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

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The previous Survey of Iceland was issued in December 1999.

ASSESSMENT AND RECOMMENDATIONS

The expansion continued at a rapid pace in 2000…

After four years of rapid growth, averaging almost 5 per cent, the pace of the economic expansion remained robust in 2000. Domestic demand accelerated, led by renewed buoyancy in private-sector investment that boosted imports. Capital formation in the aluminium and fishing industries increased strongly, as did spending on information and communication equipment. More worryingly, public investment continued to soar, and government consumption remained buoyant. Meanwhile, slower real income growth, linked to higher oil prices, and higher debt-service payments hit the purchasing power of households. As a result, the growth of personal consumption was maintained only through even faster borrowing, with household debt estimated to have increased almost 20 per cent. In contrast to domestic demand, exports grew only modestly, as higher investment has not yet been reflected in much of an increase in fish production. Hence, with a negative contribution from net exports, real GDP growth dipped slightly to 3½ per cent, while the current account deficit widened further.

… bringing extreme pressure on resources and faster inflation

Even that more moderate rise in output was well above the potential growth rate of the economy and thus generated increasing excess demand. The registered unemployment rate fell as low as 1.2 per cent of the labour force by the autumn, even though there was a marked rise in immigration and inexperienced workers were drawn into the labour force. The tightness of the labour market helped push up both wage and price inflation. Over the past year, wages have risen by around 6½ per cent, exceeding the sum of trend productivity growth and expected price inflation. The latter — as measured by the consumer price index — reached 5.1 per cent in 2000, in line with projections made at the time of the last *Survey* at the end of 1999. A further sign of excess demand came from the surge in the deficit on the current external account which may have surpassed 10 per cent of GDP, triple its historical average.

While the monetary policy response was muted until late in the year,…

The last *Survey* recommended additional monetary tightening in order to stem these inflationary pressures, but this was late in coming. The Central Bank raised its repurchase rate four times since then, bringing it to 11.4 per cent by November 2000. However, it was not until that point that real short-term interest rates had increased substantially, reaching their highest level in the current upswing. The initial slowness in boosting interest rates came in a period of currency appreciation. But in February 2000, interest rates were raised and the exchange-rate band was simultaneously widened to ±9 per cent, a move designed to create room for further monetary tightening. Following downward revision to fishing quotas in the spring, selling pressure on the króna developed, and this was first met by intervention. Monetary policy was then tightened, but without preventing

a10 per cent fall in the trade-weighted exchange rate to a level that, by February 2001, was about 3 per cent from the weaker edge of the target band. By then, long-term rates on indexed bonds had risen by100 basis points, the property market had eased, and the stock market had fallen 30 per cent from its level a year earlier.

… fiscal tightening proved insufficient to end overheating,…

During 2000, fiscal policy did play a role in restraining demand. However, the public-sector wage bill increased rapidly, primarily reflecting a catch-up in government pay. Plans to curtail medical outlays failed to be implemented. Nevertheless, overall, central-government spending grew markedly less rapidly than nominal GDP. On the revenue side, yields from corporate tax and the relatively new capital income tax were above expectations, while individual income tax yields rose as the basic tax credit was not increased in line with wages. These developments led to a significant increase in the general-government financial surplus, from 2 to 2¾ per cent of GDP. The OECD's estimate of the structural balance, which adjusts for the strength of the business cycle, rose somewhat less, to 2 per cent.

… and, unfortunately, will do no more to ease demand pressures this year

The budget for this year does not imply a further tightening of fiscal policy. Overall spending is projected to rise by close to 9 per cent, and the recent teachers' pay settlement implies a further rise. A part of the explanation is that two expenditure programmes have been modified in a way that will boost spending: a parental-leave scheme has been introduced; and there has been a reduction in the extent of means-testing of child allowances. However, part of the rise reflects temporary increases in agricultural subsidies and interest payments that only affect 2001. In addition, central government is funding a cut in the local real estate tax in rural areas and permitting an increase in municipal income tax rates by lowering its own income tax rate. This last item, however, will not affect the overall position of the public sector, provided that local governments do not spend their additional revenue.

Nonetheless, output growth should moderate…

The balance of forces is pointing, nonetheless, towards a considerable slackening in the growth of output this year, with real GDP growing by only 1½ per cent. Such a slowdown reflects a likely fall in the fish catch and tighter financial conditions. Both factors are likely to cool personal consumption and business investment. Weaker activity should bring a noticeable rise in unemployment. Yet, with both the quantity and price of fish exports falling, the current-account deficit seems likely to widen further. In these circumstances, the forces acting on inflation are mixed. Substantial excess demand will persist for most of the year, and wage drift may undermine the moderate increases agreed for the second year of the national pay contracts. The drop in the exchange rate that occurred last year is projected to eventually push up the prices of imported goods, but housing costs should decelerate and oil prices may decline slightly further from recent lower levels. Overall, the inflation rate seems likely to ease back this year to around 4 per cent, from 5 per cent previously, and may edge down further in 2002 on the technical assumption of a stable exchange rate from February 2001 onwards.

… but the economy will remain vulnerable to changes in investor sentiment

The risks surrounding this central projection are considerable. First and foremost is the real and financial impacts that any further downward movement in the exchange rate might have on the economy. Sustaining the large current-account deficit has depended on the private-sector capacity and willingness to continue to increase its net foreign-currency debt at a rapid pace. Strains are beginning to emerge in this respect, as shown by the fall in the króna to the lower reaches of the official target range. Pension funds, sensing further weakness in the currency, could further increase their purchase of foreign assets. Fishing companies have taken large losses on their foreign borrowing. Other debtors, without much in the way of foreign-currency income, may become reluctant to increase risks to their balance sheets. Much of this foreign borrowing has been intermediated by banks, which, in addition, have been taking long positions in both the bond and equity markets. Such exposures could lead to further deterioration in the quality of their balance sheets, bringing a possibility that foreigners would reassess their willingness to lend to them, thereby reducing domestic borrowers' access to foreign credit. For any of these reasons, pressure on the exchange rate could continue and even be amplified, given the deterioration in vulnerability indicators, such as the ratio of net foreign reserves to indebtedness, since the last *Survey*.

Policymakers must ensure that the economy slows down sufficiently to eliminate excess demand

The overall policy challenge is to minimise the substantial risks inherent in the current situation. The economy has to be steered so that aggregate demand slows and wage and price pressures ease. The monetary authorities have a key role to play in ensuring that inflation remains on a clear downward path, thereby helping to restrain the demand for credit. Their job will be easier if fiscal policy-makers keep strictly to budgeted spending levels and have contingency plans ready for possible cuts, if circumstances call for them. The financial supervisors should pay close attention to the risk exposures of the larger banks in order to mitigate the vulnerability of the financial system to external shocks. In addition, consideration should be given to strengthening the supervisory framework for financial institutions through increased required capital-adequacy ratios and stricter loan classification as well as better provisioning.

The recent shift to an inflation-targeting regime is a welcome development

Given the risks inherent in the current situation, the government and Central Bank have recently decided that the best way to achieve a smooth movement to domestic balance is to adopt an inflation target. The aim of the new policy is to reduce inflation to about 2½ per cent by 2003. Special reporting mechanisms have been put in place for the Central Bank to justify its policy if inflation diverges from the target by more than 1½ percentage points by that date, with a somewhat wider band in the interim. Thus, the acceptable range is somewhat higher than for other countries with an inflation target. The Central Bank is being given immediate operational independence, thereby bringing its status into line with that of the monetary authorities in many other countries. At the same time, the fixed exchange-rate band is being abandoned. Such changes in policy are desirable given that the economy is particularly vulnerable to periodic large shocks from the fishing sector. This will give a better focus to monetary policy for the reasons that were outlined in the 1999 *Survey* when

this course of action was first advocated.

The current challenge is to guard against entrenchment of recent rates of wage and price increases

Monetary policy will have to remain vigilant to the possibility that exchange-rate depreciation might feed into second-round effects on wages and prices and stand ready to counter any such eventuality with a sufficiently tight monetary policy. The recent introduction of an inflation target may help lessen the prospect of such a wage-price spiral by improving the credibility of monetary policy. However, the Central Bank will have to ensure that the economy continues to slow down after the recent half-point cut in official interest rates. Should growth remain too strong, the Bank would need to take further action in order that a better balance emerges in the labour and product markets. Indeed, developments in the labour market in the coming months will give a crucial indication as to whether the desired moderation in activity is actually occurring, more so than the overall inflation rate, which may be held down in the very short-term by the fall in oil prices.

Public spending needs to be better controlled…

In the context of an economy that needs a better balance between demand and supply, the top priority for fiscal policy should be to remain within the spending levels set in the budget for 2001. The historical record for expenditure control has not been good. It is to be hoped that the new sanctions put in place with respect to public agencies that exceed their budget limits will be of some help in this area, but more forceful general constraints on spending may be needed.

… especially if the government is serious about eliminating its net debt by 2004

Additionally, a new instrument needs to be put in place to define the nominal sums available to Ministries over the medium term. In particular, a mechanism should be implemented to ensure that spending increases next year and thereafter will be reined back to under 5 per cent, the medium-term nominal growth rate of the economy consistent with a modest inflation rate. Unless any of the risks outlined above were to occur, the government should be able to achieve its aim of having no net debt by 2004. In this regard, it is noteworthy that central government net debt has been reduced to18 per cent of GDP at end-2000 from 35 per cent five years previously. A resumption of privatisation sales, which are planned to reach 2.5 per cent of GDP this year, will sustain, or indeed accelerate, this trend. Such a rapid improvement in public finances is clearly warranted, even if it will present some challenges for debt management. In particular, since it is unlikely that the entire consolidation could be undertaken by repurchases of domestic debt in this time period, some domestic financial assets might have to be acquired and net foreign indebtedness (which amounted to 61 per cent of central-government debt at end-2000) reduced, even if such action might put downward pressure on the exchange rate for a time.

Fiscal policy-makers should soon also turn to improving the tax system

The longer-term accumulation of domestic financial assets would not be appropriate. Such a policy would raise questions concerning the extent of government control over the private sector. Moreover, running a surplus would unduly favour future generations at the expense of current ones, given that, as outlined in the previous *Survey*, ageing poses only a small problem to public finances. Rather, macroeconomic stability permitting, longer-term fiscal policy should be oriented towards reducing taxes and enhancing their efficiency. While the tax system functions quite

well overall, with a number of features (such as a low number of rates and broad bases) that are exemplary, it could be improved in a way that would boost incentives to work, save and invest.

Past tax reforms have aimed at simplification and neutrality,…

Past tax reforms have aimed at simplification and a reduction in the extent of discrimination. A flat income tax of 35 per cent with a uniform tax credit was introduced. The corporate tax rate was lowered to 30 per cent by widening the tax base. A value-added tax replaced the sales tax, and the municipal turnover tax was abolished. Although some of these changes were partly reversed with the introduction of a higher rate of income tax, the government renewed its reform of income taxation in 1997. Marginal tax rates were reduced, and the taxation of all capital income was unified, with only one low rate of 10 per cent. A uniform payroll tax for all sectors of the economy was introduced. Consumption taxes and the taxation of employment and pension income now account for the bulk of government revenues, with an overall tax yield slightly lower than in the average OECD country but up from a decade ago.

… but taxation is still far from neutral

Despite the introduction of the uniform capital income tax, the principal area of non-neutrality remains the taxation of different forms of capital. If saving is made either through pension schemes or through the purchase of bonds, the extent of the double taxation of saving is low. When an investment is made in equities, it is higher — though amongst the lowest in the OECD area. In addition, there are a number of further charges on capital income, notably the wealth tax and stamp duties (transfer taxes). The former is also discriminatory between different forms of wealth but, in this case, favours investment in equities, as in that case taxation is based on the par value of shares rather than their market value. Finally, there are inheritance and property taxes. The former is set at different rates according to the closeness of the family linkages between the donee and donor. Overall, the impact of these additional taxes has been to raise the effective rate of taxation on capital to above that on labour. This is undesirable in Iceland's case because it is faced with a chronic inadequacy of domestic savings while it enjoys low structural unemployment.

A more coherent taxation of capital might boost savings and improve growth prospects,…

The basis of future tax reform should be to further increase simplicity and neutrality, while improving the sustainability of the recent increase in living standards. Simplicity would best be served by reducing the number of different taxes on capital: a goal that would also help improve the neutrality of the tax system as between consumption and saving — a particularly desirable result insofar as the combination of large current-account deficits and budget surpluses suggests inadequate incentives to save. The first stage in this process would be to lower the difference between the taxation of corporate profits and that of interest payments. Two routes would be possible. The corporate tax could be progressively reduced or shareholders could be given a credit for the payment of corporate taxation. The wealth tax might be a candidate for elimination, the more so since it discriminates between different assets. For example, with current rules, individuals can markedly reduced wealth tax payments by holding assets abroad in specially created companies whose shares have artificially low par values. Its revenue yield is low relative to collection costs and incentives for

avoidance. It is also likely that the growing globalisation of domestic financial markets will make it difficult to continue with stamp duties on financial transactions, which are increasingly mobile internationally. Finally, inheritance taxes should be eased — they represent an extra burden on those who are not related to donors and provide important "tax planning" incentives. They may also encourage dis-saving among the elderly, since they cut into long-run rates of return.

… while the taxation of expenditure and income also could benefit from changes

The reform package should not neglect expenditure and individual income taxes. In the first area, it would be appropriate to raise the overall value-added tax and reduce the use of additional excise taxes on specific items, other than on those with clear negative externalities (on users' health or the environment more generally). In the area of income taxation, the priority over the longer term should be to gradually lower the marginal tax rate. At the same time, the child benefit and the mortgage interest allowance should be reformed. The first of these benefits discriminates in an unjustifiable way between children of different ages. As to the allowance for mortgage interest payments, even if it is less distortionary than corresponding treatment in many other OECD countries, it favours purchase rather than rental of accommodation and has little justification in the absence of capital income taxation on the imputed rent from owner-occupied housing. It would be best replaced by a one-off lump-sum housing benefit.

Resource rents are an as yet untapped tax base

While the general thrust of the tax reform package would be one of rate reduction and tax elimination, there is at least one area where taxation should be introduced. Resource rents are an appropriate tax base because their taxation is non-distortionary. Since the introduction of fishing quotas, considerable rents have been generated for the owners of these rights. Secretariat estimates put the size of the rent at over one per cent of GDP for cod alone. The production of hydro-electricity is another area where sizeable rents could emerge for the owners of the rights. The taxation of these rights, or — even better, in the case of fishing and radio frequencies — their auction, has the possibility of raising substantial revenue and so helping finance the recommended package of tax reform.

Prudent funding of such a package would require expenditure cuts — possibly from a reform of farming policy

Such a tax reform would go beyond the likely availability of funds from the budget surplus and would require extra financing from expenditure reductions. A prime candidate for such cutbacks would be moving toward a more market-related agricultural policy. Public farm spending amounted to 1.8 per cent of GDP in 1999, and outlays were the second highest (on a per capita basis) amongst OECD countries. Moreover, consumers are subjected to hidden, implicit taxes that keep the price of domestically produced foodstuffs 2¼ times above world market levels and disrupt the efficient allocation of resources domestically. Indeed, agricultural policy reform would also allow the abolition of the lower rate of value-added tax that is designed to partially offset the impact of agricultural policy in raising food prices. Policy is presently constrained by contracts between the government and farmers in certain sectors, but over the medium-term horizon, agriculture should be opened to the benefits of globalisation.

Growth opportunities will

Tax reform is not the only approach to enhancing trend growth of

also benefit from a major reduction in government's role in financial markets…

the economy. A reduction in the level of government ownership and regulation is also necessary. Progress has been made in opening financial markets to competition since the last *Survey*. Several of the investment credit funds were merged into an investment bank that was subsequently fully privatised and which later merged with the only completely private commercial bank. The two state commercial banks now have private shareholders, but the pace of change in this sector slowed in 2000. Nevertheless, the government took steps to ensure that bank deposits of the state banks are not fully guaranteed by introducing a deposit insurance scheme that put a ceiling on compensation in the event of bank failure. A concerted effort needs to be made this year to implement current plans to completely sell the state holdings in the commercial banks and to further review the possibility of privatising the government housing funds, as recommended in the last *Survey*. Equally, it will be important to implement the restructuring of the savings-bank sector in order to give them clearer commercial priorities.

… and from liberalisation initiatives taken or contemplated in other sectors

Significant new initiatives were taken to increase competition elsewhere in the economy. The new regulatory authority for telecommunications has already taken steps to increase competition. New licences have been granted both for mobile telephones and terrestrial services. These new operators should help drive prices even lower and further extend market penetration, already the highest in the OECD area. The monopoly power of the historic telephone operator has been further eroded by obliging it to unbundle the services offered through its local loop. This year, the government needs to finalise its plan for the privatisation of the national telephone company in a way that maximises competition, even if this reduces the price it will receive for its stake. In the area of electricity, an objective should be to separate generation and distribution of electricity before privatising this company too. Consumers will need to have the freedom to purchase supplies from new producers. Market forces in the economy are also likely to be improved by the new competition legislation, which increases the powers of the competition authorities to vet mergers, thereby addressing the concerns expressed in previous *Surveys*. Overall, structural policy has been a success in recent years and has helped in the development of new activities, even if fisheries remain the principal source of export earnings. In that area, the increase in fishing quotas will need to be held back in the next few years below that allowed in the legislation, in order to rebuild stock levels that are now not thought to be as high as before.

In sum

The past five years have seen rapid economic growth, averaging 4½ per cent annually, which has helped push the government's budget into substantial surplus and reduce the unemployment rate to one of the lowest in the OECD area, at close to 1 per cent of the labour force. However, for the past year or so, the economy has been showing worrying signs of overheating, even though policy actions already taken are likely to slow domestic demand. This slowdown in demand will be magnified by the cut in fishing quotas so that GDP growth could slacken to around 1½ per cent in 2001. Nevertheless, significant inflationary pressures remain, although they may be masked in the near term by the fall in oil prices. Also, the current-account deficit is likely to remain uncomfortably large in the next

two years. Such developments would pose an increased risk to the stability of the exchange rate and that of the financial system. A concerted policy response is called for. In this regard, the recent adoption of an inflation target, coupled with the grant of operational independence to the Central Bank, and the ending of the exchange-rate band are to be welcomed as giving a stable base for policy. However, the monetary authorities will need to be particularly vigilant to any signs from the labour and product markets that underlying inflation is not on a sustained downward trend. Moreover, financial supervision should be enhanced. Fiscal policy should remain tight, and a stricter control mechanism is needed to ensure that the overspending that has characterised budgets over the past decade does not repeat itself. In the medium-term, growth prospects would be enhanced by reducing and simplifying capital taxation and introducing taxes on resource rents in the fishing and electricity sectors. Shrinking agricultural support provides another important avenue for creating room for tax cuts. Elsewhere, the role of the government still needs to be further curtailed, except where justified by externalities, such as in fishing. So long as macroeconomic balance is restored and structural reforms are sustained, the prospects for the economy should again be bright.

I. RECENT TRENDS AND PROSPECTS

Following a boom period in which Iceland's economy became overheated, the pace of activity slowed down somewhat last year. Output grew about 3½ per cent in 2000, after four years of increases averaging 4¾ per cent. With increasing pressure on available capacity, inflation surged, even though it peaked in the first half of the year. Yet it has remained high relative to rates recorded in trading partners as well as those seen in Iceland ever since the early 1990s. This year, output growth is expected to drop considerably further, in part reflecting a cutback in the allowable fish catch. Unemployment is projected to rise from the very low rates recorded at end-2000, but with the labour market likely to remain fairly tight, inflation is unlikely to improve much from current rates. Hence, despite the slowdown, additional policy tightening may be required. Financing the burgeoning current account deficit has put pressure on the exchange rate and has raised the risks of financial instability, especially as businesses and households have accumulated high levels of debt through heavy borrowing in recent years.

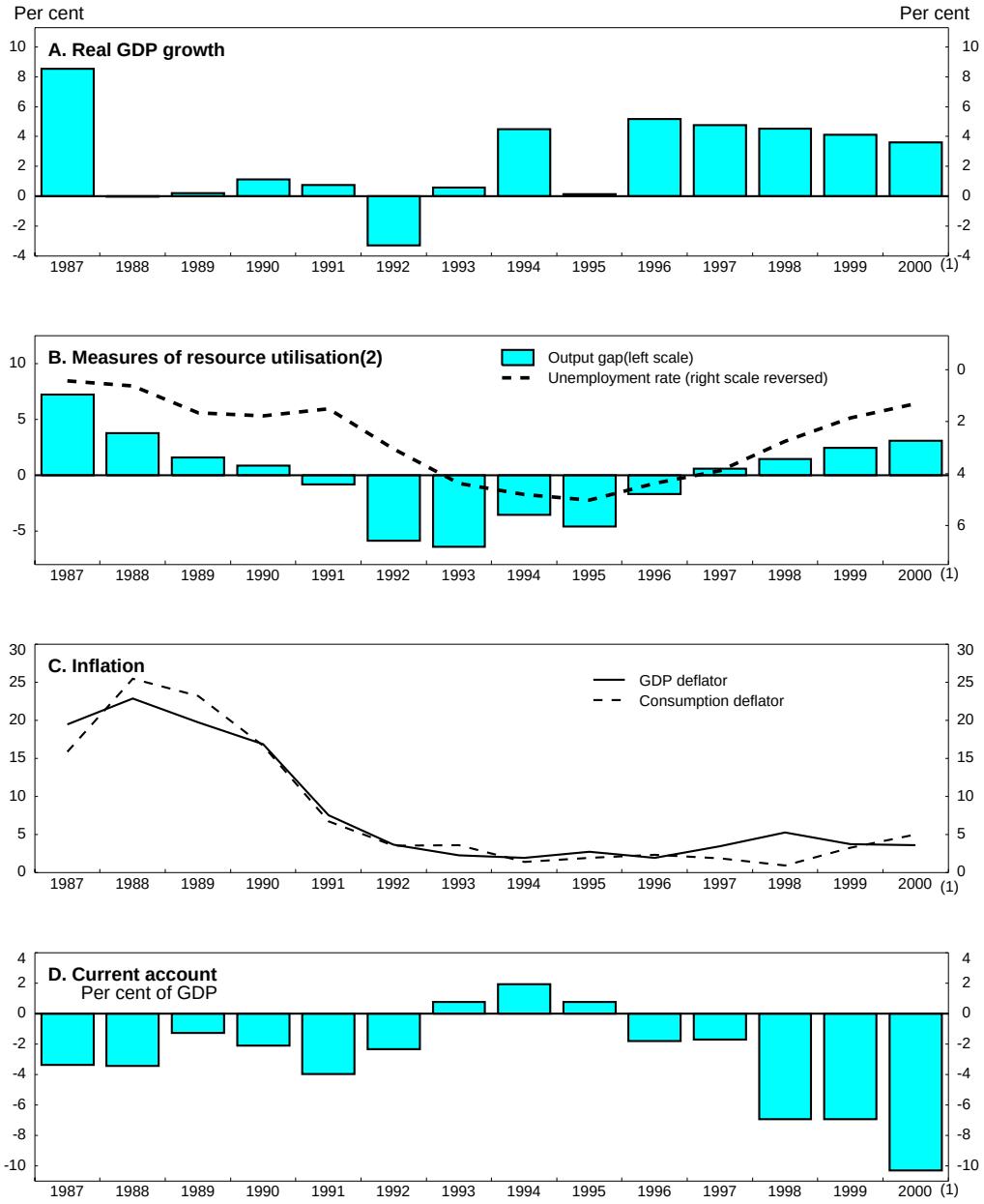
The economy remains overheated

Economic growth was extremely rapid in the second half of the 1990s. The pace of the expansion eased in 2000, but real GDP growth edged down only slightly to 3.6 per cent. With potential growth of 3 to 3½ per cent, this was enough to push output further above its sustainable level, despite a significant increase in immigration and substantial capital investment (Figure 1, Panels A and B; Table 1). Credit continued to expand vigorously (by around 20 per cent), fuelling domestic demand, which rose nearly 5½ per cent. Labour markets tightened, with the registration-based unemployment rate falling to 1.2 per cent towards the end of the year and job vacancies at employment agencies rising steeply to new records. These pressures on the economy's productive capacity have been reflected in a growing external imbalance and a higher rate of inflation. Real wages continue to outpace productivity gains as a result of generous nominal wage settlements and significant wage drift. Inflation (Panel C) moved higher on average last year, and the current account deficit surged (Panel D).

Domestic demand continues to be buoyant, led by investment growth…

Real business fixed investment resumed its climb in 2000 after a small contraction in 1999 (Figure 2). This dip followed three years of sharp increases that were boosted by the construction of new power capacity and aluminium smelters. Investment in the fishing industry soared last year, more than reversing a substantial decline the year before. Purchases of private fishing boats expanded, and a new marine research vessel was added. Significant gains, albeit slightly smaller than in the previous two years, were also posted in the communications sector and, more generally, for computer and office equipment. Such investment rose to one quarter of overall business capital formation. Construction work on commercial and office buildings continued to rise rapidly on the heels of a 60 per cent increase in 1999. Spending by the aluminium industry picked up in 2000, as manifest in the ongoing expansion of the aluminium smelter in Grundartangi from 60 000 to 90 000 tonnes per year. By contrast, investment in hydro-electric power generation and geothermal heating fell from the very high levels of recent years.

Figure 1. Aggregate economic indicators



1. Projection based on available data.
2. Percentage difference between output and estimated potential output.
Source: Central Bank of Iceland and OECD.

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Table 1. **Output, demand and prices**
Per cent change in volume terms, 1990 prices

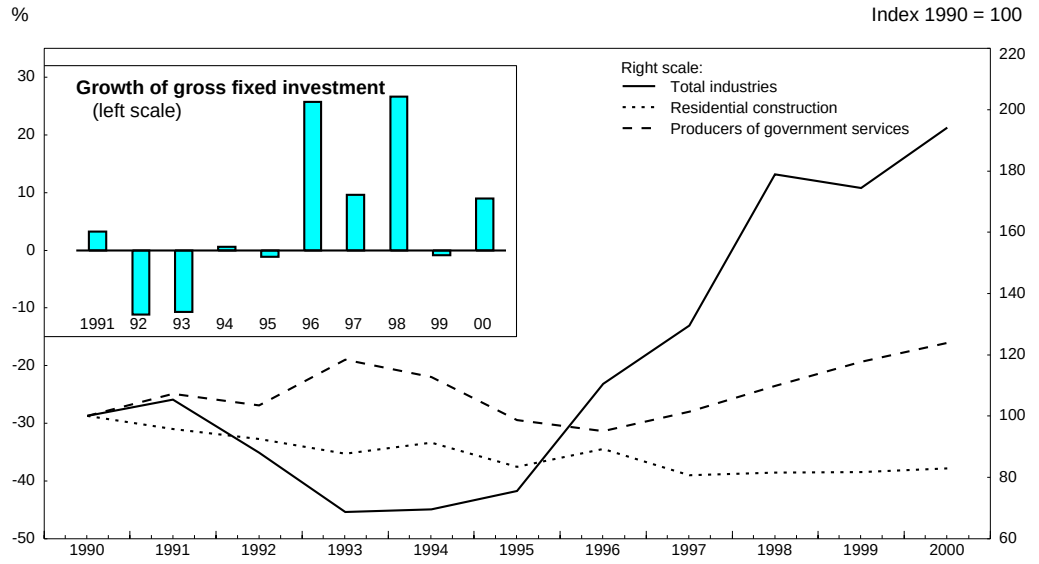
	Average 1988-94	1995	1996	1997	1998	1999	2000
Private consumption	-1.4	2.2	5.4	5.5	10.0	6.9	4.0
Government consumption	2.9	1.8	1.2	2.5	3.4	5.1	3.7
Gross fixed investment	-3.5	-1.1	25.7	9.6	26.6	-0.8	9.0
Residential	1.0	-8.7	7.1	-9.7	1.1	0.3	1.4
Business	-7.6	8.7	46.1	17.3	38.0	-2.5	11.3
Government	4.2	-12.4	-3.7	6.6	8.3	7.2	5.3
Final domestic demand	-1.0	1.5	8.0	5.7	12.1	4.8	5.1
Change in stockbuilding[1]	0.2	0.6	-0.7	0.0	0.1	-0.1	0.3
Total domestic demand	-0.8	2.2	7.2	5.7	12.3	4.6	5.4
Exports of goods and services	1.0	-2.1	9.9	5.7	2.2	4.4	5.1
Imports of goods and services	-2.7	4.0	16.7	8.5	23.3	5.7	9.3
Change in foreign balance[1]	1.3	-2.0	-1.8	-0.9	-7.6	-0.8	-2.2
GDP	0.5	0.1	5.2	4.8	4.5	4.1	3.6
GDP deflator	10.4	2.7	2.0	3.5	5.3	3.8	3.6
Private consumption deflator	11.1	1.9	2.4	1.9	1.0	3.3	5.0

1. As a percentage of GDP in the previous year.
Source: National Economic Institute.

Business investment in the late 1990s was boosted by falling real long-term interest rates and declines in the relative prices of capital equipment, generated in part by an appreciating currency. For much of the period higher profitability was also an important supportive factor. In 2000, real interest rates jumped, the currency depreciated and profit margins shrank (see below), but the amount of credit extended to businesses continued to rise fairly swiftly nonetheless (about 23 per cent over the past year). Lending by financial institutions to the services, fisheries and commerce sectors was particularly abundant (Figure 3, Panel B). Firm's debt with the credit system rose 26 per cent in 2000 and has nearly doubled over the past three years.

In contrast to business investment, residential construction has trended down since 1990, in part because real housing prices were little changed over most of the decade. Even in 1999, with low real rates on housing financing, falling relative costs of building and rapidly rising home prices, housing investment did not recover. In fact, in 1999 the number of housing unit completions as well as the number under construction fell to their lowest levels in 45 years. Some additional investment in housing was forthcoming in 2000. That may have been a lagged response to these favourable factors, but the level of such investment remains quite low,1 especially as there is relatively strong growth in the working-age population. Construction may have been held back by difficulties in finding workers, since reported vacancies for construction workers were quite high in the capital region last year.

Figure 2. Volume of gross fixed investment



Source: National Economic Institute and OECD.

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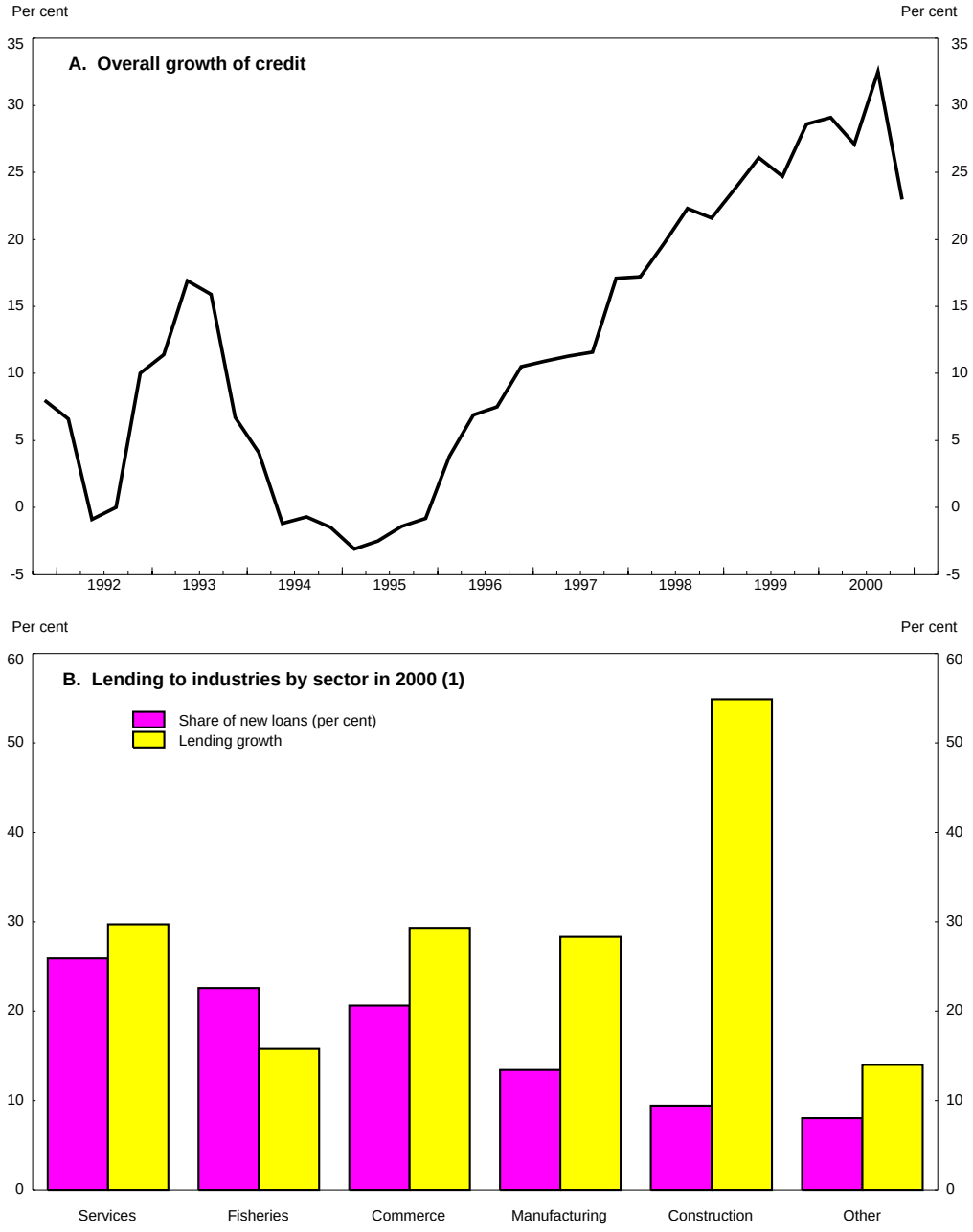
The growth of *private consumption* slowed to 4 per cent in 2000, following substantial gains in the previous four years. In recent years, spending has been particularly heavy on durable goods, travel and entertainment, reflecting significant gains in household real incomes and wealth. In 2000, spending on foreign travel continued to grow very rapidly, and apparel expenditures picked up considerably. The pace of durable goods purchases slowed substantially as imports of autos plunged, but purchases of appliances and furniture remained fairly robust. A slowdown in real disposable income growth, combined with a heavier debt service burden, contributed to an outright decline in available discretionary purchasing power last year; debt service payments, which have increased from about 22 per cent of household disposable income in 1995 to 33 per cent in 1999, rose to nearly 38 per cent in 2000 (Figure 4).

Despite the slower pace of consumption, borrowing by households continued to expand briskly in 2000, with a rise in debt of more than 19 per cent (Table 2). In addition to bank loans, individuals borrowed heavily against their pension fund claims. Increases in non-housing debt were particularly marked. On the asset side, the value of pensions and other financial assets moved up swiftly, but the value of fixed assets increased only 3 per cent. As a result, net wealth barely increased last year. Debt as a proportion of net wealth has climbed by 13 percentage points in the past five years, with most of that rise recorded in 2000 alone. In relation to disposable income, household debt surpassed the level of 160 per cent, double that of a decade earlier and eight times the 1980 figure.

Government spending on goods and services also grew at a slightly slower pace in 2000. Real public consumption increased 3¾ per cent, compared with nearly 5 per cent in 1999. Public investment rose about 5¼ per cent, down somewhat from the pace in the previous three years. Spending on roads and bridges accelerated, while that on schools and hospitals continued to grow briskly. Solid increases in public infrastructure over the past few years followed a steep drop in investment in the mid-1990s. The persistently pro-cyclical pattern of total government outlays on goods and services is striking (see Chapter II).

Figure 3. Lending to industries
Year-on-year percentage change



1. By banks and investment credit funds, the only credit institutions with a sectoral breakdown of loans. In 2000, these institutions provided half of new credit to industries.
Source: Central Bank of Iceland.

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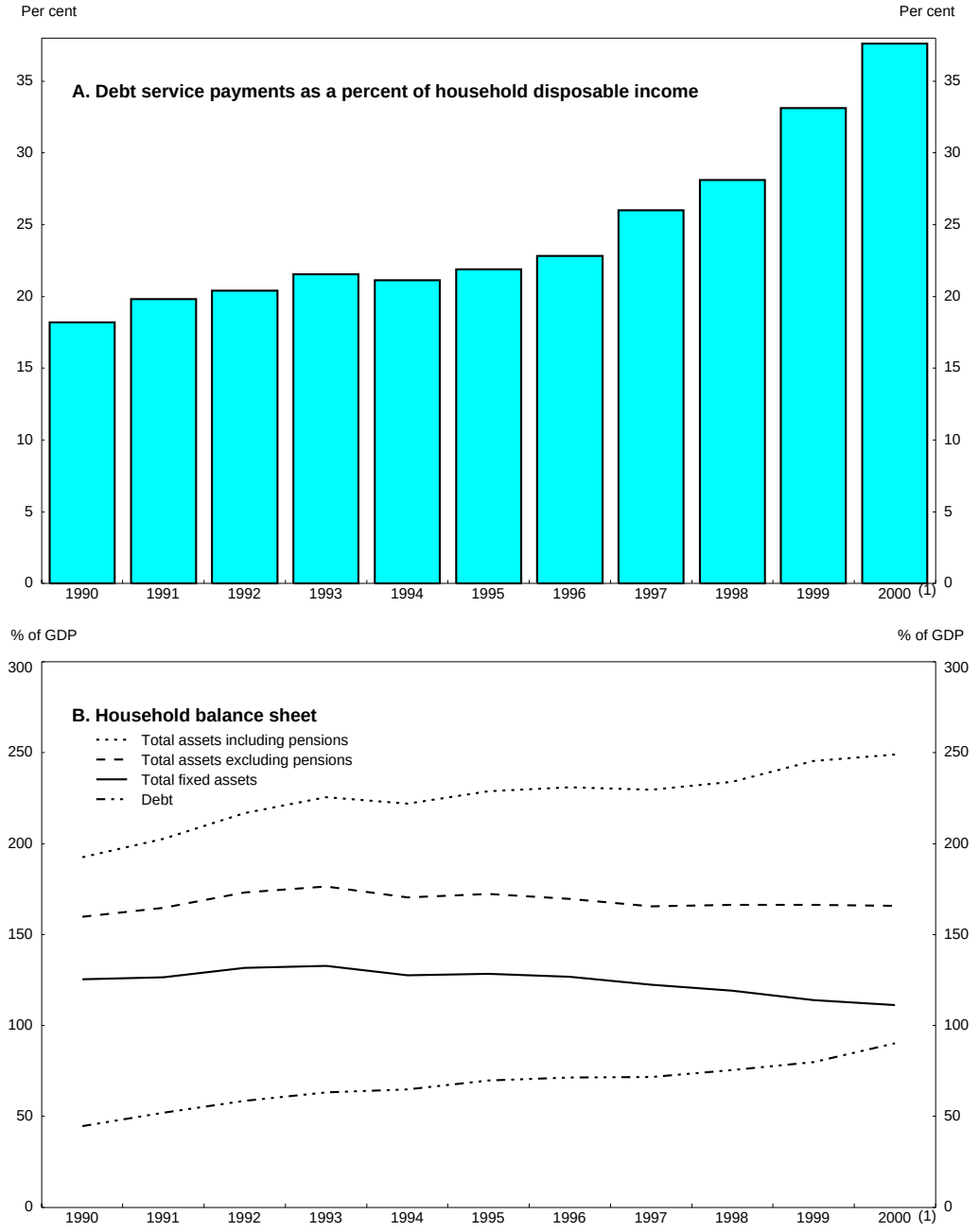
Figure 4. Household finances



1. Estimates.
Source: Central Bank of Iceland.

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Table 2. **Balance sheet of households**
Percentage changes

	Level in 2000 (Mil. Krónur)	1995	1996	1997	1998	1999	2000
Assets	1 684.5	5.5	9.0	8.7	11.2	14.2	7.3
Fixed	751.7	2.8	6.6	5.8	6.0	4.2	3.1
Pensions	563.6	12.4	17.0	14.4	15.2	27.4	11.1
Other financial	369.2	5.1	5.8	9.3	19.8	20.5	10.5
Debt	610	10.0	10.3	10.1	14.6	15.4	19.5
Net wealth	1 074.5	3.6	8.5	8.1	9.6	13.7	1.4
Excluding pensions	510.9	-0.7	3.7	4.2	5.8	3.5	-7.5
Analytical shares (percentage)							
Debt as a share of net wealth		43.8	44.6	45.4	47.5	48.2	56.8
Debt as a share of net wealth excluding pensions		68.0	72.4	76.5	82.9	92.4	119.4

Source: Central Bank of Iceland; 2000 figures are estimates.

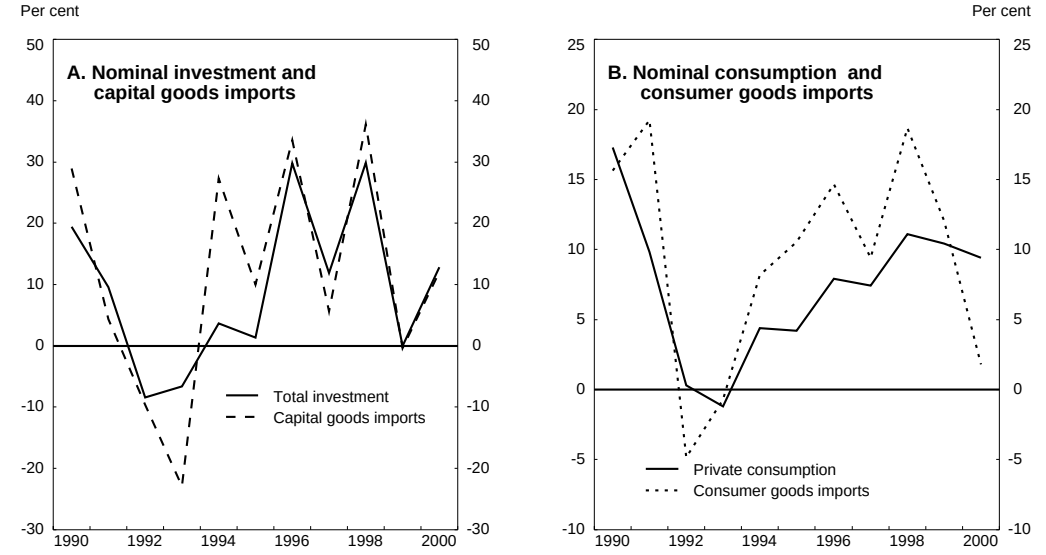
… with much of this demand met by imports

This strong domestic demand generated buoyant imports. Real imports of goods and services rose over 9 per cent in 2000, the sixth consecutive year that imports grew significantly faster than output. Goods imports moved roughly in line with the changes in the components of domestic expenditure (Figure 5). Imports of capital equipment accelerated, with booming imports of industrial transport equipment and aircraft and rapid increases in imports of computers and telecommunications equipment. However, car imports dropped sharply, following five years of average nominal increases exceeding 30 per cent, while the growth of imports of other consumer goods slowed somewhat from the rapid pace recorded a year earlier. Imports of fuels surged in value terms, but those increases were largely price driven. Imports of other industrial supplies expanded significantly, particularly raw materials required by power-intensive industries. Finally, imports of non-factor services, especially on travel-related spending, surged, pushing the deficit for that category to its highest level ever.

