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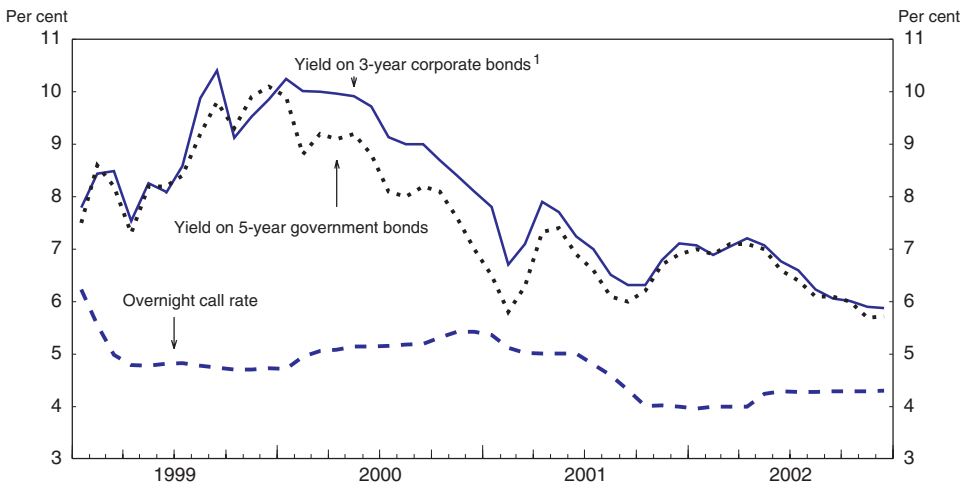
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II. Monetary and fiscal policies

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

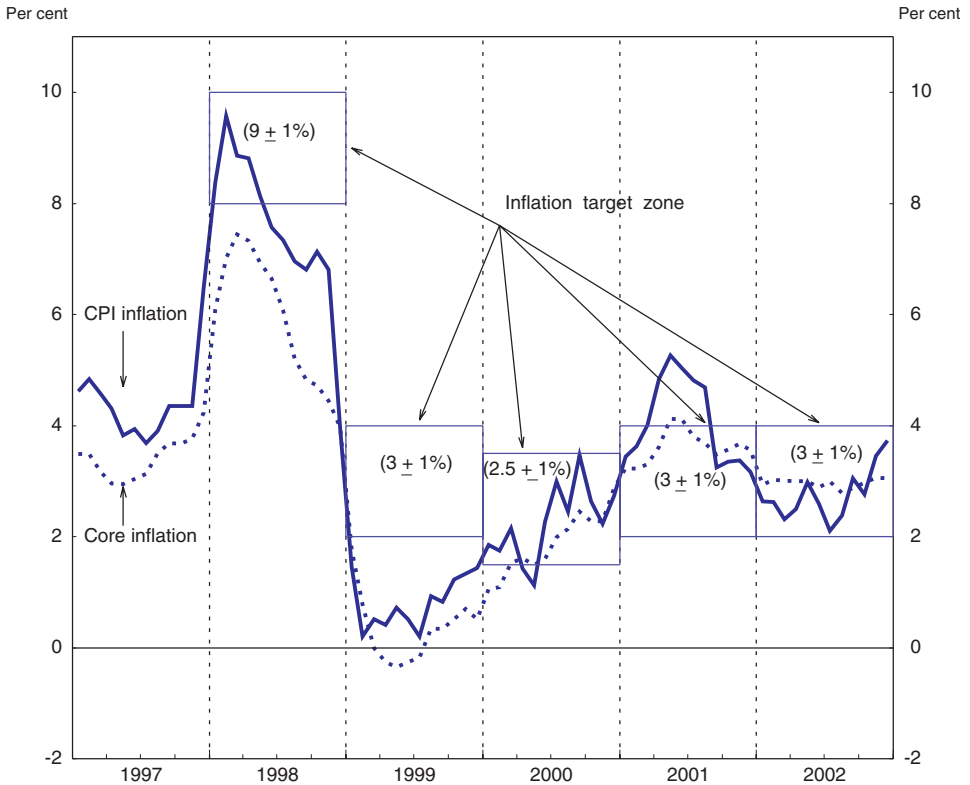
In 2001 and 2002, the annual inflation rate remained within the target zone that the Bank of Korea is required to set each year in consultation with the government (Figure 14). However, in the spring of 2001, core inflation – the monetary policy objective – peaked at a level slightly above the 2 to 4 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

