Box IV-2

Indicators of internal adjustment of the economy and the shift of production from the non-tradable to the tradable sector

Economies are always adjusting, in that the factors of production shift from sector to sector and individual sectors' share in output inevitably changes over time. However, the adjustment taking place in the Icelandic economy in recent years is much more pronounced than that occurring under normal conditions. This Box describes that adjustment. It shows that production takes place increasingly in the tradable sector, which benefits from the low real exchange rate of the króna, instead of the non-tradable sectors, which grew rapidly during the pre-crisis upswing.[1]

Economic recovery driven by exports and related sectors

The expenditure approach in the national accounts shows the adjustment that has taken place in consumption, investment, and net trade, and it shows clearly, for instance, how a portion of the contractionary effect of the financial crisis was directed out of the domestic economy through a steep contraction in imports. With the production approach to the national accounts, it is possible to analyse economic developments by sector and to examine both the adjustment that has taken place in production and the contribution of various sectors to both the post-crisis contraction and the economic recovery that began in 2010.[2]

The post-crisis contraction in gross factor income (GFI) was most pronounced in the sectors that had grown the most before the crisis, particularly construction, financial services, and retail trade (see Chart 1). The Statistics Iceland labour market survey bears this out: between 2008 and 2010 the number of jobs fell by 7,500 in construction, nearly 5,000 in retail trade, and about 800 in financial services (see Chart 2). Jobs in the construction sector continued to decline in number, with the number of jobs lost in 2008-2012 equal to all of the jobs in the financial services sector at the top of the upswing.

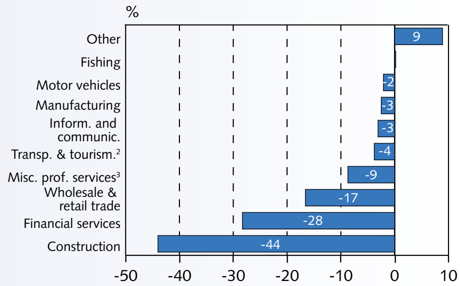
From 2010 to 2012, the economic recovery was driven by exports and related activities. About 41½% of the increase in GFI since 2010 is due to growth in transport, travel agency operations, hotels and restaurants, and non-real estate leasing (such as motor vehicle rentals). The fisheries sector contributed another 14% to the recovery. In the domestic private sector, the contribution was greatest in wholesale and retail trade (apart from motor vehicles). This reflects both the increase in private consumption during the period and the fact that the wholesale and retail trade sector benefits from growth in tourism (see Chart 3). The labour market survey supports this. According to the survey, since 2008 some 2,000 jobs have been created in hotel and restaurant services, nearly 1,300 in the fishing industry, and 500 in transport and transportation (see Chart 2).

Firms' adjustment appears to have centred on cutting employee compensation in response to increased cost of capital and reduced demand

The production accounts can also be used to examine the distribution of the returns on production between wage-earners and com-

Chart 1

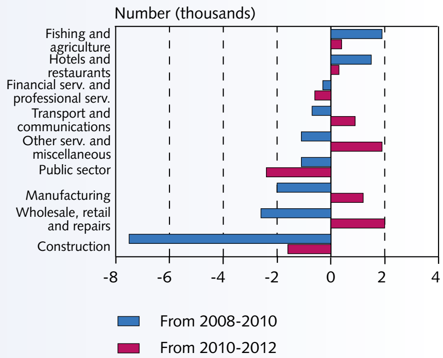
Sectoral contributions to the economic contraction in 2008-2010[1]



1. Based on gross domestic factor income according to the production approach to the national accounts. 2. This group includes transport and storage, accommodation and food services, travel agencies, and rental and leasing activities (other than housing). 3. Without travel agencies and rental and leasing activities.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 2

Changes in the number of employed[1]

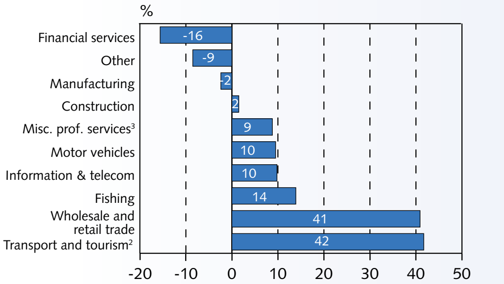


1. People are classified as employed if they worked one hour or more during the reference week or were absent from the work they usually carry out.
Sources: Statistics Iceland, Central Bank of Iceland.

1. An analysis can never be better than the available data allow, and among the problems involved in interpreting and analysing these data is the challenge of determining which companies belong to the tradable sector. This Box is based on the production approach to national accounts, together with other data on the labour market and companies' operations, fixed capital, financial assets, and liabilities.
2. The expenditure approach shows the distribution of GDP by allocation to private consumption, public consumption, investment, and external trade. On the other hand, the production approach shows in which sectors output is generated. Gross factor income (GFI) measures the value of the production of goods and services taking place in the economy. The difference between GDP and GFI is that indirect taxes are not included in factor income, as they are not part of companies' revenues, whereas manufacturing subsidies are included. Figures on year-2012 GFI at constant prices are not yet available, but volume indices can be used to produce an estimate.

