1991/1992

OECD ECONOMIC SURVEYS

ICELAND

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ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

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

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

The original Member countries of the OECD are Austria, Belgium, Canada, Denmark, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. The following countries became Members subsequently through accession at the dates indicated hereafter: Japan (28th April 1964), Finland (28th January 1969), Australia (7th June 1971) and New Zealand (29th May 1973). The Commission of the European Communities takes part in the work of the OECD (Article 13 of the OECD Convention). Yugoslavia has a special status at OECD (agreement of 28th October 1961).

Publié également en français.

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BASIC STATISTICS OF ICELAND

THE LAND

Area (1 000 sq.km)	103	Unproductive area (1 000 sq.km)	82
Productive area (1 000 sq.km)	21	*of which:*	
of which:		Glaciers	12
Cultivated area	1.1	Other area devoid of vegetation	70
Rough grazings	20		

THE PEOPLE

Population, 1st December 1991	259 581	Occupational distribution, 1989 (per cent):	
Net increase 1981-90, annual average		Agriculture	5.1
(per cent)	1.1	Fishing and fish processing	11.8
		Other manufacturing	12.9
		Construction, total	10.7
		Commerce	14.9
		Communications	6.8
		Services and other	37.8
			100.0

GOVERNMENT AND PARLIAMENT

	1987	1991
Parliament, number of seats:		
Independence Party (Lib. Cons.)	18	26
Progressive Party (Agrarians)	13	13
Peoples' Alliance (Socialists, Communists)	8	9
Social Democratic Party	10	10
Citizen's Party	7	-
Women's Alliance	6	5
Other	1	-
	63	63

Last general election: April 1991

PRODUCTION AND CAPITAL FORMATION

Gross national product in 1991:		Gross fixed capital formation in 1991:	
IKr million	367 532	IKr million	72 700
Per head, US dollars	23 917	Per cent of GNP	19.8

FOREIGN TRADE

Exports of goods and services in 1991,		Imports of goods and services in 1991,	
per cent of GNP	34.5	per cent of GNP	35.5
Main exports in 1990 (per cent of merchandise		Imports in 1990, by use (per cent of merchandise	
exports):		imports):	
Fish products	75.5	Consumer goods	31.0
Aluminium	10.4	Investment goods	32.0
Other manufacturing products	10.0	Intermediate goods (excl. fuels)	27.3
Agricultural products	1.9	Fuels and lubricants	9.7
Miscellaneous	2.2		

THE CURRENCY

Monetary unit: Krona		Currency units per US dollar,	
		averages of daily figures:	
		Year 1991	59.2
		March 1992	59.6

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

This Survey is based on the Secretariat's study prepared for the annual review of Iceland by the Economic and Development Review Committee on 6th April 1992.

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After revisions in the light of discussions during the review, final approval of the Survey for publication was given by the Committee on 22nd April 1992.

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The previous Survey of Iceland was issued in June 1991.

Introduction

There was a modest respite in 1991 from the economic slump, which began in 1988, but in 1992, output is expected to drop, and little growth can be expected in 1993. Although fish prices have been strong, the cod and capelin catches are down, depressing export income. The near-term outlook for the fishery is one of poor catches and, probably, falling prices; and softness in the world aluminium market resulted in the postponement of the project to build a new smelter, which had been set to begin in late 1992. The 1991 budget deficit proved to be larger than planned, as fiscal policy was loosened in the run-up to the election in April 1991. Partly as a result, demand pressures built up toward the middle of 1991, and the inflation rate began to rise again. Nevertheless, this was reversed in the second half of the year, and the striking reduction of inflation, which followed the wage-price agreement between firms, unions and government in early 1990, was maintained. The wage agreement expired in September 1991 and, at the time of writing, negotiations were underway to replace it.

As measured by revenues or expenditures as a fraction of GDP, Iceland's public sector is small by comparison with other OECD countries. Nevertheless, the Treasury deficit remains uncomfortably large, and reducing it has proved difficult in the depressed economic climate. The public sector borrowing requirement is very large and has been growing rapidly, but this has mainly been due to the growth of private-sector mortgage borrowing. Iceland is unusual in that the government still plays a predominant role in the mortgage market, and includes this form of financial intermediation in its borrowing requirement.

The government has historically played a large role in the economy, especially through its control of capital markets. As recently as ten years ago, the domestic allocation of capital, international financial transactions and interest rates were almost entirely determined by the government or by public-sector institutions. Since then, large strides have been made to liberalise these markets,

although substantial government involvement remains. The government plans to reduce its role in capital markets further, a policy which reflects, in part, the prospect of closer relations with the European Community as envisaged by the European Economic Area agreement.

The first Chapter reviews recent economic developments and lays out short-term prospects for Iceland's economy. The second Chapter discusses several structural reforms, including the implications of the new European Economic Area, the reformed fishing quota system, the Fisheries Equalisation Fund and changes in the agricultural subsidy programme. Chapter III examines the government's role in capital markets, concentrating on Investment Credit Funds, short-term capital and currency markets and the government-run mortgage scheme. Chapter IV discusses fiscal developments at both the central and local levels of government, and Chapter V presents conclusions.

I. Recent developments, policies, and prospects

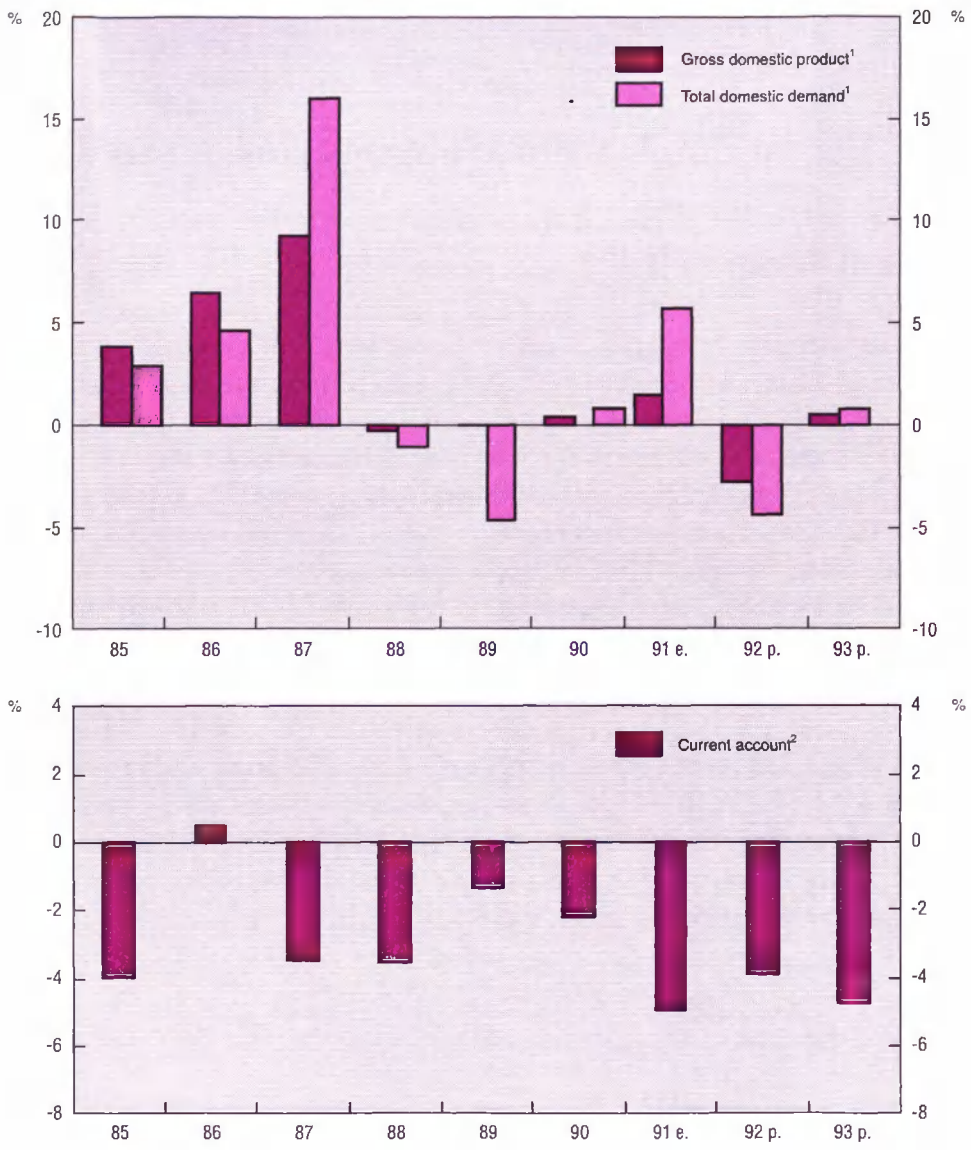
Recent developments

Real GDP rose by 1.4 per cent in 1991, following little growth in 1989 and 1990. A major factor behind the mediocre growth performance in 1991 was the fish catch, which was smaller than had been expected, although other exports were also depressed. The current account deficit widened as the shortfall in the fishery cut into export earnings, and decisions to cancel some tax increases and to raise some expenditures, taken during the run-up to the election in April, raised domestic demand and imports of consumption goods. The Treasury deficit slipped considerably relative to the target of 1 per cent of GDP that had been set in the 1991 Budget. However, the inflation gains following the wage agreement in early 1990 were largely maintained during 1991.

Weighted by value, the fish catch was down 6 per cent in 1991, its fourth consecutive annual decline. The most dramatic drop came in the capelin catch, as a sharp decline in stocks led to a suspension of capelin fishing during the winter season. For the year as a whole, the capelin catch was less than half that in 1990, and only one-third of the 1985-1988 average[1]. The cod catch, which is by far the most valuable, fell slightly in 1991 to 310 000 tons, 21 per cent below its recent peak in 1987. However, the catch of demersal species other than cod rose to 351 000 tons, the sixth consecutive annual increase.

Environmental conditions improved in Icelandic waters in 1991, as average water temperatures in the main fishing grounds rose and plankton concentrations were up. Nonetheless, stocks of cod are low, owing to poor conditions in earlier years. As well, the expected return of cod from Greenland waters proved disappointing, as these fish were smaller than had been expected, given their age. In order to preserve and, it is hoped, increase the cod stock, the total allowable catch (TAC) for the 1991/92 fishing year has been set at only 265 000 tons, or

Diagram 1. **AGGREGATE ECONOMIC PERFORMANCE**



Note: e = estimate; p = projection.
1. Constant prices. Percentage change from previous year.
2. As a percentage of nominal GDP.
Sources: National Economic Institute and OECD, *National Accounts.*

Table 1. **Demand and output**

Percentage change in volume terms, 1980 prices

	1986	1987	1988	1989	1990	1991[1]	1992[2]	1993[2]
Private consumption	8.0	16.4	–4.0	–4.2	–0.6	5.6	–3.5	0.5
Public consumption	6.9	6.1	4.2	2.4	4.1	4.6	–0.3	2.0
Gross fixed investment	–1.2	19.0	–1.3	–8.3	2.8	3.0	–9.4	0.4
Business	6.6	20.6	–7.9	–20.1	7.5	2.4	–6.9	0.0
Residential	–13.8	14.2	10.6	2.8	–0.6	–9.7	–6.0	1.0
Public	–5.8	19.0	4.4	5.4	–1.4	5.0	–14.6	0.7
Final domestic demand	5.7	15.0	–2.0	–4.7	1.3	4.0	–1.5	0.8
Stockbuilding[3]	–0.7	0.7	1.0	–0.8	–0.3	0.8	–0.3	0.0
Total domestic demand	5.1	15.8	–1.0	–5.5	1.0	4.8	–1.8	0.8
Exports of goods and services	6.2	4.1	–2.8	2.5	–0.4	–5.9	1.7	0.0
Exports of goods	10.3	3.2	–1.0	3.5	–1.4	–7.9	2.4	..
Exports of services	–3.4	6.3	–7.4	–0.1	2.3	–0.1	0.0	..
Imports of goods and services	0.3	22.9	–3.1	–10.2	0.7	5.8	–3.0	0.8
Imports of goods	5.6	24.9	–3.9	–10.9	0.3	4.9	–5.4	..
Imports of services	–13.8	16.5	–0.5	–8.3	1.6	8.8	0.1	..
Foreign balance[3]	2.3	–7.0	0.3	–4.6	–0.4	–4.3	1.6	–0.3
GDP	7.4	8.7	–0.8	0.0	0.4	1.4	–2.8	0.5
GNP	7.5	9.1	–1.2	–0.2	0.4	1.5	–3.2	..
Gross national income[4]	9.3	10.6	–1.2	–2.0	–0.2	2.8	–3.8	..
Memorandum items:								
Export production	7.5	8.1	–0.1	1.8	–1.8	–3.8	0.8	..
Marine products	10.1	4.9	–0.2	–2.3	–1.2	–2.6	0.0	..
Aluminium	1.2	9.7	–1.7	7.8	–1.8	2.7	1.0	..
Ferro-silicon	11.3	–18.3	14.7	3.8	–12.2	–20.6	12.0	..
Other goods	–6.8	44.0	–1.8	13.5	–0.8	–22.5	4.7	..
Cost of living index	21.3	18.8	25.4	21.1	14.8	6.8	4.5	4.5

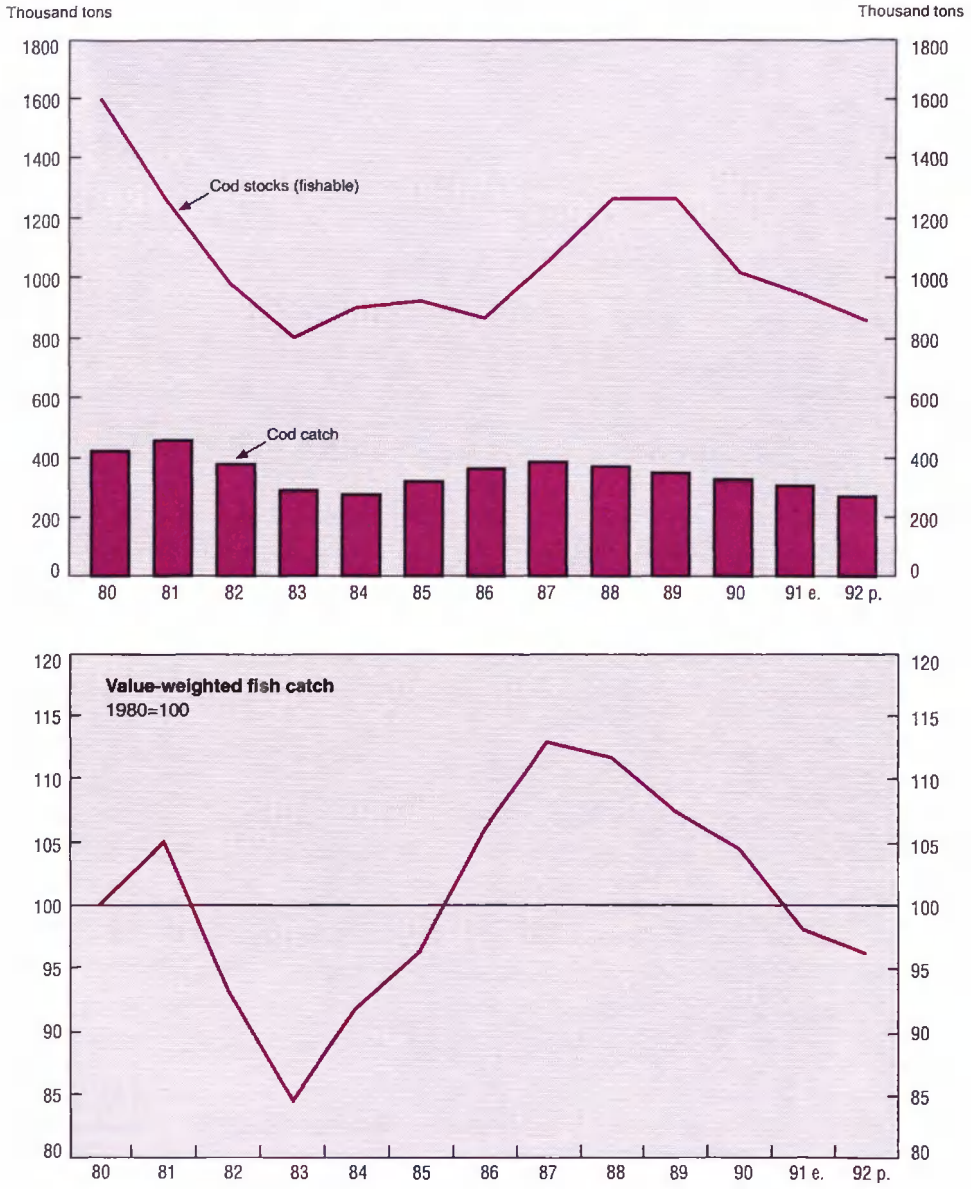
1. Provisional.
2. Projection.
3. Contribution to GDP growth, i.e. changes in aggregates expressed as a percentage of GDP of the previous year.
4. GNP adjusted for effects of changes in the terms of trade.

Sources: National Economic Institute and OECD estimates.

about 15 per cent below the 1991 catch. In view of what is known about the age distribution of the stock, it seems likely that the TAC will be set at a similar level in 1993. At these levels, the catch will be lower than any time since the late 1940s.

In fact, the effective reduction in the TAC from 1990 (which was 350 000 tons) is sharper than these figures indicate. Owing to recent changes in

Diagram 2. **THE FISH CATCH**



Note: e = estimate; p = projection.

Sources: National Economic Institute and Marine Institute, *State of Marine Stocks and Environmental Conditions in Icelandic Waters 1991, Fishing prospects 1992,* Reykjavik July 1991.

the quota-management system (described in the 1990/91 *Survey of Iceland*), the slippage between the quota and the actual catch should have been less than in previous years. The old system had allowed "effort" quotas, which specify, for example, the number of days of fishing allowed, rather than the amount of fish that can be caught. By using more productive boats, those subject to effort quotas were able to expand their catch. The new system has eliminated effort quotas. Also, under the old system, small boats had not been subject to quota, whereas most boats are controlled by the new system.

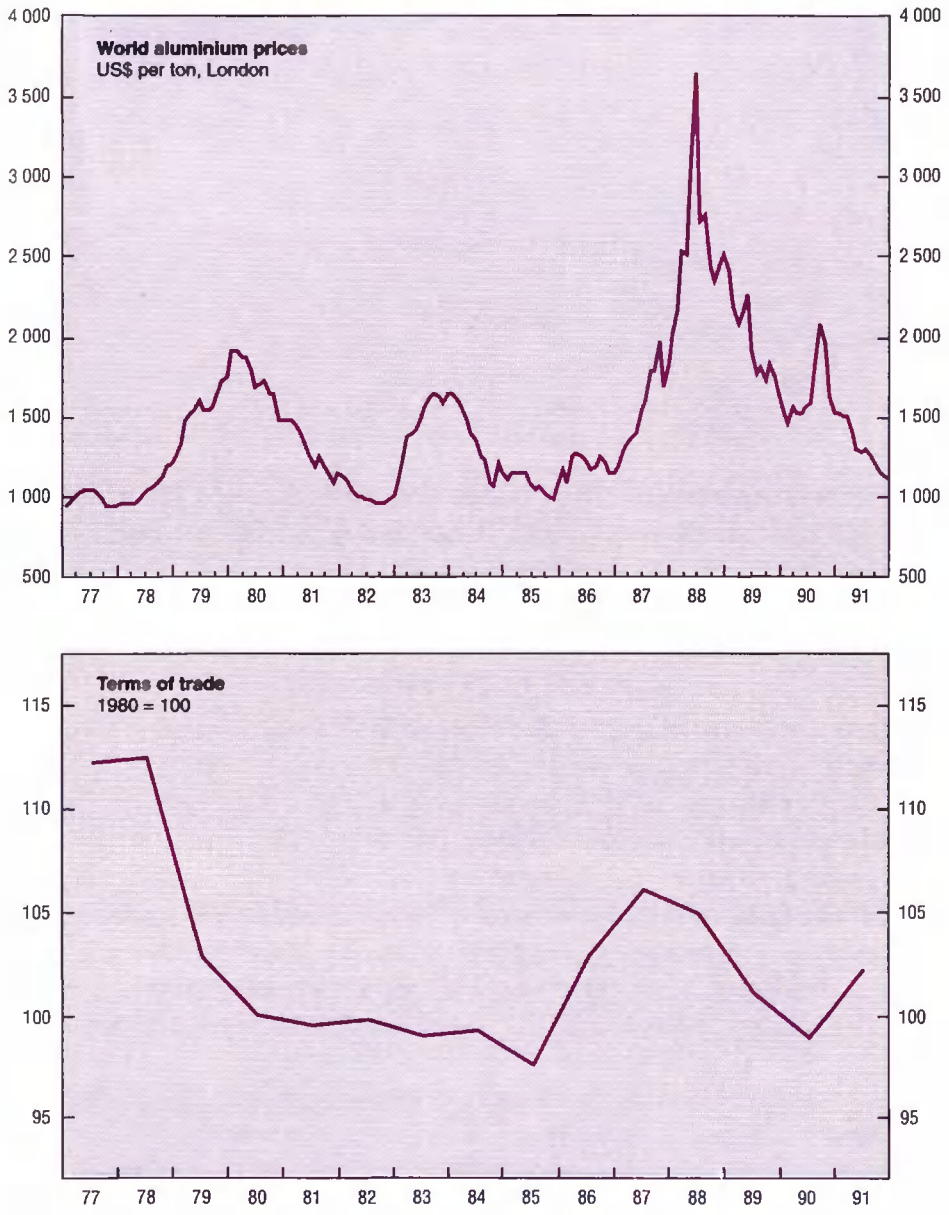
After a low catch in 1991, the capelin stock has risen rapidly. The recommended TAC for the 1991/92 season was 616 000 tons and might be as high as 800 000 tons in 1992. The haddock stock also looks strong, and the catch could rise in coming years. The redfish stock appears stable, and the herring stock appears to be reviving. The shrimp catch should be healthy in 1992, because of the lack of cod (which eat them).

