Economic Outlook 2008–2012

23 September 2008 – Landsbanki Research

Enviable Long-term Prospects
High living standards, strong infrastructure, a debt-free treasury and plenty of unexploited natural resources are among those characteristics which make Iceland's long-term prospects enviable. They should also help the economy to regain its balance in a time of international financial turmoil.

Falling national expenditure and moderate economic growth
We forecast economic growth close to 1% this year and the next two, with improvement in the trade balance plus investment in power-intensive industry offsetting lower private consumption and general industrial investment. In 2011–12 GDP growth of 4% will be fuelled by substantially higher exports, investment and moderate private consumption growth. The ISK will strengthen from its current level, but remain relatively weak (an average TWI of 155) to the end of the forecast period. Inflation at year-end 2009 will be close to 5%.

Sharp adjustment for households
Private consumption will drop by 12% over the next four years, reversing part of its 20% increase in the past four years, due to less credit-financed consumption. Lower labour force participation and higher unemployment will reduce household disposable income. While household debt service has risen considerably the past two years, it remains below 2003 levels, prior to mortgage market restructuring. Households on average are in good shape, although the gap between the bottom and the top has widened.

Power-intensive development on the same scale as 2004–07
High global energy prices and a weak ISK have greatly whetted foreign appetites for power-intensive industrial development in Iceland. Such projects together with public works will offset a major drop in residential construction and general industrial investment in coming years. Despite high domestic interest rates and tighter credit, strong investment will continue. We forecast total investment related to power-intensive industry 2008–12 of ISK 440bn (32% of GDP) or similar to that of 2004–07. The macroeconomic impact will differ, however. Instead of crowding out other development, investment will fill the gap forming as a result of the international financial crisis.

Economic management in a climate of uncertainty
Major economic fluctuations are by no means a new or rare occurrence in Iceland. The downturn now setting in, however, is the first since the Icelandic banking sector has outgrown its economy in relative terms and where financial chaos prevails internationally. In such a situation Iceland's favourable long-term prospects make a decisive difference.
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What Makes the Long-term Prospects So Enviable?

The title of Landsbanki’s 2008-2012 Economic Forecast is in fact taken from International Monetary Fund’s reports. For several years now, the IMF has stated that Iceland’s long-term prospects are enviable in many respects. Those who follow economic developments in the country closely generally point to several key factors which lay the foundation for a strong economy in coming years. Energy and other natural resources, a favourable demographic make-up, the high level of education, a strong and fully funded pension system, the debt-free national treasury, robust institutions, a flexible economy and demonstrated adaptability to changing conditions – all characteristics to be envied.

There is also general consensus as to the Icelandic economy’s main weaknesses and short-term challenges: a huge current account deficit and high inflation left by years of strong growth, high foreign debt and a financial system that has outgrown the tiny economy and currency.

Evidently a growing number of outside assessors are paying heed to those Icelandic voices which have repeatedly emphasised the country’s underlying economic strength and long-term potential. Most analysts abroad concur with statements that shocks of a magnitude necessary to create a serious financial crisis in Iceland are highly unlikely. As the international rating agency Moody’s puts it, in a report of 17 September 2008 confirming Iceland’s strong sovereign rating, despite challenges presented by “heavy contingent liabilities for the government deriving from a large internationalised banking sector … Moody’s believes that the government could handle a crisis in any sector, including the outsized banking sector, and that the risk of disruptive systemic stress is low.” This is part of the justification for Iceland’s high credit rating and the favourable terms it has enjoyed on international financial markets.

In the short term, both the government and private sector will have to grapple with the consequences of the international financial crisis in order to create the necessary stability for the country to realise its enviable long-term potential. Despite the fact that Icelandic financials have negligible direct interests at stake in the subprime mortgages or other toxic debt instruments whose value has evaporated, the country’s markets have been hard hit. In the case of the banks, it can be claimed that the impact, for instance on CDS spreads, is greater than justified by their fundamentals.

The impact on Iceland and its economy is primarily a consequence of investors’ risk aversion, which makes all its foreign financing more difficult and more costly. Risk aversion has also gummed up the FX markets and all but wiped out the carry trade, sending most high-interest currencies – like the ISK – into a tailspin. The small size of the Icelandic economy and currency exaggerates all such fluctuations.

Moves to shore up the currency and ensure stability

The principal short-term risks have also been summarised by international bodies and ratings agencies. They mention the small size of the economy and currency, compared to that of its large, internationalised banking sector. Almost 59% of Icelandic banks’ lending, for instance, is to clients abroad, and over 75% of their aggregate assets are in currencies other than the ISK. This unusual situation makes Iceland more vulnerable than otherwise to a weakening in confidence, and raises questions as to how major foreign currency commitments could be handled if a serious financial crisis developed.
Both the Icelandic government and Central Bank have taken various measures in response to the impact of the international financial crisis on Iceland and to ensure stability. These include boosting foreign currency reserves and increasing foreign currency access. In mid-May, swap agreements were concluded with central banks in Sweden, Norway and Denmark, granting access to EUR 1,500 in exchange for ISK, if necessary.

The spring session of the Icelandic parliament Althingi authorised the treasury to borrow up to ISK 500bn and re-loan the foreign currency portion of this to the Central Bank. This summer treasury bills in USD and EUR were issued totalling over ISK 70bn and at the beginning of September the Prime Minister announced that negotiations on a loan of EUR 300m to increase Iceland’s foreign currency reserves were in their final phase. He also pointed out that Iceland had formally become a party to the EU MoU on co-operation between regulators, central banks and finance ministries on cross-border financial stability.

Other steps taken by the Central Bank are aimed at ensuring an efficient secondary market, reinforcing price formation on the domestic bond market and increasing banks’ access to liquid funds. Actions were also taken to facilitate investment from abroad in ISK instruments after the swap markets effectively closed, for instance, by increasing supply of government-backed short-term paper. Rules on collateral accepted by the Central Bank in extending credit to financial undertakings were widened to accord with those of the ECB.

**Opportunities should be taken advantage of, not missed**

Economic shocks are by no means a new or rare occurrence in Iceland. The downturn now setting in, however, is the first since the banking sector has outgrown its economy in relative terms. Added to this is the unfavourable external situation – the country’s leading business partners are gripped by international financial turmoil, with no end in sight. In such a situation it is of key importance for Iceland to have such favourable long-term prospects. It is no less important that measures taken now to relieve short-term difficulties do not mean missing out on future opportunities presented by the enviable prospects discussed here.

**Large-scale economic fluctuations a consequence of small size**

Following a period of strong expansion and rising purchasing power, the Icelandic economy is now experiencing a sharp correction. This is basically the classical end phase of the typical Icelandic economic upswing, which began with major investment to increase natural resource utilisation. In the past, Icelandic economic cycles were usually driven by the fishing industry. Poor catches and unfavourable prices for marine products resulted in deep downturns, while good catches, extension of Iceland’s exclusive fishing zone and favourable product prices fuelled strong growth. In recent decades, investment in power-intensive industry and associated projects have stimulated economic upswings. In the last four years, the scope of such development has been much greater than ever before. The concurrent transformation of the housing mortgage market and rapid globalisation of the financial system made the economic acceleration even greater.

Compared with the small size of the economy, investment in power plants and new industrial installations is enormous and may amount to 20–30% of GDP. As this investment is typically spread over a period of only 3–4 years, it has an enormous impact on growth. To restrain domestic demand the Central Bank increases monetary restraint, strengthening the ISK and directing demand abroad. A strong increase in purchasing power in tandem with the ISK appreciation encourages imports of consumer goods at the same time as imports of investment goods peak. This creates a huge current account deficit, which Iceland’s good credit rating abroad helps to finance.
Once the typical Icelandic upswing has run its course, investment drops sharply as does the influx of foreign capital. The ISK weakens and consumer goods imports decrease along with imports of investment goods. Exports from the new industrial developments begins, the ISK depreciation boosts the competitiveness of other export sectors and the current account deficit disappears surprisingly quickly.

Icelandic companies, households and financial enterprises have been built up in an environment of large-scale volatility and have demonstrated the strength and resilience this calls for. The labour market is unusually flexible by international comparison and both the financial system and households are to a large extent protected against inflation by extensive use of indexation in domestic financial obligations. Many companies with foreign debt are hedged against exchange rate fluctuations by foreign currency income streams. In other words: GDP instability is not a consequence of inherent instability in the economy, but rather of the relative size of the investment projects vs. the economy itself. This is confirmed by the statistical record, which goes back as far as the establishment of the Republic of Iceland in 1944.

Resource management and utilisation

In 2008, exports of seafood products are expected to comprise around 26% of total goods and service exports, compared to around 90% early in the 1960s. Similarly, the sector’s GDP contribution has dropped from 15% to 7% during the same period. Increased diversification of production in Iceland is not least the result of exploitation of another of the country’s principal resources – energy.

Fisheries management

Responsible management of renewable natural resources is a premise for their long-term sustainability and the Icelandic fisheries management system is often pointed out as a model to be followed. Decisions on total allowable catches (TACs) and allocation of individual transferable quotas (ITQs) ensure the most efficient resource utilisation as well as
preventing the over-investment which generally characterises other fisheries management systems, such as the pursuit quotas tried in Iceland several decades ago.

