



The Economy of Iceland

# ECONOMY OF ICELAND

2008

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**Icelandic letters:**

ð/Ð (pronounced like *th* in English *this*)

þ/Þ (pronounced like *th* in English *think*)

**Symbols:**

- \* Preliminary or estimated data.
- 0 Less than half of the unit used.
- Nil.
- ... Not available.
- . Not applicable.

## Republic of Iceland

### People

Population	313.376 (January 1, 2008)
Capital	Reykjavík, population 117.721 (December 1, 2007)
Language	Icelandic; belongs to the Nordic group of Germanic languages
Main religion	Evangelical Lutheran (80,7%)
Life expectancy	Females: 83 years, Males: 79 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 12th, 2007

### Economy

Monetary unit	Króna (plural: krónur); currency code: ISK
Gross domestic product	€14.6 billion (1,279.4 billion krónur, US\$19.9 billion) in 2007
International trade	Exports of goods and services 35% and imports of goods and services 46% of GDP in 2007
Per capita GDP	€33.7 thousand in 2007 (4.1 million krónur, US\$37.9 thousand in terms of PPP)

### Land

Geographic size	103,000 km <sup>2</sup> (39,768 sq.miles)
Highest point	2,110 m (6,923 ft)
Exclusive economic zone	200 nautical miles (758,000 km <sup>2</sup> / 292,680 sq.miles)
Climate	Cool temperate oceanic; highly changeable, influenced by the warm Gulf Stream and Arctic currents

## Republic of Iceland credit ratings

	<i>Affirmed</i>	<i>Foreign currency</i>		<i>Domestic currency</i>		<i>Outlook</i>
		<i>Long-term</i>	<i>Short-term</i>	<i>Long-term</i>	<i>Short-term</i>	
Moody's	May 2008	Aa1	P-1	Aa1	P-1	Stable
Standard & Poor's	April 2008	A	A-1	AA-	A-1+	Negative
Fitch	April 2008	A+	F1	AA+		Stable
R&I Rating of Japan	June 2007	AA+				Stable

## Central Bank of Iceland publications in English

Annual Report  
Monetary Bulletin  
Financial Stability  
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.

### Useful websites

Central Bank of Iceland	<a href="http://www.sedlabanki.is">www.sedlabanki.is</a>
Parliament of Iceland (Althingi)	<a href="http://www.althingi.is">www.althingi.is</a>
Government of Iceland	<a href="http://www.government.is">www.government.is</a>
Statistics Iceland	<a href="http://www.statice.is">www.statice.is</a>
OMX Nordic Exchange in Iceland	<a href="http://www.omxgroup.com">www.omxgroup.com</a>
National Debt Management Agency	<a href="http://www.bonds.is">www.bonds.is</a>
Trade Council of Iceland	<a href="http://www.icetrade.is">www.icetrade.is</a>
National Association of Pension Funds	<a href="http://www.ll.is">www.ll.is</a>
Invest in Iceland Agency	<a href="http://www.invest.is">www.invest.is</a>
Financial Supervisory Authority	<a href="http://www.fme.is">www.fme.is</a>



# 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 in 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, is provided in the Central Bank's *Monetary Bulletin* and *Financial Stability* report. 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 Iceland's rapid evolution into a market-driven economy supporting one of the more affluent societies in Europe in the 21<sup>st</sup> century. It examines the interaction of volatility, growth and inflation in the preamble to the recent upswing. Chapter 4 deals with the structure of the economy. It discusses size and income levels, the composition of GDP, foreign trade, main economic sectors and the labour market. It also describes the three pillars of the Icelandic pension system and presents the credit ratings of financial institutions. Chapter 5 provides an account of the financial markets and infrastructure. Chapter 6 surveys the public sector, including its size, division of tasks, expenditure structure and the tax system. It also describes the structure and management of the foreign debt of the Republic of Iceland, and sovereign credit ratings. Chapter 7 addresses monetary policy. It covers the framework of monetary policy, its instruments and the role of the Central Bank, with an account of foreign exchange reserves. Chapter 8 discusses foreign and domestic debt. A number of tables are provided in an appendix.

We are constantly making efforts to improve this publication. Hence, we would be 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](mailto:publish@centbk.is)



# 1 Economic developments

After a five-year period of robust economic growth, the Icelandic economy is entering a period of adjustment. While initially spurred by investments in the aluminium and power sectors, growth became increasingly imbalanced, characterised by factors such as rising inflation and a current account deficit sustained by easy access to global credit. A combination of abundant global liquidity and structural changes in the financial sector, which greatly enhanced household access to credit, fed a boom in asset prices, further stimulating domestic demand. Annual GDP growth of over 7% in 2004-2005 outstripped the increase in potential output and contributed to mounting pressures in the domestic goods and labour markets. Attaining the inflation target proved challenging under these conditions, and inflation has remained above target since the second half of 2004. As a result of a sharp depreciation of the króna, triggered by the global financial crisis, inflation reached an eighteen high in 2008. To contain inflation expectations and bring inflation back to target over the medium term, the Central Bank of Iceland raised its policy rate considerably.

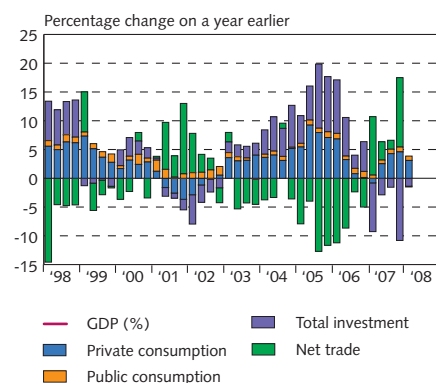
## The most extensive investments in Icelandic history

The economic upswing began in 2003, when construction commenced on a large aluminium smelter and an associated power plant in the eastern part of the country. In combination, these investments were equivalent to more than one-third of 2003 GDP, the year when construction commenced, and probably entailed a greater macroeconomic shock than any other country with a comparable monetary framework has had to tackle. Projects of such scope are accompanied by a considerable widening of the current account deficit, mostly due to imports of capital equipment, but also through induced general demand.

## Structural changes in the credit market

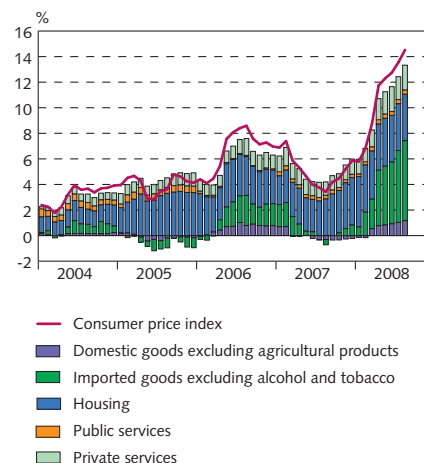
The second driver of macroeconomic imbalances was the combination of favourable global financial conditions and sweeping changes in Iceland's financial system, including the full privatisation of major banks in 2003 and their subsequent expansion abroad, and changes in the mortgage market in the second half of 2004. In late summer 2004, the commercial banks raised their profile in the mortgage market by engaging in head-on competition with the state-run Housing Financing Fund (HFF), which had traditionally been the main provider of mortgage loans to households. The banks began to offer mortgage loans with lower interest rates, longer maturities, and a higher loan-to-value ratio. Unlike the HFF, they did not set a housing purchase as a precondition for a loan, which facilitated refinancing and mortgage equity withdrawal. The overall result was brisk credit growth, soaring real estate prices, and a sharp expansion of private consumption, which in turn fuelled inflationary pressures and a widening current account deficit.

Chart 1.1  
Contributions to GDP growth  
Q1/1998-Q1/2008



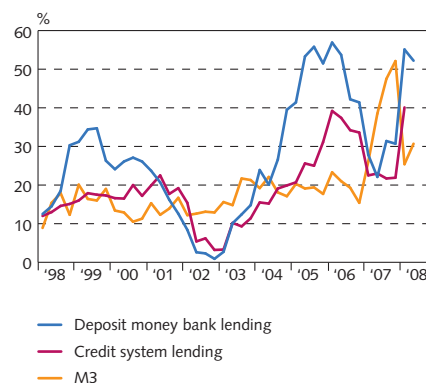
Source: Statistics Iceland.

Chart 1.2  
Components of CPI inflation  
Contribution to inflation in past 12 months



Source: Statistics Iceland.

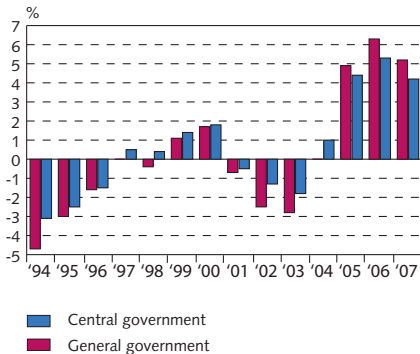
Chart 1.3  
Growth of domestic credit  
and monetary aggregates  
Q1/1998 - Q2/2008



Source: Central Bank of Iceland.

Chart 1.4

Treasury and public sector financial balance as % of GDP 1994-2007



Source: Ministry of Finance.

### Tax reductions

The third factor that contributed to the overheating of the Icelandic economy was the reduction in both direct and indirect taxes which, in addition to relatively large increases in general pay, led to a rapid rise in real disposable income. At the beginning of 2007, the last phase of the personal income tax rate cuts took effect, and in March 2007, VAT and excise taxes on food and certain other items were reduced as well. The Treasury's combined revenue loss from these cuts is estimated at around 1½% of GDP per year.

### The fiscal stance

Since the early nineties, the fiscal balance has followed the domestic cycle quite closely. A thirteen-year string of general government deficits came to an end in 1997 after economic growth picked up. During the period 1997-2000, there was a return to surplus, which was halted as the economy cooled in 2002-2003, but returned with renewed vigour in 2005-2007, when the surplus averaged 5½% of GDP. Although this was driven mainly by a rapidly expanding tax base and expenditure restraint, the contraction of public sector investment during the peak years of the large investment projects in aluminium and energy played some part as well. By the end of 2006, the Treasury had no debt on a net basis.

In connection with the signing of wage agreements in early 2008, the government pledged to raise the tax-free income threshold in excess of price levels, reduce income-linked cutbacks of child allowances and asset-linked reductions of mortgage interest allowances, and lower the corporate income tax rate. Treasury estimates of costs are around 2% of GDP once the measures are fully implemented, with compensating expansionary effects estimated at around ¾% of GDP.

### Excess demand for labour

In spite of vigorous GDP growth in 2004-2005, wage drift was muted in historical terms, even in sectors that have experienced labour shortages. Migrant labour has enhanced the resilience and flexibility of the Icelandic labour market in recent years and foreign nationals are estimated to have been over 10% of the labour force in 2007.

Nonetheless, wage increases have been far above a level compatible with the inflation target. In line with a fall of unemployment from 3½% in 2003 to 1.1% in the first half of 2007, wage drift increased significantly. This resulted in a rise in the wage index by more than 9% between annual averages in both 2006 and 2007. After hefty real wage growth over a period of several years, rising inflation in early 2008 has caused real wages to contract for the first time since 2000.

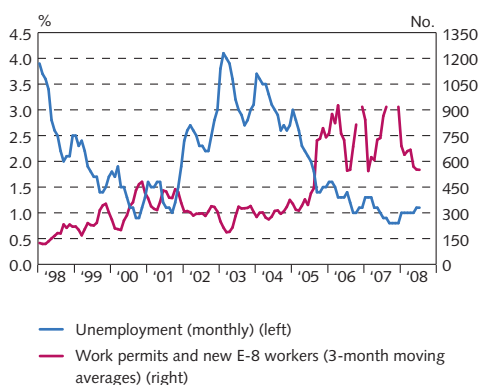
### Demand drove inflation ...

The rapid rise in disposable income spurred private consumption. All of this happened during a period featuring an international liquidity glut and historically low interest rates, which further facilitated domestic demand growth.

Inflationary pressures emerged early in the expansion phase. Inflation was at or below the 2½% target until mid-2004 when it started

Chart 1.5

Unemployment and migrant labour  
January 1998 - July 2008



Source: Directorate of Labour.



to rise, reaching 6.9% over the year in 2006. The rise in inflation was the result of a rapid expansion in domestic demand brought about by the combined effect of hefty inward investment and enhanced access to credit at lower interest rates. The demand-driven nature of inflation was most evident in rising prices of non-traded goods and services and housing, where foreign competition is minimal.

The year-on-year increase in inflation averaged 5% in 2007; however, excluding the effects of tax cuts and other temporary measures that should be de-emphasised in monetary policy decision-making, inflation was almost 7% on average. Inflation slowed down in the first half of the year, largely due to lower consumption taxes. It gained pace later in the year, however, as demand growth accelerated and exerted pressure on wage costs and housing prices, and measured 5.9% for the year. The marked depreciation of the króna in early 2008 has further contributed to temporary inflationary pressures.

### ... and the current account deficit

The expansion of private consumption and the investment in aluminium production and the related power sector led to a widening of the current account deficit. It reached more than a quarter of GDP in 2006, a phenomenally large deficit, both in Icelandic economic history and by international comparison.

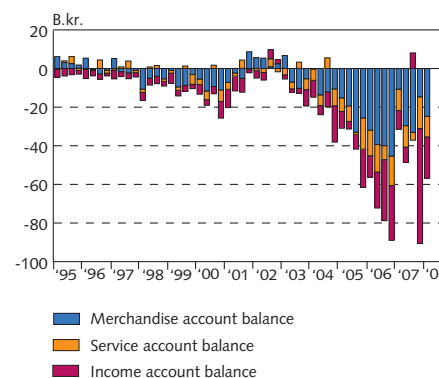
The part of the deficit that resulted from the investment in aluminium and power evaporated as construction was completed and exports of aluminium picked up in late 2007 and early 2008. However, the larger share of the deficit, which resulted from other domestic demand, will only subside as restrictive economic policy has its intended effect, particularly as a large share of the remaining deficit stems from the income account. The current account deficit shrank to 15% of GDP in 2007 but is likely to remain sizable in 2008, before contracting further, as a result of the depreciation of the króna.

### Challenging monetary policy setting

The Central Bank began to tighten monetary policy in May 2004 and has raised its policy rate by more than 10 percentage points, to 15.5%, at the time of writing.<sup>1</sup> The transmission of monetary policy via the interest rate channel was rather weak through the expansion. Hence the effectiveness of monetary policy was to a large extent dependent on the exchange rate channel, which plays a critically important role in the transmission mechanism of a very small, open economy. As exchange rate developments are fraught with uncertainty, particularly during times of external imbalances, this complicated the conduct of monetary policy. Moreover, the presence of the HFF in the mortgage market and its state guarantee distorted the market and hindered policy rate increases from being reflected in mortgage rates. Moreover, the Central Bank was not able to affect market expectations sufficiently with its decisions and pronouncements.

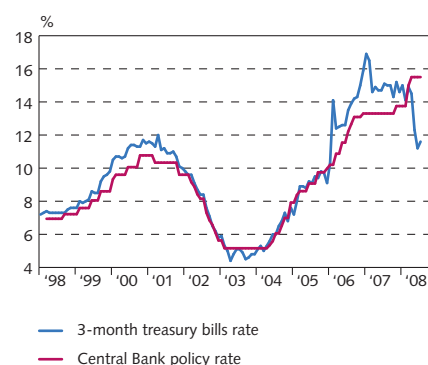
1. As of May 2007, the Central Bank publishes its interest rate announcements as the nominal interest rate instead of the annual rate of return.

Chart 1.6  
Current account balance components<sup>1</sup>  
Q1/1998 - Q1/2008



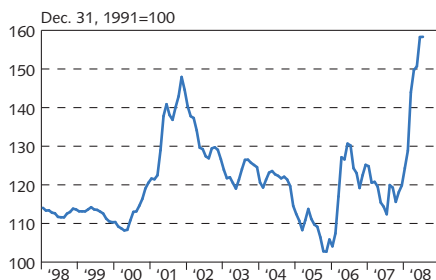
1. Net current transfer is included in balance on income.  
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 1.7  
Central Bank policy interest rate  
and Treasury bill yield  
January 1998 - July 2008, at end of month



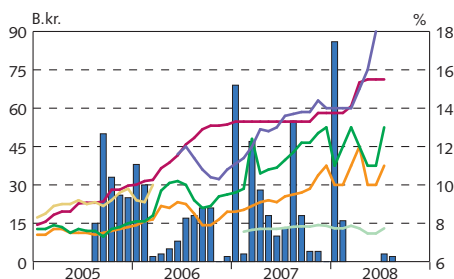
Source: Central Bank of Iceland.

Chart 1.8  
Nominal effective exchange rate  
January 1998 - July 2008



Source: Central Bank of Iceland.

Chart 1.9  
Glacier bond issuance and  
interest rate developments  
August 2005 - August 2008<sup>1</sup>



■ Glacier bond issuance (left)  
— Policy interest rate (right)  
— RIKB 13 0517 (right)  
— RIKB 10 0317 (right)  
— RIKB 08 1212 (right)  
— RIKB 08 0613 (right)  
— RIKB 07 0209 (right)

1. Data until August 7, 2008 inclusive.  
Sources: Reuters, Central Bank of Iceland.

The higher policy rate meant that the Icelandic króna became an attractive investment vehicle for foreign investors. Offshore issuance of Icelandic króna bonds commenced in 2005, with issue activity remaining relatively lively into the early part of 2008. This played a role in keeping the exchange rate of the króna relatively high.

In order to enhance monetary policy communication, the Central Bank began in early 2007 to publish a future policy rate path which its experts consider most conducive to the attainment of the inflation target within an acceptable horizon. This change greatly improved the communication and transparency of monetary policy and significantly strengthened the transmission mechanism, as policy rate decisions were reflected much more effectively across the maturity spectrum.

### The turbulence in the global capital markets has hit Iceland

The global financial market turmoil after mid-2007 and the associated reassessment of risk severely curtailed the Icelandic banks' access to the global capital markets. Questions were raised about the viability of the Icelandic banks in light of large macroeconomic imbalances in Iceland, the banks' rapid expansion abroad, and their large size relative to the Icelandic economy and the Central Bank. This development limited the banks' access to wholesale capital markets, on which an important part of their funding depended. Subsequently, the sizeable current account deficit could no longer be as easily financed as before. As a result, the króna depreciated sharply. By the end of March it had fallen to a historically low level in real terms. The Central Bank responded to the potential surge in inflation by raising its policy rate by 125 basis points in March 2008 and by a further 50 basis points in April, bringing it to 15.5%.

### The adjustment of the economy towards equilibrium has begun

After the depreciation of the króna in early 2008, inflation rose sharply, to 14.5% in August 2008, its highest rate since 199X. Given the persistence of high inflation expectations, inflation can be brought to target over the medium term only if monetary conditions remain tight over an extended period. In July the Central Bank projected that the inflation target would be attained during the forecast horizon given a continued tight monetary stance. Over the medium term, tight credit conditions and the depreciation of the króna will contribute to a significant contraction in domestic demand, ultimately leading to a more balanced economy. Businesses' and households' financial conditions have deteriorated significantly as the cost of capital has risen. Weaker domestic demand due to declining real disposable income should eventually bring the current account deficit to a sustainable level, underpinning a recovery of the króna.

### Further strengthening of the export base likely

Notwithstanding the likelihood of a period of challenging adjustment over the next couple of years, the long-term growth prospects of the Icelandic economy remain bright. The abundant source of renewable energy offers various opportunities for export-led growth. The aluminium sector investment projects that initiated the upswing are

now completed. They have tripled the total production capacity of aluminium smelters in Iceland and have strengthened the export base, as well as offering steady employment. The share of aluminium in total merchandise exports is projected to increase from 20% in 2005 to roughly 45% in 2009. Currently in preparation are two aluminium sector projects that will increase the sector's production capacity by another one-fourth in 2011 and perhaps by over 40% in 2015. Various other export projects that utilise Iceland's renewable energy resources are also under consideration. All of these would entail considerable FDI inflow.



## 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 a 200-nautical-mile exclusive economic zone (EEZ) 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 12°C in July and just below zero in January.

Iceland is mostly mountainous and of volcanic origin, with the highest peak reaching 2,110 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.