Fish prices rose late in 1990 and, despite a small fall in mid-1991, remain at a high level; overall, prices averaged 10 per cent higher in 1991 than in 1990. With cod and other demersal species still in short supply world-wide, prices are expected to remain firm in early 1992. By the end of the year, though, increased catches expected from Russia and Norway could put some downward pressure on prices.

The price of aluminium, Iceland's second most important export good after fish and fish products, has been falling for some years, and dropped below $1200 per ton in late 1991. The slowdown in global economic activity has reduced demand, while increased exports from the former Soviet Union – partly out of existing stockpiles, but also from current production – have flooded world markets. The price may rise again as recovery in the OECD area sparks demand and stockpiles are run down, although exports from the former communist countries could keep it below its long-term average of about $2000 per ton[2] for some time. Thanks to ample supplies of cheap hydro-electricity, Iceland's aluminium industry is competitive with any in the world. Thus, despite low prices, production from the existing smelter was maintained at high levels in 1991, and this situation is expected to continue.

The terms of trade rose by 4½ per cent in 1991, as the rise in fish prices and the drop in oil prices in the early part of the year more than compensated for lower aluminium prices. The terms-of-trade improvement boosted national

Diagram 3. **EXPORT PRICES AND THE TERMS OF TRADE**



Source: Central Bank of Iceland, OECD.

income by about 2¾ per cent, and private consumption expenditures rose by 5½ per cent in real terms. The volume of public-sector spending also rose in 1991, with government consumption up by 4½ per cent and investment by 5 per cent. (Public-sector expenditures are discussed in detail in Chapters III and IV.) The picture for private investment was mixed. Residential construction fell 10 per cent, depressed by high real interest rates and poor prospects for the economy. Business investment managed to resist these pressures, however, and rose 2½ per cent in real terms.

Increases in private-sector incomes and in government consumption boosted real imports of goods and services by 5¾ per cent. Much of the increase was concentrated in consumer goods, particularly automobiles, and was interpreted by the authorities as a sign that the economy was beginning to overheat. At the same time, exports were down 6 per cent in real terms. The poor fish catch was mostly responsible, although the demise of the Soviet Union disrupted exports of

Table 2. **Saving, investment and the current account**

As a percentage of GDP

	1985	1986	1987	1988	1989	1990	1991[1]
Capital formation	20.5	18.8	19.9	19.1	18.3	19.1	19.0
Private investment	14.8	13.8	14.5	13.6	12.4	12.9	12.4
Public investment	5.7	5.0	5.4	5.5	5.9	6.2	6.6
National saving	16.6	19.3	16.5	15.6	17.0	16.9	14.1
Government	–1.9	–1.3	–1.4	–2.9	–2.6	–1.4	–3.3
Private	18.5	20.6	17.9	18.5	19.6	18.2	17.4
Current account	–4.0	0.5	–3.4	–3.5	–1.3	–2.2	–4.9
of which:							
Merchandise trade	0.0	2.5	–1.0	–0.1	2.4	1.4	–0.8
Non-factor services	0.7	1.9	0.5	–0.1	0.5	0.6	–0.2
Net factor income	–4.7	–3.9	–3.0	–3.3	–4.3	–4.2	–3.9
Net external debt	52.8	45.2	40.8	42.0	46.6	46.0	46.8
Memorandum:							
Net factor income as a percentage of exports	11.3	9.9	8.5	10.0	12.2	11.6	11.8

Note: Data may not add due to rounding.
1. Preliminary data.
Sources: Central Bank of Iceland, National Economic Institute, and OECD.

woollen and especially canned products. Ferrosilicon production was down, owing to weak world-wide demand. Despite the sluggish global economy, though, tourism appeared to continue its growth in 1991. While service trade remained roughly in balance and there was little change in net factor income from abroad, the sharp deterioration in net merchandise trade doubled the 1991 current account deficit to almost 5 per cent of GDP, from 2¼ per cent in 1990. As a result, net external debt, rose to nearly 47 per cent of GDP in 1991.

Unemployment remained relatively high by Icelandic standards in 1991, at 1½ per cent of the labour force. Though low by standards elsewhere in the OECD, unemployment since 1989 has been higher than any time in the last two decades[3]. Despite relatively high unemployment, labour shortages remained in some sectors. Foreign workers – mostly from other European countries – made up 7 per cent of the workforce in the fish processing industry in 1990, a total of 620 jobs.

The consumer price index (CPI) rose just 7 per cent over the twelve months of 1991, matching 1990's performance. As described in last year's *Survey*, this represents a marked improvement compared with the previous two decades – the inflation rate averaged almost 50 per cent from 1974 to 1983, before settling down to a range of 20 to 30 per cent in the remainder of the 1980s. Inflation picked up temporarily around mid-1991, owing to higher interest rates (which affect the CPI mechanically through mortgage interest rates) wage increases and the increase in domestic demand. However, inflation fell back at the end of the year, and was under 5 per cent in the last three months of 1991.

The moderate rate of inflation prevailing in the past two years was the direct result of the wage agreement that was signed in February 1990, which has been supported by appropriately tight monetary policy, consistent with the pegging of the króna. The agreement, between the labour unions, employers and government, expired in September 1991 and negotiations to replace it began shortly afterwards. The government's opening proposal was for a nominal wage freeze, which, if accepted, would lead to only modest (perhaps 3 to 4 per cent) consumer price inflation in 1992, and to a fall in real wages. Actual pay outcomes would probably somewhat exceed the freeze because of "wage drift". The government has proposed increases in user fees to close the deficit (see below), which will also raise the CPI, although the impact effect will be only once-off.

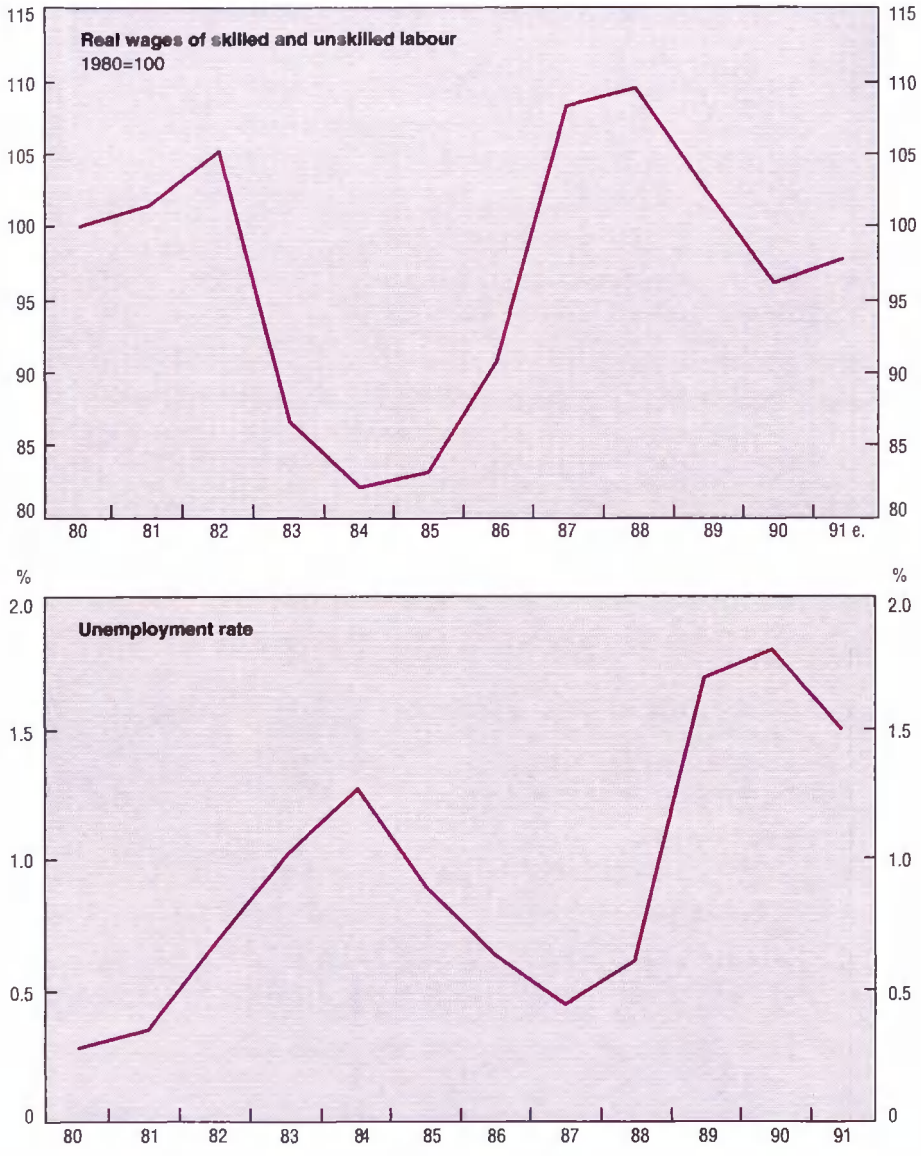
Table 3. **Exports by commodity group**

Per cent of total exports

	1970	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Total merchandise exports	61.4	76.7	73.5	64.9	67.8	67.7	66.8	70.3	71.2	72.3	72.2	72.3
Marine products	48.0	57.5	57.6	48.7	46.1	45.5	50.0	54.2	54.1	51.4	51.3	54.7
Agricultural products	2.0	1.3	1.2	0.8	0.8	1.2	1.1	1.1	1.4	1.3	1.2	1.4
Manufacturing products	10.6	16.6	14.1	14.5	19.9	18.9	15.0	13.9	14.3	16.2	17.8	14.8
Aluminium	8.1	9.3	7.1	6.5	11.9	9.8	6.6	6.5	6.8	7.8	9.3	7.5
Ferro-silicon	–	1.4	1.4	1.9	2.2	2.9	2.4	2.1	2.0	2.8	2.7	1.9
Other merchandise exports	0.8	1.3	0.7	0.9	1.0	2.1	0.8	1.2	1.4	3.5	2.0	1.5
Non-factor services	37.1	22.2	24.7	32.5	30.9	31.0	32.0	28.5	27.6	26.5	26.3	26.3
Travel	2.1	1.9	1.8	2.4	2.5	3.2	3.5	3.8	4.5	5.5	5.6	5.7
Transportation	20.8	10.7	13.6	17.5	15.4	15.0	17.8	13.2	11.2	10.6	10.0	9.9
Insurance	5.3	0.8	0.8	0.8	1.1	0.8	1.0	0.7	0.9	1.3	0.8	0.8
Defence force, net	5.3	5.7	5.6	8.3	7.9	7.9	6.2	6.9	6.4	6.0	6.6	6.5
Other services	3.6	3.1	2.9	3.5	4.0	4.1	3.6	3.9	4.7	3.2	3.2	3.4
Interest receipts	1.5	1.1	1.8	2.6	1.3	1.3	1.2	1.1	1.2	1.1	1.5	1.4

Note: Data may not add due to rounding.
Source: Central Bank of Iceland.

Diagram 4. **REAL WAGES AND UNEMPLOYMENT**
Deflated by the consumer price index



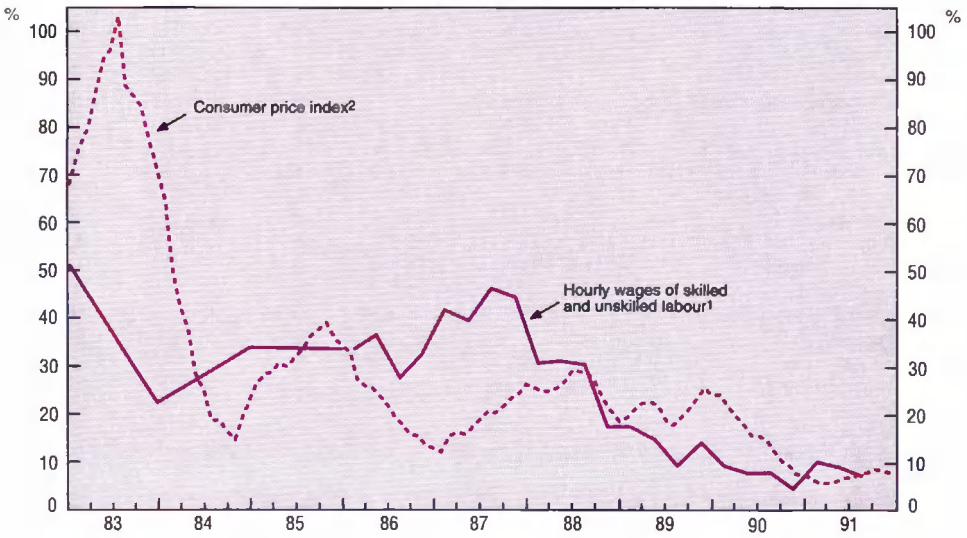
Note: e = estimate.
Sources: National Economic Institute and OECD estimates.

Table 4. **Labour market conditions**

	1984-86	1987	1988	1989	1990	1991
Labour vacancies						
Number (in thousands)	2.4	3.2	1.7	–0.3	0.0	0.3
Per cent of total labour force	2.6	3.5	1.9	0.4	0.0	0.4
Unemployment rate[1]	–0.9	0.5	0.6	1.7	1.8	1.5
Workweek of full-time manual workers[2]	50.0	50.1	47.9	48.2	47.6	47.7
Work stoppages (days)	68	116	131	611	3	27
Earnings per worker						
Nominal	33.3	41.8	26.9	13.3	7.7	8.6
Real	5.3	19.3	1.1	–6.4	–6.2	1.7

1. Based on registered unemployment each month.
2. More precisely, the workweek of skilled and unskilled workers who work more than 400 hours per quarter.
Sources: National Economic Institute; Nordic Council of Ministers and the Nordic Statistical Secretariat, *Yearbook of Nordic Statistics*.

Diagram 5. **INFLATION PERFORMANCE**



1. Percentage change from four quarters earlier.
2. Percentage change from twelve months earlier.
Source: National Economic Institute.

Policies

Fiscal policy

The Treasury deficit nearly tripled as a share of GDP in 1991 to 3.3 per cent; this was also more than triple the deficit that had been projected in the 1991 Budget. This sharp deterioration was the result of both increased spending and reduced revenues. Expenditure targets were exceeded for each of public consumption, transfer payments and public investment. The largest overrun in absolute terms, at 3 billion krónur, or nearly 1 per cent of GDP, was in transfer payments, while the largest percentage overrun was in public investment, which was 20 per cent, or about 2 billion krónur, over the Budget.

Table 5. **Treasury finances**

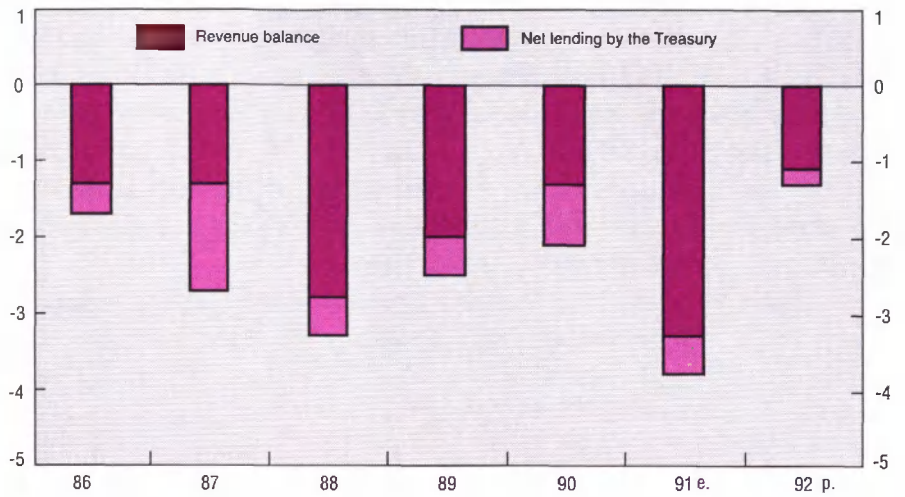
IKr million, cash basis

	1990	1991			1992 Budget
		Budget	Outcome	Difference	
Total revenue	92 453	101 698	99 953	–1 754	105 463
Direct taxes	17 690	20 167	19 263	–904	21 088
Indirect taxes	68 448	75 228	74 240	–988	76 215
Import duties and excise	8 354	8 718	9 460	742	8 608
VAT	37 068	41 550	38 950	–2 598	40 450
Other	23 008	24 960	25 826	866	27 157
Other revenue	6 315	6 303	6 450	147	8 160
Total expenditure	96 899	105 767	112 487	6 720	109 575
Consumption	39 669	43 950	44 705	755	43 877
Transfer payments	39 630	41 774	45 109	3 335	43 925
Social security	24 412	26 449	27 775	1 326	26 826
Agricultural subsidies	8 072	8 304	9 516	1 212	8 264
Other	7 146	7 021	7 818	797	8 835
Interest payments	8 274	9 400	9 875	–475	9 900
Capital expenditure	9 326	10 643	12 798	–313	11 873
Revenue balance [1]	4 446	4 069	12 534	8 465	4 112
Treasury, net borrowing requirement [2]	7 170	5 879	14 648	8 769	4 900
Public sector borrowing requirement [3]	26 600		40 200	13 600	19 200

1. Equals total expenditure less total revenue.
2. Equals the revenue balance plus net Treasury lending, equity purchases and short-term credit.
3. Equals the Treasury net borrowing requirement plus the net borrowing of public sector financial and non-financial institutions (including that of municipalities, which is very small).

Source: Ministry of Finance.

Diagram 6. **TREASURY BUDGET DEFICIT**
Per cent of GDP



Note: e = estimate; p = projection.
Source: Ministry of Finance, Treasury Finances 1991-1992.

Weak economic activity reduced revenue from direct taxes below the Budget forecast, and extra income from import and other duties, largely the result of a surge in highly-taxed consumer-goods imports, did not fully offset the shortfall. The run-up to the election also appears to have played a role. Some planned expenditure cuts and tax increases were not enacted, and corporate taxes were cut early in the year. Indeed, after the election, deficit cuts amounting to nearly 1 per cent of GDP were put in place, but were insufficient to return the deficit to the 1991 Budget target.

Net lending by the Treasury also expanded, raising the central government borrowing requirement to almost 15 billion krónur, or 3.9 per cent of GDP. Net lending by the government-run mortgage system – in particular, the housing bond scheme, which was introduced in 1989 and is described in Chapter III – grew more rapidly still, raising the public sector borrowing requirement (PSBR) to more than 40 billion krónur, or 10.7 per cent of GDP. However, as is discussed

in Chapter IV, including borrowing through housing bonds substantially overstates the change in the government's net asset position, and borrowing of this type would not usually be included in the PSBR of most OECD countries.