Export growth has slowed…

While real exports of goods and services rose over 5 per cent in 2000, real exports of goods actually declined slightly. Exports of marine products, which comprise about two-thirds of goods exports, fell last year, with declines for frozen products largely offset by increases in their fresh counterparts. Following a marked downward revision to the estimate of the cod stock made by the Marine Research Institute last spring, the government lowered the allowable fishing quota for cod by nearly 18 per cent for the current fishing season that began in September 2000 (Table 3). The total allowable catch was lowered for a number of other species as well, including haddock, deep sea redfish and capelin.[2] While this constraint will bite more this calendar year, it led to a decline in the catch for cod and some other demersal fish in 2000. A substantially higher catch for capelin and blue whiting (which has no catch limit) helped offset declines in demersal species. Excluding capelin, the catch was nearly 6 per cent lower than in 1999 in constant-price terms.

Figure 5. Domestic expenditure and imports
Percentage change from previous period



Source: National Economic Institute and OECD.

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Aluminium exports expanded by about one-quarter in nominal terms as prices surged, but export production was little changed in 2000 from the preceding year. By contrast, with the introduction of a new oven at the ferro-silicon plant, ferro-silicon export production jumped by nearly one-half. But with falling prices, the value of such exports rose more slowly. Exports of other goods expanded considerably, though exports of used ships virtually disappeared following a surge in 1999. Increases were widespread across a variety of agricultural and manufacturing products that make up less than 15 per cent of Icelandic exports, notably pharmaceuticals and artificial limbs. Exports of services in most categories expanded briskly, including revenues from communications and tourism. The number of foreign tourists visiting Iceland increased by an estimated 17 per cent last year; their spending rose by a more modest 11 per cent.

… and the current-account deficit has widened sharply

With the growth in imports of goods and services running well ahead of that of exports in the past few years, the current-account deficit ballooned from 1¾ per cent of GDP in 1997 to nearly 7 per cent in both 1998 and 1999 and then to over 10 per cent in 2000 (Table 4). In addition to a widening deficit on real net exports, the terms of trade worsened slightly last year. Export prices of goods and services increased about 3 per cent, held down by falling ferrosilicon and marine product prices, while import prices increased 5½ per cent, boosted by an 88 per cent jump in oil import prices. In fact, about one-third of the deterioration in the current account last year can be attributed to the higher cost of imports of petroleum. The balance on factor income deteriorated further, despite a rapid increase in investment income receipts. Growing current-account deficits in recent years, as well as borrowing abroad for domestic portfolio investment purposes, have led to a large accumulation of net foreign debt, estimated at 88 per cent of GDP in 2000. As a result, rising debt service on foreign-currency loans has swamped the increase in earnings on foreign assets.

Table 3. **Recommended fish catches and landings**
Thousands of tonnes

	1997/98 Cod-equiv. Units	FY 1998/99 Total allowable catch Recom.	FY 1998/99 Approved	FY 1999/00 Total allowable catch Recom.	FY 1999/00 Approved	FY 2000/01 Total allowable catch Recom.	FY 2000/01 Approved
In Icelandic waters, including foreign fleets							
Cod	1.00	250	250	247	250	203	220
Haddock	1.00	35	35	35	35	30	30
Saithe	0.60	30	30	25	30	25	30
Golden redfish	0.70	35	35	35	35	35	35
Deep-sea redfish	0.70	30	30	25	25	22	22
Oceanic redfish	0.70	45	45	85	45	85	45
Wolffish	0.70	13	13	13	13	13	13
Greenland halibut	2.40	10	10	10	10	20	20
Plaice	1.20	7	7	4	4	4	4
Other demersal	1.00	13	13	14.5	14.5	11.5	13
Herring	0.12	90	90	100	90	110	110
Capelin	0.06	1 200[1]	1 200	1 284[1]	1 200	975[1]	627[1]
Lobster	3.86	1.2	1.2	1.2	1.2	1.2	1.2
Inshore shrimp	1.00	5.1	4.9	3.3	3.3	2.2	2.2
Offshore shrimp	1.00	40	40	20	20	12	20
Scallop	2.00	9.8	9.8	9.8	9.8	9.3	9.3
Total (cod equivalent)		587	587	588	560	530	496
Minke whales[2]		250	0	250	0	250	0
Fin whales[2]		100	0	200	0	200	0

Total landings including those from international waters

	Calendar year 1997	1998	1999	2000
Cod	209	243	261	236
Haddock	43	41	45	41
Saithe	37	31	31	33
Redfish	73	69	67	71
Ocean redfish	39	47	43	45
Wolffish	12	12	14	15
Greenland halibut	19	11	11	15
Plaice	11	7	7	5
Other demersal	34	40	35	30
Herring	291	277	298	287
Capelin	1 319	750	704	892
Blue whiting	11	69	160	260
Shrimp	83	63	43	33
Scallop	10	10	9	9
Total	2 199	1 679	1 733	1 976
Excluding capelin	880	929	1 029	1 084
Constant price volume (1996=100)	98.7	90.9	89.4	88.6
Excluding capelin	94.9	93.7	92.5	87.2

1. Scaled up by 50 per cent to reflect the fact that the Marine Research Institute initially sets its provisional recommendation at only two-thirds of what it thinks the final value will be.
2. Number of animals, not tonnes.

Source: National Economic Institute and the Marine Research Institute.

Table 4. **Current account**
Per cent of GDP

	1996	1997	1998	1999	2000
Trade Balance	**0.2**	**0.0**	**-4.4**	**-3.6**	**-5.7**
Merchandise exports f.o.b.	26.0	25.0	23.7	23.2	22.2
of which:					
Marine products	19.1	17.8	17.2	15.7	14.1
Aluminium and ferro-silicon	3.3	3.6	3.7	4.1	4.6
Other industrial products	1.9	1.9	1.7	1.8	2.3
Merchandise imports f.o.b.	25.8	25.0	28.1	26.8	27.9
of which:					
Consumption goods	8.4	8.4	8.9	9.3	8.9
Investment goods	5.8	6.3	7.3	6.7	6.6
Non-factor services	**0.4**	**0.6**	**-0.2**	**-1.1**	**-1.6**
Exports	10.6	11.4	11.6	10.8	12.1
Imports	10.2	10.8	11.8	11.9	13.7
Factor income, net	**-2.3**	**-2.3**	**-2.2**	**-2.2**	**-2.8**
Transfers, net	**-0.1**	**0.0**	**-0.2**	**-0.1**	**-0.1**
Current balance	**-1.8**	**-1.7**	**-6.9**	**-7.0**	**-10.3**

Source: Central Bank of Iceland, *Monetary Bulletin* and OECD.

Potential output has accelerated but output remains well above trend…

Potential output growth was slightly lower on average in the 1990s than in the 1980s and much lower than in the 1970s, because of both slowing factor input increases and, earlier on, lower total factor productivity growth. Nevertheless, the growth of potential output appears to have picked up over the past few years to between 3 and 3½ per cent per year (Table 5). This recent increase reflects a pick-up in labour supply gains as well as some acceleration in productivity. Population growth has been supported by a rapid increase in immigration, particularly from Eastern Europe and Asia. Over much of the 1990s emigration exceeded immigration. As a result, net external migration was a drain on the Icelandic population. In 1997, net external migration turned positive, and sizeable increases were recorded in each of the last three years, increasing population growth by around ½ percentage point per year. Increases in labour force participation rates have also contributed to rising potential. Such gains have been particularly large for those under 25; for example, 60 per cent of students were employed last year, compared with only half in 1995. By contrast, participation rates for older workers have actually been trending down over the 1990s, as more workers are eligible for private pensions. However, their rates remain the highest in the OECD.[3]

Increases in labour productivity, measured as output per worker, have shown only a small upturn, with the measured improvement likely the result of cyclical factors. Furthermore, measures of labour productivity per hour worked show slower rates of productivity growth over the past few years, as average hours have risen during the recent expansion. Despite widespread business investment and a pick-up in the growth of the overall capital stock in recent years,[4] there has been little change in the pace of capital

deepening. Looking through business-cycle variations, the accumulation of capital per worker has contributed around ½ percentage point to growth for many years now. Total factor productivity growth was slightly faster in the 1990s than in the 1980s but remains far below that recorded in the 1970s. Nonetheless, there were some encouraging signs as the decade came to a close, even if they may well be attributable to the cyclical peak. As a result, there is no strong evidence of a "new economy" yet in Iceland, though there is no doubt that the structure of output has changed markedly in recent years (see Chapter IV).

Table 5. **Productivity and economic growth**
Percentage changes

	Average annual growth rate					
	1971-80	1981-90	1991-00	1998	1999	2000
Real GDP	6.3	2.7	2.5	4.5	4.1	3.6
Employment	2.6	1.7	1.1	3.4	2.7	2.0
Labour productivity	3.7	1.0	1.4	1.1	1.4	1.6
Total factor productivity	2.8	0.5	1.0	0.9	1.2	0.9
Contribution of capital deepening	0.9	0.5	0.4	0.2	0.3	0.7
(Capital stock)	*5.1*	*3.0*	*2.2*	*4.0*	*3.5*	*3.7*
Memorandum item:						
Potential GDP	5.3	3.1	2.3	3.7	3.3	3.3
Output gap[1]	1.2	1.5	-1.5	1.4	2.2	2.5

1. The average level of real GDP as a per cent of its potential level over the period indicated.
Source: National Economic Institute and OECD.

One qualification to these findings lies in the area of research and development (R&D). The slow pace of productivity growth may reflect recent investments in such knowledge generation, particularly in biotechnology and software development, which have not yet generated much value added. By their nature, such investments are very labour intensive and may require long gestation periods before complete returns are realised. Between 1995 and 1999, government spending on R&D increased by over one-third in real terms. Private-sector research activities have also expanded rapidly. To the extent that these investments in knowledge capital begin to pay off, total factor productivity may pick up in the future.

Although potential output has accelerated in recent years, aggregate demand has grown considerably faster. From a point of approximately full factor utilisation in 1997, domestic expenditure grew by an average of 4¼ per cent for the following three years. The result was that the estimated output gap widened to about 2½ per cent of potential GDP last year, the largest imbalance since the late 1980s. The considerable deterioration of the current account along with wage and price inflation developments, discussed below, reflect the extent to which rapid growth in recent years has stretched the economy's productive capacity.

… and labour markets have tightened considerably,…

With the output gap widening in 2000, the registered unemployment rate moved down from 1.9 per cent in 1999 to 1.3 per cent on average for the year. This rate stood at only 1.2 per cent (seasonally adjusted) in the last five months of the year, the lowest since 1991 and well below any estimate of the NAIRU. Another measure of unemployment, based on internationally standardised household surveys

conducted twice a year, showed surprisingly that the unemployment rate rose to 2.7 per cent in November 2000 from 1.8 per cent in November 1999. Understandably, the increase was concentrated among individuals who were not registered to receive unemployment benefits, including those new to the labour market. However, consistent with continuing tightness rather than the implied loosening of labour-market conditions, vacancy rates at private firms have moved up sharply, particularly in the capital area where the ratio of vacancies to the labour force is at its highest level in over ten years. Despite rapid employment growth over the past few years, construction and business services firms in the capital region were particularly pressed for workers last year. Employers in some parts of the public sector have also faced serious recruitment difficulties. Job vacancies in the private sector, particularly construction, are being filled in part by additional work permits for immigrants, which moved to an all-time high last year. Foreign workers are estimated to account for between 3 and 3½ per cent of the labour force.

… bringing rapid wage growth…

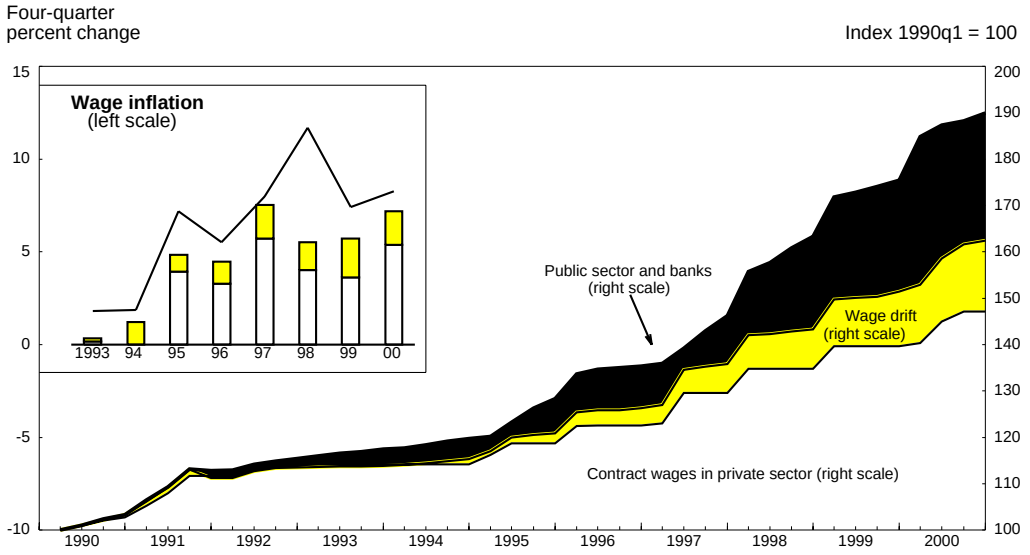
General wage agreements, which cover the private sector for 3½ years, were concluded in the spring of 2000. Their focus was to lower inflation and improve the compensation of the lowest paid. Under the agreements, base wages for most private-sector workers rose 3.9 per cent in the spring of 2000 and another 3 per cent at the beginning of 2001. Wages are set to increase by 3 per cent at the start of 2002 and 2¾ per cent at the outset of 2003 (to cover the first nine months). Larger increases, however, were negotiated for some groups, including the lowest paid. It was estimated that average wages would rise by 18.6 per cent during the contract period of 3½ years, including 5.7 per cent in 2000 and 4.1 per cent at the beginning of 2001. Lower inflation is a binding condition for these agreements; their wage provisions can be cancelled in February each year if it does not hold. The agreements can also be reviewed if other groups, such as public-sector workers, win wage increases that are significantly higher. The private sector settlements were not, in the event, re-opened in February 2001 but nonetheless an extra pay increase of 0.7 per cent was granted. The public-sector agreements expired in the fourth quarter of 2000. After a strike, secondary school teachers received a 3½ year contract involving very large wage gains.[5] Other public-sector workers concluded their negotiations during the Spring of 2001. The settlements have taken the private sector agreements as a base. In mid-March, wage negotiations between fishing operators and fishermen broke down and fishermen went on strike.

Wage rates in the non-bank private sector grew 7¼ per cent during 2000 on the strength of contracted pay raises and wage drift amounting to nearly 2 percentage points (Figure 6). Government and bank employee wages rose even faster last year, gaining 8¼ per cent from the previous year. Economy wide, wages increased 7¾ per cent during 2000, up from 6¼ per cent over the four quarters of 1999.

… and high inflation

After running at only 1¼ per cent in 1998, inflation rose significantly over the twelve months of 1999 and into the first half of 2000 (Figure 7). The twelve-month change in the consumer price index peaked at 6 per cent in April 2000. Since then, this measure of inflation has dropped back to 3.9 per cent in March 2001. Most of the improvement in the second half of 2000 was the result of the slower pace of increase for petrol prices and housing services. The twelve-month change in petrol prices was about 28 per cent in April 2000, but only 11.5 per cent in December.[6] Housing services inflation in the CPI slowed from 16 per cent to 10 per cent over the same period. Prices per square meter for residential housing in the capital area, which enter into the cost of housing services in the CPI, have also decelerated, rising 12½ per cent during the last year, down from 22 per cent in 1999. Although inflation oscillated during the year, the average annual rate of change in the CPI was 5 per cent in 2000, up from 3.4 per cent in 1999 and the highest since 1991.

Figure 6. Private- and public-sector wages



Source: Central Bank of Iceland and Statistics Iceland.

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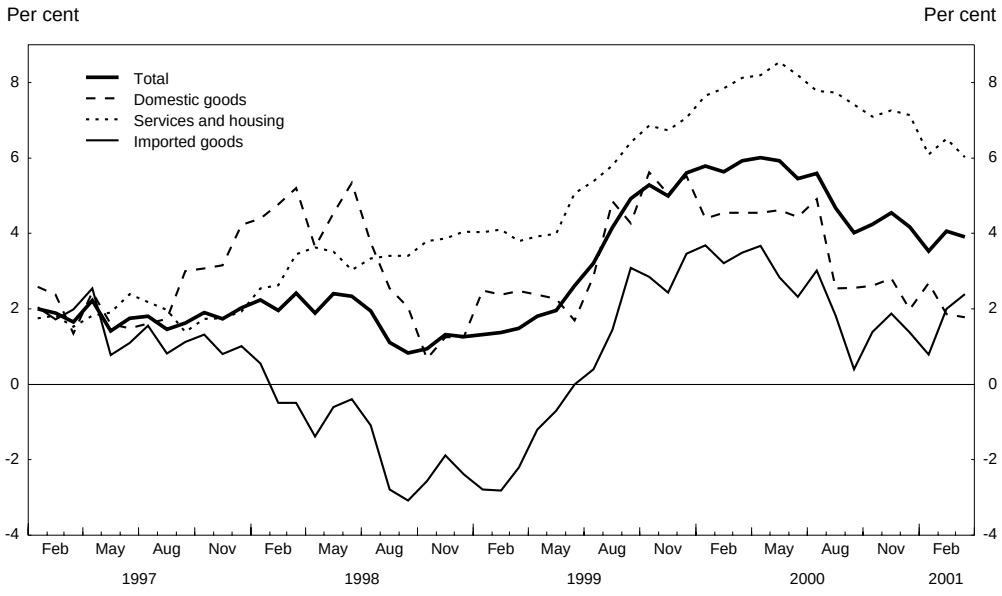
Figure 7. Consumer price inflation
12-month per cent change



Source: Statistics Iceland.

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At the same time as petrol and housing price inflation have eased, price changes for domestic services have moved higher. As these services are generally labour intensive and tend to face limited foreign competition, they are particularly sensitive to changes in wage costs. Overall labour productivity growth has averaged nearly 1¾ per cent in 1999 and 2000, compared with average wage increases of 6¾ per cent each year. As a result, unit labour costs have increased 5 per cent each year, generating pressure on domestic inflation. After bottoming out in the summer of 1997, private services inflation has moved up steadily, with the 12-month rate of change at 6½ per cent last year. The index for public-sector services prices has also accelerated over the past few years, with its rate of change at about 5 per cent at the end of last year.

Domestic goods' prices decelerated last year, helped by slower increases for other foods and price declines for vegetables. After falling in 1998, the prices of imported goods climbed over 1999, reflecting the turnaround in oil prices (Figure 8). The year-on-year rate of change in import prices remained fairly stable at around 3 per cent through the first half of 2000 as the cumulative appreciation of the effective exchange rate helped to offset the acceleration in petrol prices. Import price inflation eased back in the second half as oil prices stabilised and as the prices of non-oil imports were quiescent, despite a sharp depreciation of the króna. However, this cumulative depreciation is likely to put considerable pressure on import prices this year.

Increases in oil prices and unit labour costs in excess of domestic output prices have eaten into corporate profits, reduced retained earnings and, together with higher investment, pushed firms into greater debt.[7] For non-financial corporations listed on the stock exchange, after-tax profits as a per cent of revenues fell to around 1 per cent in the first half of 2000 from 3 per cent in 1999, and the return on equity dropped sharply. Higher interest expenses, exchange-rate losses and increased tax payments[8] also contributed to the downturn in profits. The deterioration was greatest in the fishing, transport and financial sectors. In contrast, profits improved for manufacturing and high-technology firms but only because of extraordinary items. Disappointment over profit figures contributed to large declines in stock prices in the second half of 2000, particularly for transportation and fishing firms.

The near-term outlook and associated risks

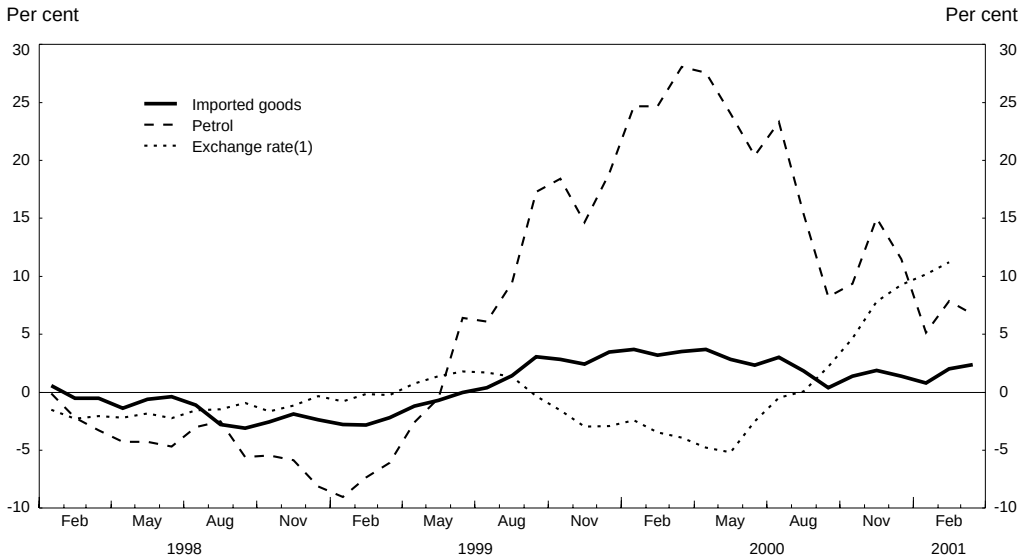
Output growth may slow considerably…

Economic activity is projected to slow considerably this year and next from the rapid pace of the past five years (Table 6). Despite the slowdown in domestic demand, the current-account deficit — which exceeded 10 per cent of GDP last year — is unlikely to narrow in 2001 because of a large cut in fish quotas. With real GDP rising less than potential output, unemployment is projected to rise, easing some of the tension from very tight labour markets. This slackening of demand may help reduce the build-up of inflationary pressures, but rising import prices will likely offset much of this improvement.

… as the allowable fish catch declines…

In light of a reassessment of the outstanding stock of fish last spring, the Marine Research Institute recommended a 10 per cent cut in the total allowable catch, measured in tonnes of cod equivalents. The Ministry of Fisheries implemented cuts in fishing quotas largely in line with the recommendations for the fishing year beginning in September 2000. With fish exports accounting for nearly half of all exports of goods and services and nearly 15 per cent of GDP, this adjustment has had a large negative impact on the outlook for output, investment, and the current-account position this year. A partial offset has been the competitiveness-enhancing effect of the substantial drop in the exchange rate index that followed the quota announcement.

Figure 8. Price developments of imported consumer goods
12-month per cent change



1. Positive growth implies a depreciation of the króna.
Source: Statistics Iceland and the Central Bank.

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Table 6. **Short-term projections**
Percentage changes, volume (1990 prices)

	Official forecast March 2001		OECD		
	2000	2001	2000	2001	2002
Private consumption	4.0	2.5	4.0	1.8	2.4
Government consumption	3.7	3.1	3.7	2.5	2.0
Gross fixed capital formation	9.0	-2.5	9.0	-1.4	1.0
Final domestic demand	5.1	1.5	5.1	1.2	2.0
Change in stockbuilding[1]	0.3	-0.4	0.3	-0.2	0.0
Total domestic demand	5.4	1.1	5.4	1.0	1.9
Exports of goods and services	5.1	3.4	5.1	0.0	4.0
Imports of goods and services	9.3	0.9	9.3	-1.0	2.5
Change in foreign balance[1]	-2.2	0.8	-2.2	0.4	0.3
GDP	**3.6**	**2.0**	**3.6**	**1.5**	**2.4**
GDP implicit price deflator	3.6	4.9	3.6	3.7	4.8
Consumer price deflator[2]	5.0	4.3	5.0	4.3	3.9
Unemployment rate (in per cent)	1.5	1.8	1.3	2.2	2.6
Current balance[3]	-10.3	-10.1	-10.3	-10.6	-9.7
3-month Treasury bill	n.a.	n.a.	11.2	11.0	11.0
5-year non-indexed Treasury note	n.a.	n.a.	11.2	10.5	11.0

1. As a percentage of GDP in the previous year.
2. Official forecasts are for the consumer price index.
3. As a percentage of GDP.

Source: National Economic Institute and OECD.

… and the impact of tight macroeconomic policies is fully felt

Deteriorating prospects for growth and profits, together with rising real interest rates last year, contributed to a sharp decline in equity prices. The overall stock index has dropped by about one-third since its peak in March 2000, led by declines in the share prices of fisheries companies. As a result, the pace of consumption is likely to be held back in 2001 and 2002 by a reduction in the value of household wealth. Real interest rates are assumed to remain high, though market expectations suggest that some fall may occur. Other factors contributing to a slowing include the effects of rising debt levels and debt-servicing burdens. Combined with a somewhat less favourable outlook for employment and income growth, households are unlikely to want to maintain rapid consumption growth through further borrowing.

Credit expansion has been particularly pronounced for businesses (see Chapter II), and firms have taken on substantial foreign-currency liabilities. Higher interest rates and the cumulative depreciation of the exchange rate have boosted borrowing costs, which, together with weaker profits, is expected to lead to a considerable deceleration of business investment. Furthermore, the completion of the Nordural aluminium smelter will contribute to a drop-off in investment expenditures this year. The rate of government investment is also expected to slow from its rapid pace over the past few years.

Because considerable uncertainty exists regarding prospects for new large-scale investment projects, none are incorporated in the projections. While this assumption represents a moderate upward risk in the near-term, it is a significant factor in the medium-term outlook. One such project involves an aluminium smelter and hydroelectric power plants in eastern Iceland. Under current plans, construction would begin in 2002 and aluminium smelting would commence in 2006. This project would be the largest capital project ever undertaken by Iceland and would have a significant impact on output, private and public investment, and the current account (discussed below). A decision on whether to proceed with this project should be made by February 2002.

Net exports are likely to contribute slightly to output growth this year and next. Imports are expected to decelerate in 2001 and 2002 along with slowing domestic demand and rising import prices. Meanwhile, exports are projected to remain unchanged this year before moving back up as fish exports recover. With the expansion of aluminium capacity, production and exports should pick up there, while ferro-silicon exports continue to rise rapidly. The turnaround in net exports is not projected to fully show through to the current account, as rising debt service on Iceland's foreign liabilities significantly reduces net factor income. On balance, the current-account deficit is projected to move back to around 9¾ per cent of GDP in 2002 after reaching 10½ per cent in 2001.

Pressures on inflation are mixed

Factors influencing inflation are mixed this year. The large cumulative depreciation of the exchange rate is likely to push up import prices overall, but crude oil prices have declined recently and are expected to remain subdued this year. Among domestic prices, increases in housing costs seem to have peaked, but wage pressures continue to be intense. On the whole, year-average inflation is expected to move down somewhat in 2001 and 2002, as the negative contributions of housing costs and oil prices to inflation more than offset the effects of the depreciation of the exchange rate and continued pressure on unit labour costs.

Risks to the outlook are pronounced

Macroeconomic imbalances have intensified over the past year. With an overheated economy, rapid money and credit growth and a substantial current-account deficit, risks of higher inflation and

financial instability continue to be concerns. The projections incorporate a desirable moderation in growth, but with labour markets remaining very tight, there is a risk of significant wage drift.

The current-account deficit widened considerably last year and is not expected to improve much in the short term. Such a large deficit has never persisted for so long. Current account deficits exceeding 7 per cent of GDP in Iceland in the past have been the result of a collapse in fish stocks or a large terms-of-trade shock, and seldom due to excess demand.[9] In recent years, capital goods imports have risen rapidly, but imported consumption goods have also played an important role in the deterioration of the trade balance. This year, as demand pressures on imports are easing, declining fish stocks will cut exports, stifling external-balance improvement. Financing this deficit will require continued substantial capital inflows. However, with debt levels already quite high relative to income and economic prospects less rosy, there is a risk that the private sector will not be able to accumulate significantly more foreign liabilities without putting additional downward pressure on the exchange rate. Furthermore, considerable uncertainty exists as to what the path of adjustment will be over the medium term that will achieve a more sustainable external balance.

With extensive foreign borrowing, a sharp depreciation of the króna could then result in a financial crisis. With their considerable foreign borrowing for re-lending, banks are particularly exposed to defaults by customers with little or no foreign-exchange earnings to offset rising debt-service costs. That said, sources within the banking system have not, so far, reported an increase in non-performing loans, and provisions for such were unchanged last year after rising in the previous two years. On the positive side, the government is generating a surplus and financing public debt is not a problem.

The effect of a possible extra aluminium smelter on the medium-term outlook

The government has been negotiating for some time with investors over the possibility of constructing a new aluminium plant in eastern Iceland. Initial plans were deemed to be uneconomical by the investors, but last year new plans for a project with considerably larger capacity gained momentum. In May 2000, the government signed a declaration with domestic and Norwegian investors and the National Power Company regarding the construction of a large aluminium smelter in Reydarfjordur and a related power plant in Karahnjukar. The agreement was to undertake the necessary preparatory work, including environmental impact assessments, required to evaluate the feasibility of the project and to aim to make a final decision as to whether to proceed by February 2002. Under the current plan, the intention is to begin construction of the power plant in the summer of 2002 and the first phase of the aluminium plant in 2003, with operations beginning in 2006. The smelter would have an initial productive capacity of 240 000 tonnes per annum, with an additional increase to 360 000 tonnes made later. (The largest aluminium plant currently operating in Iceland has a capacity of 162 000 tonnes per year.) The possibility of further expansion to 480 000 tonnes was also allowed for.

Implementation of this project would have a major impact on Iceland's economy for nearly a decade. Annual investment expenditures on the aluminium and hydro-electric plants are projected to be close to ISK 30 billion. Considerable public investment expenditures on schools, hospitals, roads and tunnels, and water and sewer systems would also be required. All told, the level of investment might be some 15 to 20 per cent higher per year and as much as 40 per cent higher at its peak than it would be without the project (Table 7) (National Economic Institute, 2000). As a result, the level of GNP is estimated to be 2 per cent higher on average during construction and GDP growth 2½ per cent higher.[10] With over half of the investment represented by imported goods, the current-account deficit could deteriorate by 2½ percentage points of GDP on average over the construction period, but by as much as 6 points at its height. Consequently, net foreign assets (as a per cent of GDP) would be 10 to 12 percentage points lower at the end of the construction period, but are predicted to recover to baseline by around 2020

as exports are boosted by the added aluminium exports — amounting to 1 per cent of GDP per year — after the plants begin operating.

Table 7. **Estimated impact of the Noral project**
Percent deviation from the baseline scenario[1]

	2002–09 average	Peak effect
Investment	15 to 20	40
Real GNP	2	2.5
Real GDP	2.5	n.a.
Employment	0.9	1.5
Current account (percentage points of GDP)	–2.5	–6
Net foreign assets (percentage points of GDP)	n.a.	–10 to –12
Central projection[2]:		
Unemployment rate (percentage points)	–0.3	–0.6
Inflation (percentage points)	1.5	2.5
Alternative scenario[3]:		
Unemployment rate (percentage points)	–0.5	–1.0
Inflation (percentage points)	2.3	4.3

1. The baseline scenario assumes real GDP grows 3 per cent per year, the average unemployment rate is 2.5 per cent, and inflation is around 3.5 per cent per year.
2. The central projection assumes the labour force is 1 per cent larger in 2002-2009 than in the baseline.
3. The alternative scenario assumes the labour force is unchanged from the baseline.

Source: National Economic Institute (2000).

Should this project be implemented, maintenance of economic stability will be an enormous challenge for macroeconomic policies for some time. Considerable resources will need to be directed toward this project from other activities. Estimates of the effect on inflation are very sensitive to assumptions about the state of the economy when construction begins and the reaction of monetary policy to possible overheating in the labour market. The number of additional workers required for this project is expected to average nearly 1 per cent of the labour force between 2002 and 2009 and as much as 1½ per cent at the peak of construction. Whether these workers would come from among the unemployed or immigration would depend on the level of the unemployment rate when construction begins as well as policy flexibility with respect to potential migrants and on the extent to which new workers can be drawn into the labour force. In any event, most of the construction workers would need to come from outside the region, which is not very populous. One of the key assumptions underlying the official simulations is that most of the extra labour needs are supplied by higher participation rates and possibly immigration; the unemployment rate falls by 0.3 to 0.4 percentage point on average from 2½ per cent in 2002. Under this scenario, inflation rises from 3½ per cent in 2002 to 6 per cent in 2005 and then slows somewhat to 4½ per cent in 2009. A more optimistic scenario could be that an even bigger increase in the participation rate occurs. If the increase were at the upper boundary of previously estimated relationships between

participation and unemployment, then inflation would only peak at 5¼ per cent. If, on the other hand, the Noral project were to begin when the unemployment rate was lower or if labour-force participation did not rise as much as assumed, inflation could be substantially higher. Looking at the range of estimates, serious inflationary pressures cannot be ruled out if unemployment is much lower than 3 per cent at the outset of the major construction activity. Should this project be approved, it will be important for the monetary and fiscal authorities to eliminate the excess demand currently in the economy before construction begins.

II. MACROECONOMIC POLICIES

Economic policies in Iceland have been gradually evolving in response to the overheated economic environment. Before formally abolishing their intermediate exchange-rate target, the authorities had effectively downplayed the importance of the exchange rate in determining monetary policy. With the band around the central rate widened early last year, the exchange rate was allowed to fluctuate to a much greater extent than in the past. In its place a greater focus was placed on controlling inflation, with the authorities announcing their intention to bring it down to the average rate of their trading partners. Then in March 2001, the authorities put in place a new framework for monetary policy that replaces the exchange-rate band with a formal inflation target. With respect to fiscal policy, spending overruns have recurred, even if deficit targets have been more than achieved. The government intends to eliminate net central government debt by 2004. However, the absence of detailed medium-term spending plans could jeopardise the achievement of that target.

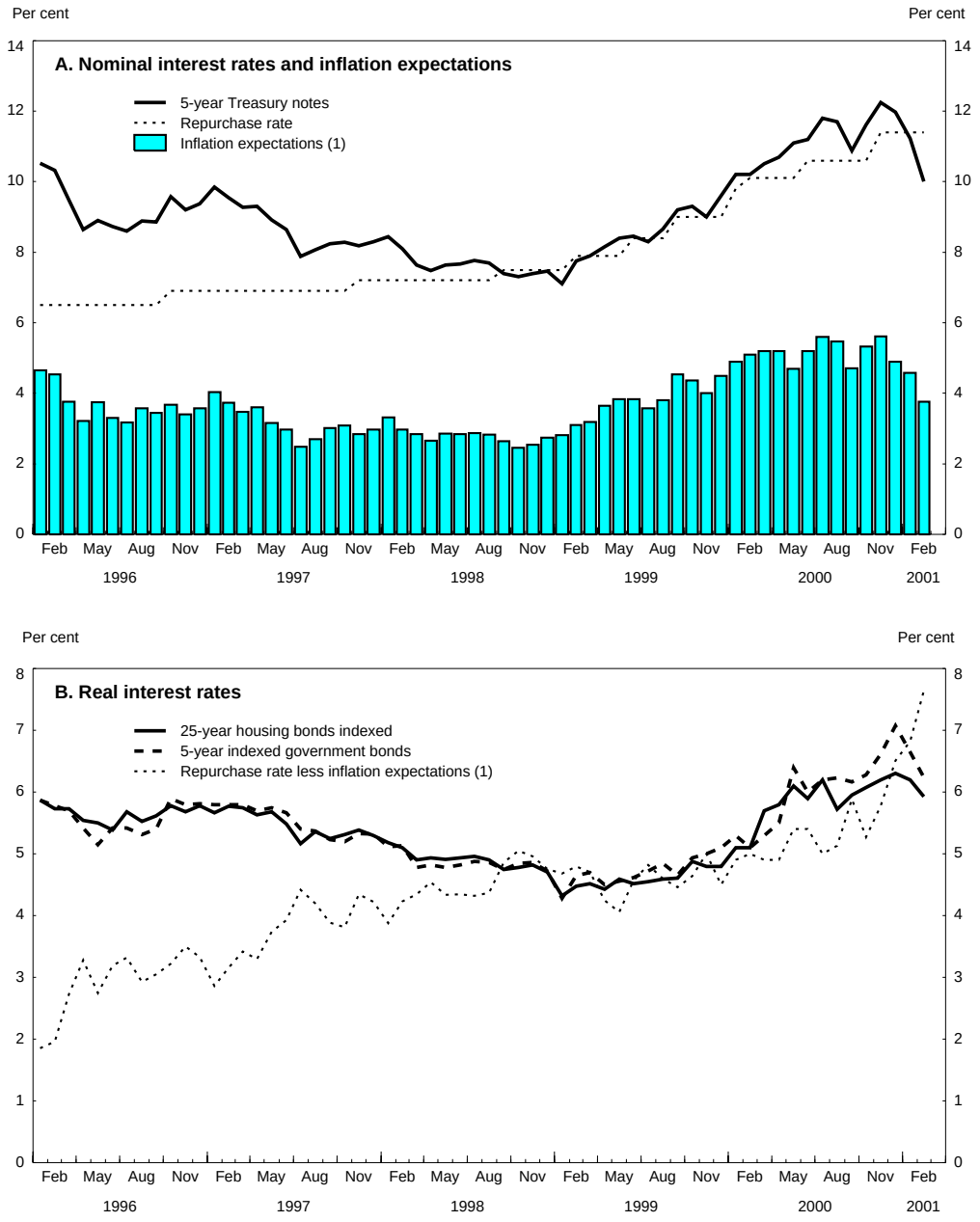
Monetary management

Official interest rates were raised through end-2000…

The evolution of monetary policy in recent years needs to be seen against the background of conflicting pressures concerning the exchange rate, interest rates and inflation. After a period of relative stability, the nominal repurchase rate was increased in late 1998 in response to króna weakness (Figure 9, top panel). Policy rates were raised again in February, June and September 1999 — by a cumulative 1½ percentage points — in response to concerns about inflation, strong domestic demand and rapid credit growth. A significant appreciation of the króna started during the summer, because capital inflows surged as resident borrowers sought to avoid the large differentials between domestic and foreign rates. With the official index nearing its upper limit, the Central Bank found its ability to further tighten policy constrained, despite its concerns about domestic overheating. In its first *Monetary Bulletin*, published in November 1999, the Bank expressed its disquiet over the inflation outlook and called for a reassessment of the authorities' exchange-rate policy. The exchange rate ended 1999 nearly 5 percentage points above the central rate, just under the 6 per cent ceiling.

In January 2000, the Central Bank raised official rates a further 0.8 percentage point when a dip in the exchange rate gave some additional room to manoeuvre. According to the Central Bank the increase was consistent with its policy of a higher exchange-rate of the króna and, consequently, a lower rate of inflation. On 14 February, the exchange-rate bands were widened to ±9 per cent to create scope for tighter monetary policy and to re-inject some exchange-rate uncertainty into residents' decision-making about where to borrow. Official rates were also raised a further 0.3 percentage point. With these changes, the Bank announced in its press release its intention to reinforce the priority given to price stability in its conduct of monetary policy. On 16 June, rates were raised by yet another 0.5 percentage point in an effort to calm financial markets following the announcement of a large cut in fish quotas. During the summer and fall, labour markets tightened further, and credit continued to rise rapidly. Paired with a sizeable cumulative depreciation over this period, inflationary pressures were building, and official rates were raised once again by 0.8 percentage point in November. According to the Central Bank, it was necessary to

Figure 9. Interest rate developments



1. Inflation expectations defined as difference between nominal and indexed government bond yields.
Source: Central Bank of Iceland.

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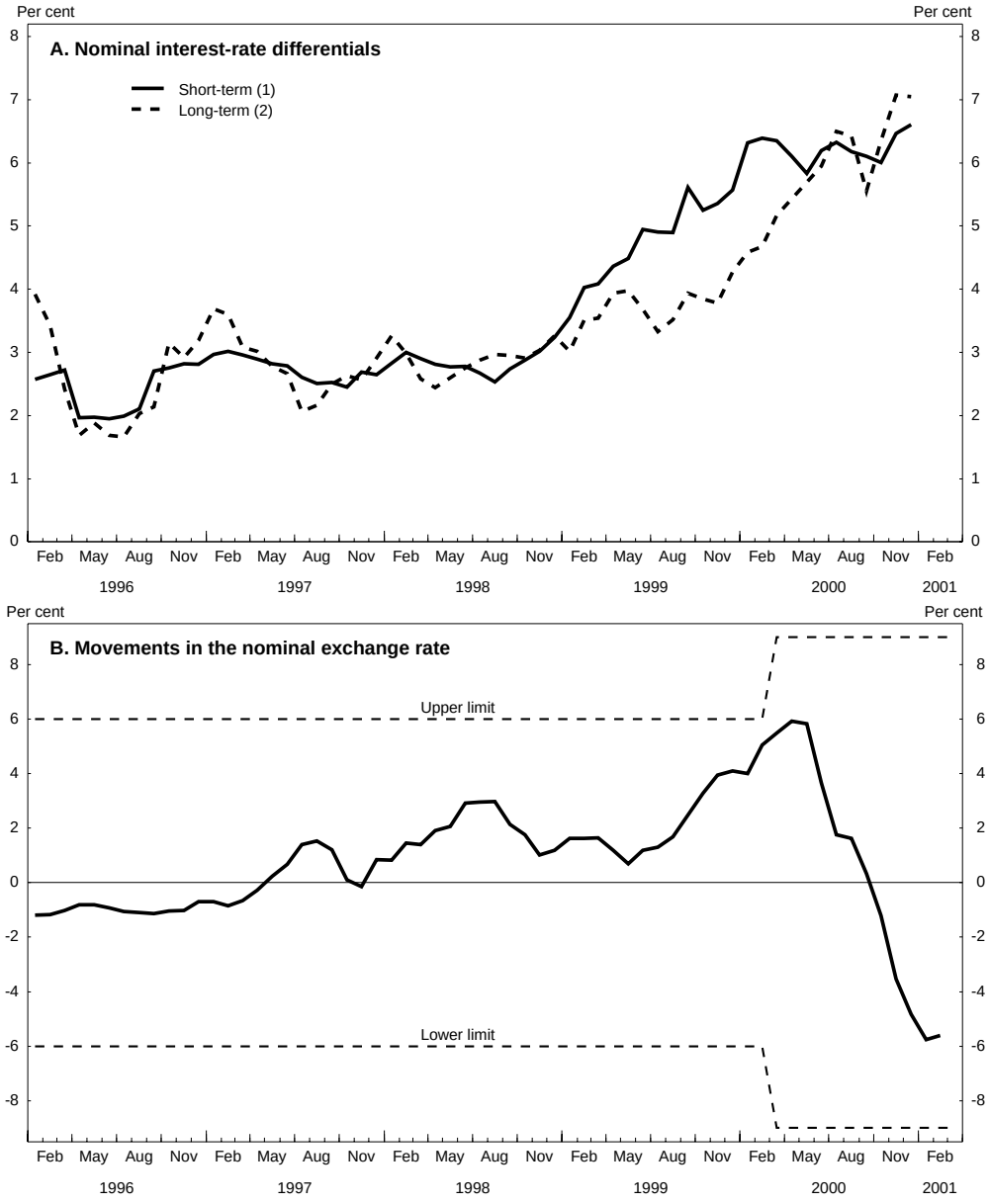
tighten the stance of monetary policy in an effort to reduce inflation to an acceptable level over time — defined to be the average rate of inflation among Iceland's trading partners — and to restrain credit demand.

