OECD

ECONOMIC SURVEYS

1984/1985

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

ICELAND

ORGANISATION DE COOPÉRATION ET DE DÉVELOPPEMENT ÉCONOMIQUES

MAY 1985

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ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

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

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

The Signatories of the Convention on the OECD are Austria, Belgium, Canada, Denmark, France, the Federal Republic of Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. The following countries acceded subsequently to this Convention (the dates are those on which the instruments of accession were deposited): Japan (28th April, 1964), Finland (28th January, 1969), Australia (7th June, 1971) and New Zealand (29th May, 1973).

The Socialist Federal Republic of Yugoslavia takes part in certain work of the OECD (agreement of 28th October, 1961).

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DIAGRAMS

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	Other area devoid of vegetation	70
Rough grazings	20		

THE PEOPLE

Population, December 1st, 1983	238 175	Occupational distribution 1982 (per cent):	
Net increase 1973-1983,		Agriculture	7.1
annual average (per cent)	1.2	Fishing and fish processing	13.9
		Other manufacturing	16.5
		Construction, total	10.3
		Trade, finance and services	15.2
		Transport	7.0
		Other	30.0
			100.0

GOVERNMENT AND PARLIAMENT

Government, from 1983, number of ministers:		Parliament, from 1983, number of seats:	
Progressive Party	4	Independence Party (Lib. Cons.)	23
Independence Party	6	Progressive Party (Agrarians)	14
		Peoples' Alliance (Socialists, Communists)	10
		Social Democrats	6
		Social Democratic Alliance	4
		Feminists	3
			60
Last general election: 1983		Next general election: 1987	

PRODUCTION AND CAPITAL FORMATION*

Gross National Product in 1984:		Gross Fixed Capital Formation in 1984:	
Millions of I. Kr.	67 300	Millions of I. Kr.	13 000
Per head, US $	8 870	Per cent of GNP	19

FOREIGN TRADE*

Exports of goods and services in 1984,		Imports of goods and services in 1984,	
per cent of GNP	51.4	per cent of GNP	56.6
Main exports Jan.-Nov 1984, (per cent):		Imports Jan.-Sept. 1984, by use (per cent):	
Fish products	68.6	Consumer goods	35.1
Aluminium	15.4	Investment goods	28.9
Other manufacturing products	13.5	Intermediate goods (excl. fuels)	22.4
Agricultural products	1.5	Fuels and lubricants	13.6
Miscellaneous	1.0		

THE CURRENCY

Monetary unit: Krona		Currency units per US $, averages of daily figures:	
		Year 1984	31.86
		December 1984	40.20

* 1984 figures preliminary.

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 22nd March 1985.

After revisions in the light of discussions during the review, final approval of the Survey for publication was given by the Committee on 3rd April 1985.

INTRODUCTION

The policy package implemented since May 1983 has aimed at reducing inflation and improving the current external position while maintaining high employment. The strategy adopted has relied on breaking the inflationary spiral by de-indexing wages, stabilizing the exchange rate and improving profits. Substantial anti-inflation gains have been achieved, with consumer price increases falling from an annualised rate of more than 130 per cent in the early months of 1983 to around 15 per cent by the third quarter of 1984. But domestic demand has been more buoyant than expected, leading to excessive imports and a reversal of the earlier trend towards an improvement of the current account. The fall in living standards called for by declining fish catches has been cushioned by household dissaving and foreign borrowing, while the process of real wage adjustment has met with increasing resistance as the strategy has proceeded. This culminated in a strike over wages in the autumn of 1984, since when the annual rate of wage and price inflation has re-accelerated to some 25-30 per cent. The prospects are for a decline in the rate of inflation in the first part of 1985, but a new round of wage negotiations expected in the spring makes price developments beyond mid-year uncertain.

Since rapid disinflation was to be achieved without jeopardizing full employment and social welfare goals, stabilization policies have not been supported by fiscal and monetary restraint. In a situation where inflationary expectations have reacted only partially to the downward movement of prices, financial deregulation of interest rates has been ineffective in preventing large increases in bank advances to the household and business sectors. The government has also had recourse to central bank borrowing and to increased foreign indebtedness. Improved budgetary discipline is planned for 1985, but progress towards greater fiscal stability has so far been erratic and partial. External debt is becoming a matter of concern, with interest costs building up and threatening abrupt cuts in standards of living unless brought under control. Fluctuations in national income, linked to the fact that the Icelandic economy remains very dependent on the fishing sector for its export earnings, complicate the task of policy. Against the background of structural difficulties in the fishing sector, steady and more stable growth of national income over the longer-term appears to hinge on further efforts to diversify the economy.

Part I of the present Survey reviews the 1983-1984 stabilization programme, and the results achieved so far, in the light of the real adjustment costs necessitated by the supply shock which has affected fishing in the 1980s. Part II appraises fiscal and monetary stance, describes briefly exchange rate policy and assesses short-term prospects. The difficulties of controlling domestic credit expansion and the problems raised by increased borrowing abroad are examined in Part III. The persistently high dependence on fishing and the scope for further diversification of the industrial structure on the basis of the country's vast energy potential are discussed in Part IV. The Conclusions are summarised in Part V.

I. THE 1983-1984 STABILIZATION PROGRAMME

The policy package

For almost two decades, Iceland has been faced with a serious problem of inflation and an endemic external deficit. Consumer prices rose on average by 35 per cent a year in the 1970s, with a sharp acceleration between the first and last cycles of the decade. As noted, in the early months of 1983 the annual inflation rate exceeded 130 per cent, and seemed headed higher. Exogenous factors, related to fluctuations in the terms of trade, sluggish export demand and a depleted fish catch, played a role in promoting this inflationary process. However, the inflationary momentum was also fuelled by the wage determination system. The combination of wage indexation and exchange rate depreciation acted as a powerful mechanism for translating fluctuating terms of trade and competition for income shares into an inflationary spiral[1]. The measures of May 1983 (taken by the incoming government) thus concentrated on breaking the wage-price spiral. They embraced an incomes policy, limiting wage increases to 8 per cent in June and 4 per cent in October 1983, and the suspension of wage indexation until May 1985. This was to be combined with a policy of exchange rate stability, following an initial 15 per cent devaluation of the króna. These measures were accompanied by social security and tax changes, intended to mitigate their effects on living standards. In the second stage, as from 1984, incomes policy was to be phased out and supportive fiscal policies were to give way to restraint. Monetary policy was also to be tightened. As a more general aim, the government expressed the intention of establishing a framework for decentralised economic decision-making, through financial and economic deregulation.

Indexation of wages has a long history in Iceland[2]. Over the years, reforms have aimed at introducing certain modifications, such as removing certain price changes from the index on which compensation was based. These reforms culminated in the Economic Management Act of 1979, which provided for proportional indexation of all wage and salary rates at three-month intervals on the basis of quarterly changes in the Cost of Living Index. It excluded the effects of changes in the terms of trade resulting from higher import prices, the prices of alcohol and tobacco and the wage component of the publicly administered domestic farm prices. This legislation was not binding. It allowed unions and employers to agree on other terms of indexation, through collective bargaining. In practice, however, the statutory provisions on wage indexation were included in practically all wage contracts negotiated from 1979 until the beginning of 1983. By that time, the indexation system threatened to generate a rate of inflation of 130-140 per cent through 1983, a situation perceived as creating serious problems. In particular, because of the timing of decisions on administered prices, and the shortfall in fish catches, liquidity problems were seen to entail risks of bankruptcies in certain sectors of the economy. In a completely indexed economy, adverse shocks are ultimately borne by the export sector, the exchange rate being inefficient to restore external balance in a situation where wage adjustments immediately eroded the initial benefits to export profitability. De-indexation of wages therefore aimed at restoring a sufficient degree of real wage flexibility. However, fiscal and monetary indexation provisions were left unchanged, since inflation was also characterised by imbalances in financial markets and deficient domestic financial savings. De-indexation of financial assets was – given the inflationary circumstances – thought likely to reduce the supply of domestic financial savings.

Outcome so far

The initial incomes policy phase of the counter-inflation programme was successful. Inflation, as measured by the cost of living index, was brought down to an annualised rate of

Table 1. **Income, prices and earnings**

In per capita terms[1]
Percentage change on previous year

	1977	1978	1979	1980	1981	1982	1983	1984[2]	1985[2]
Wage and salary rates	45.8	55.0	44.0	50.9	49.5	50.3	49.4	19.0	22.0
Earnings	48.8	51.7	46.3	52.6	56.2	53.8	56.5	29.0	26.0
Disposable income	47.5	55.5	49.4	57.2	59.3	55.4	59.5	29.0	28.0
Cost of living index	30.4	44.1	45.5	58.5	50.9	51.0	84.3	29.0	28.0
Building cost index	30.0	47.2	47.0	55.6	51.8	56.2	70.8	22.0	..
Private consumption deflator	31.1	43.9	47.0	56.2	50.5	54.0	81.0	29.0	28.0
Real wage rates	11.2	7.7	−2.0	−3.4	−0.7	−2.4	−17.5	−7.8	−5.0
Real earnings	13.5	5.4	−0.5	−2.3	3.8	−0.1	−13.6	0.0	−1.5
Real disposable income	12.5	8.1	1.6	0.6	5.8	0.9	−11.8	0.0	0.0

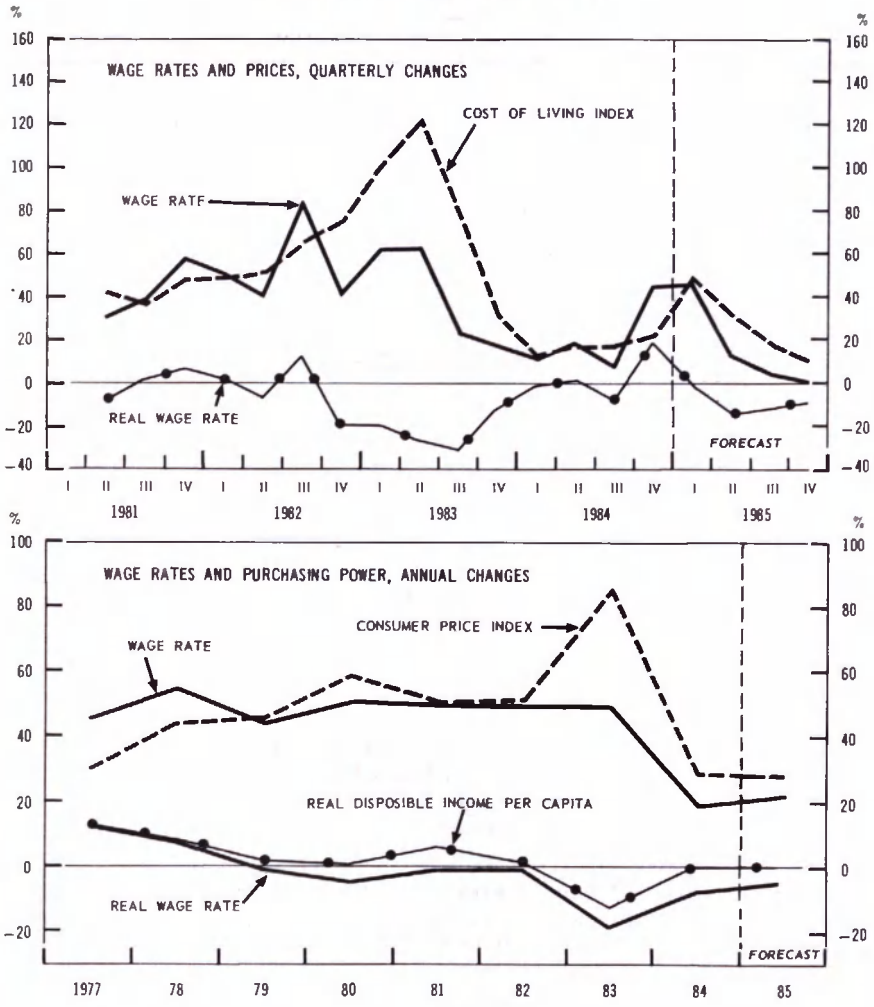
1. All series deflated by the private consumption price deflator.
2. Estimates and forecasts.
Sources: Central Bank of Iceland, *Economic Statistics Quarterly,* November 1984, and National Economic Institute.

32 per cent by the end of 1983, though prices rose by over 80 per cent in the year as a whole (Diagram 1 and Table 1). The policy aim as stated in the 1984 budget was to lower the rate of price increase to about 10 per cent by the end of 1984, implying a year over year rise of 25 per cent. By the third quarter of 1984 inflation had fallen to about 16 per cent. During the incomes policy phase, the pace of nominal wage increases decelerated to an annual rate of 17 per cent in the fourth quarter of 1983, giving a 50 per cent increase between 1982 and 1983. The 1984 Budget guidelines for wage increases aimed for a 15 per cent rise in 1984 (year-on-year). Settlements tended to exceed the guidelines only slightly. By the third quarter, wage increases had eased to about 7 per cent. With the disinflation strategy on track, the initial 1985 budget had assumed a maximum 9 per cent average rise in wage rates between 1984 and 1985 and average prices were expected to rise by 11-13 per cent.

However, the wage settlements of early 1984 contained renegotiation clauses, and these were invoked by the majority of unions as from September 1. Following a public sector strike, which lasted through October, new wage settlements were agreed which implied a wage rise of 25 per cent up to the end of 1985. The Budget guidelines for the year 1984 (over 1983) were thus exceeded, wage rates rising on average 2 percentage points more than the 17 per cent target. Since the wage settlement immediately resulted in a 12 per cent devaluation, following some previous gradual depreciation of the krona, the rise in the cost-of-living index between 1983 and 1984 was 29 per cent. Indeed, as a result of the November depreciation, and of the "front-loading" of the wage increases, the index rose at an annualised rate of 50 per cent in the three months to December.

The counter-inflationary strategy was implemented against the background of a supply shock caused by the fall in marine production in 1982 and 1983 (Diagram 2). The favourable growth performance of the 1970s (when GNP increased by 4¾ per cent per annum in real terms) gave way to more modest growth in the early 1980s, as the fish catch (which, after processing, amounted to 20 per cent of GNP) stagnated. The catch dropped dramatically in 1982-1983 leading to a fall in GNP (Diagram 2 and Table 2). Depletion of the capelin stock (a low-value fish used for fish meal and oil) was followed by a ban on fishing in 1982, while the more valuable cod catch also declined, from a peak of 461 thousand tons in 1981 to 294 thousand tons in 1983 (see Part IV). After a fall of 12 per cent in the real value of the fish

Diagram 1. **Wage and price trends**



Source: National Economic Institute.

catch in 1982, a further 5 per cent drop was experienced in 1983. In 1984 the cod catch continued to decline, to 281 thousand tons, but substantial capelin fishing resumed and the catch of some high value species such as shrimp increased. In overall tonnage, the 1984 catch represented a recovery to 1981 levels, amounting to a 11 per cent increase in real terms over 1983. Excluding capelin there was a fall of 3 per cent (Diagram 2).

When this supply shock occurred, domestic demand was still high and continued to expand in 1982. The result was a large current account deficit. This was accompanied by a fall in the real exchange rate of the Krona as the authorities attempted to protect the profitability of the export sector and correct the trade imbalance. Given the impact of higher import costs on consumer prices, the ban on wage indexation was expected to result in considerable cuts in

households' purchasing power. The May 1983 measures, together with the halving of the indexation factor announced in December 1982, were expected to lead to a year-on-year fall of 18 per cent in real wage rates in 1983. In the event, the decline was much as expected, (17½ per cent) (Diagram 1). Owing to wagedrift the fall in real earnings was somewhat smaller (13½ per cent), while real disposable income per employee fell 12 per cent compared with an expected 14 per cent (Table 1). The 1984 Budget assumed a further decline in real wage rates of 8 per cent which was expected to be partly offset by wagedrift and tax reductions. According to provisional figures for 1984, however, the indications now are that earnings and disposable household income did not fall in real terms but remained more or less stable.

Table 2. **Demand and output**

A. NATIONAL EXPENDITURE

	1982 Kronur million current prices	Percentage change in volume from previous year[1]						
		1980	1981	1982	1983[3]	1984		1985[4] forecast
						Budget estimate	Provis. outturn	
Private consumption	20790	1.0	5.0	2.0	−6.0	−4.0	3.0	1.0
Public consumption	4055	4.0	5.0	3.8	3.0	−2.0	0.0	1.0
Gross fixed investment	8576	9.4	2.1	−1.5	−13.6	−5.5	6.9	2.0
Final domestic demand	33421	3.5	4.2	1.3	−6.8	−4.3	3.5	1.2
Stockbuilding[2]	886	0.8	0.4	1.4	−4.2	..	3.5	−1.0
Total domestic demand	34307	4.2	4.6	2.6	−10.5	−4.3	6.2	0.3
Exports of goods and services	13063	2.7	1.9	−9.0	9.0	3.5	2.3	5.3
Imports of goods and services	16173	3.6	8.6	0.8	−4.7	−0.3	9.4	3.8
Foreign balance[2]	−3110	−0.4	−3.0	4.3	6.0	1.9	−3.9	0.5
GNP at market prices	31197	3.9	1.6	−1.5	−5.5	−2.4	2.7	0.8
Terms of trade effects[2]		−1.2	0.3	−0.3	1.8	..	0.1	0.3
Gross national income		2.7	1.9	−1.8	−3.7	−2.4	2.8	1.0

B. NATIONAL PRODUCT

	Contribution of industries percentage	Year-to-year percentage changes				
	1980	1980	1981	1982	1983	1984[4]
Agriculture and processing	7.0	8.1	−2.3	−2.6	−1.0	3.6
Fishing and fish processing	19.5	12.0	0.8	−13.4	−6.0	11.7
Manufacturing industry	14.4	4.8	0.6	5.3	1.6	6.7
Construction industry	9.1	13.1	−1.0	2.0	−10.0	5.0
Trade and catering	12.7	3.4	5.0	4.1	−7.2	3.0
Public service and other industries	37.3	1.3	3.6	4.4	0.9	1.2
Gross domestic product	100.0	5.2	2.0	0.4	−2.3	4.4

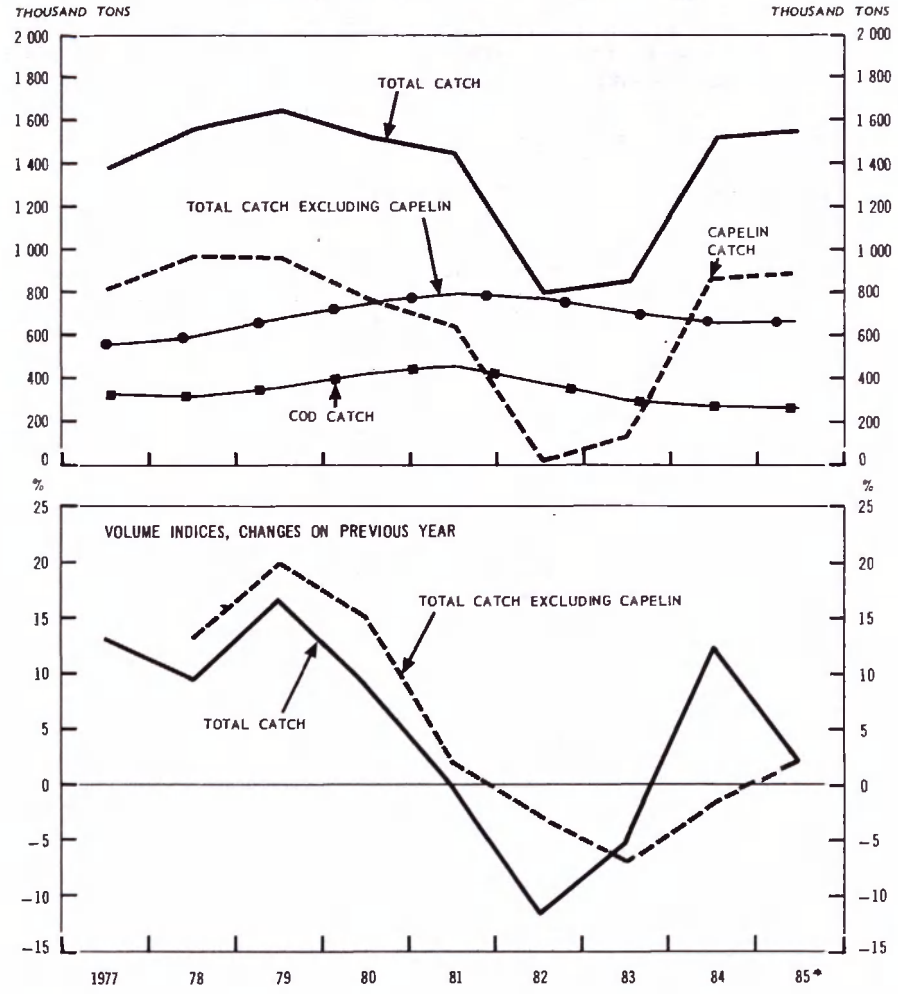
VOLUME CHANGES ACCORDING TO EXPENDITURE METHOD

Gross domestic product	2.2	−0.9	−4.2	3.4
Gross national product	1.6	−1.5	−5.5	2.7

1. Constant (1980) prices.
2. Contribution to GNP growth, i.e. changes in aggregates expressed as a percentage of GNP of the previous year.
3. Provisional.
4. The forecast incorporates revisions to the foreign balance, due to an expected increase in the cod catch, not included in the forecast published in *OECD Economic Outlook 37.*

Source: National Economic Institute.

Diagram 2. **Fish catch, 1977-1985**



* Forecast.
Source: National Economic Institute.

Domestic demand turned out to be much stronger in 1984 than foreseen in the Budget. Real private consumption, instead of falling, is now estimated to have increased by some 3 per cent over its 1983 level, owing to larger increases in household income than expected and a marked decline in the savings rate (Table 2). Final domestic demand rose by 3½ per cent in real terms as against an expected reduction of 4¼ per cent. Investment, which had declined in 1983, as capital spending in fishing, fish processing, manufacturing, construction and public utilities all fell, expanded by nearly 7 per cent (Table 3). Residential construction and business investment rose strongly, following a marked decline in 1983. In the public sector, investment in geothermal heating was particularly buoyant with public construction generally

Table 3. **Gross fixed investment**

	1982 Million kronur current prices	Percentage changes in volume from previous year[1]						
		1979	1980	1981	1982	1983[2]	1984[2]	1985[3]
Residential construction	1714.0	−2.0	−3.1	−10.5	8.9	−8.0	10.0	0.0
Other private investment	3659.0	−0.8	6.1	5.7	−0.6	−14.4	13.5	10.9
Agriculture	422.0	−13.2	−7.0	−1.3	14.0	−14.0	29.2	−4.0
Fishing	518.0	7.9	−11.8	18.0	−11.7	−19.0	−7.7	−29.4
Fish processing	349.0	14.8	−7.1	2.1	3.4	−15.8	26.6	2.8
Aluminium smelter	37.0	335.3	4.1	36.4	−84.8	−68.7	0.0	−40.7
Ferrosilicon plant	6.0	−30.6	−40.7	−80.0	−78.6	−33.3	150.0	73.9
Other manufacturing	712.0	10.9	0.0	4.1	21.3	−9.1	29.6	2.5
Transport equipment	593.0	−4.5	91.2	10.2	−18.6	−24.8	−26.2	121.2
Other machinery and equipment	484.0	−10.2	44.3	7.8	28.5	−5.2	40.3	6.1
Commercial building, etc.	538.0	−17.6	0.6	14.2	28.8	−9.6	0.0	0.0
Public works and buildings	3203.0	0.7	22.1	4.9	−7.1	−15.7	−2.7	−9.0
Electricity supply	1154.0	7.1	39.3	7.5	−9.2	−23.6	−20.4	−29.2
Geothermal heating, water supply	330.0	4.4	24.2	−8.2	−43.3	−21.6	24.8	−3.3
Communications	1061.0	−0.8	12.3	5.7	4.2	−5.2	4.5	0.0
Public buildings	658.0	−9.8	6.4	13.5	13.9	−15.5	0.0	−2.5
Gross fixed investment	8576.0	−0.6	9.4	2.1	−1.5	−13.6	6.9	2.0
Fixed capital formation as a percentage of GNP		25.7	27.1	27.0	27.5	24.5	24.2	24.3

1. Constant (1980) prices.
2. Provisional.
3. Forecasts.
Source: National Economic Institute.

strong. The investment/GNP ratio rose in real terms, though stabilizing at about 24 per cent in relation to nominal GNP. Accumulating fish stocks (as a result of larger capelin catch) also contributed to the strength of total domestic demand. The improving fish catch helped raise total export production by 11¾ per cent (2¾ per cent net of stock changes). The output of the manufacturing and construction sectors also recovered significantly (Table 2).