Long-term considerations are paramount in determining TACs. Each year the Minister of Fisheries allocates harvest rights based on scientific assessment of commercial fishing stocks and forecasts for species and catch development.

In May 2007, the Marine Research Institute (MRI) highlighted the urgent need for immediate action to build up the spawning stock biomass of cod (the most important species) to increase recruitment and, ultimately, the harvestable stock. The MRI recommended therefore a drastic cut of one-third in the TAC for the fishing year commencing on 1 September 2007. The Minister of Fisheries accepted this recommendation and reduced the cod TAC to 130,000 tonnes from 193,000 tonnes for the fishing year 2007/2008. Furthermore, despite the forecast slowdown in the Icelandic economy in coming quarters, the Minister announced in July 2008 that the cod TAC for the 2008/2009 fishing year would remain unchanged.

This decision is to enable a rapid rebuilding of cod stocks, minimising the impact of reduced catches in the longer term. Enhanced value added in processing has helped to offset lower total catch volumes in recent years, backed by gains in efficiency through ITQs, increased automation and modern management techniques. A shift towards fresh groundfish products – which bring higher prices in markets in Europe and the US – instead of the more traditional frozen or salted products has also boosted selling prices. Current cutbacks in fishing quotas are therefore actually equivalent to investment in fisheries.

**Energy resources**

Iceland’s known energy potential lies primarily in geothermal and hydropower. According to the Master Plan published in 2004 the total potential which is technically and economically feasible to exploit, is 48 TWh per year (6900MW). At that time, total electricity production was 8.6TWh, but is now 16TWh. Based on the first phase of the Master Plan, a harnessable potential of around 32 TWh remains. While research and environmental impact assessment (EIA) in various regions is at different stages, we expect it will be feasible to develop some 550MW over the next five years. The position of the government – and the nation itself – towards power-intensive industry and environmental issues will naturally determine the size and speed of energy development. Technological advances will also make a major difference in both profitability and environmental impact.

Of the 32TWh which are considered technically and economically feasible to develop, around 16TWh are hydropower and a similar amount geothermal. Current production plus the energy already promised to new power-intensive industry in coming years will total close to 20TWh in 2012.
Further additions to currently known energy resources are conceivable. Experiments with deep drilling to exploit additional geothermal potential in known development areas are underway. A favourable outcome will multiply the current geothermal energy potential of specific areas. As the project is still in an experimental phase, however, it would be inadvisable to count those chickens before they hatch. Preparations are underway for offshore oil and gas exploration off the northeast coast of Iceland in co-operation with foreign petroleum exploration companies. Actual exploration could begin in 2010-11 and, if the results are positive, production could even commence in 2024-26.

Energy consumption in Iceland has changed dramatically in recent decades. The share of renewable energy has surged from 42% in 1971 to an estimated 85% in 2008. Fossil fuel usage has dropped accordingly and is now restricted almost exclusively to the nation's motor vehicles, ocean vessels and air transportation.

Chart 6: Primary energy consumption in Iceland 2008

The impact of rising global oil prices on Icelandic households and corporates differs from that in most other countries. Direct impact on households is limited to petrol price rises for motor vehicles, while practically all heat and electricity are derived from hydro and geothermal sources. This is also true for industry, admittedly with the exception of fisheries, where fuel accounts for around one-fifth of the operating cost of large fishing vessels. As higher oil prices naturally increase the cost of transport to and from the country, this provides some protection for the non-sheltered domestic sectors while adding to exporters’ costs. The major ISK depreciation and resulting improvement to exports’ competitiveness, however, offsets much of increased transport cost.

Chart 7: Energy prices

Source: Bloomberg, Statistics Iceland
The figure below shows electricity generation in Iceland 1960-2008. During the last two decades, investment in electricity generation has grown strongly, in tandem with power-intensive industrial development during the same period.

Figure 8: Electricity generation by source in Iceland, TWh

Flexible labour market

The characteristic high flexibility of the Icelandic labour market is a key factor explaining the ability of the economy to withstand the exaggerated fluctuations besetting it. This flexibility applies to most aspects of the labour market, i.e. labour force participation, working hours and real wages. Inter-sector employee mobility has also been high, facilitated in recent years by a rapid increase in the number of new jobs.

Iceland is home to just over 310,000 people. In recent decades, workforce participation has been 80-84% of able-bodied 16- to 64-year-olds, bearing witness to the high participation of women, youths and older citizens by international comparison. Fluctuations in labour force participation reflect the country’s response to its frequent and sizeable economic ups and downs, adaptation to volatile demand from employers and major changes in real wages. Fluctuations are greatest in the 16- to 24-year-old category, which serves as somewhat of a reserve labour pool, entering the labour force when employees are in short supply and exiting once more during downturns. Part of this group returns to its studies, with the result that only a fraction appears in unemployment figures.

Chart 9: Labour force participation rate

Labour market regulations in Iceland are somewhat more flexible than elsewhere in Europe with regard, for instance, to hiring and dismissing employees. Icelandic companies can reduce their workforce without detailed explanations and are not constrained by “last in, first out” rules. On the other hand, Icelandic workers have the right to at least one month’s notice of dismissal upon completion of three months’ work and many groups are entitled to
three months' notice after working 6-12 months. Health insurance and other individual social entitlements are not linked to employers, but are part of the tax-financed Icelandic social security system, regardless of an individual's employment situation. These arrangements doubtless contribute to the mobility of the Icelandic labour force and its flexibility in terms of work contribution and participation.

As union membership is very widespread by international comparison, collective bargaining agreements of large numbers of wage earners come up for renewal concurrently. Wage negotiations have traditionally had trilateral input, i.e. government involvement, especially when an economic upswing is nearing its end with a foreseeable contraction in national expenditure ahead. Since under such conditions the emphasis has generally been on preventing ensuing high unemployment, the outcome has been real wage fluctuations.

**Favourable demographics**

In the decades to come, Iceland will face fewer problems due to an ageing population than most other developed nations, partly because its population is younger and will continue to be so during the coming decades. The old-age dependency ratio (over-65-year-olds as a ratio of 15- to 64-year-olds) was 19.4% in 2007, similar to that of the US (19%) but well below the EU average (24.7%). Secondly, workforce participation rates among youngsters, women and the elderly are higher than the OECD average, and the pension system has no special incentives for early retirement. While official retirement age is 67, 24% of 65- to 74-year-olds were active in the labour market in 2007.

**Pension system with strong fundamentals**

At mid-2008, Icelandic pension funds’ assets amounted to ISK 1,719bn, equivalent to ISK 7m for each Icelander 16 years of age and older. At year-end 2007, the pension funds’ assets amounted to 130% of estimated GDP, making the country the OECD leader in this respect.

Despite its size, the Icelandic pension system is of fairly recent origin, as it emerged from private sector collective bargaining agreements in the 1960s. Various amendments have been made since that time, e.g. sole proprietors were added to the contributors in 1980 and in 1987-90 the contribution base was extended to include gross wages rather than simply basic salary. As a result, the system has almost total coverage, is growing strongly and members’ contributions remain well above pension payments. The funds’ net assets have almost doubled in four years and, given Iceland’s demographic structure, can be expected to grow still further in coming decades.
The Icelandic old-age pension system has three pillars. The first is a public pension system financed by taxes. The second is an occupational pension scheme based on mandatory contributions by all wage earners and sole proprietors, providing mutual benefits. While the mandatory minimum contribution is 12% of gross wages, the contribution level of many occupational groups, for instance, in the public sector and in finance, is even higher. The third pillar is voluntary private pension schemes which, although a fairly recent development, are growing rapidly. In 2007, an estimated two out of three Icelanders were paying up to 4% of their wages into such supplementary schemes, which enjoy favourable tax treatment and matching contributions from employers of up to 2%.

By far the greatest share of pension funds’ assets (around 57%) are domestic bonds. The funds’ foreign assets, which amounted to ISK 520bn as of mid-2008, have risen rapidly from just over 2% of total assets in 1990 to 40% as of the same time. The funds’ foreign assets are equivalent to 40% of Iceland’s GDP.
Public finances in prime shape

Municipalities answer for all of Iceland’s net public debt, which amounted to only 7% of GDP at year-end 2007, as the national treasury has no net debt.

State coffers have undergone a major transformation in recent years. In 1995 net national debt was 33% but by the end of 2007, the treasury had a positive balance of 3%. This includes deposits with the Central Bank resulting from the privatisation of Iceland Telecom in 2005. The much improved treasury position can be attributed to budget surpluses, income from privatisations and economic growth.

Surpluses and income from sales of assets have been used to pay off national government debt and pave the way for the future in other respects, such as making substantial contributions to the state employees’ pension fund. This leaves the national treasury in good shape to face possible future setbacks, whether this involves stepping up public consumption or public works in the face of an economic downturn or providing support for the financial system.
Economic Outlook 2008 - 2012

Two years of moderate growth

Last year saw the long-awaited return of the Icelandic economy towards balance after years of expenditure-driven expansion. Investment slowed for the first time since 2002 and foreign trade also made a positive contribution to GDP growth for the first time since that year. The trend has continued this year, supplemented by a sizeable YoY drop in private consumption in Q2.

