ECONOMY OF ICELAND

Contents

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In *Economy of Iceland*, monetary figures are generally presented in euros; however, in certain instances, amounts are expressed in US dollars. The amount in Icelandic krónur is included in parentheses, as most figures are originally in krónur. Stocks at the end of the period are calculated using the period-end exchange rate, whereas flows are calculated using the average exchange rate for the period.

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	332,529 (1 January 2016)
Capital	Reykjavík; population 122,460 (1 January 2016)
Language	Icelandic; belongs to the Nordic group of Germanic languages
Main religion	Evangelical Lutheran (71.6%)
Life expectancy	Females: 84 years; Males: 81 years

Governmental system

Government	Constitutional republic
Suffrage	Universal, over 18 years of age; proportional representation
Legislature	Parliament (Althingi) with 63 members
Election term	Four years; last election 27 April 2013

Economy

Monetary unit	Króna (plural: krónur); currency code: ISK
Gross domestic product	12 billion euros (2,205.479 billion krónur, 13.55 billion US dollars) in 2015
International trade	Exports of goods and services 53% and imports of goods and services 46% of GDP in 2015
Per capita GDP	33.66 thousand euros in 2015 (6.7 million krónur, 46 thousand US dollars in terms of PPP)

Land

Geographic size	103,000 sq.km. (39,769 sq.mi.)
Highest point	2,110 m. (6,923 ft.)
Exclusive economic zone	200 nautical miles (758,000 sq.km. / 292,665 sq.mi.)
Climate	Cool temperate oceanic; highly changeable, influenced by the warm Gulf Stream and Arctic currents

Republic of Iceland credit ratings

		Foreign currency		*Local currency*		
	Affirmed	*Long-term*	*Short-term*	*Long-term*	*Short-term*	*Outlook*
Moody's	September 2016	A-3	…	A-3	…	Stable
Standard & Poor's	July 2016	BBB+	A-2	BBB+	A-2	Stable
Fitch	July 2016	BBB+	F2	BBB+	F2	Stable

Central Bank of Iceland publications in English

Annual Report
Monetary Bulletin
Financial Stability
Economy of Iceland
Economic Affairs
Informational Reports
Special Publications
Central Bank of Iceland *Working Papers*

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

Useful websites

Central Bank of Iceland	www.sedlabanki.is
Parliament of Iceland (Althingi)	www.althingi.is
Government of Iceland	www.government.is
Statistics Iceland	www.statice.is
OMX Nordic Exchange in Iceland	www.nasdaqomx.com
Government Debt Management	www.bonds.is
Trade Council of Iceland	www.icetrade.is
National Association of Pension Funds	www.ll.is
Invest in Iceland Agency	www.invest.is
Financial Supervisory Authority	www.fme.is
The Official Gateway to Iceland	www.iceland.is

Introduction

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 that 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 every other year.

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 it does not provide a detailed account of recent developments. A more up-to-date analysis of recent developments and prospects is provided in the Central Bank's *Monetary Bulletin* and *Financial Stability* reports. The Bank's *Annual Report* describes the Central Bank of Iceland's general activities during the year.

The outline of this booklet is as follows: Chapter 1 presents basic facts about Icelandic geography, population, and society. Chapter 2 deals with the structure of the economy. It discusses size and income levels, the composition of GDP, foreign trade, main economic sectors, the labour market, and the Icelandic pension system. Chapter 3 provides an account of the financial system and discusses the various challenges during the recovery following the financial crisis. Chapter 4 surveys the public sector, including division of tasks, central and local government finances, expenditure structure, and the tax system. Chapter 5 describes the frameworks for monetary policy and financial stability. It explains the objectives and main instruments of monetary policy, and the role of the Monetary Policy Committee. It also elaborates on financial stability policy and the Central Bank's role in promoting an efficient and safe financial system. Chapter 6 presents Iceland's external debt position. It elaborates on the accumulation of debt in the years preceding the financial crisis and developments in its aftermath. It discusses changes in foreign direct investment and provides estimates of net foreign debt levels after the winding-up of the failed banks' estates. Chapter 7 describes government, corporate, and household balance sheets. It discusses the position of the Government, households, and businesses, and examines debt restructuring following the financial crisis. Chapter 8 discusses Iceland's capital controls, why they were introduced, the steps taken thus far in lifting them, and the potential risks accompanying their liberalisation. 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 if you see other scope for improvement, please e-mail your suggestions to: sedlabanki@sedlabanki.is.

1 Country and people

This chapter gives an overview of the country of Iceland – its geography and the main characteristics of its people, society, and political and institutional structure – and of Iceland as a welfare state. It also reviews Iceland's external relations and its status in a global context.

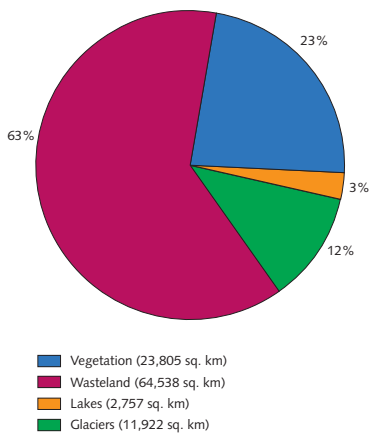
Geography

Iceland is an island 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 6,088 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 the capital, Reykjavík, the average temperature is nearly 13°C in July and just above 0°C in January.

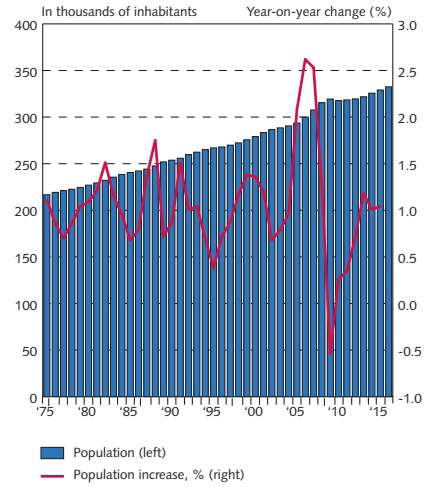
Iceland is mostly mountainous and of volcanic origin, with the highest peak reaching 2,110 metres. Lowlands stretch from the coast towards the interior, mainly in the south and the west. Several glaciers, one of them the largest in Europe, distinguish the landscape. The coasts are

Chart 1.1
Geography of Iceland[1]



1. The size of Iceland is roughly 103,000 square kilometres.
Sources: Icelandic Geodetic Survey, National Energy Authority, Science Institute, University of Iceland.

Chart 1.2
Population of Iceland[1]



1. Population 1 January each year.
Source: Statistics Iceland.

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 23% of the total land area is classified as vegetated land, most of it located in the southern and western part of the country and in several fertile valleys stretching from the coast.

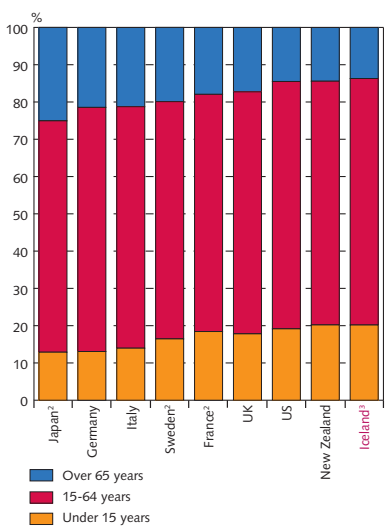
Iceland is endowed with abundant natural resources. These include the fishing grounds around the island, within and outside the country's 200-mile EEZ. Furthermore, Iceland has abundant hydroelectric and geothermal energy resources.

People

Iceland was settled in the ninth century A.D. 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 Kalmar Union was dissolved in 1523, 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.

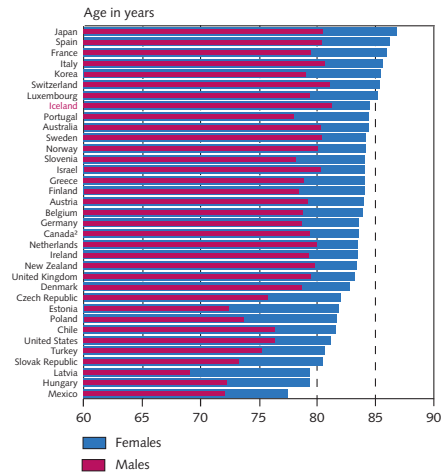
With only 3 inhabitants per square kilometre, Iceland is one of the least densely populated countries in Europe. On 1 January 2016, Iceland's population was almost 333 thousand. In 2000–2015, annual average population growth was 1.1% and the natural increase (births less

Chart 1.3
Age structure of the population in selected countries 2014[1]



1. Ranked by share of population 65 and over. 2. Data for France, Sweden, and Japan are for 2013. 3. Data for Iceland are for 2015.
Sources: OECD, Statistics Iceland.

Chart 1.4
Life expectancy at birth 2014[1]



1. 2014 figures or OECD estimate. 2. Data are for 2012.
Source: OECD.

deaths) 0.8%. Around 63% of the population (almost 210 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 just over 18 thousand. Most of the remaining inhabitants live in small towns along the coast.

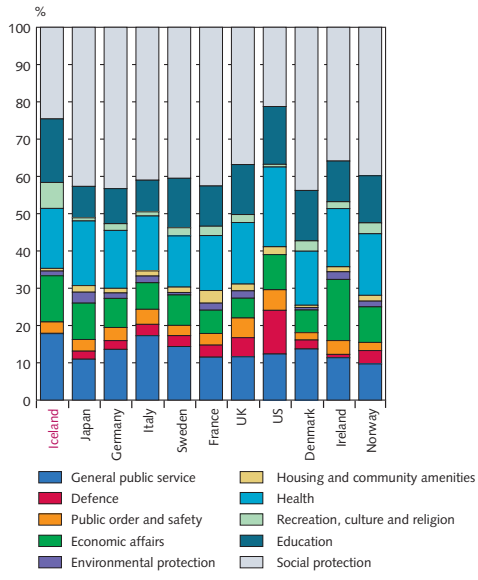
As in other advanced countries, the population of Iceland is ageing, but at a relatively slower pace than in most OECD countries. In 2014, despite high life expectancy, the ratio of the total population aged over 65 to the population of working age was 22%, eighth-lowest in the OECD.

Society and the welfare state

Iceland is a modern welfare state that guarantees its citizens access 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 25.7% of GDP in 2014.

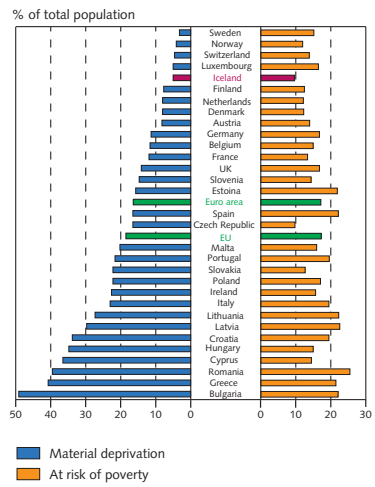
Life expectancy, which is among the highest in the world, and one of the world's lowest infant mortality rates (2.1 per 1,000 live births in 2015) testify to the advanced state of health care in Iceland, both primary health care and hospitals. The Icelandic health care system is a tax-financed universal system for all persons who have had legal residence in Iceland for more than six months. Health care services are provided mainly 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 18 years of age have most of the cost refunded.

Chart 1.5
General government expenditure by function in 2014[1]



1. Percentage breakdown of total expenditure.
Source: OECD.

Chart 1.6
Material deprivation and risk of poverty in Europe 2015[1]



1. 2015 or latest.
Source: Eurostat.

The standard of education is high, and public education is compulsory between the ages of 6 and 16. Good command of English and the Scandinavian languages is widespread. Education is offered free of charge or for a nominal fee at three levels. First, there are ten years of compulsory education at the primary level (age 6-16). This is followed by three 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 Iceland, as in most OECD countries, university enrolment of those completing secondary education has increased substantially in recent years. In 2015, 39% of the adult population held a university degree, up from 29% in 2005. The ratio of pre-school enrolment is also one of the highest among OECD countries.

Institutional framework: the political, judicial, monetary, and financial supervisory structure

Iceland is a constitutional republic with a multi-party parliamentary system of government. The Constitution was adopted on 17 June 1944, when the Republic was established. Legislative power is vested in Parliament (Althingi) and the president, in that bills of legislation are passed by Parliament and submitted to the president for confirmation by his or her signature. Upon such confirmation, the bill in question acquires the force of law. The Government must be supported by a majority of Parliament in order to remain in power. The 63 members of Parliament are elected from six constituencies on the basis of proportional representation, for a term of four years. Over the past thirty years, the participation of women in politics has increased significantly and their share of seats in Parliament has increased from 15% to roughly 40%. The president is the head of state and is elected for a term of four years by a direct vote of the electorate.

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 together held a majority in Parliament. The most recent election was held on 27 April 2013. The results of the elections were as follows: the Independence Party obtained 26.7% of votes and 19 seats, the Progressive Party 24.4% and 19 seats, the Social Democratic Alliance 12.7% and 9 seats, the Left Green Party 10.9% and 7 seats, and two new parties, Bright Future and the Pirate Party, obtained 6 seats and 3 seats, respectively, with 8.3% and with 5.1% of the vote. Others received a total of 8.7% of the vote but no seats, as none of them received votes above the required minimum. A coalition government of the Independence Party and the Progressive Party (with a total of 38 seats) took office in May 2013. General elections are generally held every four years, but the Constitution allows for early dissolution of Parliament, which triggers early elections. There will be elections on 29 October 2016.

Iceland's court system is divided into two levels: district courts, which are the courts of first instance, and the Supreme Court, which holds the highest judicial power in Iceland.[1] The Constitution provides for the courts' independence, according to which judges have judicial power, shall only abide by the law in their official duties, and cannot be discharged from office except by judicial decision.

1. Significant amendments were made to the Act on the Judiciary in spring 2016. Most significant is the establishment of a new Court of Appeals, which will take effect on 1 January 2018. From then on, Iceland's court system will be divided into three levels: district courts (currently eight in number), the Court of Appeals, and the Supreme Court.

The Central Bank of Iceland was established by an Act of Parliament in April 1961. The Bank is an independent institution owned by the State but under separate administration. An inflation-targeting regime was adopted in 2001, with the inflation target determined jointly by the Minister and the Bank. Decisions on the use of monetary policy instruments are taken by a five-member Monetary Policy Committee (see Chapter 5). The Ministry of Finance and Economic Affairs oversees matters pertaining to the Central Bank, insofar as they belong to the political sphere. The Bank is supervised by a seven-member Supervisory Board elected by Parliament.

The Financial Supervisory Authority (FME) is charged with the task of supervising financial enterprises. Its mission is to safeguard the integrity and sound operation of the financial system. The Act on Official Supervision of Financial Activities states that the FME is an independent institution with its administration entrusted to a board of directors. The FME falls under the auspices of the Ministry of Finance and Economic Affairs, but according to the Act, the Minister does not have the power to affect decision-making within the institution. Since May 2014, a Financial Stability Council and Systemic Risk Committee have served as the authorities' official forum for collaboration on financial stability (see Chapter 5).

External relations

Iceland participates actively in international cooperation. It belongs to the group of Nordic countries that includes Denmark, Finland, Norway, and Sweden, as well as Greenland and the Faeroe Islands. The Nordic countries have established wide-ranging cooperation in a variety of fields, including economic affairs and international representation, in which the Baltic countries also play an active part. Iceland is a member of the Nordic Council, the Nordic Council of Ministers, and specialised institutions such as the Nordic Investment Bank. Iceland is also a member of the Arctic Council and a number of other regional bodies.

Iceland became a member of the United Nations in 1946 and is an active participant in most of its affiliated agencies. It is a founding member of the Bretton Woods institutions established in 1945, the International Monetary Fund (IMF), and the International Bank for Reconstruction and Development (World Bank). Iceland is a founding member of the Asian Infrastructure Investment Bank and ratified its Articles of Agreement in 2016. The Central Bank of Iceland is a shareholder in the Bank for International Settlements (BIS) and participates actively in its activities.

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 (OSCE) since the organisation's inception in 1975.

In 1964, Iceland became a party to the General Agreement on Tariffs and Trade (GATT), the predecessor to the World Trade Organization (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 1 January 1994. Through this agreement, Iceland is a part of the single market of the European Union. Iceland is a party to numerous free trade agreements (FTA) with other countries through its EFTA membership. Furthermore, Iceland has negotiated bilateral free trade agreements with China, Greenland, and the Faeroe Islands.

Iceland is a founding member of the North Atlantic Treaty Organization (NATO), established in 1949. The United States maintained a permanent military presence in Iceland from 1951 until 2006. The bilateral defence agreement between Iceland and the United States remains in effect.

Table 1.1 Iceland's membership of international organisations and institutions

	Year of association
International Monetary Fund (IMF)	1945
International Bank for Reconstruction and Development (World Bank)	1945
United Nations (UN)	1946
North Atlantic Treaty Organization (NATO)	1949
Organisation for Economic Cooperation and Development (OECD)	1949
Bank for International Settlements (BIS)	1950
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
Nordic Investment Bank	1975
Organization for Security and Cooperation in Europe (OSCE)	1975
European Bank for Reconstruction and Development (EBRD)	1990
Western European Union (WEU)	1992
Barents Euro-Arctic Council (BEAC)	1993
European Economic Area (EEA)	1994
Council of Baltic Sea States (CBSS)	1995
World Trade Organization (WTO)	1995
Arctic Council	1996
Asian Infrastructure Investment Bank (AIIB)	2015

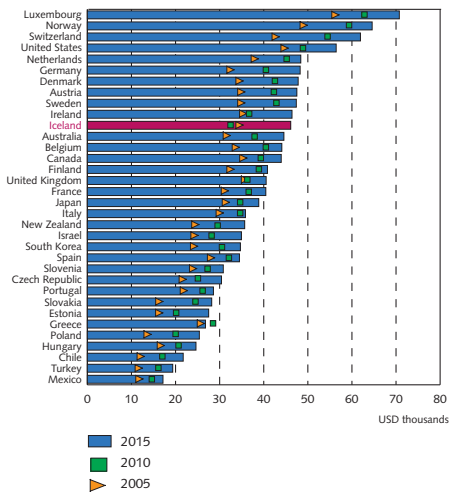
2 Structure of the economy

This chapter focuses on the structure of the Icelandic economy, mainly with regard to size, composition of output and expenditure, and foreign investment. Different sectors of the economy are analysed, particularly to include recent developments and the contribution of each sector to GDP. Finally, the labour market and pension system in Iceland are discussed. The Icelandic economy displays the characteristics of an advanced economy, with high income levels and a relatively large services sector. Its distinguishing features are its large marine and energy sectors based on ample resources, a growing tourism sector, and a high labour participation rate.

Size and income level

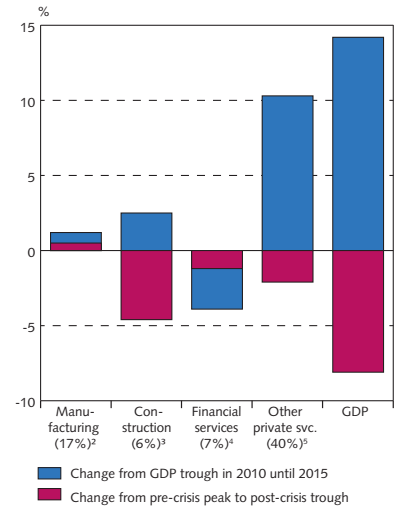
The Icelandic economy is the smallest within the OECD, generating GDP of 16.7 billion US dollars (2,205 b.kr) in 2015. This amounted to around 1/1000 of the US economy, 1/17 of the Danish economy, and a little over ¼ of the economy of Luxembourg, while it is more than 70% larger than the economy of Malta. The small size of the Icelandic economy mainly reflects the country's small population, which was 332.5 thousand on 1 January 2016. According to World Bank data,

Chart 2.1
Gross national income per capita in OECD countries[1]



1. Based on PPP.
Source: Macrobond.

Chart 2.2
Individual sectors' share in economic contraction and recovery[1]



1. Each sector's contraction and recovery, weighted with its share in gross factor income during the relevant period (2015 share in parentheses). 2. Manufacturing, mining, utilities, and waste handling. 3. Building and construction. 4. Financial and insurance activities. 5. Wholesale, retail, transportation and storage, hotels and restaurants, IT and communications, real estate, and miscellaneous specialised services.
Source: Statistics Iceland.

GNI per capita measured in terms of purchasing power parities (PPP) amounted to more than 46 thousand US dollars in 2015, the seventeenth-highest in the world and the eleventh-highest among the OECD countries. Iceland's GNI per capita is lower than that in Denmark, Norway, and Sweden but higher than in Finland and above the EU average.

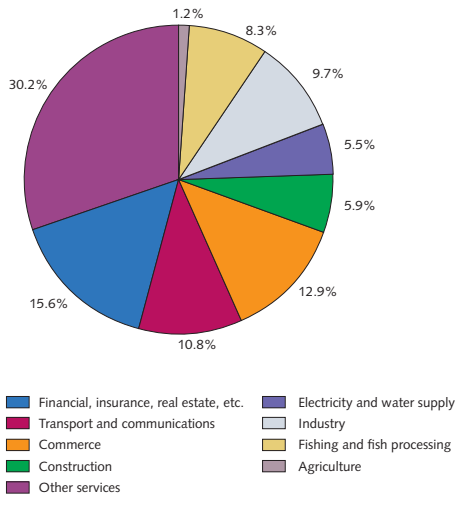
Drivers of growth

Historically, Iceland's prosperity has been built largely on its comparative advantages in abundant marine and energy resources, with investment and services the main drivers of growth. In the few years prior to the financial crisis of 2008, the financial services and construction sectors were the main drivers of economic growth, and conversely, the contraction following the financial crisis was most pronounced within those sectors. After GDP growth resumed in 2010, however, the contribution from the services sector has been driven by the recovery of domestic demand and growth in tourism-related services, supported by a competitive real exchange rate, particularly in the early phase of the recovery (Chart 2.2). This is also reflected in national accounts expenditure figures, which show that services exports along with private consumption and business investment have contributed the lion's share of GDP growth during the recovery period.

Composition of output and expenditure

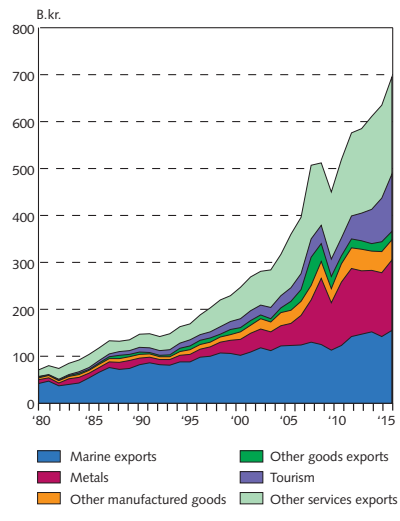
As in other developed economies, services form the bulk of economic activity, accounting for more than 70% of GDP in 2015. The marine sector accounted for 8.3% of GDP in 2015 and remains one of the most important sources of export revenues, although its relative weight in total export revenues has declined in recent years, as energy-intensive exports and tourism-related services have increased more rapidly. Manufacturing (excluding marine products) accounted for

Chart 2.3
Breakdown of GDP by sector 2015



Source: Statistics Iceland.

Chart 2.4
Exports of goods and services
At constant average exchange rates, based on a trade-weighted basket of currencies



Source: Statistics Iceland.

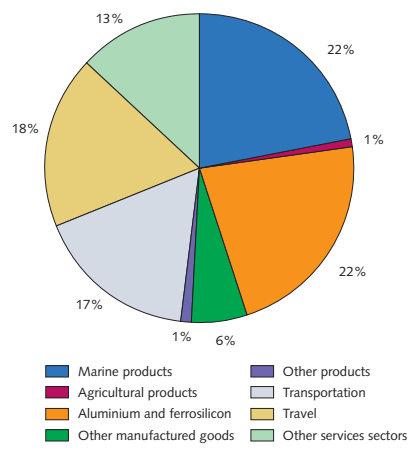
roughly 12% of GDP in 2015, and construction accounted for nearly 6%. Financial services (other than insurance services and pension funds) accounted for an average of 6% of GDP in 2013-2015, considerably below the pre-crisis average of roughly 9%. From 2010, the beginning of the post-crisis economic recovery, until 2016, GDP grew by 14.2%, more than ⅔ of it due to growth in the services sector and another 2½ percentage points due to the recovery of the construction sector.

Private consumption contributed, on average, about 52% of GDP in 2010-2015, and public consumption and gross fixed capital formation contributed 24% and 16%, respectively. After the crisis struck in 2008, the investment-to-GDP ratio fell well below the long-term average of 21% of GDP, but it has been rising in recent years and was just over 19% in 2015. The ratio of public consumption to GDP declined at the height of the pre-crisis boom, as private sector activity outpaced public sector activity. It rose just after the crisis, however, as the private sector contracted more than the public sector. Since 2011, the public consumption ratio has been on a declining path, as the economic recovery has been driven by exports and domestic private sector demand and growth in public final expenditure has been weak.

Foreign trade

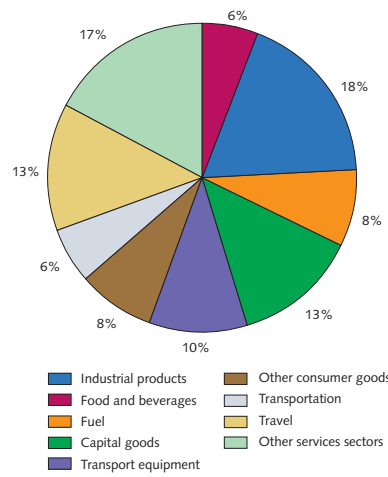
Iceland is a fairly open economy, with imports and exports of goods and services amounting to 46% and 53% of GDP, respectively, in 2015. In the period 2000–2015, trade openness, measured as the ratio of imports and exports of goods and services to GDP, averaged 86%, well above the OECD average. Although trade still involves a relatively large share of primary products and commodities, exports have diversified significantly since the beginning of the century. Certain factors restrict openness, however, such as geographic distance from major population centres, limited intra-industry and transit trade, and protection of domestic agriculture.

Chart 2.5
Exports by type of goods 2015
Percentage of total exports



Source: Statistics Iceland.

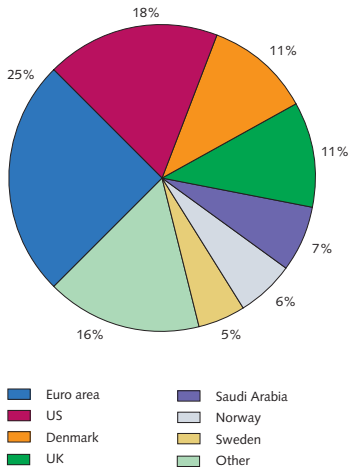
Chart 2.6
Imports by type of goods 2015
Percentage of total imports



Source: Statistics Iceland.

Chart 2.7

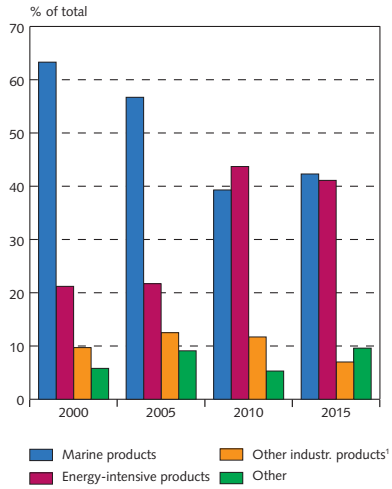
Currency area share in services exports 2015



Source: Statistics Iceland.

Chart 2.8

Composition of goods exports by product categories



1. Manufacturing services are included under energy-intensive industrial goods as in Statistics Iceland's trade figures.
Source: Statistics Iceland.

Fish and other marine products have traditionally been the mainstay of goods exports, although they have been declining as a share of total exports since the early 1990s. In 2015, fish and other marine products accounted for 42% of goods exports and 22% of total exports, down from 63% and 41%, respectively, in 2000. Exports of manufactured goods have been growing rapidly in importance, led by aluminium smelting and medical and pharmaceutical products, and accounted for 53% of goods exports in 2015 (up from 31% in 2000) and 28% of total exports.

