CENTRAL BANK OF ICELAND

THE ECONOMY OF ICELAND

SEÐLABANKI ÍSLANDS

November
2003

The Economy of Iceland
November 2003
Published by the Central Bank of Iceland, Kalkofnsvegur 1, 150 Reykjavík, Iceland
Tel: (+354) 569 9600, fax: (+354) 569 9605
E-mail: publish@centbk.is
Website: www.sedlabanki.is
ISSN 1024-0039

Republic of Iceland

People	
Population	288,471 (December 31, 2002)
Capital	Reykjavík, population 112,554 (December 31, 2002)
Language	Icelandic; belongs to the Nordic group of Germanic languages
Religion	Evangelical Lutheran (86.6%)
Life expectancy	Females: 82.6 years, Males: 78.4 years
Governmental system	
Government	Constitutional republic
Suffrage	Universal, over 18 years of age; proportional representation
Legislature	Althingi with 63 members
Election term	Four years, last election May 10th 2003
Economy	
Monetary unit	Króna (plural: krónur); currency code: ISK
Gross domestic product	€9.1 billion (779 billion krónur, US$ 8.5 billion) in 2002
International trade	Exports of goods and services 40% and imports of goods and services 38% of GDP in 2002
Per capita GDP	€26.4 thousand in 2002 (2.8 million krónur, US$ 29.6 thousand) (in terms of PPP)
Land	
Geographic size	103,000 km^2 (39,768 sq.m.)
Highest point	2,119 m (6,952 ft)
Exclusive economic zone	200 nautical miles (758,000 km^2 / 292,680 sq.m.)
Climate	Cool temperate oceanic; highly changeable, influenced by the warm Gulf Stream and Arctic currents

Republic of Iceland credit ratings

	Foreign currency		Domestic currency	
	Long-term	Short-term	Long-term	Short-term
Moody's Investors Service	Aaa	P-1	Aaa	P-1
Standard & Poor's	A+	A-1+	AA+	A-1+
Fitch	AA-	F1+	AAA	.

Contents[1]

Introduction 9

1. Economic development and prospects 11
   - Fram stagnation to overheating 11
   - Period of adjustment under new monetary policy framework 12
   - Fiscal surplus 13
   - The most extensive investments in Icelandic history ahead 14

2. Country and people 16
   - Geography 16
   - People 16
   - Society and the welfare state 17
   - Political structure 18
   - External relations 18

3. Economic history 20
   - A century of high but volatile growth 20
   - From liberal trade to a controlled economy and on to European integration 21
   - Episodes of inflation and disinflation 21
   - Towards a market-based approach to policy 21

4. Structure of the economy 23
   - Size and income level 23
   - Composition of output and expenditures 24
   - Foreign trade 25
   - Marine sector 26
   - Manufacturing and power-intensive industries 28
   - Energy 29
   - Agriculture 31
   - Transport and communications 31
   - Service industries 32
   - The labour market 33
   - The pension system 34
   - The environment 36

5. The financial system 37
   - Overview and recent developments 37
   - Capital movements 38
   - Iceland Stock Exchange and the Icelandic Securities Depository 38
   - The bond market 39
   - The money market 40
   - The equity market 40
   - The foreign exchange market 41
   - Credit institutions 41
   - Securities firms and brokerages 43
   - Insurance companies 44
   - Financial stability and the Central Bank 44
   - Supervision and deposit insurance 44

6. The public sector 46
   - The size and nature of the government sector 46
   - General government sector finances 46
   - Division of responsibilities 46
   - Central government finances 47
   - Local government finances 50
   - The tax system 51
   - Divesting government holdings in the business sector 52
   - Government guarantees 53

7. Monetary policy 55
   - The Central Bank 55
   - Inflation targeting 56
   - Monetary instruments 57

8. Foreign debt 58
   - External debt 58
   - Private debt 59
   - The household balance sheet 59
   - Corporate balance sheets 60
   - Other explanatory factors 61
   - Treasury foreign debt 62
   - Foreign exchange reserves 63
   - Credit rating history 63

9. Appendix 65

1. This publication uses information available on November 19, 2003.

Tables

Table 1.1 The Icelandic economy 11
Table 2.1 Iceland's membership of international organisations 19
Table 4.1 Output and expenditure 24
Table 5.1 Financial market liberalisation in Iceland: some important steps 37
Table 5.2 Ratings for Icelandic commercial banks 42
Table 6.1 Main features of the tax system in Iceland 51
Table 6.2 Highlights of recent and prospective privatisation 53
Table 6.3 Treasury guaranties at the end of 2002 54
Table 7.1 Monetary policy arrangements in Iceland since 1970 56
Table 8.1 Debt of households and non-financial corporations 60
Table 8.2 Republic of Iceland foreign bond issues 1995-2003 63
Table 8.3 Ratings for Icelandic treasury bonds 64

Charts

Chart 1.1 Economic growth and current account balance 1990-2005 11
Chart 1.2 Growth of credit and monetary aggregates, Q1 1997-Q3 2003 12
Chart 1.3 CPI inflation, wage growth and exchange rate of the króna, January 1997-Oktober 2003 12
Chart 1.4 The effective exchange rate of the króna, January 1997-Oktober 2003 13
Chart 1.5 Treasury and public sector financial balance 1990-2004 13
Chart 1.6 Central Bank repo rate and money market interest rates, January 1998-Oktober 2003 14
Chart 1.7 Central Bank inflation forecast in November 2003 14
Chart 2.1 Age structure of the population in selected countries 2002 17
Chart 3.1 Growth of GDP 1945-2002 20
Chart 3.2 CPI inflation 1940-2002 21
Chart 3.3 Real effective exchange rate of the króna 1960-2002 22
Chart 3.4 Real yield and broad money 1960-2002 22
Chart 4.1 GNI per capita in OECD countries 2002 23
Chart 4.2 Breakdown of GDP by industry in 2002 24
Chart 4.3 Degree of openness 1973-2002 26
Chart 4.4 Exports of goods and services 1980-2002 26
Chart 4.5 Geographical division of merchandise trade in 2002 26
Chart 4.6a Merchandise exports by category in 2002 27
Chart 4.6b Merchandise imports by category in 2002 27
Chart 4.7 Regional division of trade 1960-2002 27
Chart 4.8 Fish catch by Icelandic vessels 1970-2002 28
Chart 4.9 The value of marine products for export 2002 28
Chart 4.10 Composition of manufacturing exports and share in total merchandised exports 1988-2002 29
Chart 4.11 Electricity production in Iceland 1960-2005 30
Chart 4.12 Primary energy supply in Iceland 1960-2002 30
Chart 4.13 Icelandic software companies' export earnings 1990-2002 32

Chart 4.14 Number of foreign tourists and revenues from tourism 1990-2002 32
Chart 4.15 Labour force participation rate in Iceland and OECD countries 1991-2002 33
Chart 4.16 Net assets of pension funds 1970-2002 35
Chart 5.1 Foreign direct investment and portfolio capital owned abroad by residents 1995-2002 38
Chart 5.2 The Icelandic bond market at the end of 2002 39
Chart 5.3 Equity market: monthly trade volume and prices at month-end 1996-2003 40
Chart 5.4 Volume traded in the interbank market for foreign exchange 1993-2003 41
Chart 5.5 Market value and total assets of the three largest commercial banks as of June 2003 41
Chart 6.1 General government finances 1980-2002 47
Chart 6.2 General government net debt 1980-2002 47
Chart 6.3 General government total expenditure in 2002 48
Chart 6.4 Treasury revenues by source 2002 48
Chart 6.5 Central government expenditure by function 2002 48
Chart 6.6 Central government fixed investment and capital transfers 1980-2002 49
Chart 6.7 Central government debt 1990-2002 49
Chart 6.8 Central government revenue 1980-2002 49
Chart 6.9 Local government expeniditures by function 2000 50
Chart 7.1 Central Bank of Iceland interest rate corridor, March 3, 1998 - September 30, 2003 55
Chart 8.1 International investment position of selected advanced countries 2002 58
Chart 8.2 General government gross debt in selected advanced countries 2002 58
Chart 8.3 Estimated external debt by sector 1997-2002 59
Chart 8.4 Private sector debt 1970-2002 59
Chart 8.5 Maturity profile of Treasury external long-term debt 62

Appendix

Table A1 Economic development 65
Table A2 Structure of the economy 66
Table A3 Structure of foreign trade 67
Table A4 National accounts overview 70
Table A5 Financial sector indicators 70
Table A6 Government sector indicators 71
Table A7 Balance of payments 72
Table A8 Projected external debt service 74

Central Bank of Iceland publications in English

Annual Report
Monetary Bulletin, quarterly publication
The Economy of Iceland
Central Bank of Iceland Working Papers

These publications are available on the Central Bank website. Also available on the website are Central Bank statistics (updated weekly) and Economic Indicators, a monthly snapshot of the Icelandic economy in charts and tables.

Selected useful websites

Central Bank of Iceland	www.sedlabanki.is
Parliament of Iceland (Althingi)	www.althingi.is
Government of Iceland	www.government.is
Statistics Iceland	www.statice.is
National Economic Institute of Iceland (NEI)[1]	www.ths.is
Iceland Stock Exchange	www.icex.is
National Debt Management Agency	www.bonds.is
Trade Council of Iceland	www.icetrade.is
National Association of Pension Funds	www.ll.is
Invest in Iceland Agency	www.invest.is
The National Power Company	www.lv.is
Financial Supervisory Authority	www.fme.is

1. The National Economic Institute (NEI) was closed down on July 1, 2002. This website contains material produced by the NEI up to that date and directs visitors to the appropriate locations of the institutions that have taken over the tasks previously performed by the NEI.

Introduction

The Economy of Iceland has been published by the Central Bank of Iceland since 1987. It is mainly intended for an international readership. This includes international institutions which deal with Icelandic economic matters on a regular basis, rating agencies, financial institutions, foreign investors, embassies and more generally everyone who is interested to find out more about the Icelandic economy. We also hope that Icelandic readers will find this survey useful. It is published annually.

This publication focuses on the structure of the Icelandic economy. It is intended to serve as background material for understanding the evolution of the economy, but does not provide a detailed account of recent developments. A more up-to-date analysis of recent developments, particularly from a monetary policy point of view, is provided in the Central Bank's quarterly *Monetary Bulletin*. The Bank's Annual Report also gives an overview of economic developments each year.

The outline of this booklet is as follows: Chapter 1 provides a short summary of recent economic developments. Chapter 2 presents basic facts about Icelandic geography, population and society. Chapter 3 describes how Iceland evolved from one of the poorest economies in Europe in the beginning of the 20th century to become one of the more affluent at the end. It explains sources of volatility and growth and how, over the past two decades, the emergence of a modern market economy has served to overcome the legacy of high inflation. Chapter 4 deals with the structure of the economy. It discusses size and income levels, the composition of GDP, foreign trade, main industries and the labour market. It also describes the three pillars of the Icelandic pension system. Chapter 5 provides an account of the financial system, asset markets, institutions and supervision. Chapter 6 surveys the public sector, including its size, division of tasks, expenditure structure and the tax system. The recent privatisation programme is also discussed. Chapter 7 addresses monetary policy. It covers the framework of monetary policy, its instruments and the role of the Central Bank. Chapter 8 discusses national and public foreign debt, the structure and management of foreign debt of the Republic of Iceland, foreign exchange reserves and credit ratings. A number of tables are provided in an appendix.

We are constantly making efforts to improve this publication. Hence, we would be very grateful for any comments and suggestions that might increase the usefulness of this booklet. If you feel that important information is missing and should be added, or see other scope for improving this publication, please e-mail your suggestions to: *publish@centbk.is*

1. Economic development and prospects

From stagnation to overheating

From the late 1980s to mid 1990s the Icelandic economy was characterised by slow or negative output growth. This was mainly due to a decline in fish catches, in conjunction with a downturn in the global economy and restrictive economic policies aimed at curbing inflation and restoring the fiscal balance to a more sustainable long-term position. Policies of market liberalisation, fiscal consolidation, privatisation and other structural reforms were implemented during this period, culminating in 1994 in membership of the European Economic Area (EEA) by which Iceland was integrated into the internal market of the European Union (EU).

Economic growth started to gain momentum by the middle of the 1990s, rekindled by replenishing fish stocks, a global economic recovery, a rise in exports and a new wave of investment in the aluminium sector.

During the second half of the 1990s Iceland experienced one of the highest growth rates of

Table 1.1 The Icelandic economy

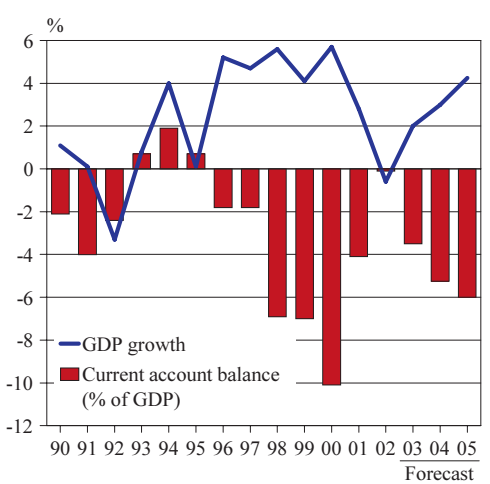
Growth of output and expenditure

% change in volume unless stated otherwise	*Preliminary 2002*	*Forecast[1] 2003*	*2004*	*2005*
Private consumption	-1.1	5½	4¼	5
Public consumption	4.0	3½	1	2
Gross fixed investment	-14.8	6¾	8	8½
National expenditure	-2.9	5¼	4¼	5
Exports of goods and services	3.7	0	4	4¾
Imports of goods and services	-2.3	8½	7½	7
Gross domestic product	-0.6	2	3	4¼
Current account balance as % of GDP	-0.1	-3½	-5¼	-6

1. Central Bank of Iceland forecast, November 2003.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 1.1

Economic growth and current account balance 1990-2005



Sources: Statistics Iceland, Central Bank of Iceland.

GDP among OECD countries. While initially the upswing was led by rising exports and investment in the export sector, it became increasingly characterised by booming consumption and investment in the non-traded goods sector, which was to a large extent financed by foreign credit.

In 1998 signs of overheating became increasingly visible. Credit growth had become quite excessive and the current account deficit clearly unsustainable, peaking at 10% of GDP in 2000. A considerable shortage of labour, with unemployment around 1.4% in 1999, resulted in wage growth well in excess of productivity growth. Inflation took off and reached 6% in the spring of 2000.

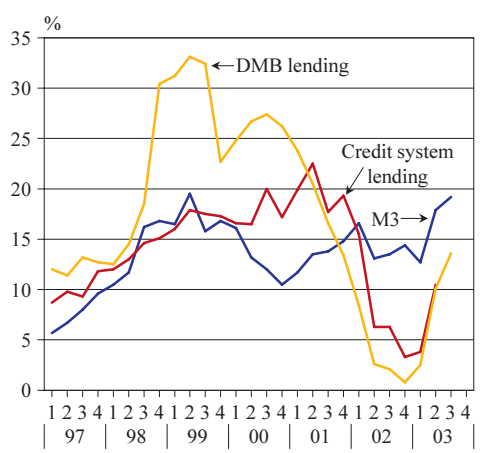
Period of adjustment under new monetary policy framework

These imbalances undermined the short- to medium-term growth prospects of the economy and were the underlying reason for a sharp depreciation of the króna in the latter half of 2000 and in 2001. During this period the long-standing policy of using the exchange rate as an intermediate target for monetary policy came under severe strain. Exchange rate targeting was abandoned at the end of March 2001, when an inflation target was adopted and the króna was floated (see Chapter 7). In the short term, however, the inflation rate climbed rapidly, largely as a result of the decline in the króna, and peaked at 9.4 per cent in January 2002.

The Central Bank responded to the imbalances in the economy by tightening the monetary stance as early as 1997 and a tight stance was maintained until the spring of 2002, by which time inflation was clearly on a declining trend. Within a year, inflation was reduced from nearly 10% to the target of 2½%. As inflation declined and prospects for attaining the inflation target improved, monetary policy was eased. Since March 2002 the Central Bank

Chart 1.2

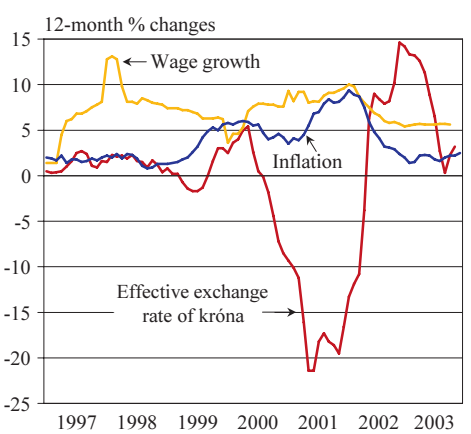
Growth of credit and monetary aggregates
1997/Q1 - 2003/Q3



Source: Central Bank of Iceland.

Chart 1.3

CPI inflation, wage growth and exchange rate of the króna, January 1997 - October 2003



Sources: Statistics Iceland, Central Bank of Iceland.

has lowered its policy rate 11 times and towards the end of 2003 it stands at 5.3%. Inflation was below the Central Bank's inflation target until November 2003, when the target was hit.

With the sharp depreciation of the króna, the economy underwent rapid adjustment. Investment as well as domestic demand fell, increasing unemployment slowed down wage drift and wage growth came to a halt. Imports contracted sharply at the same time as exports rose.

As a result, the current account deficit disappeared in the space of two years. The turnaround in the current account was unusually swift and ranks with the greatest current account reversals among developed countries in recent decades. With the current account back in balance, the króna, after reaching a trough in November 2001, quickly recovered what had been lost since the spring of that year, contributing to rapid disinflation.

Fiscal surplus

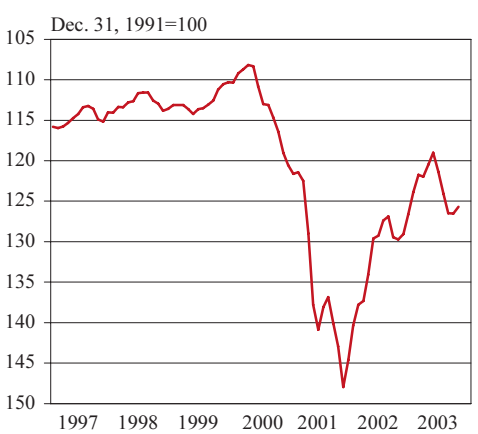
In 1993-1994 the general government ran a hefty deficit, partly reflecting the recession. This was followed by a period of fiscal consolidation in 1996-1997. During the demand-led boom of 1998-2000 the Treasury ran healthy surpluses, which outweighed stubborn deficits at the local government level and kept the public sector as a whole in surplus by around 2.5% of GDP. With demand contracting in 2001-2002, revenues from taxes on imports and consumption weakened and the surpluses vanished.

In 2003 the Treasury deficit is heading towards 1% of GDP, part of which is because of spending decisions designed to boost the economy. Budget proposals for 2004 contain significant spending cuts, which should return the public sector as a whole to surplus in 2004.

The budget proposals are accompanied by a medium-term programme for 2005-2007 which states that real growth of central gov-

Chart 1.4

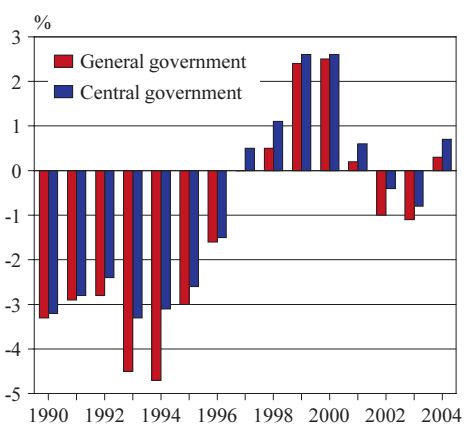
The effective exchange rate of the króna, January 1997 - October 2003



Source: Central Bank of Iceland.

Chart 1.5

Treasury and public sector financial balance as % of GDP 1990-2004



Sources: Statistics Iceland 1990-2002, Treasury forecast for 2003 and budget proposal for 2004 and 2005.

ernment public consumption will be kept under 2% and the real increase in current transfers around 2½%, both significantly below recent trends and growth forecasts for GDP. Together with cuts in government investment, this restraint is designed to create scope for tax cuts adding up to almost 2% of GDP towards the end of the period. Details are as yet unspecified but the main targets are taxes on personal income and net wealth as well as value-added tax. Although local governments remain in deficit, their outlook is thought to be improving.

The most extensive investments in Icelandic history ahead

On average economic growth in the last 10 years was 3.2 per cent. The prolonged growth phase of the late 1990s was followed by a modest contraction in GDP in 2002. Signs of economic recovery have become increasingly visible in 2003. In November the Central Bank forecast GDP growth of 2% in 2003, 3% in 2004 and 4¼% in 2005.

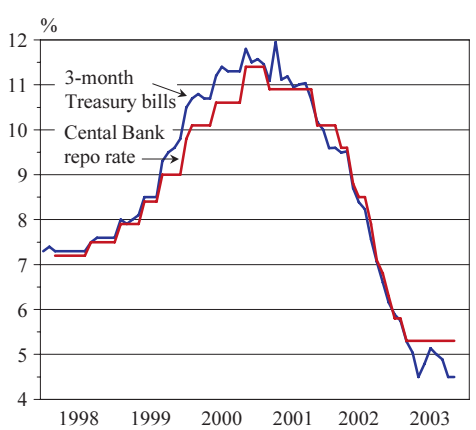
The years ahead will be marked by large-scale investment in the aluminium sector with the Alcoa smelter and a related power plant, which commenced in 2003 and will continue until 2008. The long-term impact will be to strengthen the export base by increasing the annual production capacity of aluminium by more than 120% from the 2002 figure, increasing the share of aluminium in total exports from 20% to 34%. No final decision has been taken on plans for an expansion of the Norðurál aluminium smelter which will, if realised, call for additional power plant investment. With the Norðurál expansion the annual production capacity of alminium would increase by 155% and aluminium's share in export to 37%.

