



REPORT

CENTRAL BANK OF ICELAND

No. 8

Financial Stability: The Role of the Central Bank of Iceland

*A report by Sir Andrew Large
at the request of the Central Bank of Iceland*

October 2012

Central Bank of Iceland

Financial Stability: The Role of the Central Bank of Iceland

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FINANCIAL STABILITY: THE ROLE OF THE CENTRAL BANK OF ICELAND

A report by Sir Andrew Large¹
at the request of the Central Bank of Iceland

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In addition to those in Iceland I would like to thank Alastair Clark, Advisor to HM Treasury and member of the UK's Financial Policy Committee, Gavin Bingham, partner of Systemic Policy Partnership and Oliver Wyman for their comments.

Please note that the views in this report are mine and do not necessarily reflect those of those I met or who provided comments.

1. Founding Partner, Systemic Policy Partnership LLP.

Cover Memorandum

To the Governor, Central Bank of Iceland
From Sir Andrew Large
London. 1 May 2012

Dear Governor

Final Report

I attach the final report in relation to the project which you asked me to undertake in relation to financial stability and systemic oversight. In this I have focussed on the four areas covered in the agreed scope, namely:

1. Design of a macroprudential framework; based on the most recent international practices, with due regard for the Icelandic environment.
2. Interface between micro supervision and macroprudential framework - status quo or alternate arrangements.
3. Crisis management and trigger mechanisms.
4. CBI organization – recommendations, i.a. with respect to financial stability and interaction with other areas within the Bank.

I have benefitted from my discussions in Reykjavik both in November and early February, and comments received from various parties and I hope this report will form a useful basis for your deliberations on the way forward and those of the Wise Man Group.

In the meantime my thanks to you and all your colleagues, as well as many others who gave me their time during my trips to Reykjavik, for all the help they have provided in the production of this report.

With kind regards

A handwritten signature in black ink, appearing to read 'Andrew Large', with a horizontal line underneath.

Andrew Large

FINANCIAL STABILITY: THE ROLE OF THE CENTRAL BANK OF ICELAND

Contents

Structure of report and executive summary	7
Financial Stability: Introduction, definition and objectives	11
Chapter 1 Design of a Macroprudential Framework	17
1.1. General Issues of Principle and Practice.....	17
1.2. How should the framework be designed for Iceland?	24
1.3. Basic design of Macroprudential Group.....	28
Chapter 2 Interface of Macroprudential and Microprudential.....	35
Chapter 3 Resolution arrangements: crisis management and trigger mechanisms	39
Chapter 4 CBI Organisation.....	47
Selected Bibliography	50
Appendix 1 Consolidated list of recommendations.....	51
Appendix 2 Macroprudential frameworks: International comparisons	55
Appendix 3 Definitions, Indicators, Data/information and Instruments.....	58
Appendix 4 Framework for Macroprudential and Resolution Policy.....	63

Structure of report and executive summary

Scope

The scope of this report was defined by the Central Bank of Iceland (CBI) as follows.

1. Design of a macroprudential framework; based on the most recent international practices, with due regard for the Icelandic environment.
2. Interface between micro supervision and macroprudential framework - status quo or alternate arrangements.
3. Crisis management and trigger mechanisms.
4. CBI organization – recommendations, inter alia with respect to financial stability and interaction with other areas within the bank.

Structure

Accordingly the report has been structured as follows:

The report opens with a section on *Financial Stability: Introduction, definition and objectives*; introduces the subject generally and comments on the efforts made to date to improve the framework in place. It then reviews, with recommendations, a potential definition of financial stability together with objectives that might be put in place in order to deliver financial stability objectives effectively.

The report is then divided into four chapters to conform to the scope, and recommendations felt to be relevant for the Icelandic context are put forward. In each case the report outlines the background and status quo, and arguments in favour of change.

Please note that the scope of this project did not include analysis of the manner in which microprudential supervision is conducted, nor the structure of the financial services industry in Iceland. It did however specifically cover the interface between macroprudential and microprudential activities - the subject of Chapter 2.

Please note also that an overarching challenge, which the report attempts to confront, is the need to put in place governance arrangements for policy areas whose implementation necessarily involves the active engagement of several otherwise independent entities on an integrated basis. This presents issues given the need to respect the existing governance arrangements of each entity.

Content

Chapter 1 Design of a Macroprudential Framework

Examines major issues encountered generically in approaching this area, considers the implications of each of these issues, and concludes with recommendations for the Icelandic context.

A two tier process for a macroprudential authority consisting of a Financial Stability Council (the Council) and an operational Macroprudential Group (MG) is recommended to provide adequate governance for the framework and ensure that the necessary tasks are performed in the steady state environment.

The chapter is divided into three parts.

- 1.1 *General Issues of Principle and Practice* reviews a number of generic issues that arise in all jurisdictions in relation framework design;
- 1.2 *How should the framework be designed?* takes account of these issues and sets out within the Icelandic context how the overall construct for developing macroprudential policy might be designed; and
- 1.3 *Design of Macroprudential Group (MG)* looks at the specific features of the operational features of the framework as to how the actual process of assessment and decision-making in relation to macroprudential policy might be conducted. This includes questions of transparency and publication, accountability and governance. Note that the recommendations assume the retention of the essential character of CBI as central bank and Fjármálaeftirlitsins (FME), the financial supervisory authority, as a single unitary supervisory authority respectively (but see recommendations in Chapter 2).

Chapter 2 Interface of Macroprudential and Microprudential

Addresses the interface between macroprudential policy and microprudential policy and the extent to which the institutional architecture as regards where supervision is conducted in relation the central bank is of relevance. It presents certain arguments which on balance support the case for architectural change.

The chapter considers the possibilities of either a full merger of CBI and FME or a 'Twin Peaks' variant, with prudential supervision being transferred to CBI and financial conduct including both market and consumer protection issues remaining at FME. The arguments are developed as to how any such change could contribute to a more effective framework for conducting financial stability policy.

Chapter 3 Crisis management and trigger mechanisms

Considers the range of issues for which both legal underpinning and institutional focus is desirable in the crisis state.

Just as a coherent framework to conduct macroprudential policy in 'peacetime' is of value, so is the need to prepare and establish 'in peacetime' a complementary process for implementation when handling a crisis should it occur, together with the transition between them. This chapter examines the attributes most relevant to creating such a framework. The Council would be common to the oversight of both peacetime and crisis situations. To some extent the recommendations and observations which follow are designed as guide posts to focus effort which is already under way. The comments are informed by discussion with members of CBI, Ministry of Economic Affairs and FME.

The chapter extends the two tier concept into the crisis environment. It reviews the issues presently under consideration in Iceland and suggests expeditious action in the area generally so that a complementary (though perhaps contingent) framework to handle resolution issues in the crisis state is developed alongside the macroprudential framework. It recommends expeditious action to create a workable resolution framework.

Chapter 4 CBI Organisation

Considers desirable organisational change at CBI to reflect the recommendations in this report, both in the case of supervision remaining in FME as an independent organisation, and in respect of possible architectural change.

Appendices Are provided as per the contents above. To assist forming a quick overview readers are referred to Appendix 1 which lists all the recommendations in the report, and Appendix 4 which provides a chart illustrating the overall 'Construct' design.

Engineering

Despite Iceland's small size we have opted for a relatively detailed set of recommendations. The sophistication of governance and accountability arrangements in Iceland suggest that a framework with a fairly structured approach would be appropriate, reflecting at least some of the elements found in larger jurisdictions. Many of the proposals in this report reflect experience in such jurisdictions. They aim at ensuring that the many complex and interconnected issues are coherently addressed, whilst respecting the different governance arrangements of the different agencies involved. No doubt some simplification may be possible but the tasks and functions need in any case to be performed effectively to confront the challenges which Iceland faces. Equally the recommendations in some respects represent a simplification of existing arrangements.

Terminology

Please note the following terms used and in conjunction with the Chart in Appendix 4.

Macprudential Authority (MA). Combination of a *Financial Stability Council (the Council)* at ministerial level and a *Macprudential Group (MG)* at the level of the central bank and supervisory authority.

The *Council* at top level would comprise the Minister of Finance (in the Chair), Governor of the Central bank and CEO of the supervisory authority. Others might include the head of the Deposit Guarantee Fund. This Council would be the highest authority in relation financial stability, both steady state macroprudential policy issues and during time of crisis.

It should set the mandate and objectives of the *MG*.

The *MG* would be housed at the CBI and be responsible for assessment and conduct of macroprudential policy under a remit laid down by the Council. It would comprise a *Macprudential Committee (the Committee)* and a *Support Unit*.

It will respond to the *remit* set by the Council; act as a *point of focus* to achieve the objectives set for financial stability policy; create a '*radar*' early warning system; assess *structural and conjunctural issues* and vulnerabilities and develop and oversee implementation of policy response on the basis of relevant data/information and indicators.

The Committee, chaired by the Governor of the CBI, will make assessment and policy decisions and recommendations for the conduct of macroprudential policy.

The Support Unit will support the work of the Committee with appropriate dedicated resource.

Financial Stability: Introduction, definition and objectives

Introduction and guiding principles

The financial crisis which began in 2007 and arguably afflicted Iceland more severely than almost any other country was the product of many factors. Many jurisdictions - US, UK and many other countries, especially in Europe, - suffered and are still suffering as a consequence. Most countries were ill-prepared to respond once the crisis began.

The background included hubristic and irresponsible management within financial institutions, over-confidence in mathematical models without proper regard for the assumptions on which they were based, distorted incentives both within the financial sector and between the financial, commercial, personal and public sectors, and defective macroeconomic policy which paid too little attention to the accumulation of financial risks. The issues were amplified by an ample supply of cheap credit at the global level (partly created by the savings glut and global imbalances). In a general sense and in addition regulation proved ineffective and lagged behind practice in the institutions being regulated by focussing too much on detail and not enough on the stability of the financial system as a whole. The mismatch between on the one hand the rapid progress of financial globalisation driven by deregulation and market forces and on the other the lagging international and regional regulatory frameworks and safety nets proved a major cause of the problems. In Iceland's case, this is illustrated by the existence of the 'deregulatory' EU wide passport on the one hand and the existence of an ill prepared national regulatory system, safety net and crisis management on the other.

Many of the issues which faced Iceland were therefore not unique in kind; but in some respects they may have been unique in degree. Several countries – notably the UK, the Netherlands and Switzerland – had banking sectors, and even individual banks, which were very large in relation to the domestic economy. But nowhere was the disparity more acute than in Iceland. Again, a number of countries have experienced serious fiscal pressures as a result of having to recapitalise or otherwise bail-out parts of their financial sector. This was true in Iceland although some other countries e.g. Ireland were even worse affected because they bailed out bank bond holders. But in few, if any, cases has the overall impact been more severe than in Iceland. At the same time, widespread weaknesses in crisis management techniques and procedures have been exposed; but here too the problems in Iceland seem to have been unusually severe. Moreover, the difficulties for Iceland have been exacerbated by the fact that much of the Icelandic banks' business involved international liabilities and claims, making resolution more complicated.

