Future Structure of the Icelandic Financial System

Report

of the Minister of Economic Affairs
to the Althingi

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1

Introduction

During the past three years the global financial system has been subjected to the worst crisis it has sustained in an entire century. Banking crises which have previously struck individual nations may, however, have proved more difficult for the countries concerned – as was the case with the collapse of the US banking system between 1929 and 1933. The current financial crisis is unique in that major difficulties have threatened and still threaten the financial systems of a large number of states simultaneously, many of them in fact wealthy states which form the backbone of the global economy and were considered to have such highly developed financial systems that there was little or no danger of them suffering a banking crisis. So closely interrelated are the economies of practically all countries now, that the socioeconomic impact of the crisis is felt throughout the world. The financial crisis has revealed various basic flaws and deficiencies in the financial system and at the same time has raised a variety of ethical and political questions, which must be addressed and answered, if public confidence is to be restored in banks and financial markets. As a result, the framework and structure of the financial system, both in many individual countries and internationally, need a thorough overhaul. Iceland is no exception here. The cost of the collapse of the Icelandic banks in 2008 was enormous, in terms of unemployment, lost income, increased household and corporate debt and a major rise in the government's debt burden. In addition, the Icelandic banks' foreign creditors lost huge amounts.

The questions must be answered as to what went wrong, what needs to be done to reduce the likelihood of the economy suffering once more shocks of this sort, and how can the damage done by financial shocks be minimised if they cannot be completely avoided?[1] The answers to these questions are, furthermore, a prerequisite for rebuilding confidence in the Icelandic financial system; confidence is a prerequisite for the banking system to be able to perform those important social tasks in the community for which it is intended. To find answers to this requires a close examination of the interrelationship between the financial system and the economy and a careful investigation of the role and functioning of financial activities. What causes the financial system to have a tendency for overexpansion which ends in a crisis? What options are there to mitigate this volatility? Answers to these questions can only be found by tracing and analysing the roots of the financial setbacks which have struck during the past three or four years. How can it be ensured that the financial system will in the future effectively fulfil the important roles of directing savings to projects which are in fact profitable, handling payment services, and forming a market for secure financial obligations, a market which facilitates pooling of risk, transforms the maturity of financial obligations and ensures a smoothing of disposable income throughout the course of people's lives? There are many

[1] It is worth mentioning that the 2008 financial collapse is not the first financial crisis to strike Iceland. Ásgeir Jónsson, lecturer at the University of Iceland, has claimed, for example, that the 2008 collapse was only "yet another link in the long chain of financial instability and FX difficulties which have characterised modern Icelandic history." Ásgeir Jónsson (2010), p. 1.

indications that the financial system and the management of financial undertakings during the past decade did not perform these principal tasks as they should have, but instead – through market failure, complex financial products and misdirected incentive systems – pursued activities which do not serve these ends; and that here lies the root of the overexpansion which ended in collapse.

2

Role and function of the financial system

Generally the role of banks is considered to be that of financial intermediation, transferring savings which have been deposited to earn a return to individuals or enterprises in the form of loans, and performing general payment services. Although this is correct in a basic sense, it does imply a certain simplification of the nature of banking activities. Banks in a modern economy are involved in various activities in addition to mediating capital between savers and investors.

Normal banking activities involve both efficiencies and pooling of risk to the advantage of society as a whole. The efficiencies arise from economies of scale, by spreading administration costs among many parties. Because of risk diversification savers can be confident that the credit operations funded by their savings will be of varied types. Another characteristic of modern banking is what is referred to as maturity transformation. By providing long-term credit, banks enable individual and corporate clients to take decisions on investments which will not return a profit for quite some time.[2] The bank's longer-term loans are balanced against its shorter-term commitments – not the least of which are deposits in bank accounts – which the bank must be able to refund if the need arises. This aspect of banking activities involves an obvious risk of instability, if fluid deposits or other short-term financing in the banking system are suddenly set in motion. In this manner the advantages to society of the risk diversification comprised in granting longer-term credit is balanced against the risk of the short-term financing of such lending activities. Here it must also be borne in mind that in a modern banking system, where the equity base is generally relatively small in relation to total lending, the risk inherent in this instability is magnified still further because asset prices can decrease rapidly – and a liquidity problem become an equity problem – if assets have to be disposed of at fire-sale prices to obtain liquid funds. Traditional banking activities can therefore be said to involve accepting deposits, extending credit, pooling of risk and payment services, depending upon whether depositors or borrowers are concerned.

There is good reason to draw special attention to payment services because of how large a part they play in people's daily lives in modern society where transactions have to be concluded promptly and smoothly, whether they are simple purchases or complex processes involving many parties. This service is extremely important for the functioning of the economy and here banks perform a key role. The services provided by the banking system in this regard involve either granting immediate access to available balances or granting of credit by one means or

[2] Greatly increased indebtedness in western economies recently, including Iceland, gives rise to the question of whether this debt increase has resulted in transferring capital to profitable projects. There are indications in the UK financial system that at least part of increased credit only fuelled rising asset prices, not least with an enormous increase in real estate lending, and was not utilised for other new and profitable undertakings. Although leveraged finance and smoothing of consumption over time through borrowing may be rational actions, over-indebtedness can substantially increase the vulnerability of the economy to fluctuations. See, for example, Turner (2010).

another, whether this involves access to overdrafts or credit card services. These activities can in some respects be compared to basic utilities such as water, electricity and heating. Electronic payment services accelerate all transactions, whether simple or complex.

The social and economic importance of banking activities is thus obvious. It is important to savers that normal banking activities offer a secure return and preservation of savings while at the same time ensuring them access to liquid funds and payment mediation services. For investors, banking activities make the decisive difference in bridging the gap between the cost of and income returned on investment projects. Without such financing there would be few new undertakings in society.

One of the key characteristics of commercial banks, and what sets them apart from other enterprises, is their ability to create money, i.e. purchasing power.[3] This places banks in a unique position to influence the entire economy, not only their owners, employees and customers. The ability of commercial banks to create money derives from their authorisation to accept deposits. Deposits are subsequently used to make loans to other customers. The capital which is loaned can subsequently find its way back to the same banks in the form of deposits, and the cycle is repeated. By law, the bank is only obliged to retain a small portion of its deposits, its so-called reserve requirement, which is currently 2%.[4] In this manner the bank can actually increase the amount of money in circulation and thereby fuel inflation and price bubbles, if this increase exceeds what economic fundamentals can sustain.

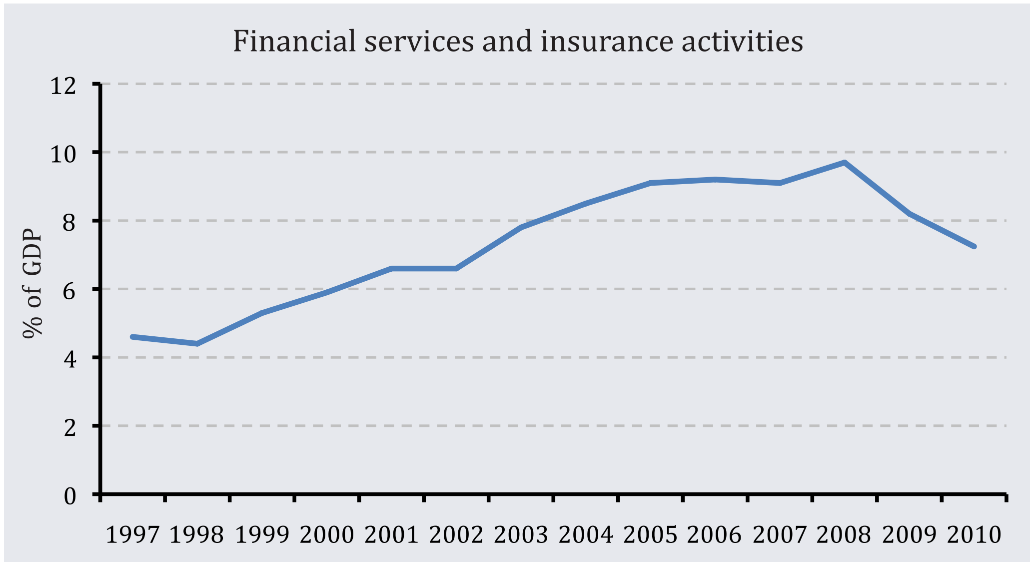
Banks' lending appetite and lending capacity, however, is determined by two closely related key factors: firstly, their assessment of the borrower's expected future income and, secondly, the assets which the borrower can pledge to secure the loan.[5] In years of strong expansion borrowers' income prospects brighten and asset prices rise. Banks then consider themselves to have scope to increase lending. If no brake is applied, there is a risk of overconfidence in both investments and lending, and higher valuation of assets than is actually justified. The market situation can change practically overnight, resulting in falling asset prices and future income expectations. In such circumstances banks cut back their lending and demand additional collateral as the security cover on loans shrinks. In the end, borrowers may be forced to sell assets, which can further depress asset prices. The banking system can in this manner fuel asset bubbles and aggravate the downturn, as discussed in more detail in Chapter 3.

Although commercial banks are the focus here, various other entities in the financial system also play important roles, although they admittedly do not have the banks' ability to create money. Enterprises such as investment banks and state-operated housing mortgage financers issue securities which investors purchase. These undertakings can utilise the funds obtained to finance transac-

3 Theories of endogenous money, i.e. that money can be created within the banking system based on demand and is not determined primarily by central bank decisions on monetary supply, have gained increasing support in recent years. See, for example, Lavoie (2009).

4 Lower reserve requirements boost banks' lending and their profitability. In 2003 the Central Bank of Iceland lowered reserve requirements from 4% to 2%, which due to insufficient countervailing measures undoubtedly contributed to the asset bubble which began in 2004.

5 In addition, various statutes and rules apply to banks' activities, e.g. concerning their equity (assets net of liabilities), loans to related parties and large exposures. The Financial Supervisory Authority and the Central Bank also set the banks requirements concerning their liquidity ratio, i.e. that portion of their assets which could be repaid to the banks' depositors and creditors at very short notice.



Source: Statistics Iceland.

Figure 1: *Share of financial and insurance activities in GDP.*

tions with valuable assets. Pension funds and insurance companies use contributions from a large number of parties to purchase bonds and equities – securities with uncertain future returns. These parties all provide financing, like the commercial banks, and like them are faced with having to assess uncertain circumstances, while at the same time taking decisions which can affect the prospects of their clients and society as a whole. In addition to these financial undertakings, various public institutions are part of the financial system. These include in particular central banks, financial regulators and competition authorities, which comprise the framework for the market based on the relevant laws and rules. Central banks also play a direct – although most often limited – part in the normal market operations of the financial system in accordance with their statutory role. Stock exchanges can also be added to this list. They are the forum for trading in listed securities and are intended to facilitate capital allocation. Stock exchanges are often entrusted with various aspects of securities market monitoring. A more detailed discussion of the role and activities of the various units of the financial system is provided in Chapter 5.

Banking and financial activities have not been untouched by changes in the structure of society, increased diversity and technological innovation. Traditional banking activities have been completely transformed from the time they were concentrated on simple capital allocation. The scope of financial activities grew enormously in the years preceding the collapse, not only in Iceland but internationally. In part this was reflected in the expansion of investment banking and asset management activities, together with the globalisation of the financial system and a much greater supply of financial products of various sorts. For example, the share of financial activities in Iceland's GDP surged from 4.5% in 1998 to 9.4% in 2005 and 2006, then peaked at 10% of GDP in 2008. Its share subsequently fell to 7.8% in 2010. The caveat should be added here that methods of assessing the share of financial activities in GDP are not undisputed, and various economists have pointed out flaws in the

methods most commonly used for this purpose.[6]

The financial crisis has been followed by extensive debate as to whether the increased scope of the financial sector brought real value-added, or whether there are other explanations for this growth. Generally speaking, most writers appear to agree that the growth of the financial system was immoderate and evidence of unbridled risk appetite, seeking higher short-term returns.[7] The resulting financial bubble, which eventually burst with consequences which are still being revealed, therefore showed the inherent instability of the financial system rather than its positive characteristics.

Within the banking system two types of principal-agent problems develop, firstly, between banks and their clients and, secondly, between commercial banks and central banks or the Treasury. A principal-agent problem develops between banks and their clients, as borrowers benefit from the risk-taking which may not be in the bank's interests. If all goes well, the borrower pays the interest but retains the profit. If things turn out badly, the bank loses its loan and the interest on it. This problem grows as interest rates increase, because only risky investments can bear a higher interest rate. For this reason, banks often demand collateral for loans. Even more important, however, is the fact that the relationship between lender and borrower is based on trust which only develops over a long period. In such a relationship banks are of prime importance, since one of their main tasks is to gather information on borrowers' behaviour and decisions and to reward those who prove worthy of trust with loans, and limit credit to parties taking unwise decisions. The agency problem between commercial banks and the Treasury is based on expectations of public support if the bank faces a shortage of capital. If the bank is successful the bank's owners receive the profit, while if unsuccessful the taxpayers foot the bill even though the owner also loses his investment. High leveraging of financial undertakings and indirect public subsidies (see Section 4.2.1) reinforce owners' profit expectations while increasing the Treasury's risk.[8] This double agency problem of the banking system shows the importance of trustworthy ownership of banks and stability in their operations. It can prove especially risky for banks to grant loans to their owners, since in so doing the owners are actually obtaining credit at public expense.[9]

Another form of the financial system's agency problem appears in financial bubbles. It arises from insufficient or skewed data of various sorts and the problems in connection with this. The asymmetric situation of principals, i.e. owners, depositors, investors or shareholders, and the financial undertakings which serve as their agents can easily result in the latter being so situated that they can increase their own income disproportionately at the cost of their principals. Everything from excessive salaries and bonuses within the financial sector, high commissions for investment advice and asset management, to questionable lending decisions can be linked in one manner or another to the agency problem, which underlies such – often hidden – conflicts of interest. These developments can in addition result in inefficiencies in the economy. Market failure can

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[6] See, for example, Haldane, Brennan and Madouros (2010).

[7] See, for example, Turner (2010); Haldane, Brennan and Madouros (2010).

[8] High leveraging of financial undertakings is not least the result of a regulatory environment which makes debt financing less expensive than equity financing. Increasing banks' capital can reduce the risk of a failure since the owners have more to lose. In addition, higher capital can reduce third-party costs, since a greater portion of the cost is borne by the owners. Demanding excessive capitalisation, however, can result in higher financing costs, with lower growth and macroeconomic losses.

[9] Stiglitz and Weiss (1981).

result when the owners of capital cannot determine whether a poorer return achieved by their asset manager in an upswing than from others is the result of the asset manager's incompetence or the fact that its investments are less risky than those of others (which should naturally be manifest in better returns in a downturn). The less satisfied a customer is with the investment strategy of the asset manager, the more likely he/she is to transfer his/her business, more often than not to a higher risk investment. In such circumstances the price of the higher risk investment rises, potentially causing an asset bubble and financial market instability.[10]

Under such circumstances, public confidence in the operations and scope of financial undertakings suffers a major blow, not unlike that following in the wake of the banks' collapse both here in Iceland and in other countries where similar events have occurred. Despite this, it is important not to lose sight of the important role which responsible, well run and honest financial activities play.

One of the most important tasks of the government and management of financial undertakings currently is in fact to rebuild public confidence in banks and the financial system as a whole. Without such confidence there is no chance that these institutions will be able to perform their role properly.

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[10] See, for example, Wooley (2010).

3

Financial crisis and the inherent instability of financial markets

During the 1990s the view became widespread that mature market economies could hardly be subject to a serious financial crisis. If problems were to arise on financial markets there would be no point in applying fiscal or monetary policy to counter them in an upswing, when bubbles could be developing. On the other hand, monetary policy instruments could be applied to repair the consequences of temporary financial market disruptions, through low interest rates and plentiful access to liquidity, as was in fact done in the US after the internet bubble collapsed at the beginning of the this century.

This widespread belief in the self-correcting characteristics of mature financial systems was based on two main factors. The first was the ascendancy of economic theories maintaining that markets would only be inefficient because of price inelasticity. According to these ideas, economic fluctuations are self-correcting and financial markets are efficient because prices are generally based on the real underlying value of financial assets and expectations of market players are always rational.[11] Under such circumstances the financial market is regarded as merely a neutral channel for mediation of capital and payments on the one hand and of information on interest rates and lending terms on the other. There was no assumption of interaction between financial markets and the real economy which could result in overheating or even bubbles which could in the end lead to recession.[12] For this reason the role of monetary policy was clearly restricted to keeping inflation low and stable. These assumptions served as a basis for major advances in financial theory with the development of risk models used to price various complex financial products, which were assumed to be able to diversify risk in the financial system better than before.

Based on this vision the historical interpretation spread that wide-reaching and serious financial crises, such as the Great Depression of the 1930s and the recessions which hit Asia and South America during the last two decades of the 20th century, were confined to developing and emerging market economies, where markets were undeveloped and price formation slow; developed, industrialised states had actually graduated from this risk category because of their mature financial markets, carefully constructed legal framework, supervision and deposit guarantees, and advances in general economic management. The predominant view was that rapid growth of the share of financial services in GDP and increased risk diversification in the financial system provided by complex financial instruments had increased both the efficiency and the stability of the financial system, while at the same time en-

[11] These ideas – often referred to as the efficient market hypothesis and rational expectations – rely to a large extent on theories developed by Lucas, Black and Fama and are explained clearly in Woodford (2003). Increasing doubts are now expressed regarding these theories; see, for example, Borio (2011), p. 9.

[12] Borio (2011), p. 8.

couraging extensive value creation. This view has unfortunately been proven wrong. The reality has been quite the contrary; banking crises have become ever more frequent as financial markets have boomed in high income countries and have gained a foothold in smaller and poorer economies.[13] An attempt by the Icelandic government to build up an international banking system and financial centre in Iceland[14] and the decision by the rating agency Moody's to award Iceland and the Icelandic banks its highest credit rating in 2007[15] – in spite of various signs of cumulative systemic instability – is an indication of how widespread the former view was in the financial world.

Lessons from the current financial crisis and a thorough analysis of economic history over a longer period than was done previously suggest unequivocally – and contrary to the dominant view in financial circles in the past two decades or more – that bank runs and financial crises are inherent in a capitalist financial system. These studies also show that financial shocks can magnify economic contractions originating in the real economy. For this reason it is imperative that both macroeconomic management and rules on the financial system and their application are capable of dealing with such difficulties.

3.1 Financial shocks and economic recessions

Despite the conviction of most Icelanders to the contrary, following the banking collapse in October 2008, financial crises are seldom themselves the cause of economic contraction, but most often amplify an unavoidable economic downturn.[16] The functioning of the financial system in such circumstances can aggravate economic cycles and a bank collapse can magnify a contraction arising from other primary causes. Studies also show that banking crises can reduce longer-term growth potential.[17] When economic activity slows or contracts, banks' default ratios rise, resulting in lower credit provision and applying a further brake on growth, with still more defaults etc.[18] Furthermore, banking crises are often accompanied by exchange rate (FX) crises (such as the one Iceland is still grappling with through plans to remove capital controls), debt crises (such as those with which Icelandic banks, businesses and households are currently attempting to work their way out of) and inflation crises. It took the US banking system a long time to regain its lending capacity after about half of its banks collapsed in the Great Depression.[19] The far-reaching failure of the US banking system around 1930 and its time-consuming reconstruction is considered to have made the period of contraction much longer than it would otherwise have been. This analysis of the Great Depression is no doubt among the leading reasons for the enormous intervention and support actions taken by governments in many countries – not least in the past three years – aimed at prevent bank collapses.

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[13] Reinhart and Rogoff (2009), p. 153.

[14] Chapter 5 of the Report of the parliamentary Special Investigation Commission (SIC) traces this ideal as far back as 1998, when Davíð Oddsson referred to plans to make Iceland an international financial centre in an interview with the *Financial Times*. Such policy no doubt reached its peak in the report of the Prime Minister's Office *Alþjóðleg fjármálastarfsemi á Íslandi* (International financial operations in Iceland), published in October 2006. See Rannsóknarnefnd Alþingis (Special Investigation Commission) (2010) and Forsætisráðuneytið (Prime Minister's Office) (2006).

[15] Moody's (2007).

[16] The Central Bank of Iceland and other parties forecast an economic contraction in 2009 long before the bank system collapse became imminent.

[17] Sveriges Riksbank (2011), pp. 51–53.

[18] Reinhart and Rogoff (2009), p. 145.

[19] Bernanke (2000).

In a recession the value of pledged assets falls, reducing banks' lending capacity and thereby corporate investment options. It has been demonstrated that during the past two decades the impact of financial shocks hits SMEs especially hard, not least due to their limited access to efficient financial markets following such shocks.[20] This is in fact the current situation of most Icelandic enterprises. In recent years they have had limited access to funding by Icelandic banks and practically no access to foreign financial markets, while at the same time domestic equity and bond markets are inactive (with the exception of the market for Treasury bonds and bonds of the largest municipalities). Such circumstances mean a risk of protracted contraction. For this reason, Icelandic corporate debt adjustment is a basic premise for strong and sustainable growth once more. An extended debt crisis and high non-performing loans (NPL) ratios can even result in stagnation. Here the example of Japan should serve as a warning.[21] In order to permanently reduce this risk all lenders, including pension funds, need credit loss provisions able to withstand unexpected shocks, and co-ordinated legislation and comprehensive supervision is necessary for the entire financial system, including pension funds and the Housing Financing Fund (HFF).

3.2 Historical frequency of financial crises

As the current recession and numerous new studies show only too clearly[22], financial crises are neither confined to developing countries and emerging markets, nor are they a thing of the distant past in the economic history of industrialised states. On the contrary, the financial system appears to be inherently unstable, as Keynes and subsequently Minsky pointed out.[23] This is attested to by the 124 systemic banking crises from 1970–2007 listed in the IMF database.[24] Reinhart and Rogoff examine an even longer period and additional countries. Their studies show that mature economies were subjected to banking crises on average 7% of the time following their independence (or since 1945) and each developed state had experienced on average 1.4 crises during this period.[25,26] Systemic banking crises were most frequent during the first half of the 1990s, and in 1995 no fewer than 13 such crises occurred.

Two types of banking crises can be distinguished. Firstly, there are crises – more common to developing economies – where banking systems in the hands of governments are actually used for indirect taxation

[20] Bernanke (2000).

[21] See, for example, the work by Richard Koo et al.

[22] See Laeven and Valencia (2009); Reinhart and Rogoff (2009).

[23] See, for example, Minsky (1977). Minsky's writings were based to a considerable extent on his analysis of Keynes's work and had a major impact on Kindleberger's classic analysis of financial crises which was first published in 1978. Kindleberger and Aliber (2011).

[24] According to their definition, in a systemic banking crisis, a country's corporate and financial sectors experience a large number of insolvencies and financial institutions and corporations face great difficulties in fulfilling obligations on time. As a result, non-performing loans increase sharply and banking system capital is exhausted. Under such circumstances, asset prices may plunge in the wake of their surge prior to the crisis; real interest rates rise rapidly, the economy contracts or there is a reversal in cross-border capital flows. In some cases the crisis may be triggered by a depositor run on banks, although in most cases financial shocks follow a general realisation that systemically important banking institutions are in distress. Reinhart and Rogoff (2008), p. 5.

[25] Kindleberger's classic study, referred to above, also shows how extensive and varied these crises actually were.

[26] From 1800 to 2008 banking crises existed for 7.2% of the time and each state had undergone an average of 7.2 banking crises.

by monopolising savings and payment systems. Iceland experienced a mild variant of such a financial crisis at the beginning of the 1990s.[27,28] Secondly, there are banking crises which are manifest in bank runs. Deposits are drained away from banks due to the herd instinct of depositors once rumours start that a bank is struggling (e.g. Northern Rock in the UK) or the banks' money-market funding dries up.[29] This results in the closing, merger or takeover by public bodies of one or more financial institutions unless some saviour emerges with unlimited financial resources. Such banking crises can also occur without a bank run if any systemically important financial institution is closed, merged or taken over, or provided with major public assistance and this is seen as marking the beginning of the same sort of developments at other financial institutions.[30] In a traditional banking crisis substantial losses, market panic or both, result in the insolvency of a significant part of the banking system. A comprehensive banking system collapse, such as occurred in Iceland in 2008, in which almost all banks and most other financial undertakings experienced severe difficulties, is an exception, however.

It has been pointed out that one important underlying cause of the financial crisis which still plagues the global economy results from the extensive moral hazard which characterises the financial system in rich countries. During the past four decades these states themselves have, directly or indirectly, shouldered huge explicit and contingent liabilities to support their financial systems. It could be spoken of as an unwritten law in these countries that many financial undertakings are considered 'too big to fail'; various leading banks are often said to be so systemically important that they cannot be allowed to fail. Most governments aim at achieving short- and long-term economic growth and are reluctant to face the difficulties and problems arising from bank insolvencies. This situation latently and openly fuels financial system overexpansion and imprudent lending. Owners of the financial undertakings bear limited responsibility for their losses, since only their equity is at stake. Profits are thus collected by the owners while the risk, i.e. the cost of rescuing banks and of their failure, generally is borne by a third party. The low real equity of Icelandic banks prior to the collapse, as explained below, aggravated this risk still further. This incentive system was then topped off with salary and remuneration arrangements rewarding credit growth rather than prudence. If this is not restricted, the implicit public subsidies for the financial system increase. Repeated public

[27] Up until the end of the 1980s, the financial system operated with negative real interest rates. Individuals' monetary savings were used to finance the Treasury and corporate sector through negative real interest rates. Individuals received no real return on their savings while businesses enjoyed only low or negative real interest rates. The state maintained these arrangements, in part through capital controls, a lack of alternative investment options and its dominant ownership of financial undertakings. Positive real interest rates after 1990 resulted in a period of contraction and financial shocks in the banks – which admittedly were not anywhere near as serious as those of 2008 – when the system reduced its leveraging so that payment capacity could cope with positive real interest rates. This is actually no different from the experience of many developing countries and emerging market countries which have lived with heavily regulated financial markets.

[28] A comprehensive account of financial shocks in Iceland has yet to be written. Two financial crises are generally mentioned in Iceland, in 1930 and 2008, although public intervention and involvement in the country's financial system have been considerably more frequent, e.g. with an equity contribution to Landsbanki in 1993 (see the Act on Measures to Improve the Equity of Deposit Institutions, No. 16/1993 and Ásgeir Jónsson (2010).

[29] This applied to the Icelandic banks, especially Glitnir, although in its case the failure can be regarded as a run resulting from the banks' herd behaviour.

[30] Reinhart and Rogoff (2009), p. 10.

sector bailouts of failing banks result in huge treasury deficits in the state concerned, which can end in sovereign default as recent examples show.[31]

Although a banking system collapse is most often the consequence of negative developments in the real economy, there are examples where financial system disequilibrium itself results in a banking crisis. Recent studies by the IMF indicate that rapid credit growth together with other factors, such as surging asset prices and funding costs, can signal serious financial market disequilibrium.[32] Furthermore, financial crises appear especially likely to follow increased deregulation of financial markets (Canada appears, however, to be an exception here).[33] Financial crises have generally struck within five years of significantly increased financial deregulation. In Iceland the financial crisis came practically on schedule, according to this study, several years after privatisation of the banking system concluded. Although the period was somewhat longer between the liberalisation of capital flows between Iceland and other countries – together with other changes to financial markets resulting from Iceland's membership of the European Economic Area (EEA) – and the banking collapse, it appears appropriate to date the 'lead time for a crisis' as beginning with the banks' privatisation rather than EEA membership in itself.[34]

There also appears to be a close correlation between financial shocks and increased liberalisation of cross-border capital movements. Large cross-border flows of capital for years have repeatedly been followed by an international banking crisis.[35] Financial market deregulation and cross-border capital movements, such as Iceland experienced 2004–08, appear often to precede a financial crisis. Nonetheless, it is worthwhile reiterating that capital movements and financial market liberalisation are inherently positive, within certain limits.

Banking crises appear to occur in the wake of an economic downturn following a period of strong growth, if that growth had been fuelled by increased lending and capital inflows resulting in unsustainable exchange rate strengthening. Financial market liberalisation often precedes a banking crisis.[36]

3.2.1 International spread of financial shocks

The financial crisis with which the global economy is now struggling spread more rapidly and more extensively than previous banking crises.[37] It is not, however, the first international banking crisis in history. Reinhart and Rogoff analyse ten examples of international banking crises from 1880 to 2008.[38] Roughly speaking, banking crises can become international in two ways. In the first place, they can spread when the banking systems of a large number of countries suffer a joint shock almost simultaneously. In the second place, they can spread by contagion from the banking system first hit by the shock. The danger of contagion from one banking system to another is high in the European single market. Although the banking systems are still linked to particular countries, they are very closely interconnected by extensive business relationships, international ownership, common European financial sector regulations and, in many cases, a single currency.

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31 Reinhart and Rogoff (2010), pp. 105–129.

32 IMF (2011b), pp. 103–148.

33 Reinhart and Rogoff (2009), p. 155; Kaminsky and Reinhart (1999); Demigruc-Kunt and Detragiache (1998).

34 Reinhart and Rogoff (2009), p. 155.

35 Reinhart and Rogoff (2009), p. 155.

36 Kaminsky and Rogoff (1998).

37 Reinhart and Rogoff (2009), p. 240.

38 Bordo and Murshid (2001) and Neal and Wedenmeir (2003).

3.3 The costs of financial crises

Financial shocks are costly to the Treasury and the economy. The direct costs to the state include refinancing of the banking system, lost tax revenues and increased public expenditure. This is compounded by lower growth or a contraction in the economy, if the banking collapse magnifies the recession, as described above. A report of the Organisation for Economic Co-operation and Development (OECD) on Iceland, published in June 2011, estimates the cost to the Icelandic state of the banking collapse to be at least 20% of GDP, or more than in any other OECD country except Ireland. Ireland's cost of restructuring its banking system was then estimated to be 45% of GDP.[39] By comparison, both Norwegian and Swedish governments consider the final net cost to their countries' Treasuries from their banking crises in the early 1990s to have been practically nil.[40] However, this is only taking into consideration public finances and ignoring the social cost resulting from the financial setbacks in a wider sense. In the current crisis, the EU Commission has authorised state aid to banking systems amounting to EUR 3,600 billion. Most of this amount is comprised of guarantees, but some EU 300 billion has been granted directly as equity for refinancing banks. This figure is likely to rise still further in the first half of 2012, as EU member states have obliged themselves to reinforce the equity of the continent's largest banks to comply with the requirements of the new European regulator, the European Banking Authority (EBA).

The cost of banking crises, however, is much greater than implied by narrowly defined public budget contributions for the rescue or winding-up of individual financial institutions. Economic research indicates that the economic contraction during banking crises on average exceeds 10% of GDP and that both banks' lending and profits are low in the wake of such shocks.[41] The OECD has estimated the GDP drop in Iceland following the banking crisis to be 11% from its peak in 2008, which was admittedly not a sustainable level for the economy. This downturn is among the highest which occurred in OECD countries, and among the greatest suffered by Icelanders in recent decades.[42] In addition, an economy's long-term growth capacity also appears to decline following financial shocks.[43] Taking into account the contraction, the growth which otherwise could have been experienced during the contraction period, and reduced future growth potential, the aggregate loss in GDP can clearly be substantial.[44] This is not least true in an economy like that of Iceland, where households and businesses are dependent upon bank financing.[45]

Reinhart and Rogoff are of the opinion, in view of how difficult it is to assess the various public sector costs caused by financial shocks, that the increase in public debt is a better measure of this cost than expenditures directly linked to these shocks. According to their research, public debt increases on average by 86% during the first three years after a financial crisis commences.[46] The increase in debt has been considerably greater than this in Iceland, as public sector debt rose from 27% of GDP in 2007 to 84% in 2010

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39 OECD (2011), pp. 27–28.

40 Sandal (2004).

41 Hoggarth and Redhill (2003), p. 109.

42 OECD (2011), pp. 13–14.

43 Finansdepartementet (Norwegian Ministry of Finance) (2012) and Miles et al. (2011).

44 In such calculations, however, it makes a major difference which years are selected for examination, how the growth capacity of the economy is assessed and how the overexpansion, which is often the forerunner of financial shocks, is treated.

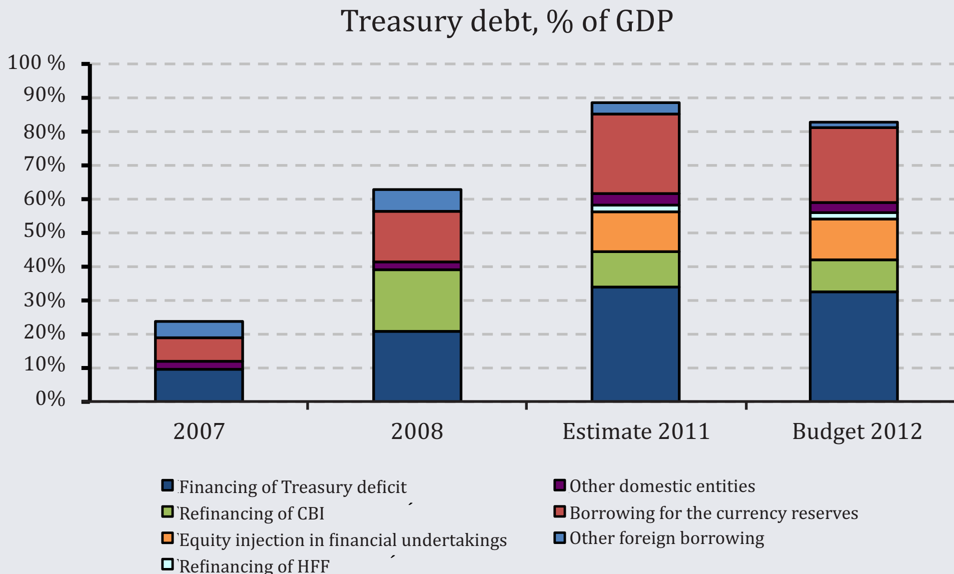
45 Krosznera et al. (2007) and Dell'Ariccia et al. (2008).

46 Reinhart and Rogoff (2009), p. 142.

Cost of the collapse to the Treasury

Treasury debt has risen from 24% of GDP in 2007 to 87% in 2011, and the target is to reduce this to 83% of GDP by year-end 2012.[47] The Treasury's good financial situation was a basic prerequisite for its response to the banking system's collapse, on the one hand, by injecting equity into the financial system and, on the other hand, by allowing automatic stabilisers to function until mid-2009. This ensured that the financial system could still perform its basic tasks and taxes did not have to be raised and public services cut back as extensively as would otherwise have been necessary if Treasury debt had been higher.

The direct cost of the banks' collapse is actually threefold. Firstly, there is the refinancing of the Central Bank of Iceland, which now amounts to 11% of GDP. Immediately following the collapse, the cost was 18% of GDP but the net amount has subsequently decreased somewhat following purchase by the Central Bank of Treasury assets. In the second place, the Treasury has issued notes to finance the banking system equivalent to some 12% of GDP. Thirdly, the Treasury has provided almost 2% of GDP for refinancing of HFF. In addition to this there is the cost of a state guarantee for the Agricultural Loan Fund equivalent to around 1.5% of GDP which reverted to the Treasury upon Landsbanki's collapse. The total direct cost to the Treasury of the banking collapse is therefore just over 25% of GDP.



Source: Ministry of Finance.

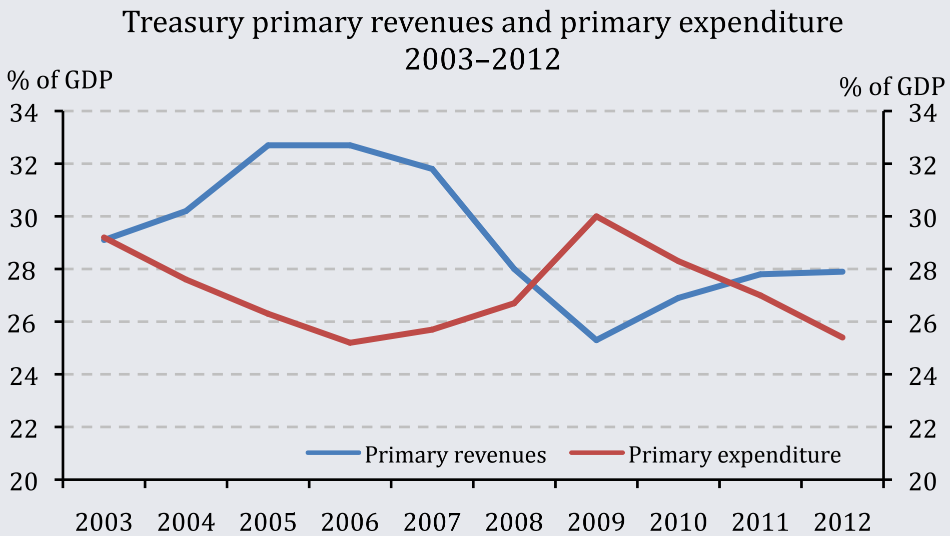
Figure 2: *Treasury debt as % of GDP.*

In addition to direct cost, state expenditures rose substantially following the collapse while at the same time its revenues shrank. The aggregate stock of Treasury notes, which are used to finance the deficit on its operations, has risen by 23% of GDP.