Foreign trade is of key significance for Iceland, since such a large portion of consumer and investment goods, together with raw materials used in its exports, are imported. Although aluminium exports comprise a growing portion of the country’s exports, marine products are still very important and it should be borne in mind that value-added in fisheries is significantly higher than in aluminium production. As fishing is subject to natural fluctuations, GDP volatility has been the rule rather than the exception in Iceland.

Strong growth in national expenditure, outstripping GDP growth, characterised the upswing in 1998-2000, and is even more pronounced in that commencing in 2004 which peaked last year. Although references to economic volatility generally refer to fluctuations in GDP, in fact changes in national expenditure better reflect the changes in Iceland’s economic situation, at least as far as households are concerned. If this measure is applied, the YoY contraction is 1.4%. Admittedly 2007 was an extreme case, with national expenditure swinging widely from one quarter to the next, surging in Q2 and Q3 and falling in Q1 and Q4. National expenditure grew again in Q1 this year, only to fall sharply in Q2.

All signs point to a further contraction in national expenditure in 2008. Investment in power-intensive industry has fallen sharply, along with other industrial investment, and residential housing investment has also dropped YoY. After growing steadily in recent years,
private consumption is slowing. Major increases in real estate prices in recent years contributed to higher private consumption, with households benefitting from rising real estate asset value. In recent months housing prices have been sliding somewhat and we expect this trend to continue, resulting in a 2010 price level which is 10% lower in nominal terms than the peak at year-end 2007. The wealth effect of high housing prices will be negative this year and in coming years, strengthening the contraction in private consumption. Rising housing prices resulted in high housing investment, which is now falling once more. This should continue next year and only begin to rise again in the latter half of 2010.

A strong increase in public investment in 2007 is expected to continue this year and next. We expect moderate growth in public consumption; if the downturn proves to be fairly limited as forecast, there is little need to increase public spending dramatically. Growth in public consumption of 3-4% annually should allow the economy to return to balance while further investment in resource utilisation continues.

Table 2: Main macroeconomic indicators 2007–2012

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private consumption (m ISK)</td>
<td>749,031</td>
<td>4.3%</td>
<td>-2.3%</td>
<td>-7.4%</td>
<td>-3.0%</td>
<td>2.2%</td>
</tr>
<tr>
<td>Public consumption (m ISK)</td>
<td>316,823</td>
<td>4.2%</td>
<td>3.6%</td>
<td>3.0%</td>
<td>3.1%</td>
<td>3.0%</td>
</tr>
<tr>
<td>Fixed capital formation (m ISK)</td>
<td>356,887</td>
<td>-13.7%</td>
<td>-16.4%</td>
<td>7.1%</td>
<td>0.4%</td>
<td>3.5%</td>
</tr>
<tr>
<td>Industrial investment (m ISK)</td>
<td>211,586</td>
<td>-26.0%</td>
<td>-24.0%</td>
<td>17.0%</td>
<td>0.4%</td>
<td>-14.5%</td>
</tr>
<tr>
<td>Investment in residential housing (m ISK)</td>
<td>90,606</td>
<td>13.2%</td>
<td>-13.4%</td>
<td>-20.3%</td>
<td>-4.8%</td>
<td>9.1%</td>
</tr>
<tr>
<td>Public sector investment (m ISK)</td>
<td>54,696</td>
<td>19.2%</td>
<td>11.8%</td>
<td>9.4%</td>
<td>-2.7%</td>
<td>-10.3%</td>
</tr>
<tr>
<td>National expenditure (m ISK)</td>
<td>1,429,367</td>
<td>-1.4%</td>
<td>-5.3%</td>
<td>-1.2%</td>
<td>-0.7%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Exports of goods and services (m ISK)</td>
<td>481,743</td>
<td>18.1%</td>
<td>11.0%</td>
<td>0.4%</td>
<td>1.5%</td>
<td>6.4%</td>
</tr>
<tr>
<td>Imports of goods and services (m ISK)</td>
<td>587,943</td>
<td>14.1%</td>
<td>7.7%</td>
<td>-3.6%</td>
<td>-2.4%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Gross Domestic Product (m ISK)</td>
<td>1,293,167</td>
<td>4.9%</td>
<td>1.2%</td>
<td>0.2%</td>
<td>0.9%</td>
<td>4.9%</td>
</tr>
</tbody>
</table>

Despite the turnaround in expenditure, GDP will continue to grow in coming years, although at a slower rate. We forecast GDP growth of 1.2% this year and 0-1% growth for the next two years. The contraction will be buffered by a major rise in exports from the new and enlarged aluminium facilities plus additional power-generation and power-intensive industry projects, which will move into top gear next year. Two years on, production from Phase 1 of the Helguvík smelter will commence, together with construction of a power plant and aluminium facility at Bakki near Húsavík, in north Iceland. We forecast GDP growth of 4-5% once more in 2011 and 2012.

Large current account deficit continues

The large and chronic current account deficit has become the leading concern of those following Icelandic economic developments, both at home and abroad. In 2003-06 the current account deficit ballooned as a result of imports of investment goods and soaring private consumption. A strong ISK, together with the transformation of the housing mortgage market, encouraged many Icelandic households to undertake major improvements and purchases. The trade deficit shrank somewhat last year and will continue to contract this year and next. Imports of both investment and consumer goods have dropped while aluminium exports have shot up.
Since 2003, the factor income balance has become a steadily growing aspect of the current account balance. Interest paid on foreign debt, which has grown markedly in recent years due to private sector borrowing and been boosted by large-scale ISK depreciation, is the largest component on the expenditure side. Interest earned, however, appears to be underrepresented in national accounts. This was pointed out by the rating agency Moody’s when it confirmed Iceland’s sovereign rating in September.

The trade deficit will continue to shrink in coming years with growing exports and by the end of the forecast period we expect trade in goods and services to be in balance. A continuing current account deficit should shrink slowly.

**ISK remains weak**

The persistent international financial crisis has battered the ISK, as risk aversion has eroded demand for high-interest currencies. Uncertainty as to where markets are headed feeds volatility, and the ISK has never been as weak as in September. We expect it to strengthen slightly once more and forecast a trade-weighted index (TWI) around 160 at year-end. While fear and uncertainty prevails on financial markets the ISK will remain weak, although a high interest rate differential and growing export income should support the currency somewhat. We expect a weak ISK in the coming years, with the TWI averaging around 155. This year’s high inflation has offset the ISK drop to some extent, with the result that the real exchange rate (RER) is not as weak as the index itself would suggest. We expect the RER to move closer to the historical average during the latter half of 2009.
Inflation peaks

Inflation has likely peaked for now, and we expect it to drop in coming years. The contraction in national expenditure plus rising unemployment will prevent cost increases from being passed on through price level increases as they have been. In addition, we expect a further drop in housing prices, which will affect price levels both directly and indirectly.

Our inflation forecast is based on the key assumption that ISK weakening in recent weeks will be reversed fairly rapidly, before it can boost prices. Any additional ISK strengthening could mean a more rapid subsiding of inflation than we forecast. We predict an inflation rate of 13.6% for Q4 this year, which will then drop steadily to 5% in Q4 2009 and to below 3% by year-end 2010. In 2011-12 inflation should average 2-3%. According to our forecast, the Central Bank should achieve its inflation target in just over two years’ time.

Chart 23: Inflation forecast

![Inflation forecast chart](chart)

Source: Landsbanki Research, Statistics Iceland

Policy rate cuts in 2009

The policy rate will remain unchanged until early next year, as the Central Bank has clearly indicated. We expect rate cuts to begin near the end of Q1 2009, bringing the policy rate to 11.5% by year-end 2009 and to 7% by year-end 2010. In 2011 and 2012 the CB’s policy rate should be close to 6%.

Chart 24: Policy rate forecast

![Policy rate forecast chart](chart)

Source: Landsbanki Research, Central Bank of Iceland

Policy rate hikes in recent years were not sufficient to fully restrain domestic demand, as construction, and to some extent private consumption, was financed by borrowing abroad at much lower rates than were available domestically. Borrowers who have to repay these loans with ISK income bear the exchange rate risk, since high interest rate currencies
depreciate more than others in the long term. Such depreciation can occur very rapidly, as was the case with the ISK this spring.

When access to foreign funding closed this past spring, many borrowers were faced with domestic interest rates for the first time. As a result, the high policy rate now bites better than before and is a definite factor in the current rapid fall in domestic demand. Inflation is still running high. With purchasing power and employment still high, ISK weakening this spring quickly became visible in prices. Purchasing power has been subsiding recently and the employment outlook is deteriorating as autumn progresses. This makes it tougher to pass on cost increases with price rises, and should clearly rein in inflation in coming months.

By the time the upswing peaked late last year, the economy was stretched to the utmost. Unemployment was at a record low, inflation surging and the current account deficit enormous. Against this backdrop, the ISK depreciated steadily, interest premia climbed sharply, chaos beset the financial markets and asset prices fell. All of this came on the heels of major cuts in fishing quotas announced last year. The overextended economy was therefore in prime shape for an abrupt correction, or even a large-scale downturn, at the beginning of this year.

