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ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

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– to contribute to the expansion of world trade on a multilateral, non-discriminatory basis in accordance with international obligations.

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Publié également en français.

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BASIC STATISTICS OF KOREA

THE LAND

Area (thousand sq. km)	100
Agricultural area (thousand sq. km)	14
Forests (thousand sq. km)	65
Major cities, 2001 (million inhabitants):	
Seoul	10.3
Pusan	3.8
Inch'on	2.6
Taegu	2.5

THE PEOPLE

Population, 2001 (million)	48.3
Per sq. km, 2001	485
Annual rate of change of population, 2001	0.7
Civilian labour force, 2001 (million)	22.4
Civilian employment	21.7
Agriculture, forestry and fishing	1.8
Industry	4.2
Construction	1.8
Services	13.9

PRODUCTION

GDP, 2001 (trillion won)	545.0
GDP per head (US$)	8 900
Gross fixed investment, 2001	
(trillion won)	147.5
Per cent of GDP	27.1
Per head (US$)	2 420
Origin of GDP, 2001 (per cent of total):	
Agriculture, forestry and fishing	4.4
Industry	33.4
Construction	8.2
Services	54.0

THE GOVERNMENT

Public consumption, 2001 (per cent of GDP)	10.4
Central government revenue, 2001, consolidated basis (per cent of GDP)	26.4
Central government budget balance, 2001, consolidated basis (per cent of GDP)	1.3

Composition of the National Assembly: February 2003	Number of seats
The Grand National Party	151
The Millennium Democratic Party	103
Other	18
	272

FOREIGN TRADE

Commodity exports, 2001, f.o.b. (per cent of GDP)	35.6
Main exports (per cent of total exports):	
Light industry products	17.5
Heavy industry products	74.1
Electronic products	31.5
Cars	7.6
Commodity imports, 2001, c.i.f. (per cent of GDP)	32.7
Main imports (per cent of total imports):	
Consumer goods	11.8
Industrial materials and fuels	51.0
Crude petroleum	15.1
Capital goods	37.2

THE CURRENCY

Monetary unit: Won

Currency unit per US$, average of daily figures:	
2000	1 131
2001	1 291
2002	1 251

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

This Survey is published on the responsibility of the Economic and Development Review Committee of the OECD, which is charged with the examination of the economic situation of member countries.

The economic situation and policies of Korea were reviewed by the Committee on 16 January 2003. The draft report was then revised in the light of the discussions and given final approval as the agreed report of the whole Committee on 6 February 2003.

The Secretariat's draft report was prepared for the Committee by Randall Jones, Yongchun Baek, Young-Sook Nam and Douglas Sutherland under the supervision of Yutaka Imai.

The previous Survey of Korea was issued in September 2001.

Assessment and recommendations

Sustaining the recovery achieved in 2002 will require dealing with emerging macroeconomic imbalances and continuing structural reforms

Korea's recovery in 2002, which boosted output growth to 6 per cent despite a sluggish world economy, reflects both the success of the economic restructuring programme initiated in the wake of the 1997 crisis and the underlying dynamism of the economy. Reform efforts have strengthened the mechanisms for resource allocation through market forces and significantly altered the legal and institutional settings to improve governance. They have also created positive synergies with macroeconomic policies. In particular, the restoration of healthy bank balance sheets has strengthened the transmission of monetary easing to the economy, as slowing credit growth to the enterprises in the wake of corporate restructuring has been more than offset by buoyant lending to households, in part through credit cards. At the same time, tax reform measures to encourage credit-card use and thereby increase tax compliance have broadened the tax base and helped to keep the government budget in surplus. These developments laid the foundation for a rebound from the 2001 downturn led by private consumption and housing investment. However, the recovery has been accompanied by a sharp increase in household debt, rising inflationary pressures and a steep rise in real estate prices, prompting the government to take numerous measures to stabilise the housing market. Even though private consumption and housing investment are likely to moderate, output growth in the 5½ to 6 per cent range is projected for 2003 and 2004, assuming that there is a pick up in the world economy that results in a recovery in external demand. The challenge for Korea is to maintain its high growth potential by overcoming remaining structural weaknesses through further reforms, while keeping inflationary pressures under control and containing potential financial imbalances through appropriate macroeconomic policies.

Further structural reforms should have a positive effect on growth

Korea is well placed to meet that challenge. The priorities for reform are likely to create additional positive synergies with macroeconomic policies. This is particularly the case with respect to privatising the banks that were recapitalised with public money. Such privatisation would not only promote further corporate restructuring but also generate revenues to alleviate somewhat the fiscal burden of the financial-sector restructuring programme. Even so, given the large size of these costs and long-term spending pressures, the scope for discretionary fiscal policy actions will remain limited, leaving the task of aggregate demand management largely with the central bank.

To cope with inflationary pressures, a gradual reversal of monetary easing…

While inflation is currently within the central bank's recently revised medium-term target of 2.5 to 3.5 per cent, inflationary pressures may be building up, necessitating a policy response by the Bank of Korea. Following a series of cuts, the policy interest rate had remained at a record low of 4 per cent from September 2001 until it was raised by 25 basis points in May 2002. In the meantime, wage growth accelerated to 10 per cent in the first half of 2002, in the context of an unemployment rate below 3 per cent, pushing up unit labour costs by an estimated 7 per cent. In addition, the sharp rise in real estate prices may boost inflation through their influence on housing costs, inflationary expectations, wealth effects and higher production costs. While the absence of further central bank action since last May is understandable given the considerable uncertainty about the world economic outlook, a gradual reversal of the monetary easing would seem to be needed to contain inflationary pressures during the expansion projected over the next two years.

… accompanied by measures to improve the monetary policy framework, would help achieve the medium-term inflation target

Locking in the benefits of the moderate inflation rate that has been maintained since the crisis would be facilitated by measures to improve the inflation-targeting framework that was established in 1998. One weakness in the current framework is the focus on annual targets that are set in consultation with the government as mandated by law. Given the long time lags in the impact of monetary policy, the emphasis on the annual target is inappropriate. Furthermore, experience in other OECD countries demonstrates that the chance of success of inflation targeting is increased by the independence of the central bank, which has been enhanced in Korea since 1998. However, some aspects of the legal framework, including those covering the composition of the Monetary Policy Committee, need to be improved so as to ensure the neutrality of Committee members. Moreover, if the government's authority to overturn the Committee's decisions is ever to be used, it should be accompanied by full transparency. Measures to ensure the instrument independence and accountability of the Bank of Korea in taking monetary policy decisions would promote the success of the inflation-targeting framework.

With significant costs from financial-sector restructuring…

While monetary policy is focused on the inflation objective, fiscal policy aims at a balanced budget, excluding the surplus in the social security funds. By this measure, the budget recorded a surplus estimated at 0.2 per cent of GDP in 2002. The emphasis on consolidation is appropriate, given the costs incurred for financial-sector restructuring. Government-guaranteed bonds amounting to nearly 18 per cent of GDP were issued to finance this programme. About half of these bonds, most of which reach maturity between 2003 and 2006, will be re-financed by public bonds. In 2003, such borrowing is expected to amount to 2¼ per cent of GDP.

… fiscal policy is set on a path of consolidation…

A slight fiscal tightening is planned for 2003. Although the budget (excluding social security) is expected to record a deficit of around 2 per cent of GDP, this is due to the financial-sector restructuring programme noted above. Excluding this borrowing, the authorities would achieve their balanced-budget target in 2003. The planned fiscal stance appears appropriate in the context of a continued expansion. However, the automatic fiscal stabilisers, though small, should be allowed to operate, and there is scope for limited discretionary fiscal measures if the economic expansion were to stall.

... which is appropriate, given the longer-term pressures for increased spending, notably as a result of ageing...

With the costs of financial-sector restructuring remaining large during the period 2004 to 2006, the budget (excluding social security) is likely to remain in deficit. Korea should aim at balancing the budget over the cycle in the period 2007 and beyond. Maintaining sound public finances is essential to cope with longer-term spending pressures, including the costs of economic co-operation with North Korea and the fiscal impact of population ageing. Excluding the social security funds from the fiscal target is justified by the need to ensure that the pension fund surplus provides resources to meet the future consumption needs of the elderly, which will increase sharply. Indeed, the proportion of the population over the age of 65 is projected to double from 7 per cent at present to 14 per cent by 2020.

... making reform of the pension system a top priority

Weaknesses in the pension system make it essential to enact fundamental reforms, particularly given the rapid pace of population ageing compared with other OECD countries. The government should not wait to address the deficiencies in the current system. Instead, it is crucial to address a number of problems before the National Pension Scheme begins paying regular benefits in 2008. *First*, to provide the 60 per cent replacement rate targeted under the current system, the contribution rate would have to double to nearly 20 per cent, implying adverse consequences for the labour market. Lowering the replacement rate would limit the necessary rise in the contribution rate. *Second*, around a quarter of those eligible for the public pension scheme do not contribute, while many, notably the self-employed, pay too little because they significantly under-report their income. *Third*, a better private-sector system for retirement saving should be introduced. This could be accomplished by reforming the existing separation allowance into a corporate pension system. Together with voluntary arrangements for long-term saving, these reforms would help achieve sustainable retirement incomes based on a three-tier system, as advocated in the 2001 OECD *Economic Survey of Korea*. Given the gaps in coverage and the relatively recent introduction of the system, it is important to strengthen public assistance for the elderly to alleviate poverty.

Faced with long-term spending pressures, the tax system should be improved…

Even with the implementation of reforms, outlays on public pensions and healthcare are likely to rise with an ageing population and the development of a social safety net, thus necessitating increased revenues for the public sector. Boosting revenues under the current tax system would magnify the impact of the distortions embedded in the system, which at present are mitigated by the low level of taxes. To minimise such negative effects, it is important to reform the tax system, in particular by reducing the generous allowances and tax credits, which mean that half of all individual income earners do not pay income tax. The tax bases of the corporate and value-added taxes should also be broadened by reducing preferences and exemptions. Finally, capital income should be taxed more evenly across sources to enhance equity.

… while reforms to enhance the efficiency of the public expenditure system are essential

Improvements in the tax system should be accompanied by reforms to make the public expenditure system more efficient and effective. At 22½ per cent of GDP, Korea has the second-lowest level of public spending among OECD countries. While the immaturity of the social welfare system and the low level of public services are primarily responsible, Korea's tradition of prudent fiscal management has also contributed to containing spending. Although the public expenditure system has been effective until now in maintaining aggregate fiscal discipline, it is not geared toward achieving an efficient allocation of resources and maximising value for money. Furthermore, maintaining fiscal discipline will become increasingly difficult, given the longer-term spending pressures that will significantly boost the size and share of non-discretionary spending in the government budget. Since 1998, the authorities have introduced a range of reform measures to address these issues, resulting in significant progress. Based on this experience, the new government should launch a comprehensive reform strategy along the lines presented below to improve the effectiveness, efficiency and transparency of the public expenditure management system.

It is necessary to adopt a medium-term expenditure framework and a comprehensive reform of the budget structure…

Ensuring fiscal sustainability in the face of steadily increasing spending pressures requires the government to set its budgetary priorities in a medium-term context. Annual budgets should be developed in a medium-term expenditure framework that would provide a strong budgetary anchor and discipline on policymakers, while enhancing fiscal transparency and the ability to reallocate spending towards emerging priorities. Fiscal sustainability would also be enhanced by reforms to make the budgetary system more comprehensive. The highly compartmentalised and fragmented budget structure, with its extensive reliance on earmarked revenues, hampers aggregate control and transparency, as well as the capacity to allocate resources in line with strategic priorities. Consolidating special accounts and public funds so as to reduce drastically their number and their share of expenditure is crucial. The comprehensiveness of the budget also needs to be improved by bringing extra-budgetary funds into the budget and conducting fiscal policy on the basis of general government data, which would also enhance fiscal transparency.

… to strengthen accountability for results,…

Providing adequate incentives and control mechanisms in central and local government administration, as well as in public-sector agencies, is necessary to increase the effectiveness of public spending. Korea can draw on OECD country experience in moving from its traditional system of input-focused budgeting and management to one centred on outcomes. The current trend towards allowing line ministries and agencies more flexibility and autonomy should also be pursued. However, the current budget classification system and the emphasis on detailed line item budgeting and control needs to be reformed so as to encourage a focus on the performance of programmes. The shift toward more flexible and results-focused budgeting and management should go hand in hand with measures to strengthen transparency and accountability for performance. Expanding the capacity of the Board of Audit and Inspection to conduct value-for-money audits at both the central and local government level is essential in this regard. Moreover, the use of feedback from audits and evaluations should also be strengthened.

… to enhance the use of market mechanisms,…

Enhancing the role of market mechanisms would also help boost the efficiency of publicly funded services. Korea has been moving in this direction through, for example, private-sector participation in public investment projects and the contracting out of non-core government functions. Policymakers should explore the wider use of market-based instruments such as internal contracts, vouchers, and user charges, while being careful not to compromise other goals, including equity objectives.

… and to improve intergovernmental fiscal relations…

Korea also faces the important challenge of making decentralisation more effective. The devolution of power should provide more autonomy and flexibility to local governments while, at the same time, increasing accountability and strengthening incentives for efficiency in public spending. The current system of strict controls imposed by the central government on borrowing by local governments should help ensure responsibility. To make decentralisation more effective, the rules for the central government's equalisation transfers to the local level should be improved so as to make them the key instrument for ensuring horizontal equity between jurisdictions. The conditional portion of these transfers should be minimised and the allocation criteria should be made more clear and objective to enhance transparency and accountability. The central government should also follow through on its plan to integrate small, specific grants into more general, multi-purpose grants, thus increasing local autonomy. Such grants should be designed so as not to discourage local governments from addressing important local priorities.

… in particular in the area of education

Education is a case in point. Although the performance of Korean secondary students on international standardised tests is outstanding, there is widespread dissatisfaction with the public education system. Despite some improvement, the current approach discourages local governments from investing in schools, contributing to inadequate facilities and the largest class sizes in the OECD area. While such problems can be dealt with through increased investment, more fundamental reforms are needed to improve the quality of teaching and expand the scope of choices in schools and curriculum. These weaknesses have forced families to rely on private educational institutes to supplement the education provided by the schools, putting a burden on household budgets and undermining equity objectives. Granting schools more autonomy and expanding the pilot programme that allows the creation of independent schools would foster more competition and diversity at the secondary level, while vouchers could be used to address equity concerns. The university system – the weakest area of the education system – could also be upgraded by permitting more autonomy and enhancing accountability for private institutions and increasing public expenditure, which is exceptionally low.

Fundamental reforms in the R&D system and the venture business policy framework would encourage the growth of new industries

Despite the government's recent efforts to improve the conditions for R&D, the deficiencies at the university level, which has a third of R&D manpower, have negative implications for the development of science and technology. While Korea spends nearly 3 per cent of GDP on R&D programmes, their effectiveness is limited by a lack of interaction between the universities, government research institutes and the private sector. Achieving more mobility of researchers between sectors and strengthening international links, while exercising caution in targeting specific areas for research, would help promote the development of a knowledge-based economy. Small and medium-sized enterprises (SMEs), led by venture businesses, have been playing a leading role in this regard. To ensure the dynamism of this sector, it is important to further reduce measures protecting SMEs and to rationalise the large number of programmes providing support. The government should scale back its involvement in the venture business sector, where it supplies a significant share of the funds of venture capital firms, as well as equity guarantees. The rehabilitation of the financial sector has enhanced the availability of funding for new enterprises, thus reducing the rationale for public financing.

Maintaining a healthy financial sector and privatising the banking sector is a key to completing corporate restructuring…

The rapid restructuring of the financial sector was achieved through outlays totaling 157 trillion won (27 per cent of GDP), an upgrading of prudential supervision and the closure of non-viable institutions. The banking sector is again profitable and non-performing loans have fallen to a record low. It is important that the Financial Supervisory Commission require banks to maintain their healthy status in the face of future challenges, such as rising credit-card delinquency and asset price fluctuations. Following the re-capitalisation of financial institutions using public money, the government owns a substantial share of the banking sector. Despite government efforts to ensure independent and responsible management of the banks it owns, privatising them is essential to remove any doubts about governmment intervention in the management of the banks, which would pose more obstacles to the restructuring of the corporate sector, where there are still a large number of weak firms. More than a quarter of enterprises are failing to earn enough profit to cover the interest on their debt, creating a risk of a rise in non-performing loans. While bankruptcy procedures have been substantially improved since the crisis, further streamlining the process would help to make it a more effective tool for restructuring. It is also important that there be effective monitoring by shareholders and creditors, which would be facilitated by introducing class action suits to protect shareholders from fraudulent practices. The new corporate governance framework appears to be taking root, as the market has rewarded companies that have good practices in this area. Ensuring that corporate governance is effective in practice will help strengthen the restructuring process and enhance the prospects for growth.

… along with measures to enhance competition…

Promoting competition is also important in helping to maintain Korea's high growth potential. One important aspect is maintaining the open environment for foreign direct investment that was established in the wake of the crisis. Such inflows have fallen from the $15 billion level in 1999 and 2000, to $11 billion in 2001 and $9 billion in 2002, in the context of a sharp decline in global direct investment flows. The environment for direct investment will depend in part on the transparency of regulation, making continuing efforts of the Regulatory Reform Committee important in this regard. In addition to abolishing unnecessary regulations, the Committee should guard against the tendency of officials to impose regulations that are not backed by legislation. Further reducing barriers to trade, particularly in the service sector, would also enhance competition and promote Korea's ambition of becoming a regional hub. The agricultural sector, which receives large-scale assistance equivalent to 5 per cent of GDP, is another priority for trade liberalisation. The shift from market price supports to direct payments, which are less distortionary, should continue. At the same time, accelerating the upward trend in the average farm size appears important to boost productivity in this sector.

… particularly in network industries

The Korea Fair Trade Commission also has a key role to play in strengthening competition, in part through the "Clean Market Project", which focuses on sectors characterised by anti-competitive practices in products that are important to consumers. Furthermore, the on-going development of the corporate governance framework and the financial sector should allow an easing of chaebol-specific regulations. The government's policies to enhance competition in the electricity and telecommunication industries are particularly important. For electricity, the ten-year restructuring plan is proceeding with the privatisation of the generating companies that started in 2002, though at a slower pace than planned. Accelerating the timetable to allow households to benefit from competition earlier than at the end of the decade would be beneficial. Measures to enhance competition in the telecommunications sector include privatising Korea Telecom, unbundling the local loop and introducing a new framework for setting interconnection charges. However, it is important to ease licensing procedures for new entrants. Moreover, there is a need for independent and pro-active regulatory bodies for both telecommunications and electricity to ensure a smooth transition to competition.

Flexibility in the labour and land markets is also important

Flexible factor markets are an important aspect of maintaining high growth in Korea, where structural change has been very rapid. While the labour market is characterised by signficant wage flexibility, the high costs of dismissing regular workers may be contributing to a growing proportion of non-regular employees and the emergence of a dualistic labour market. This creates both efficiency and equity concerns. Extending the social safety net for non-regular workers, while enhancing employment flexibility for regular workers, may limit such problems. As for the land market, ensuring an efficient use of land is essential in Korea, given the exceptionally high population density and the concentration of nearly half of the population in the capital region. The sharp increases recently in the housing market suggest that the effective tax rate on holding property should be gradually raised from its currently low level and reformed to make it less regressive.

Addressing the issues of air pollution and waste management is important to enhance welfare

Addressing environmental issues is essential to ensure that growth is sustainable over the long term. Although, such issues became part of the national policy agenda in the 1990s, there have been challenges in balancing the differing interests of the government at the local and national level. Despite progress made in some areas, air pollution remains a serious problem that requires further policy efforts to reduce emissions from diesel vehicles, which account for a large part of urban pollution. A three-pronged strategy is needed to reduce the tax advantage for diesel vehicles, to raise emission standards and fuel quality for such vehicles and finally to move toward road pricing in order to reduce congestion – itself a source of increased pollution. As for waste management, the volume-based charging system introduced in 1995 has been successful in reducing municipal waste, although the cost of garbage bags should be gradually increased. The introduction of a system of extended producer responsibility for recyclable products needs to be carefully monitored in order to ensure that recycling does not generate costs in excess of waste disposal methods such as incineration, including the environmental externalities of such disposal methods.

In conclusion

Korea's economic recovery in 2002 in the face of a sluggish world economy was based on progress in implementing a broad restructuring programme, accompanied by appropriate macroeconomic policies. However, this should not lead to complacency about resolving remaining structural weaknesses and addressing emerging imbalances. In particular, the acceleration in wages and the sharp increase in real estate prices risk boosting inflationary pressure, suggesting that a gradual reversal of monetary easing would seem to be needed so as to keep inflation in its medium-term target range during the expansion projected over the next two years. Moreover, shifting the policy focus to the medium term and ensuring central bank independence and accountability in setting monetary policy would enhance the chances for a successful inflation-targeting policy. Meanwhile, fiscal consolidation is necessary given the significant cost of financial-sector restructuring, as well as longer-term spending pressures, in part, related to ageing. Achieving a structural fiscal balance by 2007, excluding the social security surplus, would be an appropriate objective in this respect. Meeting this goal will require both tax-base broadening and more efficient public expenditure. The public expenditure system should be reformed to enhance efficiency and transparency. Consolidation of the highly compartmentalised budget structure should be a priority, while aggregate spending control should be ensured by anchoring expenditures in a medium-term framework. Reform of the pension system is essential to contain the fiscal impact of ageing. Although this is a long-term issue, it should be near the top of the policy agenda given the difficulty of implementing fundamental changes once the current scheme begins paying regular pensions in 2008. Policies that maintain a low level of structural unemployment and encourage the upward trend in the labour force participation rate will also help cope with the fiscal effects of ageing. More generally, the welfare of all Koreans will be enhanced by policies to maintain Korea's high growth potential. This requires improvements in the education and R&D systems and enhancing competition by pursuing the on-going initiatives to remove impediments to direct investment, lower trade barriers, reform regulations and strengthen competition policy. Corporate and financial-sector restructuring efforts need to continue. One priority should be the privatisation of the banks that received public money following the crisis, which is essential to accelerate corporate restructuring. Corporate restructuring will also be aided by the new corporate governance framework and improved bankruptcy procedures. At the same time, sustaining high growth will require greater focus on environmental issues, notably the need to reduce air pollution and improve waste management. Moving ahead with the structural reform programme, while implementing polices to ensure macroeconomic stability, will help Korea to maintain high growth rates and continue its convergence to the income levels in the most advanced countries.

I. Recent trends and prospects

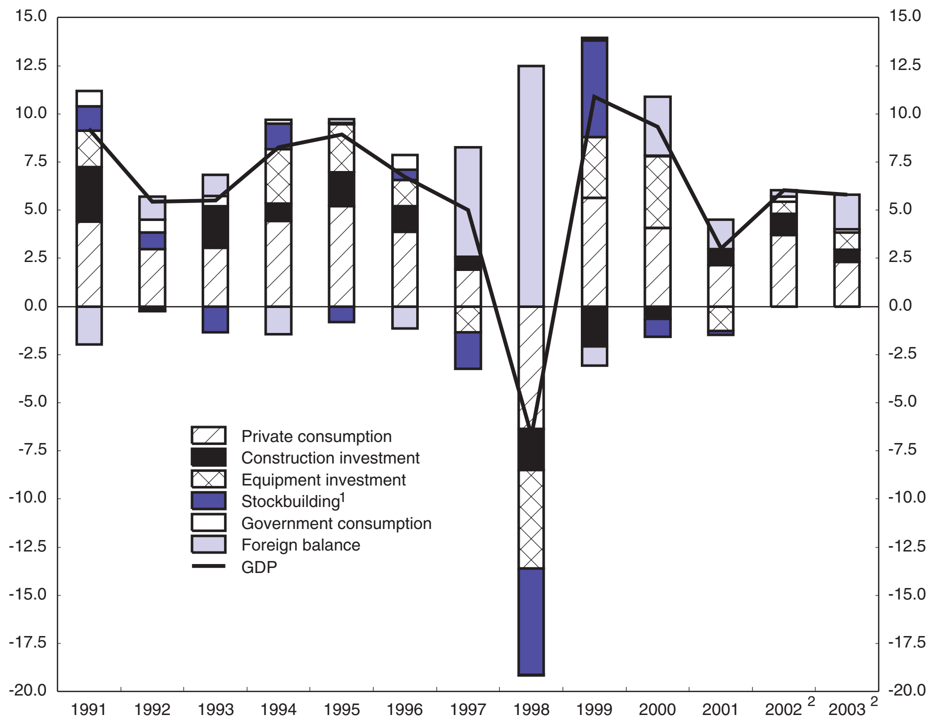
Economic growth decelerated from 9 per cent in 2000 to 3 per cent in 2001 in the context of a marked slowdown in the world economy (Figure 1). However, Korea's first downturn since the 1997 financial crisis was short-lived, thanks to robust private consumption and a rebound in construction investment, which led to a recovery beginning in the final quarter of 2001. The strong growth in these two components was driven by buoyant bank lending, reflecting success in overcoming credit-crunch conditions through a comprehensive financial-sector restructuring programme. In addition, supportive macroeconomic policies played an important role in Korea's early recovery (see Chapter II). Economic growth accelerated to 6 per cent (year-on-year) in the first three quarters of 2002, despite weak investment in machinery and equipment and exports in the early part of the year. However, by mid-2002, exports had also rebounded, led by the information and communications technology (ICT) sector.

Korea likely achieved economic growth of about 6 per cent in 2002 – the highest in the OECD area – despite considerable geopolitical uncertainty, a slump in world equity markets and a weakening of business confidence throughout the OECD area. The durability of the current expansion depends on an improvement in these external factors, as well as on dealing effectively with a number of domestic concerns. Perhaps most important is the surge in real estate prices since early 2001, which has created the possibility of a bubble that would pose risks of a future correction with an adverse impact on households and financial institutions. In addition, a double-digit increase in wages in the context of a fall in unemployment to below 3 per cent also risks increasing inflationary pressure. Finally, the large number of financially weak firms indicates that the corporate restructuring process is not complete and could pose a drag on the pace of economic activity.

A recovery led by private consumption

The upturn in private consumption beginning in 2001 limited the slowdown in the economy and provided the main impetus of the recovery that started in the final quarter of the year. As a share of GDP, private consumption reached the 60 per cent level in 2002 for the first time in twenty years. The rebound in

Figure 1. **Contributions to growth**
Percentage points



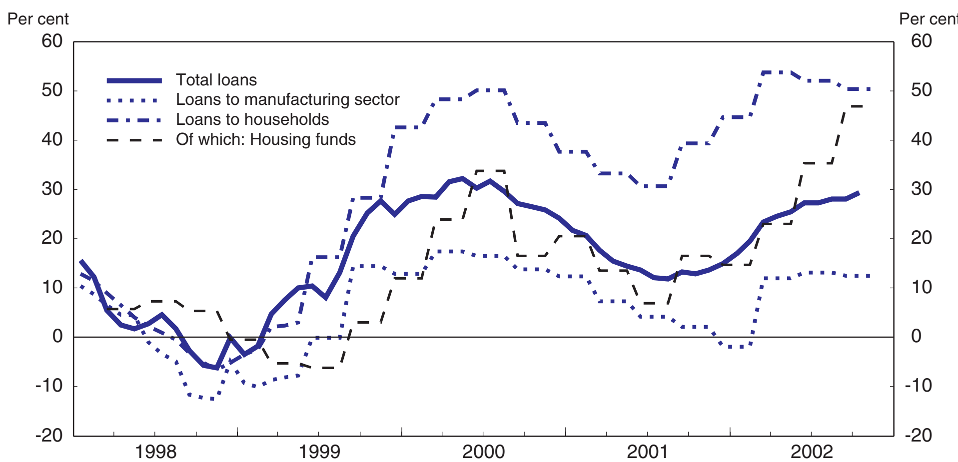
1. Including statistical discrepancy.
2. OECD projection.

Source: Bank of Korea and OECD, *Economic Outlook 72*, December 2002.

private consumption started in the second quarter of 2001, a period when real wages were falling. However, major structural changes in the financial sector enabled households to overcome liquidity constraints. Historically, consumer credit has been relatively undeveloped in Korea, reflecting the emphasis on investment. Following the crisis, though, financial institutions have become increasingly aware of the risks of lending to chaebol-affiliated firms, which at the same time have focused on reducing their debt. This led to intense competition between banks to increase lending to the higher-profit and lower-risk household sector. Moreover, rising real estate prices (see below) raised the value of households' loan collateral, allowing them to borrow more money from banks. Consequently, the share of households in total lending by financial institutions jumped from 24 per cent in 1998 to 34 per cent at the beginning of 2001, and continued to rise to 45 per cent in mid-2002. The preference for households was accompanied by a rise in total lending by banks, which had previously been limited by their balance-sheet problems. With the success of the restructuring programme in restoring the banks' financial health (see Chapter IV), the growth of total lending accelerated from 12 per cent (year-on-year) in mid-2001 to 28 per cent a year later (Figure 2). Bank lending to households grew more than 50 per cent during the first three quarters of 2002.

A second factor easing liquidity constraints was the expanded use of credit cards following the introduction of tax advantages in 2000 to encourage their use (see Chapter II). Indeed, the number of cards issued doubled between 1999 and 2001 and purchases using them quadrupled over the same period to a level equivalent to a third of private consumption (Table 1). The easing of monetary policy encouraged consumers to take advantage of the new credit opportunities. During 2001, the Bank of Korea cut the short-term policy interest rate by 125 basis points to a record low of 4 per cent, thus limiting the interest burden resulting from higher debt. One consequence of expanded household debt was a 27 per cent increase between 2000 and 2002 in the number of individuals defaulting on loans, boosting the total to 2.63 million (8 per cent of the working-age population).[1]

Figure 2. **Growth of bank lending**[1]
Year-on-year percentage changes



1. Loans and discounts of deposit money banks.
Source: Bank of Korea, *Monthly Bulletin*.

Table 1. **The use of credit cards**
Trillion won

	1999	2000	2001
Number issued (in millions)	39.0	42.8	89.3
Amount of sales using credit cards	42.5	79.9	175.7
Per cent of private consumption	8.8	15.3	32.2
Amount of cash loans from credit cards	48.3	145.3	267.7
Total amount of credit card use[1]	96.8	237.3	480.7

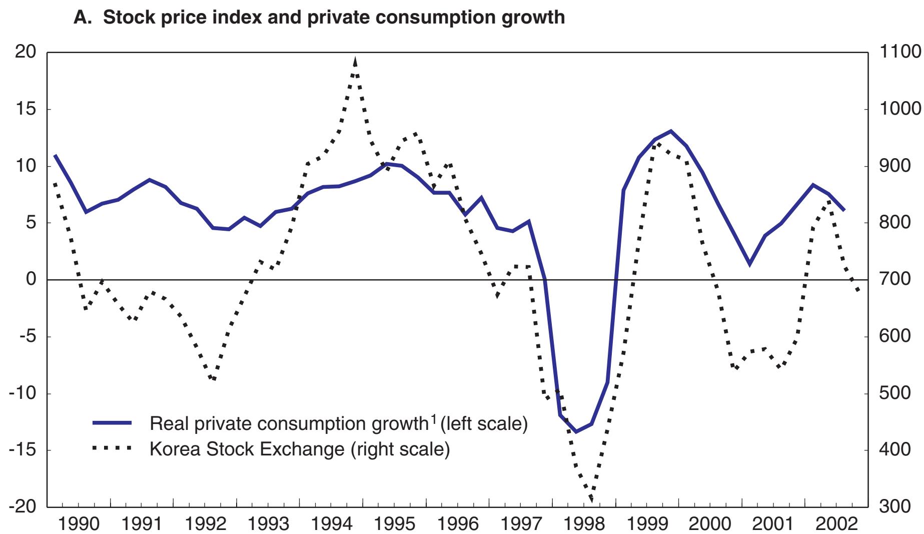
1. This is bigger than the sum of sales and cash loans because it includes other items.
Source: Financial Supervisory Commission.

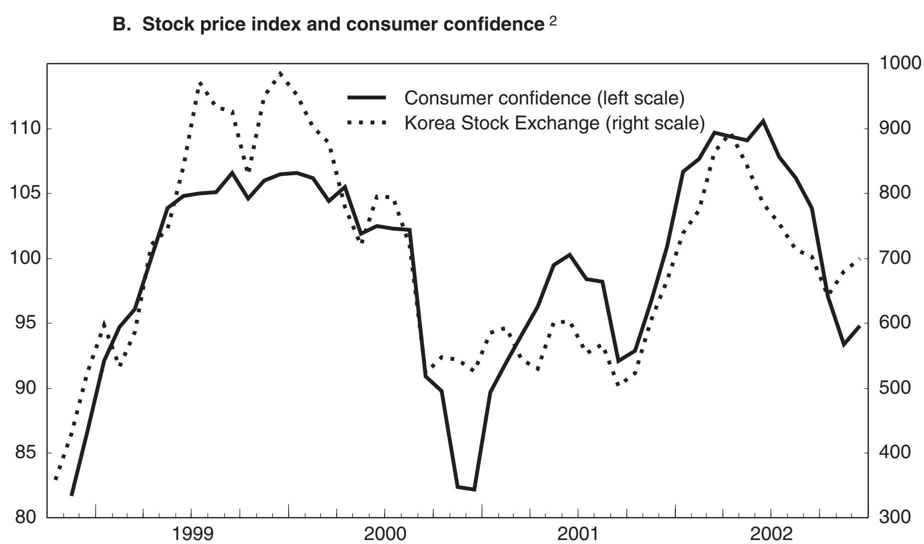
Positive wealth effects and improved consumer sentiment prompted increased household outlays in the new financial environment. Share prices in Korea have been correlated with the growth of private consumption (Figure 3), suggesting that wealth effects are significant. The stock market (KOSPI price index) rose 77 per cent between September 2001 and April 2002.[2] Share prices are also correlated with consumer confidence, which rose by 20 per cent between September 2001 and April 2002 (Panel B), suggesting that share prices also influence consumption by those who do not own equities.[3] The surge in real estate prices (see below) has also had a positive wealth effect. The impact of equity and real estate prices has been accompanied by large increases in labour income once the recovery was underway. After rising less than 3 per cent in 2001, real earnings per hour posted a gain of 9 per cent in the first half of 2002 (see below). Another factor boosting consumption was the reform of the special consumption tax.[4]

With private consumption growing 7½ per cent in inflation-adjusted terms in the first three quarters of 2002, the decline in the household saving rate appears to have continued (Figure 4). While national accounts for the household sector are not available beyond 2000, the saving rate is estimated to have fallen around 10 per cent in 2002 for the first time since the 1970s. This may be part of the long-term downward trend from the peak of 25 per cent in 1991, which may reflect demographic trends and the introduction of a public pension system (Kim and Lim, 2002). The downward trend in the saving rate was briefly interrupted by the financial crisis, which prompted households to boost precautionary savings.

The wider use of consumer credit has led to a sharp rise in household debt during the past few years (Figure 5). Household debt as a share of disposable income grew steadily from 1980 onwards, facilitated by the development of financial markets. Then, following a decline in the wake of the crisis, the ratio jumped from 86 per cent in 1998 to around 110 per cent in 2001. Such a level would put Korea above the average in the major industrialised countries (Table 2). Moreover, the pace of the increase – 24 percentage points over three years – is

Figure 3. **Share prices and private consumption**

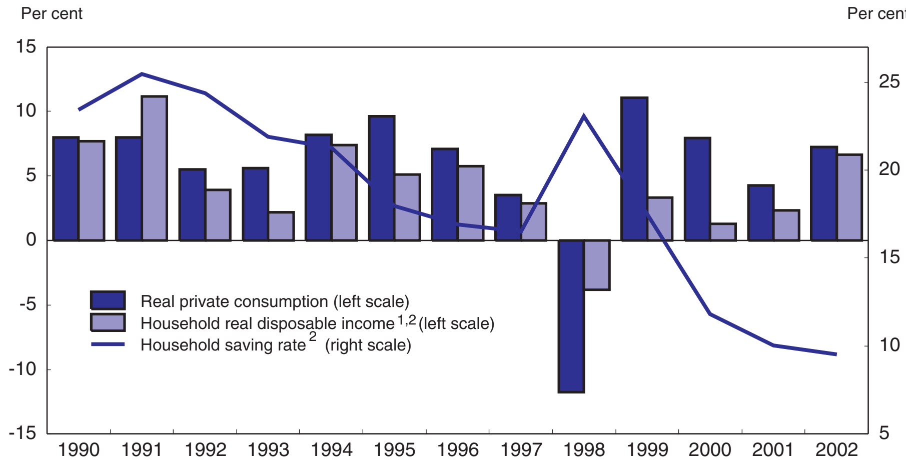




1. Year-on-year growth rate.
2. A score of 100 means that consumption is expected to be the same in six months as at present.

Source: Korea Stock Exchange, Bank of Korea and Korea National Statistical Office.

Figure 4. **The household saving rate**

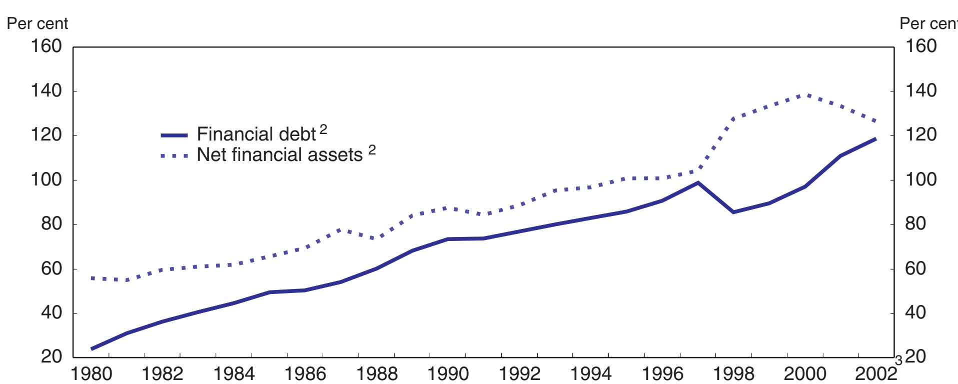


1. Deflated by the private consumption deflator.
2. OECD estimates for 2001 and 2002.

Source: Bank of Korea.

Figure 5. **Household financial assets and liabilities**

Per cent of disposable income[1]



1. Based on OECD estimate of disposable income for 2001 and the first half of 2002 for the household and non-profit institutions serving households sector.
2. For the "Individual Sector" in the Bank of Korea's flow of funds data.
3. End of June 2002.

Source: Bank of Korea.

Table 2. **International comparison of household wealth and indebtedness**

Per cent of disposable income in 2001

	Financial assets	Liabilities	Net financial wealth
Canada	348.2	111.7	236.5
France	347.9	76.1	271.9
Germany	270.5	112.0	158.6
Italy	291.6	35.9	255.7
Japan	474.7	133.2	341.5
United Kingdom	412.3	118.9	293.3
United States	438.3	108.8	329.5
Average	**369.1**	**99.5**	**269.6**
Korea[1]	244.1	110.8	133.4

1. Disposable income is estimated by the OECD. See the notes to Figure 5.

Source: OECD and Bank of Korea.

probably not sustainable. In terms of the accumulation of financial assets by households, Korea is far behind the major OECD countries, so that the ratio of net financial assets to disposable income, at 133 per cent in 2001, is about half of the average of the G-7 countries. Net financial assets fell even in absolute terms in the first half of 2002 for the first time since the 1980s. These trends indicate that a large portion of the rise in financial debt is being used for consumption or the purchase of non-financial assets, particularly housing.

The recovery in construction investment and rising real estate prices

After declining by nearly a quarter in real terms after 1997, construction investment rebounded with growth of around 6 per cent in 2001 and the first half of 2002 (Table 3). The turnaround was primarily due to residential construction, which has recovered from a deep decline after the 1997 crisis. Indeed, the number of houses completed fell by half in 1998, while housing prices declined by 12 per cent (Figure 6). The resulting financial distress in the construction industry led to a large number of bankruptcies and a contraction of employment. To stabilise the housing sector, the government boosted financial support, revised tax laws and eased regulations. Financial support through the National Housing Fund was almost doubled from 10 trillion won in 1998 to 19 trillion won (3.5 per cent of GDP) in 2001, while its interest rates were cut. Acquisition, registration and capital gains taxes were lowered, and homes purchased before June 2003 were exempted from the capital gains tax. In addition, the "Excess Land Capital Gains Tax Act" and the "Land Ownership Limit Act", which were introduced to restrain the surge in land prices during the late 1980s, were abolished. Finally, the "parcelling"[5] system to allocate new houses was reformed.

These measures, combined with the easing of monetary policy, significantly boosted demand for housing. The number of houses built rose by 22 per

Table 3. **Economic growth**
Percentage change from year earlier

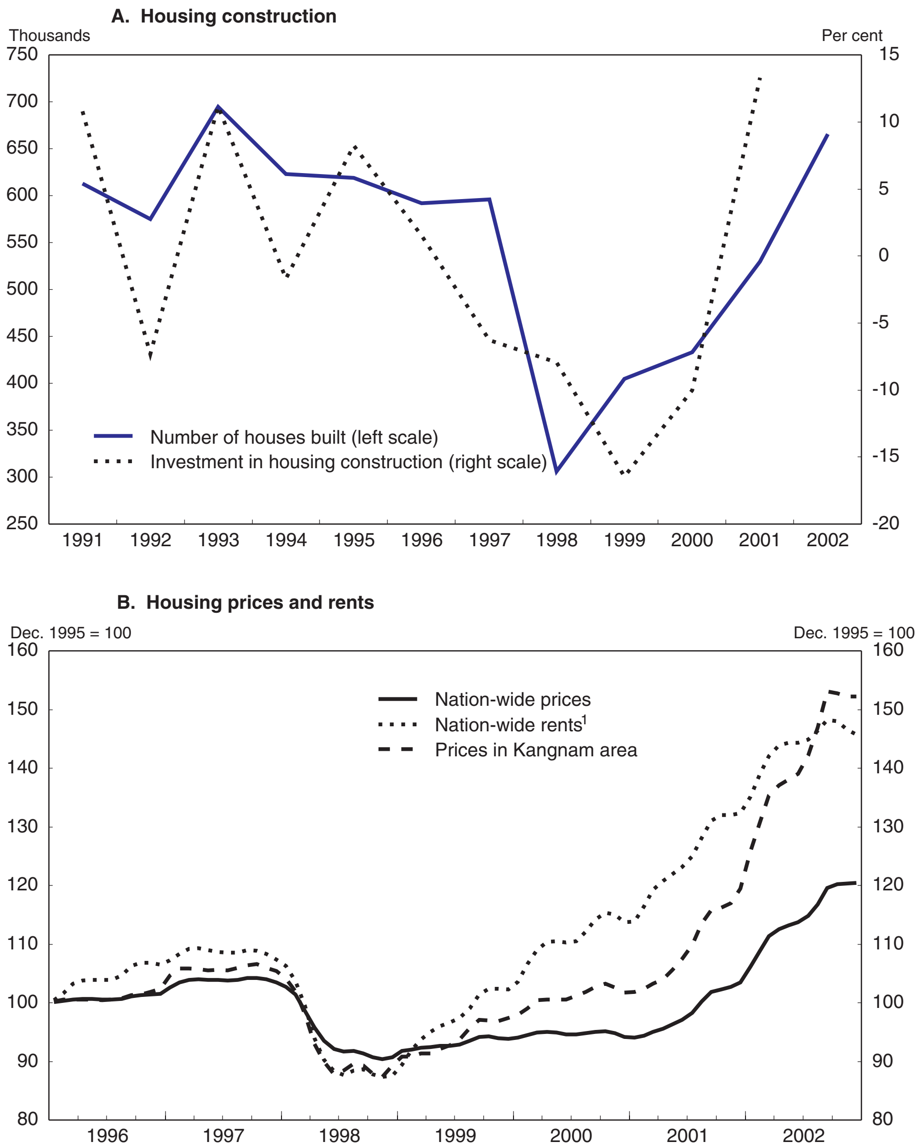
	1991-97	1998	1999	2000	2001[1]	2002 First half[1]	2002 Third quarter[1]
Private consumption	6.4	–11.7	11.0	7.9	4.2	8.0	6.1
Government consumption	3.7	–0.4	1.3	0.1	0.2	5.2	2.4
Gross fixed capital formation	5.3	–21.2	3.7	11.4	–1.7	6.0	0.9
Construction	4.7	–10.1	–10.3	–4.1	5.8	6.7	–3.8
Machinery and equipment	6.3	–38.8	36.3	35.3	–9.8	5.2	7.7
Final domestic demand	5.7	–14.0	7.6	8.2	2.0	7.1	4.1
Stockbuilding[2]	–0.1	–5.5	5.4	–0.2	0.0	0.2	–0.1
Total domestic demand	5.4	–19.8	14.7	8.1	2.0	7.3	4.2
Exports	14.7	14.1	15.8	20.5	1.0	6.8	18.3
Imports	11.2	–22.1	28.8	20.0	–2.8	12.5	20.1
Foreign balance[2]	0.5	12.5	–1.0	3.1	1.5	–0.7	2.5
Gross domestic product	6.4	–6.7	10.9	9.3	3.0	6.1	5.8

1. Preliminary.
2. Contribution to growth.
Source: Bank of Korea.

cent in 2001, and by another 26 per cent in 2002 (Figure 6). The growth of housing investment accelerated to 13 per cent in 2001 and further to 28 per cent in the first half of 2002.[6] However, these measures initially had a larger impact on demand than supply, perhaps reflecting the downsizing of the construction sector. Consequently, there has been a rebound in housing prices that goes well beyond a correction of the post-crisis decline. Since the beginning of 2001, housing prices and rents have risen by almost a third (Panel B). In contrast to the late 1980s, the recent episode has been concentrated in apartments, particularly in the capital region. The largest increases have been in the Kangnam area of Seoul, where apartment prices have risen 65 per cent since early 2001 compared to the nationwide average of 40 per cent.

To limit the sharp rise in real estate prices, the government has introduced numerous policy packages since December 2001 aimed primarily at preventing speculation and increasing the supply of housing (see Chapter IV). To exclude speculators, the authorities have launched investigations into the origin of funds invested in housing and conducted tax audits. Moreover, re-sale of parcelling rights has been restricted, and the limits on applying a second time for houses have been tightened. The government also announced a plan to build 5 million homes during the next ten years. However, given that more than half a million homes were completed in 2001 and 2002, this objective can be met without any acceleration of housing construction. The upward trend in real estate prices moderated in the final quarter of 2002, although this may reflect seasonal

Figure 6. **Developments in the real estate market**



1. Based on the chonsei system.
Source: Korea National Statistical Office, Bank of Korea and Kookmin Bank.

influences. Housing prices generally rise in the first and third quarters of the year – the periods when Korean families are most likely to move. Thus, the extent to which the government's measures are effective will be more apparent by the end of the first quarter of 2003.

Weak machinery and equipment investment and sluggish exports

The strength of private consumption and construction investment accounted for all of the growth in 2001 and 70 per cent in the first three quarters of 2002 (Figure 1). In contrast, the leading sectors in most previous expansions – exports and investment in machinery and equipment – were sluggish through the first half of 2002 (Table 3).

Investment in machinery and equipment

Investment in machinery and equipment has been weak since the downturn began in the final quarter of 2000. Such investment[7] fell almost 10 per cent in 2001, reflecting the economic slowdown and weak profitability of the business sector (Table 4). Corporate earnings declined despite progress in improving their balance sheets. In the manufacturing sector, the debt to equity ratio has fallen by more than half since the crisis to less than 200 per cent. Moreover, the average interest rate has declined significantly since 1998. Consequently, the ratio of financial expenses to sales decreased to a record low of 4.2 per cent in 2001. However, this was more than offset by a reduction in operating profits, leaving the ordinary

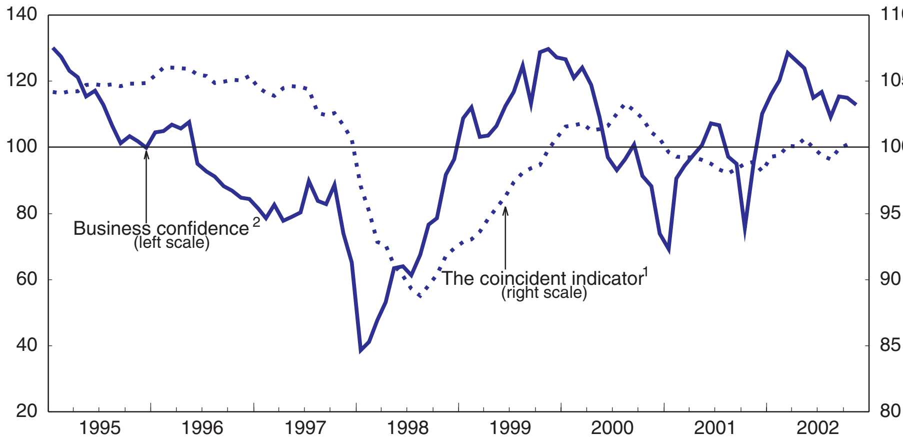
Table 4. **Performance indicators for the manufacturing sector**

Per cent

	1997	1998	1999	2000	2001	2002 First half
Financial indicators						
Debt-equity ratio	396.3	303.0	214.7	210.6	182.2	135.6
Total borrowings-assets ratio	54.2	50.8	42.8	41.2	39.8	33.1
Current ratio[1]	91.8	89.8	92.0	83.2	97.9	107.9
Asset turnover ratio	0.90	0.82	0.82	0.96	0.98	1.01
Profitability indicators						
Operating profit-sales ratio	8.3	6.1	6.6	7.4	5.5	7.8
Labour cost-sales ratio	11.4	9.8	9.8	9.7	10.0	10.0
Ordinary profit-sales ratio	–0.3	–1.8	1.7	1.3	0.4	7.3
Financial expense-sales ratio	6.4	9.0	6.9	4.7	4.2	3.0
Average interest rate	10.6	13.5	11.5	10.5	9.4	8.2
Interest coverage ratio[2]	1.29	0.68	0.96	1.57	1.33	2.57

1. The ratio of liquid assets to short-term liabilities.
2. The ratio of operating profits to interest expenses.
Source: Bank of Korea.

Figure 7. **Business sentiment**



1. Cyclical component.
2. Seasonally adjusted. A score of 100 means that production is expected to be the same as the previous month.
Source: Korea National Statistical Office and Federation of Korean Industries.

profit to sales ratio near zero. This pushed down the "interest coverage ratio", which compares a firm's operating profits to its debt service obligations on a flow basis, following two years of improvement. In addition to the decline in internal funds, opportunities for external finance in 2001 were limited by credit crunch conditions in the banking sector and the corporate bond market (see 2001 *Survey*).

Investment in machinery and equipment has rebounded with growth of 5 per cent in the first half of 2002, boosted by the economic recovery and the improvement in profitability. Indeed, operating profits rose to nearly 8 per cent of sales in that period, leaving firms flush with cash: the ratio of liquid assets to short-term liabilities has rebounded strongly since 2000 (Table 4). Nevertheless, the level of investment in machinery and equipment remains below that in 2000 and its prospects are uncertain. Firms are reluctant to invest their abundant funds given the current world economic outlook. Business sentiment has plummeted since its peak in April 2002 (Figure 7). In addition, the relatively low rate of capacity utilisation – 2 percentage points below the 78 per cent recorded in 2000 – is damping investment. Nevertheless, there has been a recovery in machinery orders, which increased 21 per cent year-on-year in the third quarter of 2002.

Another reason for weak business investment is the still large number of financially weak firms, as measured by the interest coverage ratio. In the manufacturing sector, the proportion of firms with a ratio below one increased from 32 per cent during the first nine months of 2001 to 34 per cent during the same period of 2002 (Table 5). Moreover, the share with negative ratios rose from 18 to 23 per cent over that period. Among externally-audited enterprises, 2 364 – 28 per cent of the total – had ratios of less than one in 2001 (Panel B). Of these firms, 35 were in workout programmes and 25 were in court-mandated bankruptcy procedures. However, the remainder were not formally recognised as having serious financial problems. The combined debt of the companies with a ratio of below one amounted to 28 per cent of GDP. While a low ratio can reflect temporary liquidity

Table 5. **Financial distress in the corporate sector**

A. Interest coverage ratio[1] of manufacturing firms

	Share of firms with a ratio of:						
	Below 0%	0 to 50%	50 to 100%	Total below 100%	100 to 150%	150 to 200%	Over 200%
2001[2]	17.7	6.3	8.3	32.3	9.9	6.6	48.3
2002[2]	22.8	5.1	6.4	34.3	6.9	5.3	49.1

B. Firms with interest coverage ratios[1] below one in 2001

1. Number of firms

Years below one	2001 only	2001-2000	2001-1999	2001-1998	Total in 2001
Total number	1 265	649	228	222	2 364
Per cent[3]	15.0	7.7	2.7	2.6	28.0
Normal firms	1 195	593	193	158	2 139
In workout programmes	15	1	7	12	35
In composition	5	3	1	1	10
In reorganisation	4	6	1	4	15
Other[4]	46	46	26	47	165

2. Total debt

Years below one	2001 only	2001-2000	2001-1999	2001-1998	Total
Total debt (trillion won)	73.3	41.0	24.7	15.2	154.3
Per cent of GDP	13.5	7.5	4.5	2.8	28.3
Normal firms	51.9	36.6	12.7	5.9	107.1
In workout programmes	17.4	0.3	10.6	5.4	33.7
In composition	1.9	0.2	0.0	0.9	3.0
In reorganisation	0.2	1.3	0.2	0.6	2.2
Other[4]	2.1	2.6	1.1	2.5	8.3

1. The ratio of operating profits to interest expenses.
2. For the January to September period.
3. Per cent of the 8 440 firms that are externally audited.
4. The other category includes companies, usually small in size, that defaulted on their loans but did not enter into any formal bankruptcy procedure.

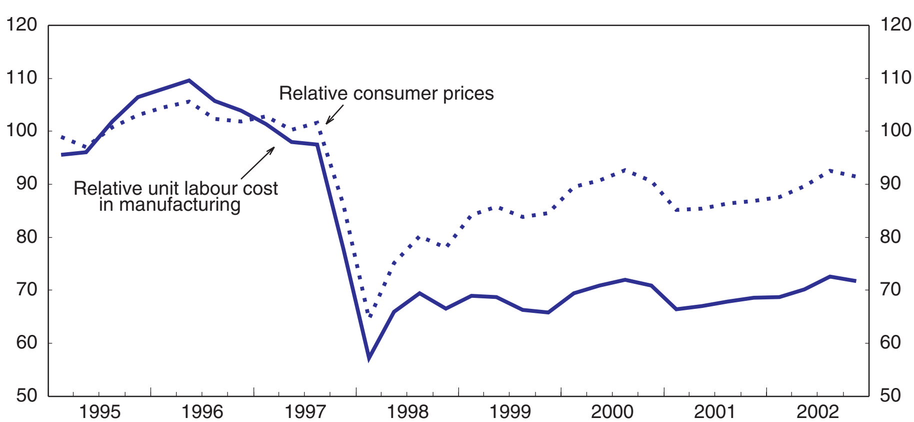
Source: Bank of Korea for Panel A. Won-Hyuk Lim (2002) for Panel B.

problems that do not threaten a firm's viability, 450 firms in 2001 had recorded an interest coverage ratio of below one for at least three consecutive years. Not surprisingly, having a low ratio over an extended period has been found to be a good predictor of company failure (Won-Hyuk Lim, 2001). The number of financially weak firms indicates that there is a significant amount of corporate restructuring still to come.

Exports and the external balance

The growth of Korea's exports of goods and services slowed to 1 per cent in volume terms in 2001, the smallest rise since the 1980s. But a gain in competitiveness in the latter part of 2000 (Figure 8) helped Korea to gain export market share in the face of stagnant world trade. Competitiveness gains, though, evaporated in the course of 2001, and by mid-2002, relative unit labour costs in the manufacturing sector had returned to their level of mid-2000. However, the pick-up in growth in export markets to around 4 per cent in 2002 fuelled a modest export recovery in the first half of the year (Table 3). A sharper upturn began in the third quarter of 2002, with exports up 18 per cent (year-on-year) in volume terms. The strong recovery was based on demand from China and Southeast Asia, offsetting sluggish shipments to the OECD area. In terms of product composition, the export rebound was driven by ICT products, such as portable phones (Box 1).

Figure 8. **Competitiveness indicators**[1]
1995 = 100



1. Calculated *vis-à-vis* forty-one countries. A decline indicates a gain in competitiveness. OECD estimates for 2002.
Source: OECD.

Box 1. The information and communications technology sector

The volatile information and communications technology sector (ICT)* has been a key factor driving Korea's business cycle since the crisis. This sector accounted for a third of the rise in industrial output during the strong upturn recorded in 1999 and 2000. However, the plunge in ICT production between mid-2000 and mid-2001 was a major cause of the economic slowdown recorded in 2001 (Figure 9). The rebound in the ICT sector fuelled the economic recovery that began in the final quarter of 2001. Indeed, ICT production has been rising at a double-digit rate in volume terms since May 2002.