The financial crisis and the economy's unavoidable adjustment following the preceding years of overexpansion have severely tested both the state's revenue generation system and state expenditures. The accompanying figure shows

[47] Figures for 2012 are from the state budget plus the amount drawn on the last tranches of loans from Nordic countries and Poland which were effected at year-end 2011.

clearly the major transformation which occurred in 2008 and 2009 in terms of primary revenues and primary expenditures relative to GDP. During the upswing years 2003–2007, primary Treasury revenues rose from 29% to 32–33% of GDP. This dropped sharply to 28% in 2008 and to 25% in 2009. On the other hand, primary Treasury expenditure surged following the banks' collapse from 25% of GDP in 2006 to 30% in 2009. This included automatic fiscal stabilisers which were in effect until 2009. This was necessary to soften the first impact of the banking crisis on the financial situation and welfare of the general public. However, fiscal balance had to be regained within a relatively few years' time. With extensive and determined fiscal measures in mid-2009, further Treasury shortfalls were prevented while at the same time restraint was increased in public expenditures. By so doing, a primary balance was achieved as early as 2011 and a small primary surplus in 2012. Medium term budget forecasts until 2015 indicate that by 2014 an overall surplus will be achieved in Treasury finances.[48]



Source: Ministry of Finance.

Figure 3: *Treasury primary revenues and primary expenditure 2003–2012.*

The last major contributor to increased Treasury debt following the collapse is borrowing to reinforce foreign currency reserves. When all loans in connection with the economic recovery programme prepared in collaboration with the IMF, both from the Fund itself, Nordic countries and Poland, had been drawn the result was an increase in Treasury debt of 15% of GDP.[49]

It should be borne in mind that in tandem with this large-scale increase in Treasury debt there has been a major increase in assets. As a result, the equity contribution to the banking system and borrowing to boost foreign currency reserves are likely to result in only a temporary increase in Treasury debt. Excluding these debts, the objective is a Treasury debt position equivalent to 56% of GDP at year-end 2012.

48 Fjármálaráðuneytið (Ministry of Finance) (2011b).

49 It should be pointed out that loans from IMF and Norway granted as a part of the IMF programme were disbursed directly to the Central Bank and therefore are not included in Treasury debt.

(an increase of 250%).[50] However, it is worth pointing out that this huge rise in debt has been accompanied by a major increase in state assets in Iceland, both in the form of deposits with the Central Bank to strengthen currency reserves and holdings in and loans to the new banks (see Box insert on page 13). The cost to the Treasury and the society, however, is not determined merely by the scope of the banking crisis, but also by the government's response, as both prompt and effective intervention[51] and solid economic fundamentals prior to the banking crisis[52] can reduce such cost.

3.3.1 Sovereign defaults

The most serious banking crises can result in a sovereign default in the country concerned, naturally with very damaging long-term effects on the national economy. Unlike enterprise insolvencies, sovereign defaults do not result in liquidation, and no court can enforce national obligations, e.g. by a transfer of assets to the creditors as in the case of private sector insolvencies. Defaulting states cannot fulfil their obligations or restructure them to stimulate short-term demand in their economy. Although such sovereign defaults have been infrequent in recent years, there are plenty of examples in more distant history. From the Great Depression in the 1930s until the present recession, however, developed countries have generally managed to avoid such a fate.[53] The cost of sovereign default is manifest in various ways. States' costs of borrowing rise, for instance, and their access to capital shrinks, reducing long-term consumption.[54] Financial market shocks can also limit the success of short-term attempts to stimulate growth. Research shows that the impact is felt primarily in increased borrowing cost, and less in limitations on access to financial markets.[55] Higher interest rates are felt throughout the entire economy, since the cost of sovereign borrowing generally sets the interest rate threshold for other borrowers.

Previous experience of financial shocks and our own experience of the collapse in 2008 demonstrates clearly the high cost which can result from a banking collapse, not to speak of the frightening cost which could result from a sovereign default. All of this reaffirms the importance of ensuring that the equity of banks and the financial system as a whole is sufficient to sustain unexpected fluctuations in their operations and balance sheet, and that the Treasury generally has the financial scope to absorb financial market shocks when the banks' equity falls short.

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50 Since the costs of the banking collapse have been absorbed primarily by the Treasury, the increase in municipal debt is ignored here.

51 OECD (2001).

52 Þorvarður Tjörvi Ólafsson and Þórarinn G. Pétursson (2010).

53 De Paoli, Hoggarth and Saporta (2006); Reinhart and Rogoff (2009).

54 Borrowing cost can also increase prior to a sovereign default.

55 De Paoli, Hoggarth and Saporta (2006).

4

The Icelandic banking crisis and its consequences[56]

Responsibility for the rapid expansion and subsequent collapse of the Icelandic banks rests above all with their managers and owners. The general circumstances prevailing in Iceland and internationally paved the way for this excessive growth. Mistakes in economic management on the part of Icelandic authorities also played a role; these are visible, for instance, in the incautious decisions taken when privatising the banks, a weak regulatory framework and financial market supervision, and wavering and poorly co-ordinated application of macroeconomic management tools.[57] External developments also helped things along, not least the international regulations which were transposed into Icelandic law through the EEA Agreement. Mention could also be made of the low interest rates on international financial markets and failure to price credit risk appropriately. This failure was visible throughout the world, encouraging high risk appetite on global financial markets. The sharp shock delivered to international markets by the collapse of the investment bank Lehman Brothers in mid-September 2008 – at a time when market liquidity through interbank lending had practically dried up – proved to be the last straw for the Icelandic banking system in early October 2008. With the benefit of hindsight, however, the collapse of the Icelandic banks appears to have been foreseeable many quarters earlier.[58]

4.1 The international environment

4.1.1 The EEA Agreement and the beginning of international banking activities in Iceland

Iceland's membership of the European Economic Area from 1994 made the legal environment for Icelandic financial undertakings comparable to that elsewhere in the European

[56] This chapter is based in part on the report of the parliamentary Special Investigation Commission (SIC), see Rannsóknarnefnd Alþingis (Special Investigation Commission) (2010). Comprehensive accounts of the collapse of the Icelandic banking system have been provided in innumerable articles, speeches and books; it will be some time yet until all the birds have come home to roost. The following section only discusses briefly the causes of the banking crisis insofar as they directly affect the shape of future government policy regarding the Icelandic banking system. No opinions are expressed concerning possible criminal conduct currently being investigated by the Office of the Special Prosecutor.

[57] OECD (2008), p. 8, and Rannsóknarnefnd Alþingis (2010), Vol. 1, pp. 96-97.

[58] It is worth pointing out, however, that Icelandic financial undertakings and the banking system as a whole had on several occasions in the past met with serious difficulties well before the globalisation of finance occurred. Examples of this are the insolvency of the first Íslandsbanki in 1930 and the difficulties of Landsbanki and Samvinnubanki in the early 1990s, which were resolved with state intervention. The consequences of these setbacks, however, were nowhere near as serious as those with which the country has been struggling since 2008.

single market. EU financial market directives were transposed into Icelandic law in stages. As is pointed out in the SIC report, the directives generally provided for "a minimal harmonisation of specific aspects concerning the establishment and operation of credit institutions, together with the general principle of mutual recognition" of the regulatory framework and supervision of member states.[59] As EU legislation provided only minimum requirements, Icelandic authorities therefore in various aspects could have ensured more stringent rules concerning Icelandic financial undertakings. This was not done, however, in part due to the authorities' determination to provide Icelandic financial undertakings with operating conditions comparable with those common in neighbouring countries and the government's policy of 'light touch' regulation in a *laissez-faire* spirit.[60] As the 1990s progressed, the banking system was increasingly viewed as a potential third pillar of the Icelandic economy, alongside of fisheries and power-intensive industry.

The minimum harmonisation ensured by the EU acquis was based on the dominant theories in finance and economics referred to previously, not least the view that financial shocks were a thing of the past in mature industrialised countries. The EU directive on banks' own funds, for example, was based on rules of the Basel Committee on Banking Supervision, which were intended primarily to level the competitive position of large banks by harmonising equity requirements rather than ensuring financial security of banking operations and financial stability. In such harmonisation work, representatives of international banks – not least large US banks – wanted, among other things, to limit the portion of banks' equity which had to be in cash money, as this was costly. Instead they placed strong emphasis on defining various types of subordinated debt as equity. These views influenced the Basel rules. The view was that relatively limited equity should suffice to maintain banks' lending capacity and thereby encourage GDP growth. In developing these standards, however, no critical regard was given for why equity was considered to be costly, never mind for the conceivable cost to public coffers and the economy of financial system collapse (see Chapter 3). It was not until preparations were underway for the Basel III rules, which are to enter into force at the beginning of 2013 in the single European market, that equity requirements were based on research aimed at maximising the macroeconomic benefits of such rules.

The ideas which resulted in minimum harmonisation within the EU/EEA also influenced how the acts and regulatory framework were applied by regulators. In Iceland, as in many neighbouring countries, it was considered important that supervision should not overly restrain banks and other financial undertakings.[61] FME's financial and human resources did not increase in proportion to the rapid banking system expansion. Neither its Board of Directors and management, nor the ministry responsible for the FME placed sufficiently strong emphasis on expanding and reinforcing the Authority in accordance with the greater size and complexity of the regulated entities. In addition, the management of FME expressed their views that during the

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[59] Rannsóknarnefnd Alþingis (2010), Vol. 5, p. 11. In fact, FME authorised the inclusion of subordinated loans to the banks in calculations of their capital adequacy to a greater extent than was practised in neighbouring countries. This is one example of how the banks were in fact granted leeway exceeding what was usual in most other countries (see 4.2.4).

[60] EU procedures in adopting financial market legislation have changed somewhat in recent quarters. Directives specifying minimum requirements, transposed into national law, have to an increasing extent been replaced by a combination of directives and regulations, which apply to the undertakings directly and set mandatory obligations rather than simply minimum requirements.

[61] It is hardly necessary to emphasise the importance of government support for regulators.

first six years of the Authority's operation "interest groups have strongly opposed increases to its funding and to the fees levied for supervision of regulated entities".[62]

The EEA Agreement brought not only a flexible regulatory framework for Icelandic financial undertakings. Iceland's membership of the single market also allowed Icelandic financial undertakings to open branches in other member states and facilitated the establishment of subsidiaries in the EEA, on the basis that the regulatory framework and supervision of the parent company was in accordance with EU rules. This enabled Icelandic banks to tap funding from EU depositors, backed up by a deposit guarantee scheme complying with EEA rules. This Landsbanki did in the UK and the Netherlands, making reference in its advertisements to the deposit guarantee scheme rather than the bank's financial strength.[63] Last but not least, the banks could obtain liquidity in EUR from the ECB through their subsidiaries. This the Icelandic banks did through their subsidiaries in Luxembourg.

Based on European rules, the Icelandic banks moved into European markets to an increasing extent from 2003 onwards, following the conclusion of their privatisation. The international expansion of the newly privatised banks at this time was fuelled not least by easy access to credit and dwindling risk aversion on international markets. Serious flaws have subsequently come to light in the EU/EEA regulatory framework for cross-border financial services in the EEA. Neither common deposit guarantee schemes nor a lender of last resort, in the respective currencies of the deposits, were created. The growth of the Icelandic banks was in fact encouraged by the government, which thereby created great moral hazard. Supervision by FME, reflecting the international spirit of the time, was minimal. In such circumstances, the banks far outgrew both the Central Bank of Iceland and the Treasury. A process which began with the largest Icelandic banks being 'too big to fail' ended with their being 'too big to save'.

4.1.2 Growth of international financial transactions and the carry trade

The increased stability and prosperity in the global economy from the mid-1990s onwards resulted in declining risk premia on financial markets and lower yields. Low and stable inflation and low inflation expectations enabled central banks throughout the world to keep short-term interest rates low. This made ever more investment options appear profitable and access to financing was easier because investors were seeking good returns in a low-interest-rate environment, whether this was through US subprime loans, carry trade transactions or bonds of Icelandic banks. The search for high returns combined with financial market deregulation encouraged rapid growth of international capital movements and cross-border banking transactions.[64] An ever-increasing number of national economies became involved in such transactions, and thereby susceptible to the same risks. The response of central banks, not least in the US, when the dot.com bubble burst in 2001 – of lowering interest rates still further – only reinforced the prevailing attitudes. With low interest rates and expectations that this situation would continue, leveraging surged, making the financial system even more vulnerable to sudden shocks. China's high current account surplus during the global upswing, and the disequilibrium it brought in world trade, also substantially increased the supply of credit, depressing global interest rates. During the period preceding the international banking crisis it was

[62] Rannsóknarnefnd Alþingis (2010), Vol. 5, p. 138.
[63] Sigríður Benediktsdóttir, Jón Daníelsson and Gylfi Zoega (2011).
[64] McGuire and Von Goetz (2009).

not, therefore, only individual economies which were especially susceptible to unexpected shocks; all economies were tightly intertwined, which explained how rapidly the crisis could spread.

Iceland was not unaffected by this climate of decreasing risk aversion, lower interest rates and a funding glut. The Icelandic banks began seeking foreign funding in earnest on European markets for bonds and wholesale deposits in 2004. The merged Kaupthing-Búnaðarbanki had in fact made its first venture into international financial markets a year earlier. By the end of August 2005, the ISK had become a fully-fledged high-yield currency, with the first issue of 'glacier bonds', i.e. notes issued in ISK offered on international markets. By the beginning of September 2007, the outstanding stock of such notes totalled ISK 450 billion.

Icelandic banks' access to European bond markets and wholesale deposits contracted sharply early in 2006. These difficulties, which have been referred to as the '2006 mini-crisis' and tested the banks severely, were to a certain extent a foretaste of what was to come. The banks subsequently sought other means of funding, firstly in the US bond market and then by offering advantageous rates on retail deposit accounts in Europe. As the SIC Report describes, in 2006 the banks issued notes in the US totalling USD 5 billion. The high interest rates on Icelandic bank bonds plus their good credit ratings made them especially attractive for packaging in collateralised debt obligations (CDOs) including a variety of debt instruments and marketed throughout the world by securities dealers and investment banks. The idea behind the CDOs was to reduce risk by offering diversification in this manner. Critics of such derivatives point out that while CDO transactions did, admittedly, diversify risk they nonetheless increased uncertainty concerning the value of the often far-distant debt instruments underlying them. Credit rating agencies have also been criticised for awarding CDOs excessively high ratings without investigating sufficiently the risks behind them, as they included for instance, US subprime loans with high default rates following the collapse of the US housing market. Growth of CDO trading was one of the consequences of the above-mentioned financial market developments and contributed greatly to the international financial market collapse in the autumn of 2008.

The Icelandic banks' campaign for deposits on European markets from 2006 onwards was fuelled, firstly, by their declining access to European bond markets and wholesale deposits and, secondly, by criticisms of their narrow range of funding options. The banks' foreign deposits grew rapidly during this period: deposits of the Landsbanki group tripled from the end of Q3 2006 to year-end 2007, most of them in Icesave internet accounts with Landsbanki's London branch, to total almost GBP 7 billion or 28% of the bank's balance sheet.

The financial market situation and the banks' regulatory framework enabled them to sustain enormous overseas growth during the first decade of the new century, serving both new foreign clients and Icelandic entrepreneurs increasingly active on foreign markets. As described in the SIC report, the nature of their activities "also changed greatly, with investment banking activities becoming an ever more significant aspect of the banks' operations" instead of their previous traditional commercial banking activities. The three large commercial banks expanded rapidly under these circumstances until by year-end 2007 their total assets equalled almost eight times Iceland's GDP.[65]

[65] Because of the sharp fall in the ISK exchange rate in 2008, the banks' assets in ISK terms increased relative to GDP and had become over 10 times the country's GDP before their collapse.

4.2
Domestic circumstances

It was not, however, merely the international situation which set the stage for the rapid growth which eventually led to the banks' failure. Many aspects of the structure of the Icelandic financial market and public policy also had a major impact.

4.2.1
Effect of Iceland's sovereign rating on the banks

The Icelandic banks' entry into international bond markets was not least due to their high credit ratings. This reflected the country's strong fiscal position and the assumption that the state would support its banks should they face difficulties. These close linkages between the sovereign credit rating and that of the banks reached a peak in the first half of 2007, when for a brief period the banks enjoyed the highest rating awarded by Moody's, AAA.[66] The SIC regards this access to financial markets one of the main premises of the banks' strong growth, especially in 2004–2006.

Each country's sovereign credit rating serves as the basis for the ratings of other borrowers in the economy. A high sovereign rating, therefore, can lead to improved access to funding and lower interest rates for the entire economy. A high sovereign rating is therefore clearly in the interest of the general public, but this can only be achieved through responsible public finances and macroeconomic stability. While it takes time and persistence to strengthen creditworthiness, it can disappear overnight, as experience shows. If an issuer's credit rating falls below a certain level it can result in rapid selling of bonds and other financial instruments which are linked to the rating in one way or another, not least if the rating falls below a level decided on by institutional investors or which is prescribed in financial undertakings' rules on own funds.

A good sovereign credit rating is therefore an important public asset which can benefit other parties in the economy, not least banks. Systemically important financial undertakings, which the Treasury of the state concerned can be expected to rescue no matter what, enjoy better financing terms than other financial undertakings. Such subsidising of banks' funding costs results in a rent to the banks' owners if nothing is done especially to tax it. The cost of a possible financial shock, however, hits the entire society – not least the general taxpayer. Subsidising banking activities through their benefiting from the sovereign rating was not limited to Iceland in the years prior to the collapse. The annual subsidy by public authorities in this manner of the financing cost of the 25 largest international banks is estimated to have amounted to hundreds of billions of USD during the period from 2007 to 2010. Some studies even suggest that such subsidies amount to over USD 1000 billion annually (ISK 120,000 billion). By comparison, the annual profits of these banks were around USD 170 billion on average in the years immediately preceding the crisis.[67] The Swedish central bank estimated that interest expense subsidy to the country's four largest banks in 2002–2010 was equivalent to half their profits during this same period.[68]

The Icelandic banks' good credit ratings not only paved their way to European bond markets. As mentioned previously, the banks turned to the USA to an increasing extent after their access to European financial markets shrank in 2006. In the US market the banks' bonds could be used in CDOs, as they

[66] It is worth pointing out that this decision by Moody's does not appear to have improved the banks' access to market funding at this time, since it was viewed with scant confidence on financial markets.

[67] Haldane, Brennan and Madouros (2011).

[68] Sveriges Riksbank (2011).

generally bore interest rates higher than indicated by their credit ratings. Here the banks' good ratings – in fact based on the strong Treasury position and European regulatory framework – combined with financial market innovations, resulting in a variety of financial instruments, which paved the way for further growth of the banks.

4.2.2 Lack of consistent economic policy

The economic policy of the Icelandic government has for decades focused primarily on actions to stimulate the demand side of the economy while at the same time reducing supply side obstacles, to boost growth in line with prevailing trends and policies. The economic policy objective was above all to encourage growth, emphasising high employment. Little regard was had as to whether GDP growth was sustainable in the long term, or whether it fuelled inflation. Following the adoption by the Government and the Central Bank of Iceland in March 2001 of an official, quantitative inflation target for low and stable inflation, large-scale public sector works projects were launched while at the same time the housing mortgage supply greatly increased. This made it very evident that a co-ordinated economic policy was sorely lacking.[69] As the SIC Report points out, the government's fiscal policy and public sector investment during the period preceding the collapse "in fact aggravated the disequilibrium" arising from the power-intensive industry projects and increased supply of credit. Nor did actions by the Central Bank appear to have been effective in restraining the overexpansion, as "interest rate increases were generally too little, too late, which to begin with appears to have been prompted by wishful thinking on the part of the bank that the state would take part in reducing the overheating. It never happened. During this same period, access by the banks to liquid funds from the Central Bank was practically unrestricted, apparently with no limits on the money supply. In actuality, liquid funds were loaned to the banks against (unsecured) debt instruments during the last years."[70] Kaarlo Jännäri made similar comments in his report to the government in March 2009.[71] In 2004 the maximum LTV provided by the state-backed Housing Financing Fund was increased to 90% and loan ceilings raised. These decisions played a considerable part in boosting subsequent competition between housing mortgage lenders, and the resulting lower interest rates and greater credit supply further fuelled the economic overexpansion. There was no internal consistency in the government's economic policy from the beginning of the century until the banks' collapse in 2008. Various international economic organisations, such as OECD and IMF, warned of the danger of overheating, as did various domestic and foreign analysts.[72]

It could also be argued that the Central Bank's high interest rate policy aggravated the problem, since it became the basis for the carry trade which developed. As a result, the Central Bank's high interest rates did not manage to cool the economy. The high interest rate policy, however, did ensure a strong ISK in the short term, which in turn kept inflation measurements low. However, the economy paid for the stronger ISK with high interest rates on

69 In its report on the Icelandic economy in the first half of 2008, OECD pointed to the difficulties which resulted when ministers appeared to oppose the Central Bank: "It would also be helpful if members of government respected the independence of Central Bank policy making, as this would reinforce the credibility and effectiveness of policy." OECD (2008), p. 8.

70 Rannsóknarnefnd Alþingis (2010), Vol. 1, pp. 96–97.

71 Jännäri (2009).

72 An example of this is reports by Danske Bank which created a considerable stir, including *Iceland: Geyser crisis* of March 2006, and writings and addresses by Robert Z. Aliber, including *Monetary Turbulence and the Icelandic Economy* in June 2008.

foreign funding seeking a quick profit. The cost of this policy could be estimated at approximately ISK 60 billion annually in interest payments leaving the economy during the last years preceding the collapse.[73]

In addition to this, financial market policy and regulation by public authorities was completely unrelated to other aspects of its economic policy. Until the financial crisis the emphasis in economic policy was on monetary and fiscal policy especially. As previously mentioned, the government's main objective in banking was to facilitate the growth of the financial system rather than to strengthen supervision of it. While the Central Bank was raising its interest rates to rein in domestic expansion the Housing Financing Fund (HFF) cut its interest rates and raised its LTV ratio. Despite a primary balance surplus, fiscal policy was not countercyclical; the surplus in fact resulted from overheating. Foreign short-term funding poured into the country due to the high policy rate, adding to the profitability of the carry trade. No effort was made to apply those means available, which would now be called financial stabilisers or macro-prudential measures, to slow lending growth or other causes of financial system expansion. Financial supervision was directed exclusively at the finances of individual financial undertakings, without any monitoring of the financial system as a whole, e.g. its FX liquidity. In part for these reasons efforts were not directed early enough to rein in the over-expansion of the banking system. To a certain extent, this failure to see the gaping flaws in the system was a consequence of spreading responsibility for financial market matters among too many actors. The Prime Minister's Office was responsible for the Central Bank, which handled important aspects of supervising financial activities and financial system stability; the Ministry of Finance was responsible for pension fund matters; the Ministry of Social Affairs for the Housing Financing Fund and the Ministry of Commerce for financial services in other respects, including the Financial Supervisory Authority. Following the report and advice of Kaarlo Jännäri at the end of March 2009 a number of steps were taken in accordance with his advice by transferring responsibility for the Central Bank and FME to the new Ministry of Economic Affairs. Legislation and regulation concerning HFF, however, remain under the Ministry of Welfare and issues concerning pension fund legislation and rules under the Ministry of Finance. HFF and the pension funds, however, represent a very large portion of the financial system.

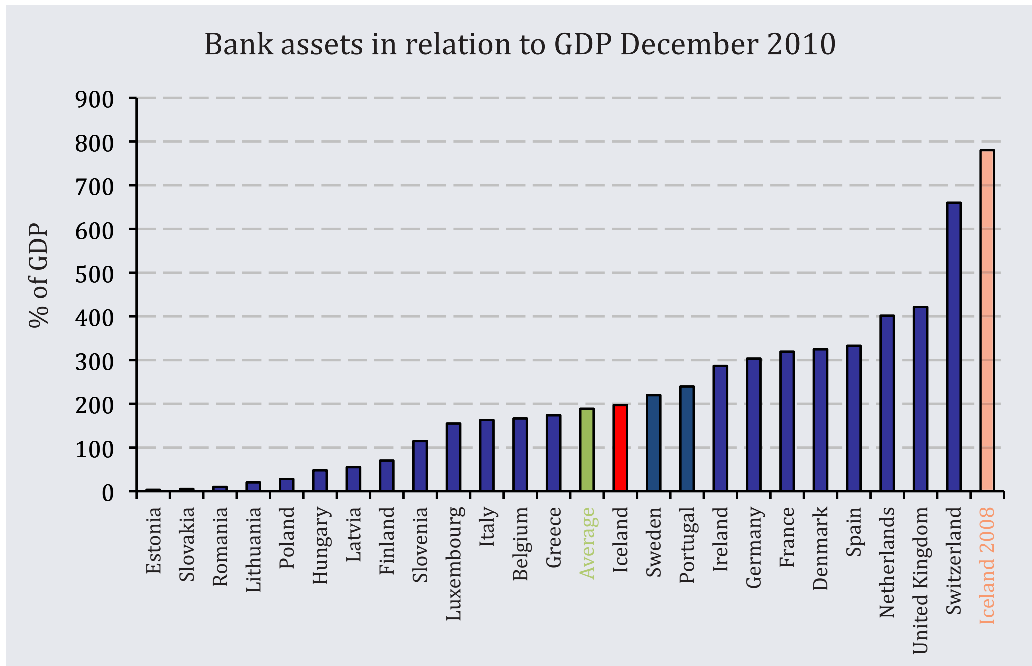
The SIC concludes "that co-ordination of fiscal policy with the Central Bank's economic management must be increased, so that one strategy is not applied in complete contradiction with the other as was the case in recent years when fiscal policy was continuously aimed at increasing disequilibrium and overheating, leaving the Central Bank to wrestle with the consequences alone".[74] The establishment of the Ministry of Economic Affairs late in 2009 and the Ministerial Committee on Economic Affairs was to some extent a response to these criticisms from the SIC.

4.2.3 Lack of macroeconomic monitoring of the banks' expansion in proportion to the size of the country's economy and foreign currency reserves

The SIC states that "[t]he collapse of Glitnir banki hf., Kaupthing Bank hf. and Landsbanki Íslands hf. can be explained primarily

[73] The IMF has issued guidelines on how efforts can be directed at managing capital inflows. They include, for instance, major purchases by central banks of this inflow to strengthen their foreign currency reserves, and the application of increasingly tight fiscal policy. Taxes and other prudential measures can also be applied to temper the inflows IMF (2011a).

[74] Rannsóknarnefnd Alþingis (2010), Vol. 7, p. 205.



Sources: European Central Bank and Central Bank of Iceland.

Figure 4: *Size of banking systems at year-end 2010 relative to GDP.*

by their growth and thereby their size upon their collapse".[75] Economic research suggests there is a correlation between the size of banking systems and the possible economic impact of banking crises.[76] When it collapsed in late 2008, the size of Iceland's banking system was equivalent to almost ten times GDP, following rapid and practically continuous growth since 2003/2004. From 2004 to 2007 the three banks' balance sheets grew seven-fold, through both organic growth and acquisitions of operations overseas. The banks' growth was to a large extent financed with bond issues abroad, as discussed previously. Their rapid growth and huge relative size near the end far exceeds any examples in other states with large, mature financial markets. Rapid growth can reduce the quality of loan portfolios, especially when banks enter new markets, which is often accompanied by poorer credit control. Therefore the growth in itself involved a special risk for the Icelandic financial system, which was all the greater due to the size of the banks relative to the economy.

The banking system was not only enormous in relation to the size of the economy, it had far outstripped the ability of the Central Bank of Iceland to serve as a lender of last resort with the backing of the Treasury. Despite growing concerns from 2006 as to the ability of the Central Bank to perform this role, the banks continued to grow. The lack of a credible lender of last resort can have a serious effect on the economic and financial system concerned. In 2008 Willem Buiter and Anne Sibert pointed out that no deposit institution could rely on its own strength, even if its assets were good and it had sufficient liquid funds to withstand nor-

[75] Rannsóknarnefnd Alþingis (2010), Vol. 1, p. 31.
[76] Sveriges Riksbank (2011), pp. 19-20, and Rannsóknarnefnd Alþingis (2010), Vol. 1, p. 31.

mal volatility in the net flow of deposits and other short-term obligations.[77] The nature of banking is to assume short-term obligations to finance long-term assets. This makes banks vulnerable to liquidity problems if too many depositors wish to withdraw their deposits at the same time. This characteristic of banking activities was in fact the principal argument for establishing the US Federal Reserve in 1913, following a bank crisis which developed in the country in 1907. This was clearly apparent in Iceland in October 2008. The three large Icelandic – and international – banks all failed within the first ten days of the month, although only Glitnir had faced major debt maturities in October 2008 and the months immediately following. The closing of international interbank markets for liquid funds in the autumn of 2008 – not to mention the bond markets – can be likened to a run on deposits, dependent as the Icelandic banks were on access to foreign liquid funding. Once banks lose their credibility they face serious difficulties. Without access to the interbank market or liquidity support from central banks they were beyond saving and their collapse was unavoidable.

The Central Bank of Iceland attempted to respond to this problem by boosting its currency reserves at year-end 2006. In 2007 the Minister of Finance was authorised to take out additional foreign loans to reinforce reserves, but by that time the financial markets had in fact shut their doors on the Icelandic state. These measures, however, fell short as the nation´s short-term foreign liabilities towards the end of 2007 had risen to the Central Bank´s fifteen-fold currency reserves. The Central Bank of Iceland obtained credit lines from other Nordic central banks in the first half of 2008, but apart from this the currency reserves were not increased. There are various benchmarks for an acceptable ratio of reserves to short-term liabilities, but a common rule is to have currency reserves equal to short-term liabilities. Most short-term liabilities in the economy arose from the banks' funding. Furthermore, the three banks' foreign deposits were equivalent to eight times the currency reserves. In addition, there was little support to be had from the Depositors' and Investors' Guarantee Fund when it came to the crunch, because the Fund had very limited assets in comparison to the banks' foreign deposits.[78]

Given the situation on international financial markets in the autumn of 2008, the enormous size of the banking system and its short-term foreign liabilities in proportion to the size of the economy, plus the relatively small currency reserves made the banking system collapse actually unavoidable.

4.2.4 Reasons for the banks' collapse and limitations of financial supervision

As in most other banking crises, it was a shortage of liquidity which brought down the Icelandic banks[79], although it now appears evident that they were in fact struggling with serious underlying equity problems. In response to criticisms from analysts and difficulties in obtaining market funding, the banks, especially Landsbanki and Kaupthing, moved increasingly into the European

[77] Buiter and Sibert (2008), p. 4.

[78] Deposit guarantee funds generally have relatively low amounts at their disposal compared to the deposits they are to guarantee. In many states such funds actually have no assets, but are expected to borrow on the markets when guarantees have to be paid. The Icelandic fund's assets were equivalent to 0.5% of its insured deposits upon the banks' collapse, which is close to the average of EU member states. A bill to set up a new deposit insurance scheme in Iceland would provide the Depositors' and Investors' Guarantee Fund with assets to cover 4% of deposits guaranteed by the scheme when fully developed (proposal from the EU Commission for a new framework for a deposit guarantee scheme provide for funds to hold the equivalent of 1.5% of guaranteed deposits).

[79] See Chapter 2.

retail deposit market, as was mentioned previously. In so doing, the banks took advantage of authorisations under EU legislation to establish branches and referred to the EU Directive on deposit guarantees to instil confidence in their customers. By year-end 2007 deposits comprised around 40% of the Icelandic banks' funding, rising from 28% in 2006.[80] Of these deposits, 2/3 were owned by foreign nationals, 80% were in foreign currencies and 86% were available for withdrawal within three months.[81]

From around mid-2007 deposits began to flow out of Landsbanki's foreign branches, with withdrawals peaking at the beginning of 2008 after the bank's credit rating had been lowered. The establishment of Icesave accounts in the Netherlands in the spring of 2008 reversed the situation to some extent, but wholesale deposits fell sharply, as they are more sensitive to credit rating changes than deposits of the general public and SMEs. The three banks obtained liquid funds in EUR from the European Central Bank (ECB) through their subsidiaries in Luxembourg. However, they lacked sufficient Luxembourgian assets to pledge to meet the outflow of deposits and the closure of funding markets. They attempted to circumvent this by placing Icelandic bonds, of both private and public bodies, in subsidiaries in Continental Europe and through this route obtain liquid funds from the ECB. Liquidity through interbank credit lines was generally hard to come by and dried up further with the rating drop. As previously mentioned, the Central Bank of Iceland could not provide the banks with liquid funds in the currencies they needed. The swap market for ISK had already practically closed in March 2008. As a result, the banks could not cope with the outflows and the closure of the interbank market at the beginning of October 2008 due to the huge maturity mismatch of their assets and liabilities in different currencies, even though only Glitnir faced major maturities in the upcoming weeks and months. Confidence in Icelandic banks, their prompt repayment and reliability in transactions, which had been built up over a period of many years – and no less in the Treasury, with its operating surplus, debt reduction and linkage to the EEA single market – disappeared in one fell swoop.[82]

Upon their failure, all of the banks appeared to have equity well above the mandatory minimum: according to their 6M results in mid-2008 their risk-adjusted capital ratio was 10.9%, well above the 8% prescribed by law and FME rules.[83] Their Tier 1 capital ratio was reportedly 8.5%, more than twice the statutory minimum.

In addition to rules on equity which were too weak, the nature of the Icelandic banks' equity was too weak, as was pointed out, for instance, in the report by Kaarlo Jännäri and the SIC report. The capital ratios published by the banks in their financial statements did not therefore reflect their real strength and even less the capacity of the financial system as a whole to meet unexpected shocks. The banks had loaned extensively for purchases of their own shares, often only against pledges on the shares themselves. By mid-2008 such hollow equity had become around 25% of the total equity base of the three banks. If only the core component of this capital base is considered, i.e. shareholders'

80 In 1998 deposits comprised 45% of the banks' funding but had decreased to 22% by year-end 2004 after the banks began obtaining their funding to an increasing extent from the European bond market.

81 Ong and Chiák (2010), pp. 4–5.

82 Supervision of financial institutions' liquidity is the responsibility of the Central Bank of Iceland. Supervision of liquidity in foreign currencies was seriously inadequate prior to the collapse, as proposals to address this were still being formulated when it occurred.

83 The purpose of equity rules is to protect the interests of those parties whose interests the banks have no incentive to safeguard, as well as to ensure financial stability.

equity according to the annual financial statements net of intangible assets, the weak equity of the three banks amounted to over 50% of this core capital at mid-2008. The banks had loaned various clients funds for purchases of their own shares, often only against pledges on the shares themselves. Furthermore, the banks loaned each other for such share purchases. As a result, the total equity of the banking system was in reality much less than it appeared to be from merely an examination of the balance sheets of each bank and their aggregate total. Taking account of these inter-linkages the weak equity in the system amounted to as much as 70% of core capital from the latter half of 2007 onwards. In addition, the banks' accounts did not reflect their risk stemming from the ISK weakening, i.e. they did not anticipate greater losses on FX loans than on ISK loans, even though many borrowers had only ISK income. This major risk was therefore not visible in the banks' provisions, as their provisions for loan losses as a ratio of total lending were lower than those of many comparable international banks.[84] Finally, in 2005, FME agreed that subordinated bonds could amount to 33% of Tier 1 capital rather than 15%, as had generally been the practice in neighbouring countries. Subordinated bonds are not regarded as especially strong equity, and therefore are not included in Tier 1 capital under Basel III rules which will soon enter into force. Tier 1 capital is the core of the equity position, i.e. the most stable part of equity.[85] It is worth mentioning that one of the main conclusions of the Norwegian *Stortinget* following the Norwegian banking crisis in the early 1990s was to point out the importance of having banks well capitalised.[86]

A closer look at what lay under the surface of the banks' balance sheets, taking into consideration the shared or mutual ownership connections, makes it obvious that the banks' real financial strength was much less than their published results and equity figures indicated. In addition, the international financial crisis has shown that the equity ratios published by the Icelandic banks in their financial statements would probably not have enabled them to survive the shocks which beset the global economy in 2008, even if the quality of their equity had been higher and their accounting clearer.

The flaws in the banks' equity position also bear witness to the interplay between the banks and the securities market during the boom years. There are many indications that market abuse was sometimes practised to inflate the banks' market cap far in excess of what was justified. Through systematically trading in own shares the banks' management actually duped other investors to purchase the shares at an inflated price which in the end plummeted. The banks' houses of cards collapsed for a number of interrelated reasons. Their business practices and corporate governance were unsustainable in the long term. Their risk assessment and risk management was faulty. Cross-ownership, related party lending, far too large individual exposures in their loan portfolios, salary incentives encouraging risk-taking and unlimited leveraging – all of these flaws characterised the banks' management. Added to these faults were the defects in their accounting and the auditing of the same, partly due

[84] Sigríður Benediktsdóttir, Jón Daníelsson and Gylfi Zoega (2011), pp. 193–194.

[85] According to new Basel III rules, which will be transposed into European law with the Fourth Capital Requirements Directive (CRD IV) and the Capital Requirements Regulation (CRR), Common Equity Tier 1 will be equity net of proposed dividends, goodwill, various intangible assets, investments in other financial undertakings (exceeding a certain limit), certain deductions for pension obligations, certain deferred income tax payments and several other deductions. The new regulatory framework will restrict considerably that portion of equity which is included in core equity.