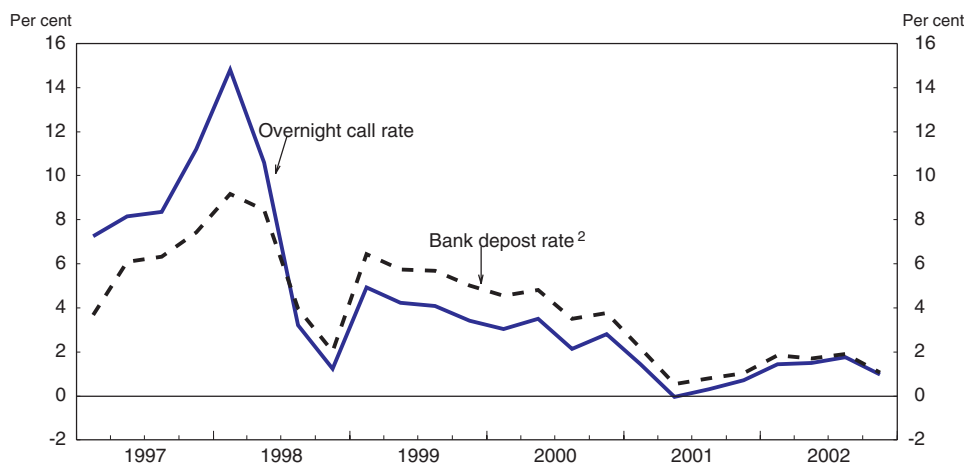
Figure 14. **Inflation targets and outcomes**
Year-on-year percentage changes



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 rates¹

1. Deflated by the year-on-year change in the consumer price index.

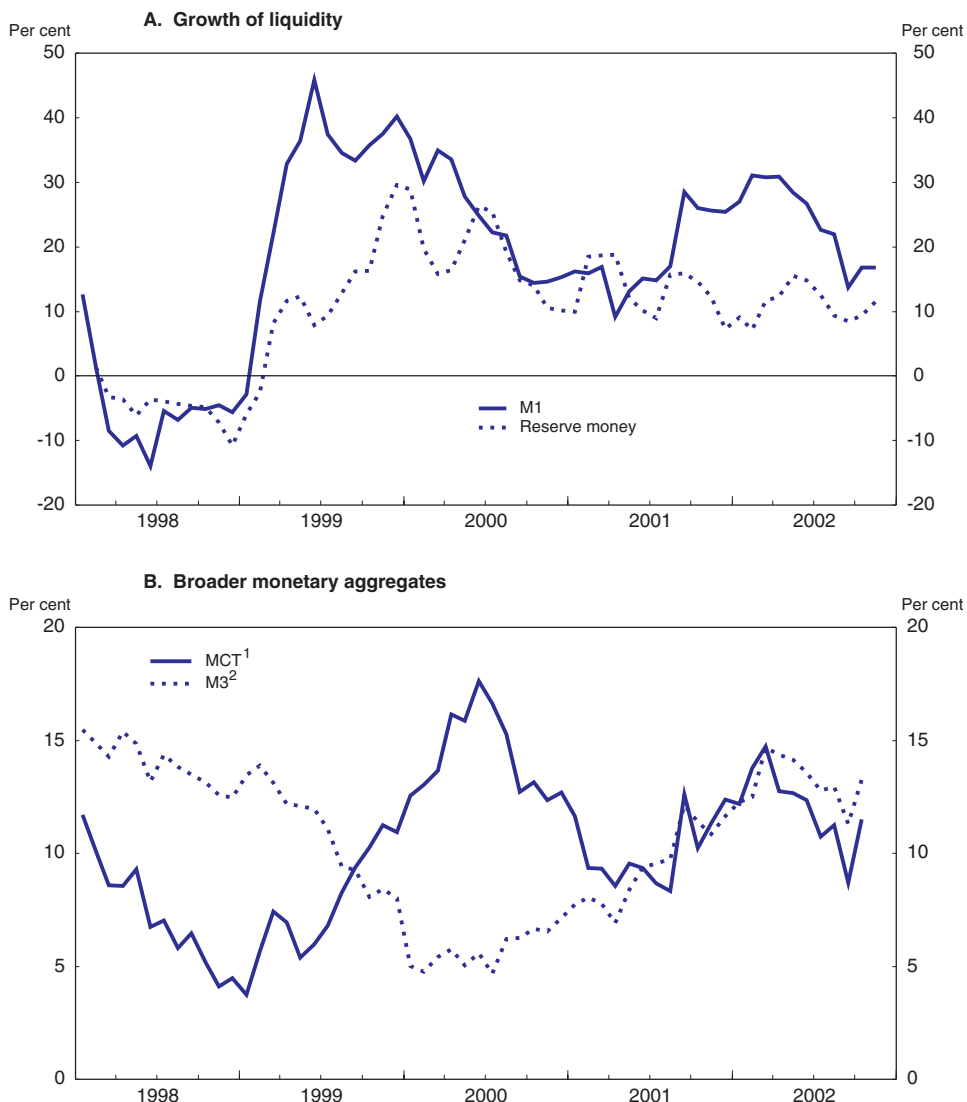
2. Rate on time deposits of less than six months.