Relative to the size of the Icelandic economy, the recently launched project is very large. In economic terms the investment will amount to 22% of one year's GDP. Construction activ-

Chart 1.6

Central Bank repo rate and money market interest rates January 1998 - October 2003

At end of month

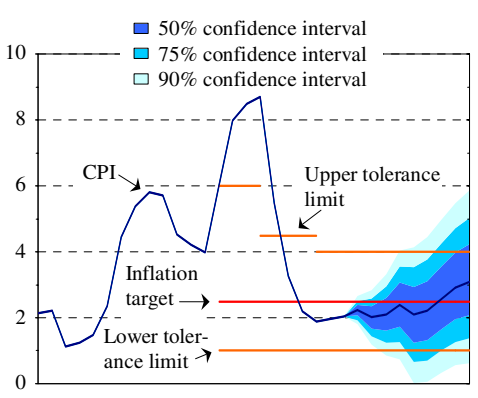


Source: Central Bank of Iceland.

Chart 1.7

Central Bank inflation forecast

Forecast in November 2003, for the period 2003/Q4 - 2005/Q4



Source: Central Bank of Iceland.

ity will peak 2006, when some 37% of the investment will be made. In 2006 investment will equal 7¾% of GDP and total labour demand will amount to 1.3% of Iceland's estimated labour force.

A project of this scope will be accompanied by a considerable widening of the current account deficit, mostly due to imports of capital equipment but also through induced demand. The Central Bank predicts in its November forecast that the current account deficit will reach 6% of GDP in 2005.

The temporary impact of construction activities will call for sound economic policies. Studies by the Central Bank of Iceland show that it will be possible to maintain stability and keep inflation close to the Bank's target through a mix of internal economic adjustment and monetary and fiscal policy measures. The exchange rate appreciated considerably in the first half of 2003, helping the economy to absorb the pending rise in investment. Fiscal measures to restrain public sector spending and investment have been proposed. The Central Bank will aim to keep monetary policy sufficiently tight to keep inflation under control during the coming years of extensive economic activity.

2. Country and people

Geography

Iceland is located in the North Atlantic between Norway, Scotland and Greenland. It is the second-largest island in Europe and the third largest in the Atlantic Ocean, with a land area of some 103 thousand square kilometres, a coastline of 4,970 kilometres and an exclusive 200-nautical-mile economic zone extending over 758 thousand square kilometres in the surrounding waters.

Iceland enjoys a warmer climate than its northerly location would indicate because a part of the Gulf Stream flows around the southern and western coasts of the country. In Reykjavík, the capital, the average temperature is nearly 11°C in July and just below zero in January.

Iceland is mostly mountainous and of volcanic origin, with the highest peak reaching 2,119 metres. Lowlands stretch from the coast towards the interior, mainly in the south and the west. Several glaciers, one of them the largest in Europe, distinguish the landscape. The coasts are rocky and of irregular outline, with numerous fjords and inlets, except for the south where there are sandy beaches with no natural harbours. Only around 20% of the total land area is classified as arable land, most of it located in the southern and western part of the country and several fertile valleys stretching from the coast.

Iceland is endowed with abundant natural resources. These include the fishing grounds around the island, within and outside the country's exclusive 200-nautical miles economic zone. Furthermore, Iceland has abundant hydroelectric and geothermal energy resources, only a fraction of which has been harnessed.

With only 2.8 inhabitants per square kilometre, Iceland is one of the least densely populated countries in Europe. On December 31, 2002, the population of Iceland was 288,471. The annual rate of population growth 1992-2002 was 0.9%. Around 62% of the population lives in the capital city of Reykjavík and its surrounding municipalities. The largest town outside the capital area is Akureyri, in the north, with a population of 15,840. Most of the remainder live in small towns along the coast.

People

Iceland was settled in the ninth century. The majority of the settlers were of Norse origin, with a smaller Celtic element. A general legislative and judicial assembly, the Althingi, was established in 930 and a uniform code of laws for the country was established at the same time. In 1262, Iceland concluded a treaty establishing a union with the Norwegian monarchy. When the Danish and Norwegian

monarchies were united in 1380, Iceland came under Danish rule, which lasted for more than five hundred years. Iceland was granted a new constitution in 1874 and obtained home rule in 1904. With the Act of Union in 1918, Iceland became a sovereign state in a monarchical union with Denmark. In 1944, Iceland terminated this union with Denmark and founded a Republic. The native language, Icelandic, belongs to the Nordic group of the Germanic languages.

Iceland has experienced substantial net immigration in recent years, causing the share of foreign citizens to rise to 3.5% of the total population at the end of 2002. Compared to most other developed countries this ratio still remains low.

As in other advanced countries the population of Iceland is ageing, but at a relatively slower pace than in most OECD countries. In 2002, notwithstanding high life expectancy, the ratio of the total population aged over 65 to the population of working age was lower in only six OECD countries: Ireland, Korea, Mexico, New Zealand, the Slovak Republic and Turkey.

Society and the welfare state

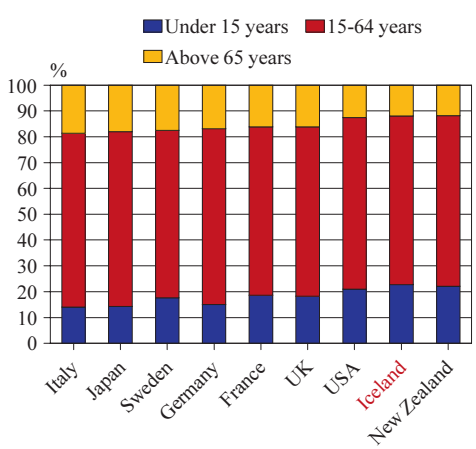
Iceland is a modern welfare state, which guarantees access by its citizens to universal health care, education and a high degree of social security. Spending on health, education, social security, welfare and other social affairs amounted to a quarter of GDP in 2002.

Life expectancy which is among the highest in the world and one of the lowest infant mortality rates (1.7 per 1000 live births in 2002) testify to the advanced status of health care in Iceland, both primary health care and hospitals. The Icelandic health care system is a tax-financed universal system for all persons who have had legal residence in Iceland for more than 6 months. Health care services are provided mostly free of charge, although user charges have been on the rise. The main exception is dental health care, where adult patients are charged the full cost of service, but children under 17 years of age have most of the cost refunded. In 2002, 14% of total employment was in health care and social work, and expenditures on health care amounted to 9.9% of GDP.

The standard of education is high and public education is compulsory between the ages of six and sixteen. A good command of English and the Scandinavian languages is widespread. Education is offered free of charge or at a low fee at three levels. First, there are 10 years of compulsory education at the primary level (age 6-16). Secondly, there are 4 years at the upper secondary level, which provides general education and vocational training in a wide range of fields. Finally, higher education is offered at

Chart 2.1

Age structure of the population in selected countries 2002[1]



1. Ranked by share of population 65 and over.
Source: OECD.

several universities. In 2002, 17.9% of the employed labour force held a university degree. Roughly one out of every four university degrees held by Icelanders is obtained in other countries. As in most OECD countries, university enrolment has increased substantially in recent years, to 64% in 2001, compared to 49% in OECD countries on average. The ratio of pre-school enrolment is also one of the highest among OECD countries.

Political structure

The present constitution was adopted on June 17, 1944 when the Republic was established. Iceland has a parliamentary system of government. Legislative power is vested in the parliament (Althingi), and executive power in a cabinet headed by the Prime Minister. The government has to be supported by a majority of parliament in order to remain in power. The 63 members of the Althingi are elected from six constituencies (before the 2003 elections there were eight constituencies) on the basis of proportional representation, for a term of four years. A parliamentary bill becomes law when it is passed by the Althingi and signed by the President. The President is the head of state and is elected for a term of four years by a direct vote of the electorate.

Iceland has a tradition of political stability. Since Iceland gained autonomy from Denmark in 1918, governments have normally been formed by a coalition of two or more political parties that have held a majority in parliament. Since 1995 there have been successive coalition governments of the Independence Party and the Progressive Party.

The results of the 2003 elections were as follows: The Independence Party obtained 33.7% of votes and 22 seats, the Social Alliance 31.0% and 20 seats, the Progressive Party 17.7% and 12 seats, the Left-Green Movement 8.8% and 5 seats, and the Liberal Party 7.4% and 4 seats. Others obtained 1.5% and no seats with 1.2% of ballots void or blank. The next general election is to be held in 2007.

External relations

Iceland has participated actively in international cooperation. Iceland belongs to a group of Nordic countries that includes Denmark, Sweden, Norway and Finland – as well as Greenland and the Faroe Islands. The Nordic countries have established wide-ranging cooperation in a variety of fields, including economic affairs and international representation in which the Baltic States have increasingly been taking an active part. Iceland is a member of the Nordic Council and specialised institutions such as the Nordic Investment Bank.

Iceland became a member of the United Nations in 1946 and is an active participant in most of its affiliated agencies. Iceland is a founding member of the Bretton Woods institutions that were established in 1945, the International Monetary Fund (IMF) and the International Bank for Reconstruction and Development (World Bank). Iceland is one of the original members of the Organisation for Economic Cooperation and Development (OECD) and of the European Bank for Reconstruction and Development (EBRD). It joined the Council of Europe in 1950 and has participated in the Organisation for Security and Cooperation in Europe since it was initiated in 1975.

In 1964, Iceland became a party to the General Agreement on Tariffs and Trade (GATT), the predecessor to the World Trade Organisation (WTO). Iceland joined the European Free Trade Association (EFTA) in

1970 and entered into a free-trade agreement with the European Economic Community in 1972. In May 1992, the member countries of EFTA and the European Union signed an agreement to establish a zone for the free movement of goods, services, capital and persons, the European Economic Area (EEA), which took effect on January 1, 1994.

Iceland is a founding member of the North Atlantic Treaty Organisation (NATO), established in 1949. A defence treaty with the United States was concluded in 1951. A NATO military base, staffed by United States military personnel, is operated at Keflavík in the southwest of Iceland.

Table 2.1 Iceland's membership of international organisations

	Year of Association
International Monetary Fund (IMF)	1945
International Bank for Reconstruction and Development (World Bank)	1945
United Nations (UN)	1946
North Atlantic Treaty Organization (NATO)	1949
Organisation for Economic Cooperation and Development (OECD)	1949
Council of Europe	1950
Nordic Council	1952
International Finance Corporation (IFC)	1956
International Development Association (IDA)	1961
General Agreement on Tariffs and Trade (GATT)	1964
European Free Trade Association (EFTA)	1970
Organisation for Security and Cooperation in Europe (OSCE)	1975
European Bank for Reconstruction and Development (EBRD)	1990
Western European Union (WEU)	1992
European Economic Area (EEA)	1994
World Trade Organization (WTO)	1995

3. Economic history

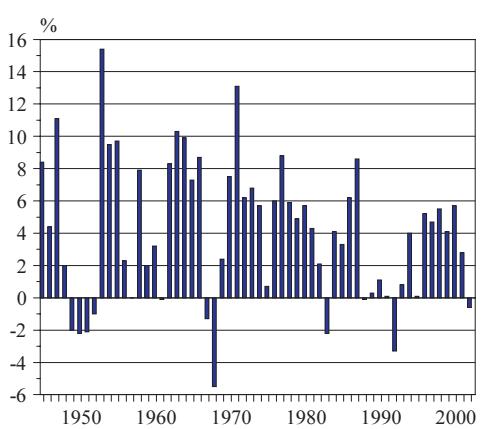
A century of high but volatile growth

In the course of the 20th century Iceland was transformed from one of Europe's poorest economies, with almost 2/3 of the labour force employed in agriculture, to a prosperous modern economy employing 2/3 of its labour force in services. For most of the century economic growth was led by the fisheries. Consequently, swings in the fish catch and export prices of marine products were the leading source of fluctuations in output growth.

Chart 3.1

Growth of GDP 1945-2002

Annual percent changes



Sources: Statistics Iceland.

By international comparison, post-WWII economic growth has been both significantly higher and more volatile than in other OECD countries. The average annual growth rate of GDP from 1945 to 2002 was about 4%. Studies have shown that the Icelandic business cycle has been largely independent of the business cycle in other industrialised countries. This can be explained by the natural resource-based export sector and external supply shocks. However, the volatility of growth declined markedly towards the end of the century, which may be attributed to the rising share of the services sector, diversification of exports and better economic policies.

Volatility may also be attributed to deficient economic policies and structural rigidities. Like most other advanced economies, Iceland became highly regulated towards the middle of 20th century and only started to liberalise markedly in the 1960s. Gradual deregulation culminated in membership of the European Economic Area (EEA) in 1994 and liberalisation of the bulk of cross-border capital flows by 1995. It was only during the final decade of the 20th century that all the main pillars of a modern market economy were essentially in place.

From liberal trade to a controlled economy and on to European integration

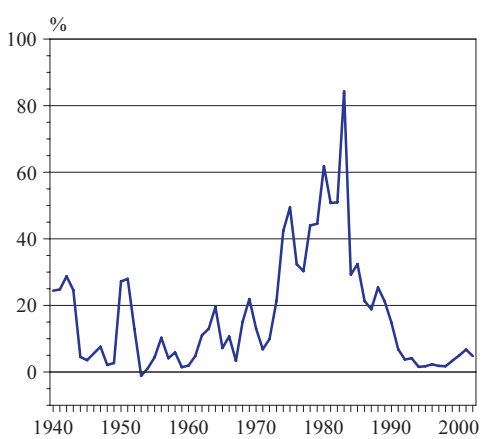
The first three decades of the last century were characterised by rapid growth, interrupted only by WWI. This growth occurred in the context of fairly liberal economic policies. In the wake of the depression and WWII, however, Iceland, like many other countries, became entangled in a web of trade barriers, capital controls and a complex system of multiple exchange rates which led to serious distortion of the price mechanism and misalignment of real exchange rates.

A radical departure from these policies occurred in 1960, when barriers to trade were lowered considerably in conjunction with a large devaluation of the króna, leading to more efficient allocation of resources. Trade barriers were further lowered when Iceland became a member of the European Free Trade Association (EFTA) in 1971 and further still when it became a founding member of the EEA in 1994, which integrated Iceland and other EFTA member countries (except Switzerland) into the internal market of the European Union (EU).

Chart 3.2

CPI inflation 1940-2002

Percent change between annual averages



Source: Statistics Iceland.

Episodes of inflation and disinflation

A distinguishing feature of Iceland's economic development in the post-WWII era has been the high and variable rate of inflation. Inflation surged in the 1970s, reaching a peak in 1983, when the 12-month rate briefly exceeded 100%. The inflationary tendencies can be explained by the combination of structural features of the economy, which generally make attaining price stability a difficult task, and excessively accommodative policies.

While Iceland has a history of one of the highest inflation rates among OECD countries, it also provides one of the more remarkable examples of a successful disinflation strategy. Through a combination of less accommodative monetary and exchange rate policies, incomes policies that managed to reach a wide-ranging consensus on the need to reduce inflation, and broad-based structural reforms, inflation was brought down in the early 1990s to broadly the rate prevailing in major trading partner countries.

Towards a market-based approach to policy

Over the past two decades, significant structural reforms have taken place in the Icelandic economy and financial markets. These reforms have aimed to enhance allocative efficiency by increasing the role of market forces through deregulation and integration into the world economy. This process was accelerated by the need to align the Icelandic legislative and regulatory framework to those prevailing in the European Union when Iceland became one of the founding members of the EEA in 1994.

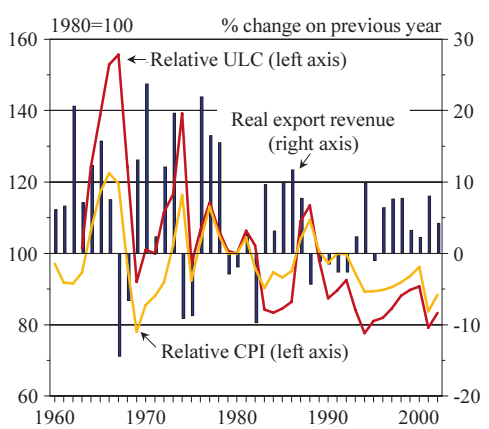
Through its EEA membership Iceland became a part of the internal market of the EU, except in a few specific areas.

Government interference with the allocation of credit was gradually reduced following the deregulation of interest rates. A legacy of the regulated economy of the post-WWII years was that substantial segments of the economy became owned by either central or local governments. Many of these have been privatised in recent years, with the formerly state-owned banks being the latest addition. The energy sector, housing finance and large parts of the telecommunication sector are still publicly owned, however. An exception to the trend towards liberalisation has been agriculture, which is still widely supported by government subsidies, price intervention and a system of production quotas.

The emergence of a money market in the early 1990s and the establishment of an interbank market for foreign exchange in 1993 laid the foundation for modern monetary policy implementation. Liberalisation of capital movements also made monetary and exchange rate policies in some respects more challenging. In order to cope with those challenges, exchange rate policy became gradually more flexible, until the króna was officially floated in March 2001, under a new framework of monetary policies based on inflation targeting. By the turn of the century Iceland had become an advanced economy, thoroughly integrated into the European market, with most of the paraphernalia of a modern market economy.

Chart 3.3

Real effective exchange rate of the króna[1] and real export revenue 1960-2002

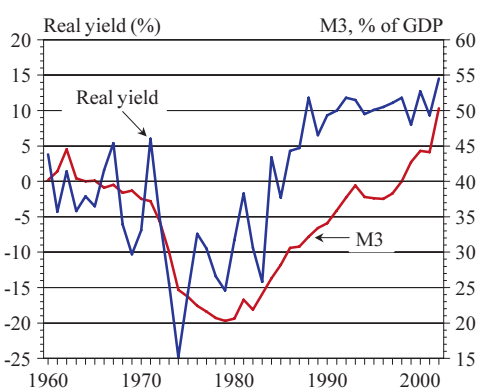


1. Based on relative consumer prices (CPI) or relative unit labour cost (ULC). *Sources:* Statistics Iceland, Central Bank of Iceland.

Chart 3.4

Real yield and broad money 1960-2002

Real yield on non-indexed bank loans and M3 as percent of GDP



Latest data are preliminary.
Source: Central Bank of Iceland.

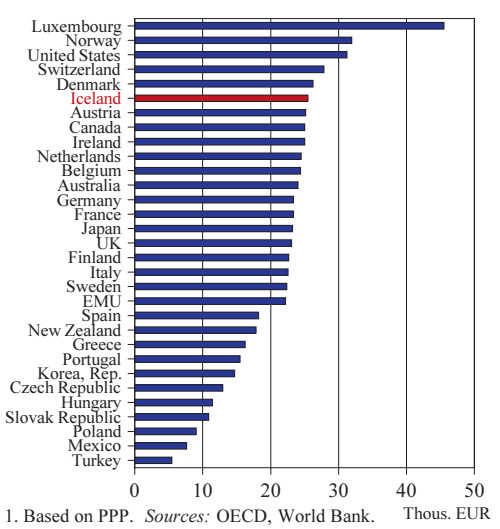
4. Structure of the economy

Size and income level

The Icelandic economy is the smallest within the OECD, generating GDP of €7.5 billion in 2002 in terms of Purchasing Power Parities (PPP). This was less than 1/1200 of the US economy, 1/20 of the Danish economy and 1/3 of the economy of Luxembourg but 1/3 larger than the economy of Malta. The small size of the Icelandic economy mainly reflects the small size of the population, which was only 288 thousand at the end of 2002.

Chart 4.1

Gross national income per capita in OECD countries 2002[1]



1. Based on PPP. *Sources:* OECD, World Bank.

Iceland's small population has not inhibited economic growth and prosperity. The country has all the characteristics of a modern welfare state. GDP per capita measured in terms of Purchasing Power Parities (PPP) amounted to €26,386 (in 2002), the sixth highest in the world. In comparison to the Nordic countries, Iceland's GNI per capita is lower than in Norway and Denmark, but higher than in Sweden and Finland and somewhat above the EU average.

This prosperity can be attributed to Iceland's ability to utilise its comparative advantages by exploiting its abundant natural resources, both marine and land-based, as well as human capital. The location and geology of Iceland determine its main resources which are marine resources from some of the richest and cleanest waters in the world and hydro and geothermal energy. Both are from highly renewable and non-polluting sources and both are scientifically managed to maintain self-sustainable long-term use. Iceland is the 12th largest fishing nation in the world, exporting nearly all its catch as domestic demand is relatively small. Even following the rapid build-up of power-intensive industries, only around one-fifth of economically harnessable hydro and geothermal power has been harnessed until now. The third major resource in Iceland

is the unspoiled natural environment on which a large and growing tourist industry is based. High labour force participation of women and by the young and elderly, as well as long working hours by international comparison, also contribute to Iceland's robust growth.

Composition of output and expenditures

As in other developed economies, services, which to a significant degree are non-tradable, form the bulk of economic activity, accounting for 65% of GDP in 2002. Agriculture contributes only 1.5% of the country's GDP.[1] While the marine sector is the most important source of export revenue, its share of GDP has declined considerably in recent years, from 17% in 1980 to 12% in 2002.

These developments reflect a transformation in the utilisation of natural and human resources. Scope for expanding the harvesting of Iceland's coastal fishing grounds has been limited in recent years, while the utilisation of its hydroelectric and geothermal power potential has intensified. At the same time, the advent of service industries such as tourism, and several emerging human capital-intensive activities such as information technology and communications (ITC) and financial services, has continued unabated. Significant progress has been made in high-tech activities such as medical equipment, technical solutions for food processing, fisheries equipment, biotechnology and pharmaceutical products.

