	0.0	5.1	4.6	5.0	1.0
Other	3.4	0.8	3.0	2.5	2.7	0.5
Local government	15.1	3.3	16.2	18.0	18.8	3.6
Government guarantees	**13.0**	**2.9**	**72.0**	**81.5**	**74.6**	**14.4**
Borrowing	2.2	0.5	31.4	17.1	6.2	1.2
Domestic	0.7	0.2	0.6	0.6	0.6	0.1
External	1.5	0.3	30.8	16.5	5.6	1.1
External debt of private banks	0.0	0.0	29.6	12.2	0.7	0.1
Other	1.5	0.3	1.2	4.3	4.9	0.9
Bonds	10.9	2.4	40.5	64.4	68.4	13.2
KAMCO	7.0	1.5	17.4	19.9	15.7	3.0
KDIC	0.0	0.0	21.0	43.5	52.4	10.1
Other	3.9	0.9	2.1	1.0	0.2	0.0
Total debt plus government guarantees	**78.6**	**17.3**	**159.6**	**189.2**	**194.8**	**37.7**

1. Foreign exchange stabilisation bonds.
Source: Ministry of Finance and Economy.

of 2000. However, the second-stage financial-sector restructuring programme, which was launched in September 2000, includes 40 trillion won of additional public funds, and is thus likely to reverse this trend (see Chapter IV).

The stance of fiscal policy in 2001

The government describes the stance of fiscal policy in 2001 as neutral, with expenditures projected to rise by 10.2 per cent on a consolidated basis (Table 10). While the planned increase is less than the 15.5 per cent in the initial budget for 2000, it is still well above the 6 per cent rise in nominal GDP in the OECD outlook for 2001 and the government's projection of 8 to 9 per cent growth. To promote a recovery, almost two-thirds of outlays are planned for the first half of the year. The government projects that revenue will rise by about 4½ per cent, well below the projected growth in nominal GDP. The authorities expect these spending and revenue outcomes to result in a small deficit in the consolidated central government budget of 0.1 per cent of GDP. Given the government's typically conservative revenue forecast (Table 11), though, a second consecutive budget surplus would not be surprising if the spending targets are maintained. In particular, the projected 3 per cent rise in tax revenue is well below the expected increases in wages and output. To encourage a recovery, the tax deduction on investment was raised from 7 to 10 per cent in 2001, but will be eliminated at the end of the year. Besides this tax cut and the frontloading of spending noted above, no changes in fiscal policy to stimulate the economy are planned. Given the long-term spending pressures in Korea, the priority given to fiscal soundness, rather than fiscal fine-tuning to limit business cycles, appears appropriate. However, the automatic stabilisers – such as increased outlays for the unemployed and decreased tax revenue – should not be countered by offsetting tax and expenditure measures.

Although the allocation of spending on a consolidated basis in 2001 is still unknown, the distribution of expenditures included in the general and special accounts gives some indication of the government's priorities (Table 14). The largest increases are planned as follows:

– Expenditures in the categories of information technology and science and technology are both expected to rise by about 16 per cent. Such increases would boost the share of R&D outlays in the central government budget from 4.1 to 4.4 per cent, in line with the objective of reaching 5 per cent by 2003 (see the 2000 *Survey*).

Table 14. **Central government expenditures**

General and special accounts

	1999 (trillion won)	2000 (trillion won)	Percentage increase	2001 (trillion won)	Percentage increase
Education	17.9	19.7	10.2	23.5	19.1
Security and national defense	14.9	14.5	–2.8	15.4	6.3
Civil service salaries	14.4	16.3	12.8	18.9	16.5
Social overhead capital	13.4	14.1	5.1	14.6	3.9
Agriculture and forestries	8.5	9.3	9.5	9.9	6.2
Welfare	5.1	7.0	37.3	8.1	16.3
Small and medium-sized firms	4.5	3.7	–17.6	3.3	–11.9
Interest costs	5.8	8.3	42.5	8.6	3.8
of which: Financial restructuring	4.0	6.0	50.0	6.5	8.3
Science and technology	4.0	3.5	–11.7	4.1	16.3
Environment	2.3	2.8	21.7	3.1	10.1
Information technology	0.9	1.2	31.3	1.4	15.2
Culture and tourism	0.7	1.0	37.7	1.0	8.5

Source: Ministry of Finance and Economy, *Economic Bulletin*, November 2000.

– The 19 per cent increase in education spending is aimed almost entirely at improving the quality of primary and secondary education, in part by raising the transfers to local schools (see 2000 *Survey*).

– The 16 per cent rise in welfare spending is largely due to the introduction of a new social welfare system in October 2000 (see 2000 *Survey*). Under the Livelihood Protection Plan, individuals whose income is below the minimum cost of living have the right to assistance from the government to bring them up to that level, assuming that they are eligible under the asset test and the income test applied to family members. The number of recipients of welfare benefits is projected to rise by 2.6 per cent to 1.55 million persons in 2001 (3 per cent of the population) due to a 6 per cent rise in the minimum cost of living calculated by the government.

More modest spending increases are envisaged in the following areas:

– A streamlining of support for SMEs will substantially reduce such assistance (see Chapter IV).

– Expenditures on agriculture and forestry will rise by 6 per cent in the context of a shift to a new direct payment system which will gradually replace the current system of government purchases to support prices (see Chapter V);

– Public investment in social overhead capital is to be limited to 4 per cent following the completion of some major projects, such as the Incheon International Airport. In addition, the outside screening of large investment projects by the Centre for Public Investment and Management Research, which began in 2000, has also limited outlays (see 2000 *Survey*). Of the thirty investment projects submitted for review last year, half – accounting for 57 per cent of the value of the projects – were rejected.

– Interest costs are projected to rise 4 per cent, with costs associated with the financial-sector restructuring programme accounting for three-fourths of the total (see Chapter IV).

– Civil servants are to receive a pay raise of at least 6.7 per cent in 2001, an increase that would bring their wages up to 95 per cent of comparable private-sector salaries. The goal is parity by 2004. The government wage bill, though, has been restrained by the continued decline in the number of central government employees. Over the period 1998 to 2001, employment has been reduced by 16 per cent.

Longer-term considerations

At the beginning of the year, the government proposed a "Fiscal Responsibility Law" containing five main elements. *First*, the Ministry of Planning and

Budget would be required to submit a three-year fiscal plan, including targets for a consolidated budget balance and government debt, to the National Assembly each year. *Second*, supplementary budgets, which have become a standard practice each year, would be allowed only in the case of an emergency. *Third*, the use of budget surpluses would give priority to the reduction of national debt. *Fourth*, any proposal containing an increase in spending or a decline in revenue would have to include a plan of how to compensate for the proposed fiscal impact. *Fifth*, the budget would have to include information on the costs of quasi-fiscal activity, such as public guarantees of loans to SMEs, in order to promote transparency. Moreover, it would provide details about contingent liabilities, including their expected costs and the likely beneficiaries.

However, the usefulness of projections for three years into the future depends on their reliability. The fact that the budget balance in 2000 was nearly 5 percentage points of GDP different than that proposed in the initial budget suggests a high degree of uncertainty about fiscal outcomes in Korea. Consequently, the impact of fiscal policy in any given year might be far different than what is initially intended or desirable, with the risk that it becomes a destabilising economic force. On the revenue side, improving the government's tax revenue forecasting ability seems to be the key to producing reliable estimates.

Improving the reliability of projections of spending outcomes would require reforms in the fiscal framework. The budget presented to the National Assembly for approval each autumn includes the general account and the 22 special accounts – about 80 per cent of the expenditures in 1999 in the consolidated central government budget, the key fiscal measure (Table 15). As noted above, spending in the general and special accounts in 2000 came in near the levels specified in the initial budget. The remainder is accounted for by public funds, which need only cabinet approval.[24] Moreover, the minister responsible for a fund can boost outlays by up to 50 per cent without the consent of the cabinet. Given uncertainty about the spending in the public funds, the total level of expenditures

Table 15. **Structure of central government spending**

Category	Number in 1999	Number in 2001	Outlays in 1999 (trillion won)	Approved by National Assembly?
General account	1	1	54.3	Yes
Special accounts	22	22	41.7	Yes
Public funds	37	43	23.4	No
Consolidated budget[1]	**60**	**66**	**121.0**	
Extra-budgetary funds	38	18	6.2	No

1. The total includes 1.6 trillion won of other expenditures.
Source: Ministry of Finance and Economy.

on a consolidated basis is unknown when the new budget is passed. The number of public funds increased from 37 in 1999 to 43 in 2001, resulting in part from the addition of ten extra-budgetary funds, as discussed below.[25] Included among the public funds are important elements of the social safety net, such as the National Pension Fund, the Employment Insurance Fund and pension funds for civil servants and private-school teachers. In addition, a wide range of activities, such as agricultural price supports, foreign-exchange stabilisation and aid for SMEs, are included.

Reducing the number and role of the public funds would likely increase the predictability of public spending. More importantly, it would improve the transparency and allocative efficiency of government expenditures. In addition to incorporating public funds into the general and special accounts, outlays that are currently excluded from the consolidated central government budget should also be brought into it. One concern is the extra-budgetary funds, which accounted for 6.2 trillion won of government expenditures (equivalent to 5 per cent of consolidated central government expenditures) in 1999. The relevant ministry, such as Finance and Economy in the case of deposit insurance, controls public expenditures in each fund, and is not obligated to consult with the cabinet or the president, nor is it required to report those outlays to the National Assembly. Despite the government involvement, private institutions are the owners and managers of these funds. Between 1999 and 2001, the number of such funds declined from 38 to 18, as ten were eliminated and an equal number were transformed into "public funds".[26] Consequently, as recommended in the 2000 *Survey*, the government has significantly reduced the total number of funds, both extra-budgetary and public, from 75 in 1999 to 61 in 2001.

While there has been progress, the still heavy reliance on various funds to finance a significant part of the government's activities has the negative effect of blurring the distinction between the public and private sectors. Moreover, the compartmentalisation of the budget seriously complicates the management of public finances, making it difficult to conduct a coherent fiscal policy. As noted in the 2000 *Survey*, it reduces transparency and allocative efficiency. Korea should aim at meeting OECD best practices for budget transparency.[27] It is important, therefore, that all funds – including public and extrabudgetary – be integrated into the government budget in order to subject them to the same level of oversight, including legislative approval. If extrabudgetary funds are deemed inappropriate for the government budget, fiscal participation in such activities should be ended. Integrating all spending categories will be essential to prioritise effectively government spending and facilitate the reallocation of funds between activities. Such flexibility will be crucial as Korea faces increasing spending pressures in the future. Finally, the government does not produce fiscal statistics on a general government basis. This is due, in part, to the fact that local government statistics do not fully correspond to GFS standards. The authorities should follow through on their plan to present such information beginning in 2003.

Until such general government information is available, the government should aim at maintaining the consolidated central government budget in balance over the business cycle. Given the long-term spending pressures, it should in general take precedence over fiscal fine-tuning measures aimed at limiting short-term economic fluctuations. Additional steps to reform the tax system in line with the recommendations in the 2000 *Survey* should also be a priority (Box 2). Further progress in this regard is essential to limit the distortionary impact of taxes as revenue needs increase as a result of the costs of financial restructuring (Chapter IV), closer economic relations between North and South Korea (Annex II) and population ageing, which is discussed in the following chapter.

Box 2. Progress in tax reform

The 2000 *Economic Survey of Korea* analysed the tax system in detail and made a number of recommendations aimed at reducing distortions, promoting efficiency, increasing fairness and simplifying the system. In the first year following the report, the authorities have made some initial steps in the direction recommended in the *Survey*.

A. **Improve the tax compliance of the self-employed:** The increased use of credit cards, which doubled in 2000 as a result of the introduction of income tax deductions for expenditures using credit cards,* is expanding the tax base of the VAT, which, in turn, is expected to boost the compliance rate of the self-employed. The overall effect, though, will only become clear in the future. In addition, a law has been introduced to require public institutions and local governments to submit income-related information, which will facilitate enforcement.

B. **The corporate tax base should be broadened by reducing or streamlining various incentives:** The investment tax credit is to be abolished at the end of December 2001, while a revision of the Special Tax Treatment Control Law in December 2000 eliminated a number of incentives. In addition, the R&D tax credit was generalised by shifting from a positive list to a negative list system that excludes just a few industries, such as real estate, restaurants and hotels. While increased uniformity across sectors is a positive factor, the increased tax incentives in many sectors are less desirable.

C. **Shift taxation of pension income from a TEE system to an EET approach:** This change was implemented at the end of 2000 (see Box 3 for details).

D. **Incorporate the special consumption taxes into the VAT system:** One step in this direction is the inclusion of the telephone tax in the VAT in September 2001.

E. **Eliminate earmarked taxes:** The transportation tax will become a general tax in 2002, while the agricultural tax will be eliminated in 2003.

Box 2. **Progress in tax reform** (*cont.*)

However, there is still much to do to improve the tax system, including in five other areas discussed in the 2000 *Survey* where no action has been taken:

A. **The personal tax base should be broadened by reducing allowances and credits.**

B. **Reform the taxation of capital income, which is low and uneven across different sources:** Comprehensive taxation of capital income was re-introduced as planned in 2001, boosting the top rate on dividend and interest income to 44 per cent. However, there are no plans to introduce taxes on financial capital gains.

C. **Broaden the base of the VAT, in part by including agricultural products and restricting the use of the zero rate:** No such changes were made during the past year, although the increased use of credit cards is having the impact of broadening the VAT base.

D. **Increase taxation of fringe benefits:** No such measures have been taken since mid-2000, leaving interest-free loans and low-interest loans from employers as the only benefits subject to tax.

E. **Property taxation should be reformed to promote the efficient use of land by raising holding taxes and lowering transaction taxes, while making capital gains taxes independent of the holding period.**

* If outlays using credit cards exceed 10 per cent of income, 10 per cent of that amount can be deducted from income tax. In addition, there is a lottery drawn from credit card receipts in order to promote their use.

III. Preparing for an aged society

Korea is in the midst of one of the most rapid demographic transitions experienced by any OECD country. The speed of the ageing process reflects the country's transformation during the period of one generation from a poor, agrarian society to an industrialised OECD member country, resulting in dramatic changes in fertility rates and life expectancy. Consequently, its population, currently one of the youngest in the OECD area, will be considerably above the average in fifty years. The demographic transition is being accompanied by a move away from a tradition of children caring for their elderly parents to a reliance on public pension and safety net systems of the type found in most other OECD countries. The key step in this process was the creation of the National Pension Scheme (NPS) in 1988. By 1999, one-half of the labour force contributed to this scheme.

Ageing is expected to slow the rate of economic growth at the same time that it boosts demands for public expenditure. The challenges are magnified by the weaknesses in the current framework for providing income support to the elderly. According to a government task force report last year, the partially-funded NPS, as well as the three occupational schemes established earlier, "are suffering from serious financial problems of varying degrees", reflecting a structural imbalance between contributions and pension benefits. In the context of rapid ageing and the maturation of the NPS, the rise in pension expenditures as a share of GDP is projected to be among the largest in the OECD area over the next fifty years. Financing this burden would require unacceptably high contribution rates, which would, in turn, discourage an expansion of coverage by the NPS. Moreover, there are issues of fairness, both between and within generations. At the same time, the retirement allowances, which private firms are required to provide, and the system of individual pension accounts are problematic. The rising cost of pensions will be accompanied by higher healthcare expenditures as the population ages. In addition, the public-sector role in long-term care for the frail elderly, which has been primarily a family responsibility, is likely to increase.

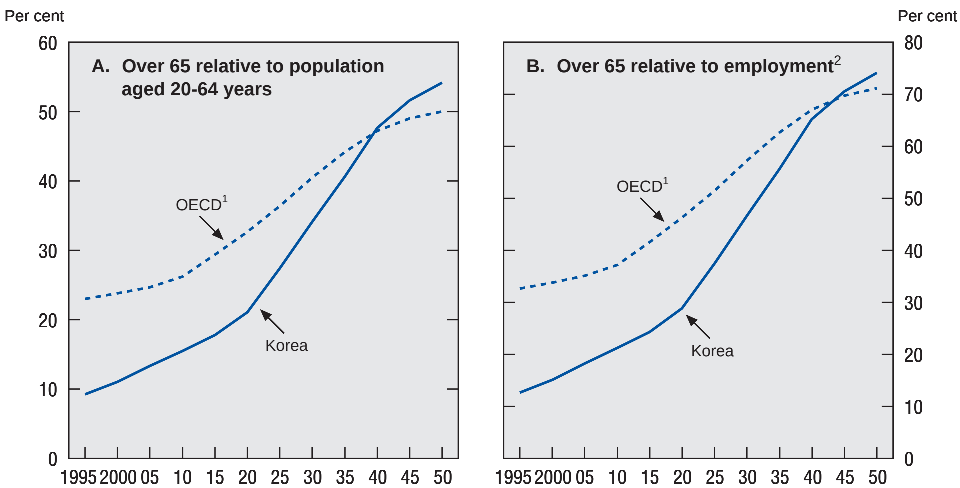
Establishing a framework that is universal and provides adequate benefits, while maintaining financial stability and inter- and intra-generational equity requires systemic reforms to establish a multi-pillar approach in which private-sector savings play a greater role. Successfully absorbing the fiscal impact of ageing, both for pensions and healthcare, is crucial for Korea's continued economic development. Although public debt has traditionally been quite low, the restructuring of the financial sector in the wake of the 1997 crisis has led to government-guaranteed borrowing equivalent to one-fifth of GDP. Moreover, the prospective costs of national unification are a huge source of uncertainty. Fortunately, the immaturity of the current pension system and the relatively young population create a window of opportunity for fundamental changes. At present, old-age pension recipients account for less than 5 per cent of the population over the age of 55 and expenditures on benefits are limited to 0.1 per cent of GDP. However, this room for manoeuvre will rapidly disappear as the pension system matures and the population ages. During the next decade, the number of pension recipients will almost triple under the current framework, while expenditures as a share of GDP would rise by a factor of five. This chapter begins by examining the demographic transition that will boost the number of elderly. The following section provides an overview of the current framework for income support and healthcare for the elderly. In the third section, the fiscal impact of ageing under the current framework is analysed. The chapter concludes with proposals for reform.

The demographic transition in Korea

Korea has the youngest population after Mexico and Turkey among OECD member countries, with an average age of 33 years, compared to 38 in the OECD area. This reflects a relatively high fertility rate and low life expectancy in the past. Korea's elderly dependency ratio – the ratio of persons over 65 to those between 20 and 64 years of age – was the third-lowest among OECD countries in 2000 and less than half of the average (Figure 26).

During the next five decades, however, Korea is expected to undergo a rapid demographic transition that would make its elderly dependency ratio the sixth-highest in the OECD area.[28] A key factor is a fall in fertility rates from 5.4 in the 1950s to 1.5 in the second half of the 1990s, a rate below the OECD average of 1.7. The extent of the decline – the third-largest in the OECD area (Figure 27) – is a consequence of the social changes accompanying rapid industrialisation, as well as an active population policy to reduce fertility rates. The second factor is a sharp fall in the mortality rate, resulting in a 27-year rise in life expectancy since the 1950s, the largest increase in the OECD area. The extent of the changes in these two factors will make the demographic transition in Korea among the fastest in the world. Indeed, it is likely to take only 22 years for the share of the population over age 65 to double from 7 per cent (a level the United Nations defines as

Figure 26 **Old-age dependency ratios**



1. The average of the rates of individual countries (excluding Turkey and Mexico).
2. For the projections, the employment to population ratio is kept at its 1995 level.

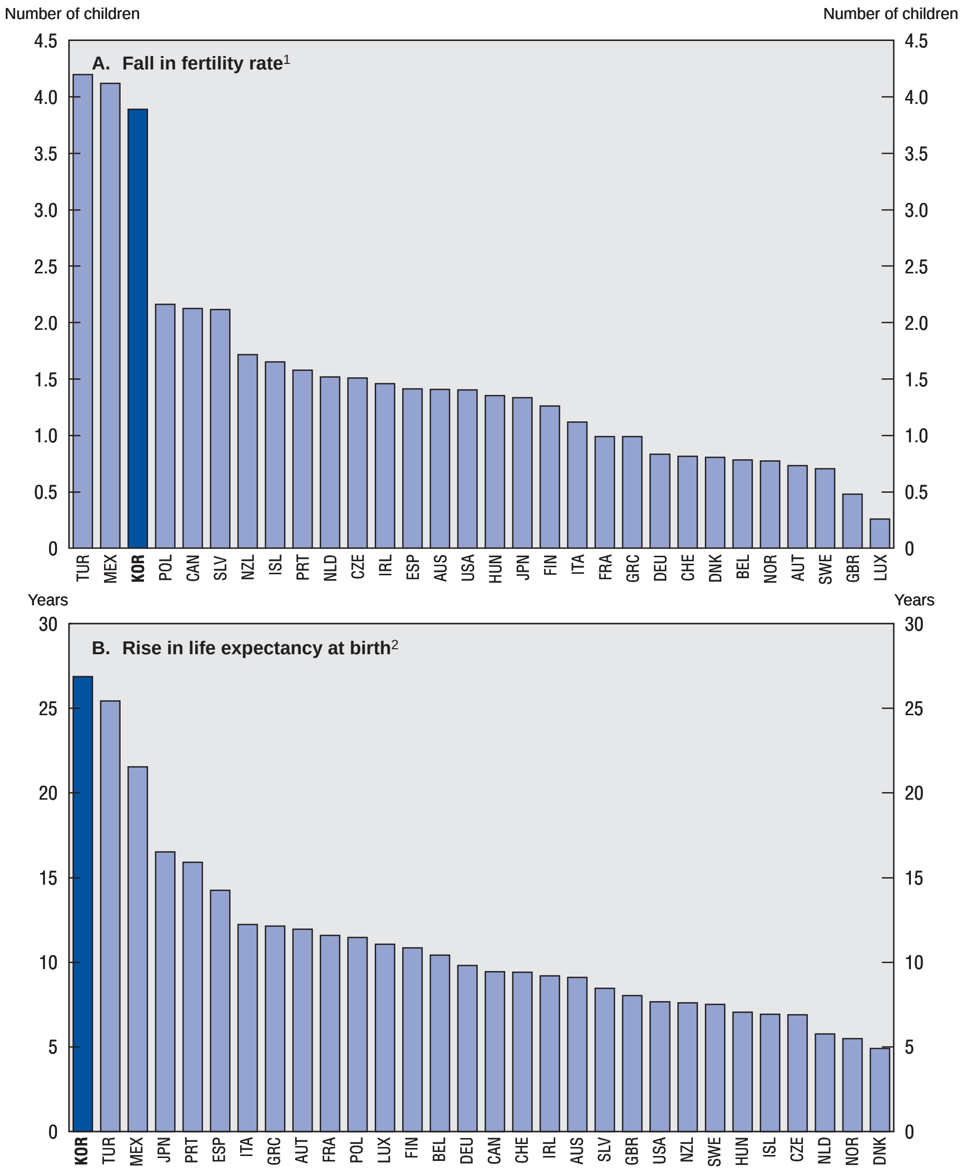
Source: Eurostat for EU countries and United Nations for others.

an "ageing society") – to 14 per cent (a level it defines as an "aged society"). In comparison, this transition took 115 years in France (Table 16).

The current support system for the elderly

Support for the elderly traditionally has been centred on children caring for their aged parents. In 1970, more than a fifth of all households consisted of three generations (Figure 28), making this living arrangement the norm for the elderly during the early years of economic development when the completed family size still exceeded five children. Korea's transition, however, from a poor nation with a largely rural population to an industrialised OECD member country over the space of only three decades has weakened the traditional Confucian pattern. Indeed, the proportion of the population living in urban areas increased from less than 30 per cent in 1960 to 88 per cent in 1999. At present, about half of the elderly live with their children. In terms of financial support, the importance of assistance from children is declining although it remains the major source of income for the elderly. According to one survey, the proportion of the elderly's income provided by their children fell from 64 to 44 per cent between 1988 and 1994 (Table 17). The government encourages children to care for their elderly parents by providing

Figure 27. **Demographic changes in the OECD area**
Change between 1950-55 and 1995-2000



1. Change in the number of children per woman.
2. Number of years.
Source: United Nations.

Table 16. **Speed of population ageing in selected OECD countries**

	Year when share of elderly[1] reached:		Number of years[2]
	7 per cent	14 per cent	
Korea	2 000	2 022	22
Japan	1 970	1 994	24
Finland	1 958	1 994	36
Germany	1 932	1 972	40
Greece	1 951	1 992	41
Portugal	1 951	1 992	41
Poland	1 966	2 013	47
United Kingdom	1 929	1 976	47
Switzerland	1 930	1 982	52
Italy	1 927	1 988	61
Canada	1 945	2 010	65
United States	1 942	2 013	71
Sweden	1 887	1 972	85
France	1 864	1 979	115

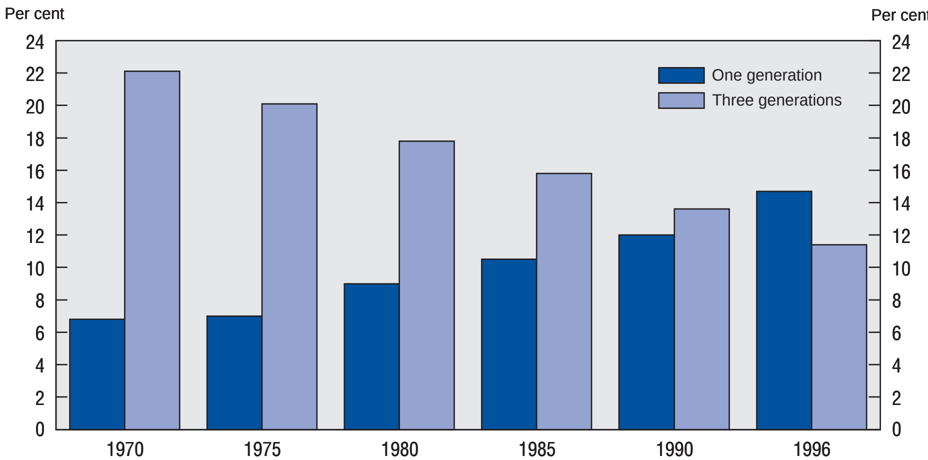
1. The number of persons over age 65 as a share of the total population.
2. For years after 2000, country projections made in the context of the OECD Ad Hoc Working Group on the Fiscal Implications of Ageing were used.

Source: Lee and Hong (2000) and United Nations (for historical data).

deductions in inheritance, income and capital gains taxes.[29] The second major source of income for the elderly is wages. Pension income is relatively unimportant in Korea, in contrast to a study of nine other OECD countries showing that public and private pensions account for four-fifths of the income of the elderly on average (Panel B). Moreover, labour income is relatively less important in the other OECD countries, with the exception of Japan.

The idea of preparing in advance for one's own retirement is a relatively new concept in Korea, given the tradition of children supporting their parents and the relatively short life span in the past. Indeed, in 1988, only one-third of the working-age population was making financial preparations for old age, although the proportion rose to one-half a decade later.[30] The main government-mandated provision of income for the elderly prior to 1988 was the retirement allowance that firms paid to their employees. The authorities also introduced a system of individual pension accounts in 1994. These two aspects of private-sector saving are discussed in the first part of this section. The following section examines the NPS, along with the three occupational pension systems. Given the immaturity of these systems, though, they provide support for only a small proportion of the elderly at present. Consequently, various social assistance programmes, which are discussed in the third part of this section, remain the main source of public support for aged persons. This section concludes with a review of healthcare for the elderly.

Figure 28. **Households by number of generations**
Per cent[1]



1. Percentage of households that include related persons. Between 70 and 74 per cent of the total in each time period were two-generation households.
Source: National Statistical Office.

Private-sector saving for old age

The retirement allowance system

Firms are required by law to pay departing employees an allowance equivalent to at least one month's wages for each year of employment. The worker's final wage, including bonuses, is used to calculate the allowance, which was made mandatory in 1961 for companies with more than thirty employees. Its coverage was progressively expanded to include all firms with at least five workers in 1989. Initially, the retirement allowance, which might be better described as a separation allowance, was a substitute for public pensions and unemployment insurance, which were not introduced until 1988 and 1995, respectively. Although the allowance is almost always paid as a lump sum, it can also take the form of an annuity.[31] For an employee who spent forty years at a firm, such an annuity would provide a replacement rate of about 30 per cent. In practice, the level of the retirement allowance, which is subject to negotiation between firms and their employees, is often more generous than required by law. Indeed, almost a third of companies in 1997 used a "progressive" system in which the amount of the allowance per year of service increased in line with the number of years at the company (KOILAF, 1999). The allowance has been taxed at an effective rate of around 2 per cent.[32]

Table 17. **Sources of income for the elderly in selected OECD countries**

Per cent of total income

A. Korea[1]

	1988	1994
Public pensions	1.2	3.9
Private pensions	0.0	0.0
Savings and wealth income	6.8	6.9
Support from children	63.7	44.3
Wages	26.3	37.6
Public assistance	1.8	3.5
Other	0.2	1.5
Not identified	0.0	2.3
Total	**100.0**	**100.0**

B. Other OECD countries[2]

	Canada	Finland	Germany	Italy	Japan	Nether-lands	Sweden	United Kingdom	United States	Average
Labour income	20.6	14.7	12.4	20.7	67.4	8.2	7.5	15.2	29.4	21.8
Means-tested income	1.4	1.8	0.5	0.5	0.3	1.0	4.3	6.0	1.2	1.9
Unemployment benefits	0.9	0.8	0.2	0.1	0.1	0.4	0.4	0.1	0.2	0.3
Public pension	48.9	100.8	82.8	65.0	39.0	67.1	86.9	45.6	44.9	64.6
Private pension	23.3	0.0	3.3	2.5	1.0	39.0	20.7	29.6	20.7	15.6
Other public benefits	3.0	6.2	0.1	2.9	0.2	0.1	4.5	1.6	1.3	2.2
Other private transfers	16.5	5.4	5.4	9.0	8.5	11.9	9.8	17.1	19.1	11.4
Direct tax and contributions	–14.6	–29.8	–4.8	0.0	–16.6	–27.8	–34.0	–15.1	–16.5	–17.7
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

1. From surveys covering 1 200 elderly persons in 1988 and 2 048 in 1994.
2. The calculation of the income composition is based on household level income equivalised and individualised by the root square of household size.

Source: Korea Institute for Health and Social Affairs (2000) for Panel A and OECD for Panel B.

The payment of the retirement allowance, however, is vulnerable to the business situation of the firm, since most companies do not establish reserves for this allowance outside the firm. Indeed, at some companies, the allowance is completely unfunded. To encourage firms to set aside reserves to pay the allowances, the tax system allows such funds to be deducted as a business expense. In the case of reserves held within the company, half of the amount can be deducted from taxable income up to certain limits.[33] Many companies claiming this deduction, however, establish reserves only in their books while using the funds for operating expenses (Chun, 2001). To acquire complete tax deductibility, the fund must be established at an independent financial institution. The Financial Supervisory Service estimated, however, that only about 10 per cent of the gross liabilities resulting from the retirement allowance system in 1999 were actually backed by assets held externally to the firm. The failure of firms to invest these funds externally represents a missed opportunity to develop long-term capital markets. Moreover, in practice, these funds are often used as collateral for loans or loaned back to the firm to be used as working capital. Consequently, the funds are not available to workers in the event of the firm's failure. Indeed, when the bankruptcy rate soared in the wake of the financial crisis, a substantial number of workers were deprived of their retirement allowances, as well as back wages. According to a survey of one thousand persons in 1998 who had recently lost their jobs, nearly a quarter of those who were due a retirement allowance had not received it (Phang, 2001). To protect workers, the government established the Wage Claims Guarantee System in July 1998, which is funded by a payroll tax now set at 0.05 per cent of wages. This ensures that workers will receive the allowance for their last three years of work, as well as their last three months of wages. However, for an average male worker, this represents less than half of the allowance that is owed.

In addition to its vulnerability to the bankruptcy of firms, the coverage of the retirement allowance is relatively limited since it does not include firms with fewer than five employees. The number of persons working at enterprises with at least five workers numbered 5.8 million in 1998, accounting for 27 per cent of the labour force and 17 per cent of the working-age population. The coverage is further reduced by the fact that daily workers (14 per cent of employees in 1998) and some temporary employees[34] do not receive the retirement allowance. In addition, the allowance has lost much of its characteristic as old-age income. *First*, the practice of withdrawing the funds while employed for various reasons, such as the purchase of a home, was legalised in 1996. *Second*, given the high rate of labour turnover in Korea, the allowance is more properly regarded as a separation allowance. The average tenure for men in Korea in 1999, at around six years, was well below the averages for the European Union, Japan and the United States (Table 18). Consequently, the average male worker in Korea would receive the retirement allowance five or six times during his working career. Indeed, surveys of

Table 18. **Job tenure in Korea and selected OECD countries**
Average number of years with the same employer in 1995

	Korea[1] 1996	Korea[1] 1999	European Union[2, 3]	Japan	United States
Total employees	**5.3**	**5.7**	**9.8**	**11.3**	**7.4**
Men	6.0	6.4	10.5	12.9	7.9
Women	3.7	4.1	8.8	7.9	6.8
Middle school and below	5.6	6.0	10.1	15.3	5.8
High school	5.0	5.3	9.4	11.4	7.9
Junior college	4.5	4.7	10.1	9.5	7.4
College and university and over	6.2	6.7			

1. The figures refer to regular workers – temporary and daily workers are excluded.
2. Averages for education are based on weighted averages of mid-points of tenure classes. The two highest educational levels are not shown separately and correspond to some or completed tertiary education.
3. Unweighted average on the different breakdowns of tenure for the 15 Member countries.

Source: OECD (2000*b*).

workers indicate that they regard the allowance as deferred wage payments that are determined through collective bargaining with their employers (KOILAF, 1999).

Apart from the problem that the allowance is not, in fact, regarded by workers as provision against retirement, its payment, as it is now practised, also exacerbates problems in the corporate sector during downturns. Companies that wish to downsize have to pay the retirement allowance to departing employees, thus boosting labour costs. During 1998, the payment of such allowances rose 170 per cent as enterprises tried to reduce employment (Phang, 2001). The need to make these payments in the midst of the sharp recession exacerbated the pressures on firms and presumably tended to boost the bankruptcy rate.

Individual pension accounts

Individual pension accounts offered by financial institutions have been encouraged by generous tax concessions since 1994. Residents over the age of 20 can establish such accounts, which are managed by bank trust accounts, insurance companies and investment trust companies (Table 19). A minimum of ten years of contributions is required to receive an annuity that cannot be paid before the age of 55 and must last a minimum of five years. Forty per cent of the amount placed in such accounts, up to an annual limit of 720 000 won (3.5 per cent of the average wage), is deductible from taxable income. Interest earned on the accounts, as well as the principal, was exempted from income tax prior to 2001 (Box 3). However, if an individual withdraws the funds before reaching ten years of contributions or the age of 55, all the accumulated interest is subject to income tax. These accounts are supervised by the Financial Supervisory Service as part of its monitoring of the institutions involved.

Table 19. **Individual pension accounts by type of institution**

Billion won in March of each year

	1995	1996	1997	1998	1999	2000[1]	2000[2]
Bank trust accounts	1 097	2 143	3 376	4 549	5 024	5 649	6 087
Investment trust companies	568	1 545	2 076	1 454	1 201	1 194	1 198
Life insurance companies	634	1 786	3 952	5 611	6 710	7 942	8 262
Non-life insurance companies	250	699	1 309	1 751	2 045	2 396	2 488
Total	**2 548**	**6 173**	**10 713**	**13 365**	**14 980**	**17 181**	**18 035**
Per cent of GDP	0.7	1.5	2.4	3.0	3.1	3.3	3.5

1. At the end of March 2000, the number of accounts totaled 1.4 million at bank trust accounts, 0.2 million at investment trust accounts, 1.8 million at life insurance companies and 0.6 million at non-life insurance companies.
2. In June 2000.
3. Excludes accounts at post offices and agricultural and fishery co-operatives.

Source: Financial Supervisory Commission.

No specific rules apply to these funds, which in the case of insurance companies, were not segregated into separate accounts prior to 2001. No foreign investment has been made by these funds, although there are no restrictions in this regard.

Box 3. **Taxation of pension income in Korea**

Taxation of pensions can take place at each of three steps: when contributions are made to the pension scheme, on the earnings from the investment in the scheme and on the benefits that are paid out. In most OECD countries with fully or partially-funded pension schemes, the first two stages – contributions and interest – are largely tax exempt, while benefits are taxed (the "EET" approach).* In Korea, the framework in place until 2000 applied different tax treatments to different pension schemes and types of insured persons. Contributions by employees under both the NPS and the occupational pension schemes were taxed, while the self-employed were able to deduct 40 per cent of their contributions from income taxes (Table 20). Interest income and pension benefits under all schemes were not taxed, with the exception of the retirement allowance, which was taxed at a low effective rate, estimated at 2 per cent in 1997. In a recently implemented and partially-funded system like the NPS, the timing of taxation has important implications for revenues and inter-generational equity. Indeed, Korea's taxation approach, which can be characterised as a "partial TEE" system, raised several concerns (see 2000 *Survey*). *First*, the uneven tax treatment of the various pension systems had negative implications for fairness, as well as creating possibilities for tax avoidance. *Second*, the failure to tax pension benefits was problematic in the context of a projected rise in benefits from 2 to 10 per cent of GDP over the next fifty years. Shielding such a significant portion

Table 20. **Taxation of pensions**[1]

Pension type	Contributor	Contributions		Benefits	
		Prior to 2001	At present	Prior to 2001	At present
National Pension Scheme					
	Employer	Deductible as expense	Same	–	–
	Employee	Not deductible	Deductible[2]	Not taxed	Taxed[3]
	Self-employed	40 % is deductible up to 720 000 won per year	Deductible[2]	Not taxed	Taxed[3]
Occupational pension schemes					
	Employer	Deductible	Same	–	–
	Employee	Not deductible	Deductible[2]	Not taxed	Taxed[3]
Retirement allowance system					
	Employer	Deductible[4] as expense	Same	–	–
	Employee	–		Taxed very lightly	Taxed at higher rate[5]
Individual pension accounts					
	Investor	40 % is deductible up to an annual limit of 720 000 won	100 % is deductible up to an annual limit of 2.4 million won	Not taxed	Taxed

1. Interest gains on the funds accumulated by the contributions are not taxed under any of the schemes.
2. Benefits of all types, except for disability, are taxed. However, the tax is only applied to benefits generated by contributions made after 2000. To protect the elderly dependent on pensions, 10 to 100 per cent of pension income will be deductible, depending on the beneficiaries' total income.
3. To lessen the impact on tax revenues, contributions are 50 per cent deductible in 2001 and fully deductible beginning in 2002.
4. Deductibility of book reserves is limited to the lesser of: 1) 40 per cent of total estimated retirement allowance that would be paid if all employees retired that year; and 2) 10 per cent of total employee compensation that year.
5. The effective tax will be raised by phasing out the Retirement Allowance Tax Credit, currently set at half of the tax amount due on the allowance.

Source: Ministry of Finance and Economy.