In the 1992 Budget, the Treasury deficit is projected to drop substantially, to 1 per cent of GDP, with tax revenues roughly constant in real terms and real expenditures falling by about 6 per cent. Planned spending cuts include savings from reforms of the health insurance system, which is state-run, and changes to the programme that guarantees the wages of workers of bankrupt firms. Another policy thrust is to increase or introduce user fees, including new tuition fees for university and secondary students, fees for doctor visits and a fee levied on the fishing industry to support the Marine Research Institute. Besides reducing the Treasury deficit, the government plans to cut back the PSBR by reducing mortgage lending. The government aims at reducing its lending through the new housing bond scheme by 3 billion krónur, or 20 per cent.

Monetary and exchange rate policy

Real interest rates, which have been high in Iceland for some time, rose further in 1991. In part, this was deliberate policy to dampen domestic demand, but it also reflected increased credit market pressure from the expanding budget deficit. The private sector increased its credit demands as well, especially through housing bonds. Higher rates on government securities sold in the primary market partly reflect the ongoing rationalisation of the capital market, as primary government interest rates were increased to bring them closer to secondary market rates.

The growth of M3 was roughly unchanged in 1991, although velocity declined, as it has since 1980. In part, the fall in velocity reflects the ongoing remonetisation of the economy following a long period of pervasive capital-market controls. The process of capital-market deregulation got underway in earnest in 1984 with the partial liberalisation of the interest rates set by commercial banks and is still continuing with the privatisation of some of the banking sector and the relaxation of international capital transactions. (Previous *Surveys* of Iceland discuss the process of financial liberalisation in Iceland.) Nonetheless, this source of demand for liquid assets will eventually be exhausted, at which point such high levels of money growth would lead to revived inflationary pressures. Although there does not now appear to be a problem, money growth bears close monitoring.

Table 6. **Public sector borrowing requirement**

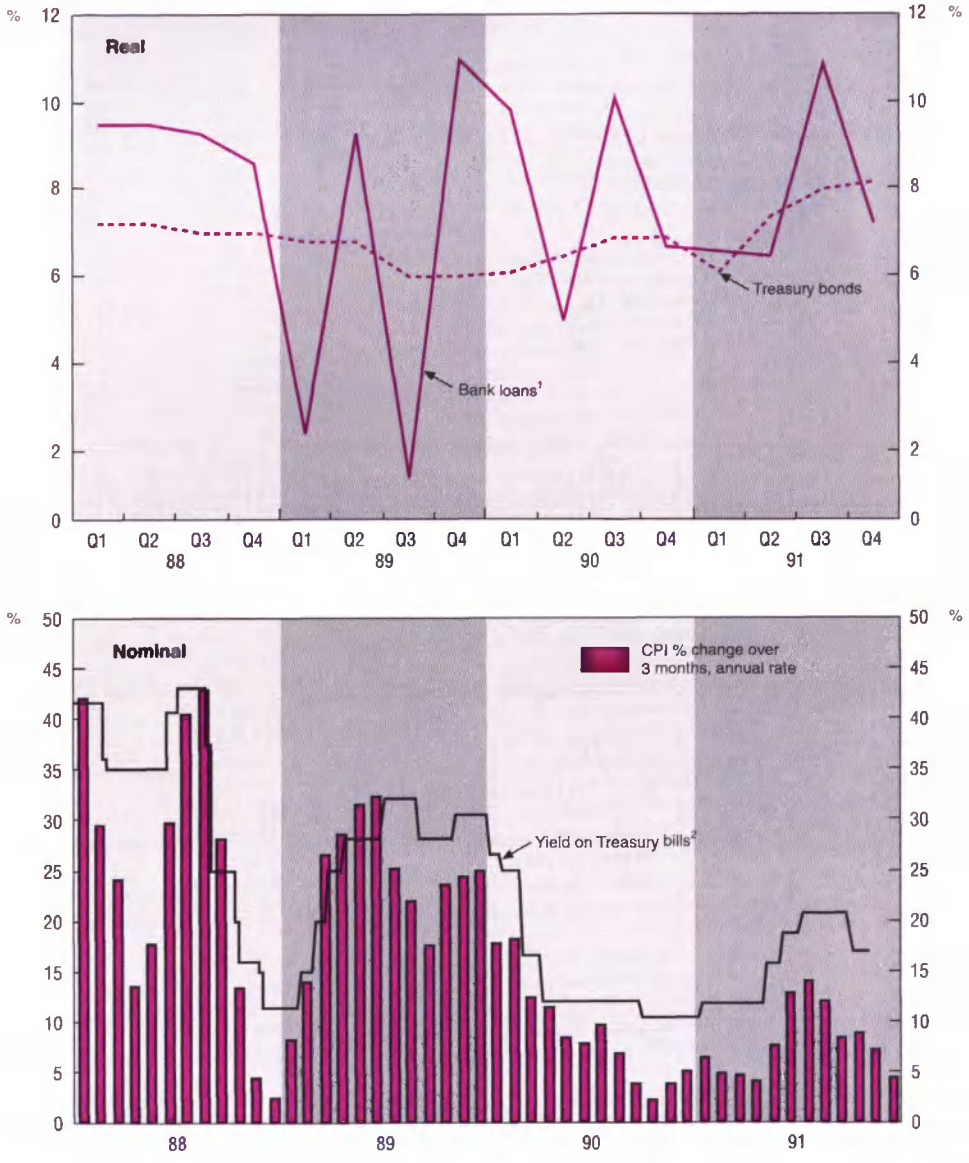
	1986	1987	1988	1989	1990	1991	1992[1]
	IKr billion, net						
Total	6.3	11.6	17.1	23.0	26.6	40.2	19.2
Treasury	2.7	5.5	8.3	7.6	7.2	14.7	4.9
Revenue balance	2.0	2.7	7.2	6.1	4.4	12.5	4.1
Net lending	0.7	2.8	1.1	1.5	2.7	2.1	0.8
Housing system	2.1	3.8	6.1	8.0	14.5	22.2	15.7
Other	1.5	2.3	2.7	7.4	4.9	3.3	–2.4
	Percentage of GDP						
Total	4.0	5.6	6.7	7.5	7.6	10.5	5.0
Treasury	1.7	2.7	3.3	2.5	2.1	3.8	1.3
Revenue balance	1.3	1.3	2.8	2.0	1.3	3.3	1.1
Net lending	0.5	1.4	0.4	0.5	0.8	0.6	0.2
Housing system	1.3	1.8	2.4	2.6	4.1	5.8	4.1
Other	1.0	1.1	1.1	2.4	1.4	0.9	–0.4

1. Forecast in 1992 budget.
Source: Ministry of Finance.

The main monetary policy objective in Iceland, as in many OECD countries, is to achieve and maintain low inflation. An important element in this policy has been to fix the value of the króna to a basket of currencies[4], which, since 1 January 1992, comprises the ECU (with a weight of 76 per cent), the dollar (18 per cent) and the yen (6 per cent). As inflation in these currencies have been much more stable than in Iceland, pegging the króna has provided a "nominal anchor" for monetary policy. In the long term pegging amounts to choosing a monetary policy that is consistent with the inflation performance of the countries whose currencies are in the basket. Since the decision taken in late 1989 to fix the nominal exchange, Iceland's inflation rate has been above that of its major trading partners and, as a result, there has been a real exchange rate appreciation. But by the end of 1991, Iceland's inflation rate was well within the range of those of other OECD countries.

There are alternative anchors, such as monetary aggregates, nominal income growth rules and inflation targets. However, a fixed exchange rate is an attractive option for Iceland. Perhaps the most compelling argument in its favour is that an exchange rate peg is highly visible and easily verified. This strategy has been

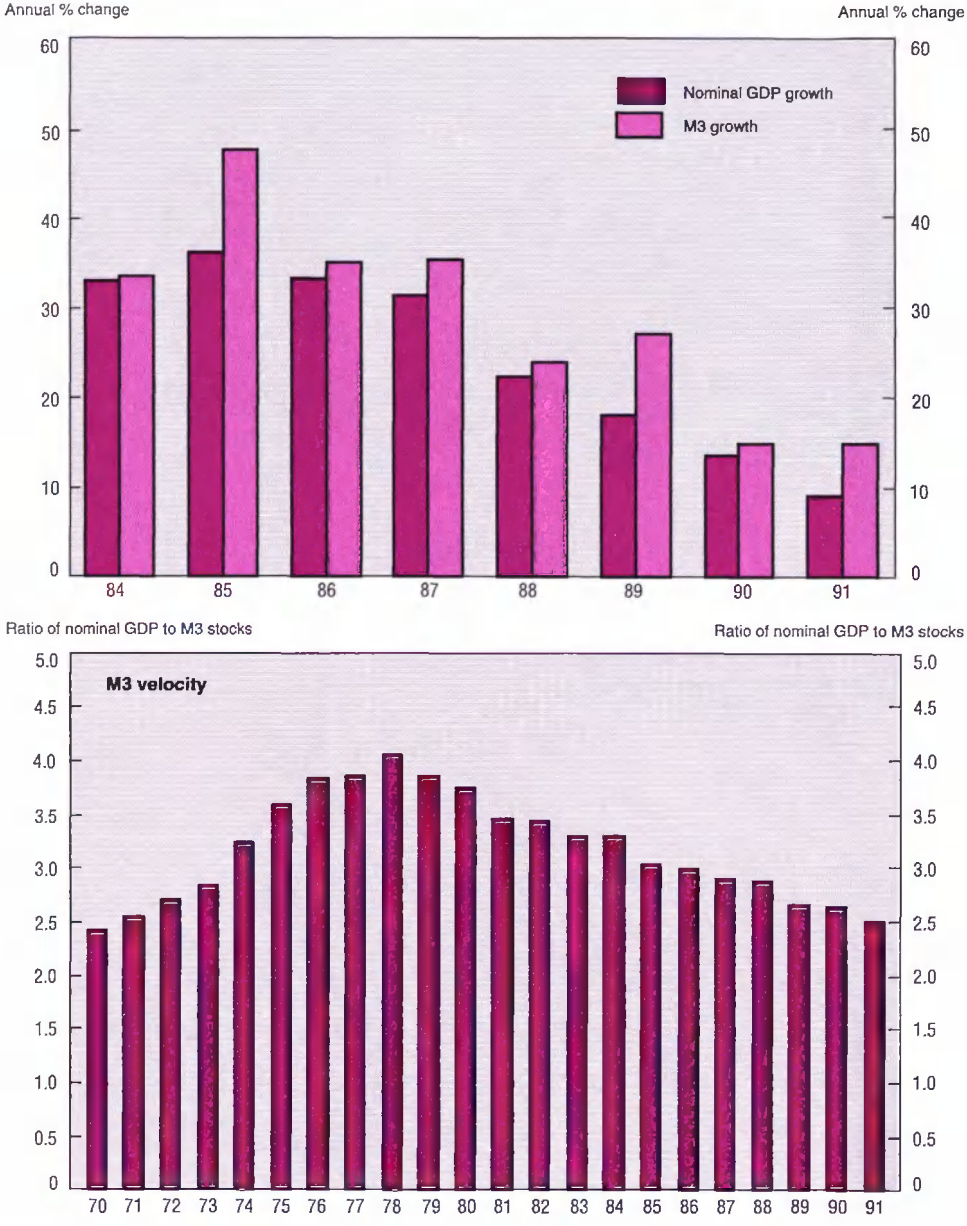
Diagram 7. **INTEREST RATES**



1. Rates of secured loans in commercial and saving banks.
2. The rates are for 90 days bills for 1988 and 60 days there after.

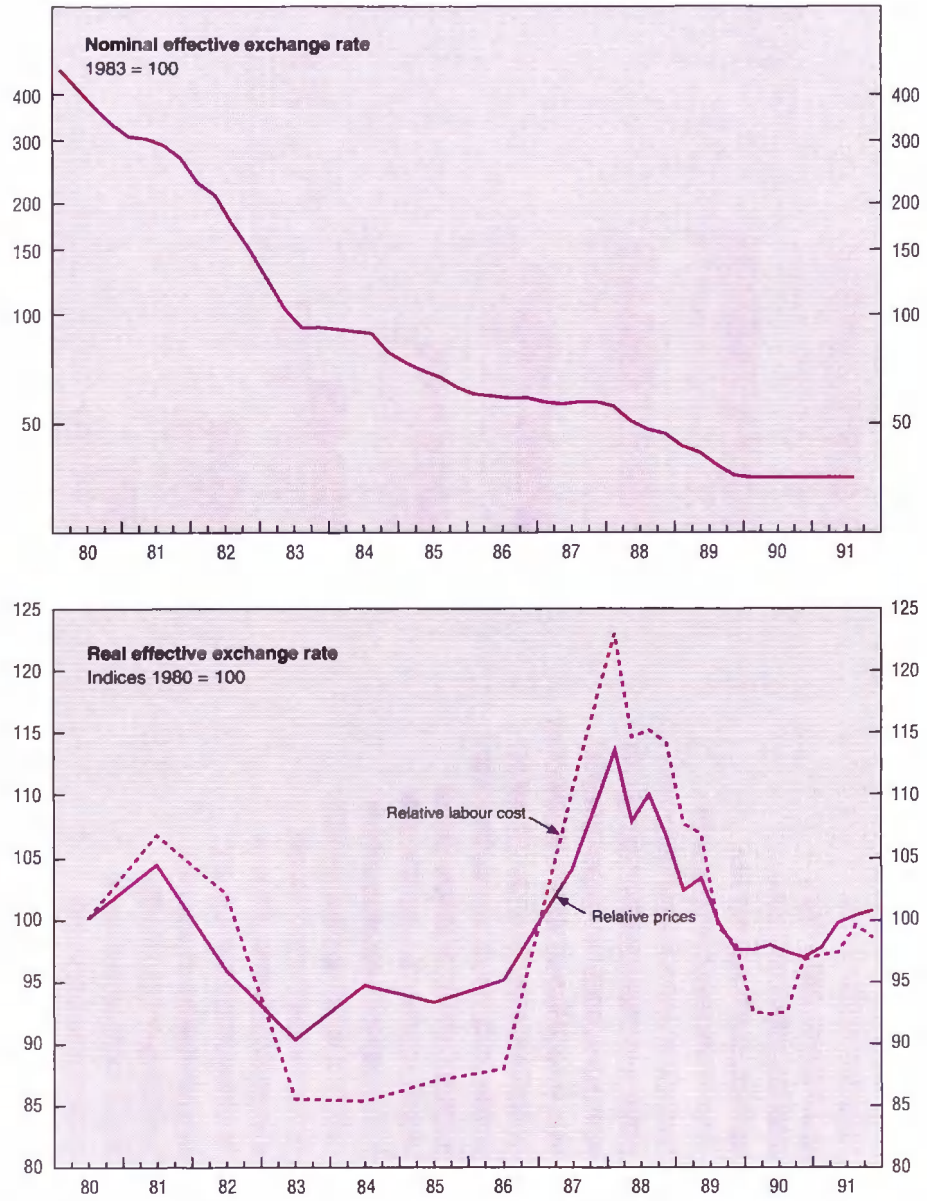
Source: Central Bank of Iceland and National Economic Institute.

Diagram 8. **MONEY SUPPLY AND VELOCITY**



Source: Central Bank of Iceland.

Diagram 9. **EFFECTIVE EXCHANGE RATE OF THE KRONA**



Source: Central Bank of Iceland.

used successfully by a number of European countries to bring their inflation rates down to, or below, that prevailing in Germany. Within the European Monetary System (EMS), France, Ireland, Denmark, the Netherlands and Belgium have enjoyed success. The same policy has also been successfully implemented outside the EMS in Austria and, more recently, Norway. Sweden and Finland have also linked their currencies to the EMS, although it is too early to say how successful they will be and, in particular, Finland devalued sharply in November 1991.

An important benefit from a credible currency peg in the EMS context has been a reduction in interest rates, relative to those prevailing in Germany. While nominal rates would have naturally converged along with inflation, it is thought that enhanced policy credibility may have reduced the premium required by capital markets to cover the risk that a devaluation will occur in the future. As Iceland's short-term international capital transactions are liberalised and a market for the króna develops, fears of a króna devaluation would tend to result in a wider interest rate premium over other currencies. A credible peg would help reduce this premium and thereby hold down real interest rates in Iceland[5].

In view of the general convergence of inflation rates among OECD countries, the choice of which currency basket to peg the króna against is probably less important than the peg itself. However, with the likelihood that the European Economic Area treaty will be ratified, Iceland will enjoy full access to European capital markets and almost free access to European goods markets (see Chapter II). The result will be closer economic integration with Europe, and it may therefore be sensible to think in terms of fixing the króna to only the European currency unit (ecu), instead of the current basket. Pegging to the ecu has two advantages over using a "made-in-Iceland" basket. First, as mentioned above, several countries have succeeded in reducing their inflation rates by entering the EMS – in effect, by pegging to the ecu. A decision by Iceland to peg to the ecu would signal to markets that it intends to emulate this success. Second, the ecu is a visible and verifiable basket, with weights that are obviously not under the control of the Icelandic authorities, a factor which may increase the credibility of the peg.

The full advantages of a fixed króna can be reaped only if devaluations and revaluations – active exchange rate policy – are convincingly forsaken. Specifically, this means that the government cannot use the exchange rate to deflate or

reflate the economy in an attempt to offset terms of trade (specifically, fish prices) and other shocks, as it has tended to do in the past. The principal argument for the use of exchange rates to offset such shocks rests on nominal wage rigidity: a deterioration in the terms of trade requires a reduction in real wages; this can, it is argued, be more easily accomplished by a currency devaluation, which raises prices, than by a reduction in nominal wages. More generally, exchange rate policy is best viewed as a form of monetary policy, which affects the real economy only to the extent there are nominal rigidities.

In practice, a drawback of using exchange rate changes in the hopes of blunting the effects of sticky nominal wages is that governments tend to worry mostly about downward stickiness, because it can result in higher unemployment. The result is devaluations and inflation when the shock is unfavourable – a terms-of-trade deterioration, for example – but no corresponding revaluation and disinflation in the face of upside shocks. This asymmetry gives monetary policy an inflationary bias which undermines policy credibility and nurtures inflationary expectations.

Whatever the merits of the argument in favour of active exchange rate policy for other countries, the considerable flexibility of Iceland's labour market, as indicated by the very favourable tradeoff between output or unemployment and inflation (documented in last year's *Survey*), suggests that terms-of-trade shocks could probably be absorbed without resorting to exchange rate changes. Indeed, Norway, which is subject to important terms-of-trade shocks from oil prices, has successfully used an ecu peg to help bring down its inflation rate.

Prospects

GDP will probably fall in Iceland in 1992, owing to tight monetary and fiscal policies, which are aimed at reducing the budget and current account deficits: it is assumed that the government will carry through its plans for fiscal restraint and that the króna will not be devalued. Real interest rates are expected to remain high, which will probably hold down residential construction and business investment. As a result, the unemployment rate may rise to 2 per cent, which is considered very high in Iceland. The terms of trade are likely to deteriorate, as fish prices are expected to fall from their current high levels. As a result, the current account deficit will probably remain substantial in 1992,

though the smaller government deficit should help reduce domestic demand (or, raise national saving) and import growth.

In view of this economic outlook, the outcome of the current wage negotiations (which, at the time of writing, had not been completed) will probably be moderate, although it may well be higher than the freeze on nominal wages proposed by the government. As a result, inflation should continue to be moderate in 1992 and probably in 1993 as well. However, a key issue is whether it will be as low as that of Iceland's trading partners, thereby allowing the krónur peg to be maintained. Given the short-term evolution of inflation in late 1991 and early 1992, this goal seems achievable. However, should inflation rise again, the peg would become unsustainable. If the peg were relaxed and the króna allowed to depreciate, inflation would rise, both because of the initial outburst of import-price increases and, more fundamentally, because an important nominal anchor would have been abandoned.