Private consumption contributed on average about 57% of GDP in 1998-2002 and public consumption and gross fixed investment 24% and 23% respectively. The investment to GDP ratio has risen substantially in recent years on average, after falling below 1/5 in the mid-1990s. The ratio of public consumption has also risen somewhat over the past five

Table 4.1 Output and expenditure

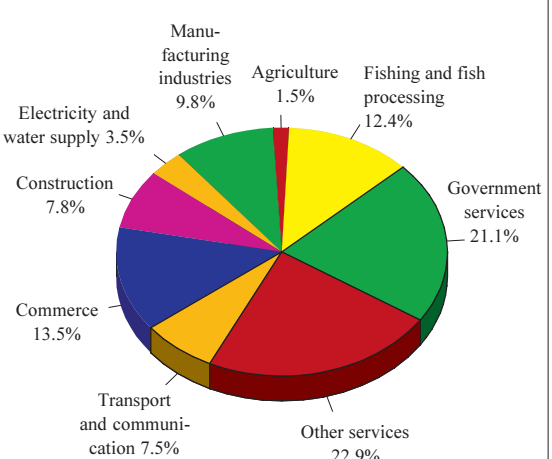
Percentage distribution (period average)

% of GDP	*1968-1972*	*1998-2002*
Private consumption	59.9	56.7
Public consumption	13.1	23.8
Gross fixed investment	28.9	22.5
Changes in stock	0.0	0.1
National expenditure	101.8	103.0
Exports of goods and services	39.7	37.2
Goods, fob	23.8	24.6
Services	15.8	12.6
Imports of goods and services	41.5	40.2
Goods, fob	27.7	27.1
Services	13.8	13.1
GDP	100.0	100.0
Current account balance	-3.1	-5.6

Source: Statistics Iceland.

Chart 4.2

Breakdown of GDP by industry in 2002



Source: Statistics Iceland.

1. It should be noted that fishing is not included in this figure. Agriculture and fisheries are often bracketed together in international statistics.

years, after remaining broadly stable through most of the 1990s.

Foreign trade

Icelandic trade has many of the characteristics of small resource-based open economies, such as a high degree of openness, a large share of primary products and commodities and a small share of intra-industry trade. Nevertheless, the diversity of exports has increased significantly in recent years. In 2002, imports and exports of goods and services amounted to 38% and 40% of GDP respectively. Although this can be seen as a fairly open economy, reflecting the small size of GDP, many larger economies have a considerably higher ratio. To some extent this can be explained by geographic distance from major population centres, but other factors may also be at work, such as limited intra-industry and transit trade, a natural resource-based export sector with high value added, and extensive protection of domestic agriculture.

The mainstay of merchandise exports is still fish and other marine products, which in 2002 accounted for 63% of merchandise exports and 42% of total exports. Rapidly growing in importance has been export of manufactured products, which in 2002 accounted for one-third of merchandise exports. This is mainly the result of growth in metals industries, mostly aluminium smelting, and in medical and pharmaceutical products. Export of services grew rapidly over the past decade, as the economy became more service-oriented. Services now account for 34% of total export revenues.

Iceland imports a wide range of manufactured goods and commodities, reflecting both the small size of the economy and the limited range of natural resources. Imports of capital goods accounted for roughly a quarter of total merchandise imports in 2002. Industrial supplies and consumer goods are around one-third of imports each.

Iceland is the westernmost outpost of Europe and therefore an ideal base for business between Europe and North America. This strategic location is further enhanced by Iceland's membership of EFTA (The European Free Trade Association) since 1970 and the European Economic Area (EEA), which has integrated Iceland into the internal market of the EU since it went into effect on January 1, 1994. The EEA constitutes the world's largest market, with GDP of €9 trillion. EEA membership implies that business legislation has been adapted to that of the EU, guaranteeing the free flow of goods, services, capital and labour.

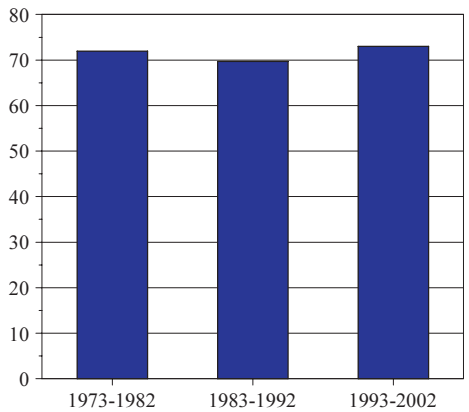
Iceland's free trade arrangements with Europe have stimulated trade with the region, causing the share of North America to fall. In 2002, three-quarters of merchandise exports went to the member countries of the EEA, which also were the source of 63% of imports. Currently, the largest trading partner countries are the UK, Germany, the USA and the Nordic countries. In terms of currency, the euro area constitutes the largest trading area, accounting for 31% of imports and 48% of exports.

Iceland has normally had a trade surplus with Japan, the UK, the Iberian countries and the USA, but a substantial deficit with its Nordic neighbours. Iceland's ratio of services to total trade is one of the highest among OECD countries. In 2002, Iceland ranked third with a share of services trade near 34%. Data on the direction of services trade are not as reliable as merchandise trade data. However, around 2/5 of Iceland's services exports in 2002 used euros and the same share used USD as the vehicle currency.

Chart 4.3

Degree of openness[1] 1973-2002

Period averages

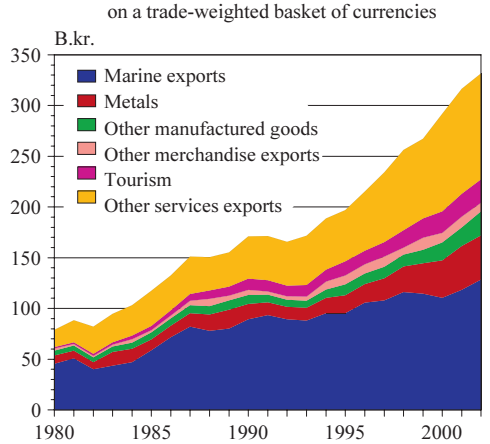


1. Degree of openness is defined as the sum of exports and imports as a percentage of GDP. *Source:* Statistics Iceland.

Chart 4.4

Exports of goods and services 1980-2002

At constant average exchange rates, based on a trade-weighted basket of currencies



Source: Statistics Iceland.

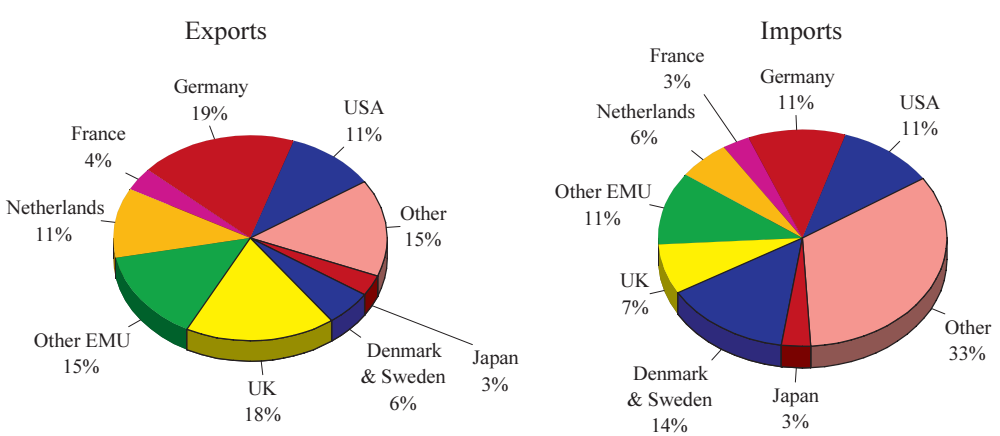
Marine sector

The marine sector is the backbone of export activity. In 2002, fishing and fish processing contributed 63% of total merchandise exports. The importance of the marine sector has diminished considerably in the last four decades. In the early 1960s, export of fish products constituted over 90% of merchandise exports.

Chart 4.5

Geographical division of merchandise trade in 2002

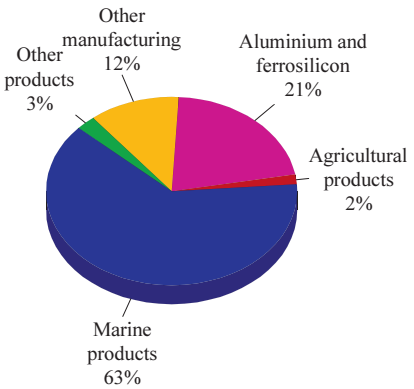
Percentage of total imports or exports



Source: Statistics Iceland.

Chart 4.6a

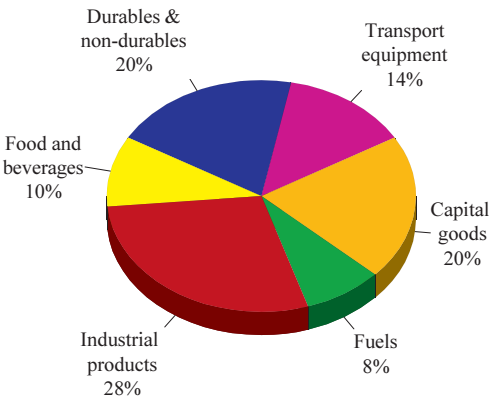
Merchandise exports by category in 2002



Source: Statistics Iceland.

Chart 4.6b

Merchandise imports by category in 2002



Source: Statistics Iceland.

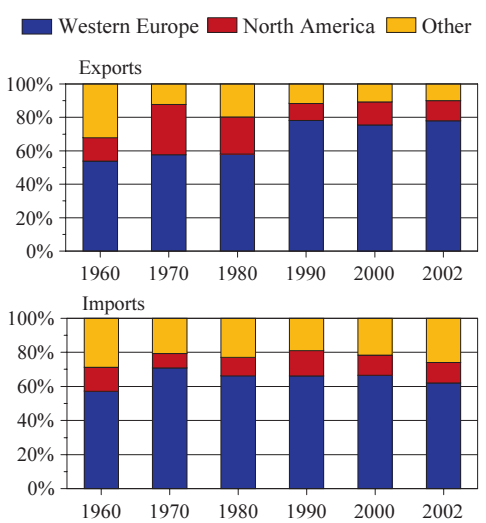
Fishing and processing of groundfish, mainly cod, haddock, saithe and redfish, are the principal part of the Icelandic marine sector. The catch of these and other demersals was around 470 thousand tons in 2002. Conservation measures led to substantial cuts in total allowable catch (TAC) in the 1990s, most significantly in cod quotas. Cod is in terms of total value of the catch the most valuable species in Icelandic waters. The decline in the cod catch has been offset by increased harvesting of other species such as redfish, Greenland halibut, blue whiting and herring, inside and outside Iceland's exclusive 200-mile fishing zone.

Efforts to enhance value added in processing, e.g. by product development, have partially succeeded in offsetting lower catch volumes in recent years. Efficiency in the fishing and fish processing industry has increased substantially. The industry is increasingly relying on information and communication technology, automation and modern management techniques to increase productivity.

Icelandic fishing vessels are regarded as among the most modern and technically advanced in the world. In recent years a number of fisheries companies have merged in order to

Chart 4.7

Regional division of trade 1960-2002



Source: Statistics Iceland.

enhance efficiency. Several of the leading fisheries companies rank with the largest private companies in Iceland.

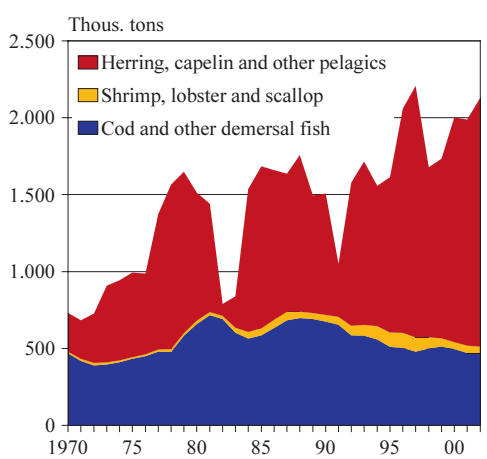
A comprehensive fisheries management system based on individual transferable quotas (the ITQ system) has been developed to manage fish stocks. All commercially important species are regulated within the ITQ system. Each year a TAC is set on the basis of biological assessment of the fish stocks and forecasts for their development in the near future. The Fisheries Management Act of 1990 is the cornerstone of the management system. Under this Act, quota shares represent shares in the annual TAC and are allocated to individual fishing vessels. Quotas are permanent, perfectly divisible and freely transferable. In 1995 the Icelandic government introduced the "catch rule" whereby the TAC for the next consecutive quota year is set at 25% of the mean of the fishable biomass in the assessment year and the year after. Annual fishing quotas are allocated against an annual fee for fisheries inspection and enforcement purposes. This fee will be increased under a recent change in the law, but will still remain well below the market price of annual quotas. Quotas can be and are traded at market prices. The introduction of the ITQ system has led to substantial rationalisation and improved performance in the marine sector.

Manufacturing and power-intensive industries

The largest manufacturing industries in Iceland are power-intensive industries based on the use of electric power. They produce almost exclusively for export. A number of smaller-scale export-oriented manufacturing industries have emerged in recent years, in areas such as biotechnology, pharmaceuticals, capital goods for fisheries and food processing, medical equipment and other IT-intensive high-tech activities.

Chart 4.8

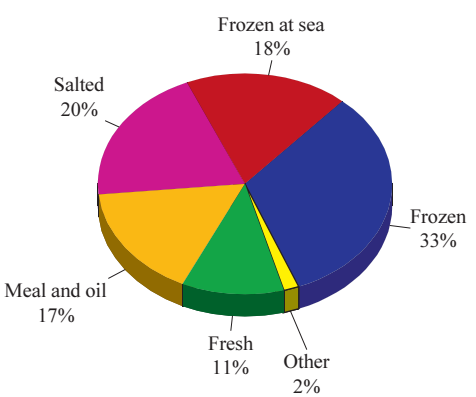
Fish catch by Icelandic vessels 1970-2002



Source: Statistics Iceland.

Chart 4.9

The value of marine products for export, percentage breakdown 2002



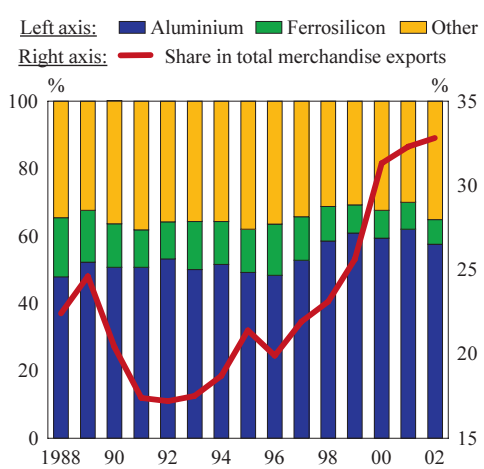
Source: Statistics Iceland.

In 2002 manufactured products accounted for 33% of total merchandise exports, of which power-intensive products (mainly aluminium) amounted to 21% and pharmaceuticals and other high-tech products to 7%. There has been a considerable increase in manufacturing exports in recent years, as they amounted only to 22% of total exports in 1997, of which 12% was aluminium.

The development of power-intensive industries is mainly based on competitive energy costs and a highly educated and skilled labour force. The government has actively encouraged foreign direct investment in power-intensive industries. The largest manufacturing facility in Iceland is an aluminium smelter located near Reykjavík, owned and operated by Alcan Iceland Ltd., a wholly owned subsidiary of Alcan Inc. Its total capacity is 175 thousand tonnes per year, (tpy), after being expanded by 60% in 1996-98. The second aluminium smelter is Columbia Ventures (Norðurál) with a capacity of 90 thousand tpy. Icelandic Alloys plc. is a ferrosilicon plant with an annual capacity of 115 thousand tonnes.

Chart 4.10

Composition of manufacturing exports and share in total merchandise exports 1988-2002



Source: Statistics Iceland.

A new aluminium smelter, owned by Alcoa, is to be built on the east coast of Iceland. It is due to start operations in autumn 2007, producing 322 thousand tpy at full capacity. Plans are also afoot, although they have not been finalised, to expand the production capacity of the Norðurál smelter by 90 thousand tpy by 2006. If both these projects materialise, the total production capacity of the aluminium industry in Iceland will be 677 thousand tpy, or one-and-a-half times the present level.

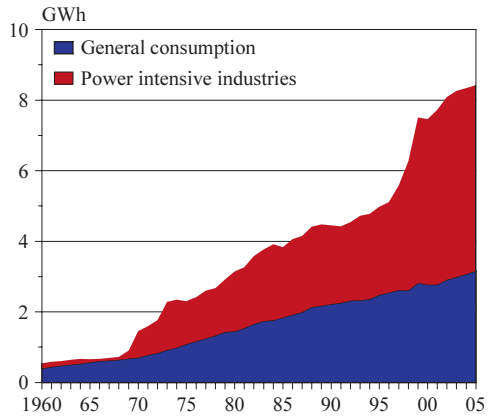
Energy

Iceland has extensive hydro and geothermal resources and is the only country in Western Europe that still has large-scale, competitively priced power remaining to be harnessed from such sources. Although electricity consumption per capita is the highest in the world, at some 29,300 kWh per person in 2002, only a fraction of the energy potential has been tapped.

Electric power potential from hydro and geothermal sources is now estimated to be 50 thousand GWh/year, taking into account economic and environmental considerations. Some 8,500 GWh/year of this power had been harnessed in 2002, or only about 17% of estimated total energy potential. Economically exploitable electricity from hydro resources is estimated at around 30 thousand GWh/year. In 2002, total installed hydropower was 1,151 MW in 31 power plants capable of producing 6,800 GWh per year. Installed geothermal power in six plants now amounts to 202 MW or 1,616 GWh/year. The largest single hydropower plant has an installed power capacity of 270 MW and the largest geothermal plant 90 MW.

Chart 4.11

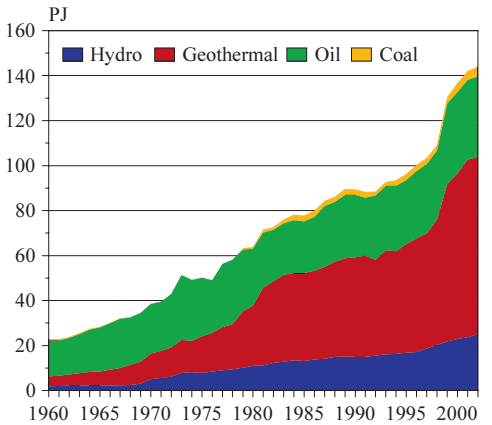
Electricity production in Iceland[1]
1960-2005



1. Prospective new power intensive plants not included. Estimates for 2003-2005. *Source:* National Energy Authority.

Chart 4.12

Primary energy supply in Iceland
1960-2002



Source: National Energy Authority.

All the largest hydroelectric power plants as well as the inter-regional power lines are owned and operated by Landsvirkjun (the National Power Company). Landsvirkjun is jointly owned by the Icelandic state, the City of Reykjavík and the Town of Akureyri.

Iceland is a world leader in the use of geothermal energy for domestic and industrial purposes. Some 87% of all homes are heated by geothermal energy at less than half the comparable cost of fossil fuels or even electrical heating. Geothermal steam is applied in a number of industrial processes and increasingly also for electricity generation.

Recent restructuring in the electricity sector internationally is having an impact in Iceland. As a signatory to the EEA Agreement, Iceland is obliged to comply with the EU directive relating to the separation of transmission, generation, distribution and sales of electricity. A new Electricity Act, which aims to phase in a deregulation of the electricity market, was passed by Parliament and ratified in March 2003. It entered into force on July 1, 2003 although implementation of its chapter on transmission was deferred until July 1, 2004. As an immediate measure, it calls for an accounting separation of the above functions. The Electricity Act does not call for incorporation of power companies or any changes with regard to the guarantees they currently enjoy.

Iceland currently provides a testing ground for the feasibility of using hydrogen in transport systems. The idea is to take advantage of Iceland's ample geothermal and hydropower resources to produce hydrogen for powering cars and ships. The first project is called Ecological City Transport System (ECTOS) and involves building a fuel station for three fuel-cell buses which will run on emission-free hydrogen for two years. These buses are already in operation in the City of Reykjavík. The project is run by Icelandic New Energy Ltd. (www.newenergy.is), which is owned by Icelandic energy companies, DaimlerChrysler, Norsk Hydro, Shell International Hydrogen

and others. Icelandic New Energy aims to develop a hydrogen-based community in Iceland in stages over the coming decades.

Agriculture

Approximately one-fifth of the total land area of Iceland is suitable for fodder production and the raising of livestock. Around 6% of this area is cultivated, with the remainder devoted to raising livestock or left undeveloped. Production of meat and dairy products is mainly for domestic consumption. The principal crops are hay and potatoes. Cultivation of other crops, such as barley, has yielded promising results. Vegetables and flowers are cultivated in greenhouses heated with geothermal water and steam. A fur industry has developed in the last two decades.

The agricultural sector has undergone structural changes in recent years. Demand for traditional Icelandic products, especially lamb meat, has declined substantially while consumption of white meat (pork and poultry) has risen in line with changes in taste and relative prices. Price support and export subsidies for the traditional products of sheep and dairy farming have been replaced with subsidies in the form of direct income payments to farmers in these segments. In 2002, such direct payments are estimated to have amounted to 52% of farmers' income in lamb and mutton production and 47% of the producers' price for milk production. Total on-budget transfers to farmers amounted to about 1.2% of GDP in 2002. Imports of meat, dairy products and vegetables that compete with domestic production are subject to high tariffs, controls to prevent diseases, and quotas. Imports are likely to increase as tariffs go down in line with WTO agreements on trade in agricultural products.

In terms of total agricultural support, Iceland ranks 4th highest in the OECD, with a PSE (producers' support estimate) of 63, behind Switzerland, Norway and Korea with PSEs of 75, 71 and 66 respectively. Producers' support amounts to 36 on average in the EU and 31 in the OECD countries.

Transport and communications

The domestic transportation network consists of roads, air transportation and coastal shipping. Car ownership is widespread. In 2002, Iceland had 569 passenger cars per 1,000 inhabitants, the third highest ratio within the OECD after the USA and Australia.

Several airlines operate in Iceland. Icelandair is a private company with international routes and direct flights from Iceland to a number of cities in Europe and the United States. Air Atlanta mainly operates as a charter airline on international routes outside Iceland. Iceland Express is a newcomer operating daily direct flights to London and Copenhagen. Some foreign airlines also operate to Iceland from time to time.

Iceland has numerous harbours that are almost without exception free of ice throughout the year. In exceptionally cold years, drift ice from Greenland can close harbours in the northern part of the country. The two main shipping companies, Eimskip and Samskip, operate regular liner services to the major ports of Europe and the United States.

In 1998, Iceland Post and Telecom (Póstur og símí) was divided into two separate entities, Iceland Post (Íslandspóstur) and Iceland Telecom (Landssíminn). Both are limited liability companies and have been state-owned until now. The first steps in privatising Iceland Telecom have been taken and the government's policy is that it will be fully privatised in the near future.