The five rate hikes that occurred during 1999 and the first half of 2000 primarily offset rising inflation but did not take place sufficiently pre-emptively to prevent the rise. Their effect was also mitigated by debtors' willingness to finance offshore. From the end of 1998 until June 2000 the repurchase rate was increased from 7.5 to 10.6 per cent, but after adjusting for inflation, rates were little changed. Real official rates, defined as nominal rates less the inflation premium in the bond market, increased by only 0.6 percentage point over this period (Figure 9, bottom panel), while the repurchase rate adjusted by current CPI inflation actually fell. It was only in late 2000 that real official rates jumped, as inflation expectations eased a bit and nominal rates were boosted significantly. At 7 per cent in December, real official rates reached their highest level since capital markets were liberalised and the monetary framework in place at the time was introduced. Also after mid-2000 the higher rates may have begun to bite more, as the exchange-rate weakness may have made foreign borrowing less attractive. In early 2001, the real repurchase rate continued to climb, as inflation expectations receded, and the yield curve inverted. At end-March, the Central Bank lowered the nominal repurchase rate by 50 basis points, but this still left the real rate above its level at end-2000.

… and exchange-rate flexibility has been enhanced

The rising spread of domestic interest rates over foreign rates helped push up the exchange-rate index during 1999 and the first half of 2000 (Figure 10). As noted, when a conflict between exchange-rate stability and domestic conditions arose, the exchange rate was allowed to appreciate toward the upper edge of the band, and in February 2000, the bands were widened around an unchanged central rate.[11] In June, the link between movements in interest-rate differentials and the exchange-rate index was suddenly broken. When the Marine Research Institute proposed a large cut in the cod quota for the upcoming fishing season, export prospects and, consequently, the equilibrium exchange rate dropped. Coupled with incoming news of rising inflation, the nominal exchange rate began to slide. The Central Bank bought over ISK 3 billion in the inter-bank market during the second half of June and raised official rates by 0.5 percentage point.[12] The intent of the intervention was reportedly to calm markets and reduce volatility rather than to influence the average rate. On balance, the official exchange-rate index depreciated 3 per cent before stabilising in late June. However, on 12 July, the króna again came under heavy pressure: the exchange rate weakened sharply in heavy trading, and on the following day, market makers suspended trading in the inter-bank market for foreign exchange for two hours.[13] Over the three days of the crisis, the Central Bank bought an additional ISK 7 billion, accounting for about 15 per cent of total turnover on the inter-bank foreign exchange market for those days, and thereby succeeded in reversing most of the index's decline. On balance, one-quarter of the net foreign assets held by the Central Bank were used during the currency turmoil in June and July. Since then, interest-rate differentials have remained fairly stable, but the exchange rate has continued to depreciate. Despite a large official-rate increase and sizeable intervention in the foreign-exchange market in November (nearly ISK 5 billion, or 5 per cent of all foreign-exchange transactions in the inter-bank market that month), the official exchange-rate index ended the year 7 per cent below the level at end-July and nearly 11 per cent below its peak reached earlier in the year. And that did not mark the end of selling pressure; at end-January 2001, the exchange rate was an additional 1 per cent lower than at year end, 6 per cent below the central rate and only 2¾ per cent from its floor, in spite of further Central Bank sales of foreign currency.

Figure 10. Nominal interest-rate differentials and the exchange rate



1. The short-term interest rate differential is the difference between the three-month rate on Icelandic treasury bills and a trade-weighted average of overseas short-term rates.
2. The long-term interest-rate differential is the difference between the yield on a 5-year Icelandic government bond and a trade-weighted rate on 10-year overseas government bonds.

Source: Central Bank of Iceland and OECD.

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External imbalances have contributed to króna weakness and a decline in reserves

A very large increase in the current-account deficit and in capital outflows contributed to the substantial decline in the exchange value of the currency during the second half of 2000 (Table 8). Capital outflows intensified last year, with rising purchases of foreign assets for most categories of instruments. However, outflows were dominated by foreign equity purchases, which almost doubled to ISK 50 billion, nearly equal to the value of the current-account deficit. These purchases reflected the ongoing diversification efforts of pension funds and other investors.[14] Capital inflows also moved up in 2000, with a ISK 140 billion surge in foreign debt obligations. Three-quarters of the rise in these liabilities are the result of massive borrowing by the private sector, with the bulk by credit institutions for on-lending purposes. As a result, net external debt soared to 95 per cent of GDP last year, and net international liabilities (including portfolio and direct investment positions) rose by 18 percentage points of GDP to 68 per cent.

Table 8. **Capital account of the balance of payments**
ISK billion

	1997	1998	1999	2000
Current account balance	-8.9	-40.1	-43.6	-68.9
Capital and financial account	16.9	45.9	60.4	66.1
Financial flows excluding reserves	13.7	48.1	66.1	64.4
Assets abroad[1]	-29.6	-26.3	-48.5	-81.5
Direct investment outflow	-3.6	-5.0	-7.7	-25.4
Equity	-12.8	-17.9	-26.8	-49.9
Debt	-1.6	-3.6	-1.4	0.7
Loans and deposits	-11.6	0.3	-12.7	-6.9
Liabilities	43.3	74.8	114.3	142.5
Direct investment inflow	10.3	10.4	4.8	10.0
Equity inflow	-0.1	1.0	4.0	-7.9
Debt	-2.8	3.7	66.7	92.0
Loans and deposits	35.9	59.7	38.7	48.4
Reserves[1]	3.2	-2.3	-5.3	5.3
Net errors and omissions	-8.0	-5.7	-16.8	2.8
Stock of assets and liabilities				
Total assets	115.2	152.2	242.5	310.9
Direct investment	19.8	23.5	31.4	47.6
Portfolio	40.6	72.5	138.8	186.3
Other	54.8	56.2	72.4	77.0
Total liabilities	361.3	441.1	553.6	763.2
Direct investment	23.9	31.7	38.4	42.5
Portfolio	152.1	157.6	227.4	347.1
Long term debt	132.7	198.6	232.7	287.1
Short term debt	52.6	53.1	55.0	86.5
Net international investment balance	-246.1	-288.9	-311.1	-452.3
(as per cent of GDP)	-46.6	-49.3	-49.9	67.6
Net external debt position	-270.7	-337.2	-423.5	-635.5
of which, private sector	-161.1	-228.0	-317.5	-488.6

1. A positive figure indicates a decline in Icelandic-owned assets abroad or in official reserve assets.
Source: Central Bank of Iceland.

Following years of accumulating reserves, repeated exchange-rate intervention during 2000 resulted in a decline of over 40 per cent in official net foreign assets (Table 9). In dollar terms, official net foreign assets halved during last year to $221 million in December, falling to less than one month of average imports in 2000. By contrast, gross foreign reserves only edged down during 2000, supported by a surge in short-term borrowing by the Central Bank.

Table 9. **Net foreign assets of the Central Bank**
ISK million, end of period

	1997	1998	1999	2000			
				March	June	September	December
Total foreign assets	33 287	35 136	37 137	33 794	34 615	35 362	34 439
of which:							
Reserves	27 807	29 623	35 787	32 421	33 204	35 153	34 231
Foreign liabilities	5 418	9 071	4 900	9 594	13 561	14 682	15 764
Net foreign assets	27 869	26 065	32 237	24 200	21 054	20 680	18 675
Net foreign assets ($ million)	387	376	446	329	276	250	221
Memorandum:							
Net purchases in the inter-bank foreign exchange market during period shown	13 666	16 980	11 979	0	-3 022	-5 853	-4 981

Source: Central Bank of Iceland.

Monetary and credit aggregates have grown rapidly…

The rapid expansion of money and credit has been a concern to the monetary authorities for several years now. Broad-money growth decelerated during 2000 but continued to exceed nominal GDP growth (Table 10). By contrast, at first glance, credit expansion does not seem to have eased at all, but that is partly explained by the automatic effect of a lower exchange rate on the significant stock of bank credit denominated in foreign currency. The actual flow of new credit has indeed slowed in the recent months, though still running at a level incompatible with low inflation. Bank lending and overall credit accelerated last year, with adjusted bank lending growing 26 per cent and overall credit expanding over 18 per cent during 2000. Overall lending to enterprises, which has been trending up for several years, was very robust last year. Lending to households also accelerated further, with a particularly marked increase in consumer credit for non-housing purposes. Credit extended to the central government fell for a third consecutive year, reflecting the fiscal surplus, while credit growth to local governments remained in the double-digit range.

… fuelled by borrowing from abroad…

This continuing surge in credit growth has been fuelled by heavy foreign borrowing. Over the past three years, foreign liabilities of credit institutions have risen by an average of over 40 per cent per annum (Figure 11). The banking system has not taken uncovered positions but rather has re-lent these

funds to domestic non-financial agents. While many of these credits are to the export sector of the economy, foreign-currency loans have increasingly been extended to service-sector firms, households and local governments, not just exporters with foreign-currency revenues. This indirect foreign-exchange exposure represents a credit risk to these financial institutions, should Króna depreciation or domestic economic difficulties hinder repayment by these agents.

Table 10. **Money and credit growth**
Percentage change over previous year

					2000			
	1996	1997	1998	1999	March	June	September	December
Money (M3)	6.8	8.7	15.2	17.2	14.5	12.1	11.8	10.7
Bank lending[1]	10.7	12.7	30.4	23.5	24.1	26.1	27.2	26.2
of which: claims on								
Companies	13.6	12.1	31.6	25.1			26.8	23.8
Households	10.8	14.9	34.6	20.6			30.3	32.0
Government	-2.0	1.2	11.8	12.1			-0.7	11.6
Non-bank financial companies	42.2	10.4	25.7	26.1			67.8	98.6
All lending by credit system	8.8	10.9	15.5	17.7	17.4	17.0	21.1	18.4
of which: claims on								
Companies	10.5	17.1	21.6	28.6	26.3	26.2	31.4	23.0
Households	10.4	10.1	14.6	15.4	19.0	18.8	18.4	19.5
Central government	0.8	3.5	-0.8	-11.0	-25.2	-23.3	-9.3	-6.6
Local government	4.4	1.9	24.8	12.7	8.6	14.8	14.4	13.7
Memorandum:								
Nominal GDP	7.2	8.4	10.0	8.0				

1. As from the end of June 2000, there is a break in the bank credit data due to the merger of a bank with a non-bank financial company, but these figures have been adjusted to include the non-bank financial company since 1998.

Source: Central Bank of Iceland.

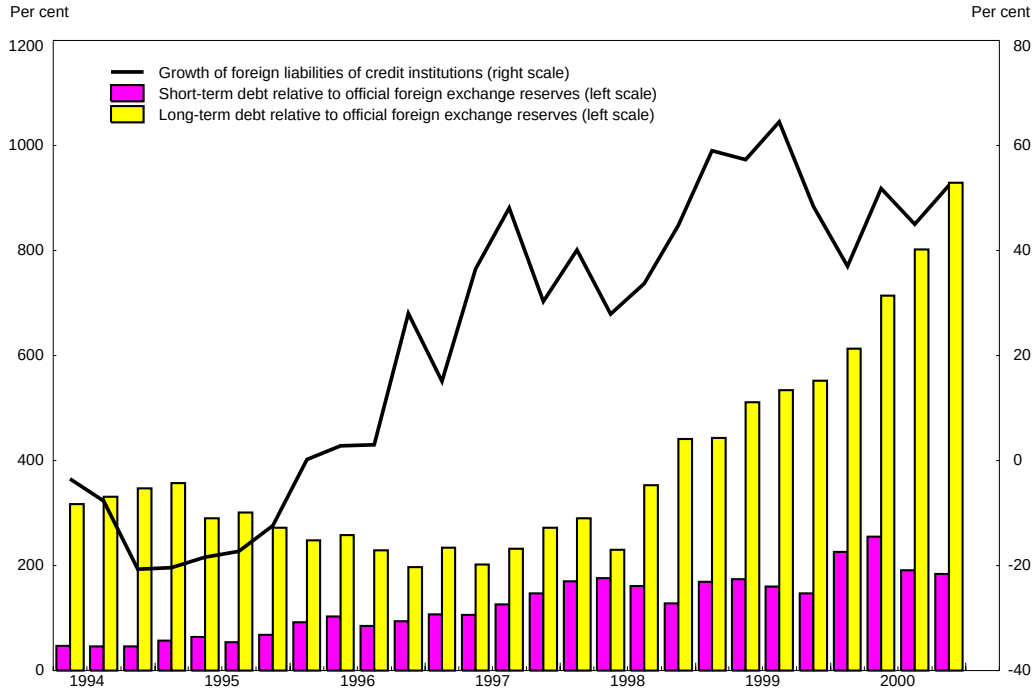
After short-term debt of credit institutions rose to more than 40 per cent of overall foreign liabilities in mid-1998 and climbed to nearly twice the level of foreign-currency reserves, the Central Bank issued new liquidity standards. As banks reorganised their foreign borrowing, short-term debt fell to just over 20 per cent of overall foreign liabilities by end-1999. Nonetheless, with overall foreign liabilities expanding rapidly, the ratio of foreign short-term liabilities to gross foreign-exchange reserves of the Central Bank edged down only slightly over this period. In the first half of 2000, short-term liabilities moved up again, exceeding 250 per cent of reserves. In the second half, overall foreign debt continued to surge ahead, but borrowing was concentrated on longer maturities. As a result, the ratio of short-term debt to reserves fell back below 200 per cent. The ratio of the long-term debt of credit institutions to domestic liabilities (broadly M4) reached nearly 700 per cent.

… and bank capital has deteriorated

The rapid expansion of bank lending in recent years has contributed to a deterioration in the capital position of the commercial and savings banks. Despite very high profits in 1999, the ratio of overall bank equity to risk-adjusted assets remained at 10.3 per cent, after dropping considerably over the previous

year when credit growth surged. As banks' profits weakened[15] and credit growth remained strong last year, their capital ratio declined to 9.4 per cent in mid-2000. While still above the legal minimum of 8 per cent, the ratio fell well below the 10 per cent level recommended by the Financial Supervisory Authority for large institutions. The deterioration was limited by an even faster rate of increase in subordinated loans, which reached ISK 17.2 billion at mid-year, ISK 4.7 billion (38 per cent) more than six months earlier. Excluding such loans, the average Tier I capital ratio fell to 6.6 per cent in June 2000, still above international regulatory limits of 4 per cent, but well below the 11 per cent level recorded four years earlier. Rapid credit growth might lead to a deterioration in risk management, as suggested in statements by the Central Bank and the Financial Supervisory Authority, and suggests the need for increased loan provisioning. The combination of plunging profitability (only partly explained by securities losses), persistently high cost ratios and falling capital ratios, especially on Tier I capital, during a period of unsustainable macroeconomic buoyancy bodes ill for the future when output growth is expected to slow sharply and króna weakness increases the burden of heavy foreign indebtedness for the banks and their customers alike.

Figure 11. Foreign debt of credit institutions



A new nominal anchor has been introduced

In marked contrast to the previous period, monetary policy over the past decade has been essentially oriented towards the maintenance of low inflation. A key element in achieving this goal was an intermediate exchange-rate target. Since two devaluations of the central rate in the early 1990s, the central rate has remained unchanged. Initially the acceptable band around the central rate was quite small (±2¼ per cent), but, as noted, the band was widened to ±6 per cent when capital flows were liberalised in 1995 and again to ±9 per cent in February 2000 when the defence of the exchange-rate band was no longer consistent with internal balance in the overheated economy.

Although the exchange-rate band was widened, the widening was itself an indication of the shortcomings of the exchange-rate regime in the face of full capital mobility and indicated that a better medium-term framework was needed for monetary policy. Indeed, over the past year or so, the authorities have been steadily reconsidering their policy approach. In late 1999, the Central Bank Act was changed, but the modifications were essentially technical, dealing with the definition of liquidity and involving the introduction of new comprehensive assessments of banks' liquid assets and liabilities. An amendment to this Act, effective at the beginning of 2000, transferred the authority over the Central Bank to the Prime Minister from the Minister of Commerce, who is responsible for the commercial banks. The new legislation did not change its goals, which remained to ensure price stability and full and efficient utilisation of the productive capacity of the economy and to preserve and strengthen the foreign-exchange reserves needed to ensure free trade with other countries (Pétursson, 2000).

This dependence of the Bank on the government in the setting of interest rates and the existence of conflicting goals made the Central Bank of Iceland one of the least independent in the world. In a recent study (Fry, 2000), Iceland was ranked near the bottom amongst industrialised countries for central bank independence (Table 11). Only one developed country central bank (Norway) was judged to have a lower degree of independence than Iceland's. Indeed it ranked below the average developing country included in the survey. Iceland scored particularly low on instrument independence and on the emphasis in its charter that is given to price stability.

With the recent decisions, this situation has now changed. In December 2000, the Prime Minister had appointed a committee to review the recently revised Central Bank Act. On 27 March, the committee made public a draft bill for a new Act, which defines price stability as the main objective of monetary policy and allows the adoption of an inflation target. On the same day, the government and the Central Bank agreed to immediately adopt a specific inflation target and eliminate the fluctuation bands for the exchange rate to avoid a period of uncertainty before a new bill becomes law. The new policy aims to bring the twelve-month change in the consumer price index down to 2½ per cent by the end of 2003. There is a tolerance interval of ±1½ per cent. If inflation were to move outside this range, the Central Bank would be required to submit a report to the government, which would be made public, explaining the reasons for the deviation, how it intends to correct the situation and how long it will take to reach the target. The tolerance interval will be higher during the adjustment period, amounting to 3½ per cent in 2001 and 2 per cent in 2002. The size of the interval in the short term reflects the long lags in transmission of monetary policy and the expectation that inflation will be between 4 and 5 per cent in the course of 2001. The Central Bank is also tasked to promote financial stability and the main economic policy objectives of the government as long as they are not inconsistent with the achievement of price stability as defined by the target. At the same time, the government is granting full instrument independence to the Central Bank to achieve its goals, bringing its status into line with that of the monetary authorities in many other countries.

The fiscal stance

In the past three years, budgetary policy has been operating in an extremely favourable environment. Economic growth has been robust, unemployment has fallen, personal incomes have grown rapidly, and household wealth has surged. Aided by the functioning of the automatic stabilisers, the public finances have moved steadily into surplus. In addition, the government has embarked on a significant privatisation programme that has further reduced the level of outstanding debt. The budgetary outcomes for the past three years have, however, been marred by recurrent decisions to add new spending in between budgets. Expenditure policy had tended to be pro-cyclical in the past, and this appears to have recurred during this cycle. Nonetheless, it is possible that net government debt will be completely reimbursed in the foreseeable future, leaving room for desirable tax cuts over the medium term.

Table 11. **Central Bank independence in selected countries in 1998**

	Emphasis on price stability	Goal independence	Instrument independence	Access to Treasury funding	Governor's term of office	Total independence
United States	7.5	10.0	10.0	10.0	4.3	9.2
United Kingdom	7.5	0.0	10.0	10.0	5.7	7.7
European Central Bank	7.5	10.0	10.0	10.0	5.7	9.3
Japan	7.5	10.0	10.0	10.0	5.7	9.3
Iceland	**5.0**	**5.0**	**3.3**	**10.0**	**5.7**	**6.1**
Denmark	7.5	5.0	10.0	10.0	10.0	8.8
Finland	7.5	10.0	10.0	10.0	5.7	9.3
Norway	0.0	0.0	6.7	10.0	7.1	5.7
Sweden	10.0	10.0	10.0	10.0	5.7	9.7
Industrialised countries	7.3	7.1	9.5	9.6	5.7	8.6
Transition economies	8.5	5.9	9.1	7.8	7.0	8.0
Developing countries	7.1	5.8	7.1	6.1	5.1	6.5
Iceland's rank among (28) industrialised countries	25-27	16-25	28	1-26	7-23	27
Iceland's rank among all (94) countries	79-90	36-81	79-89	1-45	30-74	74

Source: Fry *et al.* (2000) updated to 1999 for members of the euro area by Pétursson (2000).

The budget for 2000 beset by both data difficulties and revenue and spending underestimation

Accurate evaluation and control of expenditure in 2000 was made difficult by the transition from cash to accrual accounting that had been undertaken in 1998. The initial budget for 2000 was based on an estimated improvement in the budget surplus from 1¼ per cent of GDP in 1998 to just over 2 per cent in 1999. In the event, though, the final estimate of the budget surplus for 1999, at 3.8 per cent of GDP, was considerably greater than had been expected. As a result of delays in implementing the new system, the definitive accounts for 1999 were not available until shortly before the 2001 budget was prepared in August 2000. Most of the underestimate of revenue came from direct taxation, which grew by 12 per cent, when growth of only 7 per cent had been expected at the end of 1999.The overrun for expenditure was less but nevertheless reached 4 per cent.

Expenditure overruns, especially on wages and medical outlays

The government recently estimated that expenditure in 2000 had risen 1¼ per cent as against a budgeted increase of 1½ per cent. Spending restraint stemmed mainly from lower outlays on interest, pension fund contributions and a fall in capital and maintenance spending expenditure (Table 12). Such drops were offset, though, by notable overruns in the areas of government wages and of health insurance payments. In the former case, the initial budget is set without knowing the final outcome for the government-employee wage settlements. In the latter case, the initial plan to limit doctors' fees and pharmaceutical costs was not fully implemented, and this led to overspending of some 16 per cent on the medical insurance programme. Spending for the Municipal Equalisation Fund was also over budget, partly because such outlays are directly linked to tax receipts that themselves increased faster than budgeted but also because there was an added payment of 700 million króna to the Fund. The only significant

under-spend came in unemployment benefits, where spending was 25 per cent below budget as a result of an overprediction of the number of people out of work. Underlying current expenditure[16] rose 6.8 per cent, against a rise in total outlays of only 1.2 per cent.

Table 12. **Central government expenditure**

	2000 budget	2000 estimate	2000 estimate relative to 1999 outcome	2000 estimate relative to 2000 budget	Difference between 2000 estimated growth and budgeted growth	2001 budget	2001 budget relative to 2000 estimate	2001 budget
	ISK million	ISK million	Per cent	Per cent	Percentage Points	ISK million	Per cent	Per cent of GDP
Operating expenditure	**84 095**	**86 783**	**3.2**	**3.2**	**0.9**	**92 172**	**6.2**	**12.8**
Wages	57 748	59 746	13.8	3.5	9.7	63 380	**6.2**	8.8
Pension fund contributions	6 055	6 055	-47.1	0.0	-30.5	6 535	7.9	0.9
Other current expenditure	30 613	31 526	3.0	3.0	-9.6	33 499	6.3	4.6
Services charges	-10 321	-10 543	-14.5	2.2	-23.2	-11 243	6.6	-1.6
Total transfer payments	**77 619**	**80 009**	**2.7**	**3.1**	**-1.8**	**88 548**	**10.7**	**12.3**
Social security	33 597	35 351	9.4	5.2	4.9	36 376	2.9	5.0
Unemployment insurance fund	2 370	1 770	-4.8	-25.3	-6.4	2 284	29.0	0.3
Child benefits	3 630	3 630	-7.9	0.0	-1.9	4 430	22.0	0.6
Interest cost rebates	4 180	4 180	5.8	0.0	-10.3	3 885	-7.1	0.5
Agricultural support payments	5 829	5 961	-2.9	2.3	-3.4	6 990	17.3	1.0
Municipal equalisation fund	3 755	4 586	12.6	22.1	-2.1	5 800	26.5	0.8
Student loan fund	1 910	1 910	7.3	0.0	-3.7	2 150	12.6	0.3
Other transfers	22 348	22 620	-5.1	1.2	-9.7	24 265	7.3	3.4
Interest payments	**13 400**	**14 600**	**-4.8**	**9.0**	**-1.2**	**16 200**	**11.0**	**2.2**
Capital and maintenance expenditure	**18 045**	**20 008**	**-7.8**	**10.9**	**1.6**	**22 244**	**0.0**	**3.1**
Total expenditure	**193 159**	**201 399**	**1.2**	**4.3**	**-0.3**	**219 164**	**8.8**	**30.3**
Memorandum								
Total less interest	179 759	186 799	1.7	3.9	n.a.	202 964	8.7	28.1
Total less interest and pension contributions	173 704	180 744	4.9	4.1	n.a.	196 429	8.7	27.2
Total less interest and pension contributions and unemployment benefits	171 334	178 974	5.1	4.5	n.a.	194 146	8.5	26.9

Source: Ministry of Finance.

Revenue surprises, largely because of the unforeseen buoyancy of activity

There was a marked overrun in the growth of tax revenues for 2000 relative to that expected in the budget. The overrun in revenue was most noticeable for direct taxation (Table 13). Overall, the estimates for 2000, presented in the final 2001 budget, suggested that tax revenues had grown 3.6 per cent faster than expected. The overrun in individual-income-tax payments (at over 12 per cent) was even more pronounced, as a result of high effective marginal tax rates and a surge in surtax payments, while revenue from corporate taxation was also up significantly (18 per cent). One of the biggest increases in revenues came from the capital income tax, introduced in 1998 (see Chapter III). This tax unified the tax treatment of all kinds of capital income and capital gains, resulting in a substantial fall — to 10 per cent — in the rate on many forms of capital gains. As a result, turnover in financial markets has increased. Gains

are now being realised, reducing the extent to which investors remain locked in to existing holdings in order to defer the payment of tax on capital gains. Its yield is now running at almost double the levels predicted when the tax was introduced. Overall, a large part of the faster-than-expected growth in tax revenues can be explained by more rapid growth of nominal GDP than expected at the end of 1999. In contrast to tax revenues, there was a marked drop in other revenues. This was largely because planned sales of government assets did not occur in 2000.

Table 13. **Central government revenue and budget balance**

	2000 budget	2000 estimate	2000 estimate relative to 1999 outcome	2000 estimate relative to 2000 budget	Difference between 2000 estimated growth and budgeted growth	2001 budget	2001 budget relative to 2000 estimate	2001 budget
	ISK million	ISK million	Per cent	Per cent	Percentage points	ISK million	Per cent	Per cent of GDP
Direct taxes	**79 907**	**88 666**	**11.9**	**11.0**	**4.8**	**94 097**	**6.1**	**13.0**
Personal incomes tax	51 546	58 765	12.2	14.0	5.9	64 193	9.2	8.9
Personal income surtax	37 360	42 451	15.2	13.6	n.a.	45 500	7.2	6.3
Capital income	960	1 486	31.3	54.8	n.a.	1 700	14.4	0.2
Net wealth tax	9 320	9 757	15.5	4.7	n.a.	10 686	9.5	1.5
Corporations	10 140	10 738	17.7	5.9	3.2	9 700	-9.7	1.3
Social security taxes	18 221	19 163	7.9	5.2	2.2	20 204	5.4	2.8
Indirect taxes	**108 757**	**116 245.1**	**7.6**	**6.9**	**2.7**	**122 464**	**5.3**	**17.0**
Value added taxes	69 020	77 001	10.0	11.6	n.a	82 220	6.8	11.4
Other excise taxes	19 796	18 911	-1.2	-4.5	n.a	19 803	4.7	2.7
Excise taxes on petrol	7 739	7 863	9.8	1.6	n.a	8 206	4.4	1.1
Transaction taxes	7 276	6 955	1.5	-4.4	n.a	6 815	-2.0	0.9
Diesel usage tax	3 945	4 521	11.6	14.6	n.a	4 342	-4.0	0.6
Other taxes	981	4 521	21.5	1.3	n.a	1 077	8.4	0.1
Other indirect	39 737	39 244	0.0	-1.2	-0.7	40 244	2.5	5.6
Other taxes	**536**	**614**	**19.2**	**14.6**	**15.3**	**564**	**-8.1**	**0.1**
Tax revenue	**189 200**	**205 525**	**9.4**	**8.6**	**3.6**	**217 125**	**5.6**	**30.1**
Other revenue	**20 700**	**18 718**	**-46.3**	**-9.6**	**-46.8**	**35 937**	**92.0**	**5.0**
Dividends and rental income	2 948	2 355	-13.8	-20.1	n.a	1 978	-16.0	0.3
Interest income	8 022	10 077	8.7	25.6	n.a	12 472	23.8	1.7
Charges and licences	3 979	3 986	-17.7	0.2	n.a	4 438	11.3	0.6
Other	689	689	11.7	0.0	n.a	724	5.1	0.1
Profit from sales of assets	4 216	816	-94.9	-80.6	n.a	15 516	1 801	2.1
Cost sharing transfers	**795**	**795**	**-38.5**	**0.0**	n.a	**809**	**1.7**	**0.1**
Total revenue	**209 900**	**224 244**	**0.7**	**6.8**	**-1.5**	**253 063**	**12.9**	**35.0**
Budget surplus	**16 741**	**22 844**				**33 898**		**4.7**
Financial adjustments	**4258**	**1 455**				**4 901**		**0.7**
Financial balance	**21 000**	**24 300**				**38 800**		**5.4**

Source: Ministry of Finance.

The underestimation of the growth of indirect taxation was less severe than for direct taxation. Value-added tax receipts have been increasing in line with the growth of incomes and expenditure, at

around 10 per cent per year. Excise taxes have fallen slightly, mainly due to a fall in receipts from car sales, which had been particularly buoyant in 1999, though there was a lowering of excise taxes on some categories of cars. Against this, revenue from excise taxes on petrol grew almost 10 per cent, reflecting a change from a proportionate to a purely flat-rate tax in October 1999. This change was made in a way that was, initially, revenue neutral. By October 2000, though, with the sharp rise in oil prices, retail petrol prices were some 12 per cent below what they would have been had the old system been left in place. The weight taxation on vehicles of over 14 tonnes was changed last spring. A flat-rate annual tax was replaced by a tax proportional to the actual kilometrage travelled by a vehicle. This change was designed to be revenue neutral, but revenues turned out to be 15 per cent higher than expected, prompting the government to reduce the kilometric levy by 10 per cent in 2001.[17]

The overall budget surplus dropped

With the growth in taxation running ahead of estimates to a greater extent than that of expenditure, the balance between non-financial revenues (excluding asset sales) and expenditure rose well beyond the budgeted level (of 1.8 per cent of GDP), reaching ISK 22.8 billion (3.4 per cent of GDP). However, the profit from the sale and revaluation of government-owned assets was both markedly less than in 1999 and less than expected for 2000. This amounted to ISK 0.8 billion against ISK 16.1 billion the previous year. Consequently, the overall budget surplus was slightly lower than in 1999 at 3.4 per cent of GDP against 3.8 per cent. The reduction in debt was greater than in 1999, despite a significant increase in cash balances during 2000 following an exceptional accounting transfer of ISK 7 billion to the Government Employees Pension Fund that was matched by a rise in cash balances rather than being used to pay down debt.

The budget for 2001: discretionary spending increases paid for by more privatisation

In 2001, the government aims to raise the budget surplus to 4.4 per cent of GDP. However, the slowdown in the economy and faster spending growth is projected to bring a marked reduction in the revenue balance, excluding financial transactions (to 2.4 per cent of GDP), with this drop being offset by a resumption of privatisation of government enterprises. Total revenues are projected to grow considerably faster than expenditure, even though spending growth is projected to pick up once again to just under 9 per cent (Tables 12 and 13). Excluding the profit from asset sales, revenues are projected to rise by only 6¼ per cent. Central government revenues will be held back by ISK 1.3 billion as a result of a 0.33 percentage point cut in the standard income tax rate to soften an increase in the local authority tax rate (see below). As a result, total tax revenues are projected to rise by 5.6 per cent.

Expenditure growth is projected to accelerate in 2001. A noticeable slackening is expected in the growth of personnel costs. The extent of the hoped-for moderation will be lessened by the recent pay award for teachers that boosts wages by 13 per cent and pensions by a further 27 per cent. The acceleration will be more pronounced for transfer payments. The government plans to introduce a new parental-leave benefit and boost child-benefit payments (Box 1). In addition, agricultural subsidies are expected to jump some 17 per cent. In a further policy change, the government has increased payments to the Municipal Equalisation Fund by a further ISK 1.1 billion, in order to help poor, rural areas. The government has changed the regulations concerning the means-testing of invalidity benefits. The fraction of the benefit that is not means-tested has been increased and spouses' income is disregarded in the calculation of benefits. This change followed a ruling of the Supreme Court and will result in ongoing costs of ISK 0.1 billion with a significant allocative payment. In addition, outlays on maintenance and capital expenditure (mostly construction spending) are planned to rise by some ISK 2.2 billion (0.3 per cent of GDP), to take advantage of favourable prices caused by the ending of large private-sector contracts. Part of these increases in

spending are temporary. Agricultural subsidies should fall next year, as will payments to the Municipal Equalisation Fund. Moreover, the increase in interest payments was directly linked to the fall in the exchange rate in 2000. Nonetheless, expenditure is expected to grow more than 3 percentage points faster than GDP, raising the government spending as a share of GDP by one percentage point.

Box 1. **The new system of child and expectant mother benefits**

The new child-benefit system was introduced partly as the result of an agreement made between the unions and the government in the context of the 2000 general pay settlement. Previously, once income and net wealth exceeded certain thresholds,[1] child benefits were progressively reduced. The marginal reduction rates were between 5 and 11 per cent, depending on the number of children. In the new system, just over 30 per cent of the total benefit is paid regardless of income when the child is under 7 years of age. The rate at which the remaining benefit is reduced by a third by 2003, when the benefit reduction rates will be lowered to between 3 and 9 per cent. The child benefit will no longer be reduced as net wealth increases, a change that is being introduced immediately. Thus, increases in house prices, such as occurred in the past year, will no longer reduce child benefits. The thresholds at which benefits are reduced will be increased by 3 per cent annually over the period to 2003. The impact of the changes will be to boost the disposable income of single parents by between 2 and 3 per cent by 2003.[2] The least well paid half of couples will experience a gain in disposable income of between 1½ and 2 per cent, with the improvement falling to 0.5 per cent at the highest income decile. Overall, the new system will cost the Treasury an additional ISK 2 billion per year (0.3 per cent of GDP) when it is fully operational in 2003.

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1. In 2000, the thresholds represented a monthly income of around $600 and net wealth of $110 000.
2. At end-1998, 19 per cent of all children were living with just one parent, while 28 per cent of all women with children were not living with a partner.

The government is also introducing new measures to control the spending of decentralised agencies. In 1998, in an effort to improve efficiency, centralised controls over a number of government agencies were eased. New agencies were created and given control of their own budgets and, to a certain extent, the salaries paid to their staff. The last public-sector bargain (which expired in the fourth-quarter of 2000) contained provisions for wage negotiations at the local level, and many agencies conceded pay increases in this context. However, some of them did not count the cost of these settlements, resulting in overspending. The rules concerning budget implementation have now been strengthened, notably by insisting that the agencies' deficits will be honoured only if they are reorganised. In the health sector, it is proving equally difficult to control expenditure; accordingly, a reorganisation is also planned there. The objective will be to increase co-payments, in the light of Danish and Swedish experience. At the same time, a monthly threshold will be introduced whereby no reimbursements will be given to those with expenses of less than 6 300 krónur ($74) per month.

The increasing role of local authorities

Local authorities reduced the extent of their new borrowing in 2000 for the second year running. Their aggregate deficit amounted to only 0.4 per cent of GDP (Table 14), slightly lower than in 1999 but in line with the historical average, and it may edge down very slightly this year. This level of government is reluctant to incur any net indebtedness: its outstanding net debt amounts to only 5 per cent of GDP. Consequently, spending is effectively determined by available income. With receipts largely tied to the base of the central government income tax and to the general tax level through the Municipal Equalisation Fund (MEF),[18] spending has been buoyant, rising faster than national output. Outlays will be given a further boost by the decision of the government in the 2001 budget to add ISK 1.8 billion to the MEF, largely to aid rural areas, allowing a reduction in property taxes in those parts of the country. The rise in

outlays has been due in part to the transfer of competencies from central to local government, notably in the area of social affairs and the environment. Local authorities' spending is likely to rise further, as the central government and the municipalities are raising the maximum local income tax rate in two stages from 12.04 per cent to 13.03 per cent by 2002. At the same time, this change has partly offset the reduction in the national income tax rate of 0.33 percentage points, thereby raising the overall standard income tax rate in the average local authority area to 39 per cent by 2002.

Table 14. **Local government finances**
Accruals basis

	1990-94	1995-99	1997	1998	1999	2000	2001
	Average annual per cent increase						
Current revenue	4.7	14.9	20.5	12.7	12.0	10.6	11.5
Current expenditure	11.5	14.2	22.1	10.5	9.9	9.2	9.6
Gross investment	4.1	19.3	35.0	30.0	6.1	7.0	7.0
	Percentage of GDP						
Current revenue	7.5	8.9	9.2	9.4	9.8	10.1	10.5
Current expenditure	6.2	7.9	8.3	8.3	8.5	8.6	8.8
Current balance	1.3	1.0	0.9	1.1	1.3	1.4	1.6
Gross investment	2.4	2.0	2.0	2.3	2.3	2.3	2.3
Financial balance	-0.6	-0.4	-0.6	-0.7	-0.5	-0.3	-0.1

1. In 1997, education expenditure and compensating revenue was transferred from central to local government.
Source: National Economic Institute.

The general-government surplus remains high and debt is shrinking rapidly

The overall general-government sector has shown a marked improvement in its financial balance. The combination of an increasing central-government budget surplus and a slightly reduced local-government deficit generated a general-government surplus of just over 3 per cent of GDP in 2000 (Table 15), in line with the surpluses in other Nordic countries and well above the 1999 outcome of 2.0 per cent. In structural terms the improvement was less, but still over three-quarters of a percentage point of potential GDP. In 2001, a fall in the general-government surplus is expected by the OECD, as economic growth is projected to be well below that of potential and discretionary spending increases are implemented. This contrasts with the official projection of a larger central-government budget surplus in 2001. The principal reason for this difference is that the budget includes expected profits on the sale of publicly owned corporations. These capital gains are not included in the internationally standardised definition of the general-government surplus. The structural budget surplus is likely to be broadly stable in 2001 (Figure 12).

The improvement in the structural balance over the past four years, stemming from strong tax receipts, has been damped by increased spending. Cyclically adjusted tax revenues have been particularly buoyant, partly due to the new capital income tax. The growth in structural personal income tax payments has been particularly striking in that it has come at a time when marginal tax rates have been lowered. It is possible, though, that the cyclical elasticity of tax revenue has been underestimated, in which case the structural budget surplus will have been overestimated. Another factor tending to boost the government surplus has been the sale of government assets. This has lowered interest payments by considerably more than the dividends that had been received from these companies, tending to push up the surplus. All told, these factors have boosted the structural surplus by around 5½ percentage points of potential GDP since

1997 (Table 16). However, just over half of this gain has been offset by a major increase in the wage bill for public-sector employees, which has jumped by over 3 percentage points of potential GDP over the same period. This increase has made Iceland one of the countries with the highest ratios of public-sector pay to GDP, matched only by Sweden and Denmark. The increase in civil-service compensation has illustrated the difficulty of permanently reducing their relative pay. In effect, the increase in the past three years represents a reversal of severe cuts in relative pay that occurred during the stabilisation programme of the early 1990s (Figure 13). Other public-sector programmes have, on balance, remained relatively constant in relation to potential GDP since 1997, with some slight fall in purchases of goods for current consumption offset by an increase in investment spending. Transfer payments have increased in line with the growth of potential GDP in current price terms.

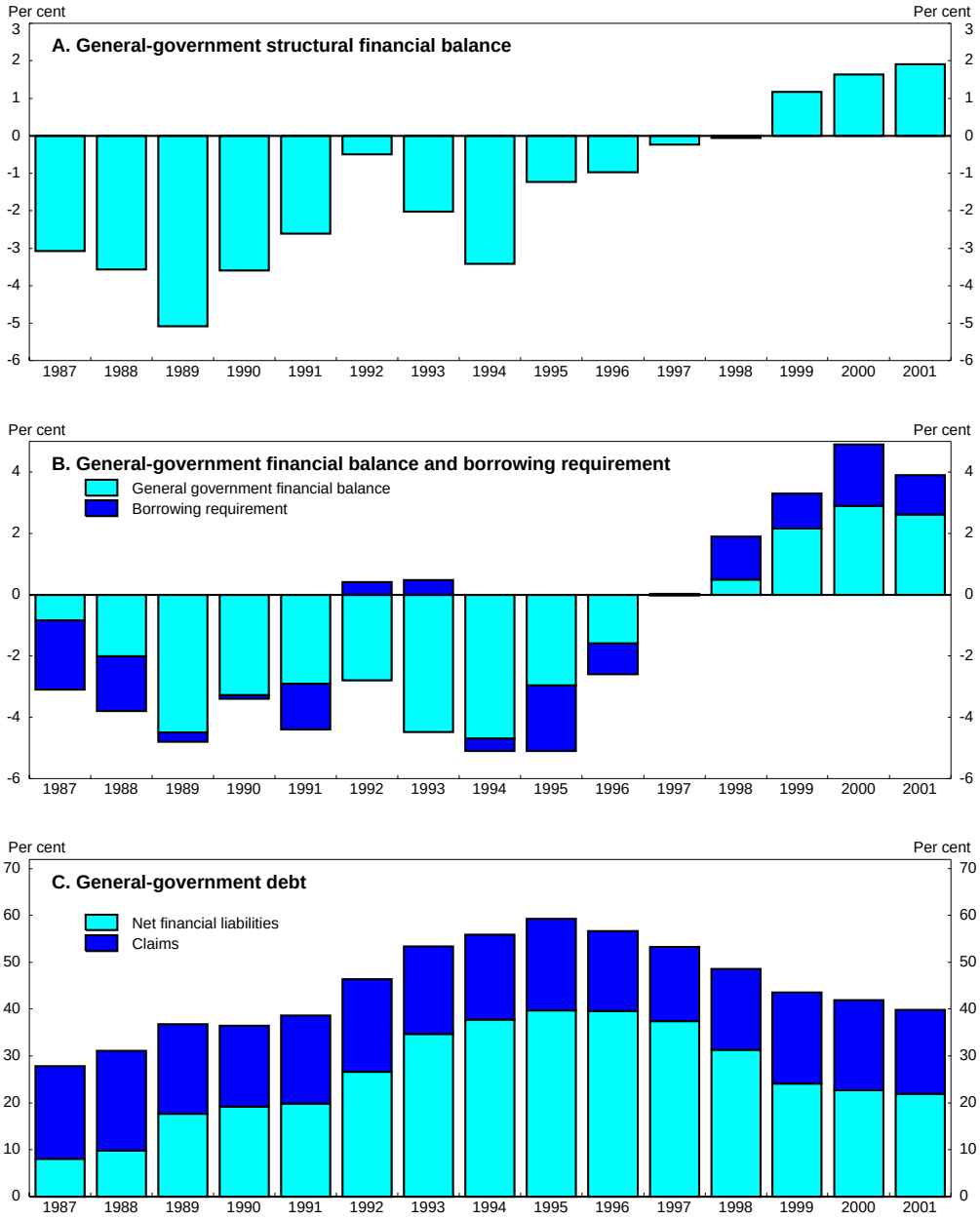
Table 15. **General government fiscal situation**
Accruals basis

	1990-94	1995-99	1997	1998	1999	2000	2001
	Per cent of GDP						
Central government balance	-3.0	0.0	0.5	1.1	2.3	3.4	2.5
Local government balance	-0.6	-0.4	-0.6	-0.7	-0.5	-0.3	-0.1
General government balance	-3.6	-0.4	0.0	0.5	2.2	3.0	2.4
General government structural balance	-2.3	-0.2	-0.2	-0.1	1.3	2.1	2.0
Asset sales	0.1	0.8	0.0	1.1	2.6	0.1	2.5
Gross debt	46.2	52.3	52.7	48.6	43.6	42.1	40.6
Financial claims	18.5	17.9	15.8	17.3	19.6	19.3	18.1
Net financial liabilities[1]	26.6	32.5	37.5	31.3	24.1	22.9	22.4

1. Net debt less cash balances. The equity holdings of the government in public enterprises are not deducted from debt.
Source: Ministry of Finance, Central Bank of Iceland, National Economic Institute and OECD.