As little increase in the fish catch is expected in 1993, exports will probably not recover significantly, although they are not expected to decline further. On the other hand, if the fiscal retrenchment proposed for 1992 succeeds, it may be possible to relax monetary policy somewhat, particularly if the wage negotiations lead to a result consistent with maintaining the krónur peg, and if this situation can be extended through to the end of 1993. Nevertheless, 1993 is likely to be another year of little economic growth.

In the outlook presented in last year's *Survey,* the key factor stimulating the economy in 1992 and 1993 was the construction of the Atlantal aluminium smelter, which was to have been underwritten by an international consortium. Since then, the price of aluminium has slipped significantly, stockpiles have risen world-wide and some aluminium smelters have been closed. As a result, any decision on the project has been put off until the situation improves. This means that construction is unlikely to begin before 1994, or at least two years later than had been envisaged.

II. Structural reform

Important structural reform initiatives undertaken in 1991 included the completion of the European Economic Area negotiations; the first year of operation of two new fisheries policies; and a change toward greater use of income supports in agricultural policy, to be introduced in 1992. Public-sector issues, principally the changing role of the government in the economy, are discussed in Chapters III and IV.

Implications of the European Economic Area for Iceland

In October 1991, negotiations were completed between the European Community (EC) and the European Free Trade Association (EFTA), of which Iceland is a member[6], establishing the European Economic Area (EEA). A jurisdictional ruling by the European Court caused negotiations to be reopened, but this second round of negotiations was successfully completed in February 1992. At the time of writing, the new agreement had not yet been ratified by the 19 countries concerned.

The EEA will largely extend the "four freedoms" of the European Community – free movement of goods, services, capital and labour – to the EFTA countries, beginning in 1993. Most EC rules on competition, state aid, banking and insurance will also apply to the EFTA countries, and future changes to EC law may apply to the EEA as a whole, even though the EFTA countries will have no formal role in the law-making process. A number of exceptions and delays were built into the agreement. For example: special arrangements have been made for trade in food, fish, energy and steel; EFTA countries can maintain their own national agricultural policies; certain restrictions on foreign direct investment will be allowed; and several EFTA countries have been granted extra time to implement some of the required changes. From Iceland's point of view, the

most important exceptions are that it will not be required to open up its fishing industry to foreign ownership and it will have to grant EC fishing boats only limited access to its waters.

Iceland could benefit from the closer integration with Europe the EEA implies. Free flow of goods and services will guarantee access for Iceland's exports (fish products being by far the most important) to the large European market. While there is no reason why access to the North American market should be reduced, it seems likely that, over time, Iceland's exports will shift more towards Europe, continuing a trend that is already underway. Free flow of capital will give Iceland access to a much greater pool of capital and ultimately reduce its interest rates towards lower European levels, provided monetary stability is maintained. And free flow of labour will allow Icelanders to take even greater advantage of foreign labour markets to adjust to domestic fluctuations[7].

Complying with the new EC rules will have wide-ranging effects on government policy-making. Most importantly, current Icelandic restrictions on capital mobility are not consistent with EC rules, although Iceland will have until the end of 1995 to fully bring them into line. Iceland is in the process of liberalising long-term capital flows and foreign direct investment (see last year's *Survey* for details), but the EEA agreement will require more. In particular, short-term capital flows and portfolio investment will have to be liberalised. Currently, foreign currency cannot be freely purchased for short-term or portfolio investment, although the 1990 liberalisation will soon allow foreign exchange transactions for long-term investment.

The required reforms will imply changes to the way monetary and exchange-rate policies are implemented. Liberalising short-term capital markets and currency trading will require the Central Bank to manage interest rates and the króna through market operations, as is done in other OECD countries. (Currently, the Central Bank sets exchange rates of the króna *vis-à-vis* individual currencies each day in a way that is consistent with the króna peg.) It is argued in Chapter III that using markets would be greatly facilitated by a deeper, more transparent financial market in Iceland. Moving the operation of monetary policy away from explicit controls and towards markets need not change its thrust in terms of reducing inflation and, in support of that goal, stabilising the króna. Nevertheless, defending the króna could prove to be a challenge, as Iceland's money stock is tiny compared with the daily flows typical in international capital

markets, and the market for krónur must therefore be thin. One solution would be to join the EMS, which would provide a well-understood institutional context for a fixed exchange rate and commit European central banks to the stability of the króna. Such a move would also allow Iceland to take fuller advantage of European financial integration. However, it might require joining the EC. While for some EFTA countries, the EEA appears to be a stepping stone to full EC membership, for Iceland such a move could eliminate the important exceptions to EC rules that it has negotiated as part of the EEA agreement.

Fisheries

The fishing quota system

1991 was the first year of operation of two reforms in fisheries management: a new quota system and the new equalisation fund. Both are described in last year's *Survey*. The reforms to the quota system sought to provide tighter control over the catch by closing loopholes that exempted small fishing boats and that based some quotas on effort (e.g. allowed fishing for a certain number of days). Restrictions on the trading of quotas were also relaxed, with the aim of encouraging the rationalisation of the fishing fleet, the capacity of which has far outgrown the catch.

The first year's experience with the new system has been encouraging. Control over the catch seems to have improved. For the 1991 season, the cod catch was actually below quota by more than 4 000 tons over an eight-month period, compared with an overrun of 33 000 tons in 1990 (and similar overruns in earlier years), although poor fishing conditions may also have helped limit the catch. Despite the recent improvements, loopholes remain. Notably, only half the November-to-February catch of longliners (i.e. boats that use hooks on long lines, rather than nets, to catch fish) is subject to quota and, not surprisingly, the popularity of this technique has surged.

With the relaxation of restrictions, quota trading nearly doubled in 1991: quota trades for all species (again, in the 1991 season of only eight months) were up 80 per cent compared with 1990. In all, 32 per cent of quota permits changed hands in the 1991 season; about a third of the transfers appear to have been between boats owned by the same operator, while about half were sold on the

open market, at an average price of about US $650 per cod-equivalent ton for a one-year lease. Though this increase in activity is promising, it is still too early to assess the success of the new quota system in reducing the fishing fleet.

The existing quota system could be improved in at least two areas. Most obviously, the catch of longliners should be fully brought under the system. The current exemption distorts activity and raises costs by encouraging a form of fishing that may not always be efficient. It also makes it more difficult to control the actual catch. Second, considerable costs could be saved by reducing the capacity of the fishing fleet. To promote this, the government should further encourage the trading of quotas by relaxing remaining restrictions, insofar as possible allowing the market to determine the most efficient outcome.

The Fisheries Equalisation Fund

The main purpose of the Fisheries Equalisation Fund is to attenuate some of the effects of fluctuations in fish prices, which had tended to be transmitted to the rest of the economy through changes in the incomes of fishermen and, perhaps as importantly, through wage emulation. To this end, when fish prices are high relative to their recent historical average, as in 1991, exporters of fish products pay into the fund; when prices are low, the fund pays out. It is estimated that payments into the fund were equivalent to about 0.7 per cent of GDP in 1991, which represents a substantial reduction in the impact of the increase in fish prices on aggregate demand. The payments also cut into a potential wage-wage spiral. Most directly, they held down wage increases negotiated under the February 1990 wage agreement, which stipulated wage adjustments based on terms-of-trade changes, but only after these had been adjusted by subtracting payments made into the equalisation fund. In effect, payments into the fund muted the terms-of-trade increase, as calculated for the purposes of the wage agreement.

While the equalisation fund has therefore enjoyed substantial success in reducing demand and wage pressures, the payments proved to be a significant financial strain on some fish exporting companies that, despite high world fish prices, had poor profits in 1991. As a result, the operation of the fund was suspended as of January 1992 for eight months, or until the end of the current fishing year. At the time of writing, no decision had been taken on what to do in September, when operation is set to resume. However, if fish prices fall, as

expected, the equalisation fund may be in a position to pay back some of the money previously deposited, relieving the burden on fish exporters.

Whaling

According to Iceland's Marine Research Institute, in the waters around Iceland the stocks of some whale species have now been rebuilt to the point where limited commercial whaling would not lead to extinction: the sustainable annual yield is now estimated to be 100 to 150 fin whales and 150 to 200 minke whales. Nevertheless, the International Whaling Commission (IWC) has not agreed to a resumption of whaling. As a result, Iceland has notified the IWC that it is withdrawing in mid-1992, a course that was recommended by the government-appointed Whaling Committee in November 1991. The government announced that there are no plans to resume whaling, however. The issue is nevertheless contentious, because withdrawing from the IWC could be perceived as the first step toward a resumption of whaling, and might therefore result in a boycott of Icelandic exports.

Agriculture

A major reform of agricultural policy, put into law in 1991, will replace price supports with direct income support to farmers. Under the existing scheme, production quotas are higher than domestic demand, and the excess output has been sold on world markets with the help of government subsidies. Under the new programme, the government will buy back existing production quotas over the next five years, at a cost of about 2 billion krónur. A new quota system will be established in which annual overall production levels will be adjusted to domestic demand, with each farmer's quota being proportional to the total (similar to the total allowable catch system used for fish quotas). Income support, based on individual farm quotas, will be paid in advance. As a result, in 1992 payments will be made under both the current and the new system, resulting in a once-off expenditure of 1.8 billion krónur.

In general, moving from price supports to direct income supports is thought to be desirable on the grounds that the latter are less trade distorting. Moreover, the substitution of income for price supports should bring the Icelandic system

closer to the regime envisaged in the current GATT negotiations. While Iceland is far too small to affect world trade, sales of agricultural surpluses on world markets at below the cost of production have proved costly. In practice, income support programmes also tend to attract excessive resources into agriculture if not offset by quantity restrictions, such as production quotas or limits on the amount of land under cultivation. Indeed, the major benefit from the reform is likely to flow from lower production quotas, which should obviate the need for export subsidies.

If it is to reap the benefits of the new system, the government will have to be determined not to allow production quotas to creep up as a means of providing greater assistance to the farm sector. More fundamentally, the decision to set production equal to domestic consumption has little economic rationale. The fact that export subsidies are currently required to sell surplus produce on world markets suggests that at least some Icelandic farmers are not competitive at world prices, as does the fact that Iceland maintains barriers on imports of foods that are produced domestically. Opening up agricultural trade would imply a reduction in the size of the agricultural sector below the levels now envisaged. This could pose labour market and regional adjustment problems, though, as documented in last year's *Survey,* Iceland has historically handled such adjustments very well.

III. The role of government in financial markets

A series of important reforms resulted in a diminished government role in financial markets in the course of the 1980s. At the beginning of the decade, the government directly controlled all interest rates, and generally set them at negative real levels, sometimes markedly so, which led to chronic excess demand for credit. The government also allocated most credit directly through a variety of state-owned institutions, including the largely state-owned banking system. Early in the decade, direct interest rate controls were removed and real rates consequently rose to high positive levels. At the same time, the government changed central bank operating procedures to make it easier to control the money supply, and therefore inflation, and introduced short-term Treasury bills with an eye to establishing a more robust domestic credit market and to gaining further control over monetary conditions.

While the government has made important strides in reducing its role in financial markets, it is still the dominant player and retains control of most of the institutions that allocate capital in Iceland: two of the three large commercial banks; several Investment Credit Funds (which make long-term loans); and the mortgage lending institutions. Although controls on international long-term capital movements are now being dismantled, controls remain on short-term capital and foreign exchange transactions. Also, in an attempt to reduce the interest cost of its debt, the government has manipulated the market for government securities, which has tended to inhibit the development of that market. In the remainder of this chapter, the government's role in Iceland's capital markets and options for further policy initiatives are discussed.

The role of government in the allocation of credit

Overview

Most credit in Iceland is intermediated through government-controlled institutions. The largest share of financial intermediation, about a third, goes through the commercial banking sector, with two of the three commercial banks being

Table 7. **Interest rates**

Rates	Non-indexed secured loans			Indexed secured loans		Treasury bonds
	Nominal	Yield	Inflation[1]	Real[1]	Real[2]	Real[2]
1987						
Average	26.2	27.9	22.2	4.7	7.7	7.5
1988						
I	35.3	38.4	16.9	18.5	9.5	7.2
II	33.5	36.3	37.5	–0.9	9.5	7.2
III	36.2	39.5	22.0	14.3	9.3	7.0
IV	18.3	19.1	2.7	16.0	8.6	7.0
Average	30.8	33.2	19.1	11.8	9.2	7.1
1989						
I	15.6	16.2	28.6	–9.6	8.1	6.8
II	29.1	31.2	25.1	4.9	7.9	6.8
III	35.0	38.1	23.6	11.7	7.4	6.0
IV	30.6	32.9	17.8	12.8	7.7	6.0
Average	27.6	29.5	23.7	4.7	7.8	6.7
1990						
I	24.1	25.5	11.4	12.7	7.9	6.1
I	14.0	14.5	9.5	4.5	7.9	6.5
III	14.2	14.7	2.2	12.3	8.1	6.9
IV	13.1	13.5	6.4	6.7	8.2	6.9
Average	16.3	17.0	7.3	9.1	8.0	6.8
1991						
I	15.0	15.6	4.1	11.0	8.0	6.1
II	16.6	17.3	13.9	3.0	8.5	7.4
III	20.7	21.8	8.7	12.0	9.9	8.0
IV	18.3	19.1	2.3	16.5	10.0	8.2
Average	17.6	18.4	7.2	10.5	9.1	7.5
1992						
I[3]	14.9	15.5	1.8	13.4	9.9	8.0

1. According to credit terms index 1987-88 and cost of living index from 1989.
2. According to credit terms.
3. Estimates.
Source: Central Bank of Iceland.

Table 8. **Who lends in Iceland?**

Percentage of total credit outstanding

	Banking system	Investment credit funds [1]	Housing bonds	Other state lending	Direct lending by pension funds [2]	Other private lending	Foreign borrowing	Inter-institutional lending [2]
1985	34.0	22.1	0.0	22.4	9.7	2.2	49.1	–39.4
1986	33.0	23.7	0.0	11.6	10.8	3.2	44.6	–26.8
1987	36.5	24.2	0.0	9.6	10.0	5.2	38.3	–23.9
1988	37.6	24.9	0.0	9.5	9.2	5.7	39.1	–26.0
1989	35.2	25.9	0.0	9.7	8.8	5.9	40.8	–26.3
1990	34.3	26.0	1.1	10.1	9.2	6.2	37.4	–24.4
1991 [2]	33.6	24.9	3.7	9.6	12.0	5.8	35.2	–24.8

1. Excluding housing bonds.
2. Excluding pension funds' lending to financial institutions.
Source: Central Bank of Iceland.

owned by the government. In terms of overall intermediation, the next most important institutions are the Investment Credit Funds (ICFs), which for the most part remain under direct government control. Almost all long-term financing of business investment is channelled through the ICFs. A growing factor in the credit system is the government-run housing bond system, which allows households to finance mortgages with a government guarantee.

Investment Credit Funds

ICFs receive borrowing authorisation in the government's Credit Budget, and lend funds for long-term investment, typically, but not always, to a specific industry. The borrowing authorisation comes with an explicit government guarantee. The ICFs themselves generally have a board composed mostly of government appointees, although there are often representatives of the workers and management of the industry as well. In the past, some ICFs suffered losses, which were covered by government grants, or sometimes by special taxes on the industry to which the ICF lent. Until the last few years the ICFs, in effect, redistributed money – and those that depended on industry-specific taxes redistributed money across firms in the same industry – while subsidising the cost of investment at the margin.

In recent years, the role and operation of the ICFs has changed significantly, in line with the policy thrust of relying more on markets. As currently consti-

Table 9. **Ownership of financial asssets**

Percentage of total

Position at end of year	Pensions and other institutions	Domestic non-institutional	Foreign borrowing	Total as a percentage of GDP
1980	25.1	35.6	39.3	98.9
1981	27.1	38.1	34.8	97.5
1982	24.5	30.0	45.4	124.8
1983	26.5	28.5	45.0	126.4
1984	26.1	25.4	48.4	139.4
1985	28.8	26.7	44.4	139.1
1986	30.9	30.2	38.8	127.5
1987	33.9	32.0	34.1	127.9
1988	33.7	31.0	35.3	139.3
1989	34.1	30.1	35.9	153.8
1990	35.9	31.8	32.4	150.7
1991	37.4	31.9	30.7	159.3

Source: Central Bank of Iceland.

tuted, they can be divided into two types. Those of the first type have commercial goals and make loans to private businesses. They therefore act much like specialised investment banks, except that they benefit from government guarantees and certain other preferences, such as exemption from corporate taxes. Those of the second type are designed to satisfy social goals, and are therefore not expected to operate on a commercial basis and cannot be judged by commercial criteria. Examples of an ICF of the first type are the Fisheries Loan Fund, and the Industrial Loan Fund. ICFs of the second type include the Regional and Municipal Development Funds (which make subsidised loans for regional-policy objectives), the Agricultural Loan and Agricultural Productivity Funds (which make subsidised loans to farmers), and the Workers' Building Fund (which makes subsidised loans for the construction of housing for low income people).

While many OECD countries have government-subsidised lending facilities to support agriculture, regional policy, education, housing and other social goals, Iceland's commercial ICFs are unusual in their scope and importance in the financial system. With ICFs free to charge market interest rates, the government has insisted in recent years that most operate purely on a commercial, nonsubsidised basis. The Fisheries Loan Fund – the largest of them – has been quite successful in this regard. In 1988 and 1989, this fund was profitable, although it

suffered some losses in 1990, which was a bad year for the fishery. The Commercial Loan Fund, which is privately owned, has been profitable each year since 1986, and the Nordic Development Fund has also been financially successful.

Other funds, however, do not yet operate on a fully commercial basis. The Development Fund, which was originally in the business of providing loans to other ICFs, has in recent years provided seed capital with a view to broadening Iceland's industrial base and reducing its dependence on fish exports. However, it has rung up huge losses, which consumed more than half its capital in 1989, and in late 1991 it ceased to operate. Its liabilities were assumed by the National Debt Management Agency. The Tourism Fund has also posted losses every year since 1985, which have been covered by industry levies (which, nevertheless, have not been high enough to prevent an erosion of the fund's capital base). The Industrial Loan Fund was profitable in 1990 after two years of losses, but continues to collect a levy on firms.

The weak funds pose obvious budgetary risks. However, even the financially sound ones may be costly to economic efficiency and pose an ongoing risk of future claims on public funds. The government guarantee on their borrowing gives them access to better credit terms than the firms themselves could obtain – indeed, such access has been one of the major justifications of the ICFs. Moreover, channelling credit through the funds necessarily puts the government in a position of picking which industries, or even firms, to encourage, since those enjoying access to ICF financing will have lower costs than those that do not. Since ICFs tend to be specialised in particular industries, their risk cannot easily be diversified, which increases the chance that a fund may become insolvent.

While these are reasons enough to reform the ICFs, the most compelling factor may prove to be the European Economic Area (EEA). As part of the agreement, Iceland must come into compliance with EC banking regulations by January 1995. Accordingly, ''commercial'' ICFs will have to be treated like banks; in particular, they will fall under normal tax rules and have to meet prudential capital standards. Government ownership and government guarantees of liabilities can be retained, however. Current government policy appears to be on target to meet these objectives, at least for the major funds, and legislation is pending to subject ICFs to corporate profits taxes. Some funds are to be turned into limited-liability companies, which may imply that the government guarantee on their liabilities will be phased out. However, given the economic importance

of ICFs, there are likely to be implicit government guarantees of their liabilities even after formal guarantees have been eliminated.

Competition in banking

Of the three commercial banks in Iceland, two are owned by the government, which limits competition for financial services, although savings banks and the ICFs may be able to compete with the commercial banks in some areas. The government has announced that it intends to restructure the state-owned commercial banks and to sell shares in one of them later this year. Another potential source of competition could be foreign banks, which had until recently been limited to representative offices, which could originate foreign-currency loans but not take deposits or transact in krónur. Under a new law, passed in spring 1991, foreign banks have been allowed to set up branches in Iceland since January 1992, and these branches can operate as any other bank in Iceland. Foreign ownership of Icelandic banks, however, is still limited to a 25 per cent share, and foreign banks cannot establish wholly-owned subsidiaries in Iceland.