Growing exports and further large-scale investment in coming years will prevent a drop in GDP despite these shocks. By the end of the forecast period inflation should be back to normal, trade in goods and services will show a surplus and the current account deficit, although still sizeable, will be rapidly shrinking. Further investment in resource utilisation, together with rebuilding and continued responsible exploitation of fishing stocks, will provide the basis for sustainable growth, as macroeconomic equilibrium is restored.

**Investment continues high**

Despite high interest rates and tighter credit, strong investment continues, primarily in energy and industrial facilities, with some growth as well in public and semi-public investment. We expect a substantial drop, however, in residential housing investment. In recent decades, investment has averaged around 23% of GDP, but peaked at 35% of GDP when the latest power-intensive industrial development reached its nadir in H2 2006 and H1 2007.

Due to the small size of the Icelandic economy, individual investment projects often leave a strong footprint on total investment. In preparing our economic forecast, we have therefore given considerable attention to the scope and timing of investment projects planned by the largest private sector actors and the public sector. The outcome provides the basis for our investment forecast for the first two years of the forecast period, in addition to which power-intensive industrial projects are expected for the entire forecast period.
Industrial investment, excluding power-intensive industry

Several major general industrial projects are on the drawing board or already underway. Some of these projects are in fact quasi-public works, but are classified as private sector because they are carried out as private sector or non-profit making initiatives with public funding support. For this reason we do not anticipate a greater contraction in general industrial investment, despite high domestic interest rates.

As far as smaller undertakings are concerned, the situation is likely to be more difficult, since credit financing is extremely limited. The outcome of a Capacent Gallup survey of the country’s 400 largest companies in February showed that 40% of them had recently cut back planned investment for the year. According to a similar survey in June, 76% of company spokesmen said they considered the current economic situation difficult and were rather pessimistic about the prospects for the next six months. We expect general industrial investment, apart from quasi-public investment or those projects already launched, to drop substantially in the next two years.

Table 3. Major projects scheduled for coming years

<table>
<thead>
<tr>
<th>Project</th>
<th>Est. cost (mISK)</th>
<th>Start</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conference hall and convention centre</td>
<td>50</td>
<td>2006</td>
<td>Underway</td>
</tr>
<tr>
<td>Reykjavík University</td>
<td>8</td>
<td>2007</td>
<td>Underway</td>
</tr>
<tr>
<td>Vaðlaheiði tunnel</td>
<td>3.5</td>
<td>2008</td>
<td>Commencing</td>
</tr>
<tr>
<td>Server farm and data storage</td>
<td>20</td>
<td>2009/10</td>
<td>Not yet begun</td>
</tr>
<tr>
<td>Widening of South Iceland motorway</td>
<td>3</td>
<td>2009</td>
<td>In preparation</td>
</tr>
</tbody>
</table>

Source: Landsbanki Research

Investment in power-intensive industry

Interest of both foreign and domestic investors in establishing power-intensive industrial operations in Iceland and has grown strongly in recent years. Rising and volatile world market energy prices, together with problems in ensuring a secure energy supply in many areas of the world have strengthened Iceland’s attraction. In addition, the very substantial
ISK weakening has lowered the initial cost of facilities in Iceland as well as their estimated long-term operating costs.

Table 4. Power-intensive industry

<table>
<thead>
<tr>
<th>Projects under consideration</th>
<th>MW</th>
<th>Estimated cost (ISKbn)</th>
<th>Time of dev.</th>
<th>Company</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Helguvík alum. smelter, Phase 1*</td>
<td>200</td>
<td>90</td>
<td>2008 - 2010</td>
<td>Century Aluminum Co</td>
<td>Construction begun</td>
</tr>
<tr>
<td>Alum. smelter at Bakki, Phase 1*</td>
<td>210</td>
<td>90</td>
<td>2009 - 2012</td>
<td>Alcoa Inc</td>
<td>Mol signed</td>
</tr>
<tr>
<td>Straumsvík smelter enlargement*</td>
<td>75</td>
<td>9</td>
<td>2008 - 2009</td>
<td>Rio Tinto Alcan</td>
<td>Construction begun</td>
</tr>
<tr>
<td>Server farm in Keflavík*</td>
<td>50</td>
<td>40</td>
<td>2009 - 2012</td>
<td>Verne Holding</td>
<td>Contracts completed</td>
</tr>
<tr>
<td>Capacitor foil plant in Akureyri*</td>
<td>75</td>
<td>6</td>
<td>2008 - 2009</td>
<td>Bercromal and Strokkur</td>
<td>Construction begun</td>
</tr>
<tr>
<td>Helguvík alum. smelter, Phase 2</td>
<td>200</td>
<td>60</td>
<td>2011 - 2015</td>
<td>Century Aluminum Co</td>
<td>Construction begun</td>
</tr>
<tr>
<td>Alum. smelter at Bakki, Phase 2</td>
<td>200</td>
<td>60</td>
<td>2013 - 2015</td>
<td>Alcoa Inc</td>
<td>Construction begun</td>
</tr>
<tr>
<td>Helguvík silica plant, Phase 1</td>
<td>30</td>
<td>14</td>
<td>2009 - 2012</td>
<td>Tomahawk Develop.</td>
<td>Energy negotiations begun, EIA in final stages</td>
</tr>
<tr>
<td>Porlákshrif</td>
<td>Not certain</td>
<td>Not certain</td>
<td>Not certain</td>
<td>Not certain</td>
<td>Project possibilities being examined</td>
</tr>
<tr>
<td>West Fjords oil refinery</td>
<td>15</td>
<td>455</td>
<td>2013 - 2019</td>
<td>Not certain</td>
<td>Environmental Impact Assessment (EIA) begun</td>
</tr>
</tbody>
</table>

Near-term power development

<table>
<thead>
<tr>
<th>Projects under consideration</th>
<th>MW</th>
<th>Estimated cost (ISKbn)</th>
<th>Construction time</th>
<th>Company</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peistareykir, Bjamaflag, Krafla I and II, and Gjástykkı</td>
<td>410</td>
<td>61</td>
<td>2008 - 2015</td>
<td>Landsvirkjun and others Suburbs Regional</td>
<td>Exploratory drilling begun</td>
</tr>
<tr>
<td>Reykjavík</td>
<td>200</td>
<td>34</td>
<td>2008 - 2015</td>
<td>Heating</td>
<td>Energy production begun</td>
</tr>
<tr>
<td>Hellisheiði and Hengill region</td>
<td>200</td>
<td>34</td>
<td>2008 - 2015</td>
<td>Reykjavik Energy</td>
<td>Energy production begun</td>
</tr>
<tr>
<td>Búðárháls Power Plant</td>
<td>80</td>
<td>15</td>
<td>2009 - 2012</td>
<td>Landsvirkjun</td>
<td>Tender documents available</td>
</tr>
<tr>
<td>Transmission lines for power-int. industry</td>
<td>24 - 28</td>
<td>2008 - 2013</td>
<td>Landnet, Iceland Drilling, dom. energy cos., Alcoa, StatoilHydro, NSF and IODP</td>
<td>Construction begun</td>
<td></td>
</tr>
<tr>
<td>Experimental deep drilling</td>
<td>Not certain</td>
<td>Not certain</td>
<td>2008 - 2018</td>
<td>Iceland Drilling, dom. energy cos., Alcoa, StatoilHydro, NSF and IODP</td>
<td>Exploratory drilling begun</td>
</tr>
</tbody>
</table>

Source: Landsbanki Research, websites of energy companies, press releases

We expect investment in power-intensive industrial development of over ISK 440bn during our forecast period (2008-2012), equivalent to 34% of GDP in 2007. That equals power-intensive development on the same scale as in 2004-2007. Phase 1 of the Helguvík smelter in southwest Iceland and of the Bakki project in Husavík, north Iceland, together with the power plants and transmission lines they require, comprise the major share of the investment.

Construction in Helguvík has begun and is to conclude in H1 2010. Annual production from the smelter will be around 150,000 tonnes. Completion of the latter phase, scheduled for year-end 2014 or early 2015, will bring total production capacity to 250,000 tonnes annually. Our forecast does not include the second phase of the Helguvík development. Adding the enlargement of the present Straumsvík plant will make Iceland’s annual aluminium production around one million tonnes in 2012.

Phase 1 of the proposed Bakki development is to have a capacity of 150,000 tonnes annually. Construction of the first phase is scheduled to conclude in H1 2013 and of the second phase two years later, bringing total annual capacity there to 250,000 tonnes.

A capacitor plant producing high voltage foils, under construction in Akureyri, is to commence operation in 2009. It should realise export income of some ISK 7-10bn annually, or around ISK 120m per MW of energy consumed.

Our forecast does not expect new power plants will be required for all of these projects, since additional energy production can be obtained by upgrading current geothermal plants and utilising some of the present surplus electricity.

Landsnet hf. intends to expand its distribution network further in connection with new power generation and industrial development in coming years, primarily by reinforcing its transmission lines in north and east Iceland. This is intended to increase regional
competitiveness by ensuring their plentiful and secure supply of electricity. Helguvik developments require expansion in the southwest of the country.