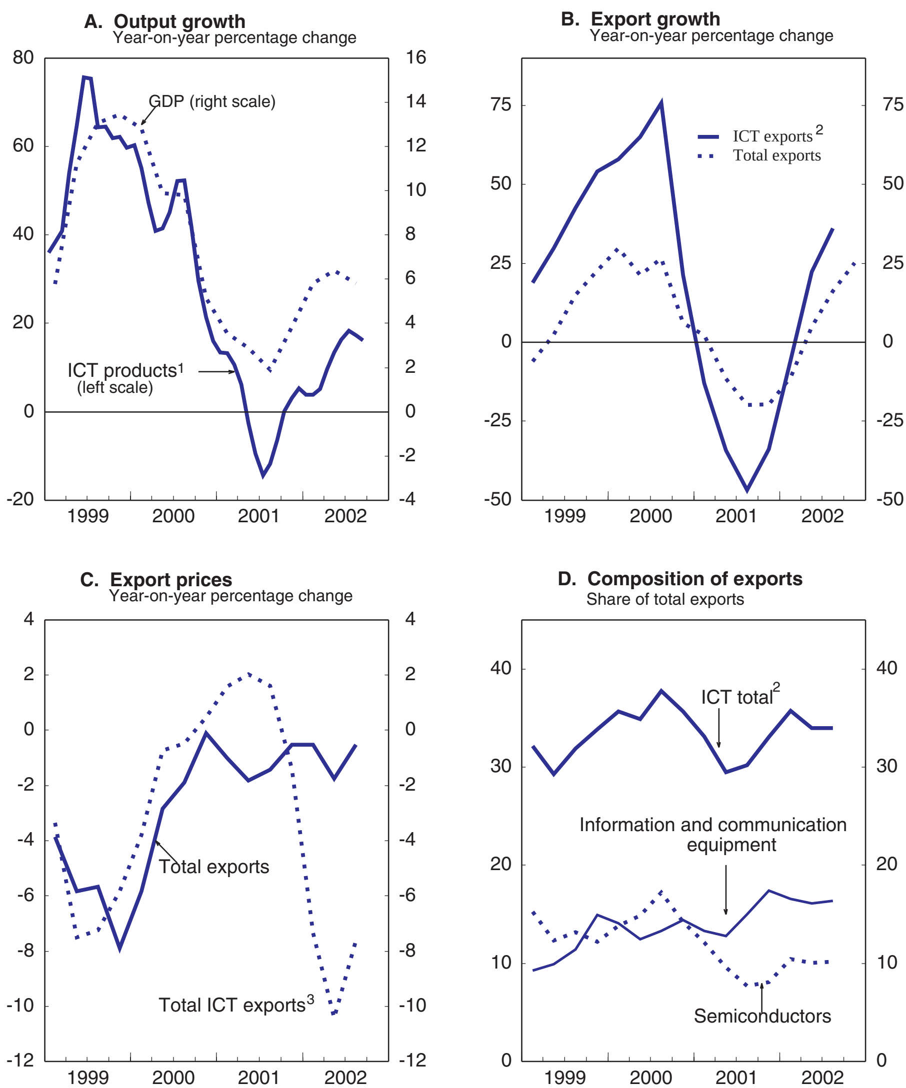
Developments in the ICT sector reflect the large fluctuations in external demand, resulting in even wider oscillations in export growth than in output (Panel B). The swings in exports are partly a result of volatile prices (Panel C). Indeed, the unit value of ICT exports fell sharply until mid-2002 before beginning a recovery. The rebound in ICT exports in 2002 has been driven by semiconductors and telecommunication products, both of which increased more than 30 per cent (year-on-year) in volume terms in the first eight months of the year (Table 6).

The ICT sector accounts for a third of total exports (Panel D), giving them approximately a 12 per cent share of GDP. The volatility of this sector raises uncertainty in projecting the future direction of the Korean economy, presenting challenges to policymakers. In sum, though, Korea's success on the manufacturing aspects of the ICT sector has been a positive development for economic growth. In the longer term, however, the key to sustaining high growth will be the diffusion of ICT in the business sector to raise productivity and reduce transaction costs. This will depend, in turn, on the availability of the necessary skills and the creation of an appropriate regulatory environment.

* Manufacturing industries in this sector include telecommunications, information (including computers) and broadcasting equipment, as well as electronic components including semiconductors.

Despite weak export growth prior to mid-2002 and a significant fall in the terms of trade, the current account balance has remained comfortably in surplus (Table 6). The decline in import volumes in 2001 resulted in a surplus of around 2 per cent of GDP. In 2002, Korea recorded its fifth consecutive current account surplus, although it narrowed to around 1 per cent of GDP as imports rebounded strongly. Moreover, the service deficit more than doubled, primarily owing to a sharp increase in overseas travel. This was partially offset by the falling deficit on investment income, reflecting the fact that Korea has become a net creditor country, with net external assets of $52 billion (11 per cent of GDP) in November 2002 (Figure 10).

Figure 9. **Developments in the information and communications technology sector**



1. Defined as the categories of office and computing machinery, communication equipment (including radio and TV) and electric machinery and apparatus.
2. Defined as information and communication equipment, semiconductors and electric home appliances.
3. Weighted by 1999 dollar values of exports.

Source: Bank of Korea and Korea National Statistical Office.

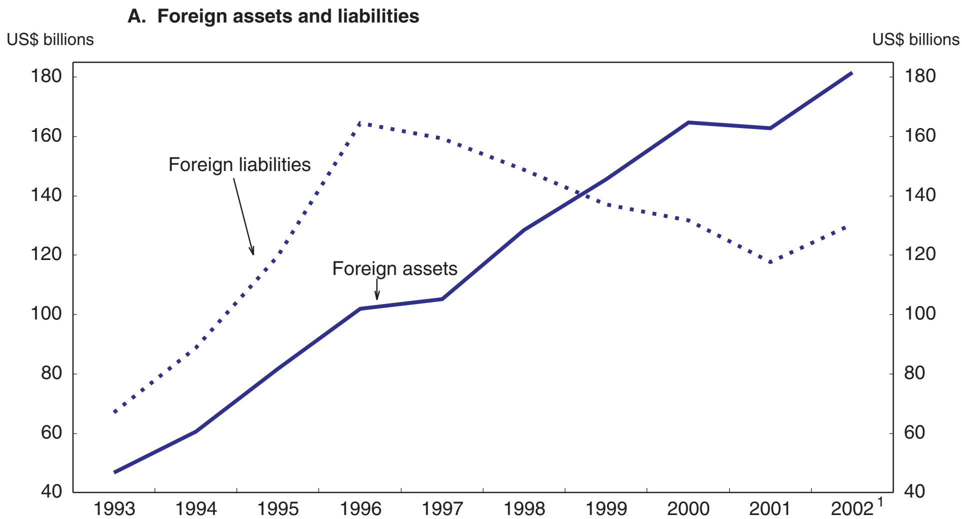
Table 6. **The balance of payments**

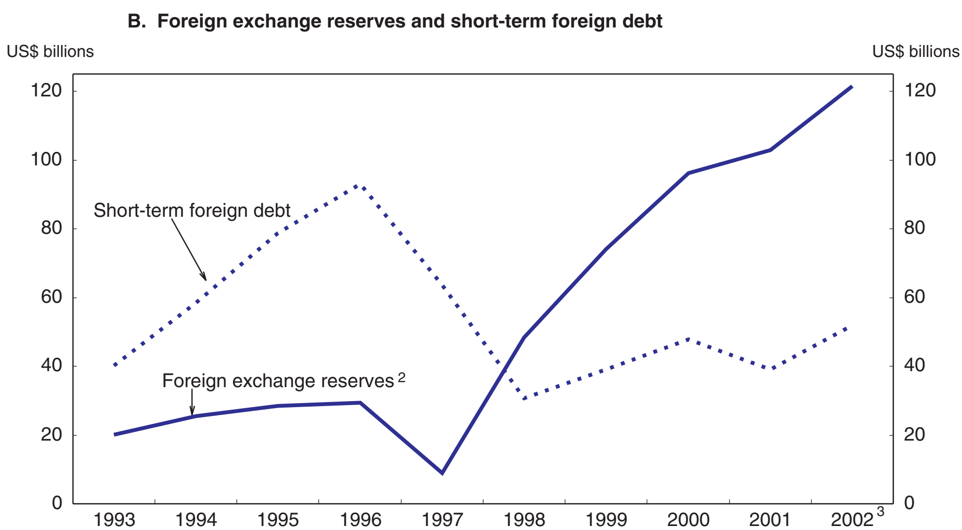
	1998	1999	2000	2001	2002[1]
A. Current account (US$ billions)					
Merchandise trade					
Exports	132.1	145.2	175.9	151.4	157.0
Imports	90.5	116.8	159.1	138.0	142.8
Balance	41.6	28.4	16.9	13.4	14.2
Non-factor services					
Exports	25.6	26.5	30.5	29.6	28.1
Imports	24.5	27.2	33.4	33.1	35.4
Balance	1.0	–0.7	–2.9	–3.5	–7.3
Investment income					
Credit	2.7	3.2	6.4	7.0	5.8
Debit	8.3	8.4	8.8	7.9	6.5
Balance	–5.6	–5.2	–2.4	–0.9	–0.7
Transfers, net					
Public	–0.4	–0.3	–0.4	–0.2	–0.3
Private	3.8	2.2	1.1	–0.1	–1.0
Current account	40.4	24.5	12.2	8.6	5.5
As per cent of GDP	12.7	6.0	2.7	2.0	1.2
B. Trade volume (percentage change)	2000 share	1999	2000	2001	2002 Jan.-Aug.[2]
Total exports	100.0	12.0	20.6	0.7	9.0
Light industry[3]	17.6	–4.8	–1.2	–5.5	–1.4
Heavy industry[3]	74.1	22.4	31.6	2.4	15.0
Passenger cars	6.4	14.4	14.0	–3.0	6.9
Electronic products	36.0	60.0	51.7	–0.1	24.9
– Semiconductors	12.4	28.5	83.2	18.6	31.4
– Telecommunications	16.3	77.9	61.0	10.2	32.9
Total imports	100.0	29.0	19.0	–2.3	11.8
Consumer goods	10.0	22.4	14.4	8.9	22.2
Industrial materials and fuels	49.2	23.6	6.2	–0.4	30.0
Capital goods	40.8	41.4	43.5	–8.2	12.4
C. Capital and financial account (US$ billions)	1998	1999	2000	2001	2002 First half
Foreign direct investment	0.7	5.1	4.3	0.6	–0.7
Inward	5.4	9.3	9.3	3.2	0.8
Outward	4.7	4.2	5.0	2.6	1.5
Portfolio investment	–1.9	8.7	12.0	6.3	–5.3
Inward	–0.3	7.0	12.0	11.5	–3.4
Outward	1.6	–1.7	0.0	5.2	1.9
Other investment	–2.2	–11.4	–3.6	–10.0	7.0
Inward	–8.9	–8.8	–1.3	–17.4	6.0
Outward	–6.7	2.6	2.3	–7.4	–1.0
Capital account	0.2	–0.4	–0.6	–0.4	–0.3
Total	–3.2	2.0	12.1	–3.6	0.7
Per cent of GDP	–1.0	0.5	2.6	–0.9	0.3

1. January to September at an annual rate.
2. Year-on-year growth rate.
3. Light industry includes textiles, apparel and rubber products. Heavy industry includes all other manufactured products, except food.

Source: Bank of Korea.

Figure 10. **Korea's net asset position and foreign exchange reserves**
US$ billions at end-year





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

Source: Bank of Korea.

Korea experienced a deficit on the capital and financial account in 2001 for the first time since 1998 (Table 6), despite continued portfolio inflows that contributed to the rise in the stock market. This investment has raised the foreign share to 37 per cent of market capitalisation. However, there was a slowdown in foreign direct investment and a large negative figure in the category of "other investment", which was caused by sizeable repayments of foreign loans by Korean banks and enterprises. Nevertheless, the deficit on the capital and financial account was less than half the current account surplus, leading to a further rise in Korea's foreign exchange reserves. Useable reserves, which fell to under $10 billion at the time of the crisis, reached $121.4 billion at the end of 2002 (Figure 10, Panel B), the second highest in the OECD area. At present, they are more than double Korea's short-term debt.

The labour market and inflation trends

Employment increased 3 per cent in the first half of 2002, despite continued declines in the number of workers in the manufacturing and agricultural sectors (Table 7). These were more than offset by strong gains in services and construction, reflecting the buoyant growth of private consumption and housing investment. The rebound in construction also boosted the number of daily workers by 11 per cent, contributing to a further decline in the proportion of employees who are regular workers (see Chapter IV). Rapid employment growth encouraged greater labour force participation, which recovered to its pre-crisis level of 62.2 per cent by the spring of 2002. Moreover, the employment to working-age population ratio also reached its 1997 level. Despite the upward trend in participation, the unemployment rate fell to below 3 per cent in mid-2002, its lowest level since the crisis (Figure 11). Wage growth accelerated from 5.6 per cent in 2001 to 10 per cent in the first half of 2002 (Panel B). Productivity also rebounded with the economic recovery in the first half of 2002. However, it failed to match the pick-up in real wages per hour – from 2.6 per cent in 2001 to 9 per cent in the first half of 2002 – suggesting sharp increases in unit labour costs.

The government's commitment to introduce a five-day workweek creates more uncertainty about future wage developments. A reduction in working hours from 44 to 40 would imply a 10 per cent jump in hourly wages if labour compensation were to remain unchanged, as the unions demand, and the increase could be more than 14 per cent according to the Federation of Korean Industries (2002). After two years of discussion, the Tripartite Commission, consisting of labour, management and government, failed to reach an agreement. Nevertheless, the government introduced a bill in the National Assembly in the fall of 2002 to phase in the five-day workweek gradually between 2003 and 2010 beginning with the largest firms, while reducing the number of public holidays and making other adjustment to working time.[8] The government plan would have limited the upward

Table 7. **Labour market developments**
Percentage changes from previous year

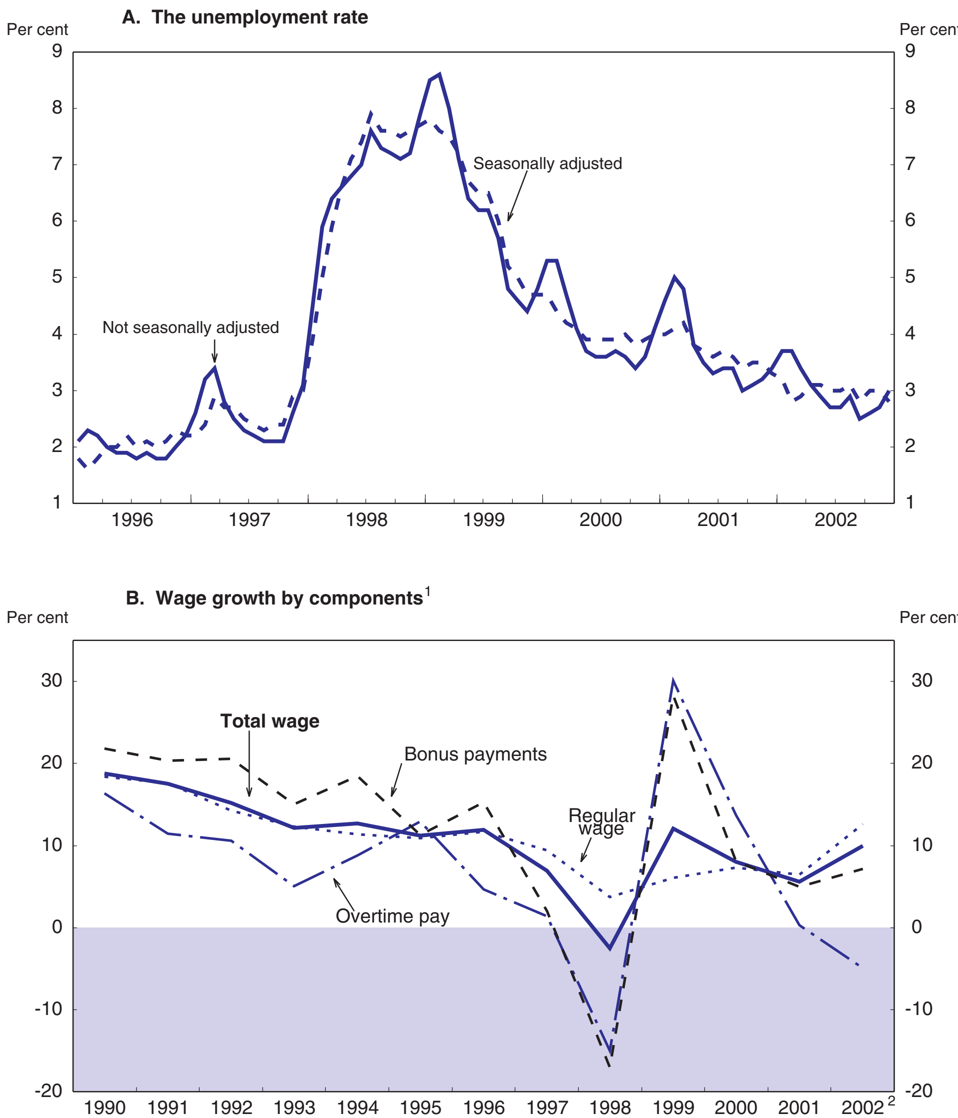
	Share in 2000	1991-97	1998	1999	2000	2001	2002 First half
A. Employment		2.0	–5.3	1.4	3.8	1.4	3.1
By sector							
Agriculture	10.9	–4.9	4.0	–5.3	–2.6	–4.2	–2.1
Construction	7.5	6.5	–21.3	–6.5	7.2	–0.4	11.6
Manufacturing and mining	20.2	–0.8	–13.0	2.8	5.9	–1.0	–0.7
Services	61.5	5.4	–1.6	3.4	4.0	3.4	4.2
By type of employment							
Self-employed	28.5	2.2	–3.4	1.1	2.7	2.8	3.5
Family workers	9.1	–1.2	6.8	–5.4	0.1	–3.3	–3.0
Employees	62.4	2.5	–7.8	2.7	5.0	1.5	3.8
Regular	29.7	2.1	–9.7	–6.3	3.3	4.0	1.4
Temporary	21.4	4.1	–4.4	4.6	7.8	2.0	3.8
Daily	11.3	0.5	–8.3	31.9	3.9	–5.9	11.0
B. Participation and unemployment							
Population 15 years and over		1.7	1.5	1.1	1.0	1.0	1.0
Labour force		2.1	–1.0	0.8	1.5	1.1	2.2
Total participation rate[1]		61.5	60.7	60.5	60.7	60.8	61.0
Men[1]		75.9	75.2	74.4	74.0	73.6	73.8
Women[1]		48.0	47.0	47.4	48.3	48.8	49.0
Employment to working-age population		63.0	59.5	59.7	61.6	62.1	63.3
Unemployment rate		2.4	6.8	6.3	4.1	3.7	3.3
C. Wages							
Total economy							
Earnings[2]		11.0	–2.5	12.0	8.1	5.6	10.0
Hours worked		–0.4	–1.9	4.5	–0.9	–1.1	–1.8
Earnings per hour		11.5	–0.6	7.3	9.0	6.8	12.0
Real earnings per hour[3]		4.3	–7.6	6.4	6.6	2.6	8.9
Unit labour costs[4]		5.9	0.7	–5.6	–0.2	4.4	7.0
Manufacturing sector							
Earnings		11.8	–3.1	14.7	8.6	6.3	9.0
Unit labour costs		1.7	–10.1	–9.6	0.2	4.4	..

1. As per cent of population over the age of 15.
2. Firms in the non-agricultural sector employing more than ten workers. The Ministry of Labour began to survey firms with more than five workers in January 1999. This survey reported earning increases of 8.0 per cent in 2000, 5.1 per cent in 2001 and 9.7 per cent in the first half of 2002.
3. Deflated by the consumer price index.
4. OECD projection for the first half of 2002.

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

impact on wages to 2.7 per cent. Moreover, some companies, including financial institutions, have already introduced the five-day workweek as a result of collective bargaining. The National Assembly recently decided to shelve the proposed legislation, which is strongly opposed by both management and labour. Nevertheless, shorter working hours will be a major objective of workers in firm-level wage bargaining.

Figure 11. **Labour market trends**



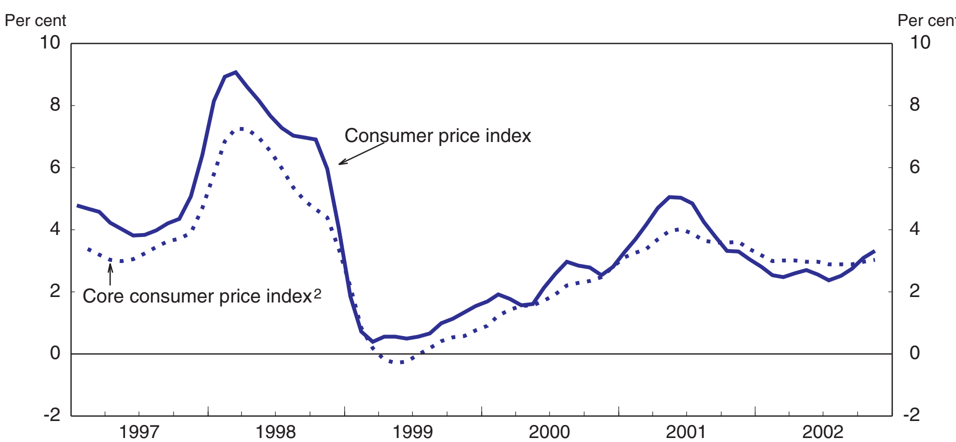
1. Firms in the non-agricultural sector employing more than ten workers.
2. The first half of 2002.

Source: Ministry of Labour.

Core inflation is currently stable at around 3 per cent despite developments in the labour market (Figure 12). During 2001, inflation – both headline and core – had accelerated, reflecting the depreciation of the won by 8 per cent in trade-weighted terms and the lagged direct and indirect impacts of higher oil prices. Other factors included the pick-up in housing rents, higher food prices and a 7.5 per cent rise in public service charges.

Inflation has moderated and stabilised during the course of 2002. Core inflation increased 3 per cent (year-on-year) in 2002, with the headline measure slightly lower due to weaker oil prices. The exchange rate was again a factor, as the 6 per cent appreciation in trade-weighted terms between April and July damped inflation. Past experience suggests that an increase of this magnitude would reduce consumer price inflation by ½ percentage point, with most of the impact occurring within six months. A second factor stabilising inflation in 2002 has been a fall in public service charges, which have a 15 per cent share of the consumer price index, after two years of 7 per cent increases. This factor has also reduced inflation by about 0.2 percentage point, in contrast to 2001, when it boosted inflation by 1 percentage point. In sum, without the impact of an appreciating currency and falling public sector prices, inflation would have been significantly higher. However, the stabilising influence of these two factors has been diminishing

Figure 12. **Consumer price trends**
Year-on-year percentage changes[1]



1. Three-month moving average.
2. Excludes energy and agricultural products (apart from grains).
Source: Korea National Statistical Office.

in the second half of 2002. Finally, the significant rise noted above in unit labour costs in 2001 and 2002 will add to inflationary pressure.

Another uncertainty about inflation prospects stems from rising housing prices. The real estate market influences consumer prices directly through changes in housing costs, which have a 13 per cent weight in the index. The *chonsei* system[9] of house rental accounts for about 70 per cent of this category, with the less widely used system of monthly rent accounting for most of the remainder. If the consumer price index incorporated the 16 per cent rise in *chonsei* rents reported by Kookmin Bank in 2002 (Figure 6), this would have added 1½ percentage points to the rate of inflation. However, the increase in the *chonsei* rent reported in the price index was relatively small at 6 per cent.[10] Nevertheless, it accounted for a quarter of the 2.7 per cent rise in the overall consumer price index in 2002.[11] Real estate prices also influence inflation through production costs, demand pressure and inflation expectations. With housing prices having increased by a third, there is pressure from workers for higher wages that would enable them to finance housing expenses. The rise in labour costs, in turn, would boost production costs and inflationary expectations. At the same time, increased wealth and stronger balance sheets tend to stimulate consumption and investment. The rapid real estate price increases in the latter part of the 1980s ended with a sharp acceleration of wages and inflation. However, following a number of measures taken by the government, real estate prices stabilised in the final quarter of 2002 in the context of some moderation in domestic demand.

Economic prospects

Outlook for 2003 *and* 2004

The strength of domestic demand, which expanded by an estimated 6¾ per cent in 2002, has led the economic recovery in Korea. However, the leading sectors – private consumption and construction investment – are likely to be less buoyant in 2003 and beyond. The strong growth of private consumption has been fuelled by an easy credit environment that has eased liquidity constraints, resulting in an estimated decline in the household saving rate to a single-digit level. The increased reliance on borrowing has sharply boosted financial liabilities relative to disposable income, resulting in a decline in households' net financial assets. In addition, the Financial Supervisory Service introduced regulatory changes in November 2002 that will tend to discourage the growth of lending to households.[12] Already in the third quarter of 2002, a substantial slowing of private consumption was recorded (Table 3) and this is likely to continue. As a result, private consumption growth is likely to lag somewhat behind economic growth in 2003 and 2004 rather than leading it as in 2001 and 2002, thus allowing some recovery in the saving rate and in the net financial wealth of households. Moreover, the decline in share prices – 30 per cent since April 2002 – will have a negative wealth effect and weaken consumer sentiment. Indeed, household confidence has already fallen by 14 per cent from its peak in the first half of 2002 (Figure 3). The extent of the fall in share prices, despite the strong economic recovery, reflects the sensitivity of the Korean stock market to foreign investors. Moreover, the small role of domestic pension funds and other institutional investors in the stock market contributes to its volatility.

Construction investment is also unlikely to maintain its current high rate of growth. Indeed, there was a decline in the third quarter of 2002, when it fell nearly 4 per cent, perhaps reflecting the impact of the packages of measures introduced during the past year to calm the housing market. Consequently, construction investment is likely to moderate in 2003.

With the growth in the leading components of domestic demand moderating, sustaining the expansion through 2004 at its current pace is likely to depend on a rebound in export growth, which in turn would stimulate investment in machinery and equipment. The marked pick-up in exports in the third quarter of 2002 was a positive sign in this regard. This upturn should be sustained by the growth in Korea's export markets, which is projected to accelerate from 3¾ per cent in 2002 to around 9 per cent in 2003 and 2004.[13] This would push export growth up to double-digit levels and have a positive impact on investment in machinery and equipment, while maintaining a current account surplus of about 1 per cent of GDP. If strong export demand does materialise, economic growth of between 5½ and 6 per cent is projected in 2003 and 2004 (Table 8). This outlook is based on the following assumptions, which were built into the OECD *Economic Outlook* of December 2002:

– The exchange rate stabilises at its November 2002 level of 1 219 won per dollar and 10 won per yen.[14]

– Oil prices rise from $23.9 in 2002 to $25.8 per barrel in 2003 before falling to $24.8 in 2004.

– The short-term interest rate (91-day CD rate) rises from slightly under 5 per cent to 5¾ per cent by early 2004, while the long-term government bond yield rises from 6 per cent to 7¾ per cent.

– Fiscal policy aims at keeping the consolidated government budget – excluding the surplus on social security and the costs of financial restructuring – in balance.

Inflation is projected to pick up from its current pace of around 3 per cent to 3½ per cent in 2003, the top of the new medium-term target zone of 2.5 to 3.5 per cent, despite the expected moderation of domestic demand. One factor is rising unit labour costs, which increased 4½ per cent in 2001 and an estimated 7 per cent in the first half of 2002, in the context of an unemployment rate below

Table 8. **Short-term prospects**[1]
Percentage change in constant 1995 prices

	Share of GDP in 2000[3]	2000	2001	2002	2003	2004
Demand and output						
Private consumption	57.3	7.9	4.2	7.3	4.5	4.2
Government consumption	10.2	0.1	0.2	3.5	2.0	2.0
Gross fixed capital formation	28.7	11.4	–1.9	6.5	5.9	6.9
Machinery and equipment	12.8	35.3	–9.8	5.5	7.9	6.3
Construction	15.8	–4.1	5.8	7.3	4.3	6.4
Final domestic demand	96.2	8.2	2.0	6.7	4.7	4.6
Stockbuilding[2]	0.0	–0.2	0.0	0.0	0.0	0.0
Total domestic demand	96.2	8.1	2.0	6.8	4.7	4.7
Exports of goods and services	45.0	20.5	1.0	8.7	11.0	10.2
Imports of goods and services	42.2	20.0	–2.8	12.0	10.9	10.0
Foreign balance[2]	2.8	3.1	1.5	0.3	1.8	1.8
GDP	100.0	9.3	3.0	6.1	5.8	5.7
Prices						
GDP deflator		–1.1	1.4	2.1	2.4	2.7
Private consumption deflator		2.2	4.0	2.8	3.6	3.4
Consumer price index		2.3	4.1	2.7	3.5	3.3
Labour market						
Employment growth		3.8	1.4	2.6	1.6	1.6
Participation rate[4]		60.7	60.8	61.3	61.8	61.9
Average wage		5.1	5.5	9.0	7.3	7.5
Unemployment rate		4.1	3.7	2.9	2.8	2.7
Balance of payments						
Current account (US$ billions)		12.2	8.6	5.0	5.4	7.4
As a percentage of GDP		2.7	2.0	1.1	1.0	1.3

1. These projections are identical to those presented in OECD, *Economic Outlook* 72 (December 2002).
2. Contribution to GDP growth.
3. The components shown below do not sum to 100 per cent 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.

Source: OECD.

3 per cent. While employment gains are likely to moderate, given the anticipated cooling of the construction sector, the average annual unemployment rate is likely to remain slightly under 3 per cent through 2004. The higher projected price of oil in 2003 will also have some impact. In addition, two special factors, falling public service charges and the appreciation of the currency, which damped inflation in 2002, are not expected to continue in 2003. Finally, the run-up in real estate prices through the third quarter of 2002 has boosted production costs, demand pressures and inflationary expectations. Inflation could accelerate more than projected if the measures implemented to stabilise housing prices prove to be ineffective.

The most obvious risk to this projection, which is based on an expansion sustained by external demand, is a delayed recovery in the world economy. If export market growth fails to accelerate in 2003 as projected, the Korean economy is likely to slow significantly. On the other hand, some positive signs in the ICT sector suggest that a strong rebound in that market could lead to faster than expected growth. There are a number of uncertainties as well on the domestic side that could limit the pace and durability of the expansion. Perhaps most important is the sharp rise in real estate prices. If the tax and regulatory measures implemented by the government fail to slow the upward trend of housing prices, a monetary policy response, which would slow economic activity, may be necessary to meet the medium-term inflation target. The behaviour of households in the new financial environment is another uncertainty. While the projection is based on a modest recovery in the saving rate and a stabilisation of net financial assets relative to income, consumers may become more cautious in the uncertain period ahead and reduce consumption by more than anticipated. Finally, the fact that more than a quarter of major firms have interest coverage ratios below one suggests that further corporate restructuring is needed, which could have temporary adverse impacts on the labour market and on confidence. However, the strong financial position of the banks lessens the risks associated with such restructuring (see Chapter IV).

Medium-term growth perspective

Korea's economy has grown at an average rate of 7 per cent since 1998. It is doubtful, though, whether this pace can be sustained over the medium term. The rate of growth will depend on the size and quality of the labour force, the pace of capital accumulation and gains in total factor productivity, which are driven by such factors as technological progress and better resource allocation. Given the major structural changes that have taken place recently in Korea, it is particularly difficult to estimate the contributions to growth based on past experience.

Given the slower expansion of the working-age population, employment growth, which contributed more than 1 percentage point of growth in the 1990s, is likely to decelerate in the current decade, even assuming a rise in labour force participation rates (Table 9). However, the continued improvement in the average educational attainment of the labour force will continue to make an important contribution to growth. Capital accumulation is also likely to slow, as the recent decline in the saving rate reduces the still high share of investment in GDP. Based on the assumption that the wide-ranging reform programme to create a more market-oriented system should translate into greater productivity growth, the potential growth rate is estimated to be around 5¼ per cent over the period 2003 to 2007 (Hahn *et al.*, 2002). However, if economic reforms do not continue and total factor productivity growth maintains its pace of 1½ per cent per year

Table 9. **Korea's potential growth rate**

Period	Potential growth rate	Contribution			
		Employment[1]	Human capital	Physical capital	Total factor productivity
A. Quality of Korea's economic system is improved through structural reform and expanding international openness					
1991-1995	6.8	1.3	0.6	4.0	0.8
1996-2000	5.7	1.0	0.6	2.4	1.6
2003-2007	5.2	0.6	0.7	2.0	2.0
2008-2012	4.8	0.2	0.6	2.0	2.0
2003-2012	5.0	0.4	0.6	2.0	2.0
B. Quality of Korea's economic system and international openness remains at the current level					
1991-1995	6.8	1.3	0.6	4.0	0.8
1996-2000	5.7	1.0	0.6	2.4	1.6
2003-2007	4.6	0.6	0.7	1.9	1.5
2008-2012	4.2	0.2	0.6	1.9	1.5
2003-2012	4.4	0.4	0.6	1.9	1.5

1. Assumes that the labour force participation rate (15 to 65 years old) for men rises from 73.9 per cent in 2002 to 74.5 per cent in 2012, while increasing from 51.4 to 53.0 per cent for women over the same period.

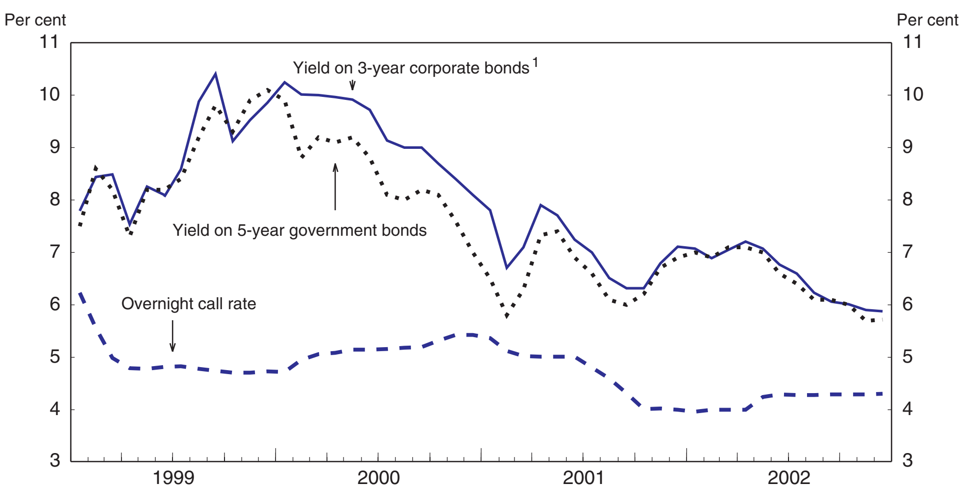
Source: Chin Hee Hahn *et al.* (2002).

recorded in the second half of the 1990s, the potential growth rate would decline further to 4.6 per cent in the context of the slowdown in inputs of labour and capital. Of course, there is a wide range of uncertainty attached to such estimates. According to one researcher, Korea's potential growth rate in the 2000 to 2002 period was estimated at between 5.1 and 6.7 per cent using different methods (Choi, 2002). Although there is a wide margin of error attached to such estimates, it is clear that, given the likely slowdown in input growth, the future growth rate of the Korean economy will depend heavily on improvements in total factor productivity. Realising higher productivity growth will be facilitated by appropriate macroeconomic policies (see Chapter II), including measures to improve the public expenditure management system (see Chapter III). In addition, it is important to follow through on the structural reform programme introduced in the wake of the crisis, while taking steps to strengthen competition both domestically and from abroad (see Chapter IV). Finally, measures to improve the policy frameworks for education, R&D and venture businesses will tend to boost potential growth.

II. Monetary and fiscal policies

The relaxation of monetary policy helped to attenuate the impact of the world economic slowdown in 2001 on Korea and lay the foundation for the recovery that began in the final quarter of that year. At the same time, inflation has been kept within the annual target zone. Fiscal policy, meanwhile, played a mildly supportive role with increased government spending focused on the priority of expanding the social safety net. With economic growth picking up to 6 per cent in the first three quarters of 2002, macroeconomic policy has shifted to a more neutral stance. Indeed, the Bank of Korea, which had a medium-term inflation target of 2.5 per cent, increased the policy interest rate in May 2002 (Figure 13), in the context of double-digit wage hikes and a surge in housing prices. However, there

Figure 13. **Interest rates**



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

has been no further tightening of monetary policy since then in the context of the uncertain world economic outlook and the sharp appreciation of the won in the second quarter of 2002. Meanwhile, fiscal consolidation has become a priority, given the cost of financial-sector restructuring. This chapter begins by examining monetary policy and exchange rate developments, and then discusses fiscal policy issues.

Monetary and exchange rate policies

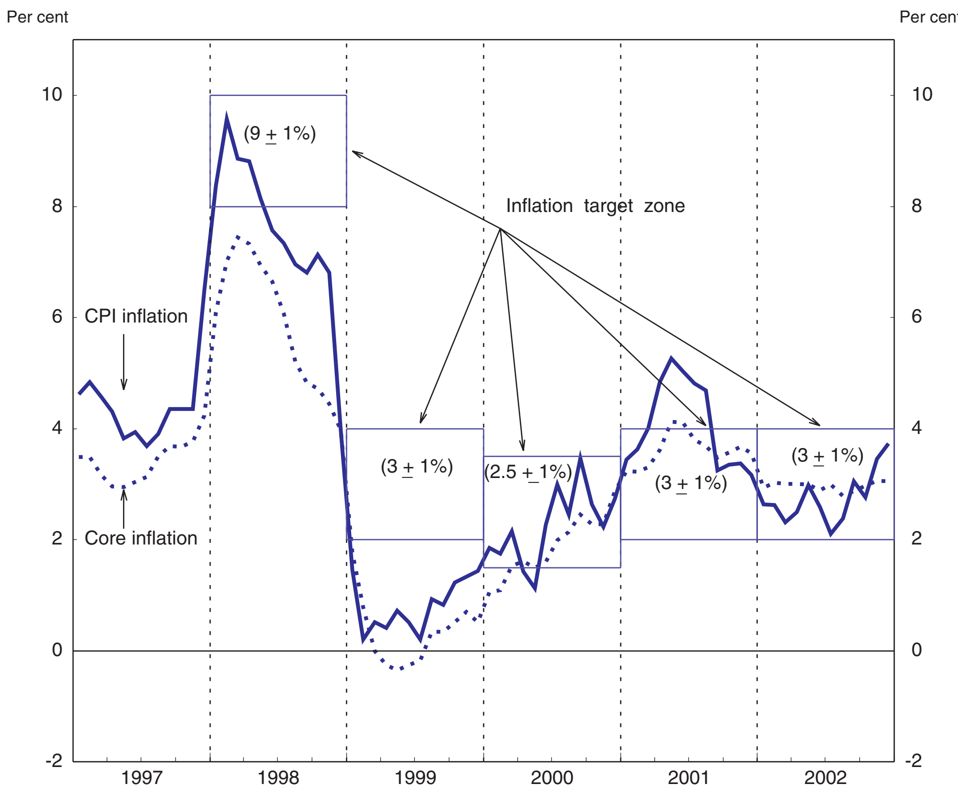
In 2001 and 2002, the annual inflation rate remained within the target zone that the Bank of Korea is required to set each year in consultation with the government (Figure 14). However, in the spring of 2001, core inflation – the monetary policy objective – peaked at a level slightly above the 2 to 4 per cent target zone. Headline inflation, meanwhile, exceeded 5 per cent, reflecting the lagged impact of the rise in oil prices in 2000. Both measures of inflation, however, began to decelerate in mid-2001 in the context of a slowdown in output growth. Monetary policy supported economic activity during 2001 with four interest rate cuts between February and September, lowering the overnight call rate by 125 basis points to a record low of 4 per cent. By the spring of 2001, the bank deposit rate in real terms was close to zero, although it increased somewhat as inflation slowed in the second half of the year (Figure 15). The low return on savings was one of the factors encouraging private consumption. Liquidity, as reflected in the rise in reserve money and M1, has been abundant (Figure 16). Lower short-term rates were accompanied by falling long-term rates until the economic recovery began near the end of 2001. The growth of monetary aggregates and credit picked up markedly beginning in the second half of 2001.

Monetary and credit conditions

The trend toward easier monetary conditions ended with the 25 basis-point hike in the overnight call rate in May 2002 and the sharp rise in the won that continued through July, before being partially reversed. The step toward monetary tightening, which was intended to prevent a build-up of excessive liquidity and ensure price stability, took place in a context of sharply rising real estate prices and an unemployment rate below 3 per cent. However, there have been no further hikes in interest rates since then in view of the considerable downside risks in the outlook for the world economy.

From the viewpoint of firms, credit conditions are, at present, relatively easy. The financial conditions index, based on a survey of 500 large firms, has risen from 98 in the latter part of 2000 amid concerns about a credit crunch (see 2001 *Survey*) to 134 in the third quarter of 2002. This reflects the fall in long-term rates, such as the three-year corporate bond yield, which has declined by 150 basis points since April 2002 (Figure 13). The downward trend is probably explained by

Figure 14. **Inflation targets and outcomes**
Year-on-year percentage changes

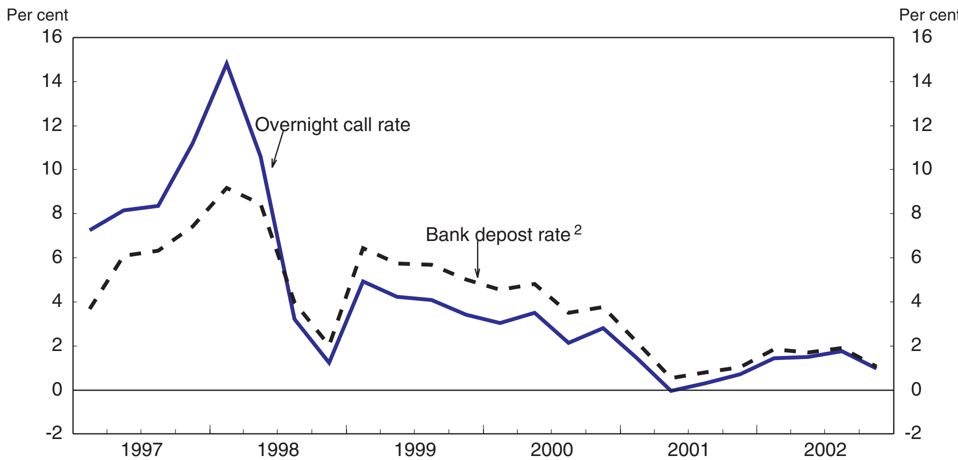


Source: Bank of Korea.

reduced confidence about a strong economic recovery in Korea in light of the uncertain world economic outlook, prompting an outflow of funds from the stock market to bonds. Indeed, the Korea Stock Exchange index has fallen by about 30 per cent since April, in line with trends in major economies. With the fall in long-term rates, the yield curve has flattened significantly (Figure 17).

Meanwhile, the recovery of the financial health of banks removed the credit-crunch conditions that had appeared in 2000. Thanks in part to the 157 trillion won (27 per cent of GDP) financial-sector restructuring programme, the

Figure 15. **Real interest rates**[1]

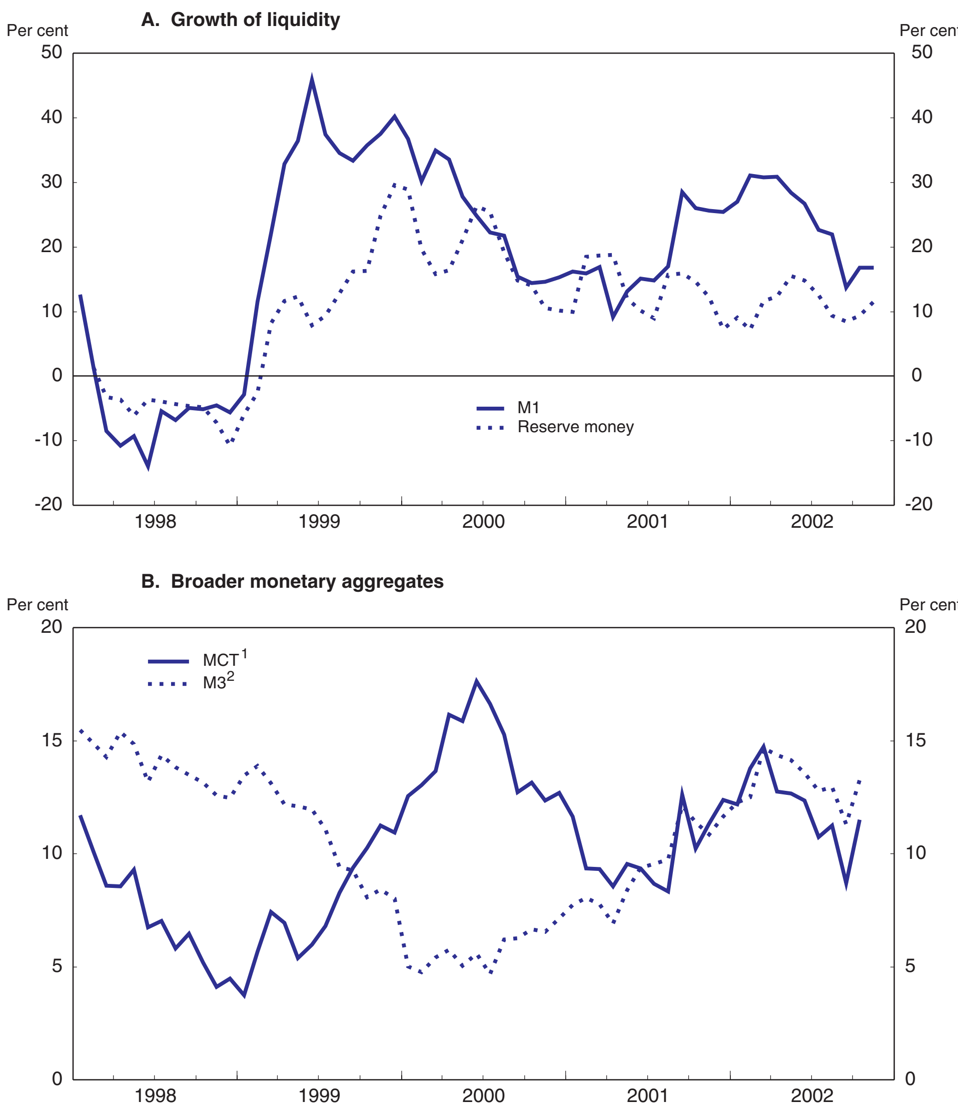


1. Deflated by the year-on-year change in the consumer price index.
2. Rate on time deposits of less than six months.
Source: Bank of Korea.

commercial banks are again profitable and well-capitalised, thus enhancing their capacity to lend (see Chapter IV). Indeed, their non-performing loans have fallen to a record low.

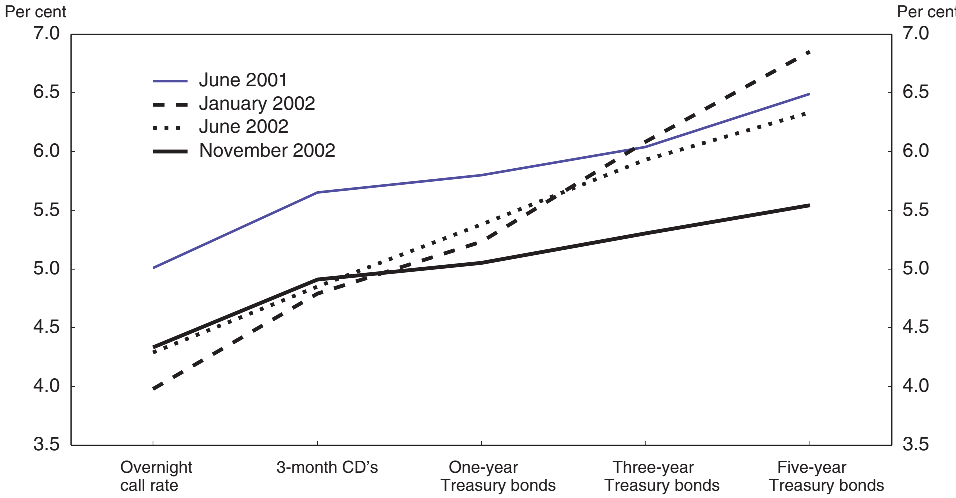
The combination of a healthy banking sector and relaxed monetary conditions has facilitated the sharp acceleration of lending, led by a 52 per cent rise (year-on-year) in loans to households during the first three quarters of 2002 (Figure 2). Such lending was a key factor driving private consumption, which has led the economic recovery (see Chapter I). About half of new lending to households was estimated to have been related to real estate, thus fuelling the run up in housing prices. The increased willingness of banks to lend to households reflects heightened awareness of the risks associated with chaebol-affiliated firms, as well as those firms' efforts to de-leverage. Moreover, a rising share of the lending to the business sector in the first half of 2002 was concentrated in small and medium-sized enterprises (SMEs) in the service sector. In contrast, the growth of bank lending to the manufacturing sector has been very sluggish despite the economic recovery. The sharp rise in credit has significantly boosted the growth of the broader monetary aggregates, although the pace moderated following the May 2002 interest rate hike (Figure 16, Panel B). In particular, the growth of M3 has been above the "monitoring range" of 8 to 12 per cent, which is judged to be consistent with the inflation target.[15] In January 2003, the central bank revised the

Figure 16. **Growth of monetary aggregates**
Year-on-year percentage changes



1. MCT = M2 + CD's + money in trust.
2. M3 = M2 + OFI deposits + debentures issued + commercial bills sold + CD + RP + cover bills.
Source: Bank of Korea, *Monthly Bulletin*.

Figure 17. **The yield curve**



Source: Bank of Korea.

medium-term objective, which had been set at 2.5 per cent, to a range of 2.5 to 3.5 per cent. At the same time, it set the annual inflation target for 2003 at 2 to 4 per cent in consultation with the government. The focus on the annual target set at the beginning of the year is a problematic feature of the monetary policy framework.

The monetary policy framework

The revision of the Bank of Korea Act that took effect in 1998 fundamentally changed the framework for monetary policy. Instead of pursuing two goals – the stability of the value of money and the soundness of the banking system – the central bank is now focused on the objective of price stability. The Bank of Korea is required to set an annual inflation target, in consultation with the government, and to do its best to achieve it. Thus, Korea now classifies itself as an inflation-targeting country. After more than a decade of experience with this strategy in the OECD area, some lessons can be drawn about the factors that contribute to successful outcomes.

One of the difficulties inherent in inflation targeting is the long and variable time lags in the impact of monetary policy on economic activity and inflation. This is the case in Korea as well. A change in the overnight call rate is estimated to begin to influence output two quarters later, reaching its maximum impact after four to six quarters (Yang Woo Kim, 2002). As for inflation, the impact is estimated to be felt from the third quarter, but does not reach its full effect until eight or nine quarters after the change in the policy interest rate. As a result, the current rate of inflation is largely determined by past policies. This suggests that the monetary authorities should focus on the future course of inflation, over which they do have some control, recognising that unexpected shocks also have a major influence on price levels. In contrast, focusing on the current level of inflation may encourage abrupt monetary policy changes when the inflation rate breaches the target zone, which may increase instability at a later point by exacerbating a downturn or adding to overheating. For these reasons, multi-year or indefinite targets are the norm among OECD countries with inflation-targeting frameworks (Table 10). Indeed, three countries – New Zealand, Mexico and Poland – that previously set annual targets have moved to multi-year objectives.[16] At present, the Czech Republic is the only OECD country other than Korea to focus on an annual inflation goal.

Korea would also benefit from focusing on its medium-term inflation target. Indeed, monetary policy changes implemented after the 2003 target was set at the beginning of the year can only begin to influence inflation in the last quarter of the year and will have their major impact in 2004 and 2005. Shifting to a medium-term framework would encourage the central bank to take pre-emptive measures to control inflation and help minimise volatility in interest rates and output. However, the medium-term target is rarely mentioned in discussions of monetary

Table 10. **Inflation targeting in the OECD countries**

	Date introduced	Target price index	Inflation target	Target horizon	Target set by
Australia	1994	Headline CPI	2-3%	Over one business cycle	Government and central bank
Canada	1991	Core CPI	1-3%	Multi-year[1]	Government and central bank
Czech Republic	1998	Headline CPI	3-5%	One year	Central bank
Korea	**1998**	**Core CPI**	**2-4%**	**One year**	**Government and central bank**
Mexico	1999	Headline CPI	3%	Indefinite[2]	Central bank
New Zealand	1990	Headline CPI	1-3%	Indefinite[3]	Government and central bank
Poland	1998	Headline CPI	2-4%	Multi-year[4]	Central bank
Sweden	1993	Headline CPI	1-3%	Indefinite[5]	Central bank
Switzerland	2000	Headline CPI	Under 2%	Three years	Central bank
United Kingdom	1992	RPIX[6]	2.5%	Indefinite[5]	Government

1. In 1991, it was 22 months.
2. Inflation is to be reduced to 3 per cent by the end of 2003, with that target maintained over the medium term.
3. 1990-92, one year; 1993-96, multi-year; since 1997, indefinite.
4. 1998-2000, one year; 2000-2003, multi-year; 2003 onwards, indefinite.
5. Changed from multi-year to indefinite in 1996.
6. Excludes mortgage interest.

Source: OECD and Mishkin and Schmidt-Hebbel (2001).

policy and in the central bank's press releases. To shift the focus to the medium term, the optimal method would be to remove the requirement to set annual targets from the Bank of Korea Act. An alternative would be for the government and the central bank to agree that the annual target would always be set at the medium-term objective.

Another lesson learned during the past decade is that a successful inflation-targeting framework depends on the independence of the central bank in using policy instruments (Mishkin and Schmidt-Hebbel, 2001). Independence is determined by the legal framework, as well as by operating practices that develop over time. Prior to 1998, the Bank of Korea had little independence.[17] The legal independence of the central bank was established in 1998 and the governor of the Bank became chairman of the Monetary Policy Committee, which had previously been headed by the Minister of Finance and Economy. Operating practices have improved during the past five years but there still remains room for improvement. In the judgement of the International Monetary Fund in 2001, "Although the Bank of Korea is legally independent, in practice its full autonomy remains in question as the government and Ministry of Finance and Economy continue to exert their influence".[18] Moreover, there are some aspects of the current legal framework that need to be improved, considering the frameworks established by other inflation-targeting countries.

The composition of the board responsible for making monetary policy decisions is one factor determining the degree of central-bank independence. In some inflation-targeting countries, such as Canada, the Czech Republic, Switzerland and Sweden, the boards are restricted to officials from the central bank, while in the case of New Zealand, the responsibility for monetary policy decisions rests entirely with the Governor. In Korea, in contrast, three of the seven seats on the Monetary Policy Committee are occupied by former government officials. The members of the Committee are appointed by the president, with the governor of the Bank of Korea acting as chairman. The other six members are recommended by the Bank of Korea, the Ministry of Finance and Economy (MOFE), the Financial Supervisory Commission (FSC), the Korea Federation of Bankers, the Korea Securities Dealers Association and the Korea Chamber of Commerce based on their knowledge of finance, economy and industry. The independence of the Bank of Korea would be strengthened by changing the composition of the Committee to ensure the neutrality of its members. This could be accomplished by reducing the number of "outside" members of the Committee and increasing the number of officials from the central bank. In addition, the term of the members of the Committee, at four years, is one of the shortest in the OECD. A second issue is budgetary independence. The government has control of the central bank's budget for operating expenses, including salary and fringe benefits of the staff, which is not the case in many other OECD countries (Table 11).

Table 11. **Independence of central banks**

	United States	Euro area	Japan	Korea
Institutional independence				
Absence of rights of third parties:				
To give instructions	*	*	*	*
To approve, suspend, annul or defer decisions	*	*	*	o
To vote	*	*	*	*
To be consulted *ex ante*	*	*	*	*
Personal independence				
Board members have:				
Minimum term of office of more than five years	*	*	*	o
No dismissal other than for serious misconduct or unfitness	*	*	*	*
No conflicts of interest arising from other functions	*	*	*	*
Functional independence				
Price stability as explicit objective	*	*	*	*
No ambiguity as to primacy of price stability objective	o	*	o	*
Financial independence				
Budgetary independence or separate funding source	*	*	*	o

* indicates "Yes", while "No" is indicated by O.
Source: OECD.

Another issue is the authority of the government to overturn central-bank decisions. Of the nine other OECD countries using inflation-targeting, Australia, Canada, New Zealand and the United Kingdom, which adopted inflation targeting in the early 1990s, give the government such power, although it has never been exercised since the adoption of inflation targeting. In each of the countries that have introduced inflation targeting since then, the government cannot overrule the central bank. In case of a dispute between the Bank of Korea and the government over a monetary policy decision, the final authority rests with the government. The Minister of Finance and Economy may request the Bank of Korea to reconsider a decision that conflicts with the government's economic policy. If at least five of the seven members of the Monetary Policy Committee vote to re-affirm their previous decision, the issue goes to the president of the country for a final decision. In the case that four – still a majority – or fewer uphold their original decision, it is overturned in line with the wishes of the government. This procedure is a powerful instrument that has never been used during the five years that the Bank of Korea has been independent, but its existence may influence relations between the central bank and the government.