Box 3. Taxation of pension income in Korea (*cont.*)

of national income from taxation would require higher tax rates on other income, thus increasing distortions. *Third*, there was a question of inter-generational equity since the current contribution rates are well below actuarially fair values. Failing to tax pension benefits raises the pension-financing burden on younger workers.

The government introduced reforms in 2000 to address these concerns by moving to an EET system of pension taxation. Regarding the NPS *and occupational pension plans*, all contributions were made fully deductible for both employees and the self-employed beginning in 2002 (Table 20). At the same time, pension benefits generated by contributions made after 2000, were made taxable. However, given the important role of pensions in the income of many elderly persons, pension income deductions will be allowed. For those earning less than 2.5 million won per year (14 per cent of the average wage), the deduction is set at 100 per cent, declining to 10 per cent for those with larger incomes. The deduction will be allowed up to 6 million won. Consequently, about half of pension recipients are expected to be paying tax on their benefits in 25 years. Taxation of *retirement allowances* will also be increased. This will be accomplished by phasing out by 2005 the retirement allowance tax credit, currently set at half of the tax amount due on the allowance. There are also major changes with regards to *individual pension accounts*. The ceiling on deductible contributions has been nearly tripled to 2.4 million won. In addition, the principle and interest generated by the deductible contributions will be taxed as pension income.

The shift from a TEE system to the EET approach, which makes contributions tax deductible while taxing pension benefits, should help ease the three problems noted above. *First*, the tax treatment of pension schemes has become more uniform, enhancing fairness and limiting possibilities for tax avoidance. *Second*, taxation of pension income will reduce the fiscal impact of population ageing. *Third*, the burden on the working-age population will be eased, thus reducing inter-generational income transfers. This should also help weaken resistance to the increases in contribution rates that will be necessary in coming years. Finally, the hike in the effective taxation of retirement allowances may reduce opposition to the transformation of this system to a corporate pension system.

* This implies a subsidy to pension saving since ordinary savings are subject to a TTE approach.

Despite the tax incentives offered, individual pension accounts play a limited role in providing for retirement income. To date, about 3.8 million accounts – a number equivalent to about a tenth of the working-age population – have been opened. Moreover, the average balance is 4.4 million won, about one-fifth the average annual wage. Consequently, these accounts amount to only 3 per cent of GDP. The contract maintenance rate is low at about 30 per cent, suggesting that investors view these accounts as a savings vehicle offering tax benefits rather than a retirement pension. In addition, these accounts are frequently abused as collateral for bank loans. The underdevelopment of individual pension accounts may reflect unfamiliarity with pensions in a society used to lump-sum payments. Moreover, the reliability of these accounts may have seemed questionable in the wake of the crisis, given the insolvency problems among some of the institutions managing these accounts, notably insurance companies and investment trusts. However, the supervision of these accounts should be improved by the requirement that all pension funds, except those established prior to 2001 with life insurance companies, must be segregated in separate accounts from 2001. In addition, the decision to make the accounts transferable between institutions beginning in March 2001 may make them more attractive.

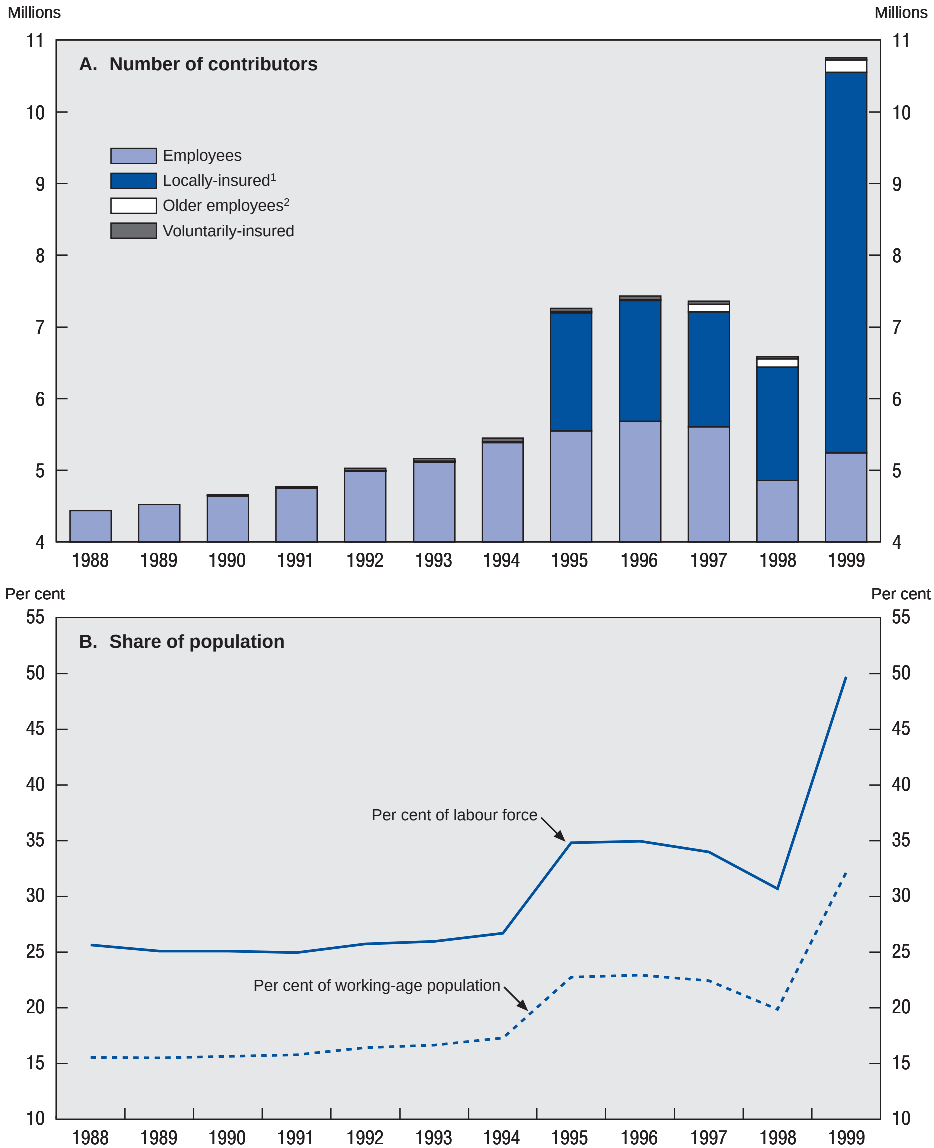
Public pension programmes

The National Pension Scheme

The law establishing a public pension scheme was passed in 1973 but implementation was delayed by 15 years, owing in part to economic difficulties experienced in the 1970s and disagreements over whether to maintain the retirement allowance system. When the NPS was implemented in 1988, its coverage was limited to regular employees (*i.e.*, excluding temporary and daily workers) at firms with more than ten workers. The threshold was reduced to workplaces with at least five regular employees in 1992. Compulsory coverage was extended to "locally-insured persons" residing in rural areas in July 1995 and in urban areas in April 1999. The term "locally-insured persons" is defined as the self-employed, including farmers and fishermen, temporary and daily workers, workers at firms with less than five employees, family workers and the unemployed. As a result of these measures, the number of insured persons jumped from 4.4 million in 1988 to 16.2 million in 1999. However, the number of persons paying contributions to the NPS was lower at 10.7 million, less than half of the labour force and a third of the working-age population (Figure 29). Of those in the labour force who did not pay contributions in 1999 – 10.9 million persons – half were insured persons, while the remainder were not covered by the NPS for various reasons.[35] An international comparison of 75 countries suggests that the proportion of the labour force contributing to the public pension system in Korea in 1999 remained somewhat low, given the level of income (World Bank, 2000).

In addition to the relatively low proportion of contributors to the NPS, the contributions made by locally-insured persons are quite small, in part due to a lower contribution rate (Table 21). As a group, they accounted for half of the number of contributing persons in 1999 but only 10 per cent of total contributions (Figure 30). This occurred despite government subsidies for contributions by

Figure 29. **Share of population contributing to the National Pension Scheme**



1. Includes the self-employed, temporary and daily workers, employees at firms with less than five workers and the unemployed.
2. Persons in the 60 to 64 age group continuously employed at a workplace who voluntarily contribute to the NPS.

Source: National Pension Corporation.

Table 21. **Contribution rates in the National Pension Scheme**
Per cent of income

Year		1988-1992	1993-1997	1998	1999	2000
Insured persons in work-places	Total	3.0	6.0	9.0	9.0	9.0
	Employees	1.5	2.0	3.0	4.5	4.5
	Employers	1.5	2.0	3.0	4.5	4.5
	Retirement payment reserve[1]	–	2.0	3.0	–	–
Year		**1988-1994**	**1995-1997**	**1998**	**1999**	**2000**
Locally-insured persons in rural areas[2, 3]		–	3.0	3.0	3.0	4.0
Locally-insured persons in urban areas[2, 3]		–	–	–	3.0	4.0

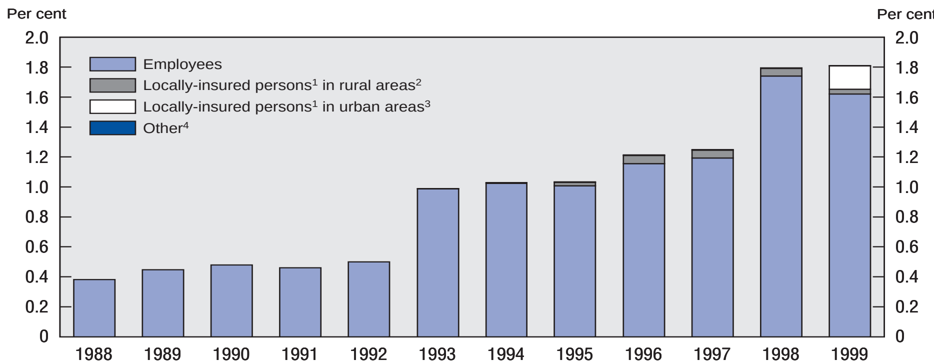
1. Between 1993 and 1998, employers were allowed to place part of their contributions in reserves to pay retirement allowances for departing employees.
2. The contribution rates of locally-insured persons is scheduled to rise 1 per cent every year from July 2000 until reaching 9 per cent in 2005.
3. The self-employed, temporary and daily workers, employees at firms with less than five workers and the unemployed.

Source: National Pension Corporation.

farmers and fishermen – part of the locally-insured – amounting to 14 per cent of their total payments.[36] The failure of the locally-insured to report fully their income to the NPS, as well as to the tax authorities, reflects an insufficient framework for detecting the income of this group, which includes the self-employed (see 2000 *Survey*). Under-reporting of income – which reduces the size of future pension benefits – may be due to a low level of understanding of the NPS and scepticism about its long-run viability. In addition, many locally-insured persons – such as daily and temporary workers and those at firms with less than five employees – have low incomes, reducing their willingness to set aside income for retirement. Alternatively, the redistributive element in the NPS (see below) may allow workers to under-contribute and still obtain an adequate retirement income.

The NPS redistributes income by calculating an individual's pension benefit on the basis of the average wage of all insured persons, as well as the individual's wages. In essence, this is equivalent to providing the same basic pension benefit to all insured. Before 1999, the average wage of all insured was given a greater weight than the individual's wage in determining that person's pension benefit (Table 22). Consequently, the replacement rate for a worker who had earned half of the average wage would have been 82.5 per cent after thirty years of contributions, while that for a worker who had earned 50 per cent above the average wage would have been 42.5 per cent. However, these replacement rates would not be achieved until 2018, since they are based on thirty years of contributions.

Figure 30. **Contributions to the National Pension Scheme**
Per cent of GDP



1. The self-employed, temporary and daily workers, employees at firms with less than five workers and the unemployed.
2. This group was added to the NPS in July 1995.
3. This group was added to the NPS in April 1999.
4. Includes payments by voluntarily-insured persons and employees in the 60 to 64 age group.

Source: National Pension Corporation.

Indeed, payment of regular NPS old-age pensions will only begin in 2008, once the initial participants meet the minimum twenty years of contributions. In addition, recipients must be at least 60 years old, an eligibility age considerably below the mean of 65 years in the OECD area. However, two types of NPS old-age pensions were paid to a total of 176 000 persons in 1999; the *special old-age pension*, which covers persons over age 60 with an insured period of at least five years, and the *early old-age pension*, which is paid to those between the ages of 55 and 59 without jobs and at least ten years of participation in the NPS (Table 23). Since the level of benefits depends on the number of years of contributions, the average pension paid under both categories in 1999 was less than one-tenth the average wage (Table 24). Consequently, total outlays for old-age pensions under the NPS amounted to less than 0.1 per cent of GDP.[37]

In sum, pension outlays have been limited by the relatively small number of elderly and the immaturity of the NPS. Indeed, the maturity ratio – the ratio of recipients to contributors – was 1.6 per cent in 1999. Meanwhile, contributions to the partially-funded NPS rose to 1.8 per cent of GDP in 1999 with the increase in coverage. Consequently, the scheme is accumulating significant reserves, which totalled 10 per cent of GDP by 1999 (Figure 31). The Fund is managed by the National Pensions Management Committee, which is chaired by the Minister of Health and Welfare. Beginning in 1994, two-thirds of the NPS' surplus was auto-

Table 22. **Replacement rates by level of income**

A. In Korea

	Twenty years		Thirty years		Forty years	
	Old formula[1]	New formula[2]	Old formula[1]	New formula[2]	Old formula[1]	New formula[2]
A. 50% of average wage	55.0	45.0	82.5	67.5	110.0[3]	90.0
B. Average wage	35.0	30.0	52.5	45.0	70.0	60.0
C. 150% of average wage	28.3	25.0	42.5	37.5	56.7	50.0
Ratio of A to C	1.94	1.80	1.94	1.80	1.94	1.80

B. In other OECD countries

	Maximum replacement rate	Statutory retirement age (men/women)	Indexation of benefits
Belgium	60	65/61	Prices
Finland	60	65	Prices and wages[4]
France	80	60	Prices and wages[5]
Germany	70	65	Net wages
Japan	30	60/55	Net wages
Norway	67	67	Wages
Portugal	80	65	Prices
Spain	100	65	Prices
Sweden	60	60	Prices
United Kingdom	20	65/60	Prices
United States	41	65	Prices

1. The old formula for the annual pension benefit was $2.4 \times (A + 0.75B)(1 + 0.05n)$, where A is the average monthly income of all insured, B is the average monthly income of the contributor and n is the number of years of contributions over 20.
2. The new formula was introduced in 1999.
3. The replacement rate cannot exceed 100 per cent.
4. Indexation formula gives a 0.2 weight to wages and 0.8 to prices.
5. Prices for the basic scheme and wages for the earnings-related portion.

Source: OECD calculations and OECD (2001*a*).

matically lent to the central government (Panel B), limiting the scope to develop the capital market through increased investment. A small proportion has been used for the construction of welfare facilities, such as institutions to care for children or the elderly. The remainder of the Fund – around 30 per cent – has been invested in financial assets, including government and corporate bonds, equities, deposits in trust accounts, time deposits and beneficiary certificates (Table 25). Since its creation in 1988, the rate of return on the Fund has averaged 11.6 per cent, about four-fifths of the average market yield. The difference is largely due to a lower rate of return on investments in the public and welfare sectors.

Table 23. **National Pension Scheme programmes**

	Type of benefit	Eligibility conditions	Calculation of annual pension benefits[1]	Level of benefits[2]
Old-age pensions	Full old-age pension	– Insured term of more than 20 years – At least 60 years old	P1 = 1.8(A+B)(1+0.05n) n: the number of years of insured term in excess of 20	100% of P1 + additional pension
	Active old-age pension	– Insured term of more than 10 years – Economically-active persons between 60 and 64	P2 = P1 (or P3) × (0.5+0.1n) n: the number of years above age 60	50% to 90% of P1 or P3 (no additional pension)
	Reduced old-age pension	– Insured term of between 10 and 20 years – At least 60 years old	P3 = 1.8(A+B)(0.475+0.05n) n: the number of years of insured term in excess of 10	47.5% to 92.5% of 1.8(A+B) + additional pension
	Early old-age pension	– Insured term of more than 10 years – Non-active persons aged at least 55	P4 = P1 (or P3) × (0.75+0.05n) n: the number of years above age 55	75% to 95% of P1+ additional pension
	Special old-age pension	– Insured term of more than 5 years – More than 45 years old when NPS introduced – At least 60 years old	P5 = 1.8(A+B)(0.25+0.05n) n: the number of years of insured term in excess of 5	25% upwards of P1 + additional pension
Disability pension		– Disability due to sickness or injury during period of coverage	P6 = between 60% and 100% of P1, depending on severity	P6 + additional pension
Survivor pension		– Death of the insured – Death of the recipients of old-age or disability pension	– Insured term of less than 10 years: P1 × 0.4 – Insured term of between 10 and 19 years: P1 × 0.5 – Insured term of more than 20 years: P1 × 0.6	Between 40% and 60% of P1 + additional pension
Lump-sum refund		– Insured term of less than 10 years – At least 60 years old	– Contributions + statutory interest	

1. In the equation, A denotes the average monthly income of all insured persons while B is the average monthly income of the individual.
2. The additional pension amount was set at 161 250 won for spouse and 107 500 won for children and parents. The amount is adjusted each year by the change in the consumer price index.

Source: National Pension Corporation.

Table 24. **Benefits paid by the National Pension Scheme**
Thousand persons in 1999 and per cent

Type of benefit	Number of beneficiaries	Share of working-age population[1]	Total amount in billion won	Average benefit paid	
				Thousand won	Per cent of average wages
Early old-age pension	26.1	0.1	45.1	1 723.6	9.0
Special old-age pension	149.4	0.5	254.5	1 703.4	8.9
Invalidity pension	16.9	0.1	45.7	2 705.5	14.1
Survivor pension	93.2	0.3	132.0	1 416.7	7.4
Invalidity lump-sum compensation[2]	1.9	0.0	11.9	6 114.9	n.a.
Lump-sum refund[2]	962.9	3.2	3 378.8	3 508.8	n.a.
Lump-sum death payment[2]	4.1	0.0	4.0	972.6	n.a.
Total[3]	**1 254.6**	**4.2**	**3 872.0**	**1 671.0**	**9.4**

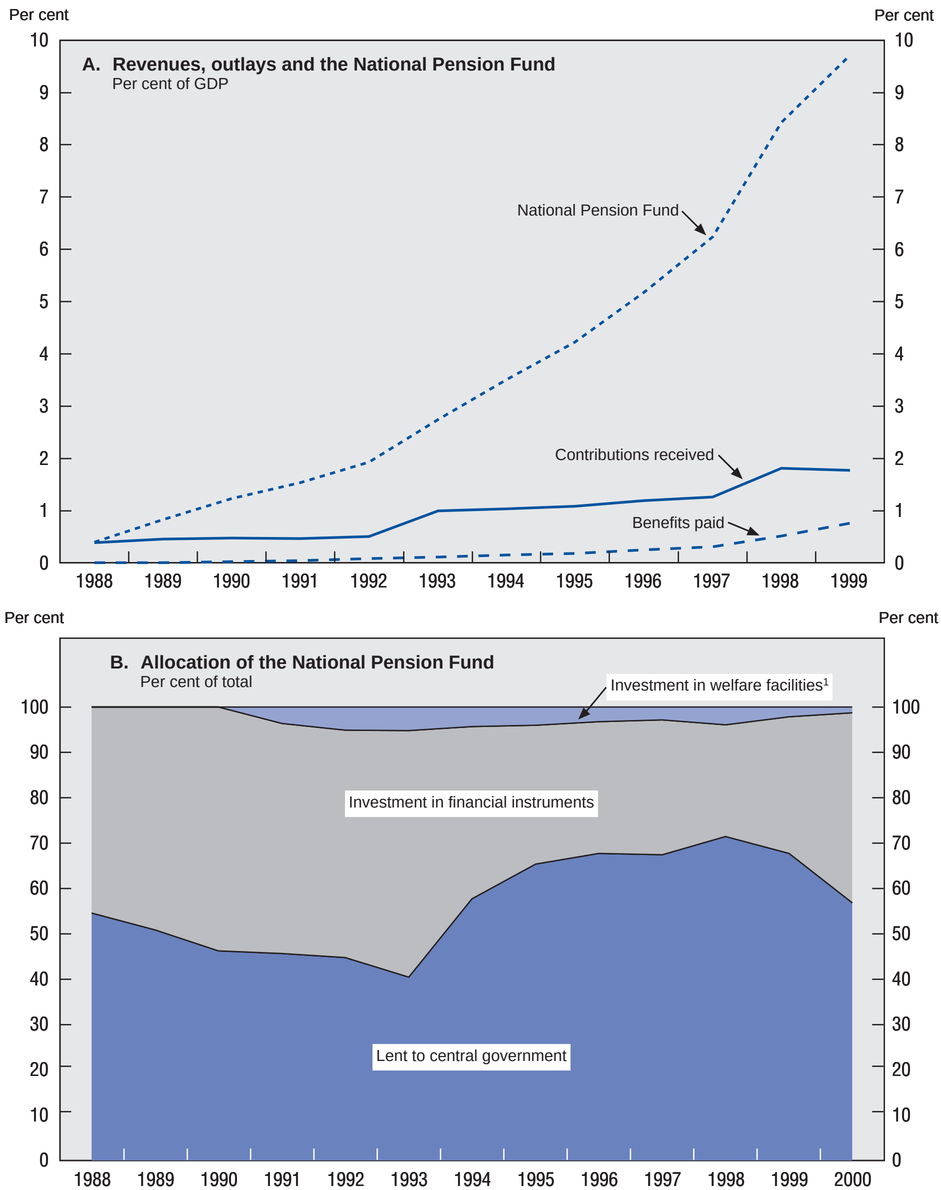
1. The 20 to 64 age group, which totalled 29.9 million in 2000.
2. One-time payment.
3. Total payments amounted to 0.8 per cent of GDP. For the average benefit paid, the total line shows the average of the four monthly payments (the top four lines).

Source: National Pension Corporation.

- Recent reforms of the NPS

The government, concerned about the sustainability of the NPS, established the National Pension Reform Board in 1997, which led to a number of parametric reforms the following year. *First*, the pension benefit accrual rate was lowered from 1.75 to 1.5 per cent. As a result, the benefit for an average-income worker with forty years of contributions would fall from 70 per cent of the present value of their lifetime average annual income to 60 per cent.[38] This is projected to reduce the total amount of pension benefits paid in 2050 by one-fifth. Despite the reduction, the average replacement rate when the NPS reaches maturity would be comparable to that in many European countries (Table 22). *Second*, the government mandated a gradual increase in the pension eligibility age from 60 to 65 over the period 2013 to 2033, reducing expected pension expenditures in 2050 by another 10 per cent. The combined effect of the two reforms would thus lower pension outlays in 2050 by 28 per cent. While these changes improve the financial sustainability of the pension system, changing the NPS only ten years after its introduction may have weakened its credibility. In addition to cutting average replacement rates, the 1998 reform also made the NPS less progressive by giving equal weight to the individual's earnings and the average wage of all the insured. Consequently, the reform will narrow the gap between the replacement rates of high and low-income earners (Table 22). Finally, the government decided to boost the contribution rate for both the urban and rural self-employed by 1 percentage point each

Figure 31. **Accumulation of assets by the National Pension Scheme**



1. Such as facilities to care for children and the elderly.
Source: National Pension Corporation.

Table 25. **The National Pension Fund**

A. Investment by sector

	Per cent of total			Average rate of return
	1988	1999	2000	
Public sector	54.6	67.8	56.9	10.6
Welfare sector[1]	0.0	2.1	1.2	10.8
Financial sector	45.4	30.1	41.9	13.0
Total	**100.0**	**100.0**	**100.0**	**11.6**

B. Investment in the financial sector

	Per cent of total			Average annual rate of return	Standard deviation
	1988	1999	2000		
Corporate bonds	10.8	8.7	30.2	13.2	1.6
Government bonds	10.3	39.1	40.2	13.2	0.9
Equities	0.0	10.0	15.4	17.0	51.8
Short-term products[2]	13.5	17.6	7.5	11.9	2.7
Beneficiary certificates	24.8	14.2	4.9	7.6	15.8
Other[3]	40.6	10.4	1.8	14.2	1.6
Total	**100.0**	**100.0**	**100.0**	**13.0**	–

1. Investment in facilities for the elderly and children.
2. Corporate paper, notes, CDs, etc.
3. Money in trust and time deposits.

Source: National Pension Corporation.

July beginning in 2000, bringing it to the 9 per cent rate paid by employees in 2005. While this may discourage the participation of the self-employed in the NPS, it should boost their pension contributions.

To enhance the transparency and autonomy of the National Pensions Management Committee, it was enlarged from 16 to 21 members in 1999 by adding five additional representatives from the private sector. At present, the committee consists of six government officials, one from the NPS, three each from labour and management federations, two private-sector experts and six representatives from rural and urban organisations. In 1998, it was decided to phase out the policy of mandatory loans to the government, resulting in a decline in the share lent to the government from 70 per cent to 57 per cent that was offset by an increasing share invested in the financial sector (Table 25). The allocation of investments in the financial sector has been rather volatile thus far, with the share in corporate bonds, for example, jumping from 8.7 per cent in 1999 to 30.2 per cent in 2000 (Panel B). Other changes were implemented at the end of 2000 to enhance the

Fund's stability and profitability. In particular, the Fund was allowed to invest overseas, as well as in KOSDAQ and in futures and options.

Occupational pension schemes

Prior to the establishment of the NPS, three pension systems for specific occupations were created: civil servants (1960), military personnel (1963) and private-school teachers (1975). The civil service scheme, which includes public-school teachers, insured almost one million persons by 1997. Although the number has fallen during the past few years as government employment has declined and the retirement age for teachers was reduced, it still covers about 5 per cent of the labour force. With 350 000 persons insured by the other two schemes, the occupational plans cover a total of 1.3 million persons, about 4 per cent of the working-age population (Table 26). Each pension plan is managed separately by different government ministries. Pension portability is permitted within the three occupational systems but not between the NPS and the occupational systems, thus hindering labour mobility. The occupational schemes differ in a number of

Table 26. **Occupational pension schemes**

A. Coverage (thousand persons)

	Number of insured	Number of beneficiaries	Average monthly pension: In thousand won	Average monthly pension: Per cent of average wage
Civil servants	952.0	82.0	1 143.0	80.1
Military[1]	154.0	70.0	915.6	64.2
Private-school teachers[2]	207.7	10.0	1 342.1	94.1
Total	**1 313.7**	**162.0**	**1 057.1**	**74.1**

B. Financial situation (billion won in 1998)

	Government contributions	Employee contributions	Government subsidy	Total revenue[3]	Total expenditures	Balance	Fund
Civil servants	1 009.0	965.4	0.0	3 316.3	5 069.8	–1 753.5	4 784.4
Military	130.6	130.6	537.1	942.1	769.2	172.9	414.4
Private-school teachers[4]	208.5	241.5	0.0	995.7	552.2	443.5	3 442.8
Total	**1 348.1**	**1 337.5**	**537.1**	5 254.1	**6 391.2**	**–1 137.1**	**8 641.6**
As per cent of GDP	0.3	0.3	0.1	1.2	1.4	–0.3	1.9

1. Number of beneficiaries is estimated to have increased from the 66 000 reported in 1996.
2. 1999.
3. Includes other revenue, notably interest from the fund.
4. The total in the "government contributions" column includes funds 151 billion won from private schools.

Source: Hyung-Pyo Moon (2000).

ways from the NPS. *First*, the pension benefit accrual rate is higher, resulting in a replacement rate of 76 per cent for a worker with the maximum 33 years of contributions.[39] *Second*, pension benefits have been indexed to wage levels, rather than consumer prices as in the NPS, resulting in a faster rate of growth. Civil servants also receive a lump-sum retirement allowance, fully-financed by the government, equal to 60 per cent of their final monthly salary for every year of employment. At the end of the 1990s, the average pension for the 160 000 persons receiving benefits was around 70 per cent of the average wage.

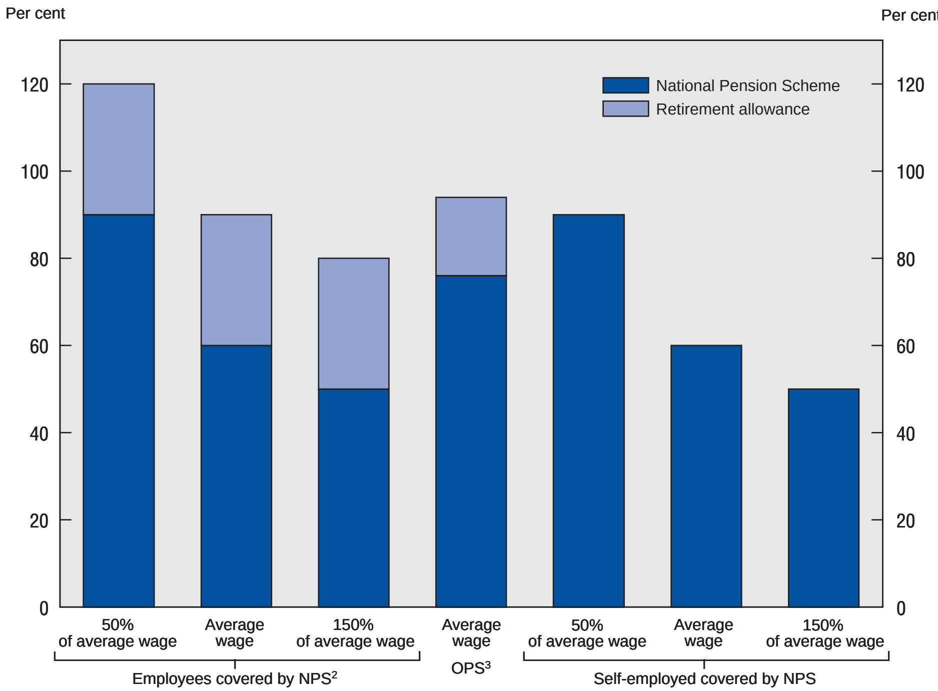
The civil servant and military personnel schemes have reached maturity as workers with 33 years of contributions are receiving benefits. Despite a steady increase in contribution rates to 17 per cent, both are already running financial deficits as a result of paying benefits that are too high relative to contributions. The situation of the civil service scheme, which first incurred a deficit in 1995, has been exacerbated by government restructuring following the crisis, which has reduced the number of contributors. At the same time, the amount of benefit payments, including lump-sum refunds, increased as the number of people leaving government employment rose. As a result, the civil service scheme is receiving a subsidy from the government in 2001. The military personnel scheme is in even more severe financial difficulty in the context of a constant number of contributors and a continuous rise in beneficiaries. The reserve fund was depleted in 1977 and the scheme has relied on a government subsidy, which in 1998 was more than four times greater than the contributions from the insured. The plan for private-school teachers, though, remains in surplus, thanks to its large reserve fund. However, with the 49 per cent average annual growth in expenditures since 1975 outstripping the 27 per cent rise in revenues, problems are likely to emerge in the future.

Several reforms have been adopted recently to address the growing problems in the occupational pension schemes. *First*, a minimum pension age of 50 was established for civil servants with less than twenty years of contributions as of January 2001. The minimum age will be gradually increased to 60 by the year 2020. *Second*, the indexation of benefits was shifted from wages to prices.[40] *Third*, benefits will be based on earnings during the last three years of work, rather than on the final year. *Fourth*, a person who finds a new job after leaving public service is not allowed to collect the full amount of the pension, although this may discourage older workers from remaining in the labour force.

The implications of the current system for the income of the elderly

Even after the NPS reaches maturity at around the year 2030, the level of retirement income will vary widely across the labour force, reflecting different pension programmes, the less than universal coverage and the retirement allowances provided to some employees. An employee with forty years of service at a firm who earned the average wage and had not already touched his or her retirement

Figure 32. **Pension income by type of worker**[1]
Per cent of average lifetime income



1. Once the NPS reaches maturity, *i.e.* the newly-retired have contributed throughout their working life. This will occur around the year 2030.
2. Assumes 40 years of service with a firm and that the worker has not received any of the retirement allowance prior to leaving the firm.
3. Occupational pensions schemes, covering civil service, military and private-school teachers. The replacement rate is based on the average of the last three years of work rather than lifetime earnings. Consequently, the replacement rate would be further increased relative to those covered by the NPS. As the pension benefit formula does not include a redistributive element, only the average wage is shown. The maximum pension is obtained after 33 years of work.

Source: National Pension Corporation and OECD.

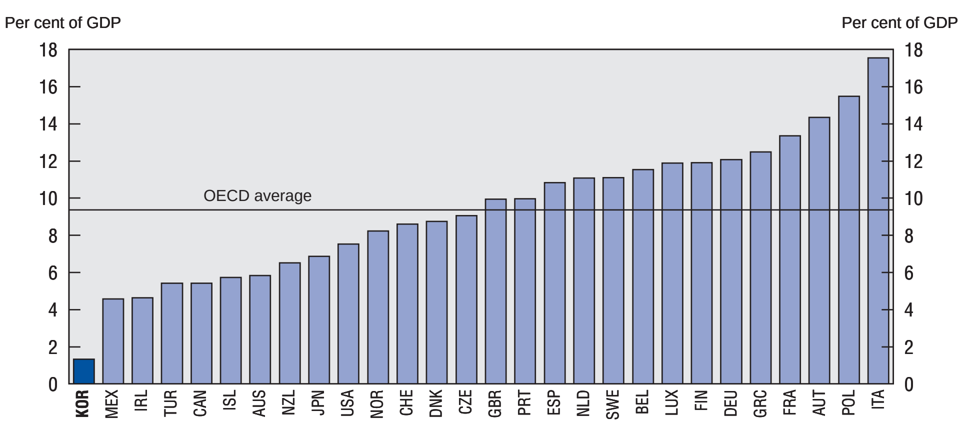
allowance would receive a benefit that could take the form of an annuity providing around 30 per cent of average annual income. In addition, that employee would also receive an NPS pension providing 60 per cent of lifetime earnings. The total replacement rate would thus be around 90 per cent (Figure 32), a very high level by international standards. To finance such generous benefits, the combined burden of the NPS and the retirement allowance would have to exceed a quarter of the wage bill. For participants in the occupational schemes, an even higher replacement rate could be obtained after 33 years of work. However, the replacement rates for the self-employed or employees not receiving a retirement allowance would be considerably lower. For such a worker earning the average wage, the total replacement rate would be 60 per cent, assuming that contributions had been fully paid. Finally, given that the number of contributors to the NPS is currently limited to half of the labour force, a majority of workers in 2030 would not receive the full pensions shown in Figure 32, which are based on forty years of contributions.

Social welfare programmes for the elderly

As noted above, the proportion of the elderly receiving old-age pensions is low at present. About 2½ per cent of the population over age 55 in 1999 received old-age benefits from the NPS and the share remained under 5 per cent after adding the occupational schemes.[41] Total expenditures – including old-age, disability and survivor benefits under the NPS and the occupational schemes – amounted to about 1 per cent of GDP in 1997, well below the OECD average of 9 per cent (Figure 33). Given the immaturity of the pension systems, social assistance

Figure 33. **Comparison of public pension expenditure in OECD countries**[1]

Per cent of GDP in 1997



1. Pension expenditure shown here is the sum of public expenditure on old-age and disability cash benefits plus survivor pensions. Differences in the tax treatment of pensions across countries are not taken into account. The OECD average excludes Hungary.

Source: Eurostat, Sespros database, January 2000; OECD, Social Expenditure database, 2000 and OECD Secretariat.

programmes will remain the major policy tool to affect the income of the elderly during the next decade. However, social assistance in Korea remains limited compared to other OECD countries. The major source of support is the Livelihood Protection Programme, which is means-tested based on income, including the earning capacity of the extended family, and assets. In 1999, 2 million persons – 4.1 per cent of the population – received benefits under this programme.[42] These programmes, though, covered only half of those with income under the minimum cost of living, reflecting the tight eligibility conditions. The introduction of a "productive welfare" system in October 2000 makes benefits, which had been subject to the availability of funds, a right. However, with the eligibility conditions virtually unchanged, the number of recipients is projected to rise less than 3 per cent in 2001.

Among the recipients of benefits under the Livelihood Protection Programme in 1999 were 250 000 persons over the age of 65 – about 8 per cent of the elderly population. The cash benefit level under the pre-2000 system was restricted to a maximum of 60 per cent of the minimum cost of living. An additional 375 000 elderly persons with low incomes received a small old-age allowance in 1999 that was set at 50 000 won (about 3 per cent of the average wage) for those over the age of 80 and 40 000 won for those between the ages of 65 and 79. In addition to the limited coverage and low benefits provided by social assistance, disability pensions, a popular device to support the elderly in some OECD countries,[43] have been relatively unimportant in Korea following their introduction in 1988. A decade later, there were less than 17 000 recipients (Table 24). Moreover, less than half of the recipients were over the age of 50. Survivor pensions are more important, providing benefits to almost 100 000 persons in 1999, of whom about half were under the age of 50. The amount of such benefits, which are provided in the case of the death of an insured person or recipient of an old-age or disability pension, are relatively small, given the limited contribution period.

Healthcare for the elderly

Total healthcare spending in Korea is one of the lowest in the OECD at 5 per cent of GDP in 1998, of which the government share was about half. Korea's healthcare system, which resembles in some respects its Japanese counterpart, is based on universal health insurance coverage and fee-for-service payment for provision of care. Patients have a large degree of freedom in the choice of doctors, although a referral system through primary-care doctors has been in effect since 1989 for access to special hospitals and general hospitals in the region where patients live and to all medical services outside that region.[44] Service providers are predominantly private but under extensive government regulation on the prices of drugs and medical services that are reimbursed by insurers as well as on the supply side more generally. The regulation of prices, combined with high co-payments, which range from 20 per cent for hospitalisation to 50 per cent for outpatient care at a general hospital,[45] explain the low level of healthcare spending in Korea. Another factor has been the important role of pharmacists, which to some extent have provided a cheaper substitute for doctors for persons suffering minor ailments. In 1997, 42 per cent of medical visits were to pharmacists, with an average cost that was less than a third that of a visit to a doctor. As in Japan and some other countries in Asia, pharmacies were allowed to sell drugs without a doctor's prescription while doctors were allowed to sell a set of approved drugs directly to patients. Concerned that this practice was contributing to over-prescription of drugs, the government imposed a complete separation between prescription by doctors and dispensing by pharmacies in August 2000.

Given the low level of spending, the contribution rate for medical insurance is set at only 3.4 per cent of wage income, split equally between the employee and the employer with no capping.[46] Universal coverage, which was implemented in 1989, has been assured by three types of schemes: a programme for civil servants; 139 workplace schemes covering firms with at least five employees; and 227 regional schemes covering the self-employed. The contribution rates varied widely between insurance schemes, with the government subsidising the deficits in the regional schemes. The government has launched a major reform to create a single National Health Insurance by integrating the existing schemes. The objective is to eliminate the gaps in insurance contributions across the various funds despite the subsidy, which was intended to compensate for differences in health risks across the funds. The administrative integration was achieved in 2000, but financial integration has been lagging owing to the difficulties in arriving at a formula for fixing the premiums for the self-employed in ways that would ensure horizontal equity *vis-à-vis* wage earners. Once fully integrated, the National Health Insurance would be similar to the Sickness Insurance in the French Social Security system.