Whether a planned silicon plant in Helguvik will materialise is still uncertain, as the owners have not yet concluded contracts with energy providers for its production needs. Project backers have, however, announced that they have obtained a major share of the financing required for Phase 1 of the plant. Some uncertainty has also shrouded development near Þorlákshöfn, on the south coast, with various options being considered including an aluminum plant, server farm, aluminum technology park and silicon refinery. The local authority is eager to have power-intensive industry locate there and working hard to achieve this.

An assessment of the export value of the energy used in power-intensive industrial production in Iceland shows that the return is around ISK 91m per MW (based on the average aluminium price and average USD/ISK exchange rate YoY and assuming this will remain unchanged to year-end).

The initial cost and operating cost of generating plants varies depending upon the type. For geothermal plants, the estimated initial cost is ISK 160m per MW and annual operating cost around 2% of initial cost. Construction cost for hydropower plants depends upon whether they are diversion (penstock) or impoundment (reservoir) projects.

Construction cost is higher for reservoir facilities, or an estimated ISK 150m per MW, while operating costs for both types are estimated at 0.7-1.0% of initial cost annually.

Residential housing investment

Residential housing construction has surged in recent years and in 2006 a record number of housing units were completed. Close to 10,300 new housing units have been built in the past three years, while according to our calculations some 1,700-1,800 new units are needed annually in the country as a whole. As pointed out in the housing market section, there is quite an oversupply of new housing units on the market, in our estimation, and we expect new construction to fall sharply. A drop in real estate prices, higher inflation and high interest rates are squeezing profits in the sector; we expect a decline in residential housing investment of 13% this year and over 20% in 2009. Residential housing investment in Q2 2008 fell by close to 28% YoY according to figures from Statistics Iceland (SI), although we expect some upward revision of these figures later this year. At the end of last year over 6,000 housing units were under construction, compared to 5,150 at year-end 2006 and 3,000 on average annually during the past decade. Such a sharp drop in H1 this year is therefore unlikely. In addition, experience has shown that statistics on housing investment generally change markedly from the first GDP estimates published by SI for specific periods until the final figures are available.
### Public sector investment

During the early part of this upswing public sector investment was relatively limited. Considerable need for investment has accumulated and the government has expressed its willingness to boost public works, offsetting to some degree a possible slowdown in the construction industry. An increase in both transportation and building projects is expected, and our forecast is based on currently scheduled national public works. Municipal investment is expected to drop slightly during the forecast period.

#### Table 5. Planned public works

<table>
<thead>
<tr>
<th>Project</th>
<th>Est. cost. (bn ISK)</th>
<th>Start</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avalance defences</td>
<td>4</td>
<td>2008</td>
<td>Underway</td>
</tr>
<tr>
<td>Nursing homes in capital region.</td>
<td>2,4</td>
<td>2008</td>
<td>Underway</td>
</tr>
<tr>
<td>Óshlíð and Héðinsfjörður tunnels</td>
<td>11,4</td>
<td>2008</td>
<td>Underway</td>
</tr>
<tr>
<td>Bakkafjara harbour</td>
<td>4,9</td>
<td>2009</td>
<td>Prepatory stages</td>
</tr>
<tr>
<td>Sundabraut bridge</td>
<td>20</td>
<td>2009</td>
<td>Drawing board</td>
</tr>
<tr>
<td>University hospital</td>
<td>100</td>
<td>2010</td>
<td>Preparyory stages</td>
</tr>
</tbody>
</table>

Source: Landsbanki Research
Real Estate Price Correction Unavoidable

In recent months the real estate market has been extremely quiet. Low turnover has gone hand-in-hand with declining residential housing prices, in keeping with our forecast last autumn of a marked slowdown in the housing market. We predicted that tighter access to credit, together with a flood of new housing into the market, would put an end to the steady price increases which have characterised the Icelandic market since 2001. Although these same factors still decisively influence the current market, developments have been somewhat different than expected a year ago. The persistent global credit crunch, for instance, has made a much broader impact than most people anticipated when it began.

The "Icelandic route" to equilibrium

Since nominal housing prices peaked at the beginning of this year, the market has been practically stagnant, i.e. prices have only fallen by around 2%. On the other hand, high inflation has meant real prices have dropped by close to 11% from their peak last autumn, effectively wiping out the real gains of the past three years. This is the typical Icelandic price correction route, with inflation eroding real prices; seldom during the past three decades have nominal housing prices fallen significantly. A drop of 8% in nominal prices from peak to trough, which occurred in 1994-95 when both inflation and GDP growth were very low, is the largest drop in nominal prices recorded since 1982. The real decline during the period was 10.4%.

Record high housing supply

The supply of new housing has never been greater. High building contractor profits in recent years were the spur for very extensive new construction. As we have previously pointed out, housing prices tend to overshoot the mark, since demand is highly elastic while supply changes only slowly due to the construction time required. Over 6,200 new units were
under construction in Iceland at year-end 2007, according to Statistics Iceland, compared to an annual average of 3,000 units during the past decade. Market research by Landsbanki’s Corporate Banking division suggests that some 2,400 new unsold housing units are currently completed or nearly completed in the Greater Reykjavík area. Although no detailed studies have been carried out on the supply of new housing in nearby municipalities, such as Reykjanessbaer, Akranes and Selfoss, the supply is clearly substantial there as well. According to our estimates, some 1,700–1,800 new housing units are required annually in the entire country. This means that the current supply satisfies the need for new construction for the next two years. All signs suggest the housing supply far outruns demand, which is one of the reasons we expect housing investment to drop by 13% this year and another 20% in 2009.

Tighter credit affects both housing demand and supply.

a) Contractors and “wholesalers”
Contractors’ equity and financing costs will be key factors in determining future housing market developments. If major developers get into difficulties, forcing them to dump housing onto the market for quick sale, a downward price spiral can develop, aggravating the slump in housing prices. Short-term nominal interest rates have remained higher than predicted, and the dramatic ISK weakening has eroded many contractors’ and housing wholesalers’ equity. As foreign-currency denominated loans have become a rarity in recent months, contractors are faced with Icelandic interest rates (3M REIBOR currently at 16%) when financing unsold properties. This increases the cost of inventory, and financing cost can quickly eat up the expected profits on housing which takes longer to sell. In June, the government authorised the Housing Financing Fund (HFF) to grant mortgages totalling up to ISK 5bn for rental housing. These are mortgages on newly completed, unsold housing units which will be rented out. In connection with collective bargaining agreements concluded in February this year, the government pledged to make as many as 750 additional rental units available annually over the next four years, commencing in 2009. We expect the authorities to fulfil this promise by purchasing housing units already completed, and in so doing absorbing some of the oversupply which has developed.

b) Housing buyers
The supply of housing mortgages to households has shrunk rapidly. LTV ratios have been lowered, indexed interest rates have risen and banks have cut back their mortgage lending sharply. The Housing Financing Fund (HFF) and pension funds have, on the other hand, increased their lending markedly. The decision by the government to raise the HFF loan ceiling from ISK 18m to 20m and to base its LTV ratio on market value rather than fire insurance assessment has boosted the supply of residential housing mortgages. The government has also waived the stamp duty for first-time buyers. This improves possibilities
for housing financing and we expect the actions to reduce the likelihood of an excessive price drop.

Maintaining a manageable level of household debt service is a key aspect of our housing price forecast. Provided that households can continue to make their mortgage payments, the impact of a housing price drop will be limited. If, however, many debt-burdened homeowners are forced to sell their properties, possibly realising a loss due to the price decline, this could further depress prices. Our calculations indicate that this is unlikely to happen.¹

High threshold for first-time buyers

Major difficulties faced by first-time buyers in purchasing a home are an important indicator that prices are too high. Once price rises have resulted in restricting normal market renewal an imbalance can arise between supply and demand. Debt service on new housing mortgages has risen steadily in recent years due to strong increases in both housing prices and interest rates. We can take the example of a 65m², one-bedroom apartment in the capital area. The price of such a property has nearly doubled over the past five years, rising from ISK 9.4m to almost ISK 18m. Similarly, indexed mortgage interest rates have risen substantially from the 4.15% available in 2004. Furthermore, higher owner equity is required, both due to lower LTV ratios and higher housing prices. Although average income has certainly risen during this period, it is clearly more difficult for first-time buyers to enter the market than before. Judging by this indicator, housing prices are definitely on the high side, which increases the probability of a price correction.

Housing price bubble a global phenomenon

From the beginning of this century to year-end 2007, residential housing prices in Iceland rose by close to 80% in real terms. Much of this increase is due to wide-reaching changes in the mortgage market, with better accessibility to credit with longer mortgage terms and lower indexed interest rates. Rising housing prices, however, were anything but an exclusively Icelandic trend, as prices rose substantially in most comparison countries. The global price rise was in most cases the results of low interest rates and easier access to credit. Since this international trend has reversed, higher interest rates and risk premia have caused a considerable drop in property prices in most neighbouring countries and further decline is generally forecast.

¹ See Household debt service lower than in 2003 on page 38
Forecast 10% drop in housing prices

For some time we have predicted a cooling of the housing market, both with regard to price increases and new construction. In May 2005, Landsbanki Research pointed out that better access to credit, combined with a strong boost to purchasing power, had created ideal conditions for an asset bubble. Three years later, with an average increase in housing prices of over 33%, the clouds have begun to gather, the supply of credit has dwindled and purchasing power has been slipping. At the same time, new housing is flooding the market.