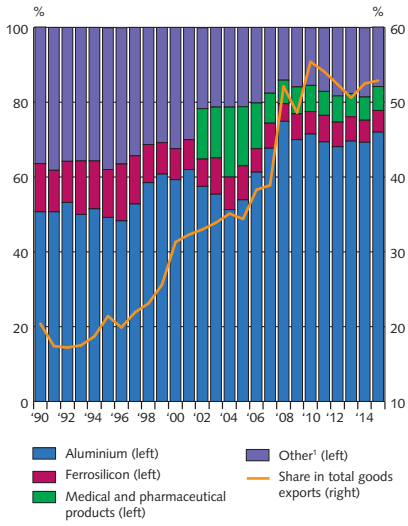
Exports of services have also increased as the economy has grown and become increasingly service-oriented. Tourism has soared over the past few years and has been one of the main drivers of export growth, contributing over 50% of the growth during the post-crisis period. Services now account for 47% of total export revenues, up from 37% in 2000.

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 28% of total goods imports and 18% of total imports in 2015. Capital goods constituted almost 21% of total goods imports and consumer goods 27% (13% and 17%, respectively, of total imports in 2015), while services contributed around 36% of total imports.

Iceland's ratio of services trade to total trade has risen in recent years. In 2015 it was 43%, one of the highest in the OECD, up from 34% at the beginning of the century. The euro is the most common currency used for services exports in Iceland, with 25% of total services exports. Besides the euro, only three currencies have a share of 10% or larger: the US dollar (18%) and the Danish krone and pound sterling, each with 11%.

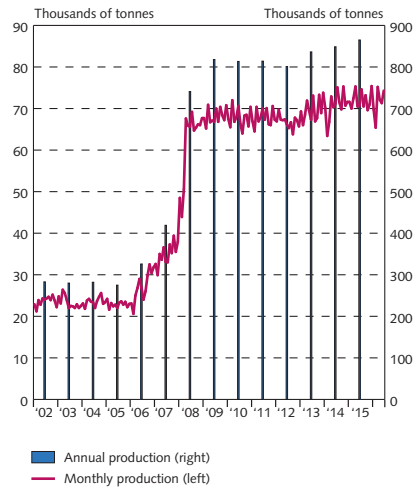
Free trade arrangements with Europe have stimulated Iceland's trade with the region, causing the share of North America to fall. In 2015, 78% of goods exports went to European Economic Area (EEA) member countries, which were also the source of 61% of imports. Currently, Iceland's

Chart 2.9
Composition of manufacturing exports and share in total goods exports



1. Medicinal and pharmaceutical products are included until 2002.
Source: Statistics Iceland.

Chart 2.10
Aluminium production



Source: Statistics Iceland.

largest trading partner countries are the Netherlands, the UK, Germany, Norway, the US, and Spain. Trade with China has increased dramatically over the past few years, and China is now Iceland's ninth-largest trading partner. In terms of currency, the euro area constitutes the largest trading area, accounting for 36% of imports and 27% of exports. In recent years, Iceland has generally had a trade surplus with the Netherlands, the UK, Russia, Nigeria, France, Japan, and the Iberian countries, but a deficit with Brazil, China, the US, and its Nordic neighbours.

Manufacturing and energy-intensive industries

The production structure of Iceland's manufacturing sector is unique among industrialised countries in many respects. First, the manufacturing sector is dominated by two sub-sectors, food processing and aluminium production, which together account for roughly ¾ of total manufacturing. Second, production of machinery and other investment goods is relatively limited. Food production is directed partly at the domestic market, but a larger share, or 62% (in 2015), focuses on seafood production for export. Other less important sub-sectors are machinery equipment production (12%), building materials production (3%), and pharmaceuticals/chemical products (3%).

Iceland's largest manufacturing industry by far is the energy-intensive industry (mainly aluminium), which has increased substantially over the past decade, generating 38% of goods exports in 2015, up from one-fifth in 2000. Iceland's aluminium industry is based primarily on competitive energy costs, strategic location, and a skilled labour force. Production has risen sharply since the turn of the century, from 210 thousand metric tonnes per year (mtpy) in 2000 to an estimated 880 thousand mtpy in 2016. Iceland's share of world aluminium production (excluding China) increased from 1% in 2000 to 3% in 2014.

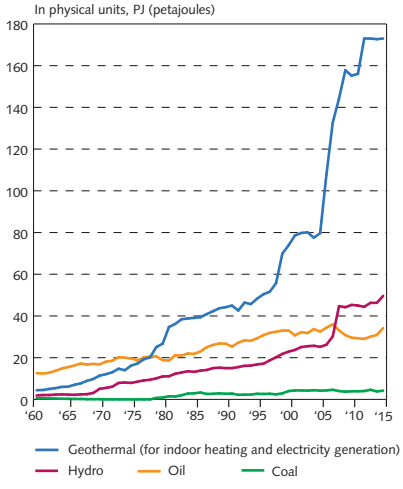
A number of export-oriented manufacturing companies have emerged in the last two decades. Most of these companies are founded on product innovation, R&D, information and communications technology (ICT), and strategic marketing. Three of these companies have grown from being small or medium-sized companies to become key international players in their field, holding a relatively large market share worldwide in medical equipment, pharmaceuticals, and food processing and fishery equipment.

Energy

Iceland is at the forefront in the use of renewable energy resources. Of the total primary energy supply in Iceland, nearly 90% is from renewable resources, up from 72% in 2000, compared to an average of ⅓ in other Nordic countries. Iceland has large potential sources of renewable energy; on the one hand, the country is located on the volcanically active Mid-Atlantic Ridge, a potent source of geothermal energy, and on the other hand, one-tenth of the landmass is covered by glaciers, a major source and reservoir of water power for generating electricity. Iceland's hydropower and geothermal resources have only been partly harnessed, and Iceland is the only country in Europe that still has a considerable amount of large-scale, competitively priced power from these sources.

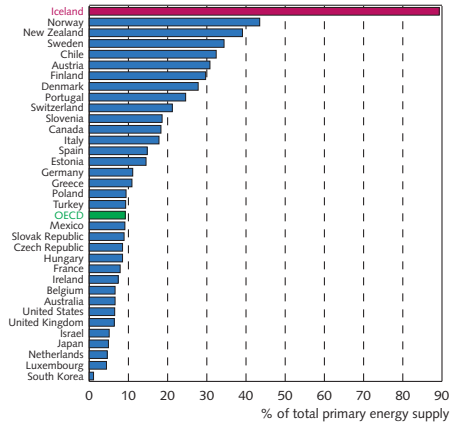
Electricity production per capita is the highest in the world, at 55 megawatt hours (MWh) per capita, more than twice that in Norway (23 MWh), which comes second. In 2015, total installed hydropower was 1,986 MW in 40 power plants with a combined capacity of 13,800 gigawatt hours (GWh), or 70% of generated electricity. At year-end 2015, combined installed geo-power for electricity generation was 665 MW from seven plants and 5,000 GWh capacity.

Chart 2.11
Primary energy consumption by source in Iceland



Source: National Energy Authority.

Chart 2.12
Contribution of renewables to energy supply in OECD countries 2014



Source: OECD.

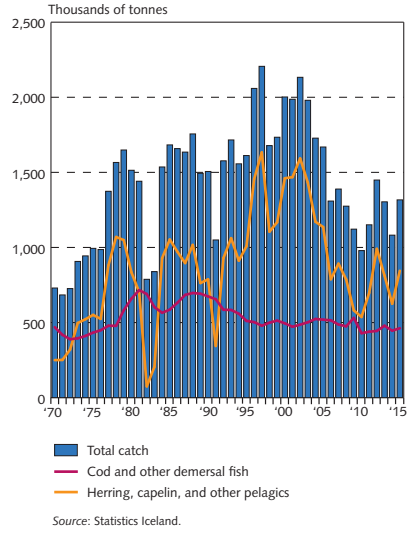
Iceland has been in the lead globally in the use of geothermal energy for purposes other than generating electricity. Geothermal energy accounts for 66% of primary energy used in Iceland, most of it as geothermal heat for space heating (70%) and the rest for swimming pools, greenhouses, aquaculture, and other industrial use. The total primary energy supply per unit of GDP is the highest in the world, nearly four times higher than the OECD average. Well over 90% of all homes are heated by geothermal energy in the form of hot water at only a fraction of the heating cost in other Nordic countries. For the general public, the price of electricity is one of the lowest in the world, about half of the price to consumers in the European Union (EU27).

Marine sector

Throughout most of the 20th century, the marine sector was of key importance to the Icelandic economy. To a large extent, economic growth was generated by the marine sector. Fisheries and fish processing are still one of the main pillars of export activities in Iceland: in 2015, 42% of goods exports and roughly 22% of all export earnings from goods and services came from fisheries. However, as exports of manufactured goods have been growing rapidly, the share of the marine sector in goods exports has fallen, from around 63% in 2000 to 42% in 2015. Despite this, the sector's contribution to GDP has remained relatively constant in the past five years at 8-10%, down from 12% in 2000.

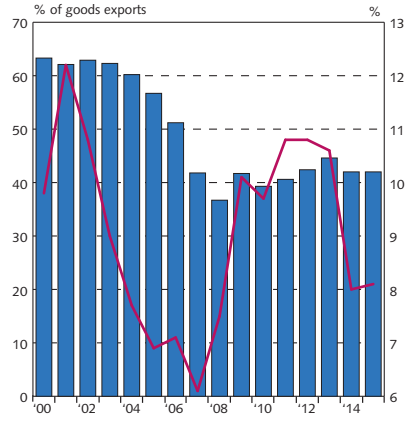
The marine sector is highly diversified in terms of species, processing methods, and markets. Fishing and processing of groundfish (primarily cod, but also haddock, saithe, and redfish) and pelagic species (mackerel, herring, and capelin) are the principal focus of Iceland's marine sector. The introduction of value-added processing techniques has helped to offset stagnant or allowable groundfish catch volumes in recent years. Value has also been boosted by a shift towards fresh seafood products instead of frozen and salted products, as fresh products yield considerably

Chart 2.13
Fish catch by Icelandic vessels



Source: Statistics Iceland.

Chart 2.14
Marine exports



Source: Statistics Iceland.

Box 2.1

The individual transferable quota system

Fishing of all commercially important marine species is regulated under the individual transferable quota (ITQ) system. The current quota system is based on the following factors:

- Each year, the total allowable catch (TAC) is set by the Minister of Fisheries, after the Minister has received advice from the Marine Research Institute based on a biological assessment of the stocks and forecasts for their development in the near future.
- The quota shares that determine each year's quotas must be registered to a fishing vessel.
- A vessel's annual quota for a species is equal to its quota share for that species multiplied by the TAC, after adjusting for special allocations; e.g., for regional support and coastal fisheries of small vessels.
- Quota shares and annual quotas are transferable and can be traded on the quota market, subject to certain restrictions.

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

In 1995, a harvest control rule (HCR) for cod was introduced, setting the TAC for the next consecutive quota year (September through the following August) at 25% of the mean of the fishable biomass in the assessment year and the following year. This share was lowered to 20% in 2007. HCRs have been used for capelin and herring for many years. More recently, HCRs have been introduced for haddock, saithe, and golden redfish, and the aim is to introduce HCRs for all important species.

All fisheries are subject to an annual fishing fee. In July 2015 the fee was fixed for a period of three (quota) years. The fee is to be calculated on the basis of earnings before taxes (EBT) in fishing and fish processing, using the most recent estimates published by Statistics Iceland. The fishing fee for the quota year 2016-2017 is estimated at approximately 60 million euros (4,780 b.kr.), or 3% of the total 2015 catch value. The fee is part of the State budget.

higher prices in the markets. The importance of pelagic species has increased significantly in the last ten years, from one-sixth of the total export value of fish and seafood products in 2006 to 25-30% in the last three years. Cod products are still the mainstay of exported fish and seafood products, at around 40% of total marine exports.

The comprehensive fisheries management system (FMS) based on individual transferable quotas (ITQ) was implemented in 1990 to manage the fish stocks and promote sustainability and economic efficiency (see Box 2.1). 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 scientific knowledge is fundamental. Another pillar of the FMS is the commitment to take into account the effects of various measures or policies on the ecosystem.

In the last two decades, fisheries companies have been actively seeking to enhance efficiency and benefit from economies of scale through mergers, acquisitions, and vertical integration of all parts of the value chain. The largest fisheries and processing companies – mainly vertically integrated firms with harvesting, processing, and marketing within the same company – have expanded, and the concentration of quota holdings has risen. The 10 and 15 largest fisheries

Box 2.2

Sectoral limitations on foreign direct investment

The only restrictions on investment by non-residents in Iceland apply to foreign direct investment in fisheries and primary processing of fish, energy production and distribution, aviation companies,[1] and real estate.[2] Restrictions on investment in the fisheries sector, the only restrictions applying to European Economic Area (EEA) residents, have the purpose of protecting the nation's exclusive rights to the fishing grounds surrounding Iceland. Direct foreign ownership of fisheries companies is prohibited, but companies that are up to 25% foreign-owned (33% in certain circumstances) may own fisheries. Combined direct and indirect ownership of 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 may not own more than 49% of shares in Icelandic aviation companies.

1. Act on Foreign Investment in Enterprises, no. 34/1991.
2. Act on the Right of Ownership and Use of Real Property, no. 19/1966. Exemptions may be granted.

companies in terms of quota holdings owned 50% and 63%, respectively, of total quota holdings as of July 2016.

Financial sector

Iceland's financial services sector grew substantially in the first decade of the 21st century, catalysed by financial globalisation and deregulation in the 1990s and the privatisation of two commercial banks, which was completed in 2003. By year-end 2007, the banking system's assets were nearly 10 times GDP. In autumn 2008 and early 2009, roughly 97% of the banking system (measured in terms of assets) collapsed.[1]

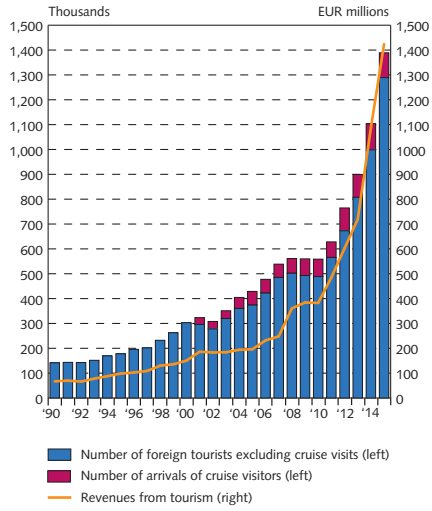
The financial system has changed radically since then. Three new banks were established and took over the domestic operations of the collapsed banks, and other smaller financial institutions have also undergone financial restructuring or lost their operating licences. Four commercial banks and four savings banks are currently operating in Iceland. The State is the major owner of two of Iceland's commercial banks and holds a minority stake in another one. The assets of the banking system are about one-and-a-half times GDP. Six other credit institutions currently operate in Iceland: two payment card companies; two investment credit funds; an asset financing company; and the State-owned mortgage lender, the Housing Financing Fund (HFF) (see Chapter 3 for further discussion of the financial system).

Tourism

Tourism has been among the fastest-growing industries in Iceland in recent years and has established itself as the third main pillar of the Icelandic economy. Over the past decade, the number of foreign tourists has increased from 320 thousand in 2005 to 1.3 million in 2015. The vast majority of tourists travelled through Keflavik Airport, or roughly 1,260 thousand, while oth-

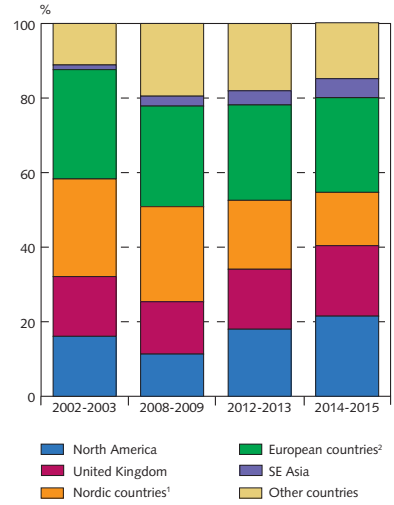
1. See Box 3.2 in the 2014 edition of *Economy of Iceland*.

Chart 2.15
Number of foreign tourists and revenues from tourism
At constant exchange rate 2015



Sources: Icelandic Tourist Board, Central Bank of Iceland.

Chart 2.16
Nationality of tourists



1. Norway, Denmark, Sweden, Finland. 2. France, Netherlands, Italy, Spain, Switzerland, Germany. Two-year average.
Source: Icelandic Tourist Board.

ers travelled through other airports and the Smyril Line ferry at Seyðisfjörður. The number of incoming tourists by air and ferries is projected to exceed 1.6 million in 2016. In addition to these figures, the number of cruise ship passengers in 2015 was around 103 thousand, up from 72 thousand in 2010. The rapid increase in tourism is also reflected in the number of airlines flying to Keflavík and destinations available from Keflavík Airport. In the winter of 2015-2016, a total of 14 airlines offered flights from Keflavík to 57 destinations. In comparison, three airlines offered scheduled flights from Keflavik in 2010.

The ratio of tourism-generated foreign exchange revenues to total export revenues averaged 31% in 2015, compared to just under 19% in 2010. Of single countries, the US and the UK accounted for the largest number of tourists, with a combined 38% of the total, followed by tourists from Germany, at roughly 8%. Until 2015, Central and Southern Europe had been the largest market, but that year, following a sharp rise in the number of tourists, Northern America emerged as the largest market area.

This increase in the number of tourists has had a significant impact on Icelandic businesses. From 2010 to 2015, the increase in turnover in businesses related to the tourist sector was nearly 49% in real terms, and the number of employees on their payroll rose by 65% over the same period.

Technology and communications

The technological sector of the services industry, the software industry in particular, has diversified and grown significantly in the last 10-15 years. Between 70 and 80 companies of all sizes are active in the software sector, specialising in medical, ICT, computer games, logistics, and operat-

ing management systems. Most of the businesses in software technology are engaged in export activities, owing to the small size of the home market.

Exportation of expertise in the development of renewable energy is growing, and several Icelandic companies are engaged in exporting geothermal and hydropower expertise and consultancy to a number of areas, including the US, China, Germany, Central America, and Southeast Asia.

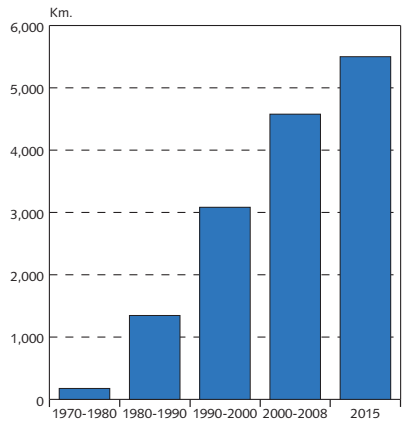
Iceland's telecommunications infrastructure is extensive and reaches all parts of the country, with fibre optic cables, broadband networks, and an extensive mobile phone system with widespread geographical coverage reaching nearly 100% of the population. International connections are based on satellite earth stations and three intercontinental cables enabling and facilitating efficient high-speed international connections.

In 2015, 96% of Icelandic households were Internet-connected, the highest percentage in Europe, compared with 81% in the EU27 and 92% in the other Nordic countries. Nearly all internet connections are high-speed connections, and around 97% of connected households are regular users, compared to 92% in other Scandinavian countries and 75% in the EU27.

Transport

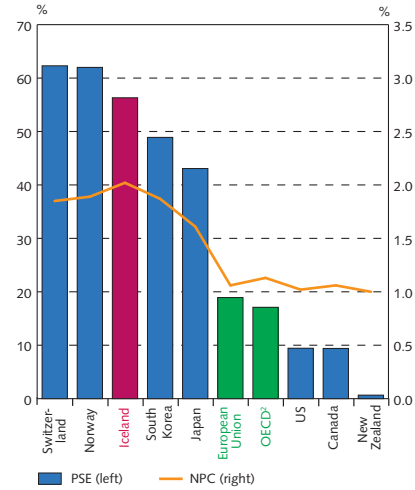
The domestic transportation network consists of roads and air transportation. The road system totals 13 thousand kilometres, some 5.5 thousand kilometres of which are primary (paved) roads. Between 2003 and 2010, 22 kilometres of tunnels were built, bringing the total length of tunnels to 43 kilometres, and four tunnels with a combined length of 24 kilometres are under construction. Private motor vehicle ownership is widespread and among the highest in the world, with 670 passenger cars per 1,000 inhabitants, compared to 455 cars per 1,000 inhabitants in

Chart 2.17
Paved roads



Source: The Icelandic Road Administration (ICERA).

Chart 2.18
Support to agriculture 2015[1]



1. PSE measures transfers as a share of gross farm receipts. NPC is the ratio between the average price received by producers and the border price. 2. Provisional figures.

Source: OECD.

the other Nordic countries. A weekly ferry connection for passengers, private vehicles, and cargo operates between East Iceland, Denmark, and the Faroe Islands.

The air traffic infrastructure in Iceland covers all parts of the country. Four international airfields are operated, and three major international AOC (aircraft operating certificate) holders operate in Iceland, offering passenger service, international cargo service, and charter flights. During summer 2016, a total of 25 airlines offered direct passenger service between Iceland and 84 destinations in Europe and North America, and in the winter of 2016-2017, 17 companies will offer service to 55 destinations. Roughly 80% of all passenger destinations are in Europe. As of 2016, 11 airlines offer year-round service.

Iceland's two main shipping lines operate scheduled services to major ports in Europe and the east coast of the US. Both of them operate transport networks on land and sea in Iceland, Europe, and North America, as well as offering freight forwarding around the world.

Agriculture and farming

Approximately 1/5 of the total land area of Iceland is arable land or pasture. Less than 5% of this area is cultivated, with the remainder used for grazing or left undeveloped. Meat and dairy products are mainly for domestic consumption, and the principal crops are hay, cereals for animal feed, root vegetables, and green vegetables, which are cultivated primarily in greenhouses heated with geothermal water. Imports of meat, dairy products, and some vegetables that compete with domestic production are subject to tariffs, import quotas, and non-tariff import restrictions.

Icelandic agriculture is heavily subsidised, with total on-budget transfers to farmers amounting to 0.8% of GDP in 2015. In terms of the OECD producers support estimate (PSE), Iceland was third-highest in the OECD in 2015, with a PSE of 56%, compared to the EU15 average of 19% and the OECD average of 18%.

Environment

Sustainable use of fish stocks and other natural resources is an important part of Iceland's environmental policies. Iceland is relatively unpolluted compared to other developed countries, owing to its sparse population and heavy reliance on renewable energy. The marine environment surrounding Iceland is relatively unpolluted as well.

Although air pollution is generally low, some pollution – i.e., particulate matter – occurs in the greater Reykjavík area. Soil erosion has been a longstanding problem due to the cutting of woodlands and overgrazing on sensitive volcanic soil. The intensity of grazing has been falling, however, and a concerted effort is made to reclaim eroded land and plant trees.

Iceland complied with its Kyoto commitments for 2008-2012. For the second commitment period, 2013-2020, Iceland will fulfil its commitments jointly with the EU and its Member States, in accordance with Article 4 of the Kyoto Protocol. Over 40% of Iceland's greenhouse gas emissions are regulated under the EU Emissions Trading Scheme (ETS), due to the EEA Agreement. Joint fulfilment of Kyoto targets with the EU implies that greenhouse gas emissions from Icelandic industry are regulated in a manner comparable to that applying to EU Member States. Iceland ratified the Paris Agreement in September 2016 and has stated its intention to take part in joint fulfilment of targets with the EU under the 2015 Paris Agreement.

Because almost 100% of Iceland's stationary energy comes from renewable sources, actions taken to reduce net emissions focus on decreasing emissions from transport and fisheries and

increasing carbon uptake through afforestation and revegetation. The government launched a new climate action plan in 2015, in connection with Conference of the Parties (COP21) in Paris.

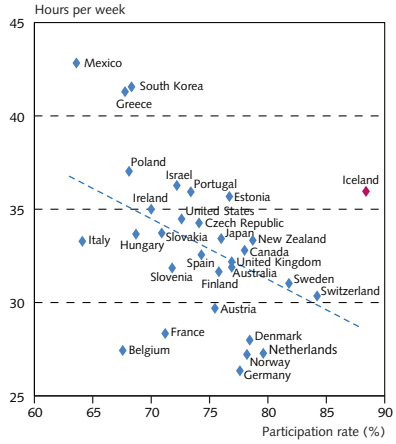
Nature-based tourism has grown markedly in recent years, and funding for tourism infrastructure and nature conservation has increased. A new Master Plan on hydro and geothermal energy has been put in place in an attempt to strike a balance between new renewable energy projects and nature conservation concerns. Iceland's wilderness areas and unique natural environment, characterised by glaciers, rivers, and volcanic activity, is increasingly recognised as an important economic asset as well as a part of natural heritage needing conservation.

Labour market

Over the past ten years, the Icelandic labour market has had a participation rate consistently well above 85%, the highest among OECD countries. The participation rate among women has also been very high by international comparison. In 2015, female participation was one of the highest in the OECD countries, with women accounting for 48% of the labour force and supplying over 42% of total hours. Participation rates among the young (aged 15-24) and the elderly (aged 65 and over) are also the highest in the OECD. Furthermore, Icelanders tend to work long hours. In 2015, 39% of the adult population held a university degree, up from 29% in 2005.

The Icelandic labour market is quite flexible, with substantial labour mobility, flexible hours, and variable participation and wages. This was clearly manifested during the last cycle. A comparison with other OECD countries shows that Icelandic companies have considerable flexibility to lay off workers. Companies can easily adjust to changed demand by expanding or reducing staffing levels or by raising or lowering the number of hours worked by those already employed; furthermore, the number of part-time and full-time employed varies with the business cycle.

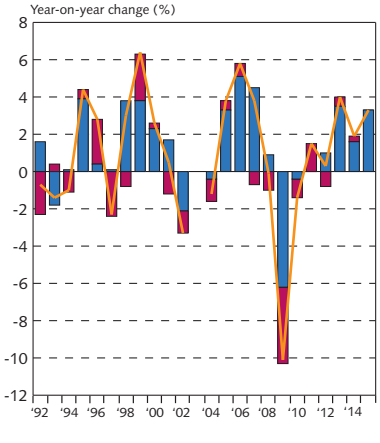
Chart 2.19
Participation rate and hours per week in OECD countries 2015[1]



1. The chart shows labour participation among the population aged 15-64 in all countries except Iceland, which shows participation for the group aged 16-64. The average number of hours worked is for the labour force as a whole.

Source: Macrobond.

Chart 2.20
Changes in employment and hours worked



Source: Statistics Iceland.

There is also some flexibility in labour force supply. In particular, there is a strong connection between net emigration of Icelandic nationals and output growth; moreover, migration of foreign nationals in tandem with the business cycle has increased substantially with the expansion of the pan-European labour market. Moreover, even in the case of significant shifts in sectoral or regional employment, a high degree of labour mobility prevents large differences in regional unemployment from emerging.

Some 86% of the labour force is unionised, and employers are highly organised as well. This has given rise to wage-setting that is characterised by significant centralisation and coordinated bargaining, most frequently by national federations, and it leads to more or less nationwide settlements that provide for the minimum wage increases. In addition, the tailoring of the national framework of wage agreements in sectoral and firm-level negotiations makes it possible to take specific local conditions into account. 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. Notwithstanding the high degree of centralisation, real wages are flexible in comparison with other OECD countries (see Chart 2.21).[2]

Pension system

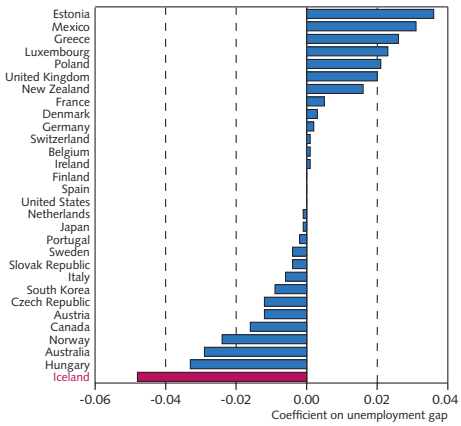
In the decades to come, Iceland will face fewer problems due to an ageing population than most other developed countries. There are three main reasons for this. First, the population is younger and will continue to be so during coming decades. The elderly dependency rate – i.e., over-65-year-olds as a ratio of 20- to 64-year-olds – was 22% in 2014, the eighth-lowest in the OECD and somewhat less than in the US (24%) but significantly below the average in the EU (29%). 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, 39% of 65- to 74-year-olds worked at least one hour a week in 2015. Third, membership of a fully funded occupational pension fund is mandatory for all employees and self-employed persons.