Over 95 per cent of elderly Koreans are covered by health insurance, while the remainder are taken care of by social welfare programmes that provide medical care. The elderly are usually included on the insurance of their oldest child, even if they live in a separate residence.[47] Otherwise, they are required to pay insurance premiums by themselves. Although the benefits covered by health insurance are fairly extensive, the co-payments noted above, which are not capped, represent a significant financial burden on the elderly. The burden has been especially large for those suffering serious illness, given the limits on the reimbursable period of treatment that existed until very recently.

Family members have traditionally provided care for the frail elderly. Given the reliance on family care as well as the low proportion of elderly in the population, long-term care services have not been well developed (Box 4). While family care is still prevalent, it has become increasingly difficult to rely on this source owing to changing social values, the fall in family size and the increasing participation of women in work and voluntary activities. Indeed, the number of

Box 4. Provision of long-term care for the elderly

Long-term care is provided in two ways. *First*, service is provided to the elderly staying at home. There are currently 78 home-help service centres that send helpers to the elderly. Home assistance is complemented by services at 42 day-care centres and 21 short-term care centres. These services are available free of charge for the recipients of public assistance, at reduced fees for poor elderly and at full price for others. *Second*, the elderly receive services in long-term care facilities. In 2000, 13 172 persons (0.4 per cent of those aged 65 and over) were cared for in 233 facilities. There are three kinds; private fee-paying facilities for the relatively wealthy elderly; low-cost facilities provided by charitable groups, often at subsidised fees for particular groups of elderly; and free facilities for poor elderly provided as social assistance (Table 27). The financing of the free home and institutional services is shared equally by the central government and municipalities except Seoul, which bears 70 per cent. The government provides financial support to low-cost institutions run by charitable groups and caps the fees at 310 000 won for elderly homes, 340 000 won for nursing homes and 535 000 won for dementia nursing homes. For private-sector institutions, the government sets minimum standards for equipment, facilities and the number of staff.

Table 27. **Welfare facilities for the elderly in 2000**

		Government sector (free)			Charitable group (subsidised fees)		Private sector (market price)			
	Total	Elderly home	Nursing home	Dementia nursing home	Elderly home	Nursing home	Elderly home	Nursing home	Dementia nursing home	Special elderly home
Number of facilities	**233**	92	76	21	4	13	20	4	1	2
Number of residents	**13 172**	4 779	4 561	1 975	98	724	654	60	139	182

Source: Ministry of Health and Welfare.

elderly living alone doubled from 6.6 per cent in 1985 to 13.2 per cent in 1995. In view of these changes, the government has begun to pay attention to the provision of long-term care for the elderly, focusing on increasing capacity rather than improving the quality of care. The number of welfare facilities (and of residents) increased by 35 per cent (38 per cent) over the three years to 2000 and is expected to continue rising at a rapid pace.

The impact of ageing under the current framework

Population ageing will slow economic growth at the same time that a rising dependency ratio will increase the demands for public spending on pensions and healthcare for the elderly. These issues have been analysed by the OECD's Ad Hoc Working Group on the Fiscal Implications of Ageing (Box 5). The work on Korea in this exercise was based on a central scenario of 2.9 per cent average annual growth over the next five decades (see Annex I). The growth projection is based on the assumption that male labour force participation rates remain unchanged, while those for females increase significantly, thus limiting the decline in the labour force following its peak in 2025 (Figure 34). This section discusses the fiscal impact of population ageing in this scenario followed by an assessment of the fiscal sustainability of the current system. While a discussion of developments over the next half-century is necessarily speculative, quantifying a range of potential outcomes helps to identify the challenges facing policymakers.

The fiscal effect of ageing

Under the long-term economic scenario outlined in Annex I, the Korean experts in the working group projected that public expenditures on old-age pensions under the NPS and the occupational pension schemes, including disability payments, survivor payments and lump-sum refunds, would rise from 2.4 per cent of GDP in 2000 to 10.5 per cent by 2050. The 8-percentage point rise is among the largest of the 22 OECD countries included in the working-group exercise (Figure 35), reflecting, in part, the fact that Korea's public pension system is at a relatively early stage compared to other OECD countries. The projected rise is similar to a recent projection by the World Bank. Moreover, sensitivity tests showing the impact of different assumptions about fertility, life expectancy, and labour force participation rates suggests a fair degree of robustness for these results.

The 8-percentage point projected rise in expenditures is equally due to the ageing of the population and the increased number of eligible persons as the NPS matures. Indeed, the number of recipients of public pensions, including the occupational schemes, may increase at a 6½ per cent average annual rate, boosting the absolute number from 350 000 in 2000 (10 per cent of the over 65 age population) to nearly 10 million in 2050 (80 per cent). In addition to expanded coverage, the average benefit will increase from the current level of less than 10 per cent of average wages towards the target rate of 60 per cent. While the amount of expenditure by programme is not available from the working-group exercise, the bulk of the increase is likely to be accounted for by the NPS. According to an estimate by the Pension Reform Task Force, NPS outlays will rise at a 7 per cent average annual rate, adjusted for inflation, over the next fifty years, boosting its share of GDP by 5 percentage points. Rising expenditures under the

Box 5. The OECD's Ad Hoc Working Group on the Fiscal Implications of Ageing

An OECD working group has conducted a co-ordinated multinational exercise on the fiscal impact of population ageing over the period 2000 to 2050. Country experts have used country-specific models embodying complex institutional details to make estimates of the effect. To provide consistency between the individual country estimates, common assumptions about the broad macroeconomic environment were agreed to by the countries. The major assumptions were:

- **Fertility rates** converge to a range of 1.5 to 1.8 by 2050. For Korea, the rate is projected to rise from 1.7 to 1.8 between 2000 and 2015 and then decline to 1.55 by the end of the period.
- **Life expectancy** increases by 4½ years for men and 3¾ years for women over the next fifty years. For Korea, it is assumed to rise by 6 and 4.9 years for men and women, respectively, reflecting the lower starting point.
- **Labour force participation rates** remain constant for men, while those for women converge to within 5 percentage points in countries with widely-available subsidised childcare and 10 percentage points in other countries. For Korea, the participation rate for women between the ages of 20 and 54 is projected to rise to 77 per cent, narrowing the gap with men in that age group from 29 to 10 percentage points. In the 55 to 64 age cohort, the female rate increases from 52 to 60 per cent, reducing the gap from 22 to 14 percentage points over the fifty-year period. It was also assumed that the participation rate for those over 65 in Korea falls from 32 to 29 per cent over the same period.
- **Labour productivity** growth converges to an annual rate of 1¾ per cent, with a higher rate allowed in low-productivity countries. For Korea, a rate of 2.7 per cent through the year 2050 is projected.

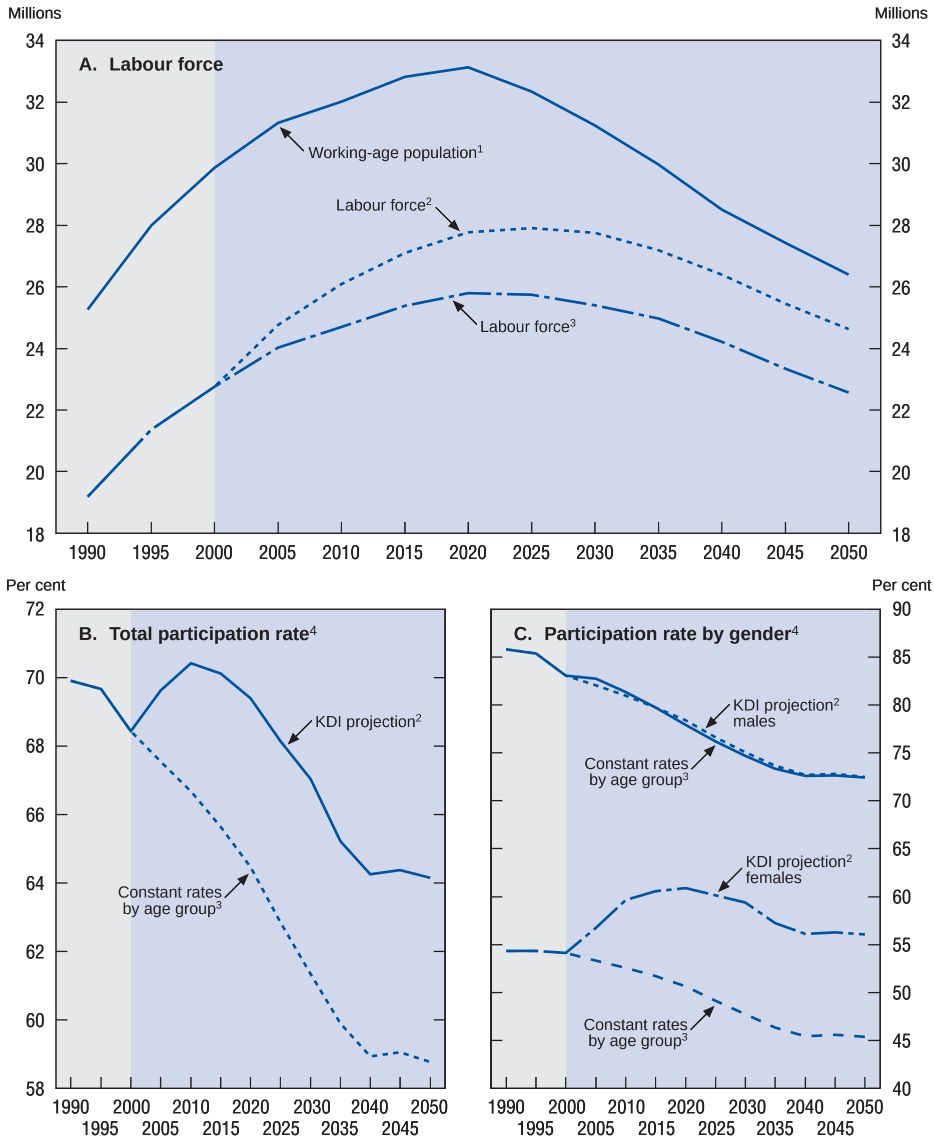
In the case of Korea, experts at the Korea Development Institute, a government-funded research organisation, made the projections based on these assumptions.

The projections for individual countries cover a wide range of expenditure items.

- **Old-age pension spending**, including survivor pensions. In the case of Korea, this includes the NPS and the occupational pension schemes.
- **Early-retirement programmes**, such as certain active labour market programmes, unemployment and disability pensions. In Korea, disability pensions were included in this category.
- **Healthcare for the elderly**, including ambulatory and acute hospital care, as well as pharmaceuticals.
- **Long-term care**, including retirement homes and nursing care.
- **Education spending** at all levels.
- **Family and child allowances**, which do not exist in Korea.

As a general rule, the assumptions on spending are based on policies legislated no later than 2000. Thus, Korea's 1998 pension reforms are included.

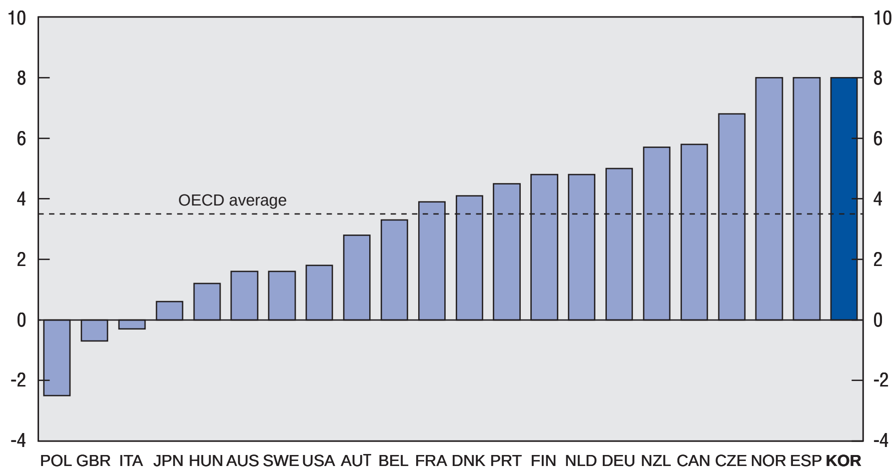
Figure 34. **Labour force projections**



1. Population in the 20 to 64 age group.
2. Projection by KDI prepared as part of the OECD's Ad Hoc Working Group on the Fiscal Implications of Ageing.
3. Assumes that participation rates remain at their 2000 levels for each age group of men and women.
4. As per cent of population over the age of twenty.

Source: KDI and OECD calculations.

Figure 35. **Projected increase in old-age pension spending**
Percentage points of GDP over 2000 to 2050



Source: OECD.

occupational schemes over the next five decades would account for the rest of the increased pension outlays. As noted above, the civil service and military schemes are already running deficits. Under the current framework, the deficit on the civil service scheme would reach 3 per cent of GDP around 2030. To finance the current system without relying on government subsidies would require a contribution rate of around 25 per cent.[48] The private-school teachers' system is projected to record deficits beginning in 2018 that would exhaust its reserves by 2029.

Healthcare expenditures on the elderly will also rise as the population ages. However, projections in this area are more difficult than for pensions, since medical spending depends on the behaviour of individuals and advances in technology, which are inherently unpredictable. Moreover, it is uncertain whether healthcare expenditures are driven by having more people that are relatively old or more people in the final years of their lives. The average increase for the other countries in the working group exercise for which estimates are available is 3 to 3½ per cent of GDP over the next fifty years. One would normally expect a significant rise in Korea as well over that period, given the rapid population ageing that is projected.

In many OECD countries, the decline in the number of children is expected to reduce government expenditure at the same time that ageing increases it. In the exercise outlined in Box 5, age-related spending, apart from pensions and healthcare, was projected to fall by an average of one percentage point of GDP, primarily reflecting lower outlays on education. Korea also projects a decline in the absolute number of youth under the age of 20, from 14 million to 9.3 million between 2000 and 2050, thus reducing their share of the total population from 30 to 20 per cent. However, the projections for Korea do not include a cut in education spending, which was 3.6 per cent of GDP in 1994, compared to the OECD average of 5.1 per cent. Maintaining spending levels would allow a reduction in class sizes, which are among the highest in the OECD area.

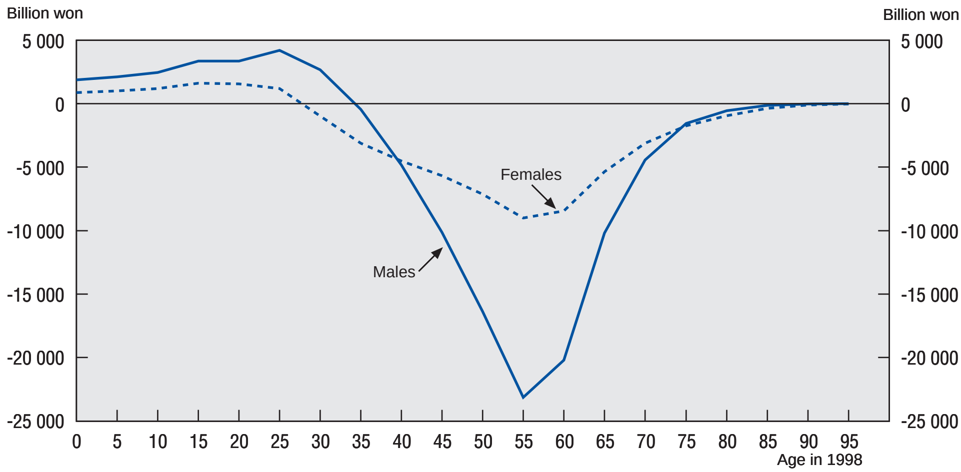
Assessment of fiscal sustainability

The generosity of pension benefits, combined with the rapid ageing of the population, make the financing of the current pension system problematic. It is true that Korea has a low tax pressure at present and the 8-percentage point projected rise in public pension outlays would only put it in the middle range of OECD countries in 2050. Nevertheless, the extent of the change may well have a profound impact on the Korean economy. To ensure the long-run sustainability of the NPS, the contribution rate would have to double to 17.2 per cent over the next three decades.[49] Combined with the retirement allowance system, pension contributions would total 25.5 per cent of wages, with a likely negative impact on the labour market and the potential growth rate. Indeed, a majority of the members of the Pension Reform Task Force agreed that the contribution rate for the NPS alone should not rise above 15 per cent of wages, while a minority believed that 10 per cent should be the maximum, with the remainder borne by the government budget. Moreover, North Korea presents an enormous potential fiscal burden to South Korea. Although the timing of the costs is uncertain, it would be prudent to maintain tax pressure at relatively low levels to enhance the ability to respond to the challenge posed by economic integration with the North (see Annex II).

Korea faces a difficult challenge in trying to introduce a generous, partially-funded public pension scheme – in the context of a rapid demographic shift – to a population unfamiliar with the concept of a pension. Indeed, the hike in the contribution rate necessary to sustain the NPS would tend to discourage increased participation. As noted above, 5.2 million regular employees accounted for about half of the contributors to the NPS in 1999. Of the remaining 16.4 million people in the labour force,[50] only 5.5 million, or one-third, have opted to pay contributions to the NPS, which for most of them, is obligatory. The proportion contributing remained low despite a contribution rate of only 3 per cent until July 2000 and a pension benefit providing a replacement rate of 60 per cent on average. The planned hike in the contribution rate to 9 per cent for locally-insured persons by 2005, as well as the further increases likely to be necessary in the future, will tend to limit the increase in the number of contributors to the NPS. Even assuming that

Figure 36. **Transfers between generations under the current system**[1]

Billion won



1. Positive values indicate that pension contributions exceed benefits. Assumes a discount rate of 3 per cent and economic growth of 1.75 per cent.

Source: Yun (2000).

coverage increases as hoped, maintaining the viability of the NPS requires a large net transfer of income from individuals under the age of 35 in 1998 to those above that age (Figure 36). Despite the enormity of the challenge, the relative youthfulness of the population and the immaturity of the public pension scheme facilitate major reforms in Korea. In contrast, existing institutions and "acquired rights" greatly complicate effective reform in many other OECD countries.

Policies to cope with the ageing of the population

The 1998 OECD report, *Maintaining Prosperity in an Ageing Society*, identified seven principles to deal with demographic change (Box 6). The most crucial aspects from a Korean perspective are the recommendations to reduce the public expenditure burden of ageing and to provide retirement income from a variety of sources so as to diversify risk, achieve a better balance of burden-sharing between generations and give individuals more flexibility. This section starts by outlining a multi-pillar approach that would achieve these goals. The following sections discuss policies to encourage labour force participation by older workers, tax pension income, improve the management of pension reserves, reform the healthcare system and ensure the adequacy of the social welfare system.

Box 6. Maintaining prosperity in an ageing society

This 1998 OECD report identified seven principles to help countries prepare for the impact of population ageing. The principles encompass a multi-faceted approach, covering fiscal, social, labour market, financial market, health and education policies. The report emphasises the importance of implementing these policies before demographic pressures begin to emerge. The seven principles are listed below with a short description of Korea's progress in each area.

1. **Remove financial incentives to early retirement and financial disincentives to later retirement.** At present, the NPS does not appear to weaken work incentives, given the relatively small number of contributors to the system and the low benefits. Moreover, the seniority wage system puts a premium on remaining in the workforce. As the pension system matures and the seniority wage system weakens, care should be taken to avoid any disincentives to work. One concern in this area is the low retirement age of 55 in place at many companies.
2. **Ensure more job opportunities for older workers and equip them with the necessary skills.** In the wake of the financial crisis, Korea faces an emerging problem of unemployment among workers over the age of 50. In part, this is due to restructuring of the financial and corporate sectors. Providing opportunities for re-training for older workers is important in order to maintain the currently high employment to population ratio for this group.
3. **Reduce the fiscal burden of ageing, perhaps through reductions in benefits and anticipatory hikes in contribution rates.** Korea faces a large fiscal impact from ageing that should be addressed by the systemic reforms proposed in this chapter.
4. **Provide retirement income through a mixture of tax and transfer systems, funded systems, private savings and earnings in order to diversify risk, achieve a better balance of burden-sharing between generations and give individuals more flexibility.** Korea's present system is too centred on public provision of income and is likely to result in large transfers between generations. Systemic reforms of the type described in the chapter are essential.
5. **Achieve greater cost-effectiveness in health and long-term care of the elderly.** At present, Korea's healthcare system provides a low level of service at a low price. Reforms to increase efficiency in the system are essential to cope with ageing and rising income, which create demand for increases in the quality and quantity of healthcare.
6. **Develop a modern and effective regulatory framework for private pensions.** Weak supervision of financial institutions, such as life insurance companies and investment trust companies, has hindered the development of individual pension accounts. In moving to a system of corporate pensions, an effective regulatory framework will be essential.
7. **Create a strategic policy framework.** Ensuring co-ordination between ministries responsible for policies related to the elderly is important.

Establishing a multi-pillar pension system

Korea's fragmented system of providing income support to the elderly is no longer sufficient in the context of rapid social and economic changes and the ageing of the population. Consequently, the government has attempted to adopt a more universal approach. However, the analysis above has established a number of weaknesses in the current public pension framework, which are summarised here. *First*, ensuring the long-run sustainability of the public pension schemes will require high contribution rates, with negative consequences for labour markets and potential growth. *Second*, the envisaged increases in the contribution rates would impose a significant burden on future generations. *Third*, it appears difficult to justify the wide range in pension benefits that will be paid to members of the same generation as the system matures, such as those covered by the occupational pensions and the retirement allowance. *Fourth*, only half of the labour force contributes to the NPS at present, and it may be difficult to increase this proportion in the face of the required increase in contribution rates. *Fifth*, the lack of linkages between the NPS and the occupational schemes limits labour mobility. *Sixth*, the practice of lending most of the surpluses generated by the NPS thus far to the government has been problematic. On the one hand, it represents a missed opportunity to increase liquidity and demand in the markets for equities and long-term bonds, thus denying a source of stable financing to the private sector. In addition, the existence of a large fund that may eventually approach 100 per cent of GDP presents a temptation to use it to finance government consumption or politically-motivated investment.[51]

The above analysis has also identified serious shortcomings in the two private-sector schemes to provide retirement income. The retirement allowance system, implemented at a time when there were no employment insurance or public pension systems and when labour mobility was less pronounced, is an anachronism in today's economy. With the greater mobility of workers and the establishment of public pension and employment insurance systems, there appears to be little rationale for what has become a mandatory separation allowance. The vulnerability of these payments to weak economic conditions became apparent in 1998. Moreover, the sudden surge in labour costs during a period of downsizing was an added blow to firms hard hit by the recession, as well as to the government, which complicated the process of restructuring. Finally, the allowances are limited to a small portion of the labour force. As for the individual pension accounts, these have failed to play an important role in promoting saving for old age. Instead, they appear popular as a tax haven for high-income earners.

The September 2000 report by the Pension Reform Task Force recommends a multi-pillar system in which private-sector savings play a larger role than at present.[52] While the report did not propose a specific recommendation for reform, it envisaged a system consisting of three pillars:

- A mandatory public basic pension that provides a defined benefit to all elderly.
- A mandatory corporate pension system. In the Task Force's September 2000 report, the majority view was that this should be operated as a defined contribution scheme.
- A voluntary private pension scheme based on individual accounts.

The principles agreed to by the Task Force are summarised in Box 7. The paragraphs below outline the form that such a multi-pillar system might take. In the transition period, the acquired rights of existing pensioners would be fully honoured.

Box 7. The Pension Reform Task Force

The Task Force was established in December 1998 in the context of negotiations with the World Bank for a Structural Adjustment Loan. The Task Force, which has 28 members, was assigned five major tasks:

- Diagnose the financial soundness of the NPS and the three occupational schemes.
- Study the conversion of the retirement allowance system into a corporate pension scheme and measures to improve individual pension accounts.
- Examine policies to ensure an appropriate level of old-age income protection for all persons.
- Enhance equity among different participants – private-sector employees, self-employed and civil servants – in terms of contribution rates and benefits.
- Link the NPS and the occupational schemes to facilitate labour mobility.

In its report issued in September 2000, the members of the Task Force agreed on six major issues. *First*, the majority view was that private pensions should play a more active role, while that of public pensions should be gradually reduced, in part by lowering the benefits paid by the NPS. *Second*, the retirement allowance system should be transformed into a corporate pension system. *Third*, public pensions should be operated as a defined benefit scheme while corporate pensions should be based on defined contributions. *Fourth*, the majority view was that 15 per cent should be the maximum contribution rate, although a minority argued for a cap of 10 per cent, with additional pension expenditures financed by the government budget. *Fifth*, corporate pensions and individual pension accounts should be fully portable. *Sixth*, measures should be prepared to grant pension rights to those excluded from the NPS and low-income elderly persons. In addition, the Task Force discussed four options for pension reform, ranging from reforming the existing structure to introducing major systemic reforms.

A mandatory public pension

An important problem of the current pension system noted above is the low amount of contributions from locally-insured persons – notably the self-employed, temporary and daily workers and employees at small firms – to the NPS. Given that the NPS consists of two parts – one based on average wages and one based on individual income – locally-insured persons are able to benefit from the income redistribution aspect while failing to pay their full contributions. The lack of horizontal equity tends to undermine political support for public pensions and encourages the creation of a separate scheme for the self-employed and non-regular employees. One solution would be to change the financing of the two components of the NPS. The redistributive element could be financed by general tax revenue[53] and provide a basic universal pension. Such an approach would resolve the problem of low participation in the NPS and take the place of the support provided to the elderly by the Livelihood Protection Programme. A replacement rate near the minimum cost of living – which is around 20 per cent of average wages – would be appropriate. Alternatively, this first tier could be provided by social assistance to the elderly with incomes below this level. However, this would require easing the asset test currently applied by the Livelihood Protection Programme, as well as the income test for family members.

The second tier of the first pillar could be an earnings-related, defined-benefit pension that is actuarially fair, providing a replacement rate of around 20 per cent. It should absorb the current occupational schemes in order to provide equal treatment to those in the private and public sectors. There would be several advantages to maintaining such a scheme distinct from the mandatory corporate pension system proposed below.[54] *First*, while a corporate pension system could easily cover workers at firms with more than five workers – about a quarter of the labour force – ensuring the participation of the remainder of the labour force would be more difficult. This group – temporary and daily employees, part-time workers, employees at firms with less than five workers, the self-employed and family workers – are only tenuously linked to corporations, if at all. In practice, participation of these workers in a corporate-based scheme would be voluntary. Without the proposed government-run second tier in the first pillar, these workers would no longer be required to contribute to a pension scheme, which would be a large step backwards. As noted above, 5.3 million persons in this group contributed to the NPS in 1999 as locally-insured persons, although their average contribution was small. Since the proposed second tier does not include any redistribution, locally-insured persons would have an incentive to declare more income in order to get an adequate pension. *Second*, the existence of a government-run scheme in parallel with the privately-run corporate scheme is a way of diversifying risk in Korea, where long-term capital markets are immature and some financial institutions face problems of insolvency.

Transforming the retirement allowance into a corporate pension system

Such a first pillar, providing a replacement rate in the neighbourhood of 40 per cent, would achieve the objective of reducing the public-sector role in providing retirement income. This should be accompanied by an increase in private-sector savings through the transformation of the retirement allowance into a mandatory corporate pension. It should aim at a wider coverage than the current retirement allowance, which is limited to only a quarter of the labour force. Indeed, all employees should be included, regardless of status or firm size, while the self-employed should be allowed to join voluntarily any corporate pension scheme. In contrast to the retirement allowance, a corporate pension scheme should be a fully-funded, defined-contribution system managed in the private sector. Firms would be required to contribute a set amount for each worker into an individual account that is fully portable. While the companies would be allowed to choose the organisation that manages the fund, it would be strictly separated from the firms' balance sheets so that the benefits would be secure. In the case of public-sector workers, the government would make the same contributions and be subject to the same rules as an employer in the private sector. A key requirement to assure the success of such a system would be an upgrading of supervisory capacity by the government, particularly in light of the unfamiliarity with annuities in Korea. Supervisors would closely monitor these institutions and disqualify those that do not follow prudential rules or which do not achieve minimum rates of return. To cover the failure of a management organisation, part of the contribution from employers should go to an insurance scheme, analogous to the Wage Claims Guarantee System for the retirement allowance. This insurance would also cover payments by firms unable to meet their contributions.

The transition from the retirement allowance to a corporate pension scheme would be problematic for both workers and firms. From the viewpoint of workers, the retirement allowance is an integral part of their income and they are attached to the lump-sum payment approach. Clearly, existing claims would have to be honoured, either converted into the corporate pension or paid as lump sums. In exchange for phasing out this allowance, workers would receive a secure source of old-age income, which guarantees benefits on a continuous and long-term basis. For firms, there would be a transition cost of going from an unfunded to a funded system. The amortisation of the unfunded liabilities should occur over an extended period.[55]

Improving individual pension accounts

The transition to a multi-pillar system also requires a more effective utilisation of the individual pension accounts. The recent decision to allow the accounts to be transferred between financial institutions should help promote their use. The key, though, is to improve the supervision of these accounts, which are managed by segments of the financial sector that have experienced serious difficulties during the past few years. While the FSS supervises the banks, insurance companies and investment trust companies that manage individual pension accounts, there is no direct oversight of the pension funds, which in the case of insurance companies were not segregated into separate accounts until 2001. The FSS should establish specific asset allocation and risk concentration guidelines for pension fund management, apart from the other lines of business conducted by these institutions. In addition, requiring segregation of pension accounts for reporting purposes would facilitate public disclosure about the performance of managers. Finally, the monitoring and enforcement capacity of the FSS should be upgraded to allow it to prevent new contracts for institutions not meeting prudential requirements, such as solvency margins.

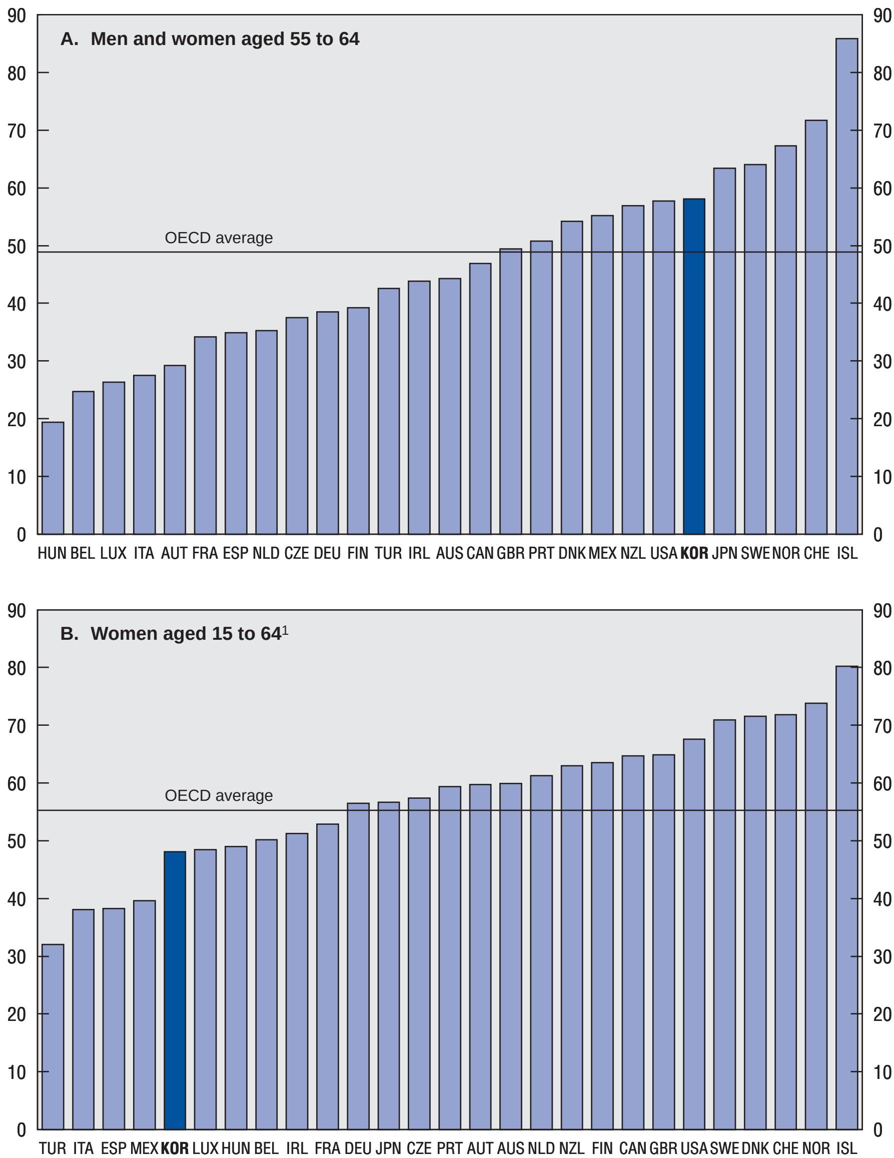
Encouraging older workers to remain in the labour force

A key to meeting the fiscal impact of population ageing is to remove incentives to early retirement. The financial incentives embedded in public pension systems in many countries, notably the foregone pension income and continued payment of contributions with little rise in the ultimate pension benefit, encourage early retirement. In Korea, in contrast, the public pension system clearly has not had much impact on the retirement age to date.[56] Those who retire at 55 and receive the early old-age pension (Table 23) lose a quarter of their benefit. In 1999, only 4 per cent of the 55 to 64 age group received such pensions, thus helping to maintain a high employment to population ratio for this age group. Indeed, Korea had the sixth-highest ratio in the OECD area in 1999 (Figure 37) despite a sharp decline in the employment of older persons in the wake of the crisis. For many of these persons, though, working past age 55 requires finding another job or becoming self-employed since the custom of retiring at that age continues to be the norm at many companies. The practice of setting company retirement ages five years below the eligibility age for NPS pensions reflects the fact that the seniority wage system makes older workers more expensive. In practice, many of those who retire at 55 use their retirement allowance to start a new business.

As the pension system matures, resulting in both higher benefits and contributions, it may have a greater impact on the age of retirement. The high rate of accrual for pension benefits in Korea, though, makes it attractive for older workers to remain in the labour force. At present, a 55-year old would boost the replacement rate of his or her pension benefit by 7.5 percentage points by working until the standard retirement age of 60. Those who remain in the labour force past age 60 are allowed to increase their eventual pension benefit by continuing to contribute to the NPS. As the pension eligibility age rises to 65 years between 2013 and 2033, working an additional ten years from age 55 would raise the replacement

Figure 37. **Employment rates**

Per cent of population in 1999



1. Persons aged 16 to 64 for Iceland, Norway, Spain, Sweden, the United Kingdom and the United States.
Source: OECD (2000), *Employment Outlook.*

rate by 15 percentage points. In contrast, in half of the 26 OECD countries for which data was available in 1995, a 55-year-old worker could expect little or no gain in the replacement rate from an additional decade of employment (Blondal and Scarpetta, 1997). The incentives in the NPS to continue working are reinforced by Korea's seniority-based wage system, which leads to large increases near the end of a worker's career.[57] Indeed, the retirement allowance depends exclusively on final wages, while the occupational pension schemes are based on the final three years. Under the reform of the occupational pensions, new workers will not be able to receive benefits prior to age 60. The recent change in pension taxation, which makes pension contributions tax-deductible while taxing pension benefits (Box 3), may also influence incentives to retire. Moreover, the income needs of workers generally reach a peak level in the 50 to 60 age period due to the education and marriage costs of their children, thus discouraging an early withdrawal from the labour force.

Finally, government policies have promoted the employment of older workers. Under the Aged Employment Promotion Act, firms are encouraged to fill at least 3 per cent of their positions with persons above the age of 55. Companies in which such workers account for more than 6 per cent of the workforce receive a benefit of 150 000 won per quarter (3 per cent of the average wage). The benefit is paid for each aged employee above the threshold of 6 per cent of employment.[58] If a firm hires a person in the 55 to 64 age group who has been unemployed for at least three months, the government pays 250 000 won per month (14 per cent of the average wage) for six months. In addition, the elderly are given priority in certain occupations in state-owned and state-invested enterprises. However, maintaining a high rate of employment among the elderly may also depend on increased opportunities for training. In the wake of the crisis, unemployment among older workers has become a problem, owing to financial and corporate-sector restructuring. In sum, the current wage and pension systems, combined with policies to promote the employment of elderly workers, are likely to prevent a significant decline in the participation rate of persons in the 55 to 64 age category. Nevertheless, it is important to monitor the impact of the pension and tax systems on retirement decisions as the NPS matures.

Taxation of pension income

The shift to an EET system, including taxation of retirement allowances, appears beneficial (Box 3). However, the high level of deductions that are to be allowed for pension incomes mean that only half of the recipients will be paying tax on pension incomes 25 years from now. Effective taxation of pension income is essential, given that benefits are projected to increase to more than 10 per cent of GDP over the next fifty years. To the extent that pension income is exempted from taxation, tax rates on other sources of income will have to be higher, thus boosting distortions.

Upgrading the management of the National Pension Fund

The reform of the NPS proposed above would sharply limit the accumulation of assets in the National Pension Fund and thus reduce the risks associated with a large concentration of assets in a single institution. In the multi-pillar system, there would be a smaller Fund co-existing with a large privately-managed pension sector. Nevertheless, it remains essential to improve the management of this segment of pension savings. International evidence shows that, in general, governments have not managed pension reserves very effectively (Iglesias and Palacios, 2000), due to the fact that criteria other than risk and return have sometimes influenced investment policy, thus reducing returns. Most publicly-managed funds, including Korea's NPS, have earned returns that are less than the growth of wages, which determine the ultimate liabilities in defined-benefit schemes. The decision to stop making loans to the government and to purchase its bonds on a market basis beginning this year, and to increase investments in the capital market, is a step in the right direction. In addition, the purchase of foreign assets was allowed in July 2001. However, recent efforts to use the Fund to support the sagging stock market create concerns.

The solution adopted in many countries – the contracting out of asset management – is complicated by the problems in Korea's asset management sector, typified by the crisis in the investment trust companies. Contracting out should increase in line with efforts of the asset management sector to implement international accounting standards. Recognising the benefits of external, private-sector fund management, the government launched a pilot project in 2000 to this end. Four private companies were chosen by a committee, including private-sector experts, to manage 50 billion won each of the National Pension Fund for one year. At the end of the period, the company with the best performance will be selected as a fund manager. It is important that the winner be subject to further competition to ensure a continued high level of performance.

Improving the healthcare system

The Korean healthcare system is now faced with the challenge of meeting the growing desire for higher quality care while keeping costs at affordable levels. Population ageing adds to this challenge by further increasing demand for medical care as well as for long-term care. Hence, any efforts to improve the functioning of the healthcare system generally bear on the issue of population ageing. This is true of the two bold steps taken recently to improve the healthcare system by separating the prescribing and dispensing of drugs between doctors and pharmacists and by integrating health insurance funds. Implementation of healthcare reforms is, however, difficult in any country as it involves many interested parties and can surprise with unanticipated consequences.[59] Korea is no exception in this regard. The government paid dearly to appease doctors who were disgruntled by the loss of the right to dispense drugs, an important source of income.[60] A softer approach relying on incentives could have avoided such frictions and associated costs.[61] Separation of prescription and dispensing should, in any case, be seen as a way of dealing with excessive consumption of drugs.[62] However, it is neither a necessary nor a sufficient condition for improved drug consumption. Indeed, the level of per capita drug consumption varies very much even among the OECD countries where there is a clear separation of these two functions. The issue of separation should therefore remain an element in the development of a comprehensive policy approach to drug administration.