The EEA agreement will force further liberalisation of banking. To comply with EC regulations, Iceland will have to open its banking system fully to foreign competition. This will, for example, imply that banks will be subject to foreign acquisition. Foreign banking would be especially desirable in a small country like Iceland, which is highly dependent on one industry, since it could allow credit risks to be spread over a larger portfolio of industries and countries. However, if foreign banks do enter – to date no bank has indicated it will take advantage of the recently passed legislation allowing branching in Iceland – the structure of banking in Iceland is likely to change significantly, and the competition will pose a severe challenge to existing banks.

Mortgage finance

The mortgage market has developed rapidly in the last few years. Mortgage finance had been arranged informally between buyers and sellers, or through the pension funds, although there was also a limited government scheme as well. In 1986, a system was introduced that allowed each household to obtain a mortgage from the State Housing Agency for a fixed amount, at a highly subsidised interest rate of 3½ per cent in real terms. (The rate was increased to 4.9 per cent in July 1991). The pension funds continued to play a key role in the system,

however, as they were compelled to channel funds into mortgages. The Housing Agency borrowed from the pension funds at market interest rates, in the 7 to 9 per cent range in real terms, with the difference between these rates and the lending rate being paid by the government.

This arrangement, of course, meant a significant mortgage subsidy and, as a result, there was excess demand resulting in queues for mortgages of up to 3 years. Given this unsatisfactory situation, it was decided to phase this system out (it will cease making new loans in 1992) and replace it with the Housing Bond programme. Under this system, which was introduced in 1989, a buyer of a home issues an IOU to the seller for up to 65 per cent of the value of the house, subject to a cap. The seller then swaps the IOU for a government-guaranteed Housing Bond, issued by the National Housing Authority (NHA), which can then be freely resold. The resulting secondary market then determines the yield on these bonds, which pay a coupon equivalent to 6 per cent in real terms[8]. Issuance of the bonds is market-determined as well, in that, subject to a credit screening, the NHA does not refuse to swap bonds for IOUs. In 1990, 6 billion krónur of housing bonds were issued, and 15 billion in 1991, representing 25 per cent of overall credit extensions last year.

A major effect of the new system is the elimination of the direct mortgage interest subsidy that existed under the previous system, reflecting a shift in state housing policy away from encouraging home ownership *per se* as a merit good. However, there remain indirect subsidies to mortgages. The NHA effectively acts as a mortgage banker and therefore incurs the usual costs of that activity, but it does not entirely recover these costs either through an interest rate spread, or through fees, although a one per cent up-front fee is charged. The costs of mortgage intermediation include administrative costs, a normal rate of profit and corporate taxes on that profit. Moreover, since it guarantees the housing bonds, the NHA takes on default risk. Although the default rate on the two-year-old scheme has been negligible so far, it would be prudent to build up a reserve to cover expected defaults when the system is mature. Credit screening and the 35 per cent downpayment reduce the default risk, but it seems unduly optimistic to assume it is zero.

Mortgages are also indirectly subsidised through the tax system, because there is a tax credit on mortgage interest payments, the value of which declines with the amount of taxable income. In Iceland, this provision interacts with the housing bond system and the rest of the tax system to produce an incentive to

take out the maximum mortgage possible. Because interest income is generally untaxed, a household may be better off to take out a mortgage, take the tax credit and invest any assets it has (in mortgage bonds, for example). The natural way to eliminate this incentive would be to abolish the tax credit. An alternative would be to tax interest income. However, the former is probably more appropriate because taxing all interest income might conflict with the goal of encouraging savings.

The NHA operates much like the Federal National Mortgage Association (Fanny Mae) in the United States, in that both purchase mortgages and then issue government-guaranteed securities backed by those mortgages. The U.S. mortgage system is also subsidised – notably Fanny Mae does not pay corporate tax. But the subsidy is probably not as extensive as in Iceland – for instance, Fanny Mae charges a spread to cover costs and the risk of default. One virtue of such securitisation is that mortgage finance is not concentrated in financial intermediaries that rely on deposits for funds. The maturity mismatch between mortgages and deposits can result in bankruptcy, as happened to many saving and loan institutions in the United States. Instead, the securities can be purchased by institutions that have a maturity-matched need for funds, such as pension funds, or by individuals.

As well as being subsidised, the mortgage bond system provides the least-restricted access to mortgage finance in Iceland to date. As a result, a great deal of debt is being issued to meet pent-up demand, which has put upward pressure on interest rates. To restrain issuance, the cap on the maximum mortgage amount was cut by about a quarter in October 1991. Still, as Iceland moves to a more liberal financial environment, including greater choice in consumer finance, such a transitional period of expanding household debt is inevitable, although remaining subsidies are probably increasing the demand for mortgages and contributing to somewhat excessive borrowing. A better solution to meeting the demand for mortgages would be to encourage the development of a private-sector mortgage market. This solution would be consistent with the broader policy goal of establishing a deeper domestic private financial system. But if the private sector is to enter the market on an even footing, the subsidy element in the current programme would need to be eliminated. If a private-sector market were successfully established, the government-backed programme would become much less important in any case. If the authorities wished to aid some households (those

with low incomes, for example), private mortgages could be supplemented by an explicit, targeted mortgage subsidy.

The government securities market

With the relaxation of capital market controls, the government securities market has the potential to become more important as a means of financing deficits and implementing monetary policy. However, the market has been subject to attempts by the government to reduce the interest it pays on its debt, which resulted in yields on government paper in the secondary market that have exceeded the when-issued rate. To maintain this spread in 1990, the government relied on commercial banks to purchase government securities, mainly by raising liquidity requirements. In 1991, the government moved the interest rate on newly issued bonds closer to the market rate. The government has relied on liquidity requirements to an even greater extent in the market for Treasury bills, at least through 1990. While liquidity requirements probably played a useful role in the mid-1980s in establishing the bill market, the efforts to hold the interest rates on government paper down has become a hindrance to further market development. The government has also frequently used the central bank to finance its deficit by running "overdrafts" – in effect, short-term loans that the central bank could not refuse to grant. While access to this facility was limited somewhat in 1990, overdrafts have continued. However, the proposed new central bank act, which is aimed at increasing the independence of the central bank, will prohibit overdrafts. This will force the government to issue debt to finance the deficit, although, as in other countries, the central bank will be able to purchase that debt (thereby monetising it).

Because the government has, at times, dealt with securities buyers on a one-on-one basis, true transactions prices of government issues (i.e. the true market yield) have not always been revealed in a timely manner[9]. As a result, the central bank has had difficulty determining actual interest rates in this market and hence has only limited access to an important indicator of credit conditions. Currently, the government chooses interest rates for bills and bonds, and the central bank stands ready to supply reserves as market conditions dictate. With interest rates thus under the control of the Treasury rather than of the central bank, rate

changes cannot be made on a timely basis and the central bank is constrained in terms of open market operations[10].

One long-standing goal of government finance has been to reduce the dependence on foreign borrowing – to finance more of the deficit on the domestic market. To some extent, this has been an important issue because capital controls meant that almost all foreign borrowing had to be carried out by the government, or the ICFs. As a result, to avoid severely crowding out private-sector investment, the government was virtually forced to borrow abroad to finance the deficit. Indeed, this was still true in 1991, when the government attempted to finance its deficit almost entirely domestically. However, the result was a drawdown of central bank foreign reserves to finance the current account deficit and by the end of the year, the government had borrowed abroad to allow the central bank to rebuild its reserves.

As international capital movements are freed up and the domestic capital market becomes more developed and integrated with world markets, the choice of whether the government finances its deficit in Iceland or abroad will matter less. To the extent that it chooses domestic finance, the private sector will borrow abroad – if not, domestic interest rates would tend to rise, giving private-sector borrowers the incentive to go offshore. Thus, the government financing decision will affect who owes the foreign debt – the public or the private sector – more than the composition of total Icelandic debt. It will also affect whether the public or private sector bears the risk of exchange rate changes, which may affect Iceland's interest rate differential with the rest of the world, depending on the risk-aversness of private-sector borrowers and their assessment of the likelihood of exchange rate changes.

As a separate matter from the issue of currency composition, it would be advantageous for the government to finance its deficit via public auctions of treasury bills or bonds. To this end, the government is developing plans to begin auctions of 6 and 12-month treasury bills. This reform would bring Iceland into line with standard practice in other OECD countries and would make the government debt market far more transparent than it is now. In turn, the added transparency would facilitate the operation of monetary policy by providing feedback between asset markets and the central bank. As capital and currency markets are liberalised, and as integration within the EEA proceeds, the ability to carry out open-market operations will become increasingly important.

IV. Public-sector finances

Since the structure of public-sector expenditures and revenues was analysed extensively in the 1988/89 *Survey of Iceland,* this issue will be reviewed only briefly here. This Chapter also discusses the economic significance for the Icelandic economy of various budget deficit measures and the fiscal role of local governments.

Government expenditures, revenues and deficits

General (that is, both central and local level) government expenditures and revenues have been creeping up as a share of GDP through the 1980s. They are still below the OECD average, though not the lowest among OECD countries. However, such measures of the average scale of government activity are not necessarily good indicators of its distortive impact on the economy, which depends in general on individual tax and subsidy rates and on their interaction[11]. Nevertheless, recent reforms to the income tax system, which introduced pay-as-you-earn and a single tax rate, the introduction of a unified payroll tax and the replacement of the sales tax by a value-added tax (the 1988/89 *Survey* discusses tax reform in detail), have probably reduced the distortions imposed by the tax system, although there are no estimates of its deadweight cost.

An important feature of the tax system is its heavy reliance on indirect taxes, especially the VAT[12]. For example, in 1989, indirect taxes accounted for almost 60 per cent of total general government tax revenue, which is the highest of any OECD country, and well above the ⅓ share in the EC. It appears that the importance of indirect taxes is now diminishing, at least for the central government. This has been due to higher revenue resulting from the switch to the pay-as-you-earn income tax system in 1988, rather than to a decline in indirect taxes as a fraction of GDP, or to a decline in indirect tax rates. In the longer term, there

Table 10. **Assets of Investment Credit Funds**

	Fund assets as a percentage of total assets		Contributions as a percentage of assets[1]		Capital as a percentage of assets	
	1985	1990	1985	1990	1985	1990
"Commercial" funds						
State Housing Fund	35.5	45.7	7.5	0.1	42.2	25.0
Fisheries Loan Fund	19.8	9.9	3.2	0.0	22.2	25.9
Industrial Loan Fund	7.1	6.6	2.7	1.1	28.7	28.4
Development Fund[2]	2.6	3.9	0.0	0.0	66.8	9.0
Nordic Industrial Loan Fund	3.9	3.1	0.0	0.0	103.3	54.3
Commercial Loan Fund[3]	2.4	1.6	0.0	0.0	4.1	10.2
Co-operative Loan Fund[3]	1.8	0.8	0.0	0.0	3.8	9.5
Tourism Fund	0.8	0.6	0.0	1.5	27.1	17.4
Subsidised funds						
Workers' Building Fund	9.5	13.7	9.3	3.4	68.4	38.4
Regional Development Fund	6.4	6.0	3.3	2.8	39.3	18.8
Agricultural Loan Fund	5.8	5.6	10.2	5.4	23.1	19.1
Municipal Fund	3.1	2.2	4.0	3.1	66.3	86.9
Other agricultural funds	1.3	0.3	13.8	155.8	–0.8	29.4
All ICFs					39.9	27.7
Memorandum:						
ICF assets relative to GDP (per cent)	30.7	41.1				

1. Contributions are mainly industry levies and Treasury subsidies.
2. Direct lending only. This fund was taken over by the central government in early 1992.
3. Privately owned fund.
Source: Central Bank of Iceland.

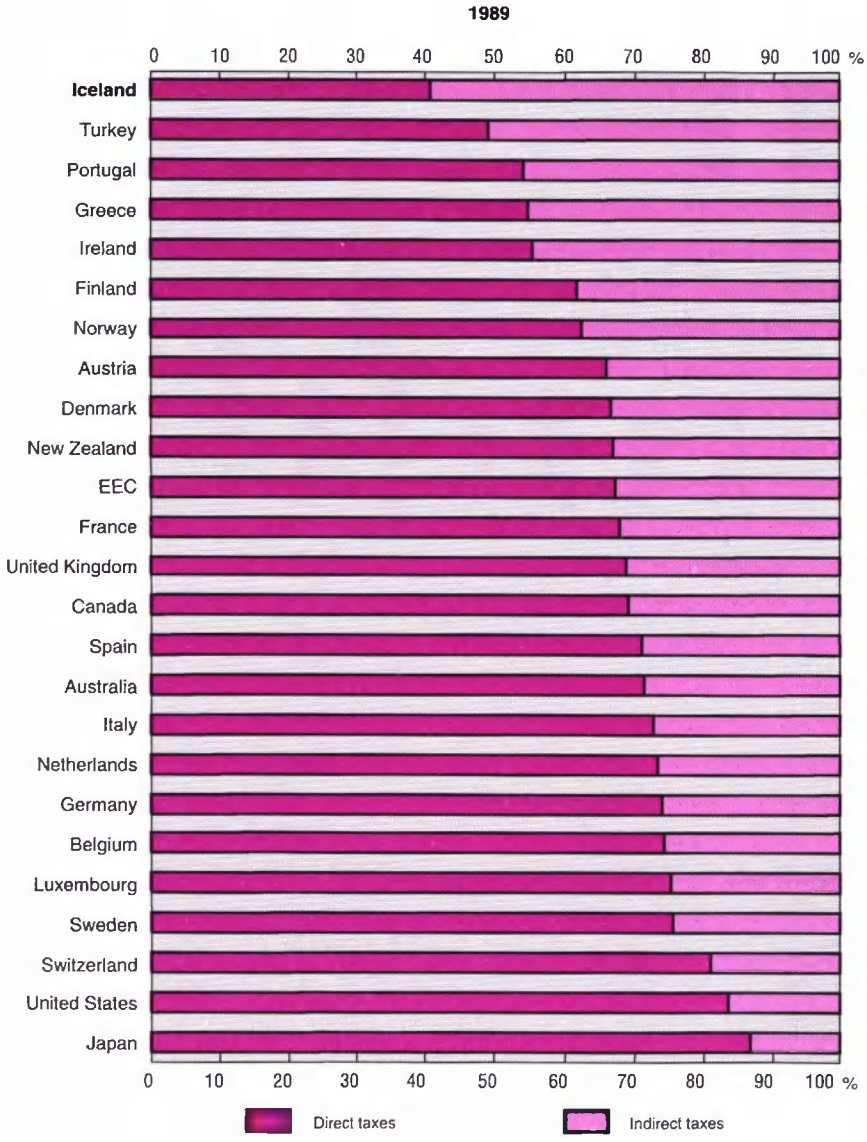
may be pressures towards still greater use of direct taxes[13]. The single-market provisions of the EEA will probably reduce revenue from import duties and tariffs, which in 1990 accounted for about 9 per cent of Treasury tax revenue. Closer integration with Europe may also generate some pressure to harmonise consumption tax rates, which, at 24.5 per cent, are higher in Iceland than in any EC country except Denmark (which has a standard rate of 25 per cent). Compared with continental EC countries, however, the potential erosion of the tax base will be mitigated by Iceland's geographical isolation.

The accompanying box and Table 12 illustrate the various budget concepts relevant to Iceland. The public sector borrowing requirement (PSBR), which is the broadest measure of the government's financial needs, is relatively large as a

Diagram 10. **GENERAL GOVERNMENT SPENDING AND RECEIPTS**
As a percentage of GDP, 1989[1]

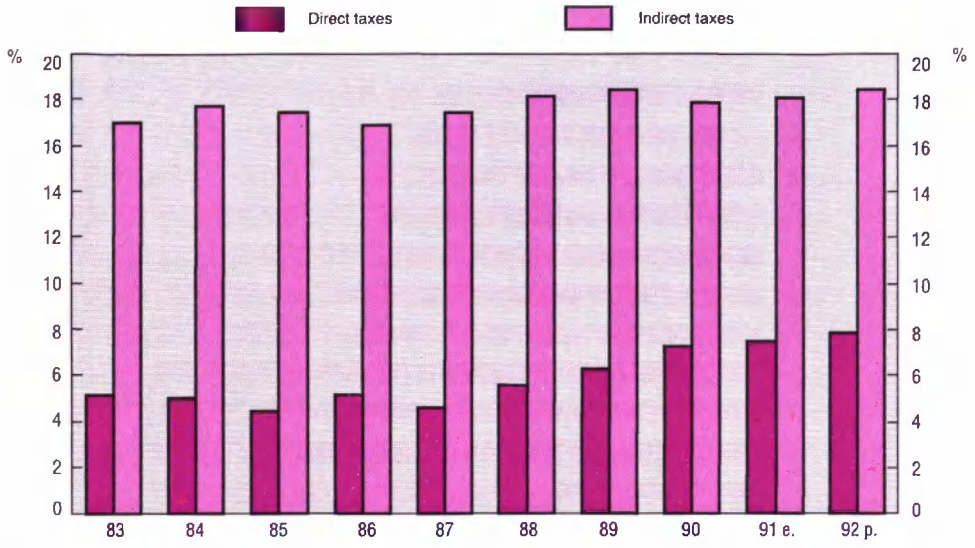
1. For Spain the percentages are for 1988.
Source: OECD, National Accounts.

Diagram 11. **COMPARATIVE DIRECT AND INDIRECT TAXES**
As a percentage of total tax revenue



Source: OECD, *Revenue Statistics of OECD Member countries, 1965-1990.*

Diagram 12. **DIRECT AND INDIRECT TAXES**
As a percentage of GDP



Note: e = estimate; p = projection.
Source: Ministry of Finance, Treasury Finances 1991-1992.

fraction of GDP and has grown rapidly in recent years: it was 5½ per cent of GDP in 1986, but 10.7 per cent in 1991; the budget aims to reduce it to 6.3 per cent in 1992. At the same time, total debt, total debt less government lending, and foreign debt have all crept up as a fraction of GDP. The two major contributors to the PSBR are the Treasury net borrowing requirement and borrowing for the housing system (mortgages). In 1990, for example, these accounted for over 80 per cent of the PSBR. However, the growth of the PSBR is accounted for almost entirely by mortgage borrowing, which trended up from less than 2 per cent of GDP in the mid-1980s to 6 per cent in 1991. The Treasury deficit, by contrast, has varied from about 2 to 3½ per cent of GDP since 1987 (see Table 6).

This distinction is worth emphasising because, from an economic point of view, the Treasury deficit and mortgage debt are quite different. The former

DEFICIT DEFINITIONS

The three major budgetary concepts, in order of increasing broadness, are the Treasury revenue balance, the Treasury net borrowing requirement and the public sector borrowing requirement (PSBR). The relationships between them are shown in Table 11, which uses the 1992 Budget estimates as a concrete example.

The Treasury revenue balance is the difference between central government expenditures, including capital expenditures and interest payments, and revenues, including interest revenue, dividends and the proceeds from sales of government assets. The Treasury net borrowing requirement includes, in addition, net lending by the Treasury, which is currently mainly the student loan programme. This is financed through borrowing and through overdrafts from the Central Bank.

The PSBR includes, in addition, the net borrowing of public-sector financial and non-financial institutions, including housing funds. It also includes the (generally small) borrowing of municipalities.

The Credit Budget provides the gross borrowing authority of the Treasury, which is almost 14 billion krónur in 1992. The Credit Budget also includes authority for many public-sector financial and non-financial institutions, which is an additional 28 billion krónur.

largely represents resources borrowed from the private sector to pay for the provision of government services. As a result, it crowds out other expenditures or induces external borrowing and, through debt accumulation, will be a burden on future taxpayers[14]. The government mortgage schemes, on the other hand, are a form of financial intermediation that reflects private-sector housing activity, not public-sector expenditure. Put differently, mortgages are offset by assets and a stream of payments (from homeowners). Thus, apart from defaults, they will not result in a charge on future taxpayers. Iceland's institutional arrangement is unusual in that the government runs the mortgage system and places the flow of new mortgage lending on its Credit Budget. But this is largely a matter of bookkeeping. If, as in other OECD countries, the mortgage system were in the private sector, there would be a difference in underlying economic activity only to the extent that current subsidies were abolished. Yet, on this basis Iceland's PSBR would be 3 or 4 per cent of GDP, not almost 10 per cent, although borrowing even at this lower level is too high to be sustainable in the medium term.