The improvement in the general-government surplus has led to a fall in public debt. Increases in inflation, such as has occurred in 2000, do not tend to lower debt ratios much in Iceland, since only 5 per cent of gross government debt is issued in nominal securities.[19] The remainder is either indexed to consumer prices or denominated in foreign currencies. However, rapid growth of real GDP, and sales of government assets worth ISK 23.5 billion (averaging 1.3 per cent of GDP in the period 1998-2000), have helped to push down gross debt from 53 per cent of GDP in 1997 to 41.8 per cent in 2000, with net financial liabilities falling to 23 per cent of GDP. Net liabilities could drop to under 22 per cent of GDP in 2001 if the budget stays on track and all planned privatisations are made at their expected prices. Such a level of indebtedness would be one of the lowest in the OECD area. However, the government's balance sheet also includes its significant liabilities in the form of unfunded employee pensions, though these are not included in its definition of net debt, in line with international statistical conventions. Such pension rights amount to around 23 per cent of GDP in present value terms.

Figure 12. Fiscal indicators
Per cent of GDP



Source: Ministry of Finance, Statistical Yearbook of Iceland and OECD.

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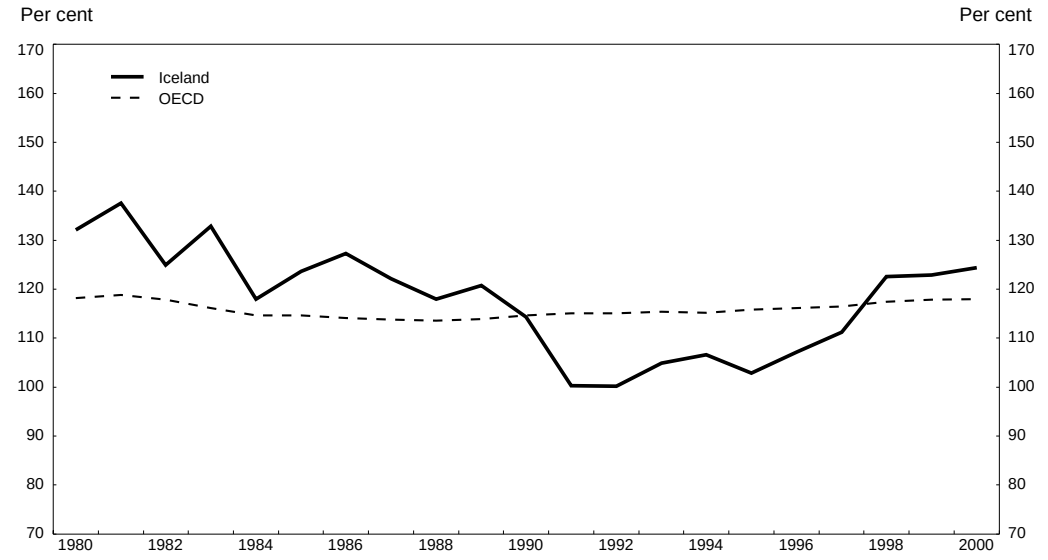
Table 16. **Cumulative changes in the components of the general-government financial balance since 1997**

	1998	1999	2000	2001
	Per cent of potential GDP			
Forces tending to increase surpluses				
Increased revenues	1.1	3.5	4.4	4.1
Decreased interest payments	0.1	0.5	1.0	1.3
Total sources	1.2	4.0	5.4	5.4
Forces tending to reduce surpluses				
Government employee pay	1.2	2.2	3.1	3.1
Other programmes	-0.2	0.5	-0.3	-0.2
Total uses	1.0	2.8	2.8	2.9
Change in structural balance	0.1	1.2	2.6	2.4
Cyclical change	0.4	0.8	1.1	0.3
Total change	0.5	2.0	3.7	2.8

Source: OECD.

Figure 13. Relative compensation of public and private employees
A comparison of Iceland with OECD average



Source: OECD.

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The medium-term outlook: elimination of net government debt by 2004 is achievable

The government has announced that it will try to ensure that its gross debt will be matched by its financial claims by 2004. Numerically, this would appear to be an achievable target. The structural central budget surplus amounts to an estimated 2 per cent of GDP. If in 2002 and beyond asset sales take place at the pace of 1998-2000, they should generate an annual inflow of more than 1 per cent of GDP. Beyond 2001, net financial liabilities would fall by over 30 billion krónur per year. As the government's net financial liabilities may amount to only around ISK 116 billion at end-2001 on the basis of budget plans, it

should be possible to eliminate net liabilities in the government's target period, provided that there is no prolonged weakness in the economy, primary spending is controlled and the exchange rate remains stable. This path for net financial liabilities suggests that the government will be faced with a choice in debt management. If cash is not accumulated over the medium-term, the likely budget surpluses are large enough to offer the choice of eliminating foreign or domestic debt. The former strategy would imply significant sales of local currency, perhaps weakening the currency.[20] This suggests that domestic debt should be paid down, especially as an active market for government-guaranteed housing bonds would remain.

Over the longer term, public finances are also favourably positioned: *i)* because of the favourable activity and budgetary impact of the possible Noral project (see Chapter I), and *ii)* to meet the challenge of an ageing society, as shown in the last *Survey*. At present, the government still pays most old-age pensions. However, private-sector pension funds will increase their assets, which already amounted to 80 per cent of GDP at end-1999. Moreover, the government has created a fund for newly recruited civil servants. As these occupational pensions gradually build up, the supplementary pension paid to people over 67 with little other income will be reduced significantly. The process has already started. Between 1995 and 1998, aggregate supplementary pension payments grew 3 percentage points less than basic pensions.

Generational accounts also supply evidence that the public finances are in good shape. This method of analysis attempts to project forward the future costs of current tax and benefit positions until the last person currently alive has died. It then calculates the tax burden that it will be necessary to impose on future generations in order that the income of the government equals its expenditure over the long term. On the basis of tax and benefit rates and general spending policies in place in 1998, it would appear that the tax rate for future generations could be lower than that for current generations (Benediktsson *et al*., 1999).

The apparently auspicious fiscal position set out above is, of course, subject to a number of risks that could make the situation less favourable. One risk is related to the volatility of public finances in Iceland. The average absolute year-to-year change in the general-government financial balance as a per cent of GDP between 1980 and 2000 was 1.6 percentage points. For the 20 OECD countries for which data are available, the average absolute change was only 1.3 percentage points, though the volatility for Iceland is somewhat less than that for other Nordic countries, reflecting the lower share of the public sector in GDP in Iceland. Nonetheless, as with some other Nordic countries, the volatility of the cyclically adjusted budget balance, while lower than the unadjusted balance, is still high. One factor behind this volatility is the fact that past business-cycle fluctuations in Iceland have been large, reflecting the importance of terms-of-trade changes in an economy dependent on a very limited number of products. Another problem, already mentioned, may be that simple methods of cyclical adjustment may be insufficient to capture the full dynamics of the tax system. Although the fisheries sector, which was at the origin of many past fluctuations, is now a smaller share of GDP and so the economy may be less vulnerable to shocks emanating from it, the fiscal balance may be vulnerable to a deterioration if profitability fall and capital gains decline, as might occur when the economy moves away from a cyclical high point. The second factor that could lengthen the time needed to pay off the government's debt would be adverse exchange-rate movements that would boost the local-currency value of foreign-currency debt; this was estimated to be 61 per cent of total central government debt at the end of 2000.

It may be possible to guard against such risks by adopting a more medium-term outlook to the planning of tax and spending policy. The government has introduced a medium-term aspect to this year's budget, which contains spending estimates for each department. At the moment, though, these plans are illustrative and are not agreed targets. Given the past history of planning for rapid growth in some types of public spending and then allowing spending overruns, the medium-term fiscal plan needs to be made more operational.

III. INCREASING SIMPLICITY, NEUTRALITY AND SUSTAINABILITY: A BASIS FOR TAX REFORM

Introduction

As the principal means by which governments fund their expenditures, taxes are at the foundation of public finances. A properly designed tax system implies readier taxpayer acceptance of that expenditure burden. It should promote the maintenance of a high and sustainable level of output by minimising both distortions to market-set prices and disincentives to work, saving and investment. But optimal tax policy goes beyond mere efficiency and funding considerations to encompass inevitable normative judgements about the amount of redistribution. The Icelandic system incorporates some implicit redistributive goals, but the main thrust of policy recently has been toward simplification. Nonetheless, anomalies remain both in the context of Iceland's integration into the world economy and in terms of the system's simplicity and neutrality.

This chapter reviews the current state of taxation in Iceland, how and why the present system has evolved over time and especially over the past 10 or 15 years and what remain its key distinguishing features in terms of mix, rates, bases and progressivity. It will proceed to examine the different categories of taxation, before assessing the scope for a welfare-enhancing, simplifying, affordable reform that could be enacted once the current overheating problem is overcome and the economy has returned to macroeconomic equilibrium.

Towards a simple tax system

The underlying thrust of tax policy in Iceland since the end of the 1980s has been to simplify and reduce the extent of discrimination between different economic activities and thereby minimise disincentives to work, saving and investment. The preparation for membership in the European Economic Area (EEA), which came in 1994, was also a major driving force for reducing border taxes and shifting to other more commonly used revenue sources. The major 1988 tax overhaul covered expenditure, personal income and corporate taxation, while tariffs eventually were reduced to zero on imports from the EEA.

For personal incomes, a large number of exemptions for different purposes were merged into one tax credit. Six income tax rates were merged into one and, given these simplifications, employers, pension funds and the social security system were charged with deducting the income tax at source for their employees or pensioners on a monthly basis, thereby ensuring a marked simplification for employees. Part of this simplification was reversed in 1993 when a surtax of 5 percentage points was introduced. Many anomalies remained, such as whether or not various forms of capital income were taxed. There was also an overhaul of taxes paid by corporations. The deductions for investment and general reserving were progressively reduced. This allowed a marked fall in statutory rates to 33 per cent in 1993, down from the 50 per cent rate that had prevailed in the 1980s. In 1994, the local authorities' corporate turnover tax — levied at each stage of production, irrespective of the profitability of the company — was also abolished. In exchange, they were allowed to increase local income taxes and, at the same time, they received the right to levy a tax on commercial property.

In 1990 a value-added tax was introduced. Initially, there was only one rate with the imposition on foodstuffs being compensated by direct payments at the producer level. A second rate was introduced in 1993 and finally in 1994 food was moved from the higher- to the lower-rate category, partly as a concession to the unions to achieve a low pay settlement and direct payments to producers were abolished.

The movement to reducing discrimination and enhancing efficiency was renewed in 1997. The payroll tax, which had varied across different forms of activity,[21] was merged with various other taxes into a uniform rate of 5¼ per cent in four annual steps ending in January 2000. The increase in the marginal income tax rate in the 1990s, partially unwinding the 1988 reform, was reversed between 1998 and 2000, thereby lowering the incentives to seek leisure over work. More importantly, the taxation of capital income, previously incomplete, was separated from that of employment income. Any individual can be subject to three statutory income tax rates: *i)* the standard rate on employment income, *ii)* the surtax on higher income, and *iii)* the much lower capital income tax. Finally, the corporate tax rate was lowered and the lower tax rate on profits distributed as dividends was abolished.

Another source of some long-standing concern for public policy has been the desire to raise domestic savings. The current account of the balance of payments has been in persistent deficit, averaging 3 per cent of GDP since 1971. Although this level of deficit has not been perceived as a threat to macroeconomic stability as it has not resulted in any significant build-up of interest payments relative to GDP, it has been seen as a symptom of inadequate national savings, especially when cyclical pressures pushed deficits above the long-term average. Private pension funds were established in the late 1960s and have been able to accumulate income without paying taxation. However, until 1994, employees paid contributions out of taxed income but were then taxed on their entire pension income and capital gains. This represented a double taxation in that both the capital and the interest were being taxed, though individuals gained from the exemption from taxation during the build-up period. Starting in 1995, the deduction of pension contributions from income was phased in and was completed in 1997. Subsequently, contributions to supplementary defined-contribution saving schemes for retirement have been allowed with the same tax benefits.

The simplification of the tax system has been accompanied by a marked increase in the tax burden. By 1999, the overall tax ratio had risen to 36.3 per cent of GDP from 28.9 per cent in 1980 but was still below the OECD average, ranking Iceland sixteenth out of the 28 OECD countries for which disaggregated tax data are available (Table 17). However, the extent to which Iceland is below the average country has fallen from 4 percentage points in 1980 to 1 percentage point in 1999, both years of high cyclical demand in Iceland. The tax ratio remains far lower than in the Nordic members of the EU. The movement towards higher taxation has not been smooth (Figure 14): indeed a large share has occurred since 1997 as the economy moved out of a recession and for reasons that are explored below.

The net result of these simplifications has been a substantial change in the mix and a rise in the overall level of taxation. Tariffs have fallen to insignificance as a source of government revenue, but taxes on income have grown markedly: the personal income tax share has risen by nearly 12 percentage points since 1980 (Figure 15). On the other hand, expenditure taxes have remained a relatively stable share, after some decrease following the reform of the sales tax in 1988. Social security and payroll taxes have been used only to a limited extent throughout the post-independence period.

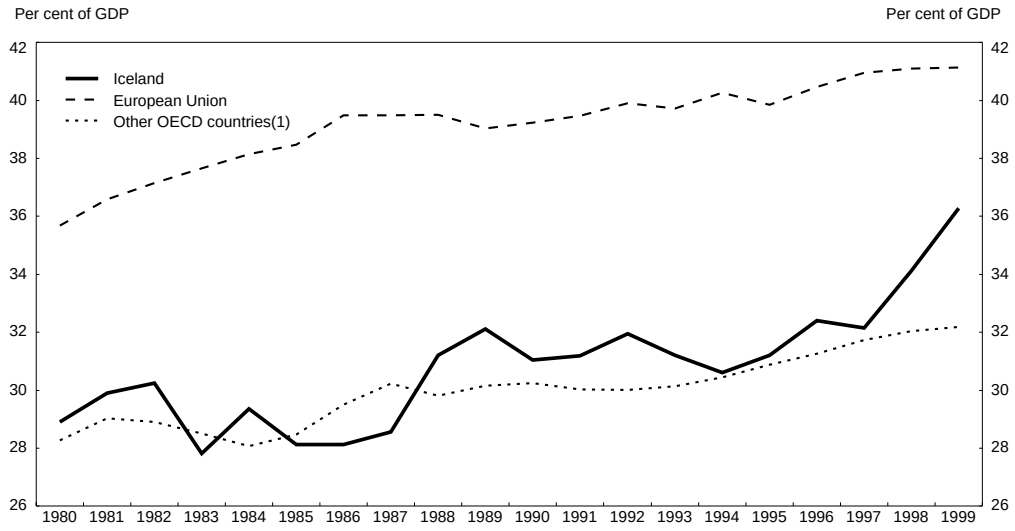
Table 17. **Tax payments relative to GDP**
1999[1], Per cent of GDP

	Corporate income taxes	Individual income tax	Social security and payroll taxes	Consumption taxes[1]	Other taxes, including property taxes	Total tax rate
Korea	2.1	3.7	2.5	9.5	4.2	22.0
Japan	3.2	4.7	10.6	5.3	3.0	26.7
United States	2.5	11.4	6.7	4.6	3.0	28.2
Australia	4.7	13.3	0.0	7.8	4.9	30.7
Ireland	3.9	9.7	4.2	11.8	2.1	31.7
Turkey	2.4	7.4	5.4	11.6	5.0	31.8
Greece	2.1	4.4	10.5	13.7	2.6	33.4
Portugal	4.0	5.8	8.8	14.2	1.5	34.3
Spain	2.8	6.9	12.2	10.4	2.6	34.9
Switzerland	2.5	10.3	12.5	6.8	3.0	35.1
New Zealand	4.1	15.0	0.0	12.9	3.8	35.8
Iceland	**1.3**	**12.8**	**2.9**	**16.7**	**2.6**	**36.3**
United Kingdom	3.7	10.5	6.3	11.7	4.3	36.5
Poland	2.8	8.3	12.1	12.9	1.5	37.6
Canada	3.8	14.2	5.2	9.3	5.2	37.7
Germany	1.8	9.4	14.8	10.6	1.1	37.7
Hungary	2.6	6.4	12.9	15.4	1.1	38.4
Netherlands	4.1	5.8	15.8	11.3	2.7	39.8
Czech Republic	3.8	5.2	17.6	13.1	0.6	40.3
Norway	3.2	11.8	10.2	15.6	1.0	41.8
Luxembourg	7.3	7.8	10.9	11.6	4.5	42.1
Italy	3.0	10.7	12.7	10.5	6.1	43.0
Austria	1.8	10.2	15.1	12.6	4.6	44.2
Belgium	3.9	14.1	14.5	11.4	2.0	45.9
France	2.7	8.3	16.6	12.2	6.2	46.0
Finland	4.2	14.7	11.7	14.3	1.3	46.2
Denmark	3.0	25.4	2.1	16.2	3.4	50.0
Sweden	3.0	18.1	13.2	11.2	5.9	51.5
Average OECD[3]	3.2	10.2	9.6	11.6	3.2	37.8
Average EU (15)[3]	3.4	10.8	11.3	12.2	3.4	41.2

1. Provisional data for 1999; 1998 for United States, Canada, Australia, New Zealand, Poland, 1997 for Greece.
2. Unweighted.

Source: OECD (2000), Revenue Statistics.

Figure 14. Tax-to-GDP ratios: Iceland, European Union and the rest of the OECD
Per cent of GDP



1. Australia, Canada, Japan, Korea, New Zealand, Norway, Switzerland, Turkey, United States.
Source : OECD, Revenue Statistics.

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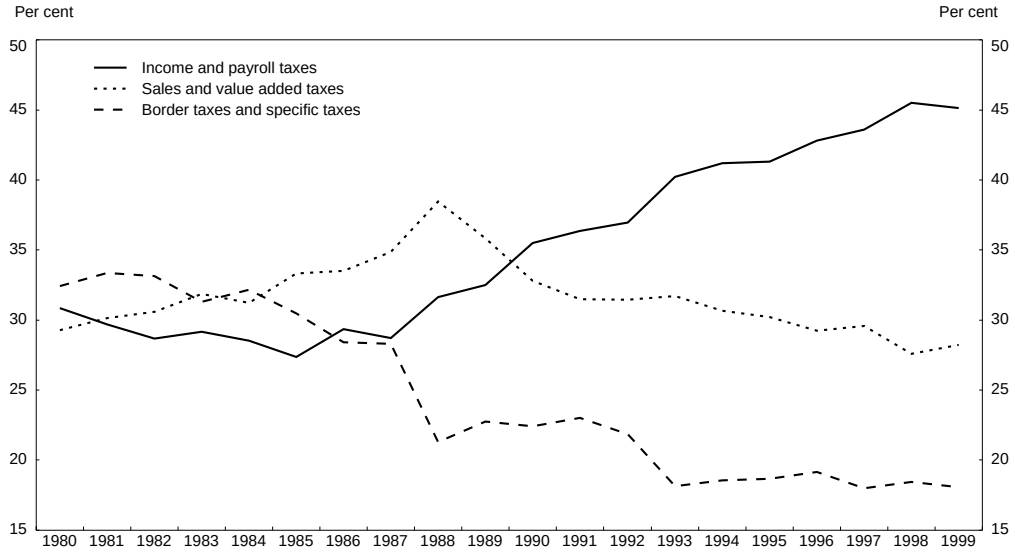
Figure 15. The share of different taxes over time
Per cent of total taxes



Source: OECD, Revenue Statistics and OECD.

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The current tax system in Iceland

The tax mix compared to other OECD countries

While the tax system has evolved considerably over the past 20 years, in 1999 it still had a markedly different structure to those seen in the rest of the OECD area (Figure 16). Only for income tax is the share in line with those found in other countries. Corporate taxation accounts for a much lower share of taxation than elsewhere, though in no country is this form of tax a large contributor to overall tax revenues. Social-security taxation is usually a large element of government income, whereas it is almost absent in Iceland. Broadly defined property taxes are somewhat below those found in the United Sates and Japan but above those in the European Union. The lack of corporate and social-security-tax revenues is compensated by a high share of expenditure taxation, especially when compared to the United States and Japan. The rest of section looks in more detail at the features of the system that generate such results and at the consequences for the effective burdens on labour and capital (full details are given in Annex I).

Individual income taxation

The income tax system for Iceland's 210 000 taxpayers is extremely simple. Income is divided into two categories: income from capital and income from employment, pensions and transfers. For the former, there has been just one marginal tax rate of only 10 per cent since 1997. For the latter, an individual is faced with only two statutory tax rates compared to the average of 4.8 in OECD countries. Moreover, the highest statutory rate is 3 percentage points below the OECD average. In addition, there are few deductions from taxable income that depend on the individual circumstances of a taxpayer. The tax system is, thus, relatively transparent and equitable between different taxpayers with similar incomes from employment. However, the existence of two means-tested benefits, which are paid through the income tax system, does go against the simplicity of the basic framework (see below). Even so, the administration of the tax system (Box 2) is not onerous with the tax authorities staff amounting to one per cent of total government employment.

Box 2. **The tax administration in Iceland**

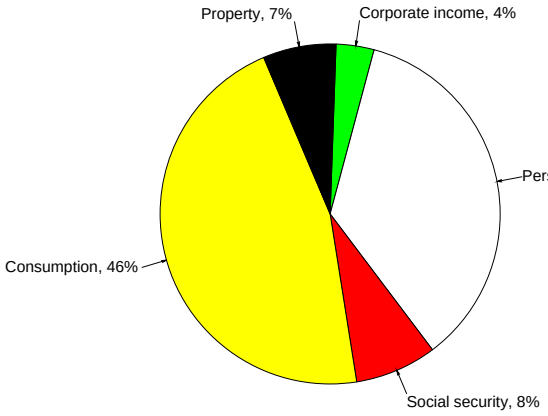
Tax enforcement in Iceland is organised in two tiers: a state-wide Internal Revenue Directorate (IRD) and 9 regional tax offices. The first of these units is responsible for the administration of taxes on individuals and corporations, VAT, excise duties, taxes on cars and fuel and all other kind of taxes except customs and other import duties. It also interprets the tax law, directs and co-ordinates the tax enforcement of the 9 regional tax offices and advises the Ministry of Finance regarding the changes and interpretation of tax law and changes made to tax law. The IRD has about 90 employees. The regional tax offices are responsible for the assessment of taxes in the region as well as the collection of VAT and the withholding tax on salaries and other earned income and pensions. The regional tax offices range in size from 4 to around 80 employees, with a total staff of around 196.

Two independent bodies are also part of the tax administration. The State Tax Board hears appeals against the tax decisions of the regional tax offices or the IRD. It consists of 6 members and has a total staff of 16. The second independent body, the State Tax Investigation Department, deals with the investigation of tax fraud and alleged violations of the laws on bookkeeping and accounting. This unit has 23 employees.

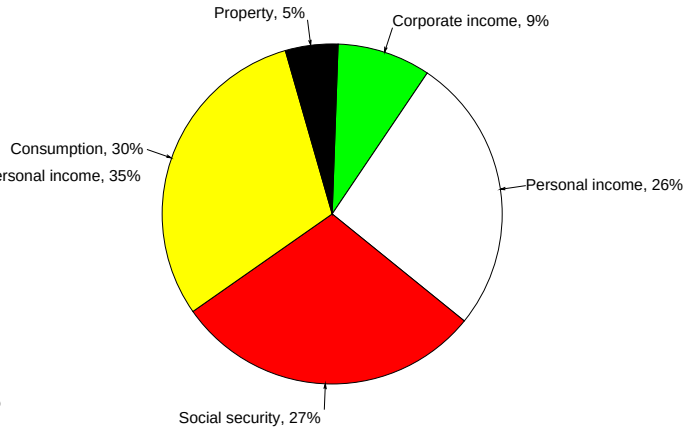
Each year the DTI investigates about 100 cases of suspected tax fraud, thought to be most serious in the areas of deductible corporate expenses and unpaid VAT in the construction and restaurant sectors. There has been a noticeable increase in the number of cases going to court from about one or two per year to 20 or more in recent years (Table 18). Likewise the average size of penalties has risen steeply, reaching nearly ISK 2 million ($24 000) in the two most recent years for those imposed by the tax authorities and ISK 4.6 million ($58 000) when brought before the courts. The conviction rate is high.

Figure 16. The structure of taxation : an international comparison
Per cent of total, 1999(1)

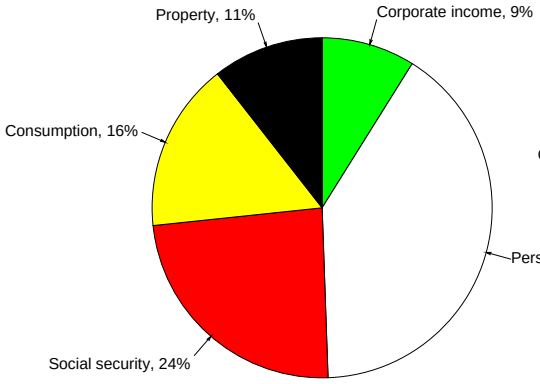
A. Iceland



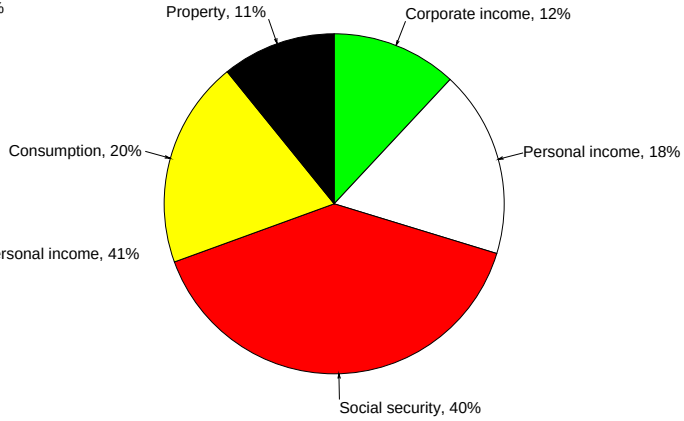
B. European Union (2)



C. United States (1998)



D. Japan



1. Figures for 1999 are provisional.
2. Unweighted average.
Source: OECD, Revenue Statistics.

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Table 18. **Tax investigations: rulings and penalties imposed**
ISK millions

	1993	1994	1995	1996	1997	1998	1999	2000	Total
Number of cases where a penalty was imposed by the tax authorities	0	8	10	6	17	23	29	24	117
Size of penalties	0	0.83	2.41	1.34	11.44	6.77	59.59	42.11	124.49
Number of rulings by district court	2	2	5	20	11	23	26	20	109
Size of penalties	1.20	2	25.80	38.75	59.50	42.40	134.65	75.25	379.55
Number of rulings by supreme court	0	1	1	2	2	3	9	5	23
Size of penalties	0	3	20	11	54	2.20	43.53	22.45	156.18

Source: Ministry of Finance.

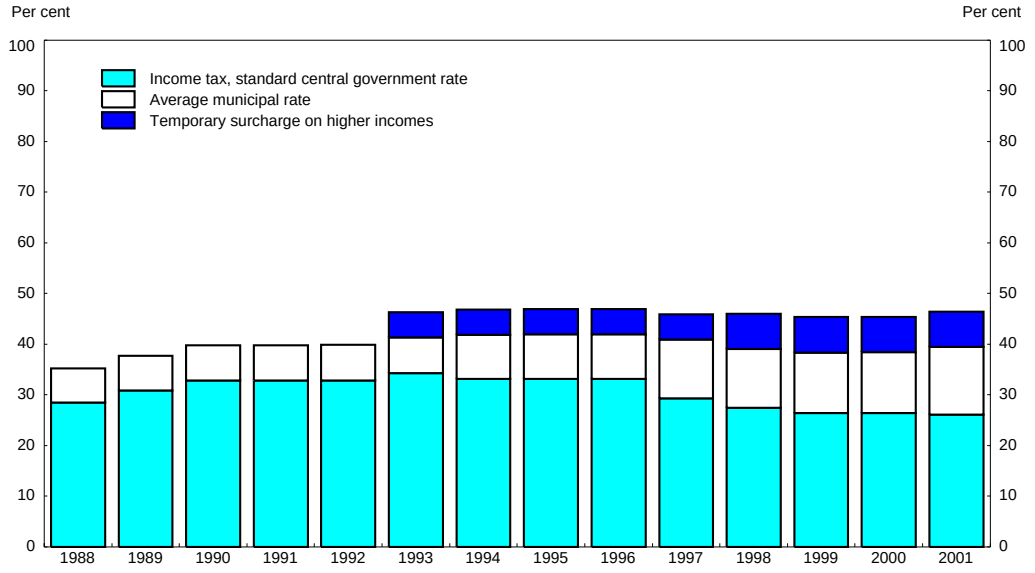
A less onerous treatment of capital income than employment income is a feature of the tax code in almost half of all OECD countries. In those countries with such a schedular system, the average highest rate of tax on interest income is 25 per cent against 29 per cent on dividends. Indeed, only half of the countries that discriminate between capital and employment income have no further discrimination between different types of capital income. For these countries, the highest tax rate on capital income averaged 22 per cent in 1999. In Iceland, not only is there no discrimination between different types of capital income but the tax rate is only 10 per cent. The schedular tax system implies that capital income is not aggregated with other forms of income, though aggregate capital income for a couple is taxed in the hands of the spouse with the highest employment income rather than being split equally.[22] Realised capital gains are taxed as capital income, except for profits on the sale of owner-occupied houses, which are exempt.

Income from sources other than capital is divided into another two categories: *i)* income from employment (including pensions and income from other sources), and *ii)* income from self-employment and own-account business activities. In the latter category, in order to guard against the transfer of personal expenses (cars, telephones, rent, lunches, etc.) into deductible expenses from self-employment income, an income is imputed to each self-employed person that is a fraction of the average earnings of all those in the same occupation in the rest of the economy. This imputed income is taxed as employment income, while any profit remaining after the deduction of normal business expenditures is aggregated with employment income rather than capital income. However, losses on the own-business account cannot be set off against other forms of income. The share of total income tax payments made by the self-employed is low. Moreover, for a country with one of the highest levels of income per capita in the OECD area, the share of self-employment in total employment is particularly high: more than twice that found in other Nordic countries for example and amounts to 20 per cent of the labour force.

Any individual only faces two statutory tax rates on employment income, including, since 1993, a “temporary surtax”. Local authorities have the right to levy an income tax (see below) within certain limits determined by central government; consequently the two statutory income tax rate vary in different localities. In 2000, on average, the lower statutory rate of taxation on employment income was 38.4 per cent, comprising a central government rate of 26.4 per cent and an average local rate of 12.0 per cent.

Despite falls in the former, the overall standard marginal tax rate was quite stable at around this level during the past decade (Figure 17). The surtax on "higher" incomes was raised from 5 to 7 per cent in 1997 though the threshold at which it is paid was raised 14 per cent at the same time, and currently it applies to incomes above about 3.4 million krónur ($40 000) per year for individuals (double that for married couples). Whereas at its inception, the tax applied only to incomes 17 per cent above average compensation, it now applies to incomes only 4 per cent above average compensation. It generated 1.5 billion krónur in 2000 (0.2 per cent of GDP).

Figure 17. The evolution of marginal tax rates on employment income over time



Source: National Economic Institute.

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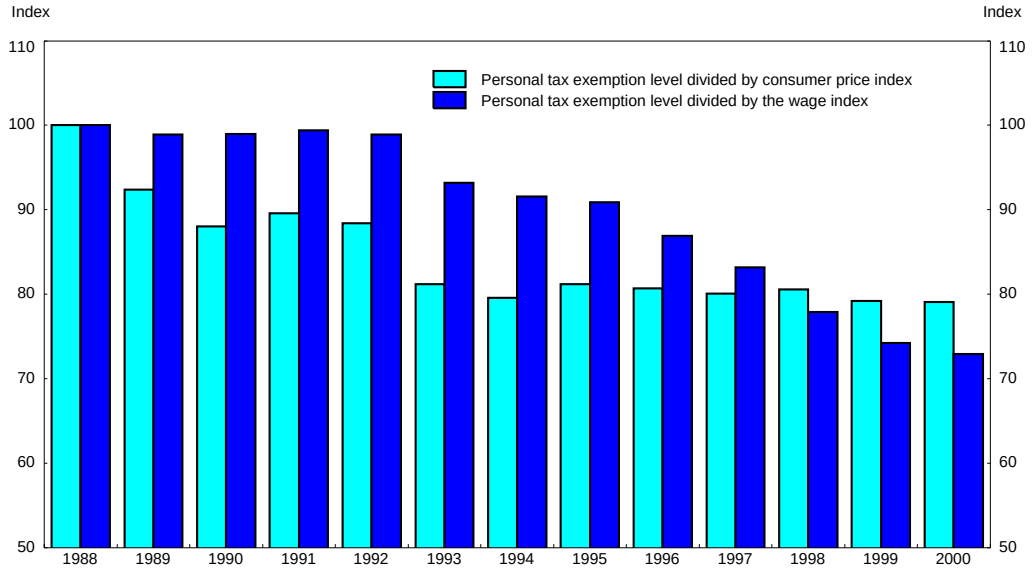
The principal deduction that is granted to all taxpayers is given in the form of a tax credit. When the taxpayers are married, one credit is given to each spouse, and, if one credit is not used, it can be transferred to the other spouse within certain limits. From the introduction of the PAYE system in 1988, the transferability limit for the allowance was set at 80 per cent. In 2000, 85 per cent of the unused credit could be transferred, but this is being increased in three equal stages so that by 2003 all of it will be transferable. If the credit exceeds the taxes on employment income, it can be set against wealth tax payments and then capital income tax payments, but only 10/38 of the allowance can be set against this form of income tax. However, unused credits are not paid to individuals as cash. The effect of the tax credit is to ensure that, in 2000, no income tax was paid below a threshold equivalent of almost ISK 800 000 per year. This threshold has fallen almost 30 per cent relative to wages since 1988 and somewhat less relative to prices (Figure 18).

Figure 18. The evolution of the personal income tax exemption limit over time
Index, 1988 = 100



Source : Ministry of Finance.

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The other major deduction is for pension contributions, though such an offset represents only a deferral of tax payment. All employees must join a pension scheme, and nearly all private-sector plans are completely funded. For the employer, contributions amount to 6 per cent of the employees' income and are a normal business expense. For the employee, the contribution rate is set at 4 per cent, and this contribution has been fully deductible from gross income since 1997. The investment income of the pension fund is tax-free. The resulting pension is taxed in its entirety as employment income. Thus, from the point of view of the government, the initial revenue loss is largely recuperated in present-value terms when the pension is paid relative to the situation in which the individuals immediately consume what would otherwise be their pension-fund contributions — provided that the return paid by the fund to the pensioner is equivalent to the government's own borrowing rate.[23] From the point of view of the employee who chooses to save, the opportunity to invest in a fund whose income is not taxed represents a gain and a loss for the government. However, the extent of the gain is limited, as the so-called "double taxation of saving" is reduced in Iceland by the very low rate of tax on capital income (10 per cent). Employees can also invest up to a limit of 4 per cent of income in a supplementary defined-contribution pension scheme that is subject to the same tax treatment as ordinary defined-benefit pensions. These have had rather modest take-up rates of 20 or 25 per cent due to low employer-matching provisions, but with improved matching as from 2000 (see Chapter IV), that share is expected to rise.

There is only one other deduction allowable against employment and capital income. Purchases of equities of companies registered in the European Economic Area are deductible from income up to an amount of 133 333 krónur ($1 590) per year representing a significant, if small, subsidy to the purchase of shares.[24] This amount is clawed back if the shares are sold within five years. Any gain is taxed as capital income (at 10 per cent). The tax can be deferred if new qualifying shares are purchased within 30 days of a sale. Certain other assets also have the right to this deduction, such as savings accounts that are blocked for five years and which are invested in the creation of a small business when the account is closed. In addition, the annual ceiling for the grant of stock options is 600 000 krónur (about $7 000).[25] Beyond this limit, gains in employee options are taxed as employment income.[26] When this allowance was first

introduced, its objective was to help establish a culture of share-ownership. The stock market still had only a small capitalisation a decade ago, a situation that has changed markedly.

One category of workers, seamen, has a higher rate of tax exemption. Their additional tax credit is set at ISK 671 per day spent at sea, thereby adding about 50 per cent to the standard credit. This higher allowance was originally introduce to help attract people to work in fisheries in the 1960s. Labour needs of the industry have subsequently fallen. Currently the allowance costs ISK 1.5 billion per year (0.2 per cent of GDP).

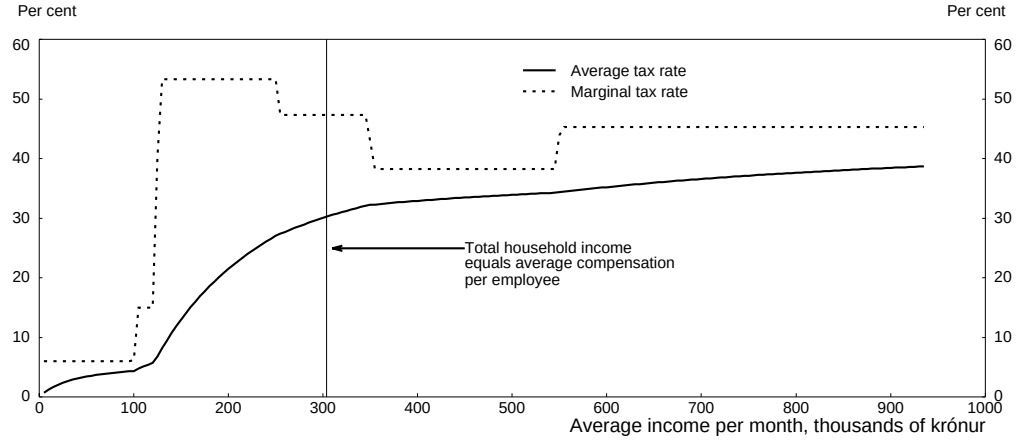
The simplicity of this system is slightly offset by the existence of two benefits (one depends on the number of children under 15 and the marital status of the mother,[27] the other on the amount of interest paid on housing loans) that are paid through the income tax system. These benefits are paid in full to those with no other income, but the amount of the allowances is reduced by 4.5 (if there are two children[28]) and 6 per cent of gross income, respectively, until their value is eliminated, thereby adding to the effective marginal tax rate of the individual. Thereafter, the effective marginal tax rate reverts to the standard tax rate.

For mortgages, the government pays all of the interest on a housing loan up to a maximum interest payment of 244 822 krónur (just below $3 000) per year for a married couple where the borrower has no other income. As well as there being a ceiling on the interest payments, there is also an upper limit on the interest rate that can be paid on the loan (7 per cent). The effect of these ceilings is that, at current interest rates, the government pays all interest on a mortgage equivalent to almost 1.2 times annual average earnings when the borrower has no income or wealth. The amount of the benefit is reduced both as income increases and as net worth increases. For a couple with zero net worth, the government ceases to subsidise mortgage interest when total household income is 25 per cent higher than average compensation per employee (*i.e.* at about $4 000 per month). This benefit is paid through an adjustment of income tax payments. If the allowance exceeds tax payments, the balance is refunded directly. The allowance is counted as government expenditure.

The impact of the phasing-out of these two benefits paid through the tax system is to create a hump-shaped schedule for marginal tax rates (Figure 19). In the 2001 budget, the shape of the curve was changed somewhat, as the phase-out rate for the child benefit was lowered.[29] This increased the number of households who receive at least part of the benefit. The linkage to net wealth was dropped and the dependence of part of the child allowance on income was removed (see Chapter II). Moreover, for children under 7, all means-testing was withdrawn. The combination of these cash allowances and the tax credit means that, for a couple, average tax rates reach 30 per cent quite quickly (when total household earnings are at 110 per cent of average compensation).[30] Thereafter rates increase quite slowly towards the average standard marginal rate of 38.4 per cent.

The combination of a uniform annual basic tax credit (of around ISK 290 000 or $3 480 for single taxpayers), which has fallen in real value over time, and a high standard income tax rate has been to raise average tax rates for employment income over the past decade (Figure 20). This increase has been most marked for lower-income families that have been gradually brought into the tax net. Indeed, between 1996 and 1999, the income tax yield rose from 10.2 to 12.8 per cent of GDP, pushing Iceland's take 2.6 percentage points above the OECD average (Table 17). Furthermore, according to the latest estimates, the share jumped another percentage point in 2000.

Figure 19. Average and marginal effective tax rates for a married couple (1)
with two children and a mortgage, 2000



1. The average tax rate is calculated as the sum of income tax payments and means-tested reductions in the child and interest-rate allowances to the sum of pre-tax income and the value of the child and interest-rate allowances before means-testing. The calculations assume that income is equally split between the spouses and that the interest-rate rebate amounted to 15000 krónur per month. It is assumed that the household has no capital income and zero net wealth.
Source : National Economic Institute and OECD.

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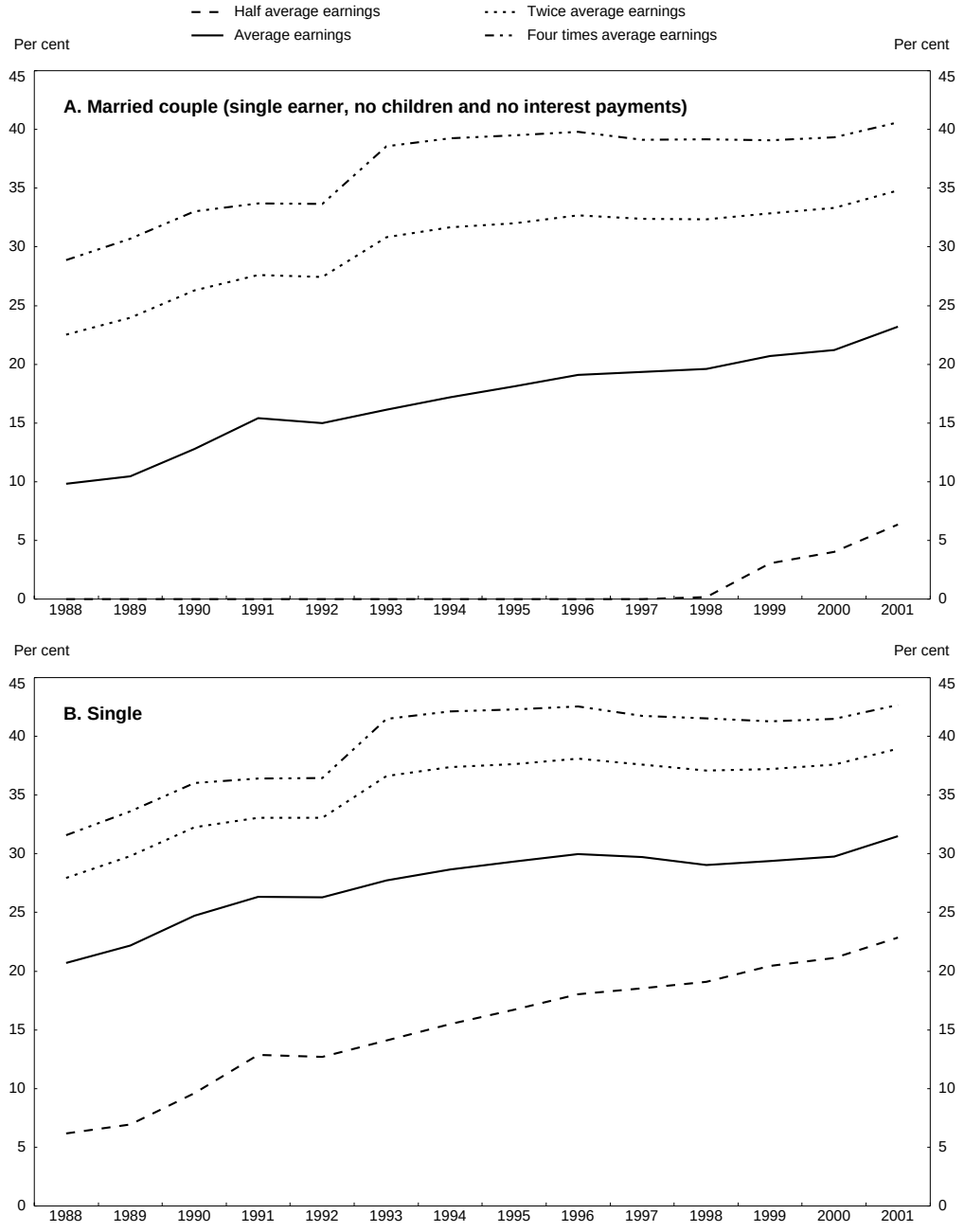
The consequence of the fall in the value of tax-free income, the means-tested allowance and the relatively high level of the initial marginal rate is that the system has become steadily less redistributive: the pre- and post-tax distributions of income are very similar (Figure 21, Panel A). In 1999, the average tax rate of half of all married couples (those in the fifth to ninth pre-tax income deciles) was within ±5 percentage points of the average tax rate for all couples (Figure 21, Panel B), based on an NEI survey of income and tax payments. The impact of the redistribution of the tax burden is felt to a major extent only in the lowest two income deciles and among single parents. At the other end of the income scale, the excess tax rate for the average couple in the highest income decile was limited to 9.3 percentage points. The concentration of redistribution at the lower end of the income scale appears to be greater than in many other countries, where the rise of the average tax rate at low income levels is less marked than in Iceland (Figure 22).