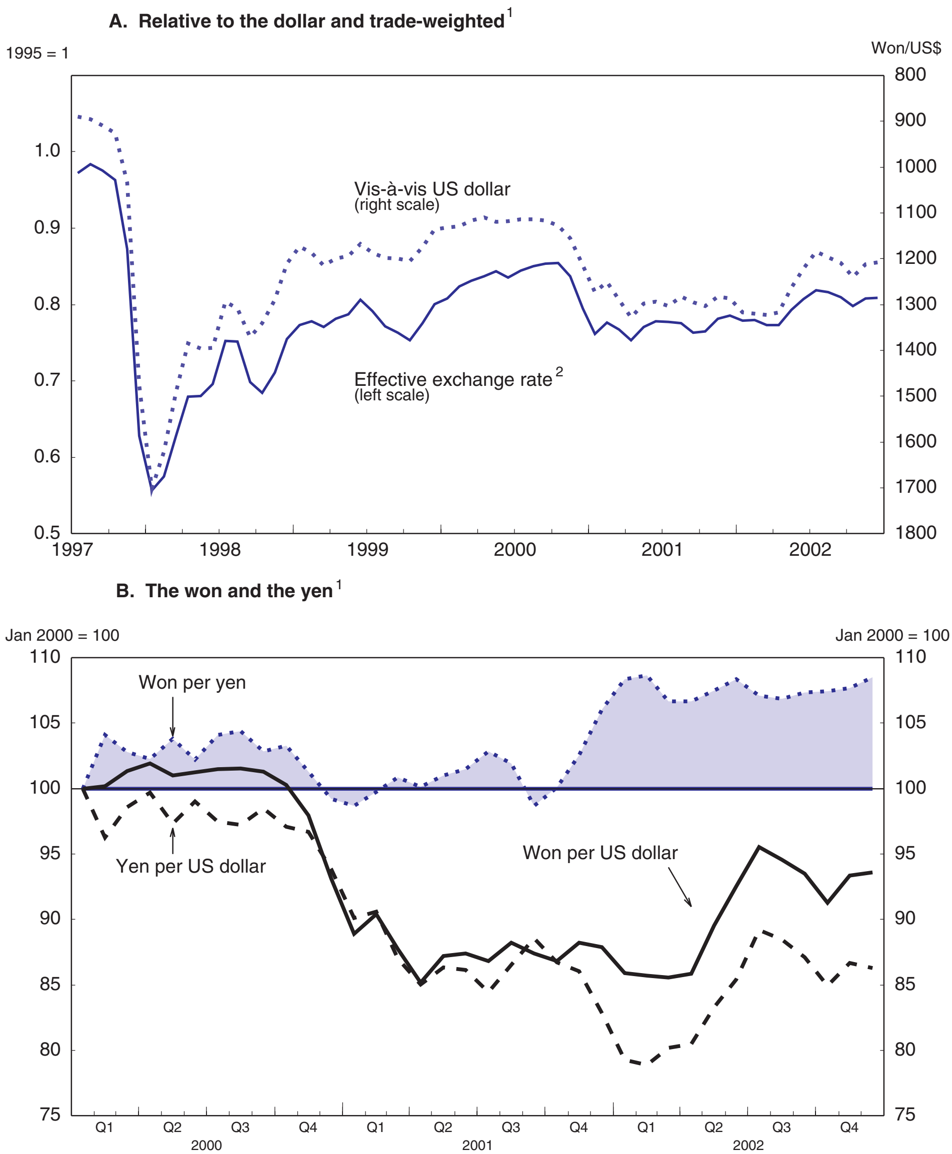
In addition to the issues of central bank independence and the appropriate time horizon, the success of inflation targeting will depend on effectively operating an interest rate-based monetary policy. This is particularly challenging in Korea as financial-sector restructuring makes it uncertain how changes in short-term rates will influence the long-term rates that affect investment and purchases of housing and consumer durables. As noted above, the hike in the short-term rate in May 2002 was followed by a significant fall in long-term rates.

The shift to an interest rate-based policy, however, is hindered by the continued use of "aggregate credit ceiling loans", aimed at encouraging bank lending to SMEs. Such loans are made at below market rates, with the aggregate quantity ceiling set by the Monetary Policy Committee. During 2001, the Committee raised the ceiling from 7.6 trillion won to 11.6 trillion won and lowered the interest rate to 2.5 per cent, well below the 4 per cent overnight rate. At the end of 2001, aggregate ceiling loans amounted to 10.7 trillion won, 97 per cent of the central bank's loans and discounts to financial institutions. In September 2002, the Bank of Korea announced that it would cut the aggregate ceiling to 9.6 trillion won in the fourth quarter of 2002. The central bank acknowledges the need to abolish the reliance on quantity ceilings, but believes the ceiling should be lowered gradually, depending on the overall financing environment for smaller companies, including the share of SMEs in loans to the business sector. Given the rising share of SMEs in such loans,[19] though, the rationale for this system seems to have been greatly weakened. In practice, it has been difficult to adjust the aggregate credit ceilings in line with the intended changes in monetary policy. In order to signal its policy changes more effectively through interest rates, the central bank introduced "liquidity adjustment loans" in August 2000. At present, the rate on these one-month loans is 50 basis points below the overnight call rate. However, no such loans have been made since February 2001.

Exchange rate policy

Exchange rates are another challenge in achieving inflation targets. Since the 1997 crisis, the volatility of the currency has been twice that in the pre-crisis period, when the "market average foreign exchange rate system"[20] was in effect (Moon, 2002). In particular, the won has experienced considerable volatility *vis-à-vis* the dollar and, to a lesser extent, in effective terms, during the past year (Figure 18). Indeed, the won surged 12 per cent relative to the dollar between March and July 2002, reflecting the recovering Korean economy and the upgrades in the sovereign credit rating.[21] These gains, though, have been partially reversed in the second half of 2002. In contrast to the volatility relative to the dollar, the won has remained remarkably stable *vis-à-vis* the yen, staying within 3 per cent of its average level of 10 won per yen since the beginning of 2002. Indeed, the yen and the won exhibited a 96 per cent degree of correlation during the first three quarters of 2002, as the won's appreciation relative to the dollar through July and the subsequent correction mirrored changes in the yen/dollar rate. The close link

Figure 18. **The exchange rate**



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

Source: OECD.

between the two currencies may reflect the high degree of competition between the two countries' products in international markets.[22]

Trends in the exchange rate influence the decisions of the central bank. In leaving the overnight rate unchanged in July 2002, for example, the Bank of Korea cited the impact of the won's appreciation in mitigating inflationary pressures. At the same time, the authorities have tried to influence the exchange rate. The speed of the rise beginning in March 2002 raised concerns that led to some intervention in the foreign exchange market. Given the high correlation between the won and the yen, though, the impact of sterilised intervention in the foreign exchange market would appear to be only temporary.

Fiscal policy

Fiscal policy has kept the consolidated central government budget in surplus since 2000 (Table 12). The sound performance provides scope for allowing automatic stabilisers to operate. Moreover, there is room for limited fiscal discretionary measures in case of adverse developments in the world economy. Increases in public spending have focused on the government's priorities of developing the social safety net and investing in education and R&D in science and technology in order to enhance the country's growth potential. Recent reforms in the tax system, primarily aimed at boosting the growth of revenue, are positive from an efficiency perspective, although much more is needed. Systemic reform of the pension should be a top priority.

Did fiscal policy support the economic recovery?

The authorities initially envisaged a balanced budget in 2001 for the consolidated government, using the GFS methodology (Annex I). In the event, however, a surplus of 1.3 per cent of GDP was achieved, matching the 2000 outcome (Table 12), despite the slowdown in growth recorded in 2001.

Several factors, though, suggest that fiscal policy did, in fact, play a supportive role. *First*, an increase in privatisation revenue, by 0.7 per cent of GDP (Table 12), boosted the reported surplus in 2001.[23] In 1998, the authorities launched a privatisation programme that was aimed at reducing government involvement in the economy, improving the quality of services, generating revenue and obtaining foreign exchange in the wake of the crisis (see 2001 *Survey*). Thus far, eight of the 11 companies identified in the 1998 programme have been privatised or liquidated (Table 13). In particular, the partial privatisation of Korea Telecom generated budget revenue of 3.7 trillion won (0.7 per cent of GDP) in 2001. However, under the new version of GFS (2000), privatisation

Table 12. **Consolidated government budget**

Trillion won[1]

	1998	1999	2000	2001		2002		2003
	Outcomes			Initial budget[2]	Outcome[3]	Initial budget[2]	Estimate for year[3]	Initial budget[2]
A. Total								
Revenue	96.7	107.9	135.8	142.1	144.0	154.4	157.3	171.9
Growth (per cent)	–2.6	11.6	25.9	4.6	6.1	8.7	9.2	11.3
Per cent of GDP	21.8	22.4	26.0	26.1	26.4	26.2	26.7	26.9
Expenditures	115.4	121.0	129.3	142.5	136.8	148.4	138.5	165.3
Growth (per cent)	15.1	4.9	6.9	5.4	5.8	4.1	1.3	11.4
Per cent of GDP	26.0	25.1	24.8	26.1	25.1	25.2	23.5	25.9
Balance	**–18.7**	**–13.1**	**6.5**	**–0.4**	**7.2**	**6.0**	**18.8**	**6.6**
Per cent of GDP	**–4.2**	**–2.7**	**1.2**	**–0.1**	**1.3**	**1.0**	**3.2**	**1.0**
Of *which*:								
Social security balance	6.1	7.4	12.5	13.2	15.4	14.4	17.5	19.4
Per cent of GDP	1.4	1.5	2.4	2.4	2.8	2.4	3.0	3.0
Privatisation revenues	0.8	3.3	0.0	3.0	3.7	5.4	6.7	1.6
Per cent of GDP	0.2	0.7	0.0	0.6	0.7	0.9	1.1	0.3
Financial-sector restructuring costs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.8
Per cent of GDP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3
B. Alternative measures of the balance								
Excluding social security	–24.8	–20.5	–6.0	–13.0	–8.2	–8.4	1.3	–12.8
Per cent of GDP	–5.6	–4.2	–1.1	–2.4	–1.5	–1.4	0.2	–2.0
Excluding social security and privatisation	–25.6	–23.8	–6.0	–16.1	–11.9	–13.8	–5.4	–14.4
Per cent of GDP	–5.8	–4.9	–1.1	–2.9	–2.2	–2.3	–0.9	–2.3
Excluding social security and financial-sector restructuring costs	–24.8	–20.5	–6.0	–13.0	–8.2	–8.4	1.3	2.0
Per cent of GDP	–5.6	–4.2	–1.1	–2.4	–1.5	–1.4	0.2	0.3
Excluding social security, privatisation and financial-sector restructuring costs	–25.6	–23.8	–6.0	–16.1	–11.9	–13.8	–5.4	0.4
Per cent of GDP	–5.8	–4.9	–1.1	–2.9	–2.2	–2.3	–0.9	0.1

1. On a GFS basis. Includes public enterprises, but excludes local government.
2. Growth rate relative to previous year's initial budget.
3. Growth rate relative to previous year's outcome.

Source: Ministry of Planning and Budget.

Table 13. **The 1998 privatisation programme**

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	Privatised in October 2002
	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	Privatised in May 2002
	Korea Tobacco and Ginseng Corporation	7 573	4 243	1	35.3	226	Privatised in October 2002
	Korea Electric Power Corporation	33 036	13 116	7	58.2	561	Government share reduced to 54 per cent
	Korea Gas Corporation	2 891	2 926	5	85.7	(336)	Government share reduced to 51 per cent
	Daehan Oil Pipeline Co.	385	34	2	48.8	(44)	Privatised in November 2000
	Korea District Heating Co.	1 044	203	3	72.2	1	Government share remains at 72 per cent

1. In 1997. Includes holdings of government-capitalised public enterprises.

Source: Ministry of Planning and Budget.

receipts are not considered to be government revenue.[24] *Second*, the reported outcome included a 0.4 per cent of GDP increase in the social security surplus[25] as a result of the expanding coverage of the National Pension Scheme (NPS), which added the self-employed in urban areas in 1999. The Ministry of Planning and Budget argues that the social security surplus should not be counted in the budget balance since it largely represents the creation of a reserve to meet the public pension system's future liabilities, which will increase sharply as a result of rapid population ageing (see below).[26] With the surplus on social security projected to expand over the coming decade, maintaining the overall budget in balance would imply considerable deterioration in the remainder of the budget.

Excluding privatisation revenue and the social security surplus, the budget deficit widened from 1.1 per cent of GDP in 2000 to 2.2 per cent in 2001, suggesting that fiscal policy supported the recovery that began in the last quarter of that year. The increase in the deficit would have been even larger if government spending had risen by as much as originally planned. Indeed, outlays in 2001 were 1 percentage point of GDP below the level envisioned in the initial budget despite two supplementary budgets introduced during the year.[27] The undershooting in spending resulted from less net lending than originally planned, smaller than expected payments to the civil servants' pension fund due to a fall in the retirement rate, and less interest payments, reflecting fewer bond issues and lower interest rates.

In contrast to spending, government receipts – excluding social security contributions – rose in line with the 4½ per cent increase in nominal GDP growth in 2001. The unchanged level as a share of GDP, though, masks interesting trends in the components. In particular, revenue from taxes on goods and services was buoyant, rising by 15 per cent, almost double the increase in private consumption outlays (Table 14). This may reflect the expanded use of credit cards, which improved compliance among small businesses that have relied primarily on cash transactions. Indeed, purchases by credit cards quadrupled from 42 trillion won in 1999 to 176 trillion won in 2001 (Table 1), which also brought more of the earnings of the self-employed into the personal income tax net. As a result, income tax revenues were substantially higher than expected in the initial budget. The reform of taxes on energy, which was aimed at changing the relative prices of alternative fuels and raising the overall level of prices to restrain energy consumption,[28] also boosted revenues from the transportation tax by almost a quarter. Finally, the introduction of 12 new quasi-taxes increased revenue from this source by almost 50 per cent. While indirect and personal income tax receipts were higher than expected, corporate income tax receipts were depressed by weaker business profits, while custom receipts fell significantly below expectations, reflecting the decline in imports in 2001.

Table 14. **Consolidated government revenue**

Trillion won

	2000 initial budget	2000 outcome	2001 initial budget	2001 outcome	Percentage change[1]	2002 Initial budget	Percentage change[2]
Total tax revenue	79.8	92.9	95.9	95.8	3.1	103.7	8.1
Income, profits and capital gains	27.0	35.4	36.0	35.6	0.7	36.3	0.8
Income tax	15.1	17.5	16.2	18.7	6.6	20.1	24.3
Corporation tax	11.9	17.9	19.8	17.0	–5.1	16.1	–18.5
Taxes on property	2.4	4.3	3.7	2.9	–31.5	3.2	–13.3
Taxes on goods and services[3]	36.6	38.0	41.7	43.8	15.2	49.2	17.9
Custom duties	4.8	5.8	6.7	5.9	2.1	7.3	7.7
Others	9.0	9.5	7.7	7.5	–20.8	7.7	–0.3
Social security contributions	17.5	14.8	16.0	17.5	18.5	18.2	13.4
Non-tax revenue	22.2	26.7	29.0	29.4	10.1	30.9	6.5
Capital revenue	1.4	1.4	1.7	1.3	–5.2	1.7	–3.0
Total revenue	**120.8**	**135.8**	**142.7**	**144.0**	**6.1**	**154.4**	**8.2**
Per cent of GDP	23.1	26.0	26.2	26.4		26.2	

1. Relative to the 2000 budget outcome.
2. Relative to the 2001 initial budget.
3. Includes value-tadded tax, liquor tax, special consumption tax and transportation tax.

Source: Ministry of Planning and Budget.

The impact on public debt

Despite the surplus in 2001 – when the social security system is included – central government gross debt edged up to 21 per cent of GDP (Table 15). The increase reflects the fact that public funds are independently financed, making a surplus in one fund unavailable to finance a deficit in another, forcing it to borrow. In particular, the large surplus in the National Pension Fund is no longer lent automatically to the government. Combining central and local government, and netting out intra-government debt, total gross debt reached 22 per cent of GDP at the end of 2001, about double the pre-crisis ratio. Nevertheless, gross government debt in Korea remains considerably below the OECD average of 74 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. At the end of 2001, central government credits reached 155 trillion (28 per cent of GDP).

However, gross government debt is nearly matched by government-guaranteed debt, which increased to 20 per cent of GDP in 2001 (Figure 19).

Table 15. **Gross government debt and guarantees**

Trillion won at the end of the year

	1997	Per cent of GDP	1998	1999	2000	2001	Per cent of GDP
Total debt (A + B – C)	**60.3**	**13.3**	**80.4**	**98.6**	**111.4**	**122.1**	**22.4**
A. Central government	50.5	11.1	71.4	89.7	100.9	113.1	20.8
Borrowing	18.5	4.1	21.8	21.4	21.9	22.5	4.1
Domestic	3.2	0.7	3.0	2.4	1.9	2.1	0.4
External	15.3	3.4	18.8	18.9	20.0	20.4	3.7
Bonds	28.6	6.3	46.6	65.8	76.3	87.8	16.1
Treasury	6.3	1.4	18.8	34.2	42.6	50.9	9.3
Foreign exchange	4.2	0.9	3.9	6.2	8.4	8.7	1.6
Grain security	5.1	1.1	4.9	4.9	2.5	2.1	0.4
National housing	13.0	2.9	14.0	15.9	17.8	20.6	3.8
Dollar-denominated	–	–	5.1	4.6	5.0	5.4	1.0
Other	3.4	0.8	3.0	2.5	2.7	2.8	0.5
B. Local government	15.1	3.3	16.2	18.9	22.3	21.3	3.9
C. Inter-government debt	5.3	1.2	7.3	10.0	11.9	12.3	2.3
Government guarantees	**13.0**	**2.9**	**72.0**	**81.5**	**74.6**	**106.8**	**19.6**
Borrowing	2.2	0.5	31.4	17.1	6.2	9.3	1.7
Domestic	0.7	0.2	0.6	0.6	0.6	0.6	0.1
External	1.5	0.3	30.8	16.5	5.6	8.7	1.6
External borrowing of private banks	–	–	29.6	12.2	0.7	–	–
Other	1.5	0.3	1.2	4.3	4.9	8.7	1.6
Bonds	10.9	2.4	40.5	64.4	68.4	97.5	17.9
KAMCO	7.0	1.5	17.4	19.9	15.7	15.3	2.8
KDIC	–	–	21.0	43.5	52.4	82.0	15.0
Other	3.9	0.9	2.1	1.0	0.2	0.2	0.0
Total debt plus government guarantees	**73.3**	**16.2**	**152.4**	**180.1**	**186.0**	**228.9**	**42.0**

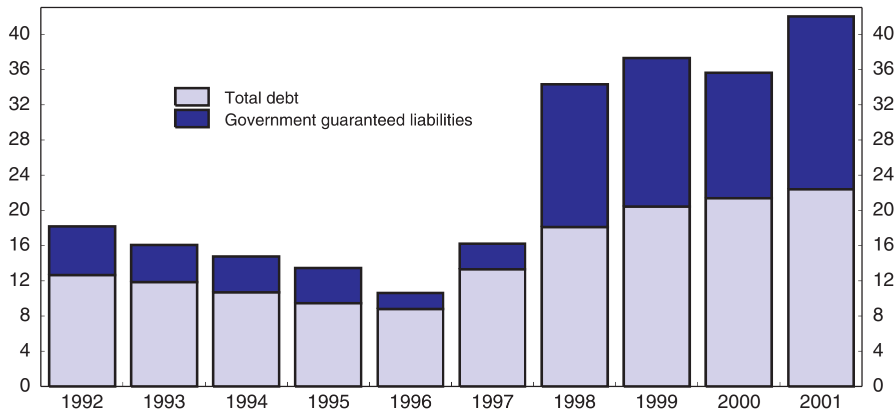
Source: Ministry of Finance and Economy.

Combining guaranteed debt with government debt gives a total of 42 per cent of GDP at the end of 2001. Guaranteed debt is almost entirely related to the financial-sector restructuring programme undertaken in the wake of the crisis (see Chapter IV). More than 100 trillion won (17 per cent of GDP) of government-guaranteed bonds were issued to purchase non-performing loans and to recapitalise financial institutions. More than four-fifths of these bonds mature between 2003 and 2006, with the remainder maturing in 2007 and 2008.

A significant portion of the outlays for financial-sector restructuring should be recovered through the resolution of non-performing loans and the privatisation of financial institutions. However, the authorities estimate that 69 trillion won (12 per cent of GDP) is irretrievable. Under the current plan, 20 trillion won is to be financed by financial institutions by increasing the premium they pay on deposit insurance. The remaining 49 trillion won, most of

Figure 19. **Government gross debt and guaranteed liabilities**

Per cent of GDP[1]



1. Intra-government debt is netted out beginning in 1997.
Source: Ministry of Finance and Economy.

which matures between 2003 and 2006, will be covered by issuing state bonds that will roll over the amount for 25 years. In 2003, this will boost government borrowing by 15 trillion won (2¼ per cent of GDP). By 2006, the costs of financial-sector restructuring will increase the stock of central government debt by more than 40 per cent.

A *neutral fiscal policy stance in* 2002

In formulating the 2002 budget, the prospect of increased borrowing to cover financial-sector restructuring costs argued for a cautious approach. At the same time, the authorities faced considerable pressure to increase outlays, in part to support an economic recovery from the 2001 downturn. Moreover, there were demands for increased expenditures to continue strengthening the social safety net and to make future-oriented investments to enhance the country's growth potential. Balancing these concerns, the initial 2002 budget envisaged a consolidated surplus of 1 per cent of GDP (Table 12). Excluding social security, the deficit was expected to remain near the 2001 outcome of 1½ per cent of GDP. However, privatisation revenues, primarily due to further sales of government holdings in Korea Telecom, were projected to reach 1 per cent of GDP. In sum, in the initial budget for 2002, the deficit – excluding social security and privatisation revenue – was expected to remain at the 2001 outcome of around 2¼ per cent.

While revenue was projected to rise in line with the 8 per cent increase in nominal output, the growth of spending in the initial 2002 budget was to be limited to 4 per cent compared to the 2001 initial budget (Table 12). However, given the significant undershooting in 2001 noted above, achieving the spending level specified in the 2002 budget would have implied an 8½ per cent hike in government expenditures compared to the 2001 outcome. The largest spending increases in 2002 were planned for the categories of social welfare and R&D investment in science and technology (Table 16). As part of the new "productive welfare" system introduced in 2000, outlays on the Basic Livelihood Security Programme were to be boosted by 20 per cent. The emphasis on R&D was to be supplemented by a double-digit increase in education, in part to fund research at the university level and to provide free middle-school education to more students. Other notable developments included:

– The planned increase in investment in social infrastructure and housing would have been much higher – at 12½ per cent – if private-sector participation in projects, such as the railroad to Incheon Airport and the Outer Seoul Ring Road, were included.

– The double-digit rise in culture, tourism and sports reflected the costs related to hosting the World Cup, the Asian Games and the Taegu Universiad all in 2002.

Table 16. **Central government expenditures**

Trillion won[1]

	2001	2002	Percentage increase	2003	Percentage increase
Education	20.0	22.5	12.5	24.4	8.2
Civil service salaries	18.9	20.8	9.9	22.6	8.6
National defence	15.4	16.4	6.5	17.4	6.4
Social infrastructure and housing	14.9	16.0	7.5	16.8	4.8
Agriculture and fisheries	9.9	10.0	1.0	10.3	2.7
Social welfare	8.1	10.0	22.7	10.9	9.3
Interest payments[2]	2.0	1.8	–11.6	1.8	–1.3
R&D investment in science and technology	4.3	5.0	16.1	5.3	6.1
Promotion of exports and SMEs	3.3	3.6	10.1	3.3	–8.5
Environment	2.6	2.9	8.5	3.0	3.7
Information technology	1.5	1.6	9.7	1.7	4.4
Culture, tourism and sports	1.2	1.4	12.5	1.4	2.0
Foreign affairs and reunification	0.8	0.8	4.6	0.7	–16.8

1. Includes the initial budgets for the general and special accounts.
2. This does not include the interest payments on government-guaranteed bonds issued to pay for financial-sector restructuring.

Source: Ministry of Planning and Budget.

– The hike in civil service salaries was expected to boost them to 96.8 per cent of comparable private-sector pay in 2002 as part of the effort to achieve parity by 2004.

The government now estimates that the 2002 consolidated budget recorded a surplus of 3¼ per cent of GDP (Table 12). The larger than expected surplus reflects somewhat higher revenues and significant undershooting of expenditures, amounting to 1¾ per cent of GDP, larger than that recorded in 2001. Such an outcome would imply that the balance in terms of the target measure – the consolidated balance excluding social security – recorded a surplus of about 0.2 per cent of GDP.

Fiscal plans for 2003 *and beyond*

The Ministry of Planning and Budget expects that the consolidated government budget, excluding social security, can be balanced in 2007 if efforts to control public expenditure are reinforced. By that date, the impact of bringing the financial-sector restructuring programme into the budget will have been largely absorbed. The 2003 budget incorporates some fiscal consolidation as a result of a further rise in revenue as a share of GDP and spending restraint. However, the stance of fiscal policy in 2003 is obscured by the outlays, amounting to 2¼ per cent of GDP, related to the financial-sector restructuring programme (Table 12). Excluding this cost, the authorities' preferred measure of the fiscal stance – the consolidated budget excluding social security – is projected to maintain a small surplus of around ¼ per cent of GDP in 2003. Such an outcome is expected despite a sharp fall in privatisation revenues in 2003 to less than a quarter the amount received in 2002. In sum, the initial budget envisages fiscal tightening of about 1 per cent of GDP in 2003, if privatisation and financial restructuring costs are excluded.[29]

The growth of outlays (excluding the financial-sector restructuring costs) is to be contained to the 8½ per cent rise in GDP projected in 2002.[30] Spending priorities are similar to those during the past few years, with social welfare expected to record the largest increase (Table 16). Civil service salaries are slated to receive the second-largest spending hikes as part of the goal of reaching parity with private-sector salaries by 2004. Substantial increases in education and R&D in science and technology are also set to continue.

In addition to limiting spending growth, a number of recent changes in the tax system are expected to help boost revenue growth in 2003 to more than 11 per cent relative to the initial budget of 2002 (Table 12). Many of these reforms are in line with the recommendations made in the 2000 OECD *Economic Survey of Korea* to reduce distortions, promote efficiency, increase fairness and simplify the tax system. Some of the most important changes are aimed at expanding coverage of the self-employed:

– The deduction from the personal income tax base for purchases using credit cards, which was introduced in 2000 to improve tax compliance, was doubled from 10 to 20 per cent in 2002.[31] This step should further broaden the tax base of the self-employed by reducing the importance of cash transactions.

– The income assessment methods for the self-employed have been improved. Previously, those with turnover below certain thresholds were allowed to pay tax based on an industry-wide "standard income ratio". This approach, which was used by about half of the self-employed, resulted in substantial under-estimation of tax liabilities. Under the new system, the self-employed have to provide receipts for proof of major expenses in order to deduct them from their sales. Other expenses are calculated using a "standard expense rate".

– Tax incentives and penalties have been introduced to encourage accurate bookkeeping by the self-employed.

In addition to these measures, overall tax compliance appears to have improved as a result of efforts by the National Tax Service (NTS). In particular, it has updated and improved tax regulations, published handbooks on tax law interpretation, established a Call Centre[32] to provide tax-consulting services over the phone and made some services available electronically. In addition, a new law requiring public institutions to submit income-related information to the NTS should improve compliance.

The government has also taken some steps to streamline and reduce corporate tax exemptions in order to broaden the tax base. For SMEs, a number of reductions in the capital gains and corporate income tax were abolished at the end of 2001.[33] Meanwhile, the number of small businesses eligible for special treatment under the VAT has been reduced.[34]

Sustainable retirement incomes[35]

Increased urbanisation, smaller families, a changed role for women and a marked increase in life expectancy have had a significant impact on the traditional support system for the elderly that was based on extensive family support. This necessitates the development of a system in which retirement income is based on financial resources that are independent of the extended family structure. This transition began with the introduction of a partially funded National Pension Scheme (NPS) in 1988 but considerable additional measures are still required to ensure that all parts of society will have access to adequate retirement incomes in the future. In particular, reducing poverty among the elderly remains a key problem that the NPS will only address gradually. The task of creating a sustainable system is all the more urgent because the NPS, despite its youth, would require a doubling of contributions, a halving of benefits or a combination of the two to stabilise its finances and limit the burden on the next generation.

At present, few retired people receive pension payments either from the government or enterprises. Companies are obliged, by the Labour Code, to pay a lump sum "retirement allowance", based on the duration of employment and final salary, to regular employees when they leave the firm. However, currently only about a third of the labour force is covered by the separation allowance system and, moreover, there are no penalties for using the allowance for purposes other than retirement saving. Families remain the main source of support for the elderly, though the importance of this source of income has been declining in importance. The share of family transfers in the income of the elderly is higher among the poorest groups. However, such transfers are usually not sufficient to move the elderly out of poverty since the supporting families also tend to be in low-income groups (Kwon, 1999). To supplement their incomes, the elderly remain in the labour force longer, resulting in participation rates that are among the highest in the OECD area (Table 17).

To improve the situation, the government introduced the NPS in 1988, but the payment of regular old-age pensions will not begin until 2008. The payment of partial pensions amounts to only 0.3 per cent of GDP, with a further 1 per cent of GDP spent on occupational pension schemes for civil servants, teachers and the military (Dang, *et al.*, 2001). Only 2.5 per cent of the population, mainly retired government employees, received a public pension in 1999. A social assistance programme, the "Basic Livelihood Security Programme", was introduced in 2000, replacing the previous "Livelihood Protection Programme". The new system guarantees a basic livelihood for all those with incomes below the minimum cost of living, regardless of their ability to work. Recipients are subject to strict eligibility conditions based on income, assets and the ability of the extended family to help. Consequently, only 9.8 per cent of the elderly receive this benefit.[36] In 2002, the level of this benefit was 74 per cent of the minimum cost of living, which was, in turn, 38 per cent of the urban median wage earner's household income. Overall, pensions and social assistance provided 18 per cent of the elderly with income in 2001.[37] In sum, the prevalence of low incomes is much greater among the elderly than among the general population,[38] with a significant over-representation of elderly households in the lowest income decile (Figure 20).

The NPS promises a replacement rate of 60 per cent for the average worker after 40 years of contributions, with a strong degree of intra-generational redistribution.[39] The contribution rate is 9 per cent of pay for regular employees and is set to rise to that level for the self-employed and casual workers by 2005. The coverage of the system, which was initially limited to employees in firms with more than ten workers, has been gradually widened, notably by the extension to the self-employed in urban areas in 1999. Thus, by 2000, the NPS had been extended to about 16 million persons – about three-quarters of the labour force.[40] However, the number of insured persons that year was substantially lower at 11.8 million persons, reflecting the fact that a large number of the self-employed

Table 17. **Performance indicators: sustainable retirement income**

	Projected increases in old age pension spending	Disposable income of those 65 and over	Private pension funds 1999	Age of withdrawal from labour force, 1994-1999		Participation rate, 2001, per cent		
						Aged over 65	Aged 55-64	
	Change in per cent of GDP	First decile	Per cent of GDP	Male	Female		Male	Female
Australia	1.6		63.8	59.7	61.3	6.0	60.0	36.9
Austria	2.2		3.6			2.8[1]	42.1[1]	17.5[1]
Belgium	3.3		6.1			1.3	36.6	15.7
Canada	5.8	148.0	45.7	62.6	61.1	6.0	61.3	41.7
Czech Republic	6.8		3.8			4.0	55.0	24.5
Denmark	2.7		24.4	62.4	61.5	4.6	65.5	51.8
Finland	4.8	101.0	10.7	59.8	60.0	3.7	51.2	49.5
France	3.9		6.3	59.3	59.8	1.2	43.8	34.1
Germany	5.0	102.0	3.2	60.5	60.8	3.0	50.6	32.4
Greece			4.6	61.7	62.2	5.0	57.0	23.6
Hungary	1.2		2.2			3.1	36.3	15.4
Iceland			86.0			19.9	92.8	81.7
Ireland			57.8			7.9	66.1	29.5
Italy	–0.3	128.0	3.0	59.3	58.4	3.4	57.8	26.6
Japan	0.6	72.0	18.7	69.1	66.0	21.8	83.4	49.2
Korea	**8.0**		**3.2**	**67.1**	**67.5**	**29.6**	**71.3**	**47.9**
Luxembourg			. .			0.0	38.1	14.3
Mexico			2.4			30.5	80.5	27.6
Netherlands	4.8	83.0	119.3	61.6	60.1	3.1	52.0	26.9
New Zealand	5.7		. .			8.6	74.6	51.7
Norway	8.0		7.4	64.2	64.7	13.2	73.6	63.2
Poland	–2.5		. .			7.5	41.5	24.1
Portugal			11.4	65.3	66.5	19.0	63.7	41.9
Slovak Republic						1.1	43.0	11.2
Spain	8.0		2.3	61.1	61.1	1.6	61.4	23.6
Sweden	1.6	89.0	. .	63.3	61.8	9.4	73.5	67.4
Switzerland			97.3[2]			11.4	82.4	56.1
Turkey			. .			18.1	50.8	18.4
United Kingdom	–0.7	76.0	84.1	62.0	61.2	4.8	64.4	44.6
United States	1.8	80.0	74.4	65.1	64.2	13.1	68.1	53.0

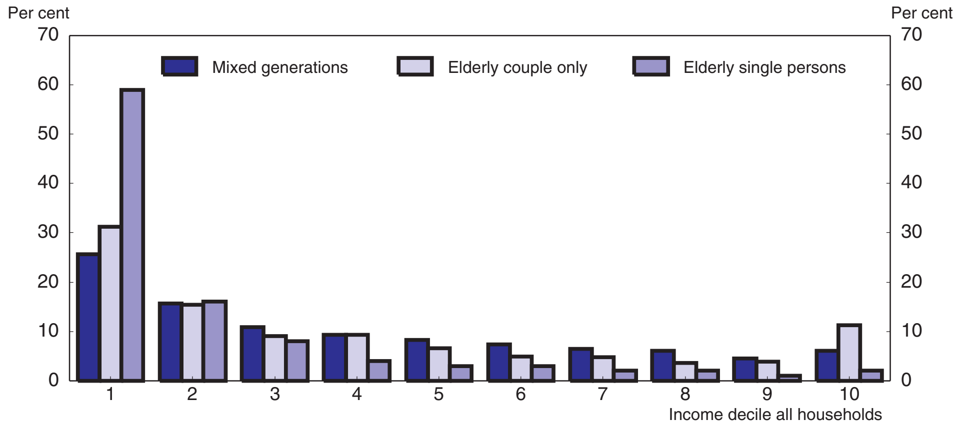
1. 2000.
2. 1998

Source: OECD.

and daily and temporary workers had been granted exceptional exemptions from making contribution due to low income.[41] In addition, the self-employed significantly under-report their income. Those who joined the NPS as a result of its expansion in 1999 will not be able to draw full pensions until 2020.

Figure 20. **Distribution of the income level of elderly households**

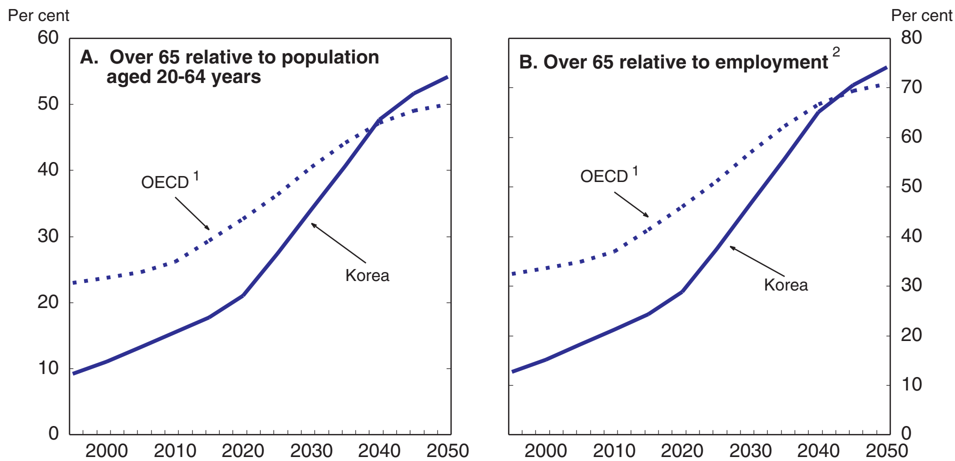
Per cent of households by type in 1998[1]



1. Elderly households contain at least one elderly person. Income deciles refer to income distribution of all households.
Source: Kwon (1999).

Despite its relatively recent introduction, the NPS is unsustainable in the long term without a major overhaul. The population is ageing more rapidly than in the rest of the OECD area and indeed in 2050 the number of older people will be higher as a percentage of the age group 20 to 60 than in the average OECD country (Figure 21). With the pension system also maturing in this period, the increase in pension outlays will be one of the largest in the OECD area (Table 17).[42] Nonetheless, the resulting level of outlays will still be below the current level of pension spending in some other OECD countries. Reforms in 1998 partially addressed financial sustainability by gradually increasing the standard age of entitlement to pensions from 60 to 65 by 2033 and reducing the replacement rate from 70 to 60 per cent. However, without further changes, the system would run into deficits around 2035 (Figure 22). There is an obligation to review the long-term balance of the pension system every five years. In order to achieve long-term balance between income and expenditure, such adjustments would need to be extremely large, requiring either a doubling of the contribution rate[43] or halving of the replacement rate or a combination such as a 40 per cent replacement rate and 12½ per cent contribution rate. Prefunding the scheme, to ensure long-term balance, could see the NPS fund rise to over 100 per cent of GDP by 2040, from 14 per cent at present, raising concerns about the nature of the likely investments and corporate governance.[44]

Figure 21. **Old-age dependency ratios**

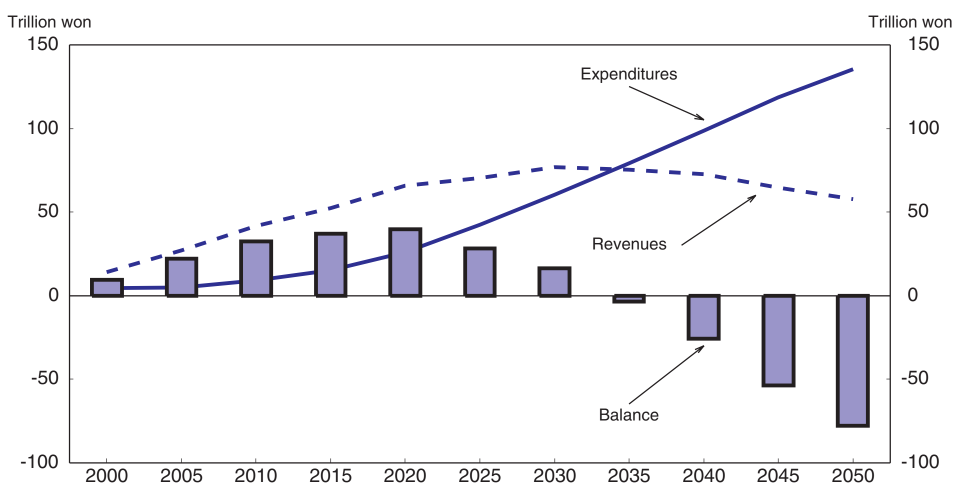


1. The average of the rates of individual countries (excluding Turkey and Mexico).
2. For the projections, the employment to population ratio is kept at its 1995 level.

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

Figure 22. **Projected evolution of the National Pension Scheme**

Trillion won, constant 2000 prices



Source: Yoon (2001).

The use of the separation allowance as a retirement saving system has serious deficiencies. *First*, the actual coverage of this system is very modest, as noted above. *Second*, as the severance payment is paid in cash at each job change and job turnover is relatively high, the current severance payment is ill-suited to play the role of a retirement savings vehicle. Moreover, a high proportion of separation allowances are paid prior to retirement for workers facing major expenses. *Third*, severance payments are insecure. Few firms make full external provisions for these payments, preferring to use the funds internally as working capital, thus leaving individuals vulnerable to the financial performance of firms.[45]

A final source of saving for retirement, voluntary saving, is currently underdeveloped, with the stock of assets amounting to around 3 per cent of GDP. Since 1999, such pension saving has been exempted from taxation until the benefit is drawn. While pension savings are exempted, the tax code caps the amount that can be deducted at 2.4 million won (12 per cent of the average wage of a manufacturing worker) per year.[46] A major reason for the deficiency of private pension vehicles as a means of saving for retirement is the weakness of the regulatory environment, which has allowed the misuse of funds as collateral for bank loans.

Assessment

Inflation has been kept within the annual target zone during the past few years. However, as the Bank of Korea noted in September 2002, "Prices may show unstable movements owing to the rise in real estate prices, the recent increase in international oil prices and the upward trend of wages". Indeed, there is a risk that these factors could lift inflation above the medium-term target of 2.5 to 3.5 per cent. A pre-emptive approach would seem to suggest that a gradual reversal of monetary easing that took place in 2001 is needed to contain inflationary pressures during the expansion projected over the next two years. The 50 basis-point cut made in the official short-term rate in the wake of the September 2001 terrorist attacks in the United States was only partially reversed in May 2002. With economic growth of around 5¾ per cent projected for 2003, the need for this emergency measure seems to have disappeared. Moreover, monetary policy tightening would help rein in the growth of credit that has fuelled the surge in housing prices.

Looking ahead, it is essential that the Bank of Korea establish the credibility of its new inflation-targeting framework in order to lock in the gains of low and stable inflation.[47] The experience of other central banks that have adopted this approach may be useful in this regard. One key lesson is to replace the annual targets with a focus on a medium-term objective. Secondly, the success of inflation targeting depends on the independence of the central bank in setting monetary policy. Such independence in some other OECD inflation-targeting countries is strengthened by giving central-bank "insiders" the dominant role in the committees that actually make monetary policy and not giving the government the legal power to reverse their decisions. In addition, most central banks have control over their budgets. Moving towards the legal framework in other OECD countries may help enhance the independence of the Bank of Korea.

A slight fiscal tightening is planned for 2003 in the context of the large costs of bringing the financial-sector restructuring programme into the budget. Indeed, in the absence of such costs, the authorities would likely balance the consolidated central government budget, minus the social security surplus, in 2003, as was done in 2002. The degree of fiscal consolidation appears appropriate in the context of a projected expansion through 2004 and should help achieve a balanced budget in 2007, when the costs of the financial-sector restructuring programme will have been largely absorbed. However, automatic stabilisers should be allowed to operate, and there is scope for limited discretionary fiscal measures, in the event of adverse developments in the world economy, to help boost demand.

One important remaining question, however, is the appropriate measure of the budget balance for the fiscal target. The GFS measure of government, which is used at present, has problems in coverage, such as excluding local government. On the other hand, it includes net lending items, some of which are financial in nature. In particular, rising privatisation revenues have contributed to the recorded surpluses during the past few years. In addition, the GFS measure is based on cash accounting, which fails to provide an accurate picture of the government's financial position. It is essential to move to a broad measure of general government using the SNA93 methodology as the basis of fiscal policy decisions, including the initial budget submitted to the National Assembly (see Chapter III).

In the medium term, the focus on maintaining a sound government financial position in Korea is essential, given the long-term spending pressures associated with population ageing, the development of the social safety net and economic co-operation with the North (see Box 2). The exclusion of the social security surplus from the fiscal target is appropriate, since the rising reserve is offset by the accumulation of government liabilities to pay pensions in the future. Other OECD countries, including Japan, Norway and Finland, also exclude social security balances in setting their fiscal objectives. More importantly, systemic reform of the pension system is essential to moderate the fiscal impact of population ageing.

Korea has a window of opportunity for systemic reform of the pension system, given that the first regular pension benefits will not be made until 2008.

Box 2. Economic co-operation between North and South Korea

Despite a number of challenges, bilateral economic contacts have moved ahead during the past few months. The second round of economic talks between the North and South were held in August 2002, twenty months after the first round, followed by a third round in November. Establishing regular consultations was one of the objectives agreed to at the 2000 Summit between the leaders of the North and South (see the 2001 *Survey*). The major issues at the most recent meeting concerned the construction of an industrial park in the North Korean city of Gaesong and the opening of cross-border rail and road links. A fourth round of economic talks is scheduled for February 2003.

The industrial park is aimed at attracting investment from South Korean firms, which would be facilitated by the fact that Gaesong is only 50 kilometres north of Seoul. The North recently designated the city as a special economic zone, which allows foreigners to do business with fewer restrictions and allows visa-free entry.* Hyundai Asan, the company named by North Korea as the main developer of the project, has estimated that the zone could eventually employ up to a quarter of a million workers in the North.

However, there are a number of obstacles to overcome before Gaesong can successfully attract investment from the South. In particular, there are questions about tax policies, the repatriation of profits and the lack of infrastructure, notably electricity, telecommunications and water supply. Although the two governments have negotiated treaties concerning double taxation, arbitration of disputes, settlement of accounts and investment protection, these have not yet been ratified. The Ministry of Commerce, Industry and Energy has formed a task force of civil servants and business leaders to address the issues related to the Gaesong project. In addition, investment depends on the ability to move people, parts and finished goods across the Demilitarised Zone on the rail and road links currently under construction. Work began in September 2002 on linking two rail lines – the Seoul-Sinuiju line on the west coast and the Donghae line on the east coast – between the North and South.

The steps towards increased co-operation have contributed to a rebound in intra-Korean trade. After declining 5 per cent in 2001, two-way trade was up by 59 per cent to $642 million in 2002, led by South Korea's shipment of equipment for construction of cross-border rail and road links. In addition, processing-on-commission trade, concentrated in the textile industry, has been rising. The South would be North Korea's second-largest trading partner. For the South, though, trade with the North amounts to only 0.1 per cent of its international trade.

* In September 2002, North Korea announced the creation of a special administrative region in Sinuiju, located on its border with China. This zone, which is to exist outside of North Korea's legal structures, has the potential to encourage the development of economic ties with China. However, the North's previous experience with a special zone in the Rajin-Sonbong area, which was established in 1991, has not been successful.

Box 2. **Economic co-operation between North and South Korea** *(cont.)*

Economic co-operation is also needed to address North Korea's continuing food shortages. Total production in 2002 was estimated at less than 3.5 million tons, well below the 5.5 million tons that is needed. Even with foreign aid of about 1 million tons a year, there is a large shortfall. In the August talks, the South agreed to deliver 400 000 tons of rice and 100 000 tons of fertiliser to the North.

The severe food shortage and continuing deterioration of its economy prompted North Korea to launch a reform of its economic system in July 2002. Rather than providing rice, housing and other necessities at minimal prices through a rationing system, prices have been raised to reflect production costs and international prices. The prices of rice and corn, for example, jumped by around 500 times, while wages were increased by 18 times on average. This reform may be partially aimed at absorbing the large underground economy that has developed in recent years.

Overall, actions need to be taken on three fronts to ensure that there is a multi-pillar system, as recommended in the 2001 *Survey*. *First*, the NPS should be placed on a sustainable basis by bringing the benefits and contributions into balance, preferably by lowering the replacement rate, given the negative labour market consequences of high contribution rates. At the same time, it is important to ensure that the intended universal coverage of the scheme is matched by actual contributions. The social assistance benefit also needs to be increased, as planned, to the minimum subsistence income level to reduce the extent of poverty among the elderly in the period before the NPS provides adequate pensions for all. Public-sector occupational pensions also need to be reformed and integrated with the NPS. *Second*, a lower, but more sustainable, public pension system will have to be supplemented by the provision of a second-tier retirement saving system based on a transformation of the existing severance payments system into defined contribution schemes. The schemes' investments should be independent of the current employers and adequately regulated. *Third*, efforts should be made to improve surveillance and regulation of voluntary retirement saving plans.

The measures to broaden the tax base are commendable and should have positive efficiency effects, although reform was primarily motivated by the need for additional revenue. It is essential to accelerate progress in tax reform, giving priority to measures to enhance the efficiency and equity of the tax system and improve compliance:

– The *personal income tax* is undermined by generous allowances and tax credits. Consequently, more than half of all individual income earners do not pay income taxes. Many of the deductions and tax credits given to wage and salary earners have been justified to "level the playing field" between wage earners and the self-employed. The measures taken to improve the compliance of the self-employed should reduce horizontal inequities, allowing scope to reduce deductions and tax credits given to wage earners.

– The *corporate income tax* base should be further broadened by reducing tax preferences for SMEs, investment and R&D. A number of preferences that have sunset clauses expiring at the end of 2002 and 2003 should not be renewed.
– Increased taxation of *fringe benefits* is needed to broaden the tax base. At present, only interest-free and low-interest housing loans from employers are taxed as employee income.
– The taxation of *capital income*, which is low and uneven across sources, should be changed to increase fairness.
– P*roperty taxation* should be reformed to promote the efficient use of land by gradually raising holding taxes and lowering transaction taxes (see Chapter IV).
– The base of the VAT should be broadened by reducing exemptions. With changes in the structure of the economy, it is necessary to reduce exemptions in the field of education, healthcare, finance and insurance.
– Reliance on *quasi-taxes* – a wide range of fees, charges and contributions that are generally not imposed by tax laws – should be reduced. With the addition of 12 more quasi-taxes in 2001, the total number surpassed 100, with combined revenue of more than 1 per cent of GDP.

While the negative impact of distortions in the tax system is limited by the relatively small size of the government at present, there will be considerable upward pressure on spending in the future. This makes it important to rectify such distortions in the tax system, as well as improve the spending framework. An agenda for upgrading the public expenditure system is presented in the following chapter.

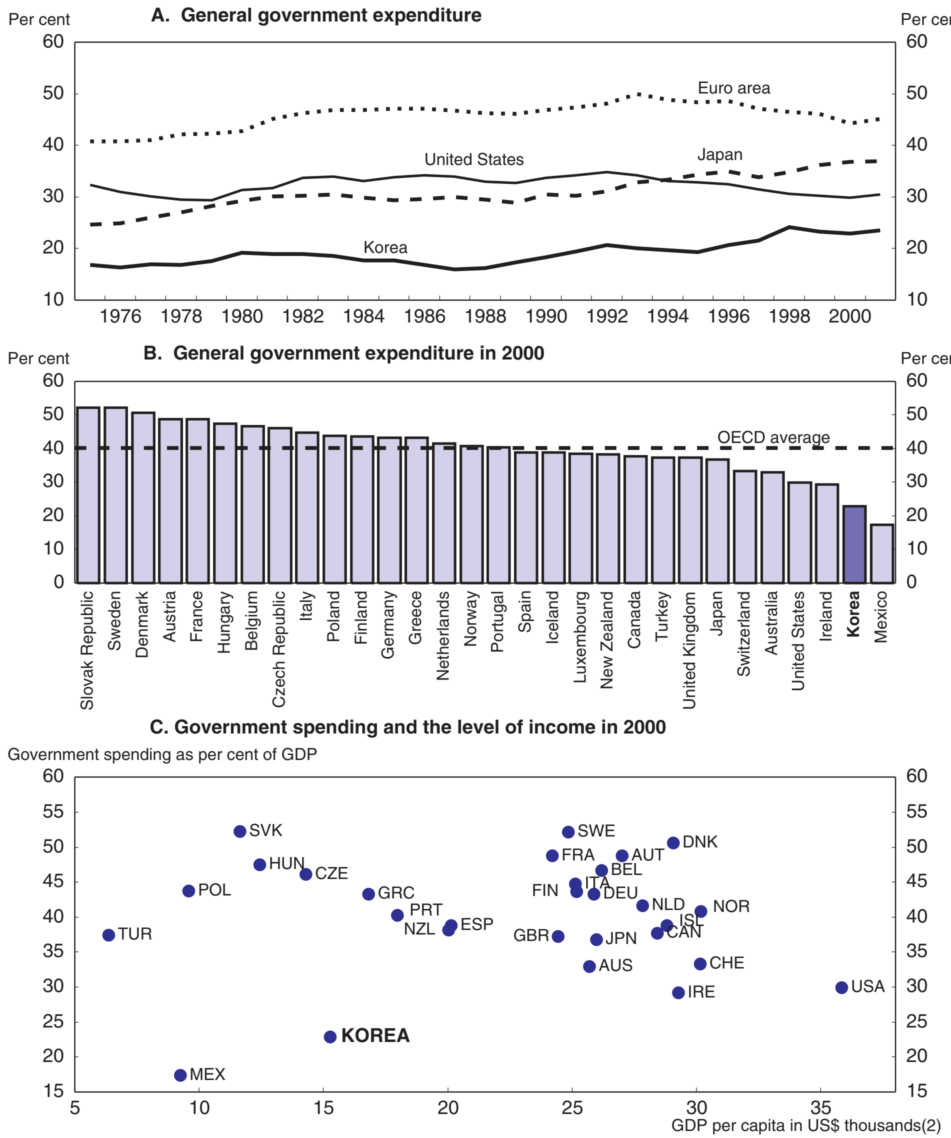
III. Reforming the public expenditure system

Korea has a history of fiscal prudence, reflected in relatively small budget deficits and low public debt. In gross terms, public debt is around 22 per cent of GDP, ranking well below the average of 74 per cent in the OECD area. Korea also has one of the lowest ratios of government spending to GDP (Figure 23). The level of public spending also reflects the immaturity of the social welfare system as well as the relatively low level of public services. However, Korea's public finances are facing serious pressures for increased spending. *First*, population ageing is projected to be exceptionally rapid in Korea, boosting the demand for greater spending on pensions and health. *Second*, the state-provided social safety net will expand as Korea moves away from traditional family-provided social protection. *Third*, Korea needs to prepare for the cost of co-operation with the North and eventual reunification. Meeting these challenges will require dealing with structural shortcomings of the budgeting and public expenditure management system. While the public expenditure system has been successful in maintaining aggregate fiscal discipline, it is not geared toward attaining efficient allocation of resources and maximising value for money. Furthermore, maintaining fiscal discipline through the traditional budgetary tools will be increasingly difficult, given the spending pressures that will significantly raise the share of non-discretionary spending in the government budget.

Building upon earlier special chapters in the *Economic Survey of Korea* on the tax system (2000) and population ageing (2001), this chapter reviews the major issues involved in enhancing the effectiveness of public spending and identifies key areas for policy action.[48] After an overview of expenditure trends and the main forces behind them, it highlights features specific to Korea. The chapter then analyses some of the main challenges, in particular: improving the budgeting and expenditure management system; enhancing the efficiency and accountability of public service delivery; and boosting the effectiveness of public spending through better intergovernmental fiscal relations. The chapter concludes by proposing an agenda for future reform.

Figure 23. **Public spending in international comparison**[1]

Per cent of GDP



1. Public spending is defined as the sum of current outlays and net capital outlays. Data are based on SNA93/ESA95.
2. Converted at purchasing power parity exchange rates.

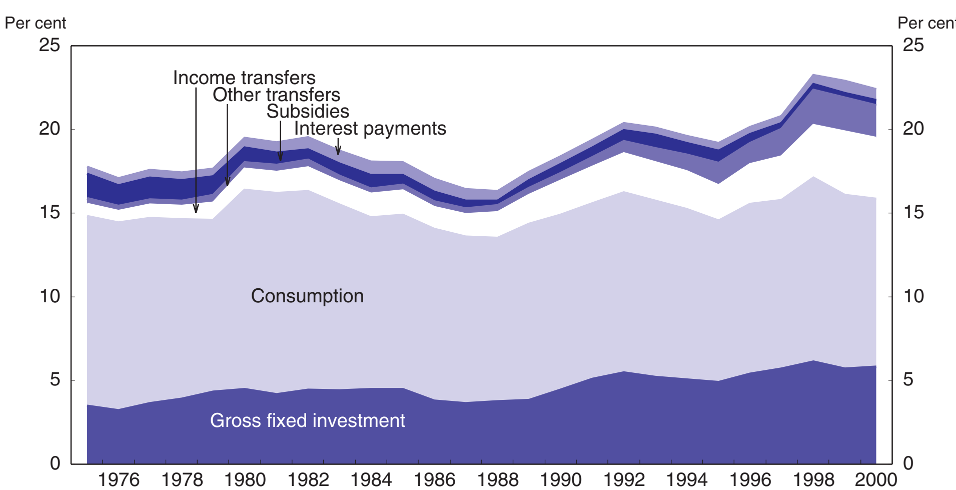
Source: OECD.

Main forces shaping public expenditure

Key features of public outlays

Public expenditure as a share of GDP is relatively low in Korea and its composition differs from that observed in other OECD countries. On a general government basis using national accounts, total public spending amounts to 22½ per cent of GDP, the lowest level apart from Mexico (Figure 23). While Korea's level of economic development explains this to some extent, Greece, Portugal and several central European countries with comparable or lower income levels have far higher spending levels (Panel C). The low level of spending at present is in part a result of fiscal consolidation during the mid-1980s, but also reflects longer-term trends. Traditionally, fiscal policy has aimed at promoting macroeconomic stability and maximising government saving to finance investment in public infrastructure and public corporations and to provide credit to targeted sectors. During the 1960s and 1970s, a number of special accounts and funds were set up to finance government investments and loans. New taxes were introduced to generate additional revenues for these expenditures. Large-scale public investments and loans boosted government spending to 19 per cent of GDP in the early 1980s (Figure 24), triggering budget deficits that averaged around 3 per cent of GDP (on a GFS basis) in the 1970s and peaked at 4.5 per cent of GDP in 1981. The

Figure 24. **Trends in general government outlays**
Per cent of GDP



Source: OECD.

rising deficit prompted active fiscal consolidation, which generated budget surpluses by the late 1980s. Since then, the government has maintained a very conservative fiscal policy, contributing to the currently low level of public debt and interest payments as a share of GDP.