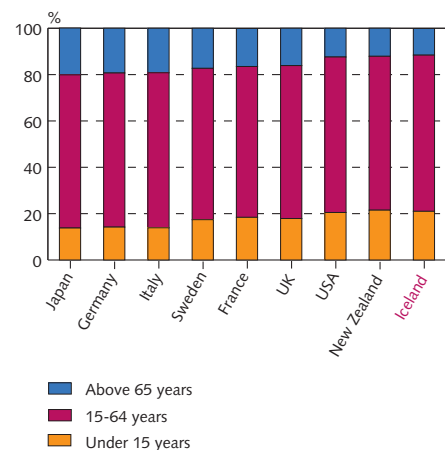
Iceland is endowed with abundant natural resources. These include the fishing grounds around the island, within and outside the country's 200-mile EEZ. Furthermore, Iceland has abundant hydro-electric and geothermal energy resources, which are still a long way from being fully harnessed.

With only 3 inhabitants per square kilometre, Iceland is one of the least densely populated countries in Europe. On January 1, 2008, the population of Iceland was 313,376. The annual rate of population growth over the period 1996-2006 was 1.49%. Around 63% of the population (about 196 thousand) live in the capital city of Reykjavík and its surrounding municipalities. The largest town outside the capital area is Akureyri, located in North Iceland, with a population of 17,253. 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 entered into 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.

Chart 2.1  
Age structure of the population  
in selected countries 2005<sup>1</sup>



1. Ranked by share of population 65 and over.  
Data for Iceland are for 2007.  
Sources: OECD, Statistics Iceland.

Iceland has experienced substantial net immigration in recent years, causing the share of citizens of foreign origin to rise to 6% of the total population at the end of 2007.

As in other advanced countries, the population of Iceland is ageing, but at a relatively slower pace than in most OECD countries. In 2006, despite high life expectancy, the ratio of the total population aged over 65 to the population of working age was lower in only five OECD countries: Ireland, South Korea, Mexico, the Slovak Republic and Turkey.

### **Society and the welfare state**

Iceland is a modern welfare state, which guarantees access for 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 just over a 30% of GDP in 2006.

Life expectancy, which is among the highest in the world, and one of the lowest infant mortality rates (1.3 per 1000 live births in 2007) 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. Healthcare 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, while children under 17 years of age have most of the cost refunded.

The standard of education is high, and public education is compulsory between the ages of six and sixteen. Good command of English and the Scandinavian languages is widespread. Education is offered free of charge or at a nominal fee at three levels. First, there are ten years of compulsory education at the primary level (age 6-16). Second, there are four 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 several universities. In 2005, 30.6% of the employed labour force held a university degree. Roughly one out of every five university degrees held by Icelanders is obtained in other countries. As in most OECD countries, university enrolment of those completing secondary education has increased substantially in Iceland in recent years. In 2004, the rate was around 79%, which is the third highest among the OECD countries. By comparison, the enrolment rate among the OECD countries was 53% 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 must be supported by a majority of parliament in order to remain in power. The 63 members of the Althingi are elected from six 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, its governments have normally been formed by a coalition of two or more political parties that have held a majority in parliament.

The results of the May 2007 elections were as follows: The Independence Party obtained 36.6% of votes and 25 seats, the Social Alliance 26.8% and 18 seats, the Leftist-Green Movement 14.3% and 9 seats, the Progressive Party 11.7% and 7 seats, and the Liberal Party 7.3% and 4 seats. Others obtained 3.3% and no seats. A coalition between the Independence Party and Social Alliance took office the same month. The next general election is to be held in 2011.

### 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 states 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 participates in numerous Free Trade Agreements (FTAs) through its EFTA membership with countries including Canada, Chile, Croatia, Egypt, Israel, Jordan, Lebanon, Macedonia, Mexico, Morocco, the Palestinian Authority, Singapore, the South African Customs Union (SACU), the Republic of Korea, Tunisia and Turkey. In addition to the Free Trade Agreements, the EFTA States have concluded Joint Declarations on Co-operation with several countries, including Albania, Algeria, MERCOSUR, Peru, Serbia, Ukraine and Colombia. Work

is in progress on FTAs with Thailand, the Gulf Cooperation Council, India, Indonesia and Russia. Iceland has enacted bilateral Free Trade Agreements with Greenland and the Faroe Islands.

Iceland is a founding member of the North Atlantic Treaty Organisation (NATO), established in 1949. The US maintained a permanent military presence at a base in Iceland from 1951 until 2006. Peacetime defence is now the responsibility of the Icelandic government, but arrangements have been made for the return of US forces in times of crisis or war, and there is a broad cooperation with Denmark, Norway and France regarding security and defence.

Table 2.1 Iceland's membership of international organisations

	<i>Year of association</i>
International Monetary Fund (IMF)	1945
International Bank for Reconstruction and Development (World Bank)	1945
United Nations (UN)	1946
North Atlantic Treaty Organisation (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 Organisation (WTO)	1995



### 3 Economic history

#### A century of high but volatile growth

Over the course of the 20th century, Iceland was transformed from one of Europe's poorest economies, with about 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.

Post-World War II 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 2007 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, more solid economic policies, and increased participation in the global economy.

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

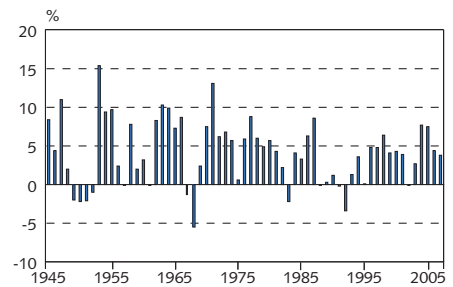
The first three decades of the last century were characterised by rapid growth, interrupted only by World War I. This growth occurred in the context of fairly liberal economic policies. In the wake of the Depression and World War II, however, Iceland, like many other countries, became entangled in a 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 lowered further when Iceland became a member of the General Agreement on Tariffs and Trade (GATT) in 1964 and the European Free Trade Association (EFTA) in 1970. They were lowered still further when it became a founding member of the European Economic Area (EEA) in 1994, which integrated Iceland and other EFTA member countries (except Switzerland) into the internal market of the European Union (EU).

#### Episodes of inflation and disinflation

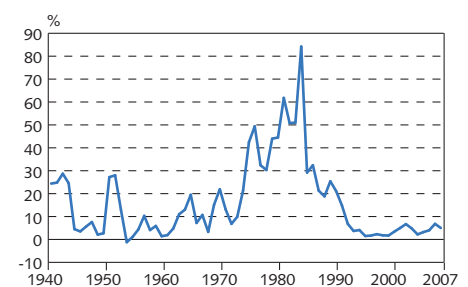
A distinguishing feature of Iceland's economic development in the post-World War II era was the high and variable rate of inflation. Inflation surged in the 1970s, reaching a peak in 1983, when the 12-month rate briefly exceeded 100%. The inflationary tendencies were explained by the combination of structural features of the economy, which generally made attaining price stability a difficult task, and excessively accommodative policies. Through a combination of tighter monetary and exchange rate policies, income policies that managed to

Chart 3.1  
Growth of GDP 1945-2007  
Annual percent changes



Source: Statistics Iceland.

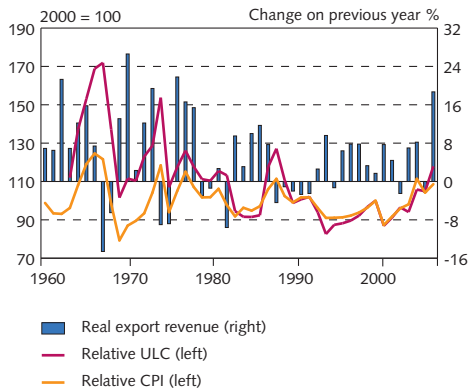
Chart 3.2  
CPI inflation 1940-2007  
Percent change between annual averages



Source: Central Bank of Iceland.

Chart 3.3

Real effective exchange rate of the króna<sup>1</sup>  
and real export revenue 1960-2007

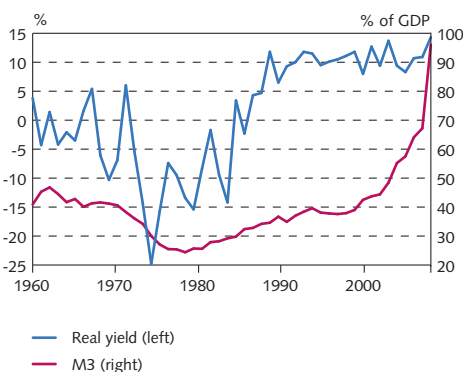


1. Based on relative consumer prices (CPI) or relative unit labour cost (ULC).  
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 3.4

Real yield and broad money 1960-2007<sup>1</sup>

Real yield on nominal bank loans  
and M3 as percent of GDP



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

achieve a wide-ranging consensus on the need to reduce inflation, and broad-based structural reforms, inflation was brought down to the rate prevailing in major trading partner countries in the early 1990s.

### A market-based economy

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. Policies of market liberalisation, fiscal consolidation, privatisation and other structural reforms were implemented in the late 1980s and early 1990s. This process was accelerated by the need to align the Icelandic legislative and regulatory framework to that prevailing in the European Union when Iceland became one of the founding members of the EEA in 1994.

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-World War II years was that substantial segments of the economy became owned by either central or local governments. Most of these have been privatised in recent years. The liberalisation process continued during the second half of the 1990s, competition increased, and the Icelandic financial markets and financial institutions were restructured. The energy sector is still predominantly publicly owned. An exception to the trend towards liberalisation has been agriculture, which is still widely supported by government subsidies, import protection, and a system of production quotas.

### New framework of monetary policy

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 policy based on inflation targeting. An inflation target of 2½% was set for the Central Bank. By the turn of the century, Iceland had become an advanced economy, thoroughly integrated into the European market, with most of the features of a modern market economy.

### From negative growth to overheating

In the late 1980s and beginning of the 1990s, the Icelandic economy was characterised by slow or negative output growth, 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.

Economic growth began to gain momentum by the middle of the 1990s, rekindled by favourable fish prices, a global economic recovery, a rise in exports and a new wave of investment in the aluminium

sector. Iceland experienced one of the highest growth rates of GDP among OECD countries. While the upswing was led initially by rising exports and foreign 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. Inflation took off, reaching 6% in the spring of 2000. These imbalances were the underlying reason for a sharp depreciation of the króna in the latter half of 2000 and in 2001, with inflation rising to above 9% in January 2002. The economy then underwent rapid adjustment, the current account deficit disappeared in the space of two years, and inflation fell rapidly as the economy cooled down and the króna appreciated again. A new upswing, largely driven by inward investment and private consumption, began in 2003 (see Chapter 1).



## 4 Structure of the economy

### Size and income level

The Icelandic economy is the smallest within the OECD, generating GDP of €14.5 billion in 2007. This was a little more than 1/1000 of the US economy, 1/20 of the Danish economy, and 1/3 of the economy of Luxembourg, but almost three times larger than the economy of Malta. The small size of the Icelandic economy mainly reflects the small size of the population, which reached 313 thousand at the end of 2007.

Iceland has all the characteristics of a modern welfare state. GNI per capita measured in terms of Purchasing Power Parities (PPP) amounted to 34 thousand USD in 2007, the twenty-second highest in the world and the fifteenth highest among the OECD countries. In comparison with the Nordic countries, Iceland's GNI per capita is lower than in Denmark, Norway, Finland and Sweden, but it is somewhat above the EU average.

Historically, this prosperity has largely been built on Iceland's comparative advantages in abundant marine and energy resources. More recently, the main driver of economic growth has been services, in particular the financial services sector.

### Composition of output and expenditures

As in other developed economies, non-tradable services form the bulk of economic activity, accounting for approximately 67% of GDP in 2007. While the marine sector remains one of the most important source of export revenues, its share of GDP has declined considerably in recent years, from 16% in 1980 to 6% in 2007. The most rapid growth in recent years has taken place in the finance, insurance and real estate sector, whose share of GDP has risen from 17% in 1998 to 27.2% in 2007.

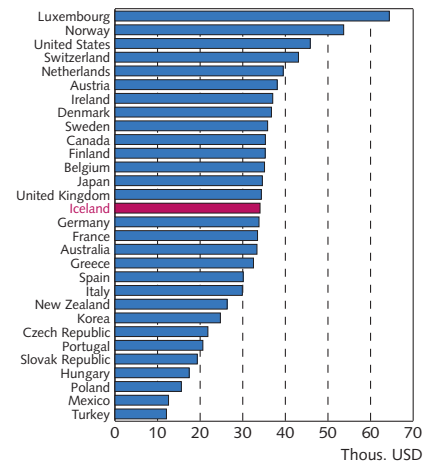
Private consumption contributed on average about 58% of GDP in 2003-2007 and public consumption and gross fixed investment contributed 25% and 27% respectively. The investment-to-GDP ratio has risen substantially in recent years on average, after falling below 1/5 in the mid-1990s. The ratio of public consumption has also risen somewhat over the past five years, after remaining broadly stable through most of the 1990s.

### Foreign trade

Iceland is a fairly open economy, with imports and exports of goods and services amounting to 46% and 35% of GDP respectively in 2007. Trade involves a relatively large share of primary products and commodities, but exports have diversified significantly in recent years. Certain factors restrict its openness, however, such as geographic distance from major population centres, limited intra-industry and transit trade, a natural resource-based export sector, and extensive protection of domestic agriculture.

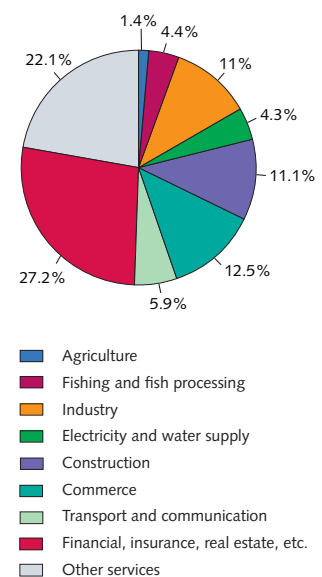
Fish and other marine products were the mainstay of merchandise exports until early in 2008, when exports of aluminium smelting products emerged as the largest single export product. Fish and other

Chart 4.1  
Gross national income per capita  
in OECD countries 2007<sup>1</sup>



1. Based on PPP.  
Source: World Bank.

Chart 4.2  
Breakdown of GDP by sector 2007



Source: Statistics Iceland.

Chart 4.3  
Exports of goods and services 1980-2007

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

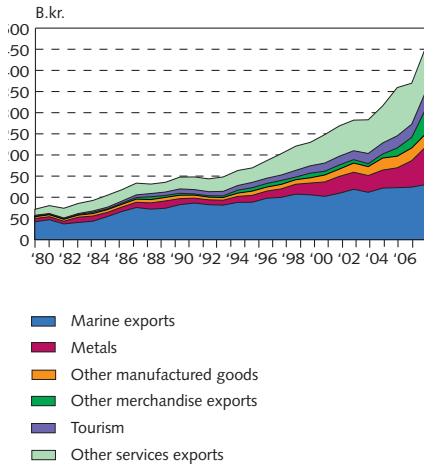
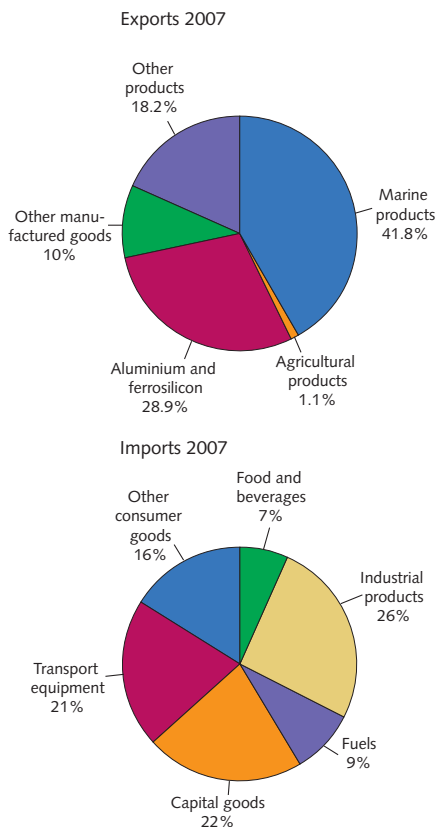


Chart 4.4  
Merchandise trade by category 2007



marine products have been declining as a share of total exports over the past four decades. In 2007, fish and other marine products accounted for 42% of merchandise exports and roughly 28% of total exports, down from 82% and 60% respectively in 1991. Exports of manufactured goods have been growing rapidly in importance, led by aluminium smelting and medical and pharmaceutical products, and accounted for 39% of merchandise exports in 2007. Exports of services have also soared as the economy becomes increasingly service-oriented. Services now account for almost 33% of total export revenues, while in 1990 the share was 26%.

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 industrial supplies accounted for 40% of total merchandise imports in 2007. Capital goods and consumer goods constitute around 30% of total imports each.

Free trade arrangements with Europe have stimulated Iceland's trade with the region, causing the share of North America to fall. In 2007, 78% of merchandise exports went to the member countries of the EEA, which also were the source of 65% of imports. Currently, the largest trading partner countries are the Netherlands, Germany, the US, the UK, and the Nordic countries Denmark and Sweden. In terms of currency, the euro area constitutes the largest trading area, accounting for 42% of imports and 26% of exports. In recent years, Iceland has generally had a trade surplus with the UK, the Netherlands and the Iberian countries, but a deficit with the US, Germany, Japan and its Nordic neighbours.

Iceland's ratio of services to total trade is one of the highest among OECD countries. Data on the direction of services trade are not as reliable as merchandise trade data. However, just over 1/2 of Iceland's services exports in 2007 used the euro, just under 1/6 used the GBP, and only just under 1/10 used the USD as the vehicle currency.

Table 4.1 Output and expenditure

Percentage distribution (period average) % of GDP	1972-1976	2003-2007
Private consumption	56.7	58.2
Public consumption	15.1	25.0
Gross fixed investment	31.7	26.6
Changes in stock	0.2	0.2
National expenditure	103.8	109.9
Exports of goods and services	35.1	33.5
Goods, fob	23.9	21.5
Services	11.2	12.0
Less: Imports of goods and services	38.8	43.4
Goods, fob	29.4	28.5
Services	9.5	14.9
GDP	100.0	100.0
Current account balance	-5.5	-13.2

Source: Statistics Iceland.

## Foreign investment

In recent years, foreign expansion of Icelandic companies has gained pace rapidly, due in large part to acquisition of companies abroad. The total stock of foreign direct investment (FDI) by Icelandic residents grew by 76% year-on-year to €19 billion (1,732 b.kr.) in 2007, and has grown by over 61% per year on average over the past ten years.

The most common means of expanding abroad has been through FDI. The Icelandic market is small, and companies in markets such as pharmaceuticals, financial services, food production, retail commerce, property development, aviation and shipping have acquired foreign subsidiaries in similar sectors so as to broaden their base and increase their revenues and profit. Foreign investments have centred on the UK and Scandinavia but have focused to a lesser extent on continental Europe and other areas.

Investment in foreign equities has also grown substantially over the past decade. Before full liberalisation of cross-border capital movements in 1995, residents owned only approximately €77.9 million (6.6 b.kr.) in foreign capital equities. Over the thirteen years to 2007, the stock had increased to €11.8 billion (1,075.4 b.kr.).

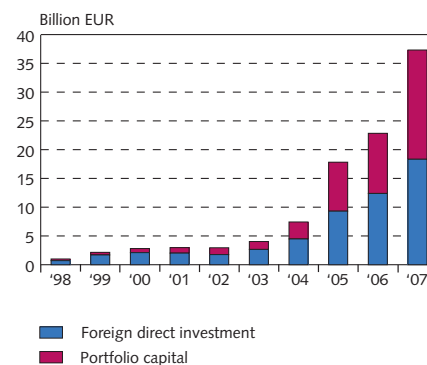
Foreign direct investment in Iceland has also been growing over the past few years. In 2007, FDI in Iceland amounted to around €2.7 billion (233 b.kr.), and the stock of FDI investment in Iceland increased by €2.2 billion (202.4 b.kr.). This increase must be interpreted with caution, however, as it is to a large extent a pass-through investment of Icelandic residents via foreign holding companies. Over the past few years, non-resident funds have been investing in companies that are listed on OMX Nordic Exchange Iceland. Furthermore, franchising has been increasing in Iceland, especially in retail, consulting, auditing and accounting.

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 €156 million (13 b.kr.) in foreign securities but this figure had increased to €18.3 billion (1,672 b.kr.), or 130% of GDP, by the end of 2007. In 1995, Iceland's outward investment stock was equivalent to approximately 14.5% of GDP. Twelve years later, in 2007, it had risen almost thirty-five-fold to 506%.