Corporate taxation

The method of determining profits in Iceland is markedly different from that used in most countries. As a result of the tradition of high inflation, profits are determined after a series of adjustments for movements in the general price level. Assets are revalued by an overall price index, thereby boosting depreciation charges relative to a system of historic-cost accounting. The depreciation rates themselves are similar to those in other countries and are uniform over the life of the asset, which is assumed to be between 5 and 10 years for most machinery and longer for structures. Once the depreciated value of an asset has fallen to 10 per cent of its book value, no further depreciation can be charged until the asset is scrapped. At the same time, to the extent that debts are not indexed, interest payments are reduced by the erosion in value of debt caused by inflation. Capital gains (after revaluation by the change in the general price level) made by a company are taxed as ordinary corporate profit. However, if the company holds physical assets, the depreciation on these can be accelerated to offset the capital gains. In the event that the company does not have such assets available, taxation on capital gains can be deferred for two years. In

any case, whatever the capital gain, it is never considered to exceed 50 per cent of the sale price. Losses can be carried forward for eight years and are indexed over the carry-forward period.

Figure 20. The evolution of the average tax rate for two family types over time



Source : National Economic Institute and OECD.

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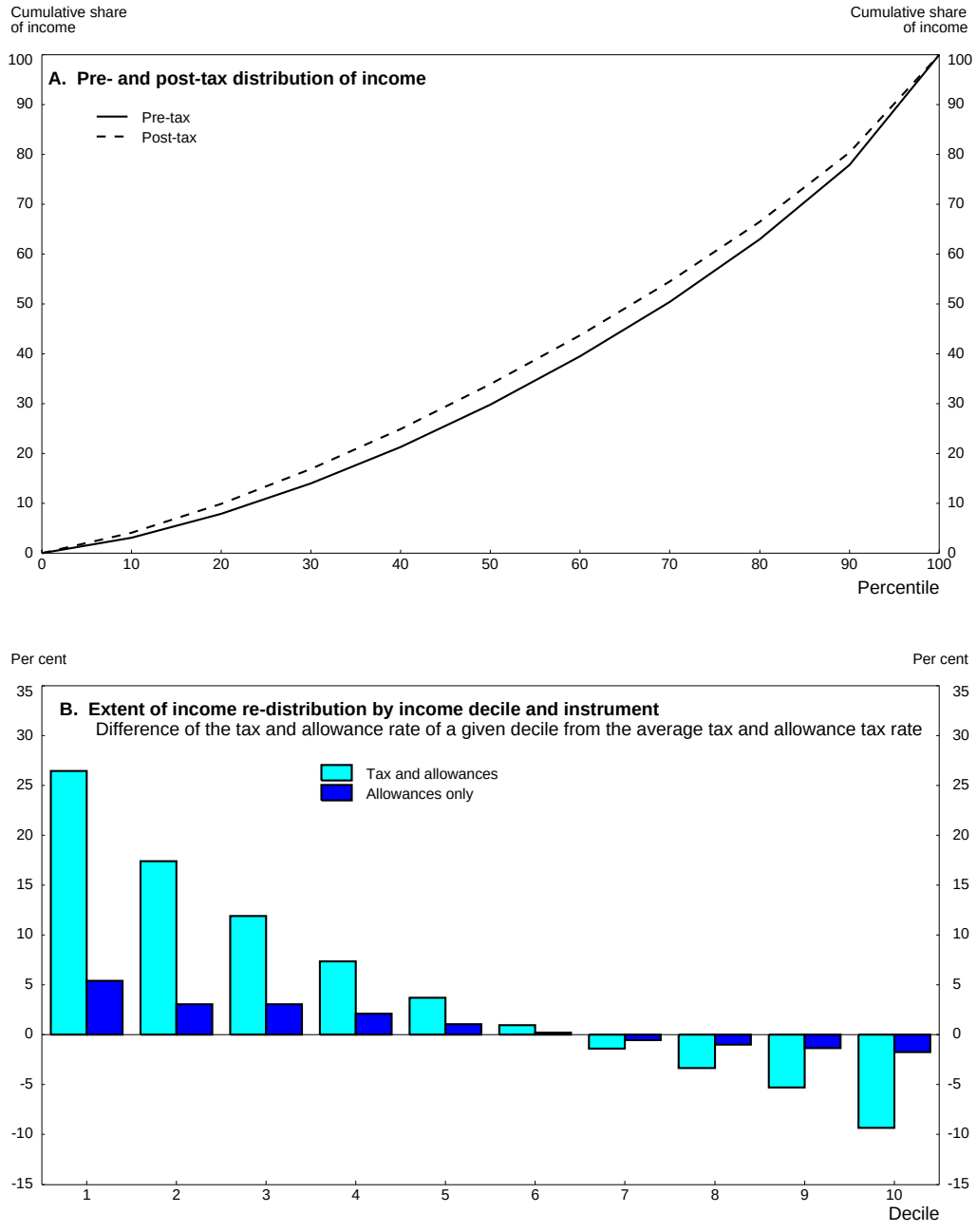
Figure 21. The impact of income taxation on the income distribution



Source: National Economic Institute.

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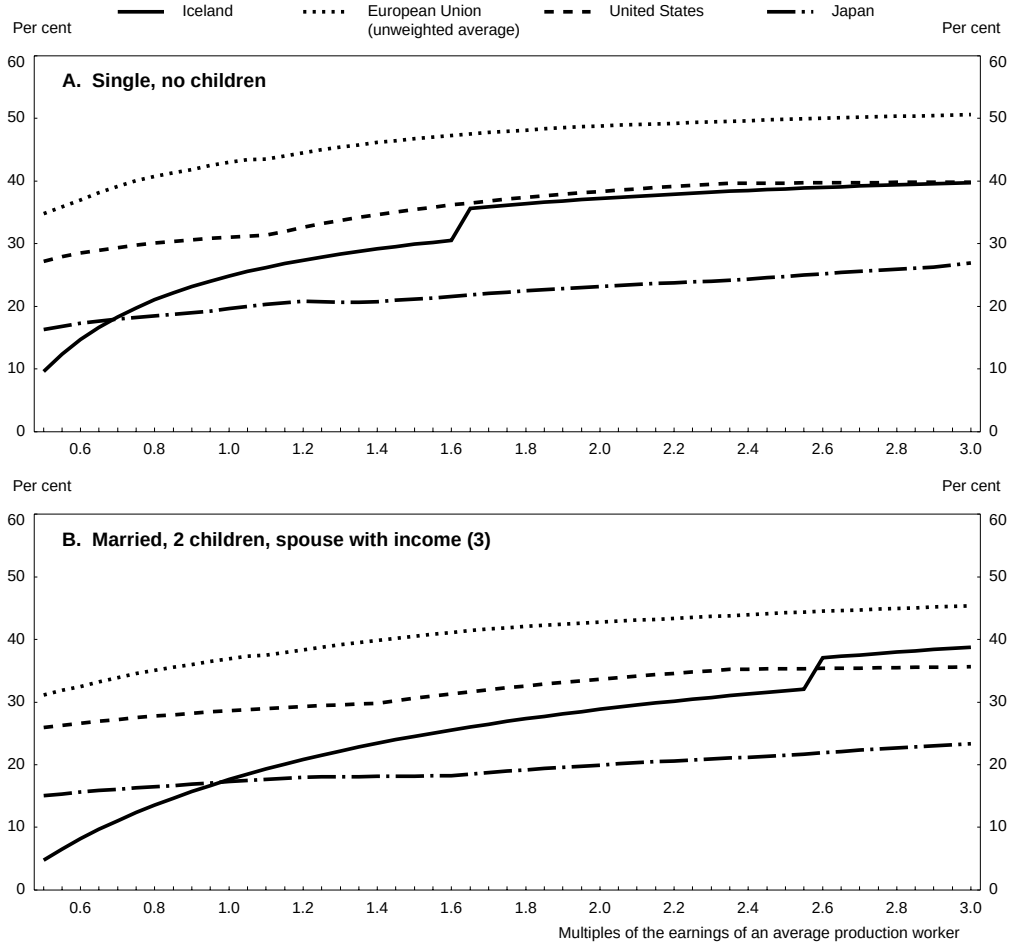
Figure 22. The progressivity of the income tax system (1)
Net average tax wedges by multiples of average income(2)
1998



1. The statutory progressivity presented here is based on OECD's tax equations. These equations do not include specific tax allowances and credits such as those related to housing investment or child care expenses.
2. Income tax plus employers' and employees' social security contributions, less cash benefits.
3. Assumes that one spouse earns 67 per cent of the income of the average production worker, while the pay of the other spouse is varied.

Source: OECD, Taxing wages.

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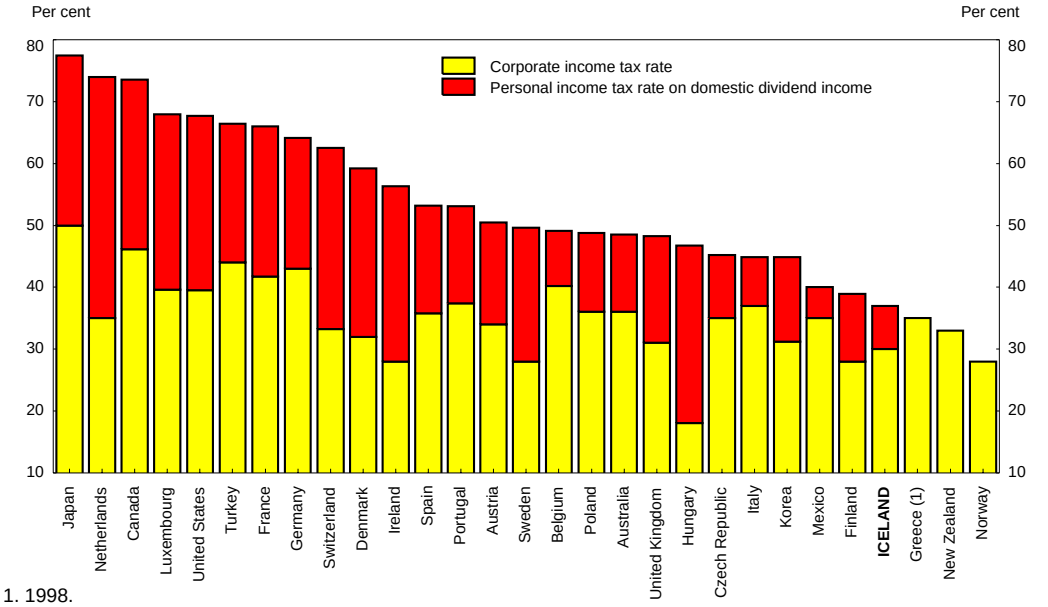
Corporate taxation is one of the two areas where the tax yields are low relative to the OECD area. The statutory corporate income tax rate, at 30 per cent, is slightly lower than the average rate in the rest of the OECD area. In 1999, the yield of this tax was only 3.7 per cent of total taxes, against an average of 8.8 per cent in the rest of the OECD area. Relative to GDP, the difference was even slightly greater at 1.3 per cent and 3.2 per cent. There are a number of possible explanations for the paucity of corporate tax revenues, relative to GDP. *First*, profits may be a small share of national income, as self-employment is relatively high in Iceland. Moreover, real interest rates have been higher in Iceland than elsewhere. *Second*, until recently, a significant part of the economy was controlled by state-owned enterprises that were not incorporated and so were not subject to taxation. Rather, they remitted part of their profits directly to the government. This position is now changing, and, in the past two years, corporate taxes have been rising rapidly, also helped by the gradual exhaustion of the carry-forward from cumulated losses from the early 1990s stagnation in the private sector. *Finally*, fishing companies were until this budget able to depreciate the cost of quota rights that they purchased from other fishing enterprises.[31]

In an attempt to increase the extent to which Iceland could act as a base for offshore activities, a new class of enterprises called “international trading companies” was allowed as from June 2000. Such firms can either be holding companies for financial, physical and intangible assets located outside Iceland, or can be engaged in international trading activities in the area of marine or agricultural products. They are also allowed to act as intermediaries in trade in services between companies located outside Iceland, to own aircraft and vessels and tranship goods in Iceland. They are not allowed to engage in business within Iceland. They are subject to a profits tax of 5 per cent and are exempt from the wealth tax and stamp duties. As yet, there have been only two such companies established. Moreover, the regime is inscribed in the OECD list of potentially harmful tax practices.

The corporate tax regime is not integrated with the personal tax regime, so that shareholders do not receive any credit for tax paid by the corporation, in contrast to two-thirds of OECD countries whose systems are integrated to a varying extent. Nonetheless, with the tax rate on capital income being the lowest in the OECD area, the overall rate of taxation on distributed profits — at 37 per cent — was still the fourth lowest in the OECD area in 1999 (Figure 23) and was indeed slightly less than the lowest marginal tax on employment income in Iceland.

Figure 23. Combined corporate and personal income tax wedge on distributed profits
1999, for a resident paying the highest marginal tax rate



1. 1998.
Source: OECD, Revenue Statistics.

With modest taxation of capital income, there is an incentive for companies to pay high dividends and finance their growth externally. According to OECD estimates, the tax wedge on financing by either new issues of equity or debt is markedly lower than in the rest of the OECD area (Table 19). However, the extent of divergence between the different types of financing is not appreciably different from that seen in other OECD countries due to the non-integration of corporate taxation that pushes up the tax wedge on financing from retained earnings. As to the difference between the tax wedges on machinery and structures, this is almost equal to that found elsewhere. These figures do not, though, incorporate the payments of the wealth tax by the corporate sector, payments of property tax or the impact of inheritance taxes on the cost of capital. These aspects of the tax burden will be dealt with below.

Table 19. **Marginal effective tax wedges on physical investment, R&D and human capital[1]**

		Manufacturing, 1999						1996			
		Sources of financing[2]			Physical assets[3]			R&D[4]		Human capital	
	Standard deviation[5]	Retained earnings	New equity	Debt	Machinery	Building	Inventories	Short lived	Long lived	Training	Tertiary Studies
Mexico	0.3	0.8	1.0	1.0	0.7	0.7	1.4	-0.3	-0.3	..	..
New Zealand	0.3	1.5	1.5	1.5	1.5	1.1	2.0	0.7	0.3	0.0	..
Norway	**0.3**	1.1	1.1	1.1	0.8	1.0	1.7	0.1	0.1	0.0	..
Italy	0.4	1.3	1.3	0.4	0.7	1.2	1.2	0.3	0.3	0.0	-0.1
Australia	0.4	2.0	2.1	2.1	1.7	2.2	2.8	-6.0	-0.9	0.9	-0.6
Korea	0.4	0.6	1.6	1.6	0.8	1.5	1.1				
Denmark	0.5	1.9	2.4	2.5	1.9	1.8	3.2	-1.7	0.6	1.6	..
Spain	0.5	3.2	2.2	1.6	2.4	2.7	2.8	-7.1	-0.8	2.0	-0.1
Germany	0.6	0.9	2.5	1.3	1.1	1.5	1.1	0.0	0.0	-0.2	-0.4
United Kingdom	0.6	2.9	2.4	1.6	2.0	2.3	3.3	0.8	0.8	0.8	..
Greece	0.6	0.9	0.9	-0.6	0.1	0.3	1.0	-0.6	-0.6	-0.6	..
Sweden	0.7	2.1	2.8	0.8	1.5	1.8	2.1	1.1	1.1	1.0	-1.8
Finland	0.7	2.2	0.9	0.9	1.2	1.6	2.5	0.7	0.7	0.7	-0.7
Iceland	**0.9**	**1.8**	**2.3**	**-0.1**	**0.8**	**1.3**	**2.0**	**1.3**	**1.3**	**1.0**	**..**
Luxembourg	0.9	3.6	2.4	1.6	2.2	2.7	4.1	1.7	1.7	1.6	..
Portugal	0.9	1.4	2.8	-0.1	1.0	0.9	1.3	-0.2	-0.2	-0.3	-0.7
Switzerland	1.1	0.4	3.5	1.8	1.1	1.3	1.3	0.5	0.5	0.4	-0.3
Austria	1.1	0.7	2.7	0.1	-0.1	0.9	2.2	-2.4	-0.8	-0.1	-0.8
United States	1.3	1.7	4.8	1.4	1.5	2.5	2.0	-3.8	-0.2	1.0	0.0
Belgium	1.3	1.4	2.5	-0.6	0.1	0.6	2.7	-0.5	-0.5	-0.5	..
Canada	1.4	4.5	5.6	2.0	2.7	4.2	5.3	-4.0	-0.4	1.1	-0.7
Ireland	1.4	1.5	4.7	0.7	1.2	1.5	2.4	0.8	0.8	0.8	-0.8
Netherlands	1.7	0.5	5.3	2.5	1.5	1.9	1.6	-3.6	-0.1	1.0	-0.5
Japan	1.9	3.3	5.5	-0.1	1.4	3.7	2.6	0.2	0.6	0.5	0.7
France	2.3	3.6	7.7	0.7	2.2	3.5	4.0	-1.1	0.1	0.5	0.0
OECD	0.9	1.8	2.9	1.0	1.3	1.8	2.3	-1.0	0.2	0.7	-0.5
EU	0.9	1.9	2.9	0.9	1.3	1.7	2.4	-0.8	0.2	0.6	-0.6

1. These indicators show the degree to which the personal and corporate tax systems scale up (or down) the real pre-tax rate of return that must be earned on an investment, given that the household can earn a 4 per cent real rate of return on a demand deposit. Wealth taxes are excluded. See OECD (1991), *Taxing Profits in a Global Economy: Domestic and International Issues*, for discussion of this methodology. Calculations are based on top marginal tax rates for the personal income tax and a 2 per cent inflation rate. Data are ranked in ascending order according to the overall standard deviation. Cross-country data are simple averages.
2. The weighted average uses the following weights: retained earnings 55 per cent, new equity 10 per cent, debt 35 per cent.
3. The weighted average uses the following weights: machinery 50 per cent, buildings 28 per cent, inventories 22 per cent.
4. The weighted average uses the following weights: machinery 5 per cent, building 5 per cent, current expenditure across assets 90 per cent, and weights in footnote 3 for financing.
5. Calculated across sources of financing in manufacturing.

Source: OECD Secretariat.

Social-security taxation

Another area where taxation is much lower than in most OECD countries is social security. In Iceland, this form of taxation has more of the characteristics of an employer-paid payroll tax than in most other OECD countries in that there is no linkage to employee benefits. Indeed, employees do not pay any social-security taxes, nor are any public social benefits linked to a contribution record. Only employers pay the 5¼ per cent tax that is earmarked mostly for funds responsible for social insurance programmes, such as those covering unemployment, workplace accidents, guarantees for the payment of pension contributions by bankrupt companies and all other insurance programmes.[32] There is, however, no linkage between the aggregate expenditure of these funds and their income from this form of taxation: central-government revenues cover the remainder of their programme costs.

The consequence of this different approach to the financing of social insurance is that social-security taxation raises only a small proportion of total tax revenue.[33] Only four countries (Australia,

Denmark, Korea and New Zealand) have a lower dependence on this revenue source than Iceland. Indeed in 1999, its share of total revenue was only 7.9 per cent against an average of 25.2 per cent in the OECD area, with the difference in yields representing 6.8 percentage points of GDP.

While the social-security tax is paid by employers, most of its ultimate incidence is on employees.[34] Consequently the sum of the yields and rates on social-security and income taxation is a more realistic indicator of the tax burden on labour, especially as the latter tax is paid primarily on employment income. In 1999, the sum of income tax and social-security taxation in Iceland represented 43.2 per cent of the total tax yield against an average of 52.2 per cent in the OECD area. The gap of the combined yield was only 9.0 percentage points against 17.3 percentage points for social-security taxation alone. This still, however, resulted in Iceland having one of the lowest average tax rates on labour income in the OECD area: only Korea, Japan, New Zealand and Mexico taxed labour income to a lesser extent (Figure 24). However, it should be noted that this form of taxation provides a direct return to individuals in countries other than Iceland, through eventual pensions. In the case of Iceland, the major part of employees' eventual pension is paid through a mandatory private-sector contribution to capitalised pension schemes. Total employee and employer contributions to the schemes amounted to 5.3 per cent of GDP in 1999 and these cannot be regarded as a tax. The overall tax rate on labour income also depends on the tax on consumption. This is high in Iceland (see below). The *marginal* tax rate for a person at the pay level of an average production worker at 47.3 per cent in 1999 (and 42.4 per cent in 2001) was somewhat closer to the OECD average than the *average* tax rate. The highest marginal tax rate on labour income was even closer to the average, as many OECD countries cap the upper payment of social-security taxes. Nonetheless, the failure in the real value of the various thresholds and allowances has resulted in some increase in the average tax rate on labour income.

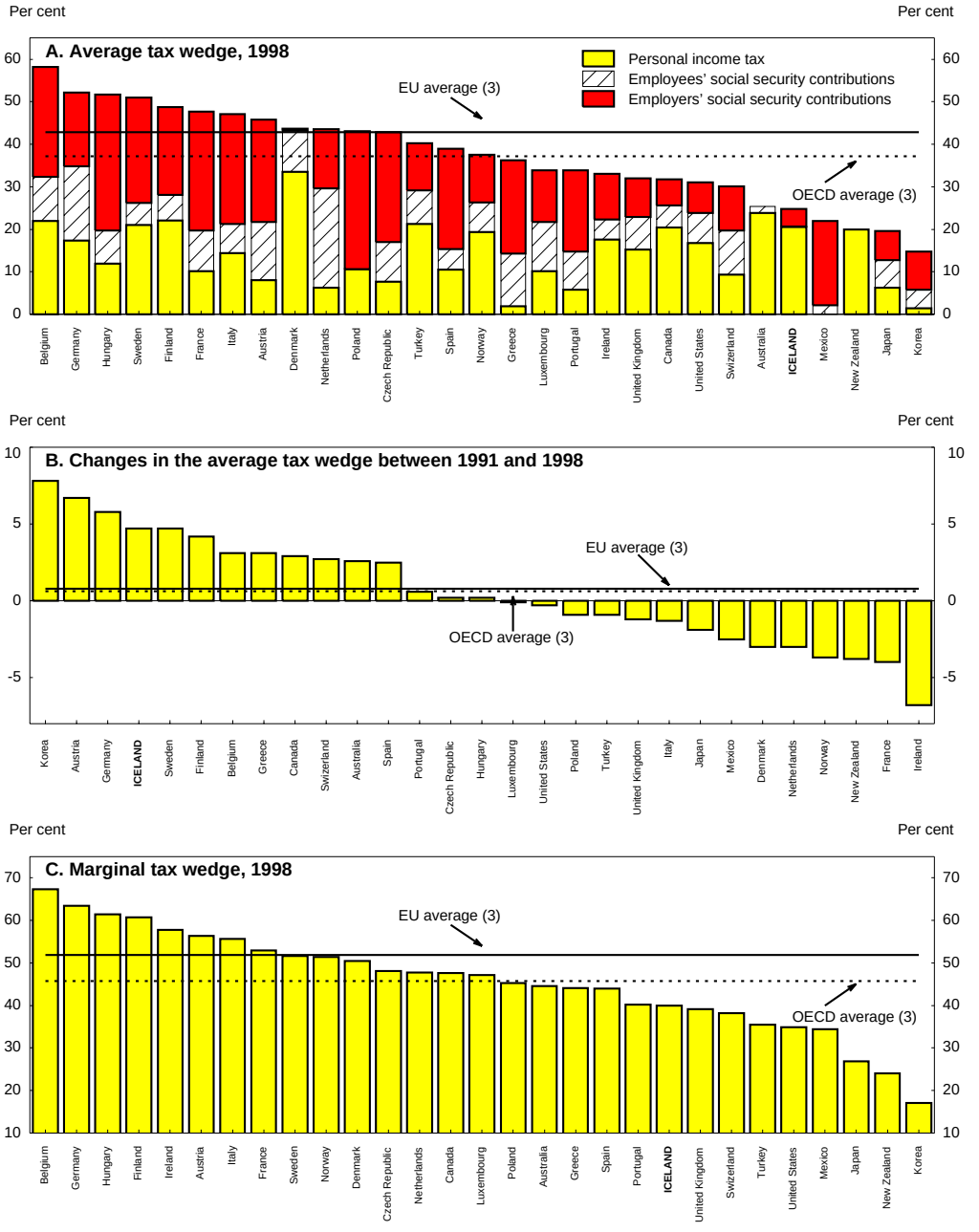
Expenditure taxation

A high share of taxation derived from consumption taxes (46 per cent — almost one and a half times the figure in the average OECD country) is the obverse side of the low share taken from taxes on various forms of income. A major reform of expenditure taxation was introduced in 1990. The sales tax and a number of commodity-specific taxes were replaced by a value-added tax. The standard rate was set at 24.5 per cent for most products and, not having changed, is now the second highest in the OECD area. A certain number of goods and services are exempted from taxation, and there is a lower rate of 14 per cent that covers foodstuffs, magazines, newspapers, books in Icelandic, heating and hotels. The principal remaining exempted items are financial services, international transportation, house rentals, postal services and publicly-provided healthcare and education services. In an attempt to diminish the extent of cash payments in the building industry, and to subsidise housing, 60 per cent of the VAT payable on the wage cost of building a new house or renovating an old house is refunded. The overall scale of exemptions and lower-rate provision would appear to be similar to those in other OECD countries having such a tax in 1998. The actual yield of VAT was 59.5 per cent of the theoretical yield using the standard rate on total consumption, against a figure of 61.8 per cent in the average OECD country.

As well as the relatively neutral value-added tax, there remain a number of taxes on specific items. As in many countries there are quantity-based excise taxes on petrol, alcohol and tobacco. The taxes on alcohol are particularly high, exceeded only in Norway; however, low-alcohol drinks with an alcohol content of less than 2¼ per cent are exempt from such taxes. Taxes on petrol were close to the average for other European countries in 1999. There are also a number of *ad valorem* taxes on items such as cars, various electrical products and building materials. These taxes varied from 15 per cent on building materials and 25 per cent on electrical goods to 40 per cent on larger cars. The purchase of these goods generates few externalities. Nonetheless, in 1999 this form of excise taxation yielded revenues of 1.4 per cent of GDP, while those on alcohol, tobacco and petrol yielded a further 3.0 per cent of GDP. Toxic waste

and plastic bags are taxed on a joint specific and *ad valorem* basis, but the yield was only 0.07 per cent of GDP. Overall, the yield of excise and specific taxes is somewhat higher than in the average OECD countries, at 4.4 per cent against 3.5 per cent (Figure 25).

Figure 24. The tax wedge on labour income(1)
As a percentage of labour costs (2)



1. For a single individual at the income level of the average production worker.
2. Gross wage plus employers' social-security contributions.
3. Unweighted average.
Source: OECD, Taxing wages,1999.

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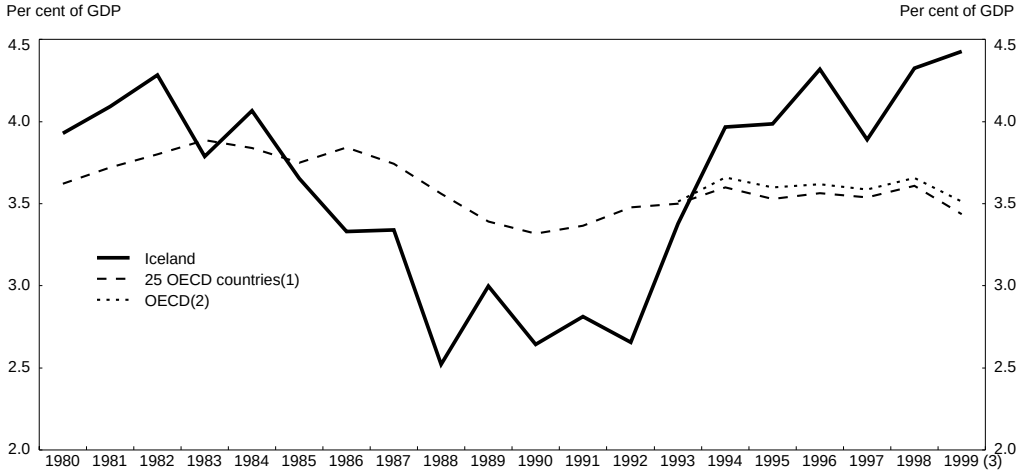
Figure 25. Excise duties and specific taxes: an international comparison
Per cent of GDP



1. The series refer to the 25 OECD countries for which continuous data are available between 1980 and 1998.
2. As from 1993, data are available for the Czech Republic, Hungary and Poland. No data are available for Slovakia and Greece.
3. Data for Australia, Belgium, Canada, Poland, Portugal and United States have been estimated in 1999.
Source: OECD, Revenue Statistics and OECD.

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There is no excise tax on diesel fuel; rather, there is a usage tax. Each diesel-powered vehicle weighing over 2 tonnes is fitted with a distance meter that is read annually by the authorities. A tax is then charged based on the distance travelled and the weight of the vehicle. The tax increases with weight, with that for vehicles over 11 tonnes being nearly 50 per cent more than the charge for a 4-tonne vehicle. However, the rate of increase of the tax with weight does not appear to match the rate at which the damage to the road surface inflicted by a vehicle rises with weight. For smaller vehicles, the usage tax was until recently based just on weight; as a result, if average mileage was low, it was not economic to purchase diesel cars weighing less than 2 tonnes. The 2001 budget changed this basis, giving owners of this type of vehicle the option of installing usage meters. In the past, diesel vehicles were primarily used for the transport of goods. A usage tax could then be thought of as a contribution to infrastructure costs. These vary with the weight per axle of a vehicle, though the Icelandic tax varies only with weight. With the change in basis of the usage taxation for cars, diesel and petrol will become competing fuels in the personal transport market. The incentives facing users in each market will be different. In order to avoid fuel-switching, which could have adverse environmental effects, an excise tax on diesel should be introduced at a level that generates the same tax on carbon as that on petrol. The usage tax should then be set at a level that varies with the axle weight of the vehicle. If congestion costs still generate substantial externalities (unlikely in Iceland), then road pricing should be considered when technically feasible. The scope for other taxes on other forms of carbon emissions is limited. It would be difficult to tax marine fuel, in the absence of an international agreement. Apart from marine uses, little other carbon is used as fuel in Iceland. Both the diesel usage tax and the special excise tax on petrol are earmarked for the construction and maintenance of roads.

Non-income taxes on capital

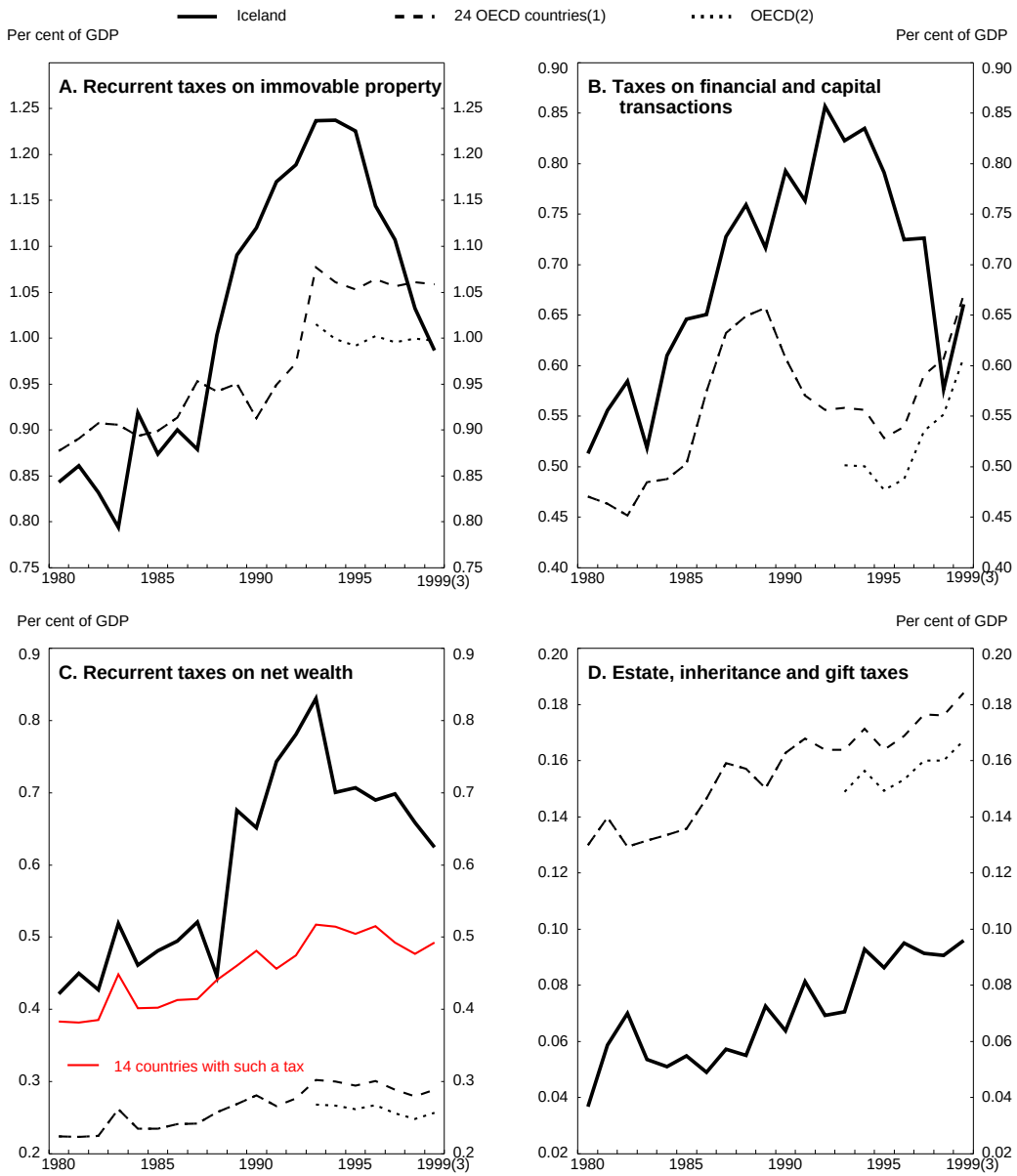
The most important form of this type of capital taxation is the municipal real estate tax. It generated revenues of almost one per cent of GDP in 1999 and, since 1987, has been a much larger source of revenue than in other OECD countries (Figure 26, Panel A). Assessments for the tax are based on the market value of the property. For residential property, the tax rate can vary within a range of 0.35 to 0.5 per cent of the value of the property, depending on the decision of the local authority. The tax is paid to the local authority where the property is situated, but the permissible range of the rate is set nationally by central government. For non-residential properties (and secondary homes) there is a uniform national tax rate of 1.5 per cent. The overall yield of this tax fell relative to GDP in the 1990s, as property prices were depressed for most of the decade. Once the recent increase in prices feeds through to assessed market values however, the yield should start to pick up once again. This form of taxation can be seen as an alternative to the taxation of imputed rent in the hands of households that own houses.[35] Indeed, property tax can be offset against actual rental income. It can, thus be seen as a substitute, albeit imperfect, for the absence of a capital income tax on the imputed rent of owner-occupiers. For businesses, though, there appears little reason to tax the value of structures. There is, however, a good justification for taxing the value of the land occupied by the structures. This land value represents a capitalised rent and can be taxed without adversely affecting incentives.

The stamp duties levied on capital transactions are the second most important additional tax on capital. The tax is levied on all transactions in bonds, mortgages, leases and bills of exchange. Transactions in equities are taxed only once, when they are first issued. The rates generally vary between 0.4 and 1.5 per cent, with an exceptionally low rate on bills of exchange.[36] For housing transactions the rate is 0.4 per cent, lower than the European average. In the mid-1990s, depressed house prices pushed down the yield of this tax relative to GDP (Figure 26, Panel B). In 1999, it started to pick up once again as the residential property market became more buoyant. Such taxes serve to raise start-up costs, discourage business refinancing and reduce market liquidity and have been accordingly losing favour elsewhere in the OECD.[37] Moreover, with the Icelandic equity market now becoming part of the Nordic Stock Exchange, there is always a risk that financial transactions will move to a lower tax environment.

In common with almost half of all OECD countries, a wealth tax is levied on net assets over a certain ceiling. This tax is paid by both individuals and companies at an initial rate of 1.2 per cent per year. For individuals, the threshold is relatively low (3 836 619 krónur in 2001 — about $45 000 per person) and the rate increases to 1.45 per cent for net assets in excess of 5 277 058 krónur or about $62 000 per person), though people over 67 are exempt from the surcharge.[38] The tax is discriminatory between different assets. Bank deposits are exempt to the extent that they do not exceed the indebtedness of an individual. Equities are included in the tax base but, when held by individuals, enter only to the extent of the par value of the shares. As a result, it is attractive to transfer such holdings to a foreign (holding) company domiciled in a low-tax country and whose shares are issued at an extremely low par value. The individual escapes wealth tax and the foreign company is not liable for any Icelandic tax. Companies are liable to pay the wealth tax on the extent to which the book value of their equity exceeds the par value of their shares. No wealth tax is paid on the component of the market value of the company that exceeds its net worth (par value of shares plus equity reserves), and this component is substantial for most Icelandic companies. Moreover, the corporate part of the tax cannot be levied if the company holding the assets is resident abroad. Over the 1990s, companies' payments of wealth tax were equivalent to one-third of their corporate tax bill, making the tax especially burdensome for unprofitable firms. As to houses their value is re-assessed each year, as for property taxes. Government bonds were exempt from the tax until 1999. In 2000, a transition measure limited the extent to which government bonds were excluded from the base. But as from 2001, they are finally fully included. The yield of the net wealth tax has not kept up with the growth of GDP in the second half of the 1990s (Figure 26, Panel C), as house prices were depressed until

1999 and soaring equity prices do not increase the assessed tax base. The yield, though, remains greater than that in other countries with such a tax and considerably higher than the OECD average.

Figure 26. Taxation of assets
Per cent of GDP



1. The series refer to the 24 OECD countries for which continuous data are available between 1980 and 1998.
2. As from 1993, data are available for the Czech Republic, Hungary and Poland. No data are available for Slovakia, Greece and Mexico.
3. Data for Australia, Belgium, Canada, Poland, Portugal and United States have been estimated in 1999.
Source: OECD, Revenue Statistics and OECD.

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For a number of reasons, inheritance taxes are a relatively small source of revenue in Iceland (Figure 26, Panel D). *First*, the tax rate on legacies to spouses and to children of the deceased is low, the former being exempt and the rate for the latter being between 5 and 10 per cent.[39] *Second*, the tax rate depends not on the overall size of the estate but on the size of each individual bequest. *Finally*, equities and bonds are valued at their par and not their market values. This provision may have reflected the absence of a stock market when the law was last changed in 1984. Now, with a significant proportion of wealth held in equities, it represents a significant reduction in the tax burden. For people who intend to leave bequests, inheritance tax can be seen as a further tax on capital. In any case, there is a strong incentive in Iceland's case for people to sell all their assets prior to death and use the proceeds to buy shares or bonds with low par values relative to market value.

Local government taxation

Local authorities have the freedom to raise both income and real estate taxes within very tight limits specified by central government. The use of local income taxes has meant that, aside from governments with a federal structure, Icelandic local authorities receive a substantially higher share of total tax revenues than in the rest of the OECD area — they account for 23 per cent of total tax revenues against an average of close to 14 per cent in non-federal OECD countries. Iceland's share is exceeded only in Denmark, Sweden, Belgium and Japan. This apparently high level of financial autonomy is, however, strictly circumscribed.

The principal source of revenue for local authorities is the municipal income tax, but the rate for this tax can vary only within limits that are set by Parliament. In 2000, the range was 11.24 to 12.04 per cent. While there is some variation, the average rate, at 11.96 per cent in 2000, was quite close to the upper limit. The tax is included in the overall standard rate of income tax that was 38.4 per cent in 2000 and is collected centrally and then transferred to the appropriate local authority. The cost of the basic tax credit and the deduction allowed for the purchase of equities is deducted solely from the central government tax receipts, while local governments share in the cost of pension contribution deductions. Thus, the local authorities' share of total personal income tax, at almost 54 per cent in 1998, was higher than the ratio of their tax rate to the total tax rate, which was only 30 per cent in the same year.

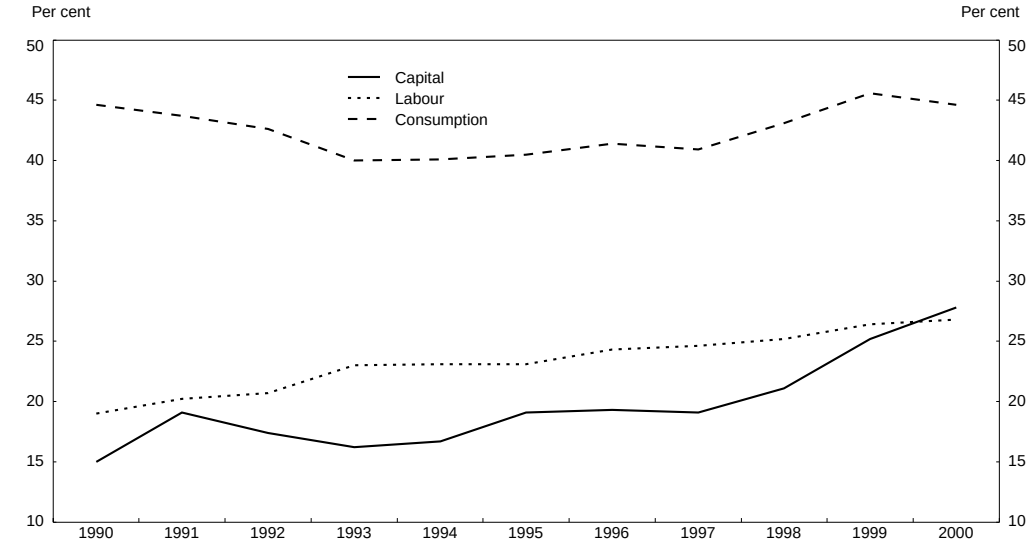
The share of real estate taxation in total municipal revenues has been falling over time and is also constrained by the central government (see above). It now accounts for only 13 per cent of total revenues against 16 per cent in 1990. The main reason for this has been the progressive transfer of competencies and income tax revenue from central to local government. In 1997, when primary education became a local responsibility, the municipal income tax rate was raised 2¾ percentage points. In 2001, the maximum local authority tax rate is being raised, in two stages, by 0.99 percentage point, partially compensated by a 0.66 percentage point drop in the central government rate. This change will take the top municipal rate to 13.03 per cent and the average standard marginal tax rate to 39 per cent in 2002, if all authorities were to raise tax rates by the maximum permissible extent.