The telecommunication sector is developing rapidly and competition is increasing. As a result of technological developments, deregulation and enhanced competition, telephone charges in Iceland, both at residential and business rates, are among the lowest within the OECD. The cellular mobile telephone network is extensive. In 2001, Iceland had the second-highest mobile telephone penetration in the world, surpassed only by Finland. The telecommunication system operated by Iceland Telecom is both extensive and modern, with satellite earth stations, optical fibre cables, broadband networks and a wide-reaching cellular mobile phone system. Og Vodafone is a new telecommunications company that commenced operation in spring 2003 after the merger of three Icelandic telecommunication companies in cooperation and partnership with Vodafone Int. It has acquired one-quarter of the telecommunication market in Iceland. Og Vodafone is listed on Iceland Stock Exchange.

The National Broadcasting Service (Ríkisútvarpið) operates two radio channels and one television channel, covering virtually the whole country. Northern Lights Corporation is the largest broadcasting company in Iceland, operating five TV channels and five radio channels covering virtually all Iceland. A newcomer in the broadcasting sector is Skjár 1, operating two TV channels as from October 1 2003. In addition, a large number of foreign TV channels are widely received via satellite, cable or UHF relay.

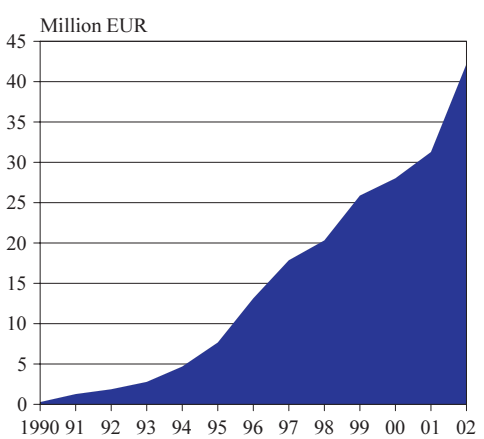
Iceland has one of the highest rate of Internet connections in the world. About ¾ of the population has direct access to an Internet connection and 93% of all companies in Iceland are connected and active users.

Service industries

The tourism sector has been one of the fastest-growing industries in recent years. The number of visitors from abroad in 2002 is estimated at

Chart 4.13

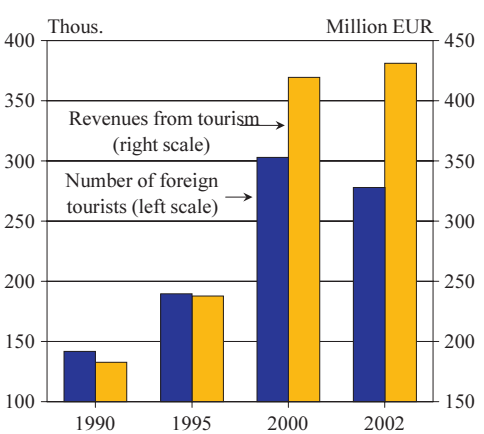
Icelandic software companies' export earnings 1990-2002



Source: Central Bank of Iceland.

Chart 4.14

Number of foreign tourists and revenues from tourism (at current euro exchange rates) 1990-2002



Sources: Statistics Iceland, Central Bank of Iceland.

278 thousand, compared to 142 thousand in 1990. Foreign exchange revenues generated by tourism in 2002 amounted to approximately €430 million.

Besides tourism there is an expanding array of emerging services industries in Iceland and others have been fundamentally transformed in recent years. Important structural changes, for instance, have been implemented in the financial sector in the last two decades, as described in Chapter 5. Rapid growth has also taken place in other business services including computer services and software development.

The Icelandic software industry has extensive knowhow and long practical experience in the design of software for sophisticated food and fish processing equipment. Icelandic software developers are also actively engaged in multimedia and Internet applications, e-commerce, real-time communication, medical software and general office and database systems. An emerging industry is biotechnology which is based *inter alia* on Iceland's genetic resources.

The labour market

The Icelandic labour market has one of the highest participation rates among OECD countries. Over the past 10 years it has consistently been well above 80%. This is explained partly by the fact that the rate of unemployment has normally been one of the lowest among OECD countries. The participation rate of women has also been very high by international comparison. In 2002, female participation was in fact one of the highest in the OECD countries, with women accounting for 47% of the labour force. Participation rates among the young and the elderly have also been quite high. Furthermore, Icelanders tend to work long hours. The participation rate and number of hours worked are positively correlated with economic growth, dampening cyclical movements in unemployment.

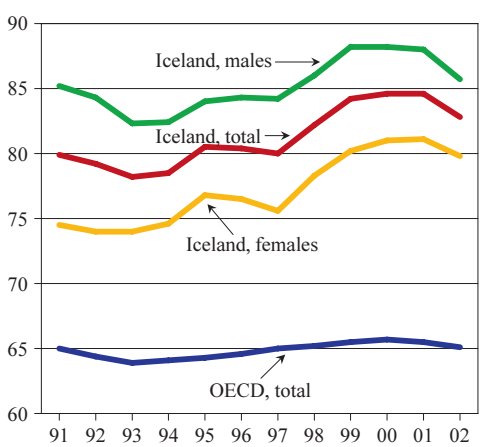
Iceland's EEA membership facilitates movement of labour within the area. The Icelandic labour market tends to attract both foreign and Icelandic nationals during upswings and the opposite applies during downswings. Moreover, even in the case of significant shifts in sectoral or regional employment, a high degree of labour mobility between them prevents large differences in regional unemployment from emerging.

The influx of foreign labour has increased substantially in recent years, both from within and outside the EEA area. Nevertheless, as this is a rather recent phenomenon, the share of foreign nationals in the labour force remains at a modest level. In 2002 approximately 3½-4% of the labour force was foreign.

The wage bargaining process in Iceland is highly centralised and usually leads to more

Chart 4.15

Labour force participation rate in Iceland and OECD countries 1991-2002



Sources: OECD, Statistics Iceland.

or less nationwide settlements. Some 85% of the labour force is unionised and the employers are also highly organised. The government has frequently been involved in wage settlements, either through tax concessions and social transfer or with legislative acts aiming to accomplish moderate settlements. In addition, tailoring of national framework pay deals in sectoral and firm-level negotiations enables specific local conditions to be taken into account.

Notwithstanding its high degree of centralisation, the Icelandic labour market appears to be quite flexible. Substantial and increasing labour mobility, flexible hours and variable participation rates serve to dampen the effects of external shocks. Furthermore, various studies indicate that real wages respond quickly to external shocks and therefore reduce their employment effect, although the measured flexibility may to some extent be the result of high historical inflation.

The pension system

Iceland will face fewer problems due to the ageing of the population during the coming decades than most other developed nations. There are three main reasons for this. Firstly, the nation is younger and will continue to be so during the coming decades. The old-age dependency ratio, i.e. over 64-year-olds as a ratio of 15- to 64-year-olds, was 18% in 2000, compared to 23% on average in the EU and 19% in the US. Secondly, labour participation rates among the elderly are high and the pension system does not give special incentives for early retirement. The official retirement age is 67 and 37% of 65- to 74-year-olds worked at least one hour a week in 2002. Thirdly, membership of a fully funded occupational pension fund is mandatory for all employees and self-employed. The Icelandic old age pension system is composed of a tax-financed public pension scheme, mandatory funded occupational pension schemes and voluntary pension saving with tax incentives.

Public pensions are fully financed by taxes. The public pension system provides an old age pension, disability pension and survivors' pension. The old age pension is in most cases paid from the age of 67. It is divided into a basic pension and supplementary pension. Both are means-tested but pensions received from other sources are treated differently from other income. These do not affect the basic pension and the level at which they begin to reduce the supplementary pension is higher than for other income. The basic pension amounts to around 15% of the average earnings of unskilled workers but the maximum total old age pension to around 70% of the same earnings. Occupational pension funds have been increasing their share in pensions relative to the public system as they approach maturity and means testing reduces the public pension. In 2002 the pension funds and the public pension system had equal shares of €301 million (25.8 b.kr.) or 3.3% of GDP.

It is mandatory to pay at least 10% of total wages and salaries to pension funds. Many of the funds were established through a collective labour agreement in the late 1960s. Most are managed jointly by representatives from the trade unions and employers. The funds have grown by leaps and bounds over the past two decades (Chart 4.16) as their coverage has become almost total and the return on their assets was good during the 1980s and the 1990s. Assets were equivalent to 87% of GDP in 2002 and are predicted to reach at least 1½ times GDP around the middle of the twenty-first century. Pension funds in Iceland are large

relative to GDP by international comparison as Iceland ranked third in 2001 among EU and EFTA countries on this criterion.

At the end of 2002 there were 40 fully operational pension funds in Iceland, thereof 12 with employer guarantees from the government, municipalities or banks. Funds without employer guarantee are required under current legislation to be fully funded. The ten largest pension funds had around 70% of the net assets of all pension funds in 2002, and the two largest ones accounted for 32%. The average fund had net assets of around €153 million (13 b.kr.), while the biggest had assets of a little over €1.4 billion (116 b.kr.).

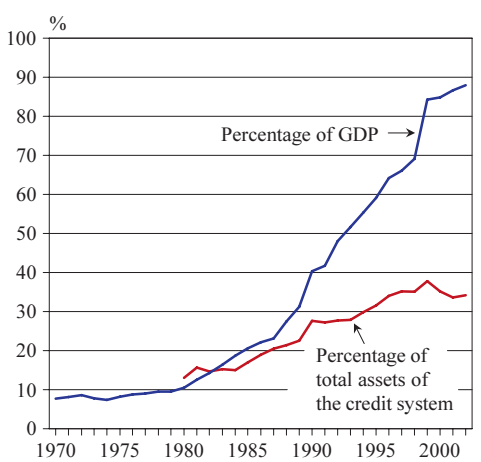
The benefits paid by occupational pension funds without employer guarantee will ultimately depend on their net return and will therefore vary from one fund to another. But the investment risk is born collectively by the members of each fund and there are no individual accounts as in pure DC plans. It has been estimated that a typical general occupational pension fund will, at full maturity, be able to pay a pension amounting to 50-60% of full-time earnings, giving a total replacement ratio of 60-70% when the basic public pension is added.

In the third pillar of pension saving, employees are allowed to deduct from their taxable income a contribution to authorised individual pension schemes up to 4% of wages. Employers must always contribute 1% of wages into an individual pension scheme of the employee's choice. If employees contribute 2% of wages employers have to contribute the same amount. Additional 0.1% of wages for each 1% contributed by the employees is financed by lowering the social security tax to an equal degree. The pension schemes have to be authorised by the Ministry of Finance. They are in most cases defined contribution individual accounts. The pension saving is not redeemable until the age of 60 and has to be paid in equal instalments over a period of at least seven years. It is estimated that 43% of wage earners were paying into such schemes at the end of 2001.

Pension funds used to invest most of their assets in government-guaranteed bonds, housing finance and loans to members. During the last decade a significant shift took place in the asset allocation of pension funds, with the shares of equities and foreign assets increasing strongly. The proportion of equities was just over 1% of total assets in 1990 but had increased to 24% in 2002. The share of foreign assets went up from less than 2% in 1995 to over 15% at the end of 2002. Current legislation sets upper limits on the share of equities in a pension fund's portfolio at 35% and restricts exposure to exchange rate risk to 50% of net assets.

Chart 4.16

Net assets of pension funds 1970-2002



Source: Central Bank of Iceland.

The build-up of the pension funds has contributed a great deal to the development of financial markets in Iceland. It is estimated that their assets were equivalent to over 34% of the size of the credit system in 2002. The funds held 39% of the stock of marketable bonds in the same year and 46% of the stock of housing bonds. At the end of 2002 the funds owned domestic equities and shares in equity funds that amounted to around 14% of the size of the organised equity market. This figure really underestimates their importance, due to extensive cross-ownership of listed companies. Finally, foreign asset accumulation of the pension funds is very significant in terms of the national economy. Their foreign assets accounted for over 61% of all foreign portfolio assets of Icelandic residents at the end of 2002 and over 25% of total foreign assets as recorded in the international investment position of the country.

The environment

Compared to other industrial countries, Iceland is relatively unpolluted and faces few immediate environmental problems. Soil erosion, however, has been a longstanding problem, as a result of the combined effects of climatic changes, volcanic activity and overgrazing. The intensity of grazing has fallen since the 1970s and considerable work is being carried out to reclaim eroded land.

Electricity and geothermal heating, Iceland's main energy sources, are generated by the use of renewable resources. Utilisation of hydroelectric power, however, requires the building of dams and large reservoirs that can affect the landscape.

Acid disposition over Iceland is very low, due to its geographic location and limited emissions of pollutants. The emission limit set for Iceland in the Kyoto Protocol for the period 2008-2012 entails a 10% increase from the 1990 levels. In addition, emissions from single projects, which increase total emissions by more than 5%, can be reported separately but not included in the above set limit. Emission of greenhouse gases from Iceland in 2000 is estimated to be 7% higher than in 1990. If emissions from new power-intensive industries are included, emissions in 2000 were 17% higher than the 1990 level. The largest source of emissions is the fishing fleet, followed by the transport sector, then by various industrial processes. The marine environment around Iceland is relatively unpolluted.

5. The financial system

Overview and recent developments

In recent years the Icelandic financial system has been in transition, the result of liberalisation and legislative reform. A changed domestic and international business environment as well as increased competition have necessitated the restructuring of Icelandic capital markets and financial institutions. Financial services in Iceland have become more international in character due to increased cooperation between Icelandic and foreign financial institutions and the adoption of international financial legislation and standards. In order to keep pace with international developments, substantial amendments have been made to the financial legislative and regulatory framework in Iceland.

Iceland participates in the European Single Market for financial services. As a member of the European Economic Area (EEA) since 1994, Iceland is obliged to transpose into national law all existing and future EU legislation in the field of financial services. Iceland has thus implemented all the EC directives on banking, insurance and securities trading. The general objective of these directives is to accomplish an integrated market for financial services, in particular with respect to the right of establishment, provision of services, prudential rules and capital movements. Iceland's obligations in the EEA have prompted a major reform of financial legislation and its framework is now in line with that in other EFTA states and EU member states. This has facili-

Table 5.1 Financial market liberalisation in Iceland: some important steps

Event	*Year*
Financial indexation permitted	1979
Liberalisation of domestic bank rates	1984-1986
Iceland Stock Exchange established	1985
Interest Rate Act – Interest rates fully liberalised	1987
Stepwise liberalisation of capital movement begins	1990
Treasury overdraft facility in the Central Bank closed	1992-1993
New foreign exchange regulation marks the beginning of liberalisation of cross-border capital movements	1992
Interbank market for foreign exchange established	1993
Iceland becomes a founding member of the EEA	1994
Long-term capital movements fully liberalised	1994
Short-term capital movements fully liberalised	1995
Foreign direct investment liberalised in accordance with EEA agreement	1995
Interbank money market	1998
Interbank FX swap market	2001
Privatisation of state-owned banks completed	2003

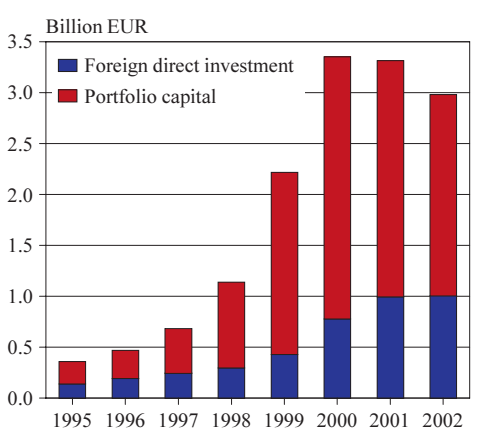
tated the offering of financial services by Icelandic financial institutions across borders, and the establishment of operations abroad.

The European financial market is constantly developing. A series of policy objectives and specific measures are being adopted on the basis of the Financial Services Action Plan from 1999. This will enhance harmonisation, competition and effectiveness of financial services, payment systems and electronic commerce throughout Europe. The Icelandic authorities, in close cooperation with market participants, have begun implementation of the Action Plan.

A new Act on the Central Bank entered into force in 2001 (See Chapter 7). The Act provides for important changes. It simplifies and clarifies the objectives of the Central Bank, provides full independence for applying its monetary instruments and increases its financial independence.

Chart 5.1

Foreign direct investment and portfolio capital owned abroad by residents (at year-end) 1995-2002



Source: Central Bank of Iceland.

Capital movements

Since the beginning of 1995, in accordance with the EEA agreement, capital movements have been fully liberalised, with the exception of certain restrictions that apply to foreign direct investments in fisheries and fish processing, energy production and distribution, and aviation companies. The restrictions on investment by foreign entities in fisheries are the only ones that apply to EEA residents. They have the purpose of protecting the nation's exclusive rights to the fishing grounds around Iceland. Direct foreign ownership in fisheries companies is prohibited but companies that are up to 25% (and up to 33% in certain circumstances) foreign-owned may own fisheries companies. Energy harnessing rights and production and distribution of energy are restricted to EEA entities. Entities domiciled outside the EEA must not own more than 49% of the shares in Icelandic aviation companies.

The liberalisation of cross-border capital movements has led to a profound change in the composition of residents' financial asset portfolios. Before full liberalisation in 1995 residents owned only approximately €155 m (13 b.kr) in foreign securities. By the end of 2002 these assets had risen thirteen-fold, to the equivalent of 22% of GDP.

Foreign borrowing by the Treasury requires authorisation by parliament. These authorisations are listed in the annual budget approved by parliament. In addition there is a standing authorisation to refinance outstanding public debt.

Iceland Stock Exchange and the Icelandic Securities Depository

The Act on Activities of Stock Exchanges and Regulated OTC markets, No. 34/1998 stipulates that a stock exchange must be a limited liability company where public listing of securities and

securities trading are carried out. A stock exchange must have authorisation from the Minister of Commerce. There is currently one stock exchange operating in Iceland, i.e. Iceland Stock Exchange (ICEX). ICEX is also licensed to operate a market for securities which are not officially listed. The Stock Exchange Act furthermore regulates listing, takeover bids, disclosures and flagging in the event of the acquisition of major shareholdings and accompanying rights. Iceland Stock Exchange is a member of the Nordic Stock Exchanges (NOREX).

Icelandic law provides that the electronic issue of securities and registration of titles to electronic securities can only be carried out by a securities depository authorised by the Minister of Commerce. The Icelandic Securities Depository has been authorised as a securities depository. It is a registry, depository and clearing house for securities in dematerialised (electronic) form. Iceland Stock Exchange and the Icelandic Securities Depository are both owned by the same holding company as of June 2002.

The bond market

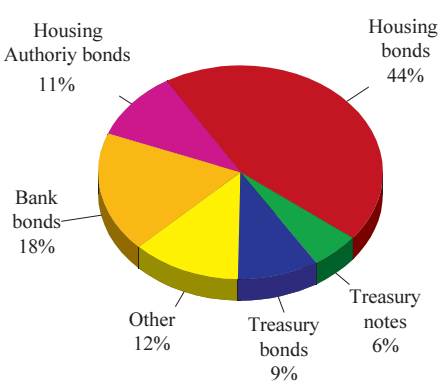
The Icelandic bond market consists of a primary market which usually takes the form of bond auctions, and a secondary market which is mainly operated on the Iceland Stock Exchange (ICEX). Icelandic bond issues can be broadly divided into four categories: 1) Government bonds, issued by the Treasury, are indexed against inflation and paid up with accrued interest at maturity date. 2) Treasury notes and Treasury bills, which are non-indexed, zero-coupon bonds. 3) Housing bonds and Housing Authority bonds which are interest-bearing bonds in an annuity format. The annuity format of the former is realised by a lottery of all issued bonds at preset intervals. 4) Bonds that are issued by government agencies, private firms or institutions such as banks.

An active market-making programme on the stock exchange ensures sufficient liquidity in the market for benchmark government bonds, Housing bonds and Housing Authority bonds. A primary dealer system is in place for Treasury notes and bills. Primary dealers have an exclusive right to bid at auctions and must actively engage in market making on the stock exchange. Most new issues are registered in the Icelandic Securities Depository and trading is conducted on a payment versus delivery basis. Settlement takes place on a T+1 basis.

The Icelandic bond market has several outstanding features which set it apart from those in other countries. Firstly, indexed bonds dominate the market. The bulk of issues of maturity exceeding 5 years are linked to the CPI. Secondly, the majority of bonds carry a state guarantee, including Housing bonds, which are the market's most liquid issues. Thirdly, yields

Chart 5.2

The Icelandic bond market at the end of 2002



Source: Central Bank of Iceland.

on the Icelandic bond market have tended to be high by international comparison. Over the past decade real yields of indexed housing and government bonds have fluctuated in the range 4% to 8%, and recently between 4% and 6%. In May 2002 the Treasury issued non-indexed notes that mature in 2013. At the end of August 2003, the market value of listed bonds amounted to €7.6 billion (666 b.kr.). Turnover on the bond market in 2002 was €9.4 billion (812 b.kr.).

The money market

The money market can be divided in two parts: the secondary market in Treasury bills, bank bills and other short-term bonds on the Stock Exchange, and the interbank loan market. Turnover on the secondary market on the Stock Exchange in 2002 was €1.4 million (118 m.kr.). The interbank market is operated by the Central Bank of Iceland and consists of unsecured loans between the members of the market. Members must display indicative bid and ask yields on various maturities, ranging from overnight to 12-month loans. Yields are published on a closed Reuters page and trades must be reported to the Central Bank. Once a day, the Central Bank fixes REIBID and REIBOR rates for the market. In 2002, turnover on the interbank market for domestic currency amounted to €4.9 billion (421 b.kr.). There is also a primary market in Treasury bills.