Table 11. **General government spending**

Accruals basis

	Central government	Local government	Social security	Total expenditure
	Per cent of total			Per cent of GDP
1945-49	62.8	25.8	11.4	24.7
1950-54	56.6	25.5	17.9	23.9
1955-59	58.5	25.8	15.8	23.1
1960-64	54.7	23.8	21.5	26.4
1965-69	54.1	25.5	20.4	30.8
1970-74	53.6	23.3	23.2	33.9
1975-79	57.3	22.1	20.5	33.8
1980	56.0	22.2	21.8	32.1
1981	55.5	22.3	22.2	33.0
1982	55.6	22.5	21.9	34.5
1983	59.3	20.3	20.4	36.1
1984	57.3	21.2	21.5	32.2
1985	58.9	20.1	21.0	34.6
1986	61.7	18.6	19.7	36.8
1987	59.5	21.0	19.5	33.6
1988	60.0	21.4	18.6	37.5
1989	60.2	21.8	18.0	38.7
1990	59.3	21.8	18.9	35.8
1991, provisional	77.8 [1]	22.2	.. [1]	37.0

1. For 1991, the central government expenditure includes social security.
Source: National Economic Institute.

The rapid increase in mortgage debt may nonetheless be a cause for concern, but for different reasons than the concerns about Treasury borrowing. First, any government mortgage subsidies – through below-market interest rates or by charging less than full costs of intermediation – are a claim on resources, just like government current expenditure. In principle, therefore, the subsidies, but not the face value of the mortgages, should be counted as expenditure[15]. However, this is a much less important issue than it once was, because the replacement of the housing funds (which offered subsidised interest rates) with the mortgage bond system has greatly reduced mortgage subsidies. Because mortgages receive favourable tax treatment, household investment decisions may be becoming more distorted as the mortgage market is liberalised – they may be shifting assets to housing, driving up the price, at the expense of other investments. A related

Table 12. **Budget concepts**

1992 budget, IKr billion[1]

Treasury revenue	105.5
less : Treasury expenditure	109.6
equals : Treasury revenue balance	–4.1
less : Treasury net lending	0.8
equals : Treasury net borrowing requirement	–4.9
Treasury gross borrowing (credit budget)	–13.9
less : Amortisation	9.0
equals : Treasury net borrowing requirement	–4.9
plus : Net borrowing of non-financial institutions	0.9
plus : Net borrowing of financial institutions	–15.2
equals : Public sector borrowing requirement	19.2

1. A negative sign implies deficit or borrowing.
Source: Ministry of Finance.

cause for concern is that the sharp rise in mortgages represents to some extent an increase in household debt. As was argued in Chapter III, the establishment of a formal mortgage market, along with other financial liberalisations, would be expected to lead to such an upward adjustment, because constraints on household financial activity have been removed. This is not, in itself, a cause for concern. Also, borrowing under the new system has partly replaced other debt, rather than adding to overall household indebtedness. Moreover, mortgages are backed by real assets, in the form of the houses themselves, and therefore more mortgages

Table 13. **Central government debt**

As a percentage of GDP

	1986	1987	1988	1989	1990	1991[1]	1992[2]
Total debt	27.3	24.1	25.0	30.0	33.5	32.5	35.0
Total lending	18.7	17.1	18.7	16.4	15.8	15.1	15.3
Debt less lending	9.3	8.0	7.6	15.0	16.9	17.4	19.7
Foreign debt	18.3	14.5	14.7	17.9	17.4	17.0	19.2
Lending in foreign currency	6.9	5.2	5.2	5.5	4.4	4.1	4.3

1. Estimate.
2. Forecast in 1992 budget.
Source: Ministry of Finance.

do not imply declines in a household's net wealth. On the other hand, the necessary correction of the overextension of household debt in other OECD countries has been blamed for aggravating the recent recession, especially as falling housing prices have reduced household assets. There is as yet no sign that this is a problem in Iceland, but the balance sheets of households (and also of firms) deserve monitoring.

Municipal finances

Municipal expenditures account for just over one-fifth of overall public expenditure, a share which has remained roughly stable for the past two decades. While the expenditures of both the central government and municipalities have risen substantially in the 1980s – by about 50 per cent in real terms – tax revenues at the municipal, but not at the central, level have largely kept pace. Thus, although the Treasury has been running considerable deficits since the

Table 14. **The structure of municipal revenue and expenditure**

	1986	1987	1988	1989	1990[1]	1991[2]
	Revenue: Per cent of total					
Personal income tax	44.9	44.9	46.0	46.3	47.6	47.3
Indirect taxes[3]	39.9	37.6	36.1	36.3	33.9	34.1
Capital revenues	7.5	8.7	9.3	9.2	7.1	7.2
Other	7.7	8.9	8.6	8.1	11.5	11.4
Revenue (per cent of GDP)	7.4	7.6	8.6	8.6	8.1	8.2
	Current expenditure: Per cent of total					
Wages	27.7	29.0	27.9	26.3	28.2	28.8
Other consumption	25.6	22.5	21.9	22.1	24.9	25.0
Current transfers	12.3	12.5	12.1	11.7	6.2	5.5
Capital expenditure	28.4	29.3	31.5	32.7	32.4	32.4
Other	6.1	6.7	6.6	7.1	8.3	8.4
Expenditure (per cent of GDP)	7.4	7.7	8.7	9.1	8.2	8.2

1. Preliminary.
2. Estimate.
3. Includes VAT (sales tax before 1990), turnover tax and real estate tax.
Source: National Economic Institute.

mid-1980s, municipalities have been roughly in budget balance and have contributed little to the PSBR.

The single largest source of municipal revenue is the personal income tax, which is levied at a flat rate of about 7 per cent. This represents more than a third of total net personal income tax revenue of all levels of government. In addition, municipalities have access to a number of specific taxes, the most important of which are the "turnover" tax (which is levied on all business operating expenses at a rate of about 1 per cent and the revenue from which has been growing rapidly), the real estate tax, and the municipal share, 1.4 per cent, of the revenue of the central government. Together, these four taxes account for about 85 per cent of local government revenue. Reflecting their different responsibilities, fixed investment accounts for a much larger fraction of local expenditure (about a third) than of central government expenditure (about 6 per cent); two thirds of all public-sector fixed investment is undertaken at the local level.

There have recently been changes to the division of fiscal responsibilities and powers between the two levels of government. The central government took on more responsibility for the health-care sector, while changes to laws affecting social services, education, nursery schools and the environment may raise municipal outlays. In the past, municipalities shared a percentage of sales tax revenues, but when the sales tax was replaced with the VAT, this arrangement was changed to a share of total central government revenue. Nevertheless, municipalities remain in good fiscal shape, in contrast to the deficit problems faced by the central government; indeed, in 1992 municipalities are required to contribute to central government deficit reduction.

V. Conclusions

A year ago there was optimism that economic activity in Iceland had turned the corner and was headed into an expansionary phase for the first time since 1987. However, developments largely beyond the control of Icelanders have resulted in slow economic growth in 1991 and the likelihood of further stagnation in the near term. The key cod and capelin catches fell, despite improved maritime conditions, although this was partly offset by rising fish prices, and fiscal expansion early in the year boosted domestic demand. Reflecting both reduced world-wide demand caused by slow growth in industrialised countries and an increase in supply from the former Soviet Union, aluminium prices collapsed, stocks built up and world-wide smelting capacity was pared back. These developments triggered the postponement of the construction of a new aluminium smelter in Iceland, which was to have begun in late 1992.

Short-term growth prospects will be shaped primarily by the expected evolution of the fish catch and of fish prices, neither of which look promising. Available information suggests that quotas for cod – by far the most important commercial species – must remain low for at least the next two years if fish stocks are to be protected. World markets for fish have been strong during 1991, and prices are now quite high by historical standards. Price declines seem more likely than further increases in the next couple of years. The state of world aluminium markets could also significantly affect Icelandic economic growth. Prices, which are now well below their historical average, should recover as world economic activity picks up, although it now seems unlikely that the smelter project will be revived in time to have much impact in the next couple of years.

One bright spot for the economy is that inflation, which historically had been very high and variable, fell sharply in 1990 and, on the whole, remained low in 1991. Growing public sentiment opposed to the high inflation of the past

and realisation that low inflation would be a necessary ingredient for successful economic integration with Europe made possible a wage-price agreement between workers, firms and the government which was signed in February 1990. Since then, monetary conditions have been consistent with the policy of fixing the króna and demand pressures have, on the whole, remained in check. Indeed, by the end of 1991 the inflation rate had fallen to levels similar to those in other OECD countries. Maintaining this performance will require restraint in policy and a moderate settlement in the current round of wage negotiations. In this regard, it is important that the government not give in to demands for fiscal concessions, which would jeopardise the goal of fiscal control. The potential benefits from such moderation are substantial. The fixed value of the króna can provide a useful anchor for monetary policy, something it has lacked in the past. At the same time, low inflation can provide the conditions for financial stability, with the gains depending, in large measure, on a credible adherence to a non-inflationary monetary policy. This credibility should be enhanced by increased central bank independance, along the lines of the proposed central bank act.

The government budget deficit is high enough to significantly restrict the opportunity to use tax cuts or government expenditure increases to bolster demand. The public sector borrowing requirement exceeded 10 per cent of GDP in 1991, and has grown rapidly. But this has been almost entirely due to increased mortgage borrowing, which ought not impose costs in terms of future taxes (because it should be repaid by the homeowners who took on the mortgages), as will the debt that is being issued to cover the shortfall in Treasury revenues. The Treasury net borrowing requirement, which the OECD believes to be the most relevant budgetary concept in this context, rose during the boom that ended in 1988 and remains at 2 to 3 per cent of GDP. This is uncomfortably large, and will have to be reduced in the years ahead. Both the 1991 and 1992 Budgets were designed to reduce the deficit, but the projected deficit was greatly surpassed in 1991. The government has announced that it intends to balance its budget in 1993. Although this goal will be difficult to achieve in view of the weak economic outlook, the policy of fiscal consolidation should be pursued.

Several structural reforms also need to be pursued for the benefits they would produce in the medium term. There has been a deterioration in the cod stock in the past few years, and the quota system probably needs to be further tightened. This would depress fishing incomes in the short term, but would have

a longer-term pay-off as fishing stocks rebounded. Rationalisation of the fishing fleet, which was one of the goals of the new system of more-tradeable quotas, could lead to significant resource savings and increased net benefits from the fishery. In the short term, it could increase unemployment somewhat and cause some local dislocation, but the dynamic nature of the Icelandic labour market suggests that these adjustments could be dealt with.

Further reforms of the financial system would also improve the longer-term productivity of the economy by imposing market discipline on investment decisions. Privatisation of the Investment Credit Funds and the elimination of remaining capital subsidies (except those justifiable on the grounds of social policy) would rationalise the allocation of scarce investment resources. Privatising the mortgage market would provide the private sector with a new financial product. More robust domestic financial markets could also be promoted by moving towards an open auction of government paper on the primary market and, as recently proposed by the government, eliminating the possibility of using central bank overdrafts to finance the deficit.

During the past decade, Iceland has built on its natural resources, well-educated workforce and flexible labour market, on liberalisation of its economic institutions and, more recently, on reform of its macroeconomic policies to dramatically reduce inflation and to contain its budget deficit. This process has provided opportunities: notably, capital market liberalisation, a moderate inflation rate and a stable króna have paved the way for closer economic integration with Europe. By opening financial and product markets, such integration should pay dividends in the years to come. Still closer integration, of the nature envisaged by the European Economic Area negotiations, will require further reforms along the lines already undertaken. More generally, the policies that have led to economic stability and greater reliance on markets should provide an environment conducive to further development and diversification, which should, in turn, increase the Icelandic economy's capacity to respond to challenges in the years ahead.

Notes and references

1. Beginning in 1991, the fishing year for the purposes of setting quotas was changed from the calendar year to September through August. For comparison with previous years, calendar year catches are used here.
2. Gilbert, C.L., (''The Price of Aluminium in the Long Run'', unpublished, 1991) develops an econometric model of the real price of aluminium. He defines ''real'' as the US price of aluminium deflated by the US producer price index (with a base year of 1991). This implies a declining price in terms of consumer goods.
3. As noted in last year's *Survey,* unemployment is calculated somewhat differently than in other OECD countries, being based on registered unemployment. Nonetheless, a survey undertaken by the Statistical Bureau of Iceland, intended to match more closely procedures in other OECD countries, found an unemployment rate that was about the same as that based on registrations.
4. Other key elements are ensuring appropriate demand conditions and moderate wage settlements.
5. Iceland's real interest rates were very high in 1991, and it is tempting to speculate that they may already reflect market expectations of a possible depreciation. However, this is probably not the case, because short-term (including currency) international transactions have not yet been liberalised, so interest rate arbitrage (adjusted for expected changes in the value of the króna) is, at best, still very imperfect. The central bank has apparently sensed no ''pressure'' on the króna, although in the absence of the relevant markets, it is hard to say how such pressure, if it existed, would manifest itself.
6. EFTA comprises Austria, Finland, Iceland, Liechtenstein, Norway, Sweden and Switzerland.
7. As described in last year's *Survey,* the right of Icelanders to work in other Nordic countries has been an important factor limiting the unemployment rate response to economic shocks.
8. An institutional peculiarity of housing bonds is that all bonds have, at par, a coupon interest rate of 6 per cent, indexed in real terms. As this has generally been below market rates, the bonds have been immediately sold at a discount, raising their yield to 7 or 8 per cent real. This effectively raises the price of the real estate transaction, since the seller must recoup the discount; the total cost to the buyer is not affected, as the low interest rate compensates for the higher price. This quirk apparently exists because the design of the system was influenced by the realtors' association, whose members benefit from higher commissions on the transactions price.

9. Lack of transparency is a problem in other Icelandic financial markets as well. On the equities market, most shares are not listed and there is no formal reporting procedure for unlisted trades. On the other hand, the secondary debt market is relatively transparent, as the Central Bank is a market maker.

10. Central banks of other OECD countries make extensive use of government paper markets, especially at the short end of the maturity spectrum, for this purpose. They also use these markets to indicate their policy intentions.

11. For example, taxes on products with inelastic demand, or on those that are substitutes for already-taxed items, will tend to distort economic decisions less. Calculating a least-distorting tax system would be difficult, although in many cases movement to more uniform tax rates would reduce distortions.

12. Direct taxes include income and property taxes on individuals and corporations, and social security and payroll taxes. Indirect taxes include VAT, import duties, excise taxes and numerous other levies. In its budget presentation, the Iceland treasury classifies social security and payroll taxes as "indirect".

13. In the very short-term, the increase in fees planned in the 1992 Budget may further increase the importance of indirect taxes.

14. It could be argued that public investment, which in 1991 amounted to about 10 per cent of total Treasury expenditure, should be subtracted from the deficit, since it represents only a change in the form of assets. In terms of its burden on future generations, however, this depends on whether the asset acquired will generate enough economic benefits to offset the debt service.

15. The United States federal government has begun to account for its loans and loan guarantees in this way, but has not yet done so for its exposure through mortgage guarantees or insurance (such as bank deposit insurance). See the 1991 *Survey of the United States* for details.

Annex

Main economic events

1991

January

New fishing quota system takes effect.

Fisheries Equalisation Fund goes into effect. In its first year of operation, it will collect an equivalent of 0.7 per cent of GDP in payments.

April

General election is held. After the election, a new government, headed by the conservative Independence Party, is formed.

May

New government takes office and introduces measures to reduce the 1991 budget deficit.

When-issued interest rates on Treasury securities rise to market levels.

June

In response to demand pressures and rising mortgage interest rates, monthly consumer price increases peak at 1½ per cent. Over the remaining months of the year, monthly inflation falls, and the price level actually drops in December.

July

Treasury bill interest rates rise to a peak of 18.5 per cent. Rates on Treasury bills begin to fallin September.

August

Fishing year ends. It had been marked by poor catches of cod and capelin. Quotas for 1991/92 fishing year include a 10 to 12 per cent reduction in allowable catch for most species.

September

Wage pact agreed in February 1990 ends. New negotiations begin, with the Government proposing a nominal wage freeze.

October

1992 Budget announced, with goal of a balanced budget in 1993.

Negotiations between the European Community (EC) and the European Free Trade Association (EFTA) forming the European Economic Area (EEA) are completed.

Government announces intention to develop a foreign exchange market by 1993.

First Icelandic krónur bond issue placed on international markets, to raise 2.5 billion krónur.

November

Reflecting the weak aluminium market, the Atlantal smelter project is postponed.

December

Iceland announces its intention to withdraw from the International Whaling Commission.

Government takes over the bankrupt Development Fund of Iceland.

European Court rejects proposed EEA agreement. Negotiations between EC and EFTA reconvene.

1992

January

Currency basket changes from a trade-weighted average of 17 currencies, to one with 76 per cent weight in the ecu, 18 per cent on the dollar and 6 per cent on the yen.

1992 Budget passed with a target deficit of 1 per cent of GDP.

Fisheries Equalisation Fund suspended for the remainder of the 1991/92 fishing season (until September 1992).

February

Second round of EEA negotiations completed.

April

European Court approves EEA.

STATISTICAL AND STRUCTURAL ANNEX

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Table A. **Supply and use of resources**

Kr. million, current prices

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Private consumption	14 361	22 923	39 432	53 930	74 689	96 072	129 795	156 203	184 534	213 218
Public consumption	4 039	6 644	11 559	14 056	20 136	27 291	36 791	47 468	56 369	65 271
Gross fixed asset formation	5 929	9 251	14 127	18 356	24 460	29 684	41 042	48 414	56 051	66 896
Expenditure on final domestic use	24 329	38 818	65 118	86 342	119 285	153 047	207 628	252 085	296 954	345 385
Change in stocks of export products	253	913	–1 070	786	–978	–2 094	–416	1 850	–578	–1 787
National expenditure	24 582	39 731	64 048	87 128	118 307	150 953	207 212	253 935	296 376	343 598
Exports of goods and services	8 724	12 714	27 078	34 295	49 534	62 888	73 085	83 548	108 335	126 003
Imports of goods and services	8 936	14 329	25 275	33 871	48 663	55 880	73 965	84 100	99 240	119 146
Gross domestic product (market prices)	24 370	38 116	65 851	87 552	119 178	157 961	206 332	253 383	305 471	350 455
Net income from abroad	–811	–1 495	–3 066	–4 554	–5 584	–6 229	–6 203	–8 333	–13 217	–14 611
Gross national product	23 559	36 621	62 785	82 998	113 594	151 732	200 129	245 050	292 254	335 844
Depreciation	2 871	4 742	8 724	10 691	14 502	18 425	22 030	27 067	35 166	41 113
Net national product (market prices)	20 688	31 879	54 061	72 307	99 092	133 307	178 099	217 983	257 088	294 731
Indirect taxes	5 778	9 202	14 486	20 062	26 341	33 964	46 314	58 875	69 133	76 405
Subsidies	762	1 392	2 204	2 389	3 491	4 228	4 783	7 808	9 808	8 670
Net national income	15 672	24 069	41 779	54 634	76 242	103 571	136 568	166 916	197 763	226 996

Sources: National Economic Institute and Central Bank of Iceland.

Table B. **Supply and use of resources**

Kr. Million, constant 1980 prices

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Private consumption	9 510	9 996	9 417	9 774	10 207	10 947	12 764	12 220	11 712	11 646
Public consumption	2 733	2 902	3 038	3 043	3 232	3 455	3 665	3 818	3 910	4 072
Gross fixed asset formation	3 965	3 945	3 461	3 778	3 854	3 808	4 531	4 505	4 132	4 247
Expenditure on final domestic use	16 208	16 843	15 916	16 595	17 293	18 210	20 960	20 543	19 754	19 965
Change in stocks of export products	170	357	–207	122	–85	–201	–75	130	–40	–96
National expenditure	16 378	17 200	15 709	16 717	17 208	18 009	20 885	20 673	19 714	19 869
Exports of goods and services	5 861	5 294	5 911	6 013	6 686	7 110	7 445	7 218	7 401	7 372
Imports of goods and services	5 972	5 951	5 460	5 888	6 404	6 494	7 990	7 620	6 843	6 889
Gross domestic product (market prices)	16 268	16 543	16 160	16 842	17 491	18 624	20 340	20 271	20 272	20 352
Net income from abroad	–426	–503	–616	–676	–755	–795	–795	–879	–917	–914
Gross national product (market prices)	15 842	16 040	15 544	16 166	16 736	17 829	19 545	19 392	19 355	19 438
Effect of changes in terms of trade	–239	–263	–374	–450	–453	–173	272	157	–192	–308
Gross national income[1]	15 603	15 777	15 170	15 716	16 283	17 656	19 817	19 549	19 163	19 130

Note: Estimates of real income coincide with output in real terms on the assumption of unchanged terms of trade. Due to particularly strong fluctuations in Icelandic terms of trade national expenditure in real terms may deviate substantially from real gross national product without adverse effects on the balance of payments. This is explicitly introduced in the Icelandic national accounts, as shown above. The item "Effect of changes in the terms of trade" equals the external purchasing power of export earnings (nominal exports deflated by a price index for imports) minus the volume of exports of goods and services.