Against this background the wide scope of the proposed review of the overall financial stability framework, covering preventative measures, both macro and micro, crisis management arrangements and institutional structures and responsibilities, seems appropriate.

A number of guiding principles have to be followed in designing a framework for financial stability:

1. A successful framework requires the *input and engagement of a number of institutions*, with a shared objective of delivering financial stability.
2. There is, nevertheless, a need for a *clear institutional focus of authority* with an objective, mandate and powers to deliver.

3. That point of focus needs to adopt an *integrated approach*, to the many tasks involved linking collection of data/information and market intelligence, analysis and assessment, development of policy proposals, and implementation.
4. There are at least two sub-objectives beneath that of overall financial stability, which we label "*conjunctural*" and "*structural*". The former is concerned with identifying and addressing risks such as an undue build-up of leverage, credit, or debt; the latter is concerned with monitoring and enhancing the resilience of the financial system and its capacity to weather shocks while continuing to provide essential financial services.
5. Given the potential cost of "excessive" financial stability (or, perhaps more accurately, excessive de-risking) in terms of economic efficiency and growth, there is a political judgment to be made about what level of risk a country is prepared to sustain or conversely *how safe the system should be*.
6. Given that macroprudential policy interacts with a range of other policy areas, some *tension and conflicts of objectives are unavoidable* both on the substance of policy and in inter-institutional (and conceivably interpersonal) relationships. Ways to manage and minimise these need to be found.
7. It is critical to have an appropriate cadre of *high-quality staff* with the right experience and the capability and confidence to make difficult judgments. This is a key point and of particular relevance for Iceland given its small size.
8. Conduct of macroprudential policy requires *effective tools* at its disposal.
9. The lead macroprudential authority as well as the resolution arrangements needs to be subject to appropriate *governance, transparency, and accountability* arrangements.
10. The difference between "*peacetime*" and *crisis* needs recognition, as do the different arrangements to handle these two states, and the transition between them.

Accordingly in what follows we have used these features as important guidelines for our approach.

Status quo as at April 2012

Structural initiatives

Various structures relevant to financial stability are now in place after consideration at ministerial level, by the CBI, FME and others. These include inter alia:

1. The Committee on Financial Stability (CFS). The CFS is advisory and provides a platform for information sharing. It is chaired by the Ministry of Economic Affairs composed of officials from that ministry as well as the Ministry of Finance, Prime Minister's Office, FME and CBI. (The CFS has been modified since the crisis but was in existence before it struck.)
2. Joint meetings on financial stability held bi-annually, chaired alternately by the Governor of CBI and the DG of FME.
3. Micro-macro risk analysis group. This was formed under the auspices of the Cooperation Agreement between CBI and FME January 2010, with six members from each institution.

Each of these is designed to help address the inadequacy in financial stability policy making which was a significant factor in the collapse in 2008. They are no doubt improvements on the status quo ante in the absence of other arrangements. On the other hand, even though useful, they do not seem to constitute a coherent framework, with clear objectives. This report seeks to provide such a framework.

Legislative initiatives

Whatever process or architecture is chosen, several authorities need to contribute to financial stability policy. Given the importance of this policy area it would be wise to enshrine their intended contributions in legislation. At present, we do not believe that this is achieved. Real guidance is needed as to

what the central bank or the other financial authorities should do in terms of preparing for and acting in relation to crisis prevention, crisis resolution, and the interface between them.

Separate legislative initiatives in Iceland are on the agenda in the following areas which are or will be of direct relevance to financial stability:

- Review of the Central Bank Act (in addition to several changes enacted over the last few years including the creation of the MPC).
- Depositors' and Investors' Guarantee Fund (Bill presented to Parliament but withdrawn and subject to amendment).
- Resolution framework including crisis handling (to replace Emergency Act of October 6th 2008).
- Special bankruptcy legislation (Act No 21/1991 on Bankruptcy and Act No 161/2002 on Financial Undertakings (AFU), to be considered alongside the resolution framework).

It is important that these legislative initiatives are pursued in the context of a coherent framework for financial stability.

Many other jurisdictions are going through similar thought processes at this time, and accordingly it is hoped that the recommendations in this report will help to inform and prioritise these important initiatives.

Reviews and reports

Finally we are also aware that a report by the Ministry of Economic Affairs has been presented to Parliament (late March 2012). This report has been prepared in parallel. We understand that both will be inputs for the Wise Man Group due to commence its work under the chairmanship of Jon Sigurdsson during April 2012 with the intent of coming forward with formal recommendations for change by autumn 2012.

Financial Stability Definition and Objectives

To achieve such a coherent framework and to assist prioritization of initiatives suggests the need to develop a definition of financial stability and a set of objectives to achieve it:

Recommendation 1

The need for a definition and objectives. A definition of financial stability and a statement of the associated objectives should be developed as guidance for the construction of a policy framework. Ideally they should be set out in statute.

Possible alternative definitions

Any system of financial intermediation, and especially any system which involves intermediaries with mismatches in the nature (maturity, credit characteristics etc) of their assets and liabilities, is exposed to the risk of instability. In the extreme, beyond a tipping point which it is hard to judge ex ante, confidence may collapse either in a particular institution, or more broadly in the capacity of the system as a whole, to meet claims when due. A rush to risk free cash is the likely result. In turn this herd behaviour may, if unchecked, lead to a general liquidity shortage and thence through fire sale effects to insolvencies. Given the importance of the financial system in channelling savings into investment, and therefore in the overall functioning of the economy, state intervention may be justified, however unwelcome, to avoid or ameliorate the effects of any serious disruption of the system and so minimise the social cost. The extent of possible state intervention is however limited by the size of the fiscal base and objectives therefore need to be set with this in mind, whilst avoiding excessive caution and unnecessarily stifling economic activity.

In contrast to monetary policy, however, where a number of well-recognised, quantifiable indicators have been adopted as targets (eg inflation rates, exchange rates, rates of growth of monetary or credit aggregates), there are no such established measures of financial stability. Indeed, despite much debate, there is no generally agreed definition of financial stability; and there remains much uncertainty about the transmission mechanism between various plausible policy instruments (eg capital requirements) and the desired end result. There is also the question of whether a positive definition ('financial stability') or a negative definition ('financial instability') is the more useful approach. 'Achieving and maintaining stability', even though not easy to define, is what people want. There are also however merits in a negative definition ie 'avoiding instability', insofar as instability, in the sense of dislocation or loss of confidence in the system as a whole, is readily observable and arguably provides a more direct guide in making policy decisions and determining necessary actions.

Against this background we suggest several optional definitions in Appendix 3. Of these we believe that the following represents the most practically useful. It is less directly rooted than some of the alternatives in macro-economic ideas about the role of the financial sector in intermediating savings, but it is closer to an operational description of what financial stability policy aims to do. What it omits however is any indication of a cost/benefit trade-off in assessing possible financial stability measures. This is addressed as an addendum under Objectives below.

Recommendation 2

Definition of Financial Stability. 'Financial Stability' Stability' is a state in which there are no and there is confidence that there are likely to be no substantial discontinuities or disruptions in the functioning of the financial system and in which, should such disturbances occur, their impact on the financial system and real economy is minimized. This definition should be placed in statute.

This definition would encompass the banking and financial system, the Housing Finance Fund (HFF), and the pension fund sector, as well as the links between them.

Formulation of practical Objectives

Advances in thinking, and experience gained during the current crisis, together with the imperative to find ways of preventing a recurrence, are now encouraging the development of more fully articulated frameworks for the delivery of financial or systemic stability. Many elements have been identified in an increasing literature including from the IMF and FSB (bibliography to follow) as well as reports of eg the G30 group chaired by Paul Volcker (2010), the EU group chaired by Jacques de Larosière (2009), the subsequent activities in the EU itself, the UK, USA and a number of other jurisdictions. They include:

- Monitoring and if necessary containing leverage (in a broad sense), so that the system is resilient in the face of asset price shocks whether internally or externally generated. In practical terms leverage should remain below a level at which shocks might precipitate a 'tipping point' calling into question general confidence in the system and a 'rush to cash'
- Ensuring that the financial system is resilient, including the capacity of the system to accommodate the failure of a financial institution, without calling into question the stability of the system as a whole. This needs to acknowledge that the same institution may be 'non-systemic' in some circumstances but 'systemic' in others.
- Ensuring the existence of adequate, perhaps contingent, resolution machinery in case disaster strikes and crisis ensues, together with a process for handling the interface between steady state and crisis.

Recommendation 3

Objectives. The financial stability function should aim to deliver and maintain financial stability as defined above. To achieve this, practical objectives should be set for:

1. Macroprudential policy: to review and assess the systemic conjuncture and resilience of the financial system; to identify actual or incipient threats to financial stability or actual system-wide vulnerabilities; and to apply the policy instruments or tools available to address these threats.
2. Supervisory (microprudential) policy and oversight: to identify specific vulnerabilities or threats affecting individual (or groups of) financial institutions or markets, together with regulatory/supervisory measures to address them; and
3. Crisis handling and resolution: involving the development and preparation of efficient means of invoking crisis management mechanisms, the associated resolution issues should they arise, and the crisis handling mechanism itself (including statement of 'who is in charge').

Addendum: The estimated direct and indirect cost of implementing policies and actions to deliver financial stability should be less than the estimated cost of failing to achieve it.

If objectives such as these had been articulated and acted upon prior to the crisis, Iceland would in our view have been better able to respond to the warning signals that in retrospect appear to have been so clear. There are a number of references consistent with this view in various IMF Article IV and FSAP updates. A comprehensive overview is to be found in the IMF report – written by the Independent Evaluation Office.¹

1. *IMF Performance in the Run-Up to the Financial and Economic Crisis IMF Surveillancein 2004–07*. The report is available on the IMF website.

1. Chapter One: Design of a Macroprudential Framework

This chapter examines major issues encountered generically in approaching this area, considers the implications of each of these issues, and concludes with recommendations for the Icelandic context.

A two tier process for a macroprudential authority consisting of a Financial Stability Council (the Council) and an operational Macroprudential Group (MG) is recommended to provide adequate governance for the framework and ensure that the necessary tasks are performed in the steady state environment.

1.1 Macroprudential Policy: General Issues of Principle and Practice

1.1.1. Issue I: Should macroprudential policy be developed as a genuinely separate policy area?

Despite contrary arguments we believe the arguments in favour of such a development predominate.

Iceland was by no means unique in lacking both an articulated policy objective and the means to deliver it. Many mature economies had failed to articulate the goal of systemic financial stability and the avoidance of crises, and hence to develop a policy framework to cater for it. For example our reading of the literature suggests that instruments that might have been used were left aside with little thought to deciding which instruments might be most appropriate, or how they should be deployed.