The equity market

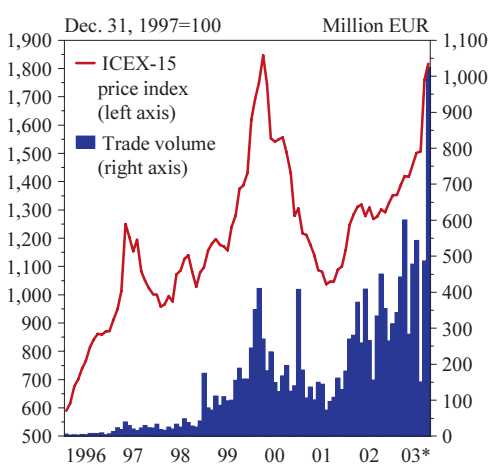
Icelandic equities are traded on ICEX, which in 2000 became a member of NOREX, the cooperative framework for Nordic exchanges. The four member exchanges (Copenhagen Stock Exchange, Oslo Börs, Stockholmsbörsen and ICEX) share a joint trading system, SAXESS. The regulatory environment of ICEX, through various recent reforms, has reached a similar status to that of markets in other countries. Listed shares are registered electronically.

Market capitalisation has increased in recent years as a growing number of Icelandic companies have gone public and equity prices have risen since October 2001. In August 2003, a total of 38 companies were listed on the main list, 8 companies were listed on the growth list and 8 companies on the alternative market which is an organised but not officially recognised market. Market capitalisation of those companies at end of August was €6.7 billion (589 b.kr.), or 74% of GDP of 2002.

Since 1998, Icelandic share prices have broadly followed a similar trend to that in foreign markets, reaching an all-time high in early 2000 and subsequently dropping considerably. In 2002, the trend was reversed and Icelandic share prices gained 16.7%. Over the first eight months of 2003 Icelandic share prices have

Chart 5.3

Equity market: Monthly trade volume and prices at month-end 1996-2003



* To September. *Source:* Iceland Stock Exchange (ICEX).

risen by 23% as measured by the ICEX-15 index.

The foreign exchange market

The foreign exchange market is an interbank market run by the Central Bank of Iceland. Participants are market makers and the Central Bank. Market makers are subject to rules issued by the Central Bank. These rules were relaxed in the beginning of 2003 when requirements on maximum spreads and time lags were abolished.

The interbank market for foreign exchange was established in 1993. In the beginning, the Central Bank was a dominant player on the market, but with increasing market depth and as the exchange rate regime became more flexible, the Central Bank withdrew from daily activity, limiting its role to discretionary interventions. Since September 2002, however, the Central Bank has regularly purchased currency from market makers prior to the opening of the market in order to strengthen the foreign reserves of the Bank.

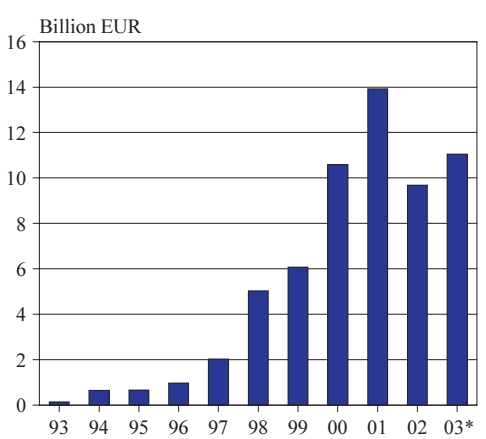
Activity on the market is highly variable; total turnover in 2002 was €9.7 billion (834 b.kr.). Turnover for the first eight months of 2003 was €9.1 billion (780 b.kr.). In November 2001 an informal FX swap interbank market was launched. The Central Bank of Iceland issued rules for that market in March 2002. Turnover in the swap market was USD 1.9 billion in 2002.

Credit institutions

The Act on Financial Undertakings, No. 161/2002 entered into force on January 1, 2003. As of the same date Act No. 113/1996, on Commercial Banks and Savings Banks, Act No. 123/1993, on Other Credit Institutions, and Act No. 37/2002, on Electronic Money Undertakings were repealed. The new Act provides a legislative framework for credit institutions which is comparable to other European

Chart 5.4

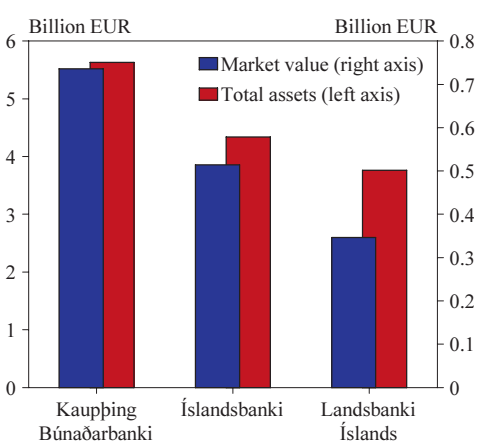
Volume traded in the interbank market for foreign exchange 1993-2003



* To September. *Source:* Central Bank of Iceland.

Chart 5.5

Market value and total assets of the three largest commercial banks as of June 2003



Source: Central Bank of Iceland.

Table 5.2 Ratings for Icelandic commercial banks

	Moody's				*Fitch*			
	Foreign currency		*Financial*		*Foreign currency*		*Financial*	
	Long-term	*Short-term*	*strength*	*Outlook*	*Long-term*	*Short-term*	*strength*	*Outlook*
Íslandsbanki hf.	A1	P-1	B-	Positive	A	F1	C	Stable
Landsbanki Íslands hf.	A3	P-1	C	Positive	A	F1	C	Stable
Kaupþing Búnaðarbanki hf.	A3	P-1	C	Positive	.	.	.	.

banking legislation and international banking standards. It stipulates provisions on issues including the establishment, authorised activities, management and holdings of banks, liquidity and own funds requirements, annual accounts and mergers, as well as activities of foreign banks in Iceland. Several regulations have been adopted on the basis of this Act, in areas such as annual accounts and capital adequacy requirements, which are consistent with European requirements.

In June 2003, domestic commercial and savings banks provided roughly 26% of total credit in Iceland. Foreign credit institutions provided around 28%, pension funds roughly 16% and the Housing Financing Fund 11.5%.

There are currently four commercial banks in Iceland, i.e. Íslandsbanki hf., Kaupþing Búnaðarbanki hf., Landsbanki Íslands hf. and Sparisjóðabanki Íslands hf. (Icebank). The first three provide all conventional banking and securities services. There are 24 savings banks in Iceland and Icebank serves as a banking institution for most of them. Total assets of commercial and savings banks amounted to €14.8 billion (1,300 b.kr.) at the end of 2002, with the commercial banks accounting for more than 85% of this figure.

The three largest commercial banks have expanded their operations to nine countries in recent years and all of them have operations in London and Luxembourg, for example. Twelve other credit institutions currently operate in Iceland, five of which are investment banks[1], four are investment funds[2] and three are leasing companies[3], plus the Housing Financing Fund.

In the financial sector, agencies have affirmed some ratings of the commercial banks and upgraded others, most recently in April 2003.

The Housing Financing Fund is a state-owned investment fund. It operates the housing bond system, which is not a traditional mortgage loan system, but a bond swap system. Homebuyers actually apply for a mortgage bond, which is a debt instrument between the buyer and seller, against the property to be bought. The Housing Financing Fund then buys this bond from the seller of the property and pays for it with a housing bond that can be freely traded in the securities market. This arrangement gives the seller access to a very liquid instrument with the same rating as Treasury-guaranteed government bonds, ensuring the most favourable price for it in the market. While the fund receives repayments on the mortgage bond as in a conventional housing

1. Greiðslumiðlun hf. (VISA Ísland), Frjálsi fjárfestingarbankinn hf., Framtak, MP Fjárfestingarbanki hf. and Kreditkort hf. (Europay Ísland).
2. The Tourism Fund, Agricultural Loan Fund, Regional Development Institute and Harbour Improvement Fund.
3. Glitnir hf., Lýsing hf. and SP-Fjármögnun hf.

loan system, it ensures its own liquidity by issuing debt instruments instead of disbursing cash.

Housing bonds are indexed against the CPI and carry fixed interest of 4.75%. Currently, the loan period of housing bonds is 25 or 40 years, involving so-called bullet bonds with a single payment of outstanding amount and interest at the end of the loan period. However, during the loan period, there is a quarterly draw of a specific number of housing bonds for redemption. Any bonds drawn in this manner have thus matured and will then be paid in full.

The Housing Financing Fund also issues and sells housing authority bonds, through quarterly tenders, to finance its other loan categories. Housing authority bonds are indexed against the CPI and carry fixed interest of 2.7%. Their loan period is currently 24 or 42 years, and they are repaid through annuity payments.

At the end of 2002 housing bonds represented 58% of the Icelandic government bond market and housing authority bonds 14%. During that year these bonds accounted for €60 million (5.2 b.kr.) of net bond purchases by foreign investors, from total inward bond investments of €82 million (7.1 b.kr.). Corresponding figures for the first half of 2003 were €50 million (4.2 b.kr.) and €190 million (16 b.kr.) respectively. The underlying value is thought to be several times that figure, since housing bond and housing authority bond purchases are often incorporated into hedging arrangements against foreign exchange risk.

Several investment funds were merged and subsequently privatised in 1998. The merged investment bank, FBA, was granted a licence to operate as a commercial bank and subsequently merged with Íslandsbanki in April 2000. The state sold its majority stakes in the partially privatised commercial banks, Landsbanki Íslands hf. in late 2002 and Búnaðarbanki Íslands hf. in early 2003. In January 2002 Kaupþing banki hf. was granted a licence to operate as a commercial bank but had until then been licensed as an investment bank. And in the spring of 2003 Kaupþing banki hf. and Búnaðarbanki Íslands hf. merged, becoming the largest commercial bank in Iceland.

Securities firms and brokerages

The Act on Securities Transactions, No. 33/2003 and the Act on Undertakings for Collective Investment in Transferable Securities (UCITS) and Investment Funds, No. 30/2003 entered into force on July 1, 2003, repealing former legislation in these areas. Icelandic laws on securities firms and securities brokerages are based on the corresponding European framework legislation. The Act on Securities Transactions covers fields including authorisation, public offerings, confidential information, insider trading, market manipulation, annual accounts and supervision. A number of regulations have been adopted on the basis of it. The Act on Undertakings for Collective Investments in Transferable Securities (UCITS) and Investment Funds provides for rules on, among other things, authorisation, registration, articles of association of UCITS, management and depository companies, investment policy, management, annual accounts and supervision.

There are currently seven securities firms and two securities brokerages operating in Iceland. Furthermore, four UCITS in Iceland are currently licensed to operate in the European Economic Area (EEA), six investment funds have operating licences but are not authorised to market products in the EEA, and there are six management companies of UCITS and investment funds.

Insurance companies

Icelandic insurance law consists of two main acts, i.e. the Act on Insurance Activities and the Act on Insurance Contracts. An insurance company must only conduct insurance activities and specifically defined ancillary activities. Life insurance activities must be separated from other types of insurance services. Icelandic insurance law is based on EU framework legislation.

There are 14 insurance companies authorised to operate in Iceland, with total assets of around €1 billion (85 b.kr.) at year-end 2002. Sjóvá-Almennar Tryggingar hf., Vátryggingafélag Íslands hf. and Tryggingarmiðstöðin hf. are by far the largest. The life insurance companies represent only 7.4% of total assets of insurance companies. In addition, 190 foreign insurance companies have licences to provide services in Iceland, one of which has established a branch in the country.

Financial stability and the Central Bank

Article 4 of the Central Bank Act stipulates that it shall undertake such tasks as are consistent with its role as a central bank, such as to maintain external reserves and promote an efficient and safe financial system, including payment systems domestically and with foreign countries.

In performing its important role of promoting an efficient and safe financial system, the Central Bank of Iceland focuses on assessing the risk of liquidity problems among financial companies and problems in payment and securities settlement systems which could be systemically important. It also promotes efficiency and positive development of the financial system. Financial stability is an important precondition for economic stability, and vice versa.

Central Bank activity in this field needs to be undertaken in such a way that markets and decision-makers take the Bank's views into account so as to contribute to an effective and safe financial system. One important way to achieve this is by publishing semi-annually an analysis of financial stability in the Central Bank's Monetary Bulletin. In its work the Central Bank has taken into account international agreements and other standards for best practices along with the work of leading foreign central banks in this field.

Supervision and deposit insurance

The Bank Inspectorate of the Central Bank and the Insurance Supervisory Authority were merged into an independent entity, the Financial Supervisory Authority (FME)[4], on January 1, 1999. The FME has a Board of Directors appointed by the Minister of Commerce. The institution supervises commercial banks, savings banks and other credit institutions, insurance companies, companies and individuals acting as insurance brokers, undertakings engaged in securities services, UCITS, management companies, stock exchanges and other regulated markets, central securities depositories (CSD) and pension funds. The FME also supervises other activities as authorised in accordance with specific laws.

The main task of the FME is to ensure that the activities of the above institutions and firms are conducted in accordance with the relevant laws and regulations and that they remain sound in other respects. These institutions and firms are obliged to provide all the information considered necessary by the FME to facilitate statutory supervision of their activities.

4. In Icelandic: Fjármálaeftirlitið.

A deposit insurance scheme is in force. The commercial and savings banks have annually contributed 0.15% of their deposits to this scheme (until the limit of 1% of total insured deposits is reached, which was the case at year-end 2000). Since the beginning of 2000, the Insurance Fund of the commercial banks and the savings banks has been a private institution. A separate department of the fund provides insurance for securities investors.

By law, the Central Bank of Iceland sets rules for the liquidity ratio of credit institutions, i.e. the ratio of liquid claims to liquid liabilities, and for their foreign exchange balance. Other prudential regulations on financial markets are either sanctioned by law or adopted by government minister or the FME. The regulation on liquidity aims to ensure that credit institutions always have sufficient liquidity to meet foreseeable and conceivable payment liabilities over specific periods. For instance, the ratio of claims to liabilities which fall due or can be liquidated within 3 months must not be lower than 1. The following limits on the balance of foreign denominated assets and liabilities are stipulated. Firstly, exposure in individual currencies is restricted to 15% of equity, except for the US dollar and the euro where the limit is 20%. Secondly, total foreign exchange exposure is limited to 30% of equity.

A Cooperation Agreement between the FME and Central Bank of Iceland is in place. The main aim of the Cooperation Agreement is to make clear the responsibility of each party and the division of tasks between them, both with respect to each other and vis-à-vis companies in financial markets and the general public. A specific agreement between the FME and the Central Bank applies to payment and settlement systems.

In 2003, the IMF undertook a follow-up study to its 2000/2001 study of the Icelandic financial system and its stability (FSAP). The assessment of the IMF was published on its website in August 2003.

6. The public sector

The size and nature of the government sector

Compared to its neighbours, Iceland has a relatively small public sector, with expenditures around 42% of GDP. This is significantly lower than in the Nordic countries and the mainland countries of the European Union, higher than the US and Japan and close to the OECD average. An obvious reason for the modest size of the government sector is the absence of defence expenditures. However, what matters most are lower expenditures on social affairs in general. For this there are several explanations besides a difference in politics and tradition. Firstly, unemployment has been historically quite low in Iceland. Secondly, occupational fully funded pension funds have become the dominant pillar of the pension system, in contrast to public pay-as-you-go systems in many other OECD countries (See Chapter 4). The relatively young population and high retirement age also explain low overall pension expenditures.

General government sector finances

Iceland, like many other OECD countries, ran up a large public sector deficit in the late eighties and early nineties, with deficits averaging 3% of GDP in 1985 to the end of 1995 inclusive. To some extent the early 1990s deficit was the result of a prolonged slowdown which depressed revenues and increased social spending.

General government finances consolidated after the mid 1990s and recorded healthy surpluses by the end of last decade after heavy deficit spending in the 1980s. Since the mid-1990s the public sector fiscal balance has been significantly above the OECD average.

With booming national expenditure and a growing wage share of GDP, public sector revenue shot up from 38% of GDP in 1996-98 to 42% in 1999, in spite of cuts in personal income tax rates. As private consumsption and investment contracted in 2001-2, revenue fell to around 41% of GDP, while expenditures crept up, leading to an estimated deficit in 2002 of 1% of GDP.

General government debt rose significantly during the recession from the late 1980s to mid-1990s. Net debt peaked in 1995 at almost 40% but as economic growth gained momentum it declined and had come down by nearly a half by 2002.

Division of responsibilities

The government sector in Iceland is organised in two stages, the central government as described in the Treasury accounts, and municipal or local governments. In the last few years, local government expenditures have been

climbing from around 10% to around 11-12% of GDP as against a central government budget of around 30% of GDP. The central government regulates local governments, legislates their authority to collect revenue and actually collects more than 80% of local government tax revenues. It also administers and finances the bulk of the social security sector of government.

The central government is responsible for the police, courts and foreign affairs, upper secondary education, health services, institutional care for the disabled and elderly, general support and services for industry and most infrastructure construction and maintenance not obviously specific to individual municipalities. It administers basic benefit programmes for elderly and disabled persons and the bulk of supplementary old-age and disability pensions, rebates on interest payments on mortgages and benefits to families with dependent children. Most of these programmes are means-tested.

Local governments are responsible for local planning, most local infrastructure, day care and education from pre-school to the end of lower secondary level, and welfare services of various kinds, in particular services for the elderly except for health care. They are also responsible for solving the housing needs of low-income households. This is done via rent support, partially financed by the central government, and by providing rental housing for those who cannot find housing on their own. Local governments provide supplementary assistance to general programmes of pensions otherwise run by the central government.

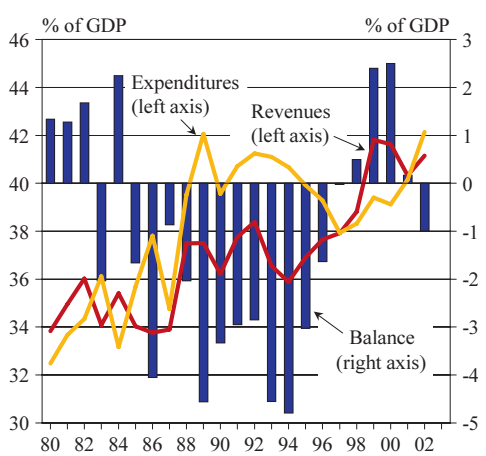
Central government finances

Central government revenues as presented in the Treasury's accounts amounted to around 33% of GDP in 2002. The composition of Treasury revenues is shown in Chart 6.4.

In 2002, expenditures by the Treasury, as presented in its accounts, amounted to around 34% of GDP. By far the largest part of central

Chart 6.1

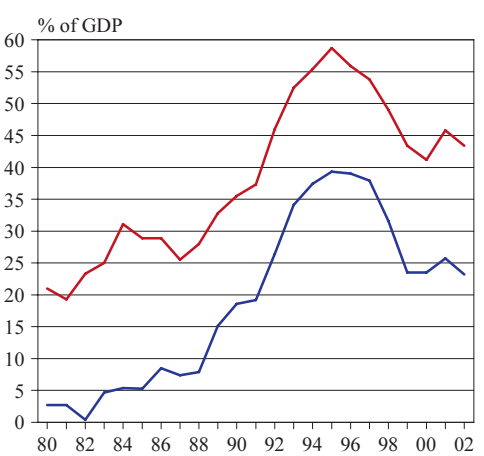
General government finances 1980-2002



Sources: Statistics Iceland, Ministry of Finance.

Chart 6.2

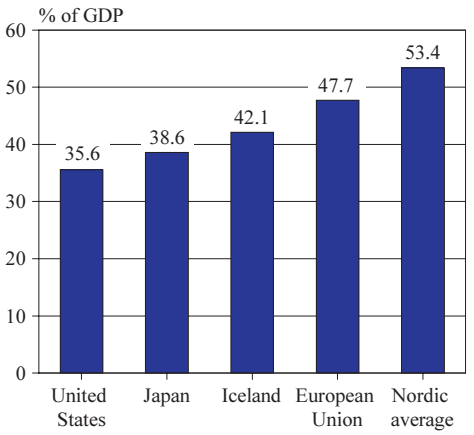
General government debt 1980-2002



Sources: Statistics Iceland, Ministry of Finance.

Chart 6.3

General government total expenditures in 2002



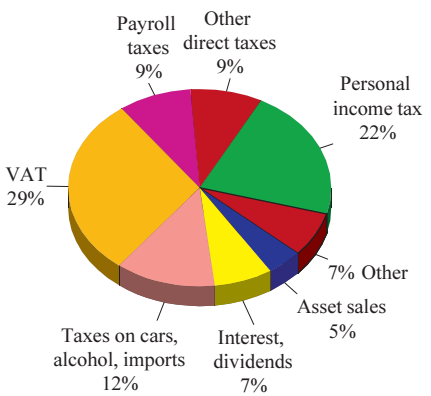
Sources: Statistics Iceland, OECD Economic Outlook (June 2003).

government expenditure goes to social security, welfare and health. A quarter was spent on health and about the same on social security and welfare. Chart 6.5 shows the functional breakdown of central government expenditure according to the Treasury accounts. A final detail to note is that the discretionary part of Treasury expenditures is quite low and has been falling. In particular, expenditure on fixed capital and capital transfers has fallen considerably in recent years, as is evident from Chart 6.6.

An interesting aspect of Treasury finances concerns the cyclical properties of the budget, especially revenues. The improvement in the budget in the mid- to late 1990s is largely explained by the sensitivity of Treasury revenues to the business cycle and associated swings in the current account. Firstly, the upswing in the economy and the associated consumption boom expanded revenue from expenditure taxes from 14% of GDP in 1995 to 17% in 1999 and 16% in 2000, after which the expenditure-led contraction in 2001-2 took this ratio down to 13% of GDP. Secondly, incomes below a threshold (around €9.7 thousand, 835 t.kr., in 2002 are exempt from the combined

Chart 6.4

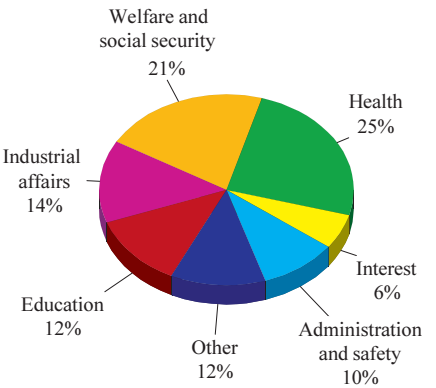
Treasury revenues by source 2002



Source: Treasury accounts for 2002.