Chart 3

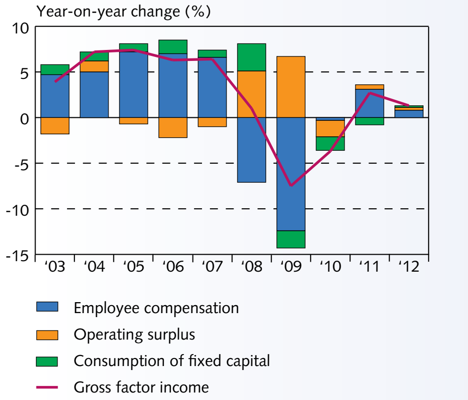
Selected sectors' estimated contribution to the economic recovery in 2010-2012[1]



1. Based on gross domestic factor income according to the production approach to the national accounts 2010-2012 where the 2012 value is assessed from volume indices. 2. This group includes transport and storage, accommodation and food services, travel agencies, and rental and leasing activities (other than housing). 3. Without travel agencies and rental and leasing activities.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 4

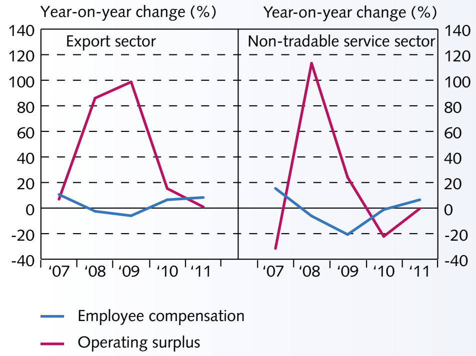
Gross factor income development and main components[1]



1. GFI is the sum of employee compensation, operating surplus and consumption of fixed capital. All variables are at constant prices. Employee compensation is remuneration in return for work. The operating surplus measures the surplus before taking account of any interest, rent or similar charges/receipts. The value of gross factor income in 2012 is assessed from volume indices and the share of the main components is assumed to stay unchanged from the previous year.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 5

Development in operating surplus and employee compensation by sectors[1]



1. Based on the production approach to the national accounts. Employee compensation is remuneration in return for work. The operating surplus measures the surplus accruing from production before taking account of any interest, rent or similar charges payable/receivable.
Sources: Statistics Iceland, Central Bank of Iceland.

pany owners, as GFI is the sum of employee compensation, operating surplus, and consumption of fixed capital.[3] Until 2007, the pre-crisis upswing was characterised by rapid growth in wage costs and an increase in wage-earners' share of the returns on production. An abrupt turnaround took place in 2007-2009, however, when employee compensation contracted by nearly a fourth at constant prices and wage-earners' share declined (see Chart 4). The contraction in wage costs was greatest in construction and domestic services, where the most jobs were lost, and least in export sectors. The contraction in total hours worked was even steeper than the loss of jobs indicates, as average hours worked declined. Wage-earners' share of the returns on production has increased somewhat since 2009 in nearly all sectors of the economy.

Firms' operating surplus and their owners' share of the returns on production rose sharply in 2007-2009, when employee compensation fell (see Charts 4 and 5). It should be borne in mind, however, that according to the production approach, firms' operating surplus shows their profit before interest payments; therefore, it does not indicate what their actual profits will be net of the cost of capital. Nonetheless, Statistics Iceland's financial accounts of enterprises can be used to estimate how much firms' net profit has deviated from their operating surplus.[4] The difference was substantial in 2008, when nearly all economic sectors generated huge net losses in spite of positive operating surpluses. The lion's share of their enormous cost of capital in 2008 was due to the depreciation of the króna and the resultant spike in inflation. In 2009-2011, their operating surpluses reflected their net profit more closely. It is clear that firms in the tradable sector performed much better than those in the non-tradable sector (see Chart 6), but losses in 2008 weighed so heavily that the entire period from 2008-2011 shows a net loss for most sectors. It is clear that, if this year's and last year's profits prove to be similar to those in 2011, companies in the tradable sector have been generating strong profits for the entire period from 2008 to 2013, while firms in domestic services and construction still have some ground to cover to make up for the previous period's losses.

Firms' capital stock grew only marginally despite heavy pre-crisis debt accumulation, and the recovery of investment has been weak

It is clear from the discussion above that production has shifted increasingly to the tradable sector and that the labour force has shifted as well. On the other hand, a major adjustment must also take place in other factors of production, and there is the risk that such an adjustment could take considerable time. An examination of developments in capital stock by sector suggests that firms' rapid debt accumulation before the crisis was due to the acquisition of financial assets rather than investment in capital stock accumulation. This is a key factor because the importance of capital stock lies in its being used to produce other goods and services, which tends to strengthen the potential output of the economy. Growth in capital

3. The income approach would be preferable, as it is based on estimating added value after it has been allocated to the sectors that participate in its creation. Unfortunately, income accounts are not yet available for all sectors in Iceland.