The only restrictions on investment by non-residents in Iceland apply to foreign direct investments in fisheries and fish processing, energy production and distribution, and aviation companies. Restrictions on investment in the fisheries sector are the only ones that apply to EEA residents and 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% foreign-owned (33% in certain circumstances) may own fisheries companies. Combined direct and indirect ownership up to 49% is possible, however. 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.

Chart 4.5

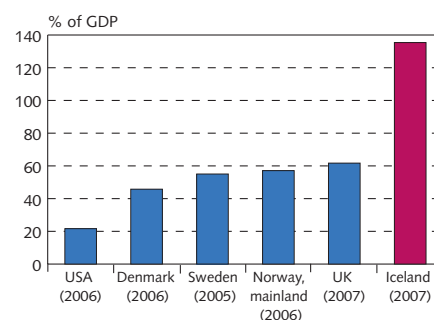
Foreign direct investment and portfolio capital owned abroad by residents (at year-end) 1998-2007



Source: Central Bank of Iceland.

Chart 4.6

Direct investment abroad: outward position



Sources: Reuters EcoWin, Central Bank of Iceland.

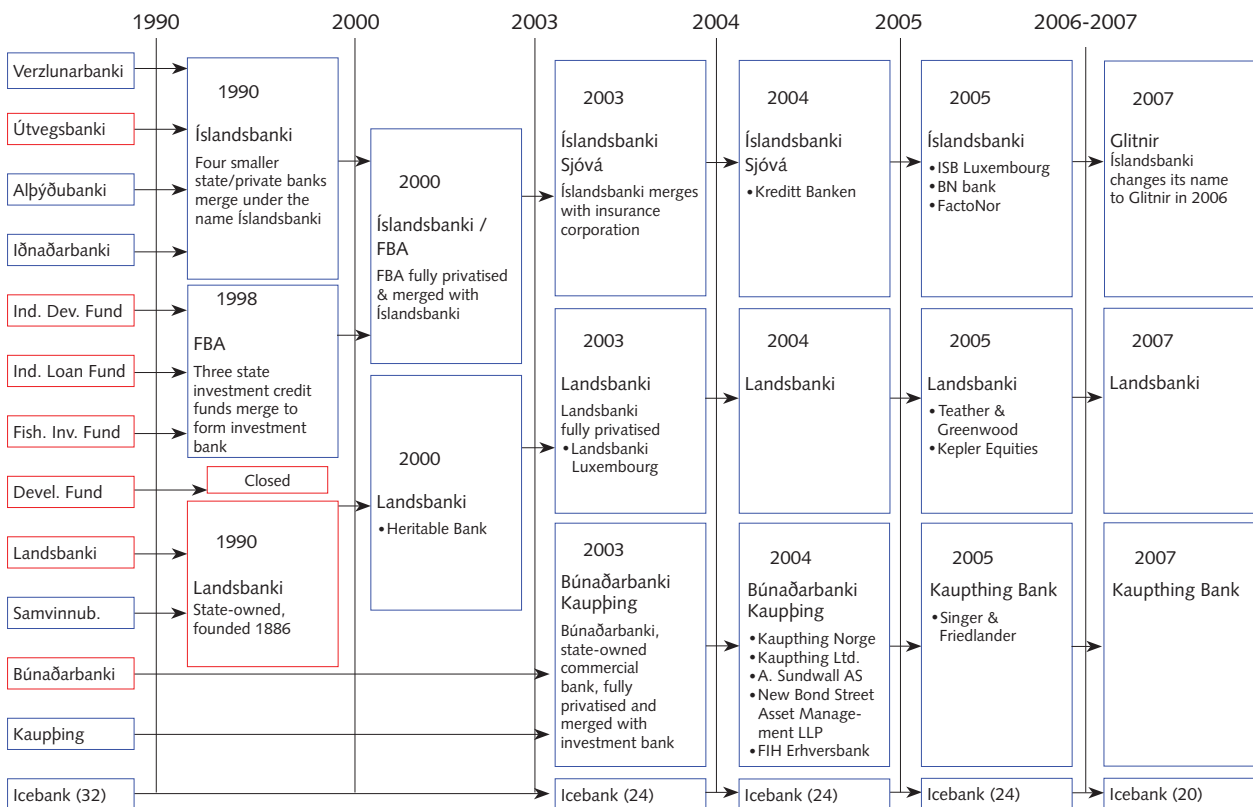
## Sectoral limitations on foreign direct investment

The composition of foreign assets has also changed substantially over this period. Reserve assets and trade credit once accounted for a significant portion of foreign assets but are now relatively unimportant. Instead, foreign lending has surged to 32% of foreign assets. The share of foreign equity has also increased to roughly one-sixth of the total foreign investment stock. On the other hand, inward equity investment accounts for only about 4½% of total foreign liabilities. Iceland's outward FDI accounted for about 24% of the total foreign assets at the end of 2007. Lending by domestic credit institutions to foreign borrowers is one of the largest single contributors to the increase in foreign assets. Foreign lending amounted to €0.48 billion (44 b.kr.) in 2001 but had skyrocketed to €23.1 billion (2,104 b.kr.) in 2007. Pension funds' foreign portfolios also soared to €5 billion (458 b.kr.) by the end of 2007, accounting for 7% of Icelandic residents' total foreign assets and just over 27% of foreign portfolio holdings. Extensive direct, portfolio and real estate investment by other Icelandic residents explains the rest of the growth in assets. Outward FDI and equity portfolio investment exceeded inward investment by €16.8 billion (1,528 b.kr.) at the end of 2007.

**Financial sector**

Iceland's financial services sector has grown considerably in recent years, catalysed by deregulation in the 1990s and, in particular, the privatisation of two commercial banks, which was completed in 2003.

Chart 4.7  
Consolidation of the banking system





International acquisitions and internal growth have swollen the banks' combined balance sheets, and the commercial banks have subsidiaries and branch offices in e.g. the UK, the US, Scandinavia and continental Europe. Financial legislation is transposed from EU law. Major companies have adopted the International Financial Reporting Standards (IFRS) and Basel II.

There are currently five commercial banks in Iceland, all privately held. The three largest – Glitnir, Kaupthing Bank and Landsbanki – provide all conventional banking and securities services. Total assets of the largest commercial bank groups amounted to €124.5 billion (11,354 b.kr.) at the end of 2007.

At the end of 2007, there were 20 savings banks in Iceland. One commercial bank, Icebank, serves as a banking institution for most of them. Total assets of the savings banks and Icebank amounted to €7 billion (642.7 b.kr.) at the end of 2007.

Glitnir, Kaupthing Bank and Landsbanki have in recent years expanded their operations abroad by acquiring subsidiaries in commercial banking and security brokerage. At the end of 2007, almost half of the total assets of the largest commercial banking groups were accounted for by foreign subsidiaries, most of them located in Northern Europe, and in 2007 about 58% of their overall income was generated abroad. The three largest commercial banks are rated by international rating agencies.

Chart 4.8

Market value and total assets of the three largest commercial banks as of June 2008<sup>1</sup>

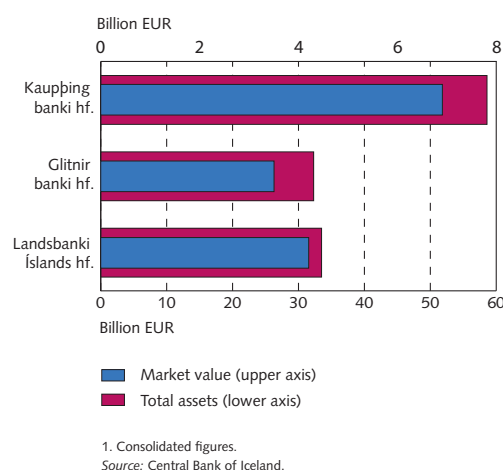


Table 4.2 Commercial banks' credit ratings

<i>Moody's credit rating for Iceland's three largest commercial banks</i>				
	<i>Announced</i>	<i>Long-term</i>	<i>Short-term</i>	<i>Financial strength</i>
Kaupthing Bank	February 2008	A1	P-1	C-
Glitnir Bank	February 2008	A2	P-1	C-
Landsbanki	February 2008	A2	P-1	C-

<i>Fitch Ratings' credit rating for Iceland's three largest commercial banks</i>					
	<i>Announced</i>	<i>Long-term</i>	<i>Short-term</i>	<i>Individual</i>	<i>Support</i>
Kaupthing Bank	May 2008	A -	F2	B/C	2
Glitnir Bank	May 2008	A -	F2	B/C	2
Landsbanki	May 2008	A	F1	B/C	2

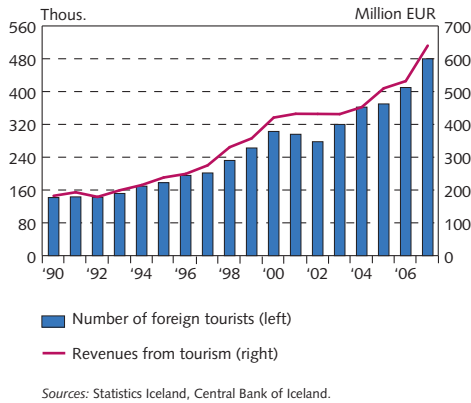
<i>Standard &amp; Poor's credit rating for Glitnir Bank</i>			
	<i>Announced</i>	<i>Long-term</i>	<i>Short-term</i>
Glitnir Bank	April 2008	BBB+	A2

Thirteen other credit institutions currently operate in Iceland: five investment banks, three payment card companies, two investment funds, and three leasing companies, as well as the Housing Financing Fund (HFF), a state-owned mortgage credit fund.

Table 4.3 The Housing Financing Fund's credit ratings

	<i>Announced</i>	<i>ISK</i>	<i>Foreign Currency</i>
Moody's	May 2008	Aa1	
Standard & Poor's	April 2008	A-	A

Chart 4.9  
Number of incoming tourists and  
revenues from tourism 1990-2007  
At current euro exchange rates



Thirteen insurance companies are authorised to operate in Iceland, with total assets of around €1.7 billion (154.8 b.kr.) at year-end 2007. Sjóvá, VÍS and TM are by far the largest. Life insurance companies represent only about 9% of total assets of insurance companies.

### Other service industries

Tourism has been one of Iceland's fastest-growing industries in recent years. The number of visitors from abroad is estimated at 480 thousand for the year 2007, compared to 310 thousand in 2000. Foreign exchange revenues generated by tourism in 2007 amounted to approximately €640 million (56 b.kr.), or 12.4% of export revenues.

The technological sector of the services industry has also been diversifying rapidly. Iceland's software industry has extensive expertise 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 communications, on-line games, medical software, and general office and database systems. In 2006, exports of software products amounted to €72 million (6.3b.kr), an increase of more than 175% since 2000.

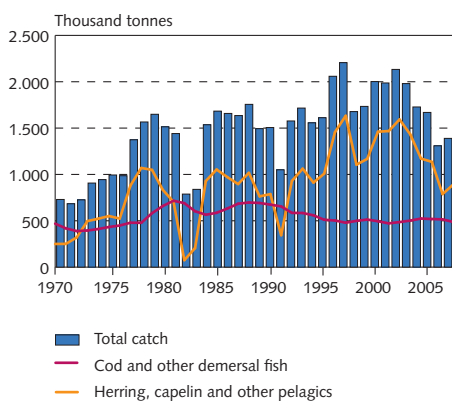
### Marine sector

The marine sector is still one of the main economic sectors and one of the pillars of export activities in Iceland, but its relative importance has diminished with the ascendancy of aluminium and services. In 2007, fishing and fish processing contributed 42% of total merchandise exports, compared with around 90% in the early 1960s. Likewise, the sector's contribution to GDP has fallen from around 15% to under 7% over the same period. The marine sector is highly diversified in terms of species, modes of processing, and markets.

Fishing and processing of groundfish – primarily cod, but also haddock, saithe and redfish – are the principal focus of the Icelandic marine sector. The catch of these and other demersals accounted for 81% of the landed value of fish in 2007. Cod is the most valuable species in Icelandic waters in terms of total catch value, accounting for 37%. A decline in the cod catch has been partly offset hitherto by increased harvesting of other species such as capelin, haddock, saithe, redfish, flatfish, blue whiting and herring, inside and outside Iceland's exclusive 200-mile fishing zone.

Enhanced value added in processing has helped to offset lower total catch volumes in recent years, backed by gains in efficiency through individual transferable quotas (the ITQ system), automation, and modern management techniques. Value has also been boosted by a shift towards fresh groundfish products – which generate higher prices in markets in Europe and the US – instead of the more traditional frozen or salted products. The most important step in the value-added strategy, besides increasing emphasis on fresh products, over the past 3-4 years has been in the processing of filleted and frozen pelagic products, mainly from herring and capelin, which were previously converted into relatively low-value fish oil and meal. In 2000, only 20% of the export value of herring and capelin was accounted for by

Chart 4.10  
Fish catch by Icelandic vessels 1970-2007



## The ITQ system

All commercially important species are regulated within the individual transferable quota (ITQ) system. Quotas represent shares in the annual TAC and are allocated to individual fishing vessels. The present quota system is built on the following factors:

- Each year a TAC is set by the Minister of Fisheries on the basis of a biological assessment of the fish stocks and forecasts for their development in the near future.
- Fishing vessels are allocated a fixed quota share of each species subject to a TAC.
- The individual quota share is multiplied by the TAC to give the quantity which each vessel is authorised to catch during the fishing year.
- Permanent quota shares and annual quotas are transferable and can be traded on the quota market.

The law prescribes maximum holdings of quotas by individual fishing companies. Regulations cover both holdings of quotas for individual species and aggregate holdings of quotas.

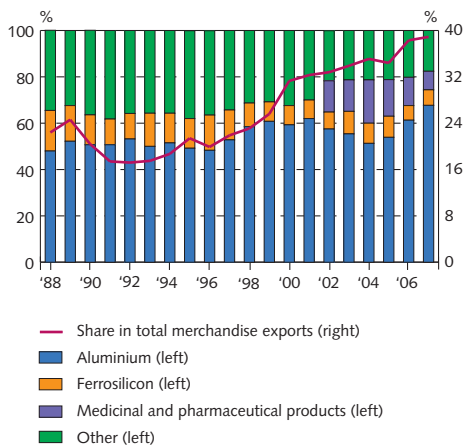
In 1995 a refinement to the management system introduced a "catch rule" setting the TAC for the next consecutive quota year at 25% of the mean of the fishable biomass in the assessment year and the year after. Annual fishing quotas are allocated against an annual fee for fisheries inspection and enforcement purposes. Owners of fishing vessels holding harvesting rights now also pay a fishing fee to the state. The fee is calculated as a percentage of the aggregated value of the total catch of the fishing fleet minus operating expenses, divided by the catch quantity. In a transition period the percentage will increase from 6.5% in 2004 to 9.5% in 2009. This fee will still remain well below the market price of annual quotas.

food products, but in 2007 this ratio had risen to 60%. Other aspects of the value-added processing strategy are the steadily increasing yield of raw material in the processing process and the significant increase in utilisation of by-products and waste in processing of seafood products. The exported amount of processed by-products has risen by half from 2003 to 2007.

A comprehensive fisheries management system (FMS) based on the ITQ system has been developed to manage fish stocks and promote conservation, sustainability, and efficient utilisation of the marine resources. The FMS adopted in Iceland is science-based and market-driven. A key role has been assigned to marine research, as the use of available knowledge is fundamental. Another pillar of the FMS is the commitment to take into account the effects of certain measures or policies on the ecosystem.

In May 2007, the Marine Research Institute (MRI) highlighted the urgent need for immediate action to increase the spawning stock biomass of cod to increase recruitment and, ultimately, the harvestable stock. The biomass of cod is now estimated at close to a historical low and only half of the size assumed necessary to produce maximum sustainable yield. The MRI recommended therefore a drastic one-third cut in the total allowable catch (TAC) for the fishing year commencing on September 1, 2007. The Ministry of Fisheries (MoF) acknowledged

Chart 4.11  
Composition of manufacturing exports  
and share in total merchandise exports  
1988-2007



Source: Statistics Iceland.

this recommendation and lowered the TAC for cod to 130,000 tonnes, from 193,000 tonnes in the fishing year 2007/2008. Furthermore, the MoF ruled in July 2008 that the TAC for cod would be unchanged in the 2008/2009 fishing year.

Other direct measures support the aims of the FMS and reinforce the conservation measures, including rules on permitted fishing gear, closure of areas for bottom trawls, obligatory small fish grids to prevent juvenile fish catches, and temporary closures of fishing grounds to protect spawning fish and limit by-catch of undersized fish.

In recent years, fisheries companies have actively been seeking to enhance efficiency and benefit from economies of scale through mergers and acquisitions. Consequently, the largest companies have expanded, and the concentration of quota holdings has risen. The 10 and 15 largest fisheries companies in terms of quota holdings owned 51% and 66% of the total respectively in June 2008.

### Manufacturing and power-intensive industries

The largest manufacturing industries in Iceland are the aluminium smelters, which produce exclusively for export. Other manufacturing exports have also grown considerably in recent years. In 2007, manufactured products accounted for 39% of total merchandise exports, up from 22% in 1997. Power-intensive products (mainly aluminium) amounted to 29% of total merchandise exports in 2007, as opposed to 12% in 1997.

A number of export-oriented manufacturing companies have emerged in recent years. Some have grown from small and medium-sized enterprises to become key international players in fields such as medical equipment, pharmaceuticals, and capital goods for fisheries and food processing. Most of these companies are founded on product innovation, R&D, strategic marketing and ITC. These industries now account for approximately 1/4 of manufactured goods exports.

Iceland's aluminium industry is mainly based on competitive energy costs and a skilled labour force. Aluminium production has risen sharply in recent years, from 210 thousand tonnes in 2000 to an estimated 770 thousand tonnes in 2008. The largest smelter, owned by Alcoa and located in East Iceland, commenced production in April 2007 and will reach its full capacity of 346 thousand tonnes per year (tpy) in 2008. Century Aluminium's smelter in Southwest Iceland is also being expanded from 180 thousand tpy to 270 thousand tpy by 2008. A new plant owned by Century Aluminium is under construction at Helguvik in Southwest Iceland. The first of two stages of construction will be on line with a production capacity of 150 thousand tpy in 2011. Alcan Iceland's smelter near Reykjavik has a capacity of 180 thousand tpy, with planned expansion to 230 thousand tpy by 2010. The total production capacity of the aluminium industry in Iceland will therefore be around 1 million tpy in 2011, or nearly fourfold the production level in 2006. This will make Iceland one of the ten largest aluminium producers in the world, with roughly 3% of global production.

Icelandic Alloys (Elkem ASA) is a ferrosilicon plant with an annual production capacity of 120 thousand tpy.

## 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. Electricity consumption per capita is the highest in the world, at some 38,000kWh per capita in 2007. Even so, only roughly one-third of the energy potential for generating electricity had been tapped in 2008. In no other country is a greater proportion of energy supplied from renewable sources.

Electric power potential from hydro and geothermal sources is now estimated at 50 thousand GWh/year (50 TWh), taking into account feasibility and environmental considerations. Commonly quoted estimates are 25 TWh per year for hydropower potential and 25 TWh per year from geothermal resources. Only 10,000 GWh/year of this power was harnessed in 2006.

In 2007, total installed hydropower was 1,758 MW in 52 power plants with a combined capacity of nearly 12,000 GWh per year (70% of generated electricity). As of August 2008, installed geothermal power in seven steam turbine plants amounted to 485 MW, or 3,880 GWh/year. In 2008, the largest single hydropower plant has an installed power capacity of 690 MW and the largest geothermal plant 210 MW.

Iceland is a world leader in the use of geothermal energy for domestic and industrial purposes other than generating electricity. Over 90% of all homes are heated by geothermal energy, some 12% of the comparable cost of fossil fuels. The current utilisation of geothermal energy for heating and other industrial and commercial uses is considered to be only a small fraction of what this resource can sustain.