1. Gross national product plus effect of changes in terms of trade.

Sources: National Economic Institute and Central Bank of Iceland.

Table C. **Production and employment**

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991[1]
Fisheries and fish processing											
Output (volume change over previous year)	1.9	–8.7	–14.6	13.8	10.9	4.8	0.3	3.8	–2.3	–1.1	–2.6
Export production											
Value (Kr million)	5 318	7 267	12 564	16 562	23 937	32 605	40 220	45 946	55 645	67 682	74 334
Fishing fleet[2] :											
Trawlers (GRT)	45 258	47 944	48 478	50 801	50 844	50 569	51 380	54 086	52 830	51 865	49 451[3]
Motor boats (GRT)	63 313	63 904	63 294	62 046	61 750	61 822	66 072	65 521	63 181	54 479	50 547[3]
Total (GRT)	108 571	111 848	111 772	112 847	112 594	112 391	117 452	119 607	116 011	106 344	99 998[3]
Employment (man-years)	15 719	15 583	16 045	15 802	15 728	16 064	16 788	15 145	14 893	14 610	14 600
Agriculture											
Output (volume change over previous year)	–1.9	–1.1	1.4	2.8	4.0	–0.4	1.5	–5.1	–0.6	–1.9	–0.6
Export production											
Value (kr million)	116	126	237	406	597	690	1 015	997	1 288	1 778	1 622
Capacity:											
Cultivated grassland (1000 hect.)	139.1	140.6	142.1	143.9	145.1	146.1	146.6	147.0	147.0	146.8	146.5
Sheep (1000 heads)	794.6	747.7	711.9	714.4	709.3	675.5	624.3	586.9	560.9	548.5	510.0
Cattle (1000 heads)	60.4	64.4	68.5	72.7	72.9	71.4	69.0	70.8	72.8	74.9	77.0
Employment (man-years)	8 205	8 182	7 864	7 595	7 420	7 374	7 147	6 470	6 399	6 270	6 150
Manufacturing (excluding fish processing)											
Output (volume change over previous year)	1.4	1.4	–0.9	7.3	2.8	2.3	8.7	–1.4	–2.5	0.5	1.0
Export production											
Value (kr million)	1 309	1 910	4 528	6 673	7 776	8 794	10 059	13 677	19 460	18 914	15 924
of which:											
Aluminium	741	1 042	2 333	3 445	3 472	4 042	4 761	6 705	10 146	9 636	8 340
Diatomite	36	70	142	189	289	284	296	348	416	522	327
Ferro-silicon	129	233	619	1 060	1 267	1 352	1 195	2 203	3 303	2 331	1 613
Employment (man-years)	16 260	16 494	16 394	16 956	17 620	17 740	18 439	17 057	16 195	15 143	

1. Projection.
2. Including whale catchers, excluding open boat.
3. Situation on 1st January, 1992.

Sources: National Economic Institute and Central Bank of Iceland.

Table D. **Gross fixed asset formation and national wealth**

Kr. million, current prices

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Gross fixed asset formation, total	5 929	9 251	14 127	18 356	24 460	29 684	41 042	48 414	56 051	66 897
Classification by end-use:										
Industrial asset formation	2 396	3 775	5 888	7 961	12 230	16 090	22 148	23 959	24 697	29 687
Agriculture	212	409	621	978	1 609	2 226	2 367	2 560	2 448	1 791
Fishing	376	518	781	839	910	2 648	4 192	5 835	3 361	2 362
Fish processing	222	360	521	785	1 137	1 358	1 440	1 509	1 265	1 730
Manufacturing other than fish processing	568	798	1 264	2 020	3 023	3 457	4 261	4 671	5 865	5 387
Transport equipment	470	593	832	790	1 734	1 403	1 774	1 387	3 846	9 640
Commercial buildings, hotels, etc.	308	613	1 084	1 269	1 933	2 626	4 770	4 190	4 700	4 721
Various machinery and equipment	240	484	785	1 280	1 884	2 372	3 344	3 807	3 212	4 056
Residential construction	1 317	2 251	3 495	4 714	5 380	5 770	7 752	10 488	13 280	15 555
Public works and buildings	2 216	3 225	4 744	5 681	6 850	7 824	11 142	13 967	18 074	21 655
Electric power, generation and distribution	797	1 159	1 510	1 550	991	899	1 177	1 882	3 103	4 881
Geothermal heating and water supply	370	330	375	570	871	840	930	1 650	2 340	1 645
Communications	649	1 061	1 764	2 229	3 062	3 625	5 634	5 409	6 288	7 159
Public buildings	400	675	1 095	1 332	1 926	2 460	3 401	5 026	6 343	7 970
National wealth	76 551	124 216	222 302	276 243	373 551	468 127	567 529	698 400	894 429	1 067 575
Private sector[1]	26 190	41 196	74 345	94 344	126 987	158 103	188 035	231 666	301 037	362 176
Public works and buildings	27 108	45 191	79 317	96 436	129 743	159 886	195 650	237 941	299 555	356 733
Industrial sector	23 253	37 829	68 640	85 463	116 821	150 138	183 844	228 793	293 837	348 666

1. Residential housing and private automobiles.

Source: National Economic Institute.

Table E. **Gross fixed asset formation and national wealth**

Kr million, constant 1980 prices

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Gross fixed asset formation, total	3 965	3 945	3 461	3 778	3 854	3 808	4 531	4 505	4 132	4 274
Classification by end-use:										
Industrial asset formation	1 617	1 627	1 443	1 653	1 961	2 091	2 522	2 323	1 857	1 997
Agriculture	142	174	149	207	266	305	283	255	192	116
Fishing	256	226	196	173	147	330	461	542	244	148
Fish processing	152	157	131	161	177	168	158	139	93	112
Manufacturing other than fish processing	386	344	308	402	460	418	456	424	420	336
Transport equipment	312	254	191	150	246	179	207	142	281	609
Commercial buildings, hotels, etc.	204	260	269	257	296	323	499	372	339	318
Various machinery and equipment	165	212	199	303	369	368	458	449	288	358
Residential construction	870	952	865	955	825	711	812	932	958	952
Public works and buildings	1 478	1 366	1 153	1 170	1 068	1 006	1 197	1 250	1 317	1 298
Electric power, generation and distribution	537	497	366	311	152	111	124	168	226	310
Geothermal heating and water supply	245	140	93	115	133	104	97	146	169	106
Communications	432	444	423	474	488	488	620	489	464	427
Public buildings	264	285	271	270	295	303	356	447	458	455
National wealth	50 953	52 861	54 173	55 951	57 580	59 521	61 652	64 194	65 563	67 160
Private sector[1]	16 551	17 873	18 321	19 043	19 473	20 229	20 627	21 570	21 943	22 450
Public works and buildings	18 037	18 737	19 198	19 661	20 006	20 279	20 737	21 238	21 791	22 309
Industrial sector	16 365	16 251	16 654	17 247	18 101	19 013	20 288	21 386	21 829	22 401

1. Residential housing and private automobiles.

Source: National Economic Institute.

Table F. **Balance of payments, OECD basis**

US $ million

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Current balance	–79	–148	–263	–57	–131	–115	17	–191	–221	–84	–160
Long term capital (excl. special transactions)	153	191	214	94	113	155	157	178	208	261	256
a) Private	76	100	50	–29	–18	32	47	95	65	70	97
b) Official	77	91	164	122	131	123	109	83	143	191	159
Basic balance	74	43	–49	37	–18	40	174	–13	–14	177	95
Non-monetary short-term private capital	16	22	–10	–47	25	128	–43	76	15	–104	–44
Non-monetary short-term official capital	–7	19	16	4	23	–58	–4	–16	22	–24	–2
Errors and omissions	–44	–14	–47	2	–28	–53	–18	–59	–4	13	26
Balance on non-monetary transactions	39	69	–90	–5	1	56	108	–12	19	63	75
Private monetary institutions' short-term capital	–5	3	–6	16	–16	8	–9	–6	–17	–8	–
Balance on official settlements	34	72	–95	11	–15	64	99	–18	1	55	74
Use of IMF credit	–25	–11	18	–1	–	–	–13	–14	–	–	–
Special transactions	–	–	–	–	–	–	–	–	–	–	–
Miscellaneous official accounts	–4	–4	–	–	–	–	–	–	–	–	–
Allocations of SDRs	4	4	–	–	–	–	–	–	–	–	–
Change in reserves (+ = increase)	10	60	–78	10	–15	64	86	–32	1	55	74
a) Gold	–	–	–	–	–	–	–	–	–	–	
b) Currency assets	7	62	–66	8	–15	64	87	–34	2	56	74
c) Reserve position in IMF	5	–	–10	4	–	–	–	–	–	–	–
d) Special Drawing Rights	–2	–2	–2	–2	–	–	–	2	–1	–1	–

Source: OECD.

Table G. **Central government and social security income and expenditure**

Kr million, accruals basis

	1983	1984	1985	1986	1987	1988	1989	1990	1991[1]
Current revenue	17 994	23 889	31 304	41 218	53 876	71 300	86 280	95 582	105 050
Direct taxes	3 054	3 976	4 616	7 630	8 273	14 110	17 864	22 400	25 680
Indirect taxes	12 500	17 115	22 850	29 334	40 462	51 011	59 646	65 900	72 270
Other	2 440	2 798	3 838	4 254	5 141	6 179	8 770	7 282	7 100
Current expenditure	15 797	19 197	27 747	36 130	47 442	64 517	78 474	86 158	97 650
Public consumption	9 009	10 845	15 681	21 049	28 650	36 535	42 871	48 908	54 900
Interest expenditure	1 777	2 297	3 300	3 931	4 340	7 174	9 685	9 500	10 750
Current transfers and subsidies	5 012	6 055	8 766	11 150	14 451	20 808	25 918	27 750	32 000
Current balance	2 197	4 692	3 557	5 088	6 434	6 783	7 806	9 424	7 400
Capital revenue	408	526	680	820	1 044	1 229	1 521	1 941	2 200
Capital transfers	88	120	129	109	181	211	276	433	500
Consumption of fixed capital	320	406	551	711	863	1 018	1 245	1 508	1 700
Capital expenditure	3 713	3 679	5 879	11 902	8 475	11 966	16 037	13 350	15 600
Gross fixed investment	969	1 279	1 889	1 871	3 065	3 960	4 417	6 150	7 500
Capital transfers	2 744	2 400	3 990	10 031	5 410	8 006	11 620	7 200	8 100
Capital balance	–3 305	–3 153	–5 199	–11 082	–7 431	–10 737	–14 516	–11 409	–13 400
Financial balance	–1 108	1 539	–1 642	–5 994	–997	–3 954	–6 710	–1 985	–6 000
Net increase in claims	984	3 229	3 597	–2 955	4 347	4 887	4 348	..	..
Borrowing requirement	2 092	1 690	5 239	3 039	5 344	8 841	11 058	..	..

1. Estimate.

Source: National Economic Institute.

Table H. **Fish catch, wages and prices**

	Fish catch (thousand metric tons)					Wages and prices (indices 1980 = 100)								
							Indices				Export price of fish products[2]			
	Total	White, fish, etc.	Herring	Capelin	Shrimp, lobster, shell-fish	Hourly wage rates, unskilled workers[1]	Total cost of living	Consumer price index	Credit terms index	Building cost	Fresh and iced fish	Frozen groundfish products	Salted products	Fish meal and oil
1979	1 641	578	45	964	10	63.7	63.1	62.0	63.4	64.4	68.5	74.4	64.2	64.5
1980	1 508	659	53	760	12	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1981	1 441	716	40	642	11	152.1	150.9	150.6	151.8	152.4	124.2	144.8	173.3	152.3
1982	788	690	56	13	24	237.2	227.8	227.5	227.4	236.7	220.4	242.9	263.5	192.5
1983	839	603	59	133	31	362.0	419.8	422.6	407.9	403.4	360.0	500.7	448.4	511.6
1984	1 536	565	50	867	42	443.1	542.3	550.7	545.7	505.3	486.2	593.5	519.5	550.1
1985	1 680	586	50	993	44	591.4	717.9	730.5	712.8	667.9	805.0	821.4	726.8	597.4
1986	1 656	632	66	898	55	787.8	870.6	880.9	888.4	931.9	1 048.2	985.0	1 013.8	627.9
1987	1 637	684	75	810	55	1 083.4	1 034.0	1 047.5	1 043.3	978.9	1 180.0	1 163.6	1 295.5	695.1
1988	1 758	697	93	911	42	1 364.9	1 297.2	1 324.5	1 287.2	1 153.4	1 317.4	1 302.6	1 389.4	873.9
1989	1 513	692	97	670	40	1 526.0	1 570.6	1 619.8	1 524.4	1 420.4	1 768.0	1 618.8	1 640.4	1 189.3
1990	1 506	673	90	694	44	1 632.3	1 803.6	1 858.0	1 760.0	1 673.1	2 321.3	2 117.2	2 277.1	1 111.9
1991	1 055	661	80	257	51	1 749.0	1 926.0	1 984.3	1 894.0	1 800.0	2 483.7	2 523.7	2 645.3	1 295.4

1. Weighted averages; 1991 data is for the first quarter.
2. The index shows the development of export prices (fob) in terms of Icelandic kronur.
Sources: National Economic Institute and Central Bank of Iceland, *Economic Statistics.*

Table I. **Foreign trade, total and by area**

US $ million, monthly rates

	Total imports cif	Imports by area						Total exports fob	Exports by area					
		OECD countries				Non-OECD countries			OECD countries				Non-OECD countries	
		Total	Europe		USA	Eastern Europe	Non–OPEC developing countries		Total	Europe		USA	Eastern Europe	Non-OPEC developing countries
			EEC	Others						EEC	Others			
1977	50.7	41.6	24.5	10.3	3.3	6.1	2.8	42.7	34.6	16.8	4.0	12.9	5.1	2.0
1978	56.7	47.8	27.4	12.4	4.0	5.6	3.2	54.2	43.6	21.6	5.0	15.9	4.2	3.7
1979	68.8	57.5	34.3	13.9	4.5	8.5	2.7	65.8	58.1	30.7	6.7	18.4	5.3	1.4
1980	83.4	71.0	39.7	15.7	7.8	9.1	3.3	77.5	62.8	36.4	8.1	16.7	6.8	2.2
1981	86.3	74.6	41.0	19.1	6.7	7.8	3.9	75.4	57.3	34.5	5.2	15.7	6.0	1.6
1982	78.6	67.1	38.9	15.6	6.6	7.8	3.7	57.2	48.9	27.8	4.2	14.8	4.8	1.2
1983	69.1	59.5	33.7	14.2	5.4	7.6	2.0	62.5	52.8	27.6	5.5	17.7	5.0	1.6
1984	70.3	60.7	36.2	13.1	4.8	7.5	2.1	61.9	54.6	29.2	5.3	17.6	5.9	1.2
1985	75.5	66.7	40.0	14.9	5.1	6.4	2.3	67.8	61.0	33.1	5.9	18.3	5.3	1.4
1986	93.1	83.9	49.5	19.2	6.5	5.8	3.3	91.2	83.1	49.5	9.2	19.8	5.0	1.5
1987	131.9	119.6	69.1	27.3	9.4	7.2	5.1	114.3	105.4	65.6	9.6	20.9	5.4	1.8
1988	133.6	121.3	69.0	29.7	10.1	7.2	5.1	119.5	108.5	70.6	12.2	16.2	6.3	3.3
1989	116.7	104.5	65.6	22.4	13.0	7.3	4.8	116.7	104.0	65.6	13.3	16.4	6.2	6.0
1990	138.7	124.1	59.7	22.7	19.7	9.0	5.5	132.6	123.2	89.9	11.6	13.1	3.8	4.7

Sources: Central Bank of Iceland, and OECD, *Foreign Trade Statistics, Series A.*

Table J. **Foreign trade by commodity group**

US $ million

	Imports by commodity group							Exports by commodity group							
			Other imports												
	Total	Transport equipment	Total	Food and live animals	Manufactured goods	Machinery and apparatus	Other goods	Total	Fish products, total	Frozen fish fillets	Herring, salted	Herring and capelin meal	Agricultural products	Aluminium products	Other manufactured products
	SITC No.	78-79		0	6	71-77									
1978	673.4	66.6	606.8	57.7	141.4	137.1	270.6	649.4	496.2	216.6	15.5	63.4	16.2	87.3	40.9
1979	825.0	74.0	751.0	68.7	159.0	143.7	379.6	789.1	589.3	258.4	22.1	60.9	21.3	106.3	64.3
1980	1 000.1	102.7	897.4	82.3	194.1	172.6	448.4	931.2	697.1	266.4	21.7	61.6	17.7	113.2	88.7
1981	1 021.0	107.8	913.2	81.3	189.4	183.8	458.7	902.5	706.4	237.1	22.1	45.3	13.3	87.5	86.2
1982	941.5	87.5	854.0	76.1	182.3	169.1	426.5	677.0	507.9	220.0	17.7	8.5	9.0	68.0	82.7
1983	815.2	58.4	756.8	72.9	156.7	139.0	388.2	745.3	506.7	245.9	18.3	1.9	9.1	130.9	87.4
1984	821.3	65.4	755.9	69.5	149.6	155.9	380.9	744.2	500.2	222.3	24.5	42.3	13.9	108.2	99.4
1985	904.0	60.7	843.3	72.0	163.1	185.0	423.2	813.9	609.3	261.5	21.2	44.4	13.1	80.5	102.1
1986	1 115.3	135.4	979.9	85.2	211.1	233.3	450.3	1 095.8	843.8	320.7	18.0	57.0	16.9	100.5	115.7
1987	1 581.3	268.4	1 312.9	99.8	275.6	337.9	599.6	1 374.3	1 044.5	381.8	21.7	50.9	26.1	131.6	144.4
1988	1 590.3	266.8	1 323.5	106.7	286.4	318.2	612.2	1 431.2	1 016.9	367.1	24.6	75.1	24.8	153.8	167.0
1989	1 395.0	183.8	1 211.2	110.7	256.6	269.1	574.8	1 401.3	994.3	398.2	21.8	63.1	23.9	180.1	164.8
1990	1 654.6	260.8	1 393.8	122.5	278.4	318.9	674.0	1 590.8	1 200.4	523.1	26.1	54.0	30.5	164.7	159.4

Sources: Central Bank of Iceland and OECD, *Foreign Statistics, Serie C.*

Table K. **Money and credit**

End of period

	Central Bank		Money supply			Deposit money banks			Credits granted by DMB					Foreign exchange	
										of which to:					
	Penalty rates (annual rate)	Net position of government	M1[1]	M2[2]	M3[3]	Required reserves	Demand deposits	Net foreign liquid assets	Total	Agriculture	Fishery and fish processing	Manufacturing and commerce	Dwellings	Net foreign reserves	Commercial banks' short-term foreign assets
	%[4]	Kr million													
1978	36.0	305	429	1 122	1 606	337	307	34	1 421	240	333	376	156	173	29
1979	45.0	303	625	1 677	2 503	556	468	47	2 235	378	501	617	273	404	–104
1980	55.8	336	1 010	2 773	4 137	1 001	791	78	3 533	532	817	978	456	910	–323
1981	55.3	268	1 620	4 841	7 056	1 900	1 224	69	6 165	800	1 421	1 645	781	1 637	–447
1982	58.0	145	2 089	7 133	11 149	3 039	1 570	198	11 592	1 273	3 111	3 386	1 197	1 494	–1 217
1983	58.2	852	3 700	12 372	19 902	5 582	2 941	–45	20 628	2 191	5 570	5 806	2 183	2 603	–3 088
1984	31.5	1 159	5 299	18 666	26 575	7 142	4 354	283	30 149	2 860	8 857	8 694	2 830	2 160	–5 710
1985	44.0	3 147	6 662	30 126	39 135	6 956	5 436	144	39 622	4 028	8 537	12 567	3 678	7 671	–10 022
1986	30.5	2 806	9 682	41 368	52 940	9 176	7 991	461	48 651	4 972	7 602	15 782	4 651	11 273	–7 860
1987	35.9	5 550	12 750	56 902	71 602	9 877	10 562	658	71 701	6 367	11 699	22 596	6 171	10 537	–11 105
1988	43.9	9 117	14 853	73 271	88 802	10 529	12 302	1 700	95 505	7 681	17 161	28 737	8 064	11 887	–15 399
1989	35.9	8 237	19 725	92 548	112 998	13 928	16 750	2 943	118 122	9 254	19 261	34 518	11 325	19 951	–11 512
1990	27.0	3 594	24 644	105 731	129 802	10 951	21 586	2 379	136 547	10 589	17 939	36 037	12 916	23 459	–8 596
1991	25.0	8 748	29 903	116 764	148 444	10 418	26 660	3 465	153 058	10 548	19 259	39 671	13 937	24 072	

1. Notes and coins, demand deposits.
2. Broad money, i.e. M1 plus general savings deposits.
3. M2 plus time deposits.
4. Annual average.