The Icelandic old-age pension system is composed of a tax-financed public pension scheme, mandatory funded occupational pension funds, and voluntary pension saving with tax incentives and an extra contribution from the employer. Public pensions are fully financed by taxes and social security contributions. 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, although the recipient may choose to delay applying for it until age 72 at the latest, and receive a larger amount. It is divided into a basic pension and a supplementary pension. Both are means-tested, but pensions received from other sources are treated differently from other income, as 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, while the maximum total old-age pension amounts to around 74% 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 trade unions and employers. Occupational pension funds have been increasing their share in pensions relative to the

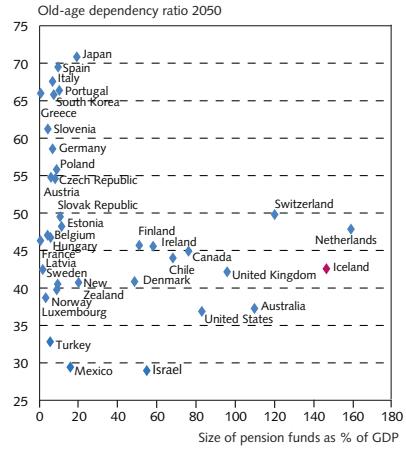
2. Chart 2.21 reports the coefficient on the unemployment gap; i.e., the deviation of unemployment from the non-accelerating inflation rate of unemployment (NAIRU), in a regression of a change in real wages on a constant, the unemployment gap, a change in productivity, and a lagged change in real wages.

Chart 2.21
Real wage flexibility 1997-2011[1]



1. Quarterly data.
Sources: OECD, Statistics Iceland, Central Bank of Iceland.

Chart 2.22
Size of pension funds in 2014 and old-age dependency ratio in OECD countries 2050[1]



1. Population aged 65 years and over per 100 persons aged 15-64 years 2050.
Sources: OECD, United Nations.

public system as they approach maturity and means-testing reduces the public pension. Payments from the pension funds totalled or 5% of GDP, or 756 million euros (110.6 b.kr.), in 2015, whereas public system payments totalled 1.9% of GDP, or 294 million euros (43 b.kr.).

From mid-2016 onwards, it is mandatory to pay at least 12.5% of total wages and salaries to pension funds.[3] Employees contribute 4% of this share, and the rest is contributed by the employer. The funds have grown rapidly in recent decades, as their coverage has become almost total and the return on their assets has been strong, although fluctuating with the economic cycle. Assets were equivalent to 148% of GDP at the end of 2015. By international comparison, pension funds in Iceland are large relative to GDP. In 2014, they were the second-largest in the OECD (after the Netherlands).

At the end of 2015, there were 26 fully operational pension funds in Iceland, including eight with employer guarantees from the State government and the municipalities; however, these eight funds are not accepting new members and will gradually wind down their operations.

The ten largest pension funds held about 83% of the net assets of all pension funds in 2015, and the two largest funds accounted for 35%. The average fund had net assets of around 877 million euros (123.9 b.kr.), while the largest had assets of almost 4 billion euros (584 b.kr.).

The benefits paid by occupational pension funds without an employer guarantee will ultimately depend on their net returns 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

3. According to a January 2016 agreement in the private labour market, the employer's contribution to employee pensions will be increased gradually by 3 percentage points from 2017-2018. Furthermore, from 2017 onwards, employees may decide whether this increase is to be paid partly or fully to their occupational funds or to their third-pillar pension saving scheme.

maturity, a typical general occupational pension fund will be able to pay a pension amounting to 56% 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 savings, employees are allowed to deduct from their taxable income a contribution to authorised individual pension schemes ranging up to 4% of wages. Employers must match the supplementary contribution up to a limit of 2%.[4] The pension schemes must be authorised by the Ministry of Finance and Economic Affairs. In most cases, they are defined-contribution individual accounts. The pension savings are redeemable at age 60. Around 66% of wage earners were paying into such schemes in 2015.

4. See Footnote 3 in this chapter.

3 Financial system

This chapter describes the Icelandic financial system. It covers the credit system, including deposit money banks (DMB), commercial banks' financial position, the Housing Financing Fund (HFF), and the pension funds along with the bond, equity, and foreign exchange markets in Iceland.

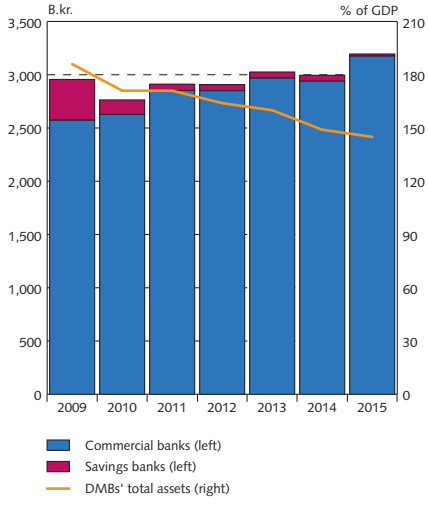
Overview of the credit system

At year-end 2015, total assets in the credit system[1] amounted to roughly four times Iceland's GDP. The combined assets of DMBs were about one-and-a-half times GDP. The DMBs and the Housing Financing Fund (HFF) account for a total of 96% of all credit institution assets.

At the end of June 2016, there were four commercial banks and four savings banks operating in Iceland. Two of the commercial banks, Landsbankinn hf. and Íslandsbanki hf., are owned by Icelandic State Financial Investments (ISFI), which administers the Government of Iceland's holdings in financial institutions. Arion Bank hf. is majority-owned by Kaupskil, which represents the old

Chart 3.1

DMBs' total assets[1]

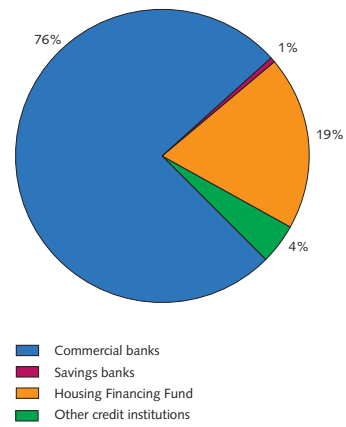


1. Parent companies.

Sources: Statistics Iceland, Central Bank of Iceland.

Chart 3.2

Credit institutions' total assets[1]



1. Parent companies. December 2015.

Source: Central Bank of Iceland.

1. The credit system in Iceland consists of the banking system, pension funds, insurance companies, mutual funds, investment and institutional funds, State loan funds, and other credit institutions, the largest of which is the Housing Financing Fund (HFF).

Table 3.1 Credit system assets

Assets, EUR billions (b.kr.)	*31.12.2008*	*31.12.2010*	*31.12.2012*	*31.12.2014*	*31.12.2015*
Banking system[1]	27.3 (4,632)	25.2 (3,878)	22.4 (3,809)	24.4 (3,758)	26.8 (3,794)
- Central Bank of Iceland	7.0 (1,187)	8.6 (1,328)	6.3 (1,075)	6.2 (957)	6.7 (948)
- commercial banks	20.1 (3,417)	17.1 (2,627)	16.8 (2,850)	19.1 (2,939)	22.5 (3,175)
- savings banks	4.5 (768)	0.9 (137)	0.3 (57)	0.4 (56)	0.1 (20)
Other credit institutions	7.6 (1,284)	7.3 (1,129)	6.3 (1,076)	6.7 (1,030)	6.9 (979)
- Housing Financing Fund	4.3 (733)	5.4 (836)	5.2 (876)	5.3 (824)	5.7 (803)
Pension funds	9.8 (1,665)	12.9 (1,989)	14.4 (2,439)	19.0 (2,935)	23.2 (3,284)
Insurance companies	0.7 (122)	0.9 (138)	0.9 (155)	1.1 (169)	1.2 (171)
Mutual funds, investment and institutional funds	1.2 (212)	1.8 (284)	2.4 (410)	3.2 (488)	4.1 (586)
State loan funds	0.7 (125)	1.0 (161)	1.1 (192)	1.5 (226)	1.5 (210)
Total assets	47.3 (8,040)	49.3 (7,579)	47.6 (8,081)	55.8 (8,605)	63.9 (9,025)

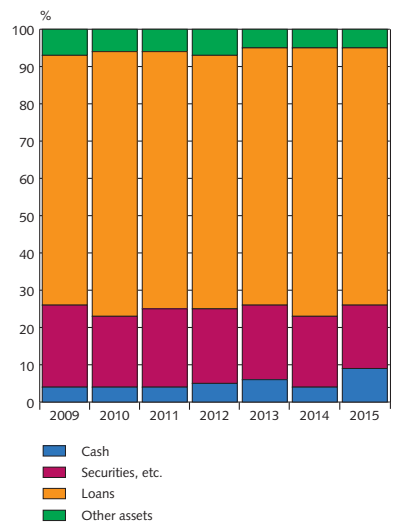
1. Because debts between the Central Bank and the DMBs are netted out, banking system assets do not balance with the total assets of the Central Bank and the DMBs.
Source: Central Bank of Iceland.

Kaupthing Bank's creditors, but ISFI has a 13% stake in the bank. The savings banks are small compared to the commercial banks, with total assets amounting to less than 1% of total DMB assets. The activities of the commercial and savings banks are directed primarily towards serving the domestic economy.

Commercial banks' financial position

The commercial banks' assets consist largely of loans. At year-end 2015, total lending amounted to 15.6 billion euros (2,204 b.kr). The vast majority was to domestic households and non-financial companies, with 39% indexed to the CPI, 45% non-indexed, and around 16% foreign-denominated. Since the financial crisis, the commercial banks have undertaken extensive restructuring of their household and corporate loan portfolios. Default ratios declined more or less steadily from 2010 until the latter half of 2015. At the end of 2015, only 2% of the three large commercial banks' loans were non-performing, down from a peak of 20% at the end-2010.

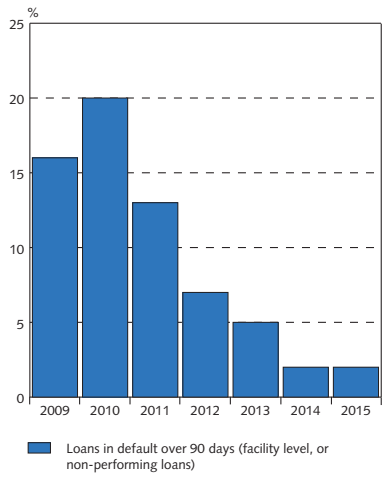
Chart 3.3
Commercial banks' assets[1]



1. Parent companies.
Source: Central Bank of Iceland.

Chart 3.4

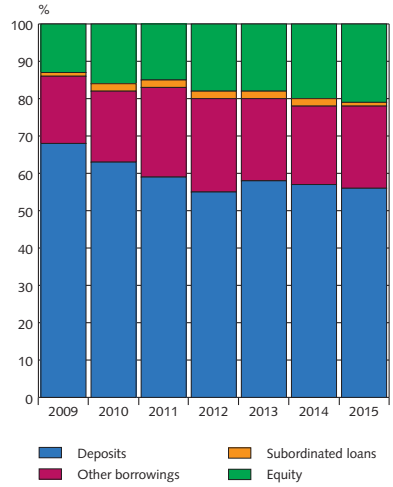
Default ratios of the three largest commercial banks[1]



1. Parent companies, book value.
Sources: Financial Supervisory Authority, Central Bank of Iceland.

Chart 3.5

Commercial banks' funding[1]



1. Parent companies.
Source: Central Bank of Iceland.

The Icelandic commercial banks are funded mainly by customers' deposits. At the end of 2015, deposits comprised 56% of their total funding and their deposit-to-lending ratio was 81%. The vast majority of deposits (94%) are held by Icelandic residents. Of total deposits, more than 10% are indexed to the CPI and around 16% are foreign-denominated. The majority of deposits (68%) are payable on demand or within one month, whereas 82% can be withdrawn within three months and 87% within six months. The banks' market funding has increased in recent years and comprised more than 9% of total funding at year-end 2015.

In 2015, the three largest banks received investment-grade credit ratings. That year, Icelandic banks issued more securities in foreign credit markets than at any time since their establishment in 2008, and their borrowing terms have been improving. The banks have issued mainly in euros, Norwegian kroner, and Swedish kronor, and in 2016 they added issues in US dollars. To an increasing degree, the banks fund their mortgage lending portfolios with covered bond issues, which accounted for 3.6% of total funding at year-end 2015.

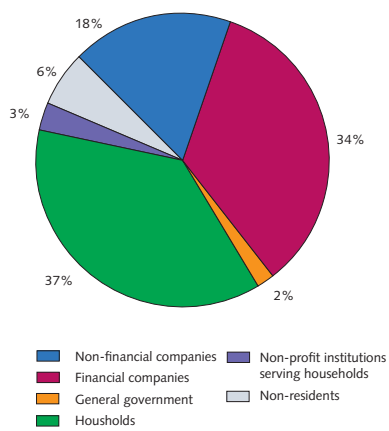
In recent years, Iceland's large commercial banks have generated strong profits, and their capital position is robust. At the end of 2015, their capital adequacy ratios were just over 28%, including 27% in Tier I capital, well above the Financial Supervisory Authority's (FME) required minimum. A significant portion of the banks' profit has stemmed from temporary items such as write-ups and sales of holdings in companies and valuation increases in loans. At year-end 2015, restructuring of asset portfolios was nearly complete. At the beginning of 2016, the Financial Stability Council (FSC) recommended that the FME impose three capital buffers: a capital buffer for systemically important financial institutions, a systemic risk buffer, and a countercyclical capital buffer. More specifically, the FSC recommended (1) that a 2% capital buffer be im-

posed on systemically important financial institutions as of 1 April 2016; (2) that a systemic risk buffer amounting to 3% of risk-weighted domestic assets be imposed on systemically important deposit-taking institutions as of 1 April 2016; and (3) that a 1% countercyclical capital buffer be imposed on all financial institutions, effective 12 months after the date of the FME's decision. A capital conservation buffer, which took effect at the beginning of 2016, does not require a recommendation from the Council and will rise in increments to 2.5% by the beginning of 2017. Capital buffers may only include Tier 1 capital. In March 2016, the FME took a decision in accordance with the FSC's recommendations. When fully implemented in 2017, the combined capital buffers imposed on the three largest banks will be 8.5%. Given the banks' strong capital position, the implementation of the buffers is not expected to prove onerous.

The Central Bank of Iceland sets rules on credit institutions' minimum liquid assets in Icelandic krónur and foreign currencies and rules on their funding ratios in foreign currency. The rules are based on the liquidity coverage ratio (LCR) and net stable funding ratio (NSFR), which are issued by the Basel Committee and used as an international reference. The Icelandic LCR rules assume that banks must always have sufficient high-quality liquid assets to cover net outflows for the next 30 days under stressed conditions. The banks must fulfil requirements for both liquidity in foreign currency and overall liquidity. Rules on credit institutions' minimum net stable funding ratio (NSFR) in foreign currencies took effect in December 2014. The funding ratio is intended to ensure a minimum level of stable one-year funding in foreign currencies, thereby restricting the degree to which the commercial banks can rely on unstable short-term funding to finance long-term foreign-denominated lending. The rules on the funding ratio are intended to limit maturity mismatches and the extent to which the banks can depend on unstable short-term funding to fi-

Chart 3.6

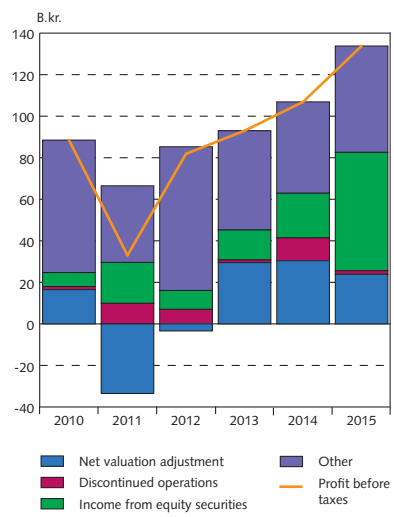
Deposit owners[1]



1. Commercial banks, parent companies. December 2015.
Source: Central Bank of Iceland.

Chart 3.7

The three largest commercial banks' profit before tax and irregular and estimated items[1]

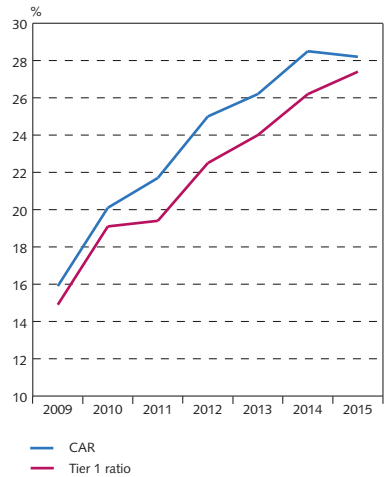


1. Consolidated figures.
Sources: Commercial banks' annual accounts, Financial Supervisory Authority, Central Bank of Iceland.

nance long-term assets that could prove difficult to sell. All of Iceland's commercial banks met the liquidity and funding requirements, both in foreign currencies and overall, an ample margin at the time this publication went to press. The Central Bank of Iceland also sets rules on credit institutions' foreign exchange balance so as to limit foreign exchange risk by preventing credit institutions' foreign exchange balances from exceeding defined limits. The permissible open foreign exchange balance is 15% of the capital base. All of Iceland's commercial banks met the foreign exchange requirements by a sizeable margin as of this writing.

Chart 3.8

Commercial banks' capital adequacy ratios[1]



1. Largest commercial banks, consolidated figures.
Source: Commercial banks' annual reports.

The Housing Financing Fund

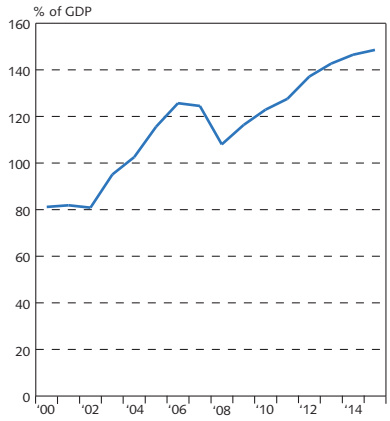
The largest single entity in the group classified as "other credit institutions" is the Housing Financing Fund (HFF), whose assets constituted more than 80% of the total assets of other credit institutions. The HFF is an independent Government institution that grants mortgage loans to individuals, municipalities, companies, and organisations in order to finance house purchases and construction projects. The HFF has financed its mortgage lending by issuing indexed HFF bonds, which are backed by a Government guarantee. Prepayments and extra payments by HFF customers have increased in recent years, and no HFF bonds have been issued since January 2012. Since the financial crisis, losses and uncertainty about the HFF's loan quality has adversely affected the Fund's equity, and the Treasury has provided HFF with capital contributions. In 2015, the HFF's capital ratio exceeded the long-term target of 5% for the first time since 2007, measuring 5.5% by the year-end.

Pension funds

The Icelandic pension fund system consists of pension funds for public employees, on the one hand, and a number of occupational pension funds, on the other. Membership of pension funds is mandatory and all wage earners and employers pay contributions to the funds (see Chapter 2). By and large, it is a funded system. About 90% of assets are held by coinsurance divisions, and about 10% consist of third-pillar pension savings held in custody by pension funds. At the end of 2015, there were 26 pension funds operating in Iceland, with total assets amounting to just over one-third of financial system assets. At that time, total pension fund assets amounted to 23 billion euros (3,300 b.kr.), or nearly one-and-a-half times GDP. Before the financial crisis in 2008, pension fund assets peaked at 126% of GDP in 2006. Since then they have increased by 52% in real terms, owing to improved returns, robust employment growth, and rising wages. As of end-2015, the majority of the funds' assets were domestic, whereas foreign assets accounted for just over 22% of total assets. The pension funds' largest asset classes are marketable bonds and bills, at about 46% of total assets, and stocks and unit share certificates, at about 43%. Iceland's pension funds also participate in lending activity within the financial system, and about

Chart 3.9

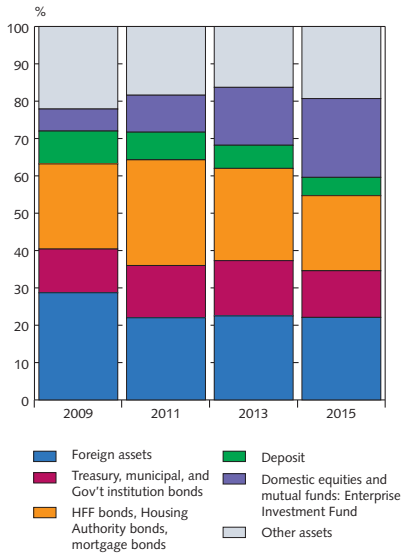
Pension funds' total assets



Source: Central Bank of Iceland.

Chart 3.10

Pension funds' assets



Source: Central Bank of Iceland.

8% of their assets are indexed loans granted to fund members. The pension funds' activities are supervised by the Financial Supervisory Authority (FME), and their investment policies are subject to strict criteria defined in the Act on Mandatory Pension Insurance and on the Activities of Pension Funds no., 129/1997. Relative to GDP, Iceland's pension funds are the second largest in the OECD, surpassed only by Dutch pension funds.

Payment intermediation

Currently, three systemically important payment and settlement systems are operated in Iceland: the Central Bank Real-Time Gross Settlement (RTGS) system; the retail payment system (netting system) of Greiðsluveitan ehf., a subsidiary of the Central Bank of Iceland; and the securities settlement system of the Icelandic Securities Depository (ISD). The RTGS system is most important systemically because of its primary function of settling high-value interbank payments. It settles individual payment instructions amounting to at least 75 thousand euros (10 m.kr.) between participants, with immediate finalisation. Net interbank positions of the other two systemically important systems are settled in the RTGS system at predefined intervals: the retail payment system twice a day at 8:30 and 16:30 hrs. GMT and the securities settlement system twice a day at 11:45 and 15:00 hrs. GMT, with delivery of securities versus payment (DvP). All three systems use Central Bank money during the settlement process. A graphic representation of system turnover relative to annual GDP and the number of transactions in all three systems can be seen in Chart 3.11.

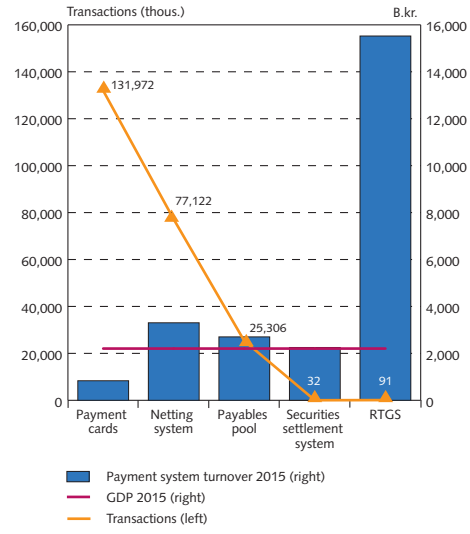
The Central Bank is responsible for the operational soundness of its systemically important payment systems. Furthermore, the Bank is responsible for oversight of systemically important financial market infrastructure, including the securities settlement system. The Bank applies the

CPSS (now CPMI) and IOSCO's Principles for Financial Market Infrastructures (e. PFMI). The Icelandic FME is responsible for supervising individual payment service providers and their infrastructure.

The Central Bank of Iceland has the exclusive right to issue banknotes and coin in Iceland. The currency is called the króna (pl. krónur). A total of five denominations of banknotes (10,000, 5000, 2000, 1000, and 500 kr.) and five denominations of coins (100, 50, 10, 5, and 1 kr.) are valid as legal tender in Iceland.

Chart 3.11

Payment systems[1]



1. Banknotes and coin in circulation at year-end 2015 amounted to 48,9 b.kr. The payables pool includes unpaid claims in the Icelandic banking system; e.g., general claims, bonds, bills and giro remittance slips.
Sources: System operators, Central Bank of Iceland.

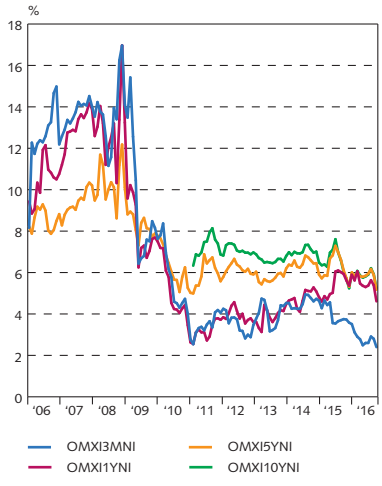
The Nasdaq Iceland stock exchange and the Nasdaq Central Securities Depository

Iceland currently has one authorised stock exchange operated by Nasdaq Iceland hf., where public securities listing and securities trading are carried out. Nasdaq Iceland hf. is a part of the Nasdaq Group and is licensed to operate a regulated market as well as a multilateral trading facility (MTF), the First North Iceland market. Both issuer rules and trading rules are largely harmonised with the sister exchanges run by Nasdaq Group in the Nordic countries (Stockholm, Helsinki, and Copenhagen).

Chart 3.12

Yields on non-indexed bond indices

At month-end January 2006 - August 2016



Source: Nasdaq Iceland.

Chart 3.13

Yields on indexed bond indices

At month-end January 2006 - August 2016

Source: Nasdaq Iceland.

Nasdaq CSD Iceland hf. is one of five central securities depositories (CSD) owned by the Nasdaq Group. The CSD is a registry, depository, and clearing house for securities in dematerialised (electronic) form. The main role of the CSD is to provide centralised registration and notary services for dematerialised securities in the Icelandic market and to maintain securities accounts at the top-tier level. The CSD is responsible for settling transactions with dematerialised securities. It also provides shareholder registry services to issuers, processes corporate actions, and provides information services. Settlement is carried out using Central Bank money. The CSD is a National Numbering Agency assigning international securities identification number (ISIN) codes to instruments issued in Iceland. It operates two National Market Practice Groups that aim to develop and harmonise procedures in the Icelandic post-trade environment.

Bond market

The Icelandic bond market consists of a primary market and a secondary market that is operated primarily on the Nasdaq Iceland exchange. Icelandic bond issues can be divided into three broad categories:

1. Nominal and inflation-indexed Treasury bonds. These are the largest bond series in the Icelandic market, amounting to 41% of market value as of end-June 2016 (6.3 billion euros, 856 b.kr).
2. Housing Financing Fund (HFF) bonds, which are inflation-indexed, interest-bearing bonds with an annuity format. Their market share was 23% at the end of June 2016, and their market value was 3.6 billion euros (491 b.kr.).
3. Bond issued by Government agencies, private corporations, or institutions such as banks. Their share of the market was 33% at the end of June 2016 (5.1 billion euros, 700 b.kr.).

The Icelandic bond market has several features that set it apart from bond markets in other countries. First, public entities are the largest issuers of listed bonds. By mid-2016, the market value of bonds issued by public entities or firms owned by them amounted to 76% of total issuance. Second, indexed issues are prominent in Iceland's domestic market (31%), as all HFF

Table 3.2 Bond market — market value 30.6.2016

	Value in EUR millions	*Share %*
Treasury securities	6,413	42
Treasury bills (3m and 6m)	148	
Treasury bonds (2, 5, and 10 years)	5,072	
Treasury bonds – CPI-indexed	1,194	
Housing Financing Fund	3,593	23
Corporate bonds	1,987	13
Financial institution securities	1,522	10
Municipal bonds	984	6
Foreign bonds	614	4
Bank bills	271	2
Total value	15,383	

Source: Nasdaq Iceland.

Chart 3.14

Equity market, OMXI8 index

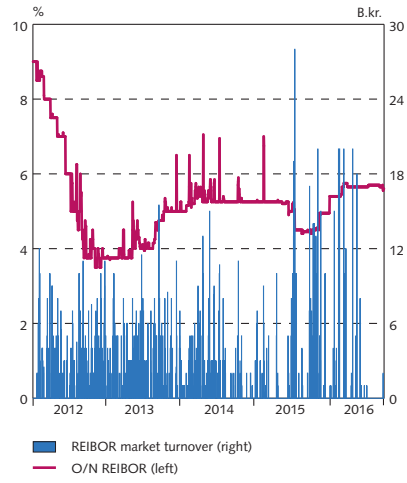
Daily data 2 January 2009 - 31 August 2016

Source: Nasdaq Iceland.