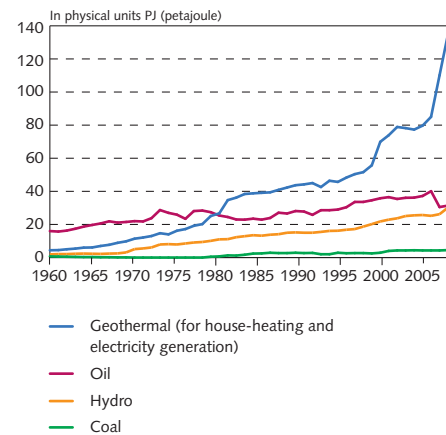
Five large-scale power stations have been under construction or expansion in recent years, and three will reach full production in 2008. Total production will be boosted by 780 MW, from 1,590 MW in 2006 to 2,371 MW in 2008. Of this increase, 690 MW comes from hydro sources and 90 MW from geothermal sources. Further projects – both hydro and geothermal plants with total capacity of up to 760 MW – are in the planning stage or under consideration.

Of the main producers, Landsvirkjun (the National Power Company) is wholly owned by the Icelandic state, while Reykjavik Energy is owned by City of Reykjavik and Sudurnes Heating is jointly owned by local municipalities in Southwest Iceland, Reykjavik Energy, and a private investment company. Iceland has implemented deregulation under an EU directive relating to the separation of transmission, generation, distribution and sales of electricity. New legislation does not call for incorporation of the power companies or any changes with regard to the state and/or municipal guarantees they currently enjoy.

## Agriculture and farming

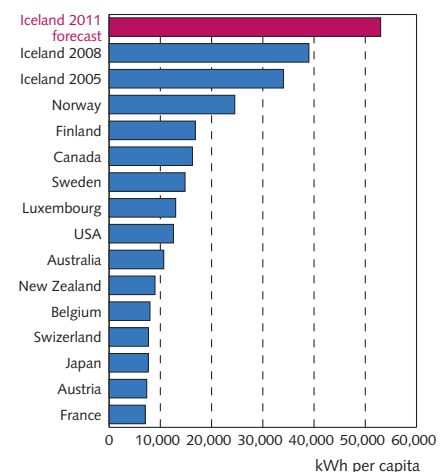
Approximately one-fifth of the total land area of Iceland is arable land or pasture. Some 6% of this area is cultivated, with the remainder used for grazing or left undeveloped. Meat and dairy products are mainly for domestic consumption. The principal crops have been hay, potatoes, and other root vegetables, while vegetables and flowers are

Chart 4.12  
Primary energy consumption by source  
in Iceland 1960-2007



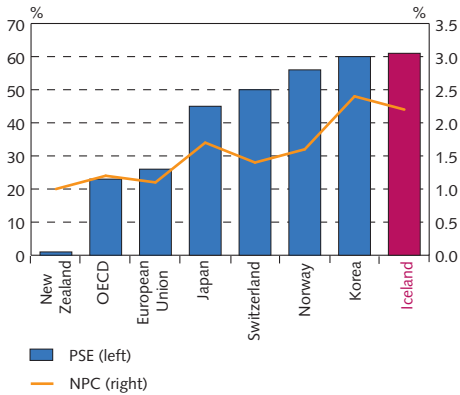
Source: National Energy Authority.

Chart 4.13  
Electricity consumption per  
capita in selected countries 2005



Source: International Energy Agency, Central Bank of Iceland.

Chart 4.14  
Support to agriculture<sup>1</sup>



1. PSE measures the transfers as a share of gross farm receipts. NPC is the ratio between the average price received by producers and the border price.  
Source: OECD.

mainly cultivated in greenhouses heated with geothermal water and steam. An ambitious forestry programme is ongoing.

Icelandic agriculture is one of the most heavily supported and subsidised in the world, with total on-budget transfers to farmers amounted to about 0.9% of GDP in 2007. In terms of Producer Support Estimate (PSE), the most common indicator of agricultural support, Iceland was highest within OECD in 2007, with a PSE of 61; Korea was second with 60, and Norway came third with 53. Producers' support in 2007 amounted to 26 on average in the EU and 23 in the OECD countries.<sup>1</sup>

Imports of meat, dairy products and some vegetables that compete with domestic production are subject to high tariffs, quotas, and strict controls aimed at preventing disease.

### Transport

The domestic transportation network consists of roads, air transportation and coastal shipping. Private motor vehicle ownership is widespread. In 2007, Iceland had 665 passenger cars per 1,000 inhabitants.

The road system totals 13,000 km, 4,300 km of which are primary roads. Some 4,800 km of the road network is paved, and nearly 30 km of tunnels have been built, with a further 11 km scheduled for completion in 2009.

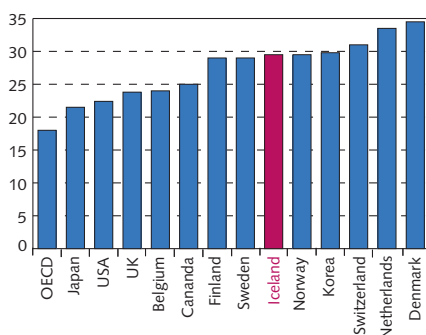
Seven international airlines operate in Iceland, all privately owned. Two of them offer direct passenger services to and from Iceland. Both serve a number of cities in Europe, and one has several gateways in the US as well. The other airlines operate charter and air cargo services worldwide. Iceland has numerous harbours large enough to handle international ship traffic, which are without exception free of ice throughout the year. The two main shipping lines operate regular liner services to the major ports of Europe and the US. Both have been building transport networks on land and sea in Europe and North America by investing in foreign subsidiaries and other transport companies. A weekly ferry connection for passengers, cars and cargo operates between East Iceland and two Nordic countries.

### Communications

The telecom market in Iceland is characterised by one of the world's highest penetrations of broadband, Internet and mobile phones. Broadband penetration per 100 inhabitants was the third-highest in the OECD in 2007, surpassed only by Denmark, Switzerland and the Netherlands. In 2007, Iceland had one of the highest mobile telephone penetration in the world, with 104 wireless subscribers per 100 inhabitants. In 2008, 92% of Icelandic households owned a computer and 72% of Icelandic households owned a laptop computer. The percentage of households with an ADSL, SDSL or other xDSL connection has increased steadily in recent years, to 94% in 2008.

Iceland's telecommunication infrastructure is both extensive and modern, with satellite earth stations, optical fibre cables, broadband networks, and an extensive cellular mobile phone system that reaches

Chart 4.15  
Broadband subscribers per 100 inhabitants in December 2007



Source: OECD.

1. Producer Support Estimate (PSE) measures the transfers as a share of gross farm receipts.

98% of the population. There are three major telecommunication operators in the market.

Three broadcasting companies operate a total of 11 radio channels and 10 TV channels. In addition, a large number of foreign TV channels are widely received via satellite, cable or UHF relay.

### Environment

Compared to other industrial countries, Iceland is relatively unpolluted, due to sparse population and high reliance on renewable energy sources. Soil erosion has been a longstanding problem, due to the cutting of woodlands and overgrazing on sensitive volcanic soil that is susceptible to wind and water erosion. The intensity of grazing has fallen since the 1970s, and a considerable effort is made to reclaim eroded land.

Electricity production and space heating are provided with renewable energy; that is, hydro and geothermal. Utilisation of hydro-electric power, however, requires the construction of dams and other structures that affect nature and the landscape.

Acidification is not a problem in Iceland because of its geographic location and limited emissions of pollutants. Air pollution is low, although some local problems occur in the greater Reykjavík area. The marine environment around Iceland is relatively unpolluted.

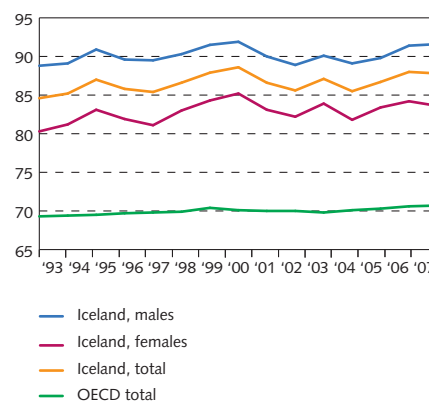
The emission limit for greenhouse gases in Iceland according to the Kyoto Protocol for the period 2008-2012 entails a 10% increase from 1990 levels. In addition, emissions from single relatively large projects can be reported separately and are not included in the above set limit, provided that they utilise renewable energy and adhere to certain criteria. Projections imply that Iceland will be within its Kyoto limits despite emissions growth. The largest share of emissions stems from industrial processes, followed by the transport sector and the fishing industry.

### 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 2005, female participation was in fact one of the highest in the OECD countries, with women accounting for 46% 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 correlate positively with economic growth, thereby 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.

Chart 4.16  
Labour force participation rate  
in Iceland and OECD countries 1993-2007



Source: OECD.

The influx of foreign labour has increased substantially in recent years, both from within and outside the EEA area. It is estimated that, in 2007, over 10% of the labour force comprised non-Icelandic nationals, in 2006 compared to 2.3% in 1998.

The wage bargaining process in Iceland is highly centralised and usually leads to more or less nationwide settlements. Some 85% of the labour force is unionised, and employers are highly organised as well. The government has frequently been involved in wage settlements, either through tax concessions and social transfers or through legislative acts aimed at accomplishing moderate settlements. In addition, the tailoring of national framework pay agreements in sectoral and firm-level negotiations makes it possible to take specific local conditions into account.

Notwithstanding its high degree of centralisation, the Icelandic labour market appears to be quite flexible compared to the rest of the EEA. 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, which reduces their employment effect, although the measured flexibility may to some extent be the result of high historical inflation.

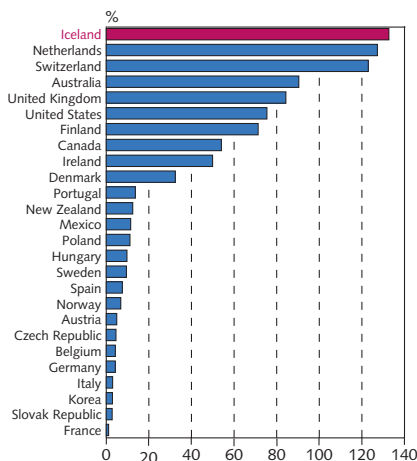
### Pension system

In the decades to come, Iceland will face fewer problems due to an ageing population than most other developed nations. There are three main reasons for this. First, the population is younger and will continue to be so during the coming decades. The old-age dependency ratio – i.e., over-65-year-olds as a ratio of 15- to 64-year-olds – was 19.4% in 2007, about the same as in the US (19%) but less than the average in the EU (24.7%). Second, labour participation rates among the elderly are high, and the pension system does not give special incentives for early retirement. While the official retirement age is 67, 24% of 65- to 74-year-olds worked at least one hour a week in 2007. Third, 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. In most cases, the old-age pension is 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 approximately 12% of the average earnings of unskilled workers, but the maximum total old-age pension amounts to around 65% of the same earnings.

Many of the occupational funds were established through a collective labour agreement in the late 1960s, and most are managed jointly by representatives from the trade unions and employers. Oc-

Chart 4.17  
Size of pension funds in selected  
OECD countries 2006  
As percentage of GDP



Source: OECD.



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. Payments totalled €505 million (46.1 b.kr.) – 3.6% of GDP – in 2007.

It is mandatory to pay at least 12% of total wages and salaries to pension funds. Formally, this 12% is split between a 4% contribution from the employee and an 8% contribution from the employer. The funds have grown by leaps and bounds over the past two-and-a-half decades, as their coverage has become almost total and the return on their assets has been strong. Assets were equivalent to over 130% of GDP at the end of 2007. Pension funds in Iceland are large relative to GDP by international comparison, as Iceland was the OECD leader with respect to this criterion in 2006.

At the end of 2007, there were 31 fully operational pension funds in Iceland, including 12 with employer guarantees from the state government, municipalities, or banks. Under current legislation, funds without employer guarantee are required to be fully funded. The ten largest pension funds held about 80% of the net assets of all pension funds in 2007, and the two largest funds accounted for 35%. The average fund had net assets of around €504 million (46 b.kr.), while the largest had assets of just under €3,5 billion (317 b.kr.).

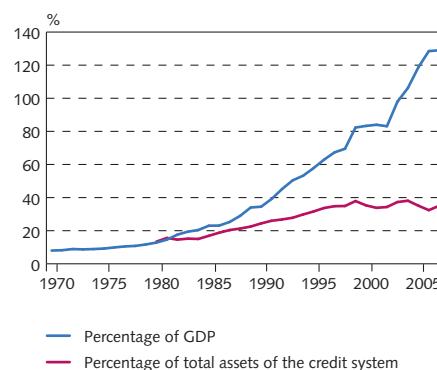
The benefits paid by occupational pension funds without employer guarantee will ultimately depend on their net return and will therefore vary from one fund to another. However, the investment risk is borne collectively by the members of each fund, and there are no individual accounts as in pure defined contribution plans (DC plans). It has been estimated that, at full maturity, a typical general occupational pension fund will 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 of up to 4% of wages. Employers must match the supplementary contribution up to a limit of 2%. The pension schemes must 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 must be paid in equal instalments over a period of at least seven years. It is estimated that 66% of wage earners were paying into such schemes in 2007.

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 35% in 2007. The share of foreign assets rose from less than 2% in 1995 to almost 28% at the end of 2007. Current legislation sets a 60% upper limit on the share of equities in a pension fund's portfolio and restricts exposure to exchange rate risk to 50% of net assets.

The build-up of the pension funds has contributed greatly to the development of financial markets in Iceland. Pension fund assets are estimated at 20.5% of the size of the credit system in 2007. During

Chart 4.18  
Net assets of pension funds 1970-2007



Source: Central Bank of Iceland.

that same year, the funds held 21% of the stock of marketable bonds and 43% of the stock of housing bonds. At the end of 2007, the funds owned domestic equities and shares in equity funds amounting to around 10% of the size of the organised equity market. This figure underestimates their scope, however, due to extensive cross-ownership of listed companies. Finally, the foreign asset accumulation of the pension funds is very significant in terms of the national economy. Pension funds' foreign assets accounted for just over 27% of all foreign portfolio assets of Icelandic residents at the end of 2007 and just over 7% of total foreign assets as recorded in the international investment position.

## 5 Financial markets and infrastructure

### Overview

Structural and legislative reforms, along with the expansion in financial services and activity that they have engendered, have made Iceland's financial system more international in character and broadly on a par with European norms. Under its obligation to transpose into national law all existing and future EU legislation in the field of financial services, Iceland has implemented all the EC directives on banking, insurance and securities trading whose general objective is to accomplish an integrated European market for financial services, in particular with respect to the right of establishment, provision of services, prudential rules and capital movements. Furthermore, the Icelandic authorities, in close cooperation with market participants, have been implementing policy objectives and specific measures on the basis of the EU's Financial Services Action Plan aimed at enhancing harmonisation, competition and effectiveness of financial services, payment systems and electronic commerce throughout Europe.

A new Act on the Central Bank of Iceland entered into force in 2001. It simplified and clarified the objectives of the Central Bank, provided full independence for applying its monetary instruments and increased its financial independence. The Central Bank of Iceland is committed to modern central banking principles such as transparency, accountability and independence. It pursues an inflation-targeting monetary policy and promotes financial stability.

Table 5.1 Financial market liberalisation in Iceland: some important steps

<i>Event</i>	<i>Year</i>
Financial indexation permitted	1979
Liberalisation of domestic bank rates	1984-86
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

### OMX Nordic Exchange Iceland and the Icelandic Securities

#### Depository

There is currently one authorised stock exchange operating in Iceland where public listing of securities and securities trading are carried out: OMX Nordic Exchange Iceland, a part of NASDAQ OMX Group Inc.,

(OMX ICE, previously Iceland Stock Exchange, ICEX). OMX ICE is also licensed to operate a regulated OTC market. In 2006, the Iceland Stock Exchange, which was founded in 1985, merged into OMX, which owned exchanges in all the Nordic and Baltic countries except that in Norway. In 2007, it merged into NASDAQ OMX Group, Inc. the world's largest exchange company, which provides trading, exchange technology and public company services on six continents.

Electronic issue of securities and registration of title to electronic securities can only be carried out by a licensed securities depository. The Icelandic Securities Depository is a registry, depository and clearing house for securities in dematerialised (electronic) form. Settlement of bonds takes place on a T+1 basis, while equity transactions are settled on a T+3 basis. The Icelandic Securities Depository is also owned by NASDAQ OMX Group, Inc.

Table 5.2 Selected legislation in the field of financial services

Act on the Central Bank, No. 36/2001
Act on Activities of Stock Exchanges and Regulated OTC markets, No. 34/1998
Act on Electronic Registration of Title to Securities, with Amendments, No. 131/1997
Act on official Supervision of Financial Operations, with Amendments, No. 87/1998
Act on Financial Undertakings, No. 161/2002
Act on Undertakings for Collective Investment in Transferable Securities (UCITS) and Investment Funds, No. 30/2003
Act on Insurance Activities, with Amendments, No. 60/1994
Act on Insurance Contracts, with Amendments, No. 30/2004
The Act on the Mandatory Guarantee of Pension Rights and the Operation of Pension Funds, No. 129/1997
Act on Co-operative Societies, No. 22/1991
Act on Deposit Guarantees and Investor-Compensation Scheme, No. 98/1999
Act on Housing Affairs, No. 44/1998
Act on the New Business Venture Fund, No. 61/1997
Act on Measures against Money Laundering and Terrorist Financing, No. 64/2006
Act on Securities Transactions, No. 108/2007
Act on Covered Bonds, No. 11/2008

### Bond market

The Icelandic bond market consists of a primary market, which usually takes the form of bond auctions, and a secondary market that is operated primarily on OMX ICE. Icelandic bond issues can be broadly divided into four categories:

1. Government bonds, issued by the Treasury, which are indexed against inflation and paid up with accrued interest at maturity.
2. Treasury notes and Treasury bills, which are non-indexed, zero-coupon bonds.
3. Housing Financing Fund (HFF) bonds, housing authority bonds and housing bonds, which are indexed, interest-bearing bonds in an annuity format.
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, HFF bonds, housing bonds and housing authority bonds. A primary dealer system is also in place for Treasury notes and bills. Most new issues are registered in the Icelandic Securities Depository, and trading is conducted on a delivery-versus-payment (DvP) basis. Several categories of bonds are registered in Clearstream. HFF bonds are registered in Euroclear, but a large share is sub-registered in the Icelandic Securities Depository.

The Icelandic bond market has several features that set it apart from bond markets in other countries. First, indexed bonds dominate the market. The bulk of issues with a maturity exceeding 5 years are linked to the CPI. Second, the majority of bonds carry a state guarantee, including HFF bonds, the market's most liquid issues. Third, yields on the Icelandic bond market have been high by international comparison. Over the past decade, real yields of indexed housing and government bonds have fluctuated in the range of 3.5% to 8%. They were around 4.7% at the end of June 2008, at which time there were 407 listed bonds and bills with a market value of €13.2 billion (1,654 b.kr.). Turnover on the bond market was €26.6 billion (2,430 b.kr.) in 2007 and €27.3 billion (3,421 b.kr.) from January to June 2008.

### Equity market

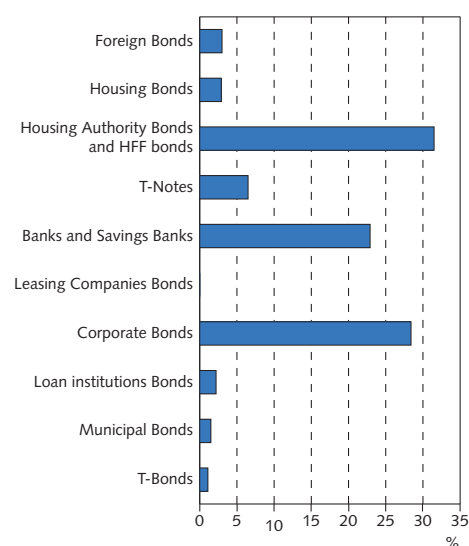
Market capitalisation of Icelandic equities increased in recent years, as equity prices rose 60% on average in 2003-2006. After mid-2007 and the onset of the turmoil that has affected all international markets, equity prices fell considerably, with the decline measuring one-third by July 2008.

In the beginning of July 2008, a total of 22 companies were listed on the OMX ICE main list, one company on the alternative market which is an organised but not officially recognised market, and three companies on the First North (small cap) securities market, where securities are officially listed and traded. Market capitalisation of listed companies at the end of 2007 was €28.2 billion (2,570 b.kr.), or 201% of 2007 GDP. Turnover in shares was €33.7 billion (3,078 b.kr.) in 2007 and €19.8 billion (2,484 b.kr.) over the first six months of 2008.