Overall effective tax rates

The structure of taxation in Iceland, therefore, remains weighted towards consumption, but in the past decade the effective tax rate on capital has been rising markedly from 15 per cent in 1990 to almost 28 per cent in 2000 (Figure 27). The effective tax rate on consumption is estimated to have averaged 42 per cent during the past decade.[40] It rose in the period 1997-99, reflecting the rapid recovery in the demand for consumer durable goods that carry high rates of specific duties. Even so, it only returned to its level when the value-added tax was first introduced in 1990. The effective tax rate for labour has been moving steadily

upwards at a fairly constant rate. However, the increase in the effective tax rate on capital is estimated to have been more significant than the increase in the effective rate on labour. Some part of this may relate to a mis-measurement of the tax base for capital income (notably profits of the self-employed are included in labour taxes, while some of the yield of the income tax attributed to employment income came from dividends, prior to the introduction of the capital income tax). Nonetheless, despite the low taxation of capital income in the hands of individuals, the weight of other taxes on capital is such that the effective tax rate on capital income is much higher than suggested by the capital income tax.

Figure 27. The effective tax rate on consumption, labour and capital



Source: OECD.

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Scope for action

The objective of previous tax reforms in Iceland has been three-fold: *i)* to simplify; *ii)* to increase savings, and *iii)* to reduce discrimination between different types of economic activity. The second objective has been pursued through a series of changes designed to encourage saving through pension plans. A recent government report advocates further expansion of such retirement saving programmes, and increasing national saving also remains a government priority, given that the current-account deficit has now reached 9 per cent of GDP. At the same, the introduction of the capital income tax in 1997, as well as being at a low rate, removed discrimination between most types of income,[41] while further changes introduced in the 2001 budget have ensured that capital gains are taxed more completely.[42]

The exact extent of the scope for further action in reforming the current tax system depends on whether it is expected to provide sufficient revenue for the future spending needs of the government. As noted above and in Chapter II, its medium- and longer-term fiscal position is good, provided that recent apparently structural gains in tax revenue are maintained when the economy slows. The government should become a net creditor by 2004, while still running a structural budget balance of around 2 per cent of potential GDP. There is a risk, though, that the current macroeconomic disequilibrium will be resolved

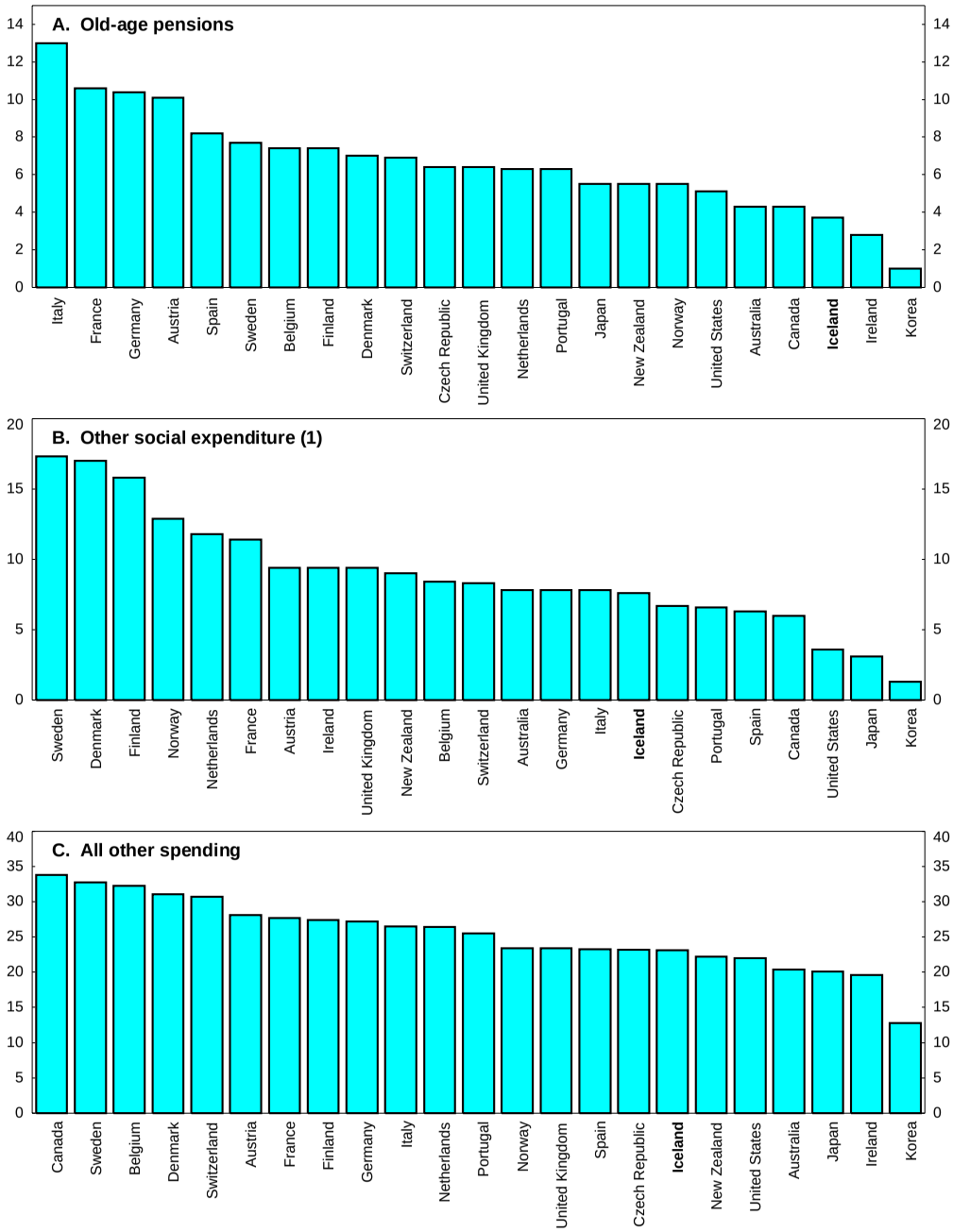
through a fall in domestic activity and incomes. In this case, it is not clear how robust the estimates of the structural budget balance would prove to be, and, in any case, a temporary downward adjustment in tax revenues cannot be ruled out.

Although there are some risks to the maintenance of a budget surplus in the medium term, public finances are well placed to meet the longer-term challenge of ageing, given the emphasis on private provision of retirement income. Already the government spends little on age-related pensions; indeed only two of 22 other OECD countries spent less in 1997 (Figure 28). Moreover, other forms of social-insurance spending were also considerably lower than in the rest of the OECD area at that point. Over time, the emphasis on private funding should further reduce the average cost of social security pension payments, though this may be offset by growing numbers of pensioners. Payments of pension for public sector employees do pose a problem, but the government has recognised the size of the unfunded liability in this area and has started to take steps to reduce it. Tax receipts should also be boosted as the private sector pensions increase rapidly. The absence of long-term pressure on the surplus is supported by a generational accounting approach to long-run fiscal policy. Such calculations suggest that with current tax rates, future generations will experience lower tax rates than those levied on present generations (see Chapter II).

At the moment, though, the macroeconomic situation calls for the maintenance of a structural budget surplus, in order to ensure a marked slowing in the economy. Nonetheless, there is scope for a revenue-neutral tax reform in the short-term that could be achieved through the introduction of new taxes and the reduction of existing taxes. It should be possible to introduce resource taxes, as is pointed out in Chapter IV. The scope for introducing such taxes follows from the fact that a large part of national wealth represents abundant stocks of fish and renewable sources of electricity that are often to be found in the public domain.[43] A resource rent could be drawn from each of these activities without threatening their competitive position or disturbing incentives in the economy. In the case of fishing, the size of the resource is difficult to estimate, (though under certain assumptions it could be as much as one per cent of GDP, see Chapter IV).[44] There is, however, a problem of how to extract these rents. The existing quotas were granted free of charge to the trawler owners at that time. Since then, the quotas have been freely traded. Taxation of the capital values of these fishing quotas has been suggested. Normally, a resource tax suffers from the drawback that the government is unlikely to be able to determine the exact extent of the rent and, thus, may set the tax rates at levels that disturb incentives to participate in the industry. However, the existence of a market for the permanent resale of the original quota rights reduces this risk in the case of the fisheries. If their price fell to zero, the tax would be too high. An alternative to a tax on the capital values of quotas would be to phase out the current ownership of quotas and for the government to eventually auction them. In many ways, this approach is to be preferred, as it leaves the market to determine the amount of the rent. As to electricity, the extent to which rents are available is less certain, but, given that less than 10 per cent of the electricity that is viable at current prices capacity has actually been constructed, the existence of intra-marginal rents is highly probable.

Additional funds for a revenue-neutral tax reform could be found by reductions in interest relief for housing, the tax break for the purchase of equities and in the hidden taxes on food. At present the interest-relief favours those people with low incomes that are purchasing rather than renting at a cost of 4.2 billion krónur in 2000. A further tax relief to housing is given through the rebate of 60 per cent of the normal value-added tax on the wage cost of new housing construction.[45] Secretariat estimates put the cost of this second subsidy at 1.5 billion krónur.[46] In total, these two tax expenditures cost an amount equivalent to 0.9 per cent of GDP. The allowance for the purchase of shares is an anomaly that discriminates in favour of one asset. It has long ago met its objective of helping to establish a stock market and should now be abolished. As to agriculture, subsidy programmes are still large, and total public spending on agriculture amounts to 2 per cent of GDP, with the hidden taxes on agriculture doubling the cost of the average farm product to the consumer (see Chapter IV).

Figure 28. Government spending by purpose: Iceland and other countries
Per cent of GDP, 1997



1. Social transfers and services such as unemployment and housing benefits, family services, etc.
Source: OECD Social expenditure database and OECD, Education at a Glance.

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The priority for tax reform, whether undertaken through revenue-neutral changes or a medium-term reduction in taxation, should continue to be changes that will probably reduce discrimination between different forms of activity and potentially increase saving. There are still some examples of discrimination in the tax system that need to be removed. In a few cases, international competition may force change (for instance, transfer taxes on financial assets). Moreover, the objective of increasing savings fits poorly with the large number of taxes on capital that would normally be paid out of income, in addition to the standard capital income tax. These additional taxes (corporation tax, wealth tax, inheritance tax and transfer taxes) yield six times the revenue generated by that tax. While empirical international evidence suggests that taxation has only limited effects on the overall level of saving, reform of the taxation of capital could lower discrimination between different forms of economic activity and increase welfare, even if enhancing the returns to saving prove insufficient to boost its level.

In the area of corporate taxation, the first priority should be to end the discrimination between the taxation of equity profits (both dividends and retained earnings) and interest payments. Such a measure (especially if coupled with the payment of a withholding tax, equal to the capital income tax, on payments of interest to foreigners) ought also help to reduce the growth of borrowing by Icelandic companies. This could be achieved by progressively reducing the domestic corporate tax rate towards that on capital income, since it would be inappropriate to reverse the move to a classical corporate tax system, which was only introduced recently. Such a reduction would have to be accompanied by strict rules concerning the use of thinly-capitalised closely-held companies. If not, there would be a danger that employment income would be transformed into capital income. Such a move might also help attract the foreign direct investment that will be necessary to exploit untapped electricity resources, for example.

A further element of discrimination is introduced by the net wealth tax, transfer taxes and inheritance taxes. The accumulation of net wealth through pension schemes is not taxed, nor are bank deposits. Wealth held as equities is taxed but to a varying extent, depending on the form in which it is held and the extent to which the market value of company assets is reflected in their balance sheet. The yield of the wealth tax is close to that of the capital income tax. It offsets the benefits of the low capital income tax and should be a target for abolition. International competition is likely to push down transfer taxes on financial instruments over time. Their elimination would help create a more liquid capital market and would cost substantially less than the overall yield of 4 billion krónur from stamp duties, if the tax on housing transactions was retained. Finally, the merging of all inheritance taxes into one low rate and the abolition of various anomalies in valuation methods would end discrimination both between different groups of relatives and different assets. With most inheritances are either exempt or taxed at only 5 per cent, the incentives for wealthy individuals to take avoidance actions would be minimised.

There is also some case for a reform of expenditure taxation to remove the remaining unjustified discrimination between different products. The reliance on value-added taxation is a good feature of the current system, though there are a number of items that are taxed only at a low rate. Some of the extra excise taxes may be justified by externalities, such as health effects and pollution (for alcohol, tobacco and petrol). The current treatment of petrol and diesel is anomalous. The former is subject to an excise, while the latter is not; rather the usage of diesel vehicles is taxed. The taxation burden on the two fuels should be unified in a way that equalises the implied tax on carbon emissions, while retaining part of the usage tax to compensate for infrastructure costs. The other specific taxes on building materials, electrical equipment and cars do not correspond to any externality and should be abolished and the revenue replaced by a somewhat higher VAT rate. The lower VAT rate on food could also be abandoned, if a reduction in agricultural protection were introduced concurrently.

While past reforms have concentrated on the tax on employment and pension income, this tax would also benefit from some reform. The basic tax allowance (that ensures no low-income households pay tax).has not kept pace with the growth in average earning since 1995, nor has the threshold for the

payment of surtax. Over the medium term, the government should guard against a fall in the value of these allowances that produces an increase in the average tax rate, while at the same time aiming to reduce marginal tax rates.

Conclusion

The Icelandic tax system has evolved considerably in recent years in a favourable, simplifying direction. Special exemptions from the corporate tax base have been eliminated, allowing a reduction in the corporate tax rate. A high tax rate on consumption has been maintained, while reducing the extent of differential taxation through the introduction of a value-added tax. At the same time, the double taxation of saving has been markedly reduced by the introduction of a separate low rate on capital income. As to employment income, individuals now face only two statutory tax rates. To be sure the economy faces a number of imbalances, but these do not appear to be caused by the structure of taxation. Overall, judged against other OECD countries, the tax system appears to be in good shape. But some further changes could be envisaged (Table 20). Some possible tax bases have been ignored in the resource area and the introduction of taxes here would help increase the scope for a revenue-neutral tax reform. Beyond that, reduction in taxation may have to wait for an economy that is more in balance. Priority areas would include reducing the extent of the taxation on capital, especially through reductions in wealth taxation, transfer taxes, inheritance taxation and corporate taxation, thereby bringing the system closer to one based on consumption. Reform of the existing taxation of consumption and employment income should not be neglected, especially the former where a number of specific excises exist that cannot be justified by externalities. All of these changes would help in continuing the objective of past reforms, namely building a simple and neutral tax system.

Table 20. **Summary of new recommendations for tax reform**

Taxation of employment income

- Reduce allowance for housing loan interest payments with a general, means-tested housing benefit.
- Eliminate the tax break for the purchase of equities.
- Index the basic tax credit to average earnings.
- Consider ending the temporary high-income surtax or raising threshold for its payment.
- Standardise treatment of child benefits across age groups.

Taxation of capital and capital income

- Lower the discrimination between the treatment of interest and dividends for corporate taxation by reducing corporate tax rates or giving domestic shareholders a credit for corporate tax paid.
- Consider the introduction of a withholding tax on all foreign interest payments.
- Eliminate transfer taxes on financial instruments.
- Merge all inheritance taxes into one low rate, with all assets valued at market prices.
- Abolish the net wealth tax.
- Change valuation base for equities to market prices for inheritance tax and wealth tax, if it is not abolished.
- Exempt structures from the tax base of property taxation for companies.

Taxation of goods and services

- End lower rate of VAT on food in the context of a liberalised agricultural policy.
- Replace the tax on usage of diesel vehicles with an excise tax and a reduced usage tax based on axle weight.
- Replace excise taxes, except for tobacco, alcohol and petrol, with a revenue-neutral increase in VAT.

Introduce resource taxation

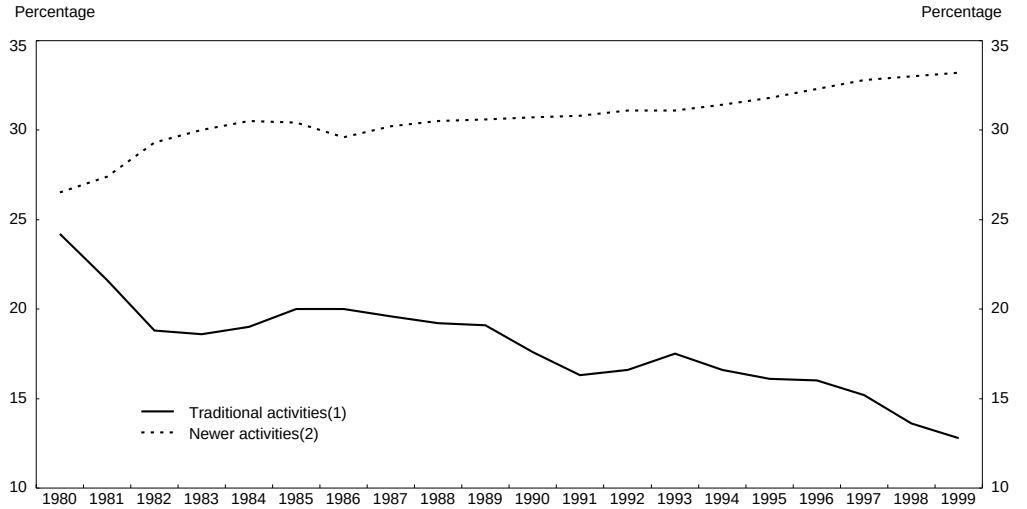
- Introduce a tax on the capital value of fishing quotas or withdraw existing rights and auction new rights.
- Introduce a resource tax on the rent created by ownership of water and sub-surface rights used for generating electricity.

Source: OECD.

IV. STRUCTURAL SURVEILLANCE

The Icelandic economy has been traditionally based on three activities: fishing, fish processing and agriculture. These sectors were still significant in 1980, accounting for 22 per cent of total employment and 22 per cent of output (Figure 29). Since then, there has been considerable change in the structure of production: while the share of the two traditional primary sectors has halved, that of a number of new activities has risen significantly. Energy-intensive industries have grown in scale, and the communications industry has developed, with, for example, consumers taking to mobile phones to a fuller extent than in any other country. Greater use is being made of the resource base of the country, both in terms of geothermal power, hydro-electricity and the relatively homogenous nature of its genetic pool (in the form of biotechnology services; see below). At the same time financial markets have been created, though further effort is still required to achieve the normal array of such markets. A start has been made in reducing the weight of the public sector in the economy. All this points to the transformation of the Icelandic economy, especially since around 1995, and, indeed, the signs of structural change are encouraging, as detailed below. Nonetheless, labour productivity has not accelerated — in fact in 2000 it increased by less than its average growth in the 1990s. This indicates a need for further regulatory reform, especially where the competitive pressure on a sector is alleviated by the existence of a rent attributed by the government. The rest of this chapter looks first at those areas where output has been expanding rapidly before considering how declining sectors might be made more efficient.

Figure 29. The changing structure of output: traditional and newer activities
Share of constant price GDP



1. Traditional activities: agriculture and fisheries, including fish processing.
2. Newer activities: financial services, telecommunication services, energy-intensive industries.
Source: National Economic Institute.

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New activities

The transformation of the Icelandic economy over the past five years has been helped by three elements of government policy. The first and perhaps the key factor was the creation of a fully functioning financial market that was able to allocate capital according to the returns offered in different sectors — thereby replacing a largely state-run capital market. An organised stock market emerged during the 1990s with the number of quoted companies rising to 75 and market capitalisation jumping to 57 per cent of GDP by the end of 2000. The state-owned banks are being privatised and the government-run investment credit funds largely disbanded. At the same time, the government has adopted a more aggressive competition policy, notably in the telecommunications market, where deregulation and falling prices offered particular advantages to a geographically isolated country. Finally, the government has attracted foreign investment in order to widen the possibilities for exploiting available sources of energy while probably reducing global emissions of carbon dioxide from levels that would otherwise have been reached.

Financial markets

As has been noted in previous *Surveys*, Iceland's financial markets have undergone a complete overhaul during the 1990s, creating a structure similar to that found in other OECD countries. The objective of successive governments has been to markedly reduce the role of the state in finance and increase the role of organised markets. The landmark events were the first quotation of equity prices in 1990, the introduction of a foreign-exchange market in 1993 and the establishment of an inter-bank market for short-term deposits between financial institutions in 1998. Parallel with these developments, the Central Bank focussed on reducing its role as a market maker. It had been the principal actor in most markets, dominating trading in foreign currency and in government and government-guaranteed bonds and notes. In a series of moves, most of these activities have been transferred to the private sector, though the Bank remained a market marker in Treasury bills until April 2001, while actively seeking a way of transferring this activity to the private sector as well. Since 1998, the Bank has aided these changes by introducing a borrowing facility for financial institutions, which allows them to smooth out day-to-day fluctuations in liquidity, thereby ensuring that short-term interest rates are driven primarily by monetary-policy considerations. At the same time the commercial and savings banks and other credit institutions subject to reserve requirements were given access to weekly repurchase arrangements with the Central Bank, while those securities houses that are market makers in government and government-guaranteed bonds were also given such access.

Financial-market modernisation has continued in the past year with an emphasis on improving the functioning of the stock market. Progress has been made in the replacement of physical share certificates by book-entries held on a central computer system. The first company was so registered following an IPO in June 2000. The Depository aims to complete the registration of all shares in publicly traded companies by end-2001. In June 2000, the Icelandic Stock Exchange (a limited company since 1999) joined NOREX, a collaborative market linking the Danish, Norwegian and Swedish stock exchanges. The market introduced new trading technology and the link became effective in October. The exchanges of the three Baltic countries have signed a declaration of intent to participate in the market by end-2001. In addition to these developments, the financial supervisor is finalising a framework for securities trading. New regulations will restrict the flow of information within securities houses and control trading on behalf of the company and its executives, with a view to minimising the risk of insider trading.

Progress has been made in complying with the conditions for avoiding risk in payments systems approved by the Bank for International Settlements (1990) in the so-called Lamfalussy Report. In 1999, legislation was passed to clarify the legal status of the netting transactions that are at the core of the present payment-clearing house. The system is quick — transactions are booked to bank accounts on the same day,

though final booking does not occur until the end of the next day and settlement on the following morning. It is clear that this procedure is vulnerable to default by a participant, since a given transaction cannot be easily unwound without causing system-wide ramifications. In order to deal with this problem, the Central Bank is devising a real-time gross settlement system for large, primarily securities market-related transactions. The present settlement system is jointly owned by both the commercial and savings banks and the Central Bank. It is closed to outside participants. In order to ensure that it is operated at arms-length from its owners, its ownership is being transferred to a separate limited company that will allow access to all financial operators on cost-related terms. When this occurs, the Icelandic payments system will meet all the Lamfalussy conditions. However, these conditions have now been superseded by a more comprehensive set of conditions enunciated recently by the BIS following the recommendations of the so-called Trundle Report (1999).

Until recently, the government owned nearly all the principal financial institutions, but this situation has been changing, and there has been considerable progress in this area since the last *Survey*. Already in 1998, the investment credit funds were reorganised, creating an investment bank that was fully privatised in the second half of 1999. In June 2000, it merged with the only private-sector bank.[47] The two state-owned banks were incorporated, and new equity was issued. At the end of 1999, a second tranche of shares was sold and, in contrast to the first, the offering was not to raise capital for the banks but to raise funds for the government.[48] The government now holds around 70 per cent of these two banks. In October 2000, it requested that the two banks ask for a ruling from the Competition Authority on a possible merger. However, in December, the Authority ruled against the merger, stating that it would damage competition. The merged entity would have held 53 per cent of all bank deposits. The government subsequently announced that it would privatise the companies separately and that legislation to this effect would be introduced in the Spring of 2001. The medium-term efficiency gains from the privatisation should be substantial. The two government-owned commercial banks have long had higher cost ratios (operating expenses as a ratio of net operating income) than their privately owned rival, and that gap widened sharply in 2000.

The government is now addressing the issue of the diffuse ownership of savings banks that the last *Survey* identified as an issue that needed to be clarified. Such banks accounted for 30 per cent of total deposits at end-1999. These institutions are generally small, high cost and locally oriented institutions, and some are under-capitalised. The precise ownership of the banks was not clear, as had been the case of the savings banks in Denmark or the Trustee Savings Banks in the United Kingdom. The government will introduce legislation that will make it possible for savings bank to convert to limited company status. In recognition of their currently indeterminate ownership, the original guarantee-depositors in each bank will receive on average 15 per cent of the equity in each bank. The remainder will be placed in a foundation that will support charitable causes in the bank's operating area. At present, the local authorities in the bank's operating area have the power to nominate two of the five board members but in the future the original guarantee-depositors will nominate directors. It is likely that this change in status will make mergers and rationalisation of the system easier, as ownership will be more clearly separated from management.

Indeed, the savings banks have not waited for this change in legislation to start the restructuring process. The status of the investment bank that was owned by most of the savings banks has been changed to a public limited-liability company. The savings banks decided to increase the share capital of the investment bank (Kaupthing) by just under 23 per cent. They then offered 44 per cent of this new capital to the public through an IPO on the Icelandic Stock Exchange in October 2000.[49] Since then Kaupthing has acquired further assets in the fund management area. By the beginning of 2001 it had a market capitalisation of 15 billion krónur ($180 million), making it the nation's fourth largest bank.

The reorganisation of the banking sector called for the introduction of new investor protection legislation. When the banking system was largely state-owned, the government guaranteed the bulk of its deposits. With the state banks partially privatised, a new uniform framework was required for all banks. In January 2000, a new Act came into effect that guarantees a minimum level of protection to the depositors of commercial and saving banks and protection against the failure of companies engaged in securities trading. A new institution was created: the Depositors' and Investors' Guarantee Fund, with two independent departments for deposits and securities trading. All banks and security trading funds have to join the Fund.[50] The government appoints the Chairman of its board.[51] Banks are required to make an annual contribution of 0.15 per cent of the average balance of their deposits in the previous year, until the total assets of the deposit department of the Fund reach 1 per cent of total bank deposits. Until this point is reached, each bank is liable to pay the shortfall from the 1 per cent target on demand, provided that this payment does not exceed one-tenth of its capital. In exchange for this premium, if the Financial Supervisory Authority determines that a bank is unable to repay its deposits, then the Guarantee Fund will stand in place of the bank up to a ceiling of 1.7 million krónur (about $20 000) per claimant. Beyond that amount, payment will be in proportion to the remaining assets of the Fund, once all contingent payments have been made to the Fund. If its assets are insufficient to pay the first tranche of guarantees, it has authority to borrow in financial markets. The Fund can also lend to a financial institution in order to strengthen its capital position, but this loan has to be made from funds specially borrowed for that purpose. The Fund, itself, is exempt from bankruptcy legislation. Similar provisions apply to securities and cash deposited with securities companies.

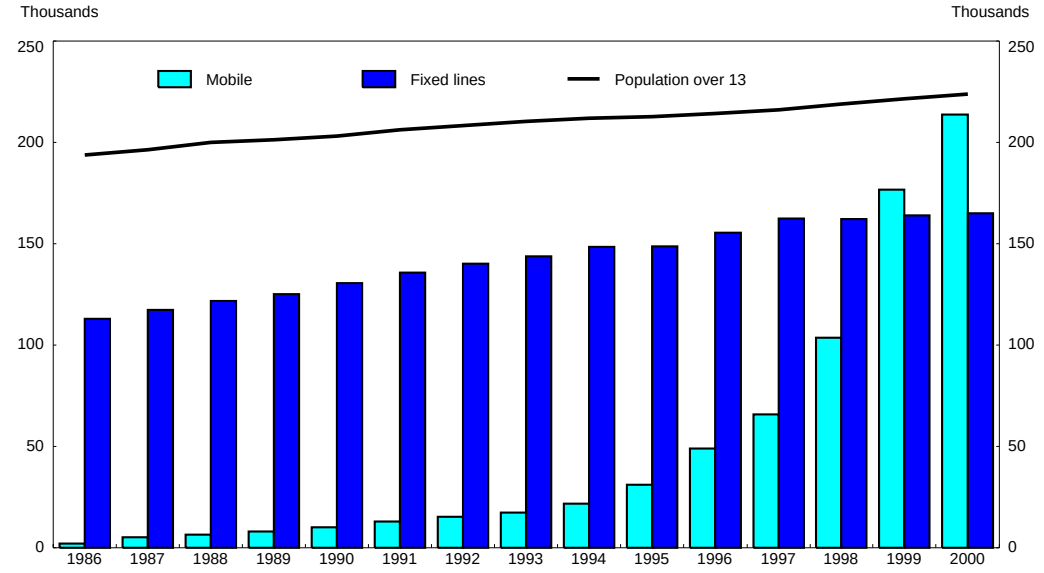
Telecommunication services

The telecommunications sector in Iceland has been growing rapidly, as in other OECD countries. While precise output numbers are not available, real output in the transport and communication industries has surged from 9.5 per cent of real GDP in 1995 to 11.5 per cent in 1999, while the gross revenues of the public telephone operator have risen from 1.9 to 2.2 per cent of GDP in the same period. More recently, value added by the public operator rose 18 per cent in the first half of 2000 from a year earlier. Of late, the increase in the number of terrestrial subscriber lines has slackened, falling back to not much more than that of the population, but allowing for the growing share of ISDN lines total access channels increased 6.2 per cent annually between 1995 and 1999.

The major growth in telecommunications has come not from terrestrial services but from mobile operations. Mobiles have been offered by the public telephone system since 1985. The number of subscribers did not start to take off until the introduction by the then public monopolist (Landssíminn) of the GSM 900 service in 1995. The market was opened to competition in 1998 with a new operator quickly adding capacity. By September 2000, the number of mobile subscriptions outstripped the number of fixed lines (Figure 30). Overall, Iceland has the highest ratio of mobile phones to population in the world. The increase in penetration has been helped by a low level of prices. Within the OECD area, nominal consumer prices for the usage of mobile phones were only lower in Finland and were 36 per cent below the OECD average in August 2000 and 73 per cent below prices in Japan. Moreover, given the high price of consumer goods and services in Iceland, the relative price of mobile usage was lower in Iceland than in any other OECD country and 60 per cent below the OECD average.[52]

Although entry into the telecommunications market had been liberalised, it was clear already during 1998 that the existing framework of regulation was inadequate to limit Landssíminn's monopoly power. The Competition Authority had dealt with almost 20 cases filed against it. In 1999, the Authority issued a number of rulings dealing with arm's-length trading between its various operations. The last *Survey* concluded that these case rulings did not add up to a comprehensive competition policy for the sector.

Figure 30. Mobile phone penetration



Source: Statistics Iceland.

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In order to stimulate competition, the parliament recently passed two new laws governing the telecommunications sector, thereby bringing Iceland into line with most OECD countries in terms of regulatory structures and safeguards imposed on incumbent operators. They are designed to promote competition and ensure that Icelandic law complies with the country's obligation, as a member of the European Economic Area, to implement European Union directives. The overriding objective of the first of these laws (The Telecommunications Act of 28 December 1999) was to prevent anti-competitive behaviour. In particular, it outlaws discriminatory tariffs and other measures that distort competition. In order to achieve this, the operational licences impose the following duties: to provide open access to leased lines within a network; to allow non-standard network termination points;[53] and to set charges for inter-connection between networks based on costs, taking into account a reasonable rate of return on investment. In particular, an operator with "significant market power"[54] is obliged to offer reasonable requests for network termination points. The Act specifies that the different operators should first attempt to negotiate tariffs and terms. If no agreement is reached, then the regulator may intervene. Moreover, the number of licences to be issued can be limited only to the extent required to ensure the efficient use of radio frequencies. If the licence involves the allocation of a frequency band, then the Government can decide to allocate by tender.

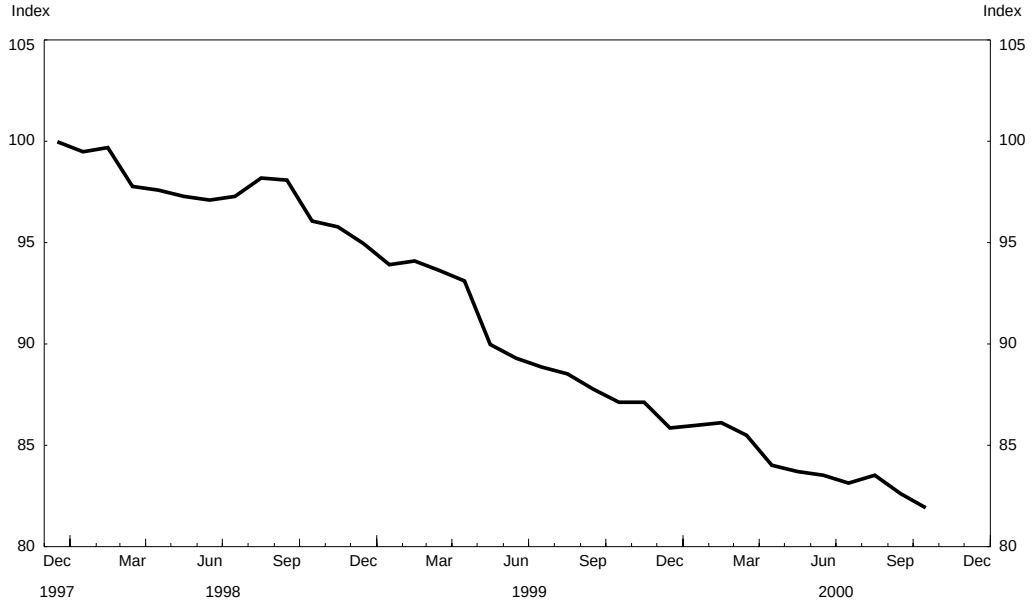
The Act imposes several public-service obligations on licensees. *First*, they have to provide an adequate universal service at reasonable rates; notably they must provide telephone services for the disabled or users with special social needs. In addition, a data transfer service, at a speed of 128 000 bits per second (corresponding to an ISDN service), must be provided by the public voice telephony network. If these obligations are unprofitable, the licensee may request reasonable remuneration for the activity. The cost of this charge will then be passed on to all operators through a levy on their telecommunications turnover. *Second*, they are obliged to provide number portability. Thus, customers can retain the same number when moving their business to another operator, subject to reasonable fee for the service. *Third*, there is an obligation to provide information to third parties concerning subscribers' names and telephone

numbers. This data must be provided in an agreed format on terms that are fair and cost-oriented but can be used only for publishing telephone directories or providing directory services. *Finally*, the Act specifies that distance-related charges cannot be applied for any call within Iceland made through the public voice telephony network.

The second act, which came into effect on 1 January 2000, gives the regulatory powers defined in the Telecom Act to the Post and Telecom Administration (PTA), an independent government agency reporting to the Minister of Communications. It has the responsibility of issuing licences according to the terms of the Telecommunications Act and ensuring compliance with all the provisions of the licences that are granted. Decisions of the PTA can be appealed to the Ruling Committee for Telecommunications and Postal Affairs whose Chairman and Vice Chairman must be qualified to serve as Supreme Court judges. Its decisions can be appealed to a court of law. The PTA is financed by a one-quarter of 1 per cent levy on the telecommunications revenue of all operators.

The new regulator has acted quickly to increase the number of operators. Within six months it had issued four new mobile licences. In total, there are now seven mobile licensees mostly with service areas only in the capital region. There are now three completed digital networks and a fourth is under construction. The older analogue network is still in use, while there are two emergency networks being built. The PTA has also issued four voice telephony licences and two international licences. But the initial limited opening of the market in 1998 had an effect on prices. In the 2 years between July 1998 and July 2000, the relative price of telecom services bought by private consumers fell by close to 15 per cent (Figure 31). Bigger drops were seen in international prices when two new operators entered the market. Before the arrival of these new entrants, the only alternative — but lower quality — international service had come from a telephony-through-internet company (Skima), which subsequently became a subsidiary of the public operator.

Figure 31. Relative price of telephone services
Index, December 1997 = 100



Source: Statistics Iceland.

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The regulator has also acted to reduce the monopoly power of the public operator in the residential market. As from March 2000, it mandated the use of carrier selection and pre-selection in the residential market for international calls. These facilities allow the selection of a carrier for each call or the automatic routing of all calls to a selected carrier. As from October 2000, the services provided by Landssíminn have had to be charged separately. This offers the possibility of other network operators obtaining access to Landssíminn's local loop. This should allow the new operators, Íslandssím and Lina.net (a subsidiary of the municipally owned Reykjavik power company), to make maximum use of their joint fibre-optic network. This project, which cost 1.2 billion krónur to build, provides 300 kilometres of fibre-optic cable in the capital city area. Both companies intend to offer full telecommunications services over this network. While Lina.net is investing to extend the network to individual subscribers, Íslandsímmi has, so far, specialised in the business market.

As well as leading the world in mobile phone penetration (along with Finland), Iceland also has a high Internet usage. According to a survey carried out for the government in September 2000, about 74 per cent of the population aged 16 to 75 had access to a computer at home and, of these, 87 per cent of these had access to the Internet. Overall, including those who had access only at work, over 77 per cent of the adult population had access to the Internet. As yet, however, the use of Internet for commercial purposes is limited. The most common uses, revealed in the survey, were for communicating (through email or chat programmes) and obtaining information. About 17 per cent of those who have access to Internet use it to purchase goods and very few people used it for regular purchases of goods and services. However, the most important commercial use of the Internet was for banking, outweighing shopping by a ratio of ten to one. The cost-saving opportunities offered by using the Internet may be one of the reasons for the links that have emerged between the new fibre-optic operators and the major banks in Iceland.[55]

The government is taking initiatives to promote the use of the Internet. In October 1996, it set out three priority objectives for an information society:

- expanding the use of computers and the Internet in education;
- ensuring adequate transmission capacity and security in the telecoms system;
- adherence to a uniform tendering procedure in software purchases.

In March 2000, it added two further priorities:

- development of electronic commerce;
- development of electronic government.

In the first of the new priority areas, the government aims to legalise electronic signatures and has introduced legislation to that effect. Legislation may also be introduced to provide that electronic agreements have undiminished legal effect and a law to exonerate Internet communication providers from responsibility for transactions taking place on their networks. Legislation may also be introduced to allow co-operation with foreign government agencies regarding Internet monitoring.

The Internet is increasingly used to interact with the government. Most government agencies accept requests for information through e-mail and provide information through websites and answers to e-mail. Filing of income tax returns for companies over the Internet started in 1997 and for individuals in 1999 with 73 000 people filing returns in 2000, 30 per cent of the total. Filing of VAT returns will start on 1 June 2001. Of companies and legal bodies, 85 per cent filed their returns over the Internet. Last year 80 per cent of customs clearance documents were filed electronically. The government action plan aims at enabling people to acquire information and services easily *via* the Internet. Another sector where the use of Internet is growing rapidly is in distance learning and distributed learning on the secondary level and

university level. About one-third of all students enrolled in teacher education programmes are now involved in distance and distributed learning.

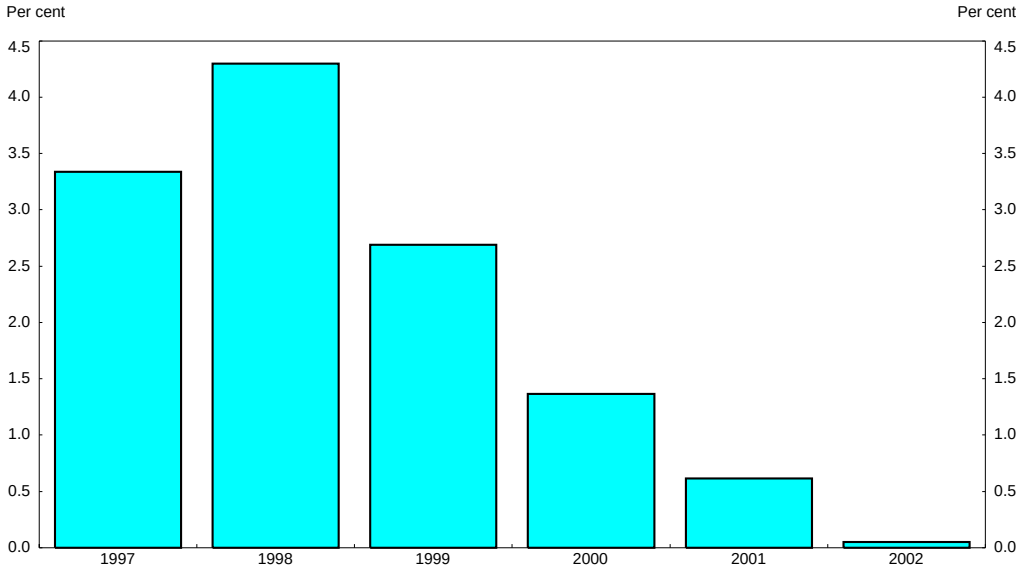
Energy services

Natural conditions in Iceland mean that the potential supply of electricity is plentiful and has been increasingly harnessed since 1997. The major part of the supply is renewable.[56] Hydropower might possibly generate 64 TWh of electricity per year, but technical and economic constraints suggest that total capacity of 45 TWh could be exploited, though environmental concerns may reduce that somewhat. Geothermal energy could generate a further 15 TWh of electricity annually for a century, making a total possible generation capacity of 60 TWh. At present, only 8 TWh is actually being produced from these sources. Given that it is yet not economically viable to export electricity by submarine cable to Scotland, as had been earlier proposed, power-intensive industries have to be attracted to Iceland to use the electricity locally. Recently there has been significant investment in such industries and their associated power plants (Figure 32). As a result after a long period of stagnation, electricity sales to power-intensive industries have started to take off in recent years (Figure 33). In order to prolong this development, the government has entered into discussions with a subsidiary of Norsk Hydro and local investors, with a view to taking a decision on the establishment of the proposed 240 000 tonne aluminium smelter in Reyðarfjörður in eastern Iceland (referred to as the Noral project and described in Chapter I) by February 2002. The smelter would use hydro power generated at Kárahnúkar. Currently, an environmental impact assessment is being prepared for the hydro project. Meanwhile, in western Iceland, the production capacity of an existing aluminium plant is being lifted from 60 000 to 90 000 tonnes. The company operating this plant has a licence to expand it to twice this size.