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

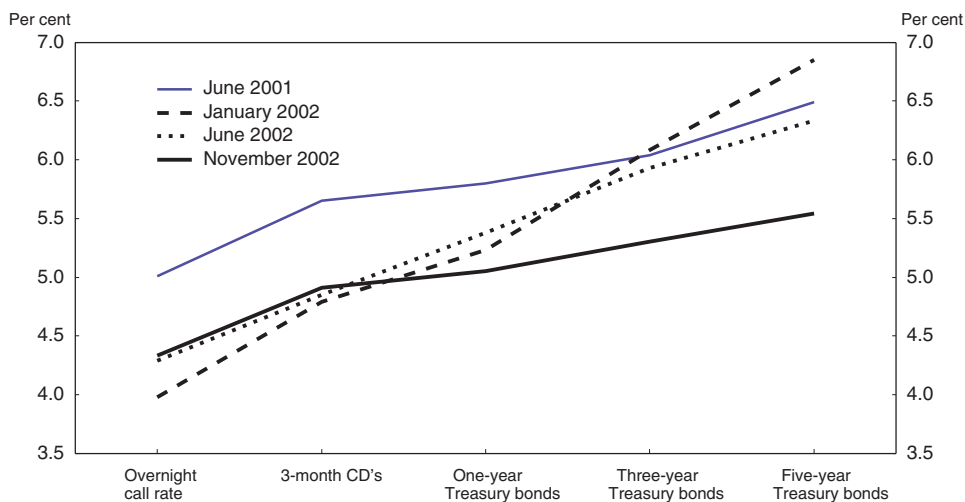


1. MCT = M2 + CD's + money in trust.

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 <i>ex ante</i>	*	*	*	*
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

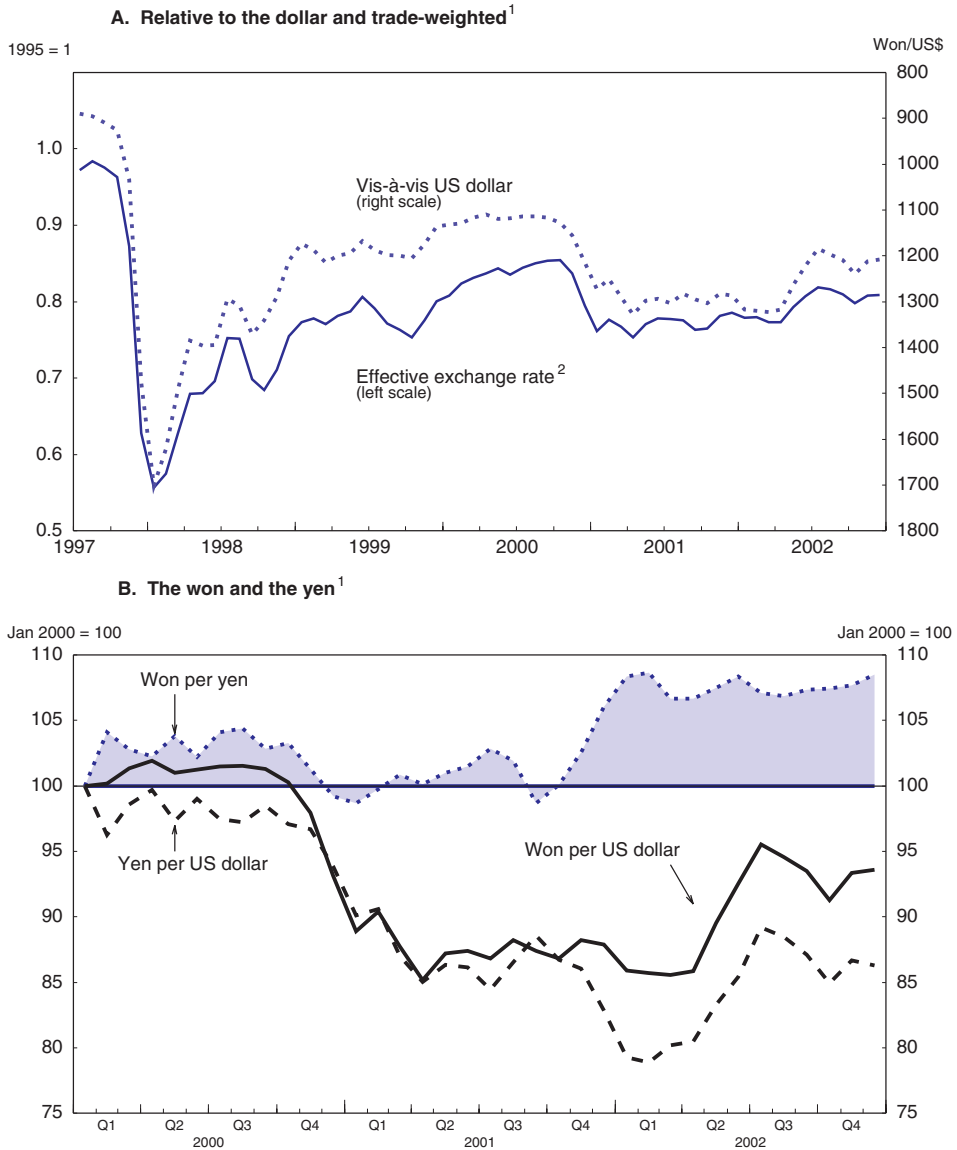
operating an interest rate-based monetary policy. This is particularly challenging in Korea as financial-sector restructuring makes it uncertain how changes in short-term rates will influence the long-term rates that affect investment and purchases of housing and consumer durables. As noted above, the 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 won¹