The integration of health insurance funds has encountered difficulties associated with setting the contributions for the self-employed so as to ensure equity in relation to wage earners. Such difficulties, however, stem from the general problem of properly assessing the incomes of the self-employed and are not specific to healthcare contributions. Before this reform, sizeable discrepancies in contributions existed between fragmented health funds despite transfers to compensate for higher health risks faced by some of the funds. But as experience elsewhere shows, such risk equalisation mechanisms are rather imperfect. The recent policy action, therefore, is laudable as it improved horizontal equity and reduced impediments to geographical labour mobility by eliminating the large discrepancies in contributions in the face of roughly similar benefits in terms of access to healthcare.

Korea's continuing gradual reform of its healthcare system allows it to draw on the experience of countries with similar systems of social insurance with fee-for-service payment, notably Japan but also other countries such as France. It might be instructive for future reform design to take Japan's situation today as Korea's in 25 to 30 years when Korea's elderly dependency ratio nears Japan's current ratio. Japan's healthcare system is suffering from financial difficulties stemming from the combination of a low growth of revenues and an increasing burden of spending by the elderly, which is not offset by cost containment efforts. Cost containment nonetheless seems effective – perhaps too much so – and patients' satisfaction levels remain relatively low. The current situation in Japan illustrates how tough the challenge is likely to be for Korea to satisfy the increasing demand for quality care associated with ageing and higher income levels, which is reinforced by advances in medical and pharmaceutical technologies, while keeping the costs at affordable levels. In France, where people appear to be relatively satisfied with their healthcare system, health spending is respectively 2 and 4 percentage points of GDP more than in Japan and Korea. This suggests that it might be difficult to avoid a future increase in contributions and/or taxes in Korea if the future demand for quality care is to be met.

Japan's experience also demonstrates that an inevitable consequence of continuing with the present "pay-as-you-go" system is that the government will have to play a greater role in re-distributing the costs of higher health spending associated with population ageing to avoid a substantial increase in the tax burden on the working-age population, thereby hurting incentives to work. While it will become politically difficult to shift the financial burden on the elderly as population ageing increases the weight of the vote by old people, it is not impossible to do so, as illustrated by the introduction of a long-term care insurance scheme for the elderly in Japan.[63] Implementation of the new insurance scheme has encountered many teething problems and revealed insufficient levels of compensation for home care as well as the question of affordability for low-income elderly. Nonetheless, the acceptance of the new scheme indicates it is possible to raise contributions if accompanied by increased provision of quality services.

A possible alternative to an incremental reform of the present system is a clear departure towards a mixed system with an element of funding, which puts greater emphasis on individual responsibility, as in Singapore (see Box 8). One advantage of a funding mechanism is that it would greatly reduce the government's role in financing increased healthcare spending due to population ageing, since this is done by the savings of individuals accumulated in their health saving accounts. As in the case of pensions, the low level of spending at present gives Korea the chance to choose systemic reform, an option that is not realistically available for most OECD countries. This form of self-insurance could be combined with other collective insurance arrangements. In Singapore, health insurance only covers truly catastrophic cases, with premiums paid from individual health savings accounts. But the current health insurance system in Korea could be transformed into a more generous "catastrophic" insurance covering any serious illness requiring major medical treatment and a certain length of hospitalisation. It is also possible to extend it to cover long-term care with a premium payment starting from a certain age. In any event, a systemic reform should only be considered with much prudence and requires thorough preparation.

Assuring an adequate social welfare system

As noted above, income from children and wages are likely to remain the major income sources for the elderly, at least during the next decade. Such sources, however, are vulnerable to economic conditions, thus posing a risk of hardship for the aged. Recessions, such as the severe 1998 downturn, reduced both opportunities for employment and the ability of children to care for their elderly parents. However, the existing pension framework cannot address the current problems of aged persons, making social welfare the primary means of limiting poverty in this group over the medium term. In this context, it is important that the scope of the Livelihood Protection Programme be sufficient to assist all those elderly with incomes below the minimum cost of living. In addition, the stated goal of providing enough support so that all recipients have an income that at least matches the minimum cost of living should be achieved.

Box 8. A funded healthcare system: the case of Singapore

Singaporeans enjoy excellent health status while spending relatively little on healthcare, 3 per cent of GDP in 1999, of which 0.6 percentage points consisted of government subsidies. The public sector provides 80 per cent of hospital care and 20 per cent of primary care. Public-sector care is subsidised at about 50 per cent for primary care and between 20 and 80 per cent for hospitalisation, depending on the levels of service demanded. Services provided by private hospitals and at private wards in public hospitals are not subsidised.

Singapore's healthcare policy is based on individual responsibility combined with government subsidies to keep basic healthcare affordable.* Every citizen, except those who are poor, pays part of the medical expense as co-payments. To facilitate citizens taking responsibility for their own healthcare needs, a funded healthcare financing system, known as Medisave, was introduced in 1984. It is a compulsory savings scheme to help Singaporeans pay for their in-patient care, particularly after retirement. Under this scheme every employee puts 6 to 8 per cent of income (depending on age, and shared equally between the employer and the employee) into a personal Medisave account from which hospitalisation expenses incurred by the employee and his or her dependants may be paid. The contributions, which are subject to monthly caps, are tax deductible and earn interest. Self-employed persons are also required to contribute to Medisave since 1992.

This funded scheme avoids placing an undue burden on future generations as population ageing advances since the elderly will have probably already saved enough to cover their increased medical costs. Apart from the simple fact that young people typically spend less on healthcare than the old, Medisave tends to promote economy. As a personal savings scheme, Medisave provides incentives for the account holders to stay healthy and avoid frivolous use of medical services. In addition, there are mechanisms to reduce excessive spending. The Medisave balance is capped at S$24 000 – S$5 000 above the minimum limit – to prevent an excessive accumulation that could stimulate medical over-consumption. The amount in excess of the maximum is automatically transferred to the account holder's pension fund. Withdrawals from Medisave are subject to limits, which are set at the maximum levels of co-payments. Limits also apply to daily hospital expenses as well as to surgical procedures according to the complexity of the operation. The minimum balance is revised regularly to reflect increased medical costs. The Medisave balance above the minimum may be withdrawn by the account holders when they reach the age of 55. Any remaining balance will be paid to the account holder's nominees upon his or her death, free of estate tax.

A low-cost national catastrophic illness insurance called MediShield was introduced in 1990 (and MediShield Plus in 1994 for those who want to be admitted to higher-class hospital wards). The aim is to help the account holders to meet the medical expenses from major or prolonged illness that their Medisave balance would not be sufficient to cover. Premiums, which are actuarially based and vary with age to minimise cross subsidies, are paid from Medisave contributions. Reimbursements are based on a system of deductibles and co-payments to avoid the

Box 8. **A funded healthcare system: the case of Singapore** (*cont.*)

moral hazard problems associated with a fully-paid insurance scheme. Because it is a catastrophic illness insurance, and also to keep the premiums affordable, deductibles are set high except for certain treatment and drugs, *e.g.* outpatient chemotherapy, for which no deductibles apply. The insured have to pay 20 per cent of the amount in excess of the deductibles. Both deductibles and co-payments may be paid out of Medisave. An endowment fund, Medifund, was set up by the government in 1993 to help those who are unable to pay for basic medical care received at public hospitals. Applications for assistance are considered by Medifund Committees, with the amount of help approved depending on individual circumstances.

* For more details, see the web site of the Ministry of Health in Singapore (*www.gov.sg/moh/mohinf*).

Conclusions

The analysis above indicates that population ageing will have a major impact on economic growth and public spending, making the establishment of a three-pillar system in which private savings play a larger role an important priority for policymakers. Such reforms would reduce the future fiscal impact of ageing, thus limiting the labour-market distortions likely to result from rising contribution rates and thereby enhancing Korea's long-term growth prospects. It would also overcome the problem of low participation in the current system. In addition, the reforms would avoid the risks associated with the concentration of a huge amount of funds in one institution. From the point of view of workers, the multi-pillar approach provides greater security as well as a higher return on their overall contribution. Moreover, the arbitrary differences between pension benefits of different workers would be reduced, transfers would be more transparent and the unfairness that undermines support for the current system would be largely eliminated. Finally, workers would gain more control over their retirement savings, a change that needs to be accompanied by a greater understanding of the choices and responsibility for the outcomes. While the public sector's role in providing retirement income would be reduced, the government has a crucial responsibility to supervise carefully the enhanced role played by the private sector. In the area of health and long-term care, it is important to establish a system that is capable of coping efficiently and equitably with the increased demands for such care in the context of population ageing.

Given that the impact of population ageing will not become burdensome for at least another decade, there is an obvious temptation to delay reforms. However, putting off reforms in this area would be unwise for several reasons. *First*, the relative immaturity of the public pension system provides a window of opportunity for implementing a more sustainable system. As the current system matures, it will become increasingly difficult to implement significant reforms. *Second*, the uncertainty about the eventual cost of financial restructuring as well as national reunification (see Annex III) makes it important to adopt reforms that will moderate the reliance on public funds for providing retirement income for the elderly. These considerations should make pension reform a top priority in Korea.

IV. Restructuring the corporate and financial sectors

The corporate and financial sectors have been at the heart of the structural reforms implemented in Korea in the wake of the crisis. As explained in the past three OECD *Economic Surveys of Korea*, fundamental weaknesses in these sectors made Korea vulnerable to contagion from other Asian countries in 1997 and, moreover, accounted for the severity of the crisis. In short, Korea's highly-leveraged companies were vulnerable to the cyclical downturn and external shocks experienced in 1996 and 1997, which resulted in severe balance-sheet problems and a series of major bankruptcies. This, in turn, led to a surge in non-performing loans that undermined the financial sector. In the wake of the crisis, Korea launched a broad range of reforms in the corporate and financial sectors to establish a more market-oriented framework. In the corporate sector, measures to improve the corporate governance framework and the exit mechanism, to increase transparency and to change the structure of the chaebol were introduced. These reforms were accompanied by steps to boost competition through removing trade barriers, encouraging inflows of foreign direct investment, strengthening competition policy, reforming the regulatory framework and privatising state-owned companies (Chapter V). To improve the financial sector, the authorities spent a large amount of public money to re-capitalise weak institutions and address the non-performing loan problem, while forcing the exit of non-viable institutions and establishing a new supervisory framework.

These reforms served to restore confidence in Korea and lay the foundation for a strong economic recovery beginning in the third quarter of 1998. The strength of the expansion, in turn, facilitated restructuring in the corporate and financial sectors. However, by mid-2000, it was clear that the pace of reform had slowed, perhaps reflecting complacency in the context of double-digit output growth and the politicisation of economic issues in the run-up to national elections in April 2000. The slowdown in growth in the latter part of the year exacerbated the underlying weaknesses in the corporate and financial sectors. Moreover, it was clear that the problems in the two sectors remained inextricably intertwined. The credit risks in the corporate sector continued to threaten the viability of many financial institutions, while financial-sector problems, notably the credit-crunch conditions (see Chapter II), reinforced the balance-sheet problems experienced by a number of companies. In this context, the government launched a second round of reforms to address the problems and restore confidence in the Korean economy.

This chapter begins by examining developments in the corporate sector, notably the recent structural reforms, progress in restructuring and the major elements of the second-stage programme. It then discusses the policies used to assist small and medium-sized enterprises. The second section of this chapter looks at developments in the financial sector.

Restructuring the corporate sector

Recent progress

Since the 1997 crisis, Korea has made important reforms, which were analysed in detail in previous *Surveys*, to facilitate market-based restructuring of the corporate sector. To create a new corporate governance framework, the rights of minority shareholders were increased, the role of company directors was strengthened, outside directors were added to corporate boards and cumulative voting was permitted. Transparency was enhanced by upgrading accounting standards and requiring chaebol to prepare combined financial statements. Bankruptcy procedures were improved by introducing time limits and giving greater weight to economic criteria.

During the past year, there have been significant reforms related to the corporate sector in line with the recommendations in the 2000 *Survey* (Box 9), particularly in the area of corporate governance:

- *The rights of shareholders have been further increased*. The scope of business decisions requiring approval at the annual shareholder meeting was expanded to include acquisition of part of another business, disposal and transfer of essential assets and large-scale borrowing. In addition, the ownership threshold to demand inspection of company books was lowered from 1.0 to 0.1 per cent of total stock, and the threshold to demand the punishment of a director for misconduct from 0.5 to 0.05 per cent.[64]
- *The role of boards of directors has been strengthened*. Expanding the scope of decisions requiring shareholder approval ensures that directors will examine those actions. In addition, related party transactions by large listed firms must be approved by directors and reported at the shareholder meeting.
- *The new corporate governance framework is being expanded to include firms listed on the* KOSDAQ. Such firms must have at least two outside directors in 2001 and in 2002 outside directors must account for a quarter of the total number of directors. Companies listed on KOSDAQ that have more than 2 trillion won of capital must comply with the same corporate governance practices required of firms listed on the Korea Stock Exchange.

Box 9. Summary of previous structural policy recommendations in the corporate and financial sectors*

Recommendations in the 2000 *Survey*	Actions taken
The corporate sector	
Complete the shift to a market-based system in which pressures from shareholders, competition and the threat of bankruptcy discipline corporate behaviour, thus reducing the need for government intervention.	While market-based institutions and practices have developed, government intervention continues, in part, in the context of market failures and systemic risks.
Encourage the development of a business culture in which good corporate governance practices are reflected in the share prices of a company.	There are already signs that companies with better corporate practices are rewarded with higher share prices.
Implement additional legal measures on corporate governance in order to activate the new framework.	The corporate governance framework has been improved: • Minimum ownership requirements for the exercise of shareholder rights have been further reduced. • The scope of issues requiring shareholder approval has been expanded. • Related party transactions must be approved by the board of directors. • The corporate governance framework was made mandatory for large firms listed in KOSDAQ.
Encourage the use of cumulative voting in the selection of members of boards of directors.	The threshold for proposing the adoption of cumulative voting has been reduced from 3 to 1 per cent of shareholders.
Remove the obstacles that impede the formation of holding companies to promote restructuring and transparency.	The conditions for establishing holding companies have been eased by lowering the minimum ownership level in subsidiaries and introducing grace periods for meeting the conditions.
Shift SME policies further away from measures that have tended to make small companies dependent on government assistance in order to encourage a dynamic SME sector in which venture businesses play an important role.	The amount of government support for SMEs has fallen, while other forms of protection have been partially removed.
The financial sector	
KAMCO should meet its target of disposing of 17 trillion won of non-performing loans in 2000, as part of its plan to recover 98 per cent of funds spent on asset acquisition by 2003.	KAMCO disposed of 24.9 trillion won of assets in 2000.
Implement a second phase of restructuring to deal with the remaining weak commercial banks.	A second-stage restructuring plan, focused on weak banks, was launched in September 2000.
Reduce the government's ownership stakes in commercial banks to encourage the development of a market-oriented financial system and to allow the KDIC to recover the funds that it injected into these institutions.	The government announced that it would privatise the commercial banks from the second half of 2002. The KDIC has been given increased power in its role as creditor and shareholder in banks.
Maintain pressure on the remaining life insurance companies to meet the new solvency requirement, thus promoting further restructuring and consolidation.	All but four of the 23 life insurance companies met the solvency requirement at the end of 2000.

Box 9. **Summary of previous structural policy recommendations in the corporate and financial sectors*** (*cont.*)

Recommendations in the 2000 *Survey*	Actions taken
Upgrade governance and supervision in the investment trust sector in line with best international practices to provide a wider range of investment vehicles to the public and to enable the capital market to play a more active role in financial intermediation.	The investment trust sector has been restructured by the purchase of its bad assets by KAMCO, the injection of public money in certain institutions and an upgrading of the supervisory framework.
Take all necessary steps to enhance risk analysis capability in the corporate bond market, including a clear policy on the responsibility of investors for risk.	Standards for credit-rating agencies have been upgraded.

* Previous structural policy recommendations related to other sectors are reported in Box 12.
Source: OECD.

– *The shadow-voting requirement for mutual funds has been removed*. This allows them to exercise their voting rights, and thus become a new monitor of corporate performance.

– *The use of cumulative voting has been facilitated*. The threshold for proposing this procedure has been reduced from 3 per cent of shareholders to 1 per cent in large companies (more than 2 trillion won of assets) in which cumulative voting is not prohibited by the company charter.

In addition to these changes in the corporate governance framework, a number of other reforms have been introduced:

– *Activating mergers and acquisitions*; purchasers no longer have to report to the Financial Supervisory *Commission* prior to the announcement of a takeover bid. In addition, they can acquire shares three days after the announcement rather than seven.

– *Enhancing transparency*; as of April 2001, the government can impose fines of up to 500 million won on accounting firms for improper audits. In addition, accounting firms are now liable for damages imposed on third parties, including shareholders, as a result of improper audits. Individual accountants were made subject to criminal charges and up to three years in prison, followed by a three-year ban from the profession. The establishment of accounting firms no longer requires approval of the authorities.

– *Easing requirements on holding companies*: For companies listed on a stock exchange, the required ownership floor in subsidiary's equity is lowered from 50 to 30 per cent (20 per cent in the case of Internet start-up companies). A grace period of two years is allowed for newly-created holding companies to meet this requirement, in addition to a one-year grace period to reduce their debt to equity ratio below the 100 per cent ceiling.

There have been a number of changes in the chaebol, which have played a leading role in Korea's economic development. As discussed in previous *Surveys*, chaebol are multi-company business groups operating in a wide range of industries under common entrepreneurial and financial control. Of the top thirty groups in 1997, 18 remained on the list in 2001 (Table 28). Five of the new groups were

Table 28. **The top thirty chaebol in 2001**
Trillion won

Group		Number of affiliates		Total assets	Rank in 1997
		2000	2001		
1	Samsung	45	64	69.9	2
2	Hyundai	35	26	53.6	1
3	LG	43	43	52.0	3
4	SK	39	54	47.4	5
5	Hyundai Motors	..	16	36.1	Not on list
6	Hanjin	18	19	21.3	7
7	POSCO	..	15	21.2	Not on list
8	Lotte	28	31	16.7	10
9	Kumho	20	17	11.6	11
10	Hanwha	23	25	11.5	9
11	Doosan	16	18	11.2	14
12	Ssangyong	22	20	9.0	6
13	Hyundai Petrochemicals	3	2	7.2	Not on list
14	Hansol	19	19	7.0	16
15	Dongbu	19	19	5.8	22
16	Daelim	18	17	5.4	15
17	Tongyang	25	30	5.1	23
18	Hyosung	13	15	4.9	17
19	Cheil Chedang	18	30	4.8	Not on list
20	Kolon	17	25	4.6	20
21	Dongkuk	14	8	4.3	18
22	Hyundai Industrial Development	7	9	4.1	Not on list
23	Hanaro Communications	..	7	3.4	Not on list
24	Shin Sehgye	10	9	3.2	Not on list
25	Yeongpoong	21	24	2.9	Not on list
26	Hyundai Department Store	..	15	2.9	Not on list
27	Dongyang Hwahak	..	22	2.8	Not on list
28	Daewoo Motors	3	4	2.7	Not on list
29	Taekwang Sanob	..	15	2.6	Not on list
30	Kohap	6	6	2.5	21
	Total of top thirty[1]	**544**	**624**	**437.9**	
	Total of top five[1]	**180**	**212**	**259.0**	

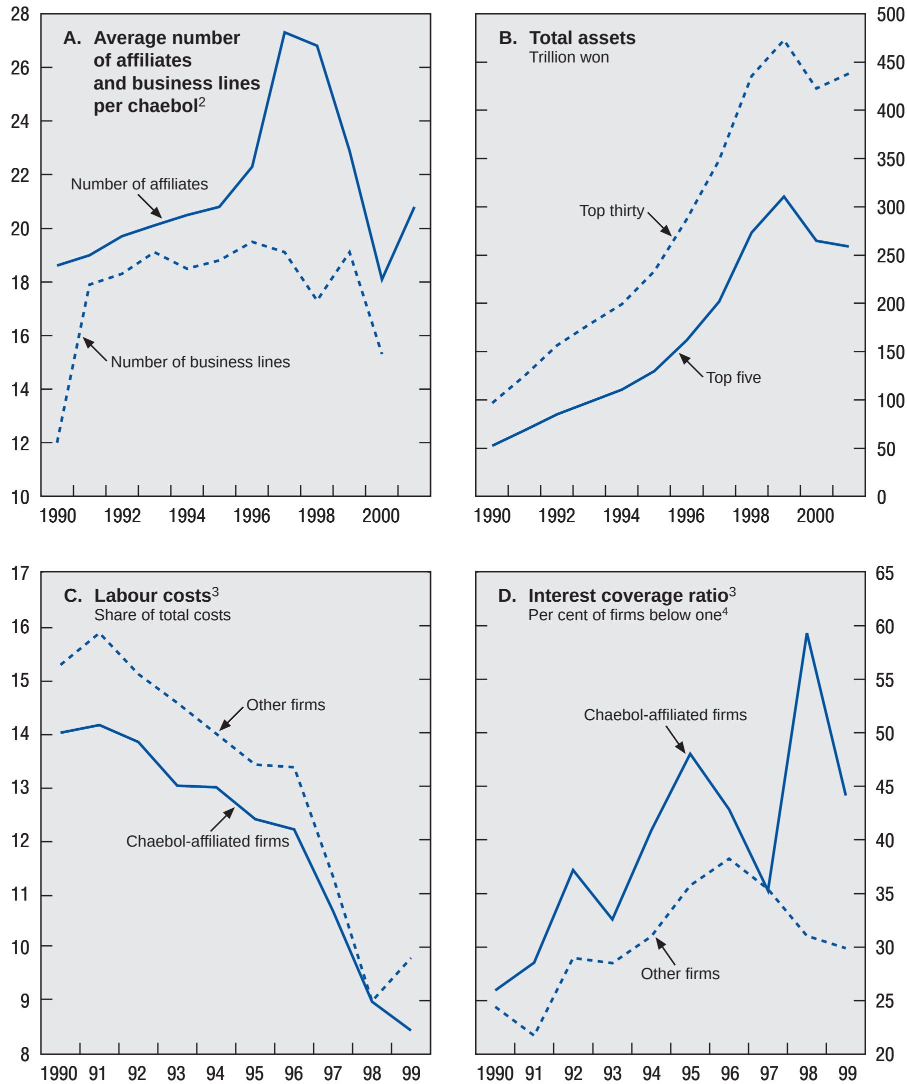
1. The 2000 totals are based on the rankings in 2000.
Source: Korea Fair Trade Commission.

previously part of Hyundai, the largest chaebol through 2000.[65] As before the crisis, the top five chaebol are in a class by themselves, accounting for one-third of affiliated companies and almost two-thirds of assets of the top thirty groups.

The financial crisis appears to have marked a turning point in the behaviour of the chaebol (Figure 38). The average number of affiliates of the top thirty groups fell by a third between 1997 and 2000, as the chaebol sold assets to reduce debt. Meanwhile, the average number of business lines declined from 19 to 15 over the same period (Panel A).[66] The average number of affiliates, though, rose in 2001, largely as a result of an increased number of information technology-related firms. However, the new chaebol-affiliated companies appear to be relatively small; the average amount of assets per firm fell 10 per cent in 2001. Total assets declined between 1999 and 2001 (Panel B), reversing the large increases that occurred in the wake of the crisis. To achieve the 200 per cent debt to equity target imposed by the government, the chaebol issued large amounts of new equity. Indeed, the ratio, which was 519 per cent in 1997, fell to 219 per cent at the end of 1999 and 171 per cent at the end of 2000 for the top thirty groups, excluding their financial affiliates (Table 29). A large part of the decline in the ratio was a result of the increase in equity, which rose by 125 per cent between 1997 and 2000. A 26 per cent decline in debt over the same period also contributed.[67] Nevertheless, financial costs remained at a high level. Indeed, financial costs as a share of total costs remained higher in 1999 (the latest year available for chaebol-affiliated companies) than at any time during the 1990s, except for 1998 when interest rates were at high levels in the wake of the crisis.[68] In 2000, however, the decline reported for firms in the manufacturing sector (Table 2) suggests that financial costs for chaebol-affiliated firms also fell.

Reductions in financial costs, at least relative to 1998, were accompanied by lower labour costs. The number of workers at listed firms affiliated with the chaebol declined by 30 per cent between 1996 and 1999, compared to a 6 per cent fall at independent companies. Consequently, labour costs fell from 12 to 8 per cent of total costs over the same period (Figure 38, Panel C). Cost reductions, in turn, improved profitability; the percentage of firms with interest coverage ratios of less than one fell to 44 per cent for the chaebol-affiliated companies and to 29 per cent of independent companies (Panel D).[69] Finally, the increase in equity in 1998 and 1999 boosted the proportion of the top thirty chaebol that is owned by their affiliated companies in 1999 (Figure 39). Consequently, the "inside ownership ratio" surpassed 50 per cent in 1999, despite the continued decline in the share of the principal owner and family. The re-imposition of the rule in April 2000 prohibiting chaebol-affiliated firms from owning more than 25 per cent of another firm has reversed the rise in shareholding by sister companies. That share is likely to decline further as firms try to meet the 25 per cent limit by the March 2002 deadline for compliance.

Figure 38. **Restructuring of the top thirty chaebol**[1]



1. Under the Monopoly Regulation and Fair Trade Act, the Fair Trade Commission is required to identify the thirty-largest chaebol each year.
2. At the two-digit level under the KSIC.
3. From a sample of listed companies that includes 111 chaebol-affiliated companies and 341 independent companies.
4. An interest coverage ratio of less than one means that a firm's operating profit is less than the interet charges on its debt.

Source: Korea Fair Trade Commission and Hasung Jang (2000).

Table 29. **The debt to equity ratio for the top thirty chaebol**

	1997	1998	1999	2000
A. In trillion won				
Equity	68.9	96.9	129.6	154.8
Liabilities	357.4	367.0	283.4	265.1
Ratio	518.9	378.8	218.7	171.2
B. Percentage change				
Equity		40.7	33.8	19.5
Liabilities		2.7	–22.8	–6.5

Source: Ministry of Finance and Economy.

In the wake of the crisis, the government established the Corporate Restructuring Accord, under which 220 leading lenders agreed to participate in workout programmes for troubled companies. Creditors have preferred this approach on the grounds that it provides a higher rate of debt recovery than legal procedures, which include bankruptcy, composition and re-organisation. Moreover,

Figure 39. **Inside ownership of chaebol**
Per cent of total

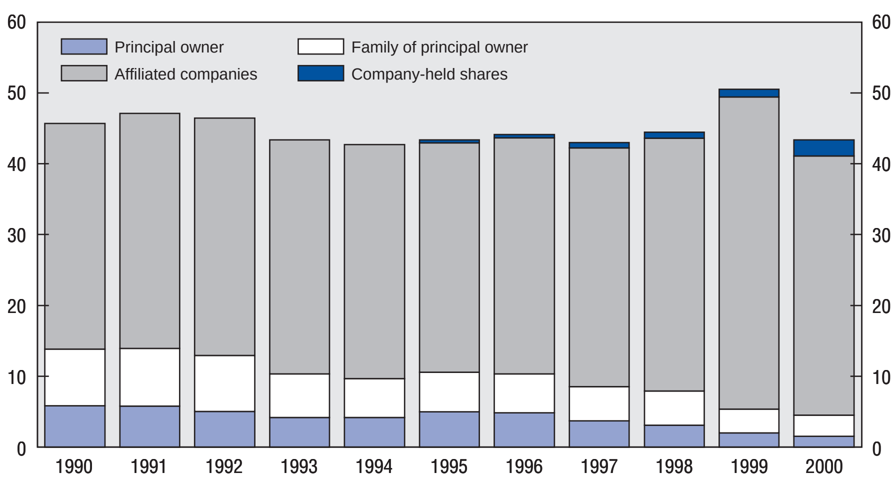


Table 30. **The corporate workout programme**

As of the end of 2000

	Nominated (A)	Excluded				Graduated (C)	Remaining (A-B-C)
		Total (B)	Dropped out	Merged	Ejected		
Daewoo companies	12	1	0	0	1	1	10
Affiliates of 6-64 chaebols	49	22	5	12	5	12	15
Middle-sized firms	43	11	3	3	5	23	9
Total	**104**	**34**	**8**	**15**	**11**	**36**	**34**

Source: Financial Supervisory Service.

legal procedures result in an immediate increase in non-performing loans, threatening the viability of financial institutions struggling to meet capital adequacy ratios. Management, as well, has an incentive to avoid legal proceedings, which lead to the appointment of a trustee and the eviction of the incumbent managers. Indeed, the number of new legal insolvency procedures, which jumped from less than 500 in 1997 to more than 1300 in 1998, dropped back to 570 in 2000. While the decline largely reflects the improvement in economic conditions, the relative unimportance of legal procedures is illustrated by the fact that only four chaebol-affiliated companies entered court-administered procedures in 2000. The corporate workout programme, meanwhile, is now in its fourth year (Table 30). Of the 104 companies originally accepted, a third have graduated and another third remain in the programme. As for the remaining 34, 19 have dropped out or been ejected from the programme, while 15 merged with other companies.[70] Of the agreements reached thus far, twenty have had to be re-negotiated as firms have been unable to meet their restructuring commitments. Ten of the remaining companies were affiliated with the Daewoo group, which collapsed in 1999. The companies still in the programme had received a total of 71.5 trillion won of concessions as of December 2000. Of the total, 60 trillion won consisted of interest rate cuts or exemptions, while debt-equity swaps and the conversion of bonds to equity accounted for less than 6 trillion won.

The second-stage programme

Despite the recovery in profitability and the progress in reducing debt-equity ratios and streamlining operations, a substantial portion of the corporate sector remains financially troubled. As discussed in Chapter I, more than a fourth of externally-audited firms failed to earn enough profits to cover the interest payments on their debt in 1999, let alone repayment of principal, and this situation continued in 2000 despite buoyant growth. As noted above, the situation seems even more severe among chaebol-affiliated companies. The high degree of credit risk was clearly undermining confidence in the Korean economy during the course of 2000. Moreover, as the impact of the injections of public funds in the first-stage financial restructuring programme faded, financial institutions became increasingly cautious about lending. The tightening of loan classification standards also made banks more reluctant to lend. The resulting credit crunch conditions combined with slower growth exacerbated balance-sheet difficulties and made it clear that the strong post-crisis expansion would not resolve all problems. In this context, the authorities launched a second round of restructuring that consisted of forcing the exit of non-viable companies and the introduction of bond recycling schemes to allow the survival of firms judged as viable. In retrospect, though, this programme came too late to prevent the economic downturn at the end of 2000.

In October 2000, the government instructed the banks to evaluate the prospects of financially-distressed firms in an effort to identify which ones they should continue to support. Such an approach had been used in May 1998, resulting in the examination of 313 companies, of which 55 were designated as non-viable.[71] Firms were singled out for the second evaluation process based on three criteria: 1) their loans were classified as precautionary or worse under the forward-looking loan classification scheme; 2) their interest coverage ratio had been less than one for three consecutive years; or 3) they were already being monitored by banks for default risks. A total of 287 firms were identified under at least one of these criteria for evaluation. However, this total was considerably below the number of externally-audited firms found to have interest coverage ratios of below one for three consecutive years (Table 3). Of the enterprises that were evaluated, 52 were classified as nonviable, of which 18 were to be liquidated, 11 were put under court receivership and 23 were to be disposed of through mergers and acquisitions. In addition, almost half of the companies (136) were judged to be normal. The remainder were classified as having "temporary" (28) or "structural" (69) liquidity problems. The two largest firms in the exercise, Hyundai Engineering and Construction and Ssangyong Cement Industrial, were simply classified as "other" despite the fact that no new loans to them were allowed.[72] The small number of firms judged as non-viable raised doubts about the government's commitment to ensure the exit of non-viable firms. Moreover, the 29 firms marked for liquidation or court receivership were relatively small, with total credit extended of 11.5 trillion won. In contrast, the total borrowing of Hyundai Engineering and Construction alone was more than 5 trillion won (1 per cent of GDP) in 1999.

A significant number of firms faced difficulty in rolling over maturing bonds in 2000, as noted in Chapter II. This reflected the "flight to safety" following the collapse of Daewoo in mid-1999 and the shift to non-guaranteed bonds following the crisis. While 85 per cent of bonds issued in 1997 were guaranteed, 95 per cent of bonds in 1999 had no guarantees. In addition, newly-introduced exposure limits meant that some investors holding the bonds of a company could not purchase an equivalent amount of new bonds to roll over the existing debt. The government responded to the situation in the bond market by creating a primary "collateralised bond obligation" (CBO) programme in August 2000. This approach involves bundling maturing bonds, providing a partial government guarantee and selling securities backed by those bonds to investors. The guarantee is provided by the Korea Credit Guarantee Fund (KCGF), which charges a 1.5 per cent fee for this service and screens the companies wishing to participate in this programme. The companies using this scheme have to have a bond rating of at least BB. The size of individual CBOs issued to date has ranged between 100 billion and 1.5 trillion won of corporate bonds. The amount of bonds from an individual company is between 5 and 10 per cent of the total CBO in order to reduce risk. Thus, the amount of bonds from an individual company in a CBO issue is between 5 billion and 150 billion won. By the end of 2000, 17 different consortiums had put together CBOs, which were sold by securities companies. This approach was extended in December 2000 to loans with the creation of "collateralised loan obligations" (CLOs), which are sold by banks.

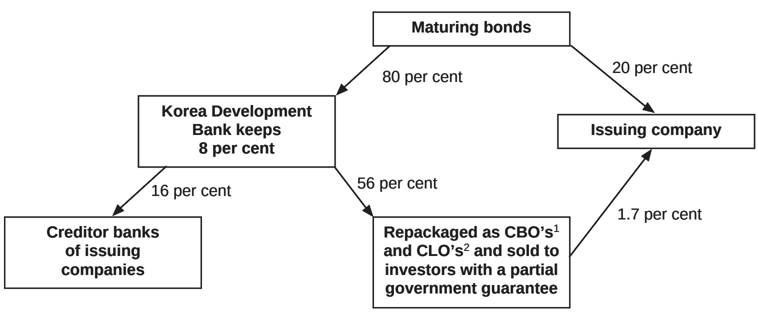
The CBO programme has been viewed as a success in rolling over maturing bonds in 2000 and is expected to absorb between 17 and 20 trillion won of additional bonds during 2001. However, the demands are much greater in 2001 due to the bunching of bond maturities. In Korea, 95 per cent of bonds have a maturity of less than four years, with three being the norm, in contrast to some other OECD countries where 10, 15 and 25 years are common. With the collapse of bank lending in the wake of the crisis, firms turned to the bond market for finance in 1998. Given the bunching of maturities, 65 trillion won – 42 per cent higher than in 2000 – is due in 2001. This amounts to three-fourths of the total stock of outstanding corporate bonds, excluding asset-backed securities. Approximately 25 trillion won of that debt was issued by companies that now have a credit rating below investment grade, and is unlikely to be financed in the market. While the CBO programme is expected to handle much of this amount, some companies have large amounts of debt maturing, making them unsuitable for the CBO programme. For example, Hyundai Electronics has between 300 billion to 500 billion won worth of bonds maturing, well beyond the amount of individual companies in CBO issues. To prevent a large number of major bankruptcies, the authorities established a "quick underwriting" programme using the Korea Development Bank (KDB), a government-owned institution, to roll over maturing bonds using partial government guarantees (Box 10).

The Korea Development Bank had agreed by April 2001 to help six companies that have a total of 8.1 trillion won of bonds maturing during the course of the year (Table 31). Of the six firms selected for the plan, four were Hyundai affiliates and account for 84 per cent of the total bonds to be rolled over. This group includes major companies, such as Hynix (formerly known as Hyundai Electronics Industry), one of the leading producers in the world of semiconductors that is burdened with nearly 12 trillion won of debt, and Hyundai Engineering and Construction,

Box 10. The Korea Development Bank's bond underwriting scheme

Under this programme, the KDB purchases 80 per cent of the maturing bonds and divides it into three categories (Figure 40). *First*, 20 per cent (16 per cent of total maturing bonds) is sold to banks that are already creditors of the issuing company. *Second*, 70 per cent (56 per cent of total maturing bonds) are sold to CBOs or CLOs within three months by bundling the bonds from different companies. This portion is partially guaranteed by the Korea Credit Guarantee Fund. The issuing company must repurchase 3 per cent[1] (1.7 per cent of the total maturing debt) of the repackaged CBO and CLO funds and agree to subordinate its repayment claim to that of outside investors. *Third*, the remaining 10 per cent (8 per cent of total maturing bonds) will be held by the KDB. The repackaged bonds mature in one year, by which time it is expected that the capital market is functioning better and the company has implemented its restructuring plan, allowing the scheme to end.

Figure 40. **The KDB bond underwriting scheme**



1. Collateralised bond obligations.
2. Collateralised loan obligations.

Source: Ministry of Finance and Economy.

The government has attached a number of conditions to this programme to avoid bailing out non-viable companies. *First*, the scheme is only open to companies with a credit rating[2] above BB and below BBB+. *Second*, companies must buy back 20 per cent of the maturing bonds at the time of refinancing, in addition to 3 per cent of the repackaged CBO and CLO funds. Thus, the issuing company bears a significant portion of the cost, in contrast to the CBO and CLO schemes, which allow a firm to re-finance all of its maturing bonds. *Third*, to be eligible for

Box 10. **The Korea Development Bank's bond underwriting scheme** (*cont.*)

this programme, a firm must submit a restructuring plan demonstrating that it can generate sufficient cash flow to meet its remaining debt. The plan must be approved by the KDB, creditor banks, the Korea Credit Guarantee Fund and a consulting company. This review is intended to eliminate non-viable firms from the programme. *Fourth*, the KDB charges market interest rates on the refinanced bonds, plus a 40 basis-point penalty and a 10 basis-point management fee.

1. This reflects the historical default rate for bonds with this level of credit rating.
2. This is the same requirement as for the CBO and CLS schemes since part of the funds will eventually be re-sold as CBOs or CLOs.

which had unsuccessfully launched seven self-rescue programmes during 2000. However, a fifth Hyundai company, Korea Industrial Development, went bankrupt in March 2001 after having applied for the programme. During the first quarter of 2001, KDB underwrote 1.6 trillion of bonds, which is 80 per cent of the total maturing for the six companies during that period. This scheme may have contributed

Table 31. **The KDB's "quick underwriting" programme for corporate bonds**
Corporate bonds, in billion won, maturing in 2001

Companies selected	First quarter	Second quarter	Third quarter	Fourth quarter	Total	Amount purchased[1]
Hynix[2]	1 051	251	807	1 535	3 644	840
Hyundai Engineering and Construction	400	434	400	717	1 951	304
Hyundai Merchant Marine	215	0	40	582	837	132
Hyundai Petrochemical	40	50	290	0	380	32
Hyundai subtotal[3]	**1 706**	**735**	**1 537**	**2 834**	**6 812**	**1 308**
Ssangyong Cement	335	238	265	180	1 018	268
Sungshin Cement	50	55	65	99	269	36
Total	**2 091**	**1 028**	**1 867**	**3 113**	**8 099**	**1 612**

1. In the first quarter of 2001. KDB underwrites 80 per cent of the bonds coming due.
2. Formerly known as Hyundai Electronics Industry.
3. A fifth Hyundai affiliate considered for the programme, Korea Industrial Development, went bankrupt in March 2001 after other Hyundai affiliates cut off all assistance.