Sources: Central Bank of Iceland.

Table L. **Public sector**

	1960	1970	1980	1987	1988	1989	1990
General government accounts (as a per cent of GDP)							
Current revenue	28.2	30.2	33.3	32.4	35.2	35.3	34.4
Tax revenue[1]	27.2	29.6	31.1	29.8	32.8	32.4	31.8
Interest income	..	..	2.0	2.1	2.0	2.2	1.7
Capital revenue	..	..	..	0.7	0.6	0.7	0.7
Total expenses	25.8	29.9	32.2	33.7	37.5	38.7	35.8
of which:							
Current expenditure	..	..	..	27.8	30.7	31.1	29.7
Current transfers	..	..	..	5.1	5.6	5.8	5.7
Subsidies	..	..	3.2	2.3	3.1	3.2	2.5
Capital expenditure	..	..	..	5.9	6.8	7.6	6.1
Gross fixed investment	..	..	..	3.5	4.1	4.3	4.2
Capital transfers	..	..	..	2.3	2.7	3.3	1.9
Tax receipts as a per cent of general government total taxes							
General government							
Direct taxes	31.5	30.9	26.9	24.8	29.1	30.2	32.3
Indirect taxes	68.5	69.1	73.0	75.2	70.9	69.8	67.7
Central government and Social security							
Total taxes	..	..	..	79.1	78.5	78.2	79.2
Direct taxes	..	..	..	13.4	17.0	18.0	20.1
Indirect taxes	..	..	..	65.7	61.5	60.2	59.1
Local government							
Total taxes	22.5	22.8	20.2	20.9	21.5	21.8	20.8
Direct taxes	..	..	..	11.4	12.1	12.2	12.2
Indirect taxes	..	..	..	9.5	9.5	9.6	8.7

1. Direct and indirect taxes.

Sources: National Economic Institute et *Sögulegt Yfirlit Hagtalna,* 1945-1988, National Economic Institute.

Table M. **Labour market**

	Capital area	Western Iceland	West Fjords	North west Iceland	North east Iceland	Eastern Iceland	Southern Iceland	Reykjanes peninsula	Total
Employment									
(number of man years)									
1980	57 481	6 510	5 208	4 674	11 104	5 913	8 602	6 783	106 275
1988	76 858	7 133	5 190	4 950	12 105	5 978	9 057	7 471	128 742
1989	75 142	7 250	5 158	5 233	12 100	6 088	9 576	7 641	128 187
1990	74 823	7 219	5 136	5 211	12 049	6 062	9 535	7 609	127 644
1991	75 721	7 306	5 197	5 274	12 193	6 135	9 650	7 700	129 176
Unemployment rate (per cent)									
1980	0.2	0.2	0.1	0.9	0.7	0.5	0.4	0.3	0.3
1988	0.2	1.4	0.3	2.0	1.4	1.2	1.5	0.7	0.6
1989	1.1	2.6	0.8	3.4	2.6	2.6	2.4	2.0	1.7
1990	1.2	2.6	0.4	3.0	3.3	3.3	2.5	1.9	1.8
1991	0.9	1.9	0.4	2.9	2.9	2.8	2.1	2.3	1.5

	1961	1970	1980	1987	1988	1989	1990
Population by age group							
(per cent change over previous year)							
Under 15 and over 65 years	2.0	–0.4	0.3	0.4	0.6	0.8	0.8
Between 15 and 19 years	3.3	1.8	–0.4	1.7	1.4	0.9	1.5
Between 20 and 64 years	1.9	1.1	1.9	2.0	1.1	1.4	0.8
Between 15 and 64 years	2.1	1.2	1.5	1.9	1.1	1.3	0.8
Total population	2.1	0.5	1.1	1.4	0.9	1.1	0.8
Labour supply							
(per cent change over previous year)	–0.1	2.0	3.3	5.5	–2.8	–0.4	–0.4
Work stoppages							
Number of stoppages	..	65	14	34	15	16	1
Working days lost	..	48	48	116	131	611	34
Number of participants	..	15 705	4 220	8 432	11 642	2 028	377
Number of man-days lost	..	303 743	30 760	98 527	100 773	79 970	231
Non-seamen in ASI	..	296 596	16 044	8 773	110 773	2 250	231
Seamen	..	7 147	3 696	66 140	0	0	0
Others	..	0	11 020	23 614	0	77 720	0

Sources: National Economic Institute.

BASIC STATISTICS:

INTERNATIONAL COMPARISONS

BASIC STATISTICS: INTERNATIONAL COMPARISONS

	Units	Reference period[1]	Australia	Austria	Belgium	Canada	Denmark	Finland	France	Germany	Greece	Iceland	Ireland	Italy	Japan	Luxembourg	Netherlands	New Zealand	Norway	Portugal	Spain	Sweden	Switzerland	Turkey	United Kingdom	United States	Yugoslavia
Population																											
Total	Thousands	1989	16 833	7 624	9 938	26 248	5 132	4 964	56 160	61 990	10 033	253	3 515	57 525	123 120	378	14 849	3 343	4 227	10 337	38 888	8 493	6 723	55 255	57 236	248 762	23 690
Inhabitants per sq. km	Number	1989	2	91	326	3	119	15	102	249	76	2	50	191	326	145	364	12	13	112	77	19	163	71	234	27	93
Net average annual increase over previous 10 years	%	1989	1.5	0.1	0.1	1.0	0.0	0.4	0.5	0.1	0.5	1.1	0.4	0.2	0.6	0.4	0.6	0.6	0.4	0.5	0.5	0.2	0.6	2.4	0.2	1.0	0.8
Employment																											
Total civilian employment (TCE)[2]	Thousands	1989	7 725	3 342	3 670	12 486	2 610	2 460	21 484	27 208	3 671	140	1 077	20 833	61 280	181	6 065	1 461	2 014	4 377	12 260	4 466	3 518	16 771	26 457	117 342	..
Of which: Agriculture	% of TCE		5.5	8.0	2.8	4.3	5.7	8.9	6.4	3.7	25.3	10.0	15.1	9.3	7.6	3.3	4.7	10.3	6.6	19.0	13.0	3.6	5.6	50.1	2.1	2.9	..
Industry	% of TCE		26.5	37.0	28.5	25.7	27.4	30.9	30.1	39.8	27.5	30.7	28.4	32.4	34.3	31.5	26.5	25.4	25.3	35.3	32.9	29.4	35.1	20.5	29.4	26.7	..
Services	% of TCE		68.0	55.1	68.7	70.1	66.9	60.2	63.5	56.5	47.1	59.3	56.5	58.2	58.2	65.2	68.8	64.3	68.1	45.7	54.0	67.0	59.3	29.5	68.4	70.5	..
Gross domestic product (GDP)																											
At current prices and current exchange rates	Bill US $	1989	282.4	126.5	153.0	545.5	106.2	115.5	958.2	1 189.1	54.2	5.2	33.9	865.8	2 869.3	7.0	223.7	41.7	90.2	45.3	380.3	189.9	177.2	79.1	837.5	5 132.0	81.8
Per capita	US $		16 800	16 603	15 393	20 783	20 685	23 270	17 061	19 182	5 399	20 516	9 644	15 051	23 305	18 613	15 063	12 503	21 341	4 623	9 711	22 360	26 350	1 432	14 642	20 629	3 454
At current prices using current PPP's[3]	Bill US $	1989	240.4	102.1	135.0	506.7	74.9	74.6	818.0	929.0	72.8	4.0	31.6	799.7	1 934.4	6.5	203.6	38.2	69.4	72.1	401.2	131.7	119.0	247.4	820.6	5 132.0	..
Per capita	US $		14 304	13 407	13 587	19 305	14 594	15 030	14 565	14 985	7 253	15 870	8 984	13 902	15 712	17 192	13 709	11 446	16 422	7 360	10 244	15 511	17 699	4 481	14 345	20 629	..
Average annual volume growth over previous 5 years	%	1989	3.9	2.7	2.6	3.9	2.0	4.0	2.7	2.6	2.2	3.1	3.2	3.1	4.5	4.4	2.4	0.8	2.2	4.3	4.2	2.3	3.0	5.1	3.8	3.6	..
Gross fixed capital formation (GFCF)	% of GDP	1989	25.5	24.0	19.1	22.2	18.2	27.6	20.8	20.5	18.5	18.7	18.4	20.2	31.0	24.1	21.8	21.0	27.5	26.2	24.0	21.2	27.6	22.8	19.6	16.6	14.5
Of which: Machinery and equipment	% of GDP		10.7	10.2	9.5	7.5	8.0	10.9	9.3	9.3	8.0	5.1	9.9	10.6	13.0	10.9	10.6	10.5	9.4	9.8 (86)	8.5	9.6	9.5	11.7 (87)	9.4	7.8	..
Residential construction	% of GDP		5.4	4.7	4.1	7.4	4.2	7.7	5.1	5.3	4.6	4.3	3.6 (88)	4.8	6.1	4.3	5.5	4.9	4.1	4.8 (86)	4.9	5.2	18.1[9]	5.8 (87)	3.8	4.4	..
Average annual volume growth over previous 5 years	%	1989	6.1	4.6	7.5	8.1	3.5	6.3	5.3	3.5	1.3	1.6	0.5	4.1	8.1	7.8	5.7	3.2	0.2	8.9	11.1	6.5	6.7	4.6	6.9	3.9	..
Gross saving ratio[4]	% of GDP	1989	22.5	26.0	20.9	19.9	17.4	25.6	21.3	26.5	14.7	16.6	19.7	20.2	34.2	60.9	24.3	17.4	24.8	26.0	22.1	18.7	34.0	24.0	15.4	15.6	..
General government																											
Current expenditure on goods and services	% of GDP	1989	16.4	18.1	14.4	18.7	25.1	19.8	18.3	18.7	21.6	19.07	15.4	16.8	9.2	16.0	15.3	16.4	21.0	16.1	15.1	26.0	12.9	16.0	19.4	17.9	14.4
Current disbursements[5]	% of GDP	1989	32.1	44.9	53.3	41.6	56.0	35.1	46.2	41.6	47.7	32.1	49.9 (87)	47.1	25.6	45.0 (86)	51.7	..	50.9	40.4 (86)	35.5 (88)	57.3	29.9	..	37.6	34.6	..
Current receipts	% of GDP	1989	34.2	46.1	48.5	39.6	57.4	39.9	46.5	44.6	31.8	36.6	43.7 (87)	41.1	33.3	52.9 (86)	50.1	..	54.9	37.6 (86)	36.3 (88)	64.1	34.1	..	39.7	31.8	..
Net official development assistance	% of GNP	1989	0.38	0.23	0.43	0.43	0.88	0.57	0.75	0.41	0.07	0.04	0.16	0.39	0.32	0.26	0.97	0.23	1.05	0.18	0.06	0.88	0.33	..	0.31	0.17	..
Indicators of living standards																											
Private consumption per capita using current PPP's[3]	US $	1989	8 258	7 434	8 486	11 225	7 705	7 766	8 733	8 120	5 026	9 447	5 079	8 577	9 068	9 534	8 133	7 007	8 224	4 683	6 443	8 090	10 181	2 768	9 154	13 768	1 638*
Passenger cars, per 1 000 inhabitants	Number	1988	435 (87)	370	349	454 (86)	321	344	394	457	130	488	210 (87)	408	241	443	348	490	388	190 (87)	263	400	419	20 (83)	318	559	129 (87)
Telephones, per 1 000 inhabitants	Number	1987	550 (85)	525	478	780	864	617 (85)	608 (85)	650	413	525	265 (85)	488	555 (85)	425 (86)	639	697	622 (84)	202	396	890 (83)	856 (86)	91	524 (84)	650 (84)	154 (86)
Television sets, per 1 000 inhabitants	Number	1986	472	323	301	546	386	372	332	379	174	306	216	255	585	253	327	358	348	157	322	393	411	165	534	813	176
Doctors, per 1 000 inhabitants	Number	1989	2.3 (86)	2.1	3.3 (88)	2.2 (88)	2.7 (88)	2.0	2.6	3.0	3.2 (88)	2.7 (88)	1.5 (88)	1.3 (88)	1.6 (88)	1.9 (88)	2.4	1.9	2.5 (87)	2.8	3.7	3.1	2.9	0.8	1.4 (88)	2.3 (88)	1.8 (86)
Infant mortality per 1 000 live births	Number	1989	7.9	8.3	8.6	7.2 (88)	7.5	6.1 (88)	7.5	7.5	9.9	5.3	7.6	8.9	4.6	9.9	6.8	10.8 (88)	8.3 (88)	12.2	7.8	5.8	7.3	6.5 (88)	8.4	9.7	24.8 (88)
Wages and prices (average annual increase over previous 5 years)																											
Wages (earnings or rates according to availability)	%	1989	5.3	4.7	2.9	3.9	6.0	7.6	3.9	4.1	16.1	..	6.1	6.9	3.3	..	2.1	9.2	9.0	15.6	8.8	7.9	..	..	8.4	2.7	220.8
Consumer prices	%	1989	7.8	2.2	2.4	4.3	4.3	4.9	3.6	1.3	17.1	23.7	3.7	6.2	1.1	1.8	0.7	11.2	6.6	12.6	6.9	5.6	2.1	50.6	5.3	3.6	210.2
Foreign trade																											
Exports of goods, fob *	Mill US $	1989	37 191	32 448	100 081[7]	117 154	28 113	23 279	179 192	340 987	7 595	1 429	20 782	140 596	274 266	..[8]	107 760	8 883	27 145	12 722	43 408	51 592	51 683	11 557	153 121	363 811	13 363
As % of GDP	%		13.2	25.7	65.4	21.5	26.5	20.2	18.7	28.7	14.0	27.5	61.3	16.2	9.6	..	48.2	21.3	30.1	28.1	11.4	27.2	29.2	14.6	18.3	7.1	16.3
Average annual increase over previous 5 years	%		10.0	15.6	14.0	6.2	12.0	11.5	13.0	14.7	9.5	14.2	16.6	13.9	10.1	..	10.4	10.2	7.5	19.6	13.3	11.9	14.8	10.1	10.3	10.8	9.8
Imports of goods, cif *	Mill US $	1989	40 981	38 902	98 586[7]	114 288	26 721	24 537	186 159	269 403	16 200	1 407	17 490	152 910	209 763	..	104 224	8 822	23 630	18 842	70 971	49 113	58 464	15 793	197 806	473 211	14 802
As % of GDP	%		14.5	30.8	64.4	21	25.2	21.2	19.4	22.7	29.9	27.1	51.6	17.7	7.3	..	46.6	21.1	26.2	41.6	18.7	25.9	33.0	20.0	23.6	9.2	18.1
Average annual increase over previous 5 years	%		12.7	14.7	12.2	9.2	10.0	14.5	13.2	12.0	11.0	10.8	12.5	12.7	9.0	..	10.9	7.4	11.2	18.9	19.8	13.2	14.7	7.8	13.5	7.8	8.6
Total official reserves[6]	Mill SDR's	1989	10 486	6 543	8 192[7]	12 217	4 868	3 889	18 728	46 196	2 453	257	3 087	35 551	63 887	..	12 562	2 303	10 490	7 573	31 554	7 274	19 234	3 638	26 456	48 358	3 147
As ratio of average monthly imports of goods	ratio		3.1	2.0	1.0	1.3	2.2	1.9	1.2	2.1	1.8	2.2	2.1	2.8	3.7	..	1.4	3.1	5.3	4.8	5.3	1.8	3.9	2.8	1.6	1.2	2.6

* At current prices and exchange rates.

1. Unless otherwise stated.
2. According to the definitions used in *OECD Labour Force Statistics*.
3. PPP's = Purchasing Power Parities.
4. Gross saving = Gross national disposable income minus Private and Government consumption.
5. Current disbursements = Current expenditure on goods and services plus current transfers and payments of property income.
6. Gold included in reserves is valued at 35 SDR's per ounce. End of year.
7. Including Luxembourg.
8. Included in Belgium.
9. Including non-residential construction.

Sources : Population and Employment: OECD Labour Force Statistics.
GDP, GFCF, and General Government: OECD National Accounts, Vol. I and OECD Economic Outlook, Historical Statistics.
Indicators of living standards: Miscellaneous national publications.
Wages and Prices: OECD Main Economic Indicators.
Foreign trade: OECD Monthly Foreign Trade Statistics, series A.
Total official reserves: IMF International Financial Statistics.

EMPLOYMENT OPPORTUNITIES

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The Economics Department of the OECD offers challenging and rewarding opportunities to economists interested in applied policy analysis in an international environment. The Department's concerns extend across the entire field of economic policy analysis, both macro-economic and micro-economic. Its main task is to provide, for discussion by committees of senior officials from Member countries, documents and papers dealing with current policy concerns. Within this programme of work, three major responsibilities are:

- to prepare regular surveys of the economies of individual Member countries;
- to issue full twice-yearly reviews of the economic situation and prospects of the OECD countries in the context of world economic trends;
- to analyse specific policy issues in a medium-term context for theOECD as a whole, and to a lesser extent for the non-OECD countries.

The documents prepared for these purposes, together with much of the Department's other economic work, appear in published form in the *OECD Economic Outlook, OECD Economic Surveys, OECD Economic Studies* and the Department's *Working Papers* series.

The Department maintains a world econometric model, INTERLINK, which plays an important role in the preparation of the policy analyses and twice-yearly projections. The availability of extensive cross-country data bases and good computer resources facilitates comparative empirical analysis, much of which is incorporated into the model.

The Department is made up of about 75 professional economists from a variety of backgrounds and Member countries. Most projects are carried out by small teams and last from four to eighteen months. Within the Department, ideas and points of view are widely discussed; there is a lively professional interchange, and all professional staff have the opportunity to contribute actively to the programme of work.

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a) Solid competence in using the tools of both micro-economic and macro-economic theory to answer policy questions. Experience indicates that this normally requires the equivalent of a PH.D. in economics or substantial relevant professional experience to compensate for a lower degree.

b) Solid knowledge of economic statistics and quantitative methods; this includes how to identify data, estimate structural relationships, apply basic techniques of time series analysis, and test hypotheses. It is essential to be able to interpret results sensibly in an economic policy context.

c) A keen interest in and knowledge of policy issues, economic developments and their political/social contexts.

d) Interest and experience in analysing questions posed by policy-makers and presenting the results to them effectively and judiciously. Thus, work experience in government agencies or policy research institutions is an advantage.

e) The ability to write clearly, effectively, and to the point. The OECD is a bilingual organisation with French and English as the official languages. Candidates must have excellent knowledge of one of these languages, and some knowledge of the other. Knowledge of other languages might also be an advantage for certain posts.

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g) The Department works on a tight time schedule and strict deadlines. Moreover, much of the work in the Department is carried out in small groups of economists. Thus, the ability to work with other economists from a variety of cultural and professional backgrounds, to supervise junior staff, and to produce work on time is important.

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