The breakdown of government outlays by economic category reveals that the characteristics of public outlays differ greatly from most other countries (Table 18). In particular, there are three major factors that underlie the comparatively low spending level in Korea. *First*, income transfers are limited by the lack of

Table 18. **General government spending by economic category**
Per cent of GDP in 2001

	Income transfers	Subsidies	Interest payments	Consumption	Net capital outlays	Total outlays
Korea (2000)	**3.6**	**0.3**	**0.7**	**10.1**	**8.3**	**23.0**
Australia	8.9	1.2	2.2	17.9	2.6	32.8
Austria	18.6	2.6	3.8	19.1	5.5	49.7
Belgium	14.4	1.6	6.6	21.7	2.2	46.5
Canada	11.0	1.5	6.7	18.7	0.2	38.0
Czech Republic	13.2	3.1	1.0	21.0	9.0	47.3
Denmark	17.0	2.0	4.1	25.5	2.1	50.7
Finland	12.5	1.5	2.7	21.0	6.6	44.3
France	17.8	1.2	3.2	23.3	3.3	48.8
Germany	18.9	1.6	3.3	19.0	3.0	45.7
Greece	15.9	0.2	6.2	15.5	4.3	42.1
Hungary	11.9	5.1	4.9	21.0	6.1	49.1
Iceland	4.2	1.8	3.7	23.6	6.4	39.6
Ireland	9.1	0.8	1.5	13.8	5.0	30.0
Italy	16.7	1.1	6.4	18.5	3.8	46.4
Japan (2000)	10.0	0.9	3.3	16.8	6.0	37.0
Luxembourg	14.9	1.7	0.3	17.3	4.4	38.6
Mexico (2000)	1.7	0.3	3.6	11.1	5.3	21.8
Netherlands	11.6	1.5	3.5	23.2	2.2	42.0
New Zealand (1997)	12.7	0.3	3.1	18.6	3.4	38.2
Norway	13.8	2.2	1.8	20.3	3.2	41.2
Poland (2000)	17.5	0.9	4.0	15.5	4.3	42.3
Portugal	12.5	1.4	3.1	20.7	4.4	42.0
Spain	12.2	1.1	3.1	17.5	3.6	37.5
Sweden	18.5	1.5	3.4	26.7	2.2	52.2
Switzerland (2000)	11.5	1.7	2.0	13.7	4.2	33.2
United Kingdom		0.5	2.4	19.4	2.2	38.2
United States	13.7	0.5	3.4	15.1	0.9	31.2
Euro area[1]	16.5	1.4	4.0	19.9	3.4	45.2
OECD[1] total	12.4	0.9	3.5	17.1	2.9	36.9

1. Weighted average.
Source: OECD.

a well-developed social safety net. At 3.6 per cent of GDP, such spending is a quarter of the OECD average, although it is higher than that in Mexico. *Second*, government consumption, at around 10 per cent of GDP, is well below the OECD average of 17 per cent. *Third*, relatively low public debt translates into modest interest payments as a share of GDP. In contrast, public investment is exceptionally high, with net capital outlays exceeding 8 per cent of GDP.

The low level of income transfers has limited the growth of government spending

The low, albeit rising, level of income transfers, reflects the fact that Korea's government-funded social safety net is at an early stage of development (Figure 25).[49] The low level is partially offset, though, by a relatively high level of privately funded social expenditure, both mandatory and voluntary (Table 19). Indeed, the proportion of privately funded social expenditures is the highest in the OECD area. This is largely due to the retirement allowance that firms are legally required to pay and voluntary social benefits, such as family allowances paid by many employers.[50] Even so, total social expenditure, public and private, is still only 8 per cent of GDP, compared with 15 per cent in Japan and 20 per cent or more in all the other OECD countries for which data are available. However, the level of support provided by the family, especially for the elderly, is likely to be higher in Korea than elsewhere.

Figure 25. **Composition of publicly funded social expenditure**
Per cent of GDP

1. Unweighted average of 29 countries.
Source: OECD.

Table 19. **Social expenditures in OECD countries**

Per cent of GDP in 1997[1]

	Public	Private			Total	Share (%)	
		Mandatory	Voluntary	Total		Public	Private
Korea	**4.3**	**2.4**	**1.8**	**4.2**	**8.4**	**50.7**	**49.3**
Australia	17.4	1.1	3.2	4.3	21.7	80.2	19.8
Austria	25.4	0.8	0.8	1.6	27.0	94.1	5.9
Belgium	27.2	1.5	0.9	2.4	29.5	92.0	8.0
Canada	17.9	0.0	4.2	4.2	22.1	81.1	18.9
Czech Republic	19.4	0.0	0.0	0.0	19.4	100.0	0.0
Denmark	30.7	0.4	0.9	1.3	32.0	96.0	4.0
Finland	28.7	0.1	1.1	1.2	30.0	95.8	4.2
Germany	26.4	1.2	1.0	2.2	28.6	92.3	7.7
Ireland	17.6	0.0	1.6	1.6	19.2	91.6	8.4
Italy	26.4	1.3	0.1	1.4	27.8	94.8	5.2
Japan	14.0	0.5	0.4	0.9	14.9	94.0	6.0
Netherlands	24.2	0.7	4.2	4.9	29.1	83.1	16.9
New Zealand	20.7	0.0	0.5	0.5	21.3	97.6	2.4
Norway	26.1	1.1	0.0	1.1	27.2	96.1	3.9
Sweden	31.8	0.4	2.6	3.0	34.8	91.4	8.6
Switzerland	22.4	4.8	1.1	5.9	28.3	79.2	20.8
United Kingdom	21.2	0.4	3.4	3.8	24.9	85.0	15.0
United States	14.7	0.4	7.8	8.2	22.9	64.3	35.7
Average of above countries	21.9	0.9	1.9	2.8	24.7	87.3	12.7

1. Social expenditure includes: old-age cash benefits; disability cash benefits; occupational injury and disease benefits; sickness benefits; services for the elderly and disabled; survivor benefits; family cash benefits; family services; active labour market policies; unemployment compensation; housing benefits; public health expenditure; and other contingencies, *e.g.* cash benefits to those with low income.

Source: Adema (2001) and OECD, *Society at a Glance* 2001.

The small public sector has also contained government consumption

Government consumption is well below the OECD average, reflecting the small size of the public sector in Korea. Public-sector employment is relatively low by international standards, accounting for less than 5 per cent of total employment (Table 20). Moreover, it has been on a declining trend with a 7 per cent reduction between 1997 and 2001. The government has also tightly controlled its wage bill, although there have been significant increases in the past few years as part of the goal of boosting civil servant wages to parity with comparable private-sector levels by 2004. In addition, high co-payments by the private sector for many publicly provided services limit government spending. For example, although public spending on education is below the OECD average, public and private spending together total 7 per cent, one of the highest levels among

Table 20. **Public-sector employment in international comparison**[1]

Per cent of total employment

	1990	1995	1997	1999	2001
Korea[2]	**4.5**	**4.4**	**4.4**	**4.3**	**4.1**
Australia	22.0	19.3	17.5	16.6	16.2
Canada	20.3	19.8	18.4	17.3	16.9
Czech Republic	n.a.	n.a.	15.2	15.2	12.3
Finland	23.3	24.8	25.0	23.5	23.0
France	n.a.	n.a.	20.2	20.0	n.a.
Germany	n.a.	12.8	12.4	11.6	n.a.
Hungary	n.a.	n.a.	22.8	21.3	20.7
Ireland[2]	17.3	17.1	16.1	14.6	14.9
Italy	n.a.	n.a.	15.5	15.2	n.a.
New Zealand	n.a.	13.4	12.6	13.1	12.5
Spain	13.9	15.4	15.2	14.4	13.4
United States	15.0	14.9	14.6	14.5	n.a.

1. Public employment refers to the general government sector excluding social security administration and public enterprises.
2. Public-sector employment in full-time equivalent.

Source: OECD.

member countries (Figure 26).[51] In the area of healthcare, private spending also accounts for almost half of total spending, as is the case in the United States and Mexico.

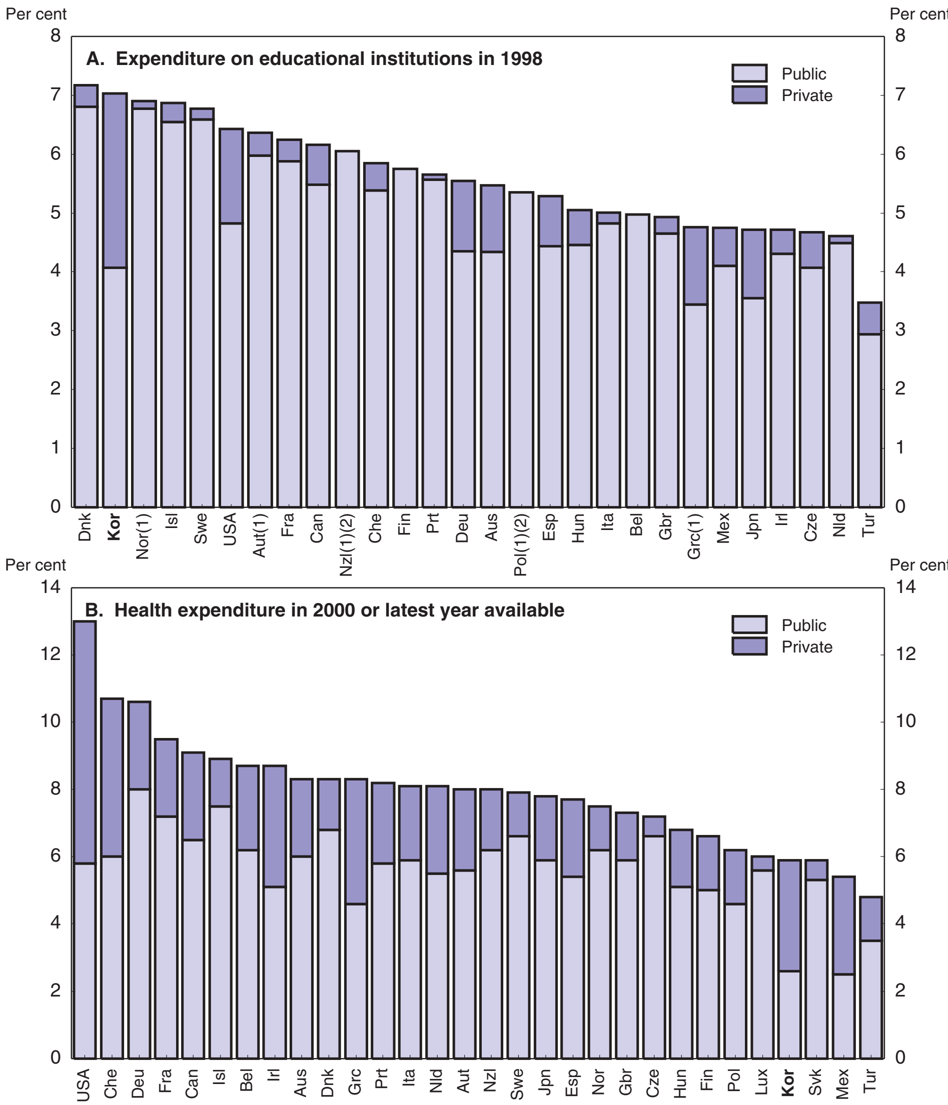
The structure of public expenditure broken down by government functions also shows large differences with other OECD countries (Table 21). In addition to the low level of publicly provided social protection noted above, defence spending, at around 3 per cent of GDP, is double the OECD average. Expenditure on economic affairs, such as transport infrastructure, agriculture and housing, is also significantly higher than the average.

Spending pressures over the medium and longer term

Upward pressure on spending is likely to gain further momentum in Korea. One factor is the 157 trillion won (27 per cent of GDP) programme on financial-sector restructuring. Two-thirds of this amount was financed by government-guaranteed bonds issued by two off-budget funds. As a result, such expenditures have not yet been incorporated into the public sector, except for the interest costs on the bonds. However, this has led to a sharp rise in government-guaranteed debt. As noted in Chapter II, 49 trillion won of the debt will be transformed into public bonds starting from 2003, substantially boosting public debt and resulting in annual interest payments of about ½ per cent of GDP.

Figure 26. **Education and healthcare expenditure in OECD countries**

As a per cent of GDP



1. Public subsidies included in private funds.
2. Public expenditure only.

Source: OECD Health Data 2002 and OECD, *Education at a Glance,* 2001.

Table 21. **Main components of primary government spending by function**

Per cent of GDP in 2000[1]

	Defence	General public services	Public order and safety	Education	Health	Social protection	Economic affairs
Korea							
1990	3.9	2.5	1.2	3.4	1.7	2.5	3.8
1998	3.1	3.2	1.5	4.1	2.4	3.9	5.6
Austria	1.0	8.0	1.5	6.0	8.0	21.2	4.4
Belgium	1.2	9.7	1.6	6.1	6.5	17.2	4.3
Canada	1.2	8.0	2.1	6.2	6.5	13.4	3.5
Denmark	1.6	4.4	0.9	8.0	5.1	23.4	3.8
Finland	1.5	6.1	1.4	6.3	5.8	20.5	4.8
Germany	1.2	3.9	1.6	4.3	6.3	21.9	4.2
Greece	3.3	10.0	1.1	4.2	3.9	19.6	0.2
Iceland	0	2.0	1.4	5.8	7.0	8.1	5.7
Ireland	0.8	4.6	1.4	4.0	5.4	6.6	6.9
Italy	1.2	9.6	2.0	4.9	5.9	17.7	2.6
Japan	1.0	2.9	1.5	4.2	6.2	10.7	4.7
Luxembourg	0.3	4.5	0.9	4.6	4.2	17.2	4.4
Netherlands	1.5	8.5	1.4	4.7	4.0	17.4	4.4
Norway	1.9	4.8	0.8	5.7	6.6	15.6	3.8
Portugal	1.7	6.4	2.0	6.9	6.4	13.0	5.8
Sweden	2.2	10.2	1.3	6.9	6.3	24.5	4.0
United Kingdom	2.8	2.0	2.2	4.5	5.5	15.2	2.5
United States	3.3	4.2	1.9	4.8	5.0	6.5	1.9
Average of above countries	1.6	6.1	1.5	5.4	5.8	16.1	4.0

1. Data are for 2001 for Belgium, 1999 for Canada, Portugal and the United Kingdom, and 1998 for Iceland.
Source: OECD.

Pressure to increase spending will also arise from the expansion of the social safety net. Social welfare spending increased as a result of the financial crisis in 1997 in order to cope with the sharp rise in unemployment and to expand the safety net (Table 22).[52] In particular, to ensure minimum subsistence standards, the government launched in October 2000 the "productive welfare" system, which made social benefits under the Basic Livelihood Security Programme a right for those who qualify, rather than making them dependent on the availability of funds. At present, around 3 per cent of the population is covered by this programme. In addition, the high level of budgetary support for health insurance and for pension schemes for civil servants and military officers, which have been running large deficits, is expected to increase further. These medium-term pressures will make flexible management of public finances more difficult by further raising the share of mandatory spending in the budget. The experience of many OECD countries suggests that such pressures as Korea now faces can result in significant increases in spending.[53]

Table 22. **Government spending on the social safety net**
Billion won

	1997	1998	1999	2000	2001	2002
Unemployment insurance	170	1 191	1 697	1 135	1 730	2 101
Wage liability insurance	–	16	39	46	77	93
Support for minimum living cost	950	1 137	1 782	2 399	3 326	3 470
Occupational accident insurance	156	1 451	1 274	1 456	1 789	1 902
National Health Insurance[1]	5 813	6 884	7 921	9 032	13 245	13 331
National Pension Scheme[2]	1 500	2 426	3 891	1 588	1 569	2 261
Other	160	1 817	3 923	1 853	1 258	821
Public works jobs	–	1 044	2 493	1 321	675	523
Vocational training	160	203	292	256	277	206
Living cost loans	–	570	1 138	276	356	92
Total	**10 148**	**14 921**	**20 526**	**17 509**	**22 993**	**23 980**
Per cent of GDP	2.2	3.4	4.3	3.4	4.2	4.0
Memorandum item:						
Spending related to the labour market[3]	329	3 024	5 658	3 033	3 064	3 016
Per cent of GDP	0.1	0.7	1.2	0.6	0.6	0.5

1. Payment for medical treatment.
2. Pension payment.
3. Includes unemployment insurance, wage liability insurance, public works jobs, vocational training and living cost loans.

Source: Ministry of Planning and Budget.

Over the longer term, spending pressure will likely accelerate as a result of population ageing and the consequent demands that this implies on social spending, notably on pensions, healthcare and associated personal services. After Mexico and Turkey, Korea has the youngest population among OECD members, but its population will age more rapidly. As discussed in the 2001 *Survey*, the increase in pension expenditures as a share of GDP is projected to be among the largest in the OECD area over the next fifty years, rising from 2.4 per cent of GDP to 10.5 per cent under the current system. While systemic reform of the pension system is crucial to limit the impact on public expenditures, a significant increase appears unavoidable in any case.

Furthermore, Korea faces the uncertain cost of co-operation with North Korea as its economic reforms will require increased support. The experience of Germany suggests that the eventual unification with North Korea will entail a significant burden on Korea's public finances. Moreover, the cost is likely to be significantly greater than in Germany because the share of Korean population in the north is far greater than the share of German population that was in the east and the per capita income differential in the two parts of Korea is greater than it was in Germany.

These spending pressures will necessitate a rise in the tax burden, which is among the lowest in the OECD, with total revenues amounting to only 22½ per cent of GDP. But given the negative effect on growth with which tax increases are associated, a prudent approach will be needed. The 2000 *Survey* suggested that the priority should be to broaden the tax bases and streamline the highly complicated tax structure. But a more fundamental issue is how to achieve the best value for money from expenditures. There is also strong demand from both public opinion and international investors for more transparency of public expenditure management.

Budgeting and public expenditure management

The ability to deal with future spending pressures and to improve the efficiency of spending relies critically on the effectiveness of the budgeting and public expenditure management system. A range of reforms to improve the efficiency of the public expenditure system were attempted in the 1980s and the 1990s. Nonetheless, the administration taking power in 1998 felt that serious problems still existed in the public expenditure system and launched a series of reform measures for the modernisation of administrative and budgetary processes. Much progress has been made, but the pace of change has been uneven across different areas and there is a need for a comprehensive reform strategy. This section reviews the institutional arrangements for budgeting and public expenditure management, the progress in reforms and the major weaknesses that will need to be addressed as Korea faces future challenges.

Overview of the budgetary system: the institutional set-up

Korea is a unitary state with a central government and two tiers of local government: there are 16 "upper-level" local governments for seven metropolitan cities and nine provinces and 232 "lower-level" local governments for cities (Shi), counties (Gun) and districts (Gu). Expenditures of the local governments, which include transfers from the central government, comprise some 40 per cent of overall spending. The concept of general government is, however, not yet used in discussing fiscal policy and government spending. Indeed, the government consolidated budget based on Government Finance Statistics (GFS) standards – the key fiscal measure in Korea – includes only the central government budget.

Structure and coverage of the budget

Korea's budget lacks transparency because it is highly fragmented and suffers from excessive earmarking. The national budget presented to the National Assembly for 2003 was comprised of one general account, 22 special accounts and 47 public funds (Table 23). The general account comprises about half of central government spending on a consolidated basis. The proliferation of special

Table 23. **Structure of the consolidated budget**

	Number (in 2002)	Outlays in 2001 (trillion won)	Main revenue sources	Linkage between revenue source and expenditure
General account	1	72.3	Tax revenues	None
Special accounts[1]	22	38.1	Earmarked tax; transfer from general account and public funds	Clear linkage
Public funds	47	26.0	Mandatory contributions; transfer from other accounts and funds	Clear linkage

1. Includes four public enterprise special accounts.
Source: Ministry of Planning and Budget and Koh (2000).

accounts and public funds reflects the legacy of the economic policies of the 1960s and 1970s when a range of earmarked taxes – amounting to nearly 15 per cent of total central government tax revenue (about 3 per cent of GDP) – and so-called quasi-taxes[54] were created to finance public investments and loans to achieve specific policy objectives. While these accounts and funds have separate budgets and are managed independently, there are very complicated financial transfers among them, thus hindering transparency and accountability.

One of the major recent budgetary reforms has been the inclusion of public funds in the coverage of the national budget, thus making them subject to parliamentary oversight.[55] As discussed in the 2000 and 2001 *Surveys*, their exclusion from the annual budget had been a major weakness of the budget system. In addition to including them in the budget, the discretion of the responsible minister in boosting outlays – without the consent of the National Assembly – was reduced from 50 to 30 per cent. This reform will thus greatly enhance transparency and accountability.[56] Nonetheless, the fact that ministers still have the right to increase outlays by up to 30 per cent without the approval of the National Assembly limits effective oversight.[57] Furthermore, there remain a number of funds that perform quasi-fiscal activities as discussed below but are excluded from the national budget. At the central government level, there are ten extra-budgetary "financial" funds. The National Health Insurance also remains extra-budgetary, while all other social security funds are included in the budget as public funds. In addition, there are some 2 000 extra-budgetary funds set up by local governments for which there is very little published information.

The national budget is prepared, and its implementation monitored, on a Government Finance Statistics basis. The weakness in the coverage and methodology of the consolidated government budget, however, prevents it from playing its intended role as the principal tool of aggregate fiscal management. *First*, the GFS accounts do not include local governments, which hampers budget planning and monitoring at the general government level. *Second*, the budget is recorded on a cash-basis, which fails to deliver a fair and accurate picture of the impact of the government's activities on its overall financial position and makes its long-term sustainability difficult to monitor.[58] Both of these problems are being addressed. The authorities currently plan to include local governments in the consolidated budget from 2003 and to move by 2005 at the latest from the present cash-based accounting to accrual accounting standards, a change that is in line with the latest update in GFS standards.[59] It is important to manage fiscal policy on a general government basis.

The budget process

The national budget is prepared by the executive branch, which sets the overall fiscal stance and its underlying macroeconomic projections, and is submitted to the National Assembly for approval. Within the executive branch, the Ministry of Planning and Budget (MPB) plays a leading role in budget formulation, management and execution. However, responsibilities for budget management and control are shared with two other ministries, *i.e.* the Ministry of Finance and Economy, which is responsible for preparing the macroeconomic outlook and revenue projections, and the Ministry of Government Administration and Home Affairs, which is responsible for local government finance and administration. The MPB initiates the drafting process and negotiates with line ministries and agencies their respective programmes, before presenting the draft budget to the National Assembly for approval (see Box 3).

There are no formal fiscal rules imposed on the central government by the Constitution or by the legislature concerning spending, the deficit or other fiscal objectives. The tradition of prudent budget management is probably explained by the culture of fiscal conservatism that prevails both within the administration and the public generally. In addition, the concentration of powers for both the drafting and execution of the budget in the hands of a single powerful ministry has helped impose an effective hard budget constraint on line ministries and agencies.[60] Moreover, budgets are prepared on the basis of deliberately conservative revenue forecasting, leading to a tendency for overshooting in revenues (Figure 27). On the spending side, line ministries also tend to take appropriations as the maximum authorised amount of expenditures, making spending overruns rare, in contrast to other OECD countries. However, the institutional environment has been changing significantly with the creation of a coalition government in the National Assembly and the democratisation of politics, resulting in greater pressure for spending increases in certain areas (Koh, 2000). The absence of a strong aggregate control framework in this new environment, together with future spending pressures, could pose a risk to aggregate fiscal discipline.

Box 3. The budget process in Korea

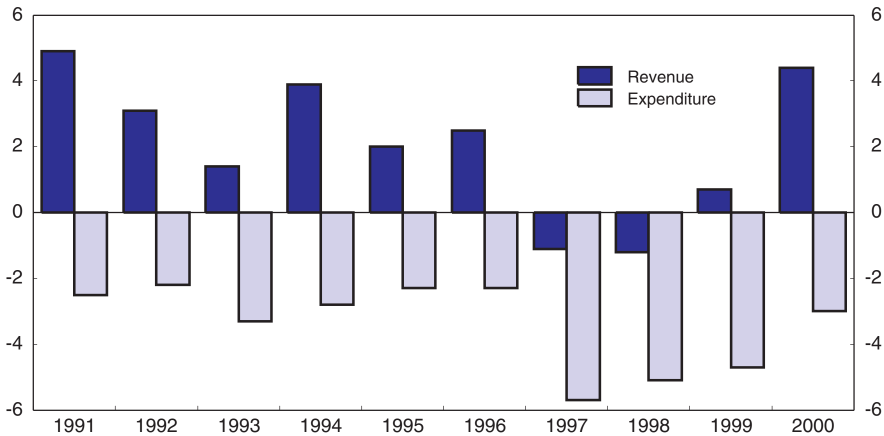
The budget formulation process. Budget preparation begins in March when the Ministry of Planning and Budget (MPB) transmits the *Guide to Budget Compilation*, upon approval by the Council of Ministers, to line ministries and agencies. The budget guidelines contain forecasts of fiscal aggregates for the following year, spending priorities and more detailed guidelines on compiling budget requests. After negotiations between concerned parties, including ministers and political parties, and the budget co-ordination meeting with provinces and municipalities, the budget is approved by the Cabinet and the President and then presented to the National Assembly by 2 October. The operating plans of public funds are presented to the National Assembly by 12 October.

The approval process. The proposed budget is first reviewed by the Special Committee on Budget and Accounts of the National Assembly, which was made a permanent committee in 2000. After deliberations in the Adjustment Subcommittee, the budget is approved in the Special Committee plenary session by 2 December. After agreement by the Cabinet, the national budget is announced. There are restrictions on the right of the National Assembly to modify the budget proposal. In particular, it may not increase the budget or introduce a new budget item without the consent of the government. In practice, the National Assembly approves the budget as presented by the government with only minor changes since most of the political negotiations occur at the budget compilation stage. The role of the National Assembly has been strengthened as public funds have become subject to parliamentary oversight since 2002. The fact that each fund was created legislatively may help the National Assembly impose oversight on the funds. However, the capacity of the legislature to analyse these funds needs to be improved.

Budget execution and monitoring. The execution of the central government budget during the course of the year is controlled by the budget allocation set by MPB, while the treasury bureau of the Ministry of Finance and Economy (MOFE) is in charge of releasing the necessary funds. The quarterly plan for funding and execution compiled by MPB is sent to each agency with the President's approval. The timing of spending during the year may be adjusted to accommodate or counter the business cycle. A newly established Committee on Budget Execution Management has actively sought to improve budget execution. In addition, a year-round regular monitoring system of fiscal execution has been set up for 300 major public projects. MOFE produces consolidated government finance statistics with a one-month delay, which are available on the Internet.

Conclusion of the budget. The budget is concluded when the National Assembly approves the budget settlement report. The Board of Audit and Inspection examines the final revenue and expenditure accounts of the government, which are compiled by the Ministry of Finance and Economy, before sending it to the National Assembly within nine months of the end of the year. However, the feedback effects from the examination of the budget settlement by the National Assembly into the next year's budget tend to be limited. One problem is that there is little time between the conclusion of the previous year's budget and the discussion of the new budget proposal. The government plans to address this problem by moving forward the date for submission of the budget settlement report.

Figure 27. **Overshooting in government revenue and expenditure**
Out-turn less budget as a per cent of budget[1]



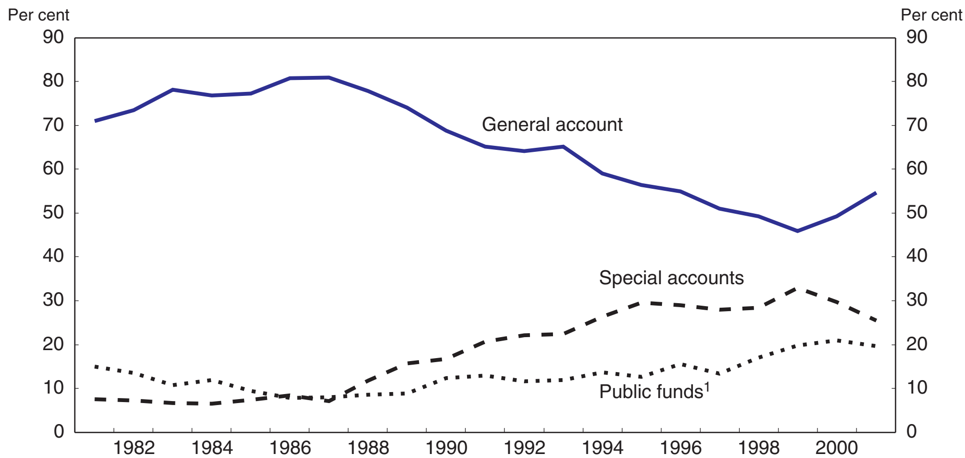
1. Data refer to the general account.
Source: Board of Audit and Inspection.

Addressing the weaknesses in the budgetary system

Compartmentalised budget structure remains a fundamental weakness

The coherence of fiscal policy remains hampered by the highly fragmented and compartmentalised budget structure. While special accounts and public funds might provide the advantage of securing stable funding sources and operational flexibility for line ministries, this is outweighed by disadvantages, especially since its share in the overall budget is large and has been increasing until recently (Figure 28). *First*, the proliferation of these accounts and funds, with extensive earmarking of revenue sources, weakens fiscal planning because the budget authorities have little control over a significant share of public spending. As a result, both fiscal planning and parliamentary discussion is mainly focused on the general account, thus hampering allocative efficiency as a significant part of budgetary resources cannot be reallocated in response to changing strategic priorities.[61] *Second*, since most of these accounts and funds have been introduced without sunset clauses, some of them no longer serve the original policy objectives. Moreover, there is a considerable degree of overlap in the activities financed by the general account, special accounts and public funds. Consolidating special

Figure 28. **Government spending by type of account**
Per cent of central government expenditure



1. Ten new funds were added to the category of public funds in 2000.
Source: Ministry of Finance and Economy.

accounts and public funds has, however, proven to be difficult. While progress has been made in merging or eliminating some public funds, new funds have continued to be established.[62]

Strategic prioritisation in budgetary resource allocation is weak

A distinctive feature of the budget formulation process is the lack of strong strategic prioritisation in the allocation of budgetary resources. The annual budget guideline issued by the MPB lacks a strategic foundation and is not backed by a visible and binding policy statement. It provides only indicative spending targets and compliance is generally weak.[63] The budget formulation is thus essentially characterised by a "bottom-up" approach. Line ministries bid for resources, while the MPB reviews their claims, compares their worth and decides on expenditure for over 2 200 appropriation accounts.[64] Given the excessive initial bids by line ministries, the MPB is forced to devote considerable time and energy on detailed budget analysis.

Annual budgeting is not explicitly linked to the medium-term fiscal framework

The current budget process is essentially geared to a single fiscal year. Since the 1980s, the budget authority had drafted medium-term fiscal plans but they were used only for internal reference. Greater emphasis has been given to medium-term fiscal planning after the financial crisis. In 1999, the government publicly announced a medium-term fiscal plan that included projections of fiscal aggregates and outlined priorities among the 12 broad spending categories between 1999 and 2002, which was subsequently revised (John M. Kim, 2001). However, the medium-term fiscal plan remains largely indicative and, in practice, there is little formal connection between the plan and the annual budgeting process. The budget documents currently contain fiscal data mainly for the budget year. In addition to aggregate expenditure control, the introduction of a medium-term framework is also important to encourage an efficient allocation of spending, particularly in the case of social overhead capital (SOC) projects, which typically require several years to reach fruition (see Box 4).

Transparency has been improved but weaknesses in some areas could pose fiscal risks

The authorities have made significant efforts to improve fiscal transparency. In addition to the budgetary reform that brought public funds into the national budget and timely dissemination of consolidated GFS accounts on the Internet, the National Fiscal Information System was established in 2002 as part of *e*-government, which is expected to increase efficiency and transparency of fiscal administration. Despite the progress made, further improvements are needed to better manage fiscal risks.

The use of extra-budgetary funds for quasi-fiscal activities continues to complicate the management of overall public finances, as noted in the 2000 and 2001 *Surveys*. Currently, ten government funds are considered "financial" and thus remain outside the budget. Nevertheless, they can have a substantial impact on the status of public finances, since any deficits will eventually have to be recognised by the budget. For example, a substantial portion of the cost of financial-sector restructuring was financed through two extra-budgetary funds. While this channel in general provides the advantage of flexibility, it reduces fiscal transparency and can be seen as a way of circumventing the normal budget process and parliamentary oversight, leading to a range of moral hazard problems. Other extra-budgetary "financial" funds are mainly credit guarantee funds, which have performed quasi-fiscal activities. For example, the Credit Guarantee Fund and Technology Credit Guarantee Fund, which have been heavily subsidised by transfers from the budget, provide loan guarantees to small and medium-sized enterprises (SMEs) with low credit ratings.[65] These funds are managed by non-governmental entities, which are responsible for internal personnel affairs, organisational changes, development of activities and the provision of guarantees. However, the funds' budgets, operational planning and the appointment and dismissal of board members are subject to approval by the

Box 4. Promoting efficiency in public infrastructure investment

The lack of multi-year planning horizons in the budget process is often associated with discontinuities and inefficiencies in public investment in many countries. The negative impact could be significant in Korea since, as noted above, the share of public investment in GDP in Korea is the highest in the OECD area, in part reflecting a high level of expenditure on social overhead capital (SOC).* In 2001, spending on SOC construction comprised about 15 per cent of the central government budget. There have been some criticisms in recent years concerning insufficient strategic prioritisation and transparency in SOC budgeting, resulting in inefficiency in large SOC projects.

Moving to multi-year budget appropriations approved by the National Assembly would enhance the efficiency and effectiveness of SOC investment by improving strategic prioritisation and transparency as well as strengthening fiscal discipline. While the current budget system allows for *multi-year expenses* that are aimed at providing stable financing for large projects through National Assembly authorisation for up to five years, this instrument has not been widely used in practice, except for national road projects. In 2001, less than 3 per cent of the national budget was allocated under the multi-year expense method. Instead, ministries have preferred to use the *long-term projects approval system*, which also allows for multi-year appropriations but requires only the approval of the MPB when changes are made to the original project or total construction costs. Because the total costs have not been approved by the National Assembly, however, stable financing is not guaranteed under this system.

A medium-term framework will need to be combined with transparent public evaluations, both *ex ante* and *ex post*, to enhance efficiency in the allocation of resources. An important reform has been the introduction of a preliminary feasibility study system aimed at strengthening the *ex ante* evaluation process. Since 1999, the Public Investment Management Centre (PIMA) has conducted preliminary feasibility studies for all new public investment projects exceeding 50 billion won ($42 million). PIMA has published a series of evaluation manuals for roads, railways, airports, seaports and cultural facilities. In most studies, public investment is evaluated from both social policy and economic perspectives. Between 1999 and 2001, PIMA examined 90 proposed projects, of which 49 were rejected.

* The budget authorities classify SOC as transportation facilities (roads, railways, subways, airports and ports), multi-purpose dams, water control, irrigation and industrial complexes.

relevant ministries to ensure that their activities fall under the relevant legal arrangements. Strengthening the accountability framework for these funds to the level applied to public funds will thus be necessary for the prudent management of fiscal risks.

There are other areas where budgetary transparency can be further enhanced by improving the budget documents presented to the National Assembly:

– The budget documents do not contain a statement of the major fiscal risks or a quantification of these risks. Although the total size of government guarantees is reported to the National Assembly on an annual basis, there is no estimate of the likely liability resulting from such guarantees. Given the sharp increase in guarantees since the financial crisis, the limited coverage in this area is a major weakness.

– Tax expenditures, which amounted to 2.5 per cent of GDP in 2000 (Table 24), are a fiscal instrument that has been frequently used as a substitute for direct expenditures. In 1999, the government started to report tax expenditures based on direct taxes to the National Assembly, and coverage was increased to include indirect taxes in 2000 and customs duties in 2001. These reports, however, are *ex post* – budget documents do not include *ex ante* estimates of tax expenditure. Their

Table 24. **Tax expenditures by purpose**
Billion won

	1999	2000
Support for employees and farmers	6 129	6 651
Savings	2 745	2 831
Employees	1 296	1 629
Farmers and fishermen	2 088	2 191
Economic development	2 571	4 246
SMEs	490	826
Investment stimulus	464	1 074
R&D	428	979
Public investment	518	499
Financial sector	168	274
Restructuring	300	439
Regional development	203	155
Social welfare	1 326	1 741
Education, culture and health	303	333
Environment	152	200
Social security	818	1 165
Housing	53	43
Defence	381	486
General public administration	109	128
Others	26	30
Total	**10 542**	**13 282**
Per cent of GDP	2.2	2.5

Note: The 1999 data is based on direct taxes, whereas the 2000 data includes both direct and indirect taxes.
Source: Ministry of Finance and Economy.

exclusion from the budget documents shields them from the same scrutiny and evaluation accorded to direct expenditures and thus complicates trade-offs in setting spending priorities.

– Clear information on the macroeconomic framework underlying the forecasts for the budget and the key assumptions that influence the estimates of fiscal aggregates are not included in the budget documents.

The weakness of the current framework in disciplining fiscal policy became an increasing concern after the 1997 crisis. There was a consensus that it would be difficult to contain spending growth without appropriate budgetary and expenditure control mechanisms that bind the government to specific targets and spending priorities. To establish such mechanisms, a Fiscal Responsibility Bill was submitted to the National Assembly in June 2001 with five main provisions. *First*, it would require the government to submit to the National Assembly a three-year fiscal plan, including targets for a consolidated budget balance and public debt. *Second*, it would restrict supplementary budgets to emergency situations. *Third*, it would establish public debt reduction as the priority in the allocation of any budget surpluses. *Fourth*, it would require that any proposals generating higher public spending or lower revenue include a plan on how to offset the negative financial impact. *Fifth*, it would create a National Debt Management Committee that reports to the MPB.[66] The failure to pass the Fiscal Responsibility Bill, essentially due to parliamentary feuding over whether to include government-guaranteed debt in the definition of national debt, was an important missed opportunity.

Introducing incentives and accountability for performance or results

The traditional budgeting system, which is largely characterised by detailed line item budgeting and control, is not geared to maximising operational efficiency. The budget implementation system focuses on compliance with legal and procedural rules, rather than on performance or programme outcomes. The responsibility of spending units is limited to keeping expenditures on inputs within the approved budget estimates and they thus have very limited freedom in shifting budget outlays from one budget category to another. While this is an important aspect of budget control, it has led to the neglect of efficient delivery of services or performance orientation.

Flexibility and performance orientation are being introduced…

The authorities have recently introduced some reforms to instil more managerial flexibility into the budgeting and management process. *First*, line ministries and agencies have been given more autonomy and discretion over an increasing proportion of their budgets that are designated as general running costs.[67] *Second*, the government has launched pilot projects for performance-oriented budgeting,[68] aimed at enhancing the efficiency of public service delivery. Initially, 16 organisations were selected for this programme in 2000, followed by another 23 in 2001 and 2002. T*hird*, the government has introduced an "executive agency" system as a way to allow managerial flexibility in some organisations, while holding them responsible for performance. By 2001, 23 such agencies had been established and given greater flexibility in budget management.[69] The MPB also increased the number and size of lump-sum appropriation accounts, for which detailed planning is devolved to line ministries.[70] However, the number of such accounts was cut sharply from 49 in 2001 to 31 in 2002, due in part to criticism from the National Assembly concerning a lack of transparency and accountability.

... making it necessary to strengthen accountability for results

The steps to introduce managerial flexibility and performance orientation make it important to strengthen accountability for results. However, the Korean public expenditure management system does not provide for routine and systematic evaluations of value for money. There has been much effort to improve evaluation of programmes and activities, but systematic *ex ante*, intermediate and *ex post* spending reviews and evaluations are still limited.[71] In particular, the input-based budget classification system, combined with the lack of performance indicators, makes the evaluation of performance difficult.

The Constitution assigns the responsibility to improve the performance and assure the accountability of the government and other public-sector entities to the Board of Audit and Inspection (BAI), an independent agency under the President. The BAI has traditionally focused on financial audits, but has been broadening its scope to performance-oriented audits. It currently conducts between 70 to 80 performance audits, compared to 200 to 250 general audits, per year. In practice, though, broadening the scope of its work to performance-oriented audits has proven difficult for the BAI, given that its time and human resource allocation is geared more toward compliance audits. In addition to BAI, three other institutions are involved in performance evaluation: the Office of Government Policy Co-ordination under the Prime Minister's Office conducts evaluations of government policies; the MPB is in charge of the pilot projects on performance-oriented budgeting; and the Ministry of Government Administration and Home Affairs is responsible for the executive agency system. These institutions, however, have limited working-level relations with each other in carrying out their evaluations and an effective institutional framework for co-ordinating these efforts is yet to be developed (Jay-Hyung Kim, 2002).

Some further challenges in improving the effectiveness of public spending

Introducing competition and market mechanisms in publicly funded services

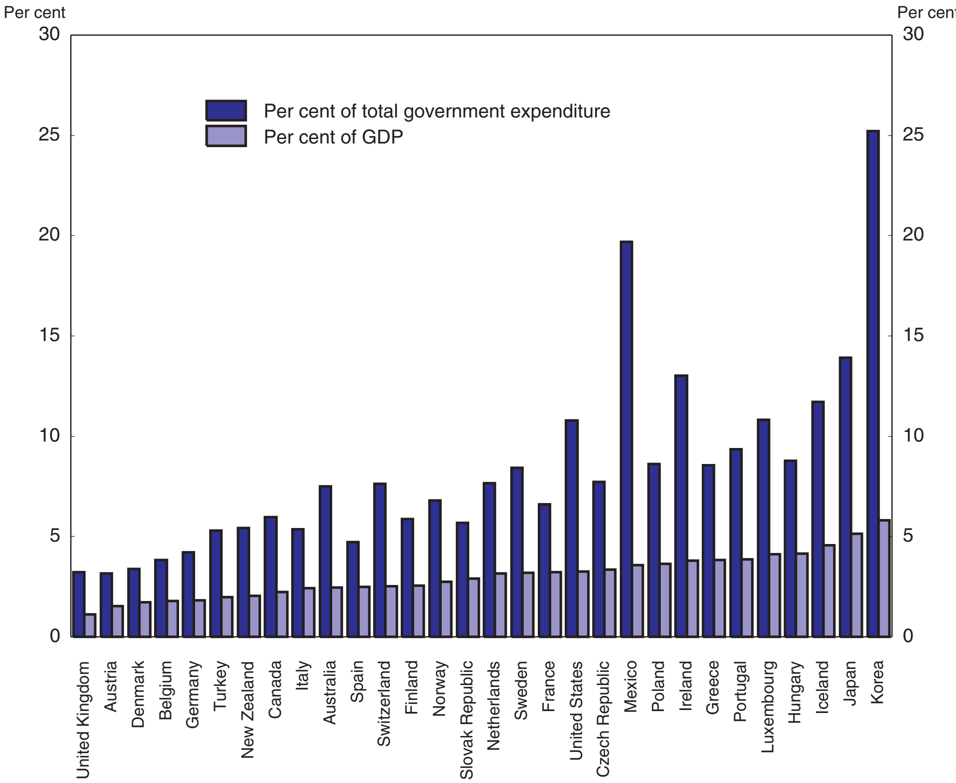
Many OECD countries have introduced market-based principles into the public sector with the aim of enhancing competition and efficiency in publicly funded services (Lundsgaard, 2000). Korea has also followed this trend, especially since the 1997 crisis. The government has increased its use of outsourcing and competitive tendering to improve the delivery of services, in particular, for support functions, such as cleaning, maintenance of buildings and equipment. This is part of the effort to consolidate public-sector activities in the core sector.[72] Local governments have also been encouraged to review and select activities that can be contracted out. The contracting out of local government functions has been most frequently used in the area of social welfare facilities and government building maintenance. The experience so far shows that cost-saving effects have been obtained in areas where competition among suppliers is well established. In contrast, where competition is not present, the total costs have tended to rise. At the local government level, in particular, the limited use of competitive tendering has limited the gains from this approach (Lee and Suh, 2000).

Contracting out in infrastructure is being pursued…

The government has also embarked on the strategy of optimising public-sector infrastructure investment by contracting out to the private sector.[73] As discussed before, Korea has one of the highest levels of government investment, both as a share of GDP and as a share of total government outlays (Figure 29). Although the government introduced the Private Participation in Infrastructure (PPI) programme in 1994, private-sector involvement did not increase owing to a number of problems, including the prospects of low profitability, unclear risk-sharing arrangements between the government and the private sector and limited competition among prospective partners. The financial constraints following the 1997 crisis prompted an initiative to overcome these problems in 1999. It included stronger financial incentives for private investors, including guaranteed minimum operation revenue, institutionalised buyout rights and an increase in the credit guarantee ceiling from 10 billion won to 100 billion won.[74] As of 2002, 31 projects had been completed under the PPI programme and 98 projects were being implemented or were under negotiation. By 2001, private-sector participation in the construction of roads, railways and ports reached between 3 and 5 per cent of total infrastructure investment.

The PPI is still at an early stage and will need to follow international best practices to avoid potential problems. Indeed, results in other OECD countries have not been uniformly positive and it is unclear the extent to which PPI actually saves public money and/or increases efficiency and consumer satisfaction.

Figure 29. **General government investment in OECD countries**
2000



Source: OECD.

Private-sector participation often involves many types of government support, including soft loans, equity investment, direct lending through banks and provident funds, and explicit and implicit guarantees. Consequently, the PPI is likely to increase the government's direct and contingent liabilities and put new demands on the management of off-budget expenditure. Minimising the fiscal risk will depend in part on the scope for prudent selection of projects and enhanced competition. It is also essential to have a transparent and credible regulatory system that provides incentives for cost minimisation and an efficient contracting process. The government has been making significant efforts to move in this direction by: implementing a preliminary feasibility study system as discussed above (see Box 4); selecting private partners through open competition; and establishing an accountability framework for private participants. The experience in other countries suggests that most efficiency gains stem from the permanent exposure of potential contractors to competition, rather than from the tender as such. Continued efforts will thus be needed to organise the process of tendering and contracting in such a way that they reduce the government's dependence on the incumbent franchise or concession holder. Using performance-based contracts might also be one way to enhance flexibility and accountability (Oak *et al.*, 2000).

Korea has also been experimenting with other forms of pubic-private partnerships, notably the formation of joint ventures in which the government secures a minority stake in the equity capital. A number of local governments have set up such "third-sector companies" to invest in various construction projects. Public-private joint ventures can have the advantage of spurring innovation and introduce private-sector management techniques, while providing a public-service ethos in an organisation that would not exist without government involvement. However, these companies in Korea have often run into problems due to weak business plans and management skills. In 2001, 18 of 33 third-sector companies were in deficit, while most of the remainder reported poor profitability. This disappointing performance, as well as the difficulty of closing such companies, suggests caution in creating such partnerships. The experience of some other OECD countries indicates that this approach can impose burdens on taxpayers.[75]

Competition among providers of publicly funded services is limited in secondary education…

Competition is very limited in some publicly funded services such as secondary education. Secondary education in Korea is provided not only through public schools but also through privately managed educational institutions that are predominantly publicly funded. This way of sub-contracting education to the private sector has been seen in many OECD countries as a cost-effective strategy for providing education. In these countries, governments pay most of the costs of education but leave the management of educational institutions to the private sector, to provide a wider range of learning opportunities without creating barriers to the participation of students from low-income families (OECD, 2002b). In Korea, however, school choice among students and parents is strictly limited, even for non-compulsory upper-secondary education, by the practice of allocating students to schools using a lottery system. Competition among schools is also largely limited as private schools are subject to the same rules and regulations as public schools, which leaves them with very little autonomy in school management, curriculum, tuition, and teacher hiring and pay. This has led to a situation in which the educational environment in private high schools, which enrol more than half of students, is inferior to that in public high schools[76] (Table 25). While this policy was introduced out of concern for equity, the lack of competition among service

Table 25. **Comparison of public and private high schools**
In 1999

	Number of schools (Per cent share)	Number of students (Per cent share)	Number of students per teacher	Expenditure per student (in thousand won)
General public school	48	41	20.6	2 782
General private school	52	59	23.6	1 677
Vocational public school	58	48	17.9	–
Vocational private school	42	52	22.7	–

Source: Korea Educational Statistical Yearbook.

providers and the absence of school choice have significantly limited the potential gains from this way of funding and providing services (see Chapter IV). The government has been exploring ways to introduce competition and diversity by allowing "independent private high schools" on a pilot basis, which should help enhance the efficiency of public spending in education.

... but efficiency concerns will need to be balanced with equity objectives in areas with high user charges

User charges can be a means to reduce excessive demand for some publicly funded services by making households more cost aware. Although internationally comparable data are not available, user charges are relatively well established in Korea. However, the benefits of this market-based solution will need to be carefully weighed against its undesirable distributional effects. In particular, the high level of private co-payments in healthcare raises concerns about equity of access for low-income households. The high share of private financing is linked to substantial out-of-pocket payments, in contrast to the United States, where private financing is due to private health insurance arrangements (OECD, 2002d). The high private co-payments, together with high fees for uninsured services and the widespread practice of informal treatment charges, make financial barriers to access insurmountable for the bottom end of the income distribution. The Medical Aid Programme, which provides a safety net for the most destitute, has been expanding but currently covers only around 4 per cent of the population, which leaves many citizens relatively unprotected. Affordability and access has also been affected by the rapid rise in health costs and the relatively low priority given to primary healthcare. This suggests that while private-sector participation in healthcare is important, appropriate institutional mechanisms should be put in place to control costs and to provide affordable access to low-income groups (Yang, 2001). There is also more scope for central and local governments to provide

Table 26. **Private co-payments and public subsidies in tertiary education**

	Private expenditure[1] (share of total expenditure)	Scholarships/other grants to households	Student loans	Total
		(Percentage of total public expenditure on education)		
Korea	**78.0**	**2.4**	**6.4**	**8.8**
Australia	46.5	14.6	17.7	32.3
Canada	38.3	12.2	6.4	18.6
France	12.0	8.0	a	8.0
Germany	8.2	10.1	1.9	12.0
Ireland	22.6	14.8	n	14.8
Italy	13.5	16.9	n	16.9
Mexico	25.5	2.8	2.9	5.7
Netherlands	20.3	18.4	6.2	24.6
Spain	22.6	9.3	n	9.3
United Kingdom	26.1	23.1	13.3	36.4
United States	53.1	11.1	8.1	19.2

a = data not applicable because category does not exist.
n = negligible or zero.
1. Excluding subsidies to educational institutions received from public sources.
Source: OECD, *Education at a Glance*, 2002.

support to public health centres to guarantee better access and to strengthen basic preventive health services mainly for low-income people.

High user charges also characterise tertiary education in Korea, which can be justified given the fact that private returns exceed social returns at this level of schooling. In Korea, however, this raises an equity problem because low-income households' access to capital markets is limited. Despite the fact that close to 80 per cent of all expenditure on tertiary institutions are from private sources, the level of subsidies to support tuition payments is significantly lower than in other OECD countries, making Korea an exception (Table 26). This problem could be addressed through a higher level of scholarships and loans that are subsidised or income-contingent, policies that are widely-used in other OECD countries (Blöndal *et al.*, 2002). Any further measures to increase user charges in tertiary education will need to be balanced with equity concerns for low-income households.

Addressing the governance problems of public corporations and the wider public sector

The delegation of power to off-budget institutions, such as government-invested corporations and other government-funded entities, outside the traditional government sector provides opportunities to engage citizens in public service delivery and policy-making. However, it also poses the difficult challenge of protecting the public interest through appropriate accountability mechanisms.

Indeed, inefficiency, lack of transparency and lax adherence to regulations in such institutions have often been identified as problems in Korea. Addressing the governance of these corporations is important as their performance has significant implications for public finances. For example, the funds managed by the National Pension Fund Corporation, which currently equal 14 per cent of GDP, may eventually rise to 100 per cent (see Chapter II). Moreover, the performance of the National Health Insurance Corporation also has important implications for the national budget, as the size of the government subsidy is expected to increase significantly (see Box 5). The efficient oversight and governance of the wider public sector will be all the more important in light of recent moves to devolve managerial responsibility through the "executive agency" system discussed above.

The government has started to address the governance problems of public corporations and the wider public sector,[77] realising that managing from a distance has created accountability and control issues. The MPB has set up the Government-invested Institutions Operations Committee, which has been conducting management performance assessment. The results are to be reflected in employee bonus payments. Public corporations and government-funded entities have been advised to make their financial statements and audit reports accessible to the public and to recruit outside directors. The government has also submitted in October 2002 a draft Basic Law on the Management of Government-Affiliated Organisations to the National Assembly with the aim of enhancing the managerial flexibility and accountability of government-affiliated organisations. Poor control mechanisms governing public funds and extra-budgetary funds have been of particular concern. In 1999, the MPB established a Public Funds Management Evaluation Team, comprising private-sector experts, and an Evaluation Committee on Public Funds Policy. The Evaluation Team has been producing annual reports reviewing fund management practices of both public funds and extra-budgetary funds. These reports have identified a number of problems including a lack of transparency, weak expertise of fund managers, inefficiency in asset management and inadequate oversight by the relevant ministries. For extra-budgetary funds, implicit government guarantees tend to generate moral hazard problems, weakening accountability for results.

The experience of other OECD countries suggests that certain conditions are necessary to ensure adequate public governance of diversified public bodies (OECD, 2002a). Most important is transparency in the governance system of autonomous bodies, including their nominations, remuneration and general accountability mechanisms. Most OECD countries have started to implement output- and even outcome-oriented reporting through activity-based costing, and some have started to establish multi-year agreements and monitoring mechanisms for their autonomous bodies. In many cases, national audit offices and parliament play an important role in monitoring these bodies.

Box 5. Controlling spending in healthcare

One long-term issue in nearly all OECD countries, including Korea, is the impact of population ageing on public spending for health and nursing care (see the 2001 OECD *Economic Survey of Korea*). Other challenges include satisfying the rising demand for quality care associated with higher income levels, while improving equity of access.

Korea has made significant progress in building a system that provides basic healthcare services at a relatively low cost. It spent 5.9 per cent of GDP on healthcare in 2000, the third lowest in the OECD area after Turkey and Mexico. Moreover, the public sector's share of that – at 44 per cent – was the second lowest after the United States, largely due to high co-payments. The healthcare system is based on predominantly private service delivery and mixed public and private financing. Healthcare is funded mainly through mandatory insurance contributions and out-of-pocket payments by patients. Providers are typically paid on a fee-for-service basis. There have been two major initiatives during the past few years: the integration of insurers into a single payer (Integration Reform) and the separation of the roles of prescribing and dispensing drugs between doctors and pharmacists (Separation Reform). While the former reform has resulted in full integration of administration, financial integration has proceeded on two tracks – one for employees and a second for the self-employed. Following the Separation Reform in 2000, the deficit of the National Health Insurance (NHI) increased from 1 trillion won to 2.4 trillion won in 2001. While the financial position of NHI had been deteriorating since the mid-1990s due in part to the relatively low contribution rate, the Separation Reform also contributed to the rise in the deficit as it was accompanied by three successive increases in medical fees by the government in 2001 due to prolonged strikes by doctors. The rising deficit of the NHI required the government to increase its budgetary support to the NHI's self-employed pool to around 2.5 trillion won in 2001.

In 2001, the Ministry of Health and Welfare announced a plan to stabilise the financial status of NHI and move the reserve fund into surplus by 2006. The plan encompasses a range of measures to boost revenues and contain expenditure growth. On the revenue side, the plan calls for a 9 per cent annual increase in the contribution rate until 2006 and a larger government subsidy to the self-employed pool. In order to raise the budgetary subsidy, however, the government sharply increased the earmarked "health promotion charge" levied on tobacco starting in 2002, further expanding the already widespread use of earmarked quasi-taxes in Korea. On the expenditure side, the plan includes measures such as higher co-payments, more thorough mechanisms to detect fraud by providers and rationalisation of the payment system.

Given the rising levels of public and private health spending, priority should be given to ensuring that the rising expenditures are used so as to achieve the best value for money in terms of quality, equity, efficiency and productivity. In particular, there is a great need to improve the governance of the health system, including the National Health Insurance Corporation (NHIC) and medical providers, Box 5. **Controlling spending in healthcare** *(cont.)*

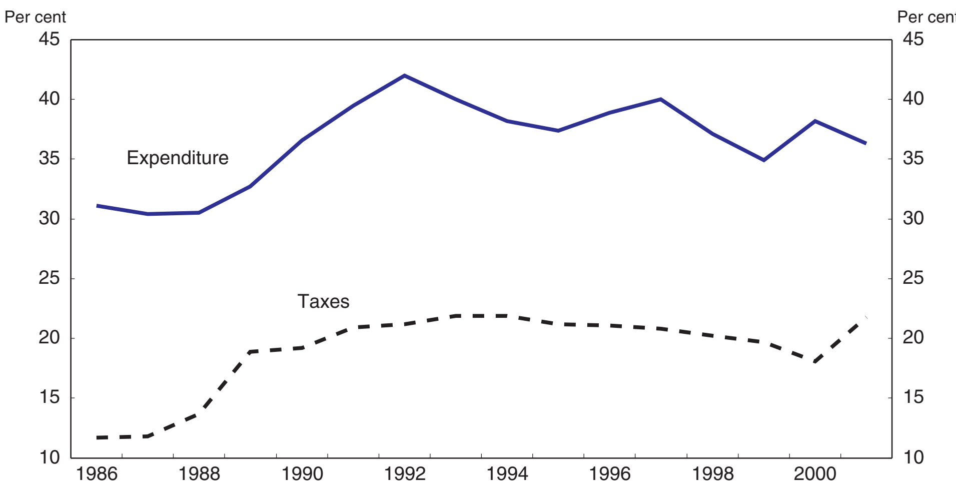
in order to increase accountability and transparency. Concerted efforts will also be needed to achieve a more cost-effective utilisation of resources by improving providers' behavioural incentives. In this regard, the recent pilot programme of mixed payment systems for both physicians and hospitals should continue and their results should be carefully monitored, as discussed in the OECD's 2002 *Review of the Korean healthcare system*.

Enhancing the effectiveness of spending by sub-national governments

Korea has been taking steps since the late 1980s to decentralise public administration. The process has been largely motivated by the political objectives to revive and enhance local democracy and autonomy, which had been suppressed during the 1960s and 1970s. In 1988, the revised *Local Autonomy Act* and *Local Finance Act* prompted fiscal decentralisation and devolution of powers away from central government. Today, local governments' share of total public outlays oscillates between 35 and 40 per cent (Figure 30),[78] a level higher than in unitary countries such as France or Ireland but lower than federal Germany and the United States or the unitary Nordic countries. The local government share of national taxes rose to 20 per cent by the early 1990s. An increased use of user charges and fees has been another source of local government revenue. With the increased spending and revenue-raising powers, local governments should be able to design and tailor public services that better meet local needs and preferences. However, decentralisation has also resulted in new problems and tensions, including a perception that it has increased wasteful and inefficient spending by local governments, while hindering national or regional development. While some of these are only teething problems, others arise from deficiencies in the current intergovernmental fiscal design that has yet to find the right balance between autonomy and accountability for local governments.

Perhaps surprisingly, given these complaints about decentralisation, the central government has maintained tight control over local government budgets. The *Local Autonomy Act* and the *Local Finance Act* require local governments to prepare balanced budgets. Moreover, the *Local Bond Approval System* requires that all local borrowing be approved by the central government, thus ensuring conservative financial practices at the local government level.[79] Local governments have also been subject to financial reviews conducted by the central government since 1996. In addition, the responsibility for evaluating the performance of local public corporations has been moved from the local to the central government level.