Source: Ministry of Finance and Economy.

to the improvement in financial conditions in early 2001 reported in the survey of the business sector (Figure 19).

Evaluation of corporate-sector restructuring[73]

The survival of financially-troubled firms may impose a drag on the economy. As noted earlier, 5 per cent of firms in 1999 had been unable to even meet their interest payments for three consecutive years. Non-viable companies absorb resources that could go to more productive enterprises. Moreover, being protected from creditors, they are able to dump products, thus eroding the profit margins of viable companies and distorting competition both domestically and abroad. The losses that bankruptcy would impose in terms of transitional organisation, relocation and retraining costs may well turn out to be smaller than the benefits foregone by delaying the transfer of resources to higher value uses.

These problems suggest that the bank-led workout programmes have not been as effective as hoped[74] and that further improvements in legal bankruptcy procedures are needed. Indeed, the workout programmes have focused on temporary debt relief, rather than on asset sales and operational restructuring. A second problem has been the strategy of creditors, which has appeared to aim at limiting immediate losses at the expense of larger problems in the longer term. For example, nearly two years after the collapse of Daewoo, all but two of the twelve companies initially accepted in the workout programme remain there.[75] While quick sales of assets would have presumably resulted in immediate losses for creditors, the long delay appears to have led to a decline in the value of those assets. The weakness of bank-led restructuring may reflect the fact that a third of the commercial banks are owned by the government.[76] Therefore, the early privatisation of the banks and the development of a more market-oriented financial system should be a priority. As for privately-owned banks, a supervisory approach that does not give financial institutions incentives to delay losses might help accelerate corporate-sector restructuring. Finally, the use of corporate restructuring vehicles (CRVs)[77] may be an effective way to turn around workout companies. Legislation in authorising the creation of CRVs through 2006 was passed in October 2000 and KAMCO and some commercial banks are developing such companies.

In addition, a further strengthening of legal bankruptcy procedures would help financial institutions take the lead in corporate restructuring. The pre-packaged bankruptcy system, which was passed in March 2001, is an important step forward. Under this approach, creditors holding at least half the outstanding debt would be allowed to negotiate an out-of-court settlement with the borrower and submit it to the court. Consequently, the maximum length of court procedures would be limited to five months. Furthermore, the bankruptcy procedure is to be streamlined by combining the three different approaches currently available. Improving the ability of the judiciary system to deal with bankruptcies should also be a priority.

Box 11. Summary of structural policy recommendations for the corporate and financial sectors in this *Survey**

The corporate sector

- Improve the workout programme, in part through the use of corporate restructuring vehicles.
- Strengthen the exit mechanism, in part through the "pre-packaged bankruptcy" approach to encourage the exit of non-viable companies.
- Implement the KDB underwriting scheme in a way that minimises moral hazard and avoids supporting non-viable firms. Phase out this scheme in 2002 so as to let market forces more fully drive corporate restructuring.
- Phase out the CBO scheme as financial markets stabilise.
- Take measures to activate the new corporate governance framework, including the role played by outside directors. Encourage the use of cumulative voting in the selection of directors.
- Improve the opportunities for shareholders to gain compensation for illegal management decisions, either through the introduction of class action suits or changes in derivative suits.
- Increase transparency by improving the quality of external audits.
- Further streamline policies to support SMEs, in part through the database developed by the SMBA. Further lower protection provided to SMEs.

The financial sector

- Effectively implement the second-stage restructuring programme so as to limit the need for additional funds and maximise the amount of funds that can be recouped. To that end, KAMCO should continue its ambitious schedule of asset sales.
- The privatisation of the commercial banks in order to promote their role in corporate restructuring and establish a market-oriented financial system should be a priority.
- Reduce government interference in private financial institutions, by avoiding, for example, pressuring banks to participate in the KDB underwriting scheme and bond market stabilisation funds.
- The FSC should ensure that banks effectively implement the forward-looking loan classification criteria.
- Rationalise excess capacity in the government-owned bank holding company in order to achieve profitability and limit the additional cost to taxpayers.
- Enforce the prudential supervision framework, including prompt corrective action, to promote the stability of the non-bank financial sector.

* The recommendations pertaining to other sectors are shown in Box 13.

While Korea does not have a specialised system for bankruptcies, there are two bankruptcy divisions in Seoul District Court, which handles half of the country's bankruptcy cases. However, the fact that judges are re-assigned to new posts every two years prevents the development of a corps of judges experienced in bankruptcy cases (Carr, 2001). In particular, the experience gained through the resolution of the first wave of bankruptcies, such as Kia and Hanbo in 1996 and 1997, has been dissipated as judges rotate to new posts. To assist judges in bankruptcy cases, a "management committee" has been created in Seoul District Court (Oh, 2001). Finally, it is crucial that banks screen the creditworthiness of their corporate borrowers on a regular basis, rather than periodically at the instigation of the authorities. While the government-initiated screenings of companies in June 1998 and October 2000 were positive measures to identify non-viable firms, such a procedure should not be an event that occurs every couple of years. Moreover, the fact that a relatively small number of companies were designated for liquidation or court receivership and some large firms with serious financial problems were not included in that list indicates that the screening was too timid in forcing the exit of troubled enterprises. The government has prepared operational guidelines for financial institutions for day-to-day credit risk assessment. As noted in Chapter V, continued improvement of the social safety net is also needed to facilitate corporate restructuring.

One worrisome development is that the recent measures taken by the government could be interpreted as encouraging financial institutions to support firms with serious balance-sheet problems. The quick underwriting programme of the KDB, as well as the CBOs using government guarantees, have been implemented to prevent the failure of companies deemed viable that otherwise would be likely to go bankrupt. Such intervention is intended to overcome market weaknesses, notably the bunching of maturities in a single year and the absence of a market for bonds with credit ratings below investment grade. Without government intervention, there would be a systemic risk from the failure of a significant number of major companies in the same year. However, there is concern that government guarantee programmes may save non-viable firms that absorb resources at the expense of their competitors. As noted above, the companies selected for the programme have to have a credit rating above BB and a restructuring plan approved by creditor banks, among others. Such conditions, however, may not be enough to prevent the inclusion of non-viable companies. *First*, there is some doubt about the reliability of credit ratings as an indicator of a company's financial health. For example, the Saehan Group, which had consistently maintained investment-grade credit ratings, abruptly filed for workout proceedings last year. *Second*, the approval of restructuring plans is also no guarantee of success, as illustrated by the large number of workout programmes that have either failed or had to be renegotiated. Moreover, Hyundai Engineering and Construction continues to be supported by financial institutions. With losses of 3 trillion won in fiscal year 2000, its paid-in capital was completely eroded and liabilities exceeded assets by 900 billion won. Nevertheless, it will receive a 3.4 trillion won debt-restructuring package that includes a debt-equity swap (1.4 trillion won), equity injections (750 billion won), corporate bond purchases (750 billion won) and fresh loans (390 billion won).

It is crucial that government intervention in the bond market does not slow restructuring in the corporate sector, including the exit of non-viable firms.[78] Indeed, the difficulties of some companies in rolling over their debt in the bond market are a sign that further restructuring is necessary and that investors are more sensitive to risk. By assuring the rollover of 25 trillion won of bonds through the KDB and CBO schemes, this message risks being ignored. In short, it is essential that the credit decisions of state-owned financial institutions do not replace the role of the market in assessing and pricing risk. To avoid such an outcome, the KDB scheme will be phased out at the end of 2001, given that the bunching of bond maturities will not be a problem in 2002, while the CBO programme should be phased out as financial markets stabilise. Moreover, the government should take steps to limit the negative consequences of these programmes. *First*, there should be transparency about the potential liabilities assumed through the guarantees and the potential cost to taxpayers. *Second*, the interest rate on the KDB scheme should be high enough to encourage the use of the regular bond market. *Third*, it is important to avoid actions that imply that some enterprises are too big to fail. If firms are bailed out on the basis of non-economic considerations, restructuring will lose its credibility. *Fourth*, the participation of creditor banks, which are to purchase 16 per cent of the maturing bonds, should be voluntary. Government pressure to force their participation would contradict the spirit of reforms in the financial sector.

The new corporate governance framework is leading to important changes to practices in this regard. Annual shareholder meetings, which were largely ceremonial events in the past, have become opportunities for shareholders to question management and exercise their rights. In addition, there have been some derivative suits filed by shareholders in recent years.[79] Although difficult to quantify, the rise in shareholder activism appears to be having an influence on corporate management. For example, one chaebol-affiliated firm refused to provide assistance to a sister company on the grounds that it would be subject to legal action by shareholders. In addition, the number of outside directors has increased sharply. There were less than 700 in 1998 when firms listed on the Korea Stock Exchange were first required to have one such director. After the minimum was raised to a quarter of the board in 1999 (one half in the case of large companies),[80] the number of outside directors rose to almost 1 500 in 2000. As a result, the average number of outside directors per listed company has risen from 0.9 to 2.1, while their share of boards has tripled from 11 to 32 per cent between 1998 and 2000. Finally, there are encouraging signs that good corporate governance practices are being rewarded by higher share prices.[81]

However, the corporate governance framework is still young and will take time to overcome traditional practices and the entrenched power of chaebol chairmen. Quickly developing the ability of various agents to monitor effectively corporate decisions is essential as the chaebol seem to be entering a period of renewed expansion (Figure 38). In particular, there are concerns about the ability of outside directors to monitor and control management decisions. According to a study by the Korea Stock Exchange at the end of 2000, outside directors supported management in 99.3 per cent of decisions. Such support reflects the selection process for outside directors. In 1999, 88 per cent of directors were appointed by the chaebol chairmen or by management, although the proportion declined to 80 per cent in 2000 (Table 32). Measures to ensure the independence of outside directors are essential, such as through cumulative voting. This procedure is now permitted under the company charters of 4 per cent of listed companies affiliated with the top four chaebol, 11 per cent of those affiliated with smaller groups and 24 per cent of listed independent companies. However, about 80 per cent of firms have adopted provisions in their articles of incorporation prohibiting the use of cumulative voting and this procedure has never been used by a listed company. Measures are needed to encourage the use of cumulative voting. Another step, which may help create a culture of outside directors, was the creation of a non-binding "Code of Conduct for Outside Directors" at the end of 2000 by the Korea Listed Companies Association and the Korea Stock Exchange.

A final concern is that there have only been a handful of derivative suits despite numerous actions within chaebol affiliates that are harmful to shareholders.[82] This may reflect a problem of free riders since the benefits in successful cases go to the company and are enjoyed by all shareholders, not just those initiating the suit. Moreover, the shareholders who bring derivative suits bear the legal costs. One option that has been under careful consideration is class action suits, which have the attractive aspect of providing benefits directly to shareholders.

Table 32. **The nomination of outside directors**

	1999		2000	
	Number	Per cent	Number	Per cent
Main shareholder	124	41.8	71	39.9
Management	138	46.4	71	39.9
Related firms	18	6.1	8	4.5
Major creditor bank	15	5.1	8	4.5
Institutional investors	1	0.3	3	1.7
Other	1	0.3	17	9.6
Total	**297**	**100.0**	**178**	**100.0**

Source: Korea Listed Companies Association.

However, this approach remains firmly opposed by business leaders who are concerned that such suits are subject to abuse. If the class action approach is rejected, other alternatives to encourage action by shareholders damaged by management misconduct should be considered. For example, the commercial code could be amended to allow shareholders who prevail in court to receive a portion of the damages payable to the company to compensate them for their management of litigation. Alternatively, companies could choose to allow a transparent form of arbitration, rather than derivative suits, to settle disputes between shareholders and the management or board of directors.

Improved corporate governance requires improved transparency. Accounting standards were raised following the crisis, but government supervisors have found that a third of surveyed companies have violated the rules. A study by PricewaterhouseCoopers judged Korea's accounting standards to be the most opaque of 35 countries examined. One weakness in Korea is that the number of qualified accountants is relatively low, at 5 300, relative to the more than 8 000 firms that are required to have external audits of their financial statements, generally at the same time of year.

In addition, the shift to a more market-oriented economy should include the easing of regulations that have been aimed at limiting the unbridled expansion of companies, especially those affiliated with chaebol. One change in this regard is the increased flexibility used in applying the 200 per cent debt to equity target.[83] Some other areas where reforms may be beneficial include the following. *First*, the ceiling on investments by chaebol-affiliated companies in other firms, which was abolished in the wake of the crisis, was re-instated in April 2000 in order to prevent expansion by the business groups. Improved corporate governance and transparency, as well as the reforms in the financial sector, will lead to an easing of this rule to facilitate corporate restructuring. *Second*, 14 holding companies, including some with major chaebol-affiliated companies, have been created since the decision to allow them beginning in April 1999. While the requirements for forming a holding company were further eased in April 2001, they still limit the scope for such an approach. In particular, the 100 per cent ceiling on debt to equity ratios makes this option unavailable for many enterprises. The KFTC plans to loosen the requirements for forming a holding company as business practices that conform with market principles take root.

Policies toward small and medium-sized enterprises

Government policies towards small and medium-sized enterprises (SMEs), which date back to the 1980s, have been predicated on the belief that smaller companies are weak and need government protection and support to survive in the face of competition from large firms, many of which are chaebol-affiliated. In particular, SMEs appeared handicapped by a lack of capital, reflecting their

Table 33. **Programmes to assist small and medium-sized enterprises**

Billion won in 2001

Ministry	Outlays	Number of programmes	Selected programmes
Small and Medium Business Administration	2 515	16	– Restructuring support – Start-up support – Stable operation support – Regional SME support – Technology development support – Venture company support
Ministry of Commerce, Industry, Energy	1 027	26	– Industrial technology development support – Modernisation of distribution network support – Activation of industrial complex support – Energy saving support
Ministry of Agriculture and Forestry	548	4	– Rice processing factory support – Agricultural product processing support – Agricultural machine product support
Ministry of Information and Communication	385	8	– Information and communication technology development support – Leading technology development and distribution support – Multi-media industry support – Software development support
Ministry of Labour	188	9	– Workplace accident prevention support – Workplace environment improvement support – Company nursery facility support
Ministry of Environment	124	3	– Anti-pollution facility support – Environmental technology development support – Recycling industry support
Ministry of Culture and Tourism	119	5	– Film promotion fund support – Sporting goods development support
Ministry of Science and Technology	101	2	– Technology development support – New technology project investment support
Ministry of Marine and Fishery	34	3	– Marine product distribution support – Fishing net support
Ministry of National Defence	8	1	– Defense industry support
Ministry of Construction and Transportation	6	2	– Standardising construction material support – General freight terminal construction support
Ministry of Health and Welfare	1	1	– New drug development support
Total	**5 056**	**80**	

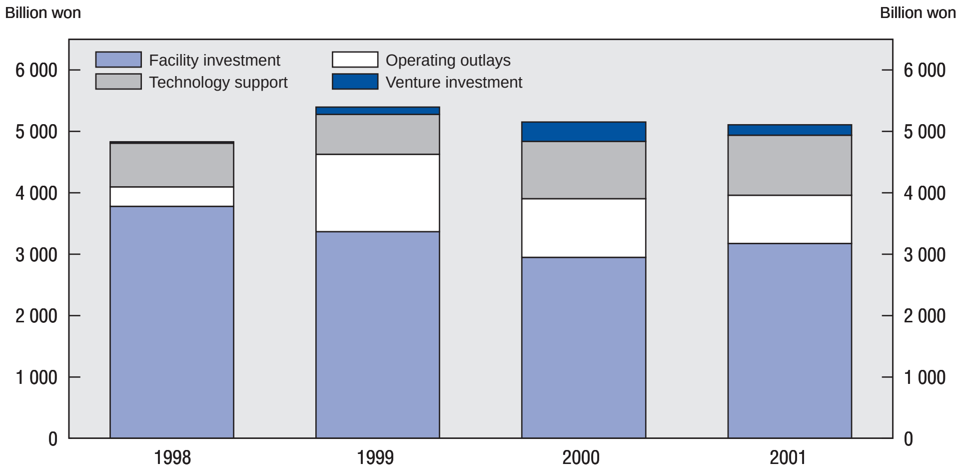
Source: Small and Medium Business Administration.

limited ability to raise collateral-backed financing. To overcome this weakness, the number of government programmes to support the SMEs quadrupled from around twenty in the early 1990s to 80 in 2001 (Table 33). Expenditures, including lending, by twelve different ministries totalled 5 trillion won (equivalent to 1 per cent of GDP). The bulk of the support – 4.3 trillion won in 2001– has been for lending to SMEs at favourable rates. While the extensive support has helped SMEs to increase their share of output and employment during the past twenty years, these policies may have had negative effects. *First*, the high level of assistance appears to have made SMEs passive about making their own efforts to improve productivity. *Second*, the competition among ministries to develop and expand support for SMEs has led to the creation of overlapping programmes, resulting in waste and duplication. Indeed, a March 2000 survey of 600 SMEs reported that 86 per cent were confused about which programmes were appropriate for them. Moreover, the large number of programmes open to SMEs may entice them to devote their limited resources to rent-seeking activities.

Government support for SMEs fell in 2000, reversing the long upward trend recorded during the past two decades. Perhaps most importantly, the authorities realised that continuing to favour the SMEs – in contrast to the shift to a more market-oriented system – would result in significant competitive distortions and consequent inefficiencies in resource allocation. In addition, financial market conditions for smaller companies – the primary rationale for government intervention – have improved. *First*, their access to bank loans increased as chaebol cut their borrowing from banks in order to lower their debt to equity ratios below 200 per cent. SMEs accounted for 97 per cent of new bank loans to companies in 1999 and 84 per cent in 2000. *Second*, other financing sources, such as KOSDAQ and the bond market, were increasingly accessible to SMEs. With abundant liquidity, the rate on bank loans to SMEs fell to 7.8 per cent at the end of 2000, compared to financing in government programmes of between 5.5 and 8.25 per cent. Given the changing financial market conditions, the government cut its support for facility investment and operating expenditure, which could be provided by private sources. In contrast to the decline in these areas, which had accounted for more than 80 per cent of government assistance to SMEs, support for technology development and venture businesses increased (Figure 41). Nevertheless, total support for SMEs is scheduled to decline again in 2001.

Korea has taken other steps to establish a more market-oriented policy towards SMEs. The number of business lines reserved for SMEs, which totalled 237 in 1989, was reduced to 88 in 2000 and will be further lowered to 45 in September 2001. This regulation reduced competition in the domestic market while providing little assistance to small companies since these business lines were open to imports. The remaining areas restricted to SMEs include such items as umbrellas, towels and stockings. In addition, the requirement that the government procure certain items solely from co-operatives organised by SMEs in order

Figure 41. **Government support[1] for small and medium-sized enterprises**
Billion won



1. Includes direct payments and lending.
Source: Small and Medium Business Administration.

to assure them a stable market has also been eased, in part due to the need to conform to the World Trade Organisation's rules in this area. Between 1998 and 2000, the number of designated goods has decreased from 258 to 154. Finally, the definition of SMEs, which accounted for 99.2 per cent of all firms in Korea in 1998, was simplified at the end of 2000 (Table 34). Given the large number of benefits, including financial support and tax relief, there are significant incentives for firms to maintain their status as SMEs. Indeed, by 2000, there were 152 exceptions to the standard definition of SMEs, allowing firms to maintain their SME status as they expanded. The objective of the new criteria was to simplify the definition of SMEs to prevent different treatment of similar firms and to introduce a definition for primary industry, which is shifting from self-employment to a corporate-based structure. The immediate effect was to raise the number of SMEs by 0.6 per cent by adding firms in services and primary industries.

The government guarantees loans to SMEs through the Korea Credit Guarantee Fund and the Korea Technology Credit Guarantee Fund. This year, it completed a shift begun in 1999 from full to partial guarantees, which range from 70 to 85 per cent of the loan amount, depending on the purpose of the loan and the type of institution making it. A partial guarantee system reinforces the screening and post-loan management functions of creditor banks. In addition, the guarantee

Table 34. **Definition of small and medium-sized enterprises**

Sector	Previous standard[1]	Current standard[2]
Manufacturing[3]	**Full-time employees;** maximum of between 300 and 1 000 **Amount of assets;** maximum of between 30 and 80 billion won	**Full-time employees;** fewer than 300 **Paid-in capital;** no more than 8 billion won
Mining[3]	**Full-time employees;** maximum of between 300 and 700 **Amount of assets**; maximum of between 20 and 50 billion won	**Full-time employees;** fewer than 300 **Paid-in capital**; no more than 3 billion won
Construction and transport	**Full-time employees;** no more than 300	**Same as mining**
Services[3]	**Full-time employees;** maximum of between 20 and 400	**Full-time employees;** maximum of between 30 and 300 **Annual sales volume;** maximum of between 2 and 30 billion won
Primary industry[3]	–	**Full-time employees;** maximum of between 50 and 200 **Annual sales volume;** maximum of between 5 and 20 billion won

1. Under the old criteria, a firm had to qualify under every condition.
2. Under the current criteria, a firm has to meet just one criterion to qualify. However, no SME can have more than 1 000 employees.
3. The maximum allowed for employees, assets, paid-in capital or sales volume varies between industries in the sector.

Source: Small and Medium Business Administration.

coverage can be increased for the same amount of financial resources at the two Funds. These public agencies increased their guarantees for SMEs by 33.7 trillion won in 2000. However, with the termination of matured guarantees, the total stock of guarantees increased only modestly to 35 trillion won (Table 35). The net loss from defaults also declined to less than 1 trillion won. In 2001, guarantees for

Table 35. **Credit guarantees for small and medium-sized enterprises**

Trillion won

	(1) Balance of guarantees	(2) Defaults	(2)/(1) Default rate (%)	Net loss
1995	11.7	0.9	8.1	0.8
1996	13.8	0.8	5.7	0.7
1997	17.1	1.2	6.9	1.2
1998	32.8	3.0	9.2	2.6
1999	30.9	1.1	6.0	1.3
2000	35.1	1.2	3.4	0.8

Source: Small and Medium Business Administration.

Table 36. **Creation and bankruptcy of firms**
Monthly average in the largest cities[1]

	1995	1996	1997	1998	1999	2000	2001[2]
New establishments	1 437	1 605	1 754	1 606	2 498	3 455	3 028
Bankruptcies	380	323	511	628	203	233	235
Ratio	3.8	5.0	3.4	2.6	12.3	14.8	13.0

1. Until 1999, the seven largest cities – Seoul, Pusan, Taegu, Kwangju. Taejon, Inchon and Suwon – were included. From 2000, Ulsan was added.
2. Average of January and February.
Source: Small and Medium Business Administration.

SMEs are set to rise to 37 trillion won, in part as a pre-emptive measure against credit-crunch conditions. With the expansion of guarantees since the crisis, the share of SME loans that are guaranteed increased from 15 per cent in 1997 to 22 per cent in 1999. In addition to guarantees for SMEs, the Korea Credit Guarantee Fund will provide 17 trillion won of guarantees for the CBOs, the CLOs and the KDB quick underwriting scheme discussed above.

The creation of new firms has accelerated sharply in the past few years, reflecting in part the weaknesses of large companies as well as the development of knowledge-based activities. The average number of new enterprises created each month in the largest cities jumped by more than a third in 2000 and is now more than double its pre-crisis level (Table 36).[84] While the rate declined somewhat in the first few months of 2001, it is was still 13 times higher than the number of bankruptcies. Part of the new firm creation in recent years has been due to a rise in the number of venture businesses to more than 10 000 as of May 2001 (Table 37). Their total employment is now around 420 000.[85] Such enterprises, which qualify based on at least one of four criteria (see 2000 *Survey*), are concentrated in the computer and communication industries. The increase in the number of venture capital financing companies from 236 in 1999 to 421 in 2000 encouraged the rising number of venture businesses.

The decline in support for SMEs since 2000 suggests some progress in moving towards a more market-based framework that encourages smaller companies to boost productivity. However, with 80 programmes still in existence in 2001, there is a need for further streamlining and rationalisation of government activities in this area and a reduction in the level of support. The proliferation of similar support programmes indicates a lack of evaluation and feedback of the government's financing projects. Each project should be scrutinised as to its objectives, needs, appropriateness and its efficiency in meeting those objectives (OECD, 2000*d*). One tool for streamlining government programmes for small companies is the SME database, which was created in March 2000 by the Small and Medium Business Administration (SMBA). All data concerning SMEs that have received

Table 37. **Venture businesses**

A. Number[1]

As of 1996	1997	1998	1999	2000	Total[2]
3 681	852	1 287	2 385	2 160	10 462

B. Background of CEO (per cent of total)

Researchers	University professors	SME employee or CEO	Large company employee	Others	Total
9.9	6.4	37.3	31.4	15.0	100.0

C. By sector (per cent of total)

Computer-related	Communication equipment	Electric equipment	Machinery manufacturing	Others	Total
33.5	11.0	11.9	10.4	33.2	100.0

1. The numbers for a given year vary over time since venture businesses can be designated retroactively.
2. As of 17 May 2001. By that date, 97 companies had been designated as venture businesses for 2001.

Source: Small and Medium Business Administration.

financing support from the SMBA are recorded in this database and the other 14 government ministries involved with SMEs have access to it.[86] This enables ministries to consult the database before making any decisions on providing assistance to a specific firm and thus can be a tool to prevent the duplication of efforts by different ministries. The SMBA has also proposed that total financing for an individual company be capped at 5 billion won and the eligible company's debt ratio should not be more than double the average in the same business category. Finally, the dismantling of specific protection provided to SMEs – notably the reservation of certain business lines and government procurement – should continue.

Restructuring the financial sector

In the wake of the crisis, Korea launched a financial-sector restructuring programme aimed at maintaining a functioning financial system and, at the same time, making it more market-oriented. By August 2000, a total of 107.5 trillion won had been spent (Table 38), primarily to re-capitalise viable financial institutions and address the non-performing loan problem. A majority of these funds were spent on commercial banks but significant amounts were also used for non-bank institutions, such as investment trust companies, merchant banks and insurance companies. In addition, nearly a quarter of Korea's financial institutions, including

Table 38. **Expenditures on financial-sector restructuring**

Trillion won

	First programme (Through August 2000)	Second programme (As of March 2001)	Total
A. Expenditures by type of institution			
Banking sector	70.3	10.4	80.7
Investment trusts	12.2	3.7	15.9
Merchant banks	11.9	4.6	16.5
Insurance companies	10.5	2.0	12.5
Other[1]	4.7	4.4	9.1
Total	109.6	25.1	134.7
B. Sources of financing			
Government-guaranteed borrowing	64.0	19.8	83.8
Recycled funds	18.6	8.6	27.2
Other public funds	27.0	–3.3	23.7
Total	109.6	25.1	134.7
Per cent of GDP in 2000	21.2	4.8	26.0
C. Net outlays			
Total minus recycled funds	91.0	16.5	107.5
Per cent of GDP in 2000	17.6	3.2	20.8

1. Mutual savings and loans and credit co-operatives.
Source: Ministry of Finance and Economy.

nine of 26 commercial banks, were closed (Table 39). To improve the supervisory framework, the Financial Supervisory Commission, a unified body covering banking, insurance, non-banks and the capital market, was established. Key elements included a prompt corrective action framework to deal with financial institutions failing to meet prudential standards and a forward-looking loan classification system (Table 40). This restructuring programme has achieved some success, with many

Table 39. **The number of financial institutions**

	End of 1997	November 2000	Change
Commercial banks	26	17	–9
Merchant banks	30	9	–21
Securities companies	36	43	+7
Insurance companies	50	40	–10
Investment trust companies[1]	31	27	–4
Mutual savings	231	159	–72
Credit co-operatives	1 666	1 322	–344
Leasing companies	25	18	–7
Specialised and development banks	7	5	–2
Total	**2 102**	**1 640**	**–462**

1. Includes investment trust management companies.
Source: Ministry of Finance and Economy.

Table 40. **Major steps taken to upgrade prudential supervision in Korea**

- A unified supervisory body, the Financial Supervisory Commission, was created in April 1998.
- Accounting and disclosure standards were brought closer into line with International Accounting Standards.
- A "Prompt Corrective Action" framework has been introduced.
- A "forward-looking loan classification" system has been implemented.
- To supervise banks, the so-called "CAMELS" system has been put in place.
- The calculation of BIS capital adequacy standards has been improved.
- Exposure limits on banks' lending to individual companies and to chaebol were tightened.
- In the insurance sector, a solvency standard based on that used by the European Union was introduced.
- Mark-to-market valuation is now required for ITC funds.
- A partial deposit insurance scheme has been implemented.

Source: OECD.

measures introduced during the past year (Box 9). In particular, there are now a number of privately-owned banks with strong balance sheets that meet tough prudential standards. However, at the same time, the government owns a number of weaker banks that remain encumbered with non-performing loans and have weaker profitability. Meanwhile, the impact of the collapse of the Daewoo group is still felt in the bond market and has accelerated the restructuring of some non-bank financial institutions. Moreover, problems remain in other areas, notably life insurance.

To address these remaining problems, the government launched a second restructuring programme for the financial sector in September 2000 that envisioned additional expenditures of 50 trillion won. As of March 2001, about half of this second amount had been spent (Table 38). The remaining 25 trillion won is to be spent during the April to December period of 2001, with about half of the amount devoted to problems in commercial banks (Table 41). This section reviews

Table 41. **Remaining outlays under the second-stage financial-restructuring plan**
Trillion of won

	April to June 2001	July to December 2001
Re-capitalisation of commercial banks and life insurance companies	4.5	7.0 to 8.0
Repayment of borrowed funds[1]	4.0	2.0 to 3.0
Payment to depositors at failed mutual saving and finance companies	1.0 to 2.0	1.0 to 2.0
Liquidation of Hanareum[2]	2.0	–
Restructuring of life insurance companies	1.0	–
Repayment of matured bonds[3]	0.4	0.7
Put-back option payment[4]	0.1	0.7
Total	**13.0 to 14.0**	**11.4 to 14.4**

1. To financial institutions.
2. A bad bank for failed merchant banks.
3. Used to finance the first-stage restructuring plan.
4. Paid to Newbridge Capital, which purchased Korea First Bank in 1999.

Source: Ministry of Finance and Economy.

the remaining issues of non-performing loans, the roles played by the Korea Asset Management Corporation (KAMCO) and the Korea Deposit Insurance Corporation (KDIC) and the problems in the banking and non-banking sectors and the bond market. It then offers an evaluation of progress to date.

KAMCO, KDIC *and the banking sector*

Non-performing loans at the end of 2000 were 65 trillion won (10.4 per cent of total loans), virtually unchanged from the previous year (Table 42). Continued corporate restructuring and the implementation of stricter loan classification standards[87] put further upward pressure on the amount of substandard loans. Consequently, the total failed to decline significantly despite another 30 trillion won of purchases of non-performing loans by KAMCO and write-offs by banks. Since taking charge of the Non-Performing Asset Fund at the end of 1997, KAMCO has purchased a total of 95.2 trillion won of non-performing loans at a purchase price of 36.8 trillion won (Table 43).[88] This has been financed by an initial 20.5 trillion won of publicly-guaranteed borrowing and by recycled funds obtained from the sale of non-performing loans purchased from financial institutions. KAMCO has developed a broad range of procedures for loan disposal, including sophisticated capital market techniques, such as asset-backed securities, which have, in turn, encouraged the development of the financial sector. In 2001, KAMCO plans to purchase a total of 15.2 trillion won of non-performing loans at a price of 5.2 trillion won. About half of the total is from six commercial banks that are under restructuring plans. Such purchases are part of the goal to reduce non-performing loans to 4 per cent of total loans by the end of 2001. KAMCO's role as the government agency responsible for resolving non-performing loans is scheduled to end in November 2002.

The KDIC has played a key role in re-capitalising financial institutions and in meeting the claims of depositors in failed institutions (Table 44). At the beginning of 2001, the blanket coverage of deposit insurance introduced in the wake of the crisis was replaced with a system in which coverage is limited to 50 million won (principal and interest) per deposit in insured financial institutions. This amount is equivalent to more than double the average size of deposit accounts. The introduction of a partial coverage system will enhance market discipline. However, the adoption of a risk-based premium system for insured financial institutions has been delayed for fear of a negative impact on weaker institutions. To promote the recovery of injected public funds, KDIC was recently given expanded powers to act as a shareholder and creditor of financial institutions. For example, it can make claims against shareholders and management of financial institutions posting losses and directly investigate corporations responsible for the losses of government-owned institutions. In addition, KDIC is to be selected as the trustee of financial institutions in court receivership.

Table 42. **Non-performing loans**

Trillion won

	December 1997			December 1998			December 1999			December 2000		
	Total loans	NPLs	Ratio (%)	Total loans	NPLs	Ratio (%)	Total loans	NPLs	Ratio (%)	Total loans	NPLs	Ratio (%)
Banks	**518.6**	**31.6**	**6.1**	**443.3**	**33.7**	**7.6**	**474.0**	**39.7**	**8.4**	**526.1**	**42.1**	**8.0**
Commercial banks	375.8	22.7	6.0	300.5	22.2	7.4	328.3	27.4	8.3	361.4	32.0	8.9
Specialised and development	142.8	8.9	6.2	142.8	11.5	8.1	145.7	12.3	8.4	164.7	10.1	6.1
Non-bank financial institutions	**128.7**	**12.0**	**9.3**	**133.1**	**26.5**	**19.9**	**116.2**	**27.0**	**23.2**	**95.3**	**22.5**	**23.6**
Merchant banks	24.1	1.0	4.1	28.0	5.6	20.0	14.9	2.3	15.4	3.5	1.3	37.1
Insurance companies	51.7	4.8	9.3	38.8	3.4	8.8	41.8	5.8	13.9	44.5	3.8	8.5
Mutual savings and loans	28.1	3.3	11.7	22.0	5.3	24.1	17.8	5.8	32.6	15.7	5.8	36.9
Credit unions	12.7	1.3	10.2	11.2	2.5	22.3	10.2	2.2	21.6	10.3	1.3	12.6
Leasing companies	n.a.	n.a.	n.a.	25.8	7.8	30.2	20.4	7.4	36.3	13.7	5.9	43.1
Securities companies	12.1	1.6	13.2	7.3	1.9	26.0	10.0	3.4	34.0	7.6	4.0	52.6
Total[1]	**647.3**	**43.6**	**6.7**	**576.4**	**60.2**	**10.4**	**590.2**	**66.7**	**11.3**	**621.4**	**64.6**	**10.4**

1. Non-performing loans were reduced, in part, by purchases by KAMCO, which totalled 44.1 trillion won in 1998, 11.9 trillion won in 1999 and 30.9 trillion won in 2000.

Source: Financial Supervisory Service.

Table 43. **Operations of the Korea Asset Management Corporation**
Billion won

A. Purchases of impaired assets (November 1997 to December 2000)

	Face value	Purchase price
Ordinary loans[1]		
Secured	10 023	6 505
Unsecured	18 465	2 176
Sub-total	28 488	8 681
Restructured corporate loans[2]		
Secured	25 743	12 199
Unsecured	13 003	4 057
Sub-total	38 746	16 256
Assets acquired from investment trust companies[3]	27 925	11 838
Total	**95 159**	**36 775**

B. Asset resolution plan

	1999	2000	2001	2002	2003	**Total**
Objective	16 000	16 900	21 500	19 000	24 200	**97 600**
Outcome	15 800	24 900	–	–	–	**40 700**

C. Asset resolution (November 1997 to December 2000)

	Face value	Purchase price	Sales price
International bidding	6 027	1 303	1 598
Asset-backed securities	7 289	3 858	3 780
Foreclosure and public auction	7 889	2 265	2 757
Sale to AMC	1 721	455	678
Sale to CRC	853	140	266
Individual loan sale	315	97	125
Collection	6 602	2 568	3 667
Sub-total	30 696	10 686	12 871
Repurchase/cancellation	14 985	8 091	8 091
Total	**45 681**	**18 777**	**20 962**

1. Ordinary loans are those acquired directly from the financial institution. Initially, KAMCO purchased assets for a tentative price. Since September 1998, purchases have been at 45 per cent of face value for collateralised loans and 3 per cent for loans without collateral.
2. Restructured corporate loans (special assets) are acquired through court-approved re-organisation or composition proceedings. The price is determined by a court-approved estimate of present value of projected cash flows.
3. Related to the Daewoo crisis.

Source: KAMCO.

The commercial banking sector continued to record large losses in 2000, as provisioning for bad loans far exceeded operating profits (Table 45). Moreover, there is a widening dichotomy between a group of banks that are privately-owned and have capital adequacy ratios of over 10 per cent and a second group of banks

Table 44. **Expenditures by the Korea Deposit Insurance Corporation**
Trillion won financed by government-guaranteed borrowing as of November 2000

	Equity participation	Contributions and insurance claim payments	Asset purchases	Other	Total
A. Original 64 trillion won[1]	20.5	21.0	1.8	0.2	43.5
Banks	16.5	9.6	1.8	0.0	27.9
Five merged banks	1.2	9.6	0.2	0.0	11.0
Korea First and Seoul Bank	9.0	0.0	1.6	0.0	10.6
Other banks	6.3	0.0	0.0	0.0	6.3
Other financial institutions	4.0	11.4	0.0	0.2	15.6
Life insurance	3.9	1.4	0.0	0.0	5.3
Guaranty insurance	0.1	0.0	0.0	0.0	0.1
Merchant banks	0.0	5.8	0.0	0.0	5.8
Credit co-operatives	0.0	1.3	0.0	0.0	1.3
Mutual savings	0.0	2.9	0.0	0.2	3.1
B. Recycled funds	..	..	..	..	9.2
Used	3.0	4.4	3.1	0.0	10.4[2]
C. Total expenditures[3]	**23.5**	**25.4**	**4.9**	**0.2**	**54.0**

1. Authorised in June 1998.
2. Including KAMCO's recycled funds that were borrowed and used by KDIC.
3. Original 64 trillion won of borrowing plus recycled funds.
Source: Ministry of Finance and Economy.

that are primarily government-owned and have lower ratios. The strong group consists of specialised banks or relatively new institutions that have not played a significant role in the past in lending to the chaebol. Moreover, this group has a significant degree of foreign participation.[89] The weaker banks, in contrast, are more heavily exposed to the chaebol. One positive sign, though, is the turnaround in Korea First Bank, which was sold to foreign investors in 1999, and in Seoul Bank, which has been restructured prior to its planned sale to foreign investors in June 2001. However, the turnaround was not inexpensive. Thus far, 12.5 trillion won (2.5 per cent of GDP) of public money has been injected into Korea First Bank and another 4.7 trillion won into Seoul Bank. To deal with the other weak banks, the government created a financial holding company in March 2001 and it began operating in April. Initially, two nation-wide banks (Hanvit and Peace) and two regional banks (Kwangju and Kyungnam) have been included.[90] Seoul Bank will also be included if no foreign buyer is found. Prior to the establishment of the holding company, the non-performing loans of the candidate banks were cleaned up and public funds were injected to boost capital adequacy ratios to above 10 per cent. The objective of the holding company approach is to allow the affiliated companies to maintain their clients and employees, in contrast to liquidation or the Purchase and Acquisition approach used in 1998. At the same time, the government

Table 45. **Indicators of bank profitability**
For nation-wide banks in billion won, per cent

	Banks with high capital ratios[1]	Banks with lower capital ratios[2]	Seoul Bank and Korea First Bank	**Total**
1999				
Before-tax profits[3]	1 071.5	–3 772.4	1 161.6	–1 539.3
After-tax profits	866.9	–3 582.9	–3 237.7	–5 953.7
Return on equity (per cent)	7.4	–35.4	–146.2	–24.8
Return on assets (per cent)	0.4	–2.2	–5.9	–1.4
Total loan	152 946.5	124 575.9	28 025.0	305 547.4
NPL	8 471.1	13 342.5	4 604.1	26 417.7
NPL ratio (per cent)	5.5	10.7	16.4	8.7
Loan loss reserves	7 127.1	10 133.0	1 613.5	18 873.6
Reserves/NPLs (per cent)	84.1	76.0	35.0	71.4
Capital adequacy ratio (per cent)	12.2	9.1	11.0	10.8
Number of branches	1 869	1 544	627	4 040
Operating expenses/operating reserves (per cent)	80.5	46.2	181.0	53.0
2000				
Before-tax profits[3]	1 496.7	–4 755.2	–597.2	–3 855.7
After-tax profits	1 240.8	–3 427.3	–213.4	–2 399.9
Return on equity (per cent)	10.1	–42.3	–11.6	–10.8
Return on assets (per cent)	0.5	–2.0	–0.5	–0.5
Total loan	186 047.7	125 048.5	26 831.3	337 927.5
NPL	7 389.3	11 697.5	3 274.2	22 361.0
NPL ratio (per cent)	4.0	9.4	12.2	6.6
Loan loss reserves	6 350.2	9 616.2	2 530.5	18 496.9
Reserves/NPLs (per cent)	85.9	82.2	77.3	82.7
Capital adequacy ratio (per cent)	10.8	9.8	12.1	10.5
Number of branches	1 908	1 439	630	3 977
Operating expenses/operating reserves (per cent)	91.4	44.8	58.3	53.7

1. BIS capital adequacy ratio of more than 10 per cent. This group includes Shinhan Bank, Hana Bank, KorAm Bank, Kookmin Bank and Korea Housing and Commercial Bank.
2. BIS capital adequacy ratio of less than 10 per cent. This group includes Chohung Bank, Hanvit Bank, Korea Exchange Bank and Peace Bank.
3. Operating profits after provisioning. A simple sum method is used in this table.