The recorded current account deficit narrowed from 10 per cent of GNP in 1982 to 2½ per cent in 1983 (Table 4). The underlying improvement was much smaller. Corrected for the decumulation of export stocks[3] and for special imports, the current external deficit improved by 2½ per cent of GNP to some 5¼ per cent. A further improvement of about 2 per cent of GNP was initially expected in the 1984 Budget. In the event a deterioration occurred, taking the deficit to about 6 per cent of GNP. General merchandise imports other than oil rose by 12 per cent in real terms in 1984 – substantially more than suggested by previous relative price and domestic demand elasticities. Growing demand pressures were probably partly responsible for this. Purchases of consumption and investment goods were particularly buoyant (Table 5). On the export side, marine products have had to contend with a degree of unfair competition in the form of subsidised fisheries in a number of countries. This has affected the US market price for frozen ground fish, which, in dollar terms, fell by 3-4 per cent. In response to this, at the end of August the krona was effectively devalued by 3 per cent, by redefining the weight of the US dollar in the basket of currencies. Overall, despite some improvement in the terms of trade[4] and the substantial growth of OECD markets for exports of manufactures, the trade balance deteriorated by about 1 per cent of GNP, and shifted into

Table 4. **Balance of payments**
Transactions basis, US$ million

	1979	1980	1981	1982	1983	1984[1]
Exports, fob	790.9	931.1	902.8	677.2	744.9	744.1
Imports, fob	764.5	899.2	929.8	827.8	726.2	754.5
Trade balance	26.4	31.9	−27.0	−150.6	18.7	−10.4
As per cent of export earnings	3.3	3.4	−3.0	−22.2	2.5	−1.0
Services, net	−44.8	−97.3	−114.2	−97.8	−69.2	−120.0
Foreign travel	−27.8	−31.9	−47.6	−47.7	−39.1	−50.2
Transportation and insurance	9.1	−34.4	−5.1	−7.6	11.3	2.1
Interest	−68.4	−84.6	−110.8	−117.8	−122.0	−143.9
Other	42.3	53.7	49.3	75.2	80.6	72.0
Transfers, net	−2.8	−4.2	−3.2	−4.5	−1.7	0.8
Current balance	−21.2	−69.6	−144.4	−252.9	−52.2	−129.6
As per cent of GNP	−0.8	−2.3	−5.0	−10.0	−2.4	−6.0
Long-term capital	88.6	137.4	122.6	142.2	81.4	76.1
Private	23.0	59.1	45.3	2.3	−18.2	−8.8
Official	65.6	78.3	77.3	139.9	99.6	84.9
Non-monetary short-term capital	−7.1	−3.6	28.0	32.2	−80.1	−16.3
Errors and omissions	−33.2	−47.9	−24.2	−54.8	−3.2	−29.3
Private monetary institutions	−2.0	−4.2	−1.0	−7.4	14.2	−22.6
Balance on official settlements	25.1	12.4	−19.0	−140.7	−39.9	−121.7
Use of IMF credit	−16.3	23.9	9.9	−18.1	1.0	—
Miscellaneous official accounts	22.4	−39.4	−94.2	−34.4	−54.0	−109.6
Allocation of SDRs	−3.5	3.3	3.3	—	—	—
Change in reserves	−27.7	24.6	62.0	−88.2	13.1	−12.1
Conversion rate (Kr. per US$)	3.52	4.79	7.24	12.52	25.00	31.66

1. December 1984 estimate.
Source: Central Bank of Iceland.

Table 5. **Growth rates of imports and exports by category**

	1978 Share of total trade	1978	1979	1980	1981	1982	1983	1984[1]	1984[1] Share of total trade
		Annual percentage growth in real terms[2]							
Merchandise imports (cif)									
Consumer goods	36.8	18.8	0.3	7.5	8.1	7.6	−5.5	10.8	33.7
Intermediate goods	32.8	1.2	35.1	−1.1	2.3	−2.6	8.4	6.8	35.6
Investment goods	30.4	−6.9	3.3	21.1	0.5	−2.8	−8.6	14.2	30.7
Total	100	4.1	12.7	7.9	3.7	0.8	−1.6	11.2	100
Merchandise exports (fob)									
Marine products	77.5	22.4	10.0	5.1	1.7	−18.5	11.3	5.5	69.8
Agricultural products	2.3	16.8	23.4	−28.1	−24.1	−22.1	7.6	41.3	1.4
Manufactured goods, etc.	20.1	5.0	21.1	7.9	−15.2	−5.3	61.1	−15.9	28.8
Total	100	18.2	12.6	4.8	−2.5	−16.0	22.2	−0.2	100

1. First three quarters.
2. Export/Import values deflated by the GNP deflator, except for 1984 figures, which are expressed in volume terms. "Real" trade flows are a measure of the "resource cost" of imports and exports, incorporating changes in the relative price of traded goods; e.g. real imports are defined as import volume x (price of imports/GNP deflator). If, for instance, the price of imports rises faster than domestic prices the proportion of GNP required to pay for imports will rise.
Sources: National Economic Institute, *Hagtoler Mandarins*, Dec. 1984, and Secretariat calculations.

deficit. With a further worsening of the service account, the current external deficit widened to some $130 million, or 6 per cent of GNP. A major contributing factor has been the growth in debt interest payments (Table 4), which have doubled in dollar terms since 1979. They now amount to 6½ per cent of GNP. However, other items such as foreign travel also contributed.

In 1983, Iceland's long-term debt rose by 10 per cent of GNP to some 60 per cent by the end of the year (Table 6). At the beginning of the 1980s this ratio was still of the order of 35 per cent, so that in the three years to 1983 the debt/GNP ratio rose by 25 percentage points. The traditional practice of financing the current account deficit by long-term credit explains only part of this development. Over the same period, the cumulative current account deficit amounted to 17½ per cent of GNP. The remaining increase was due to a revaluation of the stock of outstanding debt, resulting from the real depreciation of the krona, and to the sharp decline in GNP (see Part III). An attempt was made in the 1984 budget to stabilize the long-term external debt/GNP ratio. The unanticipated current external deficit has, however, implied an increase in the net external debt ratio to above 60 per cent – one of the highest in the OECD area – while also placing some strain on the country's foreign exchange reserves. 1984 saw both an increase in capital inflows and a deteriorating overall balance of payments.

The aim of improving the profit position of the more hard-pressed sectors of the economy has also been only partially attained. Thus, the profitability of the fisheries sector has continued to be affected by heavy investment in new fishing vessels causing serious cash deficits. Depending on the imputed interest rates used, 1984 operating losses are estimated at 3-5 per cent of gross earnings in fish processing and 1-6 per cent on trawler operations, the newest trawlers operating at 8-9 per cent losses. However, the profitability of the manufacturing sector has improved, with industries producing for the domestic market recording profits in the beginning of 1984, roughly 6-7 per cent higher as a percentage of gross national income than in 1983. Export industries (other than aluminium and ferrosilicon) have been even more profitable, showing 11 per cent profits in the beginning of 1984. The profit situation of retail and wholesale industries has also improved significantly as a result of lower contracted real wages, and increased turnover.

Table 6. **Foreign funded debt and the debt service burden**
Millions of kronur at average exchange rates of each year[1]

				As a ratio of GNP, per cent		
	Long-term foreign debt	Net foreign reserves	Net external debt[2]	Long-term foreign debt	Net external debt[2]	Service of foreign funded debt as a ratio of export income
1977	−1 205.5	56.7	−1 205.8	31.6	31.6	13.7
1978	−1 972.0	173.2	−1 887.0	34.1	32.5	13.1
1979	−2 931.0	396.0	−2 725.0	34.7	32.2	12.9
1980	−4 623.1	759.0	−4 248.9	34.4	31.6	14.1
1981	−7 523.2	1 517.0	−6 525.2	36.7	31.8	16.4
1982	−14 907.0	1 262.0	−15 011.0	47.8	48.1	21.2
1983	−32 126.0	2 154.0	−31 121.0	60.6	58.7	20.6
1984 preliminary	−42 564.0	2023.0	−43 508.0	61.9	63.3	24.3

1. Trade and currency weighted rate of exchange.
2. Long-term debt, and short-term debt, less unpaid exports and foreign exchange reserves.
Source: Central Bank of Iceland.

Inflation in 1984 was brought down without any significant increase in the rate of unemployment (Table 7), which only slightly exceeded 1 per cent of the workforce. This was partly due to flexible work practices in the form of reduced hours worked. Nevertheless, weaker activity has been reflected in a lengthening of the average period of unemployment outside the Reykjavik area. It is clear, however, that the rapid reduction of inflation achieved up to mid-1984 did not eliminate the struggle over income shares which had been part of the inflationary dynamic in Iceland for some time. In the first place, the precipitate decline in real wage rates created a real wage resistance which found expression in a widening of wage differentials (via wagedrift in more profitable industries), leading to pressure for comparable awards. The relatively weak stance of fiscal and monetary policies also seems to have played an important role in influencing wage claims and bargaining strengths[5]. In 1984, domestic demand was more buoyant than expected and signs of labour shortages emerged in the Reykjavik area in the spring and early summer. The objective of job protection, implicit in the government's strategy of maintaining the viability of loss-making industries, particularly fisheries, also meant that resistance to inflation was considerably weakened. Despite the commitment to a stable exchange rate, inflationary expectations have been slow to adjust.

Table 7. **Labour market indicators**

	Annual averages						
	1978	1979	1980	1981	1982	1983	1984
Unemployment							
Unemployment days per month	7397	8185	7179	8827	16661	25645	32080
Reykjavik area	2161	3227	2195	2817	4992	10058	11269
Outside Reykjavik	5236	4958	4984	6010	11669	15587	20811
Average number of unemployed	341	378	331	407	770	1184	1480
Unemployment as a ratio of the work force (percentage)	0.3	0.4	0.3	0.4	0.7	1.0	1.3
	Percentage annual changes						
Employment							
Industrial	2.9	0.2	3.3	2.4	2.9		
of which:							
Fishing	3.0	−2.5	7.0	−0.3	2.8		
Fish processing	−1.9	8.1	10.8	2.9	−2.9		
Manufacturing	4.4	4.0	3.2	1.0	1.3		
Electricity and water supply	14.2	−3.3	8.3	5.8	0.9		
Construction	2.3	−6.5	4.0	1.3	7.9		
Wholesale, retail restaurants and hotels	4.3	1.7	2.6	2.7	6.5		
Transport, etc.	2.3	5.6	1.5	2.0	1.8		
Financial services	8.6	0.4	8.9	12.4	1.7		
Public sector	2.8	4.8	3.6	14.4	0.0		
Workforce	3.0	1.0	3.3	4.8	2.6		
	Average hours worked in the Reykjavik area						
Length of work week	49.9	49.6	49.3	49.9	49.4	48.7	

Source: National Economic Institute.

II. ECONOMIC POLICIES AND SHORT-TERM PROSPECTS

Fiscal policy

Over the last few years, the stance of fiscal policy has remained too weak. In the past, adjustments to the wage indexation system were made possible only through "political" concessions in the form of tax cuts, subsidies, social security spending or public investment. As noted, the May 1983 measures made budgetary concessions amounting to nearly 1 per cent of GNP. They included a cut in personal income taxes, through higher allowances and child benefits, an increase in supplementary old age and disablement pensions, and subsidies for house-heating costs, estimated to cost 400 million Kronur. This package was to be financed by cuts in spending programmes, which were not, in the event, implemented. Moreover, in addition to this "discretionary" intervention, 1983 saw the spontaneous emergence of a growing central government deficit as the marked fall in domestic demand and GDP eroded the tax base. Four-fifths of Treasury revenue comes from indirect taxes, the bulk of which are sensitive to domestic demand. Treasury revenue fell in relation to GNP and also in real terms, leading to an unexpectedly large recourse to Central Bank borrowing (equal to 2½ per cent of GNP). Over 2 per cent of the 3½ per cent deterioration in the Treasury revenue balance[6] can thus be ascribed to automatic rather than "deliberate" changes in fiscal stance[7]. The May tax concessions and rising expenditure account for the remainder of the budgetary deterioration in 1983. General government consumption of goods and services increased by 3 per cent in volume and the overall share of central government expenditure in GNP rose from 30 to 33½ per cent, partly because of the fall in GNP.

While, in a recession, an automatic but temporary shift into budget deficit may stabilize demand, the benefits of "automatic stabilizers" are less obvious in the face of supply shocks. The process of adjustment may be delayed, especially in a situation of low domestic savings ratios. With inadequate private savings, a central government deficit exceeding 1 per cent of GNP tends to be reflected in an current account deficit, leading to increased foreign borrowing, or a deteriorating foreign exchange position[8]. To correct this situation, the 1984 Budget proposed cuts in public expenditure, with a view to lowering the ratio of central government spending to GNP (Table 8). The planned reduction in state spending was one of the most ambitious for decades. Total public consumption was set to fall by 4-5 per cent in real terms and current expenditure on goods and services by 2 per cent. Transfers were expected to decrease by 16 per cent and social security benefits by 11 per cent. Subsidies were to be kept virtually constant in nominal terms. Government investment was planned to decline by 17 per cent in real terms but capital transfers were to be maintained at their 1983 level. Overall, government spending volume was to drop by 10 per cent. However, since real revenue was also expected to decline (by 5 per cent) the best that could be achieved was expected to be a balanced budget.

As voted, the 1984 budget entailed somewhat smaller cuts in real expenditure than those initially proposed, and a deficit of ½ per cent of GNP (Table 8). By May there was an anticipated 11 per cent overshoot of public spending (2 billion Kronur or 3 per cent of GNP), so that corrective measures had to be taken. But these still left a projected revenue shortfall of 1½ per cent and, against the background of growing excess domestic demand, further spending cuts were announced in July. These concerned the postponement of work on major public projects, or new phases of ongoing projects. The July measures were to save 150 million Kronur in 1984. They failed, however, to prevent an overshooting of the Budget objective of limiting the central government expenditure/GNP ratio to 27½ per cent. Public consumption (including that of the municipalities) eventually stabilized rather than fell in real terms: again

Table 8. **Treasury finances (the "A-Budget")**

	1979	1980	1981	1982	1983		1984			1985
					Budget	Outcome	Voted Budget	Estimate after May	Outcome	Budget
	Cash basis, in millions of kronur									
Revenue	2378	3681	5993	9577	13007	15356	17895	18525	20747	25336
Expenditure	2467	3766	6075	9379	12973	16519	18301	19570	19964	26079
Revenue balance	−89	−85	−82	198	34	−1163	−406	−1045	783	−743
Net lending (lending −)	−11	−8	−56	−532	−154	−639	34	34	−563	65
Financial balance[1]	−100	−93	−138	−334	−120	−1802	−372	−1011	220	−678
Net borrowing outside banking system	123	155	323	500	43	543	378	1011	421	684
Cash balance	23	62	185	166	77	−1259	6	0	641	6
Central bank financing, net	−22	−45	−164	−124	60	−1260	6	0	—	6
Cash deposits (increase +)	1	17	21	42	17	—	—	—	—	—
	Cash basis, as percent of GNP									
Revenue	28.1	27.4	29.2	30.7	—	29.0	27.0	27.5	30.2	28.7
Expenditure	29.2	28.0	29.6	30.9	—	31.2	27.6	29.1	29.0	29.6
Revenue balance	−1.1	−0.6	−0.4	0.6	—	−2.2	−0.6	−1.6	1.1	−0.8
Financial balance	−1.2	−0.7	−0.7	−1.1	—	−3.4	−0.6	−1.5	0.3	−0.8
	Accruals basis, as per cent of GNP									
Revenue	29.0	28.8	30.3	32.4	—	30.7	—	—	—	—
Expenditure	29.0	27.8	29.5	29.7	—	33.4	—	—	—	—
Revenue balance[2]	0.0	1.0	0.8	2.7	—	−2.7	—	—	—	—

1. Corresponds to net borrowing requirement (i.e. borrowing excluding amortization).
2. This item corresponds to the SNA definition of "net lending". See OECD, *National Accounts*.

Sources: Central Bank of Iceland, *Annual Report 1983* and data provided by the Bureau of the Budget.

an overshoot (Table 2). But the unforeseen buoyancy of demand helped raise receipts, so that the 1984 outturn was one of approximate financial balance, with a cash surplus of ¼ per cent of GNP.

The 1985 Budget was originally prepared before the re-opening of the 1984 wage round, against the background of the need to consolidate inflation gains, reduce the current account deficit and cushion the financial squeeze on the fishing industry. Following revisions in the wake of the November wage settlement, emphasis was put on cutting back investment outlays (chiefly public works) and subsidies. Agricultural export subsidies are to be phased out. However, central government expenditure is still expected to remain at or slightly above its 1984 level of about 29 per cent of GDP, so the overall degree of expenditure restraint is minimal. On the tax side, the Budget incorporates the first of three steps towards the phasing out of state income tax on average wage earnings. This concession is estimated to amount to some 600-700 million kronur in 1985 implying a reduction in the ratio of direct taxes to GNP from 4¼ to 3½ per cent. To compensate for the revenue loss, indirect taxes have been raised, via an increase of a half percentage point in the rate of sales tax[9]. The central government tax burden is still expected to fall somewhat, to about 29 per cent of GNP. As a result, the revenue balance is projected to move into deficit by about 1 per cent of GNP.

The investment activities of the Treasury extend beyond the so-called "A-Budget" shown in Table 8. There is a parallel "B-Budget", which includes government enterprises and funds which more or less fully finance their operations from revenue. It also incorporates the Loan and Relending Account, which manages the lending operations of the government, so that any measure of public sector borrowing needs to incorporate this item of public spending. The two budgets are combined in the Credit Budget (Table 9), which forms part of the "Investment and Credit Programme". This acts as a system of overall credit rationing, deriving from the fact that administered interest rates have prevented the formation of a free capital market. The combined A and B Budgets approximate to a gross public sector borrowing requirement (net of borrowing from the Central Bank)[10]. In 1982 and 1983 this amounted to 3½ to 4 per cent of GNP, having risen from under 3 per cent at the beginning of the 1980s. However, the Credit Budget also embraces the lending operations of the Investment Credit Funds (which, inter alia, channel funds into residential construction). Moreover, the credit programme also projects investment and longer-term borrowing programme for the whole economy (as well as setting guidelines for bank credit).

The 1984 credit budget was framed around the forecast that total gross capital formation would contract by 6 per cent (from 25 to 23½ per cent of GNP) (Tables 3 and 9). Residential construction was to be unchanged, while public investment was to decline, particularly as a result of a decrease in investment in electric power generation. Excluding credit advanced by the banking system, credit for capital formation was planned to reach 8 896 million Kronur (14 per cent of GNP), of which the Treasury was to be allocated about one third (4 per cent of GNP). Equal amounts of credit were to be raised at home and abroad, with the Treasury covering two-thirds of its total needs domestically. Since refinancing was a relatively large item, new foreign borrowing was to amount only to 1 340 million Kronur (2 per cent of GNP), and as a result total funded debt was scheduled to fall as a proportion of GNP. In the event, all the borrowing targets were overshot. But whereas in 1983 the central bank had been lender of last resort, in 1984 it was foreign borrowing which increased sharply. Central government external borrowing was nearly double the original budget estimate, with 85 per cent of the Treasury's borrowing needs being covered abroad. This was partly because domestic debt redemptions exceeded expectations[11]. With the continued buoyancy of public spending, continued overseas borrowing was the least satisfactory aspect of fiscal policy in 1984.

Table 9. **Government borrowing and indebtedness**[1]

	1980	1981	1982	1983		1984			1985
				Credit budget	Outturn	Credit budget	Estimate after May	Prelim. outturn	Credit programme[2]
	Cash basis, in millions of kronur								
Central government borrowing[1]									
Uses:									
Treasury proper	128	239	317	525	535	1 550	2 385	1 937	2 156
Other government[3]	268	413	942	1 098	1 355	1 005	1 195	1 711	1 325[4]
Energy investment	152	256	416		233	195	195	195	195
Interest and refinancing	42	56	277	—	743	358	358	328	500
Other	74	101	249	—	379	452	642	1 188	745
Total	396	652	1 259	1 623	1 890	2 555	3 580	3 648	3 481
As per cent of GNP	2.9	3.2	4.0	—	3.6	4.0[5]	—	5.3	4.0
Sources:									
Foreign borrowing	146	334	800	802	1 217	1 610	2 815	3 117	2 701
Domestic borrowing	250	318	459	821	673	945	765	531	780
New savings certificates	70	50	132	200	101	200	200	308	400
Amortization of re-lent savings certificates	98	110	114	360	360	467	187	−172	0
Sales of Treasury bills	49	133	125	188	106	120	120	127	0
To banks	(37)	(76)	(70)	(103)	(19)	—	—	—	—
To pension funds	(12)	(57)	(55)	(85)	(87)	(120)	(120)	(127)	(0)
Other	33	26	88	73	106	158	158	268	380
Total borrowing[6]	396	652	1 259	1 623	1 890	2 555	3 580	3 648	3 481
	Per cent of GNP								
Central government debt									
Total	41.4	41.0	58.1	—	63.4	—	—	—	—
Foreign	25.8	23.7	37.9	—	42.0	—	—	—	—
Domestic	15.6	17.3	20.2	—	21.4	—	—	—	—

1. Not including borrowing from the Central Bank.
2. Including revisions to the original plan resulting from the Budget, which was passed by the Althing 20 December 1984.
3. B-Budget, comprising state enterprises and funds, but excluding enterprises with government participation.
4. Foreign borrowing of 120 million Kr. by the Regional Development Fund, which is included in the B-Budget, is not included.
5. In terms of GNP projections at the time of the presentation of the credit budget.
6. Including borrowing by the municipalities, the government borrowing requirement in 1984 was 3 987 million Kr. (5.8% GNP).

Sources: *Investment and Credit Programme 1985*; Central Bank of Iceland, *Annual Report*; and data supplied by the Bureau of the Budget.

The 1985 Credit Budget emphasizes the need to control the expansion of foreign debt and the rapidly rising debt interest burden. The proposals are based on assumed price increases of 26-28 per cent (over 1984) and a rise in the price of foreign currency of 22-23 per cent (i.e. real stability of the krona assuming 4-5 per cent inflation in competitor countries). The credit plan calls for total long-term borrowing of 9 868 million kronur (11½ per cent of GNP), of which the Treasury allocation is again one-third (4 per cent). Foreign borrowing makes up three-quarters of the total, at 7 300 million kronur (8½ per cent of GNP) with the Treasury also raising three-quarters of its credit overseas. However, of the total external borrowing the greater part (nearly 5½ percent of GNP) is earmarked for refinancing existing overseas debt, so that net long-term borrowing abroad will amount to 3 per cent of GNP. This compares with total gross domestic capital formation of 24 per cent of GNP and is nominally consistent with an objective of stabilizing the overseas long-term debt/GNP ratio. On the other hand, it should be noted that the current balance of payments deficit is projected to be 5 to 6 per cent of GNP, implying that short-term borrowing will increase. Consequently net external debt may continue to rise relative to GNP[12].

Monetary policy

M3 growth decelerated from 78 per cent in 1983 to 34 per cent in 1984. The 1985 credit budget, which acts as a framework for setting monetary objectives as well as long-term credit allocation, foresees a further deceleration to 25 per cent this year. However, this downward trend conceals persistent difficulties in monetary control and continuing "accommodation" on the part of the central bank. It may be worth noting that the 1984 credit budget had projected M3 growth of 15 per cent in 1984. Two features have dominated in the overshoot:

- Contrary to the trend up to mid-1983 (Table 10), in the more recent period money growth has tended to outpace inflation.
- Domestic credit expansion has continued to exceed the growth of deposits, as bank advances have fuelled import demand and central bank lending to the deposit money banks has risen.