Chart 3.15

REIBOR interest rate (O/N) and REIBOR market turnover

Daily data 4 January 2012 - 31 August 2016



Source: Central Bank of Iceland.

bonds are indexed to the CPI, although indexed bond issuance has diminished in recent years. Third, secondary market turnover is concentrated in bonds carrying a State guarantee. Fourth, yields on the Icelandic bond market have been high in international comparison. In the first half of 2016, 10-year inflation-indexed bond yields fluctuated between 2.1% and 3.0%, while 10-year nominal bond yields fluctuated between 5.2% and 6.9%. Bond market turnover amounted to 13.6 billion euros (1,995 b.kr.) in 2015.

Equity market

The number of companies listed on the Icelandic stock exchange has risen in recent years, and total market capitalisation has increased. As of end-June 2016, a total of 17 companies were on the Nasdaq Iceland Main List and another three were listed on the First North market. At that time, the market value of Main List companies was 7 billion euros (966 b.kr.), or approximately 44% of year-2015 GDP, up from 3.5 billion euros (543 b.kr.) at the beginning of 2014. The OMXI8 index stood at 1,777 points as of end-June 2016.

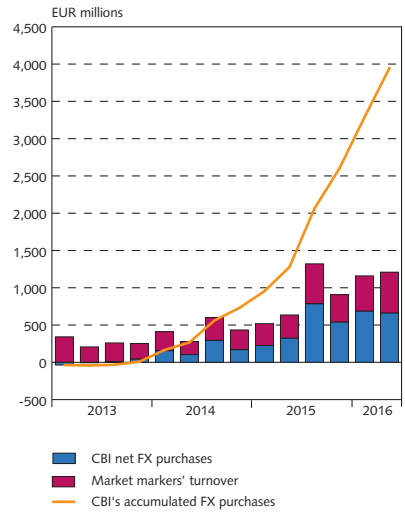
Money market

The money market consists of the interbank loan market and a secondary market. Secondary market trading is concentrated largely in very short-term Treasury bonds, Treasury-guaranteed bonds, and Treasury bills. Treasury bill turnover in the secondary market totalled at 868 million euros (127 m.kr.) in 2015.

The Central Bank of Iceland oversees the interbank market for krónur, where trading consists of unsecured loans between market makers. Members must submit indicative bid and ask quotes on various maturities ranging from overnight to 12 months. Trading on the market is almost

solely for one week or less. Once a day, the Central Bank fixes REIBID and REIBOR rates for the market. As of this writing, there are three participants in the market: Arion Bank, Landsbankinn, and Íslandsbanki. Market turnover totalled 2.4 billion euros (351.5 b.kr.) in 2015.

Chart 3.16
Interbank foreign exchange market
Q1/2013 - Q2/2016



Source: Central Bank of Iceland.

Foreign exchange market

At present, there are three market makers in the foreign exchange market for Icelandic krónur: Arion Bank, Íslandsbanki and Landsbankinn. Market makers conduct foreign exchange transactions among themselves during market hours and pledge to maintain continuous bids and offers in euros. Prices are quoted in krónur per euro, and each bid submitted is in the amount of one million euros. The market is open from 09:15 hrs. to 16:00 hrs. on weekdays.

The Central Bank oversees the interbank foreign exchange market, can trade with market makers, and publishes the daily official exchange rate of the króna based on the price offered by market makers. The Central Bank is not a market maker, however, and is therefore not obliged to conduct transactions with other market makers, even if requested to do so.

Turnover in the foreign exchange market was 3,383 million euros (492.7 b.kr.) in 2015, and the Central Bank's share was 1,872 million euros (272.4 b.kr.) (see Chapter 5).

4 Public sector

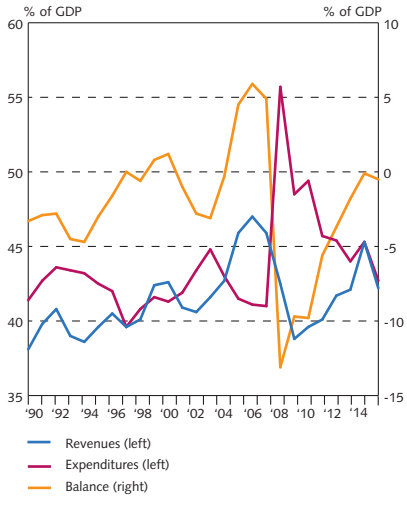
This chapter describes the public sector in Iceland, focusing on the division of responsibilities, central and local government finances, and the structure of the tax system. Recent developments in Iceland's sovereign credit ratings are discussed as well.

The size of the government sector

By 2015, Icelandic general government expenditure was back to the pre-crisis twenty-year average of 43% of GDP, after peaking at 56% of GDP in 2008, when the crisis struck. Iceland's expenditure ratio is at the lower end of the Nordic countries' range, together with Norway. It is at a level similar to that in the UK and Germany but higher than in Japan and the US, where levels are below 40%.

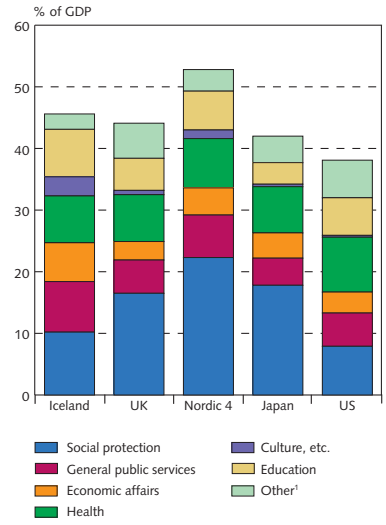
Several factors have allowed Iceland to function efficiently with a relatively small government sector: comparatively limited spending on social affairs, in part due to a relatively young population; historically low unemployment; and the historical absence of defence expenditure. Furthermore, fully funded private pension funds, organised by occupation, have overtaken the social security system's pay-as-you-go system in terms of benefit pay-outs, accounting for over

Chart 4.1
General government finances[1]



1. Revenues for 2013 adjusted for revaluation of the Treasury's share in Landsbankinn. The revaluation implies an increase in revenues of 1.4% of GDP.
Source: Statistics Iceland.

Chart 4.2
General government expenditures 2014



1. Public order and safety, defence, environment protection, and housing.
Source: OECD national accounts.

72% of pension payments in 2015, whereas public pensions are the dominant pillar in many other OECD countries (see Chapter 2). The relatively young population and high retirement age also help to lower overall pension expenditure.

On the revenues side, there was rapid growth during the pre-crisis upswing, bringing the revenue ratio up to the euro area average of around 45-47% of GDP. The ratio fell as low as 39% of GDP in the wake of the crisis but began to inch upwards after the economic recovery started to take hold, measuring 42% of GDP in 2015.

The composition of government revenues in Iceland differs noticeably from that in the other Nordic countries and the euro area. Social security contributions are low by international standards, partly because of the strength of the second-pillar pension system. Taxes on goods and services in Iceland have been similar in size to those in comparison groups, with value-added tax carrying most of the weight. Revenues from taxes on individual income rose throughout the 1990s, however, and are now approaching the rates in the Nordic countries.

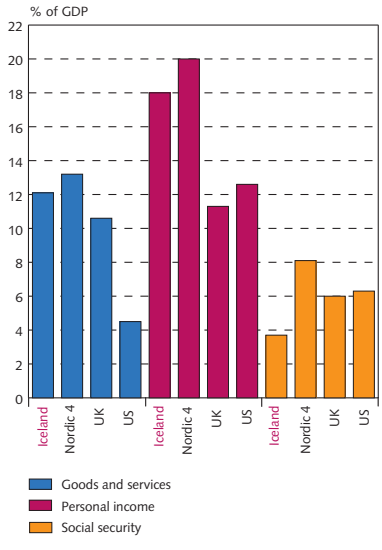
Division of responsibilities

Iceland's government sector is organised on two levels, central and local. Separate sets of social security accounts are maintained, but social security expenditures and revenues are authorised through the central government budget.

The central government regulates local governments and their authority to collect revenues, and it actually collects around two-thirds of local government revenues for municipalities, mostly through income taxes. It also administers and finances the social security sector of government.

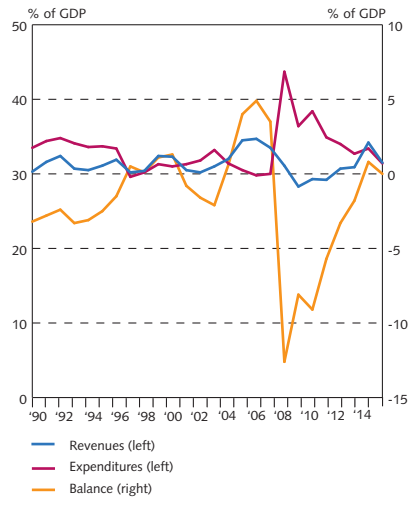
The central government is responsible for police, courts, foreign affairs, upper secondary and higher education, health services, institutional care for the elderly, general support and services

Chart 4.3
Importance of tax categories 2014



Sources: OECD, Central Bank of Iceland.

Chart 4.4
Central government finances[1]



1. Revenues for 2013 adjusted for revaluation of the Treasury's share in Landsbankinn. The revaluation implies an increase in revenues of 1.4% of GDP.
Source: Statistics Iceland.

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, mortgage interest subsidy payments for owner-occupied housing, child benefits, and parental leave at childbirth. The programmes are generally means-tested, although to varying degrees.

Local governments are responsible for local planning, most local infrastructure, day care and education from pre-school through the lower secondary level, care of disabled persons, and welfare services of various kinds, particularly to include services for the elderly apart from health care. They are also responsible for paying out rent benefits for residential housing and 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, notably by paying benefits to people who have exhausted their unemployment benefits or who for other reasons are ineligible for them.

General government finances

General government finances were in relatively good order between 2000 and 2007. Gross general government debt as a share of GDP, as defined by the Maastricht criteria, amounted to 27% in 2007. After the financial crisis struck in autumn 2008, the Government assumed large liabilities and substantial consolidation became necessary. As a result, general government gross debt rose to 95% of GDP in 2011 but has since fallen and was 69% of GDP in 2015. Government debt will decline still further in 2016, when the stability contributions are allocated towards payments of government debt (see Chapter 8).

Central government finances

Since 1980, central government revenues have been fairly stable, fluctuating between 28-33% of GDP, in tandem with the business cycle. Only in the pre-crisis upswing did they rise above that range.

The composition of central government revenues in 2015 is shown in Chart 4.5. Direct taxes generate almost half of total revenues, while indirect taxes constitute 36%. By design, Iceland's central government revenues are strongly cyclical for three main reasons. First, the state personal income tax, which accounts for some 20% of central government revenues, has a progressive predetermined bracket structure, including a sizable personal exemption, or zero bracket (see Box 4.1). This implies that greater-than-expected income growth translates into a higher-than-expected ratio of taxes to total income. Second, 40% of central government revenues come from taxes targeting consumption goods and services. These taxes fall most heavily on durables, most of which are imported. Such consumption has proven very sensitive to the business cycle, balance sheet effects, and the cyclical real exchange rate. Third, revenues from taxes on corporate profits, households' financial income, and certain financial transactions are by nature sensitive to the business cycle. These revenues grew from just under 4% of GDP in the pre-crisis years to almost 5½% at the height of the upswing and then fell to below 3½% of GDP in 2009-2013 despite significantly increased tax rates, but rose again to 4.1% of GDP in 2015. Combined central government revenue from taxes on consumption fell from 15½% in 2005-2007 to around 12% of GDP in 2009-2015. The payroll tax, or social security contribution, is far more stable,

except for the general understanding that it needed to rise to cover unemployment costs during the aftermath of the crisis. It has since been reduced somewhat.

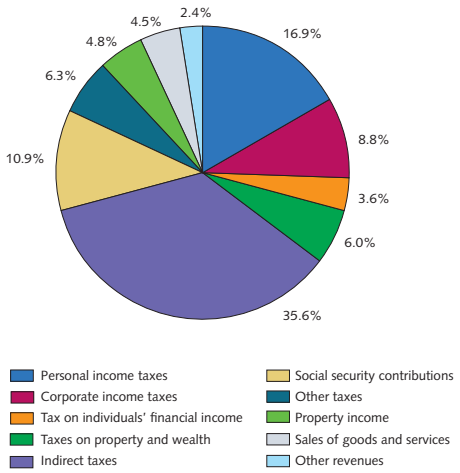
The composition of central government expenditures is shown in Chart 4.6. Health and social protection accounts for almost half of expenditures. The financial crisis increased social protection expenses, chiefly through unemployment costs, which rose from 0.4% of GDP in 2008 to 1.7% in 2009 before starting to taper off again. They were down to 0.5% in 2015.

With falling debt, central government interest expense fell from 3½% of GDP in the mid-1990s to around 2% in 2005-2007, in spite of steep increases in interest rates beginning in 2004. As a result of the debt burden imposed by the banking crisis, central government gross interest expense rose to 6% of GDP in 2009 but had fallen to 4.4% in 2015. The increased foreign debt was used primarily to build up the Central Bank's foreign exchange reserves, however. Government deposits in the Central Bank accrue interest income that must be deducted from interest expense in order to determine the net interest burden.

Beginning in 1997, the central government made an effort to pre-fund civil service pension liabilities, which are not classified as debt under the Maastricht definition, but this stopped in 2009, after the financial crisis. Pre-funding of pension liabilities is expected to resume again in 2017. Adding pension liabilities and short-term payable accounts raises the debt figure by 26 percentage points, to 87% of GDP as of 2015.

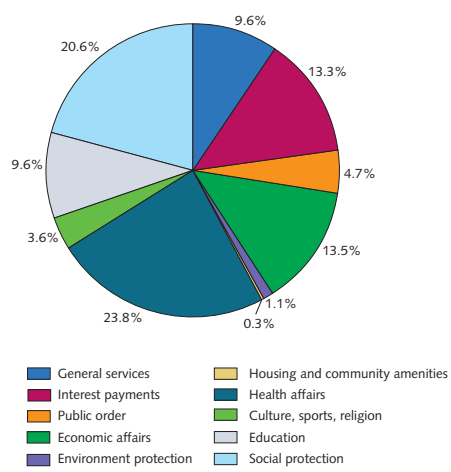
In December 2015, Parliament passed new legislation on public sector finances that imposes stringent rules on operational performance and developments in the debt level (see Box 4.2). The new medium-term fiscal framework is designed to address gaps in the previous legal framework from budget formulation to execution.

Chart 4.5
Composition of central government revenues in 2015



Source: Statistics Iceland.

Chart 4.6
Composition of central government expenditures in 2015



Source: Statistics Iceland.

Local government finances

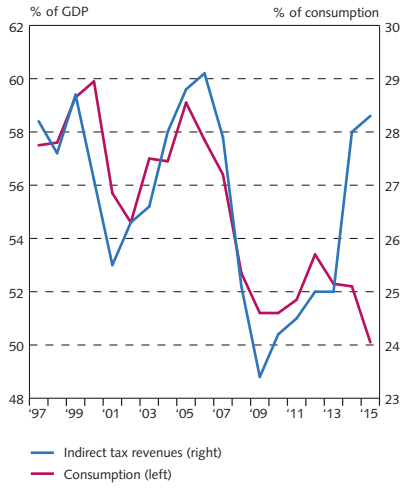
Local government expenditures amounted to 13% of GDP in 2015. This ratio has risen over the years with increased responsibilities for education and care for the disabled. Education, from pre-school to age 16, accounts for more than one-third of expenditures, with culture and recreation and welfare expenditures accounting for about 20% each.

The local government sector broke a 14-year string of deficits in 2005 and remained in surplus in 2006 and 2007, but has returned a slight deficit since then. With the 2008 crisis, local government revenue relative to GDP fell back to the 2005 level and has remained there since. The two largest local government revenue sources, the flat municipal personal income tax that contributed 61% of local government revenues (close to 8% of GDP) in 2015 and a property tax contributing 13% of revenues (1.6% of GDP), have remained stable, however.

The financial crisis and the depreciation of the króna in 2008 led to an increase in local government debt from just under 5% of GDP in 2007 to 9% of GDP in 2009. The debt level subsided to 7.5% of GDP in 2015.[1] Adding pension liabilities and short-term payable accounts raises the debt figure to just over 13% of GDP as of 2015.

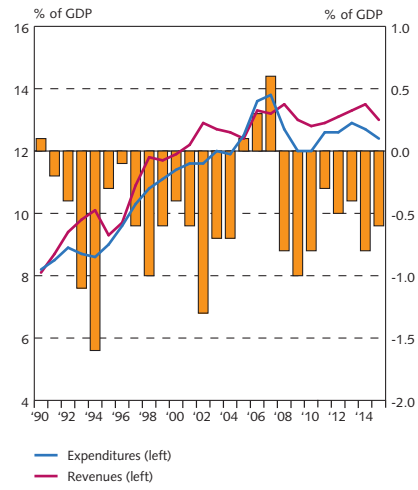
In addition to the direct effects of the crisis on local government balance sheets, several local governments operate utilities or other necessary infrastructure through separate corporations. Some of these accumulated significant foreign-denominated debt before the crisis, whereas their revenue base was domestic. In the most important cases, including Orkuveita Reykjavíkur (Reykjavik Energy), the shortfall has been covered through service charges. Orkuveita Reykjavíkur and other utility companies have managed to recover to a large extent from the 2008 financial crisis; for instance, Orkuveita Reykjavíkur's equity ratio has risen from 14% in 2009 to 37% as of 2015.

Chart 4.7
Procyclicality of indirect taxes



Sources: Statistics Iceland, Central Bank of Iceland.

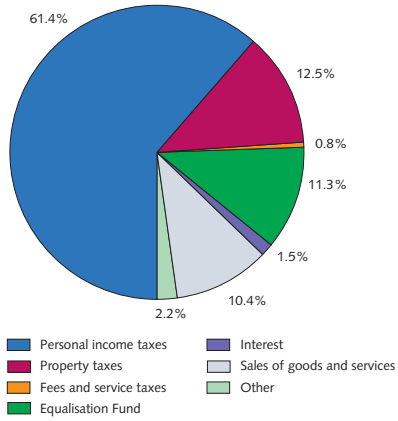
Chart 4.8
Local government finances



Source: Statistics Iceland.

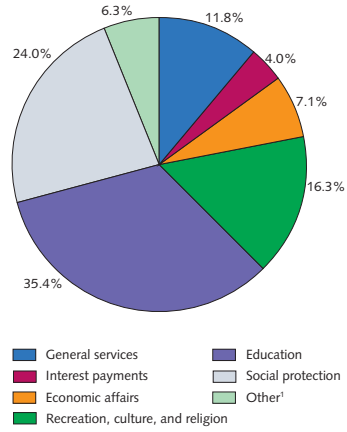
1. Debt as defined by the Maastricht criteria.

Chart 4.9
Composition of local government revenues in 2015



Source: Statistics Iceland.

Chart 4.10
Composition of local government expenditures in 2015



1. Health, housing, environment, public order.
Source: Statistics Iceland.

Parliament passed a new Local Government Act in September 2011 (see Box 4.2). Multi-year budgeting and two fiscal rules were introduced. The new Act tightened budget procedures and financial oversight considerably.

Box 4.1
The tax system

In 2015, the central government derived around 88% of its revenues (27.6% of GDP) from taxes and social security contributions, while the comparable number for local government was 74.7% (9.3% of GDP).

The personal income tax is levied jointly by the central and local governments. The local government tax, a flat percentage of total taxable income, varies slightly by municipality, averaging just below 14½% in 2015. It yielded 61.4% of local government revenue (7.6% of GDP) in 2015.

The central government tax is progressive, with a rising marginal rate and a zero tax bracket structured as a rebate on taxes due. The result is a four-bracket overall tax structure. The rates and thresholds are shown in Table 1.

In principle, taxes are levied on each individual, but a couple may share the rebate (i.e., the zero bracket) and a higher-earning spouse may utilise up to half of the unused part of the 23.9% bracket of a lower-earning spouse, subject to a maximum of 21,116 euros (2.8 m.kr.). The central government income tax yielded 5.8% of GDP and 17.8% of central government revenue in 2015.

The central government taxes individuals' financial income – dividends, rental income, interest, and capital gains – at a rate of 20%, with an exemption for interest income up to 943 euros per person per year (125 thousand kr.) and an exemption for 50% of rental income earned by individuals. The tax yielded 1.2% of GDP and 3.8% of central government revenue in 2015.

Table 1 Main features of the Icelandic tax system in 2016

	2016[1]	*Revenue 2015 % of GDP*
Central government personal income tax[2]		5.8%
Bottom bracket/starts at[3]	22.7%/12,450 euros (1.74 m.kr.)	
Middle bracket/starts at	23.9%/ 28,620 euros (4 m.kr.)	
Top bracket/starts at	31.8%/ 71,837 euros (10.04 m.kr.)	
Local government personal income tax		7.7%
min/average/max[4]	12.44%/14.45%/14.52%	
Zero bracket for combined income tax[3]	12,450 euros / 1.74 m.kr.	
Tax on individuals' financial income[5]	20.0%	1.2%
Payroll taxes	7.35%	3.6%
Corporate income (profit) tax	20.0%	2.9%
Property taxes		1.5%
Residential property, average/max	0.286%[6]/0.625%	
Hospitals, schools and related, avg./max	1.32%	
Commercial property, average/max	1.638%[6]/1.650%	
Value-added tax		8.3%
General rate	24.0%	
Reduced rate[7]	11.0%	

1. Based on average EURISK exchange rate year-to-date. 2. Couples are taxed individually, except that a) a couple may share their rebates or double zero brackets; and b) a person may utilise up to half of a spouse's unused 23.9% bracket up to a maximum of 21,116 euros (2.8 m.kr.). 3. The zero bracket is due to the 623 thousand kr. Treasury rebate against the combined income tax rate of 22.7% +14.44%. 4. Maximum rate 14.52% (temporary maximum 15.05% in 2016). Municipalities under financial duress may raise their rate by an extra 10%. 5. Interest income up to 943 euros (125 thousand kr.) and 50% of rental income from residential housing is exempt. 6. Average from 2014. 7. For items in the 7% category and items exempt from the tax, see main text.

Sources: Association of Local Authorities, Directorate of Internal Revenue, Parliament of Iceland website (www.althingi.is), Statistics Iceland.

The corporate income tax, currently 20% of profits, yielded 2.9% of GDP and 9.2% of revenues in 2015. There is a payroll tax of 7.35% of the applicable wage bill. The payroll tax is earmarked for financing unemployment benefits, maternity/paternity leave, and other similar expenses. It was raised in increments from 5.34% to 8.65% in the wake of the 2008 crisis in order to finance unemployment benefits, but has been reduced somewhat since 2012. Along with other taxes on payrolls, it yielded 3.6% of GDP and 11.5% of revenue in 2015.

Since the 2008 crisis, Parliament has introduced three measures of taxation on financial enterprises: i) A tax based on the debt of financial enterprises, introduced for 2011 at 0.041%. In 2014, the rate was raised to 0.376% and the tax was extended to include financial institutions in winding-up proceedings in order to finance the Government's household debt relief programme; ii) An additional payroll tax on financial enterprises, introduced for 2012 at 5.45%, now 5.5%; iii) An additional 6% charge on profits in excess of 1 b.kr., also introduced for 2012. Along with older taxes financing the Financial Supervisory Authority (FME) and the office of the Debtor's Ombudsman, special taxes on the financial sector yielded 1.8% of GDP and 5.8% of State revenues in 2015.

Taxation of property and financial transactions is in three main parts: i) Property taxes levied by local governments on the assessed value of real estate. In 2014, property taxes averaged 0.286% on residential property; 1.320% on schools, health care centres, and other like institutions; and 1.638% on commercial property. The combined yield was 1.5% of GDP in 2015 and

12.1% of local government revenue; ii) A stamp tax collected by the central government, yielding around 0.2% of GDP. After a simplification in 2014, it only applies to transfer of deeds and is 0.8% of the value if the deed holder is an individual, but 1.6% for corporations and other legal entities; and iii) An estate tax with a main rate of 10% (0.1% of GDP). The two state taxes yielded 0.3% of GDP in 2015 and 1.1% of central government revenue.

The largest source of central government revenue is the value-added tax on domestic business, yielding 8.1% of GDP and 25.8% of revenue in 2015. A rate of 24% is charged on most goods and services, while food, accommodation, road tolls, books, newspaper and media subscriptions, audio recordings, indoor heating, and selected services are taxed at 11%. Some categories of goods and services are exempt, including financial services, travel agencies, health services, daycare, education, cultural and athletic events and services, passenger transportation, postal services, the activities of writers and composers, and the services of priests and funeral parlours.

There are central government excise taxes and customs duties on imports of motor vehicles and on fuel (earmarked in part for road construction), as well as an annual licence tax on vehicles. In total, these levies yielded 1.97% of GDP in 2015. A general excise tax is levied on a range of goods at three rates of 15%, 20%, and 25%, while unit fees are charged on some goods. Alcoholic beverages and tobacco are also taxed. Customs duties range from 0% to 30% of the CIF value, although most imports from the EU as well as Iceland's EFTA partners (Norway, Liechtenstein, and Switzerland) are exempt under the EEA Agreement. Higher duties apply to various agricultural products. Central government excise taxes (including those on motor vehicles and fuel), tariffs, and user taxes accounted for around 3.6% of GDP and 11.3% of central government revenues in 2015.

In total, the central and local government taxes and social security contributions described above accounted for 83% of general government revenues and over 99% of tax revenues in 2015. As for the remaining 17% (7.64% of GDP), other taxes accounted for 1% of revenue, grants for 4.3%, property income for 4.5%, sales of goods and services for 6.5%, and miscellaneous income for the remaining 0.7%.

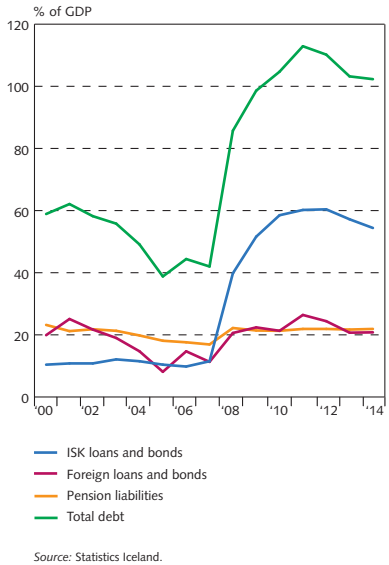
Government holdings in the business sector

In the period 1997-2007, the central government pursued an extensive programme of privatisation. After the privatisation process came to an end, the State's most important business holdings were in Landsvirkjun, the Housing Financing Fund (HFF), and a few smaller financial institutions.

After the financial collapse in October 2008, the State recapitalised the banking system by establishing new banks.[2] The original plan was that the new banks would initially be Government-owned, but according to agreements reached with the estates of the old banks, the estates took a significant equity stake in the new banks. Initially the State held 98% in Landsbankinn, 13% in Arion Bank, and 5% in Íslandsbanki, at a cost of 1.5 billion euros (196 b.kr.), or 12% of GDP. With the settlement of the Glitnir Bank estate through composition agreements based on stability conditions in late 2015, the State received a 95% stake in Íslandsbanki in addition to its previous 5%, making it the sole owner of the bank (see Chapter 8). In addition, through the stability conditions, the State received a small amount of shares in various companies that are now in the process of being sold.

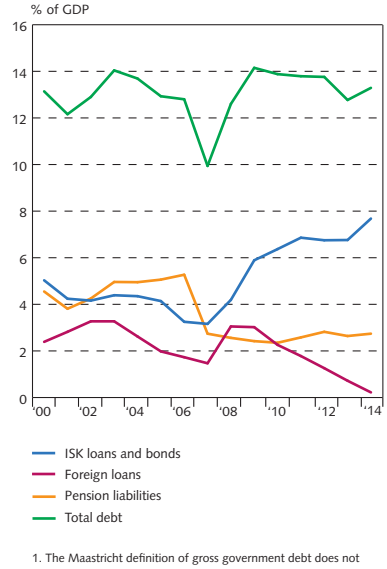
2. See Box 3.1 in the 2014 edition of *Economy of Iceland*.

Chart 4.11
Central government liabilities



Source: Statistics Iceland.

Chart 4.12
Local government liabilities[1]



1. The Maastricht definition of gross government debt does not include pension liabilities and is more akin to loans and bonds.
Source: Statistics Iceland.

Local government holdings are mainly in geothermal production of heating and electricity, as the municipalities own almost all of the geothermal power companies, which supply heating to most homes in Iceland and, on an increasing scale, provide electricity to the aluminium industry. Several local governments also own operating companies for harbours.