Source: Financial Supervisory Commission.

hopes to maximise the synergy effects in the holding company by reducing overlapping branches and investing jointly in information technology and marketing. The government also helped to engineer a merger of two strong banks, Kookmin and Housing and Commercial, in April 2001 despite significant opposition from labour unions. The merged bank will become the largest bank in Korea.

Non-bank financial institutions and the capital market

Many of the remaining problems in the financial sector are in non-bank institutions, which in many cases were used as financing vehicles by the chaebol.

Non-performing loans account for almost a fourth of their lending, which in turn, has fallen significantly during the past three years (Table 42). All but four of the original thirty merchant banks have been closed and their lending is only one-seventh of their pre-crisis level. In the life insurance sector, the government has injected 10.8 trillion won of public money and reduced the number of companies by nine, either through closure or mergers with stronger companies. As of the end of 2000, all but four of the remaining 23 companies had met the requirement to have solvency ratios over 100 per cent. Three companies, however, had more liabilities than assets and are being offered for sale by public bidding. The other weak company, Korea Life Insurance, previously one of the three major firms in this sector, is still short of capital and will receive additional public money. Despite the improvement in the financial structure in this sector, its profit performance deteriorated during the first nine months of fiscal year 2000 (April 2000 to March 2001) due to a sharp increase in policy reserves and a decline in investment income. Only nine companies were profitable, resulting in a total loss of 2.7 trillion won for the whole sector, compared to a profit of 1.8 trillion won in the year-earlier period.

As noted above, the weak bond market has been a key factor in the credit crunch conditions experienced during the past year. The problems in the bond market are directly linked to the high credit risks in the corporate sector due to inadequate restructuring and the problems of the investment trust companies (ITCs), traditionally a major investor in corporate bonds, following the collapse of Daewoo. The amount of funds in ITC trust accounts fell by nearly half in the year after the demise of the then second-largest chaebol in mid-1999. The government has responded to this situation by attempting to restructure the ITCs. *First*, KAMCO purchased nearly 29 trillion won of bad assets from the ITCs. *Second*, public funds are being injected to re-capitalise two of the largest institutions. *Third*, the regulatory framework was improved by requiring ITCs to have external audits and at least three independent directors. In addition, mark-to-market accounting was introduced in July 2000. *Fourth*, the legal and governance framework for ITCs has been strengthened. *Fifth*, the ITCs were allowed to sell tax-deductible financial products in December 2000.

In addition to measures to rehabilitate the ITCs, the government has taken more direct action to re-activate the bond market. One was to pressure banks and insurance companies to contribute to the "bond market stabilisation fund". Following the end of the first fund, which primarily purchased CBOs and corporate bonds, a second fund was created in December 2000. In addition, steps have been taken to strengthen credit-rating agencies. The Investment Trust Association has tightened their rating standards for such agencies and will publicly disclose their assessment twice a year. In contrast to the corporate bond market, the government bond market has developed rapidly in recent years. Government bonds' share of trading in the market has jumped from 6.5 per cent in 1997 to 31 per cent in 2000, helping them to become regarded as the benchmark. In addition, the government has introduced ten-year bonds and sharply boosted the amount of five-year bonds.

Evaluation[91]

It is uncertain whether the funds included in the second-stage programme will be sufficient to complete the restructuring of the financial sector. More important than the amount of funds spent is the need to successfully conclude the restructuring programme so as to limit the ultimate cost to taxpayers. As of March 2001, the government had recouped 32.8 trillion won of the public funds injected, with most of this amount being recycled into the financial system (Table 38). With total net expenditures of 107.5 trillion won, the recovery rate has thus been about 30 per cent. Given that expenditures on financial-sector restructuring will surpass total central government debt, it is important to achieve a high recovery rate. In terms of recovering funds, KAMCO has been successful thus far, with asset sales in 2000 well above its objectives (Table 43, Panel B). As of the end of the year, it had recouped 21.0 trillion won on the sale of 45.7 trillion won of non-performing loans for which it originally paid 18.8 trillion won (Panel C). Moreover, the innovative securitisation techniques used to sell these assets are contributing to the development of the Korean financial system.[92] The situation of KDIC is more difficult since recouping the funds that it has injected to re-capitalise financial institutions requires successfully turning around those institutions. Allowing KDIC to play a more active role as shareholder in banks should help it to recover public funds, although allowing it to investigate corporations may be a more difficult task for this organisation.

At present, the share prices of banks are depressed, suggesting that recovering a significant portion of the public funds requires delaying privatisation. However, there are significant costs to leaving a large portion of commercial bank ownership – almost two-thirds of its total capital at present – in government hands. The government expects that the share prices of financial institutions will go up gradually owing to the re-capitalisation and KDIC's expanded powers to act as a shareholder for turning around financial institutions. The authorities plan to privatise the commercial banks from the second half of 2002, depending on the degree of normalisation of financial institutions and conditions in the stock market and the economy. However, as noted above, active, bank-led corporate restructuring is the key to improving the prospects of both the financial and corporate sectors. As this appears to be stymied under the current situation, it is crucial that the government make privatisation of the banks and the development of a market-oriented financial system a priority. The cost of continued government ownership appears to outweigh the possible benefits of waiting for these institutions to turn around in the future. Moreover, to achieve a more market-based financial system, the government should limit its interventions. In particular, institutions should be free to choose whether or not to participate in such activities as the KDB underwriting scheme and the bond market stabilisation fund.

Most of the problems in the financial sector, including those in the corporate bond market, are due to the weaknesses in the corporate sector. Consequently, financial-sector instability will remain high as long as the corporate sector remains weak. To promote the restructuring of the corporate sector, financial institutions should further improve credit-risk assessment and lending practices and take an aggressive stance on asset quality. Such an approach will help resolve remaining problems and reduce the likelihood of successive rounds of restructuring. In this regard, it is important to implement effectively the forward-looking loan criteria, which allow each institution to establish their own credit-risk rating system to evaluate the capacity of borrowers to pay. In January 2001, the FSC evaluated the banks' progress in implementing the new classification system, which was introduced at the end of 1999. Forward-looking criteria were also applied to merchant banks from June 2000 and insurance companies from August 2000. As for the newly-created bank holding company, a further rationalisation of capacity will be necessary to ensure its profitability, and its managerial independence should be guaranteed. Since the crisis, commercial bank staff and the number of branches have declined by 38 and 21 per cent, respectively. However, most of the reductions were accomplished in the first year after the crisis. Finally, the non-bank financial sector remains a concern. Strictly implementing the new supervisory framework is necessary to limit the risk of future problems in the life insurance and investment trust sectors.

V. Building a more market-oriented economy

The overriding objective of the reforms introduced by the new government in the wake of the 1997 crisis was to establish a more market-oriented economy. A major emphasis has been on enhancing flexibility in factor markets, which facilitates restructuring, and on stimulating competition, which improves efficiency and hence raises productivity in the economy. This chapter begins by discussing developments in the labour and land markets (the financial market was discussed in Chapter IV). The second section analyses the government's efforts to boost competition through reforming regulations, strengthening competition policy, removing trade barriers, encouraging inflows of foreign direct investment and privatising state-owned enterprises. The final section looks at developments in the key network industries of telecommunications and electricity, and in the agricultural sector, which remains relatively large in Korea. Progress in all of these areas since the 2000 OECD *Economic Survey of Korea* is summarised in Box 12.

Flexible factor markets

The labour market

As noted in the 2000 *Survey*, Korea appears to have a relatively high degree of flexibility in wages. This flexibility is due, in part, to the sensitivity to economic conditions of bonus and overtime payments, which account for a third of employee compensation. In addition, firm-based wage bargaining on an annual basis is the norm in Korea, leading to outcomes generally appropriate to a company's situation. The wage-setting structure has resulted in considerable wage dispersion across sector, type of worker, education level and size of firm, allowing relative wages to play an effective signalling role in allocating labour. In addition, the minimum wage is set at a low level, resulting in a limited impact on the labour market. Despite a 16.5 per cent rise in 2001, the minimum wage is likely to remain below a quarter of the average manufacturing wage (Table 46), one of the lowest ratios in the OECD area. Even with this increase and the extension of the minimum wage law to firms with between five and ten workers, only 1 per cent of employees are expected to be paid the minimum wage in 2001.

Box 12. Summary of previous structural policy recommendations*

Recommendations in the 2000 *Survey*	Actions taken
The labour market	
Use the Tripartite Commission to forge a consensus on bringing Korea's industrial relations practices into line with internationally-accepted norms.	The Commission has a 52-item agenda and has reached agreements on 13 items, including an accord to reduce working hours. However, the plan to allow trade union pluralism at the firm level was delayed until 2007.
Ensure that the total income of the poor under the new "productive welfare" system does not fall below the minimum cost of living, while enforcing eligibility requirements once social assistance becomes a right.	The "minimum cost of living", used as a basis for welfare payments, was boosted by 6 per cent in 2001, which is likely to increase the number of recipients by 3 per cent.
Establish a system of "earnings disregards" to encourage beneficiaries of social assistance who are able to work to seek employment.	No action taken.
Make efficient use of the Public Employment Service and private job placement firms to keep beneficiaries of social assistance active in the labour market.	The number of persons placed in employment by the PES rose by 43 per cent in 2000.
Expand the number of occupations where the use of temporary (dispatched) workers is allowed.	A study on the impact of dispatched workers was launched in 2001.
Further relax employment protection for regular workers to enhance labour mobility.	No action taken.
Regulatory reform	
Ensure that civil servants' behaviour changes in line with the recent changes in regulation.	The Regulatory Reform Committee (RRC) has monitored the behaviour of civil servants both at the central and local government levels.
Maintain the momentum of regulatory reform by establishing comprehensive, results-oriented reform plans in key sectors.	The RRC is focusing regulatory reform efforts in five key sectors: sports and culture, marine and fisheries, architecture, manufacturing and the environment.
Promote the use of cost-benefit analysis in considering new regulations, implementing only those for which the benefits are expected to outweigh the costs.	Steps have been taken to improve the quality of the Regulatory Impact Analysis statements, which include cost-benefit analysis.
Land-use policy	
Ease government controls over land use to allow greater flexibility, while taking into account the public good characteristics of land.	The use of "concentration charges" to limit overcrowding in Seoul will be extended to all of Kyonggi province.

Box 12. **Summary of previous structural policy recommendations*** (*cont.*)

Recommendations in the 2000 *Survey*	Actions taken
Reduce the high taxes on property transactions, which limit the flexibility of land-use conversion, while increasing holding taxes on land.	No action taken.
Ensure sufficient co-ordination of land-use policies, given the dispersion of responsibility in this area between a number of different government ministries.	Under the new act on land use, any changes in zoning status must be considered by the National Territory and Urban Planning Committee.
Promoting competition	
Ensure that regulations, such as those aimed at protecting health and safety, do not act as non-tariff barriers to imports.	The government is modifying Korean standards to make 80 per cent of them match international standards by 2004.
Continue to improve the climate for foreign direct investment (FDI) and remove remaining barriers in order to maintain the high level of inflows.	Two business lines where FDI was prohibited have been partially liberalised. Inflows reached a record $15.7 billion in 2000.
Strengthen competition policy by expanding the Korea Fair Trade Commission's (KFTC) resources and investigative powers.	The KFTC's budget increased by 15 per cent in 2001.
Shift the KFTC's emphasis from regulation of chaebol activities to violations of competition policy as the enhanced corporate governance framework and more market-oriented financial sector operate to discipline effectively chaebol behaviour.	The KFTC has temporarily ended the open-ended investigations into chaebol activities.
Strengthen the KFTC's review of mergers and acquisitions.	No change.
Move forward on the privatisation programme in order to reduce the role of the government in the economy and to expand competition.	Four more of the 11 companies in the 1998 plan were privatised during the past year.
The telecommunications sector	
Reduce government intervention in the business and investment plans of private companies.	No action taken.
Establish an independent regulatory authority.	No action taken.
Avoid undue emphasis on the domestic equipment-manufacturing sector, which could hinder the development of the telecommunications service sector.	The mandatory contribution from service firms for R&D by equipment manufacturers was reduced from between 1.8 and 3 per cent of revenue to 1 per cent in 2001.

Box 12. Summary of previous structural policy recommendations* (*cont.*)

Recommendations in the 2000 *Survey*	Actions taken
Implement a consistent policy of promoting competition, in part by streamlining the licensing process and by using auctions to allocate spectrum.	The government has decided to introduce local loop unbundling in the second half of 2001.
Establish a clear framework for the costing and funding of universal service.	A fund based on contributions from service providers was established in 2000.
Improve the interconnection framework for other service providers wishing to link to the network.	The Notification on Interconnection Standard was revised in October 2000.
Impose price caps in markets where Korea Telecom remains dominant, while refraining from interfering in all other markets.	A price-cap system of price regulation will be introduced for Korea Telecom in the local market in the latter half of 2002. However, SK Telecom remains subject to price regulation in the mobile market.
Allow number portability.	This is to be allowed in 2003.
Eliminate remaining restrictions on foreign ownership in the telecommunications sector.	The ceiling on foreign ownership in Korea Telecom was raised from 33 per cent to 49 per cent in April 2001, the same ceiling as for other service providers.
The electricity sector	
Carry out the privatisation of KEPCO as planned and effectively separate the generation, transmission and distribution of electricity to promote competition.	The implementing legislation for the ten-year programme was approved in December 2000 and KEPCO's generating capacity was divided into six companies.
Establish an independent regulator.	The Electricity Supervisory Board was established in 2001. However, the board is located within the Ministry of Commerce, Industry and Energy.
Phase out the subsidies granted to certain sectors through below-cost sale of electricity by KEPCO.	The responsibility was shifted to the government in 2001, thus making such support more transparent.
Accelerate the ten-year programme so that the benefits of competition are realised sooner for consumers.	Opposition from labour unions delayed the start of the ten-year plan.
The agricultural sector	
Shift further from price supports to a system of direct payments to farmers.	A new direct payment system for paddy-field farmers was launched in 2001.
Promote an increase in the average farm size.	Average farm size continues to rise, though at a slow rate.
Achieve food security through securing stable supplies of imports and strategic stockpiling.	No change.

Box 12. **Summary of previous structural policy recommendations*** (*cont.*)

Recommendations in the 2000 *Survey*	Actions taken
Reduce reliance on inputs, notably fertiliser and pesticides, which damage the environment.	Direct payments for environmentally-friendly farming methods are helping to reduce such inputs.
Increase market access for imported rice after 2004, when the "minimum access commitment" ends.	No action taken.

* Previous structural recommendations related to the corporate and financial sectors are reported in Box 9.

Korea also appears to have a significant degree of employment flexibility, although the situation in this regard is less clear. According to Korean statistics, only 29.7 per cent of the labour force and 47.6 per cent of employees were classified as "regular workers" in 2000.[93] Under Korean definitions, regular workers are those who work more than one year at a firm and are paid standard wages, plus bonuses and overtime. Non-regular workers, 52.4 per cent of employees in 2000, are those who work for a determined length of time. This group includes temporary

Table 46. **Minimum wages**

Year[1]	Minimum wages[2]			Minimum wage as a per cent of average wage[1] in manufacturing	Number of workers paid the minimum wage	Workers earning minimum wage as per cent of dependent employment
	Won per month	Won per hour	Increase			
1995	264 420	1 170	7.8	23.5	103 033	0.8
1996	288 150	1 275	9.0	22.8	103 191	0.8
1997	316 400	1 400	9.8	23.9	127 353	1.0
1998	335 610	1 485	6.1	26.1	123 513	1.0
1999	355 650	1 525	2.7	24.1	22 980	1.1
2000	361 600	1 600	4.9	22.6	53 760	0.4
2001[3]	421 490	1 865	16.5	24.8	140 000	1.1

1. The minimum wage is set in September of each year. The figure for 1995, for example, was in effect from September 1994 to August 1995.
2. Until August 1999, the minimum wage applied to firms with ten or more regular employees. Since September 1999, it has applied to those with five or more regular employees.
3. Assumes a 6.25 per cent rise in wages and a 0.5 per cent rise in dependent employment.

Source: Ministry of Labour.

workers, who usually have contracts of between one month and a year, and daily workers. However, the degree of job precariousness may be less than that implied since a significant number of temporary workers remain at the same firm on a semi-permanent basis.[94] While there is a need for further research into this issue of regular versus non-regular workers, a few points appear clear. *First*, the proportion of non-regular workers has probably risen during the past few years, as suggested by the increase in the monthly labour turnover rate from 4.5 per cent in 1998 to 5.6 per cent in 2000. This may contribute to the relatively short average tenure of workers in Korea relative to other OECD countries (Table 18). *Second*, non-regular workers are attractive to firms because employees with less than one year of employment do not qualify for the retirement allowance and those with less than six months are not covered by the Employment Insurance System.

Non-regular workers account for a large share of the newly unemployed. Of persons with previous work experience who had been unemployed less than one year as of February 2001, almost three-fourths were former temporary and daily employees, while only 14 per cent had been regular workers. However, few layoffs were notified to the government; only 11 firms reported layoffs, totalling 803 workers, in the first half of 2000. Since there is no information on the total number of layoffs, it is not clear whether the small number reported to the government reflects a low number of layoffs or that firms dismiss workers on a scale too small to require notification.[95] The February 2001 labour force survey reported that 55 000 persons who had worked within the past year had been dismissed or retired early. In any case, it is important that the relatively strong employment protection for regular workers[96] not impede corporate restructuring. One factor facilitating flexibility has been the growing use of temporary worker agencies, which were introduced in 1998. Gradually expanding their use from the 26 occupations where they are currently allowed would be beneficial.

The rising share of non-regular employment raises concerns about the equity issues related to a dualised labour market, as well as high turnover and short tenure, which tends to limit the incentive to invest in training. To assist the unemployed, the government has expanded the Employment Insurance System, which now covers 77.5 per cent of employees.[97] At present, some part-time and daily workers, elderly workers and government employees remain outside the system. However, given the large number of self-employed persons and family workers, only 46 per cent of the total labour force is covered. Despite the expanded coverage, the share of unemployed persons receiving benefits fell from 13.5 per cent in 1999 to 11.3 per cent in 2000. The low proportion reflects the short duration of benefits, which vary from three to eight months. As of the end of 2000, 13 per cent of the unemployed had been out of work more than six months. In addition, there are strict eligibility requirements based on age and the number of years of contributions, while persons who voluntarily leave a job are not eligible for benefits.

Vocational training is provided for those not eligible for employment insurance benefits. Between 1998 and 2000, 900 000 unemployed persons were trained at a total cost of 1.2 trillion won (0.3 per cent of government expenditure over that period), including monthly stipends to support trainees. About three-fourths of that amount was provided by the Employment Insurance Fund, which is financed by social contributions. In the wake of the crisis, vocational training played a key role in providing income support to unemployed persons in the context of an insufficient social safety net. In the longer term, it should contribute to promoting the re-employment of unemployed persons. The government also provides wage subsidies to prevent unemployment or to encourage hiring (Table 47). The employment retention subsidy pays one-half to two-thirds of wages of workers retained in firms taking downsizing measures, with the payment depending on the size of the company. In addition, hiring subsidies are provided for workers displaced by corporate restructuring, those over the age of 55, those unemployed for more than six months and women who are head of households. These subsidies generally last six months and vary between 250 000 won and 500 000 won per month (between one-seventh and two-sevenths of the average monthly wage). In 2000, a total of nearly 100 billion won of subsidies was paid to more than 92 000 firms. The total number of workers subsidised amounted to 2 per cent of all employees. However, experience in other OECD countries shows that such subsidies generally are an inefficient way of promoting employment.[98] Indeed, the Korea Labour Institute estimates that the deadweight loss of the employment retention subsidy was around 80 per cent in 1999, though this is lower than in some other OECD countries (Martin 2000/1). The subsidy for hiring workers displaced by restructuring will be ended in July 2001. Continuation of other wage subsidies should depend on an evaluation of their costs relative to their benefits.

Table 47. **Wage subsidies**

Billion won in 2000

Programme	Amount	Number of subsidised:	
		Companies	Employees
Employment retention	35.4	3 466	148 499
Hiring of displaced workers[1]	40.8	35 543	62 661
Hiring of the elderly	20.8	11 036	48 105
Hiring of long-term unemployed[2]	0.4	731	799
Hiring of female head of households	0.7	694	787
Total	**97.9**	**51 470**	**260 851**

1. Due to corporate restructuring.
2. More than six months.
Source: Ministry of Labour.

There has been progress in expanding social welfare following the establishment of a "productive welfare" system in October 2000. Expenditures for social welfare are to rise 16 per cent in 2001, reflecting a 6 per cent increase in the minimum cost of living calculated by the government. This is projected to boost the number of recipients by 2.6 per cent to 1.55 million (3 per cent of the population). It is important to achieve the target of ensuring that the income of each recipient at least matches the minimum cost of living. In line with the concept of productive welfare, a system of "earnings disregards" is needed to encourage beneficiaries of social assistance who are able to work to seek employment. The Public Employment Service (PES) has an important role in this regard. In 2000, the number of persons finding jobs through the PES jumped 43 per cent to 0.7 million, about a fourth of those using its services. Private job placement services continue to play a larger role, placing almost 1.2 million persons in jobs in the first half of 2000.

The Tripartite Commission, which was created in 1998 to reach a social consensus on labour-related questions, continues to address difficult issues. Perhaps the most challenging is to shorten the standard workweek from 44 to 40 hours. In 1999, annual working hours, including overtime, averaged 2 500, the longest in the OECD area. The reduction has been agreed to in principle by management, labour and government members of the commission. However, given the substantial economic impact, the commission is still studying issues related to its introduction. The commission also reached a temporary compromise on the contentious issue of companies paying full-time union officials. The introduction of a ban on such payments was delayed until 2007, along with the plan to allow trade union pluralism at the firm level in 2002.[99] Finally, the commission has examined other issues such as allowing civil servants to establish unions. In short, the Tripartite Commission has an important role to play in bringing Korea's industrial relations framework into line with internationally-accepted standards.

The land market

Two problems in land-use policy have been the extensive use of government controls and the difficulty in policy co-ordination, given that the responsibility for land use is dispersed between eleven different ministries (see 2000 *Survey*). However, there have been steps toward deregulation of government control, particularly regarding rules limiting growth in the capital region, in an effort to help the economy overcome the crisis, in part by attracting foreign investment. A more long-run solution is the plan to expand the use of "concentration charges", currently applied in Seoul to discourage overcrowding, to the entire Kyonggi province. As for the problem of the dispersal of responsibility for land use, the new act on Land Use and Urban Planning provides a framework for policy co-ordination by requiring that any changes in zoning be discussed with the Ministry of Construction and Transportation and reviewed by the National Territory and Urban Planning Committee.

Another issue in land use has been "disorderly development" in the semi-agricultural zone.[100] In contrast to the extensive development planning in urban zones, land in the semi-agricultural zone has been converted to urban uses without sufficient regard for environmental concerns and the availability of social infrastructure. Although regulations on construction in the semi-agricultural zone were tightened in 1997, the lack of planning remained a problem. A proposal currently under discussion would combine the semi-agricultural and semi-urban zones into a "management" zone subject to the same land planning requirements as urban land. The shift of land to urban uses is expected to continue at a rapid pace. According to the National Comprehensive Development Plan, urban land is to rise from 5.3 per cent of Korea's area at present to 9.1 per cent by 2020. An appropriate planning system for land in the management zone will be essential for the efficient use of land.

Policies to boost competition

Reforming the regulatory framework

Regulatory reform has been a priority in Korea since the crisis, as explained in the OECD's *Regulatory Reform in Korea* (2000). Beginning in April 1998, one-half of the existing 11 125 regulations were eliminated over a one-year period. In addition, nearly 1 700 informal regulations were abolished.[101] The process was led by the Regulatory Reform Committee (RRC), which includes 13 private-sector representatives among its 20 members, located in the Prime Minister's office. This initiative has been extended to the local government level, including the creation of committees that are linked to the RRC. To ensure that the reform of regulations results in changes in practice, the RRC has monitored the behaviour of civil servants at the central and local government levels. The regulatory reform measures have contributed to a number of positive developments, such as the sharp rise in foreign direct investment inflows (see below) and a surge in the number of firms created, including venture businesses (see Chapter IV). Another tangible example is the shift from permission to simple registration for the establishment of a foreign-exchange business. This reform helped to boost the number of such companies from less than 600 in 1999 to 1 138 in March 2001.

The RRC continues to play an important role in the review of proposed regulations and the abolition or improvement of existing regulations. Of the 1 102 new regulations proposed in 2000, 9 per cent were withdrawn, while the RRC recommended improvements in 28 per cent. The pace of removing existing regulations has slowed in the wake of the tremendous progress in that regard in 1998 and 1999 (see 2000 *Survey*). Nevertheless, 121 regulations were abolished and 142 improved during the course of 2000. Looking forward, the RRC is focusing on the regulatory framework in five key sectors: marine and fisheries, sports and culture, architecture, manufacturing and the environment. This initiative will include rules originating in private-sector groups, such as industry associations. In addition, the RRC will try to upgrade the screening of new regulations, in part by improving the quality of the required Regulatory Impact Analysis statements. These statements, which include cost-benefit analysis, are to be reviewed by outside experts, including those at 42 government-funded research organisations. Making the Regulatory Impact Analysis statements available to the public would also be an effective means of upgrading their quality. Finally, the RRC intends to limit the total number of regulations by requiring that ministries introducing new regulations abolish an equivalent number.

Strengthening competition policy

In addition to promoting free competition, the Korea Fair Trade Commission (KFTC) has been responsible for promoting the balanced development of the economy. This latter objective has led to a number of regulations on chaebol behaviour and structure. Since 1998, the KFTC has launched a series of probes into the activities of the top business groups, resulting in large fines in some cases (see 2000 *Survey*). These wide-ranging investigations have been expensive for the government, while firms have complained that such probes, which were not based on any evidence of wrongdoing, imposed high costs on them. The KFTC announced at the end of 2000 that, in light of the economic slowdown, it would suspend such probes of the chaebol and launch investigations only in response to complaints of illegal acts. Shifting away from the wide-ranging probes, which was recommended in the 2000 *Survey*, may test whether the reforms that have been enacted in the corporate governance framework and in the financial sector are sufficient to ensure market-based restructuring. It would also allow the KFTC to focus more on monitoring the implementation of new corporate governance rules, such as the requirement that boards of directors approve large-scale intra-group transactions and disclose them publicly. Moreover, it would allow the KFTC to devote more resources to traditional competition policy concerns, such as domination, exclusion and discrimination. The top thirty chaebol have also requested an easing of government controls on capital investments, intra-group trading and the 200 per cent debt to equity ratio. A task force of government representatives and private-sector officials was established in May 2001 to consider these issues. Such liberalisation would be beneficial with the effective functioning of the institutional framework for corporate governance and restructuring.

Significant gains were achieved by the 1999 Omnibus Cartel Repeal Act, which eliminated statutory authority for 18 cartels and improved the authority for three others.[102] Under these cartels, some professionals, such as lawyers, had been allowed to fix their fees.[103] A survey by the KFTC reported a significant decline in the fees in the affected sectors since 1999 (Table 48). For example, lawyers' fees, depending on the speciality, fell by as much as 20 per cent between October 1999

Table 48. **Trends in fees for selected professions**
Percentage change between October 1999 and December 2000

Profession[1]	Speciality	Change in fee (per cent)	Ratio of highest to lowest fee	
			October 1999	December 2000
Lawyer	Credit and liability suits[2]	–12.5	10 times	13 times
	Indemnity suits[2]	–11.6	15 times	12 times
	Suits in cases involving violence	–16.2	10 times	8 times
	Traffic accident suits	0.7	10 times	10 times
	Divorce suits	–20.6	10 times	10 times
Certified public accountants	Auditing of financial statements	–8.9	1.6 times	15 times
	Appraisal of accounts[3]	11.0	3.3 times	8 times
	Calculation of costs[3]	4.8	3.3 times	50 times
Licensed tax accountants	Outside bookkeepers	–11.1	2.4 times	10 times
	Adjustment of tax bill	–23.9	2.2 times	15 times
Licensed labour dispute arbitrators	Simple paper work	7.8	5 times	50 times
	Labour counselling	–1.6	10 times	25 times
Patent attorney	Application for patents	21.3	3.7 times	4 times
	Application for annulment of invalidity of patent	26.2	7.1 times	4.1 times

1. The 1999 Omnibus Cartel Repeal Act eliminated statutory authority for cartels in these profession.
2. At least 100 million won at stake.
3. Although the December 2000 fees were higher than October 1999, they fall sharply – by about 16 per cent in both cases between June 2000 and December 2000.

Source: Korea Fair Trade Commission.

and the end of 2000. Moreover, the variation in pay has widened. For tax accountants, the ratio between the highest and lowest-paid widened from 2.2 in 1999 to 15 at the end of 2000.

One aspect of increased emphasis on competition policy is the "Clean Market Project" (CMP) launched in 2001. The KFTC's constant probes into and sanctions against law violations of the law have failed to improve, in a significant way, entrenched monopolistic market structures and corporate behaviours. In response, the CMP was initiated to prevent the recurrence of anti-competitive behaviours through a two-fold strategy: a structural approach, focusing on industry-specific improvements of market structure and regulatory reforms, and a behavioural approach based on corrective actions against restrictive business practices. Under this initiative, the KFTC is examining competitive conditions in six important markets: telecommunications, healthcare, media (including newspapers), funeral and wedding halls, private educational institutes (*hakwon*) and construction, where bid-rigging is a concern. This sector-specific approach, which mirrors that of the Regulatory Reform Committee, has great potential benefits for consumers.

Reducing barriers to trade

Korea has made significant progress in reducing trade barriers, making it a "more open and secure market for its trading partners" (WTO, 2000). The lifting of quotas on beef at the beginning of the year leaves quantitative restrictions only on rice, although tariff levels on agricultural products remain high (see below). In addition, the phasing out in mid-1999 of the Import Diversification Programme, which had restricted imports of as many as 924 products from Japan, has led to a surge in sales of those products. For the final 16 goods liberalised in June 1999, imports from Japan jumped 62 per cent in 2000, compared to a total import increase of 18 per cent for those goods. Korea has also reduced its use of anti-dumping measures in the past few years, although "special safeguard" provisions have been used to limit surges of imports of some agricultural products. Another positive factor is the apparent end to "frugality campaigns" by civic organisations, which targeted luxury items, many of them imported. In the area of cars, access has been improved by reducing tax and standards-related impediments, although car imports remain very low at less than 1 per cent of the market. In the context of the General Agreement on Trade in Services (GATS), Korea has made commitments on eighty activities in the areas of financial services, communications, transportation and environmental services. Finally, in addition to its activities in the World Trade Organisation, Korea is pursuing trade liberalisation through the negotiation of a free trade agreement with Chile. Studies on the possibility of such an agreement with Japan were completed in 2000 and the FTA Business Forum was established for input from the business sector. Studies are also being conducted on the possibility of agreements with New Zealand and Thailand.

Apart from agriculture, the concerns of Korea's trade partners have focused on the issues of standards and intellectual property rights. As of 1999, only about a quarter of the more than 10 000 Korean Standards were either identical or equivalent to international standards. By 2004, the government hopes to harmonise 80 per cent of Korean Standards with international standards. Differences in standards is a hindrance to trade because, "with very few exceptions,[104] Korea does not recognise testing and certification of the exporting country" (WTO, 2000). As for intellectual property, in 2000 Korea successfully went through the WTO review of its implementation of the 1996 Trade-Related Intellectual Property (TRIPS) agreement. At present, Korea is also participating in 8 out of 21 treaties administered by the World Intellectual Property Organisation. The government has taken steps to improve the enforcement of intellectual property rights in the past few years. Indeed, between 1996 and 1999, the number of prosecutions for copyright piracy and trademark infringement increased by 65 per cent while the number of convictions rose by 76 per cent. Nevertheless, enforcement of intellectual property rights in Korea remains a concern of its trading partners.[105]

Encouraging inflows of foreign direct investment

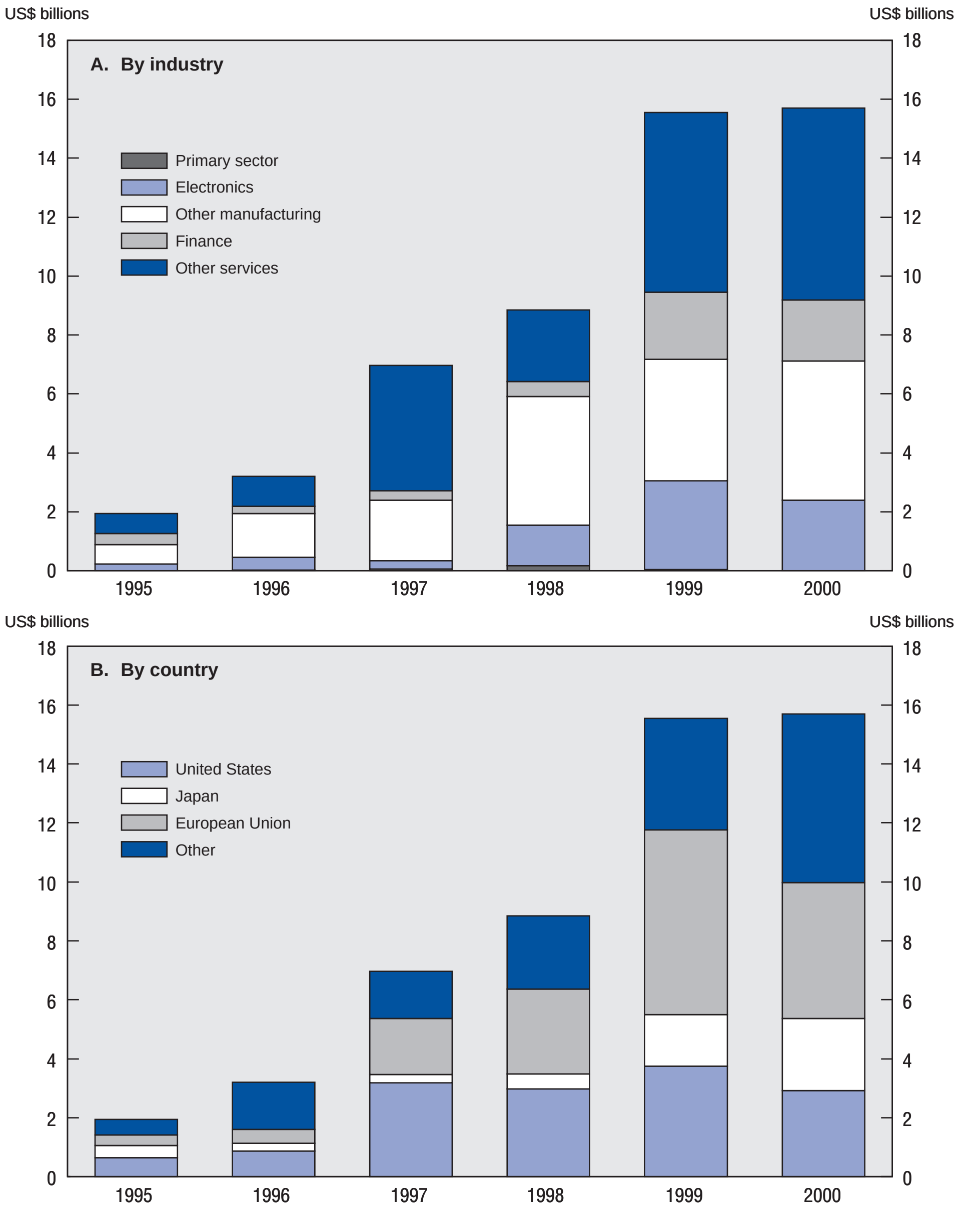
The relaxation of restrictions on foreign direct investment (FDI) into Korea has led to a sharp increase in inflows, from less than $2 billion in 1995 to $15.5 billion in 1999 (Figure 42). Much of the increase was linked to sales of major assets to foreign investors as part of corporate restructuring (see 2000 *Survey*). In contrast, the 1 per cent increase in FDI inflows to a record $15.7 billion in 2000 was led by additional purchases of firms already operating in Korea and by the creation of strategic alliances between domestic and foreign firms. As for the sources of investment, the combined share of the United States and the European Union was reported to have fallen from two-thirds of the total to less than half in 2000, although a surge of $3 billion from various islands makes the national origin of investment less certain.[106] In general, the traditional opposition to FDI in Korea has weakened during the past three years of large inflows. Besides the additional capital, direct investment has brought new technology, as well as management techniques that meet global standards. In particular, the presence of foreign companies is fostering more open corporate governance practices and compensation based on performance rather than seniority (Samsung Economic Research Institute, 2001). To achieve its $15 billion target of FDI inflows in 2001, the government is endeavouring to improve the legal framework, eliminate quasi-taxes and reduce corruption. The number of business lines in which FDI is prohibited was reduced from four to two while the number of partially restricted areas rose from 24 to 27.[107]

Privatisation of state-owned enterprises

The government launched a privatisation programme in 1998 that was intended to reduce government involvement in the economy, improve the quality of services, generate revenue for restructuring and obtain foreign exchange in the wake of the crisis. Five of the 11 state-owned enterprises (SOEs) identified in the plan had been privatised and one liquidated by the end of 2000 (Table 49). Of the 108 state-owned companies in 1998, only 61 remained in 2000.[108] With the addition of 16 new SOEs, of which three were either privatised or merged, the total is 74 at present. As a result of the privatisation plan, 30 000 workers previously in the SOE sector are now in the private sector. In addition, efforts to increase efficiency have cut employment in SOEs by another 40 000. Consequently, total employment in SOEs has declined by a third to around 140 000 during the past three years. In addition to privatisation, the governance of the remaining SOEs has been improved by increasing the autonomy of managers and enhancing the role of the board of directors. The impact of privatisation on competition in Korea is less clear. Such benefits will hinge, in part, on the privatisation of network industries, such as electricity and telecommunications, as well as the creation of an appropriate regulatory framework.