### Money market

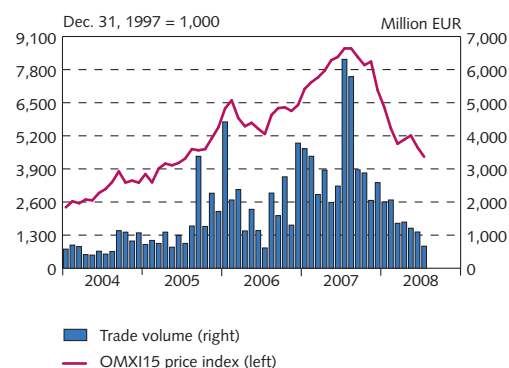
The money market consists of a secondary market in Treasury bills, bank bills and other short-term bonds on the stock exchange, and the interbank loan market. Turnover on the secondary market on OMX ICE was €661 million (60.3 b.kr.) in 2007 and €275 million (34.5 b.kr.) from January to June 2008. The interbank market is operated by the Central Bank of Iceland, and trading involves 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. Trades must be reported to the Central Bank. Once a day, the Central Bank fixes REIBID and REIBOR rates for the market. Turnover on the interbank market for domestic currency amounted to €14.9 billion (1,356 b.kr.) in 2007 and €4.9 billion (617 b.kr.) over the period January-July 2008.

Chart 5.1  
The Icelandic bond market at the end of 2007, percentage breakdown of market value



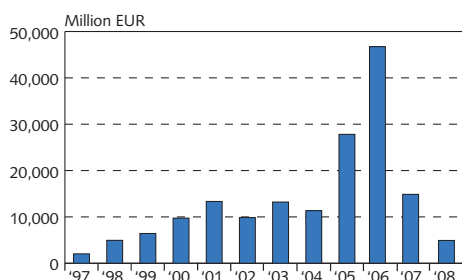
Source: OMX Nordic Exchange in Iceland (OMX ICE).

Chart 5.2  
Equity market: Monthly trade volume and prices  
At month-end January 2004 - July 2008



Source: OMX Nordic Exchange in Iceland (OMX ICE).

Chart 5.3  
Volume traded in the interbank market  
for foreign exchange 1997-2008<sup>1</sup>



1. Data until July 2008 inclusive.  
Source: Central Bank of Iceland.

### Foreign exchange market

In operation since 1993, the foreign exchange market is an interbank market run by the Central Bank of Iceland. Market participants are the three largest commercial banks. The Central Bank of Iceland is the fourth participant but has not been an active market maker for a number of years. The Central Bank has purchased foreign exchange in the interbank market on behalf of the Treasury and to boost its own reserves for the past four years, but in 2008 no such purchases have been made. Market makers are subject to rules issued by the Central Bank, which were last changed in the beginning of 2003.

Activity on the market is highly variable. Total turnover in 2007 was €39.96 billion (3,645 b.kr.), while in the first six months of 2008 it was €36.3 billion (4,555 b.kr.). In 2008 the Icelandic króna has depreciated significantly against other currencies – for example, 37.4% against the euro – after having been quite strong in recent years.

In 2007, issuance of Glacier bonds (króna-denominated Euro-bonds) was €3.0 billion (271.8 b.kr.). Issuance from January to July 2008 amounted to €0.8 billion (102 b.kr.), a significant decrease from the years before. While most Glacier bonds mature in 1-2 years, the longest issue spans 10 years. The outstanding Glacier bond stock amounted to €2.7 billion (334.8 b.kr.) at the end of July 2008. Glacier bonds scheduled to mature in the second half of 2008 amount to €0.87 billion (108 b.kr.), and in 2009, Glacier bonds in the amount of €1.4 billion (178 b.kr.) will mature.

Launched in November 2001 was an informal FX swap interbank market for which the Central Bank of Iceland issued rules in March 2002. Turnover in the swap market was USD 619 million and EUR 18 million in 2007, and USD 361 and EUR 6 million from January to June 2008. Other derivative instruments are used in Iceland but not in a formal market.

### Financial stability and the Central Bank

Article 4 of the Central Bank Act stipulates that the Bank 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 that 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 must 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 with the annual publication of the Central Bank's *Financial Stability* report. In 2008, many of the factors that were considered cause for concern in the 2007 *Financial Stability* report had materialised, such as depreciation of the króna, falling equity prices, a cooling real estate market,

and rising interest rate premia. In the latest Financial Stability report, published in May 2008, the Central Bank's finding was that it was likely that a range of risks would have to be faced, but efforts must be made to minimise the probability of a financial crisis that could harm potential output and erode living standards. Nonetheless, the Central Bank's assessment was that the financial system was broadly sound. It was believed to be capable of withstanding shocks to the economy and financial markets, to mediate credit and payments, and to redistribute risks appropriately.

In its work on financial stability, the Central Bank has taken into account international agreements and other standards for best practice, as well as considering the work of leading foreign central banks in this field. Because of the increasing prevalence of banks with cross-border establishments, in 2003 the central banks of the five Nordic countries signed a memorandum of understanding (MoU) on managing financial crises. In 2006, the Office of the Prime Minister, Ministry of Finance, Ministry of Commerce, Financial Supervisory Authority and Central Bank of Iceland published an MoU on consultation concerning financial stability and contingency plans.

### **Supervision and deposit insurance**

The Financial Supervisory Authority (Fjármálaeftirlitið, FME) has since 1999 handled supervisory tasks formerly assigned to the now-disbanded Bank Inspectorate of the Central Bank and the Insurance Supervisory Authority. The Central Bank's role is in oversight and prudential regulation.

The FME has a Board of Directors appointed by the Minister of Business Affairs. 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, and pension funds. The FME also supervises other activities as authorised in accordance with specific legislation.

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.

New international capital standards for financial companies took effect at the beginning of 2007. They are based on the Basel Committee on Banking Supervision's Revised International Capital Framework (Basel II). Basel II replaces an earlier Capital Accord originally dating from 1988. Under the new Basel II rules, financial companies were allowed to defer calculation of capital adequacy ratios and risk base according to the new rules until January 1, 2008.

By law, the Central Bank of Iceland sets rules for credit institutions' liquidity ratio – that is, 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 that fall due or can be liquidated within 3 months must not be lower than 1. Limits are stipulated for the balance of foreign-denominated assets and liabilities. The general rule is that total foreign exchange exposure is limited to 10% 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. Contingency exercises are held on a regular basis.

A Depositors' and Investors' Guarantee Fund (the Fund) is in force in Iceland. The commercial and savings banks contribute 0.15% of their deposits to the Fund each year (until the limit of 1% of total insured deposits is reached). Since the beginning of 2000, the Fund has been a private institution. A separate department of the Fund provides insurance for securities investors. The Fund is supervised by the (FME).



## 6 Public sector

### The size of the government sector

Compared to its neighbours, Iceland has a relatively small public sector, with expenditures of around 43% of GDP in 2007. This is lower than in the Nordic countries (48%) and euro area countries (46%), but higher than in the US or Japan. The expenditure ratio has fallen by 2½ percentage points since 2003, after a 4½ percentage point rise from 1998-2003. The rise was concentrated in health, social services and education, while the subsequent fall seems to be primarily related to high output growth, falling unemployment and shrinking interest costs.

Several factors should allow Icelanders to get by with a relatively small government sector: historically low unemployment, comparatively low spending on social affairs, and the historical absence of defence expenditure. Furthermore, fully funded pension funds, organized by occupation, are gaining importance and have become more significant in terms of benefit payouts than the public pay-as-you-go system, which is the dominant pillar in many other OECD countries (see Chapter 4). The relatively young population and high retirement age also help to lower overall pension expenditures. Compared to either the EU (before the latest accessions) or the Nordic countries, the latest available figures from 2006 on government expenditures by function show that low outlays on social affairs and defence are counterbalanced to some degree by greater spending on other categories, notably health care, recreation, education and economic affairs.

### General government finances

Iceland, like many other OECD countries, ran up a relatively large public sector deficit in the late 1980s and early 1990s, with deficits averaging 3% of GDP in 1985 to 1995. Finances consolidated after 1995, and boom-related surpluses were recorded in 1999-2000. There was a brief return to deficit as the economy cooled in 2002-2003. Since then, surpluses have risen to 5% of GDP in 2005, 6½% in 2006 and 5% in 2007. The fiscal balance has been well above the OECD average since the mid-1990s. Treasury forecasts from April 2008 predict a surplus of 3½% of GDP in 2008.

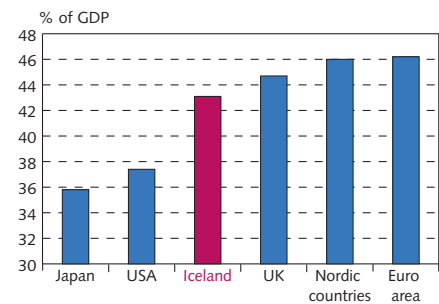
General government revenues amounted to 48½% of GDP in 2007, but the ratio is expected to fall this year with the cooling of the economy and a weaker króna. Increased spending on transfers and fixed investment raised the ratio of general government outlays to GDP by 1½ percentage points to 43% in 2007.

General government debt rose significantly during the recession in the late 1980s to mid-1990s. Net debt peaked in 1995 at 38% of GDP. With stronger growth, improving government finances and revenue from privatisation, it fell to around 7% of GDP at the end of 2007.

### Division of responsibilities

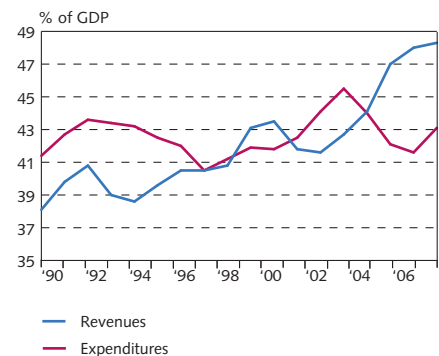
The government sector in Iceland is organised on two levels, the central government as described in the Treasury accounts, and local governments. Separate sets of social security accounts are maintained, but

Chart 6.1  
Size of general government:  
Total expenditure 2007



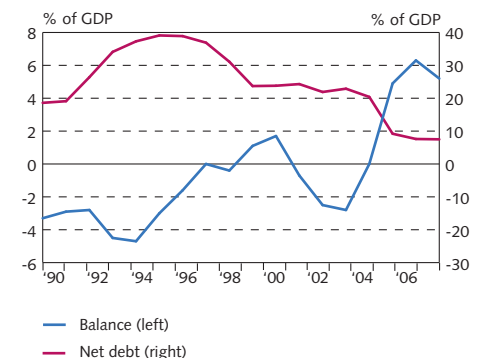
Source: OECD.

Chart 6.2  
General government finances 1990-2007  
Revenues and expenditures



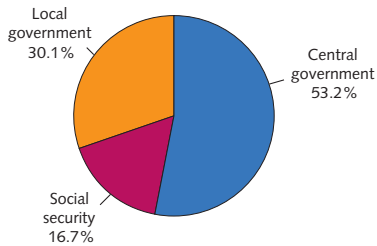
Source: Statistics Iceland.

Chart 6.3  
General government net debt  
and fiscal balance 1990-2007



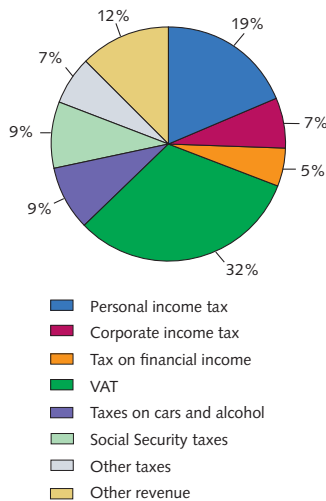
Sources: Statistics Iceland, Ministry of Finance.

Chart 6.4  
Relative size of government subsectors 2007



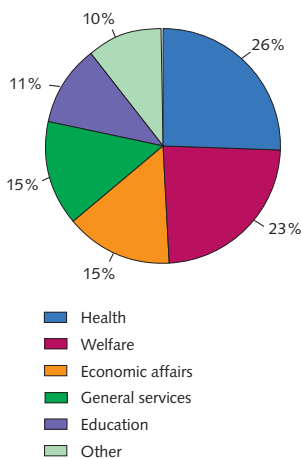
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 6.5  
Central government revenues by source 2006



Sources: Statistics Iceland, Treasury accounts.

Chart 6.6  
Central government expenditures by function 2006



Source: Statistics Iceland.

their expenditures and revenues are authorised through the Treasury budget. Since the early 1990s, local government expenditures have climbed from 10% of GDP to around 13%, while the central government has shrunk from 35 to 31% of GDP, in large part because of a shift of school expenditures and commensurate revenues from the state to the local authorities.

The central government regulates local governments and their authority to collect revenue, and collects directly more than 80% of local government tax revenues. It also administers and finances the social security sector of government.

The central government is responsible for police, courts, foreign affairs, upper secondary and higher 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 particular municipalities. It administers benefit programmes for elderly and disabled persons, unemployment benefits, rebates on mortgage interest payments for owner-occupied housing, child benefits, and parental leave at childbirth. These programmes are means-tested, although to varying degrees. Recently, income replacement to the unemployed was changed from a single rate close to minimum wages to linking the first three months of compensation to previous income, albeit with a cap.

Local governments are responsible for local planning, most local infrastructure, day care and education from pre-school through the lower secondary level, and welfare services of various kinds, in particular services for the elderly except for health care. They are also responsible for meeting the housing needs of low-income households. Local governments provide supplementary assistance to general programmes of pensions and income support run by the central government.

### Central government finances

Central government revenues amounted to 36% of GDP in 2007 according to preliminary national accounts figures from Statistics Iceland. The composition of central government revenues in 2006 is shown in Chart 6.5. The noticeably large share of taxes on goods and services puts Iceland in first place among OECD countries for such taxes, either as a percentage of GDP or as a percentage of total taxes.

Discretionary expenditures of the central government are quite low and have been falling. In particular, expenditure on fixed capital and capital transfers fell from around 4½% to around 2% of GDP from 1990 to 2006, rebounding to 3% in 2007. It is expected to rise to 4½% in 2009 as a result of a government plan to counter the contraction of the economy and strengthen infrastructure. The government has outlined a medium-term programme aiming to keep real growth in public consumption below 2% per year and the growth of income transfers below 2.5%. The composition of central government expenditures in the latest available year is shown in Chart 6.6, with health and social protection accounting for almost half of all spending.

Treasury revenues have been strongly procyclical in Iceland for three main reasons: first, a pre-determined level of tax-exempt income translates growth spurts into revenue bonuses; second, 40% of Treas-

ury revenues come from taxes on consumption goods, falling heaviest on luxury durables, most of which are imported. Such revenues are sensitive to the cycle as well as to (procyclical) exchange rates. Third, since 1997, taxes on corporate profits and the financial income of households have grown from 5% to 12% (in 2006) of Treasury revenue. Although experience is limited, both must be expected to be very sensitive to fluctuations.

Treasury surpluses, privatisation revenues, reduced lending activity and strong economic growth contributed to a fall in gross Treasury debt from 50% of GDP in 1995 to around 23% in 2007, while net debt, taking account of Treasury deposits with the Central Bank, has been reduced from 33% of GDP to an estimated surplus of 3% at the end of 2007. Furthermore, since 1999 the Treasury has made an effort to pre-fund civil service pension liabilities, which are not generally classified as debt under the OECD's national accounts standards. These liabilities rose from 13% of GDP in 1989 to 22% in 2000, but have since been trimmed back to 17% of GDP at the end of 2006 in spite of rising individual benefits and upward revisions of lifespans.

### Local government finances

The local government sector broke a 14-year string of deficits in 2005 and remained in surplus in 2006 and 2007. Local government outlays have run at 12-13% of GDP in the past five years, up from an average of 7% of GDP in the early 1980s, mainly because of new and expanded tasks in the area of primary education and day care. Local government revenues are dominated by a flat-rate, no-exemptions municipal income tax, which accounts for 54% of revenues, with property taxes and a Treasury-funded revenue sharing programme contributing 11% and 9% respectively in 2007. Education, from preschool to the age of 15, accounts for more than a third of expenditures, with culture and recreation and welfare expenditures each accounting for about 15%. Expenditure is shown in more detail in Chart 6.9.

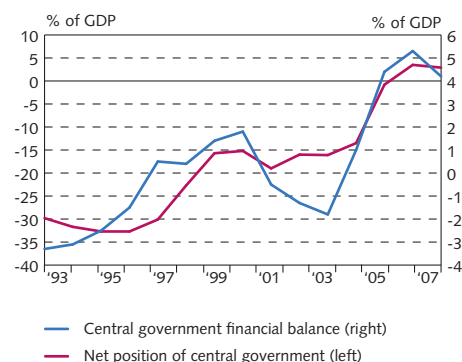
In spite of the deficit history, local government debt has been low and steady. Gross debt hovered around 7% of GDP in the period 1994-2004, falling to 5% in 2006, while net debt stayed around 5½% of GDP through 2002 but shrank to 3½% by the end of 2006. The seeming contradiction between deficits and steady debt is explained by asset sales, economic growth, and a 15% strengthening of the real exchange rate from 1994 to 2006.

### The tax system

The central government or Treasury derived around 79% of revenues from taxes in 2007.<sup>1</sup> The comparable ratio at the local government level was 77%. Of Treasury revenue, 32% came from taxes on income and wealth, 9% from payroll taxes, around 30% from value-added tax, and 17% from various excise taxes on imports, production and consumption.

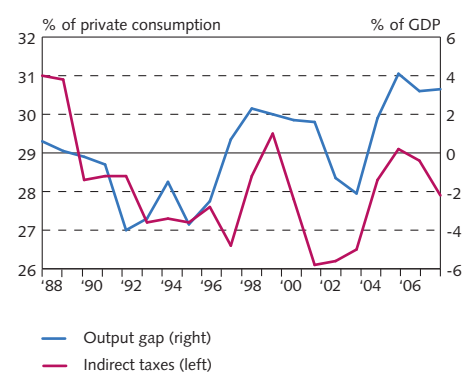
A 22.75% tax is levied on individuals' personal income over €9.8 thousand (1.14 m.kr. in 2008) per annum. In addition to the state

Chart 6.7  
Central government finances 1993-2007  
Financial balance and net position<sup>1</sup>



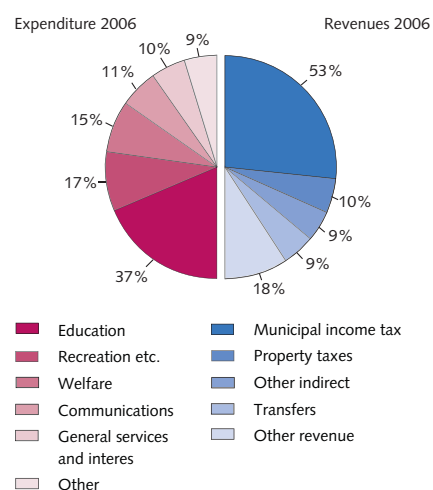
1. Including Treasury deposits with Central Bank.  
Sources: Ministry of Finance, Statistics Iceland.

Chart 6.8  
Cyclicality of indirect taxes 1988-2007



Source: Central Bank of Iceland.

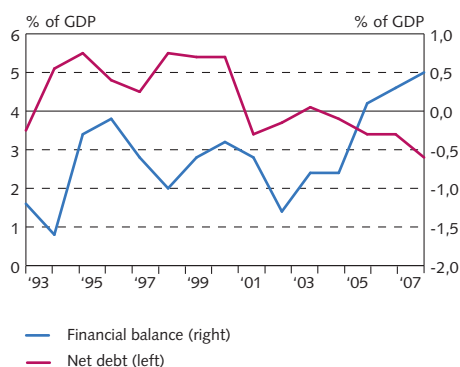
Chart 6.9  
Local government expenditures and revenues  
% of total



Source: Statistics Iceland.

1. According to national accounts figures from Statistics Iceland.

Chart 6.10  
Local government finances 1993-2007  
Net debt and financial balance



Sources: Ministry of Finance, Central Bank projections.

income tax, a flat municipal tax is levied on personal income. It ranges from 11.2% to 13%, depending on locality. The state and local government taxes are levied jointly, and the state pays local governments the tax for persons whose income is below the overall tax-exempt level. Pension fund contributions and certain public income support payments are exempt.

The Treasury taxes interest, dividends, rental income and personal capital gains of individuals at a lower rate of 10%. Property taxes accrue to local governments. Rates vary by community. In 2007, the average rate was 0.29% on residential property and 1.6% on commercial property.