There was progress during 2000 in designing a new, more competitive, structure for the electricity industry in Iceland. A bill will be introduced early in 2001. At present, the National Power Company (NPC) produces 93 per cent of all electricity and is owned jointly by the state (50 per cent), the municipality of Reykjavik and another local authority. The NPC also owns the high-voltage grid, distributing its output around the country. Municipal authorities generally run local distribution. The government's objective is to split the company into separate production and distribution arms, following the EU directive, by end-2002. By then, independent electricity producers will be able to sell directly to consumers that use more than 2 MWh per year. However, most large power consumers are already linked to the NPC by long-term contracts. Besides introducing more competition, the government has to settle the issue of how to attribute licences for future hydroelectric plants. Where the state owns the land necessary to create a dam, there may be a case for charging the NPC or other producers for the right to use it. In any case, the expropriation rights of the NPC will have to be reviewed if it were eventually to be privatised.

Elsewhere, work has continued on the joint venture between Shell, Norsk Hydro, Daimler Chrysler and Icelandic partners in evaluating the prospects for the use of hydrogen as a fuel. While the government is not a party to the agreement, signed in February 1999, the local investors were mainly state-owned institutions.[57] In the short term, the company is investigating how the hydrogen produced as part of an electrolytic process for making ammonia might be shipped to Germany. It is also considering whether to test three hydrogen-powered buses in Reykjavik during 2001.

Figure 32. Investment in the energy and related sectors of the economy
Per cent of GDP



Source: Ministry of Commerce.

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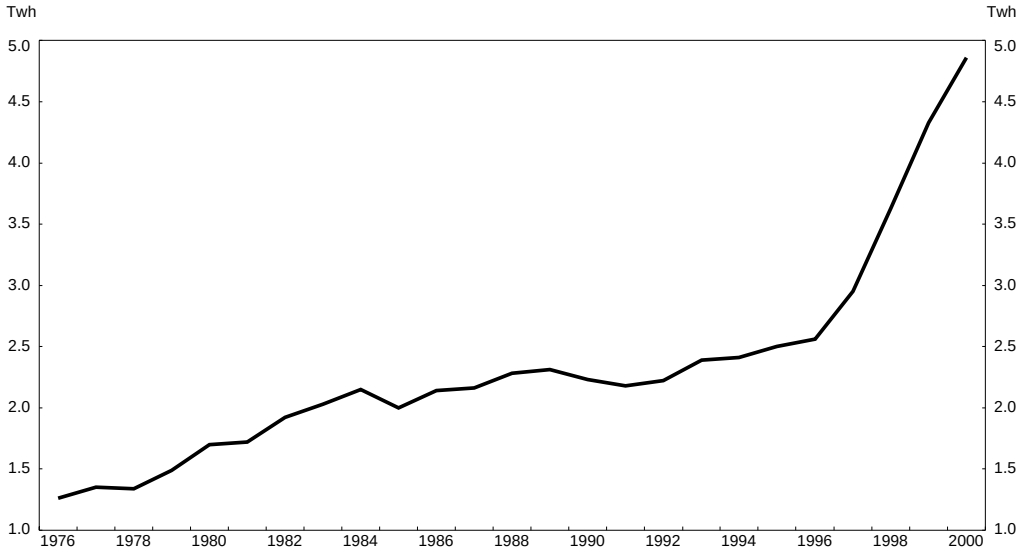
Figure 33. Electricity consumption by power-intensive industries
Terawatt hours



Source: Statistics Iceland.

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Biotechnology services

Recent advances in information technology have opened the way to identifying genetic linkages to diseases from a relatively homogenous society, with long-established civil records. After a long public debate, the Icelandic government granted an exclusive 12-year licence to the Icelandic subsidiary of DeCODE Genetics to create and manage an Icelandic Health Database. The database will contain the medical records of most living and some dead inhabitants of the country in personally non-identifiable form. In return for its licence, the government receives an annual payment of 70 million krónur (less than $1 million).[58] DeCODE has also created two other databases. One is based on DNA samples from the population, the other is genealogical and is based on public access information.

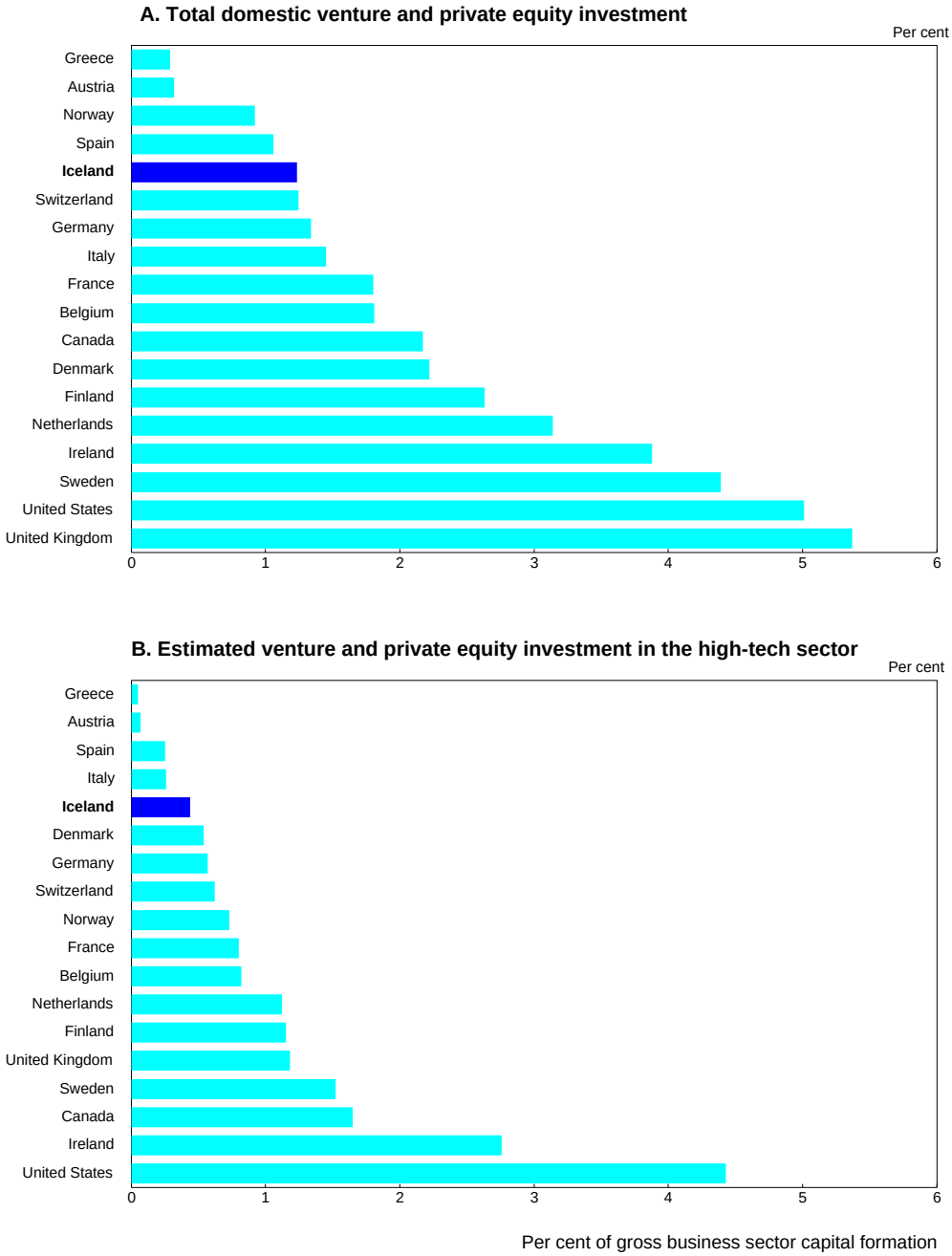
Strict privacy laws have been incorporated in the laws governing the first two of these databases. An individual can opt not to have his medical records included in the health database. By September 2000, 7 per cent of the population had exercised this option. The genetic database requires that the participants give their informed consent before giving a DNA sample. So far, 80 to 90 per cent of those contacted have agreed to participate, according to US Security and Exchange Commission filings. The company had a market capitalisation equivalent to 7 per cent of GDP in December 2000, down from a peak of 12 per cent of GDP earlier in the year. At end-1999, it employed 310 people from 20 different countries. Well over half of the staff had university degrees, while 15 per cent held postgraduate qualifications. So far the company has not earned any profit; indeed its revenues were only one-third of operating costs (which amounted to about 0.8 per cent of GDP). However, its income is improving as its major client makes progress payments related to the discovery of genetic linkages to diseases as varied as schizophrenia, osteoporosis and peripheral arterial occlusive disease.

Apart from DECODE, the extent of venture capital activity is limited in Iceland. A recent study (Baygan and Freudenberg, 2000) suggested that domestic venture capital activity for early-state investments amounted to $15 million in 1999, somewhat below the average for other countries in relation to the level of business investment (Figure 34). Moreover, most of the activity was financing low-tech activities. The financing of high-technology companies through venture capital was practically non-existent, representing only 0.4 per cent of business investment in 1999. Nevertheless, businesses raised their spending on research and development at a rate of 15 per cent annually between 1991 and 1997, one of the most rapid increases in the OECD area, even though the tax code offers little in the way of tax breaks for this activity.

Traditional activities

The two traditional economic activities — agriculture and fishing — are both highly regulated by the government. In the case of agriculture, there is no economic justification for such laws. Iceland is an economy that is entirely dependent on world trade and has gained from its extreme specialisation, even though it is totally dependent on foreign supplies for many products. However, as is shown below, agricultural policy is based on autarkic principles that are the exact reverse of those benefiting the rest of the economy. In contrast to agriculture, though, government regulation of fishing is justified by the inability of the market to create the property rights necessary for long-term management of a renewable natural resource. However, after reviewing the workings of the fishery management system, the section below suggests that the system in place for the past six years has created a significant economic rent that have accrued to quota owners.

Figure 34. Venture and private equity capital outlays
Per cent of gross business sector fixed capital formation



Source: OECD.

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Agriculture

Despite the unfavourable climatic conditions, there is a significant agricultural sector in Iceland. Production is for the most part related to the rearing of livestock. The extensive grass pastures have always permitted the raising of a large number of sheep and dairy cattle. Milk and sheep meat represents the bulk of farmers' output. The consumption of lamb and mutton has, however, fallen, though it may have stabilised lately. Rising household incomes and a widening in tastes have led to growing purchases of pork, beef and poultry. Little grain is produced, though cultivation of barley and maize for animal feed has recently started. More noticeable has been the increase in the output of vegetables. These are grown in greenhouses heated by geothermal energy. In some cases, it is also necessary to provide artificial light in order to continue production during the winter when there is little natural light. Overall, farm output has grown on average by just under 1 per cent annually in the past two decades. Agricultural output accelerated somewhat in the past two years, rising by a cumulative 7½ per cent, with a strong performance being registered by the dairy, poultry and pork sectors. Dairy production also rose despite a drop in consumption. Nonetheless, the share of the agricultural sector in total output has continued its historic decline, dropping to 2.1 per cent of GDP in 1999. The number of people working on farms has been declining rapidly, resulting in trend labour productivity growth of 4½ per cent per year. By 2000, nonetheless, farming represented only 3½ per cent of employment. A considerable number of sheep farmers are part-time though, while even amongst dairy farmers the average operator has less than 20 cows. The average age of farmers, at 52, is significantly higher than the working population as a whole, with over 30 per cent aged above 60.

Government agricultural polices with regard to the pricing and sale of agricultural products are determined by a framework law enacted in 1993. The main objectives are to promote *self-sufficiency* for agricultural products; to work towards *maximum utilisation of domestic inputs*; to promote *parity between producers* in each sector with respect to prices and markets; and to *integrate environmental issues* with agricultural policies. The government sees agriculture as essential to promoting a thriving rural economy. However, with the growing rationalisation of the traditional agricultural sector, more emphasis has been place on its multi-functional role. Agriculture is seen as being fundamental to Iceland's culture, food security and environment. Farmers are being encouraged to move into land reclamation and afforestation projects in parallel with traditional activities. The government meets these objectives through three essential channels: border controls, direct payments to farmers, and production quotas coupled with administered prices.

Border controls are the principal method by which self-sufficiency is maintained. Following the Uruguay Round, the market for certain products was opened through minimum access requirements that allow tariff-free import within the allocated quotas but which then impose high tariffs on imports over those levels. The minimum access quotas are very low, amounting to just over 300 grammes of beef per person per year; 200 grammes each for pork and poultry and 170 grammes for butter. Beyond these levels, the tariffs imposed at end-2000 are equivalent to $6 per kilogram for beef, $5 for pork and $2.50 for poultry. However, in some cases, meat imports are restricted for health reasons, as are most imports of dairy products. As a result only very limited imports of meat or dairy products (with the exception of cheese and poultry) occurred in 1999. For vegetables, a similar tariff-quota system applies, and the out-of-quota tariffs are equivalent to import levies of over 100 per cent in many cases. The allocation of quotas is determined by auction. In the case of vegetables, there is no limit on imports during the winter, however, variable levies are applied to such imports in accordance with domestic supply.

There has been a considerable change in agricultural polices in the past decade, with much less emphasis being placed on price regulation. Polices are determined in conjunction with the farming industry and are set out in two major agreements: one dealing with sheep that runs from 2000 to 2007, the other with dairy farmers for the period 1998 to 2005. In these agreements (and others) there had been a growing

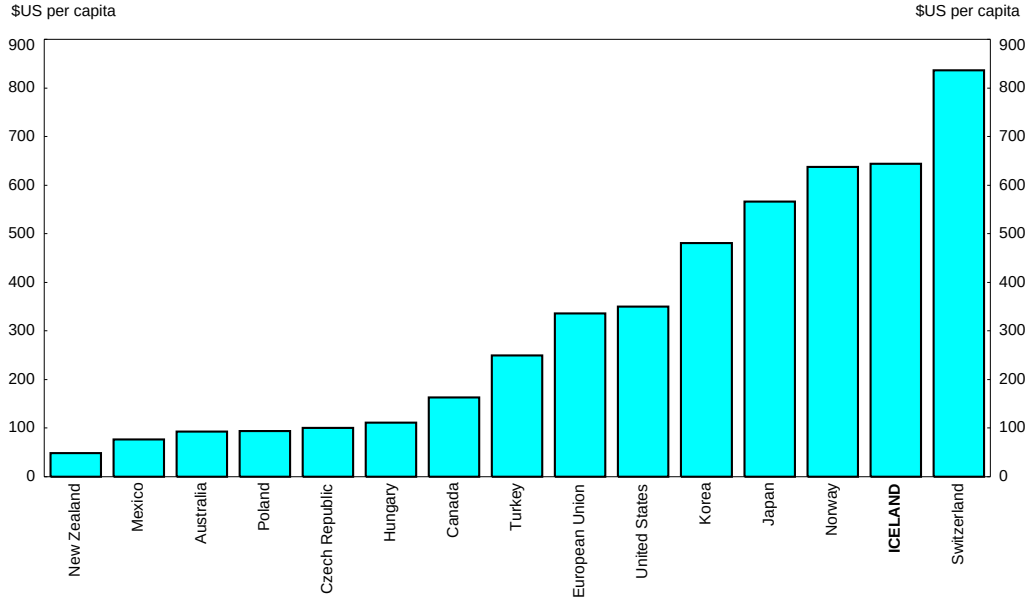
emphasis on direct payments and less reliance on administered prices. The process of phasing out administered prices began in 1991 when the subsidies paid to wholesalers and exporters were replaced by direct payments to producers. Wholesale prices for sheep-meat were deregulated in 1995 and producer prices in 1997. Administered prices for poultry and eggs were abolished in 1997. The current dairy programme has replaced the administered price for milk by a minimum price, and by June 2001 the administered price at the wholesale level will be abolished. At that point domestic agricultural prices will be completely liberalised.

Production limitation has now been abandoned for sheep-meat but remains for milk. Sheep-meat quotas, first introduced in 1986, were freely transferable between farmers until mid-1996 when they became linked to a specific farm and de-linked from production. Since then, they have served to determine the size of the payment under the income-support programme. It is not necessary to produce sheep-meat in order to receive the income support, provided that the farmer engages in an approved alternative activity such as afforestation. Under the new programme, if the farmer does not engage in such activities then he must keep at least 60 per cent of the sheep in his quota during the winter. The budget for 2001 provides additional funding of one billion krónur to enable farmers to sell their quotas to the government. These payments will be particularly attractive to elderly farmers. During the period until 2005, about 55 per cent of the 50 saved direct payments will be used for additional payments aimed at improving the quality of production. Farmers are free to produce as much sheep-meat as is economic. The excess of domestic production over consumption must be exported at world market prices with no specific subsidies. In contrast to the sheep-meat agreement, the dairy agreement provides for a direct payment to all producers depending on their deliveries to wholesalers. There is an overall quota for production, and this evolves over time depending on the utilisation of the quota in the previous year. Despite a significant fall in dairy product consumption in 1999, the quota for milk was reduced by only 1 per cent for the production year 1999/2000.

The result of strict border controls, domestic production quotas and income support payments to farmers is that agriculture is heavily supported. In terms of the total support equivalent (TSE) — an OECD measure of the extent of direct and indirect support to agriculture — Icelandic farming is one of the most heavily subsidised in the OECD area (Figure 35). This contrasts markedly with the fishing industry, where assistance is minimal and the industry competitive (Figure 36). Government spending on agriculture was trimmed in the first half of the 1990s, when it dropped from 4.1 per cent of GDP in 1989 (at factor cost) to 2.0 per cent by 1994, and has stabilised at this level since then. It fell by a similar amount in proportion to total government outlays (from 10 to 5 per cent of total spending). In the second half of the 1990s, with the whole economy growing much faster than agriculture, total outlays in agriculture rose faster than the world value of farm output, with the result that the TSE for the industry started to increase once again.

Apart from the taxation consequences of high agriculture spending, consumers are hurt by the high level of food prices in Iceland. For livestock products, Icelandic consumer prices are more than double those on the world market. After falling back towards world levels in the first half of the 1990s, aggregate consumer prices moved further away from world levels between 1994 and 1999 (Table 21). Pig meat was the only exception to this trend. Consumer prices are particularly high for poultry and eggs. Sheep-meat, however, is sold at close to world prices. It seems clear, though, that if the prices for other meats were set at world levels, consumption of sheep-meat would fall markedly. As far as farmers are concerned, the difference between their incomes and revenues evaluated at world prices has been kept high, with domestic prices at over three times free-market price levels.[59] For dairy farmers, the gap is particularly large (at almost 5¼ time free-market levels) and appears to be increasing.

Figure 35. Total agricultural support: an international comparison
1999, US dollars per capita



Source: OECD.

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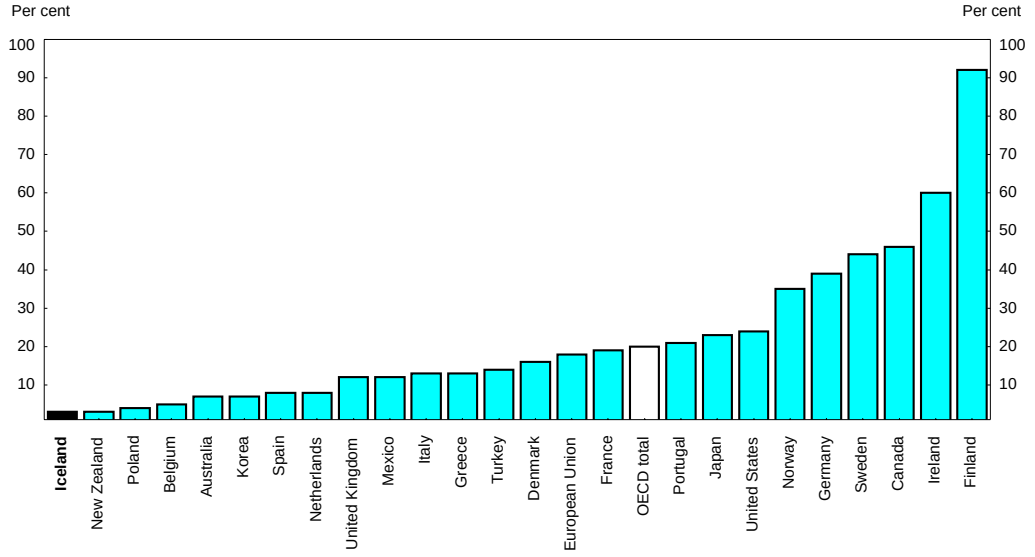
Figure 36. Total fisheries support: an international comparison(1)
Percentage of total landed value, 1996



1. Financial transfers to marine capture fisheries,i.e. excluding inland fishing, aquaculture and fish processing.
Source: OECD, Transition to Responsible Fisheries, Paris (2000).

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As part of the Uruguay Round negotiations, Iceland promised to keep the Aggregate Measure of Support (AMS) to agriculture below the level of SDR 140.9 million (ISK 15 428 million). This target has proved easy to meet, with the AMS totalling SDR 119.12 million in 1998, despite a 21 per cent increase in local currency outlays that year (Table 22). This measure of support is slightly lower than that recorded under PSE calculations, as a number of programmes (general agricultural services, productivity fund, management of intra-season sheep-meat stocks, farmers pension fund and direct payments to sheep farmers) are excluded from the commitment to market support reduction.

Table 21. **Ratio of consumer prices and farmers' revenue to world market levels, by product**

	1979-81	1989-91	1994		1999	
		Iceland		Iceland	OECD	New Zealand
Consumer prices						
Milk	2.52	2.72	2.44	2.89	2.15	1.00
Beef and veal	1.49	1.97	1.75	2.36	1.30	1.00
Sheepmeat	1.76	1.85	1.02	1.11	1.06	1.00
Wool	0.62	0.17	0.00	0.27	1.00	1.00
Pigmeat	2.30	3.14	4.24	2.97	1.26	1.00
Poultry	5.43	5.82	6.34	7.25	1.10	1.38
Eggs	3.58	4.53	4.56	5.35	1.12	1.95
Other products				2.30	1.51	1.06
All products	1.90	2.07		2.29	1.45	1.06
Farmers revenue						
Milk	3.98	5.39	4.67	5.17	2.30	1.00
Beef and veal	1.92	2.56	1.87	2.42	1.47	1.01
Sheepmeat	2.44	4.56	2.26	2.19	1.73	1.00
Wool	1.29	1.50	1.44	2.58	1.06	1.00
Pigmeat	2.38	3.46	4.30	2.97	1.27	1.03
Poultry	5.47	6.52	6.36	6.98	1.17	1.39
Eggs	3.58	4.70	4.54	5.28	1.15	1.95
Other products				2.31	1.61	1.01
All products	2.79	4.40	3.15	3.17	1.66	1.02

Source: OECD.

Table 22. **Different measures of support to agriculture**
Million krónur

	1995	1996	1997	1998	1999
Constant 1995 prices					
Aggregate Measure of Support	6 264	10 226	10 181	11 743	-
Aggregate Measure of Support Ceiling	-	-	-	13 890	-
Total Support Equivalent	-	-	9 802	11 648	10 831
Producers Support Equivalent	-	-	8 597	10 355	9 815
Current prices					
Aggregate Measure of Support	6 264	10 425	10 741	13 043	-
Aggregate Measure of Support Ceiling	-	-	-	15 428	-
Total Support Equivalent	-	-	10 342	12 938	13 007
Producers Support Equivalent	-	-	9 070	11 501	11 787

Source: WTO and OECD.

Fishing

The fishing sector (including fish processing) remains of key significance to Iceland, even if the economy has become more diversified over time. As stated, its share of output has fallen to below 15 per cent, while the corresponding figure for private-sector employment is only 9 per cent (down from nearly double that in the mid-1980s). Its importance in business fixed investment has trended down from over one-quarter in the mid- to late 1980s to as little as 7 per cent in 1999. But it is in terms of exports that the sector's role is still crucial: fish product exports are still around two-thirds of total merchandise exports (Table 23), though that compares to a recent peak of fully four-fifths in 1991.

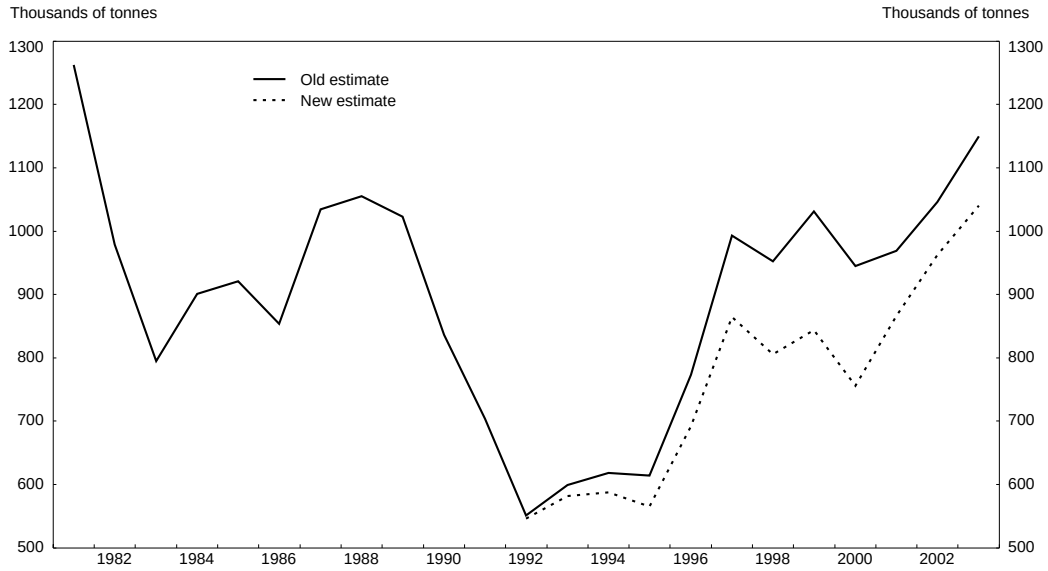
Table 23. **Fish and other export products**
Per cent of total exports

	1941-50	1951-60	1961-70	1971-80	1981-90	1991-98	1999
All marine products	91.5	92.8	88.3	75.0	73.4	75.4	67.4
Processed fish	58.0	86.6	81.6	69.6	64.9	67.8	59.8
Fresh fish	32.9	4.7	5.6	4.4	7.7	7.6	7.6
Whale products	0.6	1.5	1.1	1.0	0.8	0.0	0.0
Agricultural products	6.9	6.2	8.0	8.0	7.4	4.5	3.0
Aluminium	0.0	0.0	1.9	13.6	11.4	10.2	15.5
Diatomite	0.0	0.0	0.2	0.9	0.6	0.5	0.4
Ferro-silicon	0.0	0.0	0.0	0.3	3.2	2.5	2.2
Other manufacturing	1.3	0.3	1.0	0.9	1.8	3.8	6.0
Second-hand planes	-	-	-	-	-	2.2	4.4
Other	0.3	0.7	0.6	1.3	2.2	0.9	1.1

Source: Central Bank and National Economic Institute.

The latest fisheries assessment from the Marine Research Institute (MRI) revised down the growth of the cod stock from 1992 onwards (Figure 37). This led it to recommend a reduction in the total allowable catch (TAC) in 2000/01[60] to 203 000 tonnes from the previous quota of 250 000 tonnes in 1999/2000. In the event, the government decided not to follow the recommendation precisely; rather, it set the TAC at 220 000 tonnes, a 12 per cent reduction. Such a catch level represents 27.1 per cent of the estimated stock at end-2001, against a catch that amounted to 26.4 per cent of the then-estimated cod stock in 2000. The downward revision required a revision in the catch rule, which had fixed the TAC at precisely 25 per cent of the estimated stock. Previously there had also been a minimum allowable catch of 155 000 tonnes per year. This floor, which was meant to safeguard the short-term existence of the industry, has now been dropped and replaced by a limit of 30 000 tonnes in the annual change in the TAC, in order to limit the extent of abrupt changes is limits.

Figure 37. Revised estimates of cod stocks



Source: Marine Research Institute.

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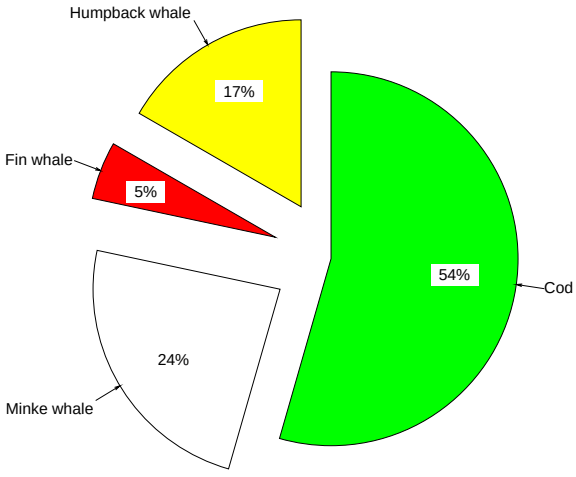
Cod cannot be counted directly, but stock estimates are based on the age of a sample of landed fish and the extent of the fishing effort. New studies revealed that, in previous years, the fishing effort had been greater than previously thought, and that net mesh sizes had increased. Consequently not all of the increase in older fish that had been caught represented an increase in the cod population, leading to a fall in the estimates of the numbers of young cod in the mid-1990s, but not for more recent years. Thus, while the estimated stock has been revised down by an amount that is within normal statistical bounds, according to a report of independent overseas experts, its future absolute growth has not been affected. The future stock trajectory will depend on the allowable catch in the next few years. If fishing were to be held to the level of the new TAC (220 000 tonnes, already above this year's recommended TAC), then stocks might recover to their previously expected levels by 2003/04 (Figure 37). But if catch limits were increased in coming years in line with the likely rise in fishable stocks, thereby reaching 260 000 tonnes in 2003/04, then the stock

level would appear unlikely to recover quickly to its previously estimated level, thereby meaning that the future potential catch will fall in line with the drop in estimated stocks.

The reduction in the cod quota this year has heightened concerns that the growing numbers of various kinds of whales in the Icelandic Exclusive Economic Zone (EEZ) may be lowering the sustainable cod catch. The ecosystem around Iceland is the result of an interaction between different marine species and fishermen. When determining the stock-management policy, which was implemented in 1995, the interaction between cod, capelin and shrimp was taken into account in deriving the final sustainable stock of all three species and the evolution of catches over time. However, whales feed on fish, especially capelin (Figure 38) and to certain extent cod. Indeed, in the EEZ, whales are estimated to consume 2 million tonnes of fish annually. A complete evaluation of the sustainable cod harvest has to take this feedback into account. The extent of the interaction depends on the initial stock of whales and the proportion of their total food intake represented by fish. In Iceland, estimates (which predate the abandonment of whaling) suggest that fish make up 3 per cent of the whales' diet, but Canadian data imply that the proportion could be as high as 50 per cent. On the basis that the proportion of fish is between 3 and 20 per cent, the Marine Research Institute estimated that the sustainable cod catch would be about 10-15 per cent lower, if there were no harvesting of whales than if whales were harvested in a sustainable fashion. In its last report, the Institute cited the reports of the North Atlantic Marine Mammal Commission in support of its view that a catch of 200 fin whales would not bring their stock below 70 per cent of their pre-exploitation level. For minke whales, stocks appear in good condition, allowing harvests of up to 250 per year. The Institute has recommended allowable catches at these levels, though the government has not authorised such fishing in view of the international ban on commercial whaling. The government is now reconsidering its position.

Figure 38. Consumption of capelin by predators
Per cent of total



Source: Marine Research Institute.

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The move to a transferable quota system within an overall catch limit has helped to transform the prospects of the industry. Over time, there have perhaps been gains in efficiency stemming from the extent to which the ownership quota rights have changed. Quota rights were initially allocated on the basis of historical fishing patterns, but the profitability of fishing in different areas varies over time. Thus, for several years in the late 1990s a large amount of quota rights held by northern fishing companies were rented to southern companies, because the fishing conditions for cod had become much better in the southern zone (Danielsson, 2000). On the other hand, the transfer of shellfish quotas has shifted in the other direction. At the same time there was a transfer of rights from small to medium-sized fishing villages. Such transfers appear to have occurred because of the economies of scale that have developed in fish processing, with modern plants requiring a steady and large flow of raw material and a relatively large labour force that would not be available in the smaller villages. Overall, the latest available figures show that almost 70 per cent of the available quotas change vessel each year (Table 24), while transfers between companies were recently running at over 40 per cent of the total quota per year.

Table 24. **The extent of quota transfers for major commercial species**
Per cent of the total allowable catch

	Transfer of quotas between companies			Transfer of quotas within companies			Total transfers
	1995/6	1996/7	1997/8	1995/6	1996/7	1997/8	1997/8
All ground fish	53.9	52.1	45.6	29.3	25.3	30.3	75.9
Cod	60.0	52.4	47.9	21.5	16.2	24.6	72.5
Other species	50.7	51.8	43.0	33.2	32.3	36.4	79.4
Capelin and herring	15.5	24.2	22.6	6.0	6.0	11.9	34.5
Shellfish	48.1	46.8	42.5	23.1	23.1	26.8	69.3
All fish	47.2	45.9	41.9	23.8	23.8	26.7	68.6

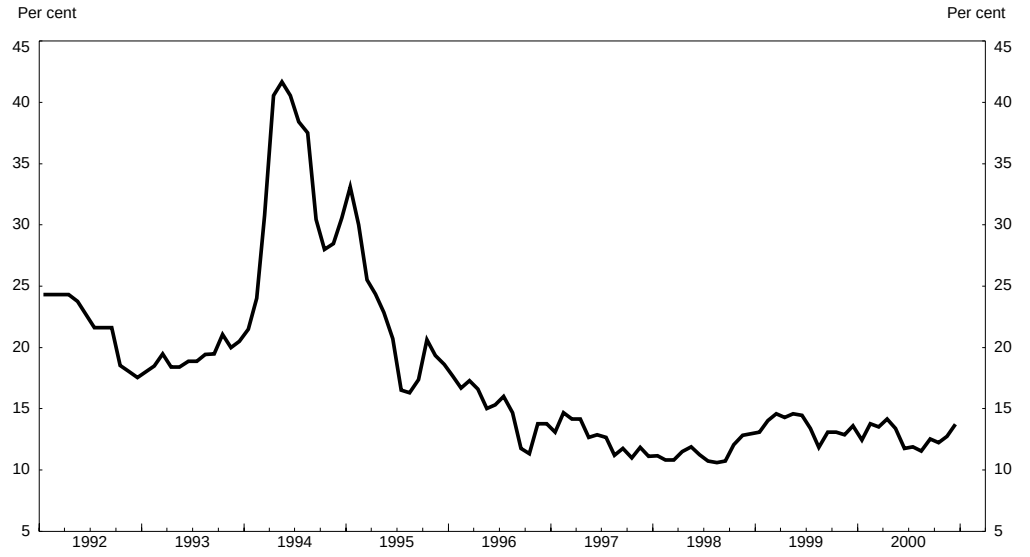
Source: National Economic Institute.

One impact of the introduction of transferable quotas has been to create a rent for the owners of the rights. Such quotas can either be rented annually, or bought and sold. However, since the owners of a quota has to catch at least 50 per cent of their quota every two years, it is not possible to permanently rent the quota. The prices paid for quota rentals are high relative to the value of the catch. Between 1997 and 2000, the annual rental price for cod quotas has averaged around 80 per cent of the landed price for gutted fish. The difference between the rental and fish prices should correspond to the short-run marginal cost of fishing, excluding all sunk costs. An approximation to this margin can be derived from the accounts of fishing companies as the sum of their earnings before interest, tax, depreciation and amortisation (EBITDA). Since many firms are integrated, having both harvesting and processing operations, the surplus available for the purchase of quotas is the sum of such earnings in both branches. According to a study by the National Economic Institute (NEI, 2000), in 1996, the EBITDA of the fish and fish processing industry amounted to 18.4 billion krónur (3.8 per cent of GDP). In the fishing year 1995/96, the aggregate rental value of transferable quotas amounted to 17.5 billion krónur rising to 19.6 billion krónur in the following year.

The short-run rental value of quotas does not represent the long-run rent that could be extracted from the fishing industry through either a resource tax or through auctioning quotas. The rent that could be

extracted would depend on the existence of profits above the normal rate of return to capital, allowing for the cost of replacing all vessels, tackle and processing plant. Some idea of the longer-run rent can be obtained from looking at the purchase price of fish quotas. A buyer of the quota has to expect to recover all the long-run costs of fishing from the short-run profits that determine the rental value of the quota. Buyers will bid up the capital value of the quota but only until all profits above the cost of capital are eliminated. Since the proportion of the annual rent represented by above-normal profits is small, the purchase price of the quota is low relative to its annual rental value, as can been seen from the initial yields on quotas that averaged 13½ per cent between 1996 and 2000 (Figure 39), reaching 13¾ per cent in 2000, perhaps reflecting the delay that has occurred in the expected rebuilding of fishery stocks. Moreover, the final return on the quotas will be higher than this, since the quota is set as a percentage of the overall catch, which should increase in future years, thereby increasing future short-term rentals. Nonetheless, for cod, the implicit market value of all fishing rights amounted to 24 per cent of GDP in 2000. A quota seller, who is withdrawing from the industry, could then re-invest the value of the quota in a risk-free security and earn a real return that has averaged 5 per cent between 1997 and 2000. On this basis, the overall resource rent might be around one-third of the annual quota rent[61] and, for cod alone, could be as large as 1.2 per cent of GDP in 2000, on the basis of these assumptions.[62]

Figure 39. Initial yield on cod quota rights
Per cent



Source: Central Bank of Iceland.

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This valuation of the resource rent from fishing may be on the high side, according to the stock market valuation of fishing firms. The market capitalisation of the 20 quoted fishing companies amounted to 70.3 billion krónur, at the end of 1999. At the same time, the combined book value of their equity was 20.1 billion krónur, excluding the value of the quotas that they had either bought or acquired through mergers. Thus, the ratio of market to book values for fishing companies (at 3.5) was close to the weighted average of the same ratio for all companies quoted on the Icelandic stock exchange, though there was a substantial variance across the individual companies. This similarity between sectors suggests that

abnormally high returns were not being earned in fishing. If the market valued the possession of quotas at their face value, then the market value of fishing companies should be far greater. Put another way, it is apparently cheaper to acquire fishing rights by buying a fishing company than by purchasing the rights directly. Indeed, the overall value of the fishing companies' equity would rise to 134 billion krónur if the market valued quotas fully, almost twice their stock exchange value. According to the Central Bank, it is probable that the market attributes, at most, one third of the value of the quota to the enterprise and possibly much less. Such a valuation would reduce the value of the rent from the cod quota to less than 0.5 per cent of GDP. There may be, though, a number of factors that lead the stock market to undervalue such assets: there is low turnover in such shares, and foreign investors are not allowed to own them.

Framework conditions

The previous sections have considered recent developments in specific sectors of the economy. There are however, some overarching conditions for an efficient market economy that affect all sectors of the economy. One such area is ensuring that competition is not lessened by the emergence of monopolies or agreements that hinder the free play of market forces. This may be particularly important in Iceland where the combination of a small market relative to minimum efficient scale may work against competitive forces.

Competition policy

The government introduced a new competition policy in December 2000. The new Act modernises previous legislation and ensures that it conforms with the relevant EU directives. It strengthens the provisions of the old Act, especially in the area of mergers. The previous law had proven unable to deal successfully with take-overs. For instance, in 1998 one industrial bakery purchased its principal competitor, giving the company 80 per cent of the market. The Competition Authority investigated the merger, and the Council declared that it should be cancelled. However, when the company appealed, the verdict was overthrown because the Council had not acted sufficiently quickly.[63] Now, companies must notify the Authority when they wish to merge, if their combined annual consolidated turnover exceeds 1 billion krónur. The Competition Authority can then set conditions for the merger and, if a dominant position results, it can ban the tie-up. The new Act also improves the ability of the Authority to deal with abuses of market power and undertakings that prevent competition.

The Competition Authority retains the power to investigate activities of public organisations that may hinder competition, provided that the act governing these bodies does not specifically rule out such investigations. Indeed, the most notable cases dealt with in the past 18 months have concerned the public authorities. In one case a new telephone operator filed a complaint with the Authority, alleging that the valuation placed on the assets of the national telecom company (Landssíminn), when it was established by the government, was too low. The Competition Council decided that the assets had been undervalued and that this constituted illegal state aid. In effect, the government had not placed any valuation on the goodwill of the company (that is, the above-normal rate of return on its assets was not capitalised). Subsequently, there was a commission of enquiry established by the government. It concluded that there had been an undervaluation of the assets but that the sum involved was less than estimated by the Competition Council. The issue has still not been resolved, as the original plaintiff has appealed to the EFTA Surveillance Authority and a decision is expected by summer 2001. As mentioned above, the Competition Council also refused to give permission for the two state-owned banks to merge, as it judged that the merged bank would have had a dominant position in the deposit and loan business.

Ageing

The last *Survey* suggested that Iceland was well placed to meet the challenge of an ageing population because of the prevalence of private pension funds that are building assets, at home and abroad, to provide the future income of the retired. A number of areas of reform were said to be necessary, however, including reducing the number of small pension funds and overhauling the regulations concerning investment policy.

The law that governs pension funds (the Pension Fund Act, 1997) was amended in May 2000 to give funds greater freedom over investment policy. The limit on permissible foreign-currency-denominated assets was raised from 40 to 50 per cent of their portfolios. Many pension funds were not close to the old limit, with most having foreign assets holdings of around 20 per cent and some with no foreign assets at all. The stock of pension funds' foreign assets grew very rapidly in 1999. In 2000, the pace of diversification increased further. In the first four months of the year they added ISK 19 billion (equivalent to 8 per cent of GDP for that period) to their foreign portfolios, which are now equally split between direct and mutual-fund holdings of equities. Foreign bonds are not held to any great extent.

The financial position of the pension funds is sound. Only a few have actuarial deficiencies. These losses are gradually being absorbed by the members of the fund: in contrast to the situation in many countries, pension funds are generally independent of employers. A number of unfunded schemes exist and must be guaranteed by the employer. In 1999, funds' assets amounted to 80 per cent of GDP, while their annual financial surplus amounted to 6.8 per cent of GDP. The last *Survey* noted that small funds were faced with high operating costs, the need to re-insure risks and an inability to participate in foreign financial markets. Indeed, the 1997 Act required that funds have at least 800 contributing members in order to be licensed. The implementation of this provision has led to a continued fall in the number of funds. There were only 54 in existence at the beginning of 2001, as against 88 at the end of 1991. Moreover, 11 were closed to new members, and a further 13 enjoyed employers' guarantees, leaving just 30 open, employee-based funds. Nearly all have now obtained a licence. Some merged in order to have 800 members, and this forced consolidation has been one of the factors that reduced expenses to 0.2 per cent of assets in 1999, compared to 0.8 per cent in 1980.

There remains scope to improve the management of pension funds, notably in the area of asset allocation. In recent years, the mean real return obtained by the funds has been close to 7¼ per cent. There has been a clear divergence among funds, with performance displaying the usual positive correlation between average returns and volatility. However, three major funds stand out as being well inside the apparent risk-return frontier.[64] All three are in the public sector (the funds for nursing staff, new government employees and banking-sector employees). In 1999, the overall returns earned by the public-sector guaranteed funds were 4 percentage points lower than those earned by private-sector funds. Supervisors should be equally concerned about poor investment performance as with the respect of limits on certain asset classes. Indeed, international experience suggests that funds in countries that rely on "prudent investor" requirements perform better than those where there are legislated limits on the relative importance of different asset classes.

In addition to the occupational pensions that are primarily defined-benefit schemes but where investment and demographic risks are borne by fund members, employees have the possibility to join additional defined-contribution schemes of their choice with individual accounts for retirement saving. In this system, introduced in 1998, employees can make contributions amounting to 2 per cent of their pre-tax income to a fund that accumulates tax-free until retirement. If the employer adds 0.2 per cent to this employee contribution, then its social-security tax rate is reduced by a like amount. As part of the new general wage agreement for 2000, employees who make a further 2 per cent contribution to the fund will

receive a matching contribution of 2 per cent from their employer. This provision is being phased in over the three-year duration of the wage agreement.