	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
<i>Of which:</i>								
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 surplus²⁵ 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 under-shooting 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-added 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

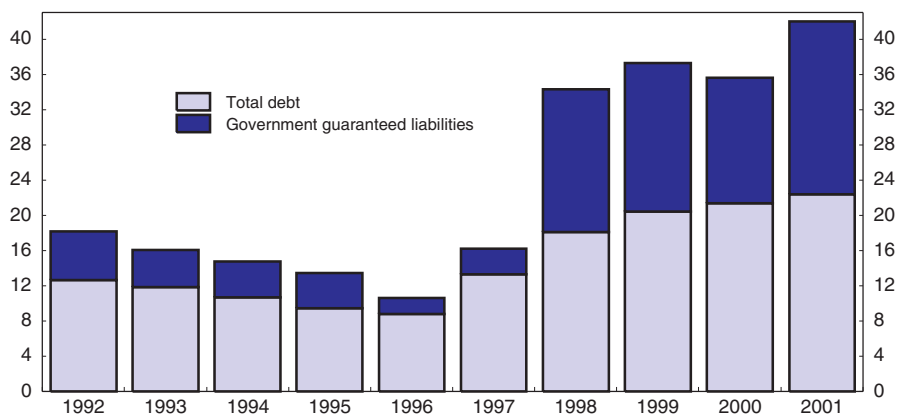
	1997	Per cent of GDP	1998	1999	2000	2001	Per cent of GDP
Total debt (A + B – C)	60.3	13.3	80.4	98.6	111.4	122.1	22.4
A. Central government	50.5	11.1	71.4	89.7	100.9	113.1	20.8
Borrowing	18.5	4.1	21.8	21.4	21.9	22.5	4.1
Domestic	3.2	0.7	3.0	2.4	1.9	2.1	0.4
External	15.3	3.4	18.8	18.9	20.0	20.4	3.7
Bonds	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 re-capitalise 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 GDP¹



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 won¹

	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 Centre³² 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 incomes³⁵

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
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

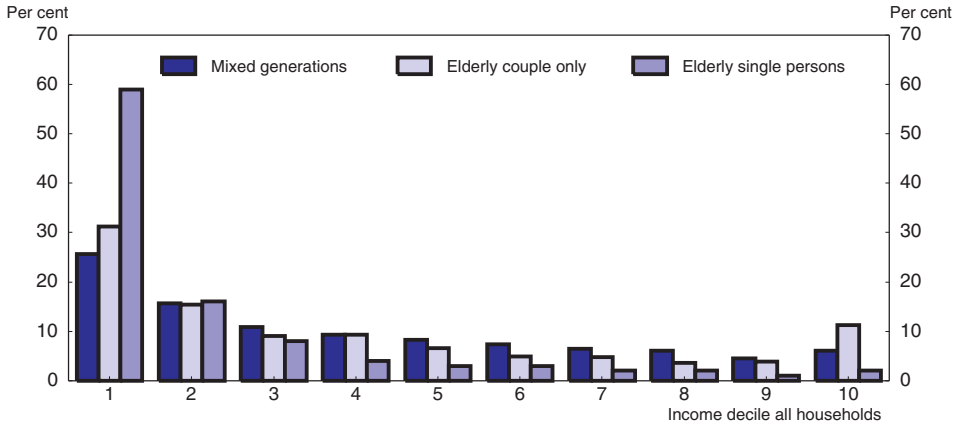
1. 2000.