In many jurisdictions therefore macroprudential policy was taken for granted in two senses:

- First, as an objective, it was obviously desirable and therefore did not need to be spelled out.
- Second, at least by implication, it was thought to be a by-product of pursuing sensible macroeconomic and regulatory policies, allied to belief in the Efficient Markets Hypothesis, and again therefore did not need to be separately recognized. Debt and leverage were considered as 'residuals' in contemporary analyses, forgetting that in times of stress they become the determinants.

Recent experience – including that of Iceland itself - has called both of these propositions into question. It is, therefore, now widely accepted that a separate objective - a macroprudential objective relating to the stability of the financial system as a whole - needs to form part of the overall economic and financial policy framework. The question nonetheless still arises as to how far it is possible or sensible to “silo-ize” macroprudential policy alongside other existing policy areas such as monetary policy or welfare policy.

To create a robust 'siloed' policy area requires a mixture of both objectives and instruments. In favour of creating such silos is clarity and accountability. However an alternative - in theory at least - would be to recognize the interactions among instruments and to set them simultaneously to deliver the best fit to a number of different policy objectives. The disadvantage of this approach is that governance of the process might well be impractical as goals and responsibilities become blurred.

For Iceland, we can see three approaches to addressing this dilemma. The option chosen by any individual country is likely to depend on factors such as the size and stage of development of its financial sector, attitudes to governance and accountability, the channels of interaction between the financial system and the real economy, and the extent of its international financial linkages. The options are:

- Ask each policy area – not just monetary policy but other areas of policy or silos including those related to growth and welfare - to “take systemic or macroprudential issues into account”. Because

of the complexities and uncertainties of implementation and the inertia or resistance from existing silos, we believe that this risks being ineffective.

- Acknowledge the need for a separate policy “channel” but fuse this into an existing policy area (the usual candidate being monetary policy). We believe that this risks confusion through trying to meet two policy goals within one framework.
- Put in place a specific framework for macroprudential policy – a 'silo' – with objectives, instruments and powers capable of delivering policy response.

The vulnerability of Iceland given its interdependence with the international community and small size makes particularly acute the need to ensure systemic issues are adequately addressed and we believe this would be best achieved through the third option.

Recommendation 4

Creation of a Macroprudential Policy Framework. A framework should be designed to meet the macroprudential objective with responsibility for regular monitoring and assessment of systemic risks and for initiating and pursuing action in response. It should reflect both experience and emerging international practice. This suggests the creation of a Macroprudential Authority as an institutional point of focus. Due regard should be paid to the Icelandic environment.

Such an approach is increasingly being adopted in many other jurisdictions. comments on international comparisons are attached (Appendix 2)

1.1.2 Issue II: How can conflicts of objectives with other policy areas be handled?

Recognizing that conflicts between financial stability and other objectives are inevitable, machinery needs to be created to resolve such conflicts

In broad terms, stability of the financial system and macroprudential policy designed to achieve it should be consistent with other desirable economic (and indeed social) goals. Instability in the financial system is likely to mean that the economy as a whole is unable to function efficiently with potentially serious social costs. At the margin, however, there may be tradeoffs.

1.1.2.1 Systemic policy and growth

For example a regulatory regime that requires excessive levels of capital may ensure systemic stability but at the same time unnecessarily inhibit the growth and risk-handling capacity of the economy. Equally, rapid economic growth associated with an excessive and conjuncturely dangerous expansion of credit, leverage, and debt may well - as again evidenced by recent experience - lead to financial instability.

In practice, the conflict between systemic stability and growth may, be more apparent than real, certainly in the long term. In stable periods, macroprudential measures may constrain growth. The alternative, however, is a higher probability of financial crises, with significant periods of negative or low growth. In reality, the sustainable rate of growth consistent with the maintenance of financial stability seems unlikely to be lower over a long period, and may in fact be higher than it would be if the risk of financial instability were disregarded.

1.1.2.2 Policy Conflicts

In formulating the macroprudential policy objective, an important consideration, therefore, is how to capture these trades-offs without losing a clear focus on systemic stability. Other policy domains with which trade-offs can arise include fiscal policy, competition policy, housing policy, industrial (and fisheries) policy, welfare and consumer protection policy.

The potential for conflicts therefore exists in all jurisdictions and Iceland is no exception. The existence of the conflicts in themselves is inevitable: the question is how best can they be reconciled. A mechanism needs to be installed to manage them.

1.1.2.3 The challenges of symmetry: techniques to alleviate problems of policy conflict

Under the arrangements recommended in this report, a number of techniques suggest themselves to address such conflicts. The danger of over-zealous pursuit of financial stability is that other policy objectives are sacrificed to a greater degree than objectively might be necessary or desirable. One approach to capturing this is through requiring 'symmetry'. There may be a useful analogy in the symmetrical target approach taken by some countries in relation to monetary policy and inflation. In this area a target is set with a ceiling but also a floor on the level of inflation. In a similar way, some counterbalance is needed for macroprudential policy to avoid the potential "overcooking" of stability measures at the cost of a disproportionate impact on growth or other policy objectives.

The problem is that while, in principle, a symmetric approach may be attractive, it is much harder to implement in the context of systemic stability, because there is no quantifiable measure of stability. It seems logical that those responsible for macroprudential policy should be required to have regard for the other policy objectives on which macroprudential policy might have an impact. But the obvious questions then are 'which other policy objectives?' and 'how much regard?' And in relation to answering the latter how to avoid dilution of transparency and accountability? An alternative would be to define ex ante a hierarchy of objectives, that is, to give explicit priority to, say, inflation over systemic stability.

Even to state this, however, highlights the difficulty because in some circumstances it may be sensible to strike the balance in one place whilst in other circumstances priorities may be reversed. Furthermore, even with a hierarchy of objectives, there would still be the question of how to set the relevant instruments to respect the prioritization. A mechanism for resolving conflicts will need to be found.

In conclusion, whatever the mechanism, recent experience has demonstrated that financial stability in general, and macroprudential policy as an essential contributor to its delivery, needs to be given higher priority than in the past. But some flexibility to accommodate a changing environment is necessary.

Recommendation 5

Macroprudential Authority and conflict resolution. The Macroprudential Authority should oversee and manage conflicts of policy both within the financial sector, and, with the appropriate ministerial interface, as they relate to other authorities in Government. It should assert the 'case' for financial stability measures so that appropriate mechanisms are found to ensure that tradeoffs are consciously thought through and the primacy of delivering systemic stability is respected.

1.1.3 Issue III: How much of the macroprudential regime should be set out in statute?

A number of general considerations argue for setting out the broad framework of macroprudential policy in statute:

Reasons favouring guidelines in statute include:

- As a new area of policy, a statutory framework would help to ensure that its aims, powers and responsibilities are as clear and transparent as possible.
- Insofar as macroprudential policy may involve overriding or modifying actions taken by other financial authorities (for example, those of FME or the Ministry of Welfare), it is important that there should be a clear framework for decision making.
- A statutory framework would facilitate the creation of clear channels of accountability for the overall conduct of macroprudential policy, something that has come to be regarded as increasingly important in all policy areas in recent years.

- Insofar as macroprudential policy may have in the past suggested taking actions that would have relied on “presumptive” powers, that is powers based on custom and practice rather than having statutory backing, such an approach may no longer be acceptable or safe.

However, there are a few arguments against statute, notably:

- Many elements of macroprudential policy remain analytically uncertain, not well-defined, or both; these include, pre-eminently, definition of the objective in any quantifiable way.
- Trying to carve out a distinct macroprudential policy “silo” requires management of interactions with other areas of economic and financial policy (see Issue II above).

Conclusion

We believe that the arguments weigh in favour of introducing some form of explicit statutory framework - and probably sooner rather than later while memories of the crisis are still fresh.

Lack of statute in this area was highlighted by the Special Investigation Commission ('SIC') which reported to Althingi in April 2010 and comments on legislative change are made in the CBI Financial Stability report 2010 p 55 onwards.² These suggest an overall lack of legal clarity as to responsibilities in the build-up of the crisis.

Equally in the present state of knowledge and experience, it is probably best to keep the framework flexible and relatively simple. There is a need for balance without too much precision in legislation, to enable flexibility in the light of experience.

This balance will address what should be covered by statutory law itself setting out the objectives and intent, perhaps with key features, and then filling out the rest of the framework through regulations and administrative process. Accordingly the following recommendation reflects the above points:

Recommendation 6

Approach to Statute. A statutory approach would be desirable balancing clarity with the need for flexibility. Candidates for inclusion in statute include:

- Definition of financial stability (see recommendation 2).
- Objectives of each of the three policy areas, perhaps by administrative order (see recommendation 3).
- Specific responsibilities of the CBI and the FME in relation to financial stability.
- Data/information required from beyond the regulatory perimeter.
- Appropriate powers to deploy policy instruments.
- Separate but connected backing for a resolution framework.

It is accordingly recommended that on completion of this exercise, and depending on which recommendations may be accepted, an exercise to examine existing legal powers is undertaken to see what set of coherent alterations may be desirable.

Consideration should be given to the needs for flexibility, with statute being reserved for high level issues, and more detailed intent being handled through forms of regulation and administrative process.

Legislation in this area is being introduced in countries such as the UK, and it would be wise to study these initiatives to decide which aspects would be most suitable for Iceland (see and bibliography).

2. <http://www.sedlabanki.is/lisalib/getfile.aspx?itemid=7986>.

1.1.4 Issue IV: How should the identifications of vulnerabilities be approached?

Identifiers of vulnerabilities are important and useful. However their value as part of a radar function is dependent on the judgment of those who use them.

All countries struggle with how best to approach identification of the most useful indicators of three main sources of systemic financial vulnerability - unsustainable trends in financial aggregates over time (such as leverage and debt), an unstable pattern of financial exposures (including currency and maturity mismatches) and structural weaknesses (such as inadequate regulation). A significant issue inherent in using indicators is that their relevance to vulnerabilities is time and state dependent. The key ingredient to success in developing the necessary radar early warning system is accordingly to have people capable of making good judgments. The issues are discussed in Appendix 3.

The potential indicators of systemic significance are many and varied. They need to be considered from the points of view both of *conjunctural* trends and exposures as well as *resilience*. Judgment as to importance - even with access to relevant data - is difficult and relies on individual expertise. Agility of thought and thinking ahead are key. And relevant indicators will change since they are time and state dependent.

In Iceland's case the forensic evidence as outlined in the SIC report suggests that a number of indicators were visible but were not acted on in the build up to the crisis. This included (in the sense of the conjuncture) the growth and size of the banking system and the fact that the banks' balance sheets built to over 10 times GDP; the extreme external imbalances including the size and dynamics of the carry trade; the extremes of foreign currency risk; and the internal imbalances including corporate and household debt.