Figure 42. **Foreign direct investment inflows**

US$ billions on a notification basis



Source: Ministry of Finance and Economy.

Reforms in key sectors

Promoting competition in the telecommunications sector

Telecommunications has been a dynamic sector of the Korean economy, despite being subject to a relatively high degree of government intervention (see 2000 *Survey*). In addition, there has been a tendency to promote the interests of domestic equipment manufacturers at the expense of service providers, as explained in the OECD's *Regulatory Reform in Korea* (2000). The government has taken or planned some major steps during the past year to promote competition, particularly in the local market. Perhaps most important is the decision to unbundle the local loop in the second half of 2001. This will help Hanaro, with 1.5 per cent of the local market at present, to compete against Korea Telecom, with 98.5 per cent, without having to replicate the existing infrastructure. In addition, in 2002, the government will shift its regulation of the tariffs charged by Korea Telecom, which is 59 per cent government-owned, to a price-cap system, which encourages greater efficiency. However, number portability will not be introduced until 2003. Meanwhile, the ceiling on foreign ownership of the dominant firm, Korea Telecom, was raised from 33 to 49 per cent in April 2001, matching the ceiling imposed on other telecommunication service providers. The government announced that it would fully privatise Korea Telecom by June 2002. The process was to begin with the sale of a 15 per cent stake in the domestic market in February 2001, but this was unsuccessful. In the area of broadband development, Korea is the leader among OECD countries. Measures to improve the interconnection framework for other service providers wishing to link to the network were announced in October 2000. Finally, the mandatory contributions from service firms for R&D by equipment manufacturers were reduced from between 1.8 and 3 per cent of revenue to 1 per cent in 2001.

Despite the positive steps, much remains to be done to promote competition in the telecommunications sector and to help achieve Korea's ambition of developing a knowledge-based economy (see 2000 *Survey*). *First*, the transition from a monopoly to a competitive market requires the establishment of an independent regulator, with powers over licensing, pricing and other regulatory safeguards. Korea is one of only three OECD countries without an independent regulatory agency in this sector. The Korea Communications Commission has the potential to become such a body, but is located within the Ministry of Information and Communication (MIC) and can be overruled by the Ministry. *Second* it is also important to reduce entry barriers by easing licensing requirements, either by introducing a class-licensing system or by establishing minimum standards rather than conducting *a priori* examinations of applicants. *Third*, price-cap regulation would be appropriate in markets where Korea Telecom remains dominant, such as leased lines and national long-distance, where it has market shares of 90 and

Table 49. **The 1998 privatisation plan**

Billion won

Timetable	Enterprise	Employees	1997 sales	Subsidiaries	Share owned by government[1] (per cent)	Profit in 1997	Results
Immediate (by end-1999)	Pohang Steel and Iron Corporation	19 294	9 718	16	26.7	729	Government share reduced to zero
	Korea Heavy Industries and Construction Corporation	7 851	3 008	3	84.3	45	Privatised in December 2000
	Korea General Chemical	263	15	1	98.8	(57)	Liquidated in November 2000
	Korea Technology and Banking	163	438	1	10.2	2	Privatised in January 1999
	National Textbook Corporation	739	52	0	40.0	4	Privatised in November 1998
Step-by-step	Korea Telecom Corporation	58 556	7 784	13	71.2	80	Government share reduced to 59 per cent
	Korea Tobacco and Ginseng Corporation	7 573	4 243	1	35.3	226	1 trillion won sold on domestic market
	Korea Electric Power Corporation	33 036	13 116	7	58.2	561	Government share reduced to 52.3 per cent
	Korea Gas Corporation	2 891	2 926	5	85.7	(336)	1 trillion won sold on domestic market
	Daehan Oil Pipeline Co.	385	34	2	48.8	(44)	Privatised in November 2000
	Korea Distric Heating Co.	1 044	203	3	72.2	1	

1. Includes holdings of government-capitalised public enterprises.

Source: Ministry of Planning and Budget.

83 per cent, respectively. However, the rationale for controlling the prices charged by SK Telecom, which has 40 per cent of the highly competitive mobile market, is not clear. In fact, MIC, arguing that there was too much competition in this market, allowed mergers, reducing the number of competitors from five to three. Korea is one of the few OECD countries that regulate prices in the mobile market. *Fourth*, the limits on foreign ownership should be further raised to boost competition and help achieve the government's plan to privatise Korea Telecom completely in 2002. *Fifth*, the government should avoid intervening in the decisions of telecommunication service providers and end the emphasis on promoting a domestic manufacturing industry.

Introducing competition in the electricity industry

In January 1999, the government announced a ten-year plan to introduce market forces into the electricity sector (see 2000 *Survey*). The key elements of the plan, which is discussed in detail in the OECD's *Regulatory Reform in Korea* (2000), include the division of the generation and distribution assets of the Korea Electric Power Corporation (KEPCO), their privatisation and the introduction of competition in generation and retail supply. However, protests by the labour union of KEPCO, which is 58 per cent government-owned, delayed passage of the implementing legislation until December 2000. The approval of the plan allowed the separation of KEPCO's generating capacity into six companies in April 2001 and the establishment of a cost-based electricity exchange. The privatisation of these companies will begin in 2002 at the earliest. Once KEPCO's distribution assets are separated at the end of 2002 and privatised in 2003, choice of supplier will be allowed for large customers. However, competition will not be introduced at the household level until 2009. The Electricity Supervisory Board was established in the Ministry of Commerce, Industry and Energy in 2001 and the government plans to operate it as independently as possible. Once competition develops, the Board will be made independent. Finally, the financial burden of providing electricity to farmers and to persons in remote areas has been transferred from KEPCO to the government.

The authorities should follow through with the plan to introduce competition in the electricity sector, which should produce significant gains in the context of rapid growth projected for this sector. Korea's per capita consumption of electricity is only about half that in Japan and is likely to increase significantly in the next few decades. Indeed, the Korea Energy Economic Institute expects that total generation capacity will need to double by 2018. Thus, it is important that the new competitive framework includes incentives to increase supply. At the same time, it is important to provide incentives for the efficient use of electricity by ensuring cost-reflective pricing. Finally, making the Electricity Supervisory Board independent would enhance its capacity to ensure fair competition among the various players in the market, including independent electricity generators.

The new framework for agricultural policy

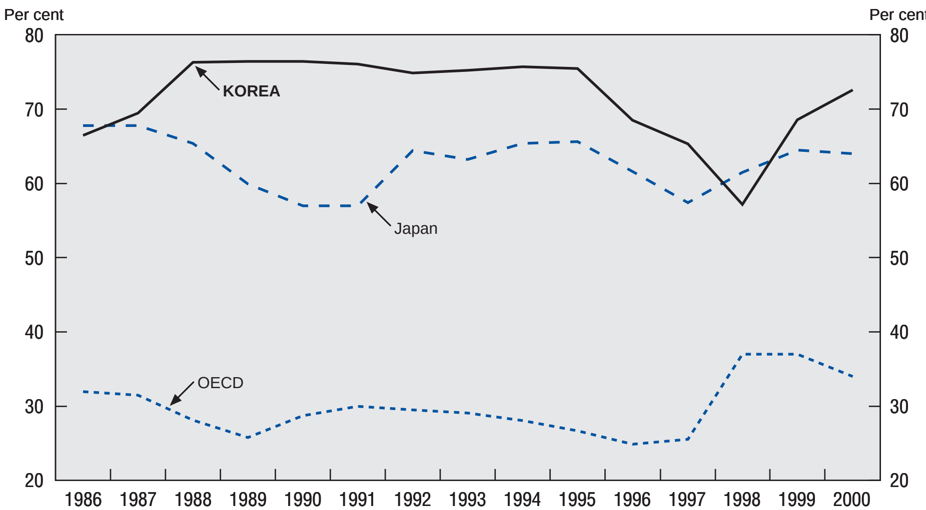
Korea's agricultural sector receives an exceptionally high level of assistance, primarily through market price support. This consists of trade measures and domestic price stabilisation mechanisms, including government purchases and public stockbuilding (see 2000 *Survey*). Such measures, which are the most distortive in terms of trade and production patterns, accounted for 96 per cent of total support for producers in 2000. Prices received by Korean producers are seven times higher than world levels for oilseeds, over four times higher for rice and over three times higher for milk and beef. As a result, the value of gross farm receipts in 2000 was about four times greater than it would have been at world prices. Indeed, the Producer Support Estimate (PSE)[109] increased to an estimated 73 per cent in 2000, the highest in the OECD area and more than double the OECD average (Figure 43). Such support has been costly to consumers and taxpayers; total transfers to agriculture amounted to 5.3 per cent of GDP ($518 on a per capita basis) compared to an average of 1.3 per cent ($289 per capita) in the OECD area (Panel B).

The rise in the PSE in 2000 was largely due to rice, which accounts for half of agricultural income. The increase for rice was partly a result of a decline in the world price of rice. At the same time, the government's purchase price increased 5.5 per cent while the quantity purchased expanded 3.4 per cent, following large declines during the preceding two years. In the Uruguay Round, Korea agreed to reduce its "Aggregate Measure of Support" for agriculture by 13 per cent between 1995 and 2004. Meeting this target requires a shift away from market price support to direct measures to assist farmers. Direct support, which is allowed under the Uruguay Round agreement, is a more effective and transparent means to provide assistance to producers, and results in less distortion to resource allocation. Moreover, it is consistent with the emphasis on multifunctionality in the Agricultural and Rural Basic Law, which took effect in 2000. However, the two direct payment programmes in operation in 2000 were too limited to provide much income to farmers. In 2001, the government introduced a direct payment system for paddy-field farmers that rewards those who practice environment-friendly farming. The incentive to use fewer chemical inputs is appropriate and should be strengthened, given that the use of chemical fertilisers in Korea is four times the world average, resulting in considerable damage to water and soil. However, the scope for direct payments to farmers is limited by budgetary constraints. Indeed, agriculture's share of government outlays fell from 13 per cent in 1995 to 8.1per cent in 2001.

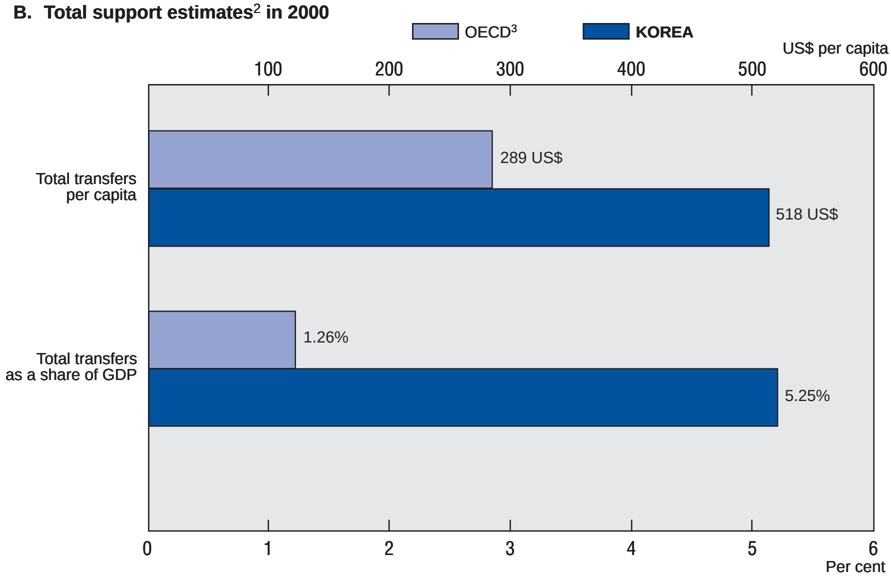
Further steps have been taken to open Korea's market to agricultural imports. Quotas on beef were removed at the beginning of 2001, leaving a tariff of 40 per cent to protect domestic producers. The gradual opening of the beef market has reduced the number of small-scale farmers in this sector, resulting in a 23 per cent fall in domestic production in 2000. With the removal of quotas on beef, rice is the only product still subject to quantitative restrictions. Nevertheless, tariffs on agricultural products average 50 per cent, more than six times

Figure 43. **Producer support estimates and transfers to agriculture**

A. Producer support estimates[1]



B. Total support estimates[2] in 2000



1. An indicator of the value of monetary transfers to agriculture resulting from agricultural policies. It is presented as a share of the total value of production at domestic producer prices.
2. Transfers from consumers plus transfers from taxpayers less budget revenues.
3. Korea is not included in the OECD average.

Source: OECD.

greater than the average for manufactured products. In the case of rice, imports are to rise from 1 to 4 per cent of domestic consumption over the period 1995 to 2004 under a "minimum access commitment". However, imported rice is only used for processing into other products. The amount of imported rice should be increased further when the ten-year commitment is completed. As noted in the 2000 *Survey*, increasing the size of farms is the key to boosting agricultural productivity. Since the removal of area limits on farms in agricultural promotion zones, the average farm size has been increasing gradually at an average annual rate of 1.2 per cent, but remains small at 1.37 hectares.

Overall assessment

While considerable progress has been made in a number of areas, reflecting the extensive nature of reforms undertaken by the government in the wake of the crisis, much still remains to be done. Recommendations for further reforms are summarised in Box 13. In the labour market, it is important to ensure that employment protection provided to regular workers does not slow progress in restructuring the corporate and financial sectors. At the same time, those who lose their jobs should receive support through improved employment insurance and vocational training programmes.

Competition should be strengthened by the plan of the Prime Minister's office and the KFTC to focus their efforts in regulatory reform and competition policy on key sectors. Making the Regulatory Impact Assessments an effective tool for highlighting the benefits of reform should help maintain the momentum in this regard. As for the KFTC, its decision to temporarily refrain from wide-ranging probes of the chaebol may offer an opportunity to test whether the reforms to corporate governance and the financial sector have been effectively implemented. Further steps to remove barriers to imports and foreign direct investment would also boost competition. Finally, reforms should be introduced in key sectors to boost competition. In electricity, moving ahead with the separation and privatisation of generation, transmission and distribution should significantly lower the cost of electricity. Telecommunications is also in the midst of a shift to a competitive market but needs an appropriate regulatory framework, given the still dominant position of the government-owned Korea Telecom. The establishment of an independent regulatory agency is essential in both the telecommunications and electricity sectors. Agriculture is an area with great scope for productivity gains. Reducing the high cost of public support to farmers would be beneficial to taxpayers and consumers. In addition, flexibility in land use is also important as a significant amount of land needs to be shifted from agriculture to urban uses over the coming decades. In sum, further progress in promoting factor-market flexibility, boosting competition and implementing reforms in key sectors is essential to the success of Korea's new market-oriented framework.

Box 13. **Summary of structural policy recommendations in this *Survey*[*]**

The labour market

- Ensure that employment protection for regular workers does not hinder restructuring of the corporate and financial sectors.
- Provide vocational training to workers who lose their jobs and do not qualify for unemployment benefits.
- Phase-out employment subsidies with large deadweight costs.
- Effectively implement the new social welfare system while maintaining incentives to work.
- Continue to use the Tripartite Commission to bring Korea's industrial relations framework into line with internationally-accepted norms.
- Further expand the coverage of the Employment Insurance System.

The land market

- Introduce efficient mechanisms for the transfer of land in the newly-created "management zone" to urban use.

Regulatory reform

- Effectively implement regulatory reforms in the five sectors chosen in 2001.
- Make the Regulatory Impact Analysis statements public to improve their quality and raise public support for regulatory reform.

Promoting competition

- Ease restrictions currently imposed on the chaebol in line with the development of market-based institutions for corporate restructuring.
- Monitor companies' compliance with the new corporate governance framework.
- Effectively implement the "Clean Market Project" launched by the KFTC to improve competition in six sectors.
- Further harmonise Korean Standards with international standards so as to avoid negative impacts on imports.
- Continue to improve the climate for foreign direct investment.
- Complete the 1998 privatisation programme for state-owned enterprises.

The telecommunications sector

- Reduce government intervention in the business and investment plans of private companies and avoid favouring the domestic equipment-manufacturing sector.
- Establish an independent regulatory authority.

Box 13. Summary of structural policy recommendations in this *Survey** (*cont.*)

– Streamline the licensing process to facilitate the entry of new firms.
– Impose price caps in markets where Korea Telecom remains dominant, while refraining from intervention in all other markets.
– Further ease the remaining restrictions on foreign ownership in the telecommunications sector.

The electricity sector

– Implement the ten-year plan to separate and privatise the generating and distribution assets of the Korea Electric Power Corporation.
– Make the Electricity Supply Board independent.

The agricultural sector

– Accelerate the shift from market price supports to direct payments to farmers.
– Promote farm consolidation to boost the average farm size.
– Reduce reliance on chemical inputs, notably fertiliser and pesticides, to improve the environment.
– Increase market access for imported rice when the "minimum access commitment" is completed in 2004.

* The recommendations pertaining to the corporate and financial sectors are shown in Box 11.

Notes

1. Business investment equals total investment minus residential construction and public investment.
2. However, there is some seasonality in profit figures since firms tend to take losses or "lumpy" expenses at the end of the year. In 1999, for example, the ordinary profit to sales ratio was 4.2 per cent in the first half of the year but 1.7 per cent for the entire year.
3. Despite the improvement in these indicators, they are not high by world standards. In the United States, for example, the ordinary profits to sales ratio was 8.1 in 1998, while the average interest coverage ratio was around 3.5 in 1999.
4. The Bank of Korea analyses the business statements of approximately 2 000 firms, out of 30 000 tax-paying firms with annual sales of at least 2 billion won, twice a year. The majority of these are in the manufacturing sector.
5. While the rise in oil prices boosted consumer price inflation, the terms of trade shock resulted in a 1.5 per cent decline in the GDP deflator in 2000.
6. This number is somewhat below econometric work showing that a $10 hike in oil prices boosts the consumer price index by 1 percentage point over three quarters (Korea Institute of Finance, 2000). This suggests that higher oil prices may have continued to boost inflation through the first half of 2001.
7. In Korea, only those who have looked for work during the previous week are counted as unemployed. Using the standard OECD definition, which includes those who looked for work during the preceding four weeks, the unemployment rate would have been a quarter of a percentage point higher.
8. The calculation of Korea's export market growth includes 40 major countries and four zones. The weights of those importing countries are based on trade flows in 1995.
9. Korean exports to Southeast Asia in the fourth quarter of 2000 in US dollar terms fell 1 per cent year-on-year and 11 per cent at an annual rate from the preceding quarter.
10. On a notification basis, direct investment inflows increased 1 per cent to a record $15.7 billion in 2000.
11. OECD projections are made on the basis of unchanged exchange rates, except in the case of some high inflation countries.
12. October 2000 statement by the Monetary Policy Committee, which meets once a month.
13. Given their erratic movement during a period of financial-sector restructuring, monetary aggregates are now information variables rather than intermediate targets. Moreover, the velocity of money has also become unstable since the crisis. After maintaining a declining trend of around 6 per cent a year during the 1990s, it fell 17 per cent in 1998 before turning positive in 1999.

14. Prior to the crisis, 85 per cent of corporate bonds were guaranteed, primarily by banks, securities companies and merchant banks, and the risk of corporate bankruptcy was low. In this environment, credit risk was not a major concern for investors. At present, only 3 per cent of bonds are guaranteed and corporate bankruptcies are more frequent.
15. In contrast to the decline in corporate bonds, the stock of asset-backed securities (ABS) increased ten-fold to 40 trillion won (8 per cent of GDP). A majority of ABS were issued by financial institutions seeking to improve their balance sheets. In addition, a substantial portion were government-related, such as issues by KAMCO to resolve non-performing loans and issues of collateralised bond obligations (CBOs), government-guaranteed in many cases, to resolve the problems of financially-troubled companies in workout programmes (see Chapter IV).
16. In Korea, firms with less than 300 workers in the manufacturing, construction and transportation sectors and a maximum of between 30 and 300 in the service sector were defined as small and medium-sized enterprises. Such companies account for 99 per cent of all firms (see Chapter IV).
17. One could argue that the huge surge in the amount of deposits should have reduced deposit rates. However, with the introduction of partial deposit insurance at the beginning of 2001 and the restructuring of the banking sector, banks have focused on boosting, or at least maintaining, their share of deposits.
18. At the end of 2000, the corporate sector had gross foreign liabilities of $57 billion (14 per cent of GDP) and net liabilities of $43 billion (10 per cent).
19. The government forecast 6.2 per cent real growth and a GDP deflator of 2.4 per cent in 2000. In the event, real growth reached 8.8 per cent but the GDP deflator fell 1.5 per cent, reflecting the terms of trade loss.
20. The elasticity of tax receipts with respect to income is generally estimated to be in the 1.2 to 1.3 range.
21. See, for example, Citibank/SalomonSmithBarney's *Korea Economic Weekly*, 12 March 2001.
22. According to preliminary figures, the allocation of the 13.4 trillion won total cash surplus in 2000 was divided as follows: 3.5 trillion won in deposit money banks (either increase in deposits or reductions in loans), 0.9 trillion won in cash holdings, 0.7 trillion won in foreign assets and 8.4 trillion won in "other sources", presumably holdings of domestic bonds and equities.
23. In practice, the bonds issued by KAMCO and KDIC are virtually identical to Treasury bonds; the government guarantees their redemption and the interest paid is included in special account expenditures.
24. However, the plan and outcome of public funds are reported to the National Assembly and the government is supposed to try and reflect the opinions of legislators in operating the public funds.
25. Expenditures by these ten funds were thus added to the consolidated central government budget in 2000. However, the statistics reported for previous years have not been revised to make them comparable.
26. A new extra-budgetary fund, *Liquidating Non-Performing Assets* was created by the Financial Supervisory Commission. Of the remaining funds, the Ministry of Finance and Economy is responsible for seven: *Deposit Insurance*, *Technology Credit Guarantee*, *Credit Guarantee for Agriculture, Forestry and Fisheries*, *Saving Encouragement for Property of Agriculture and Fishing Households*, *Credit Gurantee*, *Housing Finance Credit Guarantee* and *Saving Encourage-*

ment for Accumulation of Property. The others (with the responsible ministry shown in parentheses) include: *International Co-operation* (Ministry of Foreign Affairs and Trade); *Security of Community Credit Saving* (Ministry of Government Administration and Home Affairs); *National Sports Promotion* and *Culture and Arts Promotion* (Ministry of Culture and Tourism); *Subsidising Areas Around Power Plants* and *Export Insurance* (Ministry of Commerce, Industry and Energy); *Postal Insurance* (Ministry of Information and Communications); and *Infrastructure Credit Guarantee* (Ministry of Planning and Budget).

27. These are discussed in OECD (2001*b*).

28. These projections are from Eurostat for European countries and the United Nations for other countries, including Korea. The National Statistical Organisation in Korea has also made population projections for the period up to 2030. The Korea Development Institute has made projections through 2050 as part of the OECD's Ad Hoc Working Group on the Fiscal Implications of Ageing. Those projections are discussed in Annex I.

29. For children caring for a father more than 60 years old or a mother more than 55 years old, a deduction of 30 million won on inheritance tax and a one million won per year deduction on taxable income is allowed. In addition, 0.5 million won per year of capital gains is untaxed.

30. From a survey by the National Statistical Office that is published in *Social Indicators in Korea*.

31. In this case, the firm makes a contract with an insurance company, which pays the annuity.

32. The low rate reflects the fact that the recipient is allowed to deduct half of the payment (75 per cent in the case of layoffs or early retirement) from taxable income. The tax on the remainder is calculated using income averaging. Finally, the calculated tax was reduced by half under the Retirement Allowance Tax Credit. Recent changes in the taxation of retirement allowances are discussed in Box 3.

33. The tax deduction is limited to the lesser of: 1) 10 per cent of total compensation paid to regular employees; and 2) 40 per cent of the total estimated liability if all employees retired at once.

34. Temporary workers are defined as employees on fixed-term contracts, which by law cannot exceed one year. Such workers, who account for one-third of all employees, do not usually receive retirement allowances. However, a significant proportion of temporary workers remains with the same company for more than one year and thus becomes eligible for the allowance.

35. In 1999, 5.5 million locally-insured persons were "exempted" from paying contributions. According to the NPC Statistical Yearbook, most of these persons were unemployed. However, the "Economically Active Population Survey" by the National Statistical Office – the source of Korea's official unemployment rate – reported the number of unemployed as 1.3 million persons in 1999. Thus the "exempted" group includes persons for whom income data is not available even though they participate in economic activity. Exempted persons would be entitled to a disability pension and their dependants to a survivor pension, should such events occur. However, the level of the benefit would be determined by their number of years of contributions. The insured are allowed to increase retroactively their coverage period by paying for contributions missed in the past. The other 5.4 million persons in the labour force who were not insured by the NPS included those covered by public occupational pensions (1.1 million, see below) and their spouses, workers over the age of 60 (1.7 million) and workers under the age of 18 (0.2 million workers).

36. The subsidy, which is aimed at relieving some of the impact of the Uruguay Round on farmers, is set at 2 200 won per month, one-third of the contribution owed by a person in the lowest income class. This subsidy is scheduled to continue through 2004.
37. Most payments by the NPS thus far have been lump-sum refunds to insured persons who reach age 60 with less than ten years of contributions. Such refunds, which accounted for 87 per cent of its outlays in 1999 (Table 24), equal the contributions made plus interest. Refunds have been paid to about 7 million persons.
38. The Task Force had recommended a 40 per cent replacement rate. The Ministry of Health and Welfare, though, favoured a rate of 55 per cent and this was raised to 60 per cent by the National Assembly.
39. The annual pension benefit is A * (0.5 + .02n), where n equals years of contributions beyond 20 (up to 33 years), while A equals the final monthly salary times 12. In contrast to the NPS, there is no redistributive element in the occupational schemes.
40. It should be noted that indexing pensions to prices, both under the NPS and the occupational schemes, will tend to lower the replacement rate as a share of the average wage over time, which may not be sustainable.
41. However, a significant number of those receiving pensions under the occupational schemes were under the age of 55, since participants are able to retire at any point after twenty years of contributions.
42. Of this total, 0.8 million received benefits under the Temporary Livelihood Protection programme, which was introduced in 1998 to help the unemployed. It was abolished in 2000.
43. For example, in some Scandinavian countries, a third of the population in the 60 to 64 age group receives such support.
44. In Korea, a *general hospital* is an institution with more than 100 beds and a minimum number of specialised departments. A *hospital* (except for a dental hospital) is defined as an institution with more than thirty beds. A *special hospital* is a specialised institution such as a mental hospital or a cancer hospital.
45. Co-payments for outpatient care are lower, at 30 per cent for a clinic and 40 per cent for a hospital. The sliding co-payment schedule was originally aimed at countering the tendency for patients to go to hospitals which are generally better equipped than clinics and enjoy a reputation for high quality care.
46. For the self-employed, the National Health Insurance Corporation maintains a table of fifty premiums ranked according to income and assets.
47. An elderly person can be covered by the insurance of other children (*i.e.* not the oldest) only if they live in the same residence.
48. The reform of the civil service scheme in 2000 has reduced the required contribution rate. Initially, the Pension Reform Task Force projected that a rate of between 30 and 35 per cent would be necessary.
49. The report by the Pension Reform Task Force in 2000 projected that the NPS would run a deficit by 2034 and its reserves would be exhausted by 2048 if the contribution rate were maintained at the current 9 per cent. A rate of 17.2 per cent would prevent deficits through 2080.
50. As noted above, this group includes temporary and daily workers, employees at small firms, the self-employed and family workers. Of the 16.4 million non-contributors, about 3 million were excluded because of their age or the fact thay they were covered by the occupational pension schemes.

51. This projection (World Bank, 2000) assumes that the contribution rate increases gradually to 17.25 per cent by 2033. Under this assumption, the Fund would approach 100 per cent around the year 2040. If contribution rates remained unchanged at the current level, the Fund would peak at 50 per cent around the year 2030.
52. In the Task Force's September 2000 report, the majority view was that the role of public pensions should be reduced gradually.
53. The best form of taxation would be a consumption tax, in part because the self-employed also evade income taxes.
54. There would be some advantages to making this tier a defined-contribution scheme. Such an approach would allow the possibility of integrating it with Pillar 2 – the proposed corporate pension system – over the long term. Moreover, it would provide a management "psychology" similar to that of Pillar 2, where the focus on returns would contribute to the objective of widening capital markets. A disadvantage of a defined-contribution approach is that it may be less effective in encouraging the participation of the self-employed.
55. In the United States, for example, the Employee Retirement Income Security Act in the mid-1970s established a forty-year amortisation period for unfunded liabilities in existing employee-sponsored pension plans.
56. However, the occupational pension schemes have encouraged early retirement by ending pension accrual at 33 years of contributions.
57. Although population ageing and competitive pressures for merit pay may weaken the link between seniority and pay, the seniority-based system is likely to fade away only gradually. While the seniority system has a positive effect on the supply of older workers, it reduces the demand for them.
58. The limit for this subsidy is 15 per cent of a company's workforce per quarter (10 per cent for a chaebol affiliate).
59. See, for example, OECD *Economic Survey of Poland* (2000) for the difficulties encountered in implementing a recent systemic reform in Poland.
60. Medical fees have been raised three times since July 2000, a cumulative increase of 24.5 per cent. Moreover, prohibiting pharmacists from prescribing drugs led to an increased number of visits to doctors just to get prescriptions for drugs. Meanwhile, doctors, having been freed from the potential criticism of being driven by profits from selling drugs, have started to prescribe more expensive drugs that are perceived by patients to be of superior quality.
61. Such an approach, which has been adopted in Japan, would combine a reduced reimbursement price for drugs – to make dispensing less attractive as a source of income for doctors – with the introduction of a fee income per prescription written by doctors and restrictions on the drugs that can be prescribed by pharmacists.
62. Another often-cited argument in favour of separation is the creation of a "family" pharmacist who, by keeping a comprehensive prescription record for each patient, can avoid adverse side effects from drugs dispensed by doctors. While this idea has some appeal, it may not be practical to buy drugs from the same pharmacy as people's geographical mobility increases. Moreover, the problems associated with the lack of a drug history of a patient could be overcome by the use of an electronic medical insurance card.
63. The scheme, which began operation from 2000, is often seen as providing non-medical assistance to the elderly as in Germany. But, in fact, it is designed to include certain types of medical care that become necessary with ageing, such as rehabilitation care.

The new scheme hence is likely to impact significantly on the healthcare system as a whole, all the more since its introduction coincided with the revision of the Medical Care Act, which allowed medical institutions to enter the home care market. This is likely to promote functional specialisation among hospitals along with a reduction in the extent of elderly patients' hospitalisation as a substitute for nursing care. Competition in the long-term care market will intensify with the partial lifting of the prohibition preventing for-profit entities from entering this market.

64. In the case of corporations capitalised at more than 100 billion won, the threshold to inspect the books was lowered from 0.5 to 0.05 per cent and from 0.25 to 0.025 per cent to demand the punishment of a director.

65. Hyundai will continue to evolve with the separation of its heavy industry and shipbuilding activities at the end of 2001. This group is to be headed by Chung Mong-Joon, one of the sons of Hyundai's founder, Chung Ju-Young, who died earlier this year. The retirement of Mr. Chung from Hyundai's activities in 1999 was a factor in its separation into a number of groups, some of which are led by his sons.

66. It should be noted that part of the decline in 2000 was due to the division of Hyundai into three groups among the top thirty and the demise of Daewoo, with 34 affiliated companies.

67. The decline reported in 2000 was due in part to the collapse of Daewoo, which had exceptionally high levels of debt. In 1999, Daewoo ranked as the second-largest group with 37 companies. In 2000, however, Daewoo and Daewoo Motors were included among the top thirty groups but included a total of only five companies.

68. This is based on a sample of more than 100 chaebol-affiliated companies that are listed on the Korea Stock Exchange (Jang, 2000). A sample of 282 non-chaebol companies reported a fall in financial costs from 7.3 to 5.2 per cent over the same period.

69. Taken together, this sample of listed companies explained in the previous footnote implies that about a third of firms had interest coverage ratios below one in 1999. This is a slightly higher percentage than the survey of all externally-audited companies (Table 3), which showed that 26 per cent of companies were in that position.

70. Of the 15 companies, three were merged into graduated companies (prior to their graduation) and two into companies that dropped out (prior to dropping out). The remaining ten were merged into companies still in the programme.

71. According to the Corporate Viability Assessment Committee, these companies were to be liquidated, sold, merged or put into court receivership (see 1999 *Survey*). By the end of 1999, the restructuring of 44 companies had been completed through liquidation (26), sale (9), merger (8) and court receivership (1).

72. In 2001, the creditor banks changed the management of the two firms and required debt restructuring.

73. The recommendations related to the corporate sector are summarised in Box 11.

74. As noted in Table 30, 36 companies have graduated from the workout programme, though it may be too early to evaluate the results.

75. The largest, Daewoo Motors, was put into court receivership at the government's initiative.

76. In terms of capital, the government owned 62.5 per cent of commercial banks in June 2000, including minority holdings.

77. Under this approach, the creditor banks transfer their lending credit and equities in the workout company to the CRV in exchange for equity. This gives the CRV control of the workout company as its major shareholder. The management of the company is then assigned to an asset management company, which engages the services of turnaround experts. After the normalisation of the workout company, the CRV pays back the equity to the creditor banks and any other investors and disappears.
78. For a good discussion of these issues, see Chopra and Coe, "The challenge of corporate restructuring", *Chosun Ilbo*, 13 February 2001.
79. Since the first successful case against Korea First Bank in 1998, there have been suits against the management of Daedong Bank, Korea Telecom, Samsung Electronics and the Daewoo group.
80. Large companies, which are defined as those with a market capitalisation of more than 2 trillion won in June 2000, accounted for 82 of the 704 firms listed on the Korea Stock Exchange in 2000.
81. Joh and Ryoo (2000) demonstrate that stock prices in smaller chaebol, where linkages among firms are weaker, have had higher share prices than the five-largest chaebol.
82. Investigations of the chaebol by the Korea Fair Trade Commission have uncovered such actions (see 2000 *Survey*).
83. For example, firms in the areas of air travel, marine transportation, construction and trade are excluded in caclulating the debt to equity ratio for a chaebol.
84. However, part of the increase is due to the addition of Ulsan as the eighth of the large cities (see footnote to Table 36).
85. Ventures businesses are a sub-category of SMEs and are eligible for exceptional preferential treatment (see 2000 *Survey*).
86. The other ministries will be able to input data into this database by the end of 2001 or early 2002.
87. The introduction of the forward-looking loan classification criteria is estimated to have increased the amount of non-performing loans by 47 trillion won (Korea Institute of Finance, 2000).
88. The purchase price ranged from 3 per cent of principle face value in the case of unsecured ordinary non-performing loans to 55 per cent of the collateral price on restructured corporate loans that are secured. On average, KAMCO paid 37 per cent of face value for non-performing loans.
89. Goldman Sachs has invested in Kookmin Bank, ING in Housing and Commercial Bank, Allianz AG in Hana Bank and the consortium of J.P. Morgan and Carlyle in Koram Bank. Other banks have more dispersed foreign ownership – such as Shinhan Bank with 50 per cent – without a strategic foreign investor.
90. The decision on which banks to include was made by the Rehabilitation Evaluation Committee, which includes private-sector experts.
91. The recommendations related to the financial sector are summarised in Box 11.
92. KAMCO's efforts to resolve non-performing loans have won a number of awards from international journals in 2000. For example, it was picked as "Issuer of the year" by *Euro Money*, "The most innovative issuer of the year" by *Asia Money*, and "ABS issuer of the year" by IFR *Asia*.
93. These issues are discussed in detail in the OECD report, *Pushing Ahead with Reform in Korea: Labour Market and Social Safety-Net Policies* (2000).

94. A recent study estimated the number of non-regular workers at 18 per cent of employees. See Kyungsoo Choi (2001), "An international comparison of the number of non-regular workers" (in Korean).

95. The thresholds for reporting layoffs are:
    - More than ten regular workers in a firm with less than 100 employees.
    - More than 10 per cent of regular workers in a firm with 100 to 999 employees.
    - More than 100 regular workers in a firm with more than 1 000 workers.

96. The OECD's 1999 *Employment Outlook* ranked protection for such workers in Korea as the second strictest in the OECD area.

97. Prior to the crisis, only workers at firms with thirty or more employees – a third of dependent employment – were covered.

98. According to one study (Martin, 2000/1), "Most evaluations show that subsidies to private-sector employment have both large deadweight and substitution effects".

99. The delay in permitting more than one union at the firm level has been referred to the Committee on Freedom of Association at the International Labour Organisation.

100. In 1993, the existing ten-zone system was simplified, resulting in five zones: urban (14.8 per cent of total area), semi-urban (1.1 per cent), semi-agricultural (25.7 per cent), agricultural and forest (51.2 per cent) and natural environment preservation zones (7.1 per cent).

101. Of 1 840 informal regulations, 1 678 were abolished, while 162 were legitimised.

102. The adoption of the Act was partly motivated by the OECD's 1998 "Recommendation of the Council Concerning Effective Action Against Hard Core Cartels".

103. The Korea Bar Association set the fees for lawyers, subject to approval by the Ministry of Justice. Lawyers who failed to follow the set fees could be suspended and fined.

104. The exceptions are the Memo of Understanding with the United States on motor vehicles and the Mutual Recognition Arrangements signed with certain countries.

105. See, for example, the minutes of the Trade Policy Review on Korea held at the WTO in October 2000.

106. Approximately $3 billion of FDI was reported from Bermuda, the Virgin Islands and the Cayman Islands, which provided a total of only $72 million in 1999.

107. This increase is due to the two business lines where FDI was partially liberalised, and the partial opening of two state-monopolised businesses. Meanwhile, part of the telecommunications sector was fully opened.

108. The six companies closed or privatised had a total of 21 subsidiaries. Another twenty subsidiaries were either merged, liquidated or privatised.

109. The PSE is the value of transfers to agricultural producers as a share of the value of production. Transfers include market price supports, which provide money to farmers through policies that affect prices, such as import controls and government purchase programmes. It also includes transfers through budgetary outlays and tax expenditures.

Bibliography

Babson, Bradley (2001),
"Development Priorities for North Korea", *Korea's Economy* 2001, Volume 17, Korea Economic Institute of America and the Korea Institute of International Economic Policy, Washington and Seoul.

Bank of Korea (2000),
The Bank of Korea: A History of Fifty Years, Seoul.