[86] Stortinget (1998).

to weaknesses in IFRS, *(International Financial Reporting Standards)* and IAS, *(International Accounting Standards*), including their emphasis on marked-to-market pricing of assets and liabilities[87] – but also due to shoddy work by the banks' auditors during these years. General increases in equity prices during the period preceding the collapse, the 'equity bubble', also helped the banks, and other companies, to build up capital through their holdings in other banks and other companies. This build-up subsequently melted away rapidly when the inflow of capital turned to an outflow and asset prices plunged. FME kept its supervision to a minimum in accordance with widely held view that market forces ensured the financial market was self-regulating. The rest is history.

4.3 Government's response

The collapse of the Icelandic banking system pushed the economy to the very brink, to face what appeared to be a lengthy economic downturn and imminent sovereign default. Such circumstances called for prompt and effective responses on the government's part, in order to minimise the cost of the banking collapse. Roughly speaking, the response of the Icelandic government took two forms: firstly, the adoption of the so-called emergency legislation (Act No. 125/2008) at the beginning of October 2008 and, secondly, a detailed economic recovery programme prepared in collaboration with the IMF, the implementation of which began immediately in November 2008 and continued until August 2011. Changes to financial market acts and regulations were a key aspect of the programme agreed with the IMF – a process which is in fact still underway.

Furthermore, on 6 October 2008 the government declared that all deposits in the domestic branches of Icelandic banks were guaranteed. This statement prevented a run on the banks. Although the declaration was not put to the test in the case of the large commercial banks, it has cost the Treasury significant amounts in the case of the savings banks. The exact figure is not yet clear but the cost will definitely be counted in billions of ISK.

4.3.1 The Emergency Legislation

When the collapse of the banking system appeared inevitable, the Icelandic parliament *Althingi* approved on 6 October 2008 the Act Authorising Treasury Disbursements due to Extraordinary Financial Market Circumstances etc., No. 125/2008, which is generally referred to as the emergency legislation. Its principal objective was to enable the government to respond without delay to the prevailing financial market situation and thereby assure the functioning of payment mediation, the continuation of domestic banking activities and security of deposits in case of the insolvency of the large banks. It was also considered important to reduce the scope of the Icelandic banking system to accord better with the size of the economy. Four major changes were introduced by the Act.

Firstly, FME was granted extensive and previously unheard of authorisations to intervene in the activities of financial undertakings in danger of collapse, both by taking over the power of shareholders' meetings, for instance, in disposing of assets, and by limiting or prohibiting the disposal of the funds and other assets of a financial undertaking.

Secondly, FME was granted authorisation to appoint Resolution Committees for the failed financial undertakings, which would administer the undertakings prior to formal winding-up proceedings.

[87] De Larosière Group (2009), pp. 20–22.

In the *third place*, the Minister of Finance was granted authorisation to provide funding to establish new financial undertakings or to take over financial undertakings or their bankrupt estates, in whole or in part, under very special and extraordinary financial market circumstances.[88]

Fourthly, the priority ranking of claims in the winding-up of financial undertakings was altered, giving deposits priority ahead of other homogeneous claims, whereas previously they had been equally ranked in priority with other unsecured claims.

The Act made the implementation of the financial undertakings' winding-up proceedings even more unlike that provided for in general bankruptcy legislation. The general winding-up proceedings of bankruptcy legislation are not entirely appropriate for the collapse of financial undertakings, as there is generally special uncertainty concerning the value of their assets and funding. Furthermore, it is especially important to prevent disruption of the important role played by the financial system in business and society as a whole. It should also be borne in mind that, if action had not been taken to give deposits greater priority in winding-up in parallel to the government's declaration that the Treasury would insure all deposits in Iceland (see Box insert), there would have been a risk of a bank run by depositors of all deposit institutions. On 6 October 2008 the government issued a statement that deposits in Iceland covered by the Depositors' and Investors' Guarantee Fund would be fully guaranteed. The statement was reiterated in an announcement from the Prime Minister's Office on 13 November 2008 and again on 3 February 2009.

The provisions of the emergency legislation were applied immediately. Straightaway in the first two weeks of October FME took over control of the three largest banks at the request of their Boards of Directors. Each bank was divided into a new bank and an old bank. The three new banks, which were established as provided for in the Act, took over the lion´s share of their domestic banking activities, which comprised around one-quarter of the total activities of the banks prior to the collapse. Agreements were reached with the Resolution Committees of the old banks on behalf of their creditors on payment for assets taken over exceeding the liabilities assumed, in the case of Landsbanki and Glitnir, while in Kaupthing's case the liabilities assumed were assessed as greater than the assets. A detailed account of this process is provided in the Report of the Minister of Finance to the Althingi on the restructuring of the commercial banks.[89] The provisions of the emergency legislation were also applied upon the collapse of several smaller financial undertakings, e.g. the savings banks SPRON, Byr and SpKef.

The Government's statement on the guarantee of domestic deposits

The Government of Iceland underlines that deposits in domestic commercial and savings banks and their branches in Iceland will be fully guaranteed.

Deposits applies here to all deposits by individual savers and enterprises which are guaranteed by the deposit division of the Depositors' and Investors' Guarantee Fund.

Reykjavík, 6 October 2008

4.3.2 Economic recovery programme in collaboration with IMF

When Iceland fell victim to a financial and currency crisis in October 2008, the Icelandic government sought assistance from

[88] In addition, the Minister of Finance was authorised to provide capital contributions to savings banks within certain limits.

[89] See Fjármálaráðuneytið (Ministry of Finance) (2011).

the International Monetary Fund (IMF). In November 2008 an Economic Recovery Programme agreed by the Icelandic government and IMF was approved by the IMF Executive Board and by a parliamentary resolution of the Althingi. There were three main aspects to the programme. Firstly, the stabilisation of the foreign currency market was to be secured through interest rate increases and capital controls. A stable exchange rate was considered to be a basic prerequisite for price stability as the situation stood, in addition to which its importance for household and corporate debt restructuring was indisputable due to the impact of exchange rate movements on their situation. Secondly, the programme dealt with fiscal policy, as public debt had soared with the banks' collapse, while at the same time government revenues had dropped and expenditures were rising rapidly. Emphasis was placed on avoiding the assumption by the Treasury of any greater burden from the banks' collapse than was absolutely necessary, since the Treasury's debt position could not withstand further shocks. Thirdly, measures were aimed at re-establishing confidence in the Icelandic financial system. Only a strong and credible financial system could enable the removal of the government's guarantee of early October for all deposits in banks in Iceland, while at the same time ensuring that the banks can fulfil their important role in the economy, as explained in Chapter 1. These objectives were to be achieved, on the one hand by recapitalising the new banks and restructuring the financial market to increase its cost efficiency and, on the other hand, with amendments to financial market legislation and regulations and supervision of the same.

Amendments to acts and rules on the financial market

The detailed economic recovery programme agreed with IMF in response to the consequences of the banking collapse in October 2008 provided for a review of the entire regulatory framework of financial activities and banking supervision to improve defences against possible future financial crises. Kaarlo Jännäri, retired Director General of the Finnish Financial Supervision Authority, was invited to carry out an assessment of the regulatory framework and supervisory practices and to propose needed changes. Jännäri was asked to focus especially on rules on liquidity management, related party lending, large exposures, cross-ownership, and the 'fit and proper' status of owners and managers of financial undertakings. Jännäri delivered his report and proposals at the end of March 2009.

The adoption of Act No. 75/2010, which entered into force on 1 July that same year, extensive amendments were made to the Act on Financial Undertakings, No. 161/2002. The amendments were based on the proposals made by Jännäri, as well as amendments made to the EU acquis on financial activities from 2009 onwards. A complete revision of the regulatory environment of savings banks had been undertaken earlier with the adoption of Act No. 76/2009. Work has continued on improvements to the Act, with several additional amendments adopted since the summer of 2010. Most of these concern the chapter of the Act providing for the reorganisation and winding-up of financial undertakings, but provisions on evaluating financial strength and other technical aspects have also been revised. In several areas, the legislation goes well beyond the minimum harmonisation provided for in EU Directives.

The following are the key aspects of amendments made to the legislation which was in effect in the autumn of 2008:

- FME's authorisations to intervene (to take over the powers of shareholders' meetings and dispose of assets, cf. the emergency legislation) are increased;

FME is given expanded supervisory authorisations; additional provisions are adopted enabling FME to evaluate the operations or behaviour of individual supervised parties. These include both decision-making authorisations, such as on the closing of establishments or termination of specific activities without actual revocation of operating licences, as well as a more detailed definition of concepts whose interpretation has been disputed by FME and supervised entities or appellate bodies.

- Rules on individual large exposures are clarified and made more specific; both the role and responsibility of risk management are increased and FME authorised to accord risk management higher status in the organisation of financial undertakings; provisions on the application of stress tests have been tightened.
- Provisions for a special registry of larger borrowers, in order to provide better overview of large, individual exposures to two or more financial undertakings. The registry is important for linking exposures together and assessing their systemic impact if difficulties should arise in the borrowers' operations. Entities not subject to FME supervision, but which are listed in the registries of financial undertakings, must provide FME with information on all their obligations. FME can prohibit the provision of services to such parties should they refuse to provide the information requested.
- Provisions on sound business practices are reinforced and the existence of the Complaints Committee on Transactions with Financial Undertakings enshrined in law; detailed information must be disclosed on all major owners of financial undertakings.
- The time limits allowed financial undertakings to dispose of appropriated assets are shortened.
- Provisions on financial undertakings' holdings in own shares are tightened and defined in more detail. Holdings of subsidiaries are now considered own shares, as are off-balance-sheet contracts concerning own shares.
- Financial undertakings are prohibited from extending credit against pledges of their own shares or guarantee capital certificates.
- FME is to lay down rules as to how loans secured by a mortgage on the shares of other financial undertakings are to be calculated in the risk base and capital base.
- Both the responsibility and role of internal auditing section is increased. There are detailed rules concerning the balance between the size and diversity of the activities of the financial undertaking concerned and the scope of its internal auditing section.
- Five-year limits are placed on the period for which an auditing firm may carry out the audit of the same financial undertaking; financial undertakings' ability to dismiss a 'difficult' auditor is reduced.
- All provisions on calculation of equity and various other technical aspects have been reviewed.
- Rules on exercising qualifying holdings, i.e. 10% or more of voting rights, have been reviewed. FME is authorised to reverse the onus of proof in assessing parties intending on acquiring or adding to qualifying holdings, e.g. when it is uncertain who is/are the beneficial owner/-s of a holding company with a qualifying holding.
- Additional demands on eligibility are now made of directors, their responsibility for supervision or operations is increased and executive chairmen of the Board are prohibited; FME is assigned a greater supervisory role for Boards of Directors; personally identifiable informa-

tion must be disclosed on remuneration to senior management.
- Rules are set concerning credit transactions of financial undertakings with directors, managing directors, key employees and owners of qualifying holdings in the financial undertaking concerned. Similar rules apply to parties closely connected with the above-mentioned. FME adopts rules as to what is considered satisfactory collateral for such transactions.
- Rules are adopted concerning arrangements for incentive schemes and bonuses to management and employees and on termination contracts.
- Provisions on the reorganisation and winding-up of financial undertakings are tightened.
- An overall revision of special rules on savings banks has been carried out. The status and rights of guarantee capital owners of savings banks have been clarified, restrictions set on dividends, clear rules adopted on guarantee capital transactions, rules set on write-downs of guarantee capital and rules on savings banks' authorisations for formal co-operation clarified. Savings banks are prohibited from altering their legal form.
- New comprehensive legislation on the activities of UCITS, investment funds and institutional investment funds has been adopted; the status of so-called money market funds has been clarified.
- New comprehensive legislation on insurance activities has been adopted. Similar rules – as applicable – have been adopted to parties pursuing insurance activities as apply to financial undertakings.

As mentioned previously, Icelandic regulations in some respects go beyond the pan-European framework. The main deviations from rules adopted by the EU which have been taken up in the EEA Agreement are the following:

- FME is authorised to restrict the activities of individual establishments of financial undertakings, if it sees reason to do so. Furthermore, it is authorised to set special requirements for individual establishments of financial undertakings to continue their activities. FME may also limit provisionally the activities which a financial undertaking may pursue, in full or in part, whether subject to license or not, if the Authority sees reason to do so. This is naturally prompted not least by the activities of branches and deposit accounts established by them in other European states until 2008 (Icesave, Edge and Save-and-Save).
- Considerably more detailed provisions are set concerning the role of internal audit in Icelandic law than in the directives.
- Considerably more detailed provisions are set on how stress tests are to be carried out than in the directives.
- Financial undertakings must keep a special registry (a credit registry) of all parties to whom they extend credit and submit an updated list to FME at the end of each month. Furthermore, a similar list shall be sent on parties closely connected with financial undertakings, their Boards of Directors and managers and groups of connected clients, to the extent that these parties are not on the above-mentioned list. This list will provide a better opportunity to monitor inter-linkages between financial undertakings, their directors and management.
- If FME is of the opinion that the borrowing of a single party on the credit registry, which is not subject to official supervision of financial activities, could have a systemic impact, it may demand information from the party concerned on its obligations.
- Should a party not subject to official supervision listed on the credit registry re-

fuse to disclose information to FME, the Authority may order supervised entities to refrain from providing the said party with further service. The same applies if the information disclosure of the party concerned is unsatisfactory. The provisions on a credit registry and extensive authorisations to supervisors concerning parties not subject to official supervision are not in EU/EEA rules.
- There are considerably more detailed and restrictive provisions on related party lending and collateral than in EU/EEA rules.
- FME must refuse the owner of a qualifying holding the right to exercise the holding if there is doubt as to who is or will be its beneficial owner.
- The maximum length of time external auditors can work for the same financial undertaking is shorter than in EU/EEA rules.
- There are considerably more detailed provisions on the eligibility of directors in financial undertaking than in the Directives.
- Provisions are adopted on arrangements for bonus schemes and termination contracts. Recently formal rules have been set on remuneration policies in EU Directives, but rules on termination contracts have not yet been adopted in this forum.

The preceding section has explained the main amendments made to the regulatory framework of the financial market after the shocks in the autumn of 2008. Various changes which admittedly influence financial market activities have been omitted from this discussion, such as amendments to the rules on foreign currency transactions, to rules on payment services, etc. Some of these aspects are discussed elsewhere in this report. A separate chapter, Chapter 7, elaborates on the regulatory framework and financial market supervision; reference is made to that chapter for more detailed discussion.

5

The Icelandic financial system

The Icelandic financial system includes, on the one hand, financial undertakings, and on the other, public institutions including the Central Bank of Iceland, the Financial Supervisory Authority and the Competition Authority, which form the framework for the market in accordance with the relevant laws and rules. The Central Bank of Iceland also plays a direct – although limited – part in the market operations of the system in accordance with its statutory role. Markets for securities, foreign currency and other financial products are also part of the financial system in a broader sense.

The Icelandic financial system has undergone major changes since the banking collapse in the autumn of 2008. The three relatively large international banks which failed in 2008 have been replaced by three considerably smaller ones which operate almost exclusively on the domestic market. The fourth commercial bank, MP Bank, is much smaller than the other three. It has now been refinanced with contributions from new owners. The savings bank system has also shrunk considerably, whether measured in terms of the number of savings banks (which has been halved since 2007) or the size of their balance sheets. At the beginning of 2012, 10 savings banks were in operation, and their number is likely to decrease still further this year. Their share of the total financial system assets has declined even more, since the largest savings banks, SPRON, Byr and SpKef, have disappeared from the market after encountering serious financial difficulties. In addition, various specialised credit undertakings have been merged with the commercial banks in recent quarters due to financial difficulties. This drop in the number and scope of older financial undertakings has been partly offset by the advent of several new, smaller financial undertakings offering specialised services. They include the beginnings of pure investment banks, as three investment banks currently operate in Iceland, together with five other financial institutions. Since the banks' collapse, 9 new financial undertakings have begun operation, most of them focusing on financial advice and asset management. At year-end 2011, regulated entities on the financial market numbered 107, compared to 119 prior to the collapse.

The number of persons working in financial institutions has grown considerably during the past two decades. In 1991 around 5,000 persons worked in financial undertakings in Iceland, or around 3.5% of the total workforce. In 2008, the number of employees on the financial market in Iceland had reached 9,000, or the equivalent of 5% of the total. The banks' collapse reduced the number of employees on the financial market by 1,100, with the entire reduction in number occurring in 2009. Since that time, the number of employees of financial undertakings has increased once more, totalling 8,300 last year, and jobs in financial institutions once more represented 5% of the total. It is important to point out that employees in branches of Icelandic banks abroad are not included in these figures. Further details of the total number of employees in the banks' parent companies are found in Chapter 9.

Although the financial system shrank considerably with the collapse of the banking system in 2008, deposit institutions and the

Table 1

The financial system 2007–2011. Number of regulated entities*

	Number *30/06/2007*	Number *30/06/2008*	Number *30/06/2009*	Number *30/06/2010*	Number *30/06/2011*	Number *31.12.2011*
Commercial banks**	4	5	4	5	5	4
Savings banks	21	16	14	12	10	10
Credit undertakings	12	13	11	8	8	7
Co-op deposit departments	1	1	1	1	1	1
Investment firms	9	9	8	11	13	13
Securities brokers	2	4	3	3	3	2
Fund management companies***	7	7	9	8	8	9
Stock exchanges	1	1	1	1	1	1
Securities depositories	1	1	1	1	1	1
Pension funds	40	37	37	35	33	33
Insurance companies	12	13	13	13	13	13
Insurance brokers	6	6	6	6	6	6
Collection agencies	0	0	6	5	6	4
Other regulated entities	3	3	3	3	3	3
Total	119	116	117	112	112	107

* *Financial undertakings in winding-up proceedings are not included in the summary.*

** *EA fjárfestingarfélag hf. (previously MP Bank hf.) is not included in the number of commercial banks as of end of June and end of December 2011, as the company ceased banking activities in the first half of 2011.*

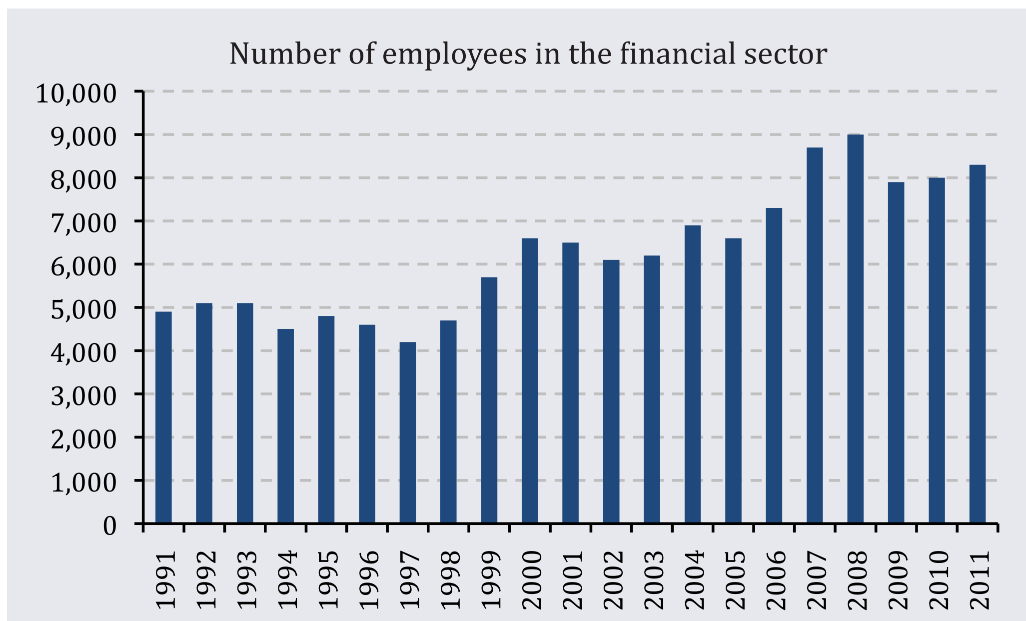
*** *UCITS and investment funds are operated by their management companies. The funds are not included in the total number of regulated entities. Several funds have more than one division.*

Source: Financial Supervisory Authority.

financial system as a whole are still sizeable relative to the economy by international comparison. Total assets of the financial system, i.e. deposit institutions plus various other credit institutions, pension funds, UCITS and investment funds and insurance companies, now amount to almost fivefold GDP, as shown in Table 2.

There are a number of reasons for the still relatively large size of the financial system in Iceland. Firstly, in Iceland, as in most European countries, bank loans are the most common financing route of Icelandic companies.[90] Secondly, Icelandic pension funds, funded by member contributions, are growing substantially. In few countries are pension funds larger in relation to GDP. Many countries in Europe have pay-as-you-go pension fund systems financed with tax revenues. In such cases, pension fund systems appear in public sector accounts rather than

[90] Although bank loans are still a considerably more important part of corporate financing in Europe than in the US, the size of the European corporate bond market grew substantially following the introduction of the euro in 1999. The total amount of corporate bonds denominated in EUR in 1999 was three times higher than the amount of comparable bonds in Eurozone states a year earlier. Eichengreen (2007), p. 375.



Source: Statistics Iceland.

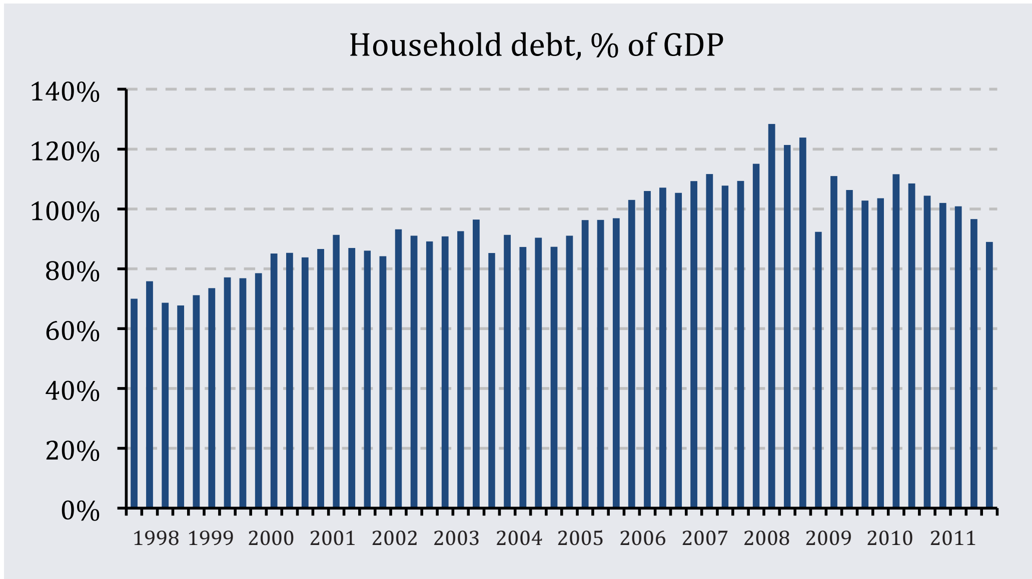
Figure 5: *Number of employees in the financial sector. Employees of parent companies in Iceland.*

Table 2
The financial system 2007–2011. Total assets

Assets ISKm	31/12/2007	30/06/2008	31/12/2008	31/12/2009	31/12/2010	31/12/2011
Banking system	9,740,321	12,574,758	4,631,588	3,967,393	3,877,668	4,310,320
of which commercial banks	9,062,413	11,739,565	3,416,546	2,572,768	2,626,830	2,891,269
of which savings banks	636,648	715,268	767.683	383,394	136,588	60,484
Various credit undertakings	1,052,045	1,242,350	1,283,327	1,194,469	1,129,338	1,094,311
of which the Housing Financing Fund	605,777	660,585	732,771	794,736	835,964	859,395
Pension funds	1,698,206	1,824,004	1,665,310	1,849,337	1,988,850	2,168,483
Insurance companies	159.255	161,093	122,160	130,726	138,126	144,724
UCITS, investment funds and institutional investor funds	696,758	694,173	211,704	194,999	284,095	518,834
State loan funds and Depositors' and Investors' Guarantee Fund	422,940	690,160	124,799	145,780	160,835	166,004
Total assets	13,769,525	17,186,538	8,038,887	7,482,703	7,578,912	8,402,676

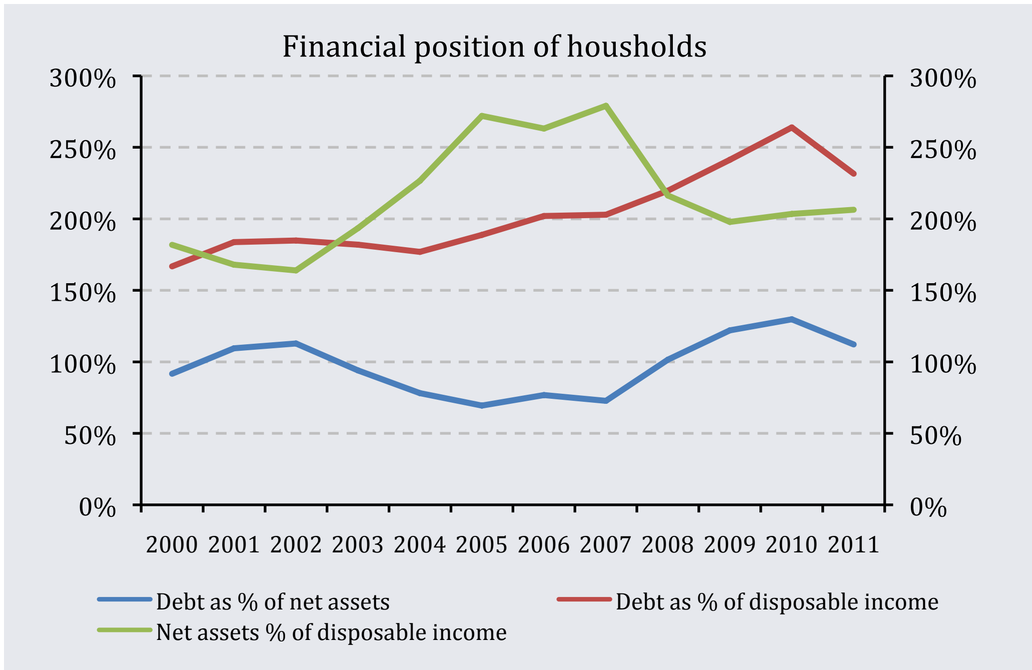
The figures for 2011 are provisional figures. Institutional investor funds were added to the figures for funds in September 2011, which explains the large YoY increase in this aspect.

Source: Central Bank of Iceland.



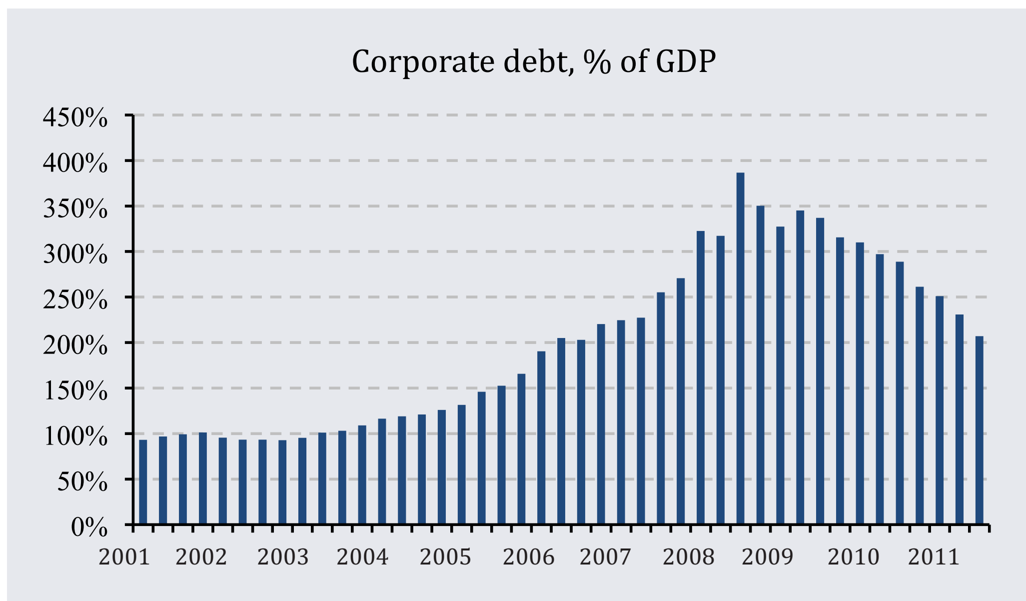
Sources: Central Bank of Iceland, Statistics Iceland and the Ministry of Economic Affairs.

Figure 6: *Household debt as % of GDP.*



Source: Central Bank of Iceland.

Figure 7: *Household financial situation. Ratio of debt to net assets, on the one hand, and to disposable income, on the other, together with the ratio of net assets to disposable income.*



Sources: Central Bank of Iceland, Statistics Iceland and the Ministry of Economic Affairs.

Figure 8: *Corporate debt as % of GDP.*

as part of the financial system. In the third place, the large proportion of owner-occupied housing means that individuals finance their housing by borrowing to a greater extent than in countries where rental accommodation is more widespread. It is also significant in this context that GDP growth in the years preceding the banking collapse was to a large extent leveraged, i.e. financed with borrowing. As a result, household debt as a proportion of disposable income has grown steadily. Debts peaked in 2009 and have declined since that time, although they still remain very substantial. At year-end 2011, their aggregate debt amounted to some 230% of households' disposable income, according to the Central Bank of Iceland. A similar story could be told of corporate debt, which has increased even more than household debt. Total corporate debt, excluding financial undertakings, thus amounted to abot 100% of GDP in 2003, and rose very rapidly until the banking collapse. Corporate debt reached a peak at over 390% of GDP at the end of Q3 of 2008. Since that time these debts have dropped rapidly and are now just over 200% of GDP.

Understandably, this enormous increase in debt was not sustainable. It was to a large extent the result of unrealistic expectations concerning asset formation and the long-term profitability of assets. It should also be borne in mind that this large-scale borrowing was to a considerable extent attributable to activities of Icelandic corporations abroad. They proved to be built on sand when the financial crisis struck. This debt aggregation is in fact a textbook example of the inherent instability of the financial system discussed in Chapter 3.

The rapid debt adjustment which has taken place in recent quarters gives rise to hopes that equilibrium will soon be achieved once more and that normal lending activities will replace the corporate debt restructuring which has been the principal task of Icelandic banks and financial undertakings.

Table 3
State's share capital and initial capital in financial undertakings at investment

	Holding	State's share capital and initial capital, ISKm	Share of total assets
Landsbankinn	81.3%	122.000	89.0%
Arion Bank	13.0%	9.862	7.2%
Íslandsbanki	5.0%	3.250	2.4%
Savings Bank of Bolungarvík	90.9%	0.607	0.4%
Savings Bank of Vestmannaeyjar	55.3%	0.555	0.4%
Savings Bank of Svarfdælir	90.0%	0.382	0.3%
Savings Bank of Norðfjörður	49.5%	0.269	0.2%
Savings Bank of Þórshöfn	75.5%	0.195	0.1%
Total		137.120	100%

Source: Icelandic State Financial Investments.

5.1 Public sector involvement in the financial system

The involvement of the public sector in the financial system has changed substantially in the past three years. When the large commercial banks collapsed, it fell to the state to ensure the financial basis of new banks following the adoption of the emergency legislation (Act No. 125/2008). In the original estimates in the autumn of 2008, the Treasury was expected to contribute equity amounting to ISK 385 billion to the three new banks. This estimate was based on a provisional assessment of the new banks' assets and liabilities and a capital ratio then set at 10%. Following negotiations with creditors of the old banks, the outcome was that the state would take over a very substantial majority of Landsbankinn and a minority holding in the other two large banks. The state's total equity contribution to the three banks amounted to ISK 135 billion, in addition to which it provided Arion Bank and Íslandsbanki with subordinated loans amounting to ISK 55 billion. The state's capital tied-up in resurrecting the three commercial banks is therefore considerably less than originally expected.

The Treasury's financial support for financial system restructuring has not, however, been limited to the commercial banks. In contrast to the situation there, however, the cost of refunding other financial undertakings has proven to be considerably higher than originally estimated. The emergency legislation authorised the Minister of Finance to provide savings banks with additional guarantee capital of up to 20% of the book value of their equity. However, the financial situation of the savings banks was soon revealed to be poorer than could be rectified by the authorised amount. Financial restructuring of five savings banks was concluded with conversion of claims, as upon the failure of Icebank (owned by the savings banks) the Central Bank of Iceland became the savings banks' principal creditor in April 2009. Icelandic State Financial Investments now exercises the state's holdings in savings banks. The final cost to the Treasury of the

Removal of controls on capital movements

Controls on capital transfers to and from Iceland were introduced once more at the end of November 2008. Capital movements had been unrestricted since 1995. Following the banking collapse in 2008, the Icelandic economy faced a situation where non-resident investors held very substantial domestic financial assets. Many of these non-residents would have liked to redeem their domestic assets and withdraw their capital from Iceland. The largest classes of such assets are deposits in financial institutions, Treasury bonds, claims against financial undertakings in winding-up proceedings and claims against municipalities and their undertakings. The capital controls were imposed to promote stability in the country's balance of payments and to prevent a sudden outflow of capital with the resulting financial and economic instability. The controls cushion the financial system and the economy against potential difficulties on foreign markets, e.g. resulting from the effects of the European debt crisis, as circumstances abroad can directly affect the desire of non-residents to hold or sell domestic assets.

In March 2011 the government approved a programme for the removal of capital controls drafted by the Central Bank of Iceland in collaboration with the Ministries of Finance and Economic Affairs and the Financial Supervisory Authority, and in consultation with the IMF.[91] In September that year *Althingi* authorised the extension of the controls until year-end 2013.[92]

The objective of the programme is to remove the controls as soon as circumstances permit. The order and extent of actions provided for in this programme is aimed at enabling the relaxation of controls without threatening financial stability, undermining short-term Treasury financing or immoderately depleting the country's currency reserves. How rapidly this will proceed will be determined to some extent by external circumstances. A large portion of the financial assets of non-resident investors in Iceland, approximately ISK 180 billion, is preserved as deposits with domestic financial institutions. Careful regard must therefore be had for the impact of removing controls on the banks' liquidity. Some ISK 200 billion are invested in Treasury paper, with the lion's share thereof securities with a maturity of less than four years. The controls and their removal could therefore have some impact on Treasury financing. The Central Bank's foreign currency reserves have been increased sizeably with long-term loans in connection with the economic recovery programme agreed by the government and IMF. These reserves will be used, if required, to counteract the possible outflow of foreign currency in connection with the control removal programme. Nonetheless, the programme aims at transferring as much as possible of the impatient short-term assets to investors willing to make long-term investments in the Icelandic economy. The problem would thus be resolved within the private sector without depleting the currency reserves.

Capital controls will be removed in stages, with factors such as participation in auctions determining primarily how rapidly controls will be fully removed. The programme for removal of capital controls includes two main stages.

The objective of the first stage is to reduce the amount of offshore ISK and encourage economic stability by boosting domestic investment.[93] In co-operation with the Treasury, the Central Bank has held auctions enabling the holders of offshore ISK to sell them at a discount, through the intermediation of the Central Bank, to parties prepared to invest in Icelandic Treasury paper, on the one hand, and on the other hand, through the so-called 50/50 route to invest in Icelandic industry and/or real estate.

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91 Ministry of Economic Affairs (2011a).

92 Ministry of Economic Affairs (2011b).

93 Offshore ISK are defined here as assets denominated in ISK owned or held in custody by non-residents, or instruments referring to such assets, which are subject to specific restrictions under the Foreign Currency Act. Most of the owners of offshore ISK are probably non-residents, although Icelandic residents also own some portion either directly or indirectly.

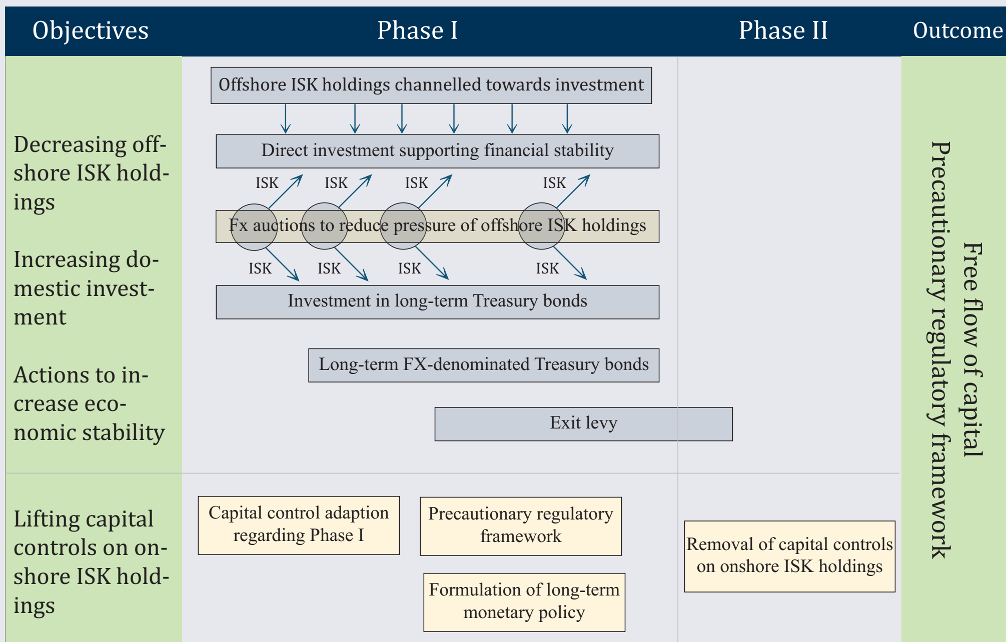


Figure 9: *Stages and steps in removal of capital controls.*

Non-resident investors have redeemed ISK assets amounting to ISK 28 billion in this manner. In addition, the Central Bank has acquired the equivalent of ISK 140 billion from non-residents since the spring of 2010. The Central Bank's actions have therefore reduced the amount of the most impatient ISK assets owned by non-residents by ISK 168 billion. Late in the first state, the issuance of foreign-denominated bonds is proposed, through which holders of ISK will be offered to exchange these ISK for long-term bonds denominated in foreign currency. Finally, a temporary exit surcharge is to be levied on capital transfers from Iceland, in tandem with the introduction of special macro-prudential regulations and a monetary strategy to encourage exchange rate stability.