Figure 30. **Share of local governments in overall expenditure and taxes**
As a percentage of national total



Source: Ministry of Government Administration and Home Affairs.

There is, however, a large degree of variation between local governments in fiscal capacity. For example, while the ratio of locally funded to total local government spending is more than 94 per cent for the Seoul Metropolitan Government, the ratio is below 50 per cent for more than 80 per cent (194 out of 248) of local governments (Table 27). A large portion of this fiscal gap is covered by central government transfers including tax sharing and grants (see Box 6). However, problems have been identified with both of these methods:

- The tax-sharing system, *Local Share Tax*, has been designed to redress horizontal as well as vertical fiscal imbalances. However, its equalisation function has had limited effectiveness in addressing horizontal imbalances, in particular, among cities and among districts within cities (Sung-Il Lim, 2002). The distribution formula is very complex and local governments, as well as the public, are not given information about its calculation. Furthermore, the distribution of the *special* Local Share Tax, which is to be used for unforeseeable circumstances, tends to be subject to central government discretion.[80]
- Conditional grants, *National Treasury Subsidies*, provide funds for very specific purposes, leaving little flexibility for local governments and resulting in large administrative costs (OECD, 2001c).[81] In principle, conditional

Table 27. **Financial independence of local governments**
In 2000

Financial independence ratio[1]	Total	Per cent	Metropolitan cities and provinces	Cities	Counties	Autonomous districts
Less than 10%	5	2	–	–	5	–
10-30%	101	41	4	21	72	4
30-50%	88	35	4	22	10	52
50-70%	30	12	2	16	4	8
70-90%	19	8	5	12	–	2
90% and over	5	2	1	1	–	3
Total	**248**	**100**	**16**	**72**	**91**	**69**

1. The financial independence ratio is computed by dividing local tax and non-tax revenues by local expenditures.
Source: OECD (2001c).

grants should reflect nation-wide externalities and objectives, which would otherwise not be taken into account in local government decision-making. However, one study found that only one-fifth of the 344 projects financed by National Treasury Subsidies actually demonstrated such effects (Junghun Kim, 2000). The matching-funds mechanism of conditional grants also puts a financial burden on poorer rural governments, which rely heavily on conditional grants as a revenue source.[82]

Concerns have also been raised about ill-defined spending and financing responsibilities across government layers. The decentralisation process has entailed a gradual devolution of government functions from the central to local level.[83] In particular, local governments have become increasingly responsible for social welfare functions. However, the functions of local governments have not been clearly defined and there is a large degree of overlap in spending and financing responsibilities between different levels of government.[84] This partly results from unclear assignments specified in laws and regulations,[85] but it also reflects the fact that upper-level local governments have often re-delegated to lower-level authorities the implementation of functions delegated to it by the central government, thus blurring responsibility.

Education has not been part of the growing responsibilities of local government. Although Korea's education system is characterised by outstanding performances on international standardised tests of students (see Chapter IV), there is nonetheless widespread public discontent over large class sizes at all levels of schooling and insufficient capital investment. Educational funding is heavily dependent on the central government and indeed accounts for 20 per cent of its budget. In 2002, central government support for local education accounted for

Box 6. Local government funding

Local government expenditure is financed by local revenue and intergovernmental transfers (Table 28). Local revenue is composed of tax and non-tax revenue. In addition, local governments can finance themselves from local bond issues. Intergovernmental transfers consist of tax sharing (*Local Share Tax*), conditional grants (*National Treasury Subsidies*) and more broadly defined capital grants (*Local Transfer Fund*).

Tax revenue: Local tax revenue is provided by 17 taxes, with those related to property accounting for three-fifths of the total. The central government administers both the assessment rules and actual property tax rates, leaving local governments with limited discretion in practice. But the "flexible tax rate system" allows local government to vary rates by up to 50 per cent of the centrally determined tax rate for 11 local taxes, including the resident tax and the tobacco tax. However, local governments have rarely used this power to raise their tax revenues.

Non-tax revenues: Local governments receive revenue from their stakes in, and operation of, profit-oriented businesses, local public enterprises and public land development, as well as from various fees and charges.

Tax sharing: *Local Share Tax* is a vertical tax-sharing system designed to equalise vertical and horizontal disparities with respect to tax-raising capacities and needs. It sets a fixed percentage (15 per cent) of the total national tax income that goes to the local level. The equalisation formula between local governments is based on the concept of "standardised fiscal deficiency", which is calculated as the difference between standardised fiscal needs and standardised fiscal revenue. The standardised fiscal need is calculated on the basis of a complicated formula taking into account demographic, geographic, and social and economic characteristics. The standardised fiscal revenue is calculated through a simpler formula, mostly reflecting 80 per cent of *actual* tax revenue and current non-tax revenues of a local government, which may discourage local government efforts to raise more revenue. While 10/11ths of the total amount is a general transfer, based on normal criteria, a small fraction (1/11th), called *Special Local Share Tax*, is earmarked, which functions more like conditional grants.

Conditional grants: *National Treasury Subsidies*, which are matching-grants, are provided to local governments for specific projects. They are allocated in line with national policy priorities for each economic sector based on annual evaluations of local needs by the central government. In 2001, National Treasury Subsidies accounted for 45 per cent of all central government transfers and 13 per cent of total local income.

Conditional capital grants: The *Local Transfer Fund* is somewhere between tax sharing and conditional grants in Korea and is often called "block" grants because of its relatively broad objectives. It was introduced in 1991 to stimulate local capital investment in infrastructure and is financed by specific shares of national taxes. Currently, all liquor tax, 15.3 per cent of the special agriculture tax and 14.2 per cent of transportation tax are transferred to local governments through this Fund. The revenues may be spent on road maintenance (70 per cent), farming and fishing development, water purification, regional development and youth education.

Box 6. **Local government funding** *(cont.)*

Other Funding: There are two tax-equalisation schemes between upper and lower-level local governments that resemble the Local Share Tax. These schemes aim to offset horizontal disparities among autonomous districts (*Metropolitan City Revenue Sharing*) and cities or counties (*Fiscal Compensation Fund*). In addition, the *Local Subsidy* is a conditional grant transferred from upper-level to lower-level local governments.

Table 28. **Intergovernmental fiscal transfers**
Billion won in 2002

Intergovernmental fiscal transfers		Amount	Per cent of total local revenue	Type	Matching	Earmarked[1]
Central to local	Local Share Tax	10 307	15.3	Block	No	Yes
	National Treasury Subsidies	13 045	19.4	Conditional	Yes	No
	Local Transfer Fund	4 574	6.8	Conditional	Yes	Yes
Between local governments	MCRS[2]	1 968	2.9	Block	No	Yes
	Local Subsidy	3 406	5.1	Conditional	Yes	No
	Fiscal Compensation Fund	1 480	2.2	Block	No	–

1. Refers to whether the grant system is related to specific tax revenues.
2. MCRS = Metropolitan City Revenue Sharing.
Source: Sung-Il Lim (2002).

three-quarters of local education budgets. Education is administered separately by Boards of Education set up in upper-level local governments, which receive 13 per cent of total national tax revenue, thus guaranteeing their independence from the general local budget. As a result, lower-level local governments have little responsibility for education and hence limited incentive to invest in educational facilities. Furthermore, an increase in local government investment in education usually results in a cut in central government block grants for education, making it difficult to increase overall investment in schools at the local level. Recently, the central government has introduced some measures to encourage more investment by lower-level local governments.[86] However, more fundamental changes are needed to substantially increase local government's involvement in education by increasing their financial and administrative responsibilities in this area.

Agenda for future reform

The previous sections suggest that there is considerable scope for improvement in the management of public expenditure in Korea. Given the future spending pressures, it is essential that Korea now launch a comprehensive reform programme to establish an effective public expenditure management system. The objective of reform should be to ensure fiscal sustainability and to enhance the transparency, effectiveness and efficiency of public spending. The key elements would be to manage public finance in a medium-term expenditure framework and to introduce modern public management tools to enhance flexibility and accountability for results within the public sector. The reforms should be implemented simultaneously in a transparent manner to gain public support. An agenda for such a programme is presented below and specific policy recommendations are summarised in Box 7.

Ensuring fiscal sustainability

Ensuring fiscal sustainability will require that the government consider its overall budgetary, taxation and expenditure priorities in a medium-term context. The reliance on an annual budgetary framework does not provide a strong anchor and discipline on policymakers. Combined with the absence of formal fiscal rules, this could significantly undermine fiscal discipline as Korea faces looming spending pressures. A key reform element is thus adopting a medium-term expenditure framework (MTEF) within which annual policy decisions can be made. Recent measures to present medium-term fiscal plans are a step in the right direction, but the authorities will now need to move to an explicit multi-year, medium-term budgetary process. Placing the annual budget process within a MTEF would increase fiscal discipline by showing the minimum costs of continuing existing policies and the medium-term consequences of decisions taken in following budgets, and by making clear to the public the degree of the government's commitment to fiscal discipline. At the same time, the government should also consider moving to a "top-down" approach to budget formulation, in which the fiscal authorities set a binding aggregate spending ceiling at the beginning of the process and divide it among individual spending ministries according to strategic priorities. This would allow the Ministry of Planning and Budget to largely withdraw from the details of budgetary allocations for each ministry and instead focus on providing strategic guidance on spending priorities to ministries. It will also allow each spending ministry to freely reallocate resources among its various agencies and programmes under a medium-term hard budget constraint. A top-down budgeting approach, together with a MTEF, would significantly boost the government's capacity for aggregate fiscal control and allocation of resources in line with medium-term strategic priorities.

Adopting a MTEF would involve preparing a rolling multi-annual budget for three or four years, based on medium-term macroeconomic forecasts, estimates of costs of ongoing programmes and estimates of the cost implications of changes in policies. Establishing a MTEF thus requires that the macroeconomic forecasting process be strengthened. In this context, it will be important to improve co-operation between key ministries, particularly the Ministry of Planning and Budget and the Ministry of Finance and Economy, during the forecasting process. It is also important that the assumptions underlying the macroeconomic forecasts are included in the budget documents. The experience of OECD countries suggests that the success of a MTEF requires strong political will. In this regard, legislation along the lines of the Fiscal Responsibility Bill should be enacted to underpin control of public expenditure and ensure fiscal sustainability, effectiveness and efficiency. Along with a MTEF, the government might also consider preparing indicative, long-term budget forecasts covering 30 to 40 years to capture the impact of population ageing and other demographic changes.

Making the budgetary system more comprehensive and transparent

The reforms to ensure fiscal sustainability should be complemented by measures to make the budget the principal instrument of aggregate fiscal control and management, which requires a more comprehensive and transparent budgetary system (OECD, 2002c). One of the reform priorities in this area should be to consolidate special accounts and public funds so as to reduce drastically their number as well as their share of expenditure. Accounts and funds that have overlapping functions should be merged, while those that no longer serve their original objectives should be abolished. Reducing the number of special accounts and public funds, however, requires a reform of the tax system aimed at abolishing earmarked taxes and various quasi-taxes, as recommended in the 2000 *Survey*. For those public funds that remain, their administration should be upgraded, while providing more information to the public and strengthening the evaluation system. Control over expenditures by the public funds should also be strengthened, in part by further reducing, from the present 30 per cent, the amount by which ministers can increase outlays without the approval of the National Assembly. The introduction of any new special account or public fund should be subject to strict criteria, accompanied by sunset clauses. At the same time, the comprehensiveness of the budget also needs to be improved by bringing extra-budgetary funds and other spending, including National Health Insurance, into the budget.

The coverage of the budget documents should also be made more comprehensive and transparent. As the principal tool of fiscal control, it should contain complete information on government operations, including quasi-fiscal activities, tax expenditures, government guarantees and any other significant contingent liabilities and associated fiscal risks. Such a comprehensive coverage would facilitate the formulation of fiscal policy and the discussion, both within the government and the National Assembly, about the use of alternative fiscal instruments. Improving fiscal transparency also requires that budget planning and management be based on reliable and timely general government data. The current plan to include local governments in the consolidated government finance statistics by 2003 represents an important improvement, but it should be accompanied by more frequent and timely reporting of budgetary information on a consolidated general government basis. The objective of moving to accrual accounting by 2005 at the latest should be met, since the current method of cash accounting gives a misleading picture. Finally, transparency also requires providing reliable information about the government's fiscal policy intentions, forecasts and outcomes to the general public.

Moving toward more flexible and results-focused public management

Strengthening incentives at the central and local government level as well as in public-sector agencies for improved service delivery should be a key component of reform. The current efforts to provide more flexibility and autonomy to line ministries and agencies should be pursued. OECD country experience shows that entrusting spending agencies with flexibility in using resources, in exchange for holding them responsible for results, can lead to significant efficiency gains. The adoption of a MTEF and a top-down budgeting approach should help in this regard by providing spending ministries with greater flexibility to reallocate resources within the medium-term spending envelope. Korea can draw on OECD country experience in moving from its traditional system of input-focused management and budgeting toward one centred on outputs and outcomes. But countries have taken different roads to reform the public sector, with varying degrees of success. Korea will have to take a path that is compatible with its political and governmental conditions. In this sense, the recent experience of the pilot projects on performance-oriented budgeting and executive agency system should be evaluated systematically to draw lessons for deeper and wider reforms. However, progress requires the development of measurable performance indicators, which are critical for ensuring accountability.

Reducing the number of budget lines would allow the budget to be organised by programmes and activities. Such an approach would allow more scope for spending ministries to adjust their expenditures in line with changing circumstances and increase their freedom in operational decisions. Re-organising the budget classification so that programme areas match management responsibilities would increase transparency and allow the setting of effective expenditure ceilings and performance targets. A classification of expenditure by activity and programme would also allow performance indicators to be defined at an appropriate level.

Strengthening the accountability framework

The efforts to strengthen accountability for performance or results should accompany the move toward more flexible and results-focused budgeting and management. Greater weight should thus be given to developing effective value-for-money audits and systematic evaluations of programmes and projects. Korea can draw from the experience of other OECD countries which have used different instruments to assure accountability for performance (OECD, 1997). These include, for example, programme evaluation (Australia), annual reports that are audited for reliability of financial and performance statements (Sweden) and framework documents and performance targets to concentrate managerial attention on key objectives and results (United Kingdom). Moving from compliance to accountability for results, however, is not an easy task and it is necessary to ensure that basic audit functions do not suffer. Indeed, the traditional accountability based on legal and procedural compliance is still an important element of management and, without it, moving to the next step could pose significant risks (Schick, 1998). The rule-based governance will remain important in areas where it is difficult to introduce the new budgeting and management tools.

Within the Korean institutional context, strengthening the role and capacity of the Board of Audit and Inspection both in traditional auditing and in performance or value-for-money audits at both the central and local government level, could be most instrumental in strengthening the overall accountability framework. At the same time, the current effort to strengthen *ex ante* evaluation should be accompanied by systematic *ex post* evaluation of programmes and policies. Moreover, the feedback effects of *ex post* evaluation and audit findings into the policy formulation and budget processes should also be strengthened. It would also be particularly useful to undertake fundamental reviews of key sectors in a phased manner. This would not only rationalise the use of special accounts and public funds, but also address the current inefficiency and fiscal rigidities arising from vested interests in spending ministries. Finally, the current efforts to extend the accountability framework to public corporations and the wider public sector should be accelerated.

Enhancing the role of market mechanisms in publicly funded services

Enhancing the role of market mechanisms could boost the efficiency of publicly funded services. Government departments and agencies should make greater use of benchmarking, which could be a useful tool for improving value for money by establishing performance targets in reference to the best practices identified in comparable public or private organisations. The government could also explore a wider use of market instruments such as internal contracts, vouchers, and user charges: the experience of other OECD countries suggests that this can be done without compromising other policy goals, in particular equity objectives.

However, reaping the full benefits of a market-oriented management approach partly depends on the strength of competitive pressures. In particular, competition in the process of contracting out of government functions and private participation in infrastructure construction will need to be strengthened. Expanding the current efforts to enhance competition in public administration should also be pursued.

Making decentralisation more effective

The on-going fiscal decentralisation and devolution of power offers an opportunity to improve the effectiveness of public spending. Making decentralisation more effective is thus a key component of reform. The basic direction of change in this area should be to provide more autonomy and flexibility, while strengthening accountability of local governments. The current intergovernmental fiscal design should be improved so as to strengthen incentives for local governments to be efficient and accountable in public spending. The rules for the central government's equalisation transfers to local governments need to be improved so as to make them the main instrument for ensuring horizontal equity between jurisdictions. The conditional portion of these transfers should be minimised, while the allocation criteria should be made more clear and objective. The use of small conditional grants should be drastically reduced by integrating small conditional grants into more general grants, as the central government is considering. This reform should be accompanied by a reduction in the share of conditional grants in central government transfers. For the remaining conditional grants, it is important to strengthen performance evaluation of projects financed by these grants. Along with the reforms at the central level discussed above, results-focused budgeting and management should also be pursued at the local government level.

The reform effort in this area should include reviewing the distribution of spending and funding responsibilities across levels of government and disentangling these responsibilities. More attention should be given to the principle that functions should be assigned according to competency in providing services. In the areas where responsibilities would still be shared, co-operation should be improved by setting clear objectives and rules for co-financing and service provision. Other reforms to enhance local accountability and fiscal responsibility include higher financial reporting standards, including accrual accounting and public release of results. The government's efforts to expand financial reviews of individual local governments since 1996 should be followed up through the development of new local standards and benchmarks, such as indicators for infrastructure services, health and education. Adequate norms and indicators will be critical to proper monitoring of local performance.

Box 7. Summary of recommendations

Ensure fiscal sustainability

- Adopt a medium-term expenditure framework within which annual budget needs are assessed.
- Strengthen the macroeconomic forecasting process underlying the budget.

Make the budget process more comprehensive and transparent

- Consolidate special accounts and public funds to reduce sharply their number and share of spending. Integrate extra-budgetary funds into the budget. Expand the comprehensiveness and transparency of the budget documents.
- Produce timely and reliable general government data that includes local governments and is based on accrual accounting. Provide adequate information on fiscal policy intentions, forecasts and outcomes to the general public.

Move toward more flexible and results-focused public management

- Expand incentives at the central and local government levels for improved public service delivery and accountability.
- Develop performance indicators to facilitate results-focused management and budgeting.
- Reduce the number of budget lines to encourage more focus on programmes and activities.

Strengthen the accountability framework

- Establish an effective institutional framework for expanding the number and usefulness of performance audits, in particular by increasing the role and the capacity of the Bureau of Audit and Inspection for value-for-money audits.
- Incorporate feedback from *ex post* evaluation and audit findings more fully into the budget process.
- Accelerate the current efforts to strengthen the governance of the wider public sector.

Enhance the role of market mechanisms in publicly funded services

- Encourage competition and extend market signals, including benchmarking, internal contracts, contracting out, vouchers, and user charges, without compromising social policy goals.
- Introduce more competition into upper-secondary education.

Box 7. **Summary of recommendations** (*cont.*)

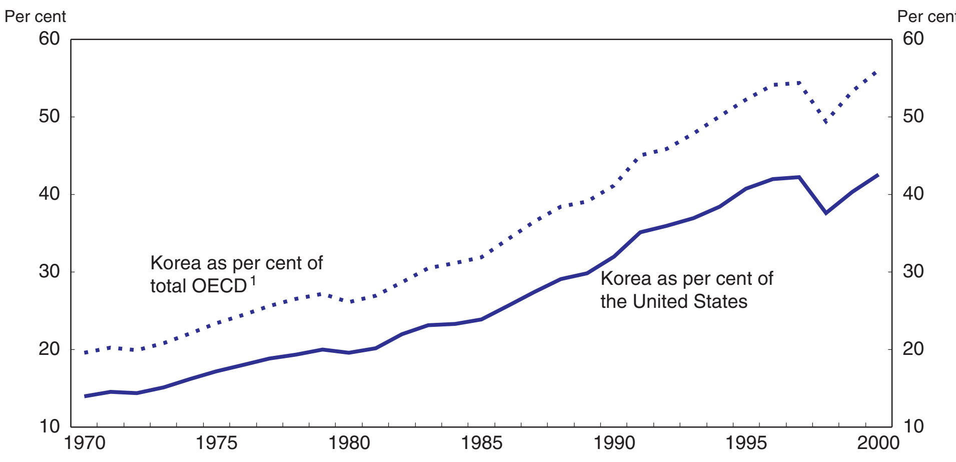
Make decentralisation more effective

- Increase the autonomy and flexibility of local governments while strengthening their accountability.
- Reform the intergovernmental fiscal transfer system: by improving the equalisation function of Local Share Tax and making the rules of equalisation transfers more clear and objective; and by drastically reducing the current reliance on conditional grants. Performance evaluation of the projects financed by these grants should be improved.
- Upgrade financial reporting standards and develop performance indicators for local governments.

IV. Structural reform to maintain high growth

Rapid growth beginning in the 1960s transformed Korea from one of the poorest countries in the world to an industrialised nation with a per capita income more than half of the OECD average (Figure 31). However, certain aspects of Korea's economic framework left it vulnerable to contagion from the crisis that began in Southeast Asia in mid-1997. In the wake of the crisis, Korea launched a major restructuring programme to create a more market-based economy. Progress in implementing these reforms, which has been examined in the past four OECD *Economic Surveys of Korea*, laid a foundation for strong growth and allowed the convergence to income levels in the advanced countries to resume, after having been temporarily reversed by the crisis. Measures taken since the 2001 *Survey* are summarised in Box 8.

Figure 31. **Relative income levels in Korea and the OECD**
Gross domestic product per capita using purchasing power parity exchange rates



1. The average of the 24 countries that were members of the OECD in 1993.
Source: OECD.

Box 8. Overview of progress in structural reform

This box follows up on recommendations from the 2001 *Survey* and summarises recommendations from this *Survey*. Box 7 summarises recommendations pertaining to the public expenditure system.

Recommendations in the 2001 *Survey*	Actions taken or proposed by the authorities	Current assessment or recommendation
A. The corporate sector		
Abolish the KDB bond-underwriting scheme in 2002 so as to let market forces more fully drive corporate restructuring.	The KDB scheme ended at the end of 2001.	
Phase out the Collateralised Bond Obligation (CBO) programme using government guarantees as financial markets stabilise.	The CBO programme was to be phased out by the end of 2002.	
Activate the new corporate governance framework.	The M&A market is to be re-vitalised in part by promoting the development of investment banks.	The new framework is taking root as companies with good corporate governance practices are rewarded with increases in their share prices.
Shift the KFTC's emphasis away from regulation of chaebol activities as the enhanced corporate governance framework and the market-oriented financial sector operate to discipline their behaviour.	The number of private-sector business groups subject to the full scope of regulation by the KFTC was reduced in 2002 from 30 to 12.	Further ease restrictions imposed on the chaebol in line with the development of market-based institutions for corporate restructuring.
Expand opportunities for shareholders to gain compensation for illegal management decisions, either through the introduction of class action suits or changes in derivative suits.	A class action suit system will be introduced to protect shareholders from false disclosure, unfaithful accounting and stock price manipulation.	
Strengthen the exit mechanism, in part through the "pre-packaged bankruptcy" system.	The "pre-packaged bankruptcy" system has been put into practice. The three insolvency-related laws are to be unified in ordered to facilitate the exit of non-viable companies.	
Improve the workout programme.	The workout programme, which continues for 12 of the original 83 companies, is to be abolished in the near future.	
Increase transparency by improving the quality of external audits.	The government announced a plan in November 2002 to upgrade the accounting system and enhance transparency.	

Box 8. **Overview of progress in structural reform** *(cont.)*

Recommendations in the 2001 *Survey*	Actions taken or proposed by the authorities	Current assessment or recommendation
B. The financial sector		
Effectively implement the second-stage restructuring programme so as to limit the need for additional funds.	The second-stage programme spent 47.6 trillion won between August 2000 and October 2002.	The banks are now profitable, with non-performing loans at a record low.
KAMCO should continue to sell, according to its timetable, the non-performing loans (NPLs) that it has purchased.	KAMCO received another 5.3 trillion won in 2001 and 2.7 trillion won in the first ten months of 2002 through the resolution of NPLs.	KAMCO, which still holds 40 trillion won of the 100 trillion won of NPLs that it purchased between 1997 and 2002, should continue with its asset sales.
Take steps to achieve profitability in the government-owned Woori Financial Holding Company in order to limit the additional costs to taxpayers.	Each of the three banks in the Woori Financial Holding Company recorded profits in 2001.	
Privatise the commercial banks.	The government has taken steps to sell Choheung Bank and plans to reduce its share of the Woori Financial Holding Company to under half by the end of 2003.	The privatisation of commercial banks should be a top priority in order to enhance their role in corporate restructuring and establish a market-oriented financial system.
Reduce government interference in private financial institutions by avoiding putting pressure on them to participate in the KDB bond underwriting scheme and bond market stabilisation funds.	The KDB scheme and bond market stabilisation funds have been abolished.	
The FSC should ensure that banks effectively implement the forward-looking loan classification criteria.	Domestic banks are currently improving their internal credit rating system as part of the forward-looking system.	It is important for the FSC to monitor potential future risks to asset quality related to the surge in bank lending to households, the increased use of credit cards and asset price fluctuations.
Enforce the supervisory framework to promote the stability of the non-bank financial sector.	The number of non-bank financial institutions has fallen by about 7 per cent since the end of 2000.	

Box 8. Overview of progress in structural reform *(cont.)*

Recommendations in the 2001 *Survey*	Actions taken or proposed by the authorities	Current assessment or recommendation
C. The labour market		
Further expand the coverage of the Employment Insurance System (EIS).	The EIS is to be expanded in 2004 to daily workers and part-time employees working more than 15 hours a week, while the legal enforcement of the system is to be upgraded.	
Ensure that employment protection for regular workers does not hinder restructuring of the corporate and financial sectors.	No action taken.	Relaxing such protection may help to limit the development of a dualistic labour market. This should be accompanied by an extension of the social safety net to non-regular workers.
Effectively implement the new social welfare system while maintaining incentives to work.	The number of persons receiving social assistance fell about 6 per cent in 2002 due to the economic recovery.	
Use the Tripartite Commission to forge a consensus on bringing Korea's industrial relations practices into line with internationally accepted norms.	The Tripartite Commission continues to operate, although it failed to reach an agreement on the key issue of introducing a 40-hour workweek.	The Korea Confederation of Trade Unions should rejoin the Tripartite Commission in order for it to function effectively.
Phase out employment subsidies with large deadweight costs.	The amount spent on wage subsidies increased in 2001.	Employment subsidies with large deadweight costs should be phased out.
D. The land market		
Introduce efficient mechanisms for land-use decisions in the semi-agricultural and semi-urban land zones.	The "Act on Planning and Utilisation of the National Territory" is intended to develop a coherent planning system for the entire country beginning in 2003.	Increase the holding tax on property and make the current system less regressive.
E. Increasing competition		
Make the Regulatory Impact Analysis statements public to improve their quality and raise public support for reform.	The Regulatory Impact Analysis statements are available to the public.	The Regulatory Reform Committee should prevent civil servants from imposing regulations that are not backed by legislation.
Effectively implement the "Clean Markets Project" in the six sectors chosen in 2001.	The Project has resulted in significantly lower prices in some of the sectors chosen.	Continue the Project in the eleven additional business lines in six sectors selected in 2002.
Continue to remove impediments to inflows of foreign direct investment.	The authorities are preparing annual FDI Environment Improvement Plans	Annual inflows have remained at high levels despite a sharp contraction in world direct investment flows.

Box 8. **Overview of progress in structural reform** (*cont.*)

Recommendations in the 2001 *Survey*	Actions taken or proposed by the authorities	Current assessment or recommendation
Complete the 1998 privatisation programme.	With the sale of Korea Telecom and Korea Tobacco and Ginseng, eight of the 11 enterprises in the 1998 programme have been privatised.	Complete the 1998 programme and consider whether the privatisation of other state-owned enterprises would enhance efficiency.
F. Specific sectors		
Telecommunications		
Reduce government intervention in the business and investment plans of private companies and avoid favouring the domestic equipment-making sector.	The mandatory contribution from service providers for R&D was reduced from 1 per cent to between 0.5 to 0.75 per cent in June 2002.	Further reduce such contributions and limit government intervention.
Establish an independent regulatory authority and streamline the licensing process to facilitate the entry of new firms.	No action taken.	Implement previous recommendation.
Impose price caps in markets where Korea Telecom remains dominant while limiting intervention in all other markets.	No action taken.	Implement previous recommendation.
Further ease the remaining restrictions on foreign ownership in the telecommunications sector.	The ceiling on foreign ownership of Korea Telecom was raised from 33 to 49 per cent in April 2002.	Implement previous recommendation.
Electricity		
Implement the ten-year plan to separate and privatise the generating and distribution assets of the Korea Electric Power Corporation.	The privatisation of the first of the six newly created generating companies began in the second half of 2002.	Consider accelerating the ten-year plan in order to bring the benefits of competition to households earlier.
Establish an independent regulatory authority.	No action taken.	Implement previous recommendation.
Agriculture		
Accelerate the shift from market price supports to direct payments to farmers.	Direct payments increased from 4 per cent of total support to farmers in 2000 to 7 per cent in 2001.	Accelerate the shift to direct payments to farmers.
Promote farm consolidation to boost the average farm size.	The five-hectare limit on farms outside the agricultural promotion zones was removed at the beginning of 2003.	The increase in the average farm size, which rose from 1.37 in 2000 to 1.39 in 2001, should be accelerated by this step.

Box 8. **Overview of progress in structural reform** (*cont.*)

Recommendations in the 2001 *Survey*	Actions taken or proposed by the authorities	Current assessment or recommendation
Reduce reliance on chemical inputs, notably fertiliser and pesticides, to improve the environment.	The authorities have launched direct payments to farmers using environmentally friendly methods.	The use of chemical fertiliser has fallen by 15 per cent between 1999 and 2001.
Increase market access for imported rice when the "minimum access commitment" ends in 2004.	No action.	Implement previous recommendation.
G. Creating a knowledge-based economy		
The education system (new issue)		Liberalise centralised control to increase the autonomy of individual schools, while also ensuring their accountability.
		Expand the pilot project of allowing independent private schools.
		Consider increasing spending on tertiary education by increasing support for private institutions, which educate the majority of students.
		Provide sufficient loans and grants to ensure access to tertiary education.
Research and development (new issue)		Increase the role of universities in the R&D effort by boosting incentives for research by professors.
		Encourage interaction between R&D in universities, the private sector and government research institutes by promoting labour mobility and enhancing opportunities for networking.
		Increase international linkages in the R&D area.
		Exercise caution in designating specific technologies as the focus of R&D programmes.
Venture business (new issue)		Reduce the government's role in providing equity and guarantees in this sector, while encouraging participation by other investors, such as business angels and institutional investors.

Box 8. **Overview of progress in structural reform** (*cont.*)

Recommendations in the 2001 *Survey*	Actions taken or proposed by the authorities	Current assessment or recommendation
		Consider whether the government should continue to designate certain firms as venture business, and if so, whether the criteria are sufficiently objective.
Small and medium-sized enterprises		
Further streamline support given to small and medium-sized enterprises (SMEs)	Public expenditures for SMEs rose by 5 per cent in the 2002 budget, while the number of programmes increased from 80 to 88.	Reduce the amount of support and the number of programmes to avoid waste and duplication
Lower protection given to SMEs	The number of business lines reserved for SMEs was reduced from 88 to 45 in September 2002.	Continue to lower protection for SMEs.
H. Sustainable development		
Air pollution (new issue)		Extend the Seoul emission permit-trading scheme to other areas, based on accurate data on emissions.
		Strengthen enforcement by increasing the role of independent inspections and separating the monitoring and ownership functions of local authorities.
		Reduce tax advantages for diesel vehicles and raise emission standards and fuel quality for such vehicles. Tighten heavy-duty vehicle emission standards in line with other OECD countries.
		Expand the use of road pricing and improve traffic management policies in order to reduce congestion.
Waste management (new issue)		Gradually increase the cost of garbage bags used for municipal waste.
		Carefully monitor the system of extended producer responsibility for recyclable products to ensure that recycling does not generate excessive costs in relation to alternative waste disposal methods.
		Allay opposition by residents to the construction of new, modern, waste disposal facilities by compensating them and introducing tougher monitoring of such facilities.

Box 8. **Overview of progress in structural reform** (*cont.*)

Recommendations in the 2001 *Survey*	Actions taken or proposed by the authorities	Current assessment or recommendation
I. Sustainable income for retirement		
Take advantage of the window of opportunity through 2008 to enact fundamental reforms to introduce a three-pillar system that relies more on private-sector saving.	The National Pension Reform Committee was established in 2002 to discuss the pros and cons of fundamental reforms. Discussions of proposals to create a corporate pension system are underway in the Tripartite Commission.	Implement previous recommendation.
Reform public occupational pensions and integrate them with the National Pension Scheme.	The National Pension Reform Committee will discuss this issue when actuarial estimates are introduced in 2003.	Implement previous recommendation.
Ensure that social assistance benefits bring the income of the elderly up to the minimum subsistence level.	The productive welfare system introduced two years ago is intended to provide minimum subsistence income to all eligible persons.	Ensure that the new system is, in fact, providing minimum subsistence income to all elderly in need, as well as other eligible individuals.
J. The tax system		
Broaden the personal tax base.	The deduction from the personal income tax base for purchases using credit cards, which was introduced in 2000, was doubled from 10 to 20 per cent in 2002. The income assessment methods for the self-employed have been improved.	Allowances and credits should be reduced to increase further the tax base.
Broaden the corporate income tax base by eliminating or streamlining various incentives.	A number of reductions in the capital gains and corporate income tax were abolished at the end of 2001.	A number of tax preferences for SMEs, investment and R&D have sunset clauses set at the end of 2002 and 2003 and should be allowed to expire.
The base of the VAT should be broadened.	The number of small businesses eligible for special treatment under the VAT has been reduced	The tax base of the VAT should be broadened by reducing the number of exemptions.
Increased taxation of fringe benefits is needed to broaden the tax base.	No action.	Implement previous recommendation.
Reform taxation of capital income, which is low and uneven across sources.	No action.	Implement previous recommendation.
Property taxation should be reformed to promote the efficient use of land by raising holding taxes and lowering transaction taxes.	The government plans several steps to increase the effective tax rate on holding property in the first half of 2003.	Continue to raise taxes on holding property and lower transaction taxes.
Reduce the use of *quasi-taxes* (charges that are not imposed by tax laws).	With the addition of 12 more quasi-taxes in 2001, the total number surpassed 100 with total revenue of more than 1 per cent of GDP.	Implement previous recommendation.

However, Korea's progress to date should not result in complacency about the importance of continuing the reform process. As noted in Chapter I, slowing inputs of capital and labour are expected to significantly reduce Korea's potential growth rate (Table 9). A continued commitment to economic reform is essential to sustain Korea's high growth potential and narrow the income gap with the most advanced countries. This chapter begins by discussing the corporate and financial sectors and the labour market, three of the key priorities of the post-crisis restructuring programme.[87] The second section looks at policies to make Korea more open to international competition, followed by an analysis of the land market. The fourth section considers policies to promote the development of a knowledge-based economy. The chapter then offers an assessment of structural reform before concluding with an analysis of issues important to ensure that growth is sustainable in the long run.

Completing the economic restructuring programme introduced in the wake of the crisis

Restructuring the corporate sector

The corporate sector has undergone significant changes since the crisis. Of the top thirty chaebol in 1997, many have shrunk in size and only about half remain among the top thirty today, although three of the largest at the time of the crisis are still at the top of the rankings by size (Table 29). Moreover, the number of companies listed on the Korea Stock Exchange has fallen by 13 per cent since 1997. Despite the restructuring that has taken place, a large number of weak firms remain. In 2001, 28 per cent of firms did not earn sufficient profits to cover their interest payments, let alone principal (Table 5). Perhaps more troubling is the fact that more than 5 per cent of companies, with total debt amounting to 7 per cent of GDP, have failed to cover their interest payments since 1999 or before. The survival of such a large number of non-viable companies absorbs resources that could be used by more productive firms. One key to accelerating the restructuring process is the privatisation of the commercial banks that were re-capitalised with public money after the crisis (see below).

Restructuring should be guided by the new corporate governance framework that was introduced following the crisis. As noted in previous *Surveys*, the major changes were to increase the rights of minority shareholders and strengthen the role of the board of directors, which must now include outside directors.[88] While corporate governance issues are related to private-sector relations between companies and shareholders, the governance framework underpins the integrity and credibility of market institutions, thus justifying the role of the state in this issue. However, some Korean companies have complained that the requirements imposed by the current system are excessive and have lobbied for their removal.

Table 29. **The large business groups**
Trillion won as of April 2002

	Business group	Number of affiliates	Assets	Rank in 2001	Debt-equity ratio	
					Excluding financial sector[2]	Total
1	Korea Electrical Power Corporation[1]	14	90.9	–	72.1	72.1
2	Samsung	63	72.4	1	77.6	240.6
3	LG	51	54.5	3	153.9	206.8
4	SK	62	46.8	4	140.4	156.4
5	Hyundai Motors	25	41.3	5	143.5	168.0
6	Korea Telecom[1]	9	32.6	–	101.7	101.7
7	Korea Highway Corporation[1]	4	26.4	–	100.4	100.4
8	Hanjin	21	21.6	6	256.3	294.4
9	Korea Land Corporation[1]	2	14.9	–	369.4	373.4
10	Korea National Housing Corporation[1]	2	14.5	–	185.2	185.2
11	Hyundai	12	11.8	2	646.3	977.6
12	Gumho	15	10.6	9	361.0	503.1
13	Hyundai Heavy Industry	5	10.3	–	227.4	219.4
14	Hanwa	26	9.9	10	232.2	238.3
15	Korea Water Resources Corporation[1]	2	9.5	–	27.2	27.2
16	Korean Gas Corporation[1]	2	9.1	–	256.0	256.0
17	Doosan	18	9.0	11	191.0	191.4
18	Dongbu	21	6.1	15	187.2	312.1
19	Hyundai Oilbank	2	5.9	13	837.1	837.1
	Total	**356**	**497.9**	–	**125.1**	**171.7**

1. State-owned enterprises. Korea Telecom, though, was completely privatised in May 2002.
2. Excludes affiliated companies in the financial and insurance sectors.
Source: Korea Fair Trade Commission.

Recent data demonstrates, though, that listed companies that improve their governance practices are rewarded by an increase in their market capitalisation, suggesting a positive link between corporate governance and firm performance.[89] In addition to corporate governance, transparency has been enhanced by requiring business groups with more than 2 trillion won ($1.6 billion) in assets to file combined financial statements and by increasing the responsibility of auditing firms for providing accurate information (see 2001 *Survey*).

Another aspect of corporate restructuring is the exit mechanism. In the wake of the crisis, many firms in distress and their creditors opted to enter workout programmes. Of the 83 firms that entered the programme, 55 have graduated, 16 were liquidated and 12 remain in the programme. At the same time, the government has improved the insolvency laws, which provide separate tracks for re-organisation, composition and liquidation, to make them shorter and more attractive to creditors (see 2000 *Survey*). For example, the average time for re-organisation procedures has fallen from almost two years in 1997 to less than half a year at present. In addition, "pre-packaged bankruptcy" was introduced in 2001 and has been used in several major re-organisation cases. Despite some progress, the government is working on measures to further improve the bankruptcy system, in part by merging the three separate tracks into one.

With the development of the corporate governance framework, the increase in transparency and the rehabilitation of the financial sector (see below), the government has adjusted the threshold at which chaebol-affiliated firms become subject to special regulations. Under the Monopoly Regulation and Fair Trade Act, the Korea Fair Trade Commission has regulated aspects of chaebol behaviour in an effort to prevent reckless investment, excess borrowing and fleet-style management. In particular, the amount of equity investment, cross-shareholding and debt guarantees by firms affiliated with the top thirty chaebol has been subject to restrictions. Beginning in April 2002, the regulations on investment cover only those business groups with more than 5 trillion won in assets. Currently, twelve private-sector business groups qualify under this criterion (Table 29). In addition, seven state-owned enterprises were added to the list, even though four of them only have two affiliates. However, the prohibitions on cross-shareholding and debt guarantees apply to groups with more than 2 trillion won, of which there are a total of 43. The revision of the coverage of the regulations on chaebol reflects progress in implementing the new corporate governance framework and in enhancing transparency. The continued development of the corporate governance framework and the financial sector should allow an easing of chaebol-specific regulations.

Developing a sound and market-oriented financial system

The financial-sector restructuring programme launched in 1997 has been successful in overcoming the impact of the crisis and laying the foundation for a more efficient and market-oriented system. The positive results are most evident in the commercial banking sector, which has returned to profitability in 2001 after four consecutive years of losses (Table 30). Moreover, the average capital adequacy ratio of nation-wide banks exceeds 10 per cent. The financial sector has been restructured by large outlays of public funds – amounting to 157 trillion won (27 per cent of GDP) – as of October 2002, with more than half used in the banking sector (Table 31). These funds were used to re-capitalise viable institutions, reimburse depositors and address non-performing loans. These expenditures were accompanied by an upgrading of prudential supervision, notably through the creation of the Financial Supervisory Commission, and the closure of nearly a quarter of financial institutions operating at the time of the crisis. Moreover, there have been significant cuts in operating costs due to reductions in branches and employees.

Table 30. **Indicators of bank profitability**
Nation-wide banks, in billion won and per cent

	1997	1998	1999	2000	2001	2002 first half
Before-tax profits						
Net profits	2 032.8	–3 244.6	1 625.1	7 350.6	8 739.2	6 402.7
Net profits minus loan loss provisions	–769.6	–10 346.8	–5 523.5	–1 863.8	3 630.4	3 807.8
Net profits minus all provisions	–3 223.3	–10 077.6	–5 523.5	–1 863.8	3 630.4	3 637.0
After-tax profits	–3 360.2	–10 130.0	–5 953.7	–2 399.9	3 391.5	2 849.1
Return on equity (per cent)	–14.09	–48.63	–24.73	–10.81	16.30	n.a.
Return on assets (per cent)	–0.90	–2.99	–1.42	–0.53	0.79	n.a.
Total loans	334 225.5	263 940.4	305 524.9	337 927.5	353 211.0	396 018.1
Substandard loans or below[1]	18 452.6	18 971.0	43 367.6	29 847.2	11 726.1	9 609.8
Ratio to total loans (per cent)	5.5	7.2	13.9	8.8	3.3	2.4
Loan loss reserves	4 698.0	12 102.5	19 762.1	19 584.1	9 568.9	n.a.
Reserves to substandard loans or below[1]	25.5	63.8	46.6	65.6	81.6	n.a.
Capital adequacy ratio (BIS ratio)	6.66	8.22	10.79	10.52	10.81	10.5
Number of branches	4 682	4 164	4 040	3 977	4 052	4 140

1. Includes loans classified as substandard, doubtful and estimated loss.
Source: Financial Supervisory Commission.

The recovery in profits has helped nation-wide banks to reduce loans classified as sub-standard or below from 13.9 per cent of total loans at the end of 1999 to a record low of 2.4 per cent in mid-2002. The banks accomplished this through write-offs, securitisation, the sale of borrowers' collateral and debt-equity swaps. In addition, the Korea Asset Management Corporation (KAMCO) has purchased such assets on behalf of the government since November 1997. By the time its role ended in November 2002, it had purchased non-performing loans with a face value of 105 trillion won (17 per cent of GDP) for the price of 39 trillion won. KAMCO's use of new techniques to dispose of these assets has furthered the development of the financial market, while recovering 29 trillion won of revenue for the government (Table 31, Panel C). Most of these funds were re-cycled for further restructuring of the financial sector. KAMCO still holds almost 40 per cent of the non-performing loans that it purchased.

The re-capitalisation of financial institutions using public money left a substantial share of the banking sector in the hands of the government (Table 32). Indeed, it currently owns two of the remaining eight nation-wide banks, in addition to nearly half of two others, plus two out of six local banks. The government has announced a plan to reduce its share of Woori Financial Holding Company, which includes three of the publicly-owned banks, to less than half by the end of 2003 by inducing domestic and foreign strategic investors, issuing global

Table 31. **The financial-sector restructuring programme**

November 1997 to October 2002 in trillion won

A. Outlays by type of financial institutions

	Equity participation	Capital contributions	Deposit payoffs	Asset acquisition	NPL purchases	**Total**
Banks	33.9	13.6	–	14.0	24.4	**85.9**
The non-bank sector	26.3	2.9	26.8	0.9	11.9	**68.8**
Merchant banks	2.7	–	17.2	–	1.6	**21.5**
Securities/investment trusts	7.7	–	–	–	8.3	**16.0**
Insurance	15.9	2.8	–	0.3	1.8	**20.8**
Credit unions	–	–	2.4	–	–	**2.4**
Saving banks	–	0.1	7.2	0.6	0.2	**8.1**
Foreign institutions	–	–	–	–	2.4	**2.4**
Total	60.2	16.5	26.8	14.9	38.7	**157.1**

B. Outlays by source of financing

Sources	Equity participation	Capital contributions	Deposit payoffs	Asset acquisition	NPL purchases	**Total**
Bond issuance	42.2	15.2	20.0	4.2	20.5	**102.1**
Public money	14.1	–	–	6.3	0.5	**20.9**
Recovered funds	3.9	1.2	6.1	4.4	16.6	**32.2**
Others	–	0.1	0.7	–	1.1	**1.9**
Total	60.2	16.5	26.8	14.9	38.7	**157.1**

C. Recovery of expenditures

Year	KDIC	KAMCO	Government	**Total**[1]
1998	–	2.4	–	**2.4**
1999	4.3	9.7	–	**14.0**
2000	6.1	8.9	–	**15.0**
2001	4.1	5.3	–	**9.4**
2002	1.6	2.7	6.4	**10.7**
Total	16.1	29.0	6.4	**51.5**

1. Includes 50 billion won of equity sales by the government.

Source: Public Funds Oversight Committee.

depository receipts (GDRs) and selling remaining equity step-by-step. The sale to strategic investors will be facilitated by the recent decision to ease the bank ownership limit on domestic investors by bringing it into line with that imposed on foreign investors. The general limit for all investors is now 10 per cent, although this can be raised to 100 per cent with FSC approval for financial capital. For non-financial capital, a 10 per cent stake is allowed as long as voting rights are restricted to 4 per cent, the previous limit. The relaxation of ownership limits

Table 32. **The government's ownership share of commercial banks**
End of 2002

Bank	Government share (per cent)	Held by
A. Nation-wide banks		
Choheung	80.05	KDIC
Woori[1]	87.71	Woori Financial Group – KDIC[2]
Korea First	49.01	KDIC (45.92%), government (3.09%)
Korea Exchange	43.17	Ex-Im Bank (32.50%), Bank of Korea (10.67%)
Kookmin	9.64	Government
Shinhan	–	–
KorAm	–	–
Hana	27.90	KDIC
B. Local banks		
Daegu	–	–
Pusan	–	–
Kwangju	87.71	Woori Financial Group – KDIC[2]
Cheju	31.96	KDIC
Jeonbuk	–	–
Kyongnam	87.71	Woori Financial Group – KDIC[2]

1. Formerly known as Hanvit Bank.
2. Woori, Kwangju and Kyongnam are 100 per cent owned by the Woori Financial Group and 87.71 per cent of Woori Financial Group is owned by the KDIC.

Source: Financial Supervisory Commission.

raises the importance of financial supervision to prevent abuses, such as those that occurred in the past between non-bank financial institutions and their large shareholders. Carrying out the privatisation of the banks should be a top priority, in part to recover some of the 100 trillion won (17 per cent of GDP) outstanding in government-guaranteed bonds used for financial-sector restructuring. Moreover, a strong, privately-owned banking sector is essential to advance the corporate restructuring process.

The privatisation of the banks also provides an opportunity to increase the foreign presence in that sector. For nation-wide commercial banks, ownership shares of between 4 and 10 per cent must be reported to the Financial Supervisory Commission and its approval is needed to surpass 10, 25 and 33 per cent. While only one commercial bank is majority foreign-owned, five others have significant foreign investment. Foreign investors tend to improve governance by pushing banks to concentrate more on shareholder value. In addition, 61 foreign bank branches and 26 foreign representative offices were operating in Korea as of March 2002. Although their market share of 6.5 per cent is only slightly higher than the pre-crisis level, the participation of these banks in the local market has increased significantly, as indicated by the rise in the share of operating funds raised domestically from less than 20 per cent in 1996 to 68 per cent in 2001. The growing role of foreign banks should have a beneficial impact on competition and efficiency as they appear to have comparative advantages in risk analysis and management, loan project assessment, credit analysis, portfolio management and computerisation.

The successful turnaround in the banking sector is recognised in the upgrades given to a number of Korean banks by global credit-rating agencies. As noted in earlier chapters, bank loans to households soared more than 50 per cent (year-on-year) during the first three quarters of 2002. Given the sharp rise in household debt relative to disposable income (Figure 5), such growth is unlikely to be maintained. Moreover, there are concerns about asset quality. With the rise in household debt, the number of individuals defaulting on loans increased 27 per cent between 2000 and 2002. The delinquency rate on credit cards, an area where the banks have a third of the market, has risen to more than 10 per cent. It is important that the supervisory framework take account of these emerging risks. The FSC has already taken some steps, such as lowering the share of real estate that can be used as collateral for household loans and increasing the risk weight attached to loans to households, thus forcing banks to hold more reserves. Finally, ensuring the long-term health of the banking system will require upgrading risk management capabilities, in part through successful use of the forward looking criteria introduced in 1999.

The situation is less favourable in the non-bank sector, where non-performing loans amounted to 10.4 per cent of total lending at the end of June 2002. This sector, though, is now substantially smaller than prior to the crisis, with total lending having fallen from half of GDP in 1997 to around 14 per cent. In particular, only three of the thirty merchant banks remain. The shrinking of the non-bank sector, combined with the bunching of bond maturities in 2001 and a high level of credit risk in the corporate sector, contributed to serious problems in the corporate bond market in 2001, which made it difficult for firms to roll over their bonds (see 2001 *Survey*). The bond market stabilised in 2002, leading to the phasing out of the CBO scheme to roll over corporate bonds using government guarantees. The insurance industry is one area where there has been significant restructuring, with public outlays of 20 trillion won (3.4 per cent of GDP) and downsizing. Moreover, the number of companies in the life insurance industry has been reduced by a third from 33 to 22, helping it to become profitable again.

The labour market

Korea's high degree of wage flexibility – as demonstrated by the fall in nominal wages in 1998 – reflects the sensitivity of wage and bonus payments, which account for a third of employee compensation, to economic conditions. Moreover, the practice of annual salary negotiations at the firm level has tended to make wage outcomes appropriate to the situation at individual companies. In addition, the statutory minimum wage, which remained below a quarter of the average manufacturing wage in 2001 (Table 33), has little impact on the labour market. Despite double-digit increases during the past few years, less than 3 per cent of employees are paid the minimum wage. As for employment flexibility, the picture is less clear. The labour code was revised in 1998 to allow layoffs for managerial reasons, subject to certain conditions, including reporting to the government (see 1999 *Survey*).[90] The restructuring of the corporate, financial and public sectors has been associated with major reductions in employment. The total number of workers at the 30-largest chaebol, state-owned enterprises and financial institutions fell by a fifth between the end of 1997 and April 2001. However, redundancy for "managerial needs" accounted for only 6 per cent of the job losses reported to the Public Employment Service in 1998 and only 1 per cent in 2001. Apparently, layoffs have been used only as a last resort in cutting the workforce. Despite the large decline in employment at major firms, more than a tenth of enterprises in early 2002 reported having excess manpower in a survey by an employers' organisation.[91] This suggests that layoffs are restrained by the preconditions imposed for dismissing workers.[92] However, this may also reflect cyclical factors. A survey of firms by the Ministry of Labour in December 2002 reported that 23 per cent were experiencing manpower shortages, while only 3 per cent had excess employees.

The paradox of sharp declines in employment combined with an apparent lack of employment flexibility may be explained by the duality of the labour market, which is segmented between regular and non-regular workers. According to the Korea National Statistical Office, non-regular workers – temporary and daily

Table 33. **The minimum wage**

	Minimum wages[1]			Minimum wage as a per cent of average wage in manufacturing	Number of workers paid the minimum wage[1]	Workers earning minimum wage as per cent of dependent employment[2]
	Won per month (thousand)	Won per hour	Increase (per cent)			
1996	288.2	1 275	9.0	22.8	103 191	1.9
1997	316.4	1 400	9.8	23.9	127 353	2.4
1998	335.6	1 485	6.1	26.1	123 513	2.3
1999	344.7	1 525	2.7	23.4	22 980	0.4
2000	361.6	1 600	4.9	22.6	53 760	1.1
2001	421.5	1 865	16.5	24.8	141 102	2.1
2002	474.6	2 100	12.6	n.a.	201 344	2.8
2003	514.2	2 275	8.3	n.a.	n.a.	n.a.

1. The minimum wage is set in September of each year. The figure shown for 1997, for example, was in effect from September 1996 until August 1997. Since November 2000, the minimum wage applies to all firms. Previously, it applied only to those with five or more workers.
2. Percentage of regular workers only.

Source: Ministry of Labour.

workers – account for more than half of employees. However, the analysis reported in Box 9 suggests that the proportion on fixed-term contracts is actually around 17 per cent,[93] which is still relatively high by OECD standards. Whatever the precise figure, the labour market is characterised by a core of regular workers with a high level of employment protection, supplemented by a large group of temporary workers, whose numbers can be more easily adjusted in line with changing economic conditions. Indeed, non-regular workers accounted for 70 per cent of the newly employed in the autumn of 2001, a proportion significantly above their share of employment (KLI, 2001). Employers cite the difficulty of reducing the number of regular workers as a major reason for hiring non-regular workers.[94] Another reason given is that social welfare payments required for non-regular employees are lower. Indeed, firms do not have to provide certain benefits, such as the retirement allowance and childcare, to workers with less than one year of tenure. Moreover, firms tend to pay lower social contributions for such workers

Box 9. **The declining proportion of regular workers**

According to the labour force survey, regular workers – those who work more than one year at a firm and are paid standard wages, plus bonuses and overtime – accounted for 29 per cent of the labour force, or 48 per cent of employees, in 2001. The proportion of non-regular workers, defined as those working for a specific length of time and those not entitled to certain allowances, has thus increased from 42 per cent of employees in 1995 to 52 per cent in 2002. However, the degree of job precariousness is significantly less than suggested by the official statistics since many employees classified as temporary and daily in fact remain with their employer on a longer-term basis.

The Korea National Statistical Office has developed a survey to provide information about the different types of employment for wage earners. According to the survey, non-regular workers in the strict sense – those working for a limited period of time – includes the following categories (Table 34). C*ontingent workers*, defined as those without a fixed-term contract who do not expect their employment to continue for involuntary reasons, accounted for 2.9 per cent of employees in August 2001. Another 3.3 per cent were *non-standard workers*, defined as those who are temporary agency workers and on-call workers. Adding these categories to the 11 per cent of employees with fixed-term contracts sums to 17 per cent – well below the 52 per cent reported in the regular survey as the combined proportion of temporary and daily workers. In sum, the discrepancy reflects the fact that a large number of employees that are classified as non-regular, either because they have no contract or are not entitled to certain allowances, expect the employment relationship to last. The proportion of non-regular workers is presumably between 17 and 52 per cent, but probably closer to the lower figure. However, it is also clear that the proportion has been increasing.

Table 34. **Non-regular workers in Korea**
August 2001

		Number of workers (thousand)	As a per cent of dependant employment[1]
Workers with a fixed-term contract:	Less than or equal to 1 month	763	5.7
	More than 1 month to less than 1 year	370	2.8
	Exactly 1 year	187	1.4
	More than 1 year to less than 3 years	73	0.5
	3 years or more	59	0.4
	Subtotal	**1 452**	**11.0**
Workers without a fixed-term contract, where employment is not expected to continue for involuntary reasons		387	2.9
Temporary agency workers		130	1.0
On-call workers		305	2.3
Total[2]		**2 274**	**17.2**

1. The total number of dependent workers was 13.3 million.
2. The overall total of temporary workers is likely to be higher, as two employee categories which were classified separately in the Supplementary Survey (home workers and workers provided by contract firms) contain an unspecified number of persons with a fixed-term contract, or a short-term employment perspective.

Source: Korea National Statistical Office.

or none at all. Daily workers, for example, have been excluded from the Employment Insurance System. The increase in the number of non-regular workers by sector is positively correlated with the separation rate of regular workers, suggesting that reducing costs is a primary motivation for hiring non-regular workers (Dae Il Kim, 2001).

The different pay and working conditions in the two segments of the labour market create equity concerns. The market for regular workers is characterised by lifetime employment, little threat of dismissal, a seniority-based pay system and infrequent movements of workers between companies. In contrast, the market for non-regular workers resembles a perfectly competitive market in which both hiring and firing are relatively easy and wages are determined by an employee's performance. Moreover, regular workers are protected by the social safety net while non-regular workers, who earn 20 per cent less after adjusting for years of service, type of job and working hours, are excluded from some aspects. Finally, non-regular jobs in Korea are viewed as traps that prevent workers from moving on to regular posts rather than a bridge to more stable employment (SERI, 2001). Given the equity problems posed by a dualistic labour market, it is important to weaken the incentives favouring temporary workers through two approaches. *First*, the social safety net for non-regular workers should be strengthened, thus reducing the cost advantage of such employees. The plan to extend unemployment insurance to daily workers is a step in the right direction. *Second*, employment protection for regular workers should be relaxed.