4. Statistics Iceland compiles statistics for financial accounts of enterprises, mostly using standard annual accounts submitted to the tax authorities by firms in all sectors. This information now extends to over 90% of all companies in the country, but the accounts are published with a considerable time lag, and the figures for 2012 have not yet been released. This Box is based on these data, but they have been entered at fixed year-2005 prices, and they exclude financial companies and the category "real estate companies and miscellaneous professional services", in which holding companies predominate.

stock during this period was due mostly to large-scale investment in energy-intensive industry and commercial real estate. Following the recent reduction in corporate debt levels, there is now greater consistency between indebtedness and capital stock in the corporate sector as a whole (see Charts 7 and 8).

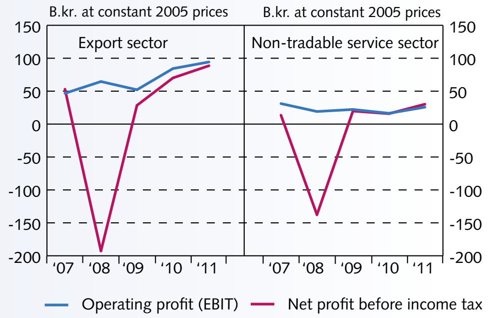
Investment activity has increased slowly since the economic recovery began in 2010. It is clear, however, that investment in tourism infrastructure will increase substantially in coming quarters, and it is assumed that fisheries will continue to invest in ships in the next few years. Fisheries and aluminium manufacturers are limited by capacity constraints, however, and cannot be expected to make radical changes in their investment activity even if their competitive position changes, as they cannot respond to a surge in demand by stepping up production.

Signs of a major adjustment in production and a shift of jobs from non-tradable to the tradable sectors

From the above, it is clear that the domestic economy has undergone a major adjustment in the wake of the shocks it sustained during the financial crisis. Thousands of jobs have shifted from non-tradable sectors to the tradable sector, a large number of companies have undergone financial restructuring, quite a number of firms have gone bankrupt, and the economic recovery has advanced relatively slowly. This adjustment will doubtless continue in coming quarters, and analysing its progress will remain an interesting subject of study for some time to come.

Chart 6

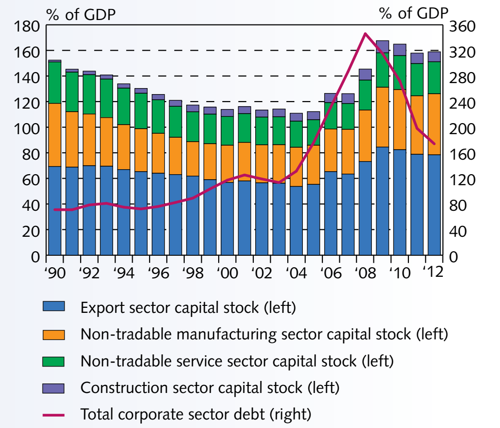
Development in profits by sectors[1]



1. According to Statistics Iceland's financial accounts of enteprises, which are compiled from annual accounts submitted to the tax authorities. Financial institutions and the category "real estate and various professional services", which includes holding companies, are excluded. Operating profit (EBIT) is the difference between revenues and operating costs, taking into account depreciation but before financial income/expenses. Net profit before income tax includes financial income/expenses and extraordinary items.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart IV-7

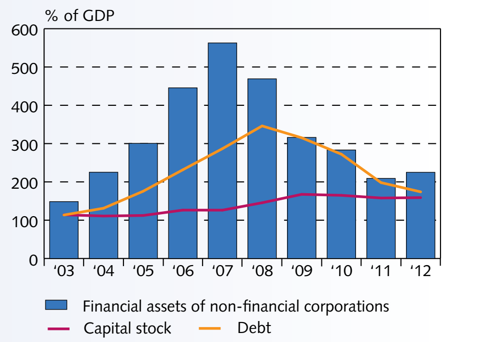
Business sector capital stock and debt 1990-2012[1]



1. Capital stock is the accumulated but depreciated value of the capital that derives from gross capital formation, excluding natural resources. The tradable sector includes fisheries, marine product processing, metals manufacturing, tourism, and 75% of utilities operations. Other sectors are considered non-tradable and are classified as production, services, and construction.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 8

Business sector capital stock, financial assets, and debt 2003-2012[1]



1. Capital stock is the accumulated but depreciated value of the capital that derives from gross capital formation. The value of financial assets is taken from financial accounts; however, shares, loans, and securities holdings are reduced by the difference between liabilities according to the financial accounts and Central Bank figures, as this difference reflects to a large degree the debt owed between companies within the same group.
Sources: Statistics Iceland, Central Bank of Iceland.