The corporate income tax was lowered from 50% in 1991 to 18% in 2002 and to 15% in 2009 on 2008 corporate profits. Capital income of corporations is treated like other revenue for tax purposes. A payroll tax of 5.34% is charged on wages. It is earmarked for unemployment and disability benefits and parental leave after childbirth. It was cut from 5.79% at the beginning of 2007.

The largest source of central government revenue, accounting for 32% in 2006, is value-added tax, levied at 24.5% on most goods and services. Food, indoor heating, books, newspapers, magazines and some services are taxed at 7%. The lower rate was cut from 14% in March 2007. A few specific categories of goods and services 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 of 15% to 25%, while unit fees are charged on some goods. Customs duties range from 0% to 30% of cif value, although most imports from the EU as well as Iceland's EFTA partners – Norway, Switzerland and Liechtenstein – are exempt. Revenue from general excise taxes and import duties has fallen from around 20% of Treasury revenues in the early 1980s to around 2% in 2006. Taxes on imports and ownership of motor vehicles and excise taxes on motor vehicle fuel made up 6% of Treasury revenues in 2006, while around 3% derived from charges on the sale of alcohol and tobacco.

Table 6.1 Main features of the tax system in Iceland

State income tax <sup>1</sup>	22.75%
Municipal income tax <sup>1</sup>	11.2-13%
State tax on financial income <sup>2</sup>	10%
Corporate income tax	15%
Payroll taxes	5.34%
Value-added tax	
General rate	24.50%
Low rate <sup>3</sup>	7.0%
Property taxes <sup>4</sup>	
Commercial and certain public property	1.60%
Residential property	0.29%

1. Incomes up to €9.8 thousand per person are exempt from income taxes. Municipalities receive a flat rate, so the exemption falls entirely on the Treasury. Pension fund contributions are exempt up to a point. 2. Interest, dividends, realised capital gains and rental income of persons. 3. Food, hotel rooms, heating, books, newsprint, CDs and television and radio subscriptions. 4. Weighted averages for 2007.

Sources: Association of Local Authorities, Internal Revenue Directorate.

In total, the Treasury and local government taxes described above accounted for 80% of general government revenues and 93% of tax revenues in 2006. Non-tax revenue accounted for 14% of general government revenue, mostly in the form of service charges, interest income and dividends. Privatisation proceeds are not counted as revenue under national accounts definitions. The ratio of total general government revenue to GDP rose by a percentage point to 48% between 2005 and 2006, and to 48½ in 2007, compared to a weighted average of 39% for the OECD as a whole, 45½% for the euro area, and 55% for the Nordic countries in 2007.

### Government holdings in the business sector

In Iceland, both central and local government were traditionally heavily involved in the business sector, notably in the operation of utilities and banking institutions. Over the last 20 years, the central government has pursued an extensive programme of privatisation. The most recent privatisation, in early 2007, was the Treasury's share in a geothermal hot water and electricity utility, owned mainly by local governments in Southwest Iceland. The Treasury did, however, consolidate its hold on the national power company Landsvirkjun by buying the 48% share previously held by local governments. The company is now wholly owned by the state.

After the most recent sales, the state's most important business holdings are in the production and distribution of electricity and postal services, as well as in the Housing Financing Fund (HFF), the Student Loan Fund, and a few smaller financial institutions, altogether responsible for around 10% of credit in the economy at the end of 2006.

Local governments still own a considerable share in electricity production, even after selling their share in Landsvirkjun. Local governments own almost all the geothermal power companies, which supply heating to most homes in Iceland and, on an increasing scale, electricity to the aluminium industry. Many own their local distributor of electricity, and they generally own operating companies for harbours.

Table 6.2 Highlights of Central government privatisation

<i>Years</i>	<i>Company sold</i>	<i>Million EUR</i>	<i>% of total</i>
2005	Iceland Telecom	860	50
1999-2003	Búnaðarbanki	199	12
1998 and 2003	Landsbanki	251	15
1998-1999	FBA investment bank	184	11
2007	Sudurnes Heating	88	5
1998 and 2003	IAV (contractors)	28	2
2005	Agricultural Investment Fund	37	2
2002	Icelandic Alloys (ferrosilicon)	14	1
1991-2007	Other	59	3
1991-2007	Total	1,720	

Sources: Executive Committee on Privatisation, Central Bank of Iceland.

### Government guarantees

Besides debt on the books of government entities, the state and local governments guarantee certain debts of various enterprises. State guarantees must now be authorised explicitly in budget legislation and, in recent years, have been confined to government enterprises and institutions related to government. Local governments are now legally prohibited from granting loan guarantees except to their own subsidiary institutions.

The Treasury accounts for 2007 show that the government has outstanding guarantees equivalent to 62% of GDP. Some 81% of this represents government backing of residential mortgages through the HFF, a state-owned investment fund with a considerable share of household mortgage lending in Iceland. Another €1.2 bn or 13% of the guarantees are for the debt of Landsvirkjun, the national power-company. Landsvirkjun's debt at the end of 2007 stood at €2.4 billion.

Until mid-year 2004 HFF operated a housing bond system, which was not a traditional mortgage loan system but a bond swap system. In mid-2004, the HFF discontinued the housing bond system and issued HFF bonds to finance its new cash loans to households. The new HFF bonds are linked to the CPI, have no call option, and mature in 2014, 2024, 2034 and 2044 respectively. HFF bonds are listed on OMX ICE and registered with Euroclear.

Table 6.3 Treasury guarantees at the end of 2007

	<i>Million EUR</i>	<i>% of total</i>
Housing Financing Fund	7,198	81
Regional Development Institute	118	1
National Power Company	1,162	13
Landsbanki	52	1
Other	385	4
Total Treasury guarantees	8,915	
Percentage of 2007 GDP		62

Source: Treasury Accounts 2007.

### Treasury foreign debt

From 2001 until November 2006, the Republic of Iceland was a modest borrower in international markets. The balance on government finances and the retirement of debt with proceeds from privatisation have contributed to a gradual reduction in the ratio of Treasury foreign debt to GDP in the past years. In November 2006, however, the Treasury made a Eurobond (EMTN) issue of €1 billion (90 b.kr.), the entire proceeds from which were used to strengthen the foreign reserves of the Central Bank of Iceland. The fixed-rate notes mature on December 1, 2011.

At the end of July 2008, the Treasury's total foreign debt amounted to USD 2.6 billion (209 b.kr.). Long-term debt was USD 2.4 billion, and short-term debt was USD 240 million. Around 30.9% of the Treasury's foreign obligations were denominated in US dollars, 50.2% in euros, 6.0% in Japanese yen, 5.6% in sterling, and 87.3% in Swiss francs.

Currently, 96.4% of the Treasury's total foreign debt carries fixed interest rates. The average maturity of foreign long-term debt was approximately 3.13 years and the average duration 2.73 years at the end of July 2008.

Table 6.4 Republic of Iceland foreign bond issues

Currency	Amount	Issue date	Maturity
EUR	250,000,000	10.4.2002	10.4.2012
EUR	150,000,000	30.9.2002	30.9.2009
EUR	150,000,000	12.5.2003	12.5.2008
USD	200,000,000	10.3.2004	10.3.2014
EUR	1,000,000,000	1.12.2006	1.12.2011

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 2 billion. The ECP programme was originally established in 1985, and the MTN and USCP programmes were introduced in 2001. The Treasury also has a committed credit facility under a five-year agreement in the amount of USD 250 m. This is a syndicated bank facility from 2005.

Under a special agreement with the Minister of Finance, the Central Bank is responsible for the implementation of foreign borrowing for the Treasury. Since October 2007, the Central Bank has handled the borrowing and debt management functions previously assigned to the NDMA.

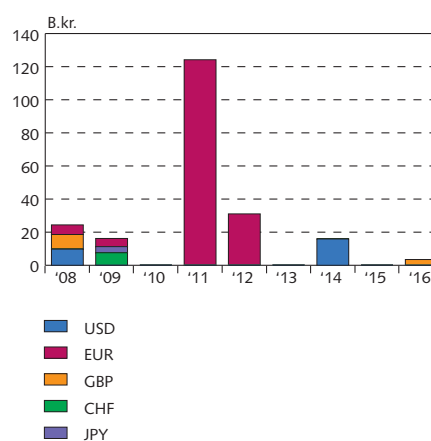
The Republic of Iceland has never defaulted on its debt and has always paid when due the full amount of principal, interest, and sinking fund instalments for all internal and external obligations.

### Credit ratings

Iceland's Aaa ratings with Moody's were placed on negative outlook in March 2008, and in May the rating agency downgraded the government bond ratings to Aa1 from Aaa and lowered the foreign currency country ceiling for bank deposits to Aa1 from Aaa. In its analysis on Iceland in May, Moody's said that the "downgrade reflects the country's potential liquidity constraints given the scale of possible, although highly unlikely, foreign currency needs because of its banking system contingent liabilities." In addition, the analysis mentioned "the many strong credit features that substantiate Iceland's very high rating, including low direct government debt, highly advanced economic development, economic vibrancy, favorable demographics, and a fully funded pension system, not to mention its remarkable flexibility to handle shocks. These characteristics differentiate it very positively from other Aa and even many Aaa rated governments."

On April 17, 2008, Standard & Poor's Ratings lowered the long-term foreign currency rating on the Republic of Iceland to A from A+ and its long-term local currency rating to AA- from AA. The A-1 short-term foreign currency and A-1+ short-term local currency ratings were

Chart 6.11  
Maturity profile of Treasury external long-term debt  
July 2008



Source: Central Bank of Iceland.

both affirmed. The outlook is negative. In its report, S&P stated that “the downgrade of the sovereign reflects increasing economic policy challenges, largely due to pressure on Iceland’s external funding for the nation’s commercial banks. Iceland’s banks rely on wholesale funding, particularly from overseas, and higher funding costs are hurting their profitability and growth.”

On April 1, 2008, Fitch Ratings revised the outlook for the Republic of Iceland’s long-term foreign and local currency Issuer Default ratings to negative from stable. The long-term foreign and local currency were affirmed at A+ and AA+ respectively, as were the short-term of F1 and the country ceiling of AA-. Fitch stated that should it “decide that the credit profile of Iceland’s major banks has deteriorated, downward pressure on Iceland’s sovereign ratings could result, if Fitch judges that the risks to macroeconomic stability and sovereign creditworthiness arising from distress in the banking system have materially increased.” Also, the rating agency said “that the sovereign’s credit fundamentals remain strong, with net general government debt of just 8% of GDP, a succession of budget surpluses since 2004 and a very low debt service burden. In addition to this favourable credit profile, the authorities have a range of financial options open to them, including the issuance of foreign as well as domestic debt and draw downs of committed credit lines from major international financial institutions”.

R&I Rating of Japan announced its first rating for the Republic of Iceland in June 2007, assigning it a foreign currency issuer rating of AA+. The outlook is stable. The rating has not been revised since it was initially assigned.

Table 6.5 Ratings for Icelandic Treasury bonds 2008

	<i>Affirmed</i>	<i>Foreign currency</i>		<i>Domestic currency</i>		<i>Outlook</i>
		<i>Long-term</i>	<i>Short-term</i>	<i>Long-term</i>	<i>Short-term</i>	
Moody's	May 2008	Aa1	P-1	Aa1	P-1	Stable
Standard & Poor's	April 2008	A	A-1	AA-	A-1+	Negative
Fitch	April 2008	A+	F1	AA+		Stable
R&I Rating of Japan	June 2007	AA+				Stable



## 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, transparency and accountability provisions were strengthened, and others were added which serve to boost the capital position of the Bank.

The legislation granted the Central Bank of Iceland full independence to implement monetary policy in accordance with the inflation target, and formally closed any direct access by the government to Central Bank financing. At the same time, it aimed 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 remained vested in the Board of Governors, which consists 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 controls, for example, were removed with the liberalisation of capital flows in the early 1990s, 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 Central Bank, like its counterparts in many other countries, has placed increasing emphasis on monitoring financial stability. The 2001 Act mandated the Central Bank to promote financial stability (see pp. 36-37).

### **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). The aim is to keep the rate of inflation on average as close to the target as possible. If it deviates from target by more than 1½% in either direction, the Central 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. Four such reports have been compiled and published to date: in July 2001, February 2005, September 2005 and September 2007.

By defining the role of the Central Bank in the formulation of monetary policy, 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

insofar as the Central Bank deems this to be consistent with the inflation target.

The Central Bank publishes forecasts three times a year, projecting inflation and other key economic variables. The forecast horizon spans three years, and the baseline forecast is based on a policy rate path that the Central Bank's staff considers consistent with the inflation target. Although the policy rate path in the baseline forecast does not entail a declaration or commitment by the Board of Governors, it should be regarded as an important indicator of the policy rate level required under the current outlook to ensure that the inflation target is attained within the forecast horizon. The forecast serves as an important guide to monetary policy decisions and is also a key tool for communication of monetary policy outside the Bank.

The inflation targeting regime represents a significant departure from previous monetary policy regimes of different types of currency pegs. Iceland has a long history of using the exchange rate as a monetary anchor, although with a varying degree of commitment, as can be inferred from Table 7.1.

Under the current regime of inflation targeting, the currency floats freely without Central Bank intervention. Under provisions in the Act, the Bank may temporarily limit or halt trading in the domestic foreign exchange market and may temporarily suspend its own quotation of the rate of exchange of the króna. However, these authorisations have not been exercised.

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 $\pm 2\frac{1}{4}\%$ 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 $7\frac{1}{2}\%$ .  In September 1995 the fluctuation band was widened to $\pm 6\%$ 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 $\pm 9\%$ in February 2000.
2001-	The exchange rate target was abolished in March 2001 and an inflation target adopted. The target requires approval by the Prime Minister but the Central Bank has full independence in setting monetary policy to attain this target without interference by the government. <sup>1</sup>

1. The current framework for monetary policy has been described in detail in the Central Bank's *Monetary Bulletin* 2001/2, available on its website ([www.sedlabanki.is](http://www.sedlabanki.is)).

### Monetary instruments

The main monetary instrument of the Central Bank of Iceland is the interest rate in its weekly auction of collateral loans – the policy interest rate. Usually the Bank auctions one-week loan agreements. So far the auctions have been fixed-price, with unlimited access subject to collateral. Collateral loans are secured against eligible securities that the Bank approves. This liquidity facility was previously known as “repurchase agreements” but was renamed in June 2007 because it does not, in strictly technical terms, qualify as such. At the end of July 2008 the outstanding collateral loans with the Central Bank amounted to €4.7 billion (425.5 b.kr.) but was €2.2 billion (198 b.kr.) a year earlier. The policy rate of the Central Bank of Iceland is currently 15.50%.

The Central Bank has issued weekly tied deposits with a maturity of one week. In March 2008, the Central Bank of Iceland issued certificates of deposit that are electronically registered and fully transferable. The size of the issue was 75 b.kr., and it matures at the end of September 2008.

The Central Bank offers an overnight loan facility to the banks, subject to collateral requirements. Central Bank CDs can be pledged against collateral loans 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.

The required reserve ratios are in line with those of the European Central Bank; that is, 2% of specific bank liabilities with a maturity of less than two years, and 0% of other liabilities.

The Central Bank of Iceland may also intervene in the interbank foreign exchange market and participate in the interbank FX swap market. The Bank has not intervened in the FX market since 2001, October.

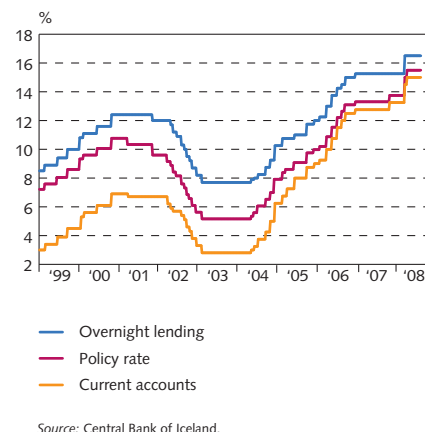
### Foreign exchange reserves

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 64 thousand ounces, and Iceland has a quota of SDR 117.6 million at the International Monetary Fund.

On November 22, 2006, the Republic of Iceland made a Eurobond (EMTN) issue of €1 billion (90 b.kr.), the entire proceeds from which were used to strengthen the foreign reserves of the Central Bank of Iceland. The fixed-rate notes mature on December 1, 2011.

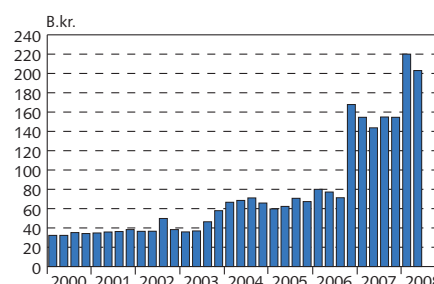
At the end of July 2008, the foreign exchange reserves amounted to about €1.8 billion (227 b.kr.), the equivalent of 17.7% of estimated 2007 GDP.

Chart 7.1  
Central Bank of Iceland interest rate corridor  
Weekly data, January 6, 1999 - August 20, 2008



Source: Central Bank of Iceland.

Chart 7.2  
Foreign exchange reserves of  
the Central Bank of Iceland  
At end of quarter March 2000 - June 2008



Source: Central Bank of Iceland.



## 8 Domestic and foreign debt

### Foreign debt

Iceland's external indebtedness is high by international comparison and has risen sharply since the mid-1990s. The net international investment position (IIP) was negative by €17.4 billion (1,584 b.kr.) at the end of 2007, equivalent to 124% of GDP. The net debt position – i.e., net liabilities excluding venture capital – was negative by €34.1 billion (3,112 b.kr.), equivalent to 243% of GDP for that year. Iceland's international investment position has changed sharply in the recent term. Both foreign assets and foreign liabilities have mushroomed in the space of a very few years, but liabilities have grown by considerably more than assets. Therefore, as a proportion of GDP, net IIP is very negative and net foreign liabilities at one of the highest levels in the world (see Chart 8.1). At the same time as foreign liabilities have grown, net interest and dividend payments to abroad have soared and weigh heavily in the current account deficit. In the standard methodology, both outward and inward foreign direct investment are recorded at book value. Because it is generally assumed that asset prices will rise over the long term, and because official statistics on the IIP do not fully reflect the market value of foreign assets, assets may be under-reported, thus exaggerating the negative IIP to some extent.<sup>1</sup>

Iceland's total foreign debt amounted to €78.3 billion (7,138 b.kr.), the equivalent of 558% of GDP at the end of 2007, up from 432% of GDP at the end of 2006. Deposit money banks accounted for 84% of Iceland's total foreign debt. Public sector debt amounted to €2.8 billion (244 b.kr.) at the end of 2007, while debt of other sectors (other credit institutions and businesses) was €7.7 billion (703 b.kr.). Foreign debt has increased considerably in 2008 due to the depreciation of the króna.

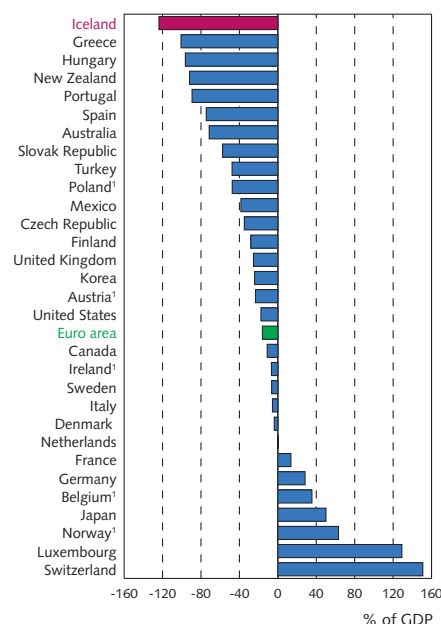
The increase in debt in recent years largely reflects the growth of the foreign investment stock. Icelandic banks have played a major role in brokering foreign capital for domestic investors and have invested extensively abroad on their own account. In addition, a sizeable share of the banks' extra foreign debt has been used to fund domestic lending, some of which has then been used to invest abroad.

Central and local government, on the other hand, were not responsible for the increase in foreign debt, as the public sector has retired a substantial amount of its foreign debt over the last decade. General government gross debt as a percentage of GDP in Iceland is one of the lowest of the OECD countries (see Chart 8.2).