Government guarantees

State guarantees must be authorised explicitly in legislation and are generally confined to government enterprises and institutions related to government. Local governments, on the other hand, are prohibited by law from granting loan guarantees except to their own subsidiary institutions.

Central government accounts for 2015 show that the Government has outstanding guarantees equivalent to 51% of GDP. Some 75% 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 23% of the guarantees are for the debt of Landsvirkjun, the national power company.

Treasury foreign debt

The Republic of Iceland has been a modest borrower in the international markets since 2014, as it was before the financial crisis. As a result of the crisis, it became necessary to step up foreign borrowing. In 2008, the Government of Iceland negotiated a Stand-By Arrangement with the IMF, which provided Iceland with access to loan facilities from the IMF, the Nordic countries, and Poland. Bilateral loans from the treasuries of Denmark, the Faeroe Islands, Finland, Poland, and

Table 4.1 Republic of Iceland foreign bond issues[1]

Amount in millions	*Issue date*	*Maturity*	*Currency*	*Loan facility amount*	*Outstanding amount*
Eurobond (MTN)	2012	2022	USD	1,000	1,000
Eurobond (MTN)	2014	2020	EUR	750	750

1. Figures are as of 31 July 2016.
Source: Central Bank of Iceland.

Sweden were granted to the Treasury, whereas the loans from the IMF and Norway were granted to the Central Bank of Iceland. Furthermore, the Treasury launched three successful bond issues from 2011 to 2014 in order to rebuild confidence in foreign credit markets and used the proceeds to refinance other foreign debt. All the loans taken by the Treasury and the Central Bank, as well as two of the bond issues, have now been paid in full. At the end of July 2016, two foreign bonds were outstanding, leaving the Treasury's foreign debt at 1,654 million euros (219 b.kr.).

Under a special agreement with the Minister of Finance and Economic Affairs, the Central Bank is responsible for the implementation of both domestic and foreign borrowing for the Treasury. The Republic of Iceland has never failed to honour its financial obligations and has always paid when due the full amount of principal, interest, and sinking fund instalments for all internal and external obligations.

Republic of Iceland credit ratings

Although Iceland had unsolicited ratings beginning in 1986, the first formal long-term credit ratings for the Republic of Iceland were issued in 1994, in the single-A category. In the years that followed, Iceland's credit ratings steadily improved, reaching the AA - AAA categories prior to the financial crisis in late 2008. The ratings were lowered during the crisis, although investment-grade ratings were maintained by both Moody's and Standard & Poor's (S&P). The Republic of Iceland's credit ratings have been steadily recovering in recent years.

Fitch Ratings upgraded Iceland's long-term foreign issuer default rating to BBB+ in July 2015. Following Fitch's update of its general sovereign rating criteria in 2016, Iceland's long-term local currency rating stands at BBB+, the short-term foreign currency rating at F2, and the country ceiling at BBB+. The outlook was rated as stable. In its July 2016 report, Fitch stated that "[t]he main factors that, individually or collectively, could trigger positive rating action are: a track record of continued economic growth without excessive macroeconomic imbalances; continued improvements in debt dynamics, supported by prudent fiscal policy; and continued reductions in external vulnerability." On the other hand, factors that could trigger a negative rating action

Table 4.2 Republic of Iceland credit ratings

		Foreign currency		*Local currency*		
	Affirmed	*Long-term*	*Short-term*	*Long-term*	*Short-term*	*Outlook*
Moody's	September 2016	A-3	…	A-3	…	Stable
Standard & Poor's	July 2016	BBB+	A-2	BBB+	A-2	Stable
Fitch	July 2016	BBB+	F2	BBB+	F2	Stable

Source: Central Bank of Iceland.

included "evidence of overheating in the domestic economy; excessive capital outflows after the lifting of capital controls, leading to external imbalances and pressures on the exchange rate; and a weakened commitment to fiscal consolidation, for example through continued pro-cyclical fiscal policy that would reverse or stall the decline in the public debt ratio".

In September 2016, Moody's upgraded Iceland's Government bond and issuer ratings by two notches, to A3 from Baa2, with a stable outlook. Moody's also raised the ceilings on local currency debt and deposits to A1 from Baa1 and the ceilings on long-term foreign currency debt and deposits to A3 from Baa2. The ceilings on short-term foreign currency debt and deposits are unchanged at P-2. With this rating action, Moody's concluded the review for upgrade which had commenced on 10 June 2016. In its press release, Moody's identified the two main drivers as: (1) that further significant improvement in government debt metrics was expected, and (2) that event risk had been reduced due to the cautious liberalisation of capital controls. Moody's further stated that the stable outlook balanced "… the positive impact of moderate but sustained growth and continued fiscal consolidation against, for example, the residual risks from capital account liberalization, the potential economic and financial pressures associated with substantial capital inflows and tight labour markets, and finally the evolving political dynamics."

S&P upgraded Iceland's long- and short-term foreign and local currency sovereign credit ratings from BBB-/A-3 to BBB/A-2 in July 2015 and again to BBB+/A-2 in January 2016. In its most recent credit report, published in July 2016, S&P affirmed Iceland's long-term local and foreign currency rating of BBB+ and the local and foreign short-term rating of A-2, with a stable outlook. S&P stated that it "could raise the ratings if capital controls are fully lifted without putting the balance of payments or financial stability at risk. We could also raise the ratings if the ratio of net general government debt to GDP declines materially faster that we presently anticipate." On the other hand, the credit rating could be lowered if the agency "perceived that the sizable wage hikes led to a significant overheating of the domestic economy with heightened risks for the country's monetary, fiscal, or external stability. We could also lower the ratings if further liberalization of capital controls led to a significant decline in net reserves, placing renewed pressure on the Icelandic krona exchange rate and the financial system."

Box 4.2
Iceland's fiscal framework

The fiscal impact of the financial crisis and the extent of fiscal consolidation required thereafter helped to build the political consensus needed to implement reforms to the fiscal framework. Two new acts of law have been passed: the Local Government Act in September 2011 and the Act on Public Sector Finances in December 2015.[1]

The Local Government Act
Local government reforms are quite extensive. First, two numerical fiscal rules were adopted so as to provide a long-term anchor and a medium-term fiscal path that is quantified in a required

1. The IMF's Fiscal Affairs Department (FAD) played a key role in the process by providing numerous recommendations in four reports prepared by technical advisory missions. The aim of the reports was to put Iceland's fiscal framework at the forefront of international budget practice.

multi-year budget. Second, municipalities are subjected to a three-tiered approach to external financial monitoring based on the principle of earned autonomy. Third, there are sanctions, ranging from mild to severe, for violating the fiscal rules. Fourth, local governments are monitored by an independent external body, the Municipal Fiscal Oversight Committee (MFOC).

The two numerical rules are a balanced budget rule and a debt ceiling rule, and both extend to Parts A and B[2] of the budget. The first rule prohibits municipalities from running operating deficits within a rolling period of three years. The second rule subjects municipalities to a maximum debt-to-revenue ratio of 150%. The definition of debt is broad and includes all liabilities and obligations.

The MFOC's task is to monitor local government finances, including accounting practices and budget proposals, and compare them to the criteria in the Local Government Act and any regulations deriving therefrom. The Committee subjects municipalities to three-tiered monitoring, which entails classifying the municipalities into one of three categories based on whether, and by how much, they are in breach of the rules. Both the autonomy and the degree of external monitoring to which a municipality is subjected vary depending on its category. The MOFC has the authority to impose sanctions on municipalities that are in breach of the rules and to recommend to the Minister of Local Governments that a municipality's fiscal powers be suspended and vested in a financial management board.

The Act on Public Sector Finances

The new Act on Public Sector Finances is a vast improvement over the previous legislation, as it addresses the gaps, loopholes, and inconsistencies in the old legal framework that helped contribute to lack of fiscal discipline before the crisis. Many features of the former Financial Reporting Act were preserved, and a number of processes and best practice guidelines have been elevated to the statutory level.[3] The scope of the Act has been expanded to include all sections of central and local government budgets and all public corporations. Ministerial responsibilities are also expanded considerably.

The main objective of the new legislation is to provide for sound macro-fiscal policy based on comprehensive medium-term budgeting and reporting. The new medium-term fiscal framework (MTFF), the cornerstone of the new Act, is designed to address gaps in the old legal framework from budget formulation to execution. The objective is to set up a transparent and credible MTFF that serves the purpose of mapping out macroeconomic and fiscal policy-making. The Act establishes a procedural fiscal rule that maps out a five-year general government fiscal path with the following three fiscal rules:

1. The overall result over a five-year period must always be positive, and the annual deficit may not exceed 2.5% of GDP.
2. Total debt, excluding pension obligations and accounts payable, but including cash balances and deposits, may not exceed 30% of GDP.[4]
3. If the net debt ratio rises above 30%, the excess portion must decline by an average of at least 5% (1/20) per year in each three-year period.

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2. Falling under Part A are activities operated directly through the Treasury or municipal account, while Part B includes the operations of Government-owned companies.
3. The FAD's third report contained 46 very specific recommendations. Most of the recommendations have been incorporated into the new Act on Public Sector Finances, some with variations.
4. This definition of debt is an approximation of the conventional definition of net debt, where all monetary assets are deducted from liabilities. Here, however, only cash and readily disposable monetary assets are deducted. This definition is used in part because the Treasury has taken account of loans taken, for example, to expand the Central Bank's foreign exchange reserves. Those funds have not been used for operations and are available for repayment of the loans. This definition gives a clearer picture of how much debt must be paid down with cash from operations.

Every new Government is obligated to formulate and submit to Parliament, as a proposed parliamentary resolution, a Statement of Fiscal Policy setting out the five-year fiscal path according to the procedural fiscal rule. Each year throughout the tenure of the five-year plan, the Minister of Finance shall present a fiscal plan or a medium-term fiscal strategy to Parliament.[5] An independent fiscal council assesses whether the fiscal policy and fiscal plan are in line with the fundamental values and fiscal rules in the legislation.

Parliament shall authorise budgetary allocations to various fields and functions, plus a contribution to a general contingency fund rather than to a large number of agencies. This will reduce budget items from approximately 900 items to 150-210.

When the fiscal budget is implemented, each minister must report to the Government and the Parliamentary Budget Committee on the implementation of the budget. Fiscal reporting is an important part of progressive fiscal responsibility laws. The scope of reporting is increased significantly with the new Act, and reports on budget outcome are moved forward so that the previous year's outcome is available well in advance of the fiscal plan.

5. This shall be done at the spring legislative session in the form of a parliamentary resolution.

5 Monetary and financial stability policies

This chapter describes the frameworks for monetary policy and financial stability in Iceland. It explains the objectives and the role of the Central Bank's Monetary Policy Committee and describes the Bank's main monetary policy instruments. It also elaborates on financial stability policies and the Central Bank's role in promoting an efficient and safe financial system.

The objective of monetary policy

The Central Bank of Iceland was established as a separate institution in 1961. The current Act on the Central Bank of Iceland entered into force in May 2001 and included substantial changes from the previous Act. In the 2001 Act, maintaining price stability was defined as the Bank's single main objective. The Bank was also granted financial and instrument independence, and any direct access by the Government to Central Bank financing was prohibited.

In a joint declaration issued by the Government and the Central Bank of Iceland on 27 March 2001, the price stability goal was further defined as an inflation target of 2½%, measured in terms of the twelve-month rate of change in the consumer price index (CPI). The declaration requires the Central Bank to keep inflation as close to the target as possible, on average. If inflation deviates from the target by more than 1½ percentage points in either direction, the Bank is obliged to submit a report to the Government, explaining the causes for the deviation, how the Bank intends to respond, and when it expects the inflation target to be reached again. The report is to be made public.

Since the financial crisis in 2008, monetary policy has used a wider range of policy instruments than it did before the crisis. The Central Bank has been active on both sides of the foreign exchange market (see Table 5.1). Furthermore, a new policy instrument to temper and affect the composition of capital inflows was introduced in June 2016 (see Box 5.1).

The Monetary Policy Committee

Amendments made to the Central Bank Act in 2009 included changes to the governance structure of the Bank, replacing the previous three-member Board of Governors with a single Governor and a Deputy Governor. The amended 2009 Act also provided for the establishment of a five-member Monetary Policy Committee (MPC) that takes decisions on the application of monetary policy instruments. The MPC consists of the Governor, the Deputy Governor, one Central Bank executive responsible for formulating monetary policy, and two outside experts in the field of economic and monetary policy appointed by the Minister of Finance and Economic Affairs.

According to the amended Act, decisions by the MPC must be based on the Bank's objectives and a thorough assessment of the current situation and the outlook for the economy, monetary developments, and financial stability. In implementing monetary policy, the MPC bases its deci-

Table 5.1 Monetary policy arrangements in Iceland since 1970

1970-1973	After the collapse of the Bretton Woods system, the Icelandic króna followed an adjustable peg to 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 linked to the US dollar and then to 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 increments.
1990-1995	More emphasis was placed on exchange rate stability as the anchor of monetary policy. Until 1992, the currency peg was specified vis-à-vis a basket of 17 currencies, weighted according to merchandise trading shares, with ±2¼% fluctuation bands. The basket was redefined in 1992, with the ECU given a weight of 76%, the US dollar 18%, and the Japanese yen 6%. The króna was devalued twice in this period, by 6% in November 1992 and by 7½% in June 1993. In September 1995, the fluctuation band was widened to ±6%, in response to the abolition of capital controls. The currency basket was also changed. The new basket contained 16 currencies, weighted by their share in Iceland's trade in goods and non-factor services.
1996-2000	Fluctuation of the króna within the bands increased as the foreign exchange market deepened and emphasis on price stability relative to exchange rate stability increased. Reflecting this, the exchange rate band was widened to ±9% in February 2000.
2001-2008	The exchange rate target was abolished in March 2001 and a formal 2½% inflation target adopted. The Central Bank was granted full independence in the application of its monetary policy instruments. The currency was allowed to move freely, with limited intervention in the foreign exchange market.
2008-	Following the financial crisis, and as a part of Iceland's IMF programme, monetary policy emphasised exchange rate stability together with the inflation target as a key ingredient in re-establishing nominal stability and securing low and stable inflation. Active use of foreign exchange intervention to lean against excessive exchange rate fluctuations has become an important part of the post-crisis monetary policy framework, dubbed "inflation targeting plus", which also emphasises the use of additional policy instruments such as macroprudential tools and capital flow management measures.[1] Decisions on the application of the Central Bank's monetary policy instruments are taken by the Monetary Policy Committee, which was established by law in 2009.

1. For further discussion, see the Central Bank report "Monetary policy in Iceland after capital controls", *Special Report* no. 4, 2010.
Source: Central Bank of Iceland.

sions, among other things, on an appraisal of economic developments and the outlook for the domestic economy as presented in the Bank's quarterly *Monetary Bulletin*.

In order to enhance transparency, the 2009 Act also stipulated that the minutes of MPC meetings are to be made public and an account given of the Committee's decisions and the premises upon which they are based. Furthermore, the MPC is required to submit a written report on its activities to Parliament twice a year. The contents of the report are to be discussed in the parliamentary committee of the Speaker's choosing.

Monetary policy instruments

The Bank's monetary policy instruments are its interest rates on transactions with credit institutions, open market operations, decisions on minimum reserve requirements, and intervention in the foreign exchange market. Financial institutions subject to reserve requirements – commercial banks, savings banks, and credit institutions – are eligible for Central Bank facilities. Icelandic branches of foreign financial institutions are eligible as well. According to the Rules on Central Bank Facilities for Financial Undertakings, securities issued in Icelandic krónur by the Republic of Iceland are the primary instruments eligible as collateral for Central Bank facilities.

Financial institutions' regular transactions with the Central Bank can be divided into two categories: standing facilities and open market operations. Financial institutions may avail themselves of standing facilities at any time and on their own initiative. The facilities offered by the Central Bank are deposits and overnight loans against acceptable collateral. Interest on overnight loans forms the ceiling of the Central Bank's interest rate corridor, while the current account deposit rate determines the floor.

The Central Bank's open market operations take place once a week on Wednesdays. Since 2009, the Bank's counterparties have had abundant liquidity. From autumn 2009 through May 2014, the Bank offered 28-day certificates of deposit (CD) for sale; however, in May 2014 the Bank made modifications to its monetary policy conduct without changing the monetary stance. Instead of issuing CDs, the Bank now offers two types of term deposits: one-week term deposits and one-month term deposits issued at the beginning of each month. The objective of these changes was to enhance the effectiveness of liquidity management and to increase efficiency from the standpoint of the Bank's balance sheet.

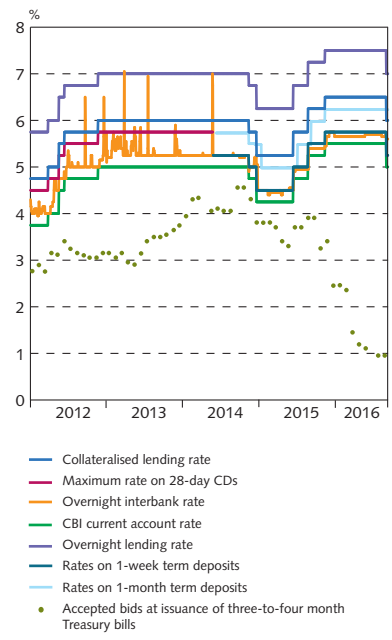
The key Central Bank interest rate – i.e., the rate that is most important in determining short-term market rates – may vary from time to time. Owing to abundant financial system liquidity, the key rate is the rate on one-week term deposits, as of this writing. As a general rule, the Bank does not offer its counterparties deposits and loan facilities at the same time. Thus counterparties do not currently have access to collateralised loans, except for emergency overnight loans.

Financial stability and the Central Bank

In performing its role of promoting financial stability and a sound and efficient financial system, including domestic and cross-border payment systems, as is stipulated in the Central Bank Act, the Central Bank of Iceland focuses on assessing risks among systemically important financial institutions, identifying external imbalances, and securing safe and sound operation of payment and securities settlement systems. The Bank regularly analyses the risks and threats to the stability of the Icelandic financial system in order to detect changes and vulnerabilities that could lead to a serious crisis, and it communicates its overall assessment to markets and decision-makers through the publication of its semi-annual *Financial Stability* report. The bank also publishes an annual report entitled *Financial Infrastructure*.

To promote financial stability, the Central Bank sets prudential rules on credit institutions' liquidity, funding and foreign exchange balance. In its work on financial stability, the Central Bank takes into account international agreements and standards for best practice.

Chart 5.1
Central Bank of Iceland interest rates and short-term market rates
Daily data 1 January 2012 - 31 August 2016



Source: Central Bank of Iceland.

Prudential framework

Iceland's European Economic Area (EEA) membership entails that financial regulation is based on EU regulations and directives. Also, technical standards and guidelines are provided by the three European supervisory authorities, EBA, EIOPA, and ESMA.

The Financial Supervisory Authority (FME) supervises financial undertakings and entities operating in the financial and insurance sectors, while the Central Bank issues liquidity regulations and carries out liquidity supervision. The FME and Central Bank of Iceland have a cooperation agreement whose main aim is to strengthen cooperation and exchange of information between the two institutions.

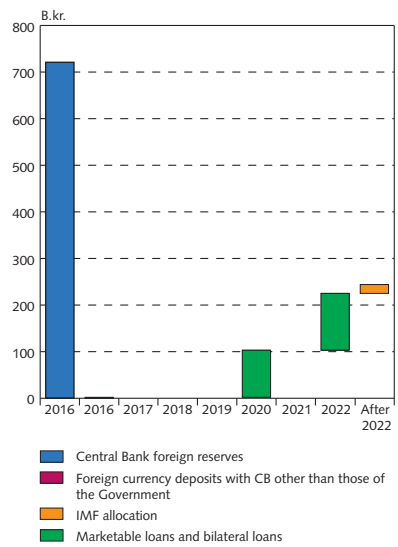
A new Act on a Financial Stability Council (FSC) entered into force in 2014. The Council serves as a forum for cooperation, information sharing, and policy-making regarding financial stability, and it coordinates Government responses in the event of a financial crisis. The Council makes recommendations concerning macroprudential policy to the appropriate authorities, which are legally bound to comply or explain. Members of the Council are the Minister of Finance and Economic Affairs (chair), the Governor of the Central Bank of Iceland, and the Director General of the FME.

A Systemic Risk Committee (SRC) works for the FSC. The SRC evaluates the current situation and outlook for the financial system, systemic risk, and financial stability. It examines the interaction of the application of the FSC member institutions' policy instruments that affect financial stability (with the exception of the Central Bank of Iceland's monetary policy instruments) and presents proposals to the FSC. The SRC comprises five members: the Governor of the Central Bank (Chair); the Director General of the FME (Vice-Chair); the Deputy Governor of the Central Bank; the Deputy Director General of the FME; and one expert who is appointed for a term of five years by the Minister of Economic Affairs.

Foreign exchange reserves

One of the Central Bank of Iceland's legally mandated functions is to manage Iceland's foreign exchange reserves. The Central Bank's foreign exchange reserves enable it to achieve its goals and fulfil its duties according to the Central Bank Act. The foreign reserves mitigate the effects of external risks related to changes in access to foreign credit and fluctuations in capital flows to and from Iceland. They enable the Bank to help the Treasury meet its need for foreign currency and fulfil its foreign debt obligations. Adequate reserves also facilitate market confidence by ensuring that Iceland is able to service its foreign debt. They can also be used to support monetary policy and lean against excessive exchange rate fluctuations.

Chart 5.2
Repayment profile of Central Bank and Treasury foreign debt
Position 31 July 2016



Source: Central Bank of Iceland.

As a rule, the size of the reserves is determined with reference to the scope of external trade, the monetary and exchange rate regime, regulatory provisions on capital movements and foreign exchange transactions, and Iceland's foreign liabilities. At any given time, the necessary size of the reserves is also determined by the balance of payments outlook. The Governor issues instructions on the desirable size of the reserves, based on the above-mentioned factors.

In preparation for the general liberalisation of capital controls, the Central Bank has purchased foreign currency through foreign exchange interventions in order to build up the foreign exchange reserves in advance of upcoming steps in the capital liberalisation process. At the end of July 2016, the reserves amounted to the equivalent of 32% of GDP and 43% of M3, and covered nine months of goods and service imports. Furthermore, at that time, the size of the reserves compared favourably to the IMF's reserve adequacy metric (RAM): the current ratio equals 160%, thus exceeding the 150% ratio that the Central Bank and the IMF considered necessary in the run-up to capital account liberalisation.

Box 5.1
New policy instrument to temper and affect the composition of capital inflows

On 4 June 2016, the Central Bank of Iceland published new Rules on Special Reserve Requirements for New Foreign Currency Inflows, no. 490/2016, in accordance with the new Temporary Provision of the Foreign Exchange Act, no. 87/1992.[1] The main purpose of the Temporary Provision is to provide the Central Bank with a policy instrument, generally referred to as a capital flow management measure (CFM), which is designed to temper inflows of foreign currency and to affect the composition of such inflows. It is therefore intended to reduce the risk that could accompany excessive capital inflows under the current foreign exchange regulatory framework, support other aspects of domestic economic policy, and contribute to overall macroeconomic and financial stability. The CFM is intended to support monetary policy and reduce systemic risk so as to safeguard financial stability. It is also designed to mitigate implementation risks associated with the final steps of capital account liberalisation.

The Central Bank's CFM is based on the application of special reserve requirements for new inflows of foreign currency. The Rules contain provisions concerning special reserve requirements for specified new foreign currency inflows; they specify the special reserve base, holding period, special reserve ratio, settlement currency, and interest rates on deposit institutions' capital flow accounts with the Central Bank of Iceland. The special reserve base is defined as new inflows of foreign currency in connection with specified types of capital, including new investment in registered bonds and bills and certain types of deposits. In addition, new inflows related to loans taken for investment in such instruments can create the special reserve base. Deposit institutions are required to deposit the special reserve amount that they hold in special reserve accounts to a capital flow account with the Central Bank. The amount deposited shall equal 100% of the special reserve amount. The Foreign Exchange Act states that the holding period may be as long as five years and that the special reserve ratio may be as high as 75% of total inflows; however, the Rules set the holding period at one year and the special reserve ratio at 40%. The Rules also

1. The bill of legislation was passed on 2 June, and the Rules were published on 4 June and amended on 16 June. A list of frequently asked questions and answers on the rules can be found on the Central Bank's website: http://www.cb.is/foreign-exch/questions-answers/faq-on-rules-no.-490-2016/

specify the Icelandic króna as the settlement currency and set the interest rate on the capital flow accounts at 0%, although it is stated explicitly in the Foreign Exchange Act that the interest rate could be negative.

The use of the CFM is not intended to replace or be a substitute for appropriate implementation of conventional fiscal and monetary policy but rather to complement and support it. The reserve requirements are directed first and foremost towards the portion of inflows that obstruct monetary policy transmission and are conducive to financial and economic instability. Profits on long-term investments will be affected to a limited degree, and equity investments are exempted. Furthermore, the temporary aspect of the CFM and its incorporation into the current legal framework on foreign exchange allow it to mitigate the risk of excessive inflows within the current regime and thereby facilitate the complete removal of capital controls. Nevertheless, the Central Bank has stated on a number of occasions that a policy instrument of this sort will also be needed during the post-liberalisation phase. Work on the development of such an instrument is currently underway.

6 External position

This chapter presents Iceland's international investment position, both gross (IIP) and net (NIIP). It discusses pre-crisis debt accumulation and post-crisis developments, describes changes in foreign direct investment, and provides figures on net foreign debt levels following the composition agreements between the failed banks and their creditors in December 2015.

Net international investment position

Iceland's net international investment position (NIIP) has improved radically in the post-crisis period, through debt repayment facilitated by the current account surplus, debt write-offs due to bankruptcies of private sector entities and other means, and the composition agreements of the failed financial institutions' estates in late 2015 (see Chapter 8).

Iceland's international balance sheet had expanded rapidly after the capital account liberalisation of the 1990s, and the expansion accelerated further following the privatisation of the banks in 2002-2003. Although the foreign assets of the Icelandic economy grew swiftly during that period, foreign debt grew even more rapidly. From year-end 2002 until the banking crisis in autumn 2008, gross external liabilities expanded from 117% to 877% of GDP and gross external assets from 50½% to 691% of GDP, resulting in a negative NIIP in the amount of 186% of GDP in Q3/2008. The NIIP continued to worsen as a result of the collapse of the banks and the depreciation of the króna, reaching a trough of -715% of GDP in Q3/2009 according to official NIIP calculations.

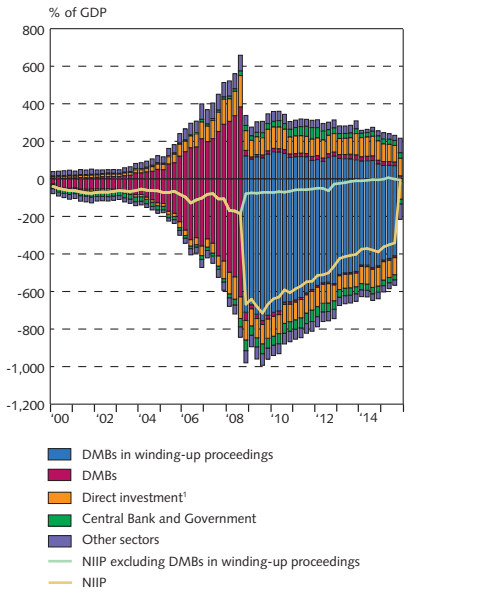
However, during the period from the banks' collapse until end-2015, the official calculation of Iceland's NIIP gave a misleading impression of the actual position. In autumn 2008, the estates of Iceland's largest banks were placed in winding-up proceedings and resolution committees

Table 6.1 Iceland's net international investment position

EUR billions (b.kr.)	*2000*	*Q3/2008*	*Q3/2009*	*2014*	*2015*
Total assets	4.2 (330)	73.2 (10,657)	25.0 (4,542)	33.8 (5,211)	34.4 (4,865)
- excl. DMBs in winding-up proceedings	- -	- -	15.3 (2,774)	23.5 (3,626)	34.4 (4,865)
Total liabilities	9.7 (767)	92.9 (13,520)	87.6 (15,909)	84.3 (13,008)	35.3 (4,991)
- excl. DMBs in winding-up proceedings	- -	- -	21.6 (3,918)	24.2 (3,728)	35.3 (4,991)
Net international investment position	-5.5 (-437)	-19.7 (-2,863)	-62.6 (-11,367)	-50.5 (-7,797)	-0.9 (-126)
- excl. DMBs in winding-up proceedings	- -	- -	-6.3 (-1,144)	-0.7 (-102)	-0.9 (-126)

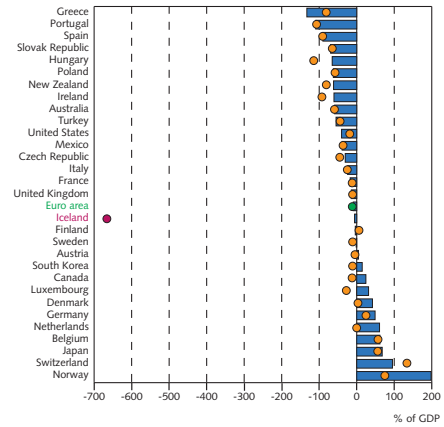
Source: Central Bank of Iceland.