Assessment and scope for further action

There has been considerable progress in implementing the structural-policy recommendations of previous *Surveys* (Table 25). Three key areas were the focus of attention in the last *Survey*: fostering competition in the telecommunications sector; strengthening competition policy; and maintaining and improving the fisheries-management strategy. As noted above, legislation governing the regulatory authority for telecommunications was introduced, and it has acted decisively to increase the number of operating companies. More generally, a new competition law has been introduced that remedies many of the deficiencies of its predecessor. Notably it places an obligation on companies to notify the Competition Authority about proposed mergers, thereby ensuring that all merger activity can be considered by the Authority. However, few of the recommendations in the areas of fishing have been implemented. Turning to outstanding recommendations from previous *Surveys*, in the financial sector a number of recommendations have been followed up. Legislation to change the ownership structure of savings banks has been introduced, and the complete privatisation of the two state-owned commercial banks is now on the table. The Central Bank will end its market-making activities in Treasury bills by April 2001. On the other hand, there are still several state-owned investment funds, and the housing fund has not been privatised. The government has not brought its pension liabilities on to its balance sheet, despite the recommendations of the government auditor. Finally, the privatisation programme stalled in 2000, with no new sales.

There remain a number of priority areas where further action is required (Table 26). The major utilities remain state-owned. Preparatory work for selling the telecoms company has been undertaken, though the delay will have undoubtedly resulted in the government receiving a lower price. Now that legislation governing the local loop is in force, there is no need to split the company into separate terrestrial and mobile companies, prior to privatisation sale. In the energy area, the government has advanced its timetable and is now proposing that the Act for introducing competition in electricity should be effective before end-2002. The Act should contain clear distinctions between the production and transmission functions of the NPC. It should also open to competition not just the market for large industrial users but also, even with a lag, that for ordinary consumers. In this regard, the continued municipal ownership of many electricity distribution operations could be questioned.

In the area of fishing, the management regime withstood a major shock when it was discovered that stocks of cod had been over-estimated. It was perhaps inevitable that the full reduction in the catch limit proposed by the Marine Research Institute (a cut of nearly 19 per cent) would not be accepted. The government and the industry accepted a cut of 30 000 tonnes to 220 000 tonnes. Even so, the stock should start to grow again in 2001. However, if the setback is not to be permanent, it will be important to limit the catch one-quarter of the fishable stock in coming years. If this is done, stocks should continue to recover. Over the longer term the size of the stock may be sensitive to the number of whales in Icelandic waters. The whale species around Iceland are not in danger of extinction; rather, as predators, they are competing for food with cod. Without a harvesting programme for these mammals, production of cod could be up to 15 per cent lower than if limited harvesting were re-introduced. At the very least, some limited catching should be allowed, so as to help determine the interaction between cod and whale stocks.

The other traditional sector — agriculture — is smaller and shrinking, but the government-induced distortions it is subject to make it a worthy focus for policy-makers' attention. Considerable efficiency gains could be achieved by reducing support to agriculture that results in farmers' income being five times what would be generated by a market that was open to global competition. Of

course, a rundown in farming employment would have implications for regional development. In the first place, then, the reduction in support should be concentrated in those sectors where activity is concentrated in the capital region where the redeployment of workers would be the easiest. The intensive production of poultry, pig-meat and vegetables falls into this category. The government is already committed to a ceiling on the Aggregate Measure of Support to agriculture in the context of the Uruguay Round. It should announce that these ceilings will be progressively reduced, with the aim of eliminating them in the five years following the end of the current sheep and dairy agreements.

The issue of how the government should charge for the use of scarce resources has arisen several times in this Chapter: in the areas of fishing, telecommunications, electricity and biotechnology services. The issues are different in each case. In fishing, the introduction of fisheries management created a rent that enriched the original quota owners. The full extent of the rent is not clear. Quota markets suggest a higher estimate than does the stock market. The rent has been created by collective action, and there are grounds for it to accrue to the collectivity. Two possibilities arise. One would be to introduce a tax on fish production. The other would be to auction the quotas. The last method seems preferable, in that the market would determine the scale of the rent. As suggested in the last *Survey*, such a step would have to be introduced gradually, perhaps as the fish catch increases over the next decade. The issue of resource rents also arises in the area of hydro-electricity generation. In many cases, new dams are constructed on public land. In such cases, the government should receive an appropriate rent for the use of the land, just as it should when new radio frequencies are allocated for mobile telephones.

Table 25. **Action taken on past recommendations**

Recommendation	Action taken		Assessment
Financial markets			
Central Bank			
Move market making in Treasury bills from Central Bank to private sector.	No action taken.		Being the only market maker can complicate monetary and exchange rate management.
Commercial banking			
Speed up privatisation of the two banks that the government owns.	Further sale of shares end-1999. Plans to sell further shares in 2001.	+	After pause in 2000, the programme is back on track.
Savings banks			
Speed up consolidation.	A jointly-owned investment bank is now quoted on the stock market.	+	Consolidation is beginning.
Not allow local government representatives to sit on boards.	New legislation proposed.	-	Local authority presence on the boards may still be a barrier to appropriate corporate governance.
Remove limitations on individual share ownership and allow shares to trade freely with a right to a dividend.	The proposal is that local authorities will be on the board but will not own shares.	+	The proposals will clarify the ownership structure.
Investment credit funds			
Reduce government share below controlling shareholder in Icelandic Investment Bank and aim for complete privatisation as soon as possible.	All shares have been sold	✔	Bank fully privatised.
Introduce privatisation plans for the considerable number of funds that are still government owned.	No action taken.		Government involvement in the financial sector is being reduced.
Housing sector			
Create a Housing Bank by merging the three funds and privatise it	Three funds merged.	+	Housing bank pays for government guarantees.
Public pensions			
Move to a fully funded system as quickly as is feasible and place liabilities on the government's balance sheet.	Government is making significant contributions to the fund	+	The closed part of the government pension scheme is still underfunded. Privatisation proceeds might be allocated to this goal.

Table 25. **Action taken on past recommendations** (*continued*)

Recommendation	Action taken		Assessment
Labour market			
Withhold unemployment benefits from those who abuse the system.	Act allows benefits to be withheld.		Data are unavailable on the workings of the new system.
Shorten the time that benefits are paid.	No action taken.		Benefit payments are unusually long, but the integration of the management system with the public employment service may offset these work disincentive effects.
Introduce experience ratings for unemployment insurance fund, and end the subsidisation of seasonal and temporary layoffs.	No action taken.		Fisheries and other seasonal employment industries take advantage of the system.
Reduce non-daylight compensation.	Latest government contracts reduce such pay.	✔	The last public sector agreement still with such pay was changed in January 2001.
Move away from the two-stage bargaining process.	No action taken.		The 2000 pay agreement was fragmented; however, it is not clear that the government has a role to play in private-sector agreements
Education			
Implement the plan to boost teaching hours, and lengthen the school year.	Law raises hours progressively through 2000.	+	Hours are still low compared to averages across OECD countries.
Increase focus on foreign languages, natural sciences and mathematics.	No action taken.		Performances on standardised tests are sub par in science and mathematics.
Performances on standardised tests are sub par in science and mathematics.	No action taken.		Time taken is well above OECD norms.
Boost fees, and use the revenue to alleviate overcrowding at universities. Offset the effects by increasing access to student loans.	No action taken.		Students pay only $1/6^{th}$ as much in relation to GDP as the average in 17 other OECD countries with available data.
Privatisation programme			
Speed up programme generally.	Only one very small firm was privatised in 2000.	+	It will be important to stick to the privatisations planned for 2001
Implement the electricity deregulation plan as quickly as the plan allows.	Act is still under preparation.	-	There has been slippage.
Include local government-owned district heating companies in a privatisation plan.	Draft electricity act requires the separation of generation accounts from the rest.	+	Local authorities should consider privatising their holdings.

Table 25. **Action taken on past recommendations** (*continued*)

Recommendation	Action taken		Assessment
Telecommunications			
Create independent regulatory agency.	A new agency was created in 2000.	✔	The new agency has made a rapid start to liberalising the market.
Privatise the National Telephone Company.	Initial plans underway	+	Further delay should be avoided.
Develop mechanisms to ensure effective access to current network systems	Iceland Telecom obliged to offer access to its local loop.	+	Financial terms have to be agreed between the old and new operators for access to the local loop.
Supervise pricing of services not subject to competition	Included in the powers of the new agency	✔	The powers of the agency are adequate.
Separate the divisions of Iceland Telecom into separate subsidiaries.	No action taken.	+	Some financial information is now published.
Grant additional licences for mobile telephony.	New licences granted.	✔	The number of licences seems sufficient.
Fisheries			
Do not have catch limits above those recommended by MRI	The reduction in cod quota was less than recommended.	-	Stocks will not recover to previously expected levels in quotas are increased in 2001/2.
Implement automatic catch rules for other species.	No action taken.		
Consider gradual introduction of quota auctions.	No action taken.	+	Quota taxes are now on the agenda.
Remove restrictions on quota trading.	No action taken.		The distribution of fishing effort would become more efficient.
Other areas			
Reduce agricultural price supports.	New milk agreement includes a removal of some price supports in the future and some reduction in production quotas.	-	Exports of surplus products have increased markedly.
Open agriculture to foreign competition.			Unilateral liberalisation of agriculture would profit the economy.
Introduce notification for significant mergers	New Competition Act passed	✔	Powers of the Competition Authority significantly improved.
Implement additional measures to reduce greenhouse gas emissions.	Public sector entities are co-operating with foreign companies in the evaluation of hydrogen as fuel.	+	A significant reduction greenhouse gas emissions would require alternative fuels for fishing boats. This initiative could help develop techniques to be used in the fishing industry.

Note: ✔ = Action completed.
+ = Progress but more action needed.
- = Situation deteriorated.

Source: OECD.

Table 26. **New structural recommendations**

Maintain the strategy of fisheries management with some improvements

- Set overall catch quotas based on scientific advice alone.
- Change the new catch law to reduce the extent to which a downward revision of the cod quota can be overridden and ensure that fishing does not exceed the one-quarter rule in subsequent years.
- Set prudent quotas in the next few years that allow cod stocks to recover to previously estimated levels.
- Allow limited catching of minke whales, in order to better determine the interaction between the stock of cod and such whales.

Complete the introduction of competition in the telecommunications market

- Privatise a majority holding in Iceland Telecom this year.
- Auction licenses for UMTS mobile telephony.
- Ensure effective implementation of the key provisions of the new Telecommunications that are designed to promote effective competition.
- In particular, ensure full access to the unbundled local loop at prices that reflect the long-run cost of providing such a service.

Introduce legislation to open the electricity market to competition

- Split power generation and distribution.
- Allow competition in the retail sale of electricity.
- Consider the privatisation of municipally-owned distribution companies.
- Sell the central and local government holdings in the National Power Company.

Change legislation governing the Central Bank in order to ensure its independence

Source: OECD.

NOTES

1. The ratio of housing investment to GDP — at around 3½ per cent — is lower than anywhere else in the OECD except Sweden and Norway.

2. The Marine Research Institute recommended total allowable catch limits for minke and fin whales for the fishing year 2000-01. Between 1977 and 1985, the annual minke whale catch was approximately 200 animals. Since 1985, no minke whales have been taken because of the temporary ban on whaling. Between 1948 and 1985, the average annual catch for fin whales was 234 animals. Scientific whaling permits allowed about 73 fin whales to be caught each year between 1986 and 1989, but no whaling has occurred in Iceland since 1990.

3. In 1999, the labour-force participation rate for workers aged 55-64 was 87.1 per cent in Iceland, compared with an average of 51.6 per cent in the OECD, and 73.6 per cent in Switzerland, which had the second highest figure for that age group.

4. Real increases in the capital stock have been particularly large since 1995 for aluminium and ferro-silicon plant; computers, software and other office machines; and telecommunications equipment.

5. Contractual wage increases for teachers are similar to those negotiated in the private sector, but, in addition, pay schedules have been raised 10 per cent in exchange for a flatter age-earnings profile, and pensions have been boosted 27 per cent as overtime pay is rolled into base pay, as occurred for other public-sector employees in 1997.

6. With a weight of 4¾ per cent in the CPI, this deceleration took about ¾ percentage point off the increase in the overall CPI.

7. In 2000, business debt is estimated to have risen 26 per cent following a 29 per cent rise the previous year.

8. Higher tax payments resulted from the strength of earnings in 1999 and from the end of loss carry forwards based on losses incurred during the downturn earlier in the 1990s.

9. A one-year surge in the current account deficit in 1971 that resulted from a 42 per cent increase in investment is the closest to the present situation of demand-generated deficits. However, that increase was temporary.

10. The permanent increase in the level of output is estimated to be between 0.4 and 1.3 per cent for GNP, and 0.8 and 1.5 per cent for GDP, compared with a baseline scenario that does not include the Noral project. The impact is larger for GDP, since GDP does not include transfers and income paid to foreigners, which are included in GNP. There is also believed to be a small favourable effect on the budget balance — of the order of one-third to one-half per cent of GDP.

11. The central rate for the official currency index was last changed in June 1993 (with a 7½ per cent devaluation) when the allowable fish catch was cut 20 per cent. Between 1994 and 1997 the exchange rate was very stable around the central rate. This stability was maintained by restrictions on foreign-exchange trading and heavy Central Bank involvement in foreign-exchange transactions. When capital flows were liberalised in mid-1995, the bands around the central rate were widened to ±6 per cent (up from ±2¼ per

cent). In 1997 the inter-bank market for foreign exchange was restructured, and the Central Bank largely removed itself from participation in that market. The exchange rate fluctuated within a fairly narrow range during 1997 and 1998, as the differentials of domestic over foreign interest rates remained relatively stable.

12. Although the Central Bank intervened on only a few days in June, it accounted for 3 per cent of all transactions in that month. The Central Bank had not transacted in the inter-bank market for foreign exchange in more than a year prior to that point.

13. On 20 October 2000, the Central Bank issued new rules for the foreign-exchange market that withdrew the authorisation for participants to temporarily suspend trading even under exceptional circumstances.

14. Pension funds have been in the process of diversifying their portfolios for the past few years. In 1997, they held around two-thirds of the entire stock of housing-related bonds, but by end-1999 this share had fallen to less than 50 per cent. In May 2000, the legal limit on foreign-denominated investments was raised to 50 per cent from 40 per cent of pension funds' net assets, giving them considerable leeway to expand their holdings of foreign securities. As a result, foreign bonds and equities rose to 23 per cent of pension assets in November 2000 from 19 per cent at end-1999.

15. The return on equity was 9 per cent in the first half of 2000, nearly half of the 17.8 per cent average for 1999.

16. Underlying expenditure is defined as total spending less capital outlays, maintenance, interest and pension contributions.

17. For a further discussion of excise and usage taxes, see Chapter III.

18. Local governments receive transfers from central government through the MEF. The aggregate size of this pool of transfers is determined as 1.4 per cent of the central government's direct and indirect tax receipts plus 0.264 per cent of the previous year's income tax base, plus part of the local authorities own tax receipts. The pool is then reallocated across all municipalities according to a needs-based formula.

19. In the domestic market alone (apart from Treasury bills) the proportion rises to 13 per cent.

20. This will be the outcome assuming that only Icelanders are willing to hold króna-denominated assets and that the Central Bank does not itself provide the Treasury with the foreign currency to make the debt repayment.

21. The rate prior to the changes (that is, in 1996) was 6.93 per cent except for agriculture, manufacturing, hotels, restaurants, car rentals, film production and computer software services (where it was 3.63 per cent) and fisheries (4.28 per cent). The average rate was estimated at 5.5 per cent.

22. This ensures that unused tax credits of one spouse cannot be used to reduce capital income tax payments of the other spouse.

23. A tax loss could occur in the following cases. The pensioner has no other income on retirement in which case part of the pension would be set against the tax credit. However, all Icelanders receive a basic state pension on retirement, the tax on which exceeds the tax credit. A further possible loss could occur through pension contributions being offset against the higher marginal tax rate than the rate at which pensions are taxed. This loss will be limited in Iceland since the difference between the higher and lower tax rate is only 7 percentage points. Against these losses, if the return on pension-fund assets exceeds the government borrowing rate, the government gains tax revenue. This has generally been the case in the past.

24. In effect, people who invest in shares have an overall tax credit that is about 17 per cent higher than those who do not invest in equities, for those who pay the standard rate. The gain amounts to $610 per year.

25. The 600 000 krónur limit is set with respect to the exercise price, even if the market price and exercise price are the same when the option is issued. Profits from the exercise of such options are treated as capital income provided that the options are available to all employees, that there is at least a 12-month gap between the grant and the exercise of the option and that the shares are held for two years after the exercise date. Prior to the 2000 budget, gains from the exercise of options were treated as employment income.

26. A more logical method would be to price the option when granted using a standard options-pricing model and to tax this value as employment income at that point in time. Any gain would then be taxed as capital income when it was realised.

27. A cohabiting couple would receive the same allowance as a married couple. A woman who is neither cohabiting or married receives the higher allowance.

28. The phase-out rate for a child allowance was 5 per cent when there is one child in the family, 4.5 per cent with two children and 3.67 per cent for three children.

29. In 2000, the allowance for a family with two children was eliminated at a similar household income level.

30. The average tax rate is defined as the complement of the ratio of actual allowances plus post-tax income to the maximum allowances plus pre-tax income. All income is assumed to come from employment. The calculation is based on a couple with two children and an interest allowance, before means testing, of 180 000 krónur.

31. Depreciation is generally only allowed against a wasting asset. Provided that the government continues to restricted fishing to sustainable levels, the quotas should not fall in value over time. Thus, a fishing quota is more akin to a non-depreciable bond than to an investment good. The purchase price of quotas cannot be set against tax, though rental costs can.

32. The breakdown is as follows: unemployment insurance 1.15 per cent; workplace accidents, 0.08 per cent; pension contribution guarantees 0.04 per cent; childbirth leave 0.8 per cent; other social insurance programmes, 3.11 per cent; Export Council, 0.05 per cent.

33. Indeed, it could be argued that social security taxation in Iceland should be allocated to the category of payroll taxation, though this is not current OECD or Icelandic practice.

34. To the extent that labour supply is elastic, both the payroll tax and the tax on employment income will lower pre-tax wage rates and the overall participation rate.

35. If the yield on rental housing is 5 per cent, the property tax equates to a tax on imputed capital income of between 7 and 10 per cent — similar to, but no more than the statutory rate on other forms of such income.

36. The key rates are: leases, 2.0 per cent; bonds, 1.5 per cent; new equity issues and zero coupon bonds, 0.5 per cent; house purchases, 0.4 per cent; and bills of exchange, 0.25 per cent.

37. For example, Denmark abolished its new issue tax in October 1999.

38. The surcharge of 0.25 per cent for people between 16 and 67 is paid to the National Library.

39. For bequests to parents, or their descendants, the tax rate varies between 15 and 25 per cent. For other recipients the rate varies between 30 and 45 per cent.

40. This figure is measured in relation to the ex-tax value of private consumption.

41. Income that accumulates in pension schemes is not subject to capital income tax, but this is not necessarily discriminatory, given the tax treatment of pension payments.

42. Prior to the 2001 budget, realised capital gains were not taxed if they were reinvested within 60 days. Realised gains that were not reinvested were taxed as employment income if they were over 3.18 million krónur per year (around $38 000). Gains of under 348 000 krónur are exempt from taxation, if the asset was acquired between 1990 and 1996 and has been held for four years.

43. A similar situation exists with respect to the electromagnetic spectrum, which is of substantial value to telecommunications services providers, a value that should optimally be appropriated by the state through an auction procedure.

44. In the autumn of 2000 a committee of experts and politicians recommended the adoption of resource taxation, but limited their proposal to charge a fee to cover certain costs incurred by the government for the industry.

45. It is anomalous that at the same time as part of the VAT on building labour is rebated, building materials are subject to a specific tax of 14 per cent in addition to VAT.

46. Housing investment amounted to 20.5 billion krónur in 2000. If labour costs amounted to 50 per cent of the total and the VAT rebate was 60 per cent of the standard rate of 24.5 per cent, then the subsidy is 0.6 times 0.245 times 10.25 billion krónur.

47. Its net profits fell 78 per cent in 2000 from their *pro forma* combined 1999 level, though management views the merger as having been successful, since most of the weakness is attributable to losses on investment securities. The resulting company acquired a bank in Latvia in 2000.

48. This offering was priced much closer to what proved to be market value, as the first-day premium in the shares was only 10 per cent against a 30 per cent premium for the first block of shares. Subsequently, a major US bank became a minority shareholder in one of them, as the result of a share exchange in which the Icelandic bank purchased a London-based subsidiary of the US bank.

49. Of the remaining 56 per cent of the new stock, three-quarters was allocated to employees of the bank and the savings banks. The remainder was allocated to the Faeroese Savings Bank. After the new issue, the largest shareholder in Kaupthing will be the Reykjavik Savings Bank.

50. The branches of any bank established in the EEA area may join the Fund, if they are not members of a similar institution elsewhere in the EEA. Other foreign branches shall be members unless they are members of a similar scheme in their home country.

51. The Minister of Commerce appoints two members of the board, two are nominated by commercial banks, one by savings banks and one by securities companies.

52. Nevertheless, the growing intensity of utilisation of the GSM networks has generated significant profits for Landssíminn, amounting to 54 per cent of its overall profits in 1999. Its net margin in mobiles was 12.7 per cent of revenue, while elsewhere it was only 3.3 per cent. No split of assets between the mobile and general telephone system is available from Landssíminn's accounts.

53. Non-standard termination points allow the inter-connection of different networks. They are often situated in the local exchanges of the historic monopolist.

54. Any company with over 25 per cent of a given geographical market is presumed to have significant market power. However, market share is only one indicator that has to be taken into account when evaluating market power. Such a threshold may neither be necessary nor sufficient for the existence of such power.

55. Íslandssími is linked to ÍslandsbankiFBA, while Landssíminn is allied with Búnaóarbankinn and Lándsbankinn.

56. All electricity is generated either from hydro or geothermal sources. The latter is only partly renewable, as there is only a fixed stock of hot water in the earth's crust.

57. The University of Iceland, the Icelandic Research Institute, Reykjavik Municipal Power Company, the Reykjanes Geothermal Power Company, the New Business Venture Fund — a company established in 1998 when the Investment Credit Funds were reorganised —and the Icelandic Fertiliser Company.

58. The payment is indexed to the CPI. It can be reviewed at the end of six years, if the company's profitability is not firmly established. However, it cannot be reduced to less than 50 million krónur per year.

59. The PSE in 1999 was 68.5 per cent of the value of output. The difference between farmers' actual incomes and their hypothetical income from selling on world markets, with no transfers from the government, is equivalent to the reciprocal of the complement of the producers' support equivalent.

60. Fishing years begin in September and so overlap two calendar years.

61. One-third is the quotient of the risk-free rate of return and the yield on quotas.

62. The cod quota for 2000-01 is 220 000 tonnes, the price of quota was ISK 750 000 per tonne in December 2000, while GDP amounted to an estimated 676 billion krónur in 2000. Thus, the total capitalised value of the quota is ISK 165 billion or 24 per cent of GDP. With a risk-free return of 5 per cent per year, the rent is 1.2 per cent of GDP.

63. This was because the companies had announced their merger in a radio news programme that was not monitored by the Authority.

64. There are two civil service pension funds. One is for staff recruited before the pension system was revised. The other is for all new entrants and the existing staff who chose to switch plans. The new plan has been fully funded since it inception.

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ANNEX I

MAIN FEATURES OF THE TAX SYSTEM IN 2001

Table A1. **Taxes levied on corporate income: standard regime**

Nature of tax

- Resident companies are liable for both national income tax and net wealth tax. Municipal taxes are not levied on corporate profits.
- In practice, a company is resident if it is registered with the Company Registrar of Iceland (*Fyrirtækjaskrá*). Funds are resident if their place of effective management is in Iceland.
- Since 1999, Iceland has had a "classical system" of corporate taxation, where corporate profits are fully taxed and distributions from the taxed profits to shareholders are taxed at 10 per cent.
- The taxable base is net income, *i.e*. income after deduction of business expenses and certain allowances provided by law. To counteract the effects of inflation on the income tax base, a price adjustment factor (PAF) is applied to the various items of income and expenses for the determination of net taxable income from business operations.
- Resident companies are subject to income tax on their worldwide income.
- Capital gains derived by a company from the disposal of assets used in a business operation or held as an investment, whether depreciable or not, constitute taxable income, regardless of the holding period. In certain cases, taxation of capital gains can be deferred or spread over a period of successive years.
- The taxable gains are calculated as the sales price of the asset less its depreciated book value, adjusted for inflation. For non-depreciable immovable property the gains are the difference between the sales price of the property and its cost of acquisition, adjusted for inflation. Taxpayers also have the option to declare an amount equal to 50 per cent of the sales price as taxable capital gains.
- The tax year is the calendar year.

Exemptions, credits and allowances

- Resident companies (joint-stock companies and limited liability companies) which meet certain requirements can receive a licence to operate as an international trading company (ITC) in Iceland.
- Dividend payments between domestic companies are exempted from the withholding tax. There is, however, a 20 per cent withholding tax on dividends payments and capital gains paid from domestic companies to foreign companies, except in case of a double tax treaty, where it can be lower or even zero.
- There is no withholding tax on royalties paid to resident companies.
- The net operating loss of a company, as adjusted annually for inflation, may be carried forward for eight years. Carry-back is not allowed.
- A straight-line depreciation method is employed for calculating depreciation for income tax purposes.
- The residual value of movable or immovable property amounting to 10 per cent of the depreciation base, as adjusted, is not depreciable; *i.e*. 10 per cent of the original value of the asset remains on account until it is scrapped or sold.
- Assets subject to ordinary depreciation are classified in various categories, with different yearly depreciation rates:

Category	Rate (%)
Ships, aircraft and cars carrying fewer than 9 persons (except taxis)	5-10
Automobiles and other transport vehicles	10-20
Industrial machinery and equipment	5-15
Office equipment	10-20
Machinery and equipment for building and construction	10-20
Other movable property	10-20
Buildings and other structures, *e.g*. office buildings, industrial plants and storage tanks	1-3
Quays	6-8
Drilling holes and electric transmission lines	7.5-10
Patents, copyrights and other similar rights	15-20
Goodwill	10-20

- Depletion of mines, quarries and other natural resources must be deducted from income as depreciation, by the unit-of-production method.
- Companies and their subsidiaries may be jointly taxed, provided the subsidiary is at least 90 per cent owned by the present company.

Rates

- For the income year 2000, the national corporate income tax rate is 30 per cent on net profits. The rate is 38 per cent for unincorporated enterprises (or partnerships) registered as distinct legal entities. ITCs are subject to corporate income tax of 5 per cent, dependent on certain conditions.

Source: International Bureau of Fiscal Documentation (2000) and Ministry of Finance.

Table A2. **Taxes levied on household and other business income: national and municipal taxes on taxable income**

Nature of tax

- Resident individuals are subject unlimited tax liability on all their incomes, wherever earned, in terms of national and municipal taxes. Any individual staying in Iceland for six months or longer is considered a resident. Former residents remain subject to unlimited tax liability for three years after leaving the country, unless they prove they have become subject to taxation in another country.
- The concept of taxable income is wide and includes all payments in money and other property whose monetary value can be ascertained. Taxable income is divided into three main categories.
  - A: wages and salaries, including presumptive employment income of the self-employed, employment related benefits, grants, payments to copyright holders, royalties, etc.
  - B: income from business and independent economic activities.
  - C: investment income of any description, including dividends, interest and capital gains.
- The taxable base for individuals not engaged in business is income in categories A and B. For individuals engaged in business, it is the aggregate income of all three categories. Individuals engaged in business are subject to the same rules and taxes as companies.
- For individuals not engaged in business, the tax on income from category C is levied by way of assessment. Withholding tax on dividends collected in the preceding tax year is credited against the tax levied by assessment. The withholding tax on interest is, however, final.
- Investment income of married couples, and of cohabiting persons who are treated as married couples for tax purposes, is taxed in the hands of the spouse whose total employment income is the higher. Other types of income are taxed separately.
- In principle, all "benefits in kind" are included in taxable income. In some cases, *e.g*. company cars, special rules apply.
- Pension benefits (including supplementary benefits) are taxable income.

Exemptions, credits and deductions

- All individual taxpayers are entitled to a personal *tax credit* against the computed income tax from all income categories. This credit amounts to ISK 747 828 for the assessment year 2001 (tax year 2000). If the credit is higher than the tax, the difference will be applied by the State Treasury to settle the municipal and net wealth taxes payable. In the case of a married couple, 85 per cent of the unused credit is added to the credit of the other spouse.
- A seaman's *tax credit* (*sjómanna afsláttur*) is a fixed amount for each week registered spent on sea.
- Different *exemptions* apply to the categories of taxable income. Only exemptions expressly provided for by law may be *deducted* from incomes in categories A, while operating losses may be *deducted* from category B income.
- Net operating loss, adjusted annually for inflation, may be *carried forward* for eight years. Carry-back is not allowed.
- A *deduction*, up to a given maximum, is permitted from an individual's total income for increased investment in a business, including co-operatives and savings banks. Qualifying investments include the purchase of shares in companies fulfilling certain requirements.
- There is an annual limit for individuals on the amount of *capital gains* subject to the standard withholding tax (From the beginning of the year 2001, that limit has been abolished, and capital gains are now subject to 10 per cent capital tax as other capital income).
- *Capital gains* on the sale of a private residence are exempt if the residence has been owned by the taxpayer for at least two years and its size is within certain limits. If the residence has been owned for less than two years, the gains may be rolled over through a reduction in the acquisition cost of another residence. Taxation of such gains may be deferred for two years.
- A *tax deduction* is in effect for purchases by individuals of domestic or foreign stocks, with 60 per cent of the purchase price deductible from income tax, up to a limit of ISK 133 333 for individuals and double that for couples. The purchaser must, however, hold the shares for five years to be eligible for the deduction. Should the shares be sold, he must reinvest within 30 days in other shares, or otherwise be liable for tax on the capital gains.
- Stock options are eligible for this *tax deduction*, provided *a)* they are available to all employees, *b)* that a minimum of 12 months passes between the stock option contract and its exercise date, and *c)* the employee holds the stock for at least two years after the purchase.
- The State Treasury pays individuals a benefit which is means-tested both with respect to income and net wealth, for the interest incurred on the financing of a residence for personal use. The benefit is paid through the income tax system.
- The State Treasury pays individuals a benefit that is means-tested with respect to income and varies with the number of children and whether the both the family has one or two parents. The benefit is paid through the income tax system.
- Employee contributions to pension funds of which 4 per cent is compulsory and which can be increased voluntarily up to 8 per cent of total employment income are *deductible* Otherwise, no significant deductions are allowed from employment income.

Table A2. **Taxes levied on household and other business income: national and municipal taxes on taxable income** (*cont'd*)

Rates	
• For the assessment year of 2000 (tax year 1999), the rate of national income tax on aggregate income (*tekjuskattur til ríkisins*) is 26.41 per cent. • The municipal income tax (*útsvar*) rate varies between 11.24 per cent and 12.04 per cent, with an average of 11.93 per cent. • The total tax rate — the sum of the national and municipal income taxes — is 38.37 per cent. • An additional tax (*sérstakur tekjuskattur til ríkisins*) of 7 per cent is levied on aggregate income in excess of ISK 3 277 950 (ISK 6 555 900 for couples).	• Capital income (category C income) derived by individuals not engaged in business is taxed separately at a flat rate of 10 per cent. • For individuals engaged in business, capital income is taxed in the same manner as other income. • Losses on the sale of property are generally not deductible; however, they may be deducted from *gains* made on the sale of a similar property in the same year.

Source: International Bureau of Fiscal Documentation (2000) and Ministry of Finance.

Table A3. **Social security contributions**

Employers' social security contributions	Individual social security contributions
Nature of the tax	
• Social security contributions (*tryggingagjald*) are imposed on all renumeration paid for dependent personal services. The contributions are partly used to finance the social security system. Social security contributions are payable only by employers. • The same social security and bankruptcy contributions are imposed on the presumptive employment income of self-employed individuals.	• Individuals do not pay a specific social security charge. • All individuals aged between 16 and 69 pay a fixed contribution to the Construction Fund for the Elderly.
Exemptions, credits and allowances	
• Employer contributions to employee social security plans are deductible as an operating expense. The norm is 6 per cent. For supplementary payment of the employees contributions up to 4 per cent, the additional employer contribution up to maximum 0.4 per cent is deductible from the social security tax.	• People with an income under ISK 718 401 are exempt.
Rates	
• For the assessment year 2001 (tax year 2000), the general rate for all activities not explicitly exempt is 5.23 per cent. • A special rate of 5.88 per cent applies to seamen. • A contribution to the bankruptcy fund (*ábyrgðarsjóðsgjald*) is imposed on the same base, at a rate of 0.04 per cent. This fund covers unpaid employee wages due to bankruptcy.	• The contribution is ISK 4 162.

Source: International Bureau of Fiscal Documentation (2000) and Ministry of Finance.

Table A4. **Taxes levied on consumption and investment**

Value-added tax	Excise duties
Nature of the tax	
• Value added tax is levied on the supply of goods and services. • All taxable persons selling goods and services are required to register for value added tax *(virðisaukaskattur)* in Iceland. These include: ° entrepreneurs (companies, partnerships and individuals) carrying on a business or trade involving the supply of taxable goods or services; ° co-operatives and other societies, even if they are tax exempt organisations in competition with other enterprises; ° public utility enterprises; ° the government, county and municipal organisations and public enterprises in competition with commercial undertakings; ° auctioneers; ° agents and other representatives of foreign-owned enterprises. Non-residents without an office or fixed place of business in Iceland must appoint a local representative for VAT purposes.	• The excise duty on motor vehicles is assessed on the basis of engine displacement (cubic centilitres). • The excise duty on petrol is at a fixed rate. • Tobacco and alcohol are assessed on the basis of product type and volume respectively. • An excise tax is levied on certain electrical goods and building materials. • A VAT is applied on top of excise taxes.
Exemptions, credits and allowances	
• A zero tax rate applies to international transport, fuel and equipment used in ships and aircraft engaged in international traffic, and shipbuilding. • A reduced VAT rate applies to the supply of the following goods and services: ° Hotel rooms, rooms in guest houses and other accommodations, as well as campground facilities; ° newspapers, magazines, periodicals (local or national) and books in Icelandic, whether written by Icelandic authors or translated; ° licence fees to use radio and television broadcasting services; ° warm water, electricity and fuel oil used for heating of houses and swimming pools; ° all foodstuffs, except sweets and soft drinks.	• Alcohol under 2.25 per cent volume is not subject to an excise tax. • Cars purchased for use as taxis or hire-cars pay a lower tax rate.
Rates	
The standard VAT rate is 24.5 per cent and the reduced VAT rate is 14 per cent.	• ISK 5 870 per each per cent of alcohol by volume exceeding 2.25 per cent. • 45.45 per cent is applied to cigarettes, and between 38.4 per cent and 38.9 per cent applies to other types of tobacco products. • The fixed rate excise tax on unleaded petrol is ISK 39.10 per litre and ISK 40.93 per litre for all other petrol. • Other excise rates: Per cent Building materials, auto parts 15 Household appliances 20 Electronic appliances 25 Vehicles with an engine size 0-2000 ccs 30 Vehicles with engine size larger that 2000 ccs 45

Source: International Bureau of Fiscal Documentation (2000) and Ministry of Finance.

Table A5. **Taxes levied on property**

Real estate	Net wealth	Inheritance and gifts
	Nature of the tax	
• Municipalities levy a real estate tax (*fasteignagjöld*) on the estimated value of immovable property, based on size, etc. • Immovable property is assessed at the real estate assessment value effective at the end of the year.	• Individuals aged 16 years and older are liable for the net wealth tax (*eignarskattur til ríkisins*). Individuals between 16 and 67 years are also subject to the extraordinary net wealth tax (*sérstakur eignarskattur til ríkisins*). • The taxable base for net wealth tax purposes is the aggregate value of an individual's assets at the end of the tax year, less his liabilities. The taxable base of married couples, or cohabiting couples taxed as if married, is divided equally between them, and each individual is taxed separately. Shares are assessed at their par value. • Companies pay wealth tax on the value of their share reserves. • Net worth of individuals exceeding ISK 3 836 619 is subject to net wealth tax, while a net worth exceeding ISK 5 277 058 is subject to the extraordinary net worth tax. The starting amount is doubled for couples.	• Inheritance tax is imposed by the state on property acquired by inheritance. The tax is not imposed on the estate of the deceased, but separately on each beneficiary in respect of his share in the estate. • There is no gift tax in Iceland, but gifts are taxable as income in accordance with the general principles. However, gifts given on particular occasions may be exempt if their value is not greater than what is the normal practice.
	Exemptions, credits and allowances	
	• An individual may deduct certain assets from his taxable assets. These assets include deposits in resident banks and depository institutions, certain debt instruments and shares up to a certain maximum. • The assets so deducted may not exceed the total liabilities, and provided the assets are not related to a business or an independent economic activity. • Holdings of government savings bonds, up to ISK 2 million for individuals (double that for couples) may be deducted from assets. This exception ends in 2001.	• Exemptions apply to inheritances to a spouse or a cohabitant and charitable organisations.
	Rates	
• The amount of real estate tax varies, depending on the municipality.	• The rate of the net worth tax is 1.25 per cent and that of extraordinary net worth tax 0.25 per cent	• The rate of tax depends on the amount of inheritance and the relation between the deceased and the beneficiary. The lowest rate being 5 per cent (for children) and the highest 45 per cent.

Source: International Bureau of Fiscal Documentation (2000) and Ministry of Finance.

ANNEX II

CALENDAR OF MAIN ECONOMIC EVENTS

1999

December

The Treasury sells 15 per cent of its holdings in Landsbanki (National Bank of Iceland) and Búnadarbanki (Agricultural Bank of Iceland), reducing the government's share in these banks to 72 and 73 per cent, respectively.

The Central Bank sets new liquidity rules for credit institutions subject to reserve requirements. These rules provide for a comprehensive assessment of financial institutions' liquid assets and liabilities.

The 2000 budget is passed by the Althingi. Revenues are expected to rise 1 per cent, and expenditures are projected in remain nearly unchanged from 1999. The surplus is projected to rise to nearly ISK 17 billion, or 2.4 per cent of GDP.

The Telecommunications Act is passed to prevent anti-competitive behaviour in this sector. It also imposes universal service requirements and other public-service obligations on licensees.

2000

January

The Central Bank Act is amended to transfer responsibility for the Bank from the Minister of Commerce to the Prime Minister.

The Central Bank raises its interest rates by 80 basis points to 9.8 per cent.

New rules on indexation go into effect, with the permissible difference between credit institutions' indexed assets and liabilities extended from 20 per cent to 30 per cent of equity.

A new act comes into effect creating the Depositors' and Investors' Guarantee Fund, with two independent departments for deposits and securities trading.

The Post and Telecom Administration, an independent government agency reporting to the Minister of Communication, is created with the responsibility of issuing licenses according to the terms of the Telecommunications Act and ensuring compliance with the provisions of those licenses.

February

The Central Bank raises its interest rates by 30 basis points to 10.1 per cent and announces that it has widened the exchange rate bands from ±6 per cent to ±9 per cent.

New rules on the inter-bank market for króna go into effect, extending the maturity of inter-bank loans to 9 and 12 months.

March

FBA (The Icelandic Investment Bank) is granted a licence by the Minister of Commerce to operate as a commercial bank. It had been privatised earlier, in October 1999.

Wage agreements valid into the year 2003 are signed for the majority of private-sector workers. Under these agreements, monthly wages below ISK 70 000 (about $1 000 at the time) increase by 8.9 per cent in 2000, with smaller increases for higher earners. Overall, the average increase is estimated at 5 per cent for 2000.

May

Two market makers for treasury instruments announce their intent to cease market making due to displeasure with the information provided by the issuers on the schedule for new issuance and buybacks.

The Marine Research Institute recommends quotas for the 2000/01 fishing year, which are substantially lower than the previous year's allocation based on a reassessment of available stocks.

The government signs an agreement with the National Power Company and domestic and foreign investors to acquire the necessary information needed to make a final decision on the Noral project by February 2002.

The Pension Fund Act is amended to raise the limit on foreign-currency denominated investments from 40 to 50 per cent of pension funds' net assets.

June

The Central Bank raises its interest rates by 50 basis points to 10.6 per cent.

The Debt Management Agency and the Housing Financing Fund (separately) sign new agreements with banks to provide market making in treasury bonds and in housing bonds and housing fund bonds, respectively. The agreements define maximum bid-ask spreads and establish the turnover commission for market making. And in response to earlier complaints, the agencies also agree to provide information to the market on a regular market regarding actions that may have an impact on bond prices.

Íslandsbanki and FBA merge and begin operations as Íslandsbanki-FBA.

The Iceland Stock Exchange becomes a member of NORAX, a co-operative framework for Nordic stock exchanges.

July

The inter-bank foreign-exchange market is closed for two hours by market makers because of heavy trading and a sharp depreciation of the currency.

Currency basket weights that make up the official exchange rate are updated, giving greater weight to the pound, the US dollar and the currencies of Nordic countries and less weight to the euro and Swiss franc.

Trading of DeCode Genetics' shares begins on Nasdaq.

Landsbanki purchases a minority of shares in a British investment bank. In return, its owner — First Union National Bank — an American bank, acquires a 4 per cent stake in Landsbanki, the first foreign direct investment made in Iceland's banking system. As a result, the government's share falls to 68 per cent.

September

The number of market makers for housing bonds and housing fund bonds expands from two to five.

October

The draft treasury budget is presented to parliament, assuming a surplus of ISK 30 billion.

The government instructs Búnadarbanki and Landsbanki, the second and third largest banks, to initiate discussions on a merger and to seek prior approval of the Competition Council.

New rules for the inter-bank market for foreign exchange go into effect. A provision authorising market makers to temporarily suspend trading is withdrawn, and the minimum amount for trading is raised from $1 million to $1.5 million.

In a move to significantly increase the capital of the investment bank, Kaupthing, the savings banks offered 44 per cent of the new stock to the public in an initial public offering on the Iceland Stock Exchange. The remainder of the stock was offered to the employees of the bank and the savings banks and to the Faeroese Savings Bank.

November

The Central Bank raises its interest rates by 80 basis points to 10.8 per cent.

A nation-wide strike of secondary teachers begins.

December

The budget is passed by the Althingi. For 2001, revenues (including those resulting from privatisation) are expected to rise 13 per cent, and expenditures are projected in increase 9 per cent. The

surplus is projected to rise to ISK 34 billion, or 4.7 per cent of GDP, the largest surplus ever. Many of the proposed spending cuts from the October proposal were dropped.

The Competition Council rules against the proposed merger of Búnadarbanki and Landsbanki on the grounds that is would damage competition.

The Anti-Competition Act passes, requiring large companies to notify the Competition Council of proposed mergers. The Competition Council can set conditions for mergers and can ban them if a dominant position would develop.

2001

January

Under last year's wage agreements, private-sector base wages rise by an average of 3¾ per cent. The lowest paid receive a 6½ per cent increase but the highest paid receive only 3 per cent.

The strike with secondary teachers is settled with a new contract that involves large pay raises; the agreement brings them into the public-sector wage system.