In the latter stage emphasis will be placed on direct investment, in addition to which the exit fee will still be required, but will be reduced in stages until capital movements are fully liberalised. The aim is also to achieve a better balance of payments, in part through the impact of the above-mentioned actions. Full liberalisation of capital movements will subsequently be supported by macro-prudential rules which are to prevent a new imbalance from developing. This report is intended to contribute to discussions of how such macro-prudential rules should preferably be applied.

Simplifying somewhat, it could be said that the problem which resulted in the imposition of capital controls was due to non-residents' short-term claims in Iceland. The task here is to extend the maturity of financing the economy in general while gradually reducing the foreign debt position by running a current account surplus. Such can only happen over a period of several years. The programme for removal of capital controls was conceived with this objective.

collapse of the savings banks SPRON and SpKef is still not clear; the Treasury transferred deposits of both of these savings banks to operating commercial banks along with pledges on the savings banks' assets. The Treasury also converted claims against three investment banks, Saga Capital, Straumur and VBS, acquired from the Central Bank of Iceland, into claims by the Treasury under a special agreement, amounting to ISK 52 billion. The final cost to the Treasury of the collapse of the investment banks is still not clear; in November 2011, the EFTA Surveillance Authority, ESA, announced it had begun a formal investigation of this treatment of claims. The Treasury was also forced to provide credit to the insurance company Sjóvá amounting to ISK 11.6 billion to prevent its impending bankruptcy from causing further difficulties on the insurance and financial markets. What the final cost to the Treasury will be of this action is still not clear. The EFTA Surveillance Authority is also examining possible state aid to Sjóvá.[94] The Housing Financing Fund (HFF) remains state-owned; as of year-end 2011 its assets amounted to ISK 859 billion. Housing mortgage arrangements have been the subject of some discussion in connection with the restructuring of the financial system, with considerable pressure to increase households' housing mortgage options. In this connection, there have been demands especially for non-indexed loan options, as many consider the current inflation-indexed housing mortgages to pose unacceptable risks to borrowers when a financial crisis strikes. The housing mortgage market will be discussed in more detail later in this Chapter.

5.2 Impact of capital controls on the financial system

The provisional capital controls imposed in November 2008 due to the banking crisis have greatly affected the operating environment of financial undertakings. Efforts have been made by the public authorities to enable the removal of the controls, with the aim of finally eliminating them as quickly as possible. The current Foreign Currency Act proposes to conclude the removal of capital controls before the end of 2013. In October 2009 a major step was taken in this direction when the inflow of foreign currency for new investment was authorised. In tandem with this a system was set up to ensure a smooth outflow of such funding once more in such an eventuality. In March 2011, a revised schedule for removal of controls was presented, which was adopted by the government and its implementation entrusted to the Central Bank.

While it is difficult to assess precisely the impact of the currency controls on the financial market, it is evident that it is considerable. The general view is that free movement of capital encourages cost-efficiency and efficacy on the financial market and thereby in the economy as a whole, as long as it does not get out of control. Capital controls have in many ways restricted household and corporate actions and narrowed their options in financial services. It is no longer possible to take out foreign currency loans unless the borrower has substantial foreign currency earnings. Savings options in currencies other than ISK are blocked and restrictions of various sorts have been set on foreign currency purchases. A report by the Iceland Chamber of Commerce[95] lists those aspects which are considered to be of importance in this connection, such as the dwindling interest of foreign investors in investment in Iceland, the obstacles preventing domestic companies from competing in international activities, declining activity on financial markets, incentives to circumvent, cost of supervision,

94 Fjármálaráðuneytið (Ministry of Finance) (2011a).
95 Iceland Chamber of Commerce (2011).

tax evasion and the negative impact on the state's creditworthiness. All these factors are of significance and as a result it is urgent to arrange matters as soon as possible to enable the removal of the controls. On the other hand, it is important to bear in mind that the controls provided shelter for the delicate financial system resurrected from the ruins of the failed banks, thereby preventing an even more serious economic collapse. Furthermore, the controls in many ways facilitated the tasks with which the authorities have struggled since the banks' collapse. Strong liquidity, for instance, has made financing the Treasury deficit considerably easier than would otherwise have been the case, in addition to which the controls shelter Iceland to some extent from the instability currently characterising the international financial market, not least in Europe.

A large pension fund system, capital controls, state guarantee of deposits and widespread home ownership (which is discussed below), all this has a major effect on savings in the Icelandic economy. Currently the capital controls limit individuals' options to invest abroad, either directly or through funds. As a result, the large amount of capital currently seeking a return domestically could, if care is not taken, keep interest rates abnormally low and even fuel an asset bubble, e.g. in real estate. The blanket state guarantee of deposits also skews investment options while it lasts.

Added to this, the system of taxation has a major impact on savings, both through tax on capital income, which has risen from 10% to 20% in recent years (although with a tax-free ceiling of ISK 100,000) and net wealth tax, which is levied on all properly registered financial assets above a specified limit. All such taxation has to be examined in the context of overall levies on the financial system. It is important that the total public levies do not reduce the supply of monetary savings more than is offset by the benefit they provide in terms of increased stability. Savings are a premise for sustainable investment and thereby welfare in a small, open economy like that of Iceland. High and persistent economic instability can also reduce domestic savings in the long-term. Extensive inflation indexation was, in its day, a premise for the increased national savings which followed its introduction. It has been difficult to ensure the stability in economic and monetary management which is a premise for the orderly elimination of indexation without a negative impact on savings and investment in the economy.[96]

5.3 The banking system

Total assets of deposit institutions amounted to ISK 2,952 billion at year-end 2011, or the equivalent of 180% of GDP. Customer deposits totalled ISK 1,534 billion, or 93% of GDP. Each of the three large commercial banks holds a share of almost one-third of deposits, while other deposit institutions, one commercial bank and 10 savings banks, account for a total of approximately 3%. Deposits owned by non-residents are considered to be around 10% of the total deposits of deposit institutions.[97]

The equity and liquidity position of commercial banks is currently relatively strong. The banks also satisfy the liquidity requirements set by the Financial Supervisory Authority and the Central Bank of Iceland. In this context it is important to bear in mind that they operate in the shelter of capital controls. Removal of the controls could there-

[96] Inflation indexation and ways to reduce it are discussed in a report of the Working Group on Indexation of the Ministry of Economic Affairs (2011c).

[97] Deposits of non-residents in Icelandic banking institutions are to a large extent the result of currency controls imposed after the banking collapse in October 2008. These deposits are therefore part of what has been referred to as offshore ISK.

fore have a considerable impact on their liquidity position. Furthermore, international financial markets are very inaccessible and the outlook in this regard is uncertain. The system's operating costs are rather high and have been rising recently, although there are opportunities for rationalising. It is clear, however, that it is costly for the financial market to restructure debt to the extent this is currently underway in Iceland. In other banking crises similar to the Icelandic one, although not as large systemically, it has taken banking systems 3–5 years to work their way out of difficulties. In addition, considerable uncertainty still remains as to the quality of loan portfolios and non performing loans (NPL) ratios in the system are high. Debt restructuring is inching forwards, but more efforts are needed in the coming months. There is little demand, however, for new loans, as is common in the wake of economic and financial shocks.

The equity position of the Icelandic banking system is relatively strong. Its capital ratio was 22.5% as of 30 June 2011. The aggregate Tier 1 capital ratio was 20.0%. The capital base of the Icelandic banking system in excess of FME's minimum requirements (16% capital ratio and 12% Tier 1 capital) was over ISK 145 billion. This is equivalent to around 8.5% of outstanding customer loans. Capital requirements placed on Icelandic banks are intended to offset the risk faced by the banking system, in part due to a large number of non-performing loans. The importance of solid equity capitalisation was revealed dramatically in the collapse of the Icelandic banking system and in earlier Nordic financial crises. Recent research also indicates that banks' capital ratio of 15–20% is the macro-economical optimal ratio. This research and experience of the importance of strong equity in the collapse of the Icelandic banking system and in financial crises in the Nordic countries is discussed in Chapters 3 and 7 of this report.

Both the amounts and number of loans in arrears are still too high. No harmonised international measure exists for loans in arrears. In evaluating this and the risk of loss, the Financial Supervisory Authority focuses primarily on borrowers whose loans are in arrears for 90 days or longer. It is assumed that, if one of a customer's loans is in arrears, then all his/her other loans are in arrears. By this measure loans in arrears are over 30% of the total. The Financial Supervisory Authority also examines arrears on the basis that even if one loan is in arrears this does not necessarily apply to all the customer's other loans. By this measure, arrears are considerably lower, or around 15% of the book value of loans. This measure is most commonly used for international comparison. In banks with a good quality loan portfolio, arrears measured in this manner are often 1–2% of the book value of loans. Whether the former or latter measure of Icelandic loans is applied, arrears remain far too high. The Financial Supervisory Authority regularly monitors the quality of the banks' loans. Last year a comprehensive examination was concluded by the Financial Supervisory Authority of loans of Arion Bank, Íslandsbanki and Landsbankinn. The Authority's comments were minor. Nonetheless, it will in the future examine banks' loan portfolios regularly, since these are the banks' principal assets, based to a large extent on discretionary, subjective valuation assumptions. Restructuring of the banks' asset portfolios is a prerequisite for the nascent economic recovery to continue and for the banking system's activities to return to normal.

Banking system costs are still too high. Success in cost cutting is not likely to be achieved until debt restructuring is for the most part completed. The small size of the Icelandic market makes it difficult for the banks to achieve economies of scale without further consolidation. Here there is a trade-off between the advantages of greater

economy of scale and the disadvantages of high market concentration, as related in Chapter 6.

The ROE on the commercial banks' core operations has been around 10% in recent quarters, which is below the requirements set by Icelandic State Financial Investments.[98] The interest spread has increased since 2009 and is currently around 3.4%; part of this increase can be attributed to lower deposit interest rates. In comparison to neighbouring countries, the interest spread is very high in Iceland. Financial market structure also has a major impact on the banking system's performance; turnover on the equity market, for instance, is currently very limited. As a result, fees and commissions on such transactions, which comprise part of the banks' core income, are low.

High liquidity in the banking system together with a lack of confidence has resulted in low trading turnover on the interbank market in ISK. Trading is both limited and short-term. In fact, it could be said that the interbank market in ISK has been inactive since the collapse, as financial undertakings have depended on credit from the Central Bank rather than trading between themselves. As circumstances gradually return to normal, trading on the ISK interbank market can be expected to become more active than it has been since the collapse. One of the characteristics of the Icelandic financial market is how much of it is external to the banking system. The activities of the Housing Financing Fund are the most significant here. This separation has no small effect on the connection between households and banks, as the latter provide only around 30% of household credit. On the whole, assets of other credit undertakings amount to close to 70% of GDP. In addition to HFF, they include Municipality Credit, the Rural Development Institute, the credit leasing undertaking Lýsing, Straumur Investment Bank and three credit card companies owned by the banks. Prior the collapse there were additional 'independent' credit and leasing companies, but they have been merged with the commercial banks or closed down. All except one of the above-mentioned credit undertakings are highly specialised. HFF is by far the largest of these undertakings, representing 79% of their total assets.

At the end of June 2011, HFF's capital ratio was 2.4%, or considerably below the 5% minimum set as target in the Regulation on the Fund, and despite a contribution from the Treasury of ISK 33 billion at the beginning of 2011. Substantial paybacks on HFF's loans 2005–2007, when the commercial banks made strong inroads into the housing market, proved costly to the Fund. The Fund's own bonds, which provide its market financing, however, have no prepayment provisions, and increased competition could cause substantial repayment risk for HFF. The increase in non-indexed housing mortgages provided by the commercial banks in recent quarters once more spotlights this risk. Other things remaining equal, the Fund's repayment risk could rise once more, possibly resulting in cost to the Treasury. This illustrates yet again the importance of placing HFF under FME's supervision just as all other financial undertakings – without such a move upsetting the Fund's social role.

The EFTA Surveillance Authority, ESA, has been examining HFF's activities for some time. The government's response to ESA's opinion that the Fund's activities are incompatible with the EEA Agreement states that certain changes are planned in the

[98] Icelandic State Financial Investments sets a requirement of 11.7% ROE, based on FME's minimum capital ratio of 16%, see Icelandic State Financial Investments (2011). It may not be advantageous to the economy, however, to aim at a maximum ROE. Applying such a measure could both whet risk appetite and encourage owners to increase banks' leverage as much as possible, with the increased likelihood of financial system shocks and likelihood of higher costs if they occur.

Fund's operations. It is proposed that HFF mortgages remain capped at ISK 20 million or 80% of purchase price or construction cost. Furthermore, additional conditions will be set that if this maximum is equivalent to 40% or less of the assessed value of a property, no credit will be provided by the Fund. This is to prevent mortgages being granted by HFF for properties officially valued at ISK 50 million or more. HFF will also cease to provide mortgages to borrowers intending to resell residential property to a third party. Public rental companies, however, will still be able to obtain credit. Criteria are to be adopted by 1 May 2012 for calculation of how much state aid HFF enjoys. If a situation develops where the state aid exceeds the reference limits, or if state aid is used for purposes other than the Fund's public service function, HFF will have to repay this to the state.

Housing is generally the highest expense item of households and individuals. Most people in Iceland still live in owner-occupied housing. The largest financial obligations of by far the greatest number of individuals and households are connected to their housing, first in the form of debt to acquire the property and then, if this is successful, it becomes their most important asset as time progresses.[99] Providing housing mortgages has mostly been the task of public credit institutions; the current Housing Financing Fund is part of this long history. It was not until the years preceding the banking collapse that the commercial banks began to actually compete with HFF in offering housing mortgages. In only a few years, they managed to acquire a substantial share of the market. This share has receded once more in relative terms and HFF's share has once more reached around 50% of residential housing mortgages, or similar to what it was prior to the banks' incursion into the market. Individuals can also obtain loans from pension funds for housing purchases, and the majority of pension funds' loans to member are likely loans for investment in residential housing. At year-end 2011, such loans amounted to close to ISK 177 billion, or 8.5% of the funds' total assets.

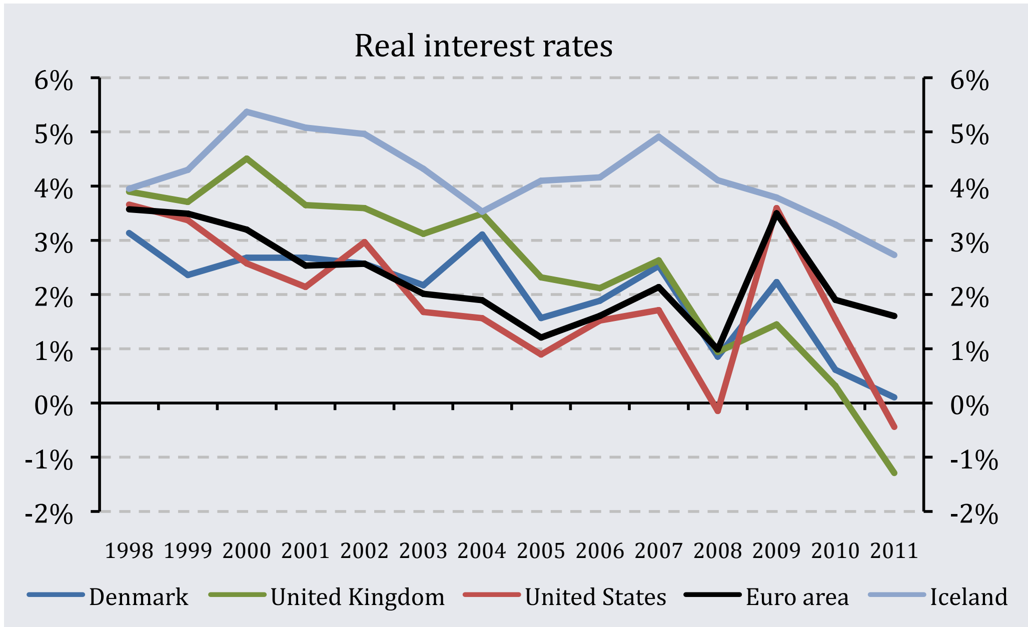
Despite the banks' increasing credit for household housing purchases in recent years, their share of this market is still lower than in many other countries. This housing market structure can affect the banking system's financial strength, as well as individual banks' options for cost-efficiency, and can increase moral hazard in the banking system. Under normal circumstances, loans secured by mortgages on housing are among the safest loans granted and provide the lender with insight into the borrower's financial strength. Greater access by households' to cheaper – or even subsidised – financing brings a risk that they turn to banks for riskier loans than to the HFF, in addition to which the banks' ability to assess households' payment history and creditworthiness is reduced. This can increase the risk in the banking system.

As previously mentioned, HFF's capital ratio was below the minimum provided for in rules on its operations. This must be rectified. Another public credit institution, the Rural Development Institute, had a negative capital ratio of 2.4% at the end of June 2011, although its applicable legislation provides for a ratio of 8%. The 2012 state budget includes an allocation to the Rural Development Institute intended to ensure it a 10% capital ratio. Other credit institutions fulfil the mandatory capital requirements.

5.4 Pension funds

Pension funds are the second-largest group of financial undertakings, exceeded only by deposit institutions, with total assets amounting

[99] Jón Rúnar Sveinsson (2005).



Sources: OECD and the Central Bank of Iceland.

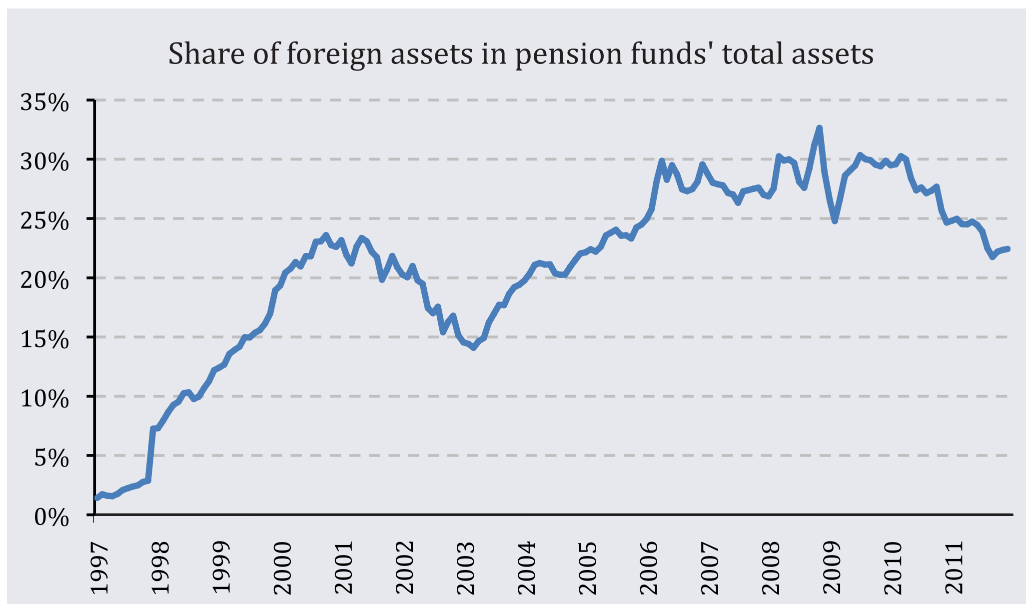
Figure 10: *Real interest rates in various countries.*

to close to ISK 2,165 billion or the equivalent of over 130% of GDP. Of a total of 33 pension funds, the five largest hold close to 60% of their total assets and the ten largest 80%.

The pension funds have an enormous impact on the financial markets, as their annual investment needs are currently around ISK 120 billion on the domestic market due to contributions from fund members and the funds' reinvestment needs. The pension funds' needs to invest on the domestic market naturally have a major effect on the domestic interest rate. Here capital controls are also an important factor, as pointed out elsewhere in this chapter. At year-end 2011, total pension fund assets amounted to almost ISK 2,168 billion, compared to ISK 1,989 billion at year-end 2010. The increase amounts to 9%, or 3% net of inflation.

A report of a special committee appointed at the request of the National Association of Pension Funds to review the investment strategy, decisions and legislative framework of pension funds prior to the banking collapse[100] discusses in detail various aspects of pension funds' activities and flaws which were revealed on closer examination. The pension funds' losses in the banking collapse were enormous, and their net real return for 2008 was negative by 22%. The report sharply criticises governance in the pension fund system and suggests possible improvements in many areas which will not be discussed specifically here. However, it is important to consider the position of pension funds in the financial system, especially since they will in the foreseeable future continue to play a key role in the market. The impact of pension funds on the financial market as a whole needs to be considered, firstly, with regard to the efficiency of individual markets, for both bonds and equities, and secondly with regard to how the pension fund system invests its assets for the long term in the interests of members.

100 Review Committee of the National Association of Pension Funds (2012).



Source: Central Bank of Iceland.

Figure 11: *Share of foreign assets in pension funds' total assets since 1997.*

In this connection, reference is made especially to current provisions on calculating the funds' actuarial position and provisions on their long-term real rate of return of 3.5% p.a. Questions have been raised as to whether these arrangements could adversely affect price formation on the bond market under current conditions, especially the indexed bond market. While it is difficult to assess this definitively, attention has been drawn to how slowly indexed bond yields have fallen even though market circumstances warranted such a decrease. The longest end of the interest rate spectrum has now been below 3.5% for some time, making it clear that in the end supply and demand determine the course of events, even if real interest rates in Iceland remain well above that of other countries, and that in spite of relatively low demand and high supply.

It is very important for the pension funds that financial market restructuring proceed smoothly. The current investment environment is in many respects alien to them compared to that which they have faced in previous years. Capital controls greatly restrict their scope for risk diversification, since they may not invest abroad, except for reinvestment of their previous holdings of foreign assets, while at the same time domestic investment options are extremely limited, in part due to the near disappearance of companies listed on the stock exchange. Financing the outflow of offshore ISK with pension funds' foreign assets will reduce the share of foreign assets in fund portfolios still further; these have fallen rapidly in relative terms in recent years.

The Icelandic Enterprise Investment Fund was established by several of the largest pension funds in 2009 in collaboration with undertakings on the financial market. The establishment of the Fund was conceived as a temporary measure intended to contribute to financial and organisational restructuring following the banking crisis. Under normal circumstances such a measure would no doubt be considered abnormal and scarcely

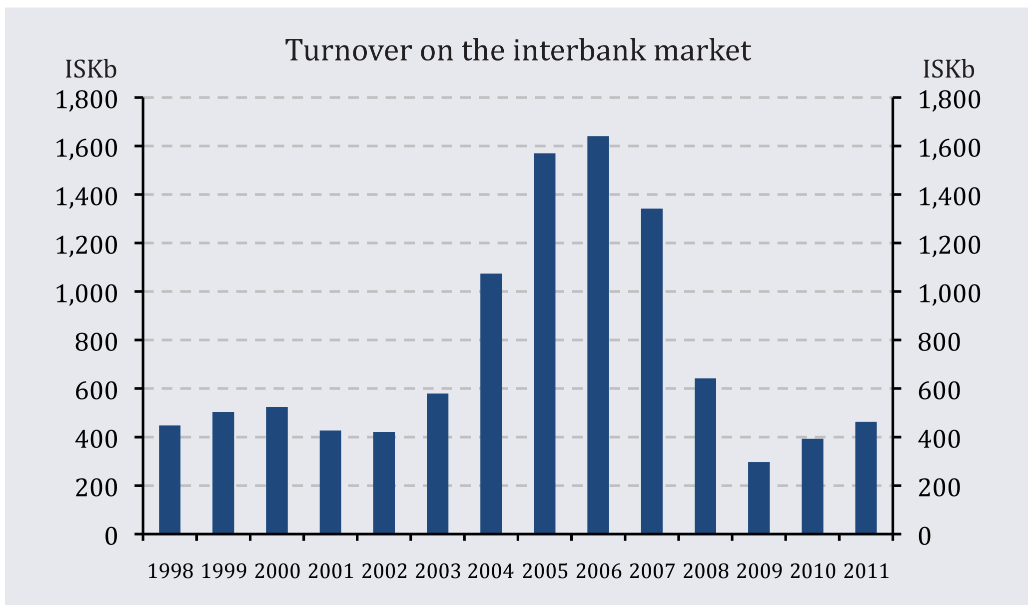
in the spirit of open and transparent business practices, but existing circumstances give cause for a different view. The risk which could develop if pension funds' investment options are not substantially broadened has been pointed out. The state's high financing needs in recent years have partly satisfied the pension funds' investment needs, but as fiscal retrenchment progresses and the budget deficit is reduced, the state's need for loan financing will decrease, narrowing the investment options for institutional investors such as pension funds.

5.5 UCITS, investment funds and institutional investor funds

UCITS and investment funds are operated by eight management companies, while institutional investor funds are either operated by management companies or other parties. Assets of UCITS and investment funds comprise close to 60% of the ISK 520 billion total assets of these funds, while the assets of institutional investor funds are just over 40%.

5.6 Insurance companies and state loan funds

Insurance companies were not unscathed by the financial system collapse. One of them, Sjóvá, needed a contribution from creditors, including the Treasury, to ensure the company's uninterrupted activities, as previously mentioned. In many countries insurance companies are closely tied to banks, and often part of the same group, but in Iceland insurance companies and banks have generally been separate, despite some ownership connections prior to the collapse. Two types of insurance companies hold operating licences in Iceland, eight non-life insurance companies and five life insurance companies; no re-insurance company operates in Iceland at present. The total assets of non-life insurance companies comprise approximately 90% of insurance companies' total



Source: Central Bank of Iceland.

Figure 12: *Turnover on the interbank market 1998–2011.*

assets, with the remaining 10% assets of life insurance companies. The three largest non-life insurance companies hold a market share of over 90% (excluding Natural Catastrophe Insurance, Iceland, *Viðlagatrygging Íslands*) and similarly the market share of the three largest life insurance companies is 90%.

Profits of non-life insurance companies in 2010 amounted to over ISK 2.1 billion, excluding Viðlagatrygging Íslands, which is a public institution operating under specific legislation and with highly fluctuating activities.

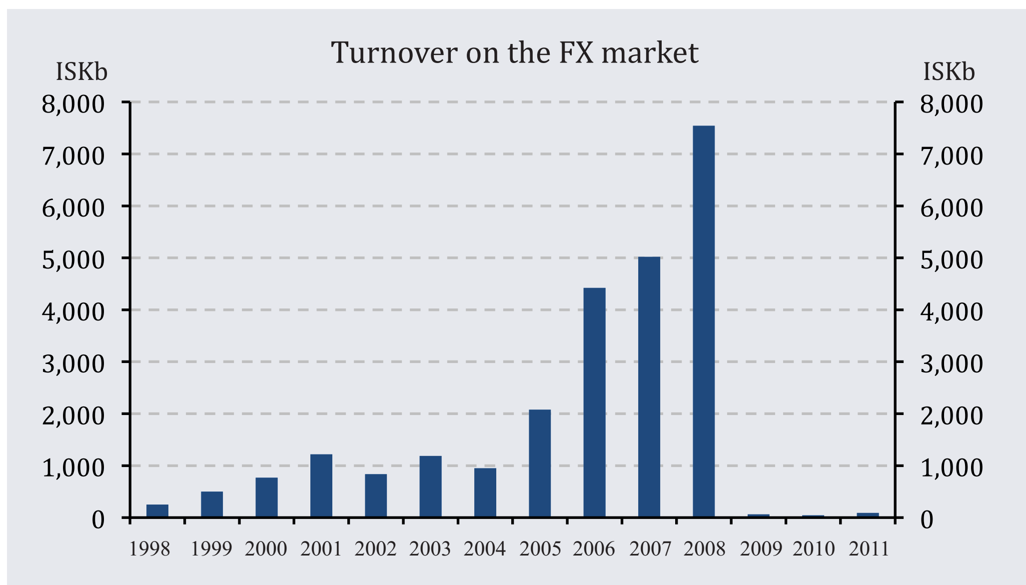
Assets of non-life insurance companies amounted to close to ISK 132 billion at year-end 2010, increasing from close to ISK 124 billion the previous year or by 6.5%.

Equity capital of non-life insurance companies also increased, by 13%, and currently totals close to ISK 59 billion or ISK 39.6 billion if Viðlagatrygging is excluded. The equity position varies from one company to the next. New legislation entered into force in 2010 on insurance activities, Act No. 56/ 2010. It raises the minimum solvency margin considerably to accord with the amounts provided for in EU directives; under previous legislation the minimum amounts in ISK terms had been unchanged since 2003. The minimum solvency margin of non-life insurance companies is now EUR 3.2 million, or currently equivalent to ISK 531 million.

As in the previous year, all non-life insurance companies operated at a profit in 2010. Their total profits, however, decreased by 14.3%, amounting to ISK 1.4 billion instead of ISK 1.7 billion the previous year.

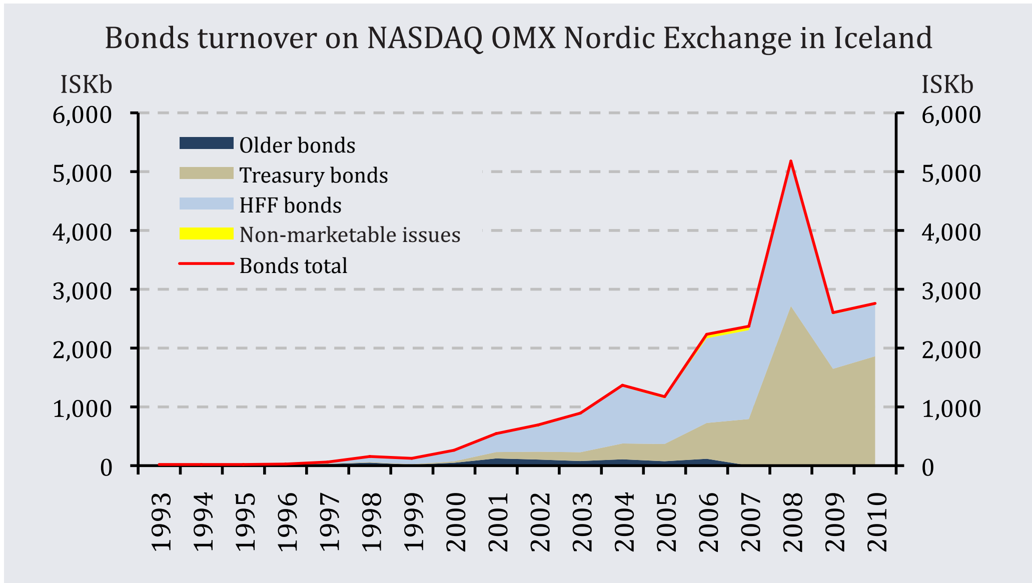
Assets of life insurance companies totalled ISK 14.3 billion at year-end 2010, an increase of 6.1% over the previous year. Life insurance companies' equity capital was ISK 6.0 billion, increasing 12.8% YoY. Like non-life insurance companies, life insurance companies must maintain a minimum solvency margin, in their case EUR 2 million or ISK 496 million. Almost all life insurance companies currently fulfil these requirements.

State loan funds include the Icelandic Students' Loan Fund (LÍN), the National Energy Fund and the New Business Venture Fund.



Source: Central Bank of Iceland.

Figure 13: *Turnover on the FX market.*



Source: Central Bank of Iceland.

Figure 14: *Equity market turnover on NASDAQ OMX Nordic Exchange in Iceland since 1993. The figure includes only on-exchange trading.*

At year-end 2011, the total assets of these funds amounted to ISK 139.2 billion. The Depositors' and Investors' Guarantee Fund (TIF) is included as a public fund in the Central Bank's classification of the Icelandic financial system (see Table 2) although TIF is not owned by the state but is an independent institution intended to guarantee deposits in commercial banks and savings banks as provided for by law. At year-end 2011, TIF's total assets amounted to ISK 26.8 billion.

5.7 Minimal financial market activity

On the whole, financial undertakings have had ample liquidity ever since the collapse. The greatest share of their financing is demand deposits, including large amounts owned by non-resident investors which are constrained by capital controls. In recent years, turnover on the interbank market in ISK has been very low compared to that in the years prior to the collapse. Turnover picked up slightly, however, in 2011, increasing from ISK 393 billion in 2010 to ISK 462 billion. Due to the uncertain outlook and lack of confidence in the market, financial undertakings have depended upon dealing with the Central Bank rather than with each other. Under such circumstances price formation is less efficient than otherwise and difficult to interpret. As a result, movements of interbank interest rates are rather intermittent and discontinuous and they may often remain unchanged for long periods. For the interbank financing market to function normally once more, financial undertakings need incentives to trade with one another.

The interbank FX market visibly reflects the constraints of capital controls. The market is thin and turnover low, and compared to the years prior to the collapse, it is practically inactive. The ISK exchange rate has weakened somewhat year-to-date after strengthening considerably last year. Trading on the interbank FX market has fluctuated somewhat YoY and was higher in 2011 than

in 2010. Activity is generally higher in the summer months and into early autumn when the inflow of currency increases. In recent months turnover has not yet decreased as in some previous years. The number of days without transactions has also decreased markedly. Total turnover in 2011 was almost ISK 80 billion, compared to just over ISK 45 billion in 2010. The Central Bank's share in FX market transactions in 2011 was around 14%, or a total of ISK 12.6 billion. At the end of August 2010 the bank began regular purchases of foreign currency. Its objective was to boost that portion of its foreign currency reserves which is not borrowed funds.

The situation on the equity market is not unlike that on the interbank ISK and FX markets: turnover has fallen sharply in the wake of the banks' collapse and it has taken time to reawaken it. The listing of the retail group Hagar hf. on the equity market near the end of 2011 did provide some stimulus. The number of listed companies is expected to increase considerably in 2012. It is important that this reconstruction proceed smoothly, as an efficient equity market is a key component of a sound financial system.

The corporate bond market has for a long time played a limited role in Iceland as in most of Europe. As a result, most enterprises, even those which are regarded as fairly large in an Icelandic context, seek much of their financing from banks. During the years prior to the banking collapse, issuance of corporate bonds increased greatly. This market practically disappeared following the collapse.

Total bond market turnover is currently similar to that prior to the banks' collapse, but trading is limited to Treasury paper or HFF bonds. This is a major reversal of the situation prior to the banks' collapse, when trading in the usual Treasury bonds and HFF bonds was greatly augmented by corporate bond trading. This reversal is in particular the result of the delisting of the old banks and other companies which previously were major corporate bond issuers. As the reconstruction of the financial system proceeds, the variety of securities on the bond market can be expected to increase as new issuers test the waters. The first sign of this change was a recent bond issue by two commercial banks and several public bodies. The successful revival of a normal bond market, enabling enterprises to obtain financing thereby, is very important for the Icelandic economy.

6

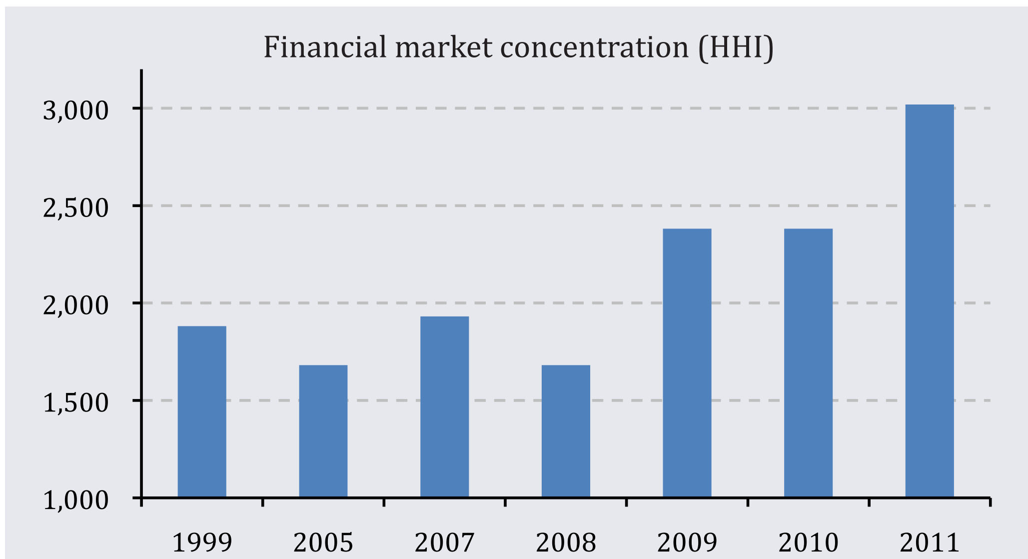
Financial market competition

6.1
Market share and concentration

The competition situation on the financial market has changed radically since the banking collapse, The market has shrunk considerably and some sub-markets have disappeared. With households and companies generally highly leveraged, demand for credit is at a minimum. The near disappearance of the equity market and the introduction of capital controls have resulted in limited investment options. Since the collapse, the banks have concentrated their efforts on internal issues and restructuring of their loan portfolios. The number of financial undertakings has decreased, with as many savings banks and specialised lenders have closed their doors.[101] The shrinking number of financial undertakings has increased concentration. In addition, greater co-operation between financial undertakings has been permitted with a view to resolving various complications resulting from the financial crisis.