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.

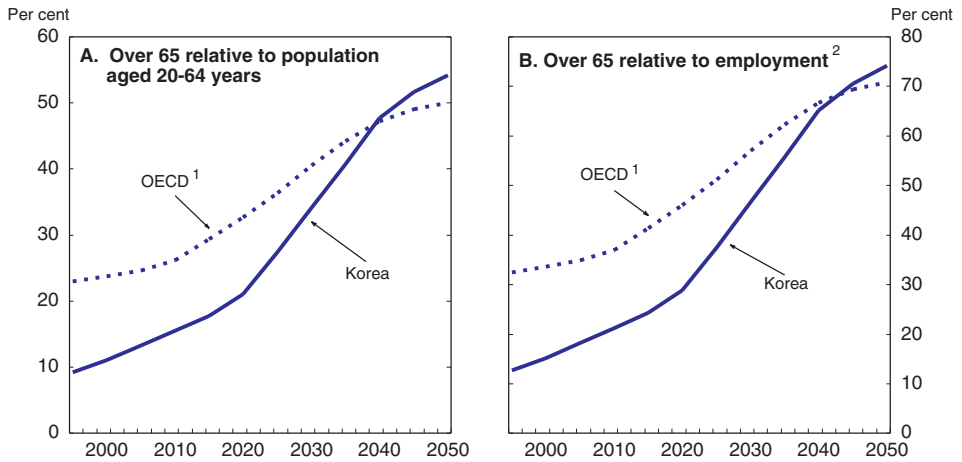
Figure 20. **Distribution of the income level of elderly households**
Per cent of households by type in 1998¹



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

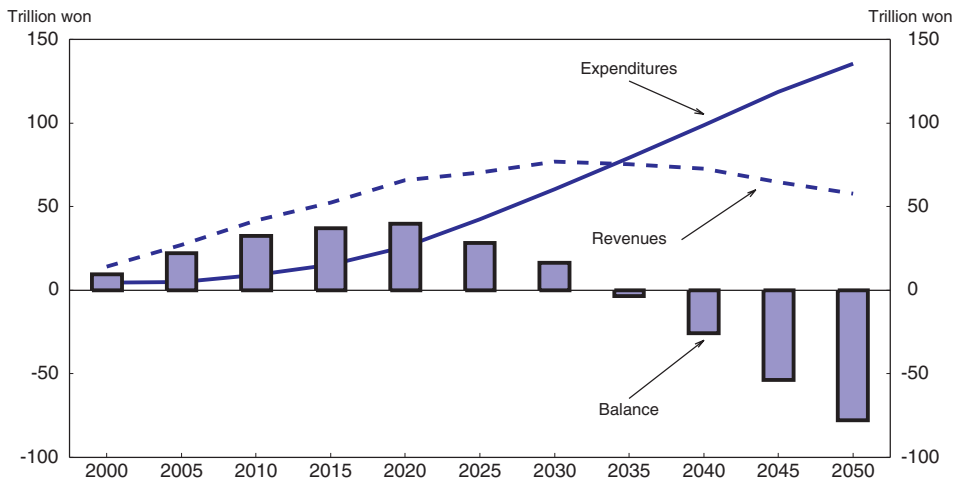
Despite its relatively recent introduction, the NPS is unsustainable in the long term without a major overhaul. The population is ageing more rapidly than in the rest of the OECD area and indeed in 2050 the number of older people will be higher as a percentage of the age group 20 to 60 than in the average 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 rate⁴³ 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.
- *Property 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.

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. *First*, parcelling prices, which had been subject to price ceilings, were liberalised in 1999. *Second*, 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. *Third*, in 2000, those who have already purchased houses under this system were allowed to apply again. *Fourth*, 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.

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BASIC STATISTICS OF KOREA

THE LAND

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

THE PEOPLE

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

PRODUCTION

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

THE GOVERNMENT

Public consumption, 2001 (per cent of GDP)	10.4	Composition of the National Assembly: February 2003	<u>Number of seats</u>
Central government revenue, 2001, consolidated basis (per cent of GDP)	26.4	The Grand National Party	151
Central government budget balance, 2001, consolidated basis (per cent of GDP)	1.3	The Millennium Democratic Party	103
		Other	18
			<hr style="border: none; border-top: 1px solid black;"/> 272

FOREIGN TRADE

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

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