Chart 6.1
Net international investment position (NIIP)
Q1/2000 - Q4/2015



1. Excluding special purpose entities from 2013.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 6.2
Net international investment position of OECD countries 2015[1]



1. The dots show the NIIP for Q4/2009.
Sources: Macrobond, Central Bank of Iceland.

were entrusted with their administration. The old banks' assets were transferred to the estates and revalued, whereas the liabilities were entered at nominal value plus accrued interest in official accounts. As it was clear from the outset that payments to creditors would be limited by the estates' assets and recoveries, the Central Bank of Iceland calculated the so-called underlying NIIP, which was based on the estimated settlement of the estates, alongside the official quarterly figures. The underlying NIIP was -131% of GDP in 2008 but had improved to -31.5% of GDP in Q3/2015. Nearly 40% of the reduction is due to the current account surplus and GDP growth during the period, and the rest is due to asset revaluation, debt restructuring, and other factors. With the composition agreements in 2015, the estates' liabilities were written off with reference to their assets, and the officially calculated NIIP thereby became the same as the underlying NIIP.

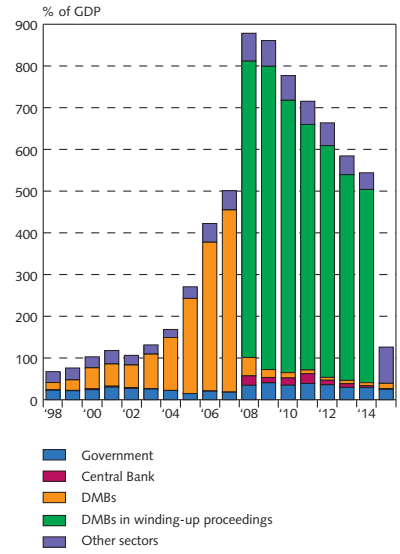
In December 2015, composition agreements sought by the failed banks' estates and approved by their creditors were confirmed by the District Court of Reykjavik, providing for cash distributions to creditors and establishment of asset management companies for the remainder of the assets. According to the settlements, payments to creditors totalled 13.5 billion euros (1,904 b.kr.)[1] and debt write-offs were 50.5 billion euros (7,134 b.kr.). Only a portion of the as-

1. Including distributions to priority creditors from the LBI estate. According to the Act on Bankruptcy, Etc., the confirmation of an estate's composition agreement is subject to the requirement that the estate be engaged in settling its debt to priority creditors. Full settlement of outstanding approved priority claims against the LBI estate took place in January 2016, with a distribution of 1.5 billion euros (210 b.kr.) to priority creditors.

sets, 3.3 billion euros (462 b.kr.), were distributed in Q4/2015.[2] With the settlements, the NIIP improved to -5.7% of GDP, the country's most favourable position in about half a century. Iceland's NIIP is low in comparison with other OECD countries and is now similar to that of Sweden, Finland, and the euro area as a whole.

Chart 6.3

Estimated foreign debt by sector[1]



1. External debt position, excluding FDI and portfolio equities.
Sources: Statistics Iceland, Central Bank of Iceland.

Foreign assets and liabilities

Iceland's total foreign debt soared prior to the collapse of the banks, rising to 877% of GDP in Q3/2008. It tapered off in 2010 and 2011, owing to the appreciation of the króna and the repayment of priority claims against the old Landsbanki Íslands estate, after having peaked at just over 1,000% in Q3/2009.[3] Foreign debt continued to decline over the next six years, due to the winding-up of the failed banks and the refinancing of foreign loans in the domestic credit market. Iceland's external assets deteriorated more abruptly than its foreign debt after the collapse of the banks and the króna. They stood at just over 691% of GDP in Q3/2008 but fell to 260% of GDP in Q1/2009. Because the book value of many companies acquired by the banks prior to the crisis was revalued upwards by the banks' estates, the foreign asset position had improved to 308% of GDP by mid-year 2010. Several companies were then sold, mainly to repay priority claims, while others were declared insolvent, returning the foreign asset position to 260% of GDP at year-end 2014. A year later, following the composition agreements, Iceland's gross external assets were almost 221%, while external liabilities totalled just over 226% of GDP.

Public sector foreign assets and liabilities

In the years before the crisis, the deterioration of the NIIP was due mainly to a surge in private sector debt intermediated by the domestic banking sector. Over the same period the public sector retired a substantial amount of its debt. The depreciation of the króna in 2008 and the need to strengthen the Central Bank's foreign exchange reserves increased the external liabilities of the general government and the Central Bank from 18% of GDP at year-end 2007 to the post-crisis peak of 61% of GDP at year-end 2011 (see Chapters 4, 5, and 7). Only a portion of the increase in public sector foreign debt had a direct effect on the NIIP, however, as loans taken to expand the reserves were mostly offset by assets. By year-end 2015, public sector external liabilities had fallen to 26% of GDP, due primarily to repayments of the long-term loans from the Nordic countries and the IMF to the Treasury and the Central Bank (see Chapters 4 and 7).

2. As of this writing, 3.3 billion euros (468 b.kr.) of the remaining 10.2 billion euros (1,443 b.kr.) have been paid out as cash distributions to creditors, while the remainder of the debt will be paid later, as asset sales are executed.
3. See Box 4.2 in *Economy of Iceland* 2012.

Table 6.2 Foreign assets and liabilities

EUR billions (b.kr.)	*2007*	*2008*	*2009*	*2014*	*2015*	*'04-'07 (average change per year in ISK)*	*2008 (year-on-year change in ISK)*	*2009 (year-on-year change in ISK)*	*2014 (change from 2009 in ISK)*	*2015 (year-on-year change in ISK)*
Outward FDI	20.0 (1,826)	9.5 (1,620)	10.2 (1,834)	13.4 (2,073)	14.7 (2,076)	91%	-11%	13%	13%	0%
Foreign equities	14.0 (1,276)	4.8 (809)	4.1 (736)	5.0 (765)	5.8 (816)	55%	-37%	-9%	4%	7%
Foreign debt securities	7.2 (652)	1.3 (216)	0.8 (149)	3.6 (560)	0.8 (112)	170%	-67%	-31%	275%	-80%
Foreign lending	23.1 (2,104)	8.2 (1,385)	6.2 (1,112)	2.2 (336)	2.1 (290)	98%	-34%	-20%	-70%	-14%
Total assets	78.5 (7,159)	30.1 (5,112)	26.6 (4,779)	33.8 (5,211)	34.4 (4,865)	79%	-29%	-7%	9%	-7%
Total assets (% of GDP)	525	316	301	260	221					
Inward FDI	14.1 (1,288)	9.4 (1,596)	9.1 (1,639)	13.0 (2,011)	14.8 (2,094)	89%	24%	3%	23%	4%
Total liabilities	94.4 (8,610)	89.2 (15,165)	85.5 (15,384)	84.3 (13,008)	35.3 (4,991)	63%	76%	1%	-15%	-62%
Total liabilities (% of GDP)	631	984	968	649	226					

Sources: Statistics Iceland, Central Bank of Iceland.

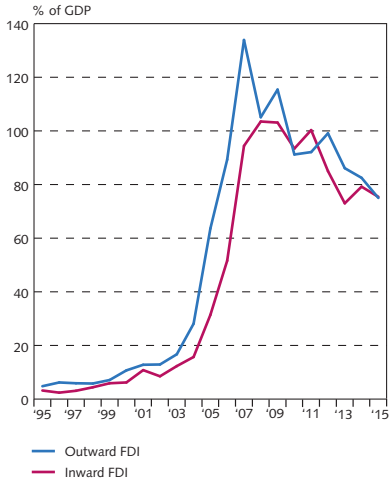
Private sector foreign assets and liabilities

The private sector NIIP has seen some major changes in the last decade or so, first as a result of the financial crisis and, more recently, due to deleveraging and the failed banks' estates composition agreements. It deteriorated from -157% in Q3/2008 to a low of -685% of GDP in Q3/2009, owning to the collapse of the old banks. Since then, the private sector has deleveraged rapidly, primarily because of the winding-up of the failed banks, asset sales and deleveraging by several large companies, and the restructuring of the pharmaceuticals company Actavis and its acquisition by Watson Pharmaceuticals in 2012.[4] At year-end 2015, after the settlement of the failed banks' estates, the private sector's total foreign assets amounted to 171% of GDP and its liabilities totalled 176% of GDP.[5] The private sector NIIP had therefore improved to its most favourable position in decades, -4.4% of GDP.

The largest subgroup in this category is the pension funds, which own substantial assets abroad but whose foreign liabilities are negligible. The pension funds' foreign portfolios stood at 34% of GDP at year-end 2007. In 2010 and 2011, however, the value of their portfolios declined in krónur terms because of foreign asset sales and the appreciation of the króna, to 28% of GDP by year-end 2011. Since then, the value of the funds' portfolios has risen, to one-third of GDP

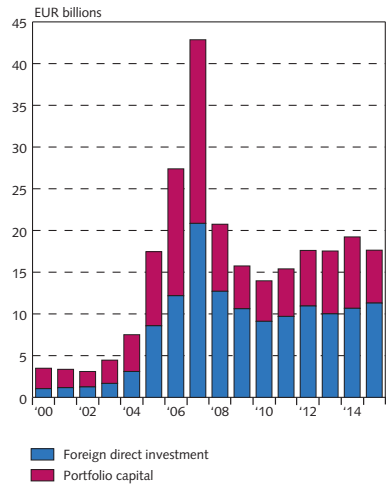
4. Actavis' impact on Iceland's external balance changed radically as a result of the Watson acquisition, from -44% of GDP in Q4/2011 to -9% of GDP a year later.
5. Special purpose entities are subtracted from outward and inward FDI according to the OECD's benchmark definition of FDI, as they are entities that have little or no employment, physical presence, or operations in the country but do provide important services to multinational enterprises (MNEs), such as holding assets and liabilities or raising capital. See https://www.oecd.org/daf/inv/FDI-statistics-explanatory-notes.pdf.

Chart 6.4
Outward and inward FDI[1]



1. Excluding special purpose entities (SPEs) from 2013.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 6.5
Foreign direct investment and portfolio capital owned abroad by residents
At year-end



Source: Central Bank of Iceland.

or 5.2 billion euros (735 b.kr.) as of year-end 2015. In 2015, the pension funds owned 15% of Icelandic residents' total foreign assets and 79% of foreign portfolio holdings.

Following the settlement of the failed banks' estates, the rest of the private sector (excluding the pension funds) had an NIIP of -38% of GDP, a significantly more favourable position than the post-crisis trough of -86% of GDP at the beginning of 2010.

Lending by domestic credit institutions to foreign borrowers

Lending by domestic credit institutions to foreign borrowers has been very limited during the post-crisis period; however, it was one of the largest single contributors to the rise in foreign assets from 2003 to 2007, when the stock of foreign lending increased from 19% of GDP to 154%. Due in part to valuation effects from the depreciation of the króna, the stock of foreign lending soared in the months leading up to the crash, rising by 66% between Q4/2007 and Q3/2008 and measuring 225% of GDP by end-September 2008. Foreign lending has decreased substantially during the post-crisis period, measuring 5.8% of GDP in 2015.

By the end of 2008, the failed banks owned 77% of total foreign loans. This share increased to 90% at year-end 2009 but had fallen to 64% by the end of 2014. Between 2009 and 2014, the stock of foreign lending by the DMBs in winding-up proceedings dropped from 63% of GDP to 11%. The main reason for this decline is that some of the loans were reclassified as foreign direct investment (FDI) at the end of 2009 because of financial difficulties among the banks' debtors, prompting a takeover of the companies concerned. At the end of 2015, foreign lending by the holding companies of the failed banks amounted to 6.8% of GDP.

Table 6.3 Foreign assets

% of total foreign assets	*1999*	*2003*	*2007*	*2009*	*2013*	*2015*
Outward FDI	18	20	26	38	30	34
Foreign equities	49	31	18	15	13	17
Foreign debt securities	5	2	9	3	10	2
Foreign derivatives	0	0	2	0	0	0
Foreign lending	4	22	29	23	9	6
Currency and deposits	5	13	14	8	18	16

Source: Central Bank of Iceland.

Table 6.4 Foreign liabilities

% of total foreign liabilities	*1999*	*2003*	*2007*	*2009*	*2013*	*2015*
Inward FDI	7	8	15	11	11	33
Icelandic equities	0	2	4	0	1	2
Icelandi debt securities	39	58	39	43	43	18
Icelandic derivatives	0	0	2	0	0	0
Icelandic lending	51	29	25	32	33	7
Currency and deposits	0	1	15	13	8	2

Source: Central Bank of Iceland.

Investment in equities and debt securities

Investment in foreign equities and debt securities also grew substantially between 2003 and 2007 but has played a limited role during the post-crisis period. The total stock of foreign equities and debt securities held by residents rose sharply until Q3/2008, when foreign equities peaked at 99% of GDP and debt securities peaked at 50% of GDP, up from 26% and 2%, respectively, in 2003. They plunged during the financial crisis, and by year-end 2015, residents' foreign equities amounted to 37% of GDP and debt securities totalled 5% of GDP.

Outward foreign direct investment

During the pre-crisis period, the Icelandic banks played a major role in brokering foreign capital for domestic investors, as well as investing extensively abroad on their own account. In addition, a sizeable share of foreign debt was used to fund domestic lending, some of which was then used to invest abroad. Outward FDI grew by an average of 80% per year in 2003-2007. The stock of outward FDI amounted to 168% of GDP at the end of Q3/2008, up from 17% of GDP in 2003. It fell dramatically as a result of the financial crisis, plunging to a new low of 89% of GDP in Q1/2009. Since then, its value has fluctuated due to the banks' restructuring and the revaluation of many companies' book value; it peaked at 116% of GDP in mid-2010 but had fallen back to 75% of GDP by year-end 2015.[6] Furthermore, the composition of the capital has changed during the post-crisis period: lending to subsidiaries has increased, while the share of foreign equity has declined. In 2015, lending to subsidiaries accounted for about 51% of outward FDI, and lending to Actavis subsidiaries accounted for the other 49%.

6. See Footnote 5 in this chapter.

Inward foreign direct investment

The stock of inward FDI also grew during the years prior to the crisis, peaking at 119% of GDP in mid-2008. It then declined steadily, to a low of 93% of GDP at year-end 2010. After an increase in the following year, inward FDI peaked at 104% in the beginning of 2012 but had fallen back to 75% of GDP by year-end 2015 because of the restructuring of Actavis, in 2012 and again in 2015. The 2012 restructuring also explains the turnaround in the net FDI position, which was negative in 2010 and 2011 but had turned positive by year-end 2012. Furthermore, non-residents' equity as a share of inward FDI had been roughly 12% in 2011 but fell to 0 at the end of 2013 because of the Actavis restructuring. At year-end 2015, the ratio had risen up to 32%, due to a further restructuring of Actavis in Q1/2015.

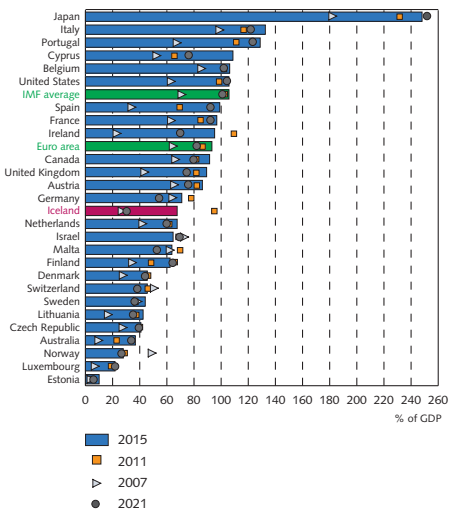
7 Government, corporate, and household balance sheets

This chapter describes Government, corporate, and household balance sheets in Iceland; the position of the Government, households and businesses; and post crisis debt restructuring.

Government balance sheets

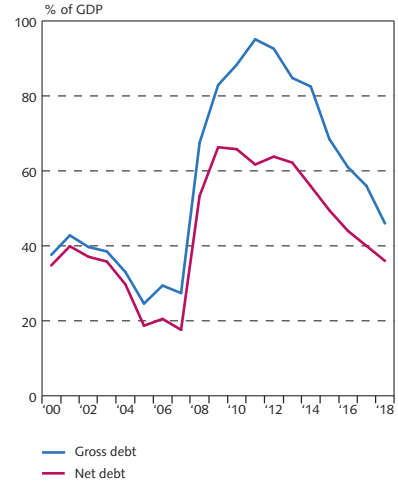
Iceland's general government gross debt was among the lowest in advanced IMF countries in 2007 (Chart 7.1). The general government's balance sheet and budgets then suffered a severe shock with the financial crisis and the sharp depreciation of the króna in 2008, as both general government and public enterprises had significant foreign-denominated debt. Furthermore, a substantial amount of debt was shifted from the private to the public sector when private enterprises, mostly banks, became insolvent. Gross debt therefore rose substantially in the wake of the crisis, peaking in 2011, but has tapered off and was well below the average for IMF member countries in 2015. Furthermore, the stability contributions from the failed banks' estates (see Chapter 8), in the amount of 17.2% of year-2015 GDP, are scheduled to be allocated to prepay-

Chart 7.1
Gross general government debt in selected IMF countries



Sources: IMF Fiscal Monitor April 2016.

Chart 7.2
General government debt[1]



1. Central Bank baseline forecast 2016-2018 from *Monetary Bulletin* 2016/2. Gross debt according to Maastricht criteria and net debt according to the definition in the Act on Public Sector Finances.

Sources: Statistics Iceland, Central Bank of Iceland.

Table 7.1 General government financial assets and liabilities 2007-2015

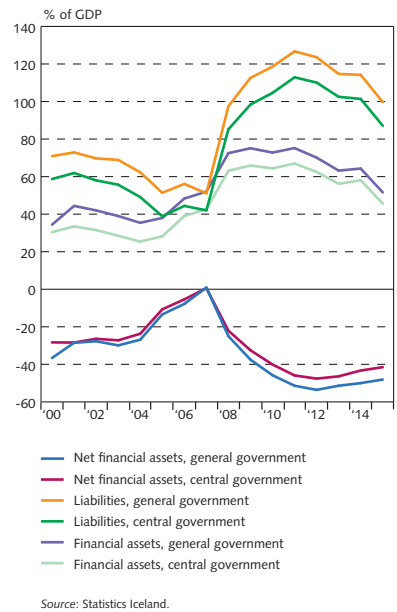
% GDP	*2007*	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	*2015*
Financial assets	52.0	72.5	75.1	72.8	75.2	70.1	63.2	64.3	51.6
Currency and deposits	9.8	14.1	16.6	22.5	33.4	28.7	22.5	26.6	18.9
Loans	14.4	32.1	24.9	16.8	10.4	10.8	10.4	9.8	6.7
Shares and other equity	16.6	14.9	23.2	23.4	21.6	20.3	21.2	19.2	17.7
Other accounts receivable	11.2	11.5	10.4	10.1	9.8	10.2	9.1	8.6	8.2
Liabilities	51.1	97.5	112.6	118.6	126.7	123.6	114.7	114.2	99.7
Securities other than shares	9.2	19.9	39.2	44.6	46.4	47.2	44.6	43.8	40.2
Loans	18.2	47.2	43.5	43.6	48.7	45.3	40.2	38.7	27.9
Domestic loans	5.4	23.7	18.1	20.1	20.6	19.7	18.9	17.8	13.9
Foreign loans	12.8	23.5	25.4	23.5	28.1	25.7	21.3	20.9	13.9
Insurance technical reserves	19.7	24.6	23.7	23.6	24.5	24.7	24.2	24.4	26.0
Other accounts payable	4.1	5.7	6.2	6.8	7.1	6.4	5.8	7.4	5.6
Net financial assets	0.9	-25.0	-37.5	-45.8	-51.4	-53.6	-51.4	-50.0	-48.1

Source: Statistics Iceland.

ment of debt. Furthermore, if projections of nominal GDP growth and a continued general government surplus materialise, general government debt will be further reduced. According to a recent IMF forecast, by 2021 Iceland will again be among the advanced IMF countries with the lowest general government debt.[1]

The central government has by far the largest balance sheet, with assets and liabilities constituting almost 89% of the general government balance sheet, while the local government share is about 11%. Social security accounts constitute only a marginal share of general government accounts in comparison with central and local government. As a result, general government financial assets and liabilities are largely those of the central and local governments.

Chart 7.3
Financial assets and liabilities



Source: Statistics Iceland.

Central government

The fiscal position of the central government was strong when the financial crisis struck. Record surpluses in 2004-2007 had enabled the central government to retire a large portion of its debt while simultaneously accumulating cash deposits in the Central Bank of around 10% of GDP. The central government's net financial assets even became marginally positive in 2007. As a result of the financial crisis, net financial assets turned negative

1. International Monetary Fund (2016). *Fiscal Monitor,* April 2016.

Table 7.2 Central government financial assets and liabilities 2007-2015

% GDP	*2007*	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	*2015*
Financial assets	42.6	63.1	65.9	64.4	67.0	62.5	56.2	58.1	45.6
Currency and deposits	7.7	11.9	14.2	19.6	31.4	27.2	21.4	25.6	18.0
Loans	12.8	30.4	22.7	15.3	8.7	9.1	8.6	8.4	5.6
Shares and other equity	14.1	12.8	21.0	21.2	19.5	18.4	19.3	17.5	15.9
Other accounts receivable	8.1	8.1	8.0	8.4	7.4	7.9	6.9	6.7	6.2
Liabilities	42.0	85.2	98.4	104.6	112.9	110.1	102.5	101.4	87.1
Securities other than shares	9.2	19.9	39.2	44.6	46.4	47.2	44.6	43.8	40.2
Loans	13.6	40.1	34.6	35.0	40.2	37.4	32.8	30.9	20.5
Domestic loans	2.3	19.6	12.3	13.8	13.8	13.0	12.3	10.2	6.7
Foreign loans	11.3	20.5	22.4	21.3	26.4	24.4	20.6	20.7	13.8
Insurance technical reserves	16.9	22.1	21.3	21.3	21.9	21.8	21.6	21.7	23.0
Other accounts payable	2.3	3.1	3.2	3.7	4.4	3.6	3.6	5.0	3.5
Net financial assets	0.6	-22.1	-32.5	-40.1	-45.9	-47.6	-46.4	-43.3	-41.5

Source: Statistics Iceland.

by 32.5% of GDP in 2009 and deteriorated further, bottoming out at -47.6% of GDP in 2012. Since then the position has been improving, and in 2015 net financial assets stood at -41.5% of GDP.

After the financial crisis, currency and deposits emerged as the central government's largest asset group, as foreign debt was used to build up the Central Bank's foreign exchange reserves. Furthermore, following the Treasury's international bond issuance in 2011-2014, the Treasury and the Central Bank have had a relatively strong near-term foreign liquidity position. The second-largest asset group is shares and other equity holdings, which also increased after the financial crisis, as the central government took equity stakes in the new banks (see Chapter 3). Shares and equity held by the central government declined by almost 6 percentage points as a share of GDP between 2010 and 2015. This is due mainly to nominal GDP growth, as the nominal value of shares and other equity has not declined. The increase in the two largest asset groups, plus the fact that the Treasury needed to hold more deposits to finance the deficit, explains why financial assets rose from 43% of GDP in 2007 to as high as 67% in 2011. They have since declined and stood at 46% of GDP in 2015 (see Table 7.2).

After bottoming out at 39% of GDP in 2005, financial liabilities soared in the wake of the financial crisis, reaching a high of 113% of GDP in 2011; however, they had fallen to 87% by 2015 and are estimated to fall further still in 2016, as the stability contributions from the failed banks' estates are scheduled to be allocated towards prepayment of debt.

The depreciation of the króna in 2008 led to a rapid weakening of the gross debt position, as 33% of central government debt was denominated in foreign currency. The need to strengthen the Central Bank's foreign exchange reserves led to a further increase in the gross debt position. Consequently, central government gross foreign debt rose from 11.3% of GDP in 2007 to 26.4% of GDP in 2011. Gross debt has since declined, mainly because the loans from the IMF and the bilateral loans taken to strengthen the Central Bank's reserves have been paid in full. By 2015, it had fallen to 13.8% of GDP.

As borroed funds were used to acquire assets, net debt[2] increased less. While central government gross debt increased by 68% of GDP between 2007 and the 2011 peak, net debt increased by only 44% of GDP to 66% of GDP. Net debt stood at just under 43% of GDP at year-end 2015.

In the wake of the financial crisis, fiscal deficits were financed primarily in domestic financial markets. Króna-denominated debt increased from 11.5% of GDP in 2007 to around 47% in 2015, after peaking in 2011 at 60%. Domestic government bonds issued in connection with the recapitalisation of the banking system and the Central Bank amounted to 14% and 10%, respectively, of year-2009 GDP. At year-end 2015, króna-denominated liabilities, including pension liabilities, amounted to 73% of GDP, compared to 31% of GDP in 2007. Overall, total central government liabilities amounted to 87% of GDP in 2015 (61% according to the Maastricht criteria[3]), as opposed to 42% in 2007, after peaking at 113% in 2011.

Local government

Prior to the financial crisis, the local government balance sheet was quite strong. With the onset of the crisis, local governments' gross debt rose from 4.5% of GDP to 8.9% in 2009, while net liabilities rose from 1.8% of GDP to 5.4%. Since 2009, local government gross debt has been on a declining path, helped by a new fiscal debt rule stipulating that debt may not exceed 150% of regular revenues (see Box 4.2), and was down to 7.5% of GDP in 2015.

Local governments' foreign debt declined considerably in the years before the crisis, from 3.4% of GDP in 2002 to 1.5% in 2007, but local governments had to realise a loss equivalent to 1% of GDP on their foreign debt in 2008 because of the depreciation of the króna. To minimise risk, most of local governments' foreign debt has been refinanced; it amounted to only 0.2% of GDP at year-end 2015.

As is the case with the central government, local governments have financed their deficit spending primarily in the domestic credit market, increasing their króna-denominated debt from 3.2% of GDP in 2007 to 7.3% in 2015.

Local governments' financial assets were stable at approximately 8-9% of GDP from 2005 to 2012 but had fallen to 5.4% in 2015, due mostly to a decline in outstanding loans and other accounts receivable. Cash and deposits declined because of improved asset management, while the nominal value of shares remained stable over the period but declined as share of GDP because of a rise in nominal GDP. Therefore, all asset groups declined as a share of GDP from 2012 onwards.

Private sector balance sheets

Iceland's private sector has seen dramatic developments in its balance sheets since the turn of the century, mainly because of movements in debt levels. Private sector debt as a share of GDP was similar to that in other developed countries until 2004, when it increased rapidly, outpacing neighbouring countries. The increase in debt during the run-up to the financial crisis in 2008 was due mainly to a surge in corporate debt (Chart 7.4).[4]

2. Net debt is defined here as gross debt less currency and deposits; i.e., readily available funds that can be used to pay down debt.
3. Debt as defined by the Maastricht criteria is total financial liabilities less insurance technical reserves and other accounts payable.
4. Holding companies are excluded.