One factor contributing to labour market rigidity is the adversarial relations between workers and management, which also discourages foreign direct investment.[95] The militancy of the trade unions since democratisation in 1987 may have been a strategic move to encourage government involvement in labour-management disputes.[96] Progress has been made in the context of the Tripartite Commission, which was established in 1998 to resolve a number of difficult issues and bring the industrial relations framework into line with OECD norms. Major outstanding issues include allowing multiple trade unions at the firm level, the payment of full-time union officials by companies and the right of civil servants to organise. The Commission also discussed the introduction of a 40-hour workweek to reduce annual working hours from 2 500 – the highest in the OECD area – to 2 000, but failed to reach an agreement. Without a change in the legal framework, working hours will be the subject of contentious negotiations at the firm level.

Other aspects of labour market flexibility include enhancing the availability of information about jobs and allowing greater use of temporary (dispatched) workers, which are currently limited to 26 occupations, primarily professional jobs. Expanding the use of such workers, as well as protecting them, is under discussion in the Tripartite Commission. As for job information, the Public Employment Service should seek more synergies with the large and long-established network of private job placement agencies, which total more than 5 000. Moreover, the separate Public Employment Service networks operated by the central and local governments should be integrated and the quality of staff upgraded.

Labour flexibility and mobility is also enhanced by helping workers gain the skills and knowledge needed in a rapidly changing economy. The number of unemployed receiving training jumped eight-fold in 1998 with the introduction of such programmes to provide income support for jobless persons in the wake of the crisis. However, with the economic recovery, the number of unemployed receiving training fell by 43 per cent to 189 000 by 2001.[97] While training programmes are still much larger than prior to the crisis, there are a number of criticisms of the current approach.[98] *First*, the choice of participants is biased towards those under the age of thirty. *Second*, dropout rates are high. Indeed in 2000, less than half of those enrolled in training programmes completed their courses (Table 35). *Third*, employment rates for those completing training have not been impressive. In 2000, a year when total employment rose 4 per cent and the unemployment rate fell below 4 per cent, two-thirds failed to find jobs during the three months following the completion of training courses. Indeed, a study comparing participants and non-participants in 1998 and 1999 found that the reemployment rate was lower for those participating in training programmes (Kang and Lee, 2001). To make training a more effective method for promoting employment, it is

Table 35. **Training programmes for the unemployed**

	Total	Reemployment training of the unemployed under the EIS	Training programmes not financed by the EIS					
			Employment promotion	Craftsmen	3-D jobs	Business start-ups	New labour market entrants	Other programmes
1998								
Total number of trainees	330 644	170 096	101 709	14 515	11 000	13 598	10 715	9 011
	(100.0)	(51.4)	(30.8)	(4.4)	(3.3)	(4.1)	(3.2)	(2.7)
Number of trainees who completed the course	134 314	73 320	37 465	4 786	2 904	11 051	4 788	. .
Completion rate[1] (per cent)	40.6	43.1	36.8	33.0	26.4	81.3	44.7	. .
Found employment[2]	26 582	15 571	7 218	1 286	1 486	547	474	. .
	(19.8)	(21.2)	(19.3)	(26.9)	(51.2)	(4.9)	(9.9)	. .
2000								
Total number of trainees	216 317	120 296	47 057	13 311	6 885	4 699	6 666	17 403
	(100.0)	(55.6)	(21.8)	(6.2)	(3.2)	(2.2)	(3.1)	(8.0)
Number of trainees who completed the course	103 807	68 502	18 516	4 171	484	2 919	3 835	5 380
Completion rate[1] (per cent)	48.0	56.9	39.3	31.3	7.0	62.1	57.5	30.9
Found employment[3]	43 632	30 798	5 681	1 260	484	440	1 512	2 626
	(35.5)	(37.6)	(26.8)	(29.4)	(77.6)	(14.5)	(35.4)	(41.6)

. . Data not available.
1. Completion rate equals the number of trainees who completed the course divided by the total number of trainees.
2. The figures in parenthesis is the number of persons who found employment in the first three months after completing training programmes divided by the sum of those who completed the training.
3. The figures in parenthesis is the number of persons who found employment in the first three months after completing training programmes divided by the sum of those who completed the training plus those who found employment before completing training.

Source: Ministry of Labour.

Table 36. **Coverage of the Employment Insurance System**
Number of workers in thousands and per cent

	July 1995	January 1998	July 1999	December 2000	September 2001	October 2002
Wage and salary earners	12 824	12 500	12 603	13 142	13 265	13 932
Eligible for EIS	4 280	5 190	8 342	8 700	9 269	9 700[2]
Actually insured	4 204	4 309	5 876	6747	6 884	7 102
Eligible as a per cent of wage and salary earners	33.4	41.5	66.2	66.2	69.9	70.0[2]
Insured as a per cent of eligible workers	98.2	83.0	70.4	77.6	74.3	73.0[2]
Insured as a per cent of wage and salary earners	32.8	34.5	46.6	51.3	51.9	51.0
Proportion of unemployed receiving benefits[1]	...	...	13.5	...	16.0	

1. Annual averages.
2. Estimates.
Source: Ministry of Labour.

important to continuously evaluate programmes based on the following criteria: *i*) targeting on participants; *ii*) keeping programmes small in scale; *iii*) ensuring that training results in a qualification that is recognised and valued by the market; *iv*) including a strong on-the-job component in training, which helps to establish close links with employers (Martin and Grubb, 2001).

As stressed in previous *Surveys*, labour market flexibility should be accompanied by an adequate social safety net. Following the crisis, Korea moved quickly in this regard, boosting spending on labour market programmes – including unemployment insurance, vocational training and public works jobs – from 0.1 per cent of GDP in 1997 to 1.2 per cent in 1999 (Table 22). Such expenditures have fallen sharply to around 0.5 per cent of GDP since 2000, reflecting the marked decline in unemployment. However, the relatively low proportion of the labour force that is covered by unemployment insurance is a concern (Table 36). Although 70 per cent of employees are eligible,[99] only 51 per cent are actually insured. The fact that 2.4 million eligible workers are not insured indicates poor enforcement and a lack of awareness on the part of workers and management on the need for unemployment insurance. Including the self-employed, only 30 per cent of those working in 2001 were covered by unemployment insurance.

The proportion of unemployed receiving benefits – 16 per cent in September 2001 (Table 36) – is substantially lower than the share of the labour force that is covered by unemployment insurance. One reason is that not all jobless persons have met the legally required minimum contribution period of

Table 37. **Employment subsidies**

	Number of participants (thousands)				Expenditure (billions of won)			
	1998	1999	2000	2001	1998	1999	2000	2001
Total	780.6 (100.0)	669.9 (100.0)	445.1 (100.0)	568.3 (100.0)	96.3 (100.0)	184.2 (100.0)	113.6 (100.0)	128.8 (100.0)
Employment maintenance programmes	654.4 (83.8)	369.6 (55.2)	148.2 (33.3)	257.4 (45.3)	74.2 (77.1)	79.2 (43.0)	29.3 (25.8)	56.0 (43.4)
Of *which*: Temporary shutdown	602.8 (92.1)	291.1 (78.8)	130.1 (87.8)	178.4 (69.3)	53.3 (71.9)	47.4 (59.8)	21.8 (74.5)	32.2 (57.6)n
Employment promotion programmes	125.9 (16.1)	300.3 (44.8)	296.8 (66.7)	310.9 (54.7)	22.1 (22.9)	105.0 (57.0)	84.4 (74.2)	62.8 (56.6)
Of *which*: Hiring of laid-off workers	5.2 (4.1)	101.4 (33.8)	62.7 (21.1)	30.3 (9.7)	5.9 (26.6)	75.2 (71.6)	40.8 (48.3)	20.2 (27.8)

Source: Ministry of Labour.

180 days. Others do not receive benefits because their unemployment spell exceeds the maximum coverage period (between 90 and 240 days), they quit their jobs voluntarily or they do not fulfil the job-search requirements. Such requirements are intended to encourage the unemployed to look for and accept jobs. However, it is important that the authorities follow through on measures planned for 2004 to increase the coverage of the Employment Insurance System. *First*, daily workers and part-time employees working more than 15 hours weekly (previously 18 hours) will be included. *Second*, the legal reporting system is to be strengthened.

Outlays on employment subsidies recorded a 13 per cent increase in 2001, with the number of participants in the two subsidy programmes reaching nearly 4 per cent of all employees (Table 37). *Employment-maintenance subsidies* are offered to firms that retain redundant workers during periods of financial difficulty. *Hiring subsidies* are provided to companies that take on certain categories of workers, such as the elderly, women or the long-term unemployed. The bulk of these subsidies are paid to firms with less than 300 employees. As noted in the 2001 *Survey*, the deadweight and substitution effects of such subsidies tend to be as high as 90 per cent in other OECD countries using such policies.

Promoting international openness

Lowering barriers to international trade

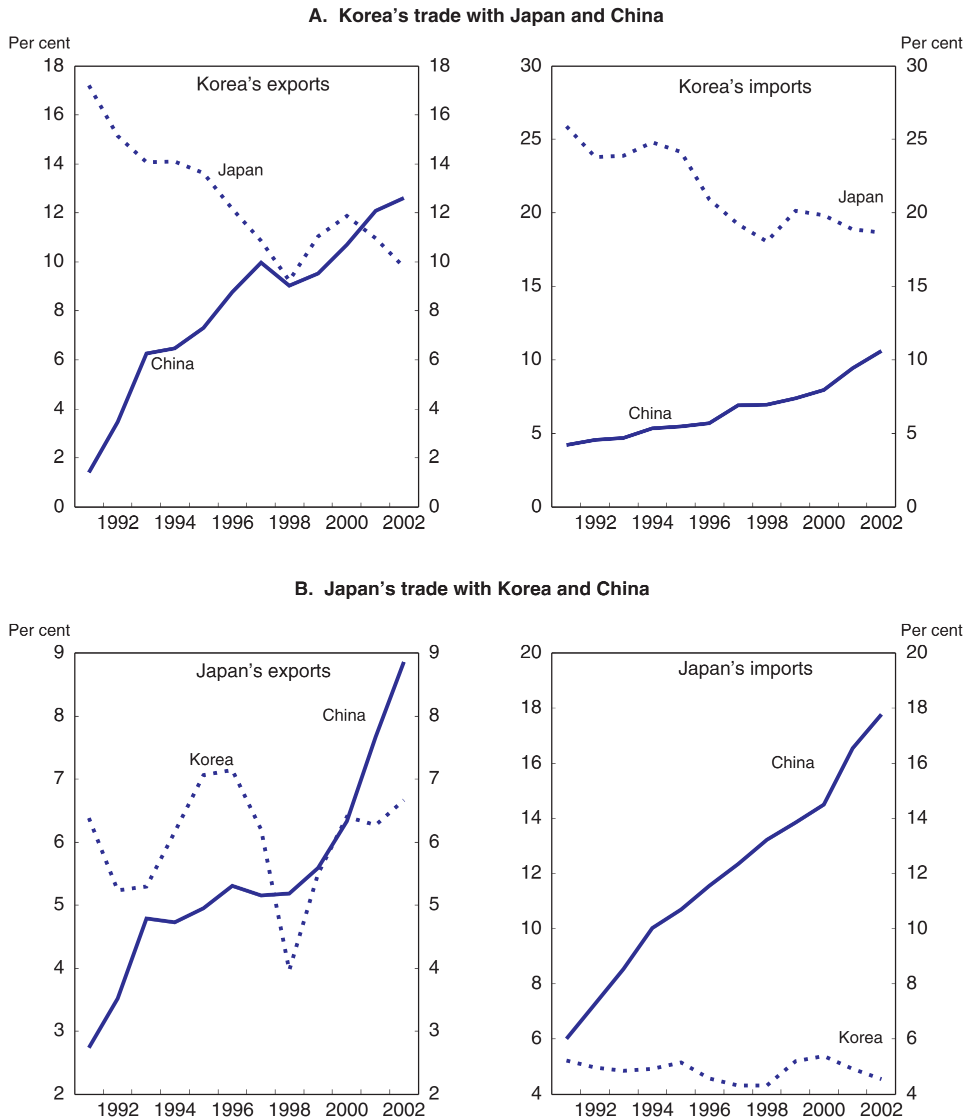
Korea has made significant efforts during the past few years to reduce barriers to trade, including the elimination in 1999 of the Import Diversification Programme, which had prohibited imports of certain products from Japan, and the abolition of all quotas except that on rice. It is important to continue the trend to greater openness, which has facilitated an increase in imports from 36 per cent of GDP in 1997 to an estimated 42 per cent in 2002, despite the sharp decline in the exchange rate, which remains a third below its pre-crisis level.

One key development in this area was the conclusion of a free trade agreement (FTA) with Chile in October 2002 after three years of negotiations. Previously, Korea had been one of the few major trading nations that was not a member of any regional trade agreement, the number of which has jumped from around 25 at the beginning of the 1990s to over 150 by the end of the decade. In addition to Korea's emphasis on multilateral negotiations, its concerns regarding the potential impacts of FTAs on its agricultural sector has been an obstacle to joining such agreements. Indeed, the agreement with Chile does exclude some agricultural products. The choice of Chile for Korea's first FTA reflects the fact that it has an industrial structure that is complementary to Korea's and it is a relatively small economy, thus reducing the risk of significant shocks on the Korean economy. Moreover, Chile has concluded FTAs with a number of countries during the past 20 years. In addition, the FTA with Chile offers Korea a bridge into South America.

A joint study group of experts from government, academia and business in Japan and Korea was launched in July 2002 to explore all relevant issues pertaining to the creation of a free trade agreement between the two countries. Such an FTA has the support of some business leaders on both sides.[100] Agriculture is less likely to pose a stumbling block on the Korean side than with other potential partners. Such an agreement would remove non-tariff barriers in addition to tariffs, which average 7.9 per cent in the case of Korea and less than 3 per cent in Japan. According to research done at the Korea Institute of International Economic Policy, a Korea-Japan FTA would boost Korea's GDP by between 1 and 4 per cent in the long run (Cheong, 2001). Such an agreement would re-invigorate bilateral trade, which has waned in importance for both Korea and Japan during the past decade, while China has emerged as both a key market and a supplier of imports for Korea and Japan (Figure 32). Given the growing role of China, some Korean business leaders envision a Japan-Korea FTA as the first step toward a trilateral FTA that would include China. Moreover, it would be a start to achieving the goal of creating an East Asia FTA, which would embrace the ASEAN countries plus China, Japan and Korea.

In the Doha Round of multilateral trade negotiations, the two areas with perhaps the greatest potential impact on Korea are services and agriculture (see below).[101] Korea's trade in services doubled to 15 per cent of GDP in the decade to 2001. In the Uruguay Round's General Agreement on Trade in Services, Korea made a number of commitments in most service sectors. Further liberalisation in the new round will help boost trade, as well as inward investment in service sectors, thus providing better access to services for consumers at lower

Figure 32. **Trade flows in Northeast Asia**
Share in total trade[1]



1. January to June for 2002.
Source: OECD.

Table 38. **Commercial presence of foreign financial institutions in Korea**

2000

	Bank	Security	Investment trust company	Investment advisory	Life insurance	Non-life insurance
Branch	Open	Open	Open	Open	Open	Open
Subsidiary	Open	Open	Open	Open	Open	Open
Joint venture	Open	Open	Open	Open	Not open	Not open
Cross-border trade	Partially open	Not open	Partially open	Open	Open	Partially open

Source: Korea Institute of Finance.

prices. Countries participating in the new round made initial requests by the end of June 2002 and are scheduled to make initial offers by March 2003, with negotiations continuing until the end of 2004. Requests to Korea have been made by a number of countries, reportedly covering all twelve service sectors recognised by the World Trade Organisation.[102]

Financial and legal services are two of the service sectors in the new round. Regarding financial services, the market has been opened for the establishment of foreign institutions in Korea, with the exception of the insurance industry (Table 38). However, there are still significant barriers to cross-border trade in financial services, *i.e.* the provision of services by institutions located in a foreign country.[103] The Korean authorities have argued that, given the level of development of the domestic financial market, a commercial presence in Korea by foreign firms is needed to supply financial services such as underwriting and broker-dealer services. However, with the rapid development of the financial market since the crisis, such concerns have presumably become less important. As for legal services, there are restrictions on such activities by foreigners in Korea, thus limiting the availability of international-standard, high-quality legal services that are essential for the internationalisation of the economy. Allowing foreign law firms to establish representative offices in Korea for the practice of non-Korean law would be a first step to liberalisation. This should be followed by allowing full partnerships between foreign and Korean law firms, with foreign firms having the right to employ individual Korean lawyers.

With the opening of the beef market in 2001, rice is the only product subject to quantitative restrictions. Under the "minimum access commitment", rice imports are to rise from 1 to 4 per cent of domestic consumption over the period 1995 to 2004. In addition, 64 products are subject to tariff-rate quotas. Korea is also committed under the Uruguay Round to reduce its "Aggregate Measure of Support" by 13 per cent between 1995 and 2004, which requires shifting away from market price supports. In line with this objective, government outlays to purchase rice fell by about 5 per cent in both 2001 and 2002. To maintain assistance to farmers, direct payments have risen from 4 to 7 per cent of total support in 2001, with the introduction of the "De-coupled Income Support" programme. This programme, which is only available for paddy land that was in operation between 1998 and 2000, provides payments to farmers who use environmentally friendly methods. The amount of the payment was doubled to between 400 000 and 500 000 won per hectare, depending on whether the farm is located in an agricultural promotion area. Such policies have also helped reduce the use of chemical fertilisers, which is extraordinarily high in Korea, by 15 per cent between 1999 and 2001. Direct payments are a more effective and transparent means to provide assistance to producers and result in less distortion to resource allocation.

However, there has been limited progress in increasing the market-orientation of Korean agriculture. The level of assistance to producers, as measured by the Producer Support Estimate, fell slightly from 67 per cent in 2000 to 64 per cent in 2001 (Figure 33). Nevertheless, it remains one of the highest among OECD countries and double the OECD average. Moreover, 93 per cent of this support took the form of market price supports, primarily trade restrictions and the domestic price stabilisation mechanism, including government purchases and public stockbuilding. These types of assistance are the most distortive to trade and production decisions. Government support boosted gross farm receipts by 2.8 times and posed a significant burden on consumers, who paid prices that were two and a half times the world level. Transfers to agriculture amounted to $417 per person and totalled 4.7 per cent of GDP.

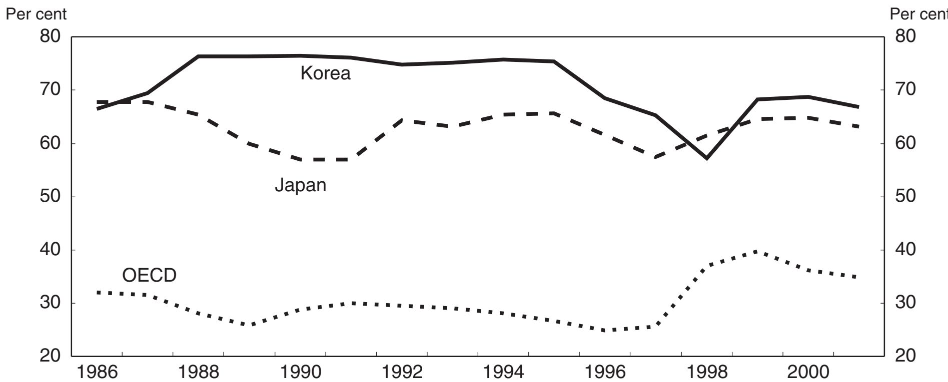
The key to establishing a more efficient agriculture sector appears to be increasing the size of farms, which are relatively small, averaging less than 1.4 hectares (Table 39). The government provides low-interest funds to full-time farmers to lease or purchase the land of non-farmers or those who are retiring. These policies have helped increase the proportion of farms with more than three hectares from 4.7 per cent in 1995 to 6.1 per cent in 2000. The gradual upward trend in the average farm size, which is rising less than 1 per cent a year, should accelerate following the removal in January 2003 of the five-hectare limit on farms outside the agricultural promotion zones, which account for nearly half of arable land.

Encouraging inflows of foreign direct investment

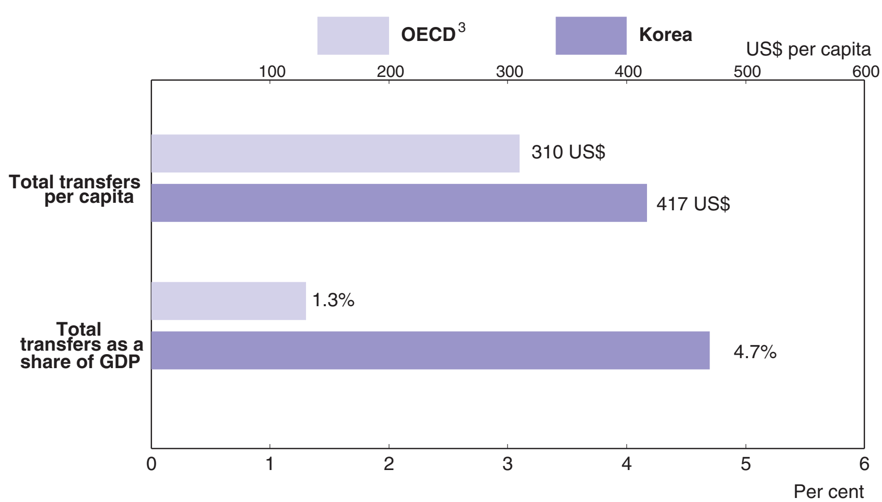
Foreign direct investment (FDI) fell by a quarter in 2001 to $11.3 billion, well below its objective of $15 billion, in the context of a general decline in the worldwide total of direct investment flows. Indeed, inflows of FDI in the OECD area fell by 56 per cent in 2001. The decrease in Korea was due to a contraction in investment in the manufacturing sector, while inflows into the service sector

Figure 33. **Producer support estimates and transfers to agriculture**

A. Producer support estimate[1]



B. Total support estimates in 2001[2]



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.

Table 39. **Farm size**
Number of farm households in thousands

	1995	2000
Total	1 501	1 383
More than 3 hectares	70	85
Per cent of total	4.7	6.1
More than 5 hectares	16	24
Per cent of total	1.0	1.7
Average farm size	1.32	1.37

Source: Ministry of Agriculture and Forestry.

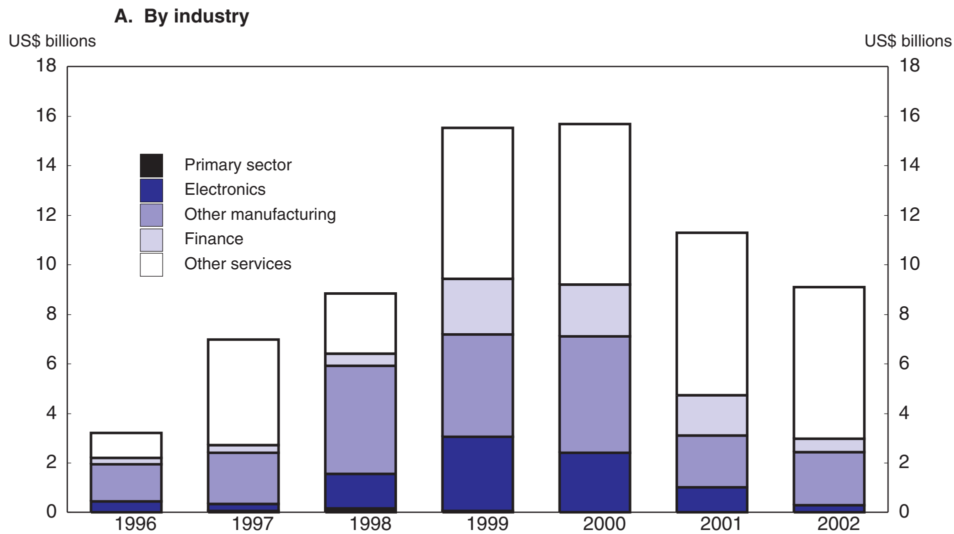
continued to rise, led by financial services (Figure 34). By source country, there were significant declines in inflows from the European Union and Japan, although that was partially offset by an increase from the United States (Panel B). Inflows of FDI in Korea fell by another 20 per cent in 2002 to $9.1 billion. The declines in 2001 and 2002 were the first since the crisis, which marked a fundamental change in the environment for direct investment in Korea. As noted in previous *Surveys*, FDI had played a minor role prior to the crisis, reflecting legal restrictions and a generally hostile attitude toward foreign investors.[104] Since 1998, though, the authorities have reduced legal restrictions and created incentives, such as tax holidays, to encourage FDI inflows.[105] Perhaps even more importantly, the negative attitudes toward direct investment changed, as reflected in the creation of the Korea Investment Service Centre, a "one-stop shop" to assist potential investors. Consequently, FDI surged to more than $15 billion in 1999 and 2000, driven by the large number of M&As and joint ventures that occurred as part of corporate restructuring. At present, 8 per cent of the manufacturing labour force is employed at foreign-invested firms.

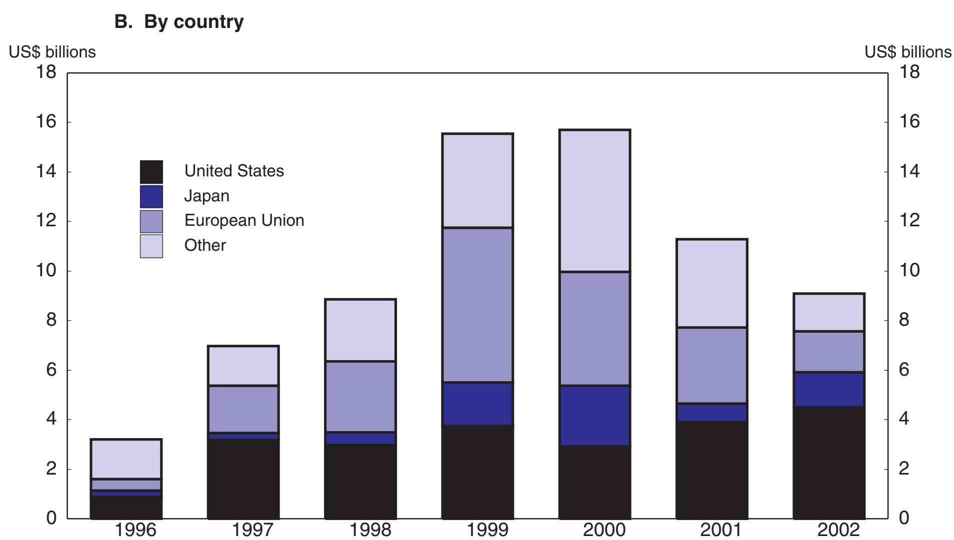
However, in 2000, after three years of significant inflows, the stock of inward direct investment relative to domestic GDP nonetheless remained the third lowest in the OECD at less than 10 per cent (Figure 35). The authorities have taken some additional steps to increase incentives for FDI in foreign investment zones (FIZ). With only two business lines – radio and television broadcasting – still closed to direct investment (out of a total of more than 1 100), the importance of legal restrictions has diminished. However, 27 business lines are partially restricted. In addition, 78 firms are designated as defence-related companies in which foreign investment requires prior approval.

While legal restrictions may remain a problem in some areas, perhaps even more important is maintaining the positive attitude toward FDI investment that has generally prevailed among officials and the public since the crisis. In addition, it is important to resolve problems such as difficult labour-management

Figure 34. **Foreign direct investment inflows**

US$ billions on a notification basis

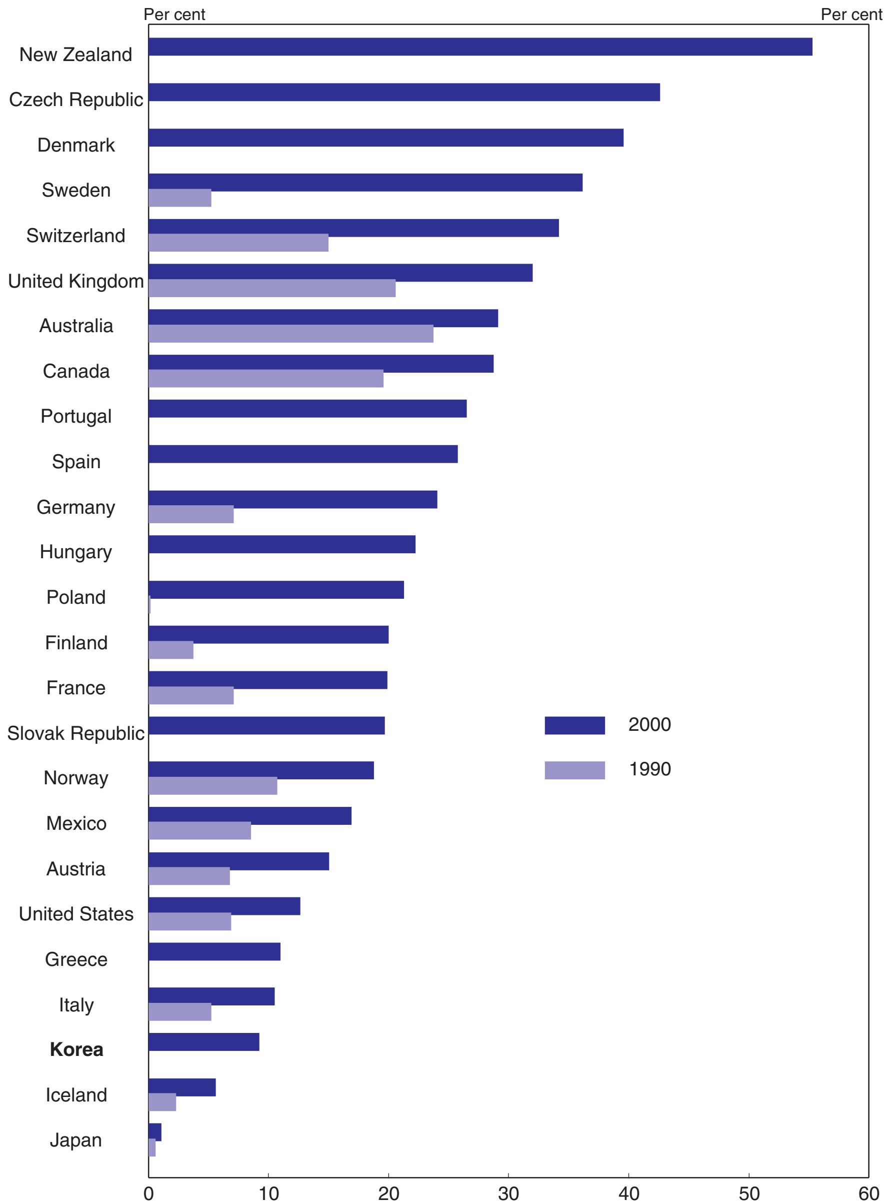




Source: Ministry of Commerce, Industry and Energy.

Figure 35. **Stock of inward forward direct investment position**

Per cent of domestic GDP



Source: OECD.

relations, unfair regulations and practices and a lack of educational opportunities, which may hinder investment inflows. In order to create an attractive investment environment that satisfies the requirements of investors, Korea has introduced additional measures since 2001 to improve the management and living environment, by addressing issues of taxation, finance, labour, education and entry into and departure from the country. Major measures include:

– Expanding the number of areas designated as business and industrial complexes for foreign companies.
– Establishing systematic procedures to investigate unfair international trade practices.
– Improving the license acquisition system for foreigners.
– Creating a "Free Economic Zone" around Incheon international airport and Busan-Gwangyang port that can act as business hubs for Northeast Asia.
– Establishing the office of Foreign Investment Ombudsman.[106]
– Developing an annual FDI Environment Improvement Plan.

As noted above, improving transparency and regulatory practices is essential to encourage investment inflows. Reforming regulations has been a priority in Korea since the crisis, resulting in a significant reduction in the number of regulations (see 2000 *Survey*). According to a survey of firms, 70 per cent have been positively affected by regulatory reform, which has been directed by the Regulatory Reform Committee (RRC). The Committee consists of seven government officials and 13 private-sector representatives and is located in the Prime Minister's office. During the past year, the focus has been on quasi-regulations that, although issued by government-affiliated organisations, are enforced to the same extent as regulations originating in the government. The quality of the Regulatory Impact Analysis statements has improved, although the Prime Minister's office still finds their quality unsatisfactory, and they are now available to the public. Despite the progress recorded in the past few years, the RRC still has an important role to play in reviewing proposed regulations and improving existing ones:

– The FSC plan announced in November 2002 to have banks set aside 10 per cent of their net profits to improve their financial structure was rejected by the RRC on the grounds that the banking laws do not authorise such a regulation. This measure would have forced banks to set aside an additional 500 billion won ($400 million).
– The Ministry of Information and Communication is preparing an auction to allocate radio frequencies to telecom companies, as recommended by the RRC. Previously, these frequencies were allocated based on the Ministry's assessment of firms' business proposals.

– The RRC instructed the Financial Supervisory Service in July 2002 to lift the ban prohibiting credit card companies from soliciting new customers on the street. Moreover, such a ban would have put around 80 000 sales persons out of work.

For the business sector, a priority is the removal of entry barriers, notably in some service sectors such as finance and areas where the public sector dominates. A second area of concern is regulations on location, which are primarily related to measures aimed at preventing concentration in the Seoul area. A third issue is controls on investment, notably those enforced against chaebol-affiliated firms. In terms of process, holding public hearings on all issues might be considered to increase the transparency of the regulatory reform process.

The land market

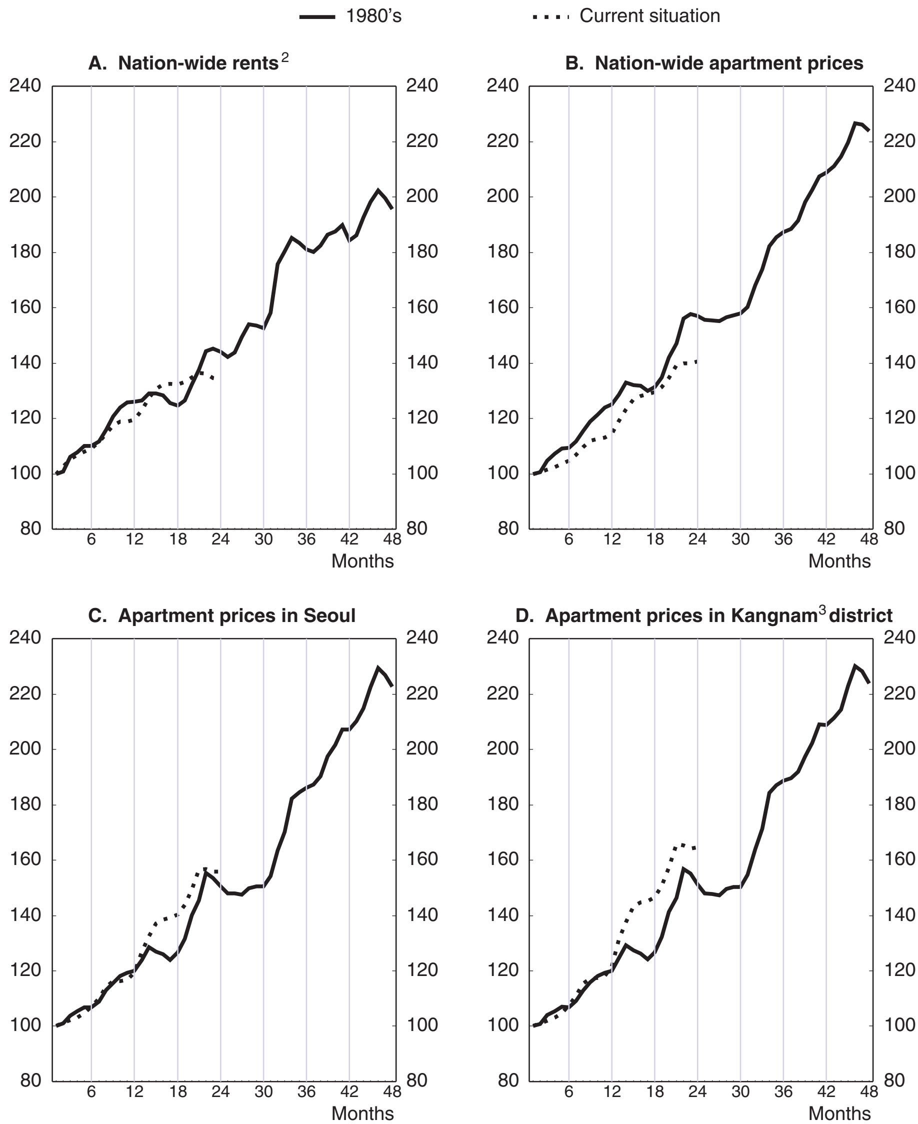
Land use is an important issue in Korea, which has the third-highest population density in the world (excluding city-states) at 485 inhabitants per square kilometre. Effective use of land is all the more important given that two-thirds of the country is mountainous and nearly half of the population is concentrated in the capital region. Korea has recently taken several initiatives to improve land use. *First*, it has conducted environmental impact assessments of Restricted Development Zones, covering more than 5 300 square kilometres (5 per cent of the national land area), in 14 urban areas. Following this review, more than a quarter was re-classified so as to permit its eventual development. *Second*, the "Act on Planning and Utilisation of the National Territory" was passed in December 2001 and will take effect in 2003. The Act is intended to develop a coherent planning system for the entire country, including semi-agricultural and semi-urban zones where planning had been weak.

Land use is an important issue in the context of the recent surge in real estates prices, which follows similar experiences in the latter part of the 1970s and the second half of the 1980s. As in the previous episode, the current cycle started with rising rents, which encouraged more households to buy dwellings, particularly in a period of low interest rates. Consequently, the rising trend of rents spread to house prices (Figure 6). Since the beginning of 2001, apartment prices nation-wide have risen 40 per cent on average, compared to a 55 per cent increase in the first two years of the last real estate boom, which started in mid-1987 (Figure 36). There are a number of similarities in the two episodes. *First*, both were preceded by a period of falling housing construction (see Chapter I). *Second*, both occurred when monetary conditions were relaxed (Chapter II). *Third*, both were linked to major international events, such as the Seoul Olympics in 1988 and the Korea-Japan World Cup and the Asian Games in 2002.

In some respects, though, the current real estate price increase differs from previous experiences, notably because it is more concentrated in the Seoul

Figure 36. **Price trends in the real estate market**

A comparison of the late 1980's episode[1] with the current situation



1. The 1980's episode began in July 1987. The current rise in real estate prices began in January 200l.
2. For apartments under the *chonsei* system.
3. A district of Seoul.

Source: Kookmin Bank.

region (Panel C). This reflects the fact that the "housing supply rate" – the ratio of households to the number of houses – has risen from 86 per cent nation-wide in 1995 to an estimated 98 per cent in 2001, thus limiting upward pressure on prices. In Seoul, in contrast, the ratio, though increasing in recent years, remains below 80 per cent. Housing price hikes have been most concentrated in the Kangnam area of Seoul (Panel D), due to demographic changes and the importance placed on education. The proportion of the population in the 40 to 50 age category is increasing rapidly, from 12 per cent in 1995 to 15 per cent in 2000. For people in this age group, the education of their children is the most important criteria in choosing a house.[107] The Kangnam area is considered to have excellent schools as well as the highest concentration of private educational institutes (*hakwon*). Thus, the real estate market boom is linked to the problems in the education system (see below).

Given that the demand for housing is concentrated in Seoul, there appear to be two options to contain the upward trend in house prices and avoid the problems that typically accompany asset price bubbles. One option would be to increase the supply of housing in the Seoul region, paying attention to the demand for high-quality education.[108] An alternative approach would be to adopt new policies to decrease the concentration in the capital region, which now accounts for 46 per cent of the nation's population. Despite policies during the past twenty years to limit the growth of the Seoul area, the concentration has continued to increase. The present approach focuses on regulatory measures to restrict the construction of new factories, universities and government institutions in the capital region. More emphasis on economic instruments, such as congestion charges, may be more effective in reducing concentration. In addition, the opening of the high-speed train system in 2004 offers an important opportunity for regional development.

During the past year, the government has introduced numerous policy packages to limit the upward trend in housing costs (Table 40). These have focused on regulatory measures, such as increased use of tax audits to discourage speculators and changes in the "parcelling system" for allocating new houses (see Chapter I). In addition, a number of measures were taken to strengthen the capital gains tax. F*irst*, the "standard price" used to calculate the tax was raised to about 90 per cent of the market price in April 2002.[109] S*econd*, the conditions under which property can be exempted from the capital gains tax were tightened.

In addition, the property holding tax will be increased from its current low level. Property taxation consists of separate levies on buildings and land. For buildings, the tax is based on standard building costs, which are set at about 30 per cent of actual building costs, with some adjustment for the value of the building.[110] The tax rate for houses ranges from 0.3 to 7 per cent depending on the size of the tax base. In the case of land, local governments apply an "Application

Table 40. **Government policies to stabilise the real estate market**[1]

Contents	Time of action
Re-introduced the compulsory ratio for the number of small houses built in new housing construction projects	December 2001
Strengthened the capital gains tax	
– Raised standard prices used to assess the tax	April 2002 and September 2002
– Shortened the period in which houses must be sold to gain an exemption	March 2002
– Lowered the threshold at which the tax is based on the actual transaction price rather than the standard price	October 2002 and November 2002
– Introduced a requirement on the amount of time one must live in a house to gain an exemption	October 2002
Expected to raise tax base of the property holding taxes (at the local government level)	First half of 2003
Favoured non-homeowners in parcelling rights	April 2002 and November 2002
Limited the right to transfer parcelling rights	September 2002
Adopted stricter requirements for reconstruction of old houses	November 2002
Strengthened tax audits	On-going

1. Excludes measures to expand the supply of housing.
Source: Ministry of Finance and Economy.

Ratio" to the standard price estimated by the Ministry of Construction and Transportation. While each local government has the authority to set the ratio, the Ministry of Government Administration and Home Affairs instructed local authorities to adopt a ratio of 32.9 per cent in May 2002. The tax base is taxed at a rate of between 0.2 and 5 per cent, depending on its amount. Given the low level of the tax base relative to market prices, the effective tax rate is quite low. According to some estimates, the effective rate of the tax on buildings is between 0.1 and 0.3 per cent, while for land, it is around 0.1 per cent.[111] International comparisons are difficult because the relation between the market price and the value assessed for tax purposes is not fixed in many countries and may vary by region. However, effective rates appear higher in several countries such as Portugal (0.8 to 1.3 per cent of market rent), Sweden (1.1 per cent of the market price) and Finland (0.55 per cent). In addition to the low level in Korea, the effective rate may be regressive despite the adjustment for the price of the building noted above and the progressive rate system. The regressive nature is due to the fact that the tax base for buildings is proportional to size. Consequently, larger dwellings in less expensive areas are assessed relatively high tax bases.[112]

The government announced two changes to raise the effective tax on property. *First*, the adjustment factor for setting the tax base on buildings is to be increased in the capital region in the first half of 2003. *Second*, the Ministry of Government Administration and Home Affairs has decided that the application ratio for the land tax should be increased, with each local government setting its own rate. While these measures should increase the effective tax rate on property, it may not reduce the regressive nature of property taxes.

Developing a knowledge-based economy

In 2000, Korea launched a three-year plan to promote the development of a knowledge-based economy (see 2000 *Survey*). One objective was to develop the information infrastructure. There has been progress in that regard as reflected in the increase in the number of Internet users to more than half of the population in 2001. Indeed, Korea has the third-highest rate of Internet use in the OECD area. Other tasks in the 2000 plan included improving the education system and strengthening the R&D framework. This section will discuss those two issues, followed by a review of policies towards SMEs and venture businesses, which play a leading role in developing new industries, and the telecommunications sector. This section concludes with a discussion of another network industry, the electricity sector.

Improving the education system

Korea's educational system has achieved remarkable success in expanding student enrolments at all levels of schooling. Universal education was achieved at the primary school level by 1970 and at the lower secondary school level by 1985 (Table 41).[113] The advancement rate to universities exceeded 70 per cent of the age cohort in 1995, a rate surpassed only by the United States. Today, the proportion of young adults between 25 and 34 years old with university degrees is one of the highest in the OECD area. This expansion has also been accompanied by exceptionally good student achievement on international standardised tests. In the OECD's PISA study, Korean fifteen-year-olds have one of the highest scores in math and reading, with strikingly low disparities between and within schools (Figure 37). These results have been achieved at a relatively low level of public spending at around 4 per cent of GDP, below the OECD average of 5¼ per cent (Figure 38). However, the level of private spending is the highest in the OECD area, reflecting the high co-payments required by the private sector (see Chapter III) and the large role of private universities.

However, there is widespread public discontent over a number of issues. *First*, class sizes at the elementary and secondary levels are the largest in the OECD area (Figure 39). *Second*, the quality of physical facilities is low, reflecting insufficient capital investment in the current framework for financing education, which discourages investment by local governments (see Chapter III). The govern-

Table 41. **Enrolment and advancement rates**

Per cent[1]

	Kindergarten	Elementary school		Middle school		High school		
	Enrolment rate	Enrolment rate	Advance-ment rate	Enrolment rate	Advance-ment rate	Enrolment rate	Advance-ment rate: academic	Advance-ment rate: vocational
1953	–	59.6	–	21.1	–	12.4	–	–
1955	–	77.4	44.8[2]	30.9[2]	64.6[2]	17.8	–	–
1960	–	86.2	39.7[3]	33.3[3]	73.3[3]	19.9	–	–
1965	–	91.6	45.4[4]	39.4[4]	75.1[4]	27.0	–	–
1970	1.3	100.7	66.1	51.2	70.1	28.1	40.2	9.6
1975	1.7	105.0	77.2	71.9	74.7	41.0	41.5	8.8
1980	4.1	102.9	95.8	95.1	84.5	63.5	39.2	11.4
1985	18.9	99.9	99.2	100.1	90.7	79.5	58.8	13.3
1990	31.6	101.7	99.8	98.2	95.7	88.0	47.2	8.3
1995	39.9	100.1	99.9	101.6	98.5	91.8	72.8	19.2
1999	37.3	98.6	99.9	98.8	99.4	97.3	84.5	38.5

1. For enrolment rates, per cent of corresponding school-aged children. For advancement rates, percentage of students who advance to the next level of schooling.
2. 1956-57.
3. 1959-60.
4. 1964-65

Source: Sun-woong Kim and Ju-ho Lee (2002).

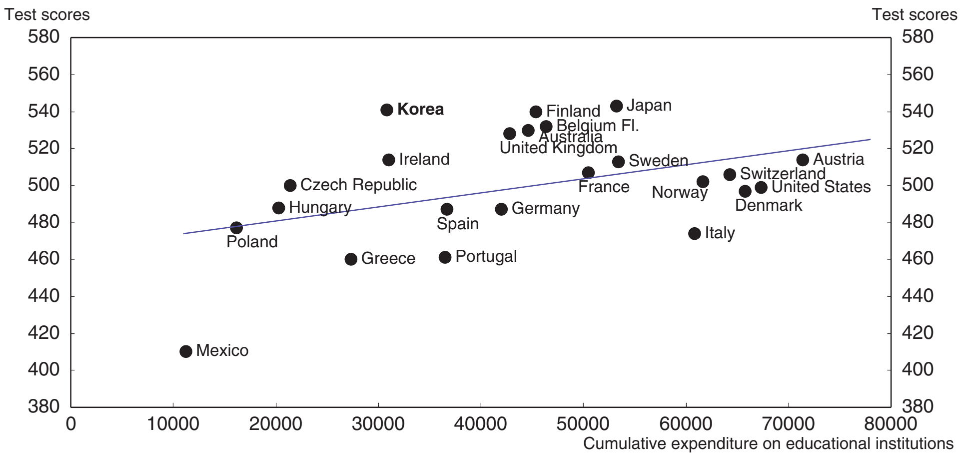
ment launched a programme in 2001 to reduce the maximum number of students per class to a still high 35 in elementary and secondary schools by 2003. The 12.3 trillion won (2.3 per cent of GDP) programme envisages building a total of 1 208 schools and expanding existing facilities. However, the shortage of teachers at the elementary school level, reflecting in part the reduction in the mandatory retirement age from 65 to 62 in 2001, has to be addressed in order to meet the target.

While large class sizes and a lack of physical infrastructure can be dealt with through more investment, issues such as the quality of teaching and the diversity of choices in schools and curriculum raise more fundamental questions. The education system has aimed at providing equal opportunities for all youth by replacing competitive entrance exams for secondary schools with the random allocation of students by lottery.[114] This "equalisation policy" is intended to discourage schools from focusing on preparing students for admission exams to secondary school. In general, however, the highly centralised education policies reduce diversity and competition among schools, which focus on preparing students for university entrance exams. School choice is further limited by the absence of independent private schools.[115] Indeed, the situation has led some Koreans to emigrate in search of better educational opportunities abroad.

Most students attend private educational institutes (*hakwon*) after school hours to prepare for university entrance exams. Expenditures for such institutes

Figure 37. **Student performance and spending per student**

Relationship between average performance on reading, mathematical and scientific literacy tests and cumulative expenditure on educational institutions[1] up to age 15

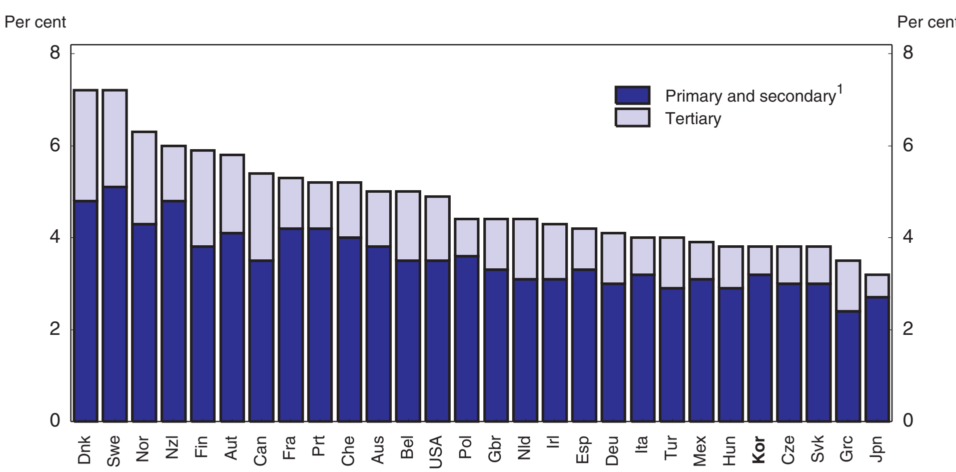


1. In US$ converted using PPP exchange rates.

Source: OECD, *Knowledge and Skills for Life: First Results from PISA 2000*.

Figure 38. **Public spending on education**

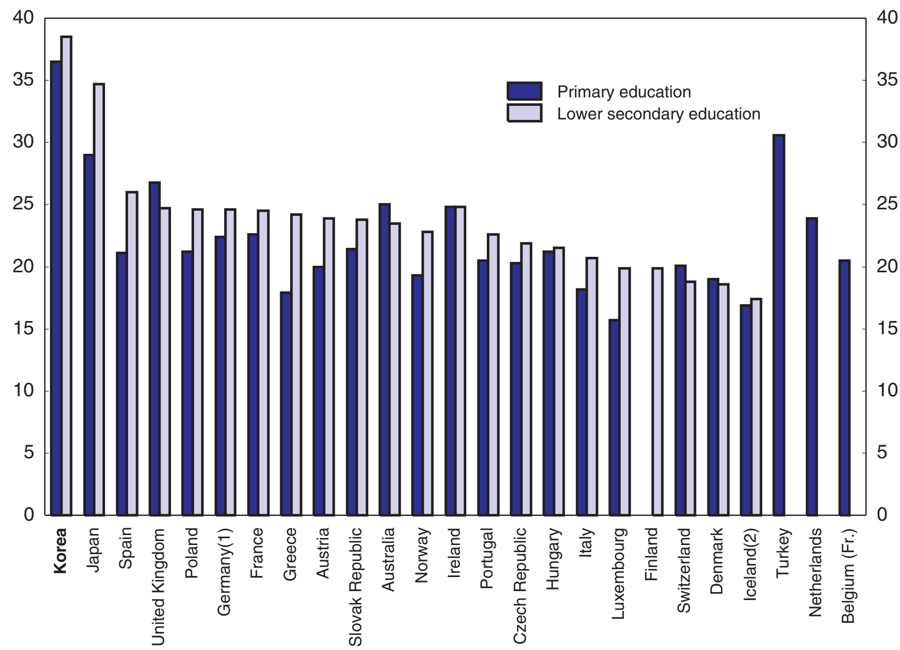
Per cent of GDP in 1999



1. Includes post-secondary non-tertiary education.

Source: OECD, *Education at a Glance*, 2001.

Figure 39. **The ratio of students to teaching staff**
Average class size in public and private institutions in 2000



1. Public institutions only.
2. Year of reference 2001.

Source: OECD, *Education at a Glance*, 2002.

account for 5 per cent of total household spending,[116] thus adding to the already high level of private spending on education. The extent of private spending on education, perhaps the highest in the world, reflects the rigid hierarchy of universities in Korea and the key role that university affiliation plays in determining career success and social status. However, the important role of *hakwon* has created a number of problems. *First*, it has undermined the goal of equalisation since students from wealthier families can spend more time and money on private tutoring. *Second*, the equalisation policy and the reliance on *hakwon* have made it difficult for teachers to function in classrooms with students of widely differing educational levels. The government has repeatedly tried to ban private tutoring by individuals, but the Supreme Court has ruled that such measures were unconstitutional. At the same time, the government has introduced policies to enhance the quality of public education.

At present, there are increasing demands from teachers' unions, parents, students and educational specialists for significant changes in the current system. Education is too important a priority to delay reform, given its importance in developing a knowledge-based economy. However, any reform must be based on a broad public consensus, given the fundamental importance of education. Past experience shows that reform efforts can be frustrated by special interest groups.[117]

One principle that should guide reform is the liberalisation of the highly centralised and bureaucratic control that limits the autonomy and flexibility of schools. Tight central supervision over school administration gives educators little incentive to cut costs or raise the quality of teaching. School officials thus need more autonomy and accountability to improve efficiency. Large classes and standardised national syllabi seriously constrain diversity in school programmes. The central government, though, has taken steps to increase the autonomy of individual schools. In 2001, it introduced school-based budgeting in public elementary and secondary schools, which grants them lump sums that they can allocate at their own discretion. These moves go in the right direction and hopefully the government's plan to make schools more autonomous by 2005 will accelerate progress. In particular, it is important that local school districts should be able to hire and fire administrators, as well as teachers. However, increased autonomy should be accompanied by greater accountability for performance.

A second principle guiding reform should be the introduction of greater diversity and competition between schools. Increased autonomy for schools would be beneficial in this regard. In addition, allowing independent private schools would provide more choice for students. While such schools were allowed in 1995, significant opposition delayed the creation of a pilot programme of independent private schools until 2000. At present, there are six independent private schools. While some argue that such schools will undermine the equalisation principle, the heavy reliance on *hakwon* noted above already makes access to education and entrance to high-ranked universities unequal. Equality could be better promoted by providing vouchers for education, while letting students choose between schools in a more competitive environment. Finally, further deregulation of university entrance requirements may allow more differentiation in curriculum at the secondary level and encourage universities to develop their own niche in the higher education market.

Tertiary education

Another challenge is to correct the serious deficiencies at the tertiary level, which is the weakest link in the Korean education system. In 2001, IMD rated the competitiveness of Korean higher education in 47th position out of 49 countries, suggesting that it is not training a future generation of workers to be productive in the emerging knowledge-based economy. This partly reflects the longstanding emphasis on primary and lower secondary schools that keeps spending on tertiary education relatively low. Indeed, at 0.6 per cent of GDP, such spending is only half of the OECD average (Figure 38). Korean universities are characterised by high student to professor ratios and substandard facilities. Moreover, government funding for universities is fragmented between different ministries with little co-ordination between them. In 2000, 70 per cent of tertiary education funding came from the Ministry of Education and 30 per cent from other ministries, resulting in overlapping investments and subjective allocation of funds (Yoo, *et al.*, 2001). Greater co-ordination would improve allocative and cost efficiency.

The share of private co-payments – at 78 per cent of total tertiary education costs – is the highest in the OECD, creating an equity issue given the lack of public loans and grants. The co-payments are primarily a feature of private universities, which account for three-quarters of tertiary education institutions and student enrolments. Public funding comprised only 4.8 per cent of private university financing, compared to 67 per cent for student-paid tuition. Many private universities have weak financial bases, in part because the government has kept tuition low. The funding situation is reversed for public universities: 58 per cent of their revenue came from the government in 1999, with the remainder paid by students.[118] The funding structure favouring public universities raises issues of efficiency and equity, especially since they offer essentially the same courses as private universities. In addition, Korea should follow the trend in other OECD countries of shifting funding away from tertiary institutions in favour of direct transfers to students, such as grants and concessionary loans, which would improve equity and efficiency (Blondal, *et al.*, 2002).

The provision of additional resources should be accompanied by governance reforms. With the planned liberalisation of tuition in 2003, stronger incentive systems to encourage better teaching and research at both public and private universities should be established. In addition, there will soon be a problem of over-capacity as the university age cohorts begin to shrink. Downsizing should be accomplished in a way that promotes the quality of tertiary education.