Black, Bernard S., Barry Metzger, Timothy O'Brien and Young Moo Shin (2000),
"Corporate Governance in Korea at the Millenium", John M. Olin Program in Law and Economics Working Paper No. 196, Stanford Law School.

Blöndal, Sveinbjörn and Stefano Scarpetta (1997),
"Early Retirement in OECD Countries: The Role of Social Security Systems", OECD *Economic Studies*, No. 29.

Byrne, Thomas (2001),
"The Financial Sector", *Korea's Economy* 2001, Volume 17, Korea Economic Institute of America and the Korea Institute of International Economic Policy, Washington and Seoul.

Carr, Brendon (2001),
"That Sinking Feeling: Korea's Ongoing Bankruptcy Hangover", *American Chamber of Commerce in Korea Journal*, Vol. 54, No. 2, pp. 36-39.

Cho, Namhoon and Samsik Lee (1999),
Population and Development in Korea, Korea Institute for Health and Social Affairs, Seoul.

Cho, Sung-Bong (2001),
"Restructuring and Privatization of the Korean Power Industry", mimeo, Korea Energy Economics Institute, Seoul.

Choi, Kyungsoo (2001),
"An international comparison of the number of non-regular workers" in *Korea Labour Economy Association's 2001 Seminar* (in Korean).

Chon, Youngjoon and Dosook Han (1997),
Reform directions for our nation's public pension system, Korea Institute of Public Finance, Seoul (in Korean).

Chopra, Ajai (2001),
"South Korea After the IMF-supported Program", *Korea's Economy* 2001, Volume 17, Korea Economic Institute of America and the Korea Institute of International Economic Policy, Washington and Seoul.

Chopra, Ajai and David Coe (2001),
"The Challenge of Corporate Restructuring", *Chosun Ilbo*, 13 February (in Korean).

Chun, Young Jun (1998),
"The Inter- and Intra-Cohort Redistributive Effect of the Reform of National Pension System", Korea Institute of Public Finance Working Paper No. 98-05, Seoul.

Chun, Young Jun (1999*a*),
"A Welfare Analysis of Taxation on Pension Income", Korea Institute of Public Finance Working Paper No. 99-02, Seoul.

Chun, Young Jun (1999*b*),
"Did the Personal Pension Increase Savings in Korea?", Korea Institute of Public Finance Working Paper No. 99-03, Seoul.

Chun, Young Jun (2001),
"The 2000 Pension Tax Reform; Evaluation and Recommendations", mimeo, Korea Institute of Public Finance, Seoul.

Chung, Kyungbae (2000),
"The Need and Direction of Reforming Public Pensions in Korea", paper prepared for International Conference on Options for Reforming the Pension System in Korea, Seoul.

Financial Supervisory Service (2001),
Weekly Newsletter, various issues.

Hong, Kiseok and Joonkyung Kim (1997),
"Factors determining our nation's saving rate", Korea Development Institute Working Paper, Vol. 19, No. 4, Seoul (in Korean).

Hyundai Research Institute (2001),
Current Issues of the Korean Economy, Seoul.

Iglesias, Augusto and Robert Palacios (2000),
"Managing Public Pension Reserves", World Bank, Social Protection Working Paper, Pension Reform Primer Series, Washington.

International Monetary Fund (2001),
Report on the Observance of Standards and Codes (ROSC) *Fiscal Transparency Module*, Washington.

Jang, Hasung (2000),
"An analysis of the effect of corporate restructuring following the economic crisis", mimeo, Korea University (in Korean).

Jang, Hasung and Joongi Kim (2001),
"The Role of Boards and Stakeholders in Corporate Governance", paper prepared for the Third OECD Asian Roundtable on Corporate Governance, Singapore (April).

Joh, Sung Wook and Sang Dai Ryoo (2000),
"Evaluation of Changes in the Corporate Governance System of Korean Chaebols", mimeo.

Keum, Jaeho (2001),
"Structural changes in long-term unemployment and policy problems" mimeo, Korea Labor Institute, Seoul (in Korean).

Keum, Jaeho and Joonmo Cho (2000),
Changes in the structure of unemployment and policies towards it, Korea Labor Institute, Seoul (in Korean).

Kim, Jinsoo (2000),
"Pension Reform Proposal Option #4", paper prepared for International Conference on Options for Reforming the Pension System in Korea, Seoul.

Kim, Jong-Il and June-Dong Kim (2000),
"Liberalization of Trade in Services and Productivity Growth," Korea Institute for International Economic Policy, Working Paper No. 10.

Kim, Joongi (2000),
"Recent Amendments to the Korean Commercial Code and Their Effects on International Competition", *University of Pennsylvania Journal of International Law*, Vol. 21, No. 2.

Kim, Jooyoung and Joongi Kim (2001),
"A Review of How PSPD Has Used Legal Measures to Strengthen Korean Corporate Governance", *Seoul National Law Journal* (forthcoming).

Kim, Sang Kyun (2000),"White Paper on Pension Reform in Korea: process and overview", paper prepared for International Conference on Options for Reforming the Pension System in Korea, Seoul.

Kim, Sungmin (2001),
"Monetary Transmission Channels in Emerging Market Countries: A Case of Korea", mimeo prepared for March 2001 seminar at the People's Bank of China.

Kim, Won Bae (2000),
"Desperately Seeking Foreign Direct Investment: The About-Face Of Korean Cities", *Asian Geographer*, Vol. 19, No. 1-2.

Kim, Yongha (2000),
"The Optimal Linkage of Public Pension Schemes", mimeo, Soonchunhyang University, Seoul.

Kim, Yongha (2000),
"Pension Reform Proposal Option #3", paper prepared for International Conference on Options for Reforming the Pension System in Korea, Seoul.

Kim, Young-Min (2001),
"Won's depreciation feared to spark stagflation", *Business Korea*, April, pp. 18-21.

Ko, Kwangsoo (2001),
"Where should we go for employees' retirement income in Korea? An alternative for introducing DC plans and its implications for Korean capital markets", mimeo, Korea Securities Research Institute, Seoul.

Kohl, Richard and Paul O'Brien (1998),
"The Macroeconomics of Ageing, Pensions and Savings: A Survey", OECD Economics Department Working Paper No. 200, Paris.

KOILAF (1998),
A *Manual for Labor Management for Foreign Investors*, Seoul.

KOILAF (1999),
Korea's Wage System, A *Practical Guide*, Seoul.

Korea Asset Management Corporation (2000),
KAMCO *Experience*, Seoul.

Korea Asset Management Corporation (2000),
Progress Report, Seoul.

Korea Fair Trade Commission (2001),
"Summary of the main findings of the second survey in 2000 on the situation of remuneration in the professions", mimeo, 1 February 2001, Seoul (in Korean).

Korea Institute for Health and Social Affairs (2000),
Low Fertility and Policy Responses to Issues of Ageing and Welfare, Seoul.

Korea Institute of Finance (2000),
Korean Financial Review, Vol. 10. No. 4, Seoul.

Korea National Statistical Office (2000),
Social Indicators in Korea, Seoul.

Kwon, Munil (2000),
"Pension Reform Proposal Option #2", paper prepared for International Conference on Options for Reforming the Pension System in Korea, Seoul.

Lee, Hyehoon and Kiseok Hong (2000),
"Implications of Aging on Resource Mobilization for Social Development", mimeo, Korea Development Institute, Seoul.

Lim, Won-hyuk (2001*a*),
"Corporate Restructuring", *Korea's Economy* 2001, Volume 17, Korea Economic Institute of America and the Korea Institute of International Economic Policy, Washington and Seoul.

Lim, Won-hyuk (2001*b*),
"The Korean Corporate Sector in the Post-Crisis Period: A Brief Overview of Risks and Accomplishments", mimeo, Korea Development Institute, Seoul.

Lister, James M. (2001),
"Accomplishments and Challenges", *Korea's Economy* 2001, Volume 17, Korea Economic Institute of America and the Korea Institute of International Economic Policy, Washington and Seoul.

Martin, John P. (2000/1),
"What works among active labour market policies: evidence from OECD countries' experiences," OECD *Economic Studies* No. 30, Paris.

Ministry of Finance and Economy,
Economic Bulletin, various issues, Seoul.

Ministry of Finance and Economy (2001),
"The KDB program", mimeo, Seoul.

Ministry of Information and Communication (2000),
White Paper 2000, Seoul.

Ministry of Planning and Budget (2001),
The Budget of the Republic of Korea, Fiscal Year 2001, Seoul.

Moon, Hyungpyo (2000),
"The Korean Pension System: Present and the Future", mimeo, Korea Development Institute, Seoul.

Moon, Hyungpyo, Hyehoon Lee and Gyeongjoon Yoo (1999),
Economic Crisis and Its Social Consequences, Korea Development Institute, Seoul.

Musalem, Albert (1999),
"Pension funds and the capital markets in Korea", World Bank Working Paper, Washington.

National Pension Corporation (1999),
Guide of New National Pension Scheme, Seoul.

National Pension Corporation (1999),
National Pension Scheme in Korea, Seoul.

National Pension Corporation (2000),
National Pension Statistical Yearbook, Seoul.

Noland, Marcus (2000),
Avoiding the Apocalypse: The Future of the Two Koreas, Institute for International Economics, Washington.

OECD (1998),
Economic Survey of Korea, Paris.

OECD (1999),
Economic Survey of Korea, Paris.

OECD (2000*a*),
Economic Survey of Korea, Paris.

OECD (2000*b*),
Pushing Ahead with Reform in Korea: Labour Market and Social Safety-Net Policies, Paris.

OECD (2000*c*),
Regulatory Reform in Korea, Paris.

OECD (2000*d*),
Small and Medium Enterprise Outlook, Paris.

OECD (2001*a*)
Economic Survey of Spain, Paris.

OECD (2001*b*),
"OECD Best Practices for Budget Transparency", OECD *Journal on Budgeting*, Vol. 1, Issue 3, Paris.

Oh, Soogeun (2001),
"Bankruptcy Division and Commissioner", paper prepared for a conference on Asian Insolvency Reform, Bali (February).

Palacios, Robert and Montserrat Pallarès-Miralles (2000),
"International Patterns of Pension Provision", World Bank working paper series.

Park, Yoon-shik (2001),
"Corporate Governance Reform", *Korea's Economy* 2001, Volume 17, Korea Economic Institute of America and the Korea Institute of International Economic Policy, Washington and Seoul.

Pension Reform Task Force (2000),
"Basic Plan for Pension System Reform", mimeo, Seoul.

Phang, Hanam (2001),
"Reform Options for Korean Retirement Allowance System: A Critical Review of the Current State and Policy Proposals", mimeo, Korea Labor Institute, Seoul.

Queisser, Monika (1998),
"The Role of Pension Funds in the Stabilisation of the Domestic Financial Sector", in *Financial Liberalisation in Asia: Analysis and Prospects*, edited by D. Brooks and M. Quiesser, OECD, Paris.

Samsung Economic Research Institute (2001),
"Impacts of foreign capital advancement on domestic corporate management", *Korean Economic Trends*, 2 March 2001.

Stanton, David and Peter Whiteford (1998),
Pension Systems and Policies in the APEC Economies, Asian Development Bank, Manila.

Tchoe, Byongho (2000),
"Pension Reform Proposal Option #1", paper prepared for International Conference on Options for Reforming the Pension System in Korea, Seoul.

World Bank (2000),
The Korean Pension System at a Crossroads, Report No. 20404-KO, Washington.

World Trade Organization (2000),
Trade Policy Review: Republic of Korea, (Report by Secretariat and Minutes of Meeting), Geneva.

Yoon, Byungsik (2001),
"Introduction to Mandatory Old-age Income Security System in Korea", mimeo, Korea Institute for Health and Social Affairs, Seoul.

Yun, Sukmyung (2000),
"Generational Accounting for Korea", mimeo, Korea Institute for Health and Social Affairs, Seoul.

Annex I

The economic impact of ageing

The OECD's Ad Hoc Working Group on the Fiscal Implications of Ageing examined this issue in a number of member countries, including Korea (Box 5). The work on Korea in this exercise was based on a central scenario of 2.9 per cent average annual growth over the next five decades (Table A1). This annex presents the assumptions underlying this scenario.

Labour productivity

The rate of output growth depends on changes in labour force productivity, as well as in the size of the workforce. The working group's baseline assumed that technological progress could produce an average annual growth rate of 1¾ per cent. Korea, with a relatively low level of

Table A1. **Long-term projections**

		2000	2010	2020	2030	2040	2050	2000 to 2050
Employment[1]	Index	100.0	116.3	126.5	126.4	120.2	112.2	
	Growth rate[2]		1.5	0.8	0.0	–0.5	–0.7	0.2
Labour productivity[3]								
Convergence	Index	100.0	135.6	179.9	234.9	302.9	386.6	
	Growth rate[2]		3.1	2.9	2.7	2.6	2.5	2.7
No convergence	Index	100.0	118.9	141.5	168.3	200.2	238.1	
	Growth rate[2]		1.8	1.8	1.8	1.8	1.8	1.8
Real GDP								
Convergence	Index	100.0	157.7	227.6	296.9	364.0	433.6	
	Growth rate[2]		4.6	3.7	2.7	2.0	1.8	2.9
No convergence	Index	100.0	138.3	178.9	212.7	240.6	267.0	
	Growth rate[2]	3.2	3.2	2.6	1.7	1.2	1.0	2.0

1. Projection by KDI shown in Figure 34.
2. Average annual growth during the preceding decade. The rate of convergence was set so as to be consistent with the 2.9 per cent average growth rate used by the working group.
3. Labour productivity in Korea – real GDP per worker – is estimated as:
$K_t = (1 + (TP/100))^* K_{t-1} + c * (US_{t-1} - K_{t-1})$
where TP is the long-term average rate of technological progress in per cent (assumed to be 1.75 per cent), K and US are the levels of labour productivity in Korea and the United States respectively, and c is a convergence factor showing the portion of the productivity gap between the two countries that is narrowed each year. US labour productivity is estimated as: $US_t = (1 + (TP/100) * US_{t-1}$.

Source: OECD and KDI.

productivity at present and its openness to the world economy, should be able to achieve a higher rate, allowing it to continue the process of convergence toward the advanced countries.[1] Over the past thirty years, the volume of output per worker has tripled from 10 per cent of the US level to 30 per cent (evaluated at exchange rates in 2000). If the gap between productivity levels in the two countries narrows at 0.6 per cent a year, the annual rate of productivity growth per worker in Korea would average 2¾ per cent over the next five decades. Such growth would boost the productivity level relative to American workers from less than a third to a half in 2050. As Korea narrows the technology gap with the most advanced economies, the growth of labour productivity would moderate from over 3 per cent to around 2½ per cent over the fifty-year period.

Growth of the labour force

The demographic projections used in the working group's exercise, which were prepared by experts at the Korea Development Institute (Box A1), project that the *working-age population* (20 to 64 years of age) will peak in 2020 at 33 million. During the following thirty years, it would decline by a fifth to 26 million – about 12 per cent below the level at present (Figure 34 in the main text). The *labour force participation rate*, the other key factor determining the size of the workforce, is even more difficult to project. In 2000, 67 per cent of the population over the age of 20 was economically active (Panel B).[2] In the working-group exercise, it was assumed that the participation rate for men would basically remain unchanged for each of four age groups, *i.e.* under 20, 20 to 54, 54 to 65 and over 65. Nevertheless, the overall rate for men would fall by 8 percentage points over the next fifty years due to the effect of ageing (Panel C). This reflects, in part, the fact that the 55 to 64 age group, which has a lower participation rate than younger workers, will account for almost a quarter of the working-age population in 2050, double its share at present.

As for the female labour force participation rate, the working-group assumptions (see Box 5) translate into a rise in Korea from 58 to 77 per cent for the 20 to 54 age group over the next fifty years. Although the overall participation rate for women would decline from 2020 as the ageing effect dominates, it would still be 2 percentage points higher in 2050 than at present under this scenario (Figure 34, Panel C). Rising female participation would limit the fall in the total labour force participation rate to 4 percentage points over the period 2000 to 2050 (Panel B) and moderate the fall in the labour force that is projected to begin in 2025 (Panel A).[3] In sum, the rise in the population over the age of twenty over the next fifty years would more than offset the decline in the participation rate for that age group. Consequently, the labour force would rise at a 0.2 per cent average annual rate over the next fifty years. Combined with the 2¾ per cent growth rate in labour productivity discussed above, this would result in output growth of just under 3 per cent per year.

Such an outcome, though, depends on maintaining a high labour force participation rate for men and boosting that for women, in contrast to the declines experienced in many OECD countries in recent years. Working beyond the age of 65, which was the norm for men in OECD countries in the 1960s, is now the exception. Indeed, the average effective retirement rate is well below 60 in some European countries (Blondal and Scarpetta, 1997). In Korea, if the female participation fails to rise from its current level, as projected in the working-group exercise, the labour force would not achieve the small increase currently projected. Moreover, if this were combined with a decline in the male participation rate, there would be a significant fall in the labour force and output growth would fall short of the 2.9 per cent in the central scenario.

Box A1. **Different demographic assumptions**

As noted above, the working group's projections for Korea were based on a demographic scenario created by experts at the Korea Development Institute, a publicly-funded research organisation. This scenario has some important differences compared to United Nation projections in the underlying assumptions on fertility rates and life expectancy at birth.

– **Fertility rates**: The UN projection assumes that the fertility rate stays at its current level of 1.5, before rising to 2.0 by 2035. The KDI projection is based on a fertility rate of above 1.7 through 2030, followed by a decline to 1.55 in 2050.
– **Life expectancy**: Korea's life expectancy in 2000 was 74 years, three years less than the OECD average. The UN projection assumes it converges to the OECD average of 82 in 2050 (Figure A1, Panel D). The KDI projection is based in a smaller increase to 80 years.

Not surprisingly, these different assumptions lead to a number of different outcomes over the next fifty years.

– **Total population**: The higher fertility rate assumed by KDI results in a larger projected total population through 2030 (Panel B). From that point, however, the fall in the fertility rate and the lower life expectancy in the KDI projection lead to an earlier and sharper fall in the population. Indeed, by 2050, the KDI projection is 7½ per cent below the UN projection.
– **Elderly population**: The UN projects a continued rise in the over 65 age group through 2050, reflecting its assumption of higher life expectancy. In contrast, the KDI projection peaks in 2035 and falls through 2050. Consequently, the number of elderly in the UN projection is 18 per cent higher at the mid-point of the century than that in the KDI projection. In contrast, the working-age population is very similar in the two scenarios.
– **Dependency ratio**: The number of over 65 as a share of the working-age population shows a steep slope in both scenarios. However, the ratio levels off from 2035 in the KDI projection, reflecting the fewer number of elderly, while it continues to rise in the UN projection.

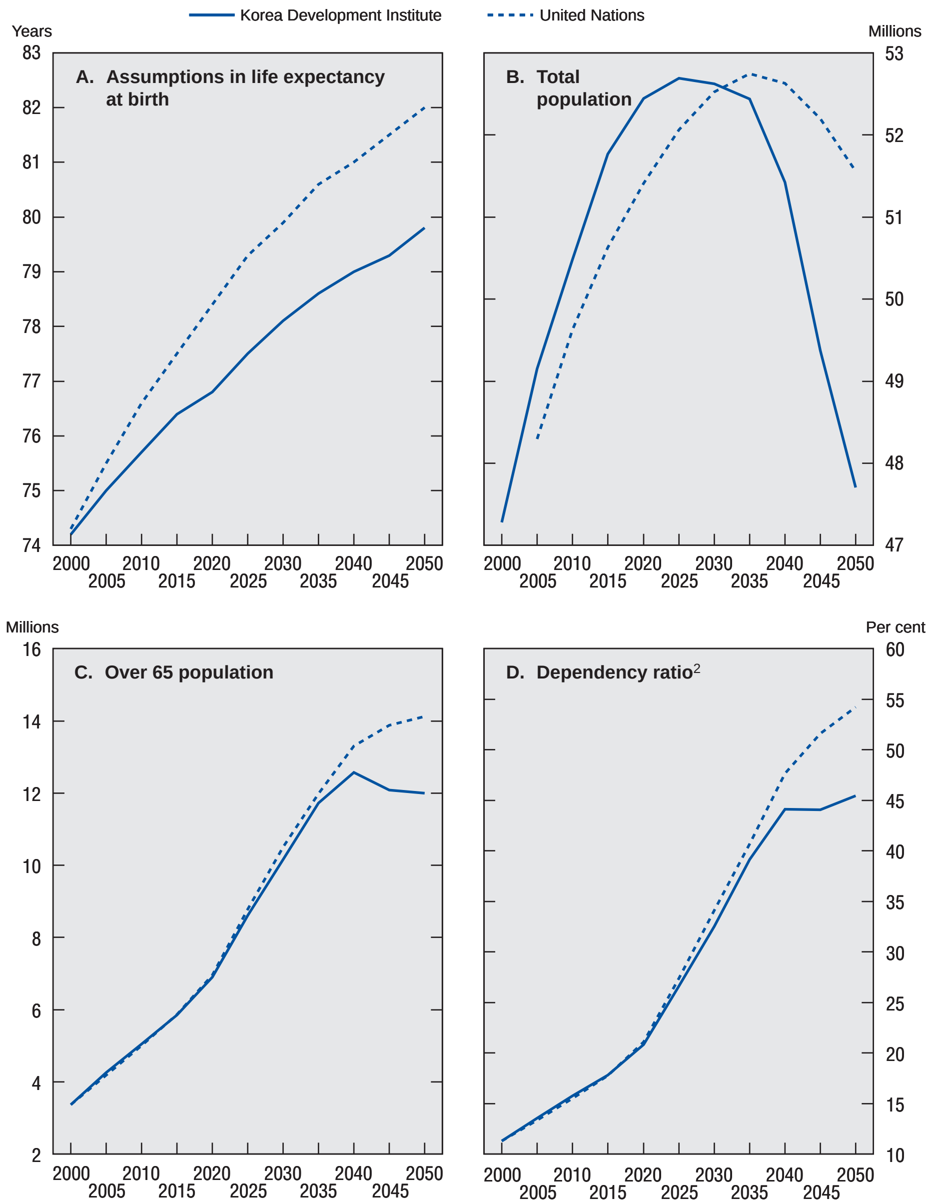
As noted in the sensitivity analysis, outlays on pensions will be larger if life expectancy increases more than under the central scenario of KDI.

Sensitivity analysis

The outlook for public pension expenditures obviously depends on the underlying assumptions discussed above. Changing these assumptions would have the following impact, according to projections by the Korean experts:

– **Fertility rate**: if it were to average 1.5 – close to its present level and 10 per cent below the 1.7 central assumption in the working-group exercise – pension outlays would rise by an additional ½ percentage point of GDP.

Figure A1. **Comparison of demographic projections**[1]



1. The United Nations projections are the 2000 revision. The KDI projections were prepared as part of the OECD's Ad Hoc Working Group on the Fiscal Implications of Ageing.
2. Population over age 65 as a share of the 20 to 64 age group.

Source: United Nations; Korea Development Institute.

– **Life expectancy**: if the increase were about eight years over the next fifty years, life expectancy would be around 82 years – a number in line with the United Nations projection and equivalent to the average of the other countries in the working-group exercise. Using this assumption, rather than the 80 years used in the central scenario would boost pension outlays by an additional ¾ percentage point of GDP.
– **Labour force participation rates**: a 5 percentage-point decline over the next fifty years from the participation rates assumed in the baseline for workers in the 55 to 64 age group would boost pension outlays by about 1 percentage point of GDP. A decline of the same magnitude for women in all age groups would have a similar impact.

Given that the impact is thought to be symmetric, the impact of shocks in the opposite direction would likely have an effect of a roughly similar magnitude.

Notes

1. Of course, labour productivity growth and convergence will also depend on the level of investment. In Korea, this may be less of a constraint, given the extraordinarily high levels of saving and investment. Indeed, excessive investment is widely viewed as a cause of the 1997 crisis. Population ageing may tend to lower the saving rate, as hypothesised by the life-cycle model. Recent work, though, has cast doubt on this model. Moreover, the recent emphasis on saving for retirement may have a positive effect on saving. Finally, a decline in saving could be offset by capital inflows. Korea's ability to attract foreign capital was demonstrated last year with inflows of nearly $20 billion (5 per cent of GDP).
2. The OECD normally excludes the population over age 65 in calculating participation rates. Such an approach is problematic in the case of Korea, where those over 65 have a relatively high participation rate. In 1995, for example, more than 40 per cent of the men in this age group were in the labour force.
3. Rising female participation in the labour force may boost the demand for public support for care of the elderly.

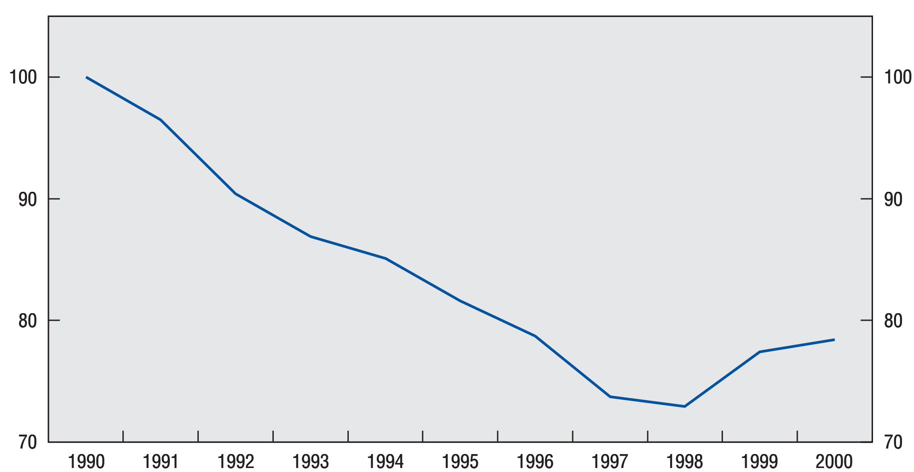
Annex II

Economic interaction between North and South Korea

After a precipitous decline throughout most of the 1990s, real GDP in North Korea appears to have stabilised during the past two years, according to the Bank of Korea (Figure A2). Output is estimated to have increased by 1 per cent in 2000, following a 6 per cent rise in 1999, although it remains more than one-fifth below its level in 1990. In addition, both exports and imports increased last year for the first time in more than a decade (Figure A3).

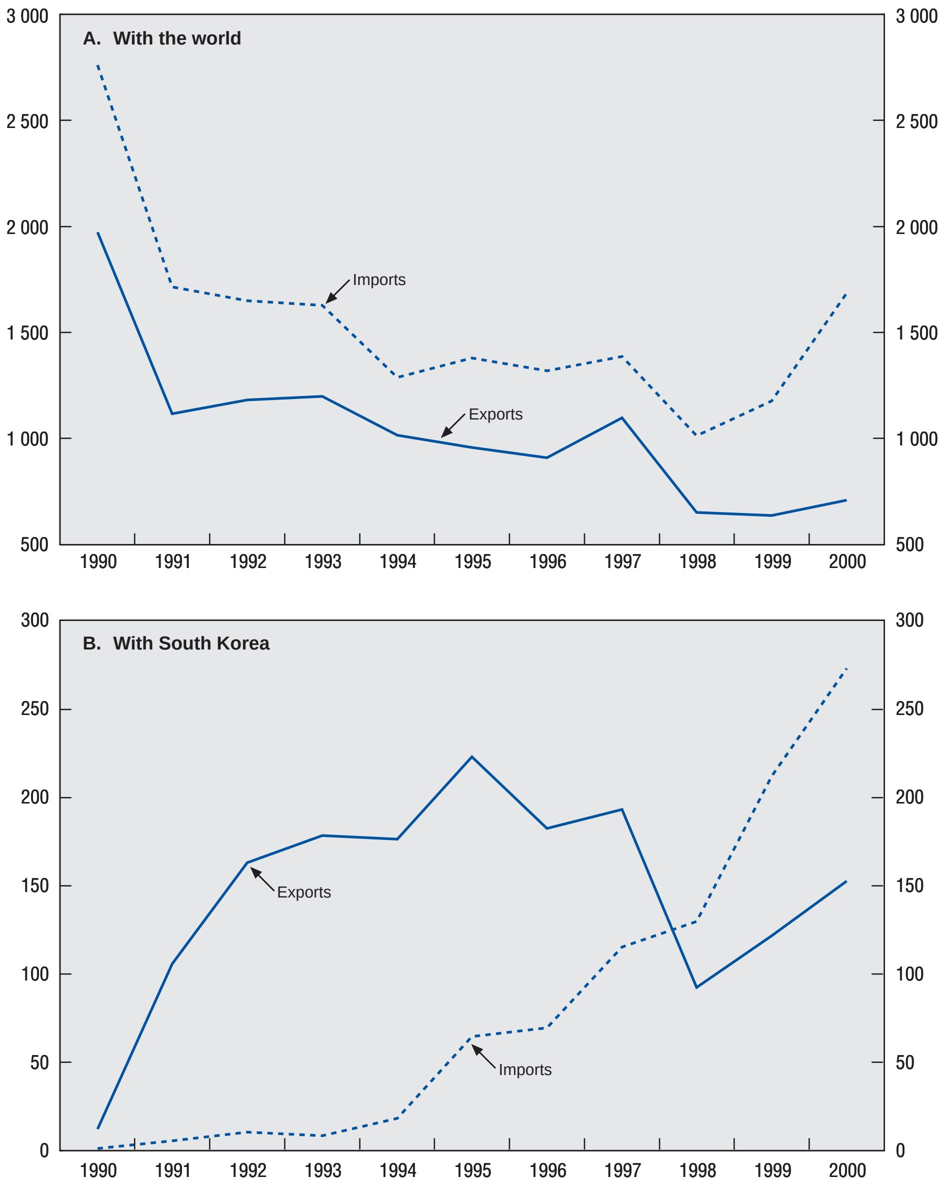
Despite these positive signs, it may be premature to conclude that North Korea has entered a recovery phase. *First*, expanded support from South Korea and from other countries appears to have played a role in the reported turnaround since 1999. *Second*, the Bank of Korea estimates that agriculture and fishery output fell in 2000. This, combined with recent poor harvests, suggest that international food relief – now in its sixth year – will remain crucial.

Figure A2. **North Korea's real GDP**
1990 = 100



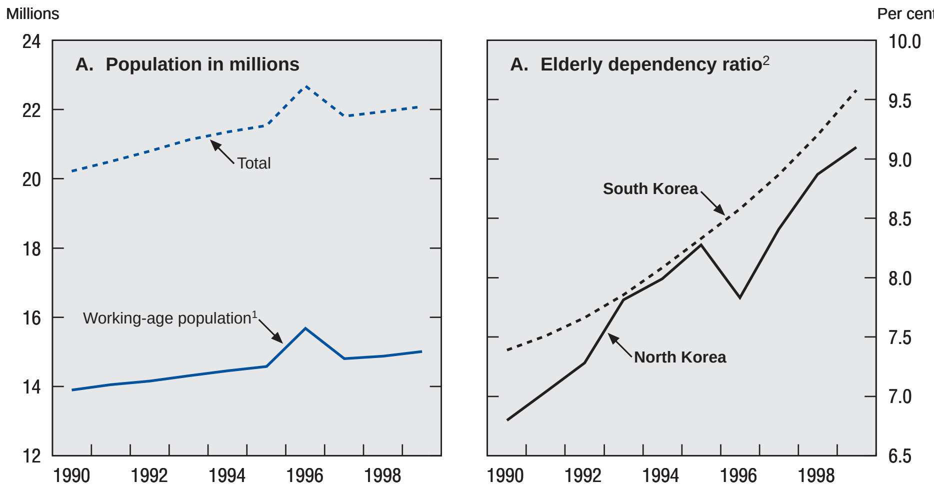
Source: Bank of Korea.

Figure A3. **North Korea's external trade**
Million US dollars



Source: Korea Trade and Investment Promotion Agency.

Figure A4. **North Korean population trends**



1. 15 to 64 years old.
2. Population over the age of 65 as a proportion of the working-age population.

Source: National Statisitcal Office.

The North's population, at about 22 million, is almost half of the South's (Figure A4). Moreover, its elderly dependency ratio is similar to that in the South (Panel B).

In the Berlin Declaration of March 2000, President Kim expressed the willingness of the South to provide economic assistance to the North. Realising meaningful economic co-operation between the two states will require the development of the North's infrastructure, such as highways, harbours, railroads, the electricity grid and communications facilities. In addition, the chronic food shortage requires improvements in the quality and availability of irrigation systems, fertiliser and agricultural equipment. Given the immensity of the challenge, it is likely to require the participation of other countries in addition to South Korea.

A major step toward wide-ranging co-operation was the June 2000 summit between the leaders of the North and the South – the first such meeting since the Korean peninsula was divided at the end of World War II. The talks between President Kim Dae-jung and Kim Jong-il, Chairman of the National Defence Commission of the Democratic People's Republic of Korea, were intended to promote mutual understanding, develop North-South relations and realise peaceful reunification based on five principles:

i) The question of reunification will be resolved by the Koreans themselves.

ii) Reunification will be promoted through the common elements in the South's proposal for a confederation and the North's proposal for a loose form of federation.

iii) Humanitarian issues, such as exchanges of visits by separated family members, will be promptly resolved.

iv) Mutual trust between the South and the North will be enhanced by promoting balanced development of the national economy through economic co-operation and stimulating exchanges in a wide range of areas, including culture, sports, health and the environment.

v) Meetings between authorities in the South and the North will be held in the near future to implement the above agreements expeditiously.

The opening of a dialogue between the two states and the promise of assistance from the South to develop the North's infrastructure should deepen economic relations, which have expanded in recent years. Intra-Korean merchandise trade rose 50 per cent in 1999 to $331 million and another 28 per cent to $425 million in 2000 (Figure A3, Panel B), the largest amount ever. The North primarily exports agriculture, forestry and fishery products, apparel and non-ferrous metals to the South, while importing chemicals and textiles. However, a significant portion of the trade has been related to food aid and to the Korean Peninsula Energy Development Organisation (KEDO, see below). Such non-commercial trade accounted for almost half of the South's exports to the North in 1998 and 1999. Indeed, excluding these exports, two-way trade between North and South was less in 1999 than in 1995. For the South, trade with the North was equivalent to only 0.1 per cent of its international trade. However, for North Korea, the South has become the second-largest trade partner, behind China and ahead of Japan.

Approximately one-third of North-South trade is related to "processing-on-commission" agreements – the shipment of semi-finished goods and machinery to the North to assemble products that are then re-sold in the South or exported to a third country. Such trade, which began in relatively simple products such as clothes and shoes, has expanded to include televisions, audiocassettes and computer monitors.

In addition to trade, the South has other types of economic interaction with the North. *First*, 39 South Korean firms have made arrangements with the North Korean authorities to invest in the North. As of the end of 2000, 11 firms had invested a total of $164 million. With the removal of the $5 million limit on investments in 1996, companies affiliated with Hyundai have taken the lead, accounting for approximately 85 per cent of investment in North Korea. *Second*, KEDO is also promoting co-operation between the South and North. KEDO was established in 1994 to supply Pyongyang with fuel oil and to build two lightwater reactors. The Korea Electric Power Company, the South's state-owned electricity supplier, signed an agreement with KEDO to build two reactors, using a mixed labour force of up to 10 000 from the South and North. Up to 70 per cent of the cost will be borne by South Korea. *Third*, Hyundai's tourism project to Mount Kumgang had taken 371 637 tourists to the North by the end of 2000. The arrangement, which had been threatened by Hyundai's financial difficulties, is expected to continue as general business conditions for the project have been improved. *Fourth*, President Kim's "sunshine policy" has increased the flow of visitors from the South to the North. Between 1998 and 2000, 16 196 South Koreans visited the North for economic or cultural reasons, a nearly six-fold increase from the total during the preceding nine years.

Annex III

Calendar of main economic events

2000

June

The government submits a supplementary budget totaling 2.4 trillion won to the National Assembly.

July

The World Bank closes its Seoul office.

The Bank of Korea reports that the number of Internet banking users has reached one million.

Moody's raises the credit rating of Kookmin Bank, Housing Bank and Shinhan Bank.

The contribution rate of "locally-insured persons" to the National Pension Scheme is boosted from 3 to 4 per cent.

August

The Bank of Korea launches "liquidity adjustment loans" for banks in temporary need of liquidity, with the initial amount set at 2 trillion won.

The government introduces a complete separation of prescription by doctors and dispensing by pharmacies.

September

The Korea Deposit Insurance Company announces that Korea First Bank will receive an additional 3 trillion won of public money.

Ford Motor Company abandons its attempt to takeover Daewoo Motor.

The government launches the second-stage financial-sector restructuring programme, which will require 40 trillion won of additional public funds.

October

The new "productive welfare" scheme of social assistance is introduced.

The Bank of Korea boosts the overnight call rate by 25 basis points to 5.25 per cent.

The Housing Bank is listed on the New York Stock Exchange and Standard and Poors raises the credit rating of Korea First Bank.

The Financial Supervisory Commission establishes the criteria for choosing companies to be screened by financial institutions as to their viability.

The National Assembly passes a 2.3 trillion won supplementary budget.

The government decides to set the ceiling on deposit guarantees at 50 million won.

The Tripartite Commission agrees in principle to introduce a 40-hour workweek, but the details, including the date of implementation, are not decided.

November

A committee of creditor banks discloses that of the 287 companies screened, 18 are to be liquidated and 11 put under court receivership.

Creditor banks announce the bankruptcy of Daewoo Motor.

December

The funds for the second-stage financial-sector restructuring plan are approved by the National Assembly.

The Ministry of Finance and Economy launches the KDB "quick underwriting" scheme for corporate bonds.

The National Assembly passes the 2001 budget of 100.2 trillion won.

2001

January

The Bank of Korea raises its inflation target to 3 per cent, plus or minus one percentage point, for 2001 while keeping the medium-term target at 2.5 per cent.

The Financial Supervisory Service reports that an agreement for the establishment of a "corporate restructuring vehicle" has been reached among the larger creditor banks.

The government announces that it will pay back $5.8 billion of IMF loans by the end of August 2001.

February

The Bank of Korea cuts the overnight call rate by 25 basis points to 5 per cent.

The Tripartite Commission agrees that the introduction of labour union pluralism, originally planned for 2002, will be delayed until 2007. The law banning the payment of labour union officials by firms is also postponed until the same date.

March

Legislation establishing a "pre-packaged bankruptcy" system is approved by the National Assembly.

April

Kookmin Bank and Housing Bank announce that they will merge.

The government-owned financial holding company, which includes four commercial banks and a merchant bank, begins operations.

The Financial Supervisory Commission announces that the number of personal bankruptcies has surpassed 3 million.

In elections for the National Assembly, the Grand National Party wins 132 seats, while the Millenium Democratic Party wins 115.

The generating capacity of Korea Electric Power Company is split into six companies, in preparation for privatisation, which may begin as early as 2002.

May

General Motors makes a proposal to takeover Daewoo Motor and launches negotiations with the carmaker and its main creditor bank.

OECD PUBLICATIONS, 2, rue André-Pascal, 75775 PARIS CEDEX 16
PRINTED IN FRANCE
(10 2001 08 1P) ISBN 92-64-19142-9 – No. 52131 2001
ISSN 0376-6438