### Private debt

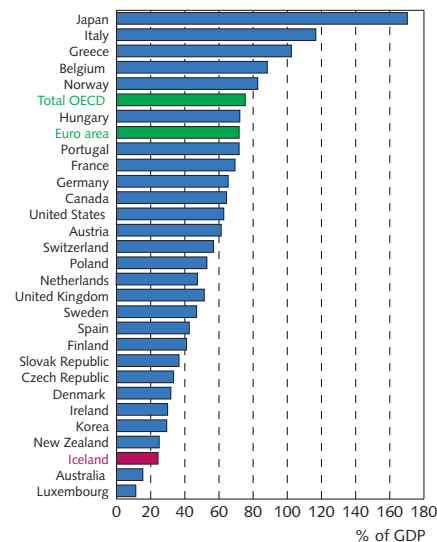
Of total foreign debt, the private sector was responsible for some 96½%, or 539% of GDP, by the end of 2007, as opposed to 37% of GDP in 1997. This entails a considerable increase from 2004 because balance sheets of both households and corporations have swelled enormously since that time.

Chart 8.1  
International investment position  
of OECD countries 2007



1. Figures are for 2006.  
Sources: IMF and various central bank and statistics office websites.

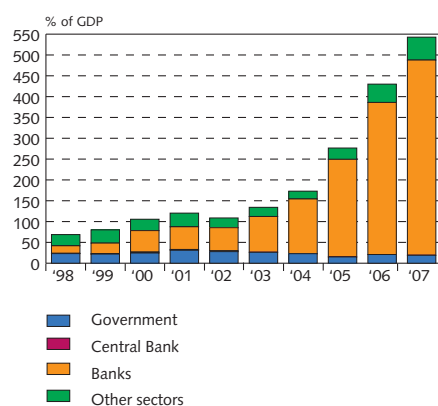
Chart 8.2  
General government gross debt  
in OECD countries 2007



Source: OECD.

1. For further discussion on this subject, see Daníel Svavarsson (2008), "International investment position: market valuation and the effects of external changes", *Monetary Bulletin* 2008/1.

Chart 8.3  
Estimated external debt by sector  
1998-2007



Source: Central Bank of Iceland.

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

High levels of foreign indebtedness by international comparison and the increase in indebtedness in recent years must be viewed in the context of country-specific factors such as high domestic and foreign investments and 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 OECD data (see Table 8.1), only Danish and Dutch households had higher ratios of indebtedness to disposable income in 2006. 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-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. At the end of the summer of 2004, the banks entered into competition with the Housing Financing Fund (HFF), offering mortgage loans and refinancing without maximum loan limits and at lower interest rates than before. Moreover, because they did not require that a property transaction take place when they granted

Table 8.1 Household liabilities 2006

	<i>% of disposable income</i>
Australia	191
Austria	87
Belgium	83
Canada <sup>1</sup>	129
Denmark	308
Finland	112
France	89
Germany <sup>1</sup>	105
Iceland	213
Italy <sup>1</sup>	69
Japan <sup>1</sup>	131
Netherlands	248
Norway	204
Portugal	141
Spain	133
Sweden	144
United Kingdom <sup>1</sup>	169
United States <sup>1</sup>	140

1. Figures are from OECD Economic Outlook No. 83 (June 2008).  
Sources: OECD Data Warehouse August 2008, Central Bank of Iceland.

mortgages, some mortgage equity withdrawal for consumption took place. Due to the extended mortgage loan maturities and refinancing at lower interest rates, the increase in household debt did not produce a correspondingly greater debt service burden until 2007, when debt service as a proportion of disposable income rose by two percentage points from the previous year. Household debt service is relatively immune to short-term interest rate movements because 80% of the total stock is CPI-indexed at fixed interest rates. Furthermore, as interest rate differentials are wide, households have increasingly turned to foreign currency-denominated loans in recent years. Foreign borrowing and the accompanying currency risk grew considerably in 2007, and the debt service of these foreign loans has increased due to the depreciation of the króna in the first half of 2008. As a proportion of total household debt in the credit system, foreign-currency loans increased from 8.4% at year-end 2006 to just under 13% at the end of 2007. As a proportion of household debt owed only to deposit money banks, they amounted to almost 25% at the end of Q2/2008, compared to 16% the year before.

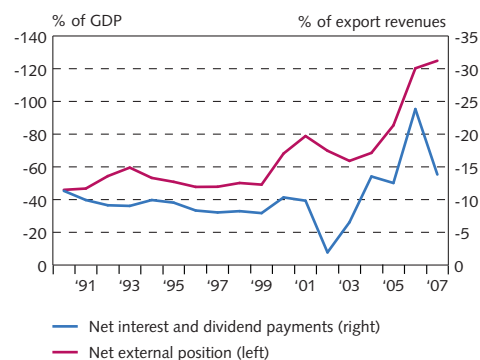
At the beginning of the 1980s, household debt was around 26% of disposable income and 17% of GDP, but by the end of 2007 debt to financial institutions had reached 226% of disposable income and 121% of GDP. In pace with its rising debt, the asset position of the household sector has strengthened and, if pension funds assets are included (see Chapter 4), so has its net worth. While debt rose from 93% of disposable income in 1990 to 226% in 2007, the value of the households' stake in pension funds showed similar growth, from 70% of disposable income to 240%. Therefore, in spite of a large increase in indebtedness, the net equity of households has improved, especially when pension fund reserves are taken into account. Increasing household debt is also to some extent a question of terminology because it encompasses only debt for which bodies within the monetary system are creditors. Before the introduction of the housing bond system, some housing debt was between buyers and sellers, so that a lower level of debt to the monetary system was recorded. Furthermore, inflationary effects decreased the real value of household debt before general indexation of loans was introduced in 1979.

Data on financial assets are not as reliable as data on real assets. The main sources of information are tax returns for dwellings and automobiles and financial sector series collected by the Central Bank. The total value of household assets including pension reserves is estimated at almost eightfold disposable income, valued at the end of 2007. Equity holdings represent a particular problem, since Icelandic tax returns report a monetary face value (equivalent to the number of shares) rather than market value. Finally, note must be taken of the very strong position of Icelandic pension funds, whose reserves are counted as household assets in the OECD financial accounts and whose existence clearly influences the need and demand for other kinds of household saving.

Net wealth of Icelandic households excluding pension reserves was around 308% of disposable income at the end of 2007 and 548% including pension reserves. The net wealth of Icelandic households is

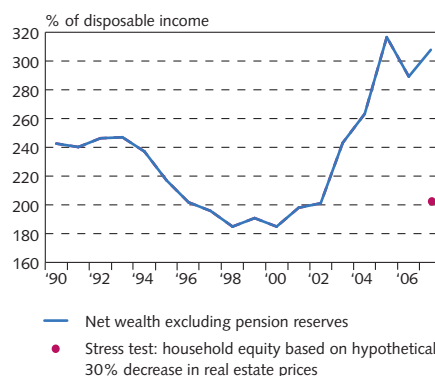
Chart 8.4  
Foreign debt and dividend payments  
and net external position

Annual data 1990-2007



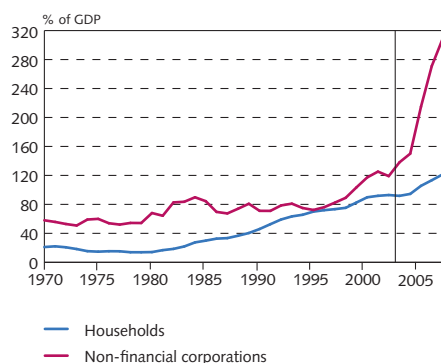
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 8.5  
Net wealth of households excluding pension  
reserves 1990-2007<sup>1</sup>



1. Equities are estimates and for 2007 disposable income is estimated.  
Source: Central Bank of Iceland.

Chart 8.6  
Private sector debt 1970-2007<sup>1</sup>



1. New classification of lending from 2003.  
Source: Central Bank of Iceland.

broadly in line within the range of the G7 countries if pension fund assets are included, but lower if they are excluded.<sup>2</sup> It must be acknowledged, however, that both real estate prices and share prices in Iceland increased considerably in recent years until 2007 and therefore boosted the asset side of the household balance sheet. However, share prices had dropped by 48% by August 2008 from a year earlier due to the turmoil in global financial markets and the liquidity crisis, and real housing prices had decreased by 9%.

### Corporate balance sheets

Icelandic corporate debt is also high compared with other countries for which data are available. At the end of 2007, total corporate debt was more than three times Iceland's GDP, the highest figure for the Nordic countries both throughout recent years and across industries. There are various factors explaining the relatively high debt leverage among Icelandic corporations.

Like households, Icelandic corporations were relatively debt-free at the end of the negative real interest rates era in the early 1980s. 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. Liberalisation of the domestic financial markets in the late 1980s was followed by external liberalisation in the first half of the 1990s. With liberalisation of capital flows and the expansion of banking system balance sheets since 1997, the debt of Icelandic corporations has climbed from 80% of GDP to 308% in 2007. Businesses have also gradually increased their share of foreign-currency denominated debt. At the end of June 2008, 67% of corporate debt with deposit money banks was denominated in foreign currency.

A significant amount of increased corporate debt lies with companies that have been expanding their operations overseas through acquisition of foreign companies (FDI) and the formation of foreign subsidiaries. A large part of the €8.6 billion (782 b.kr.) increase in corporate debt in 2007 can be traced to overseas expansion. The funding of this considerable increase in outward investment by Icelandic residents has mainly been intermediated by domestic banks.

The stock market is young and not as well developed as the banking sector, which causes firms more difficulties in raising funds by issuing equity than by issuing debt. However, the stock market has been fairly large relative to GDP and grew rapidly over the last decade.

Important sectors like fisheries, power generation and transport are very capital-intensive, and high capital formation in these sectors has been ongoing in recent years. Small and medium-sized companies are the backbone of the Icelandic business sector, and due to their small size they must be financed through the banking sector.

Corporate assets have also increased astronomically, but their true value is surrounded by great uncertainty. Leveraged purchases of shares and direct acquisitions of foreign companies are largely responsible for the growth of Icelandic companies' balance sheets in recent years. It is also clear that real estate prices soared in the last few years.

2. OECD Economic Outlook No. 83 (June 2008).



In real terms, the price of business premises was 150-170% higher at the end of 2007 than it was a decade before.

### **Other explanatory factors**

It is necessary to highlight important underlying factors that explain Iceland's relatively high levels of indebtedness by international comparison. In a recent report on Iceland, the IMF pointed out that its "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." The IMF report also stated 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."<sup>3</sup> The age structure of Iceland's comparatively young population, which reduces aggregate saving due to life-cycle behaviour, therefore accounts for a large part of its external liabilities.

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3. IMF country report No. 05/366: Iceland – selected issues: "Corporate leverage: How different is Iceland?"



## 9 Appendix

Table A1 Economic development<sup>1</sup>

	2007		2007
Population size at year-end (thous.)	313.4	Labour force participation rate , males (%)	87.5
<i>Average annual population growth (%)</i>		Labour force participation rate, females (%)	78.6
in last 10 yrs.	1.4	Rate of unemployment (% of labour force)	1.0
in last 20 yrs.	1.2	Infant mortality (% of 1,000 live births)	1.3
in last 30 yrs.	1.1	Life expectancy (males)	79.4
GDP in billions of ISK	1,279	Life expectancy (females)	83.0
GDP in billions of EUR	14.6	Live births per 1,000 inhabitants	14.6
GDP in billions of USD	20.0	Energy consumption per 100,000 inhabitants (PJ) (2006)	176.2
GDP/capita in thous. EUR	46.9	Physicians per 1,000 inhabitants (2006)	3.6
GDP/capita in thous. USD in terms of PPP	37.9	Passenger cars per 1,000 inhabitants (2006)	641
Rank among OECD countries	15	Access to Internet (% of population, 16-75 yrs.) (2008)	91
<i>Average annual growth rate of GDP (%)</i>		Exports as a share of GDP	35.3
in last 10 yrs.	4.4	International investment position at year-end	-123.8
in last 20 yrs.	2.8	Government revenue as a share of GDP	48.3
in last 30 yrs.	3.3	Government expenditures as a share of GDP	43.1
<i>Average annual inflation rate (%)</i>		General government gross debt as a share of GDP	26.1
in last 10 yrs.	4.3		
in last 20 yrs.	6.1		
in last 30 yrs.	17.1		

1. Data refer to 2007 unless otherwise indicated.

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

Table A2 Structure of the economy

	At current prices (million EUR)			% of GDP			Average volume change (%)	
	1990	2000	2007	1990	2000	2007	1967-2007	1987-2007
<i>A Components of GDP</i>								
Private consumption	2,990	5,708	8,523	59.8	60.6	58.4	4.0	3.5
Public consumption	996	2,206	3,589	19.9	23.4	24.6	4.8	3.3
Gross capital formation	973	2,154	4,014	19.5	22.9	27.5	4.8	6.3
National expenditure	4,934	10,102	16,159	98.7	107.3	110.6	4.2	3.9
Exports of goods and services	1,682	3,162	5,157	33.6	33.6	35.3	4.3	3.6
Imports of goods and services	1,617	3,847	6,712	32.3	40.9	46.0	5.4	5.8
GDP	5,000	9,416	14,605	100.0	100.0	100.0	3.7	3.1
Current account balance	-104	-956	-2,266	-2.1	-10.2	-15.5	.	.

<i>B GDP by sectors</i>	% of GDP				
	1973	1980	1990	2000	2007
Agriculture	5.2	4.8	2.6	2.0	1.4
Fishing	7.2	8.0	9.6	7.1	4.4
Mining and quarrying	0.1	0.1	0.2	0.1	0.1
Manufacturing	20.9	20.2	16.3	14.0	10.9
Fish processing	8.2	7.8	4.7	2.9	4.4
Electricity and water supply	2.9	4.2	3.9	3.4	4.3
Construction	12.0	8.7	8.4	8.7	11.1
Wholesale and retail trade	10.6	10.1	11.8	11.5	10.9
Hotels and restaurants	1.2	1.1	2.0	1.9	1.6
Transport, storage and communication	9.3	7.7	8.0	8.7	5.9
Finance, insurance, real estate, etc.	15.2	17.9	17.7	19.0	27.3
Other service activities	15.2	17.2	19.6	23.6	22.0
Total industries	100	100	100	100	100.0

<i>C Employment by sectors</i>	Thous. man-years 1997	Percentage breakdown <sup>1</sup>						
		1963	1970	1980	1990	1997	2000 <sup>1</sup>	2007 <sup>1</sup>
Agriculture	5.207	13.4	12.4	7.9	4.9	4.0	2.8	3.4
Fishing	6.115	6.6	6.4	5.3	5.7	4.7	4.0	2.5
Fish processing	7.598	9.7	7.8	9.1	6.1	5.9	4.3	1.6
Manufacturing industry	15.282	15.6	15.2	15.2	12.5	11.9	12.1	9.2
Construction, electricity and water	11.638	11.1	11.4	11.0	10.8	9.0	8.0	9.8
Wholesale & retail trade, restaurants & hotels	20.118	13.7	13.5	13.4	14.5	15.6	17.8	17.8
Transport, storage and communication	8.817	9.6	8.5	7.3	6.7	6.8	7.3	6.3
Finance, insurance, real estate, etc.	11.537	2.7	4.0	5.4	8.1	9.0	11.3	14.6
Providers of government services	25.300	9.5	12.4	15.7	18.2	19.6	6.8	5.0
Other services	9.202	7.0	6.9	7.2	7.4	7.1	5.9	7.1
Other	8.018	1.0	1.4	2.4	4.9	6.2	19.6	22.3
Total number of employed	128.832	100.0	100.0	100.0	100.0	100.0	100.0	100.0

1. Figures for the period 1963-1997 show number of man-years by industry. Since 2000, data have been compiled from PAYE returns and show number of employed persons by industry.

Sources: Statistics Iceland, Central Bank of Iceland.

Table A3 Structure of foreign trade

## A Exports and imports by basic categories 1990-2007

	At current prices (million EUR)				% of total exports or imports			
	1990	1995	2000	2007	1990	1995	2000	2007
Exports of goods and services	1,684	1,925	3,161	5,121	100.0	100.0	100.0	100.0
Imports of goods and services	1,615	1,728	3,837	6,623	100.0	100.0	100.0	100.0
Merchandise exports (fob value)	1,247	1,392	2,056	3,483	74.0	72.3	65.0	68.0
Marine products	941	1,001	1,301	1,457	55.9	52.0	41.2	28.5
Manufacturing goods	255	298	643	1,354	15.1	15.5	20.3	26.4
Other goods	51	92	112	672	3.0	4.8	3.5	13.1
Merchandise imports (fob value)	1,180	1,233	2,572	4,497	73.1	71.3	67.0	67.9
Consumption goods	.	418	817	704	.	24.2	21.3	10.6
Capital goods	.	321	795	657	.	18.6	20.7	9.9
Industrial supplies	.	493	960	3,137	.	28.6	25.0	47.4
Services exports	437	533	1,105	1,638	26.0	27.7	35.0	32.0
Transportation	174	207	533	678	10.3	10.8	16.9	13.2
Travel	119	143	247	463	7.0	7.4	7.8	9.0
Other services	145	183	324	497	8.6	9.5	10.3	9.7
Services imports	435	495	1,265	2,125	26.9	28.7	33.0	32.1
Transportation	132	160	450	605	8.2	9.2	11.7	9.1
Travel	224	217	511	973	13.9	12.6	13.3	14.7
Other services	79	118	304	547	4.9	6.8	7.9	8.3

## B Merchandise exports by commodity groups (fob value) 1990-2007

	At current prices (million EUR)				% of total merchandise exports			
	1990	1995	2000	2007	1990	1995	2000	2007
Total merchandise exports	1,247	1,392	2,056	3,483	100.0	100.0	100.0	100.0
Marine products	941	1,001	1,301	1,457	75.5	71.9	63.3	41.8
Salted and dried fish	177	161	280	265	14.2	11.6	13.6	7.6
Fresh fish	161	81	151	282	12.9	5.9	7.3	8.1
Whole-frozen fish	70	149	130	128	5.6	10.7	6.3	3.7
Frozen fish fillets	349	278	376	413	28.0	20.0	18.3	11.8
Frozen shrimp	60	184	137	73	4.8	13.2	6.7	2.1
Fish meal	42	56	128	119	3.4	4.0	6.2	3.4
Fish oil	14	29	26	48	1.1	2.1	1.3	1.4
Other marine products	67	63	73	130	5.4	4.6	3.5	3.7
Agricultural products	24	25	35	40	1.9	1.8	1.7	1.1
Manufacturing products	255	298	643	1,354	20.4	21.4	31.3	38.9
Aluminium	129	147	381	916	10.4	10.6	18.6	26.3
Ferrosilicon	33	38	53	91	2.6	2.8	2.6	2.6
Other manufacturing products	93	113	208	347	7.4	8.1	10.1	10.0
Other products	27	68	76	632	2.2	4.9	3.7	18.2
Ships and aircraft	16	49	43	544	1.3	3.5	2.1	15.6
Other products	11	19	33	88	0.9	1.3	1.6	2.5

Sources: Statistics Iceland, Central Bank of Iceland.

Table A3 (continued) Structure of foreign trade

C Merchandise imports by economic category (fob value) 1990-2007

	<i>At current prices (million EUR)</i>				<i>% of total merchandise exports</i>			
	1990	1995	2000	2007	1990	1995	2000	2007
Total merchandise imports	1,186	1,236	2,579	4,511	100.0	100.0	100.0	100.0
Food and beverages	90	123	207	295	7.6	10.0	8.0	6.5
Primary, mainly for industry	4	29	64	61	0.4	2.4	2.5	1.4
Primary, mainly for household consumption	25	16	21	46	2.1	1.3	0.8	1.0
Processed, mainly for industry	10	11	12	17	0.8	0.9	0.5	0.4
Processed, mainly for household consumption	52	67	110	171	4.4	5.4	4.3	3.8
Industrial supplies not elsewhere specified	311	344	597	1,167	26.2	27.9	23.2	25.9
Primary	12	14	28	49	1.0	1.2	1.1	1.1
Processed	299	330	569	1,118	25.2	26.7	22.1	24.8
Fuels and lubricants	117	87	238	401	9.9	7.1	9.2	8.9
Primary	3	3	6	12	0.2	0.3	0.3	0.3
Motor fuel	25	18	50	79	2.1	1.4	1.9	1.8
Other	89	66	182	310	7.5	5.4	7.1	6.9
Capital goods (except transport), parts and accessories	219	264	611	980	18.5	21.3	23.7	21.7
Basic capital goods	136	169	417	655	11.5	13.7	16.2	14.5
Parts and accessories	83	94	193	324	7.0	7.6	7.5	7.2
Transport equipment	218	154	440	958	18.4	12.4	17.0	21.2
Passenger motor cars (excl. buses)	42	55	168	322	3.5	4.4	6.5	7.1
Transport equipment (excl. ships, aircraft)	24	17	67	146	2.1	1.4	2.6	3.2
Other, non-industrial	3	3	6	31	0.3	0.2	0.2	0.7
Parts and accessories	36	35	63	127	3.1	2.8	2.5	2.8
Ships	19	35	80	38	1.6	2.9	3.1	0.8
Aircraft	94	10	54	294	7.9	0.8	2.1	6.5
Consumer goods not elsewhere specified	229	261	484	706	19.3	21.1	18.8	15.6
Durable	51	54	117	213	4.3	4.3	4.5	4.7
Semi-durable	92	104	189	251	7.7	8.4	7.3	5.6
Non-durable	85	103	178	242	7.2	8.4	6.9	5.4
Goods not elsewhere specified	2	3	3	4	0.2	0.2	0.1	0.1

Sources: Statistics Iceland, Central Bank of Iceland.