At the same time, with inflation subsiding up to the autumn of 1984, nominal interest rates have come down (Diagram 3). Real interest rates, measured by actual rather than expected inflation, were positive until mid year, although there was a great disparity in the yields of the various forms of deposit and credit.

As noted, the money supply, narrow and broad, has shown a long-run propensity to rise at a slower rate than inflation and nominal GNP (Table 10). High rates of inflation and negative interest rates tended to lower the demand for money, as money holders economised on cash balances. Some recovery in money demand was to be expected as inflation fell. And indeed, since the end of 1983, the rate of increase in the major aggregates has been above the rate of inflation. If the economy continues to move towards a lower inflation rate, the equilibrium ratio between money balances and GNP would tend to increase. Studies at the central bank suggest that this process may still have some way to go, depending on the course of real interest rates. To some degree, positive rates of real money growth may thus continue, without arousing concern. Depositors' behaviour may also change in response to changing real rates of return. A notable feature of the transition to lower inflation rates and higher real interest rates has been the changing composition of the money stock. As a result of indexation of financial obligations, the ratio of time deposits to GNP rose from the mid-1970s, but more recently savers have switched into general savings deposits and from indexed to non-indexed deposits (Table 10). This change in portfolio preferences has also affected the financing of the national debt, with 1984 witnessing a switch from government bonds into bank deposits[13].

Table 10. **Monetary indicators**

A. GROWTH RATE OF SELECTED AGGREGATES[1]

	1982	1983	1984	1983 Q1	1983 Q2	1983 Q3	1983 Q4	1984 Q1	1984 Q2	1984 Q3	1984 Q4
Central bank											
Base money	48.9	73.6	29.1	99.4	49.2	106.1	46.9	13.5	22.6	35.6	48.6
Notes and coin	30.8	46.1	24.4	115.0	22.0	58.0	48.4	11.7	78.9	−3.8	32.6
Deposit money banks											
Lending	88.3	77.2	45.8	45.5	87.3	111.3	69.3	37.7	24.8	44.6	78.0
Deposits[2]	59.7	79.9	34.0	80.0	106.0	84.3	53.5	28.6	24.2	24.1	58.6
Banking system											
Domestic assets (net)	78.3	87.2	38.7	82.9	99.3	98.3	55.7	50.3	28.3	56.2	26.8
M3	58.1	78.3	33.6	81.9	97.6	83.9	52.8	28.7	25.0	23.5	57.3
M2	47.4	73.3	51.3	55.7	86.6	63.6	89.1	68.0	14.8	25.3	109.5[3]
M1	29.1	77.5	42.7	120.4	51.1	65.7	76.9	13.6	38.4	22.2	139.2
Credit terms index	49.8	79.4	33.8	84.9	116.2	78.0	27.0	9.3	18.8	12.0	37.5

B. ANNUAL AVERAGES OF DEPOSITS AND MONEY INCLUDING ACCRUED INTEREST

	As % of gross national product								Income velocity of money			
	Notes and coin	Demand deposits	General savings deposits	Time deposits	Total deposits	Money supply M1	Money supply M2	Money supply M3	M1	M2	M3	Deposits
1976	1.74	5.80	11.78	5.95	23.53	7.55	19.33	25.28	13.25	5.17	3.96	4.25
1977	1.72	5.31	10.86	6.31	22.49	7.03	17.89	24.20	14.21	5.59	4.13	4.45
1978	1.64	4.72	10.03	6.72	21.46	6.36	16.39	23.10	15.73	6.10	4.33	4.66
1979	1.54	4.86	10.38	7.78	23.03	6.40	16.79	24.57	15.62	5.96	4.07	4.34
1980	1.31	4.67	10.46	8.25	23.39	5.98	16.44	24.70	16.72	6.08	4.05	4.28
1981	1.57	5.15	12.64	8.79	26.57	6.71	19.35	28.14	14.89	5.17	3.55	3.76
1982	1.35	4.61	13.24	9.83	27.68	5.96	19.19	29.02	16.79	5.21	3.45	3.61
1983	1.08	4.37	12.48	11.88	28.74	5.45	17.93	29.82	18.34	5.58	3.35	3.48
1984	1.26	5.45	16.42	11.45	33.32	6.71	23.14	34.60	14.90	4.32	2.89	3.00

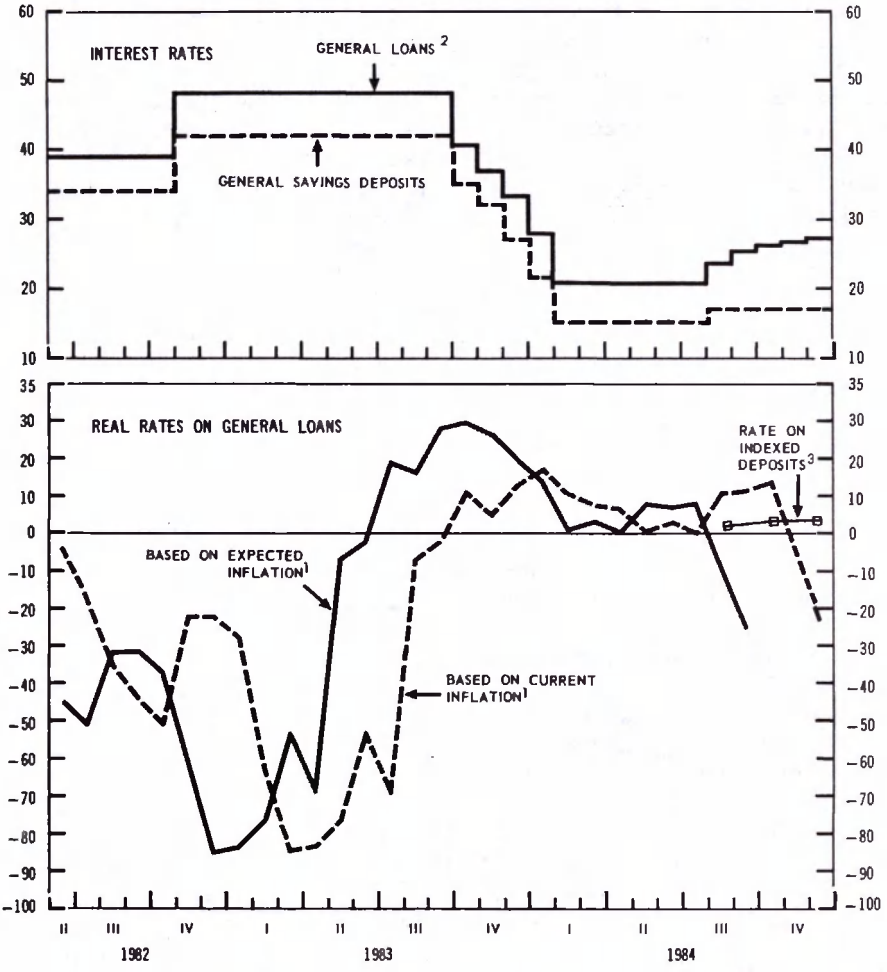
1. Seasonally-adjusted figures, at annual rates.
2. With accrued interest.
3. This reflects the introduction of new types of deposits, which are drawable, but where yields are linked to the length of time that accounts are undrawn.

Source: Central Bank of Iceland.

Rapid monetary growth has been accompanied by even faster domestic credit expansion. This has been associated with growing central bank lending (central bank claims on the deposit money banks rose by about 60 per cent in 1984) and a deteriorating net foreign asset position on the part of the banking system[14]. The deficit on goods and services accounted for a fall of nearly 4 000 million kronur in net (short and long-term) foreign assets. These two trends – central bank accommodation and current balance of payments deficit – have been, and remain, of some concern. Rapid domestic credit expansion has fuelled demand pressures in the economy, which have been met by imports, while the easy recourse to central bank credit has led to a very poor liquidity position on the part of the deposit money banks. Firms have resorted to bank credit to meet their increased liquidity problems, while individuals have borrowed in order to delay the adjustment of their consumption levels to reduced real incomes. The deposit banks have, in the process of accommodating these demands, increased their overdrafts at the central bank, despite the application of new banking rules to prevent this. Furthermore, after the Central Bank had imposed a system of escalating penalty rates on

overdrafts in late 1982, two large commercial banks sought accommodation by short-term borrowing abroad. This added to domestic credit expansion and caused a mismatch of foreign exchange assets and liabilities in the banks' portfolios. In 1983 this problem became more acute, and was not effectively dealt with until September 1984, when stricter rules for commercial banks' overdrafts with foreign banks were introduced, including a requirement that commercial banks should in general match their foreign liabilities with foreign assets. At the same time, the long-standing practice of rediscounting produce bills (commodity bills of

Diagram 3. **Nominal and real interest rates**



1. Expected inflation is taken as the actual rate of inflation in the three months ahead; current inflation is defined as the price change over the preceding three months (both annualised).
2. Annual yield on bills discounted for two months.
3. Three month deposits.

Source: Central Bank of Iceland.

exchange) has maintained the supply of credit to the fisheries, agriculture and manufacturing sectors. Rediscounts increased by 40 per cent in 1984.

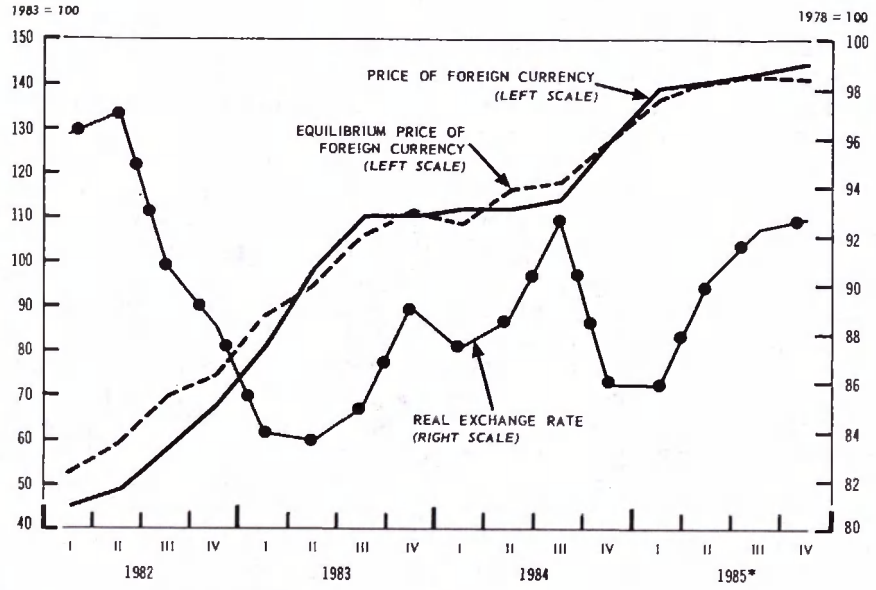
Real interest rates on non-indexed bank deposits and loans became highly negative in 1982 and the first half of 1983, as inflation rapidly gathered momentum[15]. Interest rates were raised in late 1982, but no further revisions were made until September 1983, when rates were lowered in step with falling inflation. Several further reductions followed up to mid-1984, with rates falling about 25 points from their peak levels, to about 17 per cent on deposits and 20 per cent on loans (Diagram 3). Interest rates then rose (by 2-2½ per cent) in August 1984 as part of a de-regulation package (see below), in an attempt to contain excessive domestic credit expansion. The course of real interest rates, determined by the interaction of these regulated changes and movements in inflation, has not been steady (Diagram 3). Real rates on general savings deposits moved from strongly negative (–34 per cent) at the beginning of 1983 to zero by the end of November. They became positive in the first and third quarters of 1984 (after a brief re-emergence of negative rates in the spring), as inflation troughed at about 13 per cent. However, the fact that banks were guaranteeing that the real yield on non-indexed accounts would not fall below the indexed rate, and the substantial inflationary risk premium implied by high real rates of interest on three month Treasury bills (about 11 per cent by September), suggest that inflation expectations were still entrenched in mid-1984. The rapid expansion of domestic credit, largely used for import financing, may also suggest that the expected rate of price and wage increases (including the price of foreign currency) made perceived real rates on borrowing lower than going rates. If, for instance, real rates are measured by reference to the inflation outcome over the period of a three month loan (i.e. by applying the actual rate of price change three months ahead) the picture of real rates changes quite substantially (the continuous line in diagram 3). Real interest rates on general loans then appear substantially positive in 1983, but only marginally so in 1984. Proper anticipation of the effective rate of inflation up to December 1984 would have implied negative rates of nearly 30 per cent on three-month borrowings made in September.

Exchange rate policy

A main aim of exchange rate policy, up to early 1983, was to maintain the profitability of the fishing sector by compensating for the excess of costs over export prices of marine products. With a domestic rate of inflation substantially greater than abroad, the krona had to be devalued more or less continously. Thus, during 1982 the total effective depreciation was equal to 33 per cent as a result of some downward float and two discrete devaluations. In January 1983, there was a further devaluation of 11 per cent followed by a further gradual depreciation (Diagram 4). The May 1983 stabilization package incorporated a new devaluation of 14½ per cent but exchange rate stability was maintained thereafter, leading to a gradual real appreciation through 1983. For 1984, the authorities fixed wage guidelines consistent with an effective depreciation of 5 per cent, and the February wage agreements were consistent with this. The 1985 budget proposals (published before the November wage settlement) envisaged a continuation of this policy, with changes in the effective exchange rate again to be limited to a 5 per cent differential. Wage rates on average 5 per cent higher than at the beginning of the year were considered to be consistent with that target.

The change in strategy implied by the greater stability of the nominal effective exchange rate since May 1983 was not quite so marked as it seemed, however. The exchange rate, though not automatically adjusting to domestic wage pressures according to any set rule, continued to be judged according to trends in profit margins and the balance of payments. The Central Bank has continued to use an "index of exchange rate adjustment" as a measure of the divergence of the exchange rate from its "equilibrium level". This equilibrium is defined as the

Diagram 4. **Exchange rate movements**



* Forecast.
Source: Central Bank of Iceland.

price of foreign currency which maintains the share of operating profits in value added constant from a selected base period. The index thus calculates the change in export prices in Icelandic kronur which would equal the change in material and labour costs. By mid-1984 this index was showing that the equilibrium price of foreign currency, so defined, was above the actual price (Diagram 4). This probably corresponded to a widespread perception that an exchange rate adjustment was to take place – a situation encouraging speculative domestic borrowing. Taken together, the devaluation guidelines for 1984 and 1985 meant that wages could increase by 19 per cent over the two years, but prospects following the November settlement became for a wage increase of 34.5 per cent. Against this background a 12 per cent devaluation took place on the 20th of November, the exchange rate having depreciated in the weeks before the official devaluation by 4.3 per cent from the middle of October to the 16th of November. The price of foreign currency thus increased by around 27 per cent from the beginning of the year. However, the devaluation is looked on as a one-step adjustment to the new wage settlements. It is still the Central Bank's intention to maintain a stable nominal effective exchange rate and to follow in all major respects the same exchange rate policy as in the period from the end of May 1983 through the first three quarters of 1984. Decisions on exchange rate policy will continue to be made in the context of a comprehensive assessment of the economic situation and the external balance.

Short-term Prospects

The extent of the setback to the anti-inflation strategy is still uncertain, except insofar as the aim of consolidating the rate of price increase at about 10 per cent will not now be achieved (Table 1)[16]. Since the annualised three-month increase in wage rates accelerated to 50 per

cent by the end of 1984, with a further rise projected for the first quarter of 1985, the minimum increase between 1984 and 1985 is now likely to be 22 per cent. Prices (measured by the CPI deflator) are expected to rise by some 28 per cent, implying a further decline in real wage rates, though no change in real disposable income is expected because of wagedrift and income tax cuts. However, the parties to the wage agreement will monitor price and wage developments during 1985 to assess changes in purchasing power. Pay discussions can re-open from the Spring and wage contracts can be repealed from September 1 1985 if agreement on a new contract is not reached before. No firm forecast is therefore possible beyond this point.

Unusually large uncertainties surround the future course of consumer demand. The behaviour of household savings is particularly difficult to predict, depending on the development of real interest rates and the course of future wage and price movements (including the possibility of re-opened wage negotiations). On the real disposable income assumptions made above, the National Economic Institute predicts that consumption may grow by perhaps 1 per cent in volume terms (Table 2). Real gross fixed investment is projected to expand further with a stepping up of capital spending in manufacturing (including the ferrosilicon plant) and increased purchases of transport equipment. Investment in fishing is expected to decline, while spending on public works and buildings is to be restrained. Residential construction is likely to be flat. Imports may resume a more normal trend, following the speculative upsurge of 1984, while exports may grow 5 per cent in real terms given the relatively good outlook for export market growth and improving prospects for the fish catch. Marine projections for 1985 point to a similar capelin catch, but a 4-5 per cent increase in other species could lead to a 3½ per cent volume increase overall. However, the current balance of payments deficit will remain at over 5 per cent of GNP, calling for sustained capital imports and higher short-term borrowing.

III. SELECTED POLICY ISSUES

Demand management in Iceland has been characterised by an accommodating monetary policy, currency depreciation and accumulating foreign debt. Fiscal policy, via large-scale public sector borrowing, has contributed substantially to the latter and, more recently because of deficits on the A-budget, to the expansion of the monetary base. Attempts are currently being made to correct monetary and fiscal imbalances[17]. As in previous years, however, the objectives of increasing domestic savings and achieving current external balance through financial market deregulation and higher real interest rates have conflicted with other aims, i.e. preservation of export competitiveness and full employment. Easy access to loanable funds has helped to sustain demand pressures, imports and inflationary momentum. This section discusses the innovations in monetary management and interest rate determination which have been made in recent years and the difficulties faced by the authorities in controlling domestic credit expansion; it also tries to assess the scope for checking the growth in foreign indebtedness.

Financial innovations and monetary management

For more than two decades Iceland has operated a system of credit rationing, based upon the administrative allocation of credit (through the Credit Budget for long term finance) and administered interest rates on all loans and deposits. This system has had a considerable

impact on monetary developments. By keeping rates (on commercial and housing loans especially) below market rates, an imbalance emerged between the demand and supply of financial savings, leading to capital imports and the need for extending regulation to short term loans also. These are managed to some extent by the central bank which collects funds through reserve requirements and channels them into certain industries by rediscounting produce loans from the commercial banks. Generally these loans are linked to stocks. A fish producer for example would typically be able to borrow from his commercial bank an amount equivalent to 75 per cent of the value of his stocks. The Central Bank would then rediscount more than two thirds of the loan, i.e. 52 per cent of the stock value would be financed by the Central Bank. These were the ratios applied for export products, while similar rules with lower ratios were in effect for agricultural products for the domestic market. Commercial bills from the manufacturing sector are also rediscounted but on a discretionary basis. Borrowers of rediscountable loans have enjoyed lower interest rates than others in the market.

In using bank reserves to advance industrial credit, the central bank has gradually relinquished its ability to control deposit money banks' advances via reserve requirements; these are hardly sufficient to finance the system of rediscounts. More generally, the principle of insulating the Icelandic economy from high credit costs has led to excessive credit demand. While world interest rates were low, economic growth strong and the krona appreciating in real terms such a policy could be effective. But as real interest rates on foreign borrowing have risen and debt service costs have accumulated, the domestic market could only continue to be insulated from the deficiency of national savings at the cost of allocative distortions and rising foreign indebtedness. The Government that assumed office in May 1983 therefore adopted a policy of deregulating interest rates. It began this process by passing a law at the end of 1983 that permitted the Treasury to auction bills. Three month Treasury Bills have been on offer monthly since March 1984 and, though not important as a source of finance, have taken on a significant role as an indicator of short-term market interest rates (Table 11). In February 1984, this reform was accompanied by permission for the deposit money banks to decide the terms on deposits of 6 months or longer maturity, as well as the terms of inter-bank lending. This facility was extended in August to cover all interest rates except general savings accounts and loans designed to finance the inventories of basic industries ("produce loans"), which continued to be subject to ceilings. As a result of this deregulation, an interbank market has also begun to develop.

As a step towards closer control of the money supply, the Central Bank has begun to reform the rediscounting system and reserve requirements. Rediscount ratios were lowered in the summer and rates on produce loans raised to bring them somewhat nearer to general interest rates[18]. Authorisation has also been given to the Central Bank to impose a special reserve requirement, amounting to 5 per cent of bank deposits, but this facility has not been taken up by the Central Bank, despite the fact that the process of deregulation has not prevented an unacceptably high rate of credit expansion. The Central Bank has accommodated – in addition to its traditional rediscounting – both the demands of the Treasury and of the deposit money banks (Table 12). A deceleration of monetary growth in 1985, as foreshadowed in the credit budget, would imply a reversal of these trends, as well as a decline in the rate of rediscounting. The net domestic asset growth of the Central Bank is meant to be negligible. As noted, to achieve this, curbs have been applied to public spending, including investment, while, to bring bank borrowing under control, the Central Bank has attempted to implement stricter rules on the growth of short-term debt of the deposit money banks at the Bank itself. The reforms began in November 1982, when new rules were adopted on bank overdrafts at the Central Bank, via the application of penalty rates. More recent changes have emphasised the direct exclusion of overdrafts. These are not, in principle, permitted, and if

Table 11. **Average-interest rates**

Per cent

	June - Oct.		Nov.	Sept. 21	Oct. 21	Nov. 21	Dec. 21	Jan. 21	Aug. 11	Aug. 21	Sept. 21	Oct. 21	Nov. 27
	1981	1982	1982	1983	1983	1983	1983	1984	1984	1984	1984	1984	1984
On deposits													
Nominal bank rate (non-indexed)													
General savings deposits	34		42	35	32	27	21.5	15	17	17	17	17	17
Three-month time deposits	37		45	37	34	30	23	17	18.6	19.5	20	20	20
Real bank rates (indexed)													
Three-month time deposits									1.6	2.6	3.3	3.4	3.4
Six-month time deposits	1		1	1	1	1	1.5	1.5	4.3	5.8	6.3	6.3	6.3
Checking and overdraft accounts	19		27	21	19	15	10	5	7.1	10	11.5	11.8	11.8
On loans													
General loans, discount rate	32		38	33	30.5	28	24	18.5	20.8	22.3	23	23.3	23.6
Overdrafts	33		39	33	30.5	28	23.5	18	20.6	22	24.2	24.6	24.9
Export produce loans	4		29[1]	29	9.5[2]	9.25	9.5	9.5	10	10.25	10.25	10	9.75
Other produce loans	29		29	29	29	27	23.5	18	18	18	18	18	18
Mortgages	40		47	40	37	33	27	21	23.3	24.7	25.3	25.5	25.8
Central Bank rate on overdrafts[3]	5		4.5	4.5	4.25	4.0	3.75	2.5	2.5	2.67	2.75	2.75	2.75
					March	April	May	June	July	Aug.	Sept.	Oct.	Nov.
Three-month Treasury Bills (Average-auction price)					25.7	26.0	25.95	25.7	25.6	25.8	27.8	27.7	27.8

1. From April 1982
2. As of 21.9.83 export produce loans were SDR-linked.
3. Per cent per month.

Sources: Central Bank of Iceland, *Annual Report* and *Economics Statistics Quarterly.*

Table 12. **Sources of monetary expansion: accounts of the banking system**

End-of-year, in millions of kronur

Sources of monetary growth						Money creation		
		Net domestic assets				Liabilities		
Central Bank	Net short-term foreign assets (plus krona revaluation)[2]	Claims on treasury	Claims on banks		Total[1]	Monetary base	Notes and coins	Bank reserves
			Advances, etc.	Rediscounts				
Position 1983	2594	1470	2019	4915	3965	6559	759	5800
Change 1982	−1221 (+1080)	−71	1382	1543	1382	1241	122	1119
Change 1983	327 (+778)	1315	439	1980	1676	2781	241	2540
Change 1984	−943 (+510)	−214	1428	1858	2850	1907	185	1722
Change 1985[3]	−500 (+130)	—	−140	−750	20	−350	100	−450
	Bank liquidity		Net domestic assets			Deposits		
Deposit money banks	Net short-term foreign assets	Position at Central Bank	Advances	Foreign funds re-lent	Total[4]	Total	General savings	Demand deposits
Position 1983	−45	−1028	20334	7671	20237	19164	8671	2963
Change 1982	−1050	129	5362	1876	4895	3974	1823	350
Change 1983	−262	−166	8942	4025	8958	8530	3627	1389
Change 1984	410	−1340	9313	1586[5]	7447	6517	4768	1403
Change 1985[3]	—	—	6260	—	6400	6400	—	—
	Net short-term foreign assets (plus krona revaluation)[2]	Net domestic assets				Money supply		
Banking system		of Central Bank[6]	of deposit money banks[7]		Total	M3[7]	M2[8]	M1[9]
			Advances	Foreign funds re-lent				
Position 1983	2549	1103	20334	7671	17374	19923	12394	3722
Change 1982	−1092 (+1080)	−21	5362	1876	4109	4097	2295	472
Change 1983	85 (+778)	815	8942	4025	7909	8771	5258	1630
Change 1984	−534 (+510)	595	9313	1586	6725	6701	6356	1588
Budget estimates								
Change 1984	300 (+65)	−54	2605	—	2685	3050	—	—
Change 1985	−500 (+130)	−110	6260	—	6870	6500	—	—

1. Including foreign funds re-lent, net of long-term foreign debt, plus claims on investment credit and miscellaneous funds.
2. The net foreign asset change, as shown, does not include the revaluation adjustment due to devaluation of the Krona. The adjustment is shown in parenthesis.
3. Central Bank forecast.
4. Net of other deposits at the Central Bank, bonds and other items.
5. To November.
6. Excluding foreign funds re-lent.
7. Total deposits plus notes and coin.
8. M3 less time deposits (= general) savings and demand deposits plus notes and coin).
9. M2 less general savings deposits (= demand deposits plus notes and coin).