Chart 6.5

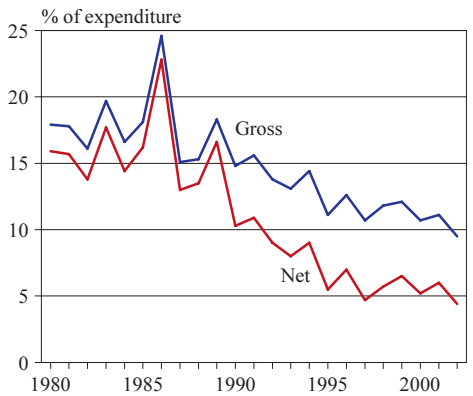
Central government expenditure by function 2002



Source: Treasury accounts for 2002.

Chart 6.6

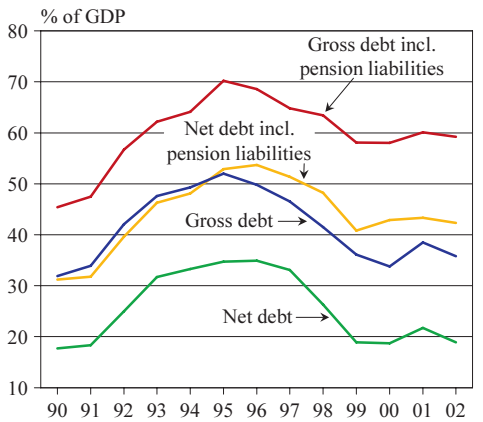
Central government fixed investment and capital transfers 1980-2002



1. Net of depreciation and transfers received.
Source: Statistics Iceland.

Chart 6.7

Central government debt 1990-2002

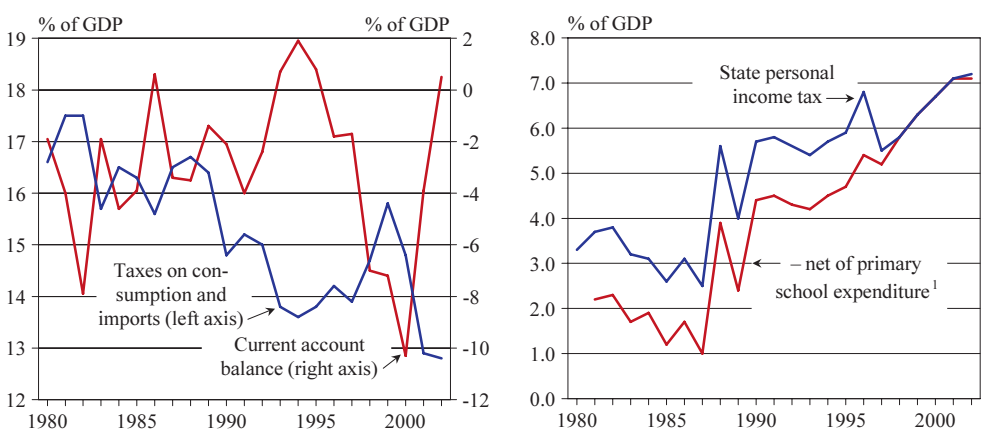


Source: Treasury accounts.

state and local income taxes. This in itself makes revenue from combined income taxes rise during booms and fall during contractions, assuming that the threshold follows, say, a longer-term trend of income. However, the peculiarity in the Icelandic taxation system is that the Treasury assumes all of this variability, by paying local governments their share of

Chart 6.8

Central government revenue 1980-2002



1. The 1988 jump reflects a large-scale tax overhaul. In 1997, municipalities assumed all expenses on primary education in return for a larger share in the joint state and municipal income tax.
Sources: Treasury accounts, budget documents.

the combined tax as a flat rate on total taxpayers' income rather than as a proportion of the revenues actually earned from it. In recent years, the threshold has lagged behind income trends, so the contraction in 2001-2 shows up as a flattening of income tax revenues relative to GDP and income. Thirdly, the upswing, along with policy changes, lowered expenses on unemployment benefits, child benefits and interest rebates to homeowners from a total of 2.6% of GDP in 1995 to 1.6% in 2002.

These factors, along with a smaller boost from corporate income and payroll taxes and the introduction of a tax on personal capital income in 1997, helped transform the Treasury balance from -2.6% of GDP in 1995 to +2.5% in 2000. When the boom turned into a mild contraction and the current account deficit began to dwindle, this surplus withered away.

Treasury surpluses since 1997, asset sales, reduced lending activity and strong economic growth contributed to a fall in gross Treasury debt from 52% of GDP in 1995 to 34% in 2000, while net debt fell from 34% to 19% of GDP. Since 2000, gross debt has rebounded to 36%, mostly because the Treasury borrowed funds to replenish the foreign exchange reserves of the Central Bank. The Treasury has also started to pre-fund civil service pension liabilities, which are not classified as debt in international comparisons. The evolution of Treasury debt, with and without pension liabilities, is shown in Chart 6.7.

Local government finances

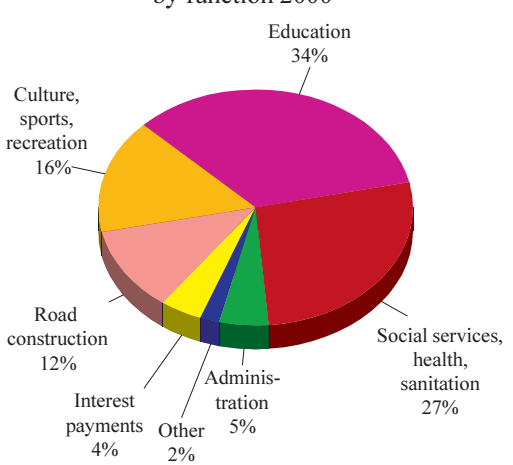
According to preliminary figures for 2002, local governments ran a deficit of around €70 million (6 b.kr.) or 7% of revenues. Local government revenues were approximately 11% of GDP, as measured by Statistics Iceland national accounts figures, while expenditures were around 12% of GDP. The size of local government budgets has grown in recent years from an average of 6½% of GDP in the early eighties to the current 12% in 2002, mainly because of new and expanded tasks in the area of primary education.

In 2000, education accounted for 34% of local government expenditures, followed by 27% for various social services, around 15% for culture and recreation and 12% for roadwork and traffic. On the revenue side, approximately 52% of revenues came from municipal income tax, another 10% from taxes on real estate, 5% from the Municipal Equalisation Fund and 20% and 12% respectively from service fees and capital-related items such as fees on building permits and asset sales.

Local governments ran deficits averaging 7% of revenue from 1990-2002, reaching 20% of revenue at the bottom of the recession in 1992-95. In spite of these persistent deficits, gross local government debt has hovered

Chart 6.9

Local government expenditures by function 2000



Source: Statistics Iceland.

around 7% of GDP and net debt around 5% in the period 1994-2000, actually falling to around 4% in 2002, as asset sales and economic growth have helped municipalities hold ground on the debt front.

The response of local government budgets to the business cycle is quite different from that of the Treasury budget. The municipal income tax is a fixed percentage of an individual's gross income with minimal exemptions and is much more stable than the Treasury's share of income taxes. However, there are considerable pressures on the expenditure side, since local governments run means-tested social assistance programmes and the pressure on local authorities to stimulate job creation in downturns proved quite strong in the early nineties. This may to some extent be due to the fact that the discretionary factor in local budgets is considerably larger than that of the central government. In particular, gross investment accounts for upwards of 20% of local government budgets compared to less than 10% for central government.

The tax system

The central government or Treasury derived around 93% of its revenue from taxes in 2002, while at the local government level the tax-dependency ratio was 86%. Of Treasury revenue, 30% came from direct taxes on income and wealth, 29% from a value-added tax, 9% from payroll taxes and 14% from various excise taxes on imports, production and consumption.

A 25.75% tax is levied on personal income up to €47 thousand (4.1 m.kr) for individuals, while an additional 5% is charged on higher income. In addition a municipal income tax, ranging from 11.2 to 13% depending on locality, is levied on personal income. Incomes up to €9.7 thousand (835 t.kr.) per person per year are exempt from the combined state and municipal income taxes, as are pension contributions.

Interest, dividends, rental income and personal capital gains are taxed at a lower rate of 10%.

The corporate income tax has been lowered significantly in the last 12 years, from 50% in 1991 to 18% in 2002. Capital income of corporations is treated like other revenue for tax purposes. A payroll tax of 5.73% is charged on wages.

A net wealth tax of 0.6% is assessed on net assets exceeding €54 thousand (4.7 m.kr.) for individuals as well as on the net value of corporations. These rates have been cut significantly in the last 10 years, with a large step being taken at the beginning of 2003. There is

Table 6.1 Main features of the tax system in Iceland

State income tax[1]	25.75%
on incomes > €47 thousand (4.1 m.kr.)	30.75%
Municipal income tax[1]	11.2% to 13% by locality
State tax on financial income[2]	10%
Corporate income tax	18%
Taxes on net worth	
Persons	0.6%
Corporations	0.6%
Payroll taxes	5.73%
Value-added tax	
General rate	24.5%
Low rate[3]	14.0%

1. Incomes up to €9.7 thousand per person are exempt from income taxes, but the Treasury pays municipalities the tax for persons below the exemption level. Pension fund contributions of persons are exempt up to a point.

2. Interest, dividends, realised capital gains and rental income of persons.

3. Food, hotel rooms, heating, books, newsprint, television and radio subscriptions.

Sources: Internal Revenue Directorate, Association of Local Authorities.

a 1.5% stamp duty on most debt instruments, a 0.25% duty on bills of exchange and 0.5% on the issue of equity shares.

The largest single source of Treasury revenue is value-added tax, which is levied at 24.5% on most goods and services. Food, heating fuel and some services are taxed at 14%, while a few specific sectors are exempt, notably financial services, education, health services and passenger transportation.

A general excise tax is levied on a range of goods at three rates; while unit fees are charged on some goods. Customs duties range from 0 to 30% of cif value; most imports from EFTA and EU countries are exempt. Revenue from general excise taxes and import duties has fallen from around 2% and 3% of GDP respectively in the early 1980s to a total of less than 1% in 2002.

Taxes on imports and ownership of motor vehicles, and excise taxes on motor fuel, made up 8% of Treasury revenue in 2002, while 4% derived from charges on the sale of alcohol and tobacco. In total, the taxes described above accounted for 84% of Treasury revenues and 98% of tax revenues in 2002. Non-tax income accounted for 15% of Treasury revenue in 2002, an unusually high figure due to gains on the sale of the two banks mentioned above. Besides this, non-tax revenue consists mostly of service charges, interest income and dividends.

Tax-to-GDP ratio was 37.3% in 2000, the same as the OECD average but well below that in the EU.

Divesting government holdings in the business sector

In Iceland, both central and local government have traditionally been heavily involved in the business sector, notably in the operation of utilities and banking institutions.

This has been especially true of the central government, whose involvement was considered necessary because of the small size of the economy. At the end of the 1980s, it ran a shipping company and owned factories producing fertiliser, cement, ferrosilicon and pharmaceuticals. Furthermore, the central government held shares in the largest airline, owned a majority share in the dominant electricity producer, most of the power grid and electricity distribution networks outside the Reykjavík area. It owned the sole operator of telephone services and postal services and the dominant broadcasting service, as well as financial institutions responsible for more than 60% of domestic credit.

Over the last 10 years the central government has embarked upon an extensive plan of privatisation. Ships, a fertiliser plant, a pharmaceuticals company, airline shares and the ferrosilicon plant have been sold, as well as sizeable chunks of the financial institutions and sundry other holdings. At the beginning of 1998, the government created an investment bank by merging four government investment credit funds which specialised in fisheries and manufacturing. The new bank was privatised in 1998 and 1999 and merged into a private bank in 2000. The two remaining government banks, Landsbanki and Búnaðarbanki, were sold in steps in 1999-2003.

In 2001, an attempt to sell 24% of the national telecom company was not successful, with subscriptions reaching only a tenth of the proposed sale. The sale was put on hold, but recent indications are that the sales process will be resumed in 2004. Meanwhile, the government's monopoly on telephone services has been diluted by competition from new entrants. The postal service remains in government hands. It too faces competition in spe-

Table 6.2 Highlights of recent and prospective privatisation

Year	*Company sold*	*Share sold*	*EUR millions*
1998	Icelandic Alloys Ltd. (ferrosilicon plant)	26.5%	13
	FBA Ltd. (investment bank)	49%	58
1999	FBA Ltd. (investment bank)	remaining 51%	126
	Búnaðarbanki (commercial bank)	13%	29
	Landsbanki (commercial bank)	13%	43
2001	Iceland Telecom	2.7%	11
2002	Landsbanki (commercial bank)	20% and 45.8%	200
2003	Búnaðarbanki (commercial bank)	45.8% and remaining 9.1%	170
	Landsbanki (commercial bank)	remaining 2.5%	8
	IAV (contractors)	remaining 40%	24
	Dilution of ownership through stock issue		
1998	Landsbanki (commercial bank)	15%	21
1998	Búnaðarbanki (commercial bank)	15%	14
	Prospective privatisation		
	The sale of Iceland Telecom has been authorised.		

Source: Executive Committee on Privatisation.

cialised postal delivery. After pending sales, the state's most important business holdings will be large stakes in the production and distribution of electricity, as well as the Housing Finance Fund, the Student Loan Fund and a few smaller financial institutions, altogether responsible for almost 25% of credit in the economy.

The current wave of privatisation actually started at the local government level in 1985, when the townships of Reykjavík and Hafnarfjörður sold their respective municipal trawler operations. Historically, local governments tended to be deeply involved in the fisheries sector, but most of those holdings have been divested in the last 15 years. Local governments, however, still own more than half of all electricity production capacity in Iceland, notably through holdings in the national power company, Landsvirkjun. They almost invariably own geothermal power companies responsible for central heating for most homes. Many own their local distributor of electricity and they generally own operating companies for the harbours. In 1998, local governments were barred from providing loan guarantees for non-governmental businesses, a practice which in the past had led to significant municipal involvement and ownership in troubled enterprises.

Government guarantees

Besides debt on the books of government entities, the state and local governments guarantee

Table 6.3 Treasury guarantees at the end of 2002

	EUR millions	*% of total*
Total Treasury guarantees	5,406	100.0
Housing Financing Fund	4,285	79.3
National Power Company	447	8.3
Agricultural Loan Fund	166	3.1
Regional Development Fund	124	2.3
Privatisation financing	152	2.8
Utilities	150	2.8
State enterprises	33	0.6
Other credit funds	18	0.3
Othe	31	0.6

Sources: Treasury Accounts 2002.

certain debts of various enterprises. Even though state guarantees must be authorised explicitly in budget legislation, historically they were granted to private as well as public enterprises in order to facilitate their borrowing. In recent years, guarantees have mostly been confined to government enterprises and institutions related to government. In 1998, local governments were legally prohibited from granting loan guarantees except to their own subsidiary institutions.

Treasury accounts for 2002 show that it has granted guarantees of around €5.3 billion (457 b.kr.), or 58% of GDP. Of this, 80% represents government backing of residential mortgages. Another 8% represents its guarantees for the debt of the national power company Landsvirkjun, in which the Treasury is a 50% partner and whose debt is guaranteed *in solidum* by the Treasury and the townships of Reykjavík and Akureyri. Landsvirkjun's total debt stood at €956 thousand (81 b.kr.) at the end of 2002, or 10% of GDP. Both the company's debt and the guarantees will rise significantly with the construction of large new power plants in east Iceland.

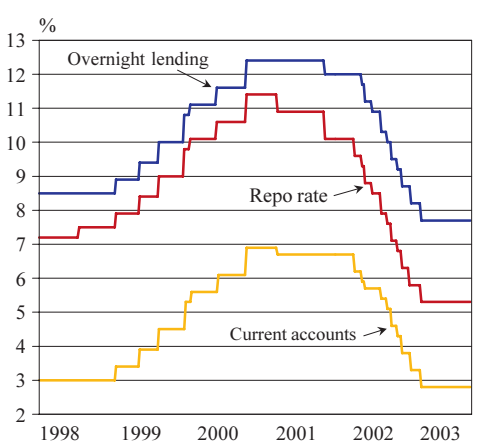
7. Monetary policy

The Central Bank

The Central Bank of Iceland was established as a separate institution in 1961. The current Central Bank Act entered into effect in May 2001 and involved substantial changes from the previous Act. In the new Act, ensuring price stability was defined as the Bank's single main objective. Furthermore, the Bank was granted instrument and financial independence, the transparency and accountability provisions were strengthened and provisions were included which serve to strengthen the capital position of the Bank.

Chart 7.1

Central Bank of Iceland interest rate corridor, March 3, 1998 - September 30, 2003



Source: Central Bank of Iceland.

The legislation grants the Central Bank of Iceland full independence to implement monetary policy in accordance with the inflation target, without interference from the government, and formally closes any direct access by the government to Central Bank financing. At the same time it aims to improve the transparency of monetary policy and make the Bank more accountable towards the government and the public at large. Monetary policy decision-making authority continues to be vested in the Board of Governors, consisting of three governors appointed by the Prime Minister to seven-year terms. The new Act specifically authorised the adoption of an inflation targeting policy.

The activities of the Central Bank have evolved over the years. Foreign exchange control, for example, were removed with the liberalisation of capital flows and the supervisory responsibilities of the Bank were moved to a separate Financial Supervisory Authority (FME) at the beginning of 1999 (see Chapter 5). In recent years the Bank, like many other central banks, has put increasing emphasis on monitoring financial stability.

Table 7.1 Monetary policy arrangements in Iceland since 1970

1970-1973	After the collapse of the Bretton-Woods system the Icelandic króna followed an adjustable peg against the US dollar.
1974-1983	Implementation of exchange rate policy became increasingly flexible and can be described as a managed float. The króna was first pegged against the US dollar and then against various baskets of trading partner countries' currencies.
1984-1989	Exchange rate policy became more restrictive, with increasing emphasis on exchange rate stability. In 1989, however, the króna was devalued ten times in small steps.
1990-1995	More emphasis was again put on exchange rate stability as the anchor of monetary policy. Until 1992 the currency peg was specified against a basket of 17 currencies, weighted according to merchandise trading shares, with ±2¼% fluctuation bands. The basket was redefined in 1992, with the ECU given a 76% weight, the US dollar a 18% weight and the Japanese yen a 6% weight. The króna was devalued twice in this period, in November 1992 by 6% and in June 1993 by 7½%. In September 1995 the fluctuation band was widened to ±6% in response to the abolition of capital controls. The currency basket was also changed. The new basket contained 16 currencies, weighted by their share in Iceland's trade in goods and non-factor services.
1996-2000	Fluctuation of the króna within the bands increased as the foreign exchange market deepened and the emphasis on price stability relative to exchange rate stability increased. Reflecting this, the exchange rate band was widened to ±9% in February 2000.
2001-	The fluctuation band was abolished in March 2001 and an inflation target adopted. The Central Bank gained full independence in setting monetary policy to attain this target without interference by the government[1].

1. The current framework for monetary policy has been described in detail in the Central Bank's *Monetary Bulletin,* available on its website (www.sedlabanki.is).

Inflation targeting

In 2001, Iceland joined a growing number of countries that have adopted a formal inflation target as a framework for monetary policy. The inflation target was specified in a joint declaration of the government and the Central Bank of Iceland on March 27 2001 as inflation of 2½%, measured in terms of the twelve-month rate of change in the consumer price index (CPI). To reflect the Central Bank's imperfect control of inflation, there are symmetric tolerance limits. If the inflation rate breaches these limits the Bank is obliged to submit a report to the government, explaining the causes for the deviation, how it intends to respond and when it expects the inflation target to be reached again. The report shall be made public. The Central Bank aims at all times to keep inflation close to the 2½% target. The tolerance interval is thus not a target range.

Given the relatively high rate of inflation at the time the inflation targeting regime was adopted, the upper tolerance limit was set at 6% for the year 2001 and at 4½% for 2002. From 2003 onwards the tolerance limits are specified as ±1½%.

To guide monetary policy, the Bank publishes a quarterly inflation forecast, projecting two years ahead. These forecasts more or less serve as the intermediate target of monetary policy instead of the previous currency peg. The króna therefore floats freely without interventions by the Bank, unless it deems such measures necessary in order to attain the inflation target or to preserve financial stability.

By defining the role of the Central Bank in the formulation of monetary policy in accordance with the new monetary policy framework, the current legislation has brought the Bank into line with best practice around the world. It sets price stability, as defined by the inflation target, as the main goal of monetary policy. Hence, monetary policy may only be applied to achieve other economic goals, to the extent deemed by the Bank to be consistent with the inflation target.

Under the current monetary policy framework, exchange rate developments are a cause of concern for the Central Bank only insofar as they affect the prospects for price stability or are likely to threaten financial stability. This was a significant departure from earlier policies, since Iceland has had a long history of using the exchange rate as a monetary anchor, although with a varying degree of commitment, as can be inferred from the table on p. 56.

Monetary instruments

The main monetary instrument of the Central Bank of Iceland is the interest rate in its weekly repurchase auction. Usually the Bank auctions two-week contracts. So far the auctions have been fixed-price, with unlimited access subject to collateral. No reverse repurchase agreements have been issued, although there is scope for them within the rules. Repurchase agreements are secured with collateral in the form of listed securities that the Bank approves.

The Central Bank offers an overnight loan facility to the banks, subject to collateral requirements. The Bank may issue certificates of deposit to a bank and these can be submitted as collateral against repurchase agreements and overnight loans. Banks are subject to reserve requirements and may deposit money at will on an interest-bearing account with the Central Bank. The required reserve base is the balance sheet total less equity and interbank liabilities at the end of the preceding month.

Currently, the required reserve ratio is 1% for the part of the required reserve base which is for one year or longer, and 3% for the part tied for a shorter term. The Central Bank has announced that before the end of 2003 its rules on minimum reserve requirements will be changed to bring them broadly into line with those of the European Central Bank. Reserve requirements with the ECB are equal to 2% of specific bank liabilities with a maturity of less than two years.

The Central Bank of Iceland may also intervene in the interbank foreign exchange market and participate in the interbank FX swap market.

8. Foreign debt

External debt

Iceland's external indebtedness is high by international comparison and has risen sharply since the mid-1990s. As can be seen from Chart 8.1 only two other developed countries, New Zealand and Finland, have a level of indebtedness similar to or larger than that of Iceland.