Improving the research and development framework

R&D is an important priority in Korea, rising to 2.7 per cent of GDP in 2000 (Table 42), one of the highest levels in the OECD area. The private sector has taken the lead, accounting for three-quarters of R&D outlays. However, spending by the public sector has also increased and R&D outlays now account for 4 per cent of government outlays. R&D spending is divided between a number

Table 42. **R&D expenditures**

	1995	1996	1997	1998	1999	2000
A. Total						
Billion won	9 440.6	10 878.0	12 185.8	11 336.6	11 921.8	13 848.5
Growth rate	19.6	15.2	12.0	–7.0	5.2	16.2
Ratio to GDP	2.50	2.60	2.69	2.55	2.47	2.65
B. By source of funds (per cent)[1]						
Public sector						
Growth rate	41.6	34.7	18.9	7.1	5.0	7.8
Share	18.8	22.0	23.4	26.9	26.9	24.9
Private sector						
Growth rate	15.4	10.5	10.1	–11.2	5.3	19.2
Share	81.1	77.8	76.5	73.0	73.1	75.0
C. By institution carrying out R&D (per cent)						
Government research institutions						
Growth rate	14.7	7.3	9.1	1.5	–5.7	2.7
Share	18.7	17.4	17.0	18.5	16.6	14.7
Universities						
Growth rate	26.6	32.2	24.8	–0.5	13.1	9.1
Share	8.2	9.4	10.4	11.2	12.0	11.3
Private industries						
Growth rate	20.2	15.4	11.1	–9.9	6.8	20.5
Share	73.1	73.2	72.6	70.3	71.4	74.0
D. By type (per cent)						
Basic						
Growth rate	4.0	22.3	12.3	–1.9	2.5	7.4
Share	12.5	13.2	13.3	14.0	13.6	12.6
Applied						
Growth rate	25.6	23.9	18.6	–17.9	7.6	9.9
Share	25.0	26.9	28.5	25.1	25.7	24.3
Development						
Growth rate	20.9	10.3	9.0	–2.8	4.8	20.8
Share	62.5	59.9	58.2	60.9	60.7	63.1

1. Total of public and private sector does not reach 100 per cent due to a small share from foreign sources.
Source: OECD.

of ministries, with Science and Technology, Commerce, Industry and Energy, Education, Defence and the Prime Minister's Office accounting for 80 per cent. The Science and Technology Framework Law of 2001 established a co-ordinating body – the National Science and Technology Council – to set priorities in this area.

In addition to the new framework law, Korea's first Five-year Science and Technology Plan, created for the 1997 to 2002 period, was updated in 2000. The Plan includes a number of short-term objectives. *First*, government R&D spending was to rise to 5 per cent of total spending in 2002. The budget, though, suggests that it will fall short at 4.7 per cent. *Second*, basic research is to be increased to 20 per cent of the government R&D budget by 2006 from around 18 per cent in 2001, to balance the strong emphasis on industrial technology development. *Third*, the number of R&D researchers is to be increased to 200 000 by 2006 from around 160 000 in 2000. Achieving this goal will be complicated by the fact that the number of young people pursuing careers in science and technology has been falling. Indeed, the proportion of students taking the university entrance exam in the area of natural science and engineering has fallen from 42 per cent in 1998 to 27 per cent in 2002. This may reflect concerns about job security in the more uncertain economic environment following the crisis.

As noted above, R&D is concentrated in the private sector, where three-quarters of such activities take place. The government encourages such activities through grants and a tax credit equal to 40 per cent of the expenses for R&D each year that exceed the average spent during the preceding four years.[119] Government Research Institutes account for about 14 per cent of R&D activities, while universities account for a surprisingly small share, given that they employ about a quarter of the nation's R&D manpower. The limited role of universities reflects the heavy teaching load of professors, poor research facilities and weak incentives to publish. The government is trying to strengthen the universities' role in research through the *Brain-Korea 21 programme*, which is spending 1.4 trillion won on selected universities during the 1999 to 2005 period. Another problem is the lack of interaction between R&D in the private sector, Government Research Institutes and universities, which is due in part to weak labour mobility. Given the rewards for remaining at the same institution, the inter-sectoral mobility of scientists and engineers remains low. A final concern is weak international linkages. According to the Ministry of Science and Technology, Korea is one of the least internationally-linked countries in science and technology in the OECD area. To increase such links, the government established the S&T *Globalisation Strategy* in 2001, which is aimed at increasing the number of foreign researchers in national programmes and establishing off-shore research activities.

Another aspect of the R&D effort was the 1999 launch of the *21st Century Frontier Programme*, a ten-year project that is to spend 2 trillion won on about twenty research projects that are expected to be a new source of industrial innovation. The programme targets aspects of life science, biotechnology, nanotechnology, new materials and environmental technology. The research is conducted by joint teams from the private and public sectors. However, the risks attached in selecting winning technologies may be similar to those in picking winning industries for investment. Moreover, there are challenges in commercialising the results as suggested by the government's decision to launch a project to commercialise the results of the national research activities in the HAN project, a decade-long programme that ended in 2002.

Encouraging a dynamic small and medium-sized enterprise and venture business sector

Small and medium-sized enterprises (SMEs)[120] make up the core of the Korean economy, accounting for 99.7 per cent of enterprises, 84 per cent of the workforce, 48 per cent of output and 43 per cent of exports. Moreover, smaller companies have an important role to play in the development of a knowledge-based economy. Korea has adopted a wide range of policies to assist SMEs, including credit guarantees, the provision of credit at preferential rates, subsidies and protection from larger companies. The authorities have acknowledged, however, that some of these programmes have restricted competition and made SMEs dependent on government assistance. The objective now is to promote deregulation and competition to bring the management of smaller companies up to world standards. In line with this goal, the number of business lines reserved for SMEs was reduced from 88 to 45 in September 2002, reflecting the fact that protecting small companies from competition has become less feasible in a market that is increasingly open to imports. Moreover, the number of goods that the government must purchase from co-operatives of SMEs was lowered from 154 in 2000 to 149 in 2002.

Public expenditures to support SMEs rose by 5 per cent in the 2002 budget. There are 88 SME assistance programmes administered by 12 ministries, reflecting the fact that each ministry is responsible for different economic activities (Table 43). The government is making efforts to co-ordinate views between ministries on major issues so as to prevent waste and duplication in assistance programmes. However, there appears to be little evaluation of the effectiveness of these programmes. It is important to use the "Integrated SME Policy Funds Database" to prevent overlap and pursue an effective follow-up of assisted companies. This database provides data on almost 100 000 companies (4 per cent of total SMEs) that receive support.

Financial conditions have improved considerably for SMEs in recent years as banks and other institutions have become more willing to lend to smaller enterprises. This reflects increased awareness of the risks associated with chaebol-affiliated companies as well as the reduced demand from larger firms focusing on reducing debt. In 2002, for example, lending to SMEs rose by 37 trillion (6 per cent of GDP), boosting their share to more than four-fifths of lending by financial institutions to the business sector. The government continues to guarantee more than a quarter of lending to smaller companies, through the Korea Credit Guarantee Fund and the Korea Technology Credit Guarantee Fund, to ensure their access to funds. Such guarantees amounted to 42 trillion won (8 per cent of GDP) in 2001 (Table 44).With a default rate of almost 4 per cent, the two funds had net losses of 1.5 trillion won, a substantial portion of their combined 4.9 trillion won of assets, which had been supplied by the

Table 43. **Programmes to assist small and medium-sized enterprises**

Billion won in 2002

Ministry	Outlays	Number of programmes	Selected programmes
Small and Medium Business Administration	2 939	18	– Restructuring support – Start-up support – Stable operation support – Regional SME support – Technology development support – Venture company support
Ministry of Commerce, Industry, Energy	947	23	– Industrial technology development support – Modernisation of distribution network support – Activation of industrial complex support – Energy saving support
Ministry of Agriculture and Forestry	113	3	– Rice processing factory support – Agricultural product processing support – Agricultural machine product support
Ministry of Information and Communication	493	8	– Information and communication technology development support – Leading technology development and distribution support – Multi-media industry support – Software development support
Ministry of Labour	173	7	– Workplace accident prevention support – Workplace environment improvement support – Company nursery facility support
Ministry of Environment	149	5	– Anti-pollution facility support – Environmental technology development support – Recycling industry support
Ministry of Culture and Tourism	260	6	– Film promotion fund support – Sporting goods development support
Ministry of Science and Technology	206	4	– Technology development support – New technology project investment support
Ministry of Marine and Fishery	80	3	– Marine product distribution support – Fishing net support
Ministry of National Defence	17	1	– Defense industry support
Ministry of Construction and Transportation	140	1	– Standardising construction material support – General freight terminal construction support
Ministry of Health and Welfare	8	2	– New drug development support
Total	**5 525**	**88**	

Source: Small and Medium Business Administration.

Table 44. **Credit guarantees for small and medium-sized enterprises**
Trillion won[1]

	(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
2001	41.7	1.6	3.9	1.5

1. Guarantees are provided by the Korean Credit Guarantee Fund and the Korea Technology Credit Guarantee Fund.
Source: Small and Medium Business Administration.

government and financial institutions. In 2002, new guarantees of 36 trillion won are planned.

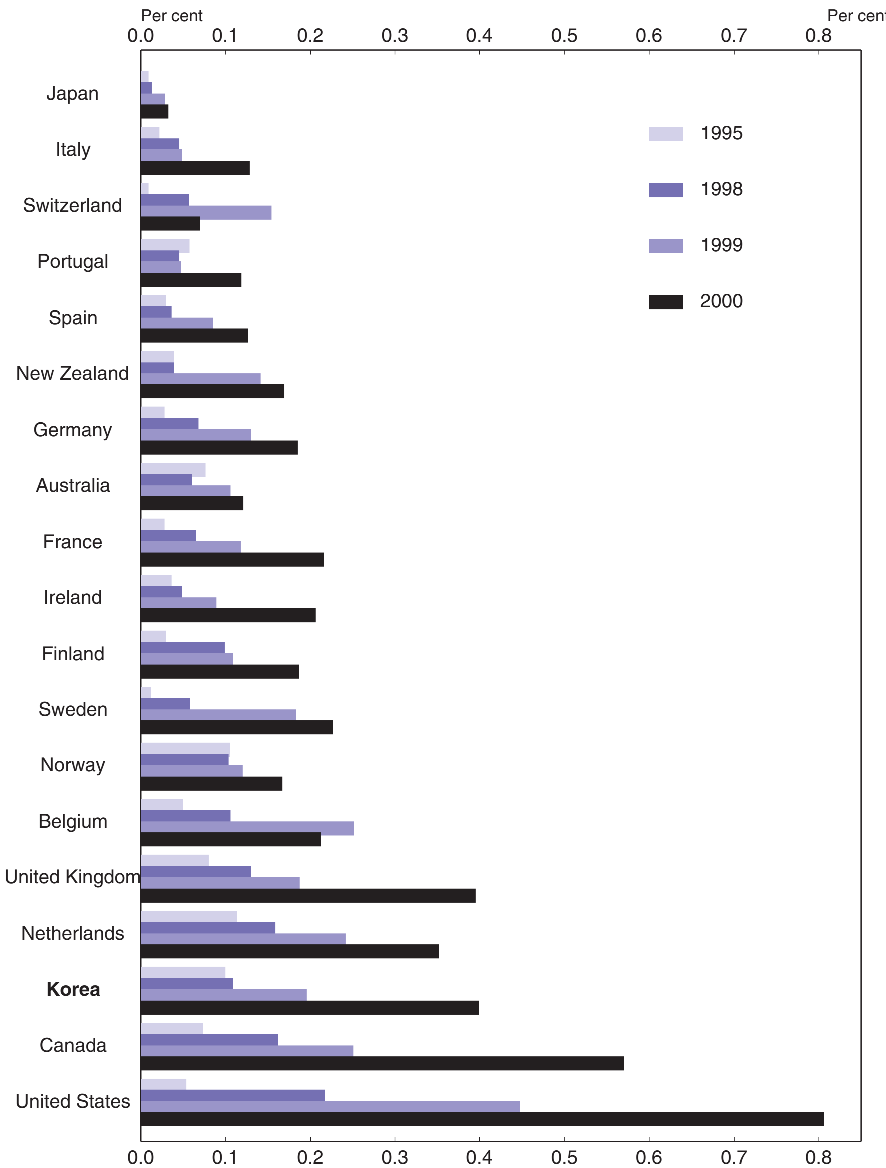
The most dynamic segment of SMEs is driven by the venture capital market.[121] With venture capital investment amounting to around 0.4 per cent of GDP in 2000, Korea ranked third among OECD countries (Figure 40). By sector, almost two-thirds is concentrated in the information and communications technology sector (Figure 41). The government plays a key role in providing equity, both directly and through generous guarantees for private equity and tax incentives. The authorities' role in the development of a venture business sector is part of its effort to accelerate restructuring of the business sector and shift the weight of the economy from the large chaebol to new start-ups in knowledge-based industries. However, such support did not prevent the severe slump in this sector, as in many other countries. Indeed, the venture index in the KOSDAQ stock market is now about 85 per cent below its peak in March 2000.

Venture capital is invested through *venture capital firms* (VCF) and *limited partnership funds* (LPFs). A VCF is a corporation that provides capital primarily to start-ups and is eligible for government assistance in the form of low-interest loans, equity funding and tax benefits. The number of VCFs reached 145 in 2001 and accounted for 53 per cent of venture capital investment. VCFs have established and operate most of the 395 LPFs, which are pooled funds in which each investor benefits in proportion to the amount invested. In addition, VCFs have provided about 17 per cent of LPF funding.

The government has provided about 1.5 of the equity of the VCFs and 20 per cent of the LPFs' resources. The significant government support helped the venture capital industry to weather the downturn that affected most other OECD countries in 2001. The Small and Medium Business Fund (SMBF), under the

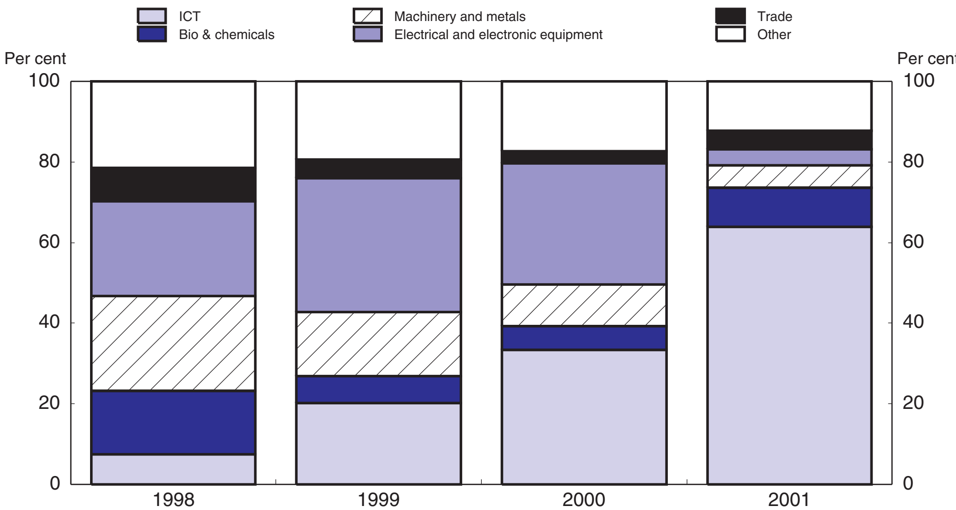
Figure 40. **Venture capital**

Investment in early stages and expansion as per cent of GDP[1]



1. "Country of management" approach.
Source: Baygan, 2003.

Figure 41. **Korean venture capital investment by sector**



Source: Baygan, 2003.

responsibility of the Small and Medium Business Administration, directs most of the government equity funding. Most important is Dasan Venture, established in 2001 to provide seed money and management know-how to promising start-ups. Between 1998 and 2001, the SMBF also invested in 131 LPFs, which receive additional public money from various special funds. For example, the Information Promotion Fund has established LPFs to invest in start-ups in the ICT sector. In addition to equity investments, the government provides equity guarantees through the Korea Technology Credit Guarantee Fund. The Fund guarantees 70 to 100 per cent of the equity investments in technology-intensive small firms.

Besides the government, the other players in the venture capital investment sector are large companies, which own 11 per cent of the equity of VCFs. The roles of institutional investors, such as pension funds,[122] and individuals (business angels) are relatively minor. In total, business angels account for 8 per cent of investment in VCFs and LPFs, despite the tax advantages offered.[123] The foreign share is even smaller at 5 per cent. However, this proportion may increase given the recent decision to abolish the requirement that foreign investors obtain special approval for investment in venture business and instead treat it as regular direct investment. At present, though, the players in the venture capital industry tend to be interlinked and publicly financed.

The venture capital industry is centred on firms that qualify as venture businesses. Between 1997 and November 2002, firms were so designated by the Small and Medium Business Administration if they met one of four criteria; *i*) they sell goods produced using patents; *ii*) R&D spending exceeds 10 per cent of revenue; *iii*) they have received equity investment from venture capitalists; and *iv*) they use advanced technology as verified by independent entities. Of the 10 000 firms designated as venture businesses by mid-2001, around half qualified under the fourth criteria. Firms that qualify receive a number of benefits in addition to the tax benefits available to all SMEs.[124] *First*, they get preferential treatment in qualifying for the KOSDAQ stock exchange. Specifically, they are exempted from requirements as to the number of years of operation, minimum capital account, profitability and liability ratios. As a result, venture businesses account for nearly half of the firms listed on the KOSDAQ and nearly 70 per cent of the trading. *Second*, venture businesses are more likely to be included in government technology projects and other programmes.

In general, the venture business sector has been a dynamic area of the economy, with the growth of sales, employment and exports exceeding that of other firms (Table 45). However, it appears that a number of unqualified firms have attempted, and in some cases, succeeded in being designated as venture businesses, reducing the credibility of this sector among investors. In mid-2001, the government announced that it was reviewing the status of 1 000 venture

Table 45. **Venture businesses**

A. Profitability and employment (per cent)

	1999			2000		
	Sales growth	Current profits[1]	Employment growth	Sales growth	Current profits[1]	Employment growth
Venture businesses	36.8	7.3	18.8	44.3	4.9	24.3
SMEs	10.8	2.9	1.4	12.5	3.3	3.8
Big companies	6.6	1.0		16.7	0.3	

B. Exports

	US$ billion			Growth rates		
	2000	2001	2002	2000	2001	2002
Venture businesses	4.9	5.6	5.6	42.8	14.5	28.1
SMEs	63.5	64.6	55.3	29.5	1.7	2.8
Big companies	108.6	85.7	77.0	15.1	–21.1	6.4

1. As per cent of sales.
Source: Small and Medium Business Administration.

businesses to see if they still met one of the four criteria. The objective is to protect investors against firms that should not be included in the venture business sector. Moreover, some firms that originally qualify may not follow through on their business plans. With 11 000 venture businesses by the end of 2001, and perhaps as many as 50 000 by 2005,[125] the task of monitoring venture businesses is enormous and likely to increase.

These challenges and problems raise the question of whether it is necessary or beneficial to have such extensive government involvement in the venture capital industry. Such intervention appears to have developed a venture business sector that is stable, rather than risky and high return in nature. Indeed, only around 500 venture businesses have shut down operations thus far, a low death rate considering that there are more than 11 000 such companies, many in their early stages of operation, and the more than 80 per cent fall in KOSDAQ. This suggests difficulty in closing companies with government equity and guarantees. The market may be mature enough to identify the companies with promising potential without the government's certification, suggesting that it may be unnecessary to continue with the current framework until 2007, when it is scheduled to end. Moreover, the designation of weak companies as venture businesses by authorities anxious to expand this sector tended to devalue the whole market. The Small and Medium Business Administration has announced reforms to overcome the problems in the current framework. *First*, the criteria for designation as a venture company were tightened in November 2002, by making the fourth criterion – the use of advanced technology – mandatory. *Second*, the monitoring of designated companies is to be enhanced and unqualified companies expelled. *Third*, the assistance policies are to be more market-oriented.

Promoting competition in the telecommunications sector

Telecommunications has been an important engine of growth despite a relatively high degree of government intervention and insufficient competition. The authorities have taken some major steps, including the privatisation of Korea Telecom, the dominant firm with market shares of 98.5, 79.2 and 56.8 per cent in the local, national long-distance and international telephone service markets, respectively. The ceiling on foreign ownership in Korea Telecom was raised from 33 to 49 per cent in April 2002, the same limit as for other service providers, and the government's remaining 28 per cent share was sold in May. To allow fair competition in the local market, a framework for the unbundling of the local loop and sharing the broadband Internet market was introduced. Competition will also be facilitated by the introduction of number portability for local telephone services in certain areas in the first half of 2003 and nation-wide in 2004. The framework for setting interconnection charge was revised in April 2002, resulting in a 23 per cent decline.[126] By 2004, the government plans to shift from the *fully distributed cost* *approach* for setting interconnection charges to the *long-run incremental cost* (LRIC) methodology, which is used in most OECD countries. The cost of entry for new fixed-line providers was lowered in 2002 by abolishing up-front contributions. Finally, the mandatory contributions from service providers for R&D was reduced from 1 per cent of revenue in 2001 to between 0.5 and 0.75 per cent in June 2002.

While there has been progress, additional steps are necessary to enhance competition in the telecommunications sector, which would promote the development of a knowledge-based economy. *First*, an independent regulator, with authority over licensing, pricing and other regulatory safeguards, is needed to ensure a smooth transition from a monopoly to a competitive market. The Korea Communications Commission, a candidate to play this role, is located within the Ministry of Information and Communication (MIC). *Second*, the current system of *a priori* examinations of applicants should be replaced by a class-licensing system or the establishment of minimum standards in order to reduce entry barriers. *Third*, the authorities should introduce price-cap regulation in markets where Korea Telecom remains dominant, such as local calls, leased lines and national long-distance. However, price controls in the mobile market should be abolished. Korea is one of the few OECD countries that regulate prices in the mobile market, reflecting the goal of preventing predatory pricing by the largest firm.[127] *Fourth*, the limits on foreign ownership of service providers should be raised. *Fifth*, the government should avoid intervening in the decisions of telecommunication service providers and end the emphasis on promoting a domestic manufacturing industry.

Promoting competition in the electricity industry

In an effort to promote the efficiency of the electric power industry, the government has initiated the restructuring of the Korea Electric Power Corporation (KEPCO). Since the passage of the implementing legislation in December 2000, the ten-year plan has been advancing, though somewhat behind the original time schedule (see 2000 *Survey*). In April 2001, the generation sector of KEPCO was split into six subsidiaries and the international bidding process for the sale of the Korea South-East Power Co. is currently underway. The design of the two-way bidding pool has been completed. The distribution sector of KEPCO will also be formally divided in April 2004 after a yearlong test-run, which starts in April 2003. In February 2002, the labour union of the generation sector staged an illegal strike. However, the government and the generating companies took a firm stance in dealing with the strike, demonstrating the strong commitment to restructuring the electricity industry.

The Korea Electricity Commission was established in April 2001 to execute the reform plan and monitor and regulate the electricity market. The Commission, although legally independent, is operating as an institute within the Ministry of Commerce, Industry and Energy (MOCIE). The authorities also introduced in

January 2003 a first step towards a cost-based tariff system that is aimed at minimising cross-subsidisation. In addition, a new government fund was established in June 2001 to support public objectives, such as keeping reasonable electricity tariff levels for consumers in remote areas, thus making such support more transparent.

Assessment of progress in structural reform

Progress in structural reform has made an important contribution to Korea's strong growth performance since the 1997 crisis. However, there remain important items on the agenda that should be addressed to maintain Korea's high growth potential in the face of slowing inputs of labour and capital. A key priority should be to accelerate the restructuring of the corporate sector through ensuring that the corporate governance framework is effectively implemented and by continuing to improve the bankruptcy framework. Perhaps most important in this regard is the privatisation of the state-owned banks, which as a group, are now in good financial health. At the same time, it is necessary to ensure good prudential supervision to deal with potential emerging problems of asset quality and to exercise prompt corrective action over the non-bank financial institutions. Restructuring will also be enhanced by labour market flexibility. The growing share of non-regular workers creates concerns about the development of a dualistic labour market, which would pose both equity and efficiency concerns. Such problems may be avoided by ensuring that the social safety net covers non-regular workers and that there is adequate employment flexibility for regular workers.

Increasing Korea's openness to international competition will also help promote productivity growth. The trend toward trade liberalisation should continue, particularly in the service and agricultural sectors. Shifting support for farmers from trade-distorting measures to direct payments is crucial in this regard. The growing stock of foreign direct investment is also a positive development and the authorities should ensure an open environment that will continue to attract investment inflows. Regulatory transparency is a key aspect in maintaining such an environment, making the work of the Regulatory Reform Committee crucial in this regard. Competition policy should also be strengthened, in part through the "Clean Market Project" (Annex II).

Korea has developed a large and vibrant information and communications technology sector. Further progress in the development of a knowledge-based economy will be promoted by improving the education system and the framework for R&D. While the education system shows excellent results in terms of student performance, it can be improved by expanding the scope of choices in schools and curriculum. Granting schools more autonomy may help develop more competition and diversity at the secondary level, while using vouchers to address equity concerns. The weakest part of Korean education is the university system and this should be upgraded to make it an effective part of the R&D system. Moreover, increased mobility between researchers in academia, the private sector and government institutes would likely boost the returns from investment in science and technology. Small companies, particularly venture businesses, have a key role to play in the development of new industries. While venture businesses have proven to be dynamic, there is a tendency for excessive government involvement in providing financing and guarantees. Encouraging the participation of other participants, such as institutional investors and individuals, would help develop vibrant new enterprises.

Sustainable development in Korea

There is growing concern that long-run sustainable development may be compromised unless measures are taken to achieve balance between economic, environmental and social outcomes. This section looks at two specific issues of sustainable development – air pollution and waste management – that are of particular importance for Korea.[128] In both cases, indicators are presented to measure progress and the evolution of potential problems, and an assessment is made of government policies in that area. The section also considers whether institutional arrangements are in place to integrate policy-making across the different elements of sustainable development (see Box 10).

Air pollution

Main issues

Air quality has gradually improved over the past decade due to a variety of air pollution reduction policies, including promoting the use of cleaner fuel, low sulphur oil and lower emission vehicles. However, air pollution continues to have adverse health effects. Concentrations of various pollutants remain higher than in many other OECD countries, making this a pressing problem. Policies have to be judged not just by whether they reduce pollution but by whether the marginal costs of new policies are less than the benefits and whether the policies are implemented in a cost-effective way.

Performance

As in many other countries, emissions of sulphur dioxide have fallen considerably in the 1990s (Figure 42). However, emissions of nitrogen oxides increased substantially, mainly as a result of a rapidly growing reliance on motor vehicles,[129] while emissions of particulate matter have been roughly stable. In relation to GDP, emissions of major air pollutants are on a par with the OECD average, after having fallen slightly faster (Table 46). However, concentrations of conventional air pollutants are high compared to the rest of the OECD (Figure 43).[130]

Box 10. The integration of environmental concerns into government policy*

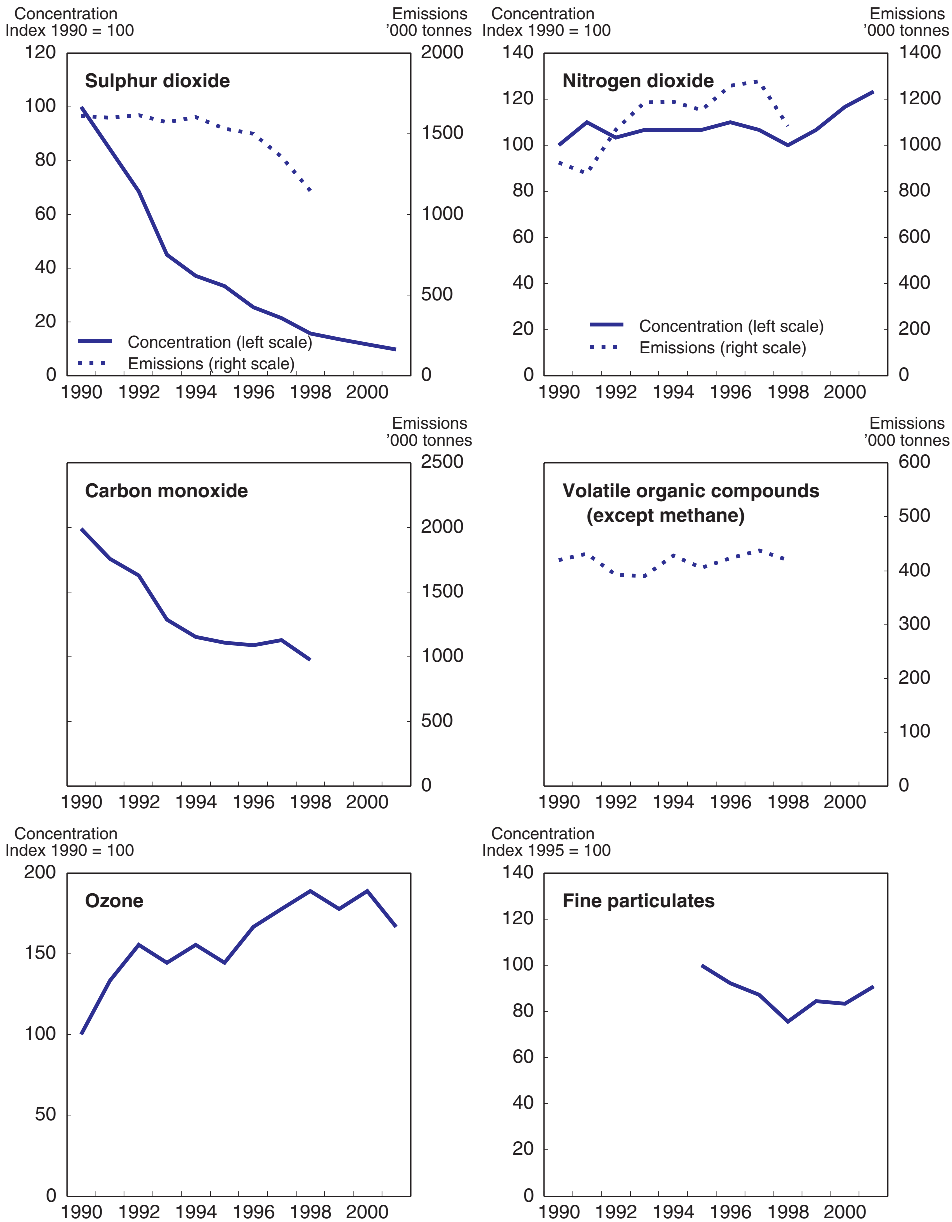
Environmental issues and sustainable development did not become a key part of the national policy agenda until relatively recently. Although framework legislation in these areas was introduced in the late 1970s and 1980s, it was not until the 1990s that supporting acts and ordinances imposed more binding rules to protect the environment. Policy integration is enhanced by the Basic Environmental Policy Act, which requires that all levels of government prepare five and ten-year environmental management plans. The Ministry of the Environment reviews these plans and presents annual reports on progress to parliament. The Korean Environment Institute prepares environmental impact assessments on behalf of the Ministry for major policies and projects and evaluates environmental policy. To this end, cost-benefit analysis has been used occasionally and new guidelines are being developed. Sustainable development plans were introduced in 1996 and updated in 2000.

In 2000, a Presidential Commission for Sustainable Development was established in order to set major policy directions and formulate plans to promote the simultaneous consideration of development and preservation issues. The objective is to reorient policies and establish plans from a longer-term perspective based on a balanced consideration of economic, social and environmental values. The Commission aims to break away from the two extremes of past environmental policies that disregarded economic considerations, and development policies that ignored their impact on the environment. The Commission has the authority to review major mid-to-long-term state policies and programmes prior to their adoption. Sustainability reviews of policies are now mandatory from the design stage in the following areas: major and basic mid-to-long-term state plans; large-scale state development projects affecting large land areas; and major policies and plans approved by other committees.

The division of responsibilities between the Ministry of the Environment and local authorities for the implementation and monitoring of environmental policies was revised in late 2002. Under the new system, the local authorities are responsible for issuing permits for pollution-emitting facilities, monitoring and inspection. Given the local authorities' differing priorities, conflict of interests in monitoring their own performance, and limited experience in environmental issues, this allocation of responsibilities constitutes a significant weakness in environmental policy. However, regional offices of the Ministry of the Environment now have enhanced power in overseeing the implementation of environmental policy by the local authorities. Non-governmental organisations play an active role in environmental policy, challenging all levels of government over proposed projects and policies, or lack of policies. This has prompted government action in several areas, but has also imposed constraints on improving environmental outcomes in some cases, notably for the siting of waste disposal units.

* The sections of this report dealing with air pollution, waste management and ensuring sustainable retirement income (in Chapter II) are inputs into the Organisation's follow up on Sustainable Development as mandated by the Ministerial Council decision in May 2001.

Figure 42. **Performance indicators: air pollution**



Source: OECD.

Table 46. **Performance indicators: air pollution**

	Change in emissions per unit of GDP, 1990-99[1]			Level of emissions, 1999[2]			Improvement in productive efficiency, 1990-1999	
	Sulphur dioxide	Nitrogen dioxide	VOC	Sulphur dioxide	Nitrogen dioxide	VOC	Sulphur dioxide per unit of electricity output	Nitrogen dioxide per vehicle
	Per cent per year			Grams per dollar of GDP				
Australia	3.1	–1.9	–2.9	3.9	5.5	4.1	n.a.	n.a.
Austria	–10.2	–3.5	–6.5	0.2	0.9	1.2	–77.2	–32.5
Belgium	–9.2	–3.6	–4.8	0.8	1.2	1.1	–64.4	–22.6
Canada	–5.3	–2.8	–2.9	3.2	2.6	3.5	n.a.	n.a.
Czech Republic	–19.1	–6.6	–5.7	2.1	3.0	1.9	n.a.	n.a.
Denmark	–14.2	–4.9	–5.2	0.4	1.6	1.0	–79.8	–38.9
Finland	–13.0	–3.8	–4.1	0.7	2.1	1.4	–65.3	–28.7
France	–8.3	–3.8	–5.1	0.5	1.2	1.4	–52.0	–37.8
Germany	–20.1	–7.1	–8.8	0.4	0.9	0.9	–85.2	–43.7
Greece	–1.4	–0.3	–0.2	3.6	2.5	2.6	–4.6	–22.3
Hungary	–6.1	–1.1	–3.8	5.5	2.1	1.4	n.a.	n.a.
Iceland	–1.1	–1.7	–4.9	3.7	3.9	1.4	n.a.	n.a.
Ireland	–8.1	–6.3	–7.9	1.7	1.3	1.0	–35.8	–19.0
Italy	–7.6	–4.3	–4.4	0.8	1.2	1.4	–52.8	–31.3
Japan	–1.7	–1.3	–2.4	0.3	0.5	0.6	n.a.	n.a.
Korea	**–8.9**	**–3.3**	**–9.7**	**1.6**	**1.9**	**0.2**	**n.a.**	**n.a.**
Luxembourg	–18.7	–9.1	–7.9	0.2	0.9	0.9	n.a.	n.a.
Mexico	–0.4	–0.9	–9.3	1.6	1.6	1.4	n.a.	n.a.
Netherlands	–10.1	–6.5	–8.8	0.3	1.1	0.7	–50.2	
New Zealand	–0.4	–0.5	–1.6	0.7	3.0	2.6	n.a.	n.a.
Norway	–9.7	–2.8	–1.8	0.2	2.0	3.0	n.a.	n.a.
Poland	–10.0	–6.6	–4.8	5.1	2.8	2.2	n.a.	n.a.
Portugal	–2.1	–0.9	0.1	2.4	2.3	3.1	–17.7	–18.3[3]
Slovakia	–13.7	–7.4	–5.6	3.3	2.4	2.0	n.a.	n.a.
Spain	–5.8	–2.1	–3.5	2.2	1.7	3.6	–39.4	–14.4
Sweden	–8.3	–4.3	–3.9	0.3	1.3	2.1	–26.0	
Switzerland	–6.0	–5.4	–6.3	0.1	0.5	0.9	n.a.	n.a.
Turkey	3.2	1.0	0.0	3.4	2.3	1.6	n.a.	n.a.
United Kingdom	–13.9	–7.9	–6.6	1.0	1.3	1.4	–72.8	–51.0
United States	–5.5	–2.5	–4.7	2.0	2.7	1.9	n.a.	n.a.
European Union	–11.1	–5.0	–5.3	0.8	1.2	1.5		
OECD Europe	–10.1	–4.8	–5.0	1.2	1.4	1.5		
OECD	–6.7	–2.9	–4.4	1.5	1.9	1.6		

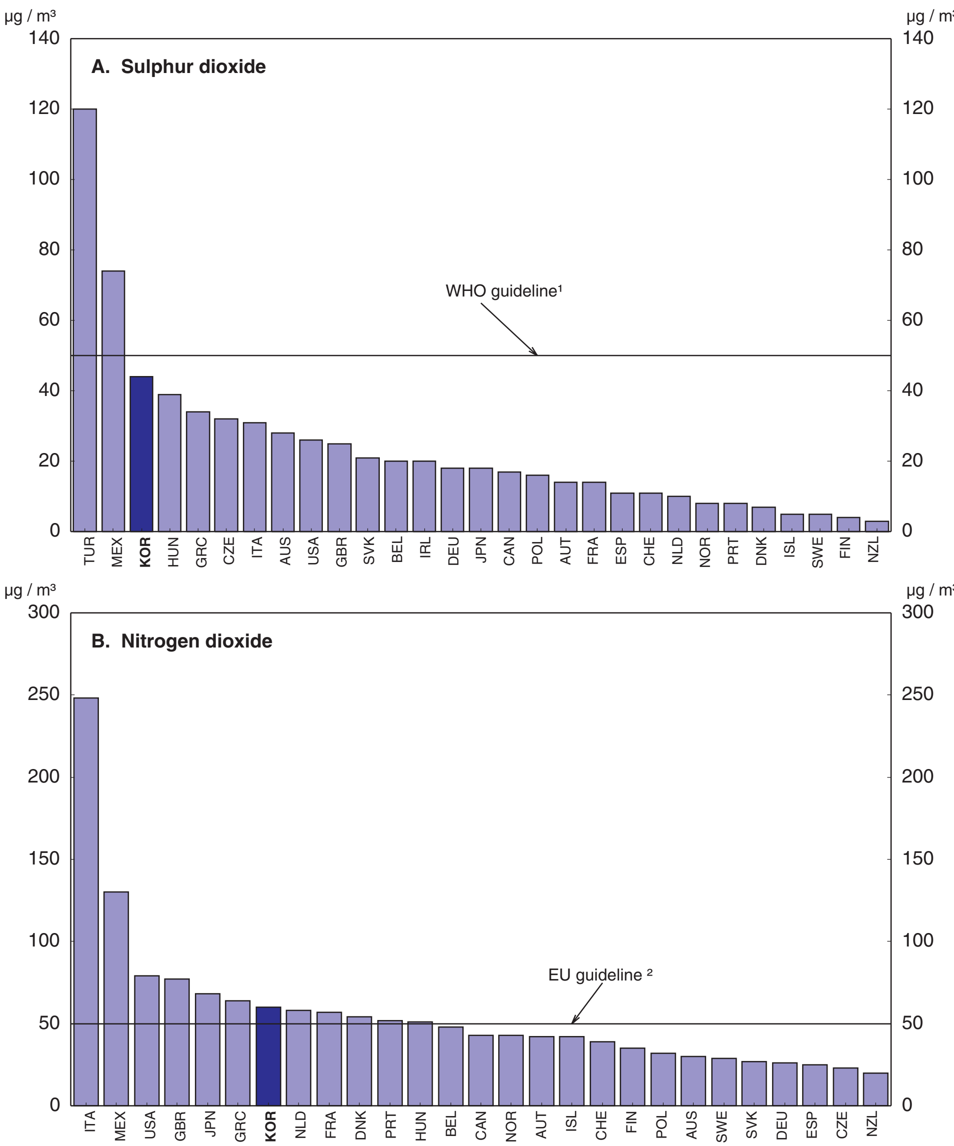
Note: For the OECD average, in the case of countries with missing data for either 1990 or 1999, data for the latest year has been substituted. Estimated data for 1999 represents about 5 per cent of the area total. GDP is measured in 1995 prices. Cross-country aggregations use 1995 purchasing power parity exchange rates.

1. Australia: 1995-99 for sulphur dioxide; New Zealand: 1990-98; Mexico: 1994-98 for sulphur dioxide and VOC and 1990-98 for nitrogen dioxide; Slovakia: 1990-98 for sulphur dioxide and nitrogen dioxide and 1990-97 for VOC.
2. 1998 for Mexico, New Zealand and sulphur dioxide and nitrogen dioxide in Slovakia; 1997 for VOC in Slovakia.
3. Between 1990 and 1997 for Portugal.

Source: Cooperative Programme for Monitoring and Evaluating of Long-Range Transmission of Air Pollutants in Europe (EMEP); World Health Organisation; OECD.

Figure 43. **Air pollutant concentrations in major cities of OECD countries**

1995



1. Mean value for one year.
2. Median of annual data of one hour values for concentrations.

Source: World Bank.

Annual average ozone concentrations rose considerably during the 1990s (Figure 42), though there was a slight drop in 2001 that may be related to the downward trend in transport-related emissions.[131] The high levels of air pollution have had grave consequences on health, with the estimated impact on mortality and morbidity valued at up to $50 billion (12 per cent of GDP) annually.[132]

Policies

The current system for addressing air quality mainly relies on the application of command-and-control measures for point-source emitters. Enterprises are required to apply for permits from regional offices of the Ministry of the Environment or from local authorities, which establish permitted emission levels.[133] More recently, the government has lowered the permitted emission threshold to induce polluters to increase their abatement efforts. In areas where air pollution has been particularly high, enterprises have been required to install telemetric monitoring equipment to give a more accurate and timely picture of actual emissions. Infringement results in an emission charge that escalates with each violation. Enforcement has been targeted at the major polluters with inspections being more frequent for large plants and plants that have violated emission limits in the past (Aden, Ahn and Rock, 1999).

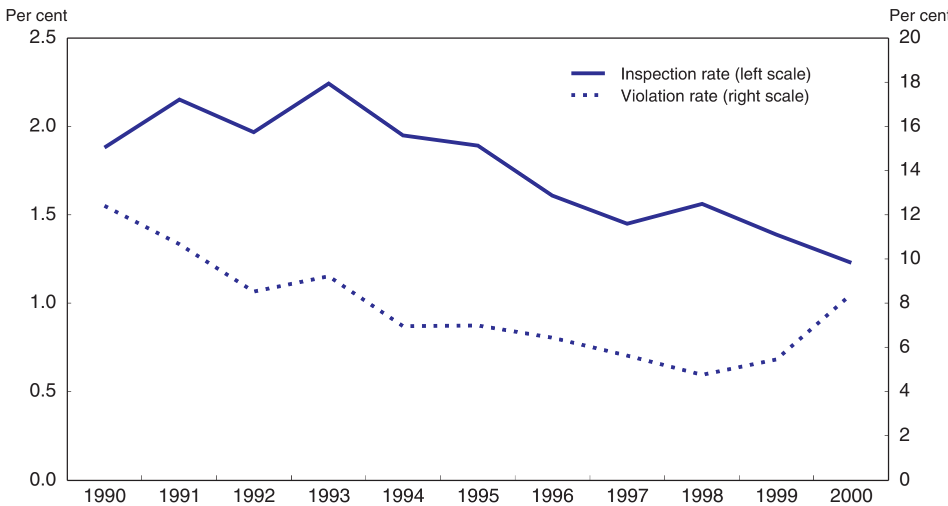
The regulatory system for point-source emitters is reasonably comprehensive. However, economic incentives need to be strengthened to enhance efficiency and enforcement should be tougher.

– Marginal abatement costs vary considerably between enterprises within and across sectors, implying that control methods for point-source emitters are inefficient. For example, marginal abatement costs in the power generation sector vary by over 40 times for particulate matter, by 14 times for nitrous oxides, and by five times for sulphur oxides (Kwon and Yun, 1999), suggesting that trading systems would help to equalise abatement costs.

– Violations of regulations have been numerous (Figure 44). This suggests that non-compliance fines have been too low to be a significant constraint.[134] A particular problem is the emission of dioxin from waste incinerator plants.[135] In this case, local governments both operate and monitor local incineration plants, perhaps creating a conflict of interests.

Recently proposed measures are aimed at harnessing market forces to reduce the costs of abatement. The Seoul Metropolitan area is planning to introduce a cap-and-trade system that will involve both point and mobile source emissions.[136] This policy innovation can potentially equalise marginal abatement costs, thus attaining emission reductions at least cost. The extension of the trading system to cover mobile sources is particularly important in Seoul where a small number of diesel-powered heavy-duty buses and trucks (3 per cent of the total) account for one-third

Figure 44. **Air pollution inspections and violation rates**



Source: Korea National Statistical Office.

of total vehicular emissions. The government is considering extending the scheme to other regions, depending on the results of the preliminary trial in the capital region.

Transport-related pollution is the major problem for urban air quality, generating the bulk of emissions of particulate matter and ozone precursors.[137] Diesel commercial vehicles account for the majority of such emissions, but receive favourable treatment in tax and emission control legislation.[138] Although the Air Quality Preservation Law tightens standards for sulphur content of fuels, it nonetheless allows standards to be above the level that allows the use of an efficient filter system. The government is committed to reducing the sulphur content of fuel in line with planned standards in the EU, which will require substantial further reductions.[139] In addition, current standards for the emission characteristics of vehicle engines impose considerably stricter limits for petrol than diesel.[140] Given that cost-benefit studies suggest that benefits from a large reduction in particulate emissions from diesels outweigh costs markedly,[141] such differentials are not justified. Finally, diesel fuel prices are only half of petrol fuel prices, although the government is reducing this gap by raising diesel fuel prices to 75 per cent of petrol fuel prices by 2006.

A major initiative is to ensure that, by 2007, all city buses are fuelled by compressed natural gas (CNG), thereby reducing pollution. This scheme is projected to have a direct cost of over $600 million for the purchase of buses and the construction of CNG refuelling stations, in addition to considerable tax breaks.[142] While this project will reduce emissions of air pollutants, it remains to be seen whether this is a cost-efficient measure. A cost-benefit analysis should be undertaken to compare the costs of CNG and requiring the use of filter systems on buses, which could also address the remaining problems stemming from emissions of other diesel vehicles.[143] Furthermore, policies barely deal with congestion, which both contributes to heightened emission levels (Transportation Research Board, 2002) and incurs significant economic costs estimated at around $10 billion annually (M.K. Lee, 2001). Although the government has introduced tolls on two tunnels, an effective road management scheme needs to extend road pricing much further.[144]

Conclusions

Air pollution remains a significant problem, despite some successes in reducing certain emissions. The current system of point-source emission control has weaknesses, suggesting that the Seoul emission permit-trading scheme should be extended to other major metropolitan areas. The quality of monitoring needs to be upgraded for it to act as the base for a trading system. The government should strengthen enforcement by increasing the role of independent inspections, and separating the monitoring and ownership functions of local authorities. While such reforms would be important, measures are most needed in the field of transportation. Taxation should be altered to reflect better the externalities of the use of diesel vehicles based on their emission characteristics, while engine emission and fuel standards should be tightened further towards the levels demanded of petrol engines – measures that seem to have very good cost-benefit ratios in other countries. In particular, heavy-duty vehicle emission standards should be brought down further, bringing them into alignment with those in other countries, such as the United States or the European Union. Finally, better traffic management policies, including more extensive road pricing, is an important means of reducing both pollution and congestion costs.

Waste management

Main issues

Waste disposal, if not handled correctly, can cause long-lasting damage to the environment and human health. In Korea, limited available space for landfill and strong public opposition to the construction of new landfill and waste incineration sites has led to a policy of targeting waste minimisation and recovery. Weak enforcement of regulations has also resulted in problems of hazardous waste disposal. Continued rapid growth of consumption may add to pressure on the waste management system.

Performance

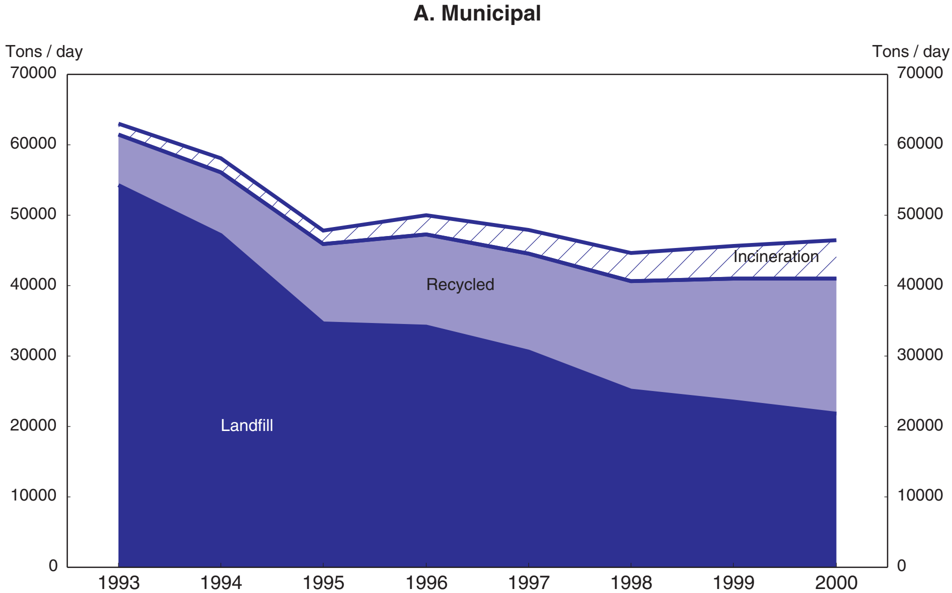
After a period of rapid economic growth, the waste disposal system was running out of capacity by the 1980s. An increasing amount of waste was deposited in uncontrolled landfills, leading to problems with environmental despoliation. As waste management policies have developed, the use of landfill has gradually diminished and the share of recycling has increased (Figure 45). The generation of municipal waste is currently in line with the average of the OECD area relative to each dollar of private consumption, after a remarkable reduction in the absolute level of waste production during the 1990s (Table 47), a performance that was helped by the pricing of waste collection. At the same time, the share of municipal waste going to recycling is among the highest in the OECD, partly as the result of deposit refund schemes and product charges. Most food waste is composted to produce organic fertiliser. Waste that is made into compost is counted as recycled waste, in contrast to other countries, so boosting the proportion of overall waste that is recycled. Incineration plays a small but growing role. Industrial waste has grown strongly throughout the past decades, reflecting rapid economic growth.[145] The majority of this type of waste is recycled but there have been concerns about the illegal dumping of hazardous waste (Table 48).

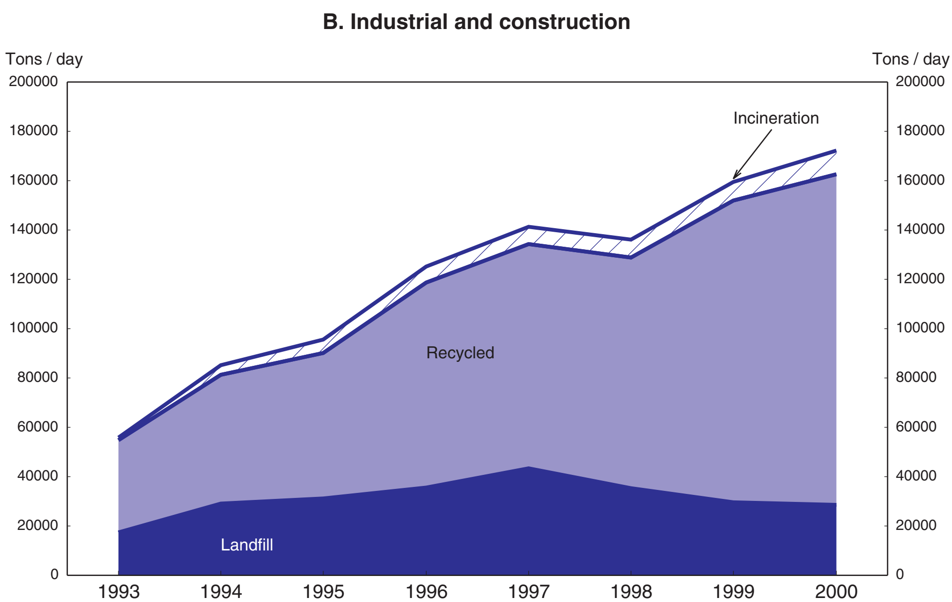
Policies

Since the implementation of the Waste Management Act in 1993, government policy has pursued a waste hierarchy approach, targeting minimisation and recovery over incineration and landfill. The striking decline in the amount of municipal waste followed the introduction of a volume-based refuse collection fee, which requires households above a certain income threshold to purchase special refuse collection bags to dispose of their waste.[146] The price of the garbage bag has risen over time, but still represents only a small fraction – officially estimated at 30 per cent – of the total cost of municipal waste management. Other policies include banning the use of materials or imposing fees on products that are difficult to recycle, such as batteries and lubricating oil. A deposit-refund system is also in operation, which refunds producers and importers in relation to their success in recycling goods. Finally, the government also provides soft loans to the recycling industry.

The volume-based collection fee system has also promoted recycling of municipal waste. As households do not pay for the collection of recyclable materials, there is an incentive to separate waste. Private companies collect the separated recyclable materials, which include paper, iron, aluminium, glass and plastics. Food waste also has to be placed in separate bags. From 2003, a system

Figure 45. **Evolution of waste treatment**





Source: Ministry of the Environment.

Table 47. **Performance indicators: waste**

	Municipal waste						Recycling		
	Kg per capita		Annual growth		Level, 1 000 tonnes	Relative to private consumption, annual growth	Level		
	Year	Level	Period	Percentage	Latest year	Percentage	Year	1 000 tonnes	Percentage of total
Australia									
Austria	1999	549	1990-1999	3.7	4 436	1.2	1999	1 061	24
Belgium	1999	535	1991-1999	3.1	5 462	1.3	1998	1 982	37
Canada							1998	2 937	
Czech Republic	2000	330			3 434				
Denmark	1999	627	1994-1999	3.5	3 329	1.7	1999	820	25
Finland	1999	465	1990-1999	–2.8	2 400	–4.1			
France	1999	539	1993-1999	1.7	30 744	–0.1	1999	3 198	10
Germany	1998	485	1996-1998	0.8	39 801	–0.4	1998	14 872	41
Greece	1997	372	1990-1997	3.8	3 900	1.8	1997	307	8
Hungary	2000	450	1990-2000	–1.9	4 552	–2.2			
Iceland	2000	713	1992-2000	2.8	199	–1.1	2000	17	9
Ireland	2000	608	1995-2000	4.5	2 302	–3.1	2000	192	8
Italy	1999	492	1990-1999	4.0	28 364	2.3	1997	1 874	7
Japan	1999	410	1990-1999	0.2	51 446	–1.5	1999	4 428	9
Korea	**2000**	**360**	**1990-2000**	**–5.8**	**16 950**	**–10.5**	**2000**	**6 996**	**41**
Luxembourg	1999	648	1991-1999	3.1	278	0.7	1999	1	0
Mexico	2000	310	1991-2000	4.3	30 733	1.3	2000	724	2
Netherlands	2000	611	1991-2000	2.9	9 691	–0.1	2000	2 191	23
New Zealand									
Norway	2000	615	1992-2000	2.7	2 755	–0.7	2000	606	22
Poland	2000	320	1990-2000	1.0	12 226	–3.9	2000	13	0
Portugal	2000	453	1992-1999	4.2	4 364	1.5	1999	190	4
Slovakia	2000	320	1992-2000	0.8	1 706		2000	36	2
Spain	1999	621	1991-1999	8.4	24 470	6.1	1999	4 390	18

Table 47. **Performance indicators: waste** (*cont.*)

	Municipal waste						Recycling		
	Kg per capita		Annual growth		Level, 1 000 tonnes	Relative to private consumption, annual growth	Level		
	Year	Level	Period	Percentage	Latest year	Percentage	Year	1 000 tonnes	Percentage of total
Sweden	1998	452	1990-1998	2.8	4 000	2.2	1998	1 000	25
Switzerland	2000	650	1990-2000	1.4	4 681	0.3	2000	1 500	32
Turkey	1998	390	1989-1998	2.8	24 945				
United Kingdom	1999	558			33 200		1999	2 880	9
United States	1999	760	1990-1999	1.3	208 520	–1.9	1999	46 068	22
OECD average		505			20 700			4 095	20
EU average		534			13 116			2 331	18

Source: OECD, Eurostat.

Table 48. **Waste treatment**
2000

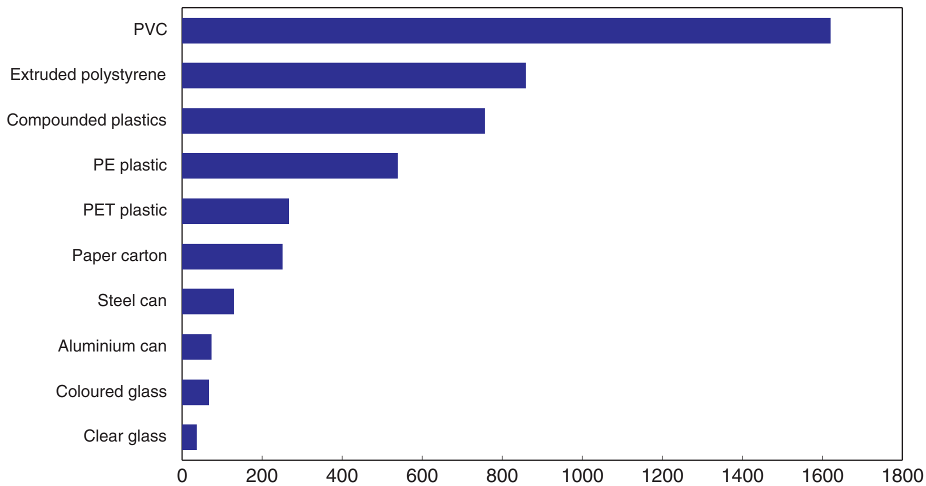
	Total waste		Waste treatment			
	Tons/day	Share of total	Landfill	Incineration	Recycled	Other
		(in per cent)	Per cent			
Municipal	46 438	19.8	47.0	11.7	41.3	0
Industrial	101 453	43.3	16.1	5.6	74.4	3.9
Construction	78 777	33.6	15.8	5.0	74.3	4.9
Hazardous	7 614	3.2	12.0	24.0	53.0	11.0
Total	**234 282**	**100.0**	**22.0**	**7.2**	**67.1**	**3.7**

Source: Ministry of the Environment.

of extended producer responsibility will replace the deposit-refund system. The government initiated this change as it has faced problems in increasing the deposits sufficiently to induce producers and importers to strengthen their recycling efforts. In the new system, the government in consultation with the firms affected will establish recycling targets. As in other countries, recycling costs (net of revenues from selling the recycled material) are around € 100 per tonne, much higher than incineration (Figure 46). The high cost of recycling certain materials suggests that the new system of extended producer responsibility should allow delivery to an incineration plant, where heat can be recuperated, as one means of complying with recycling targets.