Source: Central Bank of Iceland.

they do emerge, are subtracted from the discount bill quota at the next allocation. The new stricter rules on overdrafts went into operation on 21st August 1984, and were followed by a decline in overdrafts in September. By the end of November, however, overdrafts had again exceeded (by 50 per cent) the August level, despite minimum "penalty rates" of 2¾ per cent per month[19]. In spite of these reforms, the monetary system has remained accommodating.

The process of credit expansion appears to be linked to the difficulty of suppressing inflationary expectations, for two inter-related reasons. Firstly, in a situation where the central bank is widely expected to "accommodate" wage pressures by expanding the money supply and devaluing, it is difficult to fix interest rates which would imply consistently high real borrowing costs. Attempts to control domestic credit expansion more closely would (even if circumstances allowed this to be achieved through closer control of the monetary base, which they do not) probably imply higher real rates than appear to be politically acceptable, given employment and profitability objectives. Secondly, though a stable exchange rate objective may be used as a proxy for a policy of non-accommodation – which is partly why the authorities have tried to follow such a course – using this as a "nominal anchor" for suppressing inflationary expectations is difficult unless interest rates are allowed to rise. The strategy, as implemented, may not be entirely consistent to the extent that exchange rate policy is also aiming at securing export competitiveness and preserving company liquidity. Despite increasing emphasis put on the stability of the nominal effective exchange rate, wage increases and/or external deficits are still supposed to be offset by devaluation rather than demand deflation. Thus, as wagedrift and real wage resistance increased through 1984, and as the external deficit increased, it became profitable to borrow in anticipation of higher future import prices. If devaluation is anticipated, even "penalty" rates may appear negative in real terms (Diagram 3). It is therefore doubtful whether exchange rate targeting can be effective without greater interest rate variability.

Controlling external indebtedness

Foreign indebtedness in relation to GNP has increased substantially since 1978 (Table 13). The 1983 net debt ratio of approaching 60 per cent (Table 6) was exceeded only by Ireland, the average ratio for the smaller OECD economies being in the region of 35 per cent. Central government external debt, which amounted to about 40 per cent of GNP in 1983 also exceeded that of all OECD economies except Ireland (about 50 per cent)[20]. As a consequence, overseas debt interest payments are also relatively high, at over 6 per cent of GNP. The origins of the problem lie not so much in capital imports per se, which have been used to finance a relatively high rate of capital investment, but in the increasing divergence between real rates of interest on debt and domestic GNP growth rates. During the mid-1970s when real interest rates tended to be negative ex post and terms of trade developments were not always unfavourable, the Icelandic economy had little trouble generating sufficient growth from foreign-financed investment to keep the debt/GNP ratio stable. However, real interest rates of about 5 per cent have emerged in the 1980s (Table 13) coinciding with surplus capacity in the fishing sector, weaker industrial profitability and slower growth[21]. Attempts to protect export competitiveness by allowing the real value of the krona to slide have led to a further increase in real debt service burdens and to a rapidly increasing debt/GNP ratio. Between 1977 and 1984 the effective rate of the krona fell in real terms by about 2½ per cent per annum. If this is added to the interest rate as defined above, (cf. footnote 21) the real debt service burden has risen from about 2 per cent of GNP per annum at the end of the 1970s to about 7 per cent in 1983. This creates a policy dilemma, since devaluing the currency to maintain export competitiveness may help sustain operating

Table 13. **Interest paid on overseas debt**

	1977	1978	1979	1980	1981	1982	1983	1984
	A. LONG-TERM FOREIGN DEBT BY SECTOR							
	Percent of GNP							
Public sector[1]	20.4	22.3	23.0	22.4	23.2	31.0	40.5	42.1
Central government	18.6	20.0	20.8	20.2	21.1	28.4	37.1	23.8
Financial institutions	6.2	6.5	6.1	5.7	6.9	9.6	12.8	14.0
Private sector	4.9	5.2	5.6	6.3	6.6	7.1	7.3	5.8
Total	31.6	34.1	34.7	34.4	36.7	47.8	60.6	61.9
	B. SECTORAL DEBT SERVICE BURDEN[2]							
	Percent of total export revenue							
Public sector	6.8	6.4	6.9	7.5	8.6	10.8	10.8	12.1
Financial institutions	3.6	3.6	3.5	3.8	4.3	6.0	6.2	6.6
Private sector	3.3	3.1	2.5	2.7	3.5	4.5	3.6	5.6
Total	13.7	13.1	12.9	14.1	16.4	21.2	20.6	24.3
	C. AVERAGE INTEREST RATE ON FOREIGN LOANS[3]							
	Average rates on outstanding debt							
Public sector	8.7	8.5	9.4	10.6	11.8	11.5	10.1	10.6
Financial institutions	6.9	8.5	9.4	11.2	14.2	12.3	10.3	10.0
Private sector	8.2	8.2	8.5	10.4	12.0	12.2	8.9	10.6
Total	8.2	8.5	9.3	10.7	12.3	11.8	9.9	10.4
Real interest rates on total debt[4]	−0.6	0.6	−0.5	−2.2	1.8	4.0	4.6	5.1
Including real depreciation of krona	1.9	3.1	2.0	0.3	4.3	6.5	7.1	7.7
Average rate on total loans acquired in year	8.3	8.9	11.3	12.4	14.4	11.6	10.2	9.9

1. Central government covers A- and B-Budgets; Public sector equals central government plus municipalities.
2. Debt interest plus amortization of long-term debt.
3. On all debt.
4. For the definition of real rates see note 21; the real depreciation of the krona is taken as the average annual rate from 1977 to 1983.

Sources: Central Bank, Bureau of the Budget and Secretariat calculations.

surpluses but adversely affects the profitability of over-borrowed sectors. This is one reason for the perceived need to aim for as much currency stability as possible.

Servicing present levels of overseas debt creates adjustment problems, insofar as the need to pay for debt service implies that domestic demand must, on average, grow more slowly than abroad (i.e. than in the OECD as a whole). Borrowing to meet debt service payments is only a short-term option. To carry on doing this raises a problem of sustainability, since debt growth could eventually become explosive, probably resulting in deteriorating credit terms. In a situation where the real rate of interest tends permanently to exceed the growth rate of the economy it could ultimately force abrupt cuts in standards of living. A gradual medium-term adjustment of domestic spending is thus necessary to prevent matters getting out of hand. To stabilize the overseas debt/GNP ratio at its present level, with an unchanged real exchange rate, the current external deficit would have to be halved[22]. But since the rate of interest on debt is likely to continue to exceed the growth rate of the economy, debt interest would still continue to rise as a proportion of GNP, so that the immediate necessity is for domestic savings to increase and the balance on non-interest current transactions to improve[23].

The problems of monetary accommodation and overseas debt accumulation are reflections of the fact that Icelandic savings are too low. Macro-economic policies have

contributed to this, since they have been aimed at easing the adjustment costs of the dual external shocks which have occurred during the 1980s, namely declining export earnings and high world interest rates. As noted, monetary reform (including indexation) has not prevented domestic interest rates from becoming negative, because of the exchange rate factor. Moreover, monetary and budgetary policies have continued to channel subsidised loans to specific sectors. As a consequence, national savings have remained inadequate as the Treasury has become a large net foreign debtor. Indeed, the ratio of government foreign to domestic indebtedness (at roughly 2:1) is much greater in Iceland than elsewhere in the OECD (Table 9)[24]. The alternative means of slowing down domestic credit expansion is by generating greater public sector savings via a budget surplus. This has not so far been used, for reasons similar to those which have ruled out high real interest rates: namely the wish to cushion the effects of the dual supply shock on the industrial infrastructure. Though the stance of fiscal policy is expected to be tightened somewhat in 1985, difficulties will continue to be met in reining in public sector borrowing. The 1985 credit programme expects to meet long-term overseas debt targets only by increasing short-term overseas borrowing. The increase in net external debt appears therefore likely to continue, unless greater domestic savings are generated.

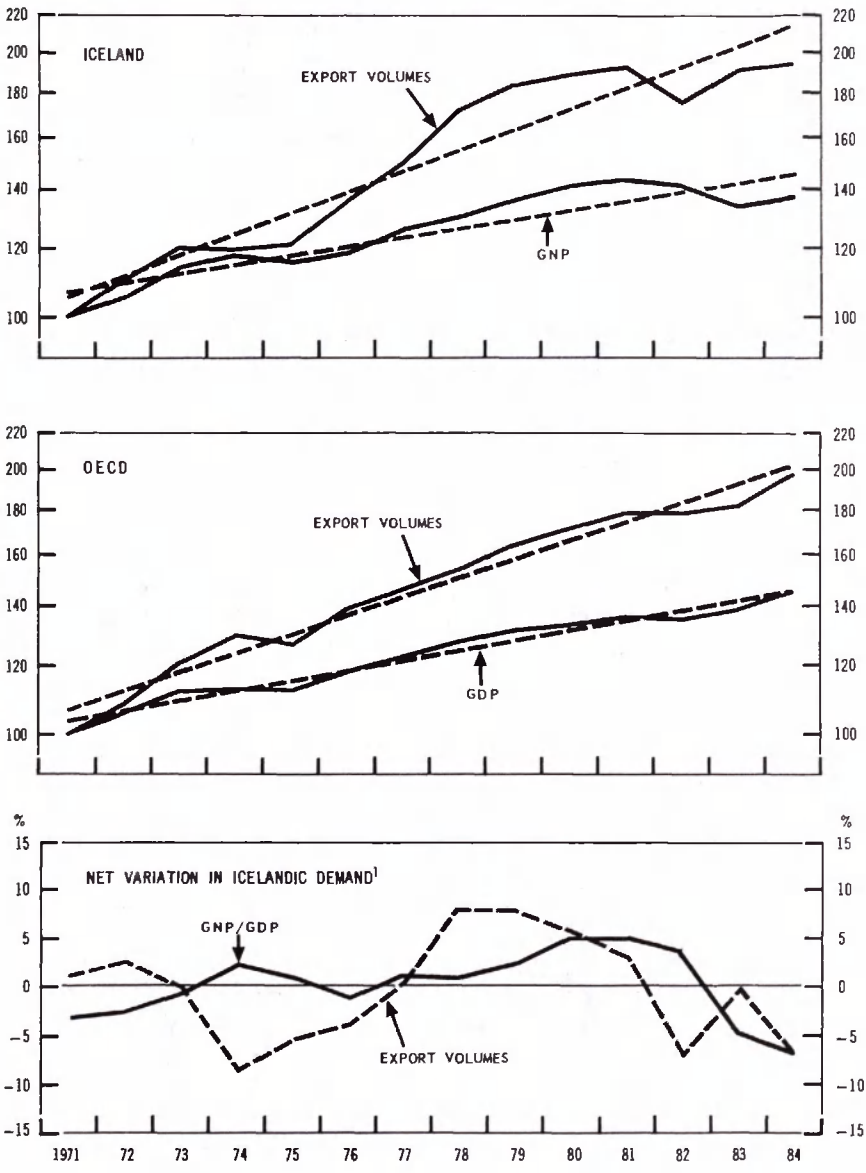
IV. DIVERSIFICATION OF THE ECONOMY

The need for diversification

While Iceland has rich natural resources[25], they are narrowly based and vulnerable to supply shocks which make export incomes, living standards and balance of payments highly variable. The variability of national output and export earnings has been greater in Iceland than in the rest of the OECD (Diagram 5), both as a result of unpredictable changes in the marine environment and of the sensitivity of the economy to changes in the terms of trade. As a result, total national expenditure has also exhibited large fluctuations (Diagram 6) and foreign borrowing has often been used to cushion living standards from too abrupt changes. In earlier periods, external deficits tended to be corrected as export supply and demand conditions improved. But the overseas deficit problem now appears more intractible, and the Icelandic economy, constrained by high foreign indebtedness, is faced with the problem of reconciling national expenditure to available resources. This has two aspects. The first involves the adjustment of domestic spending to supply shocks, while the second concerns the reduction of the economy's vulnerability to supply shocks through diversification. The spending issue involves the measurement of "permanent" national income, in the sense that consumption need not react to temporary fluctuations in income, but a permanent reduction in the fish catch (or equivalently in the terms of trade) must lead to a corresponding adjustment of domestic spending. In practice, it is extremely difficult to separate permanent from temporary fluctuations, a fact which is highlighted by the uncertainty attached to the medium-term outlook for the fish catch discussed below. This, a fortiori, puts a greater premium on diversification.

The diversification issue relates in particular to the need to reduce dependence on the relatively limited, if renewable, resource base of traditional industries, but also to the desire to reduce the variability of net exports[26]. One important way to achieve this end is the development of energy-intensive industries[27]. Apart from its rich fishing banks, the country

Diagram 5. **Fluctuations in the icelandic economy**
Indices, 1971 = 100

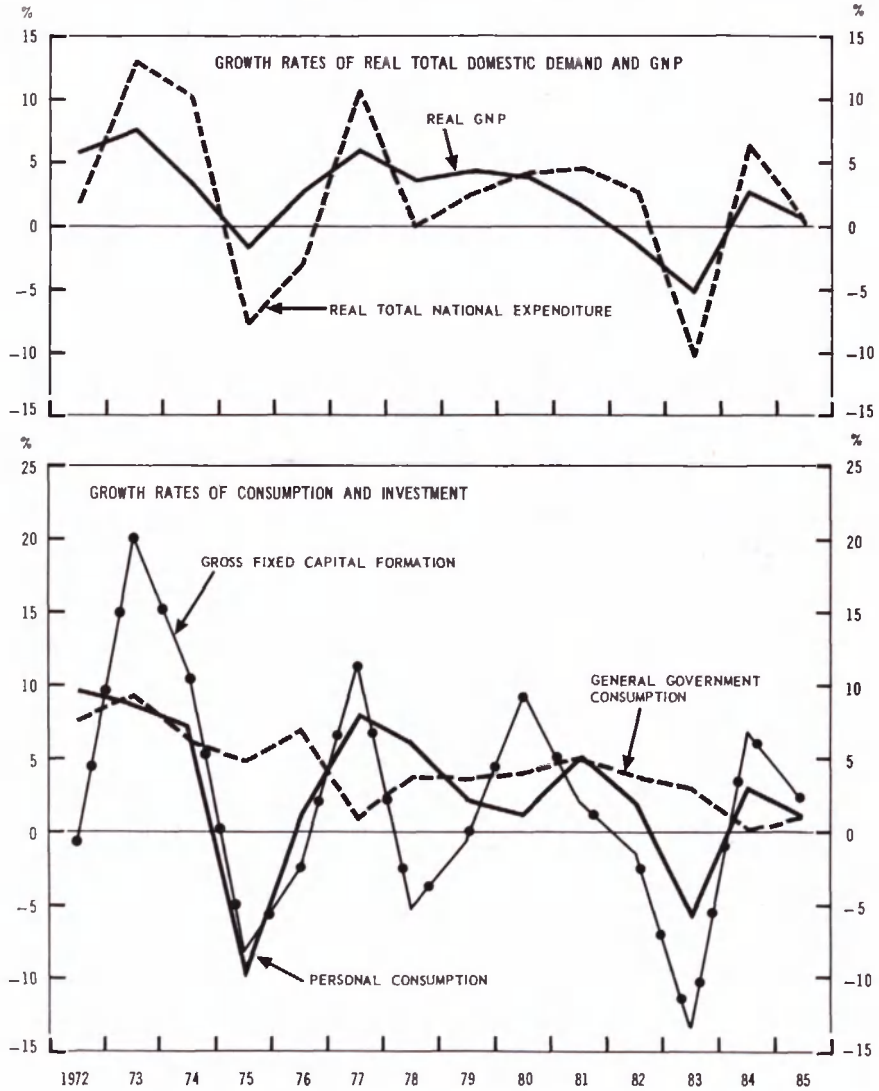


1. Net fluctuations are defined as the deviations of Icelandic demand from trend, less the deviations of OECD demand from trend; e.g. as $[(I\text{-}I^*)/I^*] - [(A\text{-}A^*)/A^*]$, where I is Icelandic exports or GNP, A is OECD average export demand or GDP, and * refers to trend values.

Sources: National Economic Institute; OECD, *National Accounts;* Secretariat calculations.

has abundant hydro-electric and geothermal power, only a small proportion of which has yet been exploited. Though diversification policies in recent decades have included an extension of the country's manufacturing, processing and service base, from a manpower point of view Iceland is virtually fully-employed, so that import substitution and job creation is not the major issue. (There are no trade restrictions on imports). Rather, the objective has been to lower Iceland's overwhelming dependence on fish exports, reduce the variability of foreign

Diagram 6. **Domestic demand and supply developments**



* Forecast.
Source: National Economic Institute.

exchange earnings and stabilize the balance of payments. The success of diversification policies has thus to be judged by the degree to which the stability of the economy has been increased and the extent to which the addition to net export earnings has more than offset the real costs of debt service on the capital borrowed to achieve it.

Persistently high dependence on fisheries

Despite efforts to diversify the economy, the country remains heavily dependent on fishing for its income, employment and export earnings (Table 14). Marine products still represent roughly 75 per cent of Iceland's exports and account for around 16-17 per cent of GDP. In addition, roughly 15 per cent of the labour force is employed directly by the fishing or fish-processing industries and perhaps an additional 10 per cent by related industries. However, even these figures do not adequately reflect the importance of fishing in the Icelandic context. Since the country is so dependent on imports for such a wide range of intermediate, investment and consumer goods, the availability of foreign exchange constitutes a "sine qua non" for a steady increase in living standards. Moreover, although energy-intensive manufactures (i.e., aluminium, ferrosilicon and diatomite) now account for about one-fifth of total merchandise exports, they contribute far less to net foreign exchange earnings and national value-added than their gross figures imply, since these industries must import most of their raw materials and make interest and dividend payments abroad.

Over the last twenty years, white fish has remained the mainstay of the Icelandic fishing industry and has accounted,on average, for roughly 75 per cent of the value of Iceland's marine exports. White or demersal fish consists mainly of cod, haddock, saithe and ocean

Table 14. **Per cent distribution of employment by industries**[1]

ISIC-classification		1977	1978	1979	1980	1981	1982
11	Agriculture	9.0	8.5	8.3	7.9	7.4	7.1
13	Fishing and whaling	5.3	5.3	5.1	5.3	5.0	5.0
0	Fish processing	8.5	8.1	8.6	9.3	9.1	8.6
31-39	Manufacturing	15.0	15.1	15.4	15.1	14.6	14.4
4	Electricity and water supply	0.8	0.9	0.8	0.9	0.9	0.9
5	Construction	10.9	10.8	10.0	10.1	9.7	10.2
6	Wholesale and retail trade, restaurants and hotels	13.2	13.3	13.4	13.3	13.1	13.5
7	Transport, storage and communication	7.9	7.9	7.4	7.2	7.0	7.0
8	Financing, insurance real estate and business services	4.9	5.2	5.1	5.4	5.9	5.6
9	Social and personal services	7.0	7.2	7.4	7.1	7.1	7.4
Industries total		82.5	82.4	81.6	81.6	79.8	79.7
Public sector total		15.0	15.0	15.6	15.7	17.0	16.5
Other		2.2	2.3	2.4	2.4	2.8	3.1
Registered number of unemployed		0.3	0.3	0.4	0.3	0.4	0.7
Total labour force (000s)		98.9	101.8	102.9	106.3	111.4	114.7

1. The figures for 1979 are not comparable with the figures for 1977-1978 due to a change in the compilation of the statistics, as a result the increase in total employment in 1979 as registered above is 1 per cent, whereas the actual increase is estimated to close to 2 per cent.

Note: Based on statistics on accident-insured work weeks with one man-year referring to 52 work weeks.

perch, with cod being, by far, the most important specie in both volume and value terms (Table 15 and Table 16). During the 1950s and the 1960s the white fish catch had remained relatively stable, averaging approximately 400 thousand tons per year; in the 1970s it rose rather steadily, reaching approximately 720 thousand tons in 1981. It then fell off to around 600 thousand tons in 1983, reflecting a sharp decline in the cod catch. The catch of cod alone reached a peak of 460 thousand tons in 1981, but fell subsequently to below 300 thousand tons in 1983. The quota for 1984 was set at 257 thousand tons, equal to slightly more than one half of the 1981 catch. While the near-term outlook for cod remains bleak, there are reasons for cautious optimism over the medium-term. Surveys by the Marine Research Institute in the summer of 1984 indicated that the 1984 year-class of newly spawned cod was exceptionally strong. However, this provides no immediate relief for the fisheries since it takes four or five years for the new class to reach maturity. Moreover, there is no guarantee that the abundant 1984 year-class will result in a good catch four or five years hence, given numerous, unforeseen factors that can reduce the class size in the interim. However, improving climatic conditions in Icelandic waters in 1984 and 1985 will increase the weight gain of the catchable part of the fish stocks, which may lead to better catches.

While increases in the catch of other fish – particularly ocean perch in 1982 and capelin in 1983 and 1984 – offset somewhat the drop in the cod catch, the overall effect on Iceland's

Table 15. **Fish catch**

	1979	1980	1981	1982	1983	Prelim. 1984	Forecast 1985
Fish catch, thousand tons	1 649	1 514	1 441	788	839	1 519	1 532
Cod	360	428	461	382	294	281	290
Other	218	236	255	307	309	279	298
Demersal species, total	578	664	716	689	603	560	574
Herring	45	53	40	55	59	48	50
Capelin	964	760	642	13	133	862	845
Lobster, shrimp, shellfish	18	21	21	23	31	42	44
Other	44	16	22	8	13	7	6
Value of catch, kronur million, current prices	1 146.8	1 823.0	2 689.7	3 460.8	6 191.0	8 805.5	
Cod	558.8	945.7	1 475.9	1 895.3	2 762.0	3 578.8	
Other	296.4	448.7	659.8	1 191.8	2 325.4	2 712.9	
Demersal species, total	855.2	1 394.4	2 135.7	3 087.1	5 087.4	6 291.7	
Herring	51.1	106.8	194.8	170.4	262.7	241.3	
Capelin	178.1	222.6	311.3	7.7	247.9	1 254.3	
Lobster, shrimp, shellfish	39.9	81.0	109.7	170.2	549.7	963.6	
Other	22.5	18.2	28.2	5.5	43.3	54.6	
Volume indices, 1978 = 100[1]	116.6	126.9	126.7	111.5	105.7	119.9	
Demersal species	122.1	140.5	147.5	140.2	125.3	120.4	
Herring	120.6	149.2	105.2	148.4	157.7	129.0	
Capelin	102.2	78.7	66.6	3.7	13.9	91.3	
Lobster, shrimp, shellfish	101.5	125.0	115.6	122.4	165.4	247.6	
Other	67.9	31.3	32.1	20.9	34.4	13.9	
Changes on previous year, per cent							
Fish catch, tons	5.3	−8.2	−4.8	−45.3	6.5	81.2	0.9
Volume indices[1]	16.6	8.8	−0.2	−12.0	−5.2	13.4	3.6

1. At 1980 prices.
Source: National Economic Institute.

Table 16. **Fish exports**
Percentage breakdown

	1978	1980	1982	1984
Frozen white fish	43.7	38.2	43.3	44.4
Other frozen products	4.7	5.5	6.6	10.3
Salted white fish	13.3	16.8	24.8	14.4
Dried white fish (stock fish)	5.5	10.0	6.2	0.6
Fish meal and oil	22.3	15.5	5.8	14.0
Salted herring	3.1	3.1	4.3	4.9
Fresh fish	4.2	6.5	6.1	6.8
Other products	3.2	4.4	2.9	4.6
Total	100.0	100.0	100.0	100.0

Source: National Economic Institute.

exports was sharply negative. The near doubling of the white fish catch that occurred in the 1970s was partly due to the extension of the national territorial fishing zone to 200 miles in 1975, an action taken by the Icelandic authorities largely to protect the cod stock from being overfished by foreign fishing boats. But the larger catch in the 1970s also reflected the increased use of deep-sea trawlers equipped with electronic detection systems and other advanced fishing gear. Among other high-valued species, catches of shrimp, lobster and shellfish accounted for 9 per cent of the value of the 1983 fish harvest. There had been high hopes that strong demand for shrimp, lobster and shellfish would partially offset the decline in cod sales in 1984. However, shrimp and scallop sales proved weak and prices for frozen shrimp and scallops fell significantly in 1984[28].