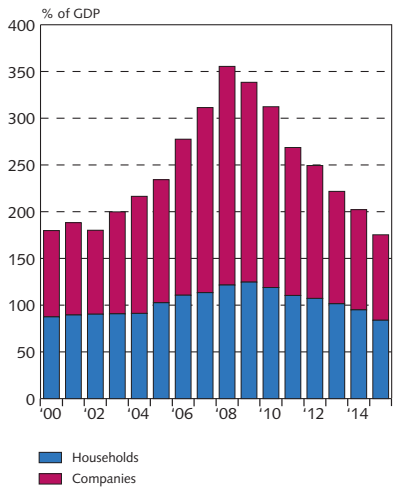
In comparison with other countries, Iceland's share of foreign-denominated debt was high at the start of the financial crisis, measured as a share of both GDP and exports. Furthermore, the share of CPI-indexed loans was high. With the depreciation of the króna in 2008 and the resulting surge in inflation, the value of both foreign-denominated and CPI-indexed loans rose sharply, weakening the balance sheets of many households and businesses. Consequently, private sector debt increased, peaking at 357% of GDP in 2008. At year-end 2015, write-offs, financial restructuring, bankruptcy, deleveraging, court rulings,[5] and Government-sponsored programmes[6] had reduced private sector debt to 175% of GDP, some 3 percentage points lower than at the beginning of the century. This position places Iceland among countries with moderate debt levels (Chart 7.5).

In recent years, private sector financial conditions have improved significantly, in line with improved economic activity, reduced debt, and rising asset prices. Private sector financial restructuring is moving forward, as can be seen, for example, in the three large commercial banks' non-performing loan ratios, which have fallen from 20% at year-end 2010 to 1.7% as of year-end 2015.

Corporate balance sheets

Corporate balance sheets grew considerably during the pre-crisis years, as companies stepped up acquisitions and accumulated debt. Following the collapse of the banking system, the posi-

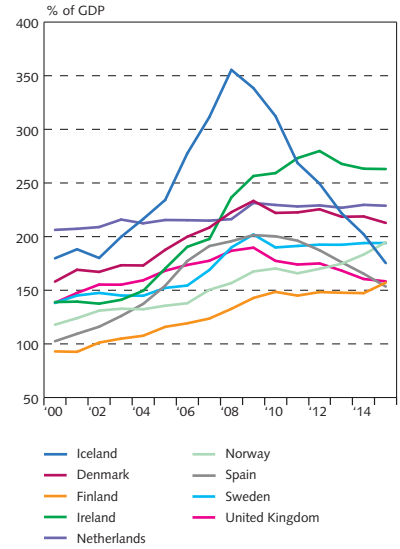
Chart 7.4
Private sector debt[1]



1. Debt owed to financial undertakings and market bonds issued. Excluding debt owed by holding companies.

Sources: Statistics Iceland, Central Bank of Iceland.

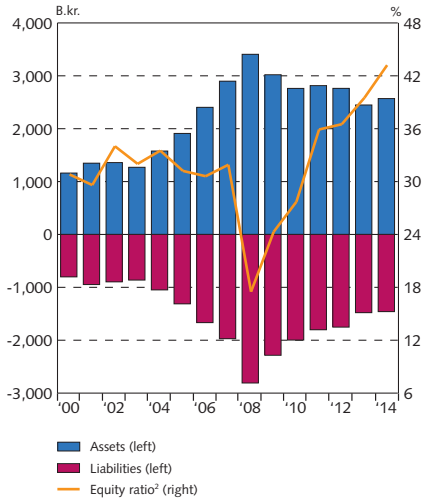
Chart 7.5
Private sector debt in selected European countries



Sources: Eurostat, Statistics Iceland, Central Bank of Iceland.

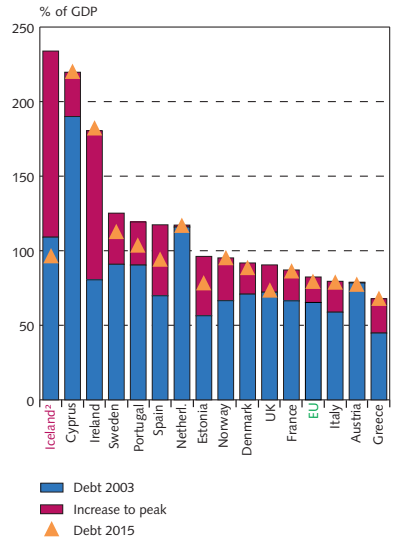
5. See Box 3.2 in the 2012 edition of *Economy of Iceland*.
6. See Box 7.1 in the 2014 edition of *Economy of Iceland*. Total household debt is estimated to decline by roughly 5½ percentage points of GDP through the Government debt relief measures.

Chart 7.6
Corporate assets and liabilities and equity ratio[1]



1. The 500 largest firms in terms of operating revenues. Assets and liabilities at 2014 price level. 2. The equity ratio is the ratio of total equity to total assets.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 7.7
Corporate debt in selected European countries[1]



1. The blue columns show corporate debt at year-end 2003. The red columns show the increase in debt to the highest year-end value, and the triangles show the position at year-end 2015. Data for 2014 used if 2015 data are not available. 2. Debt owed to financial undertakings and market bonds issued.
Sources: Eurostat, Central Bank of Iceland.

tion of many companies deteriorated severely. The debt position and debt service burden of overleveraged firms increased considerably, due especially to the depreciation of the króna, as a large share of corporate debt was foreign-denominated and many firms did not have revenues in foreign currency; furthermore, their revenues declined at the same time. Corporate debt peaked at 235% of GDP in 2008, and the equity ratios of Iceland's 500 largest companies declined from 32% to 18%, on average. Consequently, corporate bankruptcies and unsuccessful distraint actions against companies increased and, in 2011, 4.6% of firms were declared insolvent, up from 2.3% in 2008.

Relatively strong economic growth since 2010 (average 2.7%), along with financial restructuring, has helped to strengthen and solidify the position of many firms. In contrast to the pre-crisis situation, higher corporate equity ratios and increased corporate sector wealth are primarily the result of deleveraging and declining debt, not higher asset prices, as was the case in 2005-2008. The equity ratio of Iceland's 500 largest companies was 43% on average at year-end 2014, more favourable than it has been for decades, and is estimated to have risen to 45% in 2015. Furthermore, companies' ability to service their debt has improved substantially, as the 500 largest firms' ratio of profit (EBIT) to interest expense has increased from 0.7 in 2008 to 2.9 in 2014.

At year-end 2015, total corporate debt – i.e., loans from both domestic and foreign financial institutions and outstanding marketable bonds – totalled about 91% of GDP, a decline of about 142% of GDP from the 2008 peak. Furthermore, the proportion of foreign-denominated debt has declined markedly in recent years. At the end of 2015, foreign debt comprised 40% of total

corporate debt, down from 70% at year-end 2008. In international comparison (Chart 7.7), Iceland's ratio of corporate debt to GDP is now more in line with that in neighbouring countries, whereas it previously had one of the highest in the comparison group.

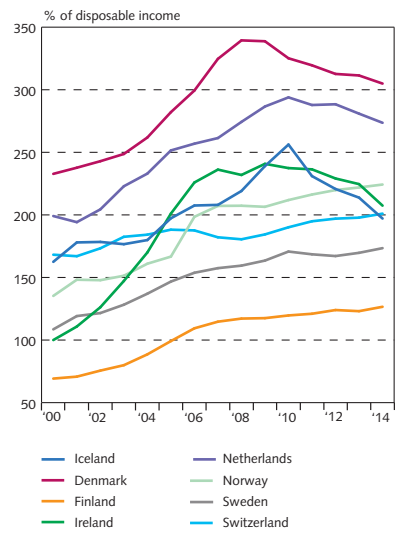
Household balance sheets

As in most Western countries, growth in household debt in Iceland exceeded real income and GDP growth for most of the first decade of the 21st century (Chart 7.8). Credit became more accessible, real lending rates dropped, debt service fell as loan durations increased, and real disposable income rose sharply along with asset prices. By 2008, Icelandic households ranked among the most indebted in the world. As 90% of household debt was either inflation-indexed or foreign-dominated, household balance sheets sustained severe damage from the financial crisis and the depreciation of the króna in 2008. The share of indebted households in financial distress grew from 12½% in early 2007 to 23½% on the eve of the banks' collapse. It is estimated to have peaked at 27½% in autumn 2009, but had already declined to 20% by year-end 2010.

Household debt relative to GDP peaked in 2009 at 125%. Debt restructuring, write-offs due to Supreme Court decisions on the legality of exchange rate-linked loans, and Government debt relief measures have since reduced Iceland's household indebtedness. Furthermore, households have been more hesitant to take on debt than before, and many households have made extra payments on their loans, due to the large spread between lending and deposit rates. Iceland's household indebtedness had fallen to 84% of GDP as of year-end 2015, or by nearly 41% of GDP from its peak. This is a dramatic change in comparison with other countries with high household debt levels.

The Government elected in 2013 enacted a general debt relief programme in 2014, entailing a direct Treasury-financed reduction of households' indexed mortgages and authorising borrowers to allocate third-pillar pension savings tax-free towards mortgage debt. The final 25% of the direct write-down was posted to mortgage loans at the beginning of January 2016. As of July 2016, over 68,000 households had taken advantage of the write-down of mortgage debt, and 27,000 had opted to use part of their third-pillar pension savings to pay down their mortgages. Between November 2014 and July 2016, direct write-downs totalled 599 million euros (79.4 b.kr.), and 179 million euros (23.8 b.kr.) in third-pillar savings had been channelled towards mortgage loans. Hence household debt has been reduced by 778 million euros (103.2 b.kr.) as of end-July 2016 and is expected to fall by an additional 128 million euros (17 b.kr.) by the time the programme concludes at the end of 2017, or by a total of 5.5% of year-2015 GDP.

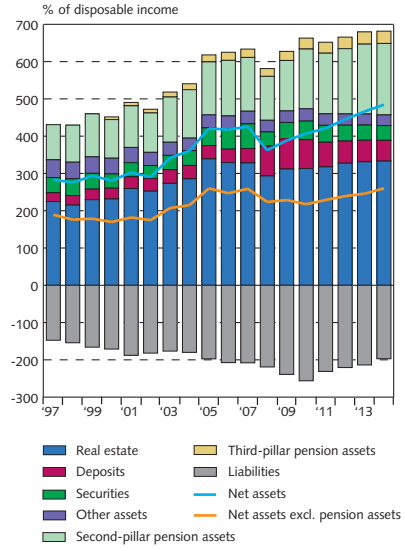
Chart 7.8
Household debt in selected European countries



Sources: Eurostat, Statistics Iceland, Central Bank of Iceland.

Households' financial position has improved considerably in recent years. With strong GDP growth since 2011, there has been robust employment growth, and real disposable income rose by an average of almost 3% per year from 2011 to 2014. Because growth in disposable income has outpaced growth in private consumption in recent years, households have been accumulating savings. Higher asset prices have also led to a stronger household equity position. Households' net wealth relative to disposable income has therefore increased markedly, or by 122 percentage points between 2008 and year-end 2014, when it stood at 485% (Chart 7.9). Excluding pension assets, households' net wealth amounted to 260% of disposable income at the end of 2014. Because of reduced debt and increased income, the debt-to-income ratio has fallen by 59 percentage points in only five years, to 197% of disposable income as of year-end 2014.

Chart 7.9
Household assets and liabilities[1]



1. Pension fund assets are based on payouts after deduction of 30% income tax.
Sources: Statistics Iceland, Central Bank of Iceland.

8 Capital account liberalisation

This chapter discusses Iceland's capital controls, why they were introduced, the steps taken thus far in lifting them, and the potential risks accompanying their liberalisation. It describes the three phases in the liberalisation policy; i.e., the resolution of the failed banks' estates, the approach concerning offshore krónur, and the lifting of restrictions on firms and households.

Background to the capital controls

In October 2008, Iceland suffered a currency and systemic banking crisis of extraordinary proportions. Iceland was among the countries hardest hit by the global financial crisis, as the massive external shock coincided with a significant mismatch between large macro-financial imbalances, which had built up during the pre-crisis period, and Iceland's domestic financial support capacity, which, despite a favourable fiscal position, was not prepared for one of the largest bankruptcies in history.

What followed was the passage of the so-called Emergency Act (the Act on the Authority for Treasury Disbursements due to Unusual Financial Market Circumstances, etc., no. 125/2008) which provided, among other things, for immediate intervention in the operations of the collapsing banks. The capital controls were adopted in late November 2008, following the formal adoption of the IMF Stand-By Arrangement with Iceland.[1] Parliament extended a provision in the Foreign Exchange Act authorising the Central Bank of Iceland to set Rules on Foreign Exchange limiting international capital transactions. In the fall of 2011, Parliament incorporated the Rules into the Foreign Exchange Act.

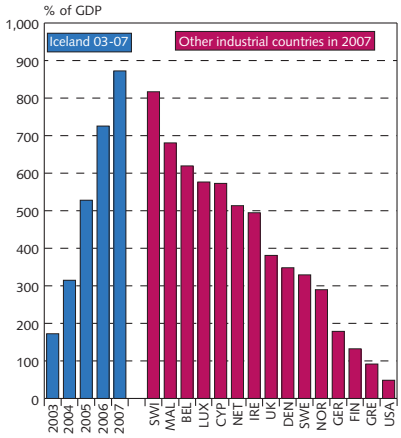
Role of the capital controls

The objective of the capital controls was to place temporary restrictions on certain types of cross-border capital transfers and foreign exchange transactions that could cause monetary and exchange rate instability while the resurrection of the Icelandic economy and financial system was underway. The capital controls played an important role in achieving and safeguarding the objectives of the policy response developed by the domestic authorities with the support of the IMF: to stabilise the exchange rate, ensure medium-term fiscal sustainability, and develop a comprehensive bank restructuring strategy. The controls hindered a further drop in the exchange rate by restricting capital outflows and supported asset prices by limiting fire sales, in addition to allowing for more accommodative monetary policy, facilitating the restructuring of private sector balance sheets, and giving the authorities time to develop appropriate policy responses and re-

1. On 10 October 2008, the Central Bank issued instructions to financial institutions to limit currency outflows because of the extraordinary circumstances then prevailing. On 15 October, after almost two weeks of no trading in the foreign exchange market, the Central Bank initiated trading in the market through limited auctions of foreign currency. Capital controls were formally adopted on 28 November 2008.

Chart 8.1

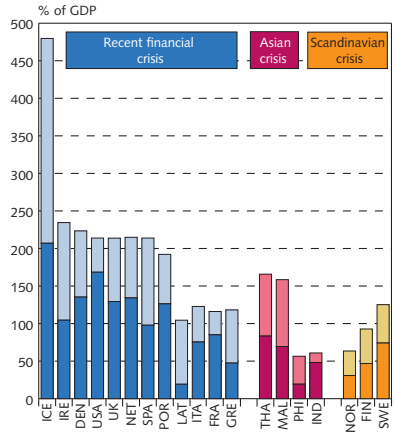
Banking system size in the run-up to the international financial crisis in selected industrial countries[1]



1.The figure shows developments in Iceland in 2003-2007 but the position in 2007 in other countries.
Sources: Central Bank of Iceland, Thorvardur Tjörvi Ólafsson and Thórarinn G. Pétursson (2011). Weathering the financial storm: The importance of fundamentals and flexibility. In *The Euro Area and the Financial Crisis*. Editors M. Bablavý, D. Cobham and L. Ódor. Cambridge University Press.

Chart 8.2

Domestic credit to the private sector in the run-up to three financial crises[1]



1. Darker-shaded bars show the debt level of the non-financial private sector in 2000 in the current crisis, 1990 in the Asian crisis, and 1980 in the Scandinavian crisis. Lighter-shaded bars show the increase in debt to the peak level during the crisis.
Sources: Macrobond, Central Bank of Iceland.

forms. Although the controls were instrumental in preserving financial stability and safeguarding the medium-term balance of payments in the wake of the crisis, the longer they remained in effect, the more the drawbacks overshadowed the benefits, ultimately necessitating liberalisation.

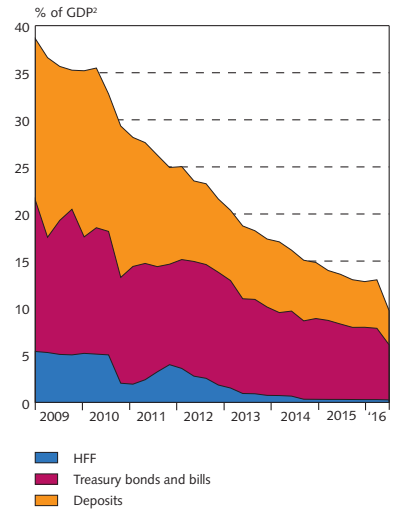
Risks associated with capital account liberalisation

Liberalisation is not without risks, however. These risks reflect possible capital outflows from three sources in particular: (i) so-called offshore króna assets; (ii) the winding-up of the failed banks' estates; and (iii) other possible outflows, especially those related to domestic residents' portfolio rebalancing in favour of more foreign assets. Offshore krónur have broadly been defined as króna assets owned or held in custody by foreign financial undertakings.[2] These assets are mainly in the form of bank deposits and securities issued by the Government and the Housing Financing Fund (HFF), and they reflect the remains of pre-crisis carry trade. Offshore krónur amounted to approximately 15% of GDP (2 billion euros, roughly 300 b.kr.) just prior to the launch of the liberalisation strategy in June 2015, down from almost 40% of GDP in 2009. The reduction was achieved mainly through Central Bank auctions and bilateral transactions. A large share of these assets were concentrated with a few institutional investors. Offshore króna assets are potentially more volatile than other króna-denominated assets, as the latter are subject

2. A legal definition of offshore krónur was laid down in the bill of legislation passed as the Act on the Treatment of Króna-Denominated Assets Subject to Special Restrictions, no. 37/2016. The definition in the Act was broader than before, as it had become clear that more categories of króna-denominated assets could cause monetary and exchange rate instability upon liberalisation.

to a home bias. This applies regardless of whether the beneficial owners are domestic or foreign. The risk associated with liberalisation is that it could result in offshore króna holders' selling their securities on the fixed income market, withdrawing their deposits from the banking system, and converting their króna proceeds into foreign currency in the foreign exchange markets, which could have a profound impact on the exchange rate, as well as on monetary and overall economic and financial stability.

Chart 8.3
Offshore króna assets[1]



1. End of quarter. 2. Per cent of sum of four-quarter seasonally adjusted GDP from Statistics Iceland.
Sources: Statistics Iceland, Central Bank of Iceland.

The winding-up of the failed banks' estates was deemed to be the largest individual source of risk to the balance of payments outlook associated with liberalisation. This reflected, first of all, the sizable mismatch between foreign claims and foreign assets, resulting in substantial (*pro rata*) distributions of domestic assets to foreign creditors and giving rise to significant capital outflows. About 40% of the estates' assets were domestic, whereas some 93% of the claims were owned by non-residents. Second, the size of the balance sheets that needed to be wound up – the combined total of króna-denominated assets held by the estates and foreign-denominated claims against domestic parties – amounted to over 40% of GDP. Third, the composition of foreign claimants was an issue, as a significant share were distressed securities investors and, as such, unlikely to undertake long-term investments in Icelandic assets and therefore likely to exit their positions at the earliest opportunity. Other things being equal, settling the failed banks' estates would have had a negative impact on Iceland's net international investment position (NIIP) in the amount of 5.5 billion euros (787 b.kr.), or nearly 36% of GDP, based on the position in Q3/2015. This is equivalent to the difference between the value of domestic assets that would have reverted to foreign creditors, on the one hand, and foreign assets that would have reverted to domestic creditors, on the other.

Furthermore, it was difficult to assess the possible extent of other outflows from residents – most importantly, pension funds. On the one hand, an orderly, price-sensitive portfolio reallocation could be expected, while disorderly, price-insensitive capital flight had to be avoided. This was reflected in the design of the liberalisation plan.

In Iceland's case, the possible extent of capital outflows relative to the limited depth of financial markets was an important factor, as large mismatches between potential shocks and the capacity of financial markets to absorb them can give rise to severe systemic externalities for the economy as a whole. The most immediate channel of transmission associated with the liberalisation process was considered to be the exchange rate channel, with a large sell-off of króna assets and deposit withdrawals leading to excessive one-way flows in the FX market, causing liquidity depletion, market dysfunction, and strong fire sale effects on the exchange rate of the króna, with severe repercussions for balance sheets and economic and financial stability in general.

Liberalisation strategy

In designing an appropriate liberalisation strategy, the Icelandic authorities took careful note of the IMF's institutional view on capital flow liberalisation and management.[3] The strategy is based on a systematic and cautious approach, entailing a liberalisation process that is well planned, timed, and sequenced with regard to the remaining macro-financial vulnerabilities, the level of institutional and market development, and individual sectors' ability to withstand volatile capital flows. When the revised liberalisation strategy was introduced in June 2015, Icelandic economic factors that would affect capital outflows were relatively favourable. Relevant external factors were favourable as well: the international low-yield environment was expected to prevail for some time, risk appetite had been relatively strong worldwide, Iceland's terms of trade had improved, and an international economic recovery continued, albeit slowly and unevenly.

The revised capital account liberalisation strategy presented in June 2015 proposed that the controls be lifted in stages. The first phase would focus on the failed banks' estates, the second on offshore krónur, and the third on households and businesses. The strategy involved reducing the size of outflows through the foreign currency market in connection with the resolution of the failed banks' estates, either through decentralised composition agreements[4] based on specific stability conditions or through taxation that would mitigate the adverse balance of payments effects, while reducing the externalities associated with outflows from offshore króna owners through an auction and secure segregation of the onshore and offshore markets during the liberalisation process.

The total scope of the risk addressed by the strategy amounted to as much as 56% of GDP. The assets concerned consisted of krona-denominated assets held by the insolvent estates of the failed commercial banks and savings banks (23% of GDP), foreign-denominated claims held by these estates against domestic parties (18% of GDP), and offshore krónur owned by non-residents (15% of GDP). The actions comprising the authorities' liberalisation strategy prevented the sales proceeds of these assets from flooding the foreign exchange market and thereby undermining economic, monetary, and financial stability.

The failed banks' estates

The failed banks' estates were presented with two options: conclude composition agreements in accordance with specific stability conditions before year-end 2015 (later extended to 15 March 2016), or face a one-off stability tax of 39% on their total assets (see Box 8.1). The stability conditions aimed to reduce the size of potential capital outflows related to the distribution of the estates' domestic assets and thereby neutralise, to the extent possible, their effects on Iceland's balance of payments and economic and financial stability.

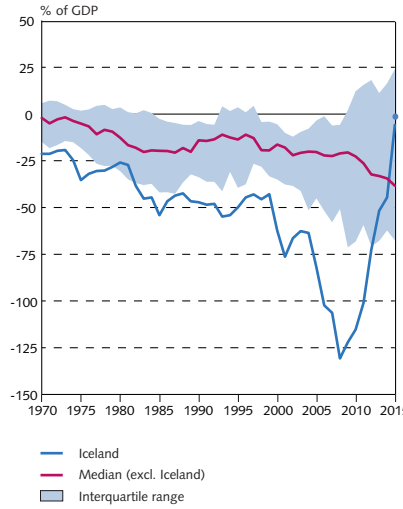
The balance of payments effect of distributions from the estates was mitigated when króna-denominated assets were reduced; the stability contribution amounted to 17.2% of year-2015

3. IMF (2012b). The liberalization and management of capital flows: an institutional view. *IMF Policy Paper*, November 12, 2012. Also expressed in specific IMF reports on Iceland; e.g., Iceland: 2014 Article IV Consultation and fifth post-program monitoring discussions – Staff Report; Press Release; and Statement by the Executive Director for Iceland. *IMF Country Report*, no. 15/72.
4. *A composition agreement* generally refers to a contract made by an insolvent or financially pressed debtor with two or more creditors in which the creditors agree to accept one specific partial payment of the total amount of their claims, which is to be divided *pro rata* among them in full satisfaction of their claims.

GDP, thus reducing the estates' domestic assets and limiting outflows. The settlement of the estates through composition agreements based on stability conditions was more or less finalised between June 2015 and May 2016. With the composition agreements, the estates' liabilities were written off with reference to their assets. At the end of 2015, Iceland's net international investment position was negative by about 5.7% of GDP, whereas the calculated underlying NIIP[5] at the end of Q3/2015 was negative by 31.5% of GDP. The NIIP therefore improved markedly because of the estates' stability contributions, as well as a revaluation of the estates' liabilities.[6] If the stability contributions had not been paid, the position would have been worse by about 17% of GDP; i.e., non-residents' share of the stability contributions.

Chart 8.4

Net international investment position in 30 advanced countries[1]



1. Figures for Iceland are from the National Economic Institute (1970-1994) and the Central Bank and Statistics Iceland (1995-2015) (data point shows preliminary figures for NIIP in Q2/2016), based on the underlying position during the period 2008-2014. Figures from the other countries are from the Lane and Milesi-Ferretti database for 1970-2011. Their data are extended through 2015 based on developments according to the IMF's international financial statistics (IFS) database.
Sources: IMF, Lane and Milesi-Ferretti (2007), National Economic Institute, Statistics Iceland, Central Bank of Iceland.

Offshore krónur

The revised liberalisation strategy addressed offshore krónur. The stock of offshore krónur had decreased markedly during the years prior to the presentation of the revised strategy, mainly due to Central Bank auctions. However, uncertainty still remained concerning the extent to which offshore króna owners would choose to reduce their exposure once controls were lifted. Therefore, in June 2016, the Central Bank offered to use part of its own foreign exchange reserves to buy offshore krónur in a single-price auction, the last auction of this type before removal of capital controls on domestic firms and households.

The bill of legislation on the treatment of króna-denominated assets subject to special restrictions, passed in May 2016,[7] therefore enabled the authorities to segregate offshore krónur in a secure manner and take the next step towards lifting the capital controls. According to the bill, offshore króna holders are allowed to invest in the same instruments as before, with the addition of special certificates of deposit issued by the Central Bank. However, the banks holding the accounts of offshore króna owners will be required to buy certificates of deposit from the Bank for the same amount, and these instruments will bear an interest rate of 0.5%. The interest rates are reviewed every twelve months by the Central Bank of Iceland, with reference to the Bank's legally mandated objectives and returns on its assets. After the bill of legislation was passed, the Central Bank held a foreign currency auction in which all owners of offshore krónur were given

5. The underlying NIIP assumes that the failed banks' estates had been wound up based on the book value of assets and the underlying classification of approved claims according to claims registers.
6. The estates' liabilities as of end-2015 were revalued in Q1/2016. Liabilities are now presented at market value, as opposed to nominal value. As a result, the external position improved, from 14.3% of GDP at year-end 2015 to 5.7%.
7. See the Act on the Treatment of Króna-Denominated Assets Subject to Special Restrictions, no. 37/2016.

the option of exchanging them for foreign currency, and the Bank decided to accept all offers submitted at a rate of 190 krónur per euro. Offshore krónur totalled 2.2 billion euros (over 300 b.kr.), or 15% of GDP, before the auction took place on 16 June 2016. On 21 June, the Bank published the results and offered to purchase the offshore króna assets not sold in the auction at the same exchange rate. A total of 1,715 offers were submitted, and 1,688, or 98.4% of the total, were accepted. Accepted offers amounted to 559 million euros (83 b.kr.) of a total of 1.4 billion euros (188 b.kr.) submitted in the auction and the post-auction tender.

The auction helped to facilitate the exit of offshore krónur without negative effects on the foreign exchange market, and the outstanding stock of offshore krónur has been reduced markedly. The remaining owners of offshore króna assets in the form of cash or Treasury bonds and bills are a smaller and more homogeneous group, mostly a few fund management companies. The remaining offshore krónur were subsequently transferred to accounts subject to special restrictions and nominee accounts with the Central Bank of Iceland, in accordance with the newly passed legislation. Owners of offshore króna assets will continue to have the right to dispose of their assets; they can make withdrawals, exchange all interest payments in the foreign exchange market, and trade their krónur in the offshore market. An assessment of when and how to lift controls on the remaining offshore krónur will be made after the steps towards liberalisation of capital controls on households and businesses, provided for in the law passed by Parliament in autumn 2016, have been executed. The first of these steps was taken immediately upon the passage of the legislation, and the latter will be taken around the turn of the year 2016-2017.

Households and businesses

In accordance with the revised liberalisation strategy, the law passed in autumn 2016 greatly enhances the freedom of businesses and individuals to transfer capital to and from Iceland and engage in foreign exchange transactions. With it, important steps are taken towards general liberalisation of the capital controls. The law, which amends the Foreign Exchange Act, no. 87/1992, removes certain restrictions on foreign exchange transactions and cross-border movement of capital and expands specified authorisations under the Foreign Exchange Act. In addition, changes were made to the Central Bank's powers to gather information in connection with its role as a central bank, and the requirement to notify the Central Bank of foreign exchange transactions and cross-border capital transfers was laid down explicitly.