Financial market concentration has increased considerably since the collapse and further consolidation can be expected, both due to the weak position of some financial undertakings and the opportunities which mergers are considered to offer for increasing cost efficiency. The number of financial undertakings is still decreasing, most recently with the mergers of Landsbankinn and SpKef in March 2011 and of Íslandsbanki

[101] Although independent financial advisors may have grown in number, an overall record of such parties is not available.



Source: Icelandic Competition Authority.

Figure 15: *Financial market concentration.*

Table 4

Market share of deposits 1999–2011*

Bank	1999	2005	2007	2008	2009	2010	2011
Landsbankinn	30.0%	33.1%	28.3%	26.1%	28.9%	26.1%	30.5%
Arion (Kaupthing Bank)	23.4%	22.3%	24.9%	26.2%	30.9%	32.2%	33.2%
Íslandsbanki	21.9%	21.7%	20.9%	20.9%	21.1%	23.4%	30.8%
SPRON	6.5%	6.0%	6.8%	5.5%			
Byr	3.3%	3.1%	5.9%	9.0%	9.4%	8.5%	
SpKef	2.6%	2.4%	3.3%	3.5%	4.1%	4.5%	
MP Bank				0.5%	2.6%	2.2%	2.3%
Total	87.7%	88.6%	90.1%	91.7%	97.0%	96.9%	96.8%

* Market share of deposits is based on residents' deposits with deposit institutions.

Sources: Financial Supervisory Authority and the Central Bank of Iceland.

and Byr in December 2011. The emergency legislation of 2008 exempted the merger of Landsbankinn and SpKef from merger provisions of the Competition Act, while the merger of Íslandsbanki and Byr was approved by the Icelandic Competition Authority on the basis that the latter was a failed enterprise.

Table 5

Market share in lending in June 2011*

Bank	Household	Corporate
Landsbankinn	32.0%	36.8%
Íslandsbanki	31.7%	28.7%
Arion Bank	20.7%	26.4%
Byr	10.8%	5.7%
MP Bank	0.3%	0.4%
Others	4.5%	2.0%
Total	100.00%	100.00%

* Market share in lending is based on credit extended to residents by deposit institutions.

Sources: Financial Supervisory Authority and the Central Bank of Iceland.

On the so-called Herfindahl-Hirschman Index, concentration measures above 3,000 points after the mergers of both Landsbankinn and SpKef and Íslandsbanki and Byr,[102] while prior to the collapse it was below 2000 points. Since a market is generally considered very concentrated if the index exceeds 1800 points,[103] the current financial market situation can clearly make it difficult for new and smaller financial undertakings to enter the market.

The banks' market shares have remained practically unchanged during the past ten years, although takeovers of the deposits of several savings banks by the three commercial banks, Arion Bank, Íslandsbanki and Landsbankinn, have increased the three large banks' share of deposits. A new MP Bank has

102 Concentration is measured by the market share of domestic commercial banks and savings banks.

103 One of the most reliable indicators of market concentration, the HHI is widely used for this purpose by competition authorities. The index is the sum of the squared market shares of all companies competing in the relevant market. As an example, in a market where 10 companies operate, each with a 10% market share, the HHI would be 10^2*10 or 1000.

commenced commercial banking operations, replacing those which have closed down.

Landsbankinn has the greatest market share in corporate and household lending. In June 2011, the bank's share of total household loans was 32% and of corporate loans 37%.

6.2 Cost-efficiency and competition

Banking markets in many countries are highly concentrated. The market share of the four largest banks comprises around 60% on average in OECD states. Regard must be had, however, for differing structures and regulatory frameworks. The market share of the four largest banks, for instance, is only around 25% in Luxembourg and the US, those states with the least banking market concentration, while in Sweden, Norway and Finland the share of the top four exceeds 90%. Generally the trend is towards greater consolidation, although this is not always true. Frequent bank mergers have played a major role in increasing concentration.[104]

A financial crisis suggests there must be significant flaws in the structure and operation of a financial market. A certain vacuum often develops following a crisis and the resulting major changes in banks' ownership. Under such circumstances, public authorities and market entities normally seek means to reorganise the market to prevent the mistakes from re-occurring. In such cases, the discussion often focuses on bank mergers. The past two decades have witnessed a growing merger trend and as a result considerable increase in the size of banks. Numerous studies have been carried out on the impact of bank mergers. Most of them conclude that mergers do not result in greater cost efficiency,[105] which is noteworthy in view of the eagerness generally shown by bank owners and management for mergers. One explanation could be that bank owners overestimate economies of scale in the sector, or assume that cutbacks to operations are easier to implement following a merger.

The present size of the banking system in Iceland makes it clearly far too expensive to operate and in need of rationalisation. The management of financial undertakings have to satisfy the demands of their owners for profitability despite their reduced activities and the increased demands made of them. The necessary rationalisation, however, has only been visible to a limited extent. This can be attributed partly to the extensive time and energy which has been required for restructuring loan portfolios. Efficiency on the financial market can be increased through technological improvements, increased automation, better utilisation of human resources, review of branch networks of banks and savings banks and increased co-operation between them. The Icelandic Competition Authority has authorised mergers between commercial banks and savings banks on failing-firm grounds, but has been sceptical of any merger of two of the larger banks.[106] The Competition Authority has also made it a priority to prevent co-operation restricting competition between financial undertakings, as it is particularly important in oligopolistic market for competitors to maintain their independence.

6.3 Barriers to entry and collusion

The Icelandic financial market is oligopolistic; the few largest companies can collectively achieve a dominant market position. If

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[104] OECD (2010b).

[105] See the discussion and list of research on the impact of mergers in Samkeppniseftirlitið (Icelandic Competition Authority) (2011).

[106] Its report, *Samkeppni á bankamarkaði* (Competition on the banking market, 2011), states: "The Authority is of the opinion that very serious competition problems can result from a merger of commercial banks, at least in instances where such a merger would involve one or more of the larger banks."

such a market has certain characteristics, it can result in tacit collusion. On such a market, the companies involved can with impunity show consideration for each other's interests, instead of competing vigorously. The companies may see it to their advantage to march in step in their marketing, e.g. they may limit the supply of goods or services to be able to increase prices. The intent is to maximise profits through co-ordinated market actions. It hardly needs justifying that such corporate behaviour is contrary to the interests of the general public.

Entry barriers to financial markets deterring competition have long been substantial in Iceland, and even above average by international comparison.[107] There are few signs that this is changing despite the somewhat improved access of new parties to payment mediation and clearing systems. On the contrary, it could be argued that the increased economic instability and uncertainty, capital controls, expanded regulatory framework and higher supervision, insurance and tax expense of financial undertakings deters investors from the sector and is more onerous for new and smaller undertakings. Use of an independent currency, the ISK, has restricted competition and deterred foreign banks and companies from entering the Icelandic market because of the perceived high currency risk. The Icelandic Competition Authority has also expressed the opinion that unfair measures, e.g. technical requirements or excessive pricing, have at times been applied to obstruct entry to financial markets and that the cost to consumers of switching between financial undertakings restricts their mobility.

6.4 International competition policy following the financial crisis

Most countries have experienced an economic downturn following the financial crisis, although varying in severity. In many countries enterprises are struggling to continue in operation and maintain their assets faced by difficult circumstances. The number of enterprises operating in important markets has decreased and can be expected to drop still further due to bankruptcies. Restrictions on competition and oligopolistic markets can develop as a result, and it can be tempting for governments to resort to protectionist measures. In light of this, competition authorities throughout the world have discussed the financial crisis extensively and its impact on competition in markets. They have all pointed out the importance of safeguarding competition in an economic downturn, and of applying to this end effective and stringent competition rules. The solution to economic downturns is not to reduce or relax supervision of competition restrictions. Various scholars who have studied recessions specifically point out the importance of competition in accelerating economic recovery.[108] One of the key policy questions debated following the financial crisis is whether competition threatens financial stability. OECD has responded to this question as follows: *"Competition and stability can co-exist in the financial sector. In fact, more competitive market structures can promote stability by reducing the number of banks that are 'too big to fail'. Policy goals for the financial sector include promoting both competition and stability. Competition encourages efficient and innovative financial services, while stability is essential to the systemic trust on which the sector depends. Are these two goals mutually exclusive or can they be achieved at the same time? If competition between banks increases, does that make them weaker so trust in the system is undermined? Evidence of inconsistency in fact is limited. In many countries, competition in the sector is oligopolistic, so it is difficult to blame excessive competition*

107 OECD (2006).

108 Andersen (2007), p. 136.

for the instability that led to the current crisis. Indeed, in a broad sense, the oligopolistic structure contributed to the crisis; it meant that many banks were systemically important, leading to moral hazard, perceived guarantees and excessive risk taking. While a less oligopolistic market structure should thus help stability, better prudential regulation should also limit excessive risk taking and further reduce the risk of instability."[109]

Many government policy committees have also released their reports on financial markets in recent quarters. The most attention has been attracted by the final report of the British Independent Commission on Banking led by Sir John Vickers (the Vickers Report) in September 2011.[110] The Commission emphasised the importance of competition. It is of the opinion that consumers' costs of switching banks and the lack of transparency about banking services on offer is a significant obstacle to competition on financial markets. In general, consumers are not well placed to make informed choices between providers of financial services.

The British Independent Commission on Banking made three proposals with regard to competition:

- That the UK government seek agreement with Lloyds Banking Group to ensure that the divestiture of assets and liabilities of the bank, required for EU state aid approval, will lead to the emergence of a strong challenger bank;
- That routes be opened for switching of banks by consumers at reasonable cost, and to improve transparency; and
- That the new Financial Conduct Authority (FCA) should have a clear primary duty to promote effective competition.

6.5 Outlook for competition

How financial activities in the country are conducted will be a decisive factor in rebuilding the Icelandic economy. The situation on the financial market determines to a large extent the success of business and households in building solid foundations for growth and prosperity. Financial market actors and the government have to formulate a future strategy taking the new economic reality into consideration.

Any examination of competition on markets must bear in mind that circumstances may change with the passage of time. This is clearly the case on the Icelandic financial market, which has changed dramatically in recent years, with no end yet in sight to those changes. The lion's share of Icelandic financial undertakings have failed, and been replaced by new ones. In addition, substantial amendments have been made to the legislation applicable to the market and supervision of it. It currently operates under extraordinary conditions, including capital controls, and with the knowledge that ownership of two large undertakings, Íslandsbanki and Arion Bank, will in all likelihood change within a few years' time. The financial strength of the banks is also unclear, and it will be some time yet until the restructuring of their loan portfolios concludes and traditional banking activities can begin in a normal fashion.

Competition on the Icelandic financial market cannot be based on a firm foundation unless it is ensured that all parties providing same or similar services are subject to the same rules and discipline. In formulating financial market policy regard must be had for this aspect. Mention could be made, for instance, of the financial services provided by pension funds and the Housing Financing Fund, without these entities being obliged to follow fully the same rules as financial undertakings concerning financial security and

[109] OECD (2009) and Independent Commission on Banking (2010).

[110] Independent Commission on Banking (2011).

internal control, or the same demands for eligibility and educational qualifications made of their employees. It is also important to ensure that financial services subject to licence, such as investment advice, are only provided by enterprises holding the required licences for such activities and subject to supervision.

In analysing the future outlook for competition on the Icelandic financial market, regard must be had for the possibility of radical changes in monetary policy, which could completely alter the market. The fact is that Iceland has applied for membership of the European Union. If approved, such membership would in all likelihood include the eventual adoption of the euro instead of the *króna*. Such a change of currency would have far-reaching effects on the Icelandic financial market, as well as on competition on this market. Even without capital controls, an independent currency means greater isolation of the Icelandic financial market from those of neighbouring countries than if the euro were used. Adoption of the euro would also fundamentally change the interest rate level in Iceland, and real exchange rate fluctuations would be determined by different forces.

In this context, a comparison with Finland may be useful. Finland is the only Nordic country to have adopted the euro, which it did following a recession which could be attributed in part to the financial sector. The Finnish banking system has undergone major changes in recent years. The activities of financial undertakings in majority foreign ownership, for instance, have grown greatly in relative terms. In 2009, around 2/3 of the Finnish banking system, measured in terms of balance sheet size, was comprised of banks in which foreign parties owned a majority.

A continuously changing economic environment obviously affects financial undertakings' competitive situation. The imposition of capital controls substantially impacted the financial market. Capital controls have various detrimental effects: they distort price formation and further isolate the Icelandic financial market, even though their introduction was considered necessary for other reasons. A merger of financial undertakings would be likely to have less damaging effects on competition if capital controls are removed, provided that barriers do not prevent the entry of new competitors or the strengthening of smaller enterprises. Regulation is also more detailed in finance than in other business sectors, and thereby has a significant impact on the competitiveness of financial undertakings. An international financial crisis such as the one which struck late in the last decade gives cause for a thorough examination of the laws and rules and will most likely result in increased regulation. Whether further rules on the risk management or capital base of financial undertakings are needed, for instance, is currently being examined, and there is discussion as to whether it is advisable to separate the activities of commercial banks and those of investment banks. Such rules can significantly affect financial market structure as well as the size and strength of financial undertakings. In general, it could be said that more extensive and complex regulations make it more difficult to operate in or to enter the financial market.

The participation of foreign banks on the domestic financial market could be of advantage, both from the competition perspective and that of financial stability. Although traditional commercial banking activities are most often limited to the home state, foreign ownership of banks is common. Foreign banks, however, have not yet been attracted to set up shop in Iceland, which makes the Icelandic banking system undeniably more homogenous. The restructuring of ownership of Arion Bank and Íslandsbanki, which are owned for the most part by their predecessors' foreign creditors through Icelandic holding companies, could lead to changes in this respect.

7

Regulation and supervision on the financial market

7.1

State involvement in the financial market – legislation and rules for the financial system

The legislative and executive branches of government set the regulatory framework for the financial market. They do so because the financial market serves society's interests by facilitating transactions between unrelated parties, ensuring the secure preservation of savings and intermediating capital for investment, guaranteeing business activities, return on capital and growth.

Financial transactions always involve uncertainty, because the value of assets is unavoidably determined by future events. Assessing this uncertainty and the risk it involves is the business of financial undertakings. In doing so, they have to enjoy the confidence of depositors who must have access to their savings whenever necessary. To encourage such confidence, financial activities are subject to an operating licence. The state adopts rules on the establishment and activities of financial undertakings, and transactions with financial instruments and entrusts supervision of their compliance with the rules to public institutions.

In order to encourage confidence in the financial market and to reduce the severe damage which market volatility can cause to the national economy and finances of individuals, rules are adopted to reduce the risk caused by market fluctuations. This is a tall order for the state. The financial system is part of the national economy and experience has shown that monetary and fiscal policy, together with socially important welfare issues, are all important financial system factors which affect market developments. Social welfare, for instance, is a factor in the housing mortgage policy and pension system in Iceland. Decisions by the legislature on individual aspects of the financial system, e.g. such as using interest rates as a policy instrument to promote price level stability, legislation on mortgage lending by the Housing Financing Fund, and rules on pension funds' reference yields, all have an interrelated effect on the financial market. Part of the legislature's challenge is to ensure legislation presents a comprehensive view of all the composite factors which up until now have been formulated individually. Regard must also be had as to how sufficient discipline can be applied to the financial market to restrain lending growth from creating systemic risk. This can prove difficult if clear and predictable formal rules are applied, as Icelandic legal tradition requires. In this respect, the possibility should be investigated of adopting legislation with clear provisions on objectives and aims, but which provide regulators with discretionary powers which they can apply within specific limits. If this route is available to exert discipline on the financial market, then it requires a comprehensive, long-term economic strategy and the role of financial markets in the society as a whole must be sufficiently well defined.

7.2
Regulatory framework of the financial market

Icelandic financial market legislation is based primarily on EU Directives and rules, which have been transposed in accordance with obligations under international law undertaken by Iceland with membership of the European Economic Area (EEA) Agreement. Through its membership of the EEA Iceland is part of the single European market.

The EU regulatory framework in this sector is, in turn, based on the principles of the Treaty of Rome on free movement of capital and services on the single market of its member states and rules which originated from the Bank for International Settlements (BIS).

Domestic acts and rules concerning the financial market, financial institutions and financial supervision are, in all their main respects, comparable to those which apply in other states of the EEA, since Iceland, as an EEA member state, is obliged to transpose acquis in this area which have been adopted by the EU. Financial services are a major part of economic activity within the EEA states. These are subject to the provisions of Articles 36 and 37 of the EEA Agreement on services and Appendix IX, which covers financial services in detail. They include the activities of financial undertakings, insurance companies, UCITS and securities dealers. Three main principles apply to these activities:

- A financial undertaking which has been granted an operating licence in one member state can, on the basis of this, open a branch in any other member state without requiring special authorisation from the authorities there or may offer services there without opening a branch. This means, for example, that an Icelandic bank can open a branch in Luxembourg or offer services there without requiring a licence from the authorities in Luxembourg.
- Supervision of the activities of a financial undertaking in each member state is the responsibility of the supervisor in the undertaking's home state. This means that the activities of a German bank in Iceland would be under the supervision of German authorities, naturally in collaboration with the Icelandic Financial Supervisory Authority (FME). Similarly, FME would be responsible for supervision of the activities of an Icelandic bank's branch in Germany. The financial regulator in the host country, however, is responsible for liquidity supervision.
- Harmonised rules are to apply to financial undertakings' activities, so that their operating conditions will be similar throughout the EEA.

7.3
New international emphases

Following the international financial crisis in the autumn of 2008, work has been underway at improving the regulatory framework for banking activities. The principal forum for this work internationally is the Basel Committee on Banking Supervision, located in Basel, Switzerland. The Committee represents 27 states from all continents, including the largest industrialised nations. Nine of the 27 EU member states are members of the Committee. Changes to the regulatory framework approved by the Committee are subsequently transposed into the laws and rules of the states concerned and into EU acts.

7.3.1
Improvements to Basel rules

Work on improving banking regulations resulted in proposals approved by the Basel Committee in September 2010 (Basel III). Work is underway on transposing them into

EU law with a directive, CRD IV, and a regulation, CRR. The main changes are discussed below.

Amendments to rules on capital requirements

The international banking crisis has revealed that banks' minimum capital requirements have been too low. In addition, the definition of what can be included in capital have been flawed, not least with regard to its most stable portion, core Tier 1 capital, which is comprised of share capital and other retained earnings. For this reason, the definition of those assets which can be included in core Tier 1 capital has been made more restrictive. The core Tier 1 capital ratio is also to rise from 2% to 3.5% in January 2013 and to 4.5% in January 2015. Furthermore, the Tier 1 capital ratio will increase from 4% to 6%. Core capital is the funding which can best withstand financial difficulties sustained by financial undertakings. Increased and stronger core capital therefore not only reduces the danger of bank failures, but is also intended to limit the potential cost to the public sector of financial undertakings' failures.

Capital requirements for trading book exposures and complex securitisations, and for off-balance-sheet vehicles, have been increased substantially. To prevent immoderate increases in on- and off-balance-sheet items, a leverage ratio of a maximum of 3% based on Tier 1 capital is proposed, i.e. on- and off-balance sheet items may not amount to more than 33 times Tier 1 capital. This maximum is considerably more conservative than has applied in some countries. These rules will be implemented in stages during the period from January 2013 to January 2015.

The intention is to require banks to conserve capital to build up special buffers as supplementary capital for recovery in times of stress. These buffers are to amount to an additional 2.5% on top of the above-mentioned 4.5% Core Tier 1 ratio, making the Core Tier 1 ratio 7% in total.[111] The rules on buffers will be implemented in stages during the period from January 2016 to January 2019. In addition, countercyclical buffers are introduced. The obligation of financial undertakings to provide for countercyclical buffers will be optional; it will be the responsibility of regulators in each state to prescribe them when they consider excess lending growth could cause systemic risk. Such buffers would be used to cover losses which otherwise could negatively affect financial stability. According to proposals, countercyclical buffers could amount to as much as 2.5% of the risk-weighted capital base. It is not known when these buffers will be introduced and it should be pointed out that the rules governing them are still being formulated.

The above-mentioned additional buffers will increase the banking system's resistance to shocks and mitigate pro-cyclicality in lending. The accompanying table provides a summary of the above-mentioned proposals for improvements to capital requirements.

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[111] It must be pointed out that research suggests that the capital ratios provided for in Basel III – which the aim is to implement in the EEA from 2013 onwards – are lower than those ratios deemed most favourable from a macroeconomic perspective. Recent research by the Swedish Riksbank suggests for example that from a macroeconomic perspective it would be optimal to have Tier 1 capital, according to the new Basel III definition, 10–17%. The bank does, however, admit that in these studies the most cost-effective capital ratio may have been underestimated, as these studies have underestimated the cost of financial shocks. Appropriate capital ratio in major Swedish banks – an economic analysis. Other studies suggest an even higher ratio, as high as 20%, would be most cost-effective from a macroeconomic perspective, see for example Miles, Yang and Marcheggiano (2011). There are therefore clear indications that the the higher capital adequacy requirements aimed at in international accords are considerably lower than can be considered socio-economically appropriate.

Table 6

Calculation of capital requirements according to Basel III (% of risk-weighted asset base)

	Common equity (after deductions)	Tier 1 capital	Total equity
Minimum	4.5%	6.0%	8.0%
Reserves	2.5%	2.5%	2.5%
Minimum plus reserves	7.0%	8.5%	10.5%
Countercyclical reserves	0–2.5%		

Source: Basel Committee on Banking Supervision.

New liquidity framework

The Basel Committee on Banking Supervision has made proposals for a new liquidity framework. This is an innovation, as previously there were no internationally harmonised standards in this area.

Firstly, it is proposed that banks be required to hold sufficient high quality liquid assets to be able to withstand a stressed short-term funding scenario with parameters determined by the supervisory bodies. A specific Liquidity Coverage Ratio (LCR) has been developed to measure bank's short-term resilience to liquidity threats.

Secondly, a minimum Net Stable Funding Ratio (NSFR) is proposed to address longer-term mismatch in the liquidity structure. As the bank's entire balance sheet is included in this context, this liquidity requirement is to encourage banks to rely on stable sources of funding.

7.3.2 New rules on solvency of non-life insurance companies and regulatory emphases –Solvency II

Work is underway by the EU Commission and its institutions on new solvency rules for the non-life insurance companies and new emphases in regulation, the Solvency II rules. The rules are based on Directive 2009/138/EC, a recent comprehensive directive on insurance and reinsurance activities, which replaced previous directives in this area. The current work involves secondary development of the provisions, and the Commission is expected to issue a Regulation accompanying the Directive in April 2012. A draft Regulation some 400 pages in length is already available. Various binding technical standards are also proposed.

The Directive must be transposed into Icelandic law by year-end 2012, and a committee under the auspices of the Ministry of Economic Affairs is currently working on this. Non-life insurance companies must fulfil the Directive's requirements from 1 January 2014 onwards.

7.4 Legislative objectives

The objective of EU legislation is first and foremost to remove barriers to the free flow of services and capital in the single market of EU member states. This is achieved by harmonising legislation on financial undertakings and transactions with financial instruments, which is aimed, among other things, at protecting consumers and encouraging financial stability. It could be said that

the actual objectives, i.e. sound financial undertakings, consumer protection and financial stability, are furthermore the principal objectives of financial market legislation in Iceland.

7.4.1 Financial market legislation

The long history of legislation on financial undertakings in Iceland begins in the latter half of the 19th century. Until 1985, specific legislation applied to each commercial bank, entrusting it to serve to a considerable extent a specific industrial sector, type of business or interest group. The first comprehensive legislation in this area was adopted in 1985, the Commercial Banks Act, No. 86/1985, and the Savings Banks Act, No. 87/1985. The adoption of Act No. 43/1993, on Commercial Banks and Savings Banks, began the adaptation of Icelandic financial legislation to EU law, as manifest in the EU acquis communautaire. The operating authorisations of commercial banks and savings banks were expanded and their operating conditions harmonised with EEA rules. Many changes have since been made to this legislation.

Act No. 161/2002, as subsequently amended, currently applies to financial undertakings. The Act provides for the establishment and operating conditions of financial undertakings, with the objective of ensuring that such undertakings operate in a sound and proper manner in the interests of their customers, shareholders, guarantee capital owners and the economy as a whole. The Act sets detailed rules concerning the requirements which the undertakings and their owners must fulfil to obtain an operating licence. The Act also lays down specific formal requirements which the owners, management and employees of financial undertakings must fulfil, and instructs regulatory bodies to set rules on eligibility assessment of management and directors and to carry out such assessment. Strict requirements are made concerning the minimum capital ratio and liquidity of the undertakings. These requirements are among the aspects on which most debate has been focused in the current financial crisis. Rules on capital ratio and liquidity have been regarded as the most important means of withstanding financial market volatility.

Detailed rules concern annual financial statements and financial reporting, disclosure requirements, financial conglomerates and when penalties may be applied.

As previously discussed in section 4.3.1, FME was granted extensive authorisation to intervene in the operations of regulated entities in Act No. 125/2008, the emergency legislation. These provisions were already revised in the spring of 2009 and a new article added to the Act. It authorises FME to appoint a provisional Board of Directors for a financial undertaking which so requests. As the name suggests, a provisional Board of Directors has a temporary mandate. The article provides for the appointment of a provisional Board and the legal effect of the appointment of such a Board towards shareholders or guarantee capital owners. The provisional Board's appointment nullifies the mandate of the financial undertaking's previous Board of Directors, in addition to which the right of shareholders and guarantee capital owners to make decisions in its affairs, based on their holdings, becomes inactive. The legislation also lays down the duties of the provisional Board of Directors and its status. Roughly speaking, while the provisional Board directs the activities of a financial undertaking its status is in many respects similar to that of the Board of Directors (and shareholders' meeting) in a company which has been granted a moratorium.

In particular, the provisional Board is to acquire an overview of the financial undertaking's financial situation and to take various important and urgent measures going

forward. Appointment of a provisional Board of Directors comprises an intervention with regard to the interests of the shareholders (or guarantee capital owners) and especially the creditors of a financial undertaking, making it important to set the Board strict limits in directing interests and a limited period of operation.

In addition to the amendments made in the spring of 2009, it has proven necessary to take additional action in response to unexpected events, such as the pronouncement of court verdicts abroad which could have repercussions in Iceland. It should also be pointed out that the provisions of Art. 5 of the emergency legislation, on the involvement of the Financial Supervisory Authority, are substantially in a Temporary Provision of the Act. This Temporary Provision has been repeatedly extended while the outcome of changes to EU legislation in this area is awaited.

The Act also provides rules concerning conglomerates, and the winding-up, merger or reorganisation of financial undertakings. A detailed account of those statutory provisions which have been reviewed since the autumn of 2008 is provided in Section 4.3.2.

In addition to the Act on Financial Undertakings, brief mention should be made of other acts regulating the financial market.

The Act on Securities Transactions, No. 108/2007. Another main pillar of the financial market regulatory framework is provided by rules concerning transactions with financial instruments: bonds, equities and other securities. Until 1986 such activities were not subject to official license in Iceland, but the Act on the establishment of Landsbanki Íslands in 1885 does mention that it may undertake the purchase and sale of bills of exchange and payment orders, whether they are to be paid in Iceland or abroad. The Act on Securities Brokerage of 1986 made these activities subject to official license.

Various further amendments were made to this legislation until 1993, when it was adapted to EU legislation. Since 2003, legislation on investment funds (UCITS) and their activities and rules on securities transactions have existed in separate acts.

The current Act on Securities Transactions, No. 108/2007, transposed the so-called EU MiFID Directive. Its main objective is to ensure efficiency on the European financial market as well as increasing consumer insight and confidence in the market. The Directive is also aims at making all transactions equally efficient, whether they take place within a single state or more than one EEA member state. To achieve these objectives, the Directive provides for an EU legal framework which covers all activities connected to investors, which is considered necessary in view of the activity in recent years of increasing numbers of investors on financial markets which at the same time increasingly complex and more extensive services and instruments are on offer. The Directive therefore provides for harmonisation which gives investors extensive protection and authorises financial undertakings licensed to carry out securities transactions to provide services throughout the EEA based on home state regulation on the single market. The rules of the Act aim at providing consumer protection and encouraging good business practice. They specify what services in connection with securities transactions, such as reception and transmission of orders, transactions with financial instruments on own account, asset management etc., are subject to license.

The Act also lays down various rules of conduct which are to ensure investor protection and sound business practices by undertakings. The rules are intended to ensure that investors are provided with information which accords with their expertise and experience and receive suitable information on the investment options and services offered. Furthermore, various rules are set concern-

ing the format and finalising of transaction, e.g. on written agreements and client classification.

Special rules apply to transactions with listed market securities. In order to ensure equal treatment and prevent market abuse detailed rules have been adopted concerning disclosure requirements for transactions, offerings, mandatory takeovers of public limited companies to protect minority owners, impact on price formation, insider trading and inside information.

The Act on UCITS, Investment Funds and Institutional Investor Funds, No. 128/2011. Directive No. 85/611/EEC, on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS) was originally transposed by Act No. 10/1993, on Mutual Funds. Major changes were made to the Directive with the adoption of two new Directives in 2001, the first on fund administration and the second on the investment strategy of such funds. The said Directives were transposed with the adoption of the Act on UCITS and Investment Funds, No. 30/2003. Still further changes were made to the funds' regulatory framework with Directive 2007/16/EC, which provided explanations of specific definitions used in the Directive on collective investment in transferable securities. The Act clarifies the different nature of various types of funds.

The Act on Mandatory Guarantee of Pension Rights and Operation of Pension Funds, No. 129/1997. The principal provisions of this Act concern the mandatory guarantee of pension rights, agreements on pension savings, the entitlement of pension fund members, requirements for pension fund operations and licenses, internal quality control, balance of assets and liabilities, funds' financial affairs and supervision of their activities. The pension funds have extensive activities on the financial market, in particular through their purchase and sale of securities and lending to fund members.

The Act on Housing Affairs, No. 44/1998. Chapter III of the Act contains provisions on the activities of the Housing Financing Fund (HFF). The Fund has extensive financial market activities.

The Public Limited Companies Act, No. 2/1995. Insofar as no specific rules are found in the Act on Financial Undertakings, the provisions of the Public Limited Companies Act apply concerning the organisational framework for financial undertakings.

The Act on Co-operative Societies, No. 22/1991. Art. 2 a of the Act concerns the activities of deposit departments of co-operative societies. One co-operative society in Iceland operates a deposit department.

The Act on Insurance Activities, No. 56/2010. Just as the Act on Financial Undertakings could be said provide a framework for the activities of those undertakings, the Act on Insurance Activities sets a framework for the activities of insurance companies. Many provisions are substantially parallel to those of the Act on Financial Undertakings. These include provisions prohibiting the extension of credit against own shares as collateral, on eligibility requirements for directors and managing directors and banning Executive Chairmen of the Board of Directors. The Act also includes provisions obliging the Board to adopt formal rules approved by FME on internal quality control, internal audit, investment activities, lending and related party transactions.

The Act on Insurance Mediation, No. 32/2005. This Act transposed Directive 2002/92/EC on insurance mediation. The Directive lays down the rights of insurance and reinsurance intermediaries to operate in the EEA based on registration in their home state. One of the Directive's main objectives is to remove barriers preventing insurance intermediaries from pursuing their activities freely in the EEA. Furthermore, the Direc-

tive aims at increasing consumer protection, in part through stricter requirements concerning the activities of insurance intermediaries and provisions on increased information disclosure to consumers.

The Act on Insurance Contracts, No. 30/2004. This Act contains general rules on Insurance Contracts. They apply in particular to those aspects of insurance activities concerning the legal relationship between an insurance company and policy holder or beneficiary. The rules of the Act are therefore primarily of a civil law nature. The rules are connected with other rules of law on the creation, implementation and termination of contracts. The legal relationship between the insurance company and policy holder or beneficiary are subject to the general rules of the law of contracts and claims law, insofar as not expressly provided for otherwise in the Act. As a result, the rules of the Act are connected with those of Act No. 7/1936, on Conclusion of Contracts, Power of Attorney and Invalidity of Legal Instruments, and various other specific legislation in these areas of law.

The Act on Electronic Registration of Rights to Title of Securities, No. 131/1997. The Act concerns the activities of securities depositories and the legal effect of electronic securities registration. Work is underway under the auspices of the Ministry for Economic Affairs on revision of the Act.

The Stock Exchange Act, No. 110/2007. This Act replaced the previous Act from 1993 and was part of the transposition of the MiFID Directive. The Act lays down rules on regulated securities markets and multilateral trading facilities.

The Act on Measures to Prevent Money Laundering and Terrorist Financing, No. 64/2006. This Act transposed EU Directives on actions to prevent money laundering and terrorist financing, as well as the recommendations of the Financial Action Task Force (FATF) in the same regard.

The Act on Deposit Guarantees and an Investor Compensation Scheme, No. 98/1999. Deposit guarantees are discussed specifically in Section 7.4.2.

The Act on Covered Bonds, No. 11/2008. The Act specifies what types of debt instruments can form an asset pool, the maximum LTV ratio for individual classes of securities in the asset pool and the legal effect of an issuer's insolvency. The Act has scarcely been tested as it was adopted shortly before the financial shocks of 2008.

Act on the Distance Marketing of Financial Services, No. 33/2005. This Act transposed Directive 2002/65/EC. The objective of the Directive is to harmonise laws and regulations on distance marketing of consumer financial services. It is also intended to strengthen the single market and increase consumer protection. Provisions of the Act apply to distance contracts for financial services concluded between a supplier and a consumer and marketing aimed at concluding such contracts. Financial services as referred to in the Directive include all banking, credit, insurance, pension, investment and payment services. Its scope is therefore broad and intended to cover all types of financial services which can be provided by distance.

The Act on Official Supervision of Financial Activities, No 87/1998. This Act determines what group of undertakings is subject to FME's supervision. The Act includes provisions on FME's Board of Directors, activities, supervisory authorisations and remedies, if its decisions are not complied with.

The Central Bank Act, No. 36/2001. In addition to its important tasks in connection with economic management, the Central Bank of Iceland (CBI) plays an important role as market participant, both as the 'banks' bank' and in the foreign currency market. The Central Bank is furthermore entrusted with part of the micro-supervision of financial undertakings.

Based on authorisations in the above acts, numerous regulations and rules have been issued, as well as guidelines.

A large number of other acts apply directly or indirectly to the financial market although their impact is not the same as that of the ones mentioned above. These include acts on interest and indexation, annual financial statements and auditors, and various specific acts in the insurance field.

7.4.2
Deposit guarantees

Prior to the entry into force of the Act on Deposit Guarantees and an Investor Compensation Scheme, No. 98/1999, provisions intended to safeguard the rights of depositors and securities owners existed in three acts. There were provisions on deposit insurance in Act No. 113/1996, on Commercial Banks and Savings Banks, and provisions on protection for owners of securities in Act No. 13/1996 on Securities Transactions and in Regulation No. 361/1993, on Insurance Requirements for Securities Brokering and Securities Transactions. Finally, there were provisions on compensation due to mistakes of securities brokers and account operators in Act No. 131/1997, on Electronic Registration of Title to Securities.

The adoption of Act No. 98/1999 transposed provisions of Directive 97/9/EC. As the Directive did not require full harmonisation, member states had considerable flexibility in transposing it. Among those aspects which were not harmonised throughout the EEA was the protection to be offered to deposit holders. The member states had the option of deciding whether their compensation scheme would be financed *ex ante* or *ex post*. In Iceland, the option elected was to create a fund, the Depositors' and Investors' Guarantee Fund (DIGF), by levying a moderate fee assessed annually on deposits of deposit institutions at year-end.

Deposit guarantees are intended to encourage financial system stability by reducing the risk of bank runs. By guaranteeing depositors a certain minimum reimbursement within a specific period upon the failure of a bank, depositors are compensated for the asymmetrical information relationship between the bank and the customer. In addition, the functioning of the economy is maintained by ensuring depositors' access to their money.[112] In the light of banks' high leveraging, there is a strong likelihood of depositors withdrawing their funds if fear spreads as to a bank's future and owners lack faith in the efficacy of the deposit guarantee scheme.