Herring and capelin constitute the other principal components of the Icelandic fish catch. For the most part, the herring and capelin catches have been characterized by large swings, imparting a certain "boom-bust" feature to the Icelandic fishing industry. Catches of herring rose very dramatically in the 1960s reaching a peak in 1967, but then the boom came to an abrupt end in 1968 when, for reasons that are not totally clear, the herring ceased migrating from Norway to northeastern Iceland. However, herring remains a significant resource in certain regions. The herring stock in Iceland's south-western coastal water is being reconstituted and now provides a rather steady catch of 40 to 50 thousand tons per year. Moreover, there is evidence that the Norwegian stock has grown considerably in recent years. Thus, there is a possibility that the herring might resume its migration to Icelandic waters in the late 1980s or early 1990s[29]. In contrast to herring, capelin had been a relatively minor product during the 1960s; but in the early 1970s the capelin catch began to expand rapidly, multiplying by five times from less than 200 thousand tons to nearly one million tons between the early and late 1970s. In fact, much of the rapid expansion of Icelandic fishing in the 1970s was accounted for by the dramatic rise in the capelin catch. In the early 1980s, however, the capelin stock dwindled sharply and the authorities imposed an almost total ban on capelin fishing in 1982, when the total catch was less than 15 thousand tons. Fishing was resumed in November 1983 but the total catch amounted to only 133 thousand tons. The quota for 1984 was initially set at 375 thousand tons, but this was subsequently raised when the Marine Research Institute found that the stocks had recovered significantly and the total catch became no less than 862 thousand tons.

Iceland's foreign exchange earnings are subject to fluctuations in the international demand for fish, as well as volume changes in the domestic fish catch. Although Iceland is one of the largest exporters of fish, it is essentially a "price taker" in the international market. This

is particularly evident with capelin, where in addition to large volume swings, the export price of capelin products is generally more volatile than that of white fish. Capelin is used largely for fishmeal and fish oil and has a value per unit weight only about one-eighth that of cod; thus, the large fluctuations in the capelin catch have less impact on the Icelandic economy than the volume figures might imply. In addition, since fishmeal is used largely as a substitute for soybean meal in animal feed, the dollar price of capelin is subject to wide swings, being influenced mainly by developments in the international soybean market. In comparison, white fish is prepared for exports mostly by freezing, salting and drying while herring is mainly salted.

Somewhat like that for capelin, foreign demand for salted and dried fish has been more variable than that for frozen fish. In the late 1970s prices of salted and dried fish rose sharply relative to these of frozen fish, as a result of strong demand from Nigeria and Southern Europe. This encouraged fisheries in Iceland to switch processing from frozen to salted and dried fish. In the last several years, however, exports of salted and dried fish have been sharply reduced because of weaker demand for salted fish in Southern Europe and import and payment restrictions in Nigeria. This caused prices of salted and dried fish to fall sharply and encouraged a switching back into frozen fish production. The prices of frozen fish, the most valuable category of Icelandic fish exports, have remained relatively strong and steady over recent years. This largely reflects the generally sustained demand for frozen cod and other varieties of white fish in the large, affluent United States market which absorbs around 60-65 per cent of Iceland's frozen fish exports[30] although less than 40 per cent of its total fish exports (Table 17). The Western European countries buy most of the remaining frozen fish and also import sizeable amounts of fresh fish from Iceland. With the dollar strong, the sales to the United States have been particularly valuable, although prices for frozen fish in the U.S. market have been softening recently. At the same time, the generally weaker dollar prices of fish sold in Western European countries have not hurt Iceland as much as it might appear, since Iceland also buys the bulk of its imports from these countries.

The recent softening of frozen cod prices in the United States reflects the tough competition Iceland is facing from other fish exporting countries. The Canadians, and also the Norwegians are heavily subsidizing their respective national fisheries and engaging in aggressive competition in the European as well as the American markets[31]. The threat that Iceland feels is understandable given Norway's and Canada's dominance in cod fishing. In 1981, before the fall-off in the Icelandic cod harvest, the Canadian and Norwegian cod

Table 17. **Fish exports by country 1983**

	Level in $ million	Per cent share
United Kingdom	65.5	12.6
West Germany	46.7	9.0
Portugal	45.6	8.8
Spain	18.3	3.5
Other EC	41.1	7.9
Other EFTA	12.5	2.4
United States	196.3	37.7
Soviet Union	38.0	7.3
Nigeria	36.9	7.1
Other	19.6	3.8
Total	520.5	100.0

Source: Statistical Bureau of Iceland.

Table 18. **Iceland's fishing fleet at end-1984**

	Units	GRT (1 000)
Stern trawlers, over 500 GRT	17	14.2
Stern trawlers, 250-499 GRT[1]	86	35.1
Fishing vessels, over 300 GRT	36	16.9
Fishing vessels, 100-299 GRT	187	31.8
Fishing vessels, under 100 GRT	504	12.9
Fishing vessels, whale catchers	4	2.0
Total	834	112.9

1. Includes 1 side trawler.
Source: National Economic Institute.

catches totalled about 430 and 340 thousand tons, respectively, whereas the Icelandic catch was 460 thousand tons. Although the Canadian and Norwegian catches are normally smaller than the Icelandic catch, they constitute the major suppliers of cod on the international market, next to Iceland. Together these three countries accounted for over 60 per cent of the OECD's cod catch and for a much larger share of the OECD's cod trade.

The robust growth in the fish harvest during the 1970s stimulated strong investment in the fishing industry, leading to serious problems of over-capacity that are still plaguing the industry and restricting policy options. The size of the fishing fleet stood at 113 000 gross registered tons (GRT) at the end of 1984 (Table 18), compared with 79 000 GRT at the end of 1971, a 43 per cent increase. This, however, does not adequately reflect the growth in the capacity of the Icelandic fishing fleet over the past decade. In addition to expanding gross tonnage, fisheries made substantial investments in advanced navigational equipment, fishing gear and processing machinery. Moreover, most of the increased tonnage occurred in the trawler fleet which is designed principally for deep-sea ground fishing[32]. In 1984 the trawler fleet comprised 103 vessels in the size range of 250 GRT and over and accounted for nearly 43.7 per cent of the fishing fleet as measured by GRT; whereas in 1971 they accounted for only a small portion of the fleet. The trawlers – generally the most modern and most expensive boats – are normally well-equipped with electronic fishing gear and large power blocks. Reflecting the capital-intensive nature of the fishing fleet, the newest trawlers cost 3-4 million dollars each and are normally manned by crews of only 15 men. In comparison, the cutters are generally older and smaller boats, not as well equipped for deep sea fishing and not as capital intensive as the trawlers.

Investment in new, deep-sea trawlers was stepped up sharply after the extension of the fishing zone to 200 miles, so that by the late 1970s and early 1980s signs of excess capacity began to occur[33]. The deep-sea fishing capacity of the new trawlers and the deleterious effect they had on the fishing stock were probably not fully appreciated by the fishing industry and the regulatory authorities at the time. The drop in the capelin and cod catch exacerbated an already serious situation and many boat owners found it difficult to meet the high debt servicing costs on the new boats. Because of their high capital costs and large debt-servicing burdens, the owners of the newer trawlers have been particularly hard pressed by the drop in the fish catch in recent years and by attempts by the monetary authorities to move towards positive real interest rates. Although the numbers are hard to interpret, the figures in Table 19 indicate that the larger boats in particular have realised narrow operating surpluses during the last several years. In addition, there have been widespread rescheduling of loans granted by the Fisheries Loan Fund and arrears on fuel bills by hard-pressed owners.

Table 19. **Profitability of fishing industry**[1]

As a percentage of total income

	Gross operating surplus[2]				Net profits[3]			
	1980	1981	1982	1983	1980	1981	1982	1983
Fishing fleet								
1. Large trawlers	10.1	4.1	7.4	4.7	−2.1	11.6	−10.5	−11.9
2. Small trawlers	14.0	11.1	8.9	8.1	−1.1	−3.7	−10.3	−11.9
3. Other vessels	3.0	1.8	−0.6	7.1	−7.2	−8.9	−14.8	−7.0
4. Total fleet	9.0	6.5	4.9	7.3	−3.7	−6.7	−12.1	−9.9
Fish processing plants								
1. Freezing plants	11.3	10.8	16.0	14.7	−5.6	−3.8	(0.8)[4]	(0.1)[4]
2. Saltfish plants	18.4	17.3	14.6	13.8	9.3	7.3	0.1[4]	(−1.1)[4]
3. Stockfish plants	36.8	28.7	17.0	18.9	26.1	18.5	(−16.6)[4]	(−13.2)[4]
4. Total plants	17.7	16.4	15.7	14.7	3.8	4.2	(−1.8)[4]	(−0.8)[4]

1. Demersal fishing only.
2. Before interest and depreciation.
3. Net profits of the fishing fleet are calculated by the National Economic Institute according to a newly introduced annuity method, whereby the annuity of total investment is computed by using 3 per cent real interest rate requirements and certain assumptions on the lifelength of the capital stock. Previously, interest payments and depreciation were deducted from gross profits to find net profits.
4. Net profits for fish processing are calculated according to the annuity method only for the years 1982 and 1983. In the case of processing plants the method differs slightly from that described above in that working capital is included in total investment and inventories are adjusted for inflation.

Source: National Economic Institute.

Because the fishing industry exercises such a heavy weight in the economy, widespread bankruptcies in this sector could have serious economic and financial consequences. The industry's response has generally been a call for a sharp increase in the domestic prices of fish, which are subject to official arbitration and sometimes Government intervention. Since fish prices are largely determined by market conditions abroad – particularly in the United States – this would involve an effective depreciation of the kronur. While this would help restore profit margins in the fishing industry, at least temporarily, it would result in a further transfer of domestic resources from the non-fishing to the fishing sector. Moreover, it would run counter to the government's objective of constraining domestic inflationary pressures by maintaining a stable exchange rate. The authorities have sought to deal with the problem by imposing a ban on the importation of all new fishing boats after September 1982 and by encouraging the scrapping of old, inefficient vessels. Direct subsidization of oil costs was abolished in 1983; on the other hand, legislation has been introduced to change the distribution of income in favour of the boat-owners to help meet rising costs of fuel and capital. Furthermore, the Government has augmented the resources of the intra-industry Catch-Equalization Fund in 1984 to help meet the short-fall in the cod catch. Interest rates charged by the Fisheries Loan Fund, a major provider of credit to the fisheries, were also reduced. Loans of the Fund are, however, SDR-denominated, which have been costly in recent years. Moreover, in 1984, provisions were made for the conversion of short-term credits into long-term debt under more favourable repayment schedules. An important innovation in fisheries management was introduced when the Ministry of Fisheries in early 1984 introduced catch quotas for individual vessels, rather than overall quotas for the industry. The purpose was to distribute the quotas more equitably as well as encourage the owners of less efficient boats to retire their vessels and to transfer the catch quotas to the more efficient vessels or sell them to other boat-owners. In this fashion some of the externality costs of the common property fishery are internalized, making the industry more efficient. These measures have

provided some relief. The support for the Catch-Equalization Fund has meant some financial burden for the Treasury, but on a modest scale. These measures have, however, not led to any drastic reduction in excess capacity of the fishing fleet, which has been estimated to be as high as 25-30 per cent. But some positive effects are already in evidence. The question of how much excess capacity exists in of the fishing fleet is much debated in Iceland, but there seems to be a consensus that there is excess capacity at least in the short to medium run.

Given excess capacity and the unfavourable fish stock situation, there are few alternatives but to idle a portion of the fishing fleet[34]. The Government could undertake to actively seek more distant fishing opportunities, but the potential for this is very limited. Since an estimated 90 per cent or more of all fish live on coastal fishing banks within 200 miles from shore and since most countries now recognize the 200 mile territorial limit, there are practically no fishing opportunities in international waters. Furthermore, relatively few countries have underutilized fishing resources; rather, the international fishing industry, particularly in the North Atlantic, has been characterized generally by an excess of fishing boats relative to fishing resources. A major exception is the United States which still has relatively large underutilized resources, especially off the Alaskan coast.

The Icelandic government has been seeking to gain fishing rights in American waters but it is unclear how successful these negotiations will be and, in any case, how much relief they would provide the Icelandic fishing fleet. The prospects for quick access are not very bright since there are a host of legal and regulatory hurdles in the way, such as a United States requirement that American-made vessels be used by foreign firms fishing in American waters. As a means of getting round some of these barriers, the Icelandic authorities are seeking joint ventures between Icelandic and American fishing enterprises. However, arranging such ventures is likely to be a long and difficult process and of little help for Iceland's immediate problem of overcapacity. There is also the broader question of whether such ventures would be profitable for Icelandic fisheries, expecially if their vessels have to operate far away from home and unload their catches at foreign processing plants.

Another possibility would be for the Icelandic fishing industry to sell off its excess vessels to foreign countries; so far, however this has not proven very promising either. Some of the older smaller vessels might not command much more than scrap value because of the high cost of converting them to new fishing conditions. However, the large new trawlers are generally multi-purpose in nature and could be readily outfitted for foreign fishing grounds at moderate costs. The problem here appears to be little demand for such boats. For, when the Icelandic Fisheries Loan Fund foreclosed on some large trawlers recently and put them up for auction, it received few bids from foreign countries even though the vessels were advertised in the international fishing trade journals[35].

Energy sector and development of power intensive industries

During the past twenty years Iceland has made efforts to develop its energy sector as a means of reducing its dependence on fish exports and more recently on imported energy. Although world energy prices were initially relatively low, large annual fluctuations in the fishcatch and poor growth prospects for fishing necessitated new sources of foreign exchange earnings. The collapse of the herring boom in the late 1960s and the quadrupling of world oil prices in the early 1970s reinforced diversification efforts. In the mid-1960s the large scale exploitation of the country's hydro resources was stepped up sharply, with the development of the Thjorsa river basin in southern Iceland. The first step in this effort was the large hydro plant built at Burfell with a capacity of 240 MW. It began operations in 1969 and reached full capacity in 1972. It became the main source of electric power for the new aluminium smelter, which also started production in 1969, as well as for Reykjavik and the other towns in south

western Iceland. Two additional plants were subsequently built in the Thjorsa Basin: one at Sigalda with a capacity of 150 MW came on line in 1977 and another one at Hrauneyjarfoss with a 210 MW capacity started operations in 1981. In spite of the economies of scale that favoured continued expansion of the Thjorsa complex, it was decided that some regional diversification would be desirable. Consequently, in 1982 a decision was made to construct the next major hydro-electric project in the Blanda river basin in northern Iceland. This plant is scheduled to come on line in 1988 with a planned capacity of 150 MW and an estimated cost of $155 million[36]. Four additional hydro projects, all in the Thjorsa basin, with a combined capacity of 600 MW, are under consideration for the 1988-1995 period. In addition, a large 250 MW plant is being contemplated for the eastern part of the country at Fljotsdalur. However, except for the Blanda plant, these projects are still on the drawing board, awaiting final decisions and agreements to construct the complementary industries so that the energy can be exported[37].

In contrast to the large amount of electricity generated by hydro-power, relatively little is produced with geothermal energy. This is largely because of the greater technical difficulties involved in obtaining adequate steam pressure to drive the turbines. Nevertheless, after long delays and serious teething problems, a geothermal electricity generating plant was opened in 1979 near Krafla in Northern Iceland. The publicly-owned National Power Company, also owns a number of smaller hydro and geothermal power plants scattered throughout the country as well as several old, oil-fired plants used for stand-by and peak-load purposes. By the end of 1983, the capacity of all public power plants combined stood at 908 MW, with hydro plants accounting for 83 per cent of the total capacity (Table 20). This represents a 530 per cent increase in capacity from 171 MW in 1968. Despite this large increase it is estimated that Iceland has harnessed only about 7 per cent of its minimum energy potential[38]. In addition to installing new capacity, the public power company has also been constructing a national power grid, which, when completed, will tie together the various power plants and regions of the country. At the end of 1981 the grid consisted of 3 000 kilometres of transmission lines, with additional spurs under construction or consideration.

Table 20. **Electricity capacity, production and consumption**

	1977	1983
Capacity[1]		
Hydro	491.9	752.0
Other	115.1	156.0
Total	607.0	908.0
Production[2]		
Hydro	2 520	3 588
Other	82	172
Total	2 602	3 760
Consumption[2]		
Aluminium plant	1 204	1 374
Ferrosilicon plant	—	506
Fertilizer plant	157	159
Cement plant	15	16
Keflovik airport	72	73
General use	1 153	1 638

1. Capacity of public power plants at end of year in thousands of kilowatts.
2. Annual production and consumption in millions of kilowatt hours.
Source: National Energy Authority.

Table 21. **Growth of power-intensive industries**

	1965	1970	1974	1978	1982
Merchandise exports* (current prices)					
Aluminium	—	17	48	237	852
Ferrosilicon	—	—	—	—	243
Diotomite	—	1	3	12	137
Fertilizer	—	—	—	—	—
Total power-intensive exports	—	18	51	249	1 232
Total merchandise exports	56	129	329	1 763	8 479
Percentage share of power-intensive industry	—	14.2	15.6	14.1	14.5
Employment (man years)					
Aluminium	—	436	615	690	731
Ferrosilicon	—	—	—	—	165
Diotomite	—	65	72	73	82
Fertilizer	154	152	173	191	201
Total power-intensive employment	154	653	860	954	1 179
Total employment, all industries	75 975	81 440	93 320	101 505	113 913
Percentage share of intensive industries	0.2	0.8	0.9	0.9	1.0
Gross domestic factor income					
Percentage share of power-intensive industry	0.3	2.3	2.1	2.6	1.7

* Millions of Kronurs.
Source: National Economic Institute.

Establishment of complementary energy-consuming industries paralleled the development of the power sources. A relatively small diatomite plant had been opened in 1967; but the first large-scale project was the construction of the aluminium smelter which commenced operations in 1969[39]. Within a year aluminium exports accounted for roughly 15 per cent of Iceland's merchandise exports (Table 21). Since then, the capacity of the aluminium plant has been expanded several times to its current level of 85 000 tons. The aluminium factory remains Iceland's largest manufacturing industry and, next to the fisheries, the country's major earner of foreign exchange,accounting for roughly 10 per cent of Iceland's total exports[40]. On a net basis, however, the aluminium industry's contribution to Iceland's foreign exchange earnings is considerably less as it has to import all of its raw materials, which is roughly equivalent to 45 per cent of its gross exports. Moreover, since the smelter is wholly foreign owned by Alusuisse (Swiss Aluminium), allowance must also be made for dividend payments abroad. The aluminium smelter is the largest single user of electricity in Iceland, accounting for 1 374 million kilowatt hours or 36 per cent of total electricity consumed in the country in 1983 (Table 20). In comparison, the ferrosilicon plant and the fertilizer factory, the next two largest users of electricity, consumed 506 and 159 million kilowatt hours, respectively, during the same period. Because world energy prices have risen considerably since Alusuisse commenced operations of the aluminium plant in the late 1960s, there has been a prolonged dispute between the Icelandic government and Alusuisse over taxes and energy prices. However, in late 1984 an agreement was finally reached that raised the electricity price and tied it to world aluminium prices.

Iceland's second largest power-intensive industry is a ferro-silicon plant owned jointly by the Icelandic government, a Norwegian Company (Elkem) and a Japanese corporation (Sumitomo). The ferrosilicon plant is located in the western part of the country and is dependant on hydro-electric power from the Thjorsa river basin projects. After commencing

operations in 1979, capacity and production of the ferro-silicon plant were expanded rapidly over the next several years with output reaching 50 000 tons in 1983. The ferro-silicon plant runs a distant second to the aluminium smelter as an earner of foreign exchange; in 1983, it accounted for roughly 3 per cent of Iceland's merchandise exports. As with the aluminium smelter, the net foreign exchange earnings of the ferro-silicon plant are considerably less than the gross export figures imply, since raw materials are imported and dividends and debt service payments are partly remitted abroad.

Iceland's third largest energy export project consists of the aforementioned diatomite factory which opened in 1967. The plant, located in an area of northern Iceland where geothermal energy is readily available, employs geothermal heat directly to process diatomacious deposits, found locally at the bottom of Lake Myvtan, into pure diatomite. The manufactured product is exported primarily to Western Europe where it is used as a filtering agent and abrasive substance. Although the diatomite plant is a relatively minor earner of foreign exchange in gross terms, accounting for only 0.8 per cent of Iceland's total exports in 1983, it does not have to import its raw materials. Like the other two power-intensive industries, the diatomite plant was partly financed through direct foreign investment and is partially owned by an American corporation. Three medium-sized manufacturing enterprises also use locally available raw materials and produce mainly for the domestic markets. These include a fertilizer plant, a cement factory, and a seaweed meal plant. While the fertilizer factory is at least as large a consumer of energy as the diatomite plant, it produces mainly for the home market as does the cement factory. In contrast, the seaweed plant produces only for exports.

Iceland has sought to use its energy sources not only to develop power-intensive exports but also to reduce its dependence on imported petroleum which had increased substantially in previous decades. When the first oil shock struck in the early 1970s, imported oil accounted for roughly 55 per cent of Iceland's energy needs. By 1983, however, the share of imported fuels in total energy consumption had been reduced to 43 per cent (Table 22)[41]. Today, oil is used mainly in transportation, by the fishing fleet and in fish meal production. Some petroleum is still being used for space heating in remote parts of the country that do not have easy accessibility to hydro-electric or geothermal heating; however, the use of oil for space heating

Table 22. **Energy equivalent of imported fuels and produced energy**

	1978		1983	
	Gwh	Per cent	Gwh	Per cent
Imported fuels	7065	58.1	5516	42.9
Light fuel oils	3759	30.9	2299	17.9
Heavy fuel oils	1529	12.6	1588	12.3
Gasoline	1099	9.0	1113	8.7
Aviation fuels	678	5.6	516	4.0
Domestic energy	5100	41.9	7355	57.1
Hydro power	2360	19.4	3207	24.9
Geothermal heat	2740	22.5	4148	32.2
Total	12165	100.0	12871	100.0

Source: National Energy Authority.

is expected to be effectively eliminated over the next five to ten years. Despite this considerable achievement, imported fuels continue to constitute a major drain on Iceland's foreign exchange resources. In 1983, they accounted for 15.1 per cent of Iceland's total merchandise imports. Moreover, there is little room for further substitution since there is at present no alternative fuel for powering Iceland's fishing fleet and transport system.