Our forecast assumes that housing prices will drop by 10% in nominal terms until the market picks up once more in H1 2010. This will erase the 2007 nominal increase and bring real prices back to the level of January 2005. According to our forecast, real housing prices in 2010 will be close to the average of the past decade. In calculating average prices, we adjust for the systematic changes (longer mortgage terms) which occurred in the housing market in 1999 and 2004, since in our estimation longer maturities have clearly caused a permanent upward shift in housing prices.

Why not a greater drop?

If our forecast of a 10% nominal decline proves correct, this will be among the largest price corrections ever in the Icelandic housing market since data collection began. Only in 1983 and 1984 was the adjustment sharper, but at that time 12M inflation was 15-102%. A number of significant factors, however, should shore up housing prices in the longer term and will, in our estimation, ensure that the price drop does not exceed our forecast.

The almost universal use of indexation and fixed interest rates for housing mortgages tends to mitigate exaggerated price fluctuations. Mortgages are generally annuities, recalculated each period and bearing a fixed real rate. For each instalment period the payment is multiplied by the cumulative change in the CPI, thus fixing it in real, rather than nominal terms. The increase in the amount outstanding, reflecting inflation, is therefore distributed over the entire term of the loan, equalising debt service.

Of major importance here is the fixed real interest rate on indexed loans, which makes debt service less sensitive to interest rate changes and premia as in many other countries with floating mortgage interest rates. We estimate the average interest rate on indexed household debt to be 5%, or similar to the current HFF mortgage rate. In the longer term, a drop in real interest rates is expected, providing support for housing prices. This is contrary to the situation in many other countries, where a major portion of housing mortgages bear floating interest rates which are currently very low in the US and close to historical average in Europe.
Demographic changes, such as population increase and shrinking family size, should also put upward pressure on housing prices in the longer term. At year-end 2007, 2.5 persons lived on average in each dwelling unit, as compared to 2.8 only 15 years ago. Average household size in Iceland, however, is still above the Nordic average of 2.1–2.3 persons per dwelling unit in 2000. Although the difference is partly due to the fact that fertility is higher among Icelandic women than in Nordic countries, the trend in Iceland can be expected to take the same direction as in other countries.

Uncertainty is higher as to the short-term impact of population increase on the real estate market. The rate of population increase is still fairly high in Iceland due to immigration of foreign nationals. It is anything but certain whether this group is here to stay or whether its residence is only temporary. As our analysis of the labour market indicates, we expect primarily foreign nationals residing on-location at power-intensive industry projects in inland areas to emigrate, and little population decrease in the capital region.

Table 3: Main factors influencing housing prices in the capital region 2008–2010

<table>
<thead>
<tr>
<th>Factors depressing prices</th>
<th>Factors increasing prices</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Supply side</strong></td>
<td><strong>Supply side</strong></td>
</tr>
<tr>
<td>Supply new housing unit at an historical high</td>
<td>Supply contractors’ capital dwindling</td>
</tr>
<tr>
<td>Contractors’ capital dwindling</td>
<td>Housing prices well above construction cost including lot prices</td>
</tr>
<tr>
<td>Demand side</td>
<td>Demand side</td>
</tr>
<tr>
<td>Short-term interest rate increase expected</td>
<td>Higher HFF mortgages</td>
</tr>
<tr>
<td>Deteriorating labour market situation</td>
<td>Medium-term mortgage interest drop expected</td>
</tr>
<tr>
<td>High threshold for first time buyers</td>
<td>Stagnant or dropping purchasing power</td>
</tr>
</tbody>
</table>

Source: Landsbanki Research

Labour Market

Labour market adjustment is definitely in the cards, following the strong GDP and purchasing power growth in recent years. Registered unemployment has now been under 2% since the autumn of 2005, and a drop in labour market tension is needed to prevent a further wage and price spiral. The Icelandic labour force currently numbers around 180,000 persons.

To stay or to go?

Behind the strong GDP growth of recent years is an unusually strong upsurge in population. A labour shortage has been met by immigration of foreign workers, who now comprise around 7% of Iceland’s population. As most of these immigrants are of working age, they comprise an even larger share of the workforce, around 12%. Prior to the beginning of the upswing now ending, foreign nationals were 2–4% of the labour force. Immigration of foreign workers has dropped considerably YtD, and fewer temporary work permits have been extended this year than in 2007. According to official statistics, however, net immigration of foreign nationals in 2008 is still positive, although it should be borne in mind that in Iceland, as elsewhere, it has proved difficult to keep track of emigration by EEA nationals, few of whom have reason to give notice of their departure. Immigration, however, is registered for taxation and social security purposes.

Although some portion of the foreign workers naturally can be expected to leave when the employment situation worsens, we do not expect any substantial emigration. There were few signs of this following the most recent downturn, although the increase in foreign workers did slow. We therefore expect the influx of foreign workers generally to drop, with a major decline in workers from temporary agencies.

Changes to workforce composition

The past decade has witnessed wide-reaching changes in work and the workforce. Jobs in fishing, fish processing and agriculture have grown fewer and fewer, partly due to lower catch quotas, greater efficiency and automation. The number of service industry jobs has, during the same period, increased greatly, in part reflecting the growth of financial services but primarily due to changes in the methods of production. The economic upswing of recent years has fostered strong growth in sectors catering to domestic demand and consumption, such as retail and services and housing construction. The number of jobs in housing and other construction has increased by close to 50%, mainly reflecting the strong level of investment in GDP. It should be borne in mind, however, that figures from Statistics Iceland do not include temporary work agencies, which have been availed of considerably by
contractors in power projects and power-intensive industry development. In our estimation, therefore, the number of jobs in residential and other construction is likely underestimated by 500-1500.

Although substantial infrastructure investment is expected in coming years, it will be less than in the past few years, and we predict a drop in construction jobs in the near term. The same applies to retail and service industries, which will feel the impact of rapidly shrinking private consumption. Financial sector jobs can also be expected to decrease in Iceland as elsewhere.

**Deteriorating employment outlook impacts wage negotiations**

Collective bargaining agreements between the Icelandic Federation of Labour (ASÍ) and the Confederation of Icelandic Employers (SA) come up for review at the beginning of 2009, as the premises on which they were based no longer apply. We expect the worsening employment outlook to be a central focus of negotiations, as signs of labour market cooling are already visible and surveys show both sides agree on the prospects.

Some 1400 persons have been given their notice YtD in large-scale lay-offs, mostly in the spring and summer months. Since for many of these workers lay-offs take effect at the end of August or September, they have not yet appeared as an increase in unemployment statistics. Further layoffs can be expected and a recent survey of the country’s 400 largest companies indicates that labour demand has fallen in most sectors. Last June almost 26% of companies surveyed expected to lay off workers during the next six months. This is a major turnaround from previous surveys: from 2003 to February 2008, more companies wished to increase their number of employees than intended to reduce them.

This outcome is in line with companies’ assessment of their performance outlook. The majority of these 400 companies expect their EBITDA to drop or remain unchanged over the next six months due to the deteriorating economic outlook, according to Capacent Gallup’s July survey. This plus the fact that their financial expense has risen sharply leaves little scope for companies’ growth or wage increases and their response to a margin squeeze is likely to be cost cutting, e.g. by laying off employees.

According to Gallup’s surveys of public expectations concerning the economy and employment, a majority of Icelanders expect the situation to worsen. The Consumer Confidence Index has seldom been lower and the response is visible, for instance, in high enrolment levels in secondary and tertiary education. We forecast some increase in unemployment next year, which will peak at 4% at the beginning of 2011 and then subside once more as GDP growth picks up.
In view of the consensus as to the limited corporate leeway to raise wages and the risk of still higher unemployment, we expect an agreement to be reached in the contract reviews if emphasis is placed on raising lowest wages. While high inflation is likely to depress purchasing power slightly this year, it should increase in coming years. Lower employment participation, higher unemployment and fewer working hours, however, can be expected to reduce the purchasing power of disposable income.
Prospects For the Icelandic Banks

Global crisis with local impact

The current financial crisis is global in nature, and originated abroad, as has become evident in recent months. It originates from losses on US subprime mortgages and related derivatives, despite Icelandic banks’ negligible exposure to these assets and the limited direct impact of the crisis. The most serious consequences of the chain of events it set in motion, however, are growing write-offs by financials abroad and the accordant risk aversion. This has effectively choked off the supply of banks’ funding available on acceptable terms – in Iceland as elsewhere – limiting their possibilities to refinance debt and fund longer-term growth.

Chart 45: US and UK housing prices, 12M change

Source: Reuters Ecowin

Basic rules still apply

When highly fluid, short-term capital takes fright and heads for a secure haven, sending short-term interest rates soaring far above the increase in long-term rates, banks are caught in the middle and forced to cut back lending as interest cost rises more rapidly than interest income. Profits drop and the growth outlook dims.

This is a textbook case – and by no means unique to Iceland. This is not to say that circumstances in the Icelandic banking system are identical to those of foreign banks, who are not grappling with a plummeting domestic currency while a major portion of their assets and liabilities are in foreign currencies, for example.

Facing common problems

Banking is all about trust – the confidence that investors and deposit owners have in financial undertakings and the risks they are willing to take for their expected return.