Deposit guarantees, however, can also increase moral hazard, encouraging depositors to rely on the protection the guarantee scheme is to provide rather than monitoring the bank's activities. Such lack of depositor involvement could result in banks' undertaking riskier transactions than otherwise. Robust financial regulation and forward-looking risk-weighting of assets in calculating capital requirements can counteract such moral hazard effects.

General insurance actually involves spreading the risk of each party over a greater number of parties, generally for payment; this is referred to as primary insurance. The payment, i.e. the premium paid for the protection, is generally decided based on the statistically probability that the protection will be called upon. It is important that the risks of the parties purchasing protection is asymmetrical, i.e. that insured parties are not all threatened by the same risk at the same time, e.g. it is unlikely that all motor vehicle owners would be involved in the same type of traffic accident at the same time. The at-

[112] It can take many years to wind up failed banks through liquidation. Without deposit insurance, depositors might need to wait for settlement, without having access to their funds, until liquidation was complete.

tempt is then made to reduce this primary risk by distributing it among a large number of parties through re-insurance. In this manner the risk can in fact be borne by a large number of parties in different ways. Such active risk diversification increases the probability of being able to provide the protection which the insurance is intended to ensure.

Although the deposit guarantee scheme appears at first glance to be based on the same premises as insurance, i.e. that the risk of one party is distributed among many others in return for payment, there are in fact major differences between the two. In the first place, payment made for the protection is not made by those parties which are to enjoy protection. Secondly, there has not been any connection between the risk that the protection will be tested and the payment made, i.e. there is no actuarial calculation underlying the determination of the contribution. Thirdly, it is not assumed that payments to parties suffering a loss will be reduced in the case of major shocks. Fourthly, the shocks are of anthropogenic nature and, finally, it could be mentioned that the risk of the party bearing the primary risk cannot be distributed among additional parties. It should be pointed out, however, that some of these aspects have been examined in international fora, so that there may be some action taken to reduce the differences between normal insurance and the protection offered by deposit guarantee schemes.

It is understandable that deposit insurance should be confused with general insurance. Practically everyone connects the word insurance with traditional, non-life insurance activities.

For a deposit guarantee scheme to work as it should, there needs to be a proper distribution of the risk of the scheme. In the US, for example, 7,436 banks and savings banks are members of the Federal Deposit Insurance Corporation (FDIC), and 91% have assets of less than USD 1 billion.[113] Due to the large numbers and broad distribution of risk among markets and regions, there is little risk of the failure of more than a small portion of these undertakings. Such risk distribution makes it possible for guarantee funds to hold reserves which are only a small portion of the total amount of covered deposits. In this connection it is worth pointing out that the FDIC appears to be more like traditional concepts of insurance than does the European system. A proposal for a new EU Directive on deposit guarantees provides for guarantee funds to amount to just over 1% of total covered deposits, which is slightly higher than that in the US. The risk distribution which can be achieved in larger economies, however, is not available in Iceland, where three large banks preserve around 97% of all deposits (see the discussion of banking market consolidation in Chapter 6), in addition to which the three banks' risk profile is practically identical due to the small size of and lack of diversity in the economy. There is therefore a danger of all the banks facing difficulties if one of them does. Iceland, however, is not the only country where the deposit market is highly concentrated; the situation is similar in various neighbouring countries. In addition, there is a danger that increasing deposit guarantees in the single market to EUR 100,000, which was done in the spring of 2009 and is repeated in the new draft Directive, would include by far the greatest share of all deposits in Icelandic banks in the deposit guarantee scheme. This depends naturally on two things: how extensive the exemptions from protection will be in the final version of the Directive and whether it will be possible to obtain exemptions or a temporary adjustment period for specific provisions.

While deposit guarantee systems are not set up to deal specifically with systemic problems, if well conceived they can reduce

[113] FDIC (2011).

the risk of such. The EU Commission's report of 2008 reveals that no deposit guarantee funds in EU member states were able to withstand shocks requiring estimated payments equivalent to 3.24% of deposits covered by the scheme.[114] A report by the French central bank in 2000 reaches a similar conclusion, as it states that it is clear that deposit guarantee schemes are not intended to deal with a systemic collapse. The feeble position of deposit guarantee funds when faced with a systemic collapse resulted in a total of nine EU member states (Austria, Denmark, Germany, Greece, Hungary, Ireland, Portugal, Slovakia and Slovenia) instituting full deposit guarantees during the current crisis, either through a government declaration, as was the case in Germany, Hungary and Portugal, or amendments to the regulatory framework. In the US all non-interest-bearing deposits were insured in full from 31 December 2010 until year-end 2012 – regardless of their actual amount and owner. In the Nordic banking crisis of the early 1990s, both Finland and Sweden declared blanket guarantees for banks' obligations, including deposits, and in Norway there were actions and statements with the same intention.[115] Blanket guarantees are therefore a common action taken by governments fearful of systemic banking difficulties and the risk of bank runs.

Despite the weaknesses of deposit guarantee schemes in small, undiversified economies with concentrated banking systems, various steps can be taken to reduce these weaknesses. In the first place, the tools available to supervisors to monitor risk in financial undertakings' operations, in this instance deposit institutions, can be improved. Secondly, actuarial methods can be applied to a greater extent in calculating premiums, e.g. deposit institutions can be assigned a risk weighting based on the risk of their operations. Thirdly, ways can be investigated of ring-fencing deposits of financial undertakings with universal activities. Furthermore, the likelihood of repayment by deposit guarantee funds can be increased by giving the fund or deposits priority in the winding-up of financial undertakings, as was done with the 2008 emergency legislation and which has been done in the US since 1993. The report of the Vickers Commission in the UK also proposes that deposits be accorded priority in winding-up. It is also important to consider the interplay of regulations on deposit guarantees, equity and financial strength, early intervention mechanism and the winding-up of financial undertakings. With co-ordinated rules it would be possible to utilise those funds which might exist in deposit guarantee funds for distributions before the eventual winding-up. Such fine tuning also increases the likelihood that when the authorities take over banks in difficulties their equity will not have been entirely depleted. With these sort of changes the role of deposit insurance funds would consist primarily of bridging the gap between payments from the funds to right-holders and disbursements following the liquidation of the bank concerned – priority of deposits, however, would ensure better recoveries for deposit guarantee funds on their reimbursements of covered deposits. Finally, restrictions can be placed as to what parties enjoy guarantees, e.g. whether public bodies, financial institutions or legal entities enjoy protection. In the US foreign deposits are not defined in the same manner as others and therefore enjoy neither guarantees nor special priority in winding-up.

7.5 International obligations

As previously mentioned, the domestic regulatory framework on the financial market is based in the main on EU acts which

114 European Commission (2008).

115 The Swedes did not, in fact have a deposit guarantee scheme at this time.

have been transposed under the EEA Agreement.

Additional international or multilateral agreements apply in Iceland. The first one to mention is the General Agreement on Trade in Services (GATS), which is among agreements concluded under the auspices of the World Trade Organisation (WTO). This agreement includes a Schedule of Specific Commitments, identifying those services for which member states authorise foreign parties to provide services both cross-border and with commercial presence. Iceland has been a member of WTO since 1995.

It is also appropriate to mention two OECD legally binding codes which have been adopted, the Code of Liberalisation of Capital Movements and the Code of Liberalisation of Current Invisible Operations. Iceland has adopted both codes.

Finally, Iceland is obliged under free trade agreements which in some respects may go beyond the obligations of GATS.

7.6 Limitations on the efficacy of financial acts and rules

7.6.1 Formal substantial rules and benchmarks

The preceding discussion has touched on the main substantial points of financial market legislation. Many terms concerning licences to operate and conditions for operations are of a formal nature. Codes of conduct for transactions with financial instruments, which are to ensure equal treatment and prevent market abuse, are based principally on effective and timely information disclosure concerning the transaction. The legislation places high disclosure requirements on financial undertakings. Regulators, not just in Iceland but practically everywhere, have considered it their main responsibility to check, on the basis of reports received, whether the formal requirements of the law are fulfilled, since their role is defined in this manner in laws on official supervision. Both technical obstacles and a lack of harmonisation of information systems have made supervision slow and unwieldy, with little time available for further analysis. Modern transactions on regulated markets are real-time transactions, while supervision based on information submitted takes place long after the transactions have been concluded. It is therefore important to ensure that transactions can be supervised in real-time. To make this possible, supervisors must have unlimited access to all the databases, both in the systems of those transacting business as well as public bodies, which record transactions or movements connected with the identifiable parties, legal or natural persons.

7.6.2 Subjective and discretionary criteria

Many provisions of the financial market legislation require subjective assessment by regulators. FME is entrusted, for example, with the task of assessing the eligibility of owners, managers and directors of financial undertakings. The view has been widely expressed that the reason for the poor situation of financial undertakings is not the rules which apply to them but rather the difficulty is the lack of expertise or competence of their managers. The law sets certain formal requirements concerning the eligibility of management, but the subjective aspects of the assessment are more difficult to apply. The legislator has responded to criticism concerning management incompetence by amending provisions on eligibility requirements, which FME has subsequently developed further into rules on assessment of directors' eligibility.

FME is entrusted with examining the operations of financial undertakings to ensure that they comply with sound business practices.

The legislator does not provide a more detailed description of how assessment of sound business practices shall be carried out, or what is involved in sound business practices.

7.6.3 The interplay of formal and subjective criteria

It was a tall order for regulatory bodies, as they were organised and equipped, to supervise the formal legal requirements. Work was underway for 10 years in international fora to rectify the lack of rules for independent analysis and assessment of the business strategy and risk management policy of financial undertakings, as a basis for assessing capital requirements and the requirements which must be made concerning corporate governance and internal control by the financial undertakings themselves. The Basel Committee on Banking Supervision issued its first draft of such rules in 1999; the rules came into effect in 2006. They were transposed in Iceland in 2007 but had not come into effect before the financial market collapsed in the autumn of 2008. It is obvious that drafting rules on the methodology to be used in assessing regulatory capital is no easy task. Nor has it served its purpose well, in view of the current situation on financial markets throughout the world. Assessment of the business strategy and risk management policy of financial undertakings makes high demands for independent analysis by the regulators of financial undertakings. It also demands good insight into and assessment of the financial market and the interplay of its various aspects.

The demands made by the legislator of those bodies responsible for financial supervision regarding analysis and assessment of undertakings' strategy and risk management when implementing Basel II rules highlights the necessity of paying more attention to the overall financial market picture and clearer formulation of long-term economic policy. Such a framework could be used as a basis for analysis and development which would better enable the regulators to assess what is a sound operating environment for financial undertakings. The legislator will therefore also have to ensure that the knowledge and analysis available provides an overview of the interrelated factors affecting the financial market. Similarly, it must be clear where the decision-making powers lie to take relevant action when the societal role of financial markets is threatened as a result of overheating or other unexpected difficulties.

If the legislator wishes to promote confidence and stability on the financial market, it must ensure a response to undesirable development which deviates from the clear policy concerning the societal role of the financial market. It must be decided where and how warning bells should ring and who takes decisions on actions.

Legislation may provide clearly for the role of individual institutions and formal requirements, but decisions on a response intended to promote financial market stability will always be subject to discretion and good judgement. If the legislator intends to create a framework which provides supervision, discipline and decisions on a fluid financial market subject to free market forces, there is no avoiding recognition of the need for rules supported by subjective assessment and good judgement. There is no hope that it will be possible to foresee, in drafting legislation, all the conceivable instances which could arise and to enshrine in law what actions must be taken in each case. Those institutions which hold decision-making powers must have the necessary authorisations to interpret rules and apply remedies on the basis of clear objectives in the relevant legislation. Such methods of legal construction are necessary in setting rules on market activities which are constantly changing. Here inflexible formal rules alone will not suffice.

7.7 Official supervision

7.7.1 FME's micro-supervision

Official supervision of financial activities is direct supervision carried out by a supervisory authority. FME's supervision consists to a large extent of obtaining information on the operations of regulated entities, on-site inspections, special examinations and other methods which enable it to check whether the activities comply with the laws, regulations and rules applicable to the activities and whether they accord, in other respects, with sound and healthy business practices. The principal responsibility for supervision of the activities of each undertaking, however, lies with the regulated entities themselves. It is the responsibility of the management of financial undertakings to organise their activities to include effective risk management, internal quality control and compliance with laws and rules.

Rules on official supervision of financial activities are set in acts and regulations. The legal framework of supervision is set primarily in the Act on Financial Undertakings, Act on Insurance Activities, Act on Securities Transactions and Act on Official Supervision of Financial Activities. Under exceptional circumstances, FME is authorised to set rules on specific aspects of regulated entities' activities. FME has extensive authorisations to demand rectification if examination reveals that regulated entities are not complying with the laws or regulations applicable to their activities. Such authorisations are laid down in the Act on Official Supervision of Financial Activities. It should be pointed out, however, that FME's supervisory authority with regard to two important financial market actors, pension funds and the Housing Financing Fund, is limited.

The independence of the Financial Supervisory Authority and requirements for successful supervision

In 2006, the Basel Committee on Banking Supervision issued *Core Principles for Effective Banking Supervision*,[116] laying down 25 rules which the Committee considers to be the premises for successful supervision. Among them are rules on the independence of supervisory authorities (Principle 1). It emphasises that each such authority should possess operational independence, transparent processes, sound governance and adequate resources, and be accountable for the discharge of its duties. Furthermore, emphasis is placed on having a suitable legal framework for licensing of regulated entities and their on-going supervision as well as supervisory remedies.

The core principles also emphasise the necessity of various other aspects outside the jurisdiction of the supervisory authority for effective banking supervision. The external aspects include:

- sound and sustainable macroeconomic policies;
- a well-developed public infrastructure;
- effective market discipline;
- mechanisms for providing an appropriate level of systemic protection (or public safety net).

Since the Financial Supervisory Authority commenced operation, the government has sought to ensure that its activities would accord with the core principles, in part by financing its operations in a specific manner. This intention has been reiterated, for instances, in a Memorandum of Intent from the Icelandic government to the International Monetary Fund of 16 August 2011, which promises that the Financial Supervisory Authority will be provided with sufficient revenues to ensure that it can perform its duties successfully.

[116] Basel Committee on Banking Supervision (2006).

7.7.2 Micro-supervision by the Central Bank of Iceland and financial stability

The Central Bank is a lender of last resort and is to promote the stability of the financial system and effective and secure payment mediation. In accordance with this role it has, by virtue of a statutory authorisation, set prudential rules on liquidity ratios and the foreign balance of credit undertakings. The undertakings also must fulfil the Central Bank's reserve requirements. The Central Bank's supervision of individual financial undertakings consists of enforcing the rules it has adopted. The rules apply to credit undertakings on the financial market.[117] The undertakings deliver reports to the Central Bank based on the rules and penalties can be applied for violations.

The Central Bank of Iceland sets rules on the liquidity ratio of credit institutions. The Central Bank's current rules on liquidity ratios date from 2006. The objective of the rules is to ensure that credit institutions always hold sufficient liquid funds to meet foreseeable and potential payment obligations during a specified period. A review of the liquidity rules is currently underway, in part, in consideration of liquidity rules drafted in international fora which will be part of Basel III. FME issues guidelines on best practice in liquidity management for financial undertakings. The most recent version of its guidelines was published on 4 October 2010 and is modelled on similar guidelines from the Basel Committee. The Central Bank also sets rules on credit institutions' foreign balance. The rules define their foreign balance as the difference between foreign-denominated assets and liabilities on- and off-balance sheet. The Central Bank's current foreign balance rules came into force in 2010.

The Central Bank is not authorised by law to carry out on-site inspections in enforcing its rules as is the FME. When acts and rules are reviewed, consideration might be given to increasing the authorisations to the Central Bank and FME to request a precise breakdown of assets and liabilities, encumbrances and conditions pertaining to them and to ensuring that penalties are available if the requested information is not provided.

As previously mentioned, the Central Bank's prudential rules concern credit institutions and therefore cover only part of the financial system. There is also a risk that such prudential rules and supervision, directed exclusively at individual entities, i.e. micro-prudential supervision, will not prevent systemic risk, which can build up in the system as a whole due to the connections between its individual entities or due to risk accumulating over a longer period.

Following the financial crisis the main thrust of international debate has been on increasing emphasis on financial supervision aimed at preventing systemic risk from developing in the financial system. This has been referred to as macro-prudential supervision. Such supervision focuses on the stability of the financial system as a whole, with the objective of limiting systemic risk and possible production loss due to financial shocks. Consideration is also given to the behaviour of financial undertakings and their interaction as an independent risk factor. A more extensive examination and analysis of macro-prudential instruments needs to be made. The ability of authorities to promote financial stability is based on their having the necessary remedies to do so. It is therefore important that such an analysis be made to promote the long-term stability of the financial system. This subject is discussed in detail in the next chapter of the report.

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[117] A credit institution is a financial undertaking which has been granted an operating licence as provided for in Points 1–4 of the first paragraph of Art. 20 of Act No. 161/2002, on Financial Undertakings. This includes deposit institutions and various other credit undertakings, e.g. asset leasing companies.

8

Financial stability – the third pillar of macroeconomic management

Following the financial crisis which struck in 2008, increasing emphasis has been placed on finding methods for the overall or macro-management of the financial system. The aim is to ensure the stability of the system as a whole, rather than to rely solely on supervision of the financial strength of the individual components which comprise it. Experience has shown that supervision of each entity is not sufficient to ensure the stability of the system. It is an illusion to think that the system is in good shape merely because each of its individual entities is in good shape. It is necessary to consider the characteristics of the financial system as a whole and the interplay of its individual units to manage its inherent tendency to over-expand; otherwise it could end in collapse. The experience of recent years shows that traditional economic management instruments in the areas of fiscal and monetary policy have not been sufficient to prevent financial crisis. Accepted macroeconomic analysis has up until now regarded the financial system as an almost neutral channel for payment mediation and the flow of funds in the economy, and thereby for transmission of changes in interest rates and taxation. It was recognised that setbacks in the real economy could affect the financial system but not that the financial system itself could be an independent source of cyclicality. The dot.com bubble in the US at the beginning of the 21st century and most recently the international financial bubble which burst with a resounding bang in 2008 have both shown that the financial system can definitely cause disruption in the real economy if it gets out of control. To respond to this problem, possibilities are being examined of applying so-called macro-prudential tools, aimed at the entire system, to control those aspects of the interplay of market forces, in the financial market on the one hand and in the real economy on the other, which could cause instability. The Central Bank of Iceland has recently discussed this in two occasional publications. The former discusses monetary policy after capital controls are removed[118] and the latter the role of central banks in financial supervision.[119] The subject was also considered in a chapter entitled "Macro-prudential Policy" in issue 2011:1 of the bank's series *Financial Stability.*[120]

It is no simple task – having regard for economic analysis and administrative structure – to incorporate these instruments effectively in the management system. The problem arises not least from the limited experience of applying such instruments for the intended purpose. Knowledge of their effects in encouraging financial stability is therefore limited. In many countries and under the auspices of international organisations research is currently underway as to how macro-prudential instruments can be optimally applied alongside traditional economic management mechanisms to reinforce financial stability. The role of this third pillar of economic management – alongside co-ordinated fiscal and monetary policy – is to reduce the risk in the financial system which can, firstly, develop

118 Seðlabanki Íslands (2010), pp. 26–44.
119 Seðlabanki Íslands (2011b), pp. 38–47 and 59–90.
120 Seðlabanki Íslands (2011a), pp. 49–66.

and expand due to cumulative risk in the system as a whole during an upswing or when a price bubble forms, and secondly can arise from cumulative risk in the network of individual entities forming the system which is not visible in micro-supervision.

8.1 Potential tools

In recent years various instruments have been tested in many countries which are aimed at the financial system in its entirety and which involve direct limits on the lending activities and higher demands concerning the equity and liquidity of financial undertakings. These instruments can be applied singly or in combination to reduce financial system overexpansion, often in connection with other countercyclical economic management measures. Economic research in this area shows that applying the following measures can reduce the expansionary tendency of the financial system and the risk of a collapse:

- maximum loan-to-value (LTV) ratios, e.g. for housing mortgages;
- maximum debt-to-income ratios, for both households and corporates;
- maximum leverage limits relative to assets;
- ceilings on lending growth, possibly with a sectoral breakdown or specifically on foreign currency lending;
- increased required reserves of banks;
- higher liquidity requirements;
- higher capital requirements, including countercyclical capital requirements;
- increased requirements for loan-loss provisions, including dynamic provisioning;
- limits on open foreign currency positions/currency risk, including domestic loans linked to foreign currencies;
- restrictions on maturity mismatch of assets and liabilities/liquidity risk;
- limits on interest rate risk.

All of these instruments are directed at the financial system as a whole or a very large part of it – and not at individual undertakings specifically. Sometimes the rules change depending upon the progress of the business cycle – increasing in an upswing and decreasing in a downturn – either by a specific decision of the authorities in each instance or pre-determined algorithms calculated on the basis of specific economic indicators to counteract cyclicality. Economic studies, including research by IMF, suggest that restrictions of this sort can, if properly applied, reduce overall risk in the financial system as a whole and thereby the probability of a financial crisis.[121] Extensive work is currently underway by the IMF in this area. IMF has recently published two reports on the tasks and instruments for overall management of financial systems to increase their stability.[122] These include a list of potential instruments similar to that above. In November 2011, IMF published a report discussing the institutional arrangements for financial stability in various countries.[123] This will subsequently be discussed in more detail. At the end of January 2012, a government-appointed working group in Norway delivered its report on organisation and instruments for macro-prudential supervision of the financial system. Proposals are being drafted on the basis of this report to place before the Norwegian parliament, *Stortinget.* It is interesting to note that, with regard to instruments, it discusses primarily the use of countercyclical reserves, or buffers, to increase stability of the financial system, with less discussion of other possible instruments for this purpose.[124] It is worth pointing out, however, that countercyclical buffers will be a special part of a new regulatory framework for the

[121] Lim, Cheng Hung et al. (2011), pp. 6–33.
[122] IMF (2011c).
[123] IMF (2011d).
[124] Finansdepartementet (Norwegian Ministry of Finance) (2012).

EU single market which is to ensure the transposition of Basel III rules from the beginning of 2013.

A variety of provisos must be made regarding the conclusions of the IMF studies referred to above. They are based on the experiences of 49 states during the past 10 years. The provisos concern both the technical aspects of the study, methods and material, as well as the scope of validity of its conclusions. They should therefore be regarded as provisional conclusions. It should be pointed out that this study was directed in particular at systemic risk over time, at cumulative systemic risk during an upswing. As of yet, economic research has only been directed to a very limited extent at what could be called network risk (sometimes called cross-section risk) in the financial system. This refers to systemic risk which develops due to the interrelationships between those components which form the financial system. The risk for the system as a whole can therefore be more than the sum of the risk limited to each individual financial undertaking. Network risk can be very important for the stability of the financial system as a whole, as was starkly revealed following the collapse of the Icelandic banks in 2008. It should be pointed out that it is difficult to assess a priori to what extent individual instruments – or a combination of instruments – of this sort should be applied in each instance. Furthermore, it is difficult to assess when instruments of this sort should be applied as a precautionary measure to prevent problems in the future or in response to problems which are already manifest. It should also be borne in mind that the application of these instruments involves costs, for instance, due to bureaucracy and red tape, which companies and regulators must bear; they can also reduce growth and distort the indications of cost-effective investment options which a market without interference would have shown. All intervention by public bodies results in such impacts, which have to be balanced against the benefits which financial stability brings for the economic system as a whole.

The extensive examination by an IMF working group referred to above analysed the ten main instruments which have been applied to encourage systemic financial stability, cf. the list above. The specific instruments can be divided into three types:

- *Credit-related instruments*: e.g. caps on the LTV ratio, caps on the debt-to-income ratio, caps on foreign currency lending and ceilings on credit or credit growth, application of heavier risk-weightings on certain loans.
- *Liquidity-related instruments*: e.g. limits on open currency positions/currency mismatch, limits on maturity mismatch, and reserve requirements which can be used to build up buffers to meet setbacks.
- *Capital-related instruments:* e.g. countercyclical capital requirements, time-varying/dynamic provisioning and restrictions on profit distribution.

These instruments are generally applied to reduce four types of risks which can threaten the financial system and its stability.

- *Risks generated by strong credit growth*, resulting in credit-driven asset price rises and the risk of a bubble forming;
- *Risks arising from excessive leverage* and the consequent deleveraging which eventually results;
- *Systemic liquidity risk*;
- *Risks related to large capital flows in foreign currency*, including foreign currency lending.

During the current financial crisis, approximately two-thirds of the 49 countries included in the IMF study have used various instruments of these sorts to boost financial stability. In most of these countries, the application of the instruments was part of

broader policy measures aimed at general, macroeconomic equilibrium, including exchange rate adjustments and capital account management rules. It is important that the instruments are used primarily to encourage financial system stability and not to influence the exchange rate or cross-border capital movements. "*Macro-prudential instruments should not be confused with capital controls*" is stated, for example on p. 11 of the report of the IMF working group previously referred to. The same applies to exchange rate policy and taxes on cross-border capital movements, including ideas concerning a so-called Tobin tax (named for the UK economist James Tobin) which have been mentioned recently in the struggle to deal with the financial crisis.[125] Such a tax has not yet been levied, however. Instruments of this sort (i.e. exchange rate adjustments and taxation of capital movements) would, however, be applied primarily to encourage general macroeconomic equilibrium – or even international economic equilibrium – rather than as specific macro-prudential instruments. The ten instruments mentioned previously are all comparable to increasing (or, as the case may be, decreasing) cost of borrowing. Like interest rate changes, they apply a brake to total lending and thereby to national expenditure and price developments. The interest instrument, however, is primarily used to affect price level developments. It has undoubtedly a considerably less direct impact on the macro indicators of the financial system in the short term than the direct intervention resulting from the application of the ten instruments listed above. It is precisely for this reason that their application now is considered as conceivable to prevent shocks in the financial system. As mentioned previously, however, their use involves unavoidable cost because they can dampen growth and channel capital in directions which may not deliver as good performance in the short or medium term than would otherwise be possible. If the application of these instruments, however, does prevent financial shocks growth is likely to be as high or higher in the longer term than would otherwise have been possible. There are various grounds for using the above-mentioned financial stability instruments to deal with systemic risks in the financial sector. In those countries where such instruments have been tried, their impact has not proven to be as indirect and uncertain as the impact of monetary policy instruments, i.e. interest rates, and they have proven both more flexible and more focused than most fiscal measures – and the impact became visible more quickly.

Within the EU, there is considerable emphasis currently on developing and applying instruments of this sort to deal with financial crises. The EU Commission appears to place the greatest emphasis on countercyclical capital requirements as the principal financial stability instrument, as well as authorisations to financial regulators to use Pillar 2 to increase obligations on a group of undertakings; individual EU member states are looking in other directions. For example, since lending for real estate purchases and housing bubbles in many countries played a major role in the current and previous financial crises, many countries have considered general limits on LTV ratios as an especially useful instrument to counteract overheating.

As the above indicates, the tools which have been mentioned here as financial stability instruments – or macro-prudential instruments – are most often also used or have been used by micro-prudential supervision instruments in financial regulation of individual entities. It is indirectly assumed here

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[125] In his article "Tobin skattur og peningastefnan" (Tobin tax and monetary policy) in the periodical *Vísbending* on 23 January 2012, Gylfi Zoega, professor at the University of Iceland, points out that a Tobin tax levied on foreign currency transactions in Iceland could be one component in the removal of capital controls.

Taxation of the financial system and financial stability

In Iceland as in many other countries, taxation of the financial system has been under review in the wake of the banking crisis. Three points in particular have fuelled this discussion. In the first place, the enormous cost resulting from the financial crisis has been borne by parties other than the banks' owners and lenders. Taxation of banks should therefore reflect this reality, if it is not possible to prevent financial shocks in the future. Secondly, the financial crisis has revealed the indirect subsidy enjoyed by financial undertakings due to the market's conviction that systemically important financial undertakings will not be allowed to fail.[126] If no action is taken regarding this subsidy, it distorts the competitive position of the financial system compared to other similar sectors. Under such circumstances there is a risk that the financial system will outgrow the economy and smother other sectors which compete with it for capital and human resources. Thirdly, the taxation system can be applied to reduce the inherent instability of the financial system, either by taxing capital transactions or banks' funding.

Four main methods of specifically taxing banks have been under discussion internationally.

Taxes on banks' assets. Such a tax is primarily a means of revenue generation and functions like other wealth taxes. The system could be structured in steps to have an effect on banking system concentration.

IMF has proposed to introduce a *tax on banks' liabilities*.[127] The advantage of such a tax over asset-side taxes is that collection of the tax can be designed so as to positively influence banks' behaviour, not only by limiting their balance sheet growth. In this connection the banks' equity and stable funding could be exempted from the levy, as is done in the UK and Sweden. In Iceland a tax was levied on all banks' liabilities in 2010, including their equity. Here the tax is therefore only an income-generating measure.

The EU Commission has proposed the introduction of a *financial transaction tax.* Although such a tax would not be part of the EEA Agreement, it could, as time progresses, affect Iceland since it is assumed it must be paid if at least one party to the transaction is within the EU. The Commission's proposal is that from 2014 onwards a tax of 0.1% will be levied on all transactions with financial instruments except derivatives which will bear a levy of 0.01%. A specific tax on financial transactions has the advantage of possibly reducing herd behaviour and negative market fluctuations. These ideas are closely related to ideas of a Tobin tax on foreign currency transactions as discussed by Gylfi Zoega in his article in *Vísbending* in January 2011.

Finally, there is the possibility of a *special tax on banks' profits and salaries.* Such a tax was introduced in Iceland in 2012. Specific taxation of banks' profits and salaries can serve an economic management purpose. On the one hand the Treasury, through such a tax, can recover part of the rent which is created in the banking system as a result of the indirect guarantee which banks appear to enjoy, as discussed previously in this report. On the other hand, no VAT is paid on financial undertakings' transactions, as it would be difficult to impose such taxation. A specific tax, e.g. on banks' salary cost, could prevent this special position of financial undertakings from skewing their competitive position compared to other comparable undertakings, e.g. in the competition to recruit well qualified employees.

Special taxation of financial undertakings raises many issues of contention, e.g. whether the tax would encourage risk appetite because the view is that it provides more funds available to rescue banks. People also disagree as to how much taxation can be levied before it has a restraining effect on growth.The EU has in part responded to ideas on macro-prudential instruments in two ways, firstly with the establishment of the European Systemic Risk Board and, secondly, by drafting a directive and a regulation transposing Basel III rules into European law (CRD IV and CRR).

126 Recent UK, Norwegian and Swedish studies suggest that this subsidy could be equivalent to half the total profit of the largest banks. See further Section 4.2.1.

127 IMF (2010).

European co-operation and macro-prudential instruments

The European Systemic Risk Board was established by Regulation No. 1092/2010, and began work at the beginning of 2011. The Board is intended to participate in preventing or mitigating risks to the European financial system. The Board is comprised of the Governors of the EU-27 central banks, the President of the ECB (who serves as Chairman of the Board), the heads of the three new EU supervisory bodies in the financial market (EBA, ESMA and EIOPA) and a representative of the EU Commission. The heads of the supervisory bodies of the Member States have observer status. The ECB provides support systems for the European Systemic Risk Board.

The Board sets up information systems and monitors statistical indications of potential cumulative systemic risk, and can request information concerning individual financial undertakings from European supervisors. The Board itself has no instruments to counteract systemic risk. However, it is intended to issue warnings of risk and imminent threats to the EU Council. In addition, the Board can make proposals to the relevant EU institutions and Member States for actions to reduce risk. Up until now, the Board has issued three proposals. They concern: 1) how loans in foreign currency shall be handled to reduce banks' foreign currency risk; 2) how the risk of banks dependent upon short-term financing in USD can be reduced; 3) the establishment and structure of member states' macro-prudential boards or institutions. The Systemic Risk Board is to monitor the response of the relevant institutions to its warnings and proposals, and demand improvements if it considers the actions to be insufficient.

Four sections in the Commission's proposal for a draft Capital Requirements Directive IV (CRD IV) can be regarded as macroeconomic instruments.

The (home supervisory) authorities can determine the size of countercyclical capital buffers to respond to macroeconomic disequilibrium. The buffers can add as much as 2.5% to banks' equity.

The authorities can alter risk weightings of real estate mortgages.

The authorities can make additional capital requirements of undertakings or a group of undertakings on the basis of the second pillar in the CRD for purposes of overall systemic management.

The EU Commission is authorised to increase prudential requirements for the EU as a whole (Art. 122).

The plan is to implement the Regulation on the Systemic Risk Board and the CRD IV Directive and Capital Requirements Regulation (CRR), which will introduce Basel III rules, in the EEA Agreement. Although both aspects may be subject to some adaptation, not least due to constitutional arrangements in EFTA states, it is clear that the continuing transposition of EU rules will affect the development of the framework for systemic instruments within the EU.

that they be available for use as systemic management instruments if required. It is therefore extremely important that it be stated clearly and definitely when they are used to reinforce systemic financial stability and when for micro-supervision purposes. Obviously there is a need for close collaboration and harmonisation among those institutions which are responsible for micro-supervision and those which intend to use the tools of micro-supervision for purposes of systemic financial stability. It could sometimes prove difficult to 'ride double' on the instruments which come into consideration. Added to this need for co-operation is the need for consistency between this third pillar of economic management and those of monetary and fiscal policy.

The following section discusses the definition of the concept of financial stability in more detail and how the financial system can best be managed as a whole by incorporating

instruments of this sort in the macroeconomic management system. Considerations from various perspectives must be co-ordinated when these instruments are applied, as it is conceivable that conflicts can arise between macro-prudential measures on the financial market, on the one hand, and interest rate decisions or changes in taxation – or decisions in connection with micro-supervision – on the other. This new pillar of economic management is still in the formative stages and special tools suitable for it are likely to be developed as time progresses.

8.2 Financial stability – definitions and measurements

8.2.1 Definitions

The Central Bank of Iceland's definition of financial stability in its publication of the same name, which has appeared unchanged each year since 2005 (twice a year actually since 2010), is as follows:

> Financial stability means that the financial system is equipped to withstand shocks to the economy and financial markets, to mediate credit and payments, and to redistribute risks appropriately.

It is important to consider the definition of the said concept carefully when one or more agencies are entrusted by law with the responsibility of supervising financial stability and for actions to promote it in the economy as a whole.[128]

The definition used by the Central Bank of Iceland is similar to definitions applied by central banks in various other countries, e.g. Norway, Switzerland and Germany. For the definition to be useful in practice, the problem lies not least in finding economic statistics or indicators which fit it. What is meant, for instance, by the word 'shock' in this context? How should the scope and frequency of shocks be measured, what causes them and what processes determine whether they occur to a decisive extent? When and how are credit and payments mediated or risk redistributed 'appropriately'?

Tommaso Padoa-Schioppa, a former member of the ECB Executive Board, defines financial stability in a manner similar to the Central Bank of Iceland, but proposes adding several important words to this brief text, as follows: "Financial stability is a condition in which the financial system is able to withstand shocks without giving way to cumulative processes which impair the allocation of savings to investment opportunities and the processing of payments in the economy."[129]

In referring to cumulative processes, Padoa-Schioppa directs attention to a series of events which can cause financial system shocks in an unforeseeable manner, viewed from the perspective of each individual financial undertaking, but which could conceivably be detected somewhat in advance by an analyst viewing the system as a whole. An example of this would be the liquidity position of the financial system as a whole,

[128] In the Central Bank's 2005 issue of *Financial Stability*, the concept is described on p. 53 as dependent upon two conditions: "(1) that the key institutions in the financial system are stable, in that there is a high degree of confidence that they continue to meet their contractual obligations without interruption or outside assistance; and (2) that the key markets are stable, in that participants can confidently transact in them at prices that reflect the fundamental forces and do not vary substantially over short periods when there have been no changes in the fundamentals." This was based on a definition by Andrew Crockett in his address "Why is Financial Stability a Goal of Public Policy?", presented at the symposium Maintaining Financial Stability in a Global Economy, sponsored by the Federal Reserve Bank of Kansas City in 1997. As can, in fact, be seen, there are difficult assessments involved in this description, but it does show clearly what is to be assessed.

[129] BIS (2011), pp. 32–33. This report has an informative discussion on pp. 27–33 on attempts to definite financial stability.

not least foreign currency liquidity. This position is possibly not generally assessed by each individual financial undertaking, which is primarily concerned with its liquidity in domestic currency. Difficulties in this respect can arise for the system as a whole if foreign financial markets close. The same applies to the effects on the system as a whole (network impact) of interaction and correlation between the parties it is comprised of, as well as to the effects of the interaction of the real economy and the financial sector. Individual undertakings can seldom foresee such effects or take them into account. It is these externalities which can call for intervention on the part of the authorities.