Future Prospects

An acceleration of Iceland's diversification programme can be supported on several grounds. First, there is a high opportunity cost in Iceland's case in not proceeding rapidly with harnessing its energy potential, since nearly all of its energy resources are renewable, and thus current utilisation would not diminish future use[42]. This is unlike many oil-exporting and other resource-rich countries, where today's exploitation would diminish resources available to future generations. At the same time there are severe constraints on Iceland's capacity to engage in a rapid industrialization policy, given its small economy and labour force. On a per capita basis the costs of constructing the most economical hydro-power projects are huge, running between $500 and $1 000. Even though these outlays are spread over several years, each project puts immense pressure on the country's limited economic and financial resources. This is especially so since the economy has been operating near full capacity over most of the past ten years, with the unemployment rate near zero and inflationary pressures strong. Given that Iceland's labour force is only about 115 000 people, a project requiring one thousand workers, would be comparable in relative terms to a project in the United States that employed roughly one million people. While the construction of a large hydro-power system must proceed at a moderate pace to avoid undue strains on the economy, the progress must be rapid enough, at least in periods of high real interest rates, so that interest costs do not become exorbitant during the construction period when the investment lies fallow. In addition to developing its energy-intensive industries, Iceland might also wish to make better use of its abundant geothermal heat and other natural advantages, such as its open spaces, clear water and ample fish feed, by stepping up its aquaculture (fish farming) and other similar programs.

Generally, the policy has been to rely on foreign direct investment for construction of power intensive industries but to use foreign borrowings and public funds, including internally generated funds of the utilities, to develop the hydro and geothermal resources. Given its limited manufacturing capability, Iceland must, of course, depend on foreign imports for its heavy electric generating and transmission equipment. However, much of the labour and construction materials have been provided by domestic supplies; currently nearly all of the planning, designing and engineering requirements for the hydro-power and geothermal projects are provided locally. Nevertheless, a step-up in the construction of new projects could strain Icelandic sources and add to inflationary pressures. The pace of harnessing hydro-electric power must be also carefully timed with the establishment of energy-intensive export industries, otherwise the interest costs on the idle capacity could well destroy the economic and financial viability of the project. Recent economic developments have also militated against more rapid development of the energy sector. With the economy generally operating near full capacity and suffering from overheating in recent years, a step-up in diversification efforts would require a significant reallocation of resources if inflationary pressures were to be constrained. This could be done but would require very careful managing of the economy. Potentially, a more serious constraint in the future might relate to Iceland's ability to borrow abroad to finance heavy equipment and technology imports required for these projects. In that sense, heavy external borrowing in recent years might have adversely restricted the country's ability to borrow in the near future, even for development projects

(cf. Part III of the draft Survey). It might therefore be difficult for Iceland to substantially step-up its energy development and export promotion efforts because of domestic and external constraints.

After taking office in 1983, the new government appointed a committee to examine possibilities for expanding Iceland's power-intensive industries and to discuss new joint ventures with foreign companies. The government hopes to triple the power-intensive sector by the turn of the century. The Ministry of Industry has been focusing its attention on the aluminium industry where Iceland is perceived to have a distinct advantage in terms of duty-free access to the Common Market as well as relatively low energy and transport costs. A statement of intent was issued with Alusuisse to double capacity at the Staumsvik smelter near Reykjavik, provided a suitable partner could be found to share the risk. Moreover, talks have been held with major international corporations to construct possible additional aluminium smelters. The government is also seeking partners for a proposed 25 000 ton silicon metal smelter at Reydarfjordur in Eastern Iceland, where a hydroplant with a capacity of 250 MW is being contemplated. Discussions have been held with several large multinationals. According to preliminary plans, construction of the first smelter could begin in 1986 and operations would commence in 1988 with the second smelter coming on line two years later. Thus far, attention has focused mainly on aluminium and ferro-silicon, but the authorities are also exploring other metal and chemical industries. The government is also seeking joint ventures with foreign companies that could employ geothermal energy directly in their industrial production. With steam costing an estimated $1.50 per ton, Iceland would have a distinct advantage over European countries where costs would run about $5.00-$10.00 per ton. Currently the Technological Institute of Iceland is conducting a survey of potential processes, with particular attention focused on the chemical industry.

However, recent developments in certain sectors of the world economy have somewhat dimmed the prospects for Iceland's diversification programme. While a weakening in world oil prices benefits Iceland in terms of lowering its oil import costs, the general uncertainty over longer term energy prices also diminishes Iceland's ability to obtain favourable terms on its own energy resources from foreign investors. This is especially true since there appears to be excess capacity worldwide in electric-generating and basic metal processing. Iceland retains a comparative energy cost advantage over most countries, but hard-pressed nations with excess electric generating capacity, such as Brazil are willing to offer attractive terms to foreign investors in order to obtain the foreign exchange earnings needed for making debt service payments, as well as the other economic advantages associated with industrial development. While Iceland retains certain advantages for prospective foreign investors – such as attractive energy supplies, a well-educated population, political stability, and proximity to Europe – countries such as Canada and Brazil offer other advantages, such as proximity to raw material supplies as well as large economies that offer prospects for forward and backward linkages and market expansion. Consequently, Iceland might well find it more difficult to attract foreign investors in the near future given the general uncertainty over world energy prices and the general excess capacity in basic metal processing[43].

V. CONCLUSIONS

The initial phase of the stabilization programme implemented since May 1983 was very successful. Owing to wage de-indexation, statutory incomes policy and greater nominal exchange rate stability, the reduction of inflation was dramatic – from more than 130 per cent in the second quarter of 1983 to some 15 per cent in the third quarter of 1984. This

performance was all the more impressive since it was achieved in conditions of virtually full employment and against the background of severe excess capacity in the fishing sector and associated financial stress. However, efforts to consolidate these results have met with difficulties. The anti-inflationary strategy has suffered a set-back since last autumn when the re-opening of wage negotiations, accompanied by a month-long strike in the public sector, and a downward adjustment of the exchange rate led to a significant re-acceleration of inflation. Moreover, contrary to official policy objectives, the current external position deteriorated again sharply in 1984 following a marked improvement in 1983.

As had been evident for quite a long time, in the Icelandic setting de-indexation and greater exchange rate stability were necessary pre-conditions for breaking into the wage/price spiral. Recent experience provides, however, a good illustration of the risks involved in trying to achieve lasting success against inflation without appropriate monetary and fiscal policies. The difficulties have been all the greater as the initial reduction in real incomes was particularly sharp and took place against the background of relatively tight labour market conditions. Given the country's past inflationary record and the role traditionally played by exchange rate policies in maintaining and redistributing real incomes through the main sectors of the economy, inflation expectations remained deep-rooted. To ensure that they did not feed into renewed price and wage pressure, a greater commitment to non-accommodating monetary, fiscal and exchange rate polices was needed. During the period of disinflation the authorities have used these instruments, to some extent, for easing rather than re-inforcing the process of adjustment. In fact, the improvement in Treasury finances in 1984 was due to the effect of unexpectedly buoyant demand on tax revenues, rather than to fiscal restraint. Renewed progress towards disinflation and external adjustment clearly calls for a tighter stance of demand management.

For many years, lack of proper instruments seriously impeded effective monetary control. In spite of progress made recently in allowing market forces to play a greater role in interest rates determination, real rates have not been allowed to rise to levels required to check the strong demand for credit. Credit control has been undermined by the large overdraft facilities of banks at the Central Bank and by the rediscounting of bills of exchange at privileged rates. So far, the stricter rules on overdrafts adopted since last August have not proved very efficient. Moreover, the Treasury deficit was financed by Central bank credit as well as foreign borrowing. As a result, monetary aggregates have increased much faster than prices. To some extent a rise in the demand for money was to be expected as rapidly falling inflation was reducing the opportunity cost of holding money. But in a context of persistently strong inflationary expectations, excessive monetary accommodation soon became incompatible with internal and external equilibrium. This undermined the credibility of exchange rate policy – a situation encouraging speculative borrowing, fuelling inflationary expectations and ultimately complicating the task of policy. Speculation against the Krona ceased after the November 1984 devaluation. But with the November wage settlements containing a provision for a possible re-opening of pay negotiations as from the Spring, the authorities are now faced with basically the same situation as a year ago. Unless credit expansion can be more effectively controlled and real interest rates allowed to exhibit greater variability, risks of a permanent set-back to the government's counter-inflationary strategy are looming large.

As argued in earlier OECD Surveys, stabilization needs must also be supported by tighter fiscal policy. Although a precise assessment of the overall fiscal stance is made difficult by the lack of consolidated public sector accounts, it is quite clear that public sector's claims on resources remain excessive. In 1984, initial budget plans calling for a marked reduction in public expenditure were not carried out and all the borrowing targets of the credit budget were substantially overshot. This development was probably not unrelated to rapid wagedrift in

some sectors and, given the traditionally strong wage-wage links, to growing momentum for wage re-negotiation. The situation was all the more unsatisfactory since foreign borrowing rose substantially, with targets for overseas debt/GNP ratio being overshot by a considerable margin. It is to be hoped that spending cuts incorporated in the 1985 budgets will be implemented according to initial plans, though, in view of the issues at stake, it may be argued that the authorities' objectives are not ambitious enough. Given the need to ensure wage moderation and reduce the current account deficit as well as the burden put by external debt on the economy, a more determined attitude towards fiscal restraint would be desirable.

Net external debt has indeed become a matter of concern, its level in relation to GNP being already the second highest among OECD member countries. Though the 1985 credit plan aims at stabilizing the long-term debt/GNP ratio, this will only be achieved owing to increased short-term borrowing. Net external indebtedness will thus continue to rise – a trend which unabated would clearly lead to a non-sustainable situation in the longer run. Stabilizing the total debt/GNP ratio therefore deserves priority. Real rates of interest on Iceland external debt have now reached about 5 per cent and will almost certainly exceed real GNP growth for some time. For net external debt to stabilize, the current external balance on non-interest payments must improve, calling for slower domestic demand growth in Iceland than abroad. The external debt issue argues in favour of greater exchange rate stability and increased national savings. Although instrumental in restoring the profitability of exposed sectors, depreciations of the exchange rate raise the real burden of external debt service and hurt heavily indebted sectors. While facilitating better monetary control, a higher rate of national savings would allow the maintenance of an appropriate level of investment without excessive reliance on foreign borrowing.

An important factor behind higher external borrowing has been the need to import capital in order to diversify the economy by better exploiting the resource base of the country. However, despite progress made so far in that direction, Iceland remains heavily dependent on the fishing sector. Greater diversification would be desirable to preserve living standards over the medium-term, if changes in the marine environment were to lead to a permanent reduction in the current export base of the country. This would have the added advantage of reducing the variability of national output and export earnings in the wake of temporary fluctuations in terms of trade and fish catches. Only a small proportion of potential energy resources is currently being exploited. However, the problems involved are complex and imply difficult choices. Considerable progress has been made over the last decade in reducing dependence on imported oil and room for further saving is limited. There is, in principle, substantial scope for installing new power intensive industries but apart from the fact that international competition for attracting potential investors has become very fierce, considerable uncertainty surrounds demand prospects for energy intensive products. Care also needs to be taken that development of energy capacity does not outstrip effective demand. Moreover, in view of the existing internal and external constraints, a rapid pace of diversification would risk putting undue strains on resources, thereby aggravating imbalances. More generally, the diversification effort should not be directed exclusively at energy intensive industries. Structural improvement in traditional industries as well as development of new export-oriented activities such as aquaculture (fish farming) and service trade may offer possibilities for future growth. These considerations re-inforce the need for careful management of the economy and greater efficiency in resource allocation.

Up to the end of the 1970s the Icelandic economy was able to operate in a high inflation environment without major detrimental impact on real growth and living standards. But policy options available in the past are now precluded by the changed economic conditions. The fishing sector – on which the country is still heavily reliant – is faced with serious

structural difficulties; foreign indebtedness is very high and real interest rates have now become substantially positive; the current external balance runs a large deficit; price and wage increases have re-accelerated. In such circumstances, there is no realistic alternative to pursuing with greater determination the anti-inflationary strategy embarked upon by the authorities since mid-1983. Chances of success will not only depend on the appropriateness and credibility of policies but also on better acceptance by all the parties involved of the necessary costs of stabilization policies.

NOTES AND REFERENCES

1. The origins of the inflation problem have been analysed in depth in previous OECD Economic Surveys of Iceland (see particularly OECD Economic Survey of Iceland November 1980). The vicious circle of cost-push inflation had its roots in the impact of terms of trade deterioration on higher costs and wages. But terms of trade improvements have also contributed, as increasing profits and wages in the export sector have led to compensating wage claims in the domestic sectors. Accommodating fiscal and monetary policies complete the inflationary mechanism.
2. See Sigurdsson, J., "Recent Experience with De-indexation in Iceland", in *Inflation and Indexation,* Institute for International Economics, Washington D.C., March 1985.
3. During most of 1982 the Central bank discounted bills for export stocks (see page 27) at 29 per cent, whereas the change in export prices exceeded 46 per cent implying a negative real rate of 17 per cent. This led to an accumulation of inventories.
4. The deterioration in the terms of trade due to the declining dollar price of fish has been offset by rising price of aluminium shipments and fairly slow changes in import prices.
5. 1985 Budget statement.
6. The concept of "revenue balance" (line 3 of Table 8) refers approximately to the SNA (OECD National Accounts) definition of "net lending", i.e. the surplus of income over expenditure or vice versa, available for lending or needing to be covered by borrowing. Government financial transactions (loans to companies and individuals etc.) may exceed any revenue surplus, so that these have to be added to obtain a measure of the central government borrowing requirement (line 5).
7. According to Central Bank estimates, if real GNP in 1983 had been as high as in 1981, with unchanged Treasury revenue in relation to GNP, (28.5 per cent), the deficit would only have amounted to 0.6 per cent of GNP instead of the actual 2.8 per cent. Treasury revenue was unusually large in 1982, partly because imports were heavy, as evidenced by the 10 per cent current account deficit, and Treasury revenue from customs duties is a very important revenue item. See Central Bank of Iceland, *Annual Report 1983,* p.27.
8. Central Bank of Iceland, *Economic Statistics Quarterly,* May 1984.
9. The rate has been increased from 23½ to 24 per cent. In an attempt to broaden the base of indirect taxation a bill calling for the introduction of a value added tax is to be presented to the Althing during the 1984/1985 session.
10. The borrowing requirement is gross of amortization and excludes the borrowing of municipalities, which amounted to 339 million Kr. in 1983.
11. See page 21.
12. To counter the excessive growth of foreign debt, measures were announced in February 1985 entailing a reduction of 1 000 million kronur in foreign borrowing. This was to be effected through cuts in public enterprise borrowing. Public investment is to be increasingly financed domestically, and by 1986 central government foreign borrowing is not to exceed debt service on outstanding loans.
13. In the original credit budget domestic financing was expected to be 945 million Kronur but turned out at 530 million. Government bonds carried 3-4 per cent real rates, which were unattractive after the banks raised their interest rates.

14. Before allowing for book-keeping adjustments due to the appreciation of foreign assets in krona terms, net short-term foreign assets fell from 2 594 million kronur to 643 million kronur.

15. Since 1978 the tax system has been designed to be inflation-neutral. Companies are allowed to deduct interest payments from taxable income, but are taxed on the net real appreciation of their financial assets (capital losses being deductible). Household interest receipts are generally not taxed, and personal interest payments are not generally deductible from personal taxable income, with the important exception (up to an indexed ceiling) of payments on loans for owner-occupied house purchase for six years following the purchase.

16. Central Bank of Iceland, *Economic Statistics Quarterly*, Vol. 5, No.4., November 1984, p.3. Over the contract period, to the end of 1985, wages of public employees are estimated to increase by 22½ per cent, most of this being concentrated at the end of 1984, or the beginning of 1985. Increases in the private sector will average 24½ per cent. The 1985 projection is based on the assumption that the wage contracts will not be repealed, the price of foreign currency will increase by 5 per cent, wage drift will reach 2 per cent and indirect tax increases will add 1 per cent to the index.

17. See Central Bank of Iceland, *Economic Statistics Quarterly*, August 1984.

18. The Bank now lends 47½ per cent of the value of stocks of export products instead of 52 per cent, and 42½ per cent of domestic market stocks, compared with 47½ per cent. The Government's declared policy is to phase out the Central Bank's rediscounting of produce bills altogether and place export financing wholly in the hands of the commercial banks. As a step towards this goal it has been announced that the central bank will cease to rediscount domestic produce loans in return for a lowering of the reserve requirement ratio from 28 to 18 per cent.

19. The rate rises with the size of the overdraft.

20. *OECD Economic Studies*, Spring 1984, pp.22-23.

21. The estimates of real interest rates are, of course, approximate, since real rates are difficult to measure. Three factors are involved:

    i) The estimation of the price index relevant to the expenditure involved;
    ii) The average life-time of the loan;
    iii) The change in the relative price of the foreign currency in which the loan is taken.

    Using for (i) the price of imports in foreign currency would imply real rates close to nominal rates during the 1980s, since this price index has declined somewhat since 1981. Low import prices, however, are a benefit to the economy. More relevant, perhaps, since it determines the capacity of the economy to pay for debt, would be the rate of increase in export prices. The fall in the dollar price of fish is one reason for the severe real interest burden on the fishing sector. However, this ignores the role of import substituting investment (energy prices). The estimates therefore use the general OECD rate of inflation (the CPI deflator) as a proxy for the inflation component of the interest rate. This measures the decline in the purchasing power of the loan from the lender's perspective.

22. Cf. page 21. The debt/GNP ratio (d) would stabilize where $b_t = d_{t-1}(g/(1+g))$, where b_t is the current balance of payments deficit/GNP ratio (assumed financed fully by long-term capital imports) and g = the nominal rate of GNP growth, expressed in the same currency as the external borrowing. Thus, for example, to sustain a value of d = 0.61, with a real growth rate of 1 per cent and an inflation rate of 4½ per cent (the OECD average) would imply a maximum overseas deficit of about 3 per cent of GNP. It should be noted, however, that b here refers to the current balance inclusive of debt service payments. With a rate of interest above 7 per cent interest payments would grow faster than GNP and the balance on non-interest transactions would need to improve.

23. Over the medium-term, as long as the real rate of interest is above the growth rate of the economy, it follows that interest payments will be a continuously rising proportion of GNP unless the balance on non-interest current transactions improves sufficiently to allow the external debt/GNP ratio to fall.

24. In an attempt to increase non-bank domestic funding (outside the pension system, which is a captive market) the authorities have introduced several new credit instruments, including new savings certificates with high real rates of interest, an SDR-linked bond and a three-month Treasury bill. However, the reluctance to see interest rates rise too far has, on a number of occasions, led to tender bids at the Treasury bill auction being refused.

25. Iceland's resources are particularly large when measured against its small population. With only 240 thousand people, it is more sparsely populated than any other OECD country except Canada and Australia. Yet it is one of the largest fish-exporting countries in the world, ranking fourteenth as measured by overall catch but third – after Canada and Norway – by net exports. Similarly, Iceland's energy resources on a per capita basis are vast, and it ranks third in terms of per capita hydro-electric consumption, even though it uses mostly geothermal energy for space heating.

26. The same geographic features that provide the basis for Iceland's natural economic advantages, also impose severe constraints on the country's development potential and contribute to the unusual volatility of the country's economic performance. The economy is highly vulnerable to climatic and geological disruptions. On several occasions during the past twenty years, shifts in the Gulf Stream or Polar currents have adversely affected the fish breeding and feeding conditions, with major consequences for Icelandic exports and income. Although the rainfall is normally plentiful, it can be variable; besides affecting agricultural output, dry weather in the early 1980s forced the power-intensive industries to reduce production because of inadequate hydro-electric power. Volcanic eruptions have remained a constant threat in certain regions, damaging geothermal plants, destroying valuable grasslands, and uprooting local populations.

27. This discussion is mainly concerned with the development of resource-based industries, although the issues relate also to the expansion of knowledge and trade-based industries as well as to structural improvement in general.

28. Most of the frozen shrimp is sold to the United Kingdom and other Common Market countries into which Iceland has tariff-free access; thus, Iceland has a slight advantage over Norway, its chief competitor. The scallops and lobsters go largely to the United States.

29. However, there is some concern that a large return of herring might cause marketing problems for Iceland. Since there is little demand for herring in the United States and Southern Europe, Iceland sells most of its salted herring (about 25 thousand tons currently) to the U.S.S.R., Finland and Sweden. While the trade with the Soviet Union provides Iceland with little hard currency, it allows Iceland to buy about 60 per cent of its oil requirements from the U.S.S.R. which normally requires rough balance in its bilateral trade relations. Iceland also exports some frozen herring (about 9 thousand tons) mainly to West Germany and the United Kingdom; however, demand has been weak and prices low there as well.

30. Roughly half of all frozen fish shipped to the United States consists of fillets, mostly cod; these are sold mainly to restaurants, with national fast-food chains being the largest purchasers. The other half of the frozen fish trade consists of fish blocks sold largely to institutional buyers, such as schools and hospitals, as well as food companies which process them into other fish dishes.

31. Norway has sought to maintain the income base of the fishing communities along the western and northern coasts, for various economic, social and security reasons. It has been estimated by industry sources that the level of Norwegian subsidies is as high as 20 per cent of total sales of the fishing industry at home and abroad. Similarly, Canada has made extensive efforts, supported by public funds, to upgrade and modernize its fishing industry, partly as an effort to support the income of the generally depressed maritime provinces.

32. Ground fish refer to those species that live and feed on the floors of the fishing banks. Nearly all of Iceland's white fish are ground fish.

33. In retrospect, it is easy to point to various factors that encouraged overinvestment in the fishing fleet: strong growth in the fish catch during the 1970s, foreign exchange policies that generally maintained high profit margins in the fisheries, and monetary policies that allowed credit to investors at negative real interest rates. However, existence of negative real interest rates in the

domestic market was only a partial contributor to over-investment in the fishing fleet. Many of the new trawlers were purchased abroad and financed with credits denominated in foreign currencies at market rates of interest, the burden of which is now felt to be very heavy.

34. The fish processing plants as well as shipbuilding and repair yards may also be suffering from some excess capacity. These industries have generally received less attention than the fishing fleet, partly because of their lower dependence on foreign credit.

35. The European fisheries and shipbuilding yards, in particular, have suffered from excess capacity in recent years. Germany and Great Britain were forced to scrap a large share of their fishing fleets, with Common Market assistance, when Iceland extended its fisheries jurisdiction. More recently, Spain has closed down a large portion of its shipbuilding yards, although it has reportedly tried to maintain some production by switching to the construction of fishing vessels.

36. To put things in perspective this would be equivalent to a cost of $650 per capita; a project with a similar per capita cost in the United States would amount to $150 billion. The Hrauneyjafoss project completed in 1981 cost $200 million or about $850 per capita.

37. Iceland has the important advantage of being a low cost producer as well as a marginal supplier of energy, so that it is able to compete effectively with other energy exporting countries, such as Australia, Brazil and Canada, as well as local energy producers in Continental Europe – where additional supplies must come from relatively high-cost nuclear, petroleum or coal sources. Ideally, therefore, multinational consumers of electrical power will find it beneficial to maintain production at their Icelandic plants during slack periods while closing down production at their higher costs plants outside Iceland. This, however, requires skilful pricing policy on Iceland's part.

38. Harnessable electrical power from rivers and geothermal sources in Iceland is estimated to be at least 50 000 GWh (Giga watt hours) per annum taking into account economical and ecological constraints. However, this estimate is thought to be rather conservative and assumes 30 000 GWh per annum from hydro and 20 000 GWh per annum from geothermal sources. An additional 20 000 GWh of hydro power would be technically feasible, but probably not economical with current technology and energy prices. The present use of electrical energy in Iceland is approximately 3 900 GWh per annum.

39. This was timed with the completion of the first large-scale hydroelectric plant in the Thjorsa river basin in south-central Iceland.

40. Although considerable progress was made in expanding the aluminium capacity and developing other export industries, the share of energy-intensive exports in the early 1980s was lower on average than in the early 1970s. This reflects partly the rapid expansion of the fish catch during the 1970s as well as some slowing of diversification efforts after the initial achievements.

41. It should be noted that the figures in Table 22 are based on the long-established practice of aggregating energy consumption by physical energy units. However, Iceland's dependence on imported oil is considerably less if energy consumption is measured in terms of oil equivalent. This is because the conversion efficiency for producing electricity is much greater for hydro power than it is for oil. According to this latter method of measuring energy consumption, imported energy accounted for 45 per cent of Iceland's energy use in the early 1970s, but only 23 per cent in 1983.

42. Geothermal energy is not as durable and renewable a resource as it was once thought to be, as illustrated by the difficulties encountered in the heating systems in Reykjavik, Reykjanes, and particularly Akureyri.