The past 12 months have witnessed a reversal of the developments of the previous 4–5 years. Once the dot.com bubble had burst, policy rates dropped in major currency regions and a flood of capital became available for ever more risky ventures despite a lower comensurate reward. Since last autumn, however, the situation has been transformed and characterised by growing and persistent risk aversion.

The story is not yet over and it is too soon to say whether the crisis has peaked, as the dramatic events of the first half of September show. Only a few months earlier no one would have forecast the demise of investment banks such as Lehmann Brothers or Merrill
Lynch, that the US government would nationalise its housing mortgage giants or leading insurer. Such drastic actions by the Treasury Department and Federal Reserve show just how serious is the impact of the credit crunch on global finance and how the world’s central banks and governments view the dangers ahead.

**Chart 46: Spread on 3M LIBOR over treasuries**

**Chart 47: US bank shares in the last 7 years**

**Towerimg worldwide losses**

Throughout the world, banks are clearly facing similar problems, either undoing mistakes made in dealing in complex debt obligations and derivatives or struggling with more indirect consequences of the credit squeeze. Most banks need to shore up their liquidity and seek new funding, either to reinforce their equity or refinance debt.

Besides the enormous losses already recorded, huge capital injections are needed to put the system back on an even keel. Bloomberg estimates total write-offs by banks since last July now amount to around USD 535bn. Banks have sought new equity equivalent to some 60% of this, or over USD 350bn. The most pessimistic forecasts suggested write-offs would reach USD 1,000bn before all was said and done, which now seems anything but unlikely, given the most recent events and the request by the US treasury secretary that Congress allocate USD 700 for a fund to acquire toxic mortgage assets from financials. Huge amounts of new equity will also be needed if the international banking system is to regain its former strength.

**Chart 48: Total bank losses in the world-wide credit crisis and new equity (USDbn)**

**Appearance vs. reality**

Problems currently facing Icelandic banks are an indirect result of the credit crisis. On one hand the banks are dealing with a shift in their operating premises and on the other with a diminished appetite for risk by outside lenders which often have limited knowledge of the
circumstances. This makes it important to distinguish between perceptions and opinions, expressed by market players at home and abroad, and the reality of the banks’ situation and their prospects.

Chart 49: CDS spreads of Icelandic banks and ITRAXX financials index (bp)

CDS spreads a fickle indicator

CDS spreads on Icelandic banks’ debt instruments are a striking example of the contrast between appearance and reality. Since the autumn of 2007, these spreads have fluctuated wildly, at times topping 1000 basis points (bp).

Many signs suggest, however, that this market reflects anything but a realistic assessment of the banks’ probability of default. Far from efficient, the market is opaque, with prices determined by offers from a handful of market players, in infrequent transactions of limited size.

As events of recent weeks clearly show, the market is often ruled by speculation rather than underlying circumstances. While spreads on Icelandic banks’ debt have remained sky-high, those of large US investment banks were around 200 bp for most of this year. Three of the five largest are now history and the remaining two struggling to keep afloat.

Significantly, all three Icelandic commercial banks have in recent quarters greatly reduced their dependency on market financing by boosting other funding sources. Premiums on their bond issues and credit lines negotiated with foreign borrowers this year are, according to bank management, well below what CDS spreads would give cause to expect. Despite the lack of official statistics on lending, as an example, a facility negotiated by Kaupthing Bank in April this year bore interest of 275 points over LIBOR while its CDS spreads were 800-950 bp.

As unrealistic as the CDS spread picture is, the banks’ interest expense has undeniably increased this year and will squeeze their interest margins. This is due primarily to delays in repricing credit extended to clients, unfavourable mismatch of domestic nominal interest rates (a sharply downward-sloping rate curve) and the high opportunity cost of maintaining strong liquidity. Liquid funds are kept on deposit or invested in short-term treasuries or bonds issued by financial institutions, giving extremely low but secure returns. Under normal conditions this capital could have been lent out at considerably higher rates.

We expect Icelandic banks’ interest margins to be 30-40 bp lower in Q3 than at year-end 2007, and forecast a YoY drop of at least 40 bp in 2009, resulting in a total decrease of over 50 bp from 2007. A rapid drop in domestic inflation and relatively high policy rate will make much of this decrease only temporary. Because of their positive indexation balance, once the policy rate drops, as our forecast assumes, the banks’ interest margins will recover.
Core operations withstand the storm

As the accounts of Iceland’s commercial banks in recent quarters clearly show, their profits have decreased somewhat, especially due to high trading losses on their equity holdings, which were very strong, especially during H1 2007. If this impact is excluded, along with the cost of financing these equity exposures, the profit on the banks’ core operations, i.e. interest income plus fees and commissions, has clearly been rising and profitability remains high.

In addition, the banks’ fundamentals, with regard to both equity and liquidity, have remained strong by international comparison. Hedges built up to resist the impact of high ISK volatility and inflation have kept their capital ratios high despite a sizeable decline in other assets, such as equity and bond portfolios, and despite rising credit loss provisions.

Foreign currency balance and core earnings

The equity of the large commercial banks is listed in ISK although a major portion of their assets and liabilities are in foreign currencies. Foreign currency assets are the lowest at Landsbanki (around 75%) and highest for Kaupthing Bank (around 90%). During the past two years the three banks have build up large FX positions, with the result that the value of their foreign-denominated assets considerably outweighs that of foreign-denominated liabilities. By being ‘short ISK’ the banks have thus built a hedge for equity against ISK weakening.
ISK weakening against foreign currencies boosts assets and liabilities while equity remains unchanged. If their foreign-domestic balance sheet position was in equilibrium, an ISK weakening would erode the banks’ capital ratios. The large net positive FX asset positions enable the banks’ equity to grow as well when the ISK depreciates.

Although these FX positions are primarily hedges for changes in the exchange rate they also have a major impact on the banks’ performance through both P&L and equity, although their accounts recognise this in very different ways. All the banks comply with IFRS, under which hedging gains/losses may, in certain instances, be recognised directly through equity. The size of goodwill recognised and the currency involved are the most important factors here. Since the ISK exchange rate against different currencies varies, the accounting treatment of gains on hedges has also changed from one quarter to the next.

Landsbanki, which has the lowest portion of its operations and balance sheet in foreign currency, has recognised all its currency gains through P&L. Glitnir, on the other hand, recognises most of its currency difference directly against equity and the remainder (about 10% of the total in recent quarters) as trading gains in P&L.

Kaupthing, which has the highest foreign asset proportion of the three banks, lies somewhere in between and has in fact been inconsistent from one quarter to the next in its accounting treatment of ISK exchange rate difference. In Q1 this year around 80% of the FX balance increase was entered as a change in equity and 20% through P&L while in Q2 the increase was split 50-50.

The varying treatment of FX difference in the banks’ accounts makes it difficult for investors and analysts to compare their performance and profitability or even compare one period with the next. The opportunity cost of these hedging positions is also considerable, since maintaining large FX positions deprives the banks of the interest income they could otherwise obtain from lending the funds at ISK rates. The sizeable impact of this cost is not specified anywhere in their accounts.

In its comparison of the banks’ operations, Research calculates the return on their core operations, i.e. excluding the impact of income and expense from their equity exposures and FX positions. All trading gains are deducted and the estimated cost of carry maintaining the positions is added to net interest income.

Banks withstand stress tests

The Icelandic Financial Supervisory Authority (FME) carries out regular stress testing by estimating the impact of a concurrent ISK weakening and drop in value of various assets comprising the banks’ equity. The stress test at year-end 2007 applied assumptions which, under normal conditions, would be considered somewhat exaggerated. As it turned out,
however, during the ensuing six months those assumed events actually occurred. The test assumes an ISK weakening of 20%, a 35% drop in the value of domestic equities, 20% in foreign equities, 7% in bonds and impairment on loans and appropriated assets of 20%. During the six-month period the ISK depreciated by over 25%, the Icelandic equity index fell by over 30% and foreign equity indices by 20-25%. Bond markets fluctuated greatly during the period but ended only slightly below where they had been.

A comparison of the actual shocks with the test assumptions shows that the test proved a good indicator, as the actual impact on the banks’ capital ratios corresponded fairly well with FME’s predictions, i.e. the capital ratio in accordance with CAD rules dropped by 80 bp at Landsbanki, 60 bp at Kaupthing Bank and 50 bp at Glitnir. The impact on Glitnir, however, was much less than FME’s forecast of a drop in its capital ratio of 120 bp.

In July FME repeated its stress test, using the same assumptions, with the outcome indicating that the banks could withstand another series of similar shocks and their capital ratios would nonetheless remain well over the mandatory minimum levels.

<table>
<thead>
<tr>
<th>Table 7. FME stress test</th>
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<tbody>
<tr>
<td>Capital adequacy ratio</td>
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<tr>
<td>30.12.2007 actual</td>
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<td>Outcome of 30.12.2007 stress test</td>
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<tr>
<td>30.06.2008 actual</td>
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<td>Outcome of 30.06.2008 stress test</td>
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Source: Landsbanki Research, FME

**Funding challenges ahead**

One of the main challenges now facing the banks is to refinance debt and respond to higher financing cost. Total repayments on long-term FX debt by the commercial banks amount to EUR 10.5bn in 2009. It is more realistic, however, to focus on the financing needs of the parent companies, which total some EUR 8.3bn, since their foreign subsidiaries generally have had good access to financing in their home markets.