According to the law, liberalisation is sequenced as follows: Outward foreign direct investment and easing of restrictions on long- and short-term portfolio investment up to a limit of 226 thousand euros (30 m.kr.) were authorised first, immediately upon passage of the legislation. Effective 1 January 2017, the limit will be raised to 754 thousand euros (100 m.kr.) per party and expanded to include cross-border deposit transfers. The Central Bank is authorised to ease these limits until they are abolished, along with limitations on derivatives and other instruments and other remaining restrictions. This phase of liberalisation will exclude both offshore króna holdings and pension funds (in excess of the limits stated above); however pension funds will continue to be authorised to invest abroad on an exemption basis.

Upon the adoption of the measures provided for in the law, the capital controls should place only minor restrictions on most individuals, and by the turn of the year 2016-2017, only a very few individuals should be affected. The law does not have any impact on offshore króna holders' authorisations. When and how the remaining restrictions in the Foreign Exchange Act and the restrictions on offshore krónur will be abolished remains to be decided and will depend upon a

reassessment of the conditions for full liberalisation. This reassessment will be carried out after the first two steps have been taken.

Pension funds

Since mid-2015, pension funds have been granted exemptions for foreign investment in the amount of about 603 million euros (80 b.kr.), or 3.6% of GDP. As a result, some of their pent-up need for foreign investment has been met; however, their foreign investment is set to increase further. According to the funds' balance sheets, the ratio of foreign assets to total assets was 22% in July 2016, as compared with the 2001-2015 average of roughly 24%.

Box 8.1

Stability conditions and stability contributions

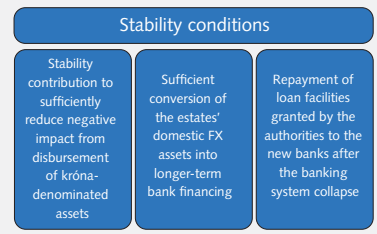
The Icelandic authorities' revised liberalisation strategy, presented in June 2015, provided the failed banks' estates with explicit deadlines for the finalisation of composition agreements fulfilling specific conditions. The stability conditions could be fulfilled by making a stability contribution to the Government, which was designed to take account of the level, composition, and degree of uncertainty of the estates' domestic assets so as to minimise potential disorderly outflows associated with the resolution of the estates.

The stability contribution consisted of (all or some of) four parts: (i) payment of a direct contribution to the Government; (ii) issuance of contingent financial instruments by the estates to the Government; (iii) an agreement to split uncertain future asset recoveries with the authorities through profit-sharing arrangements for future returns on the estates' equity stakes in the new banks or a direct transfer of shares; and (iv) the transfer to the Government of recoveries from domestic claims that are in dispute and/or have a nominal value far exceeding book value.

Furthermore, the stability conditions addressed the unwinding of remaining crisis legacy items that were related to the failed banks and remained on the new banks' balance sheets, both through repayment of loans and liquidity assistance provided by the Treasury and the Central Bank and through conversion of the estates' foreign currency deposits into longer-term foreign-denominated bonds.

Chart 1

The stability conditions



9 Appendix[1]

Table A1 Economic development[2]

	2015
Population at year-end (thousands)	332.5
Average annual population growth (%)	
in last 10 yrs.	1.1
in last 20 yrs.	1.1
in last 30 yrs.	1.1
GDP in ISK billions	2,214
GDP in EUR billions	15.1
GDP in USD billions	16.8
GDP/capita in EUR thousands	45.5
GDP/capita in USD thousands in terms of PPP	45.8
Rank among OECD countries	9.0
Average annual growth rate of GDP (%)	
in last 10 yrs.	1.8
in last 20 yrs.	3.2
in last 30 yrs.	2.7
Average annual inflation rate (%)	
in last 10 yrs.	5.8
in last 20 yrs.	4.6
in last 30 yrs.	6.9

	2015
Labour force participation rate, males (%)[3]	90.3
Labour force participation rate, females (%)[3]	85.5
Rate of unemployment (% of labour force)[3]	4.2
Infant mortality (per 1,000 live births)	2.1
Life expectancy (males)	81.0
Life expectancy (females)	83.6
Live births per 1,000 inhabitants	13.2
Energy consumption per 100,000 inhabitants (PJ) (2014)	79.6
Physicians per 1,000 inhabitants (2014)	3.6
Passenger cars per 1,000 inhabitants (2014)	671.2
Access to Internet (% of population)	98.2
Exports as a share of GDP	53.7
International investment position at year-end as a share of GDP	-5.7
Government revenue as a share of GDP	42.1
Government expenditures as a share of GDP	42.9
General government gross debt as a share of GDP	60.7

1. The information in the appendix is based on data available in mid-September, whereas the analysis in the main text is based on data from end-August 2016. 2. Data refer to 2015 unless otherwise indicated. 3. Age 16-64.

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

Table A2 Structure of the economy

	At current prices (EUR millions)			% of GDP			Average volume change (%)	
A Components of GDP	*1990*	*2000*	*2015*	*1990*	*2000*	*2015*	*1975-2015*	*1995-2015*
Private consumption	2,990	5,813	7,525	59.8	60.0	49.7	2.9	2.7
Public consumption	996	2,169	3,572	19.9	22.4	23.6	3.1	2.2
Gross capital formation	973	2,341	2,871	19.5	24.2	19.0	2.0	4.0
National expenditure	4,934	10,359	13,992	98.7	107.0	92.5	2.6	2.8
Exports of goods and services	1,682	3,139	8,126	33.6	32.4	53.7	3.9	5.5
Imports of goods and services	1,617	3,813	6,987	32.3	39.4	46.2	3.4	4.6
GDP	5,000	9,686	15,131	100.0	100.0	100.0	3.1	3.2
Current account balance	-104	-997	770	-2.1	-10.3	5.1	.	.

	% of GDP				
B GDP by sector	*1997*	*2000*	*2007*	*2009*	*2015*
Agriculture, forestry and fishing	9.6	8.3	5.1	6.6	6.4
Mining and quarrying	0.2	0.1	0.1	0.1	0.1
Manufacturing	16.6	13.6	9.3	12.5	12.7
Electricity, gas, steam and air conditioning supply	3.7	3.3	3.2	4.1	4.2
Water supply; sewerage, waste management and remediation activities	0.6	0.6	0.8	0.9	1.0
Construction	8.9	9.2	10.5	4.8	6.0
Wholesale and retail trade; repair of motor vehicles and motorcycles	11.9	11.4	10.3	8.9	9.7
Transportation and storage	6.3	5.9	4.6	5.3	5.7
Accommodation and food service activities	1.6	1.9	1.6	1.8	3.3
Information and communication	5.3	5.8	4.3	4.0	4.7
Financial and insurance activities	3.5	5.4	12.8	11.2	6.6
Real estate activities	6.2	6.9	9.8	11.0	9.4
Professional, scientific and technical activities	3.7	4.3	4.6	4.4	4.6
Administrative and support service activities	1.9	2.1	2.2	2.6	3.5
Public administration and defence; compulsory social security	4.8	5.7	6.0	5.1	5.3
Education	5.0	5.0	5.5	6.5	6.0
Human health and social work activities	8.0	8.2	6.5	7.6	7.8
Arts, entertainment and recreation	1.0	0.9	1.2	1.3	1.6
Other service activities	1.4	1.4	1.5	1.4	1.4
Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use	0.1	0.1	0.1	0.1	0.1
Activities of extra-territorial organisations and bodies	0.0	0.0	0.1	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0

Table A2 (continued) Structure of the economy[1]

C Breakdown of employment by industry	Thous. man-years 2015	Percentage breakdown 1963	1970	1980	1990	2000	2010	2015
Agriculture	3,600	13.4	12.4	7.9	4.9	4.4	2.6	2.0
Fisheries	4,100	6.6	6.4	5.3	5.7	3.9	3.2	2.2
Fish processing	3,700	9.7	7.8	9.1	6.1	4.3	2.0	2.0
Manufacturing industry	15,300	15.6	15.2	15.2	12.5	11.2	8.4	8.3
Construction, electricity and water	13,700	11.1	11.4	11.0	10.8	7.5	7.6	7.5
Wholesale & retail trade, restaurants & hotels	34,900	13.7	13.5	13.4	14.5	18.1	17.0	19.0
Transport, storage and communications	20,600	9.6	8.5	7.3	6.7	6.8	9.6	11.2
Finance, insurance, real estate, business services	24,300	2.7	4.0	5.4	8.1	12.5	13.6	13.2
Public administration	7,500	3.6	4.0	4.5	5.1	4.5	5.1	4.1
Health & social services	20,900	3.3	5.1	7.7	10.9	13.2	12.7	11.4
Education	23,500	3.0	3.9	5.0	6.0	6.3	12.3	12.8
Other services	11,400	7.6	7.8	8.2	8.5	7.3	5.8	6.2
Total employment	183,700	100.0	100.0	100.0	100.0	100.0	100.0	100.0

1. Figures for the period 1963-1990 are based on Statistics Iceland's domestic classification of man-years by industry. Year-2000 figures are based on the NACE Rev. 1 classification of labour force survey main job employment. Figures for 2010 onwards are based on the NACE Rev. 2 classification of labour force survey main job employment. The figures are not entirely comparable because of differences in classification standards.
Sources: Statistics Iceland, Central Bank of Iceland.

Table A3 Structure of foreign trade

A Exports and imports by basic category 1995-2015

	At current prices (EUR millions)				*% of total exports or imports*			
	1995	*2005*	*2010*	*2015*	*1995*	*2005*	*2010*	*2015*
Exports of goods and services	1,925	4,280	5,735	8,206	100.0	100.0	100.0	100.0
Imports of goods and services	1,718	5,645	4,367	7,033	100.0	100.0	100.0	100.0
Merchandise exports (fob value)	1,392	2,487	3,466	4,280	72.3	58.1	60.4	52.2
Marine products	1,001	1,409	1,362	1,809	52.0	32.9	23.7	22.0
Manufacturing goods	298	855	1,921	2,263	15.5	20.0	33.5	27.6
Other goods	92	223	182	208	4.8	5.2	3.2	2.5
Merchandise imports (fob value)	1,236	3,697	2,723	4,489	72.0	65.5	62.4	63.8
Consumption goods	401	1,135	686	1,203	23.4	20.1	15.7	17.1
Capital goods	264	860	617	939	15.3	15.2	14.1	13.4
Industrial supplies	344	884	898	1,264	20.1	15.7	20.6	18.0
Services exports	533	1,792	2,270	3,926	27.7	41.9	39.6	47.8
Transportation	…	…	…	1,401	…	…	…	17.1
Travel	…	…	…	1,458	…	…	…	17.8
Other services	…	…	…	1,066	…	…	…	13.0
Services imports	481	1,948	1,644	2,545	28.0	34.5	37.6	36.2
Transportation	…	…	…	431	…	…	…	6.1
Travel	…	…	…	898	…	…	…	12.8
Other services	…	…	…	1,215	…	…	…	17.3

Sources: Statistics Iceland, Central Bank of Iceland.

B Merchandise exports by commodity group (fob value) 1995-2015

	At current prices (EUR millions)				*% of total exports or imports*			
	1995	*2005*	*2010*	*2015*	*1995*	*2005*	*2010*	*2015*
Total merchandise exports	1,392	2,487	3,466	4,280	100.0	100.0	100.0	100.0
Marine products	1,001	1,409	1,362	1,809	71.9	56.7	39.3	42.3
Salted and/or dried fish	161	254	194	226	11.6	10.2	5.6	5.3
Fresh fish	81	253	158	364	5.9	10.2	4.6	8.5
Whole-frozen fish	149	152	196	230	10.7	6.1	5.7	5.4
Frozen fish fillets	278	375	358	367	20.0	15.1	10.3	8.6
Frozen shrimp	184	101	69	97	13.2	4.1	2.0	2.3
Fish meal	56	110	87	201	4.0	4.4	2.5	4.7
Fish oil	29	34	55	84	2.1	1.4	1.6	2.0
Other marine products	63	131	244	238	4.6	5.3	7.0	5.6
Agricultural products	25	48	55	91	1.8	1.9	1.6	2.1
Manufacturing products	298	855	1,921	2,263	21.4	34.4	55.4	52.9
Aluminium	147	461	1,374	1,630	10.6	18.5	39.6	38.1
Ferrosilicon	38	78	116	130	2.8	3.1	3.3	3.0
Other manufacturing products	113	316	431	503	8.1	12.7	12.4	11.8
Other products	68	175	127	117	4.9	7.0	3.7	2.7
Ships and aircraft	49	123	53	26	3.5	5.0	1.5	0.6
Other products	19	52	74	91	1.3	2.1	2.1	2.1

Sources: Statistics Iceland, Central Bank of Iceland.

Table A3 (continued) Structure of foreign trade

C Merchandise imports by economic category (fob value) 1995-2015

	At current prices (EUR millions)				*% of total merchandise exports*			
	1995	*2005*	*2010*	*2015*	*1995*	*2005*	*2010*	*2015*
Total merchandise imports	1,236	3,697	2,723	4,489	100.0	100.0	100.0	100.0
Food and beverages	123	252	264	445	10.0	6.8	9.7	9.9
Primary, mainly for industry	29	62	12	15	2.4	1.7	0.4	0.3
Primary, mainly for houshold consumption	16	37	83	163	1.3	1.0	3.0	3.6
Processed, mainly for industry	11	13	21	47	0.9	0.4	0.8	1.0
Processed, mainly for houshold consumption	67	140	148	219	5.4	3.8	5.4	4.9
Industrial supplies not elsewhere specified	344	884	898	1,264	27.9	23.9	33.0	28.2
Primary	14	38	38	62	1.2	1.0	1.4	1.4
Processed	330	846	859	1,201	26.7	22.9	31.6	26.8
Fuels and lubricants	87	346	357	568	7.1	9.4	13.1	12.7
Primary	3	12	13	17	0.3	0.3	0.5	0.4
Motor spirits	18	70	81	75	1.4	1.9	3.0	1.7
Other	66	265	263	476	5.4	7.2	9.7	10.6
Capital goods (except transport)	264	860	617	939	21.3	23.3	22.6	20.9
Capital goods (except transport)	169	568	293	503	13.7	15.4	10.8	11.2
Parts and accessories	94	292	323	436	7.6	7.9	11.9	9.7
Transport equipment	154	745	185	710	12.4	20.1	6.8	15.8
Passenger motor cars (excl. busses)	55	334	49	251	4.4	9.0	1.8	5.6
Transport equipment (excl. ships, aircraft)	17	141	14	81	1.4	3.8	0.5	1.8
Other, non-industrial	3	18	6	13	0.2	0.5	0.2	0.3
Parts and accessories	35	97	74	125	2.8	2.6	2.7	2.8
Ships	35	31	18	98	2.9	0.8	0.7	2.2
Aircraft	10	124	24	142	0.8	3.3	0.9	3.2
Consumer goods not elsewhere specified	261	606	400	556	21.1	16.4	14.7	12.4
Durable	54	174	68	125	4.3	4.7	2.5	2.8
Semi-durable	104	216	146	208	8.4	5.8	5.4	4.6
Non-durable	103	216	186	224	8.4	5.8	6.8	5.0
Goods not elsewhere specified	3	4	3	6	0.2	0.1	0.1	0.1

Sources: Statistics Iceland, Central Bank of Iceland.

Table A3 (continued) Structure of foreign trade

D Geographic distribution of foreign trade 1970-2015[1]

	Share of total					*EUR millions*
Merchandise exports, fob	*1970*	*1980*	*1990*	*2000*	*2015*	*2015*
European Union	52.8	52.3	70.7	67.4	73.5	3,144.0
Euro area	25.4	30.2	37.6	42.3	57.4	2,455.4
Other EU countries	27.4	22.0	33.1	25.1	16.1	688.6
United Kingdom	13.2	16.5	25.3	19.3	11.6	496.9
Other Western European countries	2.8	2.3	3.4	7.8	5.8	248.4
Eastern Europe and former Soviet Union	9.6	8.8	2.9	1.4	2.5	109.1
Russia	6.8	5.4	2.5	0.4	2.0	86.6
United States	30.0	21.6	9.9	12.2	5.7	242.3
Japan	0.1	1.5	6.0	5.2	2.0	85.7
Other OECD countries	0.5	0.6	0.5	2.0	3.0	127.3
Developing countries	4.2	12.9	5.5	3.0	5.6	239.8
Other countries	0.0	0.0	1.1	1.0	1.9	83.0
Total	100.0	100.0	100.0	100.0	100.0	4,279.6
Merchandise imports, cif						
European Union	64.9	58.0	59.9	57.0	50.5	2,419.3
Euro area	32.0	33.2	35.5	33.5	30.9	1,477.5
Other EU countries	33.0	24.8	24.4	23.6	19.7	941.8
United Kingdom	14.3	9.5	8.1	9.0	5.0	241.0
Other Western European countries	5.4	8.1	5.2	9.7	12.0	572.4
Eastern Europe and former Soviet Union	10.4	10.9	6.5	5.7	0.4	19.2
Russia	7.2	9.7	5.0	1.8	0.3	14.7
United States	8.2	9.4	14.4	11.0	7.9	376.1
Japan	2.9	4.0	5.6	4.9	1.7	82.5
Other OECD countries	0.4	5.8	3.7	4.5	5.6	268.8
Developing countries	7.2	2.7	3.1	5.6	20.1	964.4
Other countries	0.6	1.1	1.4	1.5	1.7	83.7
Total	100.0	100.0	100.0	100.0	100.0	4,786.4

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 (EUR millions)					Volume change year-on-year (%)				
	2011	*2012*	*2013*	*2014*	*2015*	*2011*	*2012*	*2013*	*2014*	*2015*
Private consumption	5,457	5,908	6,095	6,767	7,525	2.5	2.0	1.0	2.9	4.3
Public consumption	2,605	2,714	2,828	3,131	3,572	-0.1	-1.8	1.0	1.7	1.0
Gross fixed capital formation	1,621	1,770	1,828	2,233	2,871	11.6	5.3	2.2	16.0	18.3
Industries	1,086	1,205	1,187	1,459	2,048	23.8	8.0	-2.0	17.2	29.5
Housing	248	279	313	380	399	5.6	6.8	10.7	14.8	-3.1
Public works and buildings	288	286	328	394	424	-15.9	-6.2	12.1	12.5	-2.5
National expenditure	9,703	10,404	10,720	12,144	13,992	3.5	1.5	0.7	5.2	6.0
Exports of goods and services	5,963	6,304	6,453	6,899	8,126	3.4	3.6	6.7	3.2	9.2
Exports of goods	3,486	3,586	3,455	3,670	4,200	2.7	3.4	3.7	1.7	3.3
Exports of services	2,477	2,718	2,998	3,229	3,926	4.4	3.8	10.6	4.9	15.9
Imports of goods and services	5,124	5,643	5,527	6,089	6,987	6.8	4.6	0.1	9.8	13.5
Imports of goods	3,260	3,511	3,407	3,736	4,442	6.8	2.3	-0.3	9.3	18.7
Imports of services	1,864	2,132	2,120	2,352	2,545	6.7	8.7	0.8	10.5	5.3
Gross domestic prod. (GDP)	10,541	11,065	11,647	12,954	15,131	2.0	1.2	4.4	1.9	4.2
Current account balance	-555	-438	704	516	770	.	.	.	.	.
Current acc. balance, % of GDP	.	.	.	.	.	-5.3	-4.0	6.0	4.0	5.1

Source: Statistics Iceland.

Table A5 Financial sector indicators

Financial institutions (number, unless otherwise indicated)	*2000*	*2005*	*2010*	*2015*
Commercial banks	4	4	5	4
Savings banks	25	24	10	4
Number of employees in commercial banks and savings banks, year-end[1]	3,046	3,884	3,541	3,037
Total assets of commercial and savings banks (EUR billions)[1]	10	52	18	23
Credit undertakings	12	11	8	5
Undertakings engaged in securities	11	11	10	10
Pension funds	56	45	33	26
Insurance companies	12	12	10	12
Financial markets				
Listed companies on Iceland Stock Exchange (ICEX), now OMXI	75	24	8	17
Market capitalisation of listed companies at end of period (EUR billions)	5.0	24.3	0.9	7.3
Market capitalisation of listed companies at end of period (% of GDP)	59.0	182.3	12.5	47
Annual turnover in listed equities (EUR billions)	2.7	15.2	0.1	2.7
Annual turnover in listed bonds (EUR billions)	4.6	16.7	17.5	13.6
Annual turnover on the Icelandic interbank market for foreign exchange (EUR billions)	10.6	26.3	0.3	3.4
Annual turnover on the interbank currency swap market (EUR billions)	.	0.6	0.0	0.0
Annual turnover on the interbank market for krónur (EUR billions)	7.2	20.0	2.5	2.4

1. Parent company basis.

Sources: Financial Supervisory Authority, Nasdaq Iceland, Central Bank of Iceland.

Table A6 Government sector indicators

General government revenues and expenditures									
% of GDP	*2007*	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	*2015*
Revenue	45.9	42.3	38.7	39.6	40.1	41.7	42.1	45.2	42.1
Taxes	36.2	32.4	29.0	29.5	30.5	31.6	32.1	34.9	33.1
on income and wealth	20.2	19.3	17.5	17.5	18.4	19.0	19.7	22.6	20.9
on production/imports/consumption	15.9	13.2	11.5	12.0	12.1	12.6	12.3	12.3	12.2
Social contributions	2.9	2.7	2.9	3.9	3.9	3.6	3.7	3.7	3.6
Interest	2.2	3.2	3.0	2.0	1.5	1.4	1.1	1.1	0.8
Sales of goods and services	3.0	3.1	2.9	3.0	2.9	3.2	3.0	3.0	3.0
Other income	1.7	0.9	0.9	1.1	1.3	1.8	2.2	2.5	1.5
Expenditure	41.0	55.3	48.4	49.3	45.7	45.4	43.9	45.3	42.9
Wages	13.7	13.5	13.6	13.5	13.5	13.6	13.5	13.7	13.9
Purchases of goods and services	10.5	11.2	12.0	12.1	12.1	12.0	11.8	11.5	10.9
Interest	2.4	3.1	6.0	4.8	4.1	4.7	4.6	4.7	4.6
Subsidies	1.7	1.8	1.8	1.7	1.7	1.7	1.6	1.5	1.4
Current transfers	5.5	5.8	7.7	7.5	8.1	7.6	7.1	7.0	6.4
Fixed investment	4.7	4.9	4.0	3.4	2.7	2.7	2.9	3.1	2.9
Capital transfers	0.7	13.2	1.2	4.5	1.8	1.5	0.9	2.3	1.4
Other	1.7	1.9	2.0	1.9	1.6	1.5	1.6	1.5	1.4
General government, % of GDP									
Expenditure	41.0	55.3	48.4	49.3	45.7	45.4	43.9	45.3	42.9
Administration, safety, defence[1]	4.4	4.4	4.8	5.0	5.4	5.3	5.0	4.8	4.6
Education	7.9	8.1	8.1	8.0	7.8	7.7	7.5	7.6	7.5
Health services	7.6	7.6	7.9	7.5	7.3	7.4	7.4	7.5	7.5
Social security	8.2	8.5	10.7	10.7	11.1	10.6	10.2	10.2	9.5
Other social affairs[2]	4.7	4.7	4.6	6.5	4.0	4.8	4.4	4.1	4.3
Economic affairs	5.7	18.7	6.0	6.8	5.7	4.8	4.8	6.3	5.0
Interest expenditure	2.6	3.3	6.3	5.0	4.3	4.9	4.7	4.8	4.7
Central government, % of GDP									
Expenditure	30.0	43.4	36.3	38.4	34.9	34.0	32.7	33.4	31.6
Administration, safety, defence[1]	4.5	4.4	4.8	5.0	5.4	5.2	5.0	4.8	4.5
Education	3.1	3.3	3.3	3.3	3.1	3.2	3.1	3.0	3.0
Health services	7.5	7.4	8.0	7.7	7.4	7.5	7.6	7.6	7.5
Social protection	7.0	6.7	7.7	8.4	8.8	7.7	7.4	6.9	6.5
Other social affairs[2]	1.7	1.6	1.7	3.6	1.5	2.2	1.7	1.4	1.6
Economic affairs	4.2	17.3	5.0	6.0	4.9	3.9	3.7	5.4	4.3
Interest expenditure	2.0	2.6	5.7	4.4	3.7	4.3	4.2	4.3	4.2
Local government, % of GDP									
Expenditure	13.2	13.5	13.0	12.8	12.9	13.1	13.3	13.5	13.0
Administration and safety[1]	1.0	1.1	1.0	1.1	1.1	1.2	1.2	1.2	1.2
Education	4.8	4.8	4.8	4.7	4.7	4.5	4.5	4.6	4.5
Health services	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Social protection	2.1	2.1	2.4	2.5	3.0	3.0	3.1	3.3	3.1
Other social affairs[2]	3.1	3.2	3.0	3.0	2.6	2.6	2.7	2.7	2.8
Economic affairs	1.5	1.6	1.1	0.9	0.9	1.1	1.3	1.1	0.9
Interest expenditure	0.6	0.7	0.6	0.6	0.6	0.6	0.5	0.5	0.5

1. Excluding interest expense. 2. Culture, religion, recreation, housing and community affairs, environment protection.

Source: Statistics Iceland.

Table A7 Balance of payments

EUR millions	*1995*	*2000*	*2005*	*2008*	*2015*[1]
Current account	10	-997	-2,137	-2,754	770
Goods	138	-637	-1,442	-517	-243
Goods exports	1,393	1,977	2,327	3,158	4,200
Goods imports	1,255	2,614	3,770	3,675	4,442
Services	52	-36	-155	250	1,382
Services exports	533	1,162	1,792	1,862	3,926
Services imports	481	1,199	1,948	1,611	2,545
Primary income	-175	-309	-543	-2,461	-127
Receipts of primary income	44	119	1,160	1,072	759
Expenditures of primary income	219	428	1,703	3,533	886
Secondary income - Balance on secondary income	-4	-15	3	-26	-241
Receipts of secondary income	16	17	59	69	113
Expenditures of secondary income	20	32	56	95	355
Capital account	-3	-3	-5	-8	-10
Receipts	0	0	0	0	0
Expenditures	3	3	5	8	10
Financial account[2]	-27	-1,161	-1,846	-9,096	910
Assets	27	1,060	18,328	-3,777	-1,728
Direct investment	19	427	5,715	-2,904	366
Portfolio investment	49	599	3,773	-3,384	-2,673
Financial derivatives, net	.	.	.	-1	15
Other investment	-44	113	8,781	1,724	-416
Reserve assets	3	-79	60	789	981
Liabilities	54	2,220	20,174	5,319	-2,637
Direct investment	-7	185	2,483	633	921
Portfolio investment	169	1,288	13,599	37	-6,121
Other investment	-107	747	4,092	4,649	2,563
Net errors and omissions	-34	-160	297	-6,335	150

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 repayment, or increase in assets.

Source: Central Bank of Iceland.

Table A8 Projected external debt service[1]

EUR millions	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*	*Principal thereafter*	*Total*
Government								
Principal	0	0	0	0	758	0	902	1,660
Interest[2]	36	72	72	72	63	53	.	.
Total	36	72	72	72	821	53	.	.
Monetary authorities & Treasury								
Principal	0	0	0	0	758	0	902	1,660
Interest[2]	36	72	72	72	63	53	.	.
Total	36	72	72	72	821	53	.	.
Local government								
Principal	0	0	0	0	0	0	0	0
Interest[2]	0	0	0	0	0	0	.	.
Total	0	0	0	0	0	0	.	.
Banks								
Principal	0	144	978	458	117	0	0	1,697
Interest[2]	25	49	32	8	3	0	.	.
Total	25	193	1,010	466	121	0	.	.
Other credit institutions								
Principal	26	38	31	6	22	5	10	137
Interest[2]	1	1	0	0	0	0	.	.
Total	26	39	31	7	22	5	.	.
Other sectors								
Principal	236	389	492	311	352	202	1,001	2,981
Interest[2]	16	29	26	22	16	13	.	.
Total	252	417	517	332	368	215	.	.
Grand total								
Principal	262	571	1,500	775	1,249	206	1,913	6,476
Interest[2]	78	151	130	102	83	66	.	.
Total	340	721	1,630	877	1,332	273	.	.

1. Based on debt outstanding at end of June 2016. 2. Floating interest rate is assumed according to the most recent market rates available.

Source: Central Bank of Iceland.