43. It may be noted that it has not been easy in recent years to attract foreign corporations to establish plants in Iceland.

Annex

CALENDAR OF MAIN ECONOMIC EVENTS

Details of the main economic events between May 1982 and June 1983 were given in OECD Economic Survey of Iceland, October 1983

1983

July

The petrol tax was raised by 17.2 per cent.

The 10 per cent tax on purchases of foreign currency for travelling abroad was abolished effective July 29.

September

The herring quota for the autumn of 1983 was set at 53 thousand tons.

The Central Bank eliminated restrictions on foreign exchange transactions, other than capital transfers, and applied a single exchange rate to all transactions.

Interest rates were lowered by 4 to 8 percentage points on non-indexed deposits and loans. At the same time, rediscountable export commodity bills were tied to SDR exchange rates and international interest rates, with the interest rate temporarily set at 9.5 per cent compared to 8 per cent on Central Bank rediscounts.

October

Wages, social security benefits, fish and farm prices were increased by 4 per cent.

The 1984 National Budget, Budget Bill and Credit Budget Bill were submitted to the Althing.

Interest rates on non-indexed deposits and loans were lowered by an average of 3 percentage points and penalty rates were cut by 0.25 percentage point to 4.75 per cent per month.

November

The capelin fishing quota for the autumn and winter season 1983/1984 was set at 375 thousand tons and allocated to 51 ships.

Average deposit and lending rates were reduced by 4.4 to 4.6 percentage points, while penalty rates were reduced by 0.75 percentage point to 4 per cent monthly. Interest rates on SDR export bills and Central Bank rediscounts were lowered by 0.25 percentage point.

December

The Althing approved the May 27 provisional law on incomes policy and lifted the ban on wage negotiations effective December 15.

The special tax on commercial buildings was lowered from 1.4 per cent to 1.1 per cent of real estate assessment.

The Minister of Finance was given authority to issue indexed government bonds and savings certificates with indexation tied to either domestic prices or certain exchange rates, including the SDR.

The social security tax was set at 2 per cent of taxable income above 237 thousand kronur in 1984.

The Althing passed the Budget Bill for 1984.

Interest rates on non-indexed deposits and loans were lowered by 3.5 to 7 percentage points, while indexed rates were raised by 0.5-1 percentage point.

1984

January

Non-indexed interest rates were lowered by 5 to 6 percentage points, while indexed rates were raised by 0.5 percentage point. Penalty rates were further reduced by 0.75 percentage point to 2.5 per cent per month. As a step toward decentralising interest rate determination, the deposit money banks were allowed to decide the terms on interbank transactions and time deposits of over six months.

February

A new wage contract was signed between the Icelandic Federation of Labour (IFL) and the Employers' Association. Basic wage rates were raised by 5 per cent, while minimum wages were increased by 15.5 per cent. The new agreement raised incomes by 7.7 to 8.3 per cent for unskilled workers and 5.6 per cent for skilled, commercial and clerical personnel. Wages were scheduled to increase by 2.0, 3.0 and 3.0 per cent, respectively, on June 1, September 1 and January 1, 1985. The contract was to expire on April 1, 1985, although the wage component could be rescinded on September 1, 1984 and January 1, 1985.

To facilitate the wage agreements, the Government introduced a special child allowance measure, increased social security benefits and modified supplementary old age and disabled pensions, implying an increase in central government spending of 300-330 million kronur.

Other unions reached agreements similar to those of the IFL and the Employers' Associations. The Federation of State and Municipal Employees and the Minister of Finance also signed an agreement raising incomes by an estimated 5.3 per cent.

Fish quotas in 1984 were set by individual boats as well as major species. The quota for demersal species was set at 522 thousand tons, (of which cod was to make up 220 thousand tons). The capelin quota for the 1983/1984 autumn-winter season was increased by 265 thousand tons to 640 thousand tons and allocated to 52 ships.

A 4 per cent export tariff was levied on salted and stock fish.

A new issue of indexed treasury savings certificates was offered amounting to 180 million kronur with a real yield of 5.08 per cent and redeemable in three years. Interest rates on SDR export bills were raised by 0.25 percentage point to 9.50 per cent.

March

Social security benefits were increased by 7 per cent, supplementary pensions by 10 to 22.4 per cent, and child support allowances by 25 per cent.

Prices paid to farmers were raised by 6 per cent while agricultural retail prices were increased by 7.5 to 11.0 per cent.

The Althing passed the Credit Budget Bill for 1984. It provided for domestic borrowing by the Treasury of 600 million kronur, and foreign borrowing was authorized as follows:

i) The Ministry of Finance: 400 million kronur,
ii) The State Power Company: 900 million kronur,
iii) The Development Fund: 652 million kronur,
iv) Several other public agencies: 220 million kronur in total.

Tax brackets for 1984 income and property taxes were set at 23 per cent on the first 170 thousand kronur of net taxable income, rising to 45 per cent on income exceeding 340 thousand kronur. The personal allowances were set at 29 500 kronur and child allowances at 6 to 15 thousand kronur per child. The corporate income tax rate was set at 51 per cent and provisions for investment tax deductions were eased.

The Central Bank established new rules on reserve requirements and the disposition of foreign currency deposits at the deposit money banks.

The Treasury offered 30 million kronur of 3-month treasury bills for sale but accepted bids for only 19 million kronur at an average effective interest rate of 25.72 per cent. Unlike previous treasury bills, which were offered only to deposit money banks, these new bills were offered to the general public.

April

The cod quota for 1984 was increased by 10 per cent. The revised 1984 quotas were as follows:

Thousand tons	Total	Boats	Trawlers
Cod	256	130	126
Haddock	65	32	33
Saithe	76	34	42
Redfish	117	6	111
Plaice	18	10	8
Greenland halibut	32	2	30
Catfish	15	9	6
Total	579	223	356

The Treasury offered for sale and accepted bids for 30 million kronur of 3 months treasury bills at an average effective interest rate of 25.97 per cent.

Interest rates on SDR export bills were raised by 0.25 percentage point.

The rules for capital transfer were eased, allowing an individual to transfer 1 500 dollars when travelling abroad and 250 thousand kronur upon emigrating.

May

The Althing passed legislation on measures relating to fiscal and monetary policy. The main provisions were:

a) State expenditures were reduced by 370 million kronur.
b) Total expenditures of the Icelandic Students' Loan Fund were limited to 658 million kronur.
c) The ceiling on agricultural subsidies was raised by 188 million kronur to 468 million kronur, with the increase to be raised through a special import tariff on animal feed.
d) Maximum payments to the Municipal Equalization Fund were set at 495 million kronur.
e) Child allowances were raised and means-tested.
f) The patients' share of medical and dental care costs was increased, corresponding to a 300 million kronur reduction in social security benefits.

The equivalent of 616 million kronur of borrowing was authorized for the construction of a new air terminal at Keflavik airport.

The Treasury offered and sold 30 million kronur of 3 month treasury bills at an average effective interest rate of 25.95 per cent.

In order to make terms on indexed and non-indexed loans more comparable, interest rates on indexed and exchange rate linked loans were raised by 1-2 percentage points.

Deposit money banks were allowed to re-lend foreign currency deposits by making these loans denominated in the same foreign currency and bearing an interest rate 1.75 per cent above LIBOR.

The Central Bank revised its discount policy. Rediscount ratios were lowered, in four monthly steps (ending in August) from 52 to 47½ per cent on export produce bills and from 48½ to 42½ on domestic produce bills.

Interest rates on SDR export bills were raised by 0.25 percentage point to 10 per cent per annum.

Legislation was passed authorizing the Central Bank to impose a special liquidity requirement on deposits, subject to the Government's approval.

June

The Treasury offered and sold 30 million kronur of 3-month treasury bills at an average effective interest rate of 25.68 per cent.

July

The Treasury offered and sold 30 million kronur of 3 month treasury bills at an average effective interest rate of 25.57 per cent.

August

A great majority of labour unions (106 in all) called for re-negotiation of wage contracts.

The Treasury offered 30 million kronur of 90-day treasury bills but accepted bids for only 19.5 million kronur at an average effective interest rate of 25.8 per cent.

The Central Bank announced that it would no longer regulate all interest rates. Thus the deposit money banks were allowed to decide their own rates, except for general savings deposits, which the Central Bank raised from 15 to 17 per cent per annum, penalty rates on overdue payments, which were raised from 2.5 to 2.75 per cent per month, and rediscountable produce loans. The deposit money banks responded to these changes by raising other rates by 2 to 7 percentage points.

The Central Bank introduced new rules to limit the access of deposit money banks to overdraft facilities at the Central Bank, and modified the method for allocating discount bill quotas to the deposit money banks. The Government authorized a special reserve requirement up to 5 per cent of total deposits.

Interest rates on SDR export produce bills were raised by 0.25 percentage point to 10.25 per cent per annum.

The Central Bank decided to implement exchange rate policy with reference to trade rather than currency weights. The weight of the US dollar in the reference basket was thus reduced from 46 per cent to 30 per cent, which resulted in an effective devaluation of the krona by approximately 3 per cent.

September

Printers went on strike.

The Federation of State and Municipal Employees called a strike to begin on October 4, if a new agreement is not reached by that time.

The total herring quota for the autumn of 1984 was set at 45 thousand tons.

A restricted issue of indexed Treasury savings certificates was offered to holders of older certificates redeemable in September. The interest rate and price was set to give an annual yield of 8.55 per cent in the first three years. Thereafter, they will be rolled over automatically every six months at an 8 per cent annual rate, unless redeemed by the holder or recalled by the Treasury.

The Treasury offered 30 million kronur of 90-day treasury bills but accepted bids for only 9 million kronur at an average effective interest rate of 27.8 per cent per annum. On September 14, the total treasury bill debt stood at 58.5 million kronur.

October

The Federation of State and Municipal Employees went on strike from October 4 to October 30. The main provisions of the new wage agreement ending the strike included:

1. On November 1 all wages to rise by 10 per cent on average from their August level.
2. Each full-time employee to receive a 2 500 kronur payment for September and a special 4 000 kronur payment on November 15. Part-time employees shall receive proportional amounts.
3. All wage rates to rise by 800 kronur on December 1.
4. On May 1, 1985, all public employees to move up one wage bracket, which is equivalent to a wage increase of 3.5 per cent.
5. The agreement expires on December 31, 1985. The parties to the agreement will monitor price and wage developments during the contract period and assess changes in the purchasing power of wages. Each party can re-open negotiations on the wage rate provisions after June 1, 1985 and cancel them effective September 1, 1985.
6. The contract is estimated to yield an average increase in wages of 20-21 per cent during the contract period. Similar contracts were negotiated in the various municipalities.

The total quota for capelin fishing, which began on October 1 was set at 195 thousand tons for the autumn and winter season 1984/1985.

The National Budget and the Budget Bill for 1985 was submitted to Althing.

The Treasury offered 30 million kronur of 90-day treasury bills but accepted bids for only 21 million kronur at an average effective interest rate of 27.7 per annum.

The interest rates on SDR export bills were raised by 0.25 percentage point to 10.5 per cent per annum.

The Printers' Union and their counterparts signed a new wage contract providing for a 22-23 per cent increase in wages during the contract period.

November

On November 6, a new wage settlement was concluded between the Federation of Labour and the Employers' Association. The main provisions of the agreement are as follows:

1. All wages to rise by 9 per cent from their August level, effective immediately.
2. All employees move up one bracket immediately with additional bracket moves scheduled for January 1, March 1, and May 1, 1985. Each step entails a wage increase of about 2.5 per cent.
3. The agreement expires on December 31, 1985. The agreement, however, stipulates that renegotiations on the wage rate provisions of the settlement shall begin in April 1985 and if negotiations are not concluded by June 25, 1985 the contract will automatically expire on September 1, 1985.

The Treasury offered 30 million kronur of 90-day treasury bills but accepted bids for only 25.5 million kronur at an average effective interest rate of 27.8 per cent per annum.

Interest rates on indexed loans granted before August 11 were raised by 1 percentage point to 7 per cent per annum on loans with maturity less than 2½ years and to 8 per cent per annum on longer loans.

As a means of coordinating different interest rates on indexed loans in the various financial institutions, the Central Bank and the deposit money banks agreed to lower interest rates on non-indexed loans by 1 to 2 percentage points down to 7 and 8 per cent per annum.

The krona was devalued by 12 per cent on November 20. The policy of maintaining stable average effective exchange rate in the months ahead was restated.

Social security benefits were raised by 14 to 17 per cent.

The capelin quota for the autumn and winter season was further increased by 200 thousand tons to 590 thousand tons.

December

Prices to farmers were raised by 12 per cent on December 1.

The Althing accepted amendments to the agreement between the Government of Iceland and Swiss Aluminium Ltd., settling several disputes regarding the price of electricity and tax payments. According to the new agreement, the price of electricity now has a lower limit of USC 1.25 per kWh and an upper limit of USC 1.85 per KWh, compared to the price of USC 0.95 per KWh agreed to in the interim agreement of September 23, 1983. The exact electricity price will oscillate between the two limits in step with the world market price of aluminium.

1985 Budget was passed by the Althing.

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STATISTICAL ANNEX

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

Kr. million, current prices

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982[1]
Private consumption	609	932	1 250	1 641	2 324	3 546	5 316	8 380	13 240	20 790
Public consumption	99	156	219	300	430	683	1 022	1 622	2 520	4 055
Gross fixed asset formation	286	452	636	780	1 088	1 507	2 174	3 638	5 549	8 576
Expenditure on final domestic use	994	1 540	2 105	2 721	3 842	5 736	8 512	13 640	21 309	33 421
Change in stocks of export products and livestock	–2	26	37	–17	70	–39	13	103	233	886
National expenditure	992	1 566	2 142	2 704	3 912	5 697	8 525	13 743	21 542	34 307
Exports of goods and services	374	481	722	1 055	1 453	2 498	3 852	5 813	8 887	13 063
Imports of goods and services	400	636	936	1 099	1 550	2 419	3 917	6 126	9 910	16 173
Gross national product (market prices)	966	1 411	1 928	2 660	3 815	5 776	8 460	13 430	20 519	31 197
Depreciation	114	172	283	371	489	753	1 138	1 799	2 829	4 613
Net national product (market prices)	852	1 239	1 645	2 289	3 326	5 023	7 322	11 631	17 690	26 584
Indirect taxes	231	362	521	700	978	1 462	2 173	3 540	5 760	9 180
Subsidies	44	75	124	126	168	311	542	775	1 140	1 840
Net national income	665	952	1 248	1 715	2 516	3 872	5 691	8 866	13 070	19 244
Net income to abroad	12	19	49	73	88	161	244	411	811	1 495
Net domestic income	677	971	1 297	1 788	2 604	4 033	5 935	9 277	13 881	20 739

1. Provisional.

Source : National Economic Institute.

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

Kr. million, constant prices

	1973	1974	1975	1976	1977	1977	1978	1979	1980	1981	1982
	1969 prices					1980 prices					
Private consumption	351.0	375.6	338.0	341.4	368.7	7 676	8 137	8 300	8 380	8 800	8 973
Public consumption	44.6	47.4	49.7	53.1	53.5	1 451	1 506	1 559	1 622	1 703	1 768
Gross fixed asset formation	156.7	173.6	159.0	154.9	172.7	3 533	3 343	3 324	3 638	3 713	3 659
Expenditure on final domestic use	552.3	596.6	546.7	549.4	594.9	12 660	12 986	13 183	13 640	14 216	14 400
Change in stocks of export products and livestock	–3.5	9.5	12.4	–7.7	5.7	215	–131	2	103	157	346
National expenditure	548.8	606.1	559.1	541.7	600.6	12 875	12 855	13 185	13 743	14 373	14 746
Exports of goods and services	220.5	218.9	221.9	248.4	274.0	4 603	5 299	5 658	5 813	5 924	5 393
Imports of goods and services	293.6	332.5	298.2	294.6	349.5	5 512	5 772	5 915	6 126	6 650	6 700
Gross natinal product (market prices)	475.7	492.5	482.8	495.5	525.1	11 966	12 382	12 928	13 430	13 647	13 439
Effect of changes in terms of trade	48.8	37.8	16.7	34.0	52.0	634	658	151	–	40	2
Export income	269.3	256.7	238.6	282.4	326.0	5 237	5 957	5 809	5 813	5 964	5 395
Income balance of goods and services	–24.3	–75.8	–59.6	–12.2	–23.5	–275	185	–106	–313	–686	–1 305
Gross national income[1]	524.5	530.3	499.5	529.5	577.1	12 600	13 040	13 079	13 430	13 687	13 441

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 "Export income" obtained through the deflation of exports with a price index for imports, expresses the external purchasing power of the export earnings, and the difference between this item and exports, normally deflated with an export price index, is a measure of the real income "effect of changes in terms of trade".

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

Source: National Economic Institute.

Table C. **Production and employment**

		1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Fisheries and fish processing											
Export production:											
Value, current prices	Kr. mill.	260.9	374.2	530.5	829.8	1 291.8	2 114.9	3 404.1	5 261.6	7 137.1	12 563.8
Volume, constant prices	1980 = 100[4]	54.9	54.9	59.1	73.9	79.9	90.1	100.0	100.4	85.1	76.9
Fishing fleet[1], end of year:											
Trawlers	GRT	34 796	36 523	36 843	38 422	39 096	40 269	42 265	45 258	47 944	48 478
Motor boats	GRT	62 982	62 456	60 313	62 817	67 319	63 891	64 222	63 313	63 904	63 294
Total	GRT	97 778	98 979	97 156	101 239	106 415	104 160	106 487	108.571	111 848	111 772
Employment in fish processing	1980 = 100	69.3	76.7	80.2	85.2	83.6	90.3	100.0	102.9	99.9	..
Agriculture											
Production : Value, current prices[2]	Kr. mill.	116.51	159.69	207.72	305.0	469.9	670.9	1 043.7	1 597.6	2 472.9	4 180.9
Volume, 1969 prices	Kr. mill.	38.38	38.06	38.41	39.76	41.31	38.67	38.97	37.98	37.67	37.97
Capacity[3]: Cultivated grassland	1 000 hect.	115.0	117.0	119.2	121.6	123.6	125.7	127.2	129.0	130.1	131.1
Sheep	1 000 heads	845.8	863.6	850.8	896.2	890.8	769.8	827.9	794.6	647.7	609.0
Cattle	1 000 heads	67.3	66.5	61.8	62.7	62.8	57.2	59.9	60.4	64.4	68.2
Manufacturing (excl. fish processing)											
Production, volume	1980 = 100	79.9	78.4	84.8	90.7	93.0	96.5	100.0	100.1	107.5	105.9
Employment	1980 = 100	86.9	87.2	88.5	92.9	96.8	99.4	100.0	101.2	102.7	102.2
Dwelling construction											
Started	Number	2 640	2 261	2 268	1 980	2 278	1 932	1 758	1 648	1 829	1 631
Completed	Number	2 193	2 068	2 172	2 300	2 283	2 045	2 237	1 623	1 924	1 711
Under construction, end of year	Number	5 119	5 312	5 408	5 088	5 083	4 970	4 491	4 516	4 421	4 341

1. Including whale-catchers, excluding open boat.
2. Including change in livestock.
3. At the end of year.
4. 1974-1977 at 1973 prices; 1978-1983 at 1980 prices.

Source : Direct Icelandic communication to the OECD.

Table D. **Gross fixed asset formation**

Kr. million, current prices

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982[1]
Gross fixed asset formation, total	286.1	451.5	635.6	780.1	1 087.5	1 507.1	2 174.2	3 638.0	5 549.0	8 576.0
Classification by end-use :										
Industrial asset formation	131.4	208.0	258.1	277.3	462.3	664.8	944.1	1 502.0	2 352.0	3 659.0
Agriculture	18.6	29.2	38.5	47.7	66.9	92.5	115.0	159.0	235.0	422.0
Fishing	46.4	49.1	48.8	35.0	104.4	107.2	167.4	217.0	376.0	518.0
Fish processing	12.6	19.2	26.4	25.7	49.8	63.9	103.6	144.0	215.0	349.0
Manufacturing other than fish processing	18.1	27.7	45.0	52.4	84.7	188.0	289.4	391.0	548.0	755.0
Transport equipment	13.8	36.5	45.5	54.9	75.2	77.3	99.1	283.0	470.0	593.0
Commercial buildings, hotels, etc.	12.5	27.1	29.3	39.7	49.9	81.9	98.9	155.0	268.0	538.0
Various machinery and equipment	9.4	19.2	24.6	21.9	31.4	54.0	70.7	153.0	240.0	484.0
Residential construction	77.4	102.0	134.6	169.4	232.7	342.7	493.7	744.0	1 008.0	1 714.0
Public works and buildings	77.3	141.5	242.9	333.4	392.5	499.6	736.4	1 392.0	2 189.0	3 203.0
Electric power, generation and distribution	18.0	41.0	99.6	157.2	138.6	152.2	238.5	507.0	810.0	1 154.0
Geothermal heating and water supply	6.5	13.5	26.0	33.5	63.5	90.0	138.0	267.0	370.0	330.0
Communications	34.8	54.5	72.5	88.1	115.4	159.4	230.3	403.0	639.0	1 061.0
Public buildings	18.0	32.5	44.8	54.6	75.0	98.0	129.6	215.0	370.0	658.0
Classification by type of assets:										
Machinery and equipment	88.4	134.2	164.5	158.5	291.0	395.7	578.7	1 016.0	1 619.0	2 274.0
Machinery and other equipment	74.6	97.7	118.9	103.6	215.8	318.4	479.6	733.0	1 149.0	1681.0
Transport equipment	13.8	36.5	45.6	54.9	75.2	77.3	99.1	283.0	470.0	593.0
Buildings and other construction	197.7	317.3	471.1	621.6	796.5	1 111.4	1 595.5	2 622.0	3 930.0	6 302.0
Residential buldings	77.4	102.0	134.6	169.4	232.7	342.7	493.7	744.0	1 008.0	1 714.0
Non-residential buildings	56.4	99.4	119.6	152.2	225.6	335.6	458.9	639.0	1 022.0	1 890.0
Other construction	63.9	115.9	216.9	300.0	338.2	433.1	642.9	1 239.0	1 900.0	2 698.0

1. Provisional.

Source : National Economic Institute.

Table E. **Gross fixed asset formation**

Kr. million, constant prices

	1973	1974	1975	1976	1977	1977	1978	1979	1980	1981	1982[1]
	1969 prices					1980 prices					
Gross fixed asset formation, total	156.7	173.6	159.0	154.9	172.7	3 533	3 343	3 324	3 638	3 713	3 659
Classification by end-use:											
Industrial asset formation	79.2	92.1	72.0	59.7	84.3	1 446	1 427	1 416	1 502	1 587	1 578
Agriculture	10.3	11.4	10.0	9.8	11.1	205	197	171	159	157	179
Fishing	29.7	24.0	14.3	6.8	19.9	325	228	246	217	256	226
Fish processing	6.8	7.3	6.9	5.5	9.0	153	135	155	144	147	152
Manufacturing other than fish processing	10.4	11.5	12.6	11.7	15.9	267	407	436	391	373	327
Transport equipment	9.4	18.8	13.8	13.0	14.7	230	155	148	283	312	254
Commercial buildings, hotels, etc.	6.1	8.7	6.6	7.3	7.0	168	187	154	155	177	228
Various machinery and equipment	6.5	10.4	7.8	5.6	6.7	98	118	106	153	165	212
Residential construction	37.8	32.7	30.4	31.0	32.7	784	784	768	744	666	725
Public works and buildings	39.7	48.8	56.6	64.2	55.7	1 303	1 132	1 140	1 392	1 460	1 356
Electric power, generation and distribution	9.2	14.7	24.9	33.0	21.5	452	340	364	507	545	495
Geothermal heating and water supply	3.2	4.3	5.9	6.1	9.0	214	206	215	267	245	139
Communications	18.5	19.4	15.7	15.1	14.7	385	362	359	403	426	444
Public buildings	8.8	10.4	10.1	10.0	10.5	252	224	202	215	244	278
Classification by type of assets:											
Machinery and equipment	58.0	68.0	50.4	37.7	59.6	888	825	856	1 016	1 104	993
Machinery and other equipment	48.6	49.2	36.6	24.7	44.9	658	670	708	733	792	739
Transport equipment	9.4	18.8	13.8	13.0	14.7	230	155	148	283	312	254
Buildings and other construction	98.7	105.6	108.6	117.2	113.1	2 645	2 518	2 468	2 622	2 609	2 666
Residential buildings	37.8	32.7	30.4	31.0	32.7	784	784	768	744	666	725
Non-residential buildings	27.6	31.9	27.3	28.1	32.5	750	761	710	639	675	796
Other construction	33.3	41.0	50.9	58.1	47.9	1 111	973	990	1 239	1 268	1 145

1. Provisional.

Source: National Economic Institute.