Other criticisms (more related to questions of resilience/structure) included inadequacies of the supervisory process (despite favourable reports from the rating agencies); divergence of behaviour of the Housing Financing Fund (HFF); handling of the resolution process and overreliance on short term financing; regulation of liquidity; shortcomings in relation to understanding the drivers of systemic risk build up; contradictions in monetary policy versus liquidity provision; and lack of credibility of the central bank as lender of last resort (see also Governor Gudmundsson's analysis re 'fault-lines in cross border banking', referred to in the bibliography).

1.1.5 Issue V: What data/information are needed?

Data or information needed to support macroprudential analysis go beyond what is normally collected for the purposes of monetary policy and microprudential financial regulation.

The extent to which this is so is still under debate, but it is clear that the capacity to obtain data/information on institutions and operations outside the regulatory perimeter is needed. In addition, information may be necessary from multiple sources including from judgmental market intelligence, and from beyond the regulatory boundary: the relevant means are needed to obtain it. Cost considerations also need reflection. Please see Appendix 3 for further discussion of data.

In general, a balance needs to be struck between what data/information may seem desirable, avoiding getting swamped by data overload and duplication in data collection and, above all, ensuring focus on what is indeed relevant.

See recommendation 16 below.

1.1.6 Issue VI: What macroprudential policy instruments are available and will they work?

Many instruments can be used for macroprudential purposes: most will already be used by other policy makers. Questions of how to furnish macroprudential policymakers with authority for use of instruments arise.

1.1.6.1 General Uncertainties

The likely effectiveness of the instruments that may be used for macroprudential purposes is an area of continuing uncertainty. At least in the mature economies, few of the potential instruments have been used to pursue macroprudential objectives. Consequently, there is limited practical experience to call on. This is less true in relation to some Asian economies, and important lessons are available from their experience.

1.1.6.2 Choice of Instruments

The choice of instruments depends partly on the definition of objective and in particular if the target of attention is conjunctural or structural based.

It is very hard to identify a distinct set of “macroprudential instruments” whose sole or main effect is confined to systemic stability. Many of the instruments that might potentially be of value in delivering a macroprudential objective are already assigned to other policy silos and their goals. Thus, short-term interest rates are typically used in monetary policy to influence nominal demand and thence, inflation; and capital requirements are one of the main instruments of (microprudential) regulatory policy, designed to limit the likelihood of default by individual banks or other financial institutions. These instruments, though set to achieve other objectives, can nevertheless have an important influence on systemic stability.

The balance of instruments and powers may also need to be different in different cases; for example, overall capital requirements may be useful as a macroprudential tool while still leaving some flexibility at the micro level to address individual bank risks. Equally, if the focus is on structure, a different range of perhaps more qualitative instruments is likely to be needed for the successful delivery of policy. In addition the potential for 'leakage' (ie circumventing the intent of the instrument) through forms of international activity will require careful scrutiny.

Issues related to instruments for addressing conjunctural and structural risks are considered in Appendix 3.

See recommendation 15 below.

In conclusion the choice of instruments and their associated powers requires flexibility as more is learned about their effectiveness and calibration issues. This will be an important task for any macroprudential authority.^{3, 4}

1.1.6.3 Powers

Whatever the choice of instruments there clearly needs to be confidence that they will be properly deployed. Given the potential diversity of instruments, the MA needs to have correspondingly flexible powers. For some policy instruments, it may be given the power to direct their usage; in others, it could be given a power of recommendation, where the recipient authority is required to 'comply or explain'; and in others, it may simply have a responsibility to make public recommendations for other authorities to “take note” without necessarily providing a formal response. It is in any event unlikely to be realistic to give any one body a formal, general overriding power of instruction: it would probably be too wide-ranging to be politically acceptable.

So there may well be a need to experiment. The UK model is worth reviewing where the macroprudential authority, existing in an interim phase, is itself required to propose to Parliament the instruments over which they seek to have direct authority or to have some influence.

3. main categories of instrument are well referenced in the CBI Report 'Monetary policy in Iceland after capital controls' <http://www.sedlabanki.is/?PageID=287&NewsID=2679> offers good source material for main categories of instrument and includes a section on macroprudential issues and tools [pp 35-43].

4. IMF source docs (see bibliography).

1.1.7 Issue VII: How should the transition from peacetime to crisis and crisis itself be handled?

Financial stability policy has to cater for two very different states of the world, steady state or 'peacetime' and crisis or 'war'. The overall governance of the two states has to be coherent, and to cater for a trigger' mechanism between them. Equally, management, skills and powers necessary to conduct policy in each of the two states need to differ. Preparations for triggering and handling 'war' situations however are vital and must be put in place and tested during peacetime.

This chapter focuses on the governance of the steady state macroprudential activities, whilst the area of resolution and crisis handling, and the links between them including the role of the MA is covered in chapter 3 below.

The Chart in Appendix 4 illustrates the essential 'construct' as to how the transition between these two states of the world could be managed within the two tier framework.

However the following questions arise and are addressed below

How do governance arrangements and responsibilities need to change when moving from "peacetime" to the management of a crisis?

What procedure should govern the transition from "peacetime" to crisis?

Does macroprudential policy continue to have a role and if so what?

What can macroprudential policy contribute to the response?

1.1.8 Issue VIII: How can domestic and international arrangements best be fitted together?

How far is it possible or sensible to develop macroprudential policy on a national rather than an international basis? If international consensus is not achievable, which elements of macroprudential policy can be implemented at the national level?

1.1.8.1 Icelandic situation

Iceland is naturally conscious of being highly vulnerable to the international environment. At root it was the import of foreign concepts and arrangements, without fully being able to place their implications into an Icelandic context, which led to catastrophe. These included the implications of the EEA passport given Iceland's membership, the quasi global acceptance of the Efficient Markets Hypothesis and consequent downplaying of potential systemic risks, the advent of derivitised opaque techniques to create credit and leverage, the ability to hide or obfuscate the sources of credit creation as a part of the globalization culture, etc.

So the limitations of a purely domestic Icelandic approach to macroprudential policy, and the need for maximum engagement to ensure awareness of the implications of international developments when considering policy response, will be extremely important. The radar function referred to above will need to play a special role.

Given the degree of interconnectedness among major financial centres and, therefore, the exposure of one national financial system to problems in others, the desirable aim – however difficult to achieve - is for a high degree of convergence in relation to macroprudential (as well as other aspects of financial stability) policy. Without that, significant arbitrage opportunities are likely to emerge (in relation, for example, to additional capital requirements). These may undermine the impact of national policy measures and lead to competitive distortions and are of particular importance for open and smaller jurisdictions.

On the other hand the attempts to achieve international harmonisation and a level playing field could result in the neglect of country-specific risks that might require specific measures. Care is needed to avoid that from resulting. A case in point relates to the currency mismatches and the maturity mismatches in foreign exchangebalance sheets of the Icelandic banks. Others could arise in the future.

1.1.8.2 National frameworks

The potential for actual delivery of policy in the area has to lie with national jurisdictions themselves. It is with them that the relevant legal powers and backing, as well as fiscal base reside. Furthermore, there are always some country-specific risks that national regulators and supervisors need to confront. This seriously limits the capacity of international bodies to take on an operational role in crisis management and places a greater emphasis on the need for each jurisdiction to adopt a macroprudential framework such as that outlined for Iceland above.

The current approach in international discussions does indeed place emphasis on encouraging individual countries to develop effective national macroprudential policy arrangements. The recently announced initiative by the European Systemic Risk Board (ESRB), which requires all the members of the EU to adopt a macroprudential policy framework, is relevant in this context.⁵ The ESRB cannot deliver the policy goals as such: this has to be done by the individual jurisdictions. Equally both the Financial Stability Board (FSB) and the International Monetary Fund (IMF) can in principle play a valuable role in identifying risks, promoting preventive measures, setting and enforcing standards, and disseminating good practice. The IMF too is developing thinking in this area given its historical role both in handling macroeconomic problems (which might lead to financial crises) and in encouraging resolution of longer-term issues of macroeconomic convergence. In the absence of a substantial degree of international convergence however an unanswered question remains. Will countries be able to bring about significant improvement in national systemic stability without incurring, at least in the short term, seemingly unacceptable costs? Clearly resource constraints are significant and the most efficient means of deploying such resources is needed.

Recommendation 7

International Fora. There would be value for Iceland to continue to participate to the extent that resources permit in relevant international fora. The intent would be twofold.

First, to ensure that Icelandic authorities understand clearly international initiatives in the macro and microprudential fields in order to facilitate sensible implementation.

Second, through financial diplomacy and example, to seek to influence outcomes (perhaps collectively with other smaller jurisdictions), so as to ensure that the concerns of Iceland as a smaller jurisdiction are adequately accommodated.

1.2 Macroprudential Policy: how should the institutional framework for Iceland be designed?

This section examines how the generic issues covered above may be operationalised as an institutional point of focus in an Icelandic context. Note that in what follows in this chapter we have based the analysis on the assumption of the status quo being maintained as to the institutional separation of microprudential supervision from the CBI, ie that the FME and CBI remain as separate entities with their roles and responsibilities suitably modified to accommodate the proposed recommendations. Other alternatives are examined in Chapter 2.

1.2.1. General Issues

1.2.1.1 Timing and exit from capital controls

Although the immediate pressures from the crisis have eased as Iceland adjusts to a simpler and smaller financial system, the global scene remains extremely strained, and Iceland would be wise to consider the development of a macroprudential framework expeditiously. In addition a specific set of potential vulnerabilities exists in terms of the planned exit from the present capital controls.

5. http://www.esrb.europa.eu/pub/pdf/ESRB_Recommendation_on_National_Macroprudential_Mandates.pdf?2cd7c2bd74528e510fdc54d5b2bea0f8

This will involve some risk. There are uncertainties associated with both conjunctural and resilience aspects. These include uncertainties in relation to the behaviour of holders of offshore kronor; impact on investment activities of eg the pension funds, impact on CBI fx reserves; impact on government funding; impact on funding of the banks; as well as the implications of any substantial foreign ownership of banks.

They extend to the robustness of market intelligence and data/information in relation to the various parties and their intentions and the strength of supervisory process or controls over significant investors. A strong framework, once in place, would be of value in the judgements that will have to be made to minimise systemic dangers arising on exit. Equally an understanding of the issues will also be of value to condition the development of the resolution regime under discussion (Chapter 3).

1.2.1.2 Inter-relationships of policy areas and authorities

Macroprudential policy touches on a number of distinct though related policy areas and can be delivered through a wide range of instruments. It is, therefore, hard to fit into the "one objective, one instrument, one authority" model that has been adopted in other policy areas.

Moreover, some elements of macroprudential policy involve trade-offs and policy conflicts which may be politically contentious. For these and other reasons until now, at least two financial authorities - CBI and FME - and three ministries (Economic Affairs, Finance and Welfare) had an interest up to the present, even if in differing degrees, in macroprudential policy.