Part of this financing has already been obtained. Kaupthing, for instance has concluded 2008 financing through various means, including EUR 2.5bn wholesale funding in H1 and deposit growth, and is reportedly well advanced with financing for the next 12 months (end of Q3 2009). Major repayments in 2009 fall in the latter half of that year. The parent company needs funding of EUR 3.7bn and its Danish subsidiary EUR 1.6bn.

The greatest change in Kaupthing’s situation is without doubt the growth of deposits in its online bank, Kaupthing Edge, available in 15 European countries. According to Kaupthing these deposits have been growing by some EUR 700m monthly on average, enabling the bank to reach its target of financing 50% of lending by deposits.

Kaupthing has also directed efforts at releasing funding tied up in lending by its asset-financing operations in London, with the results expected by the end of Q3. Finally the bank has packaged pools of assets which are sold as covered bonds or used as collateral for repurchase agreements. The bank expects this will enable it to meet next year’s repayments fully without causing a drop in its balance sheet, although growth could prove slow in the coming year.

The picture is somewhat different in Glitnir’s case. The bank is still working on financing this year’s maturities. In 2009 parent company debt of EUR 2.4bn falls due plus another EUR 0.6bn at Glitnir in Norway (BnBank).

Glitnir cannot depend on strong deposit growth to finance its long-term debt repayments, since work on boosting them through online accounts is less advanced than that of the other banks and its deposit to lending ratio has dropped this year. The bank’s management
plans to issue covered bonds and repos using assets as collateral to finance most of its 2008 and 2009 maturities, which will mean some contraction in its balance sheet in coming months. Given the ratio of repayments to total assets, our conservative estimate is a drop from mid-2008 of 10-15% in Glitnir’s assets and liabilities by year-end 2009. This will naturally substantially impact the bank’s capacity to provide financing for customers or attractive investment opportunities, severely restricting operations.

Landsbanki’s refinancing needs this year are moderate compared to those of its competitors. Its payments will be met by new foreign borrowing amounting to EUR 1.5bn and growth of the bank’s Icesave online deposits in the UK and the Netherlands. Maturities in 2009 total EUR 2.1bn. According to details provided with its H1 results, the bank expects its balance sheet to grow next year and intends to obtain funding to pay off long-term debt by extending the Icesave programme into additional European markets and asset securitisation, including issuance of covered bonds or similar securities.

Chart 53: Banks’ maturity profiles through 2012 (EUR bn)

![Chart 53: Banks’ maturity profiles through 2012 (EUR bn)](source: Banks’ own published maturities of foreign long-term borrowing for Q2 2008)

Chart 54: Customer deposits as a ratio of customer lending

![Chart 54: Customer deposits as a ratio of customer lending](source: Bloomberg)

Asset quality a major factor

The quality of the banks’ loan portfolios and other assets, such as equities, will be important factors determining their performance in coming quarters, both in Iceland and abroad. Prospects of an economic slowdown in Iceland and many of the main markets of the large Icelandic banks, such as the UK and Denmark, will increase probability of default by households and companies.

In the past two quarters all the banks have boosted their credit loss provisions considerably. We expect these will need to remain high in coming quarters and rise as a ratio of lending. Credit loss provisions at all three banks have already at least doubled YoY, although Kaupthing’s provisions were at an historical low in 2007. We expect provisions at Kaupthing...
and Glitnir to more than triple this year from those of 2007 and remain high into H2 of 2009. We make no forecast for Landsbanki.

Chart 55: Loans and advances by geography

<table>
<thead>
<tr>
<th>Country</th>
<th>Glitnir</th>
<th>Kaupthing</th>
<th>Landsbanki</th>
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<tr>
<td>Iceland</td>
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<tr>
<td>Other</td>
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Source: Landsbanki Research

Write-offs YtD have been primarily due to foreign loans, e.g. UK write-offs dominated at Kaupthing in H1 this year. In the latter half of the year and in 2009, however, credit losses in Iceland can be expected to comprise a greater share of write-offs at all three banks. Highly leveraged Icelandic companies, for instance, with foreign-denominated loans but no corresponding foreign income have been hard hit by ISK depreciation. It should be borne in mind however that most Icelandic companies with foreign-denominated debt have income in these currencies which provides a currency hedge.

The housing market and construction industry is another cause for concern, given falling market conditions both in Iceland and other important market regions as the gap between supply and demand has widened. As yet only a small portion of the bank’s write-offs, around 5% of their credit loss provisions on average, has resulted from real estate lending.

Chart 56: Loans and advances to customers lending by sectors

<table>
<thead>
<tr>
<th>Sector</th>
<th>Glitnir</th>
<th>Kaupthing</th>
<th>Landsbanki</th>
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<tbody>
<tr>
<td>Real Estate</td>
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<td>Individuals</td>
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<tr>
<td>Industry</td>
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</table>

Source: Landsbanki Research, Quarterly reports from the banks, Glitnir and Kaupthing 2Q 08, Landsbanki 4Q 2007.

Housing mortgages and lending to the construction industry comprise 20–23% of total lending by each of the three banks and totals ISK 2,100bn. Around 1/3 of this credit was granted by Landsbanki, 20% by Glitnir and 40% by Kaupthing. An estimated 30% of the portfolio is in Iceland and 70% abroad, mainly in Norway, Denmark and the UK.

Generally speaking, there are signs of a weakening economy, increased costs of borrowing and restricted access to new funding having an impact on borrowers, but the international credit squeeze and economic slowdown have made only a slight impact on the figures released by the banks on loan impairment. Management appears to be optimistic that the banks can continue to work through problems with clients and prevent large numbers of bankruptcies. Nonetheless, tighter credit and the combined effects of economic downturn, inflation and ISK weakening will leave a strong footprint on the banks’ performance in coming quarters.
Household debt service lower than in 2003

Housing mortgage indexation and the increased use of foreign-currency denominated mortgages has meant that ISK depreciation and high inflation in recent months have weakened the asset position of highly indebted housing owners. This gives cause to look more closely at households’ asset position and their capacity to bear an increased debt service. Our calculations show that, despite the major increase in household debt, household debt service as a percentage of disposable income is lower than in 2003. This is due both to a strong increase in disposable income during the period, plus lower average interest rates and longer lending terms. The restructuring of the housing mortgage market in 2004 offered households for the first time an opportunity to refinance both short-term and long-term debt on more favourable terms by taking out housing mortgages with longer terms and lower rates. A very sizeable portion of households took advantage of this possibility; our calculations suggest that the average term of total household debt has lengthened by at least five years since 2004. The increase in debt service between 2007 and 2008 can be attributed to ISK weakening and high inflation. At the end of June 2008, 78% of household debt was indexed and 13% FX linked.

Real estate mortgages comprise by far the greatest share of indexed household debt. Interest rates are either fixed for the entire term or for five-year periods. Those with adjustable rates after five years were first granted in the autumn of 2004, when the banks increased their housing mortgage lending. An estimated 30% of the banks’ housing mortgages provide for such rate reviews, or the equivalent of some 11% of total household debt. This would mean that in H2 2009 and H1 2010, the interest rates on 5.500 housing mortgages, or around ISK 64bn, will be adjusted. Most of these mortgages currently bear 4.15% interest and, based on the expected interest rates to be offered by the banks in the autumn of 2009, their real interest rates could rise by as much as 2%, increasing the debt service on these loans considerably. Since this is only a portion of household debt, the impact on overall household debt will be relatively minor. However, the impact on those households actually experiencing the increase will be very substantial. Given statements by
government spokesmen, we expect some move on its part to mitigate the impact of these changes. Either general or specific actions are conceivable. General measures, for example, could include changes to interest rate deductions and benefits, but this would be highly costly for the treasury and are unlikely, in our estimation. More specific measures could include authorising HFF to make exceptions to its rule of lending exclusively for housing, enabling refinancing of previous loans. Since HFF now offers considerably lower interest rates than the banks, such action would substantially relieve the impact of higher debt service following rate revision.

If our forecast for economic development in Iceland proves correct, average household debt service in 2009 should be less than in 2003. On the other hand, data from the Directorate of Internal Revenue clearly indicates that the indebtedness of individual households has increased since then. The proportions of both highly indebted households and households with very low debt have thus increased. Highly leveraged households are thus extremely sensitive to any increase in debt service and could be forced to sell their properties in a sluggish market. Government action in connection with interest rate revision would offset this trend to some extent.
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Our focus is on providing quality service to medium-sized international companies. We offer corporate advisory services, debt facilities as well as brokerage and investment advice to a broad base of international institutional investors in the UK and Continental Europe.

Our research department is among the most comprehensive in Europe, including some 100 analysts covering 800 European stocks locally. Landsbanki also provides wealth management and private banking services, as well as offering UK savers a consistently competitive rate on its Icesave online deposit account.

Our unique combination of short communication channels, continental reach and a pro-active approach to business that fosters entrepreneurial leadership, provides Landsbanki with the means to meet the needs of its clients and help them succeed.

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