Table A3 (continued) Structure of foreign trade

D Geographic distribution of foreign trade (fob value) 1970-2007<sup>1</sup>

	<i>Share of total</i>					<i>Million EUR</i>
	1970	1980	1990	2000	2007	2007
<i>Merchandise exports</i>						
European Union	52.8	52.3	70.7	67.4	74.4	2,597.6
Euro area	25.4	30.2	37.6	42.3	55.5	1,933.2
Other EU countries	27.4	22.0	33.1	25.1	18.9	662.1
United Kingdom	13.2	16.5	25.3	19.3	13.2	460.4
Other Western European countries	2.8	2.3	3.4	7.8	6.3	218.1
Eastern Europe and former Soviet Union	9.6	8.8	2.9	1.4	2.1	72.1
Russia	6.8	5.4	2.5	0.4	1.4	47.8
United States	30.0	21.6	9.9	12.2	5.3	183.2
Japan	0.1	1.5	6.0	5.2	4.2	145.8
Other OECD countries	0.5	0.6	0.5	2.0	0.6	21.9
Developing countries	4.2	12.9	5.5	3.0	2.4	79.6
Other countries	0.0	0.0	1.1	1.0	4.7	160.9
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>6,582.7</b>
<i>Merchandise imports</i>						
European Union	64.9	58.0	59.9	57.0	59.9	2,924.9
Euro area	32.0	33.2	35.5	33.5	30.9	1,508.4
Other EU countries	33.0	24.8	24.4	23.6	28.6	1,396.4
United Kingdom	14.3	9.5	8.1	9.0	5.4	261.1
Other Western European countries	5.4	8.1	5.2	9.7	7.6	373.0
Eastern Europe and former Soviet Union	10.4	10.9	6.5	5.7	1.2	60.2
Russia	7.2	9.7	5.0	1.8	1.1	55.9
United States	8.2	9.4	14.4	11.0	13.5	657.1
Japan	2.9	4.0	5.6	4.9	4.7	230.2
Other OECD countries	0.4	5.8	3.7	4.5	3.5	174.1
Developing countries	7.2	2.7	3.1	5.6	6.9	550.1
Other countries	0.6	1.1	1.4	1.5	2.1	97.7
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100.0</b>	<b>8,289.1</b>

1. In data prior to 2000, country groups are based on the year 2000.

Sources: Statistics Iceland, Central Bank of Iceland.

Table A4 National accounts overview

	At current prices (million EUR)					Volume change on previous year (%)				
	2003	2004	2005	2006	2007	2003	2004	2005	2006	2007
Private consumption	5,553	6,085	7,811	7,814	8,523	6.1	6.9	13.0	4.4	4.2
Public consumption	2,529	2,675	3,234	3,253	3,589	1.8	2.1	3.5	3.9	3.3
Gross fixed capital formation	1,936	2,507	3,727	4,484	4,014	11.1	28.1	35.7	20.4	-14.8
Industries	1,121	1,496	2,574	3,149	2,433	20.9	33.9	60.2	21.1	-25.4
Housing	490	581	748	849	1,034	3.7	14.2	11.9	16.5	13.1
Public works and buildings	324	430	405	486	547	-5.9	29.1	-17.5	22.7	4.3
National expenditure	10,017	11,267	14,773	15,551	16,126	5.7	9.9	15.8	9.3	-2.3
Exports of goods and services	3,327	3,636	4,152	4,265	5,157	1.6	8.5	7.2	-5.1	18.1
Exports of goods	2,105	2,322	2,495	2,775	3,493	-1.1	9.2	-0.1	-1.5	22.3
Exports of services	1,222	1,314	1,657	1,490	1,664	7.2	7.1	20.1	-10.4	10.2
Imports of goods and services	3,624	4,237	5,781	6,659	6,712	10.7	14.5	29.4	10.2	-1.4
Imports of goods	2,289	2,742	3,686	4,560	4,497	7.2	15.8	25.3	16.9	-4.7
Imports of services	1,336	1,495	2,095	2,099	2,214	17.1	12.4	37.0	-1.7	5.7
Gross domestic production (GDP)	9,703	10,656	13,133	13,312	14,605	2.4	7.6	7.5	4.5	3.8
Current account balance	-463	-1,047	-2,119	-3,378	-2,282	.	.	.	.	.
Current account balance, % of GDP	.	.	.	.	.	-4.8	-9.8	-16.1	-25.4	-15.6

Source: Statistics Iceland.

Table A5 Financial sector indicators

<i>Financial institutions (number, unless otherwise indicated)</i>	2000	2005	2007
Commercial banks	4	4	5
Savings banks	25	24	20
Number of employees in commercial banks and savings banks, year end <sup>1</sup>	3,046	3,884	...
Total assets of commercial and savings banks (billion EUR) <sup>1</sup>	9.6	51.6	106.2
Credit undertakings	12	11	13
Undertakings engaged in securities	11	11	16
Pension funds	56	45	37
Insurance companies	12	12	13
<i>Financial markets</i>			
Listed companies on Iceland Stock Exchange (ICEX), now OMXI	75	24	26
Market capitalisation of listed companies at end of period (billion EUR)	5.0	24.3	28.2
Market capitalisation of listed companies at end of period (% of GDP)	59.0	182.3	201.0
Annual turnover in listed equities (billion EUR)	2.7	15.2	33.7
Annual turnover in listed bonds (billion EUR)	4.6	16.7	26.6
Annual turnover on the Icelandic interbank market for foreign exchange (billion EUR)	10.6	26.3	40.0
Annual turnover on the interbank currency swap market (billion EUR)	.	0.6	0.4
Annual turnover on the interbank market for krónur (billion EUR)	7.2	20.0	14.9

1. Parent company basis.

Sources: Financial Supervisory Authority, OMX Nordic Exchange Iceland, Central Bank of Iceland.



Table A6 Government sector indicators

*General government revenues and expenditures*

% of GDP	1999	2000	2001	2002	2003	2004	2005	2006	2007
Revenue	43.1	43.5	41.8	41.6	42.7	44.1	47.0	48.0	48.3
Taxes	36.8	37.1	35.3	35.2	36.7	37.9	40.6	41.4	41.3
On income and wealth	17.7	18.5	18.9	18.9	19.4	19.5	21.0	21.6	22.1
On prod./imports/consumption	19.1	18.6	16.4	16.4	17.2	18.3	19.6	19.8	19.1
Interest	1.3	1.4	1.8	1.8	1.3	1.1	1.0	1.7	2.3
Other income	5.0	4.9	4.7	4.5	4.7	5.1	5.5	4.8	4.7
Expenditure	41.9	41.8	42.5	44.1	45.5	44.0	42.1	41.6	43.1
Public consumption	22.9	23.4	23.6	25.4	26.0	25.1	24.6	24.4	24.6
Interest	3.4	3.4	3.4	3.0	2.7	2.4	2.2	2.2	2.3
Subsidies	1.8	1.8	1.8	1.8	1.9	1.8	2.0	1.7	1.6
Current transfers	5.9	5.8	5.8	6.6	7.6	7.3	6.7	6.3	6.6
Fixed investment	4.7	4.1	4.5	3.9	3.6	3.9	3.1	3.9	4.3
Capital transfers	0.9	0.8	1.0	0.7	0.9	0.8	0.7	0.7	0.9
Other	1.0	1.1	1.1	1.2	1.2	1.1	1.1	1.0	1.5
Depreciation	-2.0	-2.0	-1.9	-1.9	-1.9	-1.8	-1.8	-1.8	-1.8
Cost of goods sold	3.4	3.4	3.3	3.3	3.5	3.5	3.5	3.2	3.1

*Government expenditure by function**General government, % of GDP*

Administration and safety	4.4	4.2	4.6	4.5	4.6	4.3	4.3	4.1
Education	7.5	7.5	7.7	8.3	8.3	8.2	8.3	8.3
Health services	8.3	8.0	7.9	8.7	8.9	8.5	8.1	7.9
Social security	7.6	7.7	7.9	8.7	9.7	9.5	9.1	8.3
Other social affairs <sup>1</sup>	4.2	4.3	4.1	4.7	4.7	4.8	4.4	4.9
Economic services	6.7	6.8	7.0	6.4	6.6	6.3	5.8	5.9
Interest expenditure	3.5	3.4	3.4	3.1	2.8	2.5	2.3	2.3

*Central government, % of GDP*

Expenditure	31.6	31.2	31.7	32.2	33.7	32.0	31.0	30.0
Administration and safety	4.1	4.2	4.3	4.3	4.5	4.3	4.1	4.1
Education	3.0	2.9	3.2	3.3	3.4	3.4	3.4	3.3
Health services	8.1	7.8	7.7	8.5	8.7	8.3	8.0	7.8
Social protection	6.5	6.6	6.6	6.7	7.4	7.2	7.3	7.0
Other social affairs <sup>1</sup>	1.7	1.8	1.7	1.7	1.8	1.8	1.7	1.7
Economic services	5.3	5.3	5.4	5.3	5.6	5.1	4.7	4.4
Interest expenditure	2.9	2.8	2.8	2.4	2.2	2.0	1.8	1.7

*Local government, % of GDP*

Expenditure	11.8	12.0	12.4	13.1	12.9	12.9	12.6	13.5
Administration and safety	1.1	0.8	1.1	1.0	1.0	1.0	1.0	0.9
Education	4.5	4.6	4.6	5.0	4.9	4.8	5.0	5.0
Health services	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Social protection	1.6	1.6	1.8	2.1	2.2	2.1	2.1	2.0
Other social affairs <sup>1</sup>	2.5	2.6	2.5	3.0	3.0	3.1	2.8	3.3
Economic services	1.4	1.6	1.6	1.2	1.1	1.3	1.2	1.6
Interest expenditure	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.6

1. Culture, religion, recreation, housing and community affairs, environment protection.

Source: Statistics Iceland, March 2008.

Table A7 Balance of payments

Million EUR	1990	1995	2000	2005	2007 <sup>1</sup>
Current account -104	40	-956	-2,119	-2,282	
Balance on goods, services and income	-101	44	-946	-2,097	-2,238
Export	1,747	1,988	3,318	5,303	8,810
Imports	-1,848	-1,944	-4,264	-7,400	-11,047
Balance on goods and services	67	197	-676	-1,606	-1,492
Exports	1,682	1,925	3,161	4,136	5,131
Imports	-1,615	-1,728	-3,837	-5,742	-6,623
Balance on goods	65	159	-516	-1,191	-1,004
Merchandise exports f.o.b.	1,245	1,392	2,056	2,495	3,493
Marine products	941	1,001	1,301	1,409	1,457
Aluminium and ferro-silicon	162	185	435	538	1,007
Ships and aircrafts	16	49	43	123	544
Other goods	126	157	276	423	485
Merchandise imports f.o.b.	-1,180	-1,233	-2,572	-3,686	-4,497
Investment goods	-219	-264	-611	-860	-980
Transport equipments	-218	-154	-440	-745	-958
Fuels and lubricants	-117	-87	-238	-346	-401
Industrial supplies	-311	-344	-597	-884	-1,167
Consumer goods	-315	-384	-687	-851	-991
Balance on services	2	38	-160	-414	-487
Exports of services, total	437	533	1,105	1,641	1,638
Transportation	174	207	533	874	678
Air transport	94	130	416	724	536
Sea transport	80	78	117	150	142
Travel	119	143	247	330	463
Other services	145	183	324	438	497
Communications services	12	18	11	7	10
Insurance services	5	4	6	7	9
Government services	95	79	116	69	9
Other n.i.e.	33	82	191	355	468
Imports of services, total	-435	-495	-1,265	-2,056	-2,125
Transportation	-132	-160	-450	-711	-605
Travel	-224	-217	-511	-788	-973
Other services	-79	-118	-304	-558	-547
Communications services	-9	-14	-2	-35	-33
Insurance services	-12	-16	-6	-33	-21
Government services	-7	-9	-17	-18	-18
Other n.i.e.	-51	-80	-280	-472	-475
Balance on income	-168	-153	-269	-491	-746
Receipts	65	63	157	1,167	3,679
Compensation of employees	36	39	76	59	18
Investment income	29	24	81	1,107	3,661
Dividends and reinvested earnings	5	-1	28	811	1,983
Interest payments	24	25	53	296	1,678
Expenditures -233	-216	-427	-1,658	-4,425	
Compensation of employees	-9	-4	-12	-20	-39
Investment income	-224	-212	-415	-1,638	-4,385
Dividends and reinvested earnings	-6	-10	-9	-847	-984
Interest payments	-218	-202	-406	-791	-3,401
Current transfer, net	-3	-4	-10	-22	-44
Public transfer, net	-5	-7	-11	-20	-41
Private transfer, net	2	3	1	-2	-3

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 A7 (continued) Balance of payments

Million EUR	1990	1995	2000	2005	2007 <sup>1</sup>
<i>Capital and Financial Account</i>	126	-5	1,137	1,774	1,954
<i>Capital transfer, net</i>	2	-3	-3	-22	-22
<i>Financial account<sup>2</sup></i>	124	-1	1,141	1,796	1,975
<i>Financial account excl. reserves</i>	181	2	1,061	1,856	2,052
<i>Direct investment, net</i>	8	-26	-241	-3,232	-6,619
<i>Abroad</i>	-9	-19	-427	-5,715	-8,872
<i>Equity capital</i>	-4	-4	-437	-4,154	-6,343
<i>Reinvested earnings</i>	-5	2	-6	-695	-1,656
<i>Other capital</i>	0	-17	16	-865	-872
<i>In Iceland</i>	17	-7	185	2,483	2,252
<i>Equity capital</i>	1	5	228	1,316	1,483
<i>Reinvested earnings</i>	-10	2	-21	803	684
<i>Other capital</i>	27	-14	-21	364	86
<i>Portfolio investment, net</i>	20	120	689	9,822	-4,975
<i>Assets</i>	0	-49	-599	-3,777	-5,550
<i>Equities</i>	0	-34	-670	-2,633	-2,002
<i>Debt securities</i>	0	-16	71	-1,144	-3,548
<i>Bonds and notes</i>	0	-14	67	-1,146	-3,546
<i>Money-market instruments</i>	0	-2	4	1	-2
<i>Liabilities</i>	20	169	1,288	13,599	576
<i>Equities 0</i>	0	-17	67	143	
<i>Debt securities</i>	20	169	1,305	13,532	433
<i>Bonds and notes</i>	-1	145	1,247	13,433	59
<i>Money-market instruments</i>	21	24	58	99	373
<i>Financial derivatives, net</i>	-1	0	-1	0	0
<i>Assets</i>	-1	-13	17	0	0
<i>Liabilities</i>	0	12	-18	0	0
<i>Other investment, net</i>	153	-91	614	-4,734	13,646
<i>Assets</i>	-40	20	-98	-8,788	-12,294
<i>Loan</i>	0	0	-43	-7,452	-6,157
<i>Deposits</i>	-21	29	-35	-1,350	-6,197
<i>Trade credits</i>	0	-1	0	3	22
<i>Other capital</i>	-20	-8	-20	11	38
<i>Liabilities</i>	193	-111	712	4,054	25,940
<i>Loan</i>	180	-120	713	3,680	14,371
<i>Long-term borrowing</i>	200	-187	383	2,073	5,875
<i>Short-term borrowing</i>	-20	67	330	1,607	8,495
<i>Deposits</i>	0	3	-14	314	11,538
<i>Trade credits</i>	14	1	1	56	32
<i>Other capital</i>	-1	5	12	3	0
<i>Reserve assets</i>	-57	-3	80	-60	-76
<i>Net errors and omissions</i>	-22	-36	-181	345	328
<i>Memorandum items:</i>					
<i>Debt liabilities, net</i>	214	58	2,017	17,586	26,373
<i>Long-term borrowing, net</i>	199	-42	1,630	15,505	5,935
<i>Monetary authorities</i>	-1	0	0	0	0
<i>General government</i>	13	149	67	-279	84
<i>Deposit banks</i>	-12	-99	1,048	14,485	2,291
<i>Other sectors</i>	198	-93	515	1,299	3,560
<i>Short-term borrowing, net</i>	15	100	387	2,080	20,438
<i>Monetary authorities</i>	-1	16	148	0	-1
<i>General government</i>	21	24	158	-162	0
<i>Deposit banks</i>	-8	57	-29	2,183	20,552
<i>Other sectors</i>	2	4	110	59	-113
<i>Conversion rate: ISK per EUR</i>	74.29	83.76	72.61	78.14	87.60

Table A8 Projected external debt service<sup>1</sup>

Million EUR	2008	2009	2010	2011	2012	2013	Principal thereafter	Total
<b>General government</b>								
Principal	197.3	173.5	53.1	1,240.9	350.8	4.0	228.8	2,248.3
Interest <sup>2</sup>	89.6	85.1	80.8	79.0	32.1	14.7		
Total	286.8	258.6	133.8	1,319.9	382.9	18.7		
<b>Central government</b>								
Principal	173.1	159.5	0.0	1,224.3	306.1	0.0	213.7	2,076.7
Interest <sup>2</sup>	83.5	79.8	76.5	76.5	30.6	14.1		
Total	256.5	239.3	76.5	1,300.8	336.7	14.1		
<b>Local government</b>								
Principal	24.2	14.0	53.1	16.6	44.7	4.0	15.1	171.6
Interest <sup>2</sup>	6.1	5.3	4.3	2.5	1.5	0.6		
Total	30.3	19.3	57.4	19.1	46.3	4.6		
<b>Financial institutions</b>								
Principal	4,718.9	9,435.7	9,417.1	7,092.7	7,034.5	847.3	8,537.8	47,084.0
Interest <sup>2</sup>	2,261.3	1,979.5	1,538.9	1,174.2	763.9	493.1		
Total	6,980.2	11,415.2	10,956.0	8,266.9	7,798.4	1,340.4		
<b>Banks</b>								
Principal	4,704.4	9,422.3	9,404.1	7,074.7	7,000.3	829.8	7,938.2	46,373.8
Interest <sup>2</sup>	2,232.7	1,951.6	1,511.7	1,147.6	738.6	468.8		
Total	6,937.1	11,374.0	10,915.8	8,222.3	7,739.0	1,298.6		
<b>Other loan institutions</b>								
Principal	14.5	13.4	13.0	17.9	34.1	17.5	599.7	710.1
Interest <sup>2</sup>	28.6	27.9	27.2	26.6	25.3	24.3		
Total	43.1	41.3	40.2	44.5	59.4	41.8		
<b>Other sectors</b>								
Principal	587.9	1,648.5	1,542.1	326.7	1,451.8	168.3	2,034.9	7,760.2
Interest <sup>2</sup>	382.2	344.3	244.0	180.6	134.3	89.0		
Total	970.1	1,992.8	1,786.1	507.3	1,586.1	257.3		
<b>Total payments</b>								
Principal	5,504.1	11,257.7	11,012.3	8,660.2	8,837.1	1,019.6	10,801.6	57,092.5
Interest <sup>2</sup>	2,733.0	2,408.9	1,863.7	1,433.9	930.3	596.8		
Total	8,237.1	13,666.6	12,876.0	10,094.1	9,767.4	1,616.4		

1. Based on debt outstanding at end of year 2007. Conversion rate: ISK per EUR = 62.00. 2. Floating interest rate, LIBOR-USD is assumed at 5.0% and EURIBOR at 4.5% per year.

Source: Central Bank of Iceland.

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