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

US $ million

	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Current balance	–155.0	–139.8	–24.0	–48.7	28.1	–21.2	–69.6	–144.5	–252.9	–52.2	–129.6
Long-term (excl. spec. trans.)	109.1	107.5	47.5	98.4	64.3	88.6	158.7	200.5	228.0	116.9	116.7
a) Private	63.9	43.6	6.6	22.0	19.6	23.0	80.4	123.3	88.2	17.3	31.8
b) Official	45.2	63.9	40.9	76.4	44.7	65.6	78.3	77.2	139.8	99.6	84.9
Basic balance	–45.9	–32.3	23.5	49.7	92.4	67.4	89.1	56.1	–29.4	64.7	–12.9
Non-monetary short-term capital	–10.3	4.0	–0.9	–5.7	–12.5	11.0	11.3	24.6	–13.5	–66.9	35.9
Errors and omissions	–1.0	–2.9	–4.2	–14.1	–26.6	–33.2	–47.6	–23.9	–54.6	–3.4	–29.3
Balance on non-monetary transactions	–57.2	–31.2	18.4	29.9	53.3	45.2	52.8	56.8	–93.0	–5.6	–6.3
Private monetary institutions short-term capital	–9.3	3.6	1.7	1.3	0.9	2.0	–4.2	1.0	–7.4	14.2	–22.6
Balance on official settlements	–66.5	–27.6	20.1	31.2	54.2	47.2	48.6	57.8	–100.4	8.6	–28.9
Use of IMF credit	19.0	19.4	28.9	–	–11.7	–16.3	–25.0	–12	18	1.0	–
Special transactions	–	–	–	–	–	–	–	–	–	–	–
Miscellaneous official accounts	–2.9	9.0	–18.0	–15.7	4.7	–6.5	–2.3	7	–1	3.5	16.8
Allocation of SDRs	–	–	–	–	–	3.4	3.3	3.3	–	–	
Change in reserves (+ = increase)	–50.4	0.8	31.0	15.5	47.2	27.8	24.6	56	–83	13.1	–12.1
a) Gold	–	–	–	0.5	0.3	0.2	–	–	–	–	–
b) Currency assets	–43.4	2.6	34.5	14.0	49.3	22.6	18.6	55	–72	10.6	–12.3
c) Reserve position in IMF	–7	–	–	–	–	7.1	5.9	–	–10	4.8	–
d) Special Drawing Rights	–0.1	–1.8	–3.5	1.0	–2.4	–2.1	0.1	1	–1	–2.4	0.2

1. Provisional.

Sources: Central Bank of Iceland; Direct Icelandic communication to the OECD.

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

Accruals basis

Kr. million

	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Current revenue	377.2	510.4	713.2	1 002.8	1 636.5	2 480.4	3 929	6 304	10 328	16 282
Direct taxes	59.4	61.0	91.9	110.4	280.5	462.2	649	983	1 800	2 614
Indirect taxes[1]	313.9	441.8	609.8	873.4	1 327.0	1 965.8	3 179	5 203	8 230	12 868
Other	3.9	7.6	11.5	19.0	29.1	52.4	101	118	298	800
Current expenditure	323.3	438.6	537.2	801.8	1 354.2	2 076.2	3 118	5 080	7 910	14 228
Purchase of goods and services[2]	119.5	163.8	226.5	389.3	633.9	931.3	1 418	2 290	3 552	6 483
Current transfers and subsidies	203.9	274.8	310.7	412.5	720.3	1 144.9	1 700	2 790	4 358	7 745
Gross saving	53.9	71.8	176.0	201.0	282.3	404.2	811	1 224	2 418	2 054
Gross fixed asset formation	30.1	48.0	47.0	80.1	96.1	143.3	288	440	782	1 238
Surplus on current and fixed investment account	23.8	23.8	129.0	120.9	186.2	260.9	523	784	1 636	816
Lending, net[3]	1.0	–20.4	13.3	–7.8	21.8	–33.6	77	10	683	–245
Net capital transfers to other sectors	56.6	99.2	120.9	146.3	202.3	272.0	384	609	787	2 251
Overall balance[4]	–33.9	–55.0	–5.2	–17.6	–37.9	22.5	62	185	166	–1 190

1. Including employers' social security contributions.
2. Including interest.
3. "–" = net borrowing.
4. Net change in floating debts and cash balances.

Source: Central Bank of Iceland.

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

	Fish catch (thous. metric tons)					Wages and prices (1980 = 100)								
							Cost of living index				Export prices of fish products[3]			
	Total	White fish, etc.	Herring	Capelin	Shrimp, lobster, shell-fish	Hourly wage rates, unskilled workers[1]	Total	Food and beverages	Home-ownership	Building cost[2]	Fresh and iced fish	Frozen products	Salted products	Fish meal and oil
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1973	907	407	43	442	15	8.6	8.2	8.2	11.5	8.0	6.2	10.3	7.7	15.8
1974	944	430	41	462	11	12.8	11.7	12.1	14.2	11.4	8.7	12.9	14.0	17.3
1975	994	450	33	501	10	16.2	17.5	18.1	19.2	17.2	13.4	19.8	20.2	17.0
1976	986	484	30	459	13	20.3	23.1	24.2	25.1	22.9	18.1	25.5	23.8	24.9
1977	1 374	518	29	813	14	29.7	30.1	32.3	32.0	29.9	25.1	33.3	27.1	39.9
1978	1 566	544	37	967	18	46.0	43.4	46.5	45.3	43.2	50.8	46.3	42.5	54.3
1979	1 649	622	45	964	18	66.3	59.7	61.9	65.2	62.9	68.6	74.3	64.2	63.8
1980	1 514	680	53	760	21	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1981	1 441	738	40	642	21	149.0	150.6	157.2	153.5	150.9	124.3	144.3	171.7	152.1
1982	788	697	55	13	23	224.0	227.5	225.7	231.5	227.8	220.4	240.4	260.9	191.3
1983	838	615	59	133	31	334.8	422.6	435.9	383.5	419.8	360.1	501.6	449.2	510.3

1. Weighted averages.
2. February, June and October. From 1976: March, June, September, December.
3. The indice show the development of expert prices (fob) in term of Icelandic kronur.

Sources: *Icelandic Statistical Bulletin* and Hagtidindi; Central Bank of Iceland, *Economic Statistics;* Direct Icelandic communication to the OECD.

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	
	Orig.	Adj.	Total	Europe		USA	Eastern Europe	Developing countries	Orig.	Adj.	Total	Europe		USA	Eastern Europe	Developing countries
				EEC	Others							EEC	Others			
1973	29.3	..	25.5	12.8	7.3	2.2	2.6	1.2	24.0	..	21.4	9.4	4.8	6.4	2.0	0.6
1974	43.7	..	36.7	19.6	9.9	3.5	5.9	1.1	27.4	..	23.1	8.2	7.5	6.1	3.5	0.9
1975	41.1	..	34.7	18.5	9.0	3.8	5.1	1.3	26.0	..	20.8	6.8	6.1	7.6	3.5	1.8
1976	39.2	..	32.3	17.0	7.6	4.1	5.4	1.5	33.6	..	29.1	10.9	7.9	9.7	3.4	1.1
1977	50.7	..	41.5	24.0	10.7	3.3	6.2	3.0	42.7	..	34.5	13.4	7.3	12.9	5.2	3.0
1978	56.7	..	47.6	26.7	12.9	4.0	5.8	3.2	54.2	..	43.6	17.9	8.6	15.9	4.2	6.4
1979	68.8	..	57.3	32.0	16.0	4.5	8.7	2.9	65.8	..	58.1	26.4	11.1	18.4	5.3	2.4
1980	83.4	..	70.8	36.7	18.6	7.8	9.3	3.3	77.5	..	62.7	30.0	14.4	16.7	6.9	7.8
1981	86.3	..	74.3	38.4	21.6	6.7	8.1	4.0	75.4	..	57.3	23.6	16.2	15.7	6.0	12.1
1982	78.6	..	66.8	36.1	18.2	6.6	8.1	3.7	57.2	..	48.9	18.7	13.3	14.8	4.8	3.5
1983	69.1	..	59.2	31.1	16.4	5.4	7.8	2.0	62.5	..	52.8	21.7	11.4	17.7	5.0	4.7
1984	70.2	..	60.3	33.2	16.7	4.8	7.7	2.2	62.0	..	55.3	23.7	11.2	17.6	5.9	0.8

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

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	Others manufactured products
	SITC No	78-79		0	6	71-77									
1973	354.0	68.6	285.4	31.3	78.7	60.4	115.0	295.9	218.1	79.7	0.2	27.0	8.7	50.5	15.3
1974	520.8	94.8	426.0	43.3	102.1	85.7	194.9	331.1	247.9	80.2	0.0	24.9	9.2	49.3	17.2
1975	488.0	61.6	426.4	46.4	99.0	88.7	192.3	307.8	239.6	105.8	1.3	17.5	9.1	32.5	22.7
1976	469.8	46.0	423.8	49.5	94.4	94.5	185.4	403.8	290.1	123.6	7.7	17.0	10.4	68.1	28.6
1977	606.6	90.6	516.0	53.2	120.5	109.4	232.9	512.1	377.4	168.3	10.1	47.7	12.1	74.9	37.2
1978	673.4	66.6	606.8	57.7	141.4	137.1	270.6	648.2	495.2	216.2	15.4	63.2	15.1	87.1	40.8
1979	825.0	74.0	751.0	68.8	159.0	143.7	379.5	789.0	589.2	258.4	22.1	60.9	20.1	106.2	64.3
1980	1 000.1	102.7	897.4	82.3	194.1	172.6	448.4	929.2	695.6	265.8	21.7	61.5	16.0	112.9	88.5
1981	1 021.0	107.8	913.2	81.3	189.4	183.8	458.6	900.3	704.7	236.5	22.0	45.2	12.3	87.3	86.0
1982	941.5	87.5	854.0	76.1	182.3	169.1	426.5	675.1	506.4	219.3	17.7	8.4	8.5	67.8	82.5
1983	815.2	58.4	756.8	72.9	156.7	139.0	388.2	742.8	505.3	245.2	18.3	1.9	8.3	130.6	87.2

Sources: *Icelandic Statistical Bulletin*; OCDE.

Table K. Money and credit

End of period

	Central Bank		Non-Bank sector			Deposit money banks			Credits granted by DMB					Foreign exchange	
	Interest rate on bank over-drafts	Net Position of gouvern-ment	Money supply		M3[3]	Required reserves	Redis-counted bills	Net foreign position	Total	*of which to:*				Official gold and foreign exchange[4]	Commercial banks' short-term foreign assets
			M1[1]	M2[2]						Agri-culture	Fishery and fish pro-cessing	Manu-facturing and commerce	Dwell-ings		
	%[5]	Kr. millions												SDR's	Millions Kr.
1973	18.00	14	97	260	344	68	40	–15	313	33	50	105	39	83	–4
1974	24.00	48	124	336	439	86	82	–34	458	45	102	148	48	40	4
1975	24.00	103	170	442	566	114	125	–84	561	72	122	179	57	40	10
1976	36.00	129	208	548	750	159	160	–93	708	96	161	210	77	69	14
1977	36.00	149	306	783	1 079	225	265	–138	1 009	153	264	267	105	82	18
1978	36.00	279	429	1 122	1 605	329	397	–272	1 419	240	333	376	156	106	29
1979	36.00	283	625	1 677	2 503	533	587	–408	2 230	378	501	617	273	125	40
1980	4.75	312	1 012	2 775	4 139	941	992	–894	3 517	532	817	978	456	138	78
1981	5.00	196	1 620	4 841	7 056	1 778	1 392	–1 422	6 116	800	1 421	1 645	781	199	73
1982	4.50	115	2 092	7 136	11 152	2 810	2 935	–3 062	11 477	1 273	3 111	3 291	1 197	134	179
1983	3.75	813	3 722	12 394	19 924	5 180	4 915	–7 119	20 334	2 191	5 567	5 599	2 174	145	–143
1984	2.5	1 122	5 310	18 750	26 626	7 142	6 809	–9 311	29 646	2 858	8 677	8 500	2 819	132	371

1. Notes and coins, demand deposits.
2. Broad money, i.e. M1 plus general savings deposits.
3. M2 plus time deposits.
4. Excluding IMF position.
5. From 1980, per month..

Sources : Central Bank of Iceland, *Annual Reports; Principaux indicateurs économiques* de l'OCDE.

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	1984	15 379 (83)	7 552	9 860 (83)	25 150	5 111	4 882	54 947	61 181	9 848 (83)	237 (83)	3 508 (83)	56 983	120 018	366 (83)	14 420	3 245	4 141	10 099 (83)	38 173 (83)	8 337	6 482 (83)	47 750 (83)	56 377 (83)	236 634	**22 855 (83)**
Inhabitants per sq.km	Number		2	90	323	3	119	14	100	246	75	2	50	189	322	141	387	12	13	110	76	19	157	61	230	25	**88**
Net average annual increase over previous 10 years	%		1.3	–0.1	0.1	1.2	0.1	0.4	0.5	–0.1	1.0	1.1	1.3	0.3	0.9	0.4	0.6	0.7	0.4	1.2	0.9	0.2	0.1	2.2	0.1	1.0	**0.9**
Employment																											
Total civilian employment (TCE)[2]	Thousands	1983	6 471 (84)	3 199	3 577	11 000 (84)	2 389	2 404 (84)	20 839	24 649 (84)	3 508	114	1 111	20 439 (84)	57 660 (84)	157	4 929	1 266	1 970 (84)	3 892	10 382 (84)	4 255 (84)	2 994	14 927	23 470	105 005 (84)	..
of which: Agriculture	% of TCE		6.2	8.7	3.0	5.3	7.4	12.2	8.1	5.6	30.0	10.5	17.0	11.9	8.9	4.5	5.1	11.2	7.1	24.6	18.0	5.1	7.1	58.9	2.7	3.3	..
Industry	% of TCE		28.1	37.5	30.9	25.9	28.4	32.6	33.8	41.6	28.6	36.8	29.8	34.5	34.8	35.7	27.8	32.2	28.3	37.5	32.7	29.8	37.6	16.6	33.6	28.5	..
Services	% of TCE		65.7	53.8	66.1	68.8	64.2	55.2	58.1	52.8	41.4	52.6	53.2	53.7	56.3	59.9	67.1	56.6	64.6	38.0	49.3	65.1	55.3	24.5	63.8	68.2	..
Gross domestic product (GDP)																											
At current prices and current exchange rates	Billion US$	1983	155.5	67.1	80.1	324.0	56.4	49.4	519.2	653.1	34.5	2.3	18.0	352.8	1 156.0	3.2	132.0	23.0	55.1	20.7	158.2	91.9	97.1	49.7	455.1	3 275.7	**62.8 (82)**
Per capita	US$		10 119	8 892	8 126	13 008	11 020	10 155	9 538	10 633	3 505	9 523	5 120	6 208	9 693	8 721	9 190	7 183	13 333	2 055	4 137	11 029	14 930	1 041	8 072	13 969	**2 774 (82)**
At current prices using current PPP's[3]	Billion US$	1983	..	75.6	105.4	343.8	59.0	49.7	613.8	703.1	54.3	..	23.6	495.1	1 280.7	4.2	147.2	..	53.7	45.7	266.7	..	..	..	552.6	3 275.7	..
Per capita	US$		..	10 010	10 690	13 803	11 538	10 220	11 276	11 447	5 512	..	6 740	8 711	10 739	11 381	10 247	..	12 999	4 549	6 977	..	..	..	9 802	13 969	..
Average annual volume growth over previous 5 years	%	1983	2.2	2.1	1.1	1.3	1.4	4.1	1.5	1.2	1.0	0.9	2.3	1.4	4.1	0.0	0.3	1.9	2.8	2.8	1.0	1.7	1.6	2.3	0.8	1.1	..
Gross fixed capital formation (GFCF)	% of GDP	1983	21.4	22.2	16.1	19.4	16.3	24.6	19.6	20.8	20.5	23.0	22.7	18.0	28.4	23.2	18.2	23.1	25.1	28.9	18.8	18.7	23.3	18.7	16.5	16.8	**27.1 (82)**
of which: Machinery and equipment	% of GDP	1982	12.4 (81)	10.8	5.8	7.6	7.4	9.4	9.1	7.8	8.3	6.8	13.2 (81)	7.7	10.2	9.2 (80)	7.6	9.1 (81)	8.9	13.8 (81)	7.0 (81)	8.0	6.9	8.7 (77)	7.6	7.4	..
Residential construction	% of GDP	1982	4.8 (81)	3.5	3.4	3.5	3.5	6.3	5.7	6.1	4.8	5.0	6.7 (81)	5.3	6.0	5.5 (80)	5.2	4.0 (81)	4.7	7.8 (81)	5.5 (81)	4.3	16.2	2.7 (77)	2.2	2.9	..
Average annual volume growth over previous 5 years	%		0.7	–0.8	–4.6	0.2	–5.2	4.4	0.6	0.8	–1.8	–1.2	–0.3	0.9	2.6	–1.9	–3.5	4.0	0.5	1.8	–1.6	0.5	3.7	–1.2	–0.3	–0.2	..
Gross saving ratio[4]	% of GDP	1983	18.0	22.8	14.8	19.2	14.1	24.1	18.6	21.8	17.0	18.9	16.6	17.5	30.3	70.0	20.8	18.0	28.5	21.3	17.6	16.3	27.7	16.3	18.1	15.2	..
General government																											
Current expenditure on goods and services	% of GDP	1983	17.6	18.7	17.7	21.0	27.2	19.4	16.3	20.0	18.8	12.3	20.2	19.5	10.2	17.3	17.7	17.0	19.5	14.6	12.3	28.5	13.5	10.8	22.0	19.3	**15.8 (82)**
Current disbursements[5]	% of GDP	1983	32.8 (82)	45.5	53.5	43.0	58.2	36.1	48.2	44.4	38.3	27.6 (80)	48.3 (81)	51.5	28.1	45.7 (80)	58.3 (82)	..	45.9	37.4 (81)	31.8 (82)	61.7 (82)	30.8	..	44.3	36.9	..
Current receipts	% of GDP	1983	34.3 (82)	46.6	44.6	39.0	53.1	37.4	47.0	45.2	33.1	36.0 (80)	40.5 (81)	45.3	30.4	51.5 (80)	55.7 (82)	..	52.6	33.0 (81)	30.7 (82)	59.3 (82)	33.9	..	42.5	31.7	..
Net official development assistance	% of GNP	1983	10.5	10.3	5.2	7.3	5.2	9.4	6.6	9.2	8.0	3.7	7.5	6.9	15.7	57.3	10.3	13.8	14.0	17.0	7.2	4.3	17.5	10.9	6.0	2.2	..
Indicators of living standards																											
Private consumption per capita using current PPP's[3]	US$	1983	6 287*	5 716	6 669	7 858	5 900	5 359	7 110	6 287	3 570	6 024*	3 775	5 408	5 877	7 195	6 415	4 260*	5 893	2 936	4 690	5 728*	9 354*	769*	5 706	9 451	**1 426 (82)**
Passenger cars, per 1 000 inhabitants	Number	1983	..	306 (81)	325 (81)	428 (81)	272	288	349 (81)	402	94 (81)	405	225 (81)	325 (81)	209 (81)	398	321 (82)	446 (84)	334	128 (81)	228	361	370 (81)	15 (81)	283 (81)	537 (81)	**118**
Telephones, per 1 000 inhabitants	Number	1983	540	460	417	664	719	570	541	571	336	525	235	404	535	589 (81)	575	622	580	166	345	890	789	55	524	760 (82)	**111**
Television sets, per 1 000 inhabitants	Number	1983	..	300 (81)	293 (79)	466 (79)	370	370	292 (79)	362	147 (79)	282 (82)	223 (79)	231 (79)	245 (79)	335 (81)	303 (82)	..	318	122 (79)	253 (79)	390	312 (79)	..	331 (79)	635 (79)	**174 (82)**
Doctors, per 1 000 inhabitants	Number	1983	..	1.7 (82)	..	..	2.4 (82)	2.1 (82)	..	2.4	..	2.2 (82)	..	..	..	1.7	2.0	..	2.1	..	2.7 (82)	2.2 (82)	..	..	..	..	**1.5 (81)**
Infant mortality per 1 000 births	Number	1983	9.6	11.9	11.2	9.1	7.7	6.2	8.9	10.3	14.6	6.2	9.8	12.4	6.2	11.2	8.4	12.5	7.9	19.0	9.6 (82)	7.0	8.0	..	10.2	11.2	**29.9 (82)**
Wages and prices (average annual increase over previous 5 years)																											
Hourly earnings in manufacturing	%	1984	14.9 (83)	5.7	6.9	8.5	8.4	11.4 (83)	13.8 (83)	4.4	25.4 (83)	..	15.7 (83)	17.9	5.3	..	3.6	..	9.9	..	18.4 (83)	8.9	5.1 (83)	..	11.9	6.5	..
Consumer prices	%	1984	9.0	5.5	7.4	8.7	9.5	9.6	11.1	4.5	21.8	54.0	14.9	16.1	3.9	7.6	5.0	12.3	10.1	22.7	13.6	10.2	4.4	46.0	9.5	7.4	**32.3**
Foreign trade																											
Exports of goods, fob*	Million US$	1984	23 856	15 720	51 840 (83)[7]	86 868	15 912	13 476	93 120	171 012	4 464 (83)	768	9 672	72 780 (83)	169 740	..[8]	65 652	5 281 (83)	18 888	5 172	23 508	29 316	25 812	7 068	94 224	217 884	**8 700**
as % of GDP	%		15.3	23.4	64.7	26.8	28.2	27.3	17.9	26.2	12.9	34.0	53.9	20.6	14.7	..	49.7	23.0	34.3	25.0	14.9	31.9	26.6	14.2	20.7	6.7	**13.8**
average annual increase over previous 5 years	%		5.1	0.4	3.0	9.2	1.7	3.9	–1.0	–0.1	6.0	–0.6	6.2	5.4	10.5	..	0.6	2.3	7.0	8.2	5.3	1.3	–0.5	23.4	0.7	3.7	**6.9**
Imports of goods, cif*	Million US$	1984	23 436	19 596	54 096 (83)[7]	74 004	16 584	12 384	103 440	152 016	9 636 (83)	864	9 612	80 328 (83)	136 140	..	61 980	5 333 (83)	13 860	7 752	28 800	26 340	29 376	10 680	105 180	325 728	**10 200**
as % of GDP	%		15.1	29.2	67.5	22.8	29.4	25.1	19.9	23.3	27.9	38.2	53.5	22.8	11.8	..	47.0	23.2	25.2	37.5	18.2	28.7	30.2	21.5	23.1	**9.9**	**16.2**
average annual increase over previous 5 years	%		7.2	–0.6	2.3	6.7	–2.1	1.8	–0.7	–0.7	–0.2	0.9	–0.5	7.3	4.2	..	–1.6	3.2	0.2	3.5	2.6	–1.6	0.0	13.4	0.5	9.5	**–3.8**
Total official reserves[6]	Million SDR's	1984	7 869	5 070	5 853[7]	3 246	3 127	2 854	24 227	44 282	1 117	132	2 241	23 527	27 811	..	10 961	1 995	9 596	1 237	12 709	4 135	18 520	1 418	10 295	33 517	**1 247**
As ratio of average monthly imports of goods	Ratio		3.9	3.0	1.3	0.5	2.2	2.7	2.8	3.4	1.4	1.8	2.7	3.4	2.4	..	2.1	0.4	8.1	1.9	5.2	1.8	7.4	1.6	1.2	1.2	**1.4**

* 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.
7. Including Luxembourg.
8. Included in Belgium.

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

Economics and Statistics Department

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