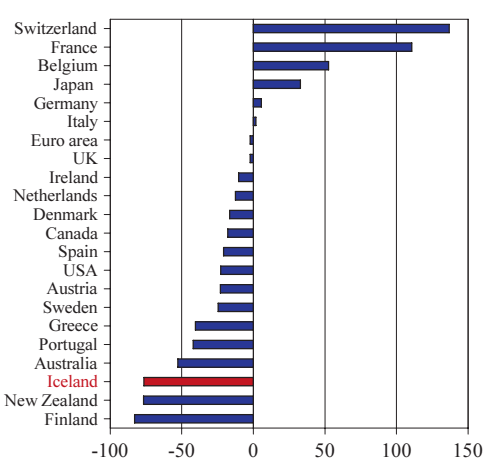
The total external debt of the Icelandic economy, private as well as public, amounted to €10.9 billion (922 b.kr) or 126% of GDP by end-2002 and the net external debt amounted to 102% of GDP. The international investment position (net external position of the Icelandic economy) was negative by €6.7 billion (568 b.kr.), or -79.1% of GDP, at the end of 2002. In that year the debt service of long-term debt came to 48.2% of export revenue (debt service ratio).

Total general government debt is not particularly high compared to other OECD countries and thus can not explain Iceland's high external indebtedness.

Explanations for indebtedness therefore

Chart 8.1

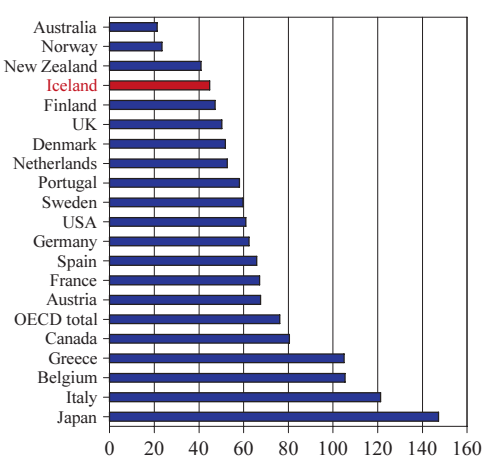
International investment position of selected advanced countries 2002



Source: International Monetary Fund.

Chart 8.2

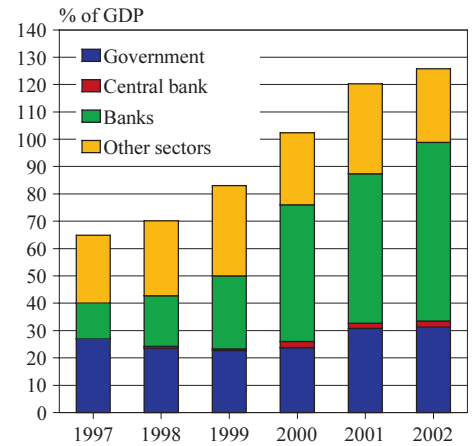
General government gross debt in selected OECD countries 2002



Source: OECD (*Economic Outlook*, June 2003)

Chart 8.3

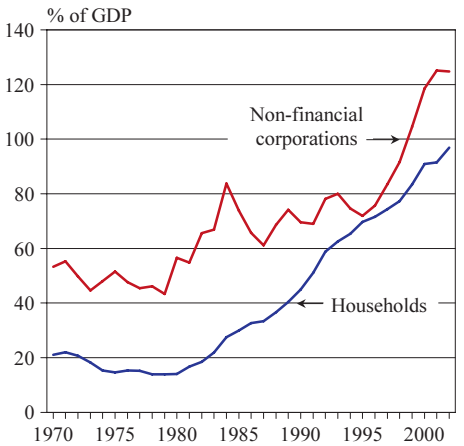
Estimated external debt by sector 1997-2002



Source: Central Bank of Iceland (staff estimates).

Chart 8.4

Private sector debt 1970-2002



Source: Central Bank of Iceland.

need to be identified in what is defined as the private sector.

Private debt

The private sector accounts for 73% of gross external debt. Private sector external debt was 92% of GDP by end-2002 and had increased from 32% in 1995. Most of the recent gross external debt growth is due to increased lending by the banking sector, which was responsible for about half of the gross total in 2002.

Low private sector savings and the financial liberalisation of the mid-1990s account for the rapid increase in external debt in recent years. The robust economic expansion of the second half of the 1990s and strong demand for credit raised domestic interest rates, which induced companies, especially those with income in foreign currency, to borrow abroad. Over a third of Icelandic corporate debt is external, either direct or intermediated by banks, but most of it is organically hedged, namely, matched by export revenues.

High levels of external indebtedness by international comparison and its increase in recent years must be seen in the light of country-specific factors as well as changes in the balance sheets of households and companies over the past decade.

The household balance sheet

Households in Iceland rank among the most indebted in the world. According to Eurostat figures (see table 8.1), only Danish and Dutch households have higher ratios of indebtedness to disposable income. According to OECD data the net worth of Icelandic households is broadly in line within the range of the G7 countries if pension fund assets are included, but below them if pension fund assets are excluded.

A major reason for the rise in household debt over the past two decades is improved access to credit. It was not until the 1980s that widespread credit rationing was lifted and interest rates became increasingly market-

Table 8.1 Debt of households and non-financial corporations

	Companies, % of GDP	*Households, % of disposable income*	*Figures for year*
Denmark	71.9	201.9	2000
Norway	91.7	141.8	2001
Germany	88.3	112.7	2001
France	82.1	73.2	2000
Netherlands	140.8	191.4	2001
Finland	72.8	69.7	2001
UK	105.9	120.4	2001
USA	93.7	92.9	2001
Iceland	147.1	169.3	2001

Sources: Eurostat for continental Europe, National Statistics for UK, Federal Reserve Flow of Funds Releases for USA. Figures for Iceland are based on data from the National Economic Institute until 1998, with Central Bank projections until 2001.

determined. When real interest rates turned positive with the widespread indexation of financial instruments in the 1980s, banks became more willing to lend. A major overhaul of the public housing fund in 1990 towards a market-based system greatly improved access to housing financing. Liberalisation of the domestic financial markets in the late 1980s was followed by external liberalisation in the first half of the 1990s. The long maturity and terms of preferential household credit imply that the debt service burden is lower than it would otherwise be.

At the beginning of the 1980s household debt was around 20% of disposable income and 14% of GDP but by the end of 2002 debt to financial institutions had reached to 91% of GDP and 176% of disposable income. In pace with its rising debt, the asset position of the household sector has strengthened and, if pension funds assets are included, so has its net worth. While debt rose from 80% of disposable income in 1990 to 176% in 2002, the value of the households' stake in pension funds showed similar growth, from 60% of to 162%. Data on financial assets are not as reliable as data on real assets but indicate that the value of shares owned by households has risen from 6% of disposable income to 78% in the twelve years to 2002. Holdings in firms that do not issue shares have not been estimated but should be included for international comparisons. Tangible assets show no clear trend relative to disposable income. Owner-occupied dwellings remain the largest chunk of household assets, representing 66% of net worth.

Corporate balance sheets

Icelandic corporate debt is also high compared with other countries for which data are available. At the end of 2002, debt of non-financial corporations was equivalent to almost 1½ GDP, the highest figure for countries for which broadly comparable data are available.[1] Corporate debt is marginally lower in the Netherlands, but considerably less elsewhere.

Just like households, Icelandic corporations were relatively debt-free at the end of the negative real interest era in 1980. As real interest rates turned positive around that time, corporate debt rose relative to GDP, but then remained roughly stable for 15 years by this criterion. With liberalisation of capital flows and the expansion of banking system balance sheets since 1997, the debt of Icelandic non-financial corporations has climbed from 80% of GDP to 135% in 2002. Some of the debt growth is traceable to the takeover and formation of foreign subsidiaries by Icelandic corporations and a significant part is the conse-

1. Based on data from National Economic Institute reports until 1997, projected to 2002. According to the Central Bank's own data, debts with the credit system are somewhat lower.

quence of the government's privatisation programme in 1998-2002.

However, corporate indebtedness has increased without a deterioration in net worth: The capital/asset ratio of publicly listed non-financial companies was about the same at the end of 2002 as at the onset of the debt increase in 1996, at around 36%, and the same general picture emerges through to 2001 in a larger sample of corporate accounts maintained by Statistics Iceland.

Other explanatory factors

Important underlying factors need to be highlighted that explain Iceland's relatively high levels of indebtedness by international comparison. In its most recent report on Iceland, the IMF points out that its "staff's cross-country analyses supported the view that the deviation of Iceland's international investment position with respect to comparable economies was largely explained by demographic factors." Furthermore, that "private sector borrowing appears rooted in demographic trends and the build-up of substantial private assets – rather than weak public finances or market distortions."

The age structure of Iceland's comparatively young population, which reduces aggregate saving due to life-cycle behaviour, has been estimated to account alone for 60% of its higher external liabilities relative to other industrial countries[2].

The accumulation of pension rights in the past two decades through a fully funded pension system (see Chapter 4) may also make households feel easier towards indebtedness because of future claims on the pension funds.

An exceptionally large proportion of housing in Iceland is privately owned, with a correspondingly small rental market amounting to only roughly one-fifth. Housing accounts for an estimated 60% of total household debt; conversely, housing debt is equivalent to roughly 65% of total residential housing assets. If half the current home owners rented their housing instead, household debt would be reduced by €3.0 billion (250 b.kr.) and its ratio to disposable income would decrease from 183% at the end of 2002 to 133%.

Furthermore, some 85% of household debt is indexed and roughly 70% consists of long-term indexed loans at preferential rates by the housing system and the Student Loan Fund, and pension fund lending to members. The long maturity and preferential terms of household credit effectively lower the debt service burden which is estimated to be around 12% of disposable income, relative to typical market rates.

Student financing is mostly in the form of long-term loans bearing little or no interest, which represented around 7% of household debt at the end of 2002. While Iceland is not alone in having such a student finance arrangement, the proportion is exceptionally high.

Finally, the power industry plays an important role as large investments in recent decades have made it relatively indebted. It is mostly financed by long-term borrowing, largely denominated in foreign currencies. Liabilities of the power sector amount to €1 billion (92.1 b.kr), constituting 9.1% of total national foreign debt. Although hydropower and geothermal facilities are capital-intensive to construct, their operating costs are low and they have a very long service life. The bulk of power generation is for industrial manufacturers, sold at rates denominated in foreign currencies and at least partially linked to export market prices.

2. Iceland – Staff Report for the 2003 Article IV Consultation, July 29 2003.

Treasury foreign debt

The Republic of Iceland has been a modest borrower in international markets. In recent years, the surplus on government finances has led to reductions in total outstanding debt. The ratio of Treasury foreign debt to GDP fell from 28% in 1995 to 21% in 2000 but, *inter alia* due to the sharp depreciation of the Icelandic króna, it rose again in 2001 to 26% of GDP. The subsequent strengthening of the króna and the use of proceeds from privatisation to pay down foreign debt have lowered this ratio to 21% at the middle of the year 2003.

A primary aim in debt management is to spread the amortisation of foreign debt evenly over coming years as well as to maintain a favourable composition in regard to interest rates, maturity and currency denomination. In recent years prepayment options have been exercised in order to refinance debt on more favourable terms. Interest rate and currency swaps have also been used to achieve debt and risk management objectives.

In August 2003, the Treasury's long-term foreign debt amounted to €1.7 billion (151.3 b.kr.) and the outstanding stock of Euro-commercial paper stood at €249 million (21.8 b.kr.) Around 27% of the Treasury's foreign obligations were denominated in US dollars, 52% in euros, 8% in Japanese yen, 10% in sterling and 3% in Swiss francs.

Currently, 42% of the Treasury's total foreign debt carries fixed interest rates. The average maturity of foreign long-term debt was approximately 3.6 years and the average duration 1.5 years in August 2003.

The Republic of Iceland has established three financial programmes to facilitate its financing requirements. These are a Euro-Commercial Paper (ECP) programme amounting to USD 500 million, a United States Commercial Paper (USCP) programme amounting to USD 1 billion, and a Medium-Term Note (MTN) programme amounting to USD 1.5 billion. The ECP programme was originally established in 1985 and the MTN and USCP programmes were introduced in 2001.

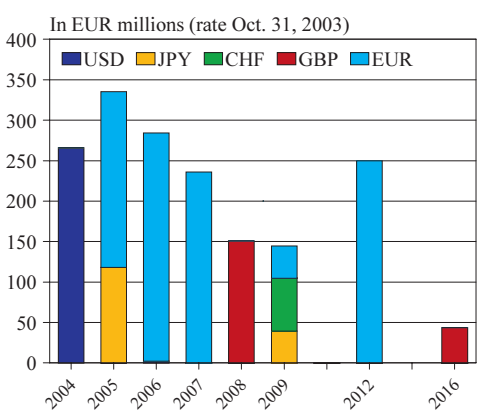
In 1990, the National Debt Management Agency (Lánasýsla ríkisins, NDMA) was established. Under the legislation setting up the NDMA, it was assigned the borrowing and debt management functions of the Treasury, and the issue of government guarantees. Under a special agreement with the Minister of Finance, the Central Bank is responsible for the implementation of foreign borrowing for the Treasury.

The Republic of Iceland has always paid when due the full amount required in respect of principal, interest and sinking fund instalments for all internal and external obligations.

Chart 8.5

Maturity profile of Treasury external long-term debt

October 31, 2003



Source: Central Bank of Iceland.

Table 8.2 Republic of Iceland foreign bond issues 1995-2003

Currency	*Amount*	*Issue date*	*Maturity*
JPY	15,000,000,000	31.1.1995	31.1.2005
EUR	36,000,000	5.5.1995	5.1.2007
EUR	40,000,000	28.8.1995	25.7.2005
DEM	250,000,000	11.4.1996	11.4.2001
DEM	63,000,000	5.6.1996	20.5.2006
DEM	100,000,000	25.7.1996	11.4.2001
DEM	150,000,000	18.3.1997	18.3.2000
CHF	100,000,000	22.10.1999	22.10.2002
EUR	200,000,000	14.3.2000	1.3.2007
EUR	250,000,000	6.4.2001	6.4.2006
USD	100,000,000	5.10.2001	5.4.2004
EUR	90,000,000	5.10.2001	5.10.2005
EUR	87,000,000	8.10.2001	10.10.2005
USD	100,000,000	5.10.2001	5.4.2004
EUR	250,000,000	10.04.2002	10.04.2012
EUR	150,000,000	30.09.2002	30.09.2009
EUR	150,000,000	12.05.2003	12.05.2008

Foreign exchange reserves

One of the functions of the Central Bank is to manage Iceland's foreign exchange reserves. Investment guidelines for the reserves are laid out in a resolution by the Board of Governors. The resolution prescribes the minimum amount of reserves, their currency composition and the investment categories of the portfolio. Currently the size of the reserves should not be smaller than the value of 3 months' merchandise imports. The portfolio consists mainly of deposits and investment grade bonds. The Central Bank holds a small position of gold reserves amounting to about 62 thousand ounces and Iceland has a quota of SDR 117.6 million at the International Monetary Fund.

At the end of 2003 the foreign exchange reserves are expected to amount to about 55 b.kr. or the equivalent of some 6.8% of 2003 GDP. The reserves are supported by committed credit lines amounting to USD 525 million. Thus, the reserves and committee credit lines will together equal roughly 12 per cent of GDP at the end of 2003. The Central Bank also has access to uncommitted interbank lines with a number of international banks.

Credit rating history

In 2003 Moody's, Standard & Poor's and Fitch confirmed their previous ratings with a stable outlook. From the reports issued by the ratings agencies it can be inferred that Iceland's creditworthiness has strengthened significantly over the past decade, supported by a fiscal consolidation programme, achievements in structural reforms and the increased flexibility of the economy. The reports have cited robust GDP growth in recent years, but all three have expressed concerns about imbalances that emerged in the economy during this period of

expansion. However, the rating firms have recently underlined the flexibility of the Icelandic economy and its capacity to sort out these imbalances.

In 1996 and 1997 Moody's and Standard & Poor's upgraded Iceland's credit rating to reflect better the country's increased creditworthiness. Standard & Poor's announced in 1996 that it had upgraded the credit rating for the Republic of Iceland's long-term foreign currency-denominated debt from A to A+, and short-term debt from A-1 to A-1+. Furthermore, Standard & Poor's assigned a first-time rating of AA+ to Iceland's long-term local currency debt. In July 1997, Moody's upgraded the Republic's foreign currency rating to Aa3 and assigned an Aaa rating to the Republic's long-term ISK bonds. In October 2002 Moody's upgraded the foreign currency rating to Aaa.

In February 2000 Fitch assigned an AA- long-term foreign currency rating for Iceland. A short-term rating of F1+ and an AAA rating for long-term local currency were also assigned.

Table 8.3 Ratings for Icelandic treasury bonds

	Foreign currency		*Domestic currency*	
	Long-term	*Short-term*	*Long-term*	*Short-term*
Moody's	Aaa	P-1	Aaa	P-1
S&P	A+	A-1+	AA+	A-1+
Fitch	AA-	F1+	AAA	.

In February and March 2001, Moody's, Standard & Poor's and Fitch confirmed their previous ratings on long-term debt. All three agencies also confirmed their highest ratings for the short-term debt. However, Standard & Poor's amended its previous positive economic outlook to neutral and in October changed the outlook to negative. In November 2002 Standard & Poor's confirmed its rating but moved the outlook back to stable. Fitch changed its outlook on the rating in February 2002 from stable to negative; however, this was changed back to stable in March 2003.

9. Appendix

Table A1 **Economic development**[1]

	2002
Population size at year-end (thous.)	288.5
Average annual population growth (%)	
in last 10 yrs.	0.95
in last 20 yrs.	1.02
in last 30 yrs.	1.05
GDP in billions of euros	9.1
GDP in billions of krónur	779
GDP in billions of USD	8.5
GDP/capita in €	31.6
GDP/capita in € in terms of PPP	26.4
Rank among OECD countries	6
Average annual growth rate of GDP (%)	
in last 10 yrs.	3.2
in last 20 yrs.	2.5
in last 30 yrs.	3.3
Average annual inflation rate (%)	
in last 10 yrs.	3.3
in last 20 yrs.	13.4
in last 30 yrs.	22.2

	2002
Labour force participation rate, males (%)	85.7
Labour force participation rate, females (%)	79.8
Rate of unemployment (%)	2.5
Infant mortality (% of 1,000 live births)	1.7
Life expectancy (males) (2001-2002)	78.4
Life expectancy (females) (2001-2002)	82.6
Live births per 1,000 inhabitants	14.1
Electricity consumption per capita (thous. kWh)	29.3
Physicians per 1,000 inhabitants (2000)	3.4
Passenger cars per 1,000 inhabitants (2000)	569
Access to Internet (% of population, 16-75 yrs.) (2001)	73.0
Share of exports in GDP	39.7
International investment position at year-end (% of GDP)	-79.1
Share of government revenue in GDP	41.1
Share of government expenditures in GDP	42.1
General government gross debt as a share of GDP	43.4

1. Data refer to 2002 unless otherwise indicated.

Sources: Central Bank of Iceland, Ministry of Labour, OECD, Statistics Iceland.

Table A2 **Structure of the economy**

A Components of GDP	*At current prices (EUR millions)* 1990	2000	2002	*% of GDP* 1990	2000	2002	*Average volume change (%)* 1962-2002	1982-2002
Private consumption	2,936	5,365	4,852	58.8	58.8	53.7	4.0	2.2
Public consumption	983	2,175	2,306	19.7	23.8	25.5	5.2	3.5
Gross capital formation	1,031	2,196	1,703	20.7	24.1	18.8	3.6	1.7
National expenditure	4,926	9,770	8,858	98.7	107.1	98.0	4.2	2.2
Exports of goods and services	1,682	3,190	3,584	33.7	35.0	39.7	4.1	3.7
Imports of goods and services	1,615	3,837	3,406	32.3	42.1	37.7	4.7	2.9
GDP	4,993	9,123	9,036	100.0	100.0	100.0	3.9	2.5
Current account balance	-104	-924	-6	-2.1	-10.1	-0.1	.	.

B GDP by sectors	*% of GDP* 1973	1980	1990	2000	2002
Agriculture	5.4	5.1	2.6	1.6	1.5
Fisheries and fish processing	15.7	16.5	14.2	10.5	12.4
Aluminium and ferrosilicon	...	...	0.9	1.4	1.3
Other manufacturing industry	12.8	12.6	10.9	9.2	8.5
Electricity and water supply	3.0	4.4	3.9	3.4	3.5
Construction	12.3	9.1	8.4	9.4	7.8
Wholesale & retail trade, restaurants & hotels	10.3	10.6	13.7	14.6	13.5
Transport, storage, communication	9.5	7.8	7.9	7.9	7.5
Other services	19.0	18.8	21.4	22.2	22.9
Government services	12.0	15.1	16.2	19.9	21.1
Total industries	100.0	100.0	100.0	100.0	100.0

C Breakdown of employment by industry	*Thous. man-years* 1997	*Percentage breakdown* 1963	1970	1980	1990	1997	2001[1]
Agriculture	5,207	13.4	12.4	7.9	4.9	4.0	3.3
Fisheries	6,115	6.6	6.4	5.3	5.7	4.7	3.9
Fish processing	7,598	9.7	7.8	9.1	6.1	5.9	5.1
Manufacturing industry	15,282	15.6	15.2	15.2	12.5	11.9	12.1
Construction, electricity and water	11,638	11.1	11.4	11.0	10.8	9.0	10.3
Wholesale & retail trade, restaurants & hotels	20,118	13.7	13.5	13.4	14.5	15.6	16.7
Transport, storage and communication	8,817	9.6	8.5	7.3	6.7	6.8	6.7
Finance, insurance, real estate, business serv.	11,537	2.7	4.0	5.4	8.1	9.0	9.5
Providers of government services	25,300	9.5	12.4	15.7	18.2	19.6	18.9
Other services	9,202	7.0	6.9	7.2	7.4	7.1	13.4
Other	8,018	1.0	1.4	2.4	4.9	6.2	-
Total employment[2]	128,832	100.0	100.0	100.0	100.0	100.0	100.0

1. Estimate. 2. Unemployed are not included.

Sources: Statistics Iceland, Central Bank of Iceland.