The central government has established a target of increasing the share of incineration to 20 per cent of waste treatment, meeting up to half of the construction cost of new facilities. However, due to the poor operational record of existing facilities, the government faces considerable difficulties in obtaining public support for new landfill sites[147] and incineration facilities.[148] In the face of opposition from residents over accepting waste from other districts, policy has targeted the construction of smaller incinerators in each administrative district, resulting in low capacity utilisation – as low as 34 per cent in Seoul – and excessive costs (Seoul Green Vision 21). In some cases, local governments have attempted to allay residents' concerns by actively involving them in the operation of waste disposal plants and compensating them for the resulting externality. To this end, a 1995 law allows residents to be involved in the management of a waste facility and be compensated from a Resident Support Fund, which is composed of a share of the waste management fee charge by the facility.[149] The Seoul government is also sponsoring research to evaluate the impact of incineration facilities on local property values and health that might eventually form the base for a compensation system.

Figure 46. **Recycling costs in Korea**
Euro per tonne



Source: Ministry of the Environment.

Responsibility for the disposal of industrial waste has been delegated to industry. One concern is the illegal dumping of industrial waste in unregulated sites, which was often found in the 1990s. The scale of this problem is difficult to determine, and requires further investigation. In addressing this issue, the Ministry of the Environment in 2001 introduced a waste manifest system to track industrial waste from generation to final deposit. By 2005, this system will cover all entities that generate, transport and dispose of industrial waste.

Conclusions

Waste management policy has made considerable progress in the reduction and processing of municipal waste in a sustainable manner. However, cost efficiency in municipal waste management needs to be improved through expanding the scale of operations and a gradual increase in the cost recovery of waste collection and disposal. The introduction of an extended producer responsibility system for recyclable products should help to reduce waste further, but care is needed in ensuring that costs do not move out of line with other disposal methods as appears to be happening with plastics. There is a need to raise public acceptance of new, modern, waste disposal facilities. The current system of compensating residents to gain their approval of new facilities should be continued, with the cost passed onto consumers. Accompanying measures to allay public fears, such as independent and tougher monitoring, should be introduced. In addressing concerns over the illegal dumping of industrial waste, the government should investigate the possibility and associated costs of requiring enterprises to contract waste disposal to licensed third parties.

Notes

1. According to the Korea Federation of Banks, the problem is concentrated among credit cards, where the overdue ratio was 7.4 per cent. In contrast, the ratio for bank loans was only 1 per cent.
2. According to one estimate, a 10 per cent rise in share prices results in a 0.6 per cent increase in private consumption within three to six months (Kim and Moon, 2001).
3. A recent study (Shim, 2001) concludes that the close correlation between share prices and consumption since the crisis reflects the improved ability of share prices to signal the future income stream of consumers.
4. The rates on cars, air conditioners and jewellery were cut, while home electronic products were exempted. The rationale for this tax is to promote energy conservation and curb conspicuous consumption.
5. The Ministry of Construction and Transportation has developed the "parcelling" system to allocate newly constructed houses. When a housing project is announced, those who do not own homes are eligible to apply if they meet other conditions, such as having sufficient savings. The winners are decided by lottery. Following the crisis, this system was changed to boost the housing market. F*irst*, parcelling prices, which had been subject to price ceilings, were liberalised in 1999. S*econd*, the parcelling right, which is priced below the market level of the finished dwelling, could be sold, thus allowing speculators to buy and re-sell those rights. T*hird*, in 2000, those who have already purchased houses under this system were allowed to apply again. F*ourth*, the requirement to open special accounts at banks in order to be eligible was relaxed.
6. In contrast, non-residential construction has been subdued, falling in the first half of 2002, after a modest 3 per cent increase in 2001.
7. Investment in machinery and equipment accounts for about two-thirds of business investment, which is defined as total investment minus residential construction and government investment.
8. The deadline for implementing the new system depends on the size of firms. For example, firms with more than 1 000 employees would have to implement the new system by July 2003, but those with more than 20 workers would not have to comply until July 2007. Companies with less than 20 workers would have until the end of 2010.
9. In the *chonsei* system, the renter gives the owner a lump sum, typically equivalent to 60 to 70 per cent of the cost of the dwelling. The interest earned on this lump sum provides income to the owner for two years, at which point the lump sum is returned to the renter. The "rent" thus generated depends on the size of the lump sum and interest rates.

10. The price index has a relatively small weight for apartments, which have been at the heart of the recent price hikes. Indeed, the *chonsei* rent category in the price index gives a 28 per cent weight to apartments compared to 57 per cent in the Kookmin Bank index.
11. If the overall contribution of housing costs – including monthly rent and other charges – are included, it contributed 0.8 percentage point of inflation, or almost a third of the total.
12. The risk weight attached to loans to households has been increased, thus forcing banks to hold more reserves. For example, the loss reserves required for "normal" home mortgage loans is being increased from 0.75 per cent to 1 per cent. In addition, seven banks were singled out for over-evaluating the collateral of households seeking loans.
13. The calculation of export market growth is based on a weighted average of the growth of import volumes in Korea's markets. The weights are determined by the country's share of Korea's exports. Such a pick-up was projected in the OECD *Economic Outlook* (No. 72) released in December 2002.
14. OECD projections are made on the basis of unchanged exchange rates, except in the case of some high inflation countries.
15. Although the central bank has shifted to an interest-rate based policy, it still monitors the monetary aggregates, particularly M3, which is thought to be linked to inflation expectations.
16. The benefits of moving to a medium-term target in New Zealand is discussed in Drew, 2001.
17. Indeed, a 1992 World Bank study placed Korea second from the bottom of 72 countries ranked in terms of central-bank independence (Cukierman, Webb and Neyapti, 1992).
18. "Report on the Observance of Standards and Codes (ROSC): Republic of Korea, Fiscal Transparency" (Washington, DC: International Monetary Fund, 23 January 2001).
19. In 2001, lending to SMEs rose by 16 trillion (3 per cent of GDP), while lending to large firms declined. This trend continued in 2002, as SMEs received 37 trillion won of the 99 trillion won rise in lending, while large companies' share did not change. As of December 2002, SMEs had received 192 trillion won in loans from financial institutions, more than four-fifths of their total lending to businesses.
20. Under this system, the exchange rate was determined within a certain range of the weighted average of the foreign exchange rates of the previous day.
21. At the end of March 2002, Moody's upgraded Korea from Baa2 to A3. This was followed by Fitch and S&P, which upgraded Korea from BBB+ to A and A- grade in June and July, respectively.
22. There is no evidence of policy measures to maintain the parity of the won and the yen (Moon, 2002).
23. Under the GFS system used in Korea, the receipts generated from privatisation carried out for policy purposes are included in the item "net lending", thus boosting the government surplus. Privatisation revenues have totalled 24.1 trillion won since 1998, of which 14.5 trillion won has flowed into the budget.
24. Moreover, privatisation receipts are not considered to be part of government revenue under the 1993 System of National Accounts.

25. The five social security funds are the National Pension Fund, Korea Teachers' Pension Fund, Industrial Workers' Accident Compensation Fund, Employment Insurance Fund and Merit Reward Fund. The National Pension Fund accounts for 90 per cent of the total.
26. It can be argued that the increased contributions to the NPS by the self-employed are to some extent voluntary. In 2000, 11.8 million persons – a little over half of the number of employed persons – contributed to the NPS. About a quarter of the employed – family workers, those covered by the public occupational schemes, those over 60 or under 18 years of age – are exempted from the NPS. This leaves another quarter of the employed – primarily the self-employed – that did not contribute. The decision of a growing number of self-employed to contribute reflects a decision to save for their retirement by qualifying for an NPS pension, which is partially determined by the individual's contributions.
27. Total outlays, including the supplementary budgets, were expected to be 147.2 trillion won, a 14 per cent rise from the 2000 outcome, which also had significant undershooting of spending. Relative to the 2000 initial budget, the initial budget for 2001 contained a 5.4 per cent increase in spending. The government introduced two supplementary budgets in 2001, including one after the 11 September attack in the United States that boosted spending by 1.6 trillion won.
28. The objective is to boost the price of diesel from 54 per cent of that of gasoline in 2001 to 75 per cent by 2006 and to raise the price of LPG from 34 to 60 per cent over the same period.
29. Since the social security surplus is projected at 3 per cent in both 2002 and 2003, the extent of consolidation is the same regardless of whether it is included.
30. Compared to the 2002 initial budget, the increase in spending in 2003 is only 1.4 per cent excluding the cost of financial sector restructuring.
31. If outlays using credit cards exceed 10 per cent of income, 20 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.
32. The Call Centre handled an average of 4 417 cases per day in 2001.
33. Reductions of capital gains for business conversion, the relocation of a factory and the transfer of real estate during the process of restructuring were abolished. In addition, the reduction of the corporate income tax for business conversion was ended.
34. Previously, all firms with sales of less than 48 million won were allowed to pay the VAT based on sales. Under the new system, firms in certain industries, such as manufacturing, mining and real estate, are treated as regular taxpayers regardless of the amount of their sales.
35. For a much fuller description of retirement income policies and challenges, see the 2001 OECD *Economic Survey of Korea*.
36. Another 12 per cent of the elderly qualified for old-age allowance payments of about 3 per cent of the average wage.
37. This does not include the elderly that receive the military public pension or the old-age allowance.
38. In 1996, just over 25 per cent of the elderly had an income lower than half of median household income, compared to 10 per cent for the population as a whole (see Kwon, 1999).

39. While the replacement rate for a worker with average income is 60 per cent, this rises to 90 per cent for a worker earning half of the average income.
40. Roughly 5 million of the 21.1 million employed persons in 2000 were exempted from the NPS. This includes those covered by the public occupational pension schemes (1.1 million), family workers (1.9 million), those over the age of 60 (1.7 million) and those under 18 (0.2 million).
41. Those who have had exemptions are able to make contributions at a later date to cover those periods.
42. Public pension expenditure is projected to rise by 5 percentage points of GDP and the occupational pension schemes by 3 percentage points over the next three decades. Age-related healthcare spending is also likely to increase pressure on state budgets, while the potential costs of reunification are large but uncertain.
43. According to official estimates, the current scheme would require contributions of 19 per cent to achieve balance with a 60 per cent replacement rate.
44. Over the period 1998 to 2001, the rate of return on invested assets has been below the average market return, mainly as a result of considerable lending to the government. The average rate of return on investment over the period 1988 to 2001 was estimated at 9.87 per cent on average. This was achieved by returns of 9.32 per cent for public-sector deposits and 10.78 per cent in the financial sector. The obligatory deposit to the government was abolished in 2001. In 2002, 26 per cent of lending from the National Pension Fund was to the government and this is scheduled to be repaid by 2005.
45. Complete external funding is practised by only 8 per cent of companies, while 19 per cent fund only internally (Choi, 1999). Following the crisis, around a quarter of eligible workers reported they had not received this payment (Phang, 2001). As a result, the government introduced a Wage Guarantee Fund to partially compensate workers whose employers had defaulted.
46. The government reformed the pension taxation system in 2000 (see the 2001 OECD *Economic Survey of Korea*) to put it on a so-called EET basis. While the reforms moved from the taxation of contributions to the taxation of benefits, significant tax deductions are allowed.
47. Low inflation has been found to have the benefit of reducing real interest rates and encouraging investment, while damping the volatility of output growth. Moreover, low inflation levels tend to reduce the volatility of inflation, which imposes efficiency costs.
48. For an overview of public expenditure management issues in OECD countries, see Atkinson and Van den Noord (2001).
49. The establishment of the social safety net reflected a widening of basic priorities to include social welfare as well as economic growth. This led to the establishment of a national pension system in 1988, national health insurance in 1992 and unemployment insurance in 1995. The current low level of publicly funded social expenditures reflects the immaturity of the pension system, which has few beneficiaries at present.
50. In most OECD countries, public social expenditure is lower on a *net* (after tax) than on a *gross* (before tax) basis since governments tend to claw back more money through taxation of public transfer income than the value of the tax advantages awarded for social purposes. In contrast, net public social expenditure is estimated to be higher in Korea and the United States. In 1997, net public social expenditure in Korea was 4.6 per cent of GDP, whereas gross public social expenditure was 4.4 per cent of GDP (Adema, 2001).

51. When private spending on extra-curricular education – accounting for 5 per cent of total household income – is added, spending on education in Korea might be the highest in the world.

52. To assist the unemployed, the authorities expanded the unemployment insurance programme, created temporary public works jobs, provided more vocational training opportunities and established a "Temporary Livelihood Protection Programme".

53. In most OECD countries, the establishment and expansion of programmes and provision of services in the social policy domain and increasing debt interest payments led to a persistent rise in general government expenditure until the 1980s. For a review of trends in public expenditure in OECD countries, see Tanzi and Schuknecht (2000) and Atkinson and Van den Noord (2001).

54. Quasi-taxes refer to a wide range of fees, charges and contributions that are not imposed by the tax laws. The amount of quasi-taxes is estimated at around 1 per cent of GDP (see Chapter II).

55. Revisions to the *Fund Management Act* in December 2001 require that the public funds be subject to parliamentary approval beginning in the 2003 budget. This reform also increased the coverage of public funds by transforming a number of "extra-budgetary" funds into public funds.

56. Until the 2002 budget, the total amount of government spending on a consolidated basis was unknown when the budget was passed.

57. Approval is only required from the Ministry of Planning and Budget.

58. Cash-based accounting provides little recognition of financial commitments because liabilities and receipts are accounted only in the year when they are realised.

59. Two major features of the new GFS standards set by the IMF are accrual-based accounting and harmonisation with the 1993 SNA system. The adoption of the new GFS standards will thus move the GFS-based government accounts closer to the SNA-based accounts (see Annex I).

60. During the 1970s and 1980s, the Economic Planning Board (EPB) assumed the central role in budget drafting and execution, as well as in preparing and implementing economic development plans. In the early 1990s, EPB and the Ministry of Finance were merged into the Ministry of Finance and Economy (MOFE), which exercised the same degree of centralising power in budgeting as EPB.

61. This explains why the initial budget announced each year by MPB until 2002 was limited to the general account and one special account, the Fiscal Financing Special Account. For the 2003 budget, the MPB used only the general account.

62. Between 1999 and 2002, 19 funds were abolished and 14 funds were merged into six funds. But during the same period, ten new funds were created.

63. For example, the 2003 budget guideline asked ministries to restrict their budget requests to one-digit growth from the 2002 budget. But the total budget requests amounted to an increase of 26 per cent.

64. This refers to the number of detailed appropriation accounts (*Se-Hang*) specified in the Budget and Accounts Act. In practice, however, the MPB negotiates with line ministries concerning over 6 000 appropriation accounts (*Se-Se-Hang*).

65. The Credit Guarantee Fund was also used to provide guarantees for low-income households setting up businesses after the financial crisis in 1997.

66. In addition, the bill would require the budget to include information on the costs of quasi-fiscal activities with a view to improving transparency. It would further provide details of contingent liabilities, including expected costs and likely beneficiaries.
67. The scope for the carry-over of unused operating costs was set at 5 per cent in 1999, in an effort to limit spending binges at the end of the year.
68. In Korea, the term "performance-oriented budgeting" refers to the practice of asking ministries or agencies participating in pilot projects to prepare and submit "performance plans" that specify strategies, objectives and indicators. The MPB, which is in charge of this project, may use this as an input for the following year's budget for these ministries or agencies.
69. In practice, however, the flexibility and autonomy given to these agencies has been relatively limited, compared to the case in other countries that have adopted this system, such as the United Kingdom.
70. The number of these accounts increased from 18 in 1997 to 49 in 2001, boosting the amount of their outlays from 4.2 trillion won to 9.3 trillion won. In 2002, the size of these accounts fell to 4.3 trillion won.
71. One major improvement in strengthening *ex ante* evaluation has been the introduction of pre-feasibility studies for large construction projects (see Box 4).
72. The government reports that between 1998 and 2002, 76 areas of the government sector have been contracted out, in addition to 209 activities of public enterprises and government-funded entities.
73. One aspect has been the privatisation of state-owned enterprises (see Chapter II).
74. In addition, it permits all types of participation including Build-Operate-Transfer, Build-Transfer-Operate and Build-Operate-Own and requires feasibility studies on projects open to private-sector firms. The Private Infrastructure Investment Centre of Korea (PICKO) was established to support the new initiative.
75. The failure of the Millennium Dome in the United Kingdom is a good example in this regard (OECD, 2001b). In addition, local governments in Japan have created over 4 000 third-sector companies, many of which suffer from large deficits.
76. The funding sources for private schools include tuition fees, government subsidies to cover the shortage of remuneration and operating costs, and resources from school foundations. In practice, private schools rely heavily on government subsidies, while transfers from school foundations remain very limited due to their generally weak financial capacity.
77. The wider public sector includes all bodies that are part of local and national government and have been given some autonomy and/or independence from reporting ministries and/or are subject completely or partially to management and financial rules from vertically-integrated ministries. The governance problems of the wider public sector have been identified as systematic in OECD countries (OECD, 2002a).
78. This figure excludes education, which remains separate from the general budget of local governments in Korea. If education is included, this figure is increased to around 50 per cent.
79. Local borrowing is restricted to infrastructure projects, disaster relief and certain welfare enhancing projects. There are limits to the amount of debt and the shortfall allowed in tax revenues from the previous year. Local government debt was 17.8 trillion won (3.3 per cent of GDP) in 2001.

80. There is, however, a general distribution formula specified in the law.
81. The large number of central ministries – 19 in 1999 – involved in the grant system, together with the lack of inter-ministerial co-ordination, also hinders the efficiency of the system.
82. The average matching rate (paid by the central government) is around 60 per cent. The share of conditional grants is the highest for counties (Gun), where conditional grants comprise close to 30 per cent of total revenue. This puts a heavy burden on these poorer local governments.
83. Between 1991 and 1998, the central government devolved 2 008 out of 12 978 government functions to local levels. In 1998, the newly elected government set up the Presidential Commission on Promotion of Decentralisation, which devolved another 493 functions between 1999 and 2001.
84. The overlap in spending and financing responsibilities has also been identified as a problem in other OECD countries, for example, Switzerland, Italy, Germany and Greece.
85. The *Local Autonomy Act* assigns 87 functions to both upper-level and lower-level local governments. These overlapping functions represent 28 per cent of the upper-level local government functions and 25 per cent of lower-level local government functions (Hong, 1998).
86. For example, the regulation on lower-level governments' investment in education – requiring *ex ante* approval by the upper-level government – has been relaxed. The central government has also allowed lower-level local governments to assess flexible tax rates for the education tax, and will not include those funds in the definition of local income used in the calculation of local government transfers.
87. Reforms in the fourth area – the public sector – were analysed in the previous chapter.
88. Outside directors must account for a quarter of the board in listed companies and half of the board in listed companies with more than 2 trillion won in assets.
89. The study (Black, Jang and Kim, 2002) created an overall index of corporate governance practices in 540 companies based on: i) shareholder rights; ii) boards of directors; iii) outside directors; and iv) disclosure and transparency. The study found that an increase of 10 points in the index, which is scaled from 0 to 100, boosted a company's book value of common equity by 7 per cent.
90. Firms are required "to exhaust all means to avoid" dismissals and to notify workers' representatives at least sixty days before any workers are made redundant. During that period, management must have discussions with workers aimed at avoiding layoffs. Moreover, firms are required to establish fair and reasonable procedures for choosing the employees to be dismissed. These provisions resemble those in countries with high employment protection. Layoffs must be reported to the government if they pass certain thresholds.
91. In a survey in February 2002, 21.5 per cent of firms did not have plans to hire workers in 2002. More than half of these enterprises cited problems of excess manpower, primarily due to difficulties in reducing their existing workforce. See *Korea Business Review*, May 2002, p. 38.
92. There has been criticism that the new law has actually made it more, not less, difficult to reduce employment (Dae Il Kim, 2002). Sung-Hee Jwa, president of the Korea Economic Research Institute, which is associated with the Federation of Korean Industries, wrote, "The actual implementation of layoffs is still extremely difficult" (Jwa, 2001).

93. This figure includes those on fixed-term contracts, those without a fixed-term contract where employment is not expected to continue for involuntary reasons, temporary agency workers and on-call workers.
94. In a survey on the reasons for hiring non-regular workers (*Korea Business Review*, May 2002, p. 38), 32 per cent of employers cited the need to fill vacant positions for increased work volume. This response implies difficulty in laying off regular workers during periods of decreased work volume. Another 23 per cent of employers cited the increased number of simple and repetitive jobs as a result of computerisation and automation. Another 17 per cent of employers cited excessive welfare expenses for regular employees and 13 per cent noted the cost of laying off regular workers.
95. According to the Office of the Investment Ombudsman, nearly a quarter of the complaints from foreign businesses during the first half of 2002 concerned labour problems.
96. The government has sometimes intervened in labour disputes involving large companies, as these can have a severe impact on small firms that supply larger ones (Dae Il Kim, 2002).
97. About four-fifths was financed by the Employment Insurance System, which receives contributions from employers and employees, with the remainder from the general account of the budget.
98. According to the president of the Korea Labour Institute: "… diverse training programs that were loosely regulated and lacked appropriate monitoring and inspection led to moral hazard of some training institutions and trainees. Some unqualified training institutions took advantage of the training programs and provided time-killing courses in order to receive reimbursement from the government, thus limiting the(ir) effectiveness… Little consideration was given either to changing demands in the labour market or to the needs of potential participants. Training institutions tended to routinely provide the same training programs as were conducted in the past. As a result, some programs did not significantly aid in the reemployment of the trainees" (Lee *et al.*, 2001).
99. Almost a third of employees – daily workers, employees over 65, part-time workers and civil servants and teachers – are legally exempted from unemployment insurance, which was introduced in 1995.
100. For example, Federation of Korean Industries, "Business Support for Japan-Korea FTA", 8 January 2002.
101. One of Korea's priorities in the Doha Round is to clarify and strengthen rules related to anti-dumping, which account for 106 of the 128 measures imposed on Korean exports as of the end of 2002. In contrast, Korea has made relatively limited use of this instrument, with 11 anti-dumping duties in effect at present.
102. The twelve sectors are 1) business, 2) communications, 3) construction and related engineering, 4) distribution, 5) educational, 6) environmental, 7) financial, 8) health-related and social, 9) tourism and travel-related, 10) recreation, culture and sports, 11) transport, and 12) other.
103. In the terminology of WTO, Korea is largely open to Mode 3 – commercial presence – but less open to Mode 1 (cross-border supply).
104. FDI accounted for less than 10 per cent of capital inflows over the period 1962 to 1992. During the five years prior to the crisis, FDI inflows accounted for less than 1 per cent of total fixed capital formation.
105. Foreign investors are granted a complete exemption from the corporate income tax during the first seven years after achieving a profit and a 50 per cent reduction for the

following three years. Moreover, they are exempted from the acquisition tax, property tax and aggregate land tax during the first five years after achieving profitability and a 50 per cent reduction for the following three years.

106. During 2001, 428 of the 430 complaints from foreign firms in Korea to the Ombudsman were resolved.

107. According to a poll by Kookmin Bank, 23.6 per cent of those in their forties cited their children's education as the most important criteria, followed by transportation and the size and kind of house. For those in their thirties – a declining share of the population – the top criteria were transportation, size and kind of house and their children's education, in that order.

108. This approach was adopted in the late 1980s with the construction of five new towns – Bundang, Ilsan, Jungdong, Pyungchon and Sanbon – with a total population of 1.2 million.

109. Market prices are used for those with more than three houses or for "luxurious" homes. The latter criterion was strengthened by lowering the threshold for homes to qualify as luxurious.

110. Standard building costs were set at 165 000 won per square meter in 2002. An adjustment of between 2 and 10 per cent is added to the tax base for apartments valued at more than 300 million won.

111. These estimates were by Roh (1997) and Yoon *et. al* (1998). This is consistent with the government's September 2002 package in which examples of the effective tax rate in different regions of Seoul ranged from 0.052 to 0.2 per cent.

112. In the example used in the September 2002 package, the rate was 0.052 per cent for an apartment in Seoul and 0.195 per cent in Yongin.

113. Free education at middle school level, which had previously been available only in rural and remote areas, will be expanded nation-wide gradually between 2002 and 2004.

114. The lottery was introduced for lower secondary schools in 1969 and for upper secondary schools in 1974.

115. While "private schools" do exist, in practice they are subject to the same rules and regulations as public schools and also receive some public financing (Table 25).

116. This figure, which is from the Urban Household Survey, is probably an underestimate, since payments to individual tutors are not likely to be fully incorporated.

117. For example, the introduction of a merit-based pay for teachers in 2001 was effectively blocked by the teachers' union, which returned the merit-based portion of their salaries for distribution among all teachers (Sun-woong Kim and Ju-ho Lee, 2002).

118. This suggests that central funding to private universities is between 18 to 25 per cent of total public spending on universities, despite the fact that they enrol 3.5 times as many students.

119. SMEs may choose instead a tax credit equal to 15 per cent of R&D expenditures in each business year.

120. In Korea, the definition of SMEs varies between sectors. In manufacturing, it includes firms with less than 300 employees and no more than 8 billion won in paid-in capital (the limit is 3 billion in mining, construction and transport). In the service sector, the maximum number of workers that an SME can have varies between 30 and 300 employees, depending on the industry, and between 2 and 30 billion won in

annual sales. Finally, in the primary sector, SMEs are defined as firms with a maximum of 50 to 200 workers and 5 to 20 billion won in annual sales.

121. This section draws on Baygan (2003), "Venture Capital Policy Review: Korea", STI *Working Papers*, 2003/02, OECD, Paris.

122. The importance of pension funds, though, is likely to increase following the 2001 decision to allow the National Pension Fund to invest in LPFs.

123. Since 1999, business angels have been allowed to deduct 20 per cent of their investments from their income tax. In addition, corporate and institutional investors in VCFs and LPFs are allowed to deduct 15 per cent of their investments from their consolidated income tax base. In addition, taxes are not levied on the capital gains of individuals investing in VCFs and LPFs. Finally, the VCFs and LPFs themselves receive preferential tax treatment.

124. All SMEs, including venture businesses, receive a 50 per cent reduction in income or corporate tax in the first six years once they generate a profit. Other tax preferences include a 50 per cent cut in property taxes during the first five years after establishment and exemption from local acquisition and registration taxes on assets acquired during the first two years.

125. This estimate was made in *Business Korea*, August 2001.

126. This resulted in an 18 per cent fall in the price of land to mobile service, providing a benefit to consumers estimated at 677 billion won.

127. MIC is considering a shift from the current approval system to a reserved notification system, under which price changes would be automatically approved if there were no opposition from the MIC within a certain time period after notification.

128. A third issue – sustainable retirement income – is discussed in Chapter II.

129. During the 1990s, car ownership quadrupled, and since the early 1980s it has risen almost twenty-fold.

130. Concentrations of particulate matter are also affected by yellow sand blown in from abroad. Such transboundary issues are beginning to be addressed on a regional basis. Solving this particular problem would require major reforestation in China.

131. Following the introduction of monitoring stations in the mid-1990s, the number of ozone warnings issued increased from 24 in 1997 to 52 in 2000.

132. This is an estimate from a special study using 1999 data on the social cost of air pollution conducted by the Korea Environment Institute on behalf of the Ministry of the Environment. The bulk of the social costs of air pollution are due to increased mortality, with the loss of a life being valued at around $500 000.

133. Emission limits are set in national laws, but may vary depending on the local environment. See OECD (1999a) for a description of the permitting system.

134. Voluntary agreements, in which enterprises are exempt from inspection if they agree to set more stringent emission targets and undertake measures to achieve these targets, were introduced in September 2002. Although the aims are laudable, in the current situation where monitoring is weak, such a system may undermine efforts to achieve lower emission levels.

135. Dioxin emissions, particularly in fly ash, have been a concern (Cho *et al*, 1999, Soo, 2001). The government's intention to ratify the Stockholm convention on persistent organic pollutants (POPs) will require a national strategy to improve monitoring and reduce emissions of POPs, including dioxin.

136. Under this scheme, tradable permits for limited amounts of emissions of particulate matter, nitrogen oxides and volatile organic compounds will be allocated to both major point-source emitters and companies that operate a large number of vehicles. The first step in this process will be to establish an accurate measurement system for point-source emitters.

137. In 1998, the transportation sector produced 84 per cent of air pollution in Seoul, up from 55 per cent in 1991. The topographical features of the city complicate addressing ozone problems.

138. Diesel engine vehicles, principally buses and trucks, contribute more than half of the pollution. Owners of such vehicles pay an annual fee (averaging about $60) based on emissions, the age of the vehicle and area.

139. At present, the sulphur content standard for petrol is 130 parts per million (ppm) and for diesel fuel 430 ppm (IEA, 2002). Proposed EU standards are to reduce the sulphur content of fuels to 50 ppm from 2005 and to 10 ppm from 2011.

140. Current standards in Korea are equivalent to EURO III and US LEV standards and cover a similar range of pollutants – carbon monoxide, oxides of nitrogen, particles and VOCs. Requirements for diesel vehicles are weaker, however (Jeon, 2002). Standards for diesel vehicles will comply with EURO III standards in 2003, with the exception of passenger cars, where regulations are similar to US LEV (Jeong, 2001).

141. The United States Environmental Protection Agency has undertaken such studies.

142. CNG buses are exempt from acquisition taxes and the tax on CNG is lower than that on diesel (M.K. Lee, 2001).

143. The cost efficiency of using advanced filters and CNG were evaluated for California in Sierra Research (2000).

144. The Transportation Research Board (2002) reports that generalised road pricing would be one of the most cost-effective means of reducing congestion and emissions.

145. Unlike other OECD countries, waste is classified into only two broad categories – municipal and industrial. Industrial waste consists of general waste and special (hazardous) waste. During the 1990s, there were changes in the methodology for measuring both municipal and industrial waste, which may overstate the reduction in both types of waste. However, subsequent trends appear robust to these changes.

146. Other measures that also contributed to the decline in municipal waste included prohibiting the use of solid fuels for heating in some urban areas and restricting the use of disposable packaging.

147. Public opposition to new landfills has been intense and has also restricted the operation of existing landfills by limiting the types of waste and by attempting to block waste from other areas. Due to bad odours, food waste was banned from the Kimpo landfill in Seoul and the ban is to be generalised by 2005.

148. Emissions of dioxin from incinerators, mainly smaller and older facilities, have been a periodic concern. Replacing these incinerators could help alleviate the problem. Dioxin emissions from incineration of municipal waste in small low-technology incinerators, without air pollution control systems, are 7 000 times greater than high-technology incinerators with sophisticated air pollution control systems. For hazardous waste, the difference is nearly 50 000 times (UNEP, 2001).

149. In Seoul, residents receive 7 per cent of the fee for locally generated waste and 10 per cent of fees from waste from other districts.

Bibliography

Adema, Willem (2001),
"Net Social Expenditure, 2nd edition", Labour Market and Social Policy Occasional Papers, No. 52, OECD, Paris.

Aden, J., Kyu-Hong Ahn and M. Rock (1999),
"What is Driving the Pollution Abatement Expenditure Behavior of Manufacturing Plants in Korea?", *World Development*, Vol. 27.

Ahn, M.S. (2001),
"Korean CNG Bus Program: The Environmental Benefits", Ministry of the Environment.

Atkinson, Paul and Paul Van den Noord (2001),
"Managing Public Expenditure: Some Emerging Policy Issues and a Framework for Analysis", OECD Economics Department Working Paper No. 285, Paris.

Bahk, Byong Won (2002),
"Corporate Governance in Korea: Past, Present and Future", paper presented at the third Korea-OECD Conference.

Baygan, Gunseli (2003),
"Venture Capital Policy Review: Korea", STI Working Papers, 2003/02, OECD, Paris.

Beck, Peter (2001),
"South Korea in 2001", *Korea's Economy* 2002, Volume 18, Korea Economic Institute and the Korea Institute of International Economic Policy, Washington and Seoul.

Black, Bernard, Hasung Jang and Woochan Kim (2002),
"Does Corporate Governance Matter? Evidence from the Korean Market", KDI School of Public Policy and Management Worling Paper 02-04, Seoul.

Blöndal, Sveinbjörn, Simon Field and Nathalie Girouard (2002),
"Investment in Human Capital through Post-Compulsory Education and Training: Selected Efficiency and Equity Aspects", OECD Economics Department Working Paper No. 333, Paris.

Cheong, Inkyo (2001),
Economic Effects of Korea-Japan FTA *and Policy Implications for Korea*, Korea Institute of International Economic Policy, Seoul (in Korean).

Cho, T.W., Y.H. Kim, D.W. Chung, S.K. Shin, J.K. Kim, C.H. Park, D.I. Kim, S.R. Kim, M.H. Yoon, S.S. Choi and J.S. Huh (1999),
"A Study on the Characteristics of Harmful Substances in Bottom Ash and Fly Ash from MSWIs", *Report of* NIER, Vol. 21.

Choi, Gongpil (2002),
"Open economy considerations in the estimation of potential output: The case of Korea," Korea Institute of Finance, Seoul (in Korean).

Choi, Jong-Hwa (1999),
"Situation and Assignment of Pension System in Korea", paper presented to the 10th East Asian Actuarial Conference, 3rd-6th October 1999, Seoul.

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

Cukierman, A., S. Webb and B. Neyapti (1992),
"Measuring the independence of central banks and its effect on policy outcomes", *The World Bank Economic Review*.

Dang, Thai-Thanh, Paolo Antolin and Howard Oxley (2001),
"Fiscal Implications of Ageing: Projections of Age-Related Spending", OECD Economics Department Working Papers, No. 305, Paris.

Drew, Aaron (2001),
"Lessons from Inflation Targeting in New Zealand", Central Bank of Chile Working Papers No. 113, Santiago.

Federation of Korean Industries (2002),
"The issue of a five-day workweek and the problems that it poses", Working Paper ECO 2002-10, Seoul (in Korean).

Fornero, E. and O. Castellino (2001),
"The Reform of the Italian Social Security System", *Centre for Research on Pensions and Welfare Policies*.

Han, Chin Hee *et al.* (2002),
"Prospects for the Korean economy's potential growth rate: 2003 to 2012", Korea Development Institute, Seoul (in Korean).

Hong, Joon Hyun (1998),
"Redistributing the Overlapped Functions between Upper-tier and Lower-tier Local Governments in Korea", *Reforming the Public Sector*, Volume III, Korea Institute of Public Finance, Seoul (in Korean).

IEA (2002),
Energy Policies: Republic of Korea, Paris.

International Monetary Fund (2001),
"Report on the Observance of Standards and Codes (ROSC): Republic of Korea, Fiscal Transparency", Washington.

Jeon, Tae-Bong (2001),
"Air Quality Management Policy in Korea", Ministry of the Environment, Seoul.

Jeon, Tae-Bong (2002),
"Air Quality Management Policy in Korea" in *Urban Air Quality Management and Practice in Major and Mega Cities of Asia*, Korea Environment Institute, Seoul.

Jeong, Youngil (2001),
"The trend of exhaust emissions standard and diesel particulate filter trap technology for diesel powered vehicles", Busan Engine International Symposium, December 13-14.

Jwa, Sung-Hee (2001),
A New Paradigm For Korea's Economic Development, Palgrave.

Kang, S.H. and B.H. Lee (2001),
"Evaluating the Training for the Unemployed in Korea", in Funkoo Park, *et al.* (eds.), *Labor Market Reforms in Korea: Policy Options for the Future*, World Bank and Korea Labor Institute, Washington and Seoul.

Kim, Byung Hwa and So-Sang Moon (2001),
"Stock Market and Consumption: the Case of Korea", *Economic Papers*, Bank of Korea, Vol. 4, No. 2.

Kim, Byung Hwa and Hyun Joon Lim (2002),
"Long-Term Determinants and Projection of Consumption in Korea", *Economic Papers*, Bank of Korea, Vol. 5, No. 1.

Kim, Dae Il (2001),
"The Korean Labor Market: The Crisis and After", in David Coe and Se-Jik Kim (eds.), *Korean Crisis and Recovery*, International Monetary Fund and Korea Institute of International Economic Policy, Washington and Seoul.

Kim, Jay-Hyung (2002),
"The quality of public expenditure – Challenges and solutions in results focused management in the public sector", paper presented at workshop on 11-12 February 2002, OECD, Paris.

Kim, John M. (2001),
"Re-allocation: Aligning Political Priorities and Budgetary Funding: Korea" OECD *Journal on Budgeting*, Vol. 1, No.2.

Kim, Junghun (2000),
"A Study on Specific Grants", Korea Institute of Public Finance, Seoul (in Korean).

Kim, Sun-woong and Ju-ho Lee (2002),
"Promoting Innovation: the Role of Education", *Korea's Economy* 2002 (Volume 18), Korea Economic Institute and the Korea Institute of International Economic Policy, Washington and Seoul.

Kim, Yang Woo (2002),
"Optimal Horizons for Inflation Targeting in Korea", *Economic Papers*, Bank of Korea, Vol. 5, No. 1.

KLI (2001),
Elabor News No. 2, December. (*www.kli.re.kr/english/labornews/02/subtrends.html*).

Koh, Young-Sun (2000),
"Budget Structure, Budget Process, and Fiscal Consolidation in Korea", Korea Development Institute, Seoul.

Kwon, Huck-Ju (1999),
"Income transfers to the elderly in East Asia: Testing Asian values", LSE Centre for Analysis of Social Exclusion, Paper 27.

Kwon, O.S. and W.C. Yun (1999),
"Estimation of the marginal abatement costs of airborne pollutants in Korea's power generation sector", *Energy Economics*, No. 21.

Lee, Chang-Kyun and Jeong-Seop Suh (2000),
Contracting Out Local Government Services in Korea, Korea Research Institute for Local Administration, Seoul (in Korean).

Lee, Chang Yong and Yoon Je Cho (1995),
Estimates of Fiscal Policy Stance and Fiscal Management in Korea, Korean Institute of Public Finance, Seoul.

Lee, M.K. (2001),
"Overview of Energy Subsidies and a Reform Plan of Energy Tax System in South Korea", UNEP Collaborating Centre on Energy and the Environment.

Lee, W.D. *et al.* (2001),
"Assessing the Role of Korean Employment Insurance and Work Injury Insurance as a Social Safety Net", paper prepared for the International Symposium for Sharing Productive Welfare Experience, Korea Labor Institute, Seoul, September.

Lim, Sung-Il (2002),
"Reform of the Intergovernmental Fiscal Transfer System in a Changing World – the Case of Korea", paper presented at KALF 2002 Conference: Intergovernmental Fiscal Relations in a Globalising World, 13-14 September, 2002, Seoul.

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

Lim, Won-Hyuk (2002),
"Number of firms with interest coverage ratio below one", mimeo, Korea Development Institute, Seoul.

Lundsgaard, J. (2000),
"Competition and Efficiency in Publicly Funded Services", OECD Economics Department Working Paper No. 331, Paris.

Martin, J.P. and D. Grubb (2001),
"What works and for whom: a review of OECD countries' experience with active labour market policies", *Swedish Economic Policy Review*.

Mishkin, Frederic and Klaus Schmidt-Hebbel (2001),
"One Decade of Inflation Targeting in the World: What Do We Know and What Do We Need To Know?", National Bureau of Economic Research Working Paper 8397, July.

Moon, Han Geun (2002),
"De Facto Exchange Rate Regime in Korea: Is It Still A Dollar Peg?", *International Economic Studies*, No. 1, Korea Institute for International Economic Policy, Seoul.

Na, S. *et al.* (2001),
"Efficiency of resource distribution between the central government and local government", Asia-Pacific Economic Association.

Noland, Marcus (2002),
"West-Bound Train Leaving the Station: Pyongyang on the Reform Track", paper prepared for the Council on US-Korea Security Studies, Seoul 14-15 October.

Oak, Dong-Suk (1997),
"The public Sector in Korea: Coverage, Measurement and Classification", Korea Institute of Public Finance, Seoul (in Korean).

Oak, Dong-Suk, Sang-Ho Lee and Hyun-Ah Kim (2000),
"Tasks to Improve Private Sector Participation After the Enactment of the Act on Private Capital Investment", Korea Research Institute of Construction Industry, Seoul.

OECD (1997),
Modern Budgeting, Paris.

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

OECD (1999a),
Environmental Requirements for Industrial Permitting: Case Study on the Iron and Steel Sector, Paris.

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

OECD (2000a),
Managing Across Levels of Government, Paris.

OECD (2000b),
Economic Survey of Japan, Paris.

OECD (2000c),
Economic Survey of Korea, Paris.

OECD (2001a),
Economic Survey of Korea, Paris

OECD (2001b),
Economic Survey of the United Kingdom, Paris.

OECD (2001c),
Territorial Review of Korea, Paris.

OECD (2002a),
Distributed Public Governance: Agencies, Authorities and Other Government Bodies, Paris.

OECD (2002b),
Education at a Glance, Paris.

OECD (2002c),
"OECD Best Budget Practices", PUMA.

OECD (2002d),
"Review of the Korean healthcare system", Paris.

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

Phang, Hanam and D.H. Kim (2001),
"Policy Options for Income Support and Active Labor Market Programs: A Synthesis of the Korea Experience", paper prepared for the World Bank Conference on Labour Market Policies: Its implications to East and Southeast Asia, Korea Labor Institute, Seoul.

Roh, Young-Hun (1997),
"A study of property tax on buildings", Korea Institute of Public Finance Research Report No. 97-15, Seoul (in Korean).

Samsung Economic Research Institute (2001),
"Recent labour market trends", *Korean Economic Trends*, December 2001.

Schick, A. (1998),
"Why Most Developing Countries Should Not Try New Zealand Reforms", *The World Bank Research Observer*, Vol.13, No.1.

Seoul Green Vision 21, (*http://smg.metro.seoul.kr*:9000/).

Shim, Sangdal (2001),
"Stock price changes and consumption: relative importance of wealth effects and sig-

naling in Korea", Korea Development Institute Policy Research Series, No. 2001-08, Seoul (in Korean).

Sierra Research (2000),
"A Comparative Analysis of the Feasibility and Cost of Compliance with Potential Future Emission Standards for Heavy-Duty Vehicles Using Diesel or Natural Gas", Report No. SR00-02-02.

Soo, L.D (2001),
"Anti-incineration movements and paths towards alternatives in Korea", paper prepared for Waste Not Asia 2001.

Tanzi, Vito and L. Schuknecht (2000),
Public Spending in the 20th Century, Cambridge University Press.

Transportation Research Board (2002),
The Congestion Mitigation and Air Quality Improvement Program: Assessing 10 Years of Experience, National Academy Press, Washington, D.C.

UNDP (1998),
Human Development Report.

UNEP (2001),
Standardized Toolkit for Identification and Quantification of Dioxin and Furan Releases, Geneva.

USEPA (2000),
Regulatory Impact Analysis: Heavy-Duty Engine and Vehicles Standards and Highway Diesel Fuel Sulfur Control Requirements.

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

Yang, Bong-min (2001),
"Health Insurance and the Growth of the Private Health Sector in the Republic of Korea", WBI Working Papers, World Bank.

Yoo, Hyun-Sook, *et al.* (2001),
"Analysis of government financial support for higher education institutions and measures to increase its efficiency", Korean Educational Research Institute, Seoul (in Korean).

Yoon, Joo-Hyun, *et. al.* (1998),
"Structural changes in the housing market and new policy directions", *Korea Research Institute for Human Settlements Report* No. 98-24, Seoul.

Yoon, Bong-Min (2001),
"Introduction to Mandatory Old-age Public Pension System in Korea", International Workshop on Korean Pension Reform in Transition, Hong Kong 2001.

Annex I

Measures of fiscal performance

Assessing the stance of fiscal policy is complicated by the different measures of the government budget balance that are used in Korea. According to the System of National Accounts (SNA) measure produced by the Bank of Korea, fiscal policy during the latter half of the 1990s was characterised by large budget surpluses, despite the financial crisis and the severe recession of 1998 (Table A.1). In contrast, the Government Financial Statistics (GFS) figures produced by the Ministry of Finance and Economy reported significant budget *deficits* in the wake of the crisis.

Tax and expenditure policies should be designed on the basis of a clear knowledge of the fiscal policy stance and its sustainability. It is important, therefore, to identify the main factors responsible for the contrasting pictures presented by the two methodologies and their relevance for assessing the performance of fiscal policy. The main discrepancies between SNA and GFS result from differences in the treatment of net lending, coverage and the issue of cash *versus* accrual accounting.

The most important difference is that loans extended by the government and repayment of principal are accounted as current outlays and revenues in the GFS methodology. In the wake of the crisis, GFS net lending exceeded 5 per cent of GDP, although it has since fallen to less than 2 per cent (Table A.1). This accounts for much of the difference with the SNA measure, which treats net lending as financial operations, which do not affect the fiscal balance. This is because, in principle, loans and repayments affect only the composition of the government's net wealth and not its level. However, GFS net lending, which is used in part to promote small and medium-sized enterprises and R&D spending, includes many quasi-fiscal activities that should be included in a broad measure of government activities (see Chapter III).

Table A.1. **Different measures of the fiscal stance**
Government budget balance as a per cent of GDP

	1996	1997	1998	1999	2000	2001
General government (SNA)	3.8	3.6	1.9	3.1	6.2	n.a.
Consolidated government (GFS)[1]	0.3	–1.5	–4.2	–2.7	1.3	1.3
Consolidated government minus net lending	2.9	2.6	1.3	1.4	5.1	3.2
Memorandum:						
Net lending	2.7	4.1	5.5	4.1	3.8	1.8

1. Excludes local government, but includes public enterprises.
Source: Bank of Korea and Ministry of Finance and Economy.

There are four major differences in coverage:

i) The SNA measure covers general government operations, while the GFS is limited to central government operations. Consequently, local governments, which account for about a third of total government spending, are not included in GFS.

ii) The treatment of 43 "public funds" differs between the two definitions. All but one of the funds[1] are included in the GFS figures and together they account for one-fifth of consolidated government expenditures (Table A.2). In contrast, the SNA does not include 19 public funds, such as the National Housing Fund, the Government Employees Pension Fund, SME's Start-up Promotion Fund, Korea Teachers Pension Fund and the Information Promotion Fund. The 19 excluded funds, which are considered to be primarily financial, had total spending of 56 trillion won (10 per cent of GDP) on an unconsolidated basis in 2001.

iii) The GFS figure that is typically used includes five special enterprise accounts,[2] which are excluded from the SNA measure. In 2001, the public enterprises recorded a deficit of 0.5 per cent of GDP on a consolidated basis (Table A.2).

iv) The SNA measure includes the National Health Insurance, which is excluded from the GFS figures.[3]

A third important difference is that the SNA records some government operations on an accrual basis (*i.e.* when rights of value are created), while the GFS methodology uses cash accounting (*i.e.* when cash is received or paid).

The choice between these two methods of calculating the fiscal stance is very complicated. In most OECD countries, the SNA measure is used, as it provides the most comprehensive coverage of government operations. In Korea, however, there is a question of whether the SNA measure is, in fact, sufficiently broad since it excludes many public funds and all extra-budgetary funds. Consequently, the SNA measure of expenditure, which includes local governments, is no larger than the GFS measure of central government. Some of the public funds appear to conduct significant quasi-fiscal operations, which are excluded from the general government. For example, the SME Start-up Promotion is involved in

Table A.2. **Consolidated government budget by component**[1]

Billion won in 2001

	General account	Special accounts	Public funds	Public enterprises	Other	Total	Per cent of GDP
Total expenditure	75.3	27.0	19.9	4.5	0.0	126.7	23.2
Net lending	–3.0	6.7	6.1	0.0	0.3	10.1	1.8
Total expenditure and net lending	72.3	33.6	26.0	4.5	0.3	136.8	25.1
Per cent of GDP	13.3	6.2	4.8	0.8	0.0	25.1	
Revenues	90.7	17.0	34.5	1.8	0.0	144.0	26.4
Per cent of GDP	16.6	3.1	6.3	0.3	0.0	26.4	
Balance	18.3	–16.7	8.5	–2.7	–0.3	7.3	1.3
Per cent of GDP	3.4	–3.1	1.6	–0.5	0.0	1.3	

1. Excludes local government but includes public enterprises.
Source: Ministry of Planning and Budget.

activity that could be categorised as fiscal. The SNA measure, thus, appears to provide an incomplete picture of fiscal policy. In addition to the question of coverage, the SNA needs to be produced with shorter time lags in order to be relevant for fiscal policy decisions. At present, the SNA measure is only available for 2000, making it difficult to use as a basis to formulate the 2003 budget.

The GFS figure, which is the operational target for fiscal policy at present, is available with a much shorter delay, thus making it more useful for policy decisions. However, this measure has a number of weaknesses. *First*, its inclusion of net lending brings in some government financial operations, such as the privatisation of state-owned enterprises, that should not be part of the calculation of the budget balance. *Second*, it excludes local government. *Third*, it uses cash-based, rather than accrual, accounting. However, the new GFS guidelines introduced in 2000 require the elimination of net lending and the accounting of all operations on an accrual basis. Moreover, Korean fiscal authorities have announced that local government budgets will be available on a GFS basis starting in 2003. These changes should sharply reduce the discrepancies with the SNA measure.

The best solution would be to base fiscal policy on an SNA measure that provides a complete picture of government activities. This will require a gradual elimination of public funds (see Chapter III), while bringing their quasi-fiscal activities – if judged to be appropriate and necessary – into the budget. In addition, the general government measure should be based on SNA93, a change that the government intends to achieve by 2004.

– At present, the SNA measure is based on accrual accounting for some institutions, such as non-profit enterprises financed by government. However, it relies on GFS, which is based on cash accounting, for the central government. Using accrual accounting has major implications for some parts of government expenditure, notably the calculation of interest payments.
– The definition of the institutions that compose the government will change. In particular, enterprises in which sales cover less than half of production costs could be classified as public enterprises.
– The depreciation of social overhead capital, such as roads and ports, will be included in the general government account. This will increase this category of spending, which is currently among the lowest relative to GDP among OECD countries.

These changes may have a tendency to increase government outlays.

Notes

1. The Foreign Exchange Equalisation Fund is excluded from both the GFS and SNA measures.
2. The grain management fund, the railroads, the telecommunications fund, the procurement fund and the executive fund. Strictly speaking, the inclusion of the public enterprises makes the GFS measure the "Consolidated Public Sector". In practice, this concept it used interchangeably with the "Consolidated Central Government".
3. However, transfers from the government to finance the deficit in insurance for the self-employed are part of social welfare spending in the general account and thus are included in both GFS and SNA.

Annex II

Competition policy

The Korea Fair Trade Commission (KFTC) is experiencing considerable pressures on its resources as the number of cases filed with it grows steadily. The competition authority has noted that it deals with a large number of repeat offenders, suggesting that the current legal deterrents are not sufficiently strong. For example, in the recent case concerning price fixing by producers of graphite electrodes, the KFTC issued penalties of $8.5 million, a record against foreign producers. However, the penalty could have been many times higher, given the harm to the economy and the illicit gain by those producers. Effective deterrence will require a further substantial increase in the size of penalties imposed in such cases.

The KFTC has launched a "Clean Market Project" to focus its energy and resources on sectors that are important in the daily lives of consumers and where anti-competitive practices are prevalent. Initially, six industries were chosen in 2001 for this initiative to eliminate anti-competitive behaviour (Table A.3). As of March 2002, the KFTC had completed corrective measures on 197 companies and 25 illegal practices by corporations and trade associations. The benefits of the Clean Market Project can be illustrated by the market for school uniforms, which are worn by 95 per cent of secondary school students. Since the uniforms differ between schools, the market is segmented and oligopolistic in nature. Promoting collective purchasing activities by consumer groups resulted in a 40 per cent reduction in the prices of school uniforms. A second example, is the elimination of the restriction on price discounts by driver education schools, which was enforced by the Korean National Police Agency. Following on the success of the first year's results, the KFTC chose 11 business sectors in six industries in 2002 (Table A.3).

Table A.3. **The Clean Market Project**

Sectors selected by the Korea Fair Trade Commission

2001		2002	
Industry	Sector	Industry	Sector
Education	School uniforms Driver's education	Education	Private educational institutes Individual study publications
Services	Wedding halls Funeral halls	Energy	LPG LNG
Telecommunications	Mobile telephones	Finance	Credit cards Non-life insurance
Construction	Construction	Real estate	Real estate brokers Housing maintenance
Media	Newspaper Broadcasters	Retail	TV home shopping
Pharmaceutical	Pharmaceutical products	Leisure services	Membership-based Other services

Source: Korea Fair Trade Commission.

Annex III

Calendar of main economic events

2001

July

The Bank of Korea cuts the overnight call rate by 25 basis points to 4.75 per cent.

August

The government completes the repayment – ahead of the original schedule – of the $19.5 billion in loans from the IMF.

The Bank of Korea lowers the overnight call rate by 25 basis points to 4.5 per cent.

September

The government announces a policy package – including a 5.1 trillion won supplementary budge – to overcome the economic instabilities caused by the 11th September terrorist attack on the United States.

The Bank of Korea cuts the overnight call rate by 50 basis points to 4 per cent, the lowest level on record, and the interest rate on "liquidity adjustment loans" by 50 basis points to 3.75 per cent.

The Financial Supervisory Commission approves the merger of Kookmin Bank and the Housing Bank.

Korea's official foreign exchange reserves exceed $100 billion.

October

The government announces policies to boost domestic demand through a supplementary budget, deregulation and financial and tax assistance.

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

November

The Ministry of Finance and Economy announces that the KDB "quick underwriting" scheme for corporate bonds will be abolished by the end of 2001.

The special consumption tax on cars is reduced temporarily to boost consumption.

The National Assembly passes a second supplementary budget totaling 1.6 trillion won.

December

The National Assembly approves the 2002 budget of 112 trillion won.

Korea and Japan agree on a Bilateral Investment Treaty.

The Financial Supervisory Commission announces plans to enhance the transparency of business operations by expanding the list of mandatory items for business reports and public announcements.

The Financial Supervisory Commission approves the merger of Hanvit Bank and Pyunghwa Bank.

2002

January

The Special Act for Fiscal Stability of the National Health Insurance is enacted. The Act sets government support for the system for the self-employed at 50 per cent of its deficit, with 40 per cent provided by the budget and 10 per cent from the newly introduced "health insurance charge" levied on tobacco consumption.

The Bank of Korea announces that its 2002 inflation target is 3 per cent, plus or minus one percentage point, the same as in 2001, while keeping the medium-term target at 2.5 per cent.

February

The Financial Supervisory Service takes measures to cope with rapid increase of household loans and to improve the asset quality of banks by instructing banks to increase loan loss provisions and improving credit risk management.

March

The Bush administration imposes safeguard measures to limit US imports of steel products.

Moody's raises the credit rating of Korea from Baa2 to A3. Fitch and S&P also boost their ratings for Korea in June and July.

Measures to cool the real estate market are introduced, including the designation of Seoul as a "speculative overheating area", the limitation of the transfer of parcelling rights and the shortening of the exemption period for capital gains tax.

April

The government and the Bank of Korea announce policies to restrain the surge in the household loans by deposit-money banks.

General Motors signs a contract to take over Daewoo Motor.

The standard prices used in the calculation of capital gains taxes on real estate are increased.

May

The Bank of Korea boosts the overnight call rate by 25 basis points to 4.25 per cent.

The government announces that it will pay back $3.8 billion in loans from the IBRD and ADB in 2003 – ahead of schedule.

The government introduces policies aimed at improving asset quality of the credit card business by restricting the issuance of cards to unqualified persons and to protect card users by lowering service charges.

June

In the 2002 FIFA World Cup held in Korea and Japan, the Korean team advances to the semi-final game.

July

The Product Liability Act to protect consumers goes into effect.

August

The Money-Lending Business Act, which is intended to bring the underground financial market into the open, is introduced.

The South-North Economic Cooperation Committee, which is held in Seoul, agrees to connect railroad lines through the DMZ and to provide rice and fertiliser to the North.

Additional policies to calm the real estate market are announced, including a strengthening of tax audits by the National Tax Service on the origin of funds invested in housing, measures to prevent capital gains tax evasion and a further increase in the standard prices used for the calculation of capital gains taxes.

September

The government announces another policy package to stabilize the overheated real estate market, in part by strengthening the taxation of capital gains taxes and raising taxes on holding property.

The Public Fund Oversight Committee decides to sell the Korea Deposit Insurance Corporation's shares in the Daehan Insurance Company to the Hanhwa consortium.

The 14th Asian Games are held in Busan.

The National Assembly passes a supplementary budget totaling 4.1 trillion won.

October

Korea signs a Free Trade Agreement with Chile, which is expected to take effect in the first half of 2003.

Daewoo Motor changes its name to GM Daewoo Auto and Technology (GMDAT). Creditors agree to lend $2 billion to the new company.

The KOSDAQ index declines to a record low level of 43.7.

The number of subscribers to broadband Internet service exceeds 10 million.

The Ministry of Finance and Economy announces changes in property taxes to calm the real estate market.

November

The Ministry of Finance and Economy introduces the National Fiscal Information System.

The Financial Supervisory Commission authorizes the merger of Hana Bank and Seoul Bank.

The National Assembly rejects legislation proposed by the government to introduce a 40-hour workweek. The legislation had been submitted without a consensus from the Tripartite Commission.

The National Assembly passes the 2003 budget of 182.8 trillion won (111.5 trillion won in the general account and 71.3 trillion won in the special accounts).

December

Mr. Moo-hyun Roh is elected as Korea's 7th president.

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