1.2.1.3 Roles and capabilities of different authorities

In practice, however, a large part of the technical expertise relevant to the conduct of macroprudential policy is likely to be found in CBI in its capacity as a central bank, and, to some extent, in the microprudential regulator, FME. Moreover, CBI has responsibility for the execution of monetary policy and has a hands on knowledge of the operation of financial markets. It will for that reason be familiar with much of the wider context for macroprudential policy.

1.2.1.4 Ministry Involvement

The importance of the interface of the MA with the political dimension is stressed throughout this paper. Striking in the Icelandic case has been the situation hitherto with the involvement of two and possibly three ministries. The Ministry of Economic Affairs has to date been the main 'reporting' interface, but the Ministry of Finance has had a vital role in providing the capability of fiscal support which is a key issue in all systemic thinking. In addition the role of the Ministry of Welfare needs to be considered.

Respective roles of Ministry of Finance and Economy (MFE) and Ministry of Industry and Innovation (MII).

We have therefore noted with interest the decision announced on 21 March but taking effect 1 September, to merge the Ministries of Finance and Economic Affairs and form a new ministry called the Ministry of Finance and Economy (MFE). CBI will fall under this ministry. However, as we understand it, and though perhaps subject to review, financial market issues, including institutionally the FME will, as currently formulated, fall under a new Ministry of Industry and Innovation (MII).

We certainly feel that it is an advance for CBI to fall under the Ministry of Finance. This is the norm internationally for reasons outlined below.

We do however have significant reservations about the FME falling under the MII for the following reasons.

Firstly in a general sense in our view there is a potential for confusion and muddle if two ministries are involved. The priorities of a ministry with business development objectives are surely likely to be different from those of a ministry with fiscal priorities.

Secondly the objective of innovation and business development may be at odds with that of financial stability. Yet clarity, with no confusion over objectives or policy delivery, is particularly important in the systemic area. Confusion would be a real possibility in our view if the two institutions most involved in collective endeavour to deliver such policies, namely CBI and FME, came under different ministries. We argue elsewhere that:

- A single set of objectives and clear mandate (as well as ongoing intensive engagement) should apply to the activities of both FME and CBI.
- This is true both for early warnings and preventing crises on the one hand (macroprudential policy) and coping with them to minimise their social impact on the other (crisis handling and resolution).
- In turn this calls for governance and accountability processes to overarch the conduct of policies related to financial stability as a whole in an integrated manner.

We would argue that these points call for the two authorities to come under a single ministry.

Thirdly the international norm is not only that there should be a single ministry but that this should be the ministry of finance. This arises because:

- Ministries of finance are commonly those held responsible for monetary/macroeconomic policy.
- In addition they are where the potential for necessary fiscal support resides at a time of crisis. At such times there is no realistic alternative - as became clear in many jurisdictions, including in retrospect Iceland, during the events of 2007-8. In public handling terms it is vital to demonstrate that there is a single party 'in charge', and in fiscal terms etc this has to be the ministry of finance.
- The necessity of being prepared to handle crisis suggests that the ministry most involved at such times should play the lead role in steady state as well which is when, importantly, the preparations for crisis have to be both put in place and tested.
- The necessary disciplines to ensure systemic security and the good conduct of macroprudential policy in a steady state environment are in our view more likely to be provided by ministries of finance than those with business or commercial development responsibilities.

There may of course be good reasons and a legitimate interest by the relevant ministry (MII) to promote healthy development of the financial sector. Equally it is true that legitimate conflicts of policy are inevitable. For this reason proposals are made in this report as to how policy objectives other than those of stability may be taken account in setting macroprudential objectives (see below). We would recommend therefore that serious consideration is given to resolving conflicts in the ways suggested, including ensuring that the MG is required to 'have regard for' other areas of policy such as financial sector development, rather than risking the possible confusion resulting from having the two bodies under differently motivated ministries.

For all the above reasons, and particularly in the interests of minimizing the potential for social costs as a result of financial instability, we would recommend that discussion should be encouraged with a view to favouring both CBI and FME coming under the MFE.

Ministry of Welfare

The role of the Ministry of Welfare in relation to oversight of the HFF has been commented on above as being somewhat anomalous. There has been no mechanism of supervision or direct influence to ensure that financial stability factors relating to HFF's activities are taken into account. Indeed history in the build-up to the 2008 crisis suggests that they were not. HFF policy in the lead up to the crisis may have been 'logical' in terms of welfare considerations. But at that time the CBI was for systemic reasons tightening rates. At the same time the HFF were trying to counteract this by reducing interest charged to the public, despite the public objections and concerns voiced by the CBI as to the negative systemic consequences. In systemic terms this was counterproductive to say the least.

Of course welfare considerations need to be taken into account. We believe that the proposed Council should be a mechanism to ensure that this would be the case. And it is unusual, and to our minds undesirable, for a significant financial institution to remain outside the regulatory process. Whatever welfare criteria may be drivers, the activities of HFF need to be brought within the purview of the supervisory authorities if systemic issues are to be given the attention they merit.

For this reason we would advocate that responsibility for financial supervision of the HFF should be switched to FME. The scope of its welfare activities and accountability for its performance could however remain as now with the Ministry of Welfare.

With the above in mind, and to avoid needing many qualifications throughout the report, we have taken the liberty in this report to assume that the responsible ministry will be the Ministry of Finance and the Economy, and that this sole ministry will be responsible for the CBI and FME together with the policies for which they are responsible including those for financial stability.

Recommendation 8

Conflict handling and ministerial involvement. The new Ministry of Finance and Economy (MFE) should have lead responsibility for all aspects of financial stability including those falling under the purview of CBI and FME. This would include macroprudential policy, microprudential policy, the preparations for and handling of crisis, and associated resolution policy.

Supervision of the HFF should be undertaken by the FME acting under the MFE's overall responsibility.

1.2.2 Essential construct of a macroprudential policy framework

1.2.2.1 Two tier structure

Given the need to provide a framework which contains an interface with the political process on the one hand, and the need for operational excellence on the other, the two tiers comprising the MA would be the Council and MG.

Recommendation 9

Macroprudential Authority: a two tier structure. The two tier structure for macroprudential policy should consist of a top level policy orientated Council linked to the political process, and an operationally active MG.

1.2.2.2. Role of the Council and MG

The Council's main purpose is to provide a mandate within which macroprudential policy may be effectively (and independently) handled, and to provide a link to the political process so that difficult but necessary decisions involving conflicts of objectives are taken when needed. The Minister will need to play a lead role in this respect.

The Council itself will not be the appropriate forum to undertake the daunting challenges of data collection, assessment of conjunctural and structural issues, and formulating detailed options for policy response. This requires a dedicated process on an operational or executive basis with appropriate resource backing. This is increasingly undertaken by a group specially tasked to conduct the operational aspects of macroprudential policy and acting under a mandate which would be set by the Council. We would recommend that such a group, the MG, is constituted in Iceland (see below).

One general proviso is that such arrangements can work well in "peacetime," when there is sufficient time for issues to be raised and discussed and for any tensions to be identified and resolved. Arrangements for crisis management will, however, need to be significantly different (see Chapter 3).

1.2.2.3 Design of Council

Although the creation of the present CFS was well intentioned in relation to financial stability, it suffers in our view from a number of serious drawbacks from the point of view of focus and policy delivery. It is an advisory body only. The CFS is established by agreement and has no legal status, nor is it constituted to provide the direct leadership of functions necessary to deliver policy. Finally its composition seems less than optimal, particularly given the presence of several ministries without clarity of the functions of each. And to whom such advice is addressed is generally not clear, nor, in its present form, how it would fit into the overall machinery and policy framework for macroprudential policy. It seems to be more of a consultation venue to enhance cooperation in time of crisis than an agent for definitive mitigatory actions. Whatever changes may be in prospect, the workings (and existence in its present form) of the CFS should in our view be reconsidered

A focused group is therefore needed that goes well beyond 'coordination' with specific tasks and roles, capable of directing the overall efforts with respect to financial stability, taking any necessary tough decisions, and ensuring implementation.

We have therefore proposed the formation of a Council with the following attributes. The council would:

- replace the CFS and play an important coordinating role in relation to policy conflict resolution given the legitimate interests of different ministries.
- provide a mandate to the MG.
- reflect and decide on recommendations from the MG.
- consider how best to handle any conflicts of policy, and if necessary review the 'have regard to' aspects of the mandate of the MG. This should be done within the limits of the primacy of the financial stability function.
- provide continuity of authority for the conduct of financial stability policies across the continuum of the three areas of financial stability (recommendation 3). For its role in relation to trigger mechanisms, crisis handling and resolution see Chapter 3.

The essential members of the Council as participants in this 'troika' process should be the Minister of Finance and Economy as Chair, the Governor of the CBI and the CEO of FME. Membership of the Council however might be supplemented by the Head of the Depositors and Investors Protection Fund.

Many jurisdictions are now adopting a similar route of forming such a top level group (Appendix 2)

Recommendation 10

Design of Council. The Council should be tasked with steady state responsibilities to resolve policy conflicts, set the mandate for the MG (see below), and respond to recommendations from the MG.

The Council should be composed at the least of the Minister of Finance (in the Chair), the Governor of CBI, and the CEO of FME.

The Council would also be responsible for triggering the transition to crisis mode and take overall charge if crisis situations arise (see Chapter 3).

1.3 Basic Design of MG

Clearly in taking account of the generic issues at 1.2.1 above this framework has got to be made to work. The first step is to create the engine room of the construct: the MG.

Recommendation 11

Design of MG. A dedicated MG would undertake the process of formulating policy response and ensuring delivery. It should operate under the mandate set regularly by the Council. It would be chaired by the Governor. Key participants in this Group would be the CBI and FME. A representative of the MFE as an observer would be an advantage.

1.3.1 Background Issues

Please note that discussion will be needed on a number of important aspects of the working arrangements for the two tier structure. These details are beyond the scope of this report. Several examples are however given though many variants could be considered. Detailed consideration will be necessary as to

- what decisions are for the Council and what for the MG.
- the balance; numbers of members; and decision making process of each of the Council and the Committee of the MG. In our view they both will need to be run on a consensual basis. However the lead role of the Minister and the Governor in relation to the Council and the MG respectively will need to be respected.
 - By way of example as regards the Council attempts would always be made to find consensus but the Minister of Finance and Economy has the final word.
 - In relation to the Committee a similar attempt should be made towards consensus. A system of voting if needed might however be envisaged whereby the Governor would have a casting vote.

1.3.2 Design features

Although much remains to be learnt, emerging practice in a number of jurisdictions suggests that in order to create an integrated policy continuum capability (covering data; assessment; deciding on appropriate policy response; delivery of that response), the following attributes should be brought together.

Please note that items 1-3 and 8-9 below relate to structure and governance issues and recommendations for these areas are stated. In the case however of 4-7 the issues are more about 'doing' macroprudential policy. We feel that in these cases the decisions as to the appropriate approaches should be taken by the MG itself, and accordingly the recommendations are for the MG itself to consider.