8.2.2 Measuring financial stability

Extensive research has been carried out in recent years on quantitative measurement of financial stability – or the lack of it. Such measurements can be made using figures on the operations and balance sheet of financial undertakings, and also with statistics on other aspects of the economy. In 2005, IMF published a *Compilation Guide for Financial Soundness Indicators*, FSIs. Such indicators are intended to show the status and outlook for financial undertakings and their clients; they are intended to be useful in analysing the strength of financial systems and for their supervision. This is done with the aim of increasing stability and reducing the probability of shocks to the system. The Central Bank of Iceland published figures for the Icelandic financial system in line with these guidelines in its *Financial Stability* report in 2005. The bank's indicators corresponded to those 12 indicators defined by IMF as the core set, which were compiled especially from accounts of financial undertakings. Such measurements have not been published since then in the same manner, although this would have been desirable. Establishing systematic quantitative methods of monitoring the stability of the Icelandic financial system should in fact be a priority. IMF's guide on the regular gathering of 39 financial stability indicators, of which 12 form the above-mentioned core set, is useful. The experience of the 2008 financial crisis gives cause to place strong emphasis in the future on the collection of data and analysis of indicators concerning financial stability. Such analysis is a premise for realistic supervision of the financial system as a whole and for measures to reinforce its stability.[130] Special emphasis should be placed on finding and monitoring early warning indicators. It has been pointed out, for instance, that when overconfidence in financial market innovation is combined with astronomical compensation of parties responsible for issuing innovative financial instruments and managing the assets of others, there is reason to fear a financial crisis.[131]

8.3 Statutory role

The most effective way to direct attention to financial stability policy as an important aspect of economic management is to codify its objectives in law and entrust its implementation to a specific public authority in the same law. This means that the authority is to ensure oversight of systemic risk and financial system stability and to be responsible for a co-ordinated response when this is needed.

Consideration must be given as to how best to enshrine in legislation (or a formal statement of duties) the objectives of financial stability and its supervision – together with the instruments provided to the regulatory authority for this purpose. It naturally makes a difference that an approved list of

[130] Updating the FSI statistics from 2004 to the present day is under consideration. The Central Bank is interested in reinstituting FSI practices once more.

[131] Wooley (2010).

such instruments does not yet exist even on paper, not to speak of having been applied in practice. Most of the instruments which have been mentioned are the same as are used for micro-prudential supervision, e.g. capital requirements, liquidity requirements, maximum LTV ratios, etc. Here interest rate changes, changes in taxation and controls on capital movements could also be appropriate. Control of these instruments is generally spread over a considerable number of institutions and public bodies. The above is in fact a premise for effective overall financial system supervision, i.e. macro-prudential supervision. Such supervision cannot be implemented properly unless the objectives have been defined and made measurable/visible, and the instruments defined and provided to a specific authority. While it is admittedly not an easy task to define the concept of financial stability precisely – although it is often and widely presented with scholarly overtones – that does not mean an attempt cannot be made.

8.4 Optimal overall supervision of the financial system[132]

It depends naturally on the purpose and instruments used how tasks should be divided in supervising and managing the financial system. In principle, there is one common objective aimed at – i.e. financial stability – but this objective is multi-faceted and the management instruments of various types. As previously mentioned, no specific instruments have yet appeared which are intended solely for macro-prudential supervision and management. Generally speaking macro-supervision instruments are intended to deal with risk affecting the system as a whole and which may be greater than the sum of the risks of individual entities in the system.

Discussion of macro-supervision of the financial system can include three dimensions. Firstly, there it the *cyclicality dimension*. It involves actions to counteract the tendency of the financial system to follow economic cycles – or even amplify them – and the cyclical effects of supervisory rules directed at entities in the system which have inherent tendencies to magnify cycles because it is easier for financial undertakings to comply with the rules in an upswing and more difficult in a downturn. To counteract these cyclical factors, requirements for contributions to reserves (risk buffers) need to be increased in an upswing, then reduced (or reserves themselves freed up) in a downturn. Variable capital and liquidity requirements to counter cyclical effects (especially the tendency to over-expand) can be based either on discretionary decisions by the regulator or pre-determined formulas. To this end, central banks' policy interest rate decisions are also of conceivable use within certain limits to encourage financial stability, i.e. 'to lean against the wind', as is sometimes said, as long as they do not counteract the central bank's principal objective of price level stability. Economic cycles affect all financial undertakings and thereby the entire system. Countercyclical adjustment of capital and liquidity requirements therefore applies to all entities equally and is intended to even out fluctuations in the activity of financial undertakings and the national economy.

Secondly, there is a *network dimension*, sometimes referred to as a *cross-sectional dimension*, to systemic risk in a financial system – and thereby in efforts to manage this. This refers to the fact that different financial undertakings and market actors can cause systemic risk to a varying extent, depending on how and to whom they are financially connected. In order to offset such risk, efforts

[132] This section is based in part on the following works: Clark and Large (2011), BIS (2011), Davies and Green (2010) and Large (2010). See also reports from the IMF and the Norwegian Ministry of Finance referred to in Section 8.1 above.

are made to apply stricter rules or levy higher fees for insurance/guarantees provided by public authorities for undertakings which create high systemic risk through their activities and by adopting rules as to the connections between financial market actors which are allowed and which are not. This refers not least to the fact that connections and correlation between the entities which form the financial system can serve as a source of systemic risk. This risk is not visible from merely examining each entity or undertaking individually, as mentioned previously.

The third dimension in stability management of financial systems concerns the organisational type of financial undertakings and financial market infrastructure. It could be called the *structural dimension*. This concerns rules that limit risk-taking and increase the robustness of financial system infrastructure. The former includes e.g. requirements for minimum initial capital and other license requirements of financial undertakings, competition rules which directly influence company size and concentration in the financial industry, rules on what activities undertakings may carry out, tax policies which can affect leverage and changes in management incentive systems, stock options, etc. The latter refers, for instance, to real-time gross settlement systems, central netting and clearing arrangements and other such financial market infrastructure. Aggregate risk increases as the risk of individual undertakings becomes more similar and the number of undertakings in the market decreases; this creates an oligopoly and concentration of risk. In view of this, it is evident that various structural rules must be dependent upon the current market circumstances at any given time and as a result change as time progresses. For this reason there may not be a clear distinction between cyclical instruments and structural ones, with the former varying through time while the latter are set once and for all.

To some extent it can be maintained that authorities can, within certain limits, decide whether to apply strict financial rules and supervision of the activities of financial undertakings as they are currently structured or to adopt legislation to alter their structure to make them intrinsically solider. The proposal for changes in bank structure which has attracted the most attention following the banking crisis of recent years is without doubt the proposal to separate the activities of commercial banks and investment banks. Such a separation, it is contended, would make the banking system more secure and reduce the tendency to extreme cyclicality, in addition to facilitating possible public support for financial undertakings in time of need for only those activities which comprise indispensable services for people and businesses, and not activities involving risky investments, whether financial market speculation or other high-risk investments.

8.5 Separation of commercial banking and investment banking

The proposal to separate these two is prompted by the view that recent bank difficulties resulted from bank managers and owners using the funds at the disposals of banks and other deposit institutions – not least deposits – for high-risk investments and questionable speculation on international financial markets. In this manner, investment banking activities benefited from deposit guarantees intended to protect consumers' interests together with the implicit state guarantee of all banks considered too big to fail. This could be remedied to some extent with stricter statutory provisions prohibiting normal commercial banking activities and proprietary trading by the same company. There is no doubt that it was precisely the unfortunate link between deposit taking and investment activities which played a major role in

the 2008 crisis. The SIC also concluded that Icelandic banks had to an increasing extent pursued investment banking activities during the period preceding their collapse.

Unfortunately it is extremely difficult to adopt simple statutory provisions on this separation which achieve the intended purpose.

In the first place, it is very difficult to define in a simple manner in a legal text the difference between normal commercial banking activities, on the one hand, and investment banking activities on the other, simply because of the floating boundary between different types of debt instruments. Some instruments are considered to be part of investment banking activities while others are part of regular everyday services for business operations and households. If an attempt is made to enshrine in law provisions on the line separating the two, there is a danger that ways will soon be found to circumvent this. This was the US experience, as legal provisions existed there separating commercial banks and investment banks from 1933 to 1999, the so-called Glass-Steagall Act, which was adopted following the Great Depression. The provisions were originally very strict, but were gradually watered down, especially after 1980, and finally repealed in 1999.

Secondly, it could be pointed out that it was not only large universal banks – combining commercial and investment banking[133] – which were involved fatefully in the banking crisis. It also struck both large and medium-size commercial banks and savings banks,[134] to a very limited degree involved in proprietary trading – which a narrow banking rule would have prevented.[135]

Thirdly, it can be argued that even if only special, separate institutions pursued investment banking activities, while on the other hand there were purely commercial banks, the same sort of self-fuelling interaction could develop between the two as developed within the large universal banks during the period preceding the 2008 crisis. This could occur if commercial banks originate loans (e.g. housing mortgages) which they then sell to investment banks which process them further, perhaps securitising them with various types of debt instruments for the CDO market. This could result in a rising spiral between two separate banks, since the incentives for such business apply in the same manner between companies as within them. Such a process generally begins with overly optimistic credit assessment, resulting in more favourable pricing of credit for the borrower. This situation can develop just as easily in transactions between two banks, where one is a pure commercial bank and the other a pure investment bank, even though each pursues only its own specialised activities – and respects the Volcker rule in all respects – as within a universal bank. The structural change alone is not sufficient. Actions and rules are needed which affect credit granting itself, whoever handles it, in order to restrict the cyclical nature of the financial system.[136]

The British Independent Commission on Banking, led by Sir John Vickers, was to examine proposals, on the one hand, for structural improvements to the UK banking system and, on the other hand, for other related improvements which could promote financial stability and competition on the financial market. The commission delivered its report in September 2011. It proposed 'ring-fencing' of investment banking activities and normal commercial banking activities within the same group, rather than total separation.

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[133] E.g. Citi, RBS and UBS in the US and the UK, or Landsbanki, Glitnir and Kaupthing in Iceland.

[134] E.g. HBOS, Northern Rock and Indymac in the UK and US.

[135] Such as, for example, the so-called Volcker rule, named for Paul Volcker, former Chairman of the US Federal Reserve, see reference below.

[136] Turner (2010), pp. 59–60.

The British Independent Commission on Banking also proposed considerably higher capital requirements, especially for commercial banking activities.[137]

These proposals are regarded as rather complex in implementation. They involve an attempt to preserve the efficiencies which can result from universal banking activities, while at the same time reducing the tendency to take risks incautiously, increasing banks' capacity to withstand losses without requiring public support.

New US legislation takes a different route, with strict rules on separation and enshrining in law the so-called Volcker rule on separation previously mentioned. Briefly, the gist of this rule is that deposit institutions, i.e. commercial banks and savings banks which accept deposits from the public, are prohibited from proprietary trading in stocks and bonds – except for US Treasury bonds – or from owning holdings in or being connected to hedge funds or equity funds.[138]

Around mid-January 2012, it was reported that Michel Barnier, the EU Commissioner responsible for the single market, had selected Erkki Liikanen, governor of the Finnish Central Bank, to chair a committee which is to investigate whether it is advisable to adopt the US Volcker rule on separation or the proposals of the Vickers report on ring-fencing in all the EU and EEA member states.[139] The committee is to deliver its conclusions in the autumn of 2012. These different ideas and proposals for separation of the two areas of banking activities are disputed, but no doubt the outcome of this will be that a sharper distinction will be made between them, whichever route is taken.

It is important to follow international developments in this area closely before decisions are taken in Iceland on radical changes in the structure of banks and other financial undertakings. It appears evident that financial stability can be increased if a clearer distinction is made between these two areas of banking activities. At the moment, the danger signs of undesirable connections between these two business segments are not a special cause for concern in Iceland's newly resurrected financial system. In view of the experience gained at high cost, there is good cause to be on guard and not to exclude the separation or demarcation of these business segments in future arrangements, not least if international developments head in this direction. Here it could be appropriate to follow up on separation definitively from the start through guidelines issued by FME, which could be codified in more formal rules in light of experience of their implementation.

8.6 Different objectives

It goes without saying that conflicts can occur between the objectives and actions taken for macro-supervision, on the one hand, and micro-supervision on the other. These two areas of supervision, which may need to use the same instruments, although for different aims, can oppose one another. Monetary policy and competition measures can also conflict with macro-prudential supervision of the financial system. Consider possible clashes between micro- and macro-supervision. It is quite conceivable – and in fact there are direct examples of this – that even though all financial undertakings in the market were well protected by good risk management and large buffers on their balance sheets, and satisfied all the requirements of micro-supervision, the financial

[137] Independent Commission on Banking (2011), pp. 7–78.

[138] The Dodd-Frank Wall Street Reform and Consumer Protection Act, SEC. 619. *Prohibition on Proprietary Trading and Certain Relationships with Hedge Funds and Private Equity Funds.*

[139] http://ec.europa.eu/commission_2010-2014/barnier/headlines/news/2012/01/20120116_en.htm

system as a whole could be unsteady, for example, due to its homogeneity and concentration risk, which could even have arisen in part as a result of official rules in connection with micro-supervision. Thus it is possible that the same type of risk management by most financial undertakings as a result of direct provisions – or guidelines – in the micro-supervision rules of regulators could contravene what would be desirable from the perspective of the whole, even if each entity were well managed. Consideration must therefore be given in advance to how such conflicts should be resolved and the most favourable way to assign responsibilities to institutions for such resolution.

8.7 Transparency and responsibility

It is important that all actions by authorities to ensure financial stability are well grounded and access provided to decisions taken to this end and the grounds underlying them as promptly as possible. Care must also be generally taken, however, to time the publication of decisions of this sort so as not to harm the market. There are examples where news of emergency loans from central banks to improve a bank's liquidity has resulted directly in a run on the bank concerned. Thus untimely transparency can work against the actual purpose of the emergency loan, even though it was intended to instil confidence in the credit institution concerned. It is a delicate question. Macro-prudential actions, however, should generally be easier to handle in this respect than micro-actions, directed at a single or a few undertakings. On the other hand, it is by nature more difficult to disclose information on macro-prudential actions on the financial market than, for instance, interest rate changes made as part of monetary policy. The challenge is not least that it is more difficult to define the objectives and success of actions in the area of financial stability in clear and simple language. Unfortunately, there is no simple indicator measuring financial stability in the same manner as price stability, as measured by the CPI, is a simple yardstick of the success of monetary policy. Inflation by this measure is sometimes the trigger for official macroeconomic management measures, e.g. interest rate changes. This connection has now become well known. The same does not apply to financial stability. Apart from this, however, transparency and making decisions and the grounds for them public in a predictable manner is the only way to ensure informed scrutiny of the decisions and responsibility of authorities in this policy area as in others. Experience of monetary policy shows that it takes a long time to create procedures and find a suitable channel for information and decisions on issues of this sort, which will give the public clear insight into the conduct of affairs.

8.8 What institution should be entrusted with responsibility for financial stability policy?

What institution or institutions should be entrusted with macro-prudential policy? This question concerns so many areas of economic management and includes so many conceivable instruments that it is not easy to arrange according to the procedure 'one objective – one instrument – one authority', which is generally applied in other areas of macroeconomic management, not least in monetary policy. Added to this is the fact that in managing entire financial systems, choices sometimes have to be made between different objectives which are at odds with one another. Such a choice can be a politically contentious issue, and it is not given that it can be entrusted to an executive body which has no political mandate from the electorate. For this and other reasons, various

financial authorities will generally concern themselves with financial stability in some manner.

If regard is had for the tasks and human resources of those institutions which currently work in related areas, it is clear that the Central Bank has access to a greater extent to the expertise needed for financial stability policy, or is better placed to obtain this, than other bodies which could be considered. The Central Bank, which is responsible for implementation of monetary policy, as a result has insight into the environment of the financial system in broad terms. The Central Bank is entrusted by law with various tasks compatible with central banking activities. It is to preserve the country's currency reserves, encourage an effective and secure financial system, including domestic and cross-border payment mediation. According to the provisions of the Central Bank Act, the decisions of its Monetary Policy Committee are to be based in part on a thorough assessment of the situation and outlook for financial stability. Furthermore, the Central Bank also has a limited micro-supervisory role with regard to the liquidity position and foreign currency balance of credit institutions, both of which are connected with its statutory role. FME, however, is the general micro-supervisory institution and as a result has special expertise concerning the entities of the financial system – also regarding their liquidity and foreign balance. The Act on Official Supervision of Financial Activities and the Central Bank Act have provisions on mutual exchange of information by FME and the Central Bank and on a co-operation agreement between them. Their most recent co-operation agreement, concluded at the beginning of 2011, provides specifically for co-operation on supervision of the financial system with macro-prudential objectives.[140]

The Ministry of Economic Affairs is a liaison between the two above-mentioned institutions and the political system, and has a formative influence on the legislation and regulatory framework of financial services; it also lays down the individual aspects of policy objectives. It does not, however, appear desirable for a ministry to be the direct implementing body applying the instruments, in part with reference to the fact that it is the Ministry's role to shape the regulatory framework and adopt detailed objectives for the overall management of the financial system. FME, which is and has been a purely micro-supervisory institution, appears not to be currently equipped to undertake macro-supervision of the financial system in addition to its current tasks. It could be said, in fact that the increasing emphasis on macro-supervision of financial markets throughout the world in recent years has been effected because it became clear that special efforts were needed to monitor financial systems in their entirety, rather than merely focusing on the financial situation and risk of individual financial undertakings – this narrow focus has not proven satisfactory. To emphasise the change in direction regarding the financial market it would be desirable to entrust an authority other than FME or the Central Bank with ultimate responsibility for overall management instruments. In this connection it could be pointed out that, since the entities in the Icelandic financial system are relatively few in number there is likely to be less difference between micro- and macro-supervision in this country than is generally the case in larger countries with a more diverse finan-

[140] The new agreement concluded at the beginning of 2011 provides for considerably closer collaboration between these institutions than previously. Emphasis is placed on defining explicitly the responsibilities of each institution and the division of tasks between then. Among other things, the institutions are expected to collaborate in assessing systemic risk for the Icelandic financial system as a whole. The co-operation agreement is included as an appendix to this report.

cial system.[141] However the basic difference – the essential difference – is the same regardless of the size of the financial system.

The entity entrusted with responsibility for macro-supervision of the financial system and to direct the same will, without any doubt, be dependent upon co-operation with other authorities – above all with the Ministry of Economic Affairs, the Ministry of Finance, the Central Bank and FME, which will, other things remaining equal, continue to carry out micro-supervision as well as supervision of financial market conduct and consumer protection.[142] Firstly, the authority responsible for financial stability will require data and information from those parties listed above on government policy and a variety of statistics, on both the financial market and related markets and on the economy in general. Secondly, this authority will need access to qualified personnel to analyse, on the basis of best available data, the financial market situation and outlook and to assess whether actions on its part are required. In the third place, the institution responsible for financial stability policy will generally be dependent upon one of the above-listed government institutions for the implementation of those actions required to ensure financial stability. This implies a need for harmonising views and co-ordinating forces. This could be done in some sort of council or committee with the statutory role of promoting financial stability and directing analysis, supervision and actions in this area.

This group could be called the Financial Stability Council, and would include representatives of the above-mentioned ministries and agencies, preferably with additional independent, outside representatives with suitable experience and expertise. Services for the Council, both secretarial and research services, could be entrusted to existing analytical departments, e.g. within the Central Bank or the Ministry of Economic Affairs. The Council's efforts to achieve joint objectives could be furthered through active co-operation with analysts in the Central Bank, FME, the Competition Authority, ministries, universities and financial undertakings. It appears desirable to build this work on the basis already laid down, on the one hand, with the agreement on appointing the financial stability committee – which has operated for several years under the leadership of the Ministry of Economic Affairs with representatives of the Ministry of Finance, the Prime Minister's Office, FME and the Central Bank[143] – and on the other through the co-operation agreement between FME and the Central Bank signed in January 2011. The co-operation agreement provides, among other things, for regular meetings of the Governor of the Central Bank and the Director General of FME at least semi-annually to discuss financial stability, and for the formation of a joint risk assessment group to evaluate risks facing the financial system with analysts from both institutions. These three venues: the financial stability committee, with a new mandate and composition; regular meetings of leaders of FME and the Central Bank; and organised co-operation between FME and the Central Bank in analysing systemic risk in the financial system, in fact form an operating basis for a Financial Stability Council if such were appointed. It could be advisable, at least to begin with, to

141 As was pointed out in Chapter 6 of the report, concentration on the banking market is not limited to Iceland: the combined market share of the four largest banks in Sweden, Norway and Finland is over 90%.

142 There is in fact reason to examine whether it is feasible for FME to supervise market conduct and consumer protection on the financial market; these tasks could perhaps not less be entrusted to the Competition Authority and/or the Consumer Agency. These tasks are in many respects of a different nature than supervision of the financial situation of financial undertakings.

143 Efnahags- og viðskiptaráðuneytið (Ministry of Economic Affairs) (2010a).

obtain secretarial and analysis services for the Council from the Central Bank, with the participation of FME employees in risk assessment for the financial system in its entirety. This would involve the special joint risk assessment group of the two institutions which is already at work and is intended to weave together micro and macro assessments of risk in the financial system.

The Stability Council could be effective in 'peace time', when there is considerable time to bring up questions which need to be examined and discussed carefully, not least if there are considered to be problems arising in their early stages of concern to the entire financial system. The most favourable arrangements for consultation between the government and institutions once a crisis has hit is a different question, however.

8.9 Prevention and recovery mechanisms

The macro-prudential instruments listed above to manage the financial market as a whole refer in particular to preventive and prudential measures determined in advance. There is also a group of financial stability instruments which are primarily for recovery if things go wrong. Among them are lender of last resort arrangements for financial undertakings which have encountered payment difficulties but are not insolvent, which are the province of the Central Bank. This is sometimes referred to somewhat euphemistically as liquidity provision due to payment difficulties. Also included in this category is a special resolution regime to administer the financial affairs of financial undertakings which face serious financial difficulties or are even insolvent. Such arrangements could perhaps be classified as crisis management instruments rather than macro- or micro-supervision instruments. They do, however, definitely concern financial stability and without doubt affect expectations of the undertakings' management and thereby their market conduct. Arrangements of this sort must be carefully enshrined in acts and rules so that it is clear to market players how the public authorities will respond if difficulties of this sort arise. These recovery instruments could be said to have closer connections with their objectives (i.e. to help banks avoid insolvency or see to the orderly winding-up of a bank which has ended up in financial difficulties, in part to avoid market contagion) than do the preventive instruments which were mentioned for supervision of the financial market as a whole. For this reason it is generally relatively obvious what institution should optimally be entrusted with implementation when dealing with such problems. This applies not least to cases which may involve allocation of public funds. In such cases the Ministry of Finance naturally has a key role.

8.10 Resolution and recovery for financial undertakings in difficulties

The takeover of financial undertakings which face serious financial problems or are actually insolvent, their restructuring, winding-up and related actions have been subject during the past three years to provisions of the emergency legislation, No. 125/2008, on the Authority for Treasury Disbursements due to Unusual Financial Market Circumstances etc., the government's statement on deposit guarantees and provisions of the Act on Financial Undertakings. Provisions authorising intervention in the operations of a financial undertaking in financial difficulties remain, however, Temporary Provisions of Act No. 161/2002, on Financial Undertakings, and unless altered expire on 1 July 2012. It is necessary to set a legal framework which can be used in the longer term for

these recovery and resolution issues. The objectives of government actions when financial undertakings face difficulties should be to limit the flight of capital and systemic risk, as well as encouraging stability in business and industry. The actions and participation of government when financial undertakings are in difficulties is the subject of energetic research by universities, ministries, central banks and financial regulators in Europe, the US and elsewhere in the world, and the drafting of proposals for improvements. The EU is preparing harmonised legislation in this area for its member states, and a draft directive on the subject is expected to be published soon. Once approved, the directive will go through the legislative procedure in the Council and the European Parliament, which could take 1–2 years. The directive will likely be included in the EEA Agreement, and subsequently transposed into Icelandic law. Experience of the implementation of the emergency legislation of 2008 has shown tangibly how urgent it is to enshrine in law clear provisions as to how cases of this sort should be handled.

8.11 International co-operation

All aspects of financial management, whether macro-prudential management or micro-supervision of the domestic financial market, are also relevant for cross-border financial activities. The matter is naturally more complex when both undertakings and authorities in other countries are involved, since there are differences in both laws and the regulatory environment and, possibly, in the economic situation as well. For this reason it is necessary to increase regular cross-border exchanges between supervisory bodies responsible for these issues, both on a bilateral and multilateral basis. It is important to establish such relations while financial activities are proceeding normally, with few complications, to ensure that the communication routes are known and accessible when problems arise. The experience of recent years shows clearly how important and useful such co-operation can be. In August 2010, an agreement was adopted on such a basis for cross-border co-operation between Nordic and Baltic countries to ensure financial stability and co-ordinate responses to financial shocks which affect more than one country. The agreement is based on an EEA accord of June 2008.[144] In addition, FME has observer status in new EU supervisory institutions for financial supervision, as do its sister institutions in EFTA/EEA states, based on Iceland's EEA membership. Formal transposition is planned of regulations on the institutions in the EEA Agreement which will formalise FME's participation.

8.12 Financial stability legislation – umbrella legislation for financial activities

An examination is needed of the benefits of adopting framework legislation for all activities of Icelandic financial undertakings and institutions to ensure that the same provisions apply to financial security, investment of undertakings' assets and their financial market conduct, the eligibility and qualifications of employees and management in this sector, whatever the stated objectives of individual undertakings or institutions may be. Such 'umbrella legislation' could ensure that such provisions apply equally to banks, securities dealers, pension funds and the Housing Financing Fund. In fact, such legislation could be said to be more urgent the more important is the social role of the institution concerned. Such legislation should be under the auspices of the Ministry of Economic Af-

144 Efnahags- og viðskiptaráðuneytið (Ministry of Economic Affairs) (2010b).

fairs to ensure the harmonised implementation of all statutory provisions on financial activities in Iceland. From the perspective of financial stability, it is especially important that such legislation be adopted. Its purpose would be to reinforce the stability of the financial system as a whole. The legislation would provide authorisation to apply general instruments – macro-prudential instruments (cf. Section 8.1 above) – to increase financial system stability. This legislation on financial stability should include provisions on the Financial Stability Council discussed in Section 8.8 above. The Council must be granted broad authorisation to gather all types of information on financial activities and general economic affairs – and authorisation to ensure the necessary communication of information between institutions – so that decisions on applying overall management measures on the financial market will be as well conceived as possible. The Council needs authorisations to make recommendations or give instructions to the relevant authorities on the application of the necessary management instruments. Should an authority fail to comply with such recommendations/instructions, it would be required to explain its decision publicly. Leadership of the Council should, given the current allocation of responsibilities among ministries, be entrusted to the Minister of Economic Affairs. In addition to the Minister of Economic Affairs, the Council would be composed of those other ministers who bear administrative responsibility for the main issues and institutions involved, i.e. the Minister of Finance and Minister of Welfare (or their representatives). The Governor of the Central Bank, the Director General of the Financial Supervisory Authority and the Director General of the Competition Authority (or their substitutes) would be permanent members of the Council, together with independent experts with suitable expertise and experience. The role of the Council will be to assess regularly the risks currently facing the financial system with a systematic risk assessment of the Icelandic financial system and to decide upon the response to imminent systemic risk – in this manner the Council's work would usually connect with assessment of the situation and outlook in the economy in general.[145] These ideas need to be developed further.

It is noteworthy that only a few countries have already set up administrative arrangements of this sort in the wake of the financial crisis. Where fairly fixed arrangements have been introduced in this respect, two types of structures can be distinguished: on the one hand, arrangements where the central bank is entrusted with a broad role in this regard, although generally with input from the government with regard to its mandate (e.g. in the UK and the Netherlands; the relevant legislation has not yet, however, been adopted by the UK parliament), and on the other hand arrangements based on a stability council (or a broadly based committee) under the leadership of the Minister of Finance/Economic Affairs (or their ministries) as the ultimate authority in this area (e.g. in the US and France). It is noteworthy that in its advice to EU member states on conduct of macro-prudential supervision of the financial market referred to above, ESRB presents

[145] In this connection it is noteworthy that on 16 January 2012 the European Systemic Risk Board (ESRB), which was established on the basis of proposals by the de Larosière group in 2009, cf. the reference above, issued recommendations to all EU member states as to how best to introduce macro-prudential supervision and overall regulation of the financial system. The experience of recent years has shown that such arrangements are necessary to ward off systemic financial shocks in the future. These recommendations are published in the document ESRB/2011/3. The time limit given for establishing such arrangements in EU member states was until mid-2013, and they were to have given notice of their plans and decisions already made in this respect before the end of June 2012.

both options as suitable, a 'central bank solution' and a 'council solution'. Nowhere in the Nordic countries has an administrative arrangement of this sort been established yet in legislation, although in all these countries committees are at work on such proposals. The Norwegian government-appointed working group referred to in Section 8.1 above did not reach agreement on these arrangements. The majority of the committee favoured a central bank solution, while the minority proposed to entrust a joint committee with the relevant decisions on actions in this area, with, however, the final executive power to be held by the Ministry of Finance.

Among the first tasks of the Financial Stability Council – or other financial stability authority – will no doubt be to select and develop suitable instruments to serve the purpose of the legislation; as a well-equipped regulatory tool kit is not yet available it will be difficult to prepare the first steps. Legislation adopted on financial stability will therefore have to allow leeway to develop the instruments in light of experience of their use in Iceland and elsewhere.

9

Future structure of the financial system – Summary

9.1 A solid and efficient financial system of appropriate size

The purpose of acts and rules on financial activities is to provide a general framework for regulation with fair rules to encourage the operation in Iceland of a solid and efficient financial system of a size appropriate to that of the economy. The financial market crisis which began in 2007 and 2008 has now developed into a general sovereign debt crisis in many countries. Iceland was hard hit by the financial crisis in the autumn of 2008 and is still struggling with its repercussions, as is described in the preceding chapters. In many countries – in Iceland as elsewhere – ways are being sought to improve and reinforce the laws and rules which form the regulatory framework for the financial market to reduce the likelihood of another such shock occurring while at the same time laying the foundation for a prosperous future for the financial system.

Iceland's prosperity is the product of a competitive, open economy based on foreign trade, which accounts for a high proportion of GDP. Financial services for the Icelandic economy and society as a whole must reflect this basic fact. For this reason, the legal and regulatory framework of the Icelandic financial system must comply with international rules adopted in accordance with international agreements to which Iceland is a party. This international framework has recently undergone changes, not least in response to the financial crisis. Instruments introducing into EU legislation new international rules from the Basel Committee on Banking Supervision (Basel III) have been presented in the form of a draft directive and regulation. These rules are expected to be implemented in the coming years as part of the EU/EEA financial services framework. They involve, in particular, demands for increased and improved capital adequacy, greater liquidity requirements, more effective stress tests and – what is most newsworthy – authorisation to supervisors to limit leveraging and to apply other countercyclical measures for management of the financial system as a whole, cf. Chapter 8 of this report. The original objective of most international rules on financial market activities and their regulation in recent decades has been to level the playing field for cross-border financial activities. One pillar of the European co-operation of which Iceland is a party is, in fact, the free movement of capital without barriers to competition. The financial crisis has resulted in modifying the international regulatory framework, reflecting increased awareness of the importance of financial stability and the understanding that greater regard must be given to the specific circumstances of each country. The task awaits the Icelandic government in the coming months and years of designing a legal framework for Icelandic financial activities which respects international commitments while clearly distinguishing between those deviations from the international norm which represent legitimate security measures in the country's best interests and other provisions which could be

seen as obstacles to competition in contravention of international agreements. In transposing rules into Icelandic law in compliance with EEA/EU acts, an examination should generally be made as to whether special rules or deviations from the usual interpretation could be justified due to the special circumstances in Iceland. It is not always optimal to transpose EEA Directives verbatim as Icelandic law. The unique position of the Icelandic system is naturally determined, as are so many other aspects of Icelandic life, by the country's small population and market size. A small but mature economy and financial system is in essence just as complex as a large one, each aspect of it is just smaller in size. This places heavy burdens on a small nation, which must establish a regulatory framework and supervision of financial activities which can enjoy international recognition and confidence, as this is a premise for competitive foreign trade. For these reasons co-operation in financial supervision with neighbouring countries which are in a similar position in the EEA/EU is of the essence to reduce costs. It does not appear advisable for the government to specifically encourage domestic banks to pursue cross-border banking activities because the capacity to monitor such activities from afar is extremely limited due to the unavoidably limited personnel numbers of official regulatory bodies in Iceland. An independent currency with a volatile exchange rate, which strongly affects price level changes in the country, is another of the unique characteristics of the Icelandic economy which without doubt is a barrier to entry for foreign investment and foreign competition, for instance, on the country's financial market. If the widespread use of indexed financial obligations is added to this list of unique characteristics, it is evident that without changes it will not be easy to ensure diversification of risk in financial activities in Iceland through participation of foreign parties. To overcome this difficulty, it would be conceivable for Iceland to become part of a larger economic entity with a common currency and interest terms which would enable the orderly elimination of indexation. Regarding decisions on such changes, the entire nation will naturally have the last word – and they are a long time in the preparation. This makes it necessary to adapt the framework for financial activities to the prevailing conditions, which can mean extensive actions to reduce exchange rate fluctuations once the present capital controls have been removed. A financial system in a small state, which has easy access to the European financial market, needs robust and efficient financial supervision, both of individual units and of the overall system, and close collaboration with foreign regulatory bodies.

As mentioned in a box insert in Section 8.1, special levies on financial undertakings have been considered – and to some extent implemented – recently as one aspect of efforts to increase the stability of the financial system and cover the cost which financial market shock have caused society. When decisions are taken on actions of this type by the public authorities, it is extremely important to take care that such taxation does not reduce the competitiveness of domestic financial services. As a result, international consultation and comparison in such matters is very necessary. The taxation treatment of financial savings, capital income and financial assets is another aspect of the impact of the public sector on the financial system which needs to be considered in the framework provided for financial activities, as referred to in Chapter 5. This taxation treatment, together with the interest and inflation indexation terms offered on the financial market naturally affect what could be called the supply of financial savings which is an important factor in the growth potential of the economy. Growth of pension funds in Iceland in recent years and decades shows clearly how influential this framework for the supply of financial savings

can be. In this report, however, the focus is primarily on the official framework for prudential and security rules on financial activities rather than this aspect of the matter, though it is no less important.

A novelty is introduced by the Basel III rule book, in the form of measures which are countercyclical and aimed at reducing systemic risk in the financial system. These measures could provide the means to prevent overexpansion, as occurred in the Icelandic financial system up until 2008, when the system outgrew both the Central Bank and the state. For macro-prudential purposes, careful monitoring is required to prevent unrestrained growth of the financial system. This does not imply that it is the task of the state to determine the size of the financial system. The state, however, can shape the market framework to result in a solid system, cost-effective in scope. In this connection it is extremely important to strengthen national economic research in order to provide the best possible foundation for assessing the long-term outlook for economic development and to assess when deviations from the policy adopted have occurred. Naturally, such assessment is generally subject to uncertainty, but for precisely this reason the attempt must be made to base it on the most reliable foundation possible in each instance.

A reliable assessment of this sort is necessary for both the government and financial undertakings and is extremely important for all decisions, whether they concern investment or applying countercyclical policy instruments. Long-term considerations also need to be given increased weighting in the investments of large public funds, such as pension funds. Legal provisions on pension funds' investment strategy must be adjusted to implement this in practice. This perspective is referred to in an assessment of pension funds' investment strategy during the period preceding the 2008 banking collapse, which was prepared by a committee which the State Arbitrator appointed at the request of the National Association of Pension Funds and published in February 2012.[146]

9.2 Separation of investment activities and general commercial banking activities

Upon closer examination, the roots of all financial supervision can be traced to financial crises. Throughout the years, following a crisis authorities have most often decided to adopt stricter rules on the finances of financial undertakings than previously applied. To a certain extent, this is attempting to prevent a crisis of the sort which has already occurred from re-occurring. The legislator's task going forward should be to formulate rules which are not necessarily stricter but rather better than those which previously applied – and ensuring that their enforcement and monitoring of compliance with them is more effective. It has been suggested that instead of more detailed and more stringent rules and regulation of the financial situation of financial undertakings, the organisational structure – of banks primarily – could possibly be modified to make them solider, cf. the discussion in Chapter 8 of this report. In Icelandic circumstances there appears to be reason to advance cautiously in this regard, in part due to the fact that investment banking activities are, because of their nature, currently at a minimum because of the low level of investment. It is also likely that this topic will be dealt with in neighbouring countries in coming quarters; this could provide more suitable models to follow than US or UK solutions to the problem. Added to this is the consideration that, due to the small size of the Icelandic market, synergies arising from

[146] Úttektarnefnd Landssamtaka lífeyrissjóða (Review Committee of the National Association of Pension Funds) (2012), pp. 19 and 51–63.

universal banking activities in the country are likely more significant than in large markets. A careful analysis is needed, based on Icelandic conditions, of what could result from the separation of these two segments of banking operations. Among those aspects which need special consideration in Iceland is the risk which could arise of a strong commercial bank, carrying out extensive investment on own account in the limited Icelandic market, becoming a dominant price setter in the asset market. This plus the oligopolistic situation which already prevails in so many sectors in Iceland, the various personal interrelations of a small society and the limited personnel of regulators, gives good cause to consider structural changes to reduce this risk.

It would without doubt contribute to increased financial stability to avoid mixing these two types of banking activities together incautiously. Care must be taken to examine whether an undesirable mixture of activities could not be prevented with improvements to internal organisation and internal quality control under the watchful eye of the financial supervisor.