Table A3 **Structure of foreign trade**

A Exports and imports by basic categories 1990-2002

	At current prices (EUR millions)				*% of total exports or imports*			
	1990	*1995*	*2000*	*2002*	*1990*	*1995*	*2000*	*2002*
Exports of goods and services	1,684	1,925	3,190	3,584	100.0	100.0	100.0	100.0
Imports of goods and services	1,621	1,731	3,845	3,412	100.0	100.0	100.0	100.0
Merchandise exports	1,247	1,392	2,056	2,370	74.0	72.3	64.4	66.1
Marine products	941	1,001	1,301	1,492	55.9	52.0	40.8	41.6
Manufacturing goods	255	298	643	778	15.1	15.5	20.1	21.7
Other goods	51	92	112	100	3.0	4.8	3.5	2.8
Merchandise imports	1,186	1,236	2,579	2,218	73.2	71.4	67.1	65.0
Consumption goods	.	418	817	690	.	24.1	21.3	20.2
Capital goods	.	321	795	570	.	18.6	20.7	16.7
Industrial supplies	.	497	967	957	.	28.7	25.1	28.1
Services exports	437	533	1,134	1,214	26.0	27.7	35.6	33.9
Transportation	174	207	562	601	10.3	10.8	17.6	16.8
Travel	119	143	247	265	7.0	7.4	7.8	7.4
Other services	145	183	324	348	8.6	9.5	10.2	9.7
Services imports	435	495	1,265	1,195	26.8	28.6	32.9	35.0
Transportation	132	160	450	458	8.1	9.2	11.7	13.4
Travel	224	217	511	389	13.8	12.5	13.3	11.4
Other services	79	118	304	348	4.9	6.8	7.9	10.2

Sources: Statistics Iceland, Central Bank of Iceland.

B Merchandise exports by commodity groups 1990-2002

	At current prices (EUR millions)				*% of total merchandise exports*			
	1990	*1995*	*2000*	*2002*	*1990*	*1995*	*2000*	*2002*
Total merchandise exports	1,247	1,392	2,056	2,370	100.0	100.0	100.0	100.0
Marine products	941	1,001	1,301	1,492	75.5	71.9	63.3	62.9
Salted and/or dried fish	177	161	280	270	14.2	11.6	13.6	11.4
Fresh fish	161	81	151	160	12.9	5.9	7.3	6.8
Whole-frozen fish	70	149	130	126	5.6	10.7	6.3	5.3
Frozen fish fillets	349	278	376	422	28.0	20.0	18.3	17.8
Frozen shrimp	60	184	137	147	4.8	13.2	6.7	6.2
Fish meal	42	56	128	210	3.4	4.0	6.2	8.9
Fish oil	14	29	26	44	1.1	2.1	1.3	1.8
Other marine products	67	63	73	113	5.4	4.6	3.5	4.8
Agricultural products	24	25	35	38	1.9	1.8	1.7	1.6
Manufacturing products	255	298	643	778	20.4	21.4	31.3	32.8
Aluminium	129	147	381	448	10.4	10.6	18.6	18.9
Ferrosilicon	33	38	53	57	2.6	2.8	2.6	2.4
Other manufacturing products	93	113	208	273	7.4	8.1	10.1	11.5
Other products	27	68	76	62	2.2	4.9	3.7	2.6
Ships and aircraft	16	49	43	27	1.3	3.5	2.1	1.1
Other products	11	19	33	35	0.9	1.3	1.6	1.5

Sources: Statistics Iceland, Central Bank of Iceland.

Table A3 (continued) **Structure of foreign trade**

C Merchandise imports by economic category 1990-2002

	At current prices (EUR millions)				*% of total merchandise exports*			
	1990	*1995*	*2000*	*2002*	*1990*	*1995*	*2000*	*2002*
Total merchandise imports	1,186	1,236	2,579	2,218	100.0	100.0	100.0	100.0
Food and beverages	90	123	207	215	7.6	10.0	8.0	9.7
Primary, mainly for industry	4	29	64	62	0.4	2.4	2.5	2.8
Primary, mainly for household consumption	25	16	21	27	2.1	1.3	0.8	1.2
Processed, mainly for industry	10	11	12	13	0.8	0.9	0.5	0.6
Processed, mainly for household consumption	52	67	110	113	4.4	5.4	4.3	5.1
Industrial supplies not elsewhere specified	311	344	597	628	26.2	27.9	23.2	28.3
Primary	12	14	28	32	1.0	1.2	1.1	1.4
Processed	299	330	569	596	25.2	26.7	22.1	26.9
Fuels and lubricants	117	87	238	185	9.9	7.1	9.2	8.4
Primary	3	3	6	7	0.2	0.3	0.3	0.3
Motor fuel	25	18	50	38	2.1	1.4	1.9	1.7
Other	89	66	182	141	7.5	5.4	7.1	6.4
Capital goods (except transport)	219	264	611	448	18.5	21.3	23.7	20.2
Capital goods (except transport)	136	169	417	284	11.5	13.7	16.2	12.8
Parts and accessories	83	94	193	164	7.0	7.6	7.5	7.4
Transport equipment	218	154	440	301	18.4	12.4	17.0	13.6
Passenger motor cars (excl. buses)	42	55	168	88	3.5	4.4	6.5	4.0
Transport equipment (excl. ships, aircraft)	24	17	67	26	2.1	1.4	2.6	1.2
Other, non-industrial	3	3	6	5	0.3	0.2	0.2	0.2
Parts and accessories	36	35	63	52	3.1	2.8	2.5	2.3
Ships	19	35	80	45	1.6	2.9	3.1	2.0
Aircraft	94	10	54	85	7.9	0.8	2.1	3.8
Consumer goods not elsewhere specified	229	261	484	436	19.3	21.1	18.8	19.6
Durable	51	54	117	96	4.3	4.3	4.5	4.3
Semi-durable	92	104	189	155	7.7	8.4	7.3	7.0
Non-durable	85	103	178	185	7.2	8.4	6.9	8.3
Goods not elsewhere specified	2	3	3	5	0.2	0.2	0.1	0.2

Sources: Statistics Iceland, Central Bank of Iceland.

Table A3 (continued) **Structure of foreign trade**

D Geographic distribution of foreign trade 1970-2002[1]

	Share of total					*EUR millions*
Merchandise exports, fob	*1970*	*1980*	*1990*	*2000*	*2002*	*2002*
European Union	52.8	52.3	70.7	67.4	70.8	1,670.8
Euro area	25.4	30.2	37.6	42.3	47.5	1,121.7
Other EU countries	27.4	22.0	33.1	25.1	23.3	549.1
United Kingdom	13.2	16.5	25.3	19.3	17.6	414.6
Other Western European countries	2.8	2.3	3.4	7.8	6.9	163.6
Eastern Europe and former Soviet Union	9.6	8.8	2.9	1.4	2.4	57.2
Russia	6.8	5.4	2.5	0.4	0.4	9.5
United States	30.0	21.6	9.9	12.2	10.8	255.1
Japan	0.1	1.5	6.0	5.2	3.3	78.5
Other OECD countries	0.5	0.6	0.5	2.0	1.3	31.0
Developing countries [2]	4.2	12.9	5.5	3.0	3.3	78.0
Other countries	0.0	0.0	1.1	1.0	1.1	25.3
Total	100.0	100.0	100.0	100.0	100.0	2,359.4
Merchandise imports, cif						
European Union	64.9	58.0	59.9	57.0	52.5	1,264.3
Euro area	32.0	33.2	35.5	33.5	30.6	736.1
Other EU countries	33.0	24.8	24.4	23.6	21.9	528.2
United Kingdom	14.3	9.5	8.1	9.0	7.4	179.3
Other Western European countries	5.4	8.1	5.2	9.7	9.5	228.6
Eastern Europe and former Soviet Union	10.4	10.9	6.5	5.7	10.0	240.9
Russia	7.2	9.7	5.0	1.8	3.8	91.4
United States	8.2	9.4	14.4	11.0	11.1	267.1
Japan	2.9	4.0	5.6	4.9	3.1	75.6
Other OECD countries	0.4	5.8	3.7	4.5	4.7	112.8
Developing countries [2]	7.2	2.7	3.1	5.6	7.5	180.3
Other countries	0.6	1.1	1.4	1.5	1.6	38.8
Total	100.0	100.0	100.0	100.0	100.0	2,408.3

1. Country groups are based on the year 2000. 2. International Monetary Fund's definition.

Sources: Statistics Iceland, Central Bank of Iceland.

Table A4 National accounts overview

	In EUR millions at current prices					Volume change on previous year (%)				
	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002
Private consumption	4,079	4,648	5,365	4,668	4,852	10.2	7.3	4.0	-3.0	-1.2
Public consumption	1,599	1,846	2,175	2,019	2,306	3.4	4.7	4.3	3.1	4.0
Gross fixed capital formation	1,754	1,782	2,196	1,902	1,703	32.9	-3.0	14.8	-7.0	-14.8
Industries	1,172	1,159	1,417	1,156	924	45.8	-5.1	14.9	-14.3	-22.1
Housing	272	289	366	380	434	1.3	0.3	15.2	17.8	5.2
Public works and buildings	310	334	413	366	345	23.4	2.7	14.0	-1.7	-12.3
Changes in stock[1]	11	2	34	-24	-2	20.1	-0.9	-1.8	-2.7	-0.4
National expenditure	7,444	8,277	9,770	8,565	8,858	13.5	4.2	6.8	-3.6	-2.9
Exports of goods and services	2,556	2,749	3,190	3,464	3,584	2.0	4.0	5.0	7.7	3.7
Exports of goods	1,710	1,878	2,056	2,247	2,370	-2.6	7.1	-1.3	7.3	6.6
Exports of services	846	871	1,134	1,217	1,214	13.2	-2.5	19.4	8.5	-1.8
Imports of goods and services	2,880	3,129	3,837	3,512	3,406	23.5	4.2	8.0	-9.0	-2.3
Imports of goods	2,023	2,168	2,572	2,315	2,212	24.3	3.2	2.7	-10.0	-3.2
Imports of services	857	961	1,265	1,197	1,195	21.2	6.9	21.5	-6.9	-0.5
Gross domestic production (GDP)	7,121	7,897	9,123	8,517	9,036	5.5	4.1	5.7	2.8	-0.6
Current account balance	-494	-552	-924	-346	-6	.	.	.	.	.
Current account balance, % of GDP	-6.9	-7.0	-10.1	-4.1	-0.1	.	.	.	.	.

1. Volume changes indicate percentages of GDP of the previous year at fixed prices. *Source*: Ministry of Finance.

Table A5 Financial sector indicators

Financial institutions (number of, unless otherwise indicated)	1990	1995	2000	2002
Commercial banks	3	4	4	5
Savings banks	33	29	26	24
Average number of employees in commercial and savings banks	2,831	3,038	3,326	3,968
Total assets of commercial and savings banks (EUR billions)	2.8	3.3	11.0	14.8
Investment banks	.	.	4	4
Investment funds	12	11	5	4
Leasing companies	4	3	3	3
Pension funds	88	75	56	51
Insurance companies	19	16	12	14
Financial markets				
Listed companies on Iceland Stock Exchange (ICEX)	2.0	27.0	75.0	64.0
Market capitalisation of listed companies at end of period (EUR billions)	.	0.6	5.0	6.2
% of GDP	.	10.9	59.0	66.4
Annual turnover in listed equities (EUR billions)	.	0.0	2.7	3.7
Annual turnover in listed bonds (EUR billions)	0.0	0.8	4.6	9.4
Annual turnover on the Icelandic interbank market for foreign exchange (EUR billions)	.	0.7	10.6	9.7
Annual turnover on the interbank FX swap market[1] (EUR billions)	.	.	.	2.0
Annual turnover on the interbank market for krónur (EUR billions)	.	0.7	7.2	4.9

1. Started November 26, 2001.

Sources: Financial Supervisory Authority (FME), Iceland Stock Exchange (ICEX), Central Bank of Iceland.

Table A6 **Government sector indicators**

General government revenues and expenditures

% of GDP	*1960*	*1970*	*1980*	*1990*	*2000*	*2002*
Revenues	35.5	30.1	33.8	35.5	41.6	41.1
Taxes	34.9	28.9	31.7	33.1	39.2	37.8
on income and wealth	8.2	8.9	8.9	11.6	19.4	20.4
on production/imports/consumption	26.7	20.0	22.7	21.5	19.8	17.3
Interest	0.5	0.6	1.9	1.5	1.5	2.0
Other	0.2	0.6	0.3	0.9	0.9	1.4
Expenditures	32.6	28.9	32.5	38.8	39.1	42.1
Public consumption[1]	9.8	11.7	15.9	17.9	21.8	23.5
Interest	0.2	0.6	1.6	3.7	3.4	3.4
Subsidies	12.1	3.3	3.5	3.4	1.6	1.8
Current transfers	5.7	5.5	5.0	6.9	7.1	8.5
Fixed investment	3.0	4.6	3.6	4.3	3.9	3.9
Capital transfers	1.9	3.1	2.9	2.6	1.3	1.1
Financial balance	2.9	1.2	1.3	-3.3	2.5	-1.0

Government expenditure by function

Central government, % of GDP	*1960*	*1970*	*1980*	*1990*	*2000*	*2001*
Total expenditure	27.6	21.4	26.9	32.3	31.0	31.3
Administration and safety	2.0	2.3	2.2	2.5	3.0	2.9
Education	2.1	3.3	3.4	3.7	2.3	2.6
Health services	1.9	3.3	5.1	6.7	7.7	7.5
Social security	4.4	4.1	4.8	6.3	6.6	6.5
Other social affairs	0.8	1.4	1.1	1.2	1.3	1.2
Economic services	16.4	7.0	7.8	7.2	4.5	5.0
of which transportation	2.0	2.7	2.4	2.0	1.9	2.0
Interest expenditure	0.0	0.4	1.3	3.3	2.9	3.1
Other expenditure	-0.1	-0.3	1.1	1.6	2.7	2.4

Local government, % of GDP	*1960*	*1970*	*1980*	*1990*	*2000*
Total expenditure	5.8	7.8	6.5	7.1	10.7
Administration and safety	0.6	0.6	0.5	0.7	0.7
Education	0.7	0.9	0.9	1.1	3.6
Health services	0.2	0.1	0.7	0.1	0.1
Social security	1.9	2.3	0.8	1.3	2.1
Other social affairs	1.0	1.4	1.5	1.7	2.4
Economic services	1.1	1.9	1.5	1.2	1.5
of which transportation	1.0	1.0	1.2	1.1	1.2
Interest expenditure	0.1	0.2	0.3	0.4	0.5
Other expenditure	0.2	0.3	0.3	0.5	-0.2

1. Without depreciation. *Source:* Statistics Iceland.

Table A7 **Balance of payments**

EUR millions	*1990*	*1995*	*2000*	*2001*	*2002*[1]
Current account	-104	40	-924	-346	-6
Balance on goods, services and income	-101	44	-914	-335	-20
Exports	1,747	1,988	3,350	3,656	3,771
Imports	-1,848	-1,944	-4,264	-3,991	-3,790
Balance on goods and services	67	197	-647	-48	178
Exports	1,682	1,925	3,190	3,464	3,584
Imports	-1,615	-1,728	-3,837	-3,512	-3,407
Balance on goods	65	159	-516	-68	158
Merchandise exports f.o.b.	1,245	1,392	2,056	2,247	2,370
Marine products	941	1,001	1,301	1,395	1,492
Aluminium and ferrosilicon	162	185	435	508	505
Ships and aircraft	14	49	43	38	27
Other goods	128	157	276	306	347
Merchandise imports f.o.b.	-1,180	-1,233	-2,572	-2,315	-2,212
Investment goods	-218	-263	-609	-506	-446
Transport equipment	-215	-153	-438	-322	-300
Fuels and lubricants	-117	-87	-238	-202	-185
Industrial supplies	-310	-343	-595	-634	-626
Consumer goods	-320	-387	-692	-651	-654
Balance on services	2	38	-131	20	20
Exports of services, total	437	533	1,134	1,217	1,214
Transportation	174	207	562	581	601
Air transport	94	130	416	432	452
Sea transport	80	78	147	150	150
Travel	119	143	247	262	265
Other receipts	145	183	324	374	348
Communications services	12	18	11	27	8
Insurance services	5	4	6	7	7
Government services	95	79	116	92	89
Other services	33	82	191	248	244
Imports of services, total	-435	-495	-1,265	-1,197	-1,195
Transportation	-132	-160	-450	-424	-458
Travel	-224	-217	-511	-416	-389
Other expenditures	-79	-118	-304	-357	-348
Communications services	-9	-14	-2	-31	-40
Insurance services	-12	-16	-6	-8	-20
Government services	-7	-9	-17	-18	-19
Other services	-51	-80	-280	-300	-268
Balance on income	-168	-153	-267	-287	-197
Receipts	65	63	160	192	186
Compensation of employees	36	39	76	66	63
Investment income	29	24	84	126	123
Dividends and reinvested earnings	5	-1	36	88	76
Interest payments	24	25	48	38	48
Expenditures	-233	-216	-426	-479	-383
Compensation of employees	-9	-4	-12	-6	-8
Investment income	-224	-212	-415	-473	-375
Dividends and reinvested earnings	-7	-13	-22	-4	-20
Interest payments	-217	-199	-393	-469	-355
Current transfer, net	-3	-4	-10	-11	14
Public transfer, net	-5	-7	-11	-13	-10
Private transfer, net	2	3	1	2	23
Conversion rate: ISK per EUR	74.29	83.76	72.61	87.49	86.20

Table A7 (continued) **Balance of payments**

EUR millions	*1990*	*1995*	*2000*	*2001*	*2002*[1]
Capital and financial account	126	-5	991	198	165
Capital transfer, net	2	-3	-3	4	-1
Financial account[2]	124	-1	994	194	167
Financial account excl. reserves	181	2	914	139	232
Direct investment, net	8	-26	-241	-230	-43
Abroad	-9	-19	-426	-396	-186
Equity capital	-4	-4	-437	-307	-251
Reinvested earnings	-5	2	-6	-50	-18
Other capital	0	-17	16	-40	83
In Iceland	17	-7	185	166	143
Equity capital	1	5	230	244	138
Reinvested earnings	-10	2	-18	-18	0
Other capital	27	-14	-27	-59	5
Portfolio investment, net	20	120	543	695	278
Assets	0	-49	-694	-64	-327
Equities	0	-34	-688	-66	-276
Debt securities	0	-16	-6	2	-52
Bonds and notes	0	-14	9	-25	-52
Money market instruments	0	-2	-15	27	1
Liabilities	20	169	1,237	760	605
Equities	0	0	-46	49	18
Debt securities	20	169	1,283	711	588
Bonds and notes	-1	145	1,225	380	596
Money market instruments	21	24	58	332	-8
Financial derivatives, net	-1	0	-1	0	0
Assets	-1	-13	17	0	0
Liabilities	0	12	-18	0	0
Other investment, net	153	-91	614	-327	-2
Assets	-40	20	-98	-538	-390
Deposits and loans	-21	29	-78	-530	-412
Trade credits	-20	-8	-20	-8	28
Other capital	0	-1	0	0	-6
Liabilities	193	-111	712	212	388
Deposits and loans	180	-120	713	263	312
Long-term borrowing	200	-187	383	346	-272
Short-term borrowing	-20	67	330	-83	584
Trade credits	14	1	1	-35	-3
Other capital	-1	8	-3	-16	79
Reserve assets	-57	-3	80	55	-66
Net errors and omissions	-22	-36	-66	148	-159
Memorandum items:					
Debt securities, loans, etc., net	214	58	1,995	923	975
Long-term borrowing, net	199	-42	1,608	726	324
Monetary authorities	-1	0	0	0	0
General government	14	149	65	474	241
Deposit banks	-12	-99	1,047	-58	-30
Other sectors	198	-93	495	310	113
Short-term borrowing, net	15	100	387	197	652
Monetary authorities	-1	16	148	-66	56
General government	21	24	158	8	-51
Deposit banks	-8	57	-29	206	658
Other sectors	2	4	110	50	-11
Conversion rate: ISK per EUR	74.29	83.76	72.61	87.49	86.20

1. Preliminary figures. 2. Positive number represents inflow of capital due to foreign borrowing or decrease in assets. Negative number accounts for outflow of capital, debt repayments or increase in assets. *Source*: Central Bank of Iceland.

Table A8 **Projected external debt service**[1]

EUR millions	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*	*Principal thereafter*	*Total*
General government								
Principal	278	216	299	559	343	296	625	2,247
Interest[2]	102	79	69	50	37	33		
Total	379	296	368	609	379	329		
Central government								
Principal	253	188	257	496	305	254	377	1,762
Interest[2]	85	64	55	37	26	23		
Total	338	252	311	533	330	277		
Local government								
Principal	25	28	42	63	38	42	248	486
Interest[2]	16	16	15	13	11	10		
Total	42	43	56	76	49	52		
Financial institutions								
Principal	1,255	1,409	707	285	71	12	129	3,869
Interest[2]	118	71	38	14	6	5		
Total	1,373	1,479	745	299	77	17		
Banks								
Principal	1,193	1,389	670	270	50	4	101	3,676
Interest[2]	112	66	34	11	4	3		
Total	1,305	1,455	703	280	54	7		
Other loan institutions								
Principal	62	20	38	16	21	8	28	193
Interest[2]	6	5	4	3	2	1		
Total	68	25	42	19	23	10		
Other sectors								
Principal	186	325	472	65	97	-172	511	1,851
Interest[2]	74	64	55	38	30	24		
Total	260	388	527	103	127	-148		
Total payments								
Principal	1,719	1,949	1,478	909	511	137	1,265	7,968
Interest[2]	294	214	162	102	73	61		
Total	2,013	2,163	1,640	1,010	584	198		

1. Based on debt outstanding at end of year 2002. Conversion rate: ISK per EUR = 84.47. 2. Floating interest rate, LIBOR-USD is assumed at 3.2% and EURIBOR at 3.7% per year.

Source: Central Bank of Iceland.