1.3.3 Detailed features and attributes of MG

1.3.3.1 Composition of the MG

- The MG itself would have two elements. The high level Committee on the one hand and a Support Unit on the other.
- Although there are many variants, emerging consensus suggests a combination of an appropriately composed senior Committee to consider and decide on policy choices, supported by a 'workhorse' standing Support Group to collect data/information and develop potential policy options.
- Aspects of these functions already exist with the bi-annual joint meetings of the CBI Governor and DG of the FME for decision taking on the one hand and the micro-macro risk analysis group in support on the other. Adaptation of both of these might accommodate what is needed.
- The composition of the Committee should include adequate high level representation of the relevant authorities. This clearly includes CBI and FME. Depending on the outcome of present legislation the engagement of the Head of the Depositors' and Investors' Guarantee Fund might also be included. A practical approach might include Governor and Deputy Governor(s) from CBI, several members of FME including the CEO, an observer from the MFE and possibly one or more independent outside experts. It would be for consideration as to whether the head of the Support Unit should be included.

- The Support Unit should contain dedicated expertise and experience, both intellectual and practical, of the range of systemic issues, including crisis situations. Candidates for membership of the group will be found in CBI, given the experience of systemic issues. In practice skills are likely to reside also at FME. Accordingly this group could be based on some or all of the existing members of the macro-micro risk assessment group. It would probably make sense for the Support Group to be physically located at a single venue and in preference the CBI (see also Chapter 4 CBI organization).

Recommendation 12

Composition of the MG. Two functions need to be accommodated: assessment and decision making. Accordingly the MG could include a Committee chaired by the Governor of CBI on the one hand, and a dedicated Support Unit on the other.

1.3.3.2 Mandate of the MG

The MG should be allotted its objectives and mandate through the Council. This could accommodate political issues such as 'how safe the system should be.' The MG itself should however operate as independently as possible from the political process on the basis of the delegated authority provided through its mandate, just as has been found to be effective in certain other policy areas such as monetary policy.

A problem encountered in all jurisdictions is how to avoid the MA trying to make the system 'too safe' and ignoring the impact of policy decisions on other desirable social or economic objectives. Given the objective of avoiding systemic instability it would be quite easy for the MG to 'play safe' in the interest of avoiding criticism if things were to go wrong. For this reason the MG might be instructed by the Council to act in a way which, for example, minimized the impact on growth, or which minimized the impact on the ability of people to purchase their own home. This 'constraint' could be revisited, say annually, and, given the Chairmanship of the Council by the Minister, could respond to political or economic realities and help resolve policy conflicts. Possible reintroduction of short-term political considerations through this constraint will however need to be resisted.

An important consideration is that the construct recommended should respect the need for independence both of the Central Bank as such, as well as the activities of the MG in relation to macroprudential policy.

Recommendation 13

MG Mandate and objectives. The objectives should ideally be accorded under statute. The mandate would be set by the Council and be refreshed from time to time. It should contain language requiring it to take account of, or 'have regard to', other policy objectives as laid down by the Council.

1.3.3.3 Location or 'anchorage' of MG

The institutional location of the MG also needs to be considered. Given inevitable inter-organizational frictions, leaving the processes to develop without an institutional home seems suboptimal at best. For a variety of reasons outlined below in our view the MG should be anchored or located within the CBI.

Although we are recommending that this home should be at CBI, several alternatives could be considered:

- Government Ministries. As the interface with the political process, the Ministry of Finance will within government necessarily have the main say in the overall objectives for macroprudential policy but inasmuch as legislative changes are needed the final word is of course with parliament. However given the manifold operational tasks and decisions required, most relevant jurisdictions have

taken the view that it does not make sense for ministries to be assigned the central 'executive', or operational role which might be better conducted under forms of delegated authority.

- Supervisory Authority. As for the FME, one of the motivations for the recent focus on financial stability policy generally has been a concern to emphasise a system-level perspective and not to focus narrowly on the health of individual institutions - which is the microprudential supervisor's main remit. Giving a separate authority such as CBI responsibility for macroprudential policy is one way of trying to ensure this.

Neither of the above is accordingly likely to be satisfactory. On the other hand as a practical matter several, to our mind quite compelling, reasons exist for locating it at the CBI.

Firstly a large part of the technical expertise relevant to the conduct of macroprudential policy is likely to be found in the central bank even though this requires the support of the micro-prudential regulator (FME).

Secondly, since CBI has responsibility for the execution of monetary policy, is active in markets, and acts as a liquidity provider and lender-of-last-resort, it is automatically familiar with much of the wider context for macroprudential policy.

If this solution is chosen there would be merit in our view in emphasizing that the MG would be 'anchored at' rather than being specifically 'part of' CBI. This would reflect the involvement of members of the committee from third parties.

Whichever institution does take on this responsibility, it will nevertheless be dependent on other authorities. If CBI does take on the role:

First, it will rely partly on FME for certain areas of data/information and market intelligence.

Second, it will need to take account of information from the Ministry of Finance on other relevant government policies.

Third, it may be dependent on one or both to take actions in relation to policy instruments or give effect to recommendations.

For these reasons, the need for very close and effective engagement among the authorities involved is clearly indicated.

A number of comments on emerging practice in relation to models internationally for macroprudential institutional approach are to be found in Appendix 3.

Recommendation 14

Location of the MG. The lead role of the MG should be allotted to CBI where its activities should be located and anchored.

1.3.3.4 Deployment of Instruments: Authority and Powers

The MG (the Support Unit and Committee collectively) will need to develop a thorough understanding of, and the ability to decide on, appropriate instruments for policy response as the environment alters.

Decisions need to be made as to the degree of authority and powers to be accorded to the MG versus that of the Council. This will be needed in relation to the deployment of chosen policy instruments through which to deliver policy objectives.

One way of approaching these issues would be to consider the following:

Firstly to which instruments the MG should have powers of direction or authority. Although certain instruments already reside with CBI in respect of liquidity management, fx mismatch and maturity imbalances, many other instruments of potential use for macroprudential purposes are already in use for microprudential objectives (such as capital ratios). Powers to deploy these reside with FME. We

recommend that any such instruments should be deployed under the authority of the MG perhaps under a 'comply or explain' formula. There may be theoretical advantages for the MG to be put in a position to 'require' or direct FME to use their 'normal' instruments for macroprudential purposes. In some jurisdictions such as the UK the relevant authority (the Financial Policy Committee) will be provided with powers of direction of this kind. There are however pros and cons of such an approach.

Secondly to which instruments should the powers be restricted to recommendation via the Council. These might include certain fiscal measures, and perhaps Loan to Value (LTV) or Loan to Income (LTI) limits, given the welfare implications. However it would be desirable for the MG to be in a position to make recommendations in respect to a wide (and preferably unrestricted) set of instruments for consideration by the Council. This could enhance the prospect of requisite action.

A further consideration refers to time and state dependency. In cases where the policy deployment decided on by the MA are subject to recommendation only, or to a 'comply or explain' process, some delays and uncertainties of deployment may occur where the party whose instrument is the subject of the recommendation resists its use (perhaps for understandable reasons). Whatever the implications of such delay during steady state, the consequences at a time of mounting vulnerabilities might be more serious. It would be worth examining therefore whether some power of direction over a wide variety of instruments might reside with the Council to be used at such a time, and subject to a suitable ex post accountability process.

In the sense of gaining experience and understanding, particularly given uncertainties of calibration etc, It is recommended that at an early stage only a few instruments be chosen by the MG on a 'guidelines and step by step' basis, given the need to experiment with their effectiveness. With experience, additional instruments can be introduced. Different Instruments will be needed to address conjunctural as opposed to systemic issues.

Recommendation 15

Authority of MG. The MG should have full authority to deploy microprudential instruments for macroprudential purposes. Should it seek use of instruments beyond the financial sector it should have the duty to make recommendations for decision by the Council.

1.3.3.5 Data/information

The Support Unit will require access to accurate and timely data from multiple sources and compiled in a manner consistent with systemic analysis on an ongoing basis, even though data overload must be avoided.

A focused capability to determine relevance is also needed. It may be possible to build on the database being developed between CBI and FME.

Data from beyond the regulated boundary in Iceland (eg of corporate debt, corporate ownership etc) will be needed as well as from relevant international sources. Please also see Appendix 3.

Recommendation 16

Data/information. Careful analysis of data sources, availability, timeliness and relevance should be undertaken. A process to obtain relevant data from beyond the regulatory boundary should be put in place with relevant legal underpinning.

1.3.3.6 Indicators and 'radar' capability

The Support Unit will need to develop a 'radar' capability, searching for new products, forms of credit creation, or regulatory arbitrage which could become significant to systemic issues. This needs to extend beyond Iceland internationally. The function must be forward looking to ensure data collected,

and indicators are not those relevant for the 'last war'. This radar needs to be able to review both conjunctural and structural vulnerabilities.

To identify and assess indicators of vulnerability in a focused manner will require expertise and judgment. The significance of given indicators will be time and state dependent. Given the inevitable shortage of relevant talent, the most effective organizational arrangements need to be found to marshal and engage such expertise.

This radar function might be created as part of the duties of the Support Unit.

Recommendation 17

Indicators and 'radar' capability. Careful analysis by the MG will be required as to how best to create an effective radar capability with the skills to establish the most relevant indicators of vulnerabilities on a continuing basis.

1.3.3.7 Assessment process and logistics

The assessment capabilities of the MG will be crucial. This requires a combination of skills and process.

In terms of skills this will include the ability to determine the relevance of ongoing developments both in the conjuncture (leverage, credit/debt levels, liquidity in the economy as a whole) and as regards resilience (strength of infrastructure, supervision, accounting standards etc).

In terms of process the Support Unit would prepare assessments and presentation of data to the Committee. The Committee would decide on the response.

Such assessment requires not only collection of data materials and indicators but also dedication of significant time to arrive at well considered policy suggestions.

To achieve this it might be desirable for some or all the members of the Support Unit to work full time in their roles. In turn the Committee might need meetings spread over several sessions, collectively at least two or three full days semi-annually.

Recommendation 18

Assessment and decision making process Resources and skills should be deployed to assess data/information and indicators. A regular process of assessment and decision making should be established.

1.3.3.8 Transparency, Governance and Accountability

Accountability arrangements in relation to the activities of the MG need to be developed both in relation to adequacy of resourcing (where accountability might be to eg the Board of CBI) and quality of policy decisions (where accountability might be via the Council and direct to Parliament).

Policy decisions by the MG as well as appropriate description of their rationale should be made transparent. This will add significantly both to the general legitimacy of the process, and to general understanding of the issues. Mechanisms for transparency could include outlining vulnerabilities through publication of Financial Stability Reports (based on the present semi-annual publications) as an instrument of MG, publication of minutes of policy decisions by the MG (and the Council), as well as publication of the conformity with agreed process for the conduct of policy. Reports could be made to Parliament to enhance this (following the precedent for Monetary Policy), and the overall Governance processes of CBI in particular should be reviewed as the framework is put into effect (see Chapter 4 below).