9.3 Financial stability legislation – a harmonised framework for all financial activities

There is no denying that the principal flaw in financial supervision in Iceland prior to the collapse – and, in fact, everywhere in the world – was the fact that the regulators failed to see the forest for the trees. They were blind to the gaping fault in the system – which was the lack of supervision of the financial system as a whole. This was definitely the case in Iceland, as the banking system far outstripped both state finances and the national economy but no one paid attention to the threats until the flow of international market funding slowed to a trickle – and by that time it was too late. The financial crisis has revealed various flaws and deficiencies in financial activities and their operating environment. As a result, the framework and structure of the financial system, both in many individual countries and internationally, need a thorough overhaul. Iceland is no exception here. The lack of a clear overview of the financial system and its relationship with the economy comprised the greatest weakness – here as elsewhere. The consequences were especially great in Iceland. It is a delusion – a fallacy of composition – to assume that the financial system must be in good shape if each of its individual units is in good shape. The characteristics of the system as a whole need to be considered, together with the interplay of its individual units – and how they interact with the real economy and with other countries. This is necessary in order to manage the system's inherent tendency to over-expand – not to mention what happens if the individual units are not at all in the good shape they themselves claim. Then disaster awaits. For this reason, emphasis must be placed, in this country as in most others, on finding overall management tools and applying them. Such tools are sometimes referred to as macro-prudential tools, and are intended to have a countercyclical impact on the financial system – to encourage financial stability – in tandem with supervision of individual units.

In the work ahead, an examination is needed of the benefits of adopting framework legislation for all activities of Icelandic financial undertakings and institutions to ensure that the same provisions apply to financial prudence, investment of their assets and financial market conduct, the eligibility and qualifications of employees and management – to every type of activity in this sector, whatever the stated objectives of individual undertakings or institutions may be. Umbrella legislation of this sort could ensure that such provisions would apply equally to

banks, securities dealers, pension funds and public loan funds receiving payments from the public and carrying out securities market transactions as well as lending activities. In fact, such legislation could be said to be more urgent the more important is the social role of the institution concerned. Such legislation should be under the auspices of the Ministry of Economic Affairs to ensure the harmonised implementation of all statutory provisions on financial activities in Iceland. It is especially important for financial stability that such co-ordinating legislation be adopted. The purpose of the legislation would be to increase the stability of the financial system as a whole. It would provide authorisations to apply general management measures, as are discussed in Chapter 8 of this report, to promote the stability of the financial system as a whole. Such legislation – legislation on financial stability – should provide for the co-operation of public authorities: the ministries concerned, FME, the Competition Authority and the Central Bank. This co-operation should take place within the Financial Stability Council, which is discussed in Sections 8.8 and 8.12 above. The objectives of the legislation should be clearly defined and its implementation entrusted to a specific authority. Authorisation needs to be provided for the Council to gather all the necessary information on financial activities and general economic affairs – and authorisation to ensure the necessary communication of information between institutions – so that decisions on applying overall management measures on the financial market will be as well conceived as possible. It would be the task of the Financial Stability Council to regularly assess the risks facing the financial system in an overall risk assessment, and to determine the response to imminent threats. Such work generally involves an assessment of the situation and outlook in general economic affairs. Analytical work and secretarial services for the Council could be linked to a work centre in the Central Bank and include the active participation of the staff of FME, the Competition Authority and ministries. This would form a strong support group for the Council. Given the Central Bank's tasks in the area of financial stability, it would be advisable for it to provide the core of such as support group for the Financial Stability Council.

It is noteworthy that only a handful of countries have already set up administrative arrangements of this sort in the wake of the financial crisis. Nowhere in the Nordic countries, for example, has an administrative arrangement of this sort been established yet in new legislation, although in all these countries committees are at work on such legislation. Among the first tasks of a financial stability authority will be to select and develop suitable tools to serve the purpose of the legislation. As a well-equipped regulatory tool kit is not yet available it will be difficult to prepare the first steps. Some of the management tools which have been suggested are already in use by others or to a different end. It can be difficult to have two or three parties attempting to apply the same mechanisms, making co-ordination necessary. This undertaking is naturally also linked to the Basel III rules, which as mentioned include countercyclical capital requirements to a certain extent. In this regard it will also be linked to EU rules which are now in the pipeline – and will no doubt be included in EEA legislation. Legislation adopted concerning financial stability must take this into consideration, while at the same time providing scope to adapt the tools as necessary as experience is gained in their application.

9.4 Regulatory bodies: Organisation and division of responsibilities

Previously a clear distinction was made in legislation and in the operations of the com-

mercial banks, insurance companies, securities dealers and investment undertakings. In recent years and decades, the boundaries between these different sectors of financial services have become blurred and their fields of activities overlap, e.g. the same company or company group may be active in more than one or even all of the above areas of financial services. This is basically the argument for entrusting one co-ordinated and independent regulatory body to supervise the activities of all financial market undertakings, including the credit market, insurance market, securities market or pensions market. This argument led to the establishment of FME in 1998 and it is still valid today.[147]

For many reasons it is an appropriate division of responsibilities for FME to handle all supervision of individual financial undertakings. The Central Bank then monitors the overall financial system and its stability, in accordance with its statutory role. There must be close co-operation between FME and the Central Bank, both concerning supervision of individual financial undertakings and the stability of the financial system in its entirety. Consultation and collaboration in this regard must also include the Competition Authority and the relevant ministries, as discussed in this report.

It is important to reinforce FME's supervision, in particular systematic supervision of all financial undertakings. It has to be set out clearly in legislation that FME is entrusted with individual supervision of all financial undertakings, i.e. micro-prudential supervision. It must be defined by law which undertakings and institutions and what types of financial activities are covered by FME's micro-supervision, so that the entire financial system is subject to supervision. This is part of what was referred to above as a co-ordinated framework for all financial activities or 'umbrella legislation'.

In 2011 banking experts Pierre-Yves Thoraval and Mats Josefsson submitted various useful comments and proposals for improved organisation and implementation of FME's supervision.[148] These proposals and comments must be examined carefully and regard had for them in practice. FME's organisation has already been modified in the direction proposed by Thoraval, but more is needed to boost the conduct of supervision. Josefsson pointed out that many of FME's employees were engaged in investigating potential criminal violations in the financial system in recent years. These tasks would be better served by an agency specialised in investigating economic crime. He also pointed out that it would be helpful for FME to conclude agreements with its sister institutions in the Nordic countries, in particular to have the opportunity to send employees for training in a well organised and disciplined working environment. There is good reason to second both these proposals.

To make FME's micro-supervision more effective and sharply focused as micro-prudential supervision, it might also be advisable to move what has been called supervision of market conduct and consumer protection to another institution or institutions which deal with related tasks. Such supervision differs from supervision of financial activities of financial undertakings and is more closely akin to police supervision. It is extremely time-consuming and involved, and unavoidably reduces the supervisory strength which can be directed at FME's main task, financial supervision of the activities of financial undertakings.

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[147] Jón Sigurðsson (2009), Davies and Green (2008) and Iðnaðar- og viðskiptaráðuneytið (Ministry of Industry and Commerce) (1998), Chapter 4.

[148] Thoraval (2011) and Josefsson (2011).

9.5 Special resolution regime and winding-up proceedings for financial undertakings in financial difficulties

In light of the experience of the consequences and repercussions of the 2008 collapse, this appears to be a good time to review all legislation on the special resolution regime and winding-up procedures of financial undertakings which have ended up in serious financial difficulties or become bankrupt. Consideration needs to be given especially to the overlap between such provisions and general bankruptcy legislation. Naturally enough, in recent years there has been extensive discussion of this process in neighbouring countries and legislation is being drafted in many countries. There have been announcements that drafts of new EU directives are in preparation, concerning firstly a harmonised recovery and resolution process for financial undertakings which have become insolvent and, secondly, what has been referred to as early intervention in the affairs of financial undertakings which are in trouble to prevent anything worse from occurring. These proposals are conceived not least to introduce harmonised rules as to how financial undertakings with cross-border operations should be handled when they end up in such serious financial difficulties that public intervention is needed.

A new procedure of this sort in the UK, which was enacted in 2009,[149] is noteworthy in this context. Lessons can also no doubt be learned from the legislation under preparation by the EU, but it is no less important to learn from the experience obtained from frequent amendments and litigation in this area in Iceland during the past three years. Since the currently applicable legal provisions in this area, which were adopted with the emergency legislation of 2008, are Temporary Provisions of Act No. 161/2002, on Financial Undertakings, and are currently scheduled to expire in mid-2012, preparing permanent legislation in this difficult area is an urgent task.

9.6 Deposit guarantees and removal of capital controls

Icelandic financial undertakings are currently operating in a sheltered environment with capital controls and a blanket deposit guarantee. Under such conditions, bank deposits are practically the only secure option for Icelandic savers. As a result the banks currently have high liquidity. They now have to prepare themselves to operate in a more exposed environment, when the capital controls are removed, which is likely to be done gradually in the coming years. New legislation on deposit guarantees is currently in preparation and a bill in this regard has been dealt with by the Economic and Trade Committee of the Althingi. The bill is intended to replace older legislation in this area and the blanket guarantee of deposits which has been in force in Iceland since the beginning of October 2008, based on the Prime Minister's statement when the emergency legislation (Act No. 125/2008) was adopted. This statement was subsequently repeated in February 2009 and is still in effect. The new deposit guarantee scheme will be designed in accordance with a corresponding new EU directive providing much higher protection for individual depositors than applied prior to the banks' collapse. Presenting and introducing these new rules must be done with extreme caution, in order not to undermine public confidence in deposit institutions in Iceland. One aspect of the emergency legislation of 2008 deserves special attention in this regard, and the possibility should be

149 The UK Banking Act (2009).

considered of having it remain in effect. This is that deposits (i.e. those which enjoy deposit guarantees by law), or guarantees pertaining to those deposits, will continue to have priority in the winding-up of a financial undertaking. This comprises a considerable guarantee for depositors, not least while the 2008 banking collapse is still fresh in people's minds. The proper time for presenting a government decision in this regard would be in tandem with a bill on a new deposit guarantee scheme being submitted to the Althingi.[150] It could then be declared that, as soon as this bill became law, the blanket government guarantee of deposits would be cancelled. It would be advisable to announce this decision before capital controls are relaxed. In this regard it should be borne in mind that the state's direct and indirect obligations in support of the financial system – as comprised by both the government's stated guarantee of deposits and official deposit guarantee systems – cannot but create moral hazard, reducing the necessary discipline and lending prudence of credit institutions. This moral hazard is without doubt one of the root causes of the financial crisis which began in 2008.

9.7 State strategy as owner of financial undertakings

In addition to adopting laws and rules for the financial system, the state can as an owner of financial undertakings directly affect the organisation of such undertakings. It is important, however, to keep these two roles separate. The state currently holds 81% of Landsbankinn, 13% of Arion Bank and 5% of Íslandsbanki. The remaining stakes are held by three independent holding companies respectively, owned by the estates of the former banks, and ultimately by the estates' creditors. When their winding-up concludes, the estates of the old banks will be converted to asset management companies. Among the assets of these companies will be holdings in the new banks. Since the state is among the creditors of the failed banks' estates, these changes can be expected to increase the state's holdings in the three banks somewhat from the above figures.

The state can determine the future of Landsbankinn to a large extent through the strength of its holding. It is important to carefully consider how this holding is to be disposed of. It is not certain that listing Landsbankinn on the domestic equity market can take place until more experience has been gained of new market listings following the collapse, the bank's NPL ratios have returned to a normal level and the impact of a recent Supreme Court verdict on exchange-rate-linked loans is fully manifest. The government has declared that the state will keep its stake in Landsbankinn for the moment and that as things stand it has no intention of reducing its holding to below two-thirds of the bank's total share capital.

With regard to its stakes in Arion Bank and Íslandsbanki, the state expects that they could be for sale as such or be sold with the banks in their entirety if their majority owners decide to sell. One prerequisite for such sale, however, is that the uncertainty resulting from the above-mentioned Supreme Court verdict has been resolved and the assets of the insolvent estates have been wound up satisfactorily. It is naturally a prime concern for the state in the banks' sale to seek buyers with the capacity to increase the stability of the financial system and instil confidence in it.

It is also important for the state to use its ownership influence in the banks to encourage positive and cost-effective development of the financial market and its organisation.

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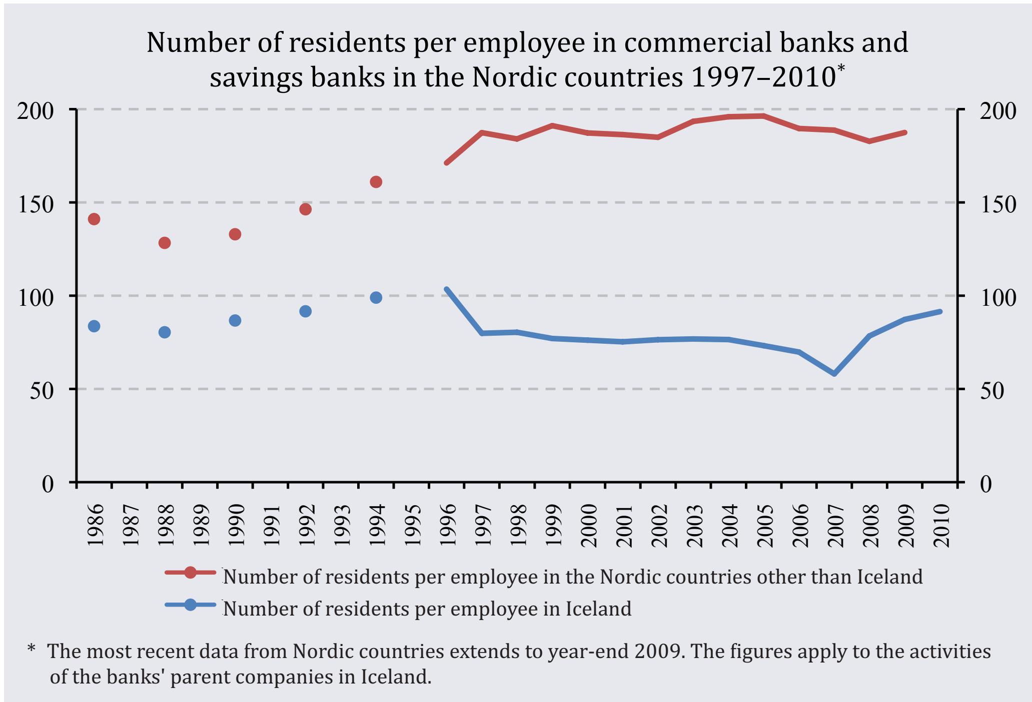
150 Models can be sought abroad of similar arrangements, e.g. in the US. A similar proposal is made in the Vickers Report, Independent Commission on Banking (2010).



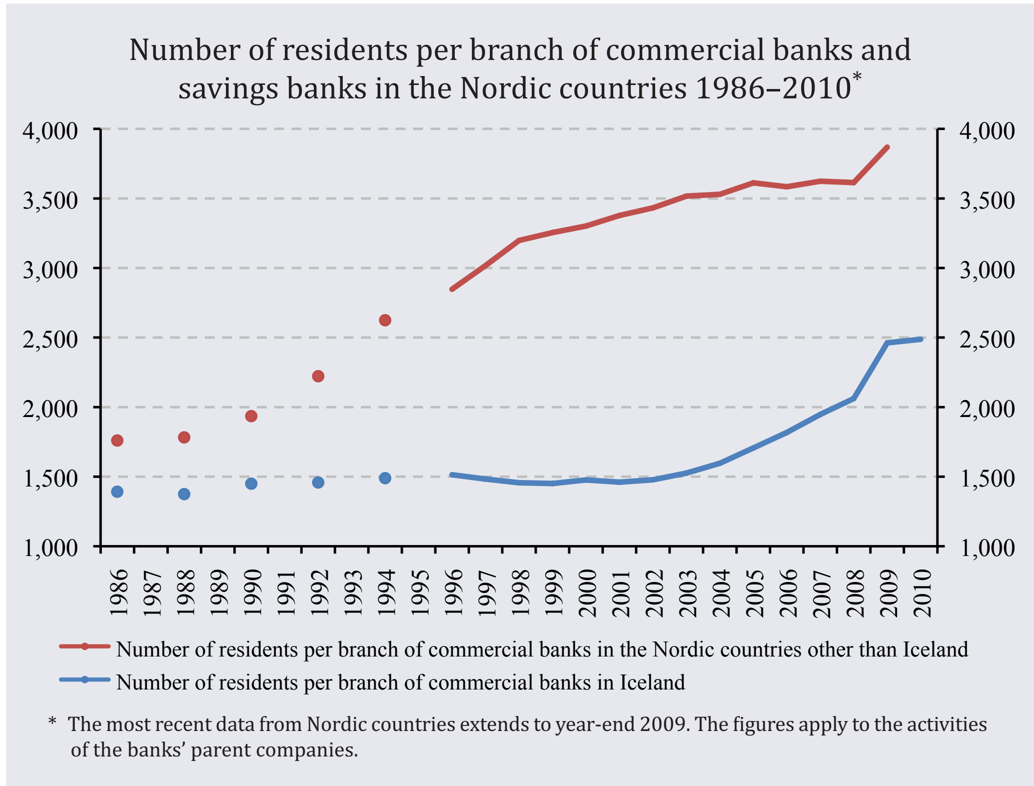
Source: The Icelandic Financial Services Association.

Figure 16: *Number of residents per employee in commercial banks and savings banks in other Nordic countries compared to Iceland.*

As a shareholder in the commercial banks and savings banks the state could, for example, involve itself in the affairs of the savings banks by facilitating their co-operation and consolidation where appropriate. The state must, however, take care to ensure that competition flourishes as much as possible in the financial market. The opinion of the Competition Authority must generally be sought in connection with those organisational changes under consideration. The Icelandic system of commercial and savings banks is too costly and labour-intensive. As figures on the number of employees and branches of commercial banks and savings banks during the recent years and decades show, electronic banking has been much slower in reducing the numbers of employees and outlets in Iceland than elsewhere in the Nordic countries, see figures 16 and 17. Reorganisation of the Icelandic banking system following the financial crisis should present an opportunity to achieve increased cost-efficiency in this regard.

9.8 Financial stability is an important public good

The objective of state involvement in financial activities is to encourage the flourishing in Iceland of a financial system which can resist shocks and withstand the detrimental effects of cumulative systemic risk, whether due to economic cycles or risk which may stem from interconnections of its units. Such detrimental effects – if allowed to continue without proper response – can prevent credit and payments being mediated and risk diversified in a proper way. In the upcoming re-



Source: The Icelandic Financial Services Association.

Figure 17: *Number of residents per branch of commercial banks and savings banks in other Nordic countries compared to Iceland.*

view of financial system legislation, clear provisions on the objectives of the laws must be set in each instance and FME's role defined more clearly than is currently the case. Provision must be made for regulatory bodies, in their decisions, to consider as a rule the objectives of the legislation and information based on an analysis of the financial market situation in each instance. The legal provisions must give regulatory bodies the ability to respond promptly, based on these objectives, to the ever-changing financial market situation. Transparency and responsibility must characterise all such decisions. This is especially important in decisions on applying measures to ensure financial stability. Financial stability is a public good, which is of major significance for the economy and society as a whole. The future arrangements for the Icelandic financial system must aim at making the system solid, effective and of moderate size in relation to the economy. This report is a contribution to discussion as to how this aim can best be achieved.

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Acronyms and abbreviations

Basel III: Standard on bank capital adequacy, stress testing and market liquidity risk
BCBS: Basel Committee on Banking Supervision
BIS: Bank for International Settlements
CBI: Central Bank of Iceland (Seðlabanki Íslands)
CDO: Collateralised debt obligation
CPI: Consumer price index
CRD IV: Fourth Capital Requirements Directive
CRR: Capital Requirements Regulation
DIGF: Depositors' and Investors' Guarantee Fund
EBA: European Banking Authority
ECB: European Central Bank
EEA: European Economic Area
EFTA: European Free Trade Association
EIOPA: European Insurance and Occupational Pensions Authority
ESA: The EFTA Surveillance Authority
ESMA: European Securities Markets Authority
ESRB: European Systemic Risk Board
EU: European Union
EUR: Euro
FATF: Financial Action Task Force
FDIC: Federal Deposit Insurance Corporation
FME: Fjármálaeftirlitið (The Financial Supervisory Authority, Iceland)
FSI: Financial Soundness Indicator
GATS: General Agreement on Trade in Services
GDP: Gross Domestic Product
HFF: Housing Financing Fund (Íbúðalánasjóður)
IAS: International Accounting Standards
IFRS: International Financial Reporting Standards
IMF: International Monetary Fund
ISFI: Icelandic State Financial Investments (Bankasýsla ríkisins)
ISK: Icelandic krona
LCR: Liquidity Coverage Ratio
LÍN: Lánasjóður íslenskra námsmanna (Icelandic Students' Loan Fund)
LTV: Loan-to-Value Ratio
MiFID: Markets in Financial Instruments Directive
NPL: Non-Performing Loan
NSFR: Net Stable Funding Ratio
OECD: Organisation for Economic Co-operation and Development
ROE: Return On Equity
SIC: The Althingi Special Investigation Commission (Rannsóknarnefnd Alþingis)
SME: Small and Medium size Enterprise
TIF: The Depositors' and Investors' Guarantee Fund
UCITS: Undertakings for Collective Investment in Transferable Securities
WTO: World Trade Organisation

Annex I

Cooperation Agreement between the Financial Supervisory Authority and Central Bank of Iceland

The Central Bank of Iceland (the Bank) and the Financial Supervisory Authority (the FME) are required by law, according to Article 35 of the Act on the Central Bank of Iceland, no. 36/2001, and Article 15 of the Act on Official Supervision of Financial Activities, no. 87/1998, to conclude a cooperation agreement. The main objectives of the Central Bank of Iceland are to promote price stability and to contribute to a safe, effective financial system, including domestic and cross-border payment systems. The Financial Supervisory Authority shall attempt to ensure that financial activities in Iceland are in accordance with current regulatory provisions governing those activities and are consistent with sound, appropriate business practice in other respects, and it shall carry out monitoring and surveillance to this end.

In accordance with the foregoing, the roles and tasks of these two institutions diverge in many ways from one another, but both have the objective of promoting a healthy, effective, and secure financial system. The objectives of one institution cannot be achieved unless the objectives of the other are achieved. In view of this, the Central Bank of Iceland and the Financial Supervisory Authority conclude the following

Cooperation Agreement:

1 Aim of the Cooperation Agreement

The aim of the Cooperation Agreement between the Central Bank of Iceland and the Financial Supervisory Authority (FME) is to promote a healthy, effective, and secure financial system in Iceland, including payment and settlement systems. In order to achieve this aim, the following is necessary:

- To define explicitly the responsibilities of each institution and the division of tasks between them;
- To ensure that the institutions work together on their defined tasks;
- To ensure that the acquisition and communication of information from financial institutions and between the institutions is carried out in a systematic manner;
- To ensure that analysis of stability generates a clear picture of financial institutions' strengths and weaknesses and their ability to respond to changes, both in the macroeconomic environment and in domestic and foreign markets;
- To ensure that the work of the two institutions aims at reducing systemic risk, thereby reducing the likelihood of a financial shock;
- To ensure that coordinated contingency plans are in place and that experience is drawn from conducting contingency exercises;
- To assess, on a regular basis, how well the existing regulatory framework conduces towards the achievement of financial stability objectives.

2 Cooperation on supervision and monitoring

2.1 Division of tasks and cooperation – fundamental principles

The Bank and the FME shall cooperate closely in monitoring the financial system. This cooperation involves three things: exchanging necessary information, consulting with the other party before drafting rules or taking action affecting the work of both institutions, and collaborating on defined tasks or projects. The division of tasks between the

two institutions takes account of the provisions of the legislation governing their activities. The following principles shall be upheld:

- Where there is an explicit division of tasks, the party carrying out supervision in a given area shall inform the other party on a regular basis of the supervision conducted; cf. Section 3 of this Cooperation Agreement.
- Where tasks overlap to some degree, supervision shall be coordinated to the extent possible, and information shall be exchanged, including work carried out by risk assessment groups comprising experts from both institutions.

2.2 Supervision of individual risk factors

The following summary defines the main risks facing financial undertakings and specifies which institution is responsible for monitoring them. An entity that monitors risk pledges to prepare, twice a year, a summary of the status of risk factors that it supervises. In areas where responsibility for monitoring and supervision overlap, risk assessment groups shall operate and the supervisory entities shall make available an assessment of risk, together with recommended responses. In assessing risk and recommending responses, the supervisory entities shall take a position on systemic risk in particular.

Included here is a summary defining the main risks facing financial undertakings and specifying which institution is responsible for monitoring them. There will be four risk assessment groups: a foreign exchange risk assessment group, a funding risk assessment group, a settlement and payment intermediation risk assessment group, and a special micro/macro risk assessment group whose task is to analyse risk related to the operations of individual financial undertakings, on the one hand, and systemic risk, on the other.

The groups shall divide tasks amongst themselves and shall coordinate monitoring of foreign exchange risk, liquidity risk, settlement risk, and payment intermediation. In dividing up tasks and coordinating the committees' work, it should be noted in particular that both institutions carry out off-site monitoring, while the FME also conducts on-site inspections. The FME's monitoring the above risks is a part of risk management monitoring and internal audit of supervised entities and will be useful to the Central Bank in following up on the precautionary rules set by the Bank.

2.3 Cooperation on drafting and adoption of rules

In their work, the Central Bank and the Financial Supervisory Authority attempt to maintain a clear overview of how current laws, regulations, and other directives achieve the objectives aimed at in this cooperation agreement. The Central Bank and the Financial Supervisory Authority also adhere to the policy of being leaders in the development and shaping of new laws and rules in their respective areas and to propose statutory innovations to the Minister of Economic Affairs or other relevant minister. Where the roles of the two institutions overlap – cf. the summary of the main risks faced by financial institutions, in Section 2.2 above – they shall consult and cooperate on such development. The initiative for such work may come from regular consultation meetings between the Governor of the Bank and the Director General of the FME, from currently working risk groups, or from other parties. The contact persons for the implementation of such cooperation are the Chief Attorney of the Central Bank and the Chief Attorney of the Financial Supervisory Authority.

3 Analysis of systemic risk

The FME and the Bank cooperate in their attempts to improve both institutions' analysis of the interplay between risk related to the operations of individual financial institutions and macroeconomic factors. The rules and

Risk of financial undertakings	Monitored by the Central Bank	Monitored by the FME	Risk assessment groups
Credit risk		X	
– including large exposures		X	
– including other concentration risk		X	
Market risk		X	
– including derivatives		X	
Risk due to asset-liability mismatches		X	
– including foreign exchange risk	X	X	X
Funding risk		X	
– including liquidity risk	X	X	X
– including capital adequacy		X	
Operational risk		X	
– including legal risk		X	
Systemic risk			
Micro/macro	X	X	X
Payment and settlement systems			X
– including oversight	X		
– including monitoring of systems	X	X	
– including monitoring of entities	X	X	

monitoring directed at the operations of individual financial institutions may be referred to as microprudential supervision, while those aimed at reinforcing the stability of the financial system as a whole may be referred to as macroprudential supervision. An analysis of systemic risk must incorporate both of these. To that end, a special micro/macro risk analysis group shall be established; cf. Section 2.2 and Section 3.1, which covers the topics for discussion at joint meetings of the Central Bank Governor and the Director General of the FME.

3.1 Joint meetings of the Central Bank Governor and the Director General of the FME

At least twice a year, the Governor of the Central Bank and the Director General of the FME shall meet, together with senior experts from both institutions. The two institutions shall take turns preparing and calling the meetings. The aim of the meetings is to assess the scope of systemic risk in the Icelandic financial system. Expert groups from both institutions, including the risk assessment groups, shall meet in advance of these meetings in order to review the topics for discussion. The topics to be discussed at these meetings include the following:

- Macroeconomic stability, market developments, and the likely impact of both on the financial system, with macroprudential considerations as a guiding principle.
- An assessment of microprudential risk factors. The key financial ratios from the financial institutions' accounts, such as capital ratio, liquidity ratio, leverage ratio, foreign exchange balance, and other figures that could shed light on risk in the financial system, including developments in large expo-

sures and lending to related or connected parties.
- An assessment of the interplay between risk related to the operations of individual financial institutions and macroeconomic factors.
- The status of payment and settlement systems and monitoring of these systems.
- Statutory and regulatory instruments governing financial activities.
- Improvements to contingency plans.

In addition, the Governor of the Central Bank and the Director General of the Financial Supervisory Authority shall meet at least once a year, together with the pertinent experts, in order to exchange information and discuss cooperation between the two institutions in a broader context. The two institutions shall also take turns preparing and calling these meetings.

3.2 Meetings of expert groups

Groups of experts from both institutions, including the risk assessment groups, shall meet as often as necessary in order to review risk factors; cf. Table 1 in Section 2. The groups shall set their own rules on preparing and calling the meetings.

4 Acquisition and reciprocal communication of information

4.1 Current arrangements

Appendix 1 to this Agreement specifies the current arrangements concerning the data to be collected by the respective contracting parties and states which information shall be provided to the other party and in what form. This arrangement shall be maintained until a revised and improved arrangement has been prepared; cf. Appendix 2.

4.2 Revised arrangements

The contracting parties are of the opinion that it is possible to make major improvements concerning acquisition, communication, and processing of data (see Appendix 2). To that end, ideas concerning a joint database for data acquisition and processing are being considered and evaluated. The fundamental idea is that the financial institutions will send data to a data submission system operated jointly by the Financial Supervisory Authority and the Central Bank. The data would be read in automatically, and the integrity of the data would be verified. The database would be connected to user-friendly report-generation tools where employees in each of the two institutions can retrieve the data they need and are authorised to access according to access control rules.

Elements of this attempt to improve execution are:

- To prevent gaps in the collection of data necessary for satisfactory monitoring and supervision and for an assessment of systemic stability.
- To take account of information that is not submitted during regular data submission but can have a decisive effect on stability; for example, market conditions, changes of loan agreement terms, etc.
- To reduce duplication of effort, which places unnecessary strain on financial institutions, raises supervisory entities' costs, and causes confusion.
- To enhance technical cooperation in the information field.
- To transmit information seamlessly between the Central Bank and the Financial Supervisory Authority and facilitate data processing.
- To work together on information exchange with foreign supervisory entities.

5 Responses to systemic risk or shock

5.1 Reporting requirements in the event that an imminent problem is suspected

If examinations by the FME reveal suspicions concerning shortcomings in the financial position of parties that are subject to official supervision and are engaged in trans-

actions with the Central Bank or operate extensively in the markets, concerning violations of rules governing payment and settlement systems, or concerning the risk of a systemic crisis in the financial markets in other respects, the FME shall immediately notify the Governor of the Central Bank.

If examinations by the Central Bank reveal suspicions of shortcomings in the financial position of companies in the financial markets, operational risk or violation of rules and agreements governing payment and settlement systems, or of serious difficulties in the financial markets in other respects, the Central Bank shall immediately notify the Director General of the FME.

In the above cases, the Director General of the FME and the Governor of the Central Bank shall respond in accordance with their institution's respective internal procedures.

5.2 Cooperation on contingency plans and exercises

The contracting parties shall attempt to develop measures to foresee operational difficulties in the financial market and in the operations of individual financial institutions in the market. They shall cooperate in presenting scenarios that will be useful in stress tests and as the basis for contingency exercises.

The Financial Supervisory Authority and the Central Bank shall formulate and maintain their own contingency plans, which shall take account of the contingency plans drafted by the other entity. Each institution shall grant the other access to this information. The need for improvements to contingency plans is assessed at senior management meetings (see Section 3.1).

At least once a year, joint contingency exercises shall be held for the financial system. Contingency exercises for payment and settlement systems shall be held separately. The Central Bank and the Financial Supervisory Authority shall participate in contingency exercises based on international agreements.

5.3 Cooperation on measures

When severe difficulties such as liquidity or capital adequacy problems arise in the operations of a financial institution that, due to its position or to external conditions, is systemically important in the financial market, the contracting parties shall consult on the measures to be taken. The same applies when the problems concern other companies in the financial markets, or the financial markets as a whole. If the Central Bank considers the possibility of providing a loan or guarantee to a credit institution in accordance with Article 7, Paragraph 2 of Act no. 36/2001, it will act in close collaboration and consultation with the FME on resolving the problem that may have arisen.

Each contracting party is solely responsible for the measures it is authorised to take in accordance with its role.

6 Other matters

6.1 Participation in international cooperation

Contracting parties shall consult with each other on participating in international cooperation and attending meetings connected with the role of both parties. Furthermore, each contracting party shall inform the other of matters that arise in international cooperation and concern the role of the other party.

6.2 Confidentiality

By law, information provided by one contracting party to the other shall be kept confidential. Such information shall only be used in the contracting parties' activities. The contracting parties shall ensure that they do not disclose information on the basis of the Information Act without consulting with the party that acquired it.

6.3 Validity

This Agreement supplants the Cooperation Agreement dated 3 October 2006. It shall be reviewed if either or both parties consider it necessary, or at least once every two years.

Appendices to this Agreement may be amended by the Director General of the Financial Supervisory Authority and the Governor of the Central Bank with their signatures.

Reykjavík, 6 January 2011

Financial Supervisory Authority

Gunnar Þ. Andersen
Director General

Central Bank of Iceland

Már Guðmundsson
Governor

Annex II

Agreement
on the Appointment
of a Financial Stability Committee

Agreement

among the Ministry of Economic Affairs, Prime Minister's Office, Ministry of Finance, Financial Supervisory Authority, and Central Bank of Iceland concerning collaboration on financial stability and contingency

Financial Stability Committee

The Financial Stability Committee shall be a forum for consultation, exchange of information, and drafting of proposals related to financial stability and co-ordination of contingency measures in case of a potential financial crisis. The Committee is also intended to promote transparency concerning the division of tasks among the parties and the collaboration among them. The Committee is a consultative body and does not take decisions on measures but shall propose measures when necessary.

The Committee can sponsor and participate in contingency exercises related to possible financial market crises. The Committee shall also handle co-operation with the Nordic countries and other European countries in case of a possible financial crisis, as the Domestic Standing Group of the Icelandic authorities. The members of the Committee shall represent the Ministry of Economic Affairs, the Prime Minister's Office, the Ministry of Finance, the Financial Supervisory Authority, and the Central Bank of Iceland. The representative of the Ministry of Economic Affairs shall chair the Committee and steer its activities. Committee members and others who appear before the Committee shall respect confidentiality obligations concerning information revealed in connection with the Committee's work, in the same manner as the institutions that provide information to the Committee. The Committee may decide to call in representatives of other institutions, ministries, or other entities if necessary.

This Agreement shall not affect the parties' responsibility for their functions, nor shall it prevent them from taking decisions in accordance with their authorisations in their respective areas.

At its meetings, the committee shall discuss i.a. the following:

- Current situation and prospects in the financial markets;
- Consultancy and actions by the authorities in the event of possible financial market shocks;
- Major amendments to acts of law, regulations, and procedures pertaining to the committee's field of activity;
- Developments and changes in international co-operation, particularly within the EEA.

Contingency and Procedures

The committee shall meet at least six times a year. It shall convene meetings at the request of any member and immediately if the Director of the Financial Supervisory Authority and/or the Governor of the Central Bank so request due to events pertaining to the state of financial undertakings or markets. In instances where the affairs of the Housing Financing Fund are discussed, a representative of the Ministry of Social Affairs shall be invited to the meeting.

If circumstances develop that are consid-

ered to jeopardise the financial system as a result of a shock sustained by an individual financial undertaking or the market, the Committee shall discuss the matter without delay and shall propose courses of action to the Ministerial Economics Committee, as well as the Director of the Financial Supervisory Authority and the Governor of the Central Bank. Divergent points of view shall not prevent the Committee from submitting recommendations to the above-specified parties; rather, the recommendations shall reflect the various opinions held by the members.

Proposed solutions or courses of action shall take into consideration the circumstances prevailing at any given time. In order to ensure financial stability, the Committee shall attempt, in preparing its recommendations, to find solutions that place financial liability for the operations of the financial institution concerned on the shareholders, guarantee capital holders, boards of directors and managers and not on the Treasury.

The bodies represented on the Committee shall take the initiative to inform the Committee in a timely and satisfactory manner of matters falling within its purview; cf. however, statutory provisions on confidentiality.

The chair of the Committee is responsible both for ensuring that informative minutes are taken at each meeting and for preserving the Committee´s documents. The minutes of the previous meeting shall be discussed and confirmed at the beginning of each meeting. In general, the agenda of the meeting shall be available with two days' notice if at all possible.

The chair of the committee shall ensure satisfactory disclosure of information on the work and proposals of the Committee and the status of financial markets to the Ministerial Economics Committee. Similarly, individual Committee members shall inform the ministers or other officials of the institutions they represent of discussions taking place at Committee meetings.

Review of the Agreement

This Agreement shall be reviewed in view of domestic and international developments and whenever any of the parties so requests.

6 July 2010

Jóhanna Sigurðardóttir
Prime Minister

Gylfi Magnússon
Minister of Economic Affairs

Steingrímur J. Sigfússon
Minister of Finance

Már Guðmundsson
Governor of the Central Bank

Gunnar Þ. Andersen
Director of the Financial Supervisory Authority