There would need to be some basis on which decisions could be made to withhold from publication certain issues judged to be detrimental to financial stability itself. This might particularly occur in relation

to individual institutions. In such cases an audit trail and record of the decision making process that led to such non-disclosure should be retained for the purpose of ex post accountability or later enquiry.

Recommendation 19

Transparency of policy decisions. Mechanisms should be put in place to ensure transparency of policy decisions with adequate publication of both vulnerabilities and policy judgements and decisions. This will enhance legitimacy and understanding of macroprudential issues.

An appropriate governance and accountability process needs to be in place to enhance understanding and act as an incentive for all involved to achieve their macroprudential objectives. This could include reports and appearance before Parliament.

1.3.3.9 Peace and war: handling the transition from steady state to crisis

Specific machinery should be put in place to legitimize and handle the transition from steady state to crisis. This machinery needs to cover who should pull the trigger and on what basis, the role of the MG in relation to that, and the necessary contingent arrangements to handle crisis itself.

As to the trigger, although the role of the MG will normally be preventative, it may be well placed to play a role in assessing the vulnerabilities which lead to a triggering decision to move from peacetime to crisis. Recommendations could therefore be given by the MG to the Council who would have the responsibility to take trigger decisions and the invocation of resolution machinery.

As to handling crisis itself once the resolution machinery has been invoked the MG's capabilities may not be designed to deal with operational and policy decisions in compressed timescales and under external, including political, pressures. On the other hand, it would seem unwise to overlook its access to market intelligence, analytical capacity and experience of acting as a macroprudential authority as a valuable input in handling a crisis.

During 'war' the MG could provide vital assessment capability to the Council which would be in charge under the leadership of the Minister (see Appendix 4).

Mechanisms need to be developed to facilitate this input in the different institutional context of crisis management which involves the resolution machinery.

The issues in relation to this area are considered more fully in Chapter 3.

Recommendation 20

The transition from steady state to crisis. Specific machinery with appropriate legal underpinning should be designed to ensure a smooth transition from a steady state environment to one of crisis and resolution. The potential role of the MG, both in the lead up to the invocation of resolution arrangements and in times of crisis should be clarified.

Chapter 2: Interface between micro supervision and macro-prudential framework

This chapter addresses the interface between macroprudential policy and microprudential policy and the institutional architecture for the conduct of supervision of the central bank. It presents certain arguments which on balance support the case for architectural change.

The chapter considers the possibilities of either a full merger of CBI and FME or a Twin Peaks variant, with prudential supervision being transferred to CBI and financial conduct including both market and consumer protection issues remaining at FME. The arguments are developed as to how any such change could contribute to a better framework for conducting financial stability policy.

2.1. Introductory Comments

The issues involved in setting up an MA are examined in Chapter 1. Recommendations as to how macroprudential policy could be developed with supervision conducted in an independent separate supervisory authority as per the status quo are put forward. However the need for intense engagement between the two relevant bodies CBI and FME, each of whom have their own governance and accountability processes, was underlined.

Partly for these reasons, and partly because of trends in other jurisdictions and notwithstanding the well-designed January 2011 cooperation agreement between CBI and FME, the architecture as regards FME and CBI is a matter of intense interest. Should the two be merged? Or should a version of Twin Peaks be put in place with prudential supervision moving to the CBI and financial conduct including consumer protection remaining as a separate authority, such as a Financial Conduct Authority or FCA?

This suggestion for a full merger has been made by a number of commentators including the OECD and within the Jännäri report. We are also aware of contrary views. Equally the Twin Peaks variant is worthy of consideration and might provide a solution to balance the pros and cons of different architectural formulae.

As a starting point however we would suggest that, even though significant, the question of architecture is still of secondary importance. Whatever the architecture, the same functions and tasks need to be undertaken. And if changing the architecture is used as a mechanism to avoid silo mentality one needs to bear in mind that internalizing silos does not mean that they disappear. For these reasons the option put forward for an MA in Chapter 1 should be workable to some degree, with CBI and FME retaining their identities and responsibilities, as modified to accommodate the needs of the financial stability framework.

In considering whether an architectural change might be merited with either merger or Twin Peaks transfer of existing microprudential functions, there are three essential issues which are relevant.

2.1.1 Would the financial stability capabilities of Iceland be stronger?

The inevitable frictions due to the existence of separate governance and accountability processes of the two entities would be avoided in a full merger and significantly lessened in a Twin Peaks solution

so that-

1. The engagement of all the relevant parties might be enhanced provided that the management of internal silos was satisfactorily handled.
2. Database consolidation and data/information collection generally should be facilitated.
3. Many potential policy instruments would fall within the remit of the CBI rather than needing to rely on FME. This could facilitate decision making in relation to their usage.
4. Additionally in favour, and of significance for a small jurisdiction like Iceland, is that co-location of functions would be likely to maximize efficiencies and avoid duplication in carrying out certain policy functions themselves.
5. In the case of a full merger (but not Twin Peaks) it would also avoid the need to carry out two separate sets of governance and accountability processes.

The arguments that led inter alia to the creation of universal supervisors such as FSA in the UK, and FME were largely based on the premise that 'one-stop regulation' should be the determinant of structure and that regulation would be more effective if banks had to deal with a single regulatory authority. Equally it was felt that the different components of the financial system were coming to resemble each other de facto and therefore should be regulated similarly.

However this proposition was asserted at a time when systemic issues were significantly underemphasized. Today the emphasis has shifted so that more weight is justifiably accorded to financial stability issues as a determinant of structure. In that context some of the arguments for creating universal supervisors need re-examination. We can indeed see a trend in a number of countries whereby the central bank, which is inevitably 'closer' to systemic understandings and capabilities, takes responsibility for microprudential supervision.

2.1.2 Would other policy areas be likely to suffer?

In practice four relevant policy areas to consider are monetary policy; resolution policy and crisis handling; microprudential policy; and financial conduct policy (consumer protection and market integrity).

- As for *monetary policy*, locating the MG of the MA within the central bank is already suggested without the need for an architectural solution. There will certainly be influences and potential conflicts between the two policy areas. But experience in other jurisdictions would argue on balance that both functions are likely to be better carried out if in the same institution.
- In relation to *microprudential policy* the trend is to see an advantage in locating this with macroprudential policy, certainly in smaller jurisdictions, and in certain larger ones as well. For example this model is now being widely followed in diverse jurisdictions such as Belgium, S Africa, UAE and the UK.
- In relation to *financial conduct policy* the situation is less clear. The following factors are relevant:
 1. Experience suggests that whereas the thought processes and actions necessary to pursue solutions in relation to microprudential issues can fit together relatively easily with macroprudential issues, the same is probably less the case for consumer protection and market integrity issues.
 2. So these functions tend to be 'left' in separate agencies in all the jurisdictions mentioned above. In particular, with exceptions such as Singapore, financial conduct tends to be handled separately from the central bank.
 3. If Iceland were to follow the Twin Peaks route this would suggest that parts of FME be left independently as a financial conduct regulator (FCA) to fulfil the functions, typically of investor protection, market conduct and consumer protection. Such a move would have the benefit of collocating macroprudential and microprudential policy whilst leaving financial conduct independent.

4. For Iceland in addition, if an FCA were to be formed, this might provide an opportunity to consolidate the activities involved in a focused and coordinated way. The fact that several agencies including the Debt Ombudsman are, as we understand it, involved in this space at present seems likely to render present arrangements suboptimal in this important area.
- With regard to *resolution and crisis handling* policy the arguments are not conclusive. However the need for rapid deployment of decisions and actions at such times across both the central bank and the supervisory authority suggests that having within the one authority both responsibility for individual institutions and the operational decisions with respect to pre-crisis lender of last resort (LOLR) and actual resolution policy would on balance prove beneficial.
 - Other cases such as Singapore, though unusual, do show that the entire suite of policy areas can be undertaken satisfactorily within one single entity (MAS).

2.1.3 What other factors need to be considered when thinking about such architectural solutions?

2.1.3.1 Power

A significant issue that would require consideration relates to 'power'. In the UK for example although the Bank of England now has responsibility for the three policy areas of monetary policy, macroprudential policy, and microprudential policy, questions were at the outset raised - though at that time rejected - about whether this would represent 'too much power' in the hands of one unelected body. To this day questions of governance and accountability of the Bank of England are a matter of intense political and public debate. The same questions might be asked in Iceland if FME and CBI were to merge, or a Twin Peaks approach were adopted.

Antidotes to the question of 'too much power' do however exist. These include governance of CBI itself. This could no doubt be strengthened and it would be wise to consider and perhaps draw some conclusions from the recent experience in the UK.

As for governance of policy areas conducted from CBI:

- In monetary policy the MPC already has a combination of mandate set by the political process, reporting to parliament, transparency of policy decisions etc. This acts as a constraint on the unfettered power of the MPC.
- Similar arrangements could be put into place both for the policy making activities of the MG, as well as for microprudential policy. Clarity of mandates should be emphasised and accountability process for the conduct of each area of policy would be put in place, including reporting to and appearing before parliament (see also Chapter 1).

It may be worth making the point that the issue of 'too much power' would be slightly lessened if a Twin Peak formula is adopted compared with the case of a full merger.

2.1.3.2 Reputation Risks

A second issue is the question of reputation risk and its implications. If the central bank has responsibility for supervision there is a danger that it will be blamed for any regulatory failure in relation to prudential oversight of a financial entity. In turn this could compromise the capabilities of the central bank in fulfilling its policy functions.

Reputational damage could also occur in terms of the 'police' or enforcement activities of the supervisor. For example FME is, as we understand it, subject to litigation, in particular by individuals they are seeking to ban. The question for the CBI as to the appetite for such controversy, and associated reputation issues, of unavoidable litigation of this sort would also require consideration.

These reputational dangers from enforcement would be somewhat less in the case of a Twin Peaks approach compared to a full merger since much of such enforcement activity might largely be left with

the FCA. And as regards regulatory failure this may seem to be a lesser consideration for Iceland than for many jurisdictions given Iceland's present banking system, which is simpler, smaller and domestically orientated and hence hopefully less prone to problems. In addition the size of the non-bank financial institution (NBFI) sector and securities/derivatives activity is at present small.

So arguably overall reputation risks may be smaller than in jurisdictions with larger and more complex financial systems. However, compared to say the USA where the central bank supervises only some of the financial institutions, the fact that the supervision of all types of financial institutions (except the HFF) is conducted by a single regulator might mean that if any failure were to occur the damage to CBI could be correspondingly greater.

2.1.4 Further points

- Execution risk of any change would require careful control. The process of change will not be simple, and essential functions need to be maintained during the transition.
- As a practical matter some amendments to the composition of both the Council and the MC might be envisaged. Clearly there are many variants but one possible approach might be:
 - In relation to the Council in Chapter 1 we suggested a possible membership to consist of Minister of Finance and Economy (chair), Governor, CEO of FME, and maybe Head of Depositors' and Investors' Guarantee Fund.
 - Under Twin peaks the CEO of FME might be replaced by CEO of FCA.
 - Under a full merger the Council might consist of two members though thought might be given to including suitable - perhaps independent - additional members.
 - In relation to MC in Chapter 1 we suggested that a practical approach might include Governor and two Deputy Governors from CBI, several members of FME including the CEO, an observer from the MFE,
 - Under Twin Peaks this might be amended to: Governor, two Deputy Governors (DGs), head of microprudential supervision, CEO of FCA and observer from MFE and possibly say two independent outside experts.
 - In the case of full merger: the same participants might be involved but all from within CBI except the observer and, if relevant, outside experts.

Recommendation 21

Consolidation of supervisors. Ultimately the decision either to merge FME and CBI, or to adopt a Twin Peaks model with prudential supervision being transferred to CBI is a political choice. On balance the arguments in favour of moving to one or other of these two options are quite strong given the importance of the financial stability framework to the economy. One essential implication of this would be the need to reconsider, and strengthen, the accountability and governance process of CBI given the extra power that would accrue to it.

Chapter 3: Resolution arrangements: crisis management and trigger mechanisms

Considers the range of issues for which both legal underpinning and institutional focus is desirable in the crisis state.

Just as a coherent framework to conduct macroprudential policy in 'peacetime' is of value, so is the need to prepare and establish 'in peacetime' a complementary process for implementation when handling a crisis should it occur, together with the transition between them. This chapter examines the attributes most relevant to creating such a framework. The Council would be common to the oversight of both peacetime and crisis situations. To some extent the recommendations and observations which follow are designed as guide posts to focus effort which is already under way. The comments are informed by discussion with members of CBI, Ministry of Economic Affairs and FME.

The chapter extends the two tier concept into the crisis environment. It reviews the issues presently under consideration in Iceland and suggests expeditious action in the area generally so that a complementary (though perhaps contingent) framework to handle resolution issues in the crisis state is developed alongside the macroprudential framework. It recommends expeditious action to create a workable resolution framework.

3.1 Models for crisis handling and triggering process

3.1.1 Resolution machinery

The cast of players in a crisis management situation will be different from that in "peacetime." The timescale for decisions is typically much shorter. There is no time for fully prepared discussions and extended arguments; the priority is to have in place a clear and timely mechanism for making decisions - a clear message about "who is in charge". This, obviously, represents a significant shift of approach from the proposed "peacetime" model. The operational roles in crisis will require different machinery from the MG which is deliberately constituted for macroprudential policy in peacetime or steady state. For these reasons the preparations to enable these roles to be effectively fulfilled must be made during peacetime when there is time to undertake the necessary planning and implement process etc. There is no universally ideal model as to how this should be achieved. It may depend, on pre-existing relationships among the different institutions involved. However, there seems a good case for putting the MFE, through leadership of the Council, in clear overall charge at the "big picture" policy level, if only on the basis that many of the most important decisions would have to be in reference to the them in any case. That does not mean a wholesale substitution of finance ministry analysis and judgments for the informed views of the central bank and regulator, assisted by the MG, but it does mean that, where there are differences of views, the MFE unequivocally has the ultimate power of decision.

As to the operational leadership role various models exist. One such would be for assignment of the role to the central bank, given the importance that financial and monetary operations are likely to have in the management of any crisis and the central bank, as part of its normal role, will have the personnel and systems in place to execute them. The supervisor would clearly also have to be closely involved - whether it is part of the central bank or separate - not only to carry out any necessary regulatory actions but also to ensure that they respect international regulatory rules and commitments.

Alternatively in some jurisdictions the role might actually be accorded to the supervisory authority, but such a solution is more likely if the supervisory authority is closely allied to or part of the central bank itself.

Finally independent resolution authorities exist in some jurisdictions (as in the USA) but it is unlikely to be a suitable model for a small jurisdiction where the resolution processes should be ideally kept on a contingency basis expecting only rare usage.

3.1.2 Who pulls the trigger?

This raises, in turn, the question of what procedure should be followed in moving from peacetime to crisis in a systemic sense. Again, there is no universally agreed answer. And it is not just a technical judgment; it also needs to take account of the likely motivations of the different parties involved.

One approach would be to define a trigger in “hard” terms, based on thresholds for certain key variables. This has the virtue of clarity but could be exposed to “gaming” around the chosen variables and is inherently inflexible. An alternative would be to assign the responsibility for making a recommendation to the Council (the ultimate decision maker) on a more discretionary basis to the MG. (Please also see 3.3.2 below)

Any risk of “forbearance” (insofar as the MG may be reluctant to signal a crisis, implying a failure in its preventive role) should be mitigated in that it would not wish to be exposed to a charge of having unduly delayed action if the responsibility for initiating action was clearly signalled in its mandate.

In practice, it may be possible to combine “hard” and “soft” triggers in an arrangement where a “hard” trigger initiates the transition unless it is explicitly overridden by the MG. But other possible approaches exist.

In conclusion we would favour a clearly legally underpinned machinery to make this transition; the potential role of the MA should be considered and the common link of the Council as leader in both states of the world is essential.

3.2 Pre-resolution mitigation measures

3.2.1 Macro- and micro- prudential policy

Both areas of policy can make a crucial contribution to reducing the likelihood of financial crises and hence avoid the need to use the contingent arrangements. This explains our emphasis on macroprudential issues in creating the framework at chapter 1. The enhancements under way at FME in relation to microprudential policy and the conduct of supervision are also crucial.

3.2.2 Deposit guarantee schemes (or more generally financial services compensation schemes).

As well as serving a consumer protection objective, these can also be valuable from the point of view of systemic stability. Specifically, they can reduce the likelihood of depositor “runs”. However, they raise a number of issues, notably:

1. How far may they exacerbate moral hazard? (Depositors pay less attention to the reputation and standing of the banks in which they deposit their money)
2. Should they be constructed on a pre- or post-funded basis? (With the latter potentially giving rise to the “survivor pays” problem)
3. Can they ever be genuinely industry funded, particularly when the size distribution of individual banks is highly skewed? (Is any plausible ex ante fund or ex post levy likely to be able to deal with the failure of one or certainly the combination of the three main banks?)

Most countries do, nevertheless, have some form of deposit protection scheme, with explicitly or implicitly an understanding that the government will at least provide cash flow support. Indeed the

trend, partly on systemic stability grounds and perhaps also recognising what has happened de facto in recent crises, has been towards increasing the scale of the guarantee. In parallel, there has however been a move in some countries to introduce depositor preference, partly as a way of containing the potential call on fiscal resources.

A further crucial aspect of depositor protection schemes is the practicality of making speedy payments in the event of a bank failure. To some extent the very existence of an appropriate scheme can act as a mitigant to the danger of runs. But the effect is likely to be reduced if depositors, even though confident of eventually getting their money back, believe that this will only happen after a considerable delay. The logistical issues involved for the banks in delivering speedy pay-outs are considerable – even, for example, in identifying in “real time” exactly what deposits are covered by the guarantee – and can only be addressed through close cooperation between the deposit guarantee authority and the commercial banks.

Recommendation 22

Deposit Insurance. We are aware of the draft Bill (at present not translated from Icelandic) in relation to the Depositors and Investors Guarantee Fund. This should be enacted as soon as is realistic.

3.2.3 Recovery and Resolution Plans

A third important element of pre-emptive policy - although not strictly pre-emptive since, while it needs to be pursued in advance, it only becomes operational once a crisis is underway - is the move to ensure that all significant financial institutions (certainly banks and possibly others) have put in place thoroughly worked out Recovery and Resolution Plans. The aim is to ensure that, if an institution does get into difficulties, it has a well worked out set of procedures, agreed with the regulator, for ensuring an orderly run down or transfer of its business.

We understand that such plans have not so far been put into place for each of the three main Icelandic banks.

Recommendation 23

Recovery and Resolution Plans. Such plans should be put into place for at least the three main Icelandic banks.

3.2.4 Liquidity injection

Direct market interventions of various kinds aimed at providing additional liquidity either to an individual bank or to the system as a whole potentially constitute an additional important category of pre-emptive measures. Such interventions by the central bank may take a number of different forms, including conventional lender of last resort operations, a discount window facility and long-term repos against a wide variety of collateral. Despite criticism levelled at the CBI in the SIC report we feel that it would be worth exploring options beyond the “traditional” techniques (eg discount window facilities) allowing a wider range of collateral, and collateral swaps. Any arrangements that might be agreed should be publicly revealed and would need to consider how best to ameliorate the “stigma” problem (ie the negative signalling impact for banks which are known to have approached the central bank for emergency liquidity support), and also how to avoid a LOLR facility effectively becoming one of lender of only resort (as demonstrated by the issues affecting the Eurozone at present).

Recommendation 24

LOLR provision. The CBI should re-examine the extent of its authority in relation to LOLR provision with a view to obtaining any necessary changes in law. CBI should be in a position to

use a suite of possible instruments to conform to the wide set of instruments presently in use in different jurisdictions.

3.3 Crisis management tools and the specific triggers for deploying them

3.3.1 General observation

We believe that it would be helpful to strengthen and clarify arrangements in the following areas.

The Act on Financial Undertakings (161/2002 as amended particularly in relation to winding-up proceedings) and Articles 1 and 2 of the Emergency Act 2008 appear to provide a number of tools for dealing with banks which approach or reach point of non-viability (PONV). However they do not appear to provide a comprehensive approach as is being developed increasingly in a number of jurisdictions. Although we understand that the Emergency Act might be renewed and suggest that this provides an important opportunity to review and consolidate existing resolution arrangements 'in the round'.

We are aware that legislative change in the subject areas in Iceland is under the lead of the Ministry of Economic Affairs which is considering the regime which the jurisdiction might wish to have in place post expiry (We assume that this function will pass to the new MFE in due course). In doing so it plans to take into account FSB's Key Attributes of Resolution Regimes which have been endorsed by the G20 as an international standard similar in nature to the Basel capital requirements. The changes under consideration in Iceland will need to take account of the planned EU directive on Crisis Management in the Financial Sector which is presently held up because of differences of view on certain issues such as bail-in.

On the other hand we strongly suggest that continued consideration is given to the regime that would be most suitable from an Icelandic perspective irrespective of these initiatives. We also suggest that the potential removal of capital controls will require all potential measures to be in place in view of the enhanced risks to which this exercise may give rise.

Our impression is that at present there is some lack of clarity as to the nature of the resolution framework most suited to Iceland. To the extent that this might be true we would recommend that speedy action is taken to rectify any gaps. Expeditious action in the area generally would be beneficial so that a complementary and workable (even if contingent) framework to handle resolution issues in the crisis state is developed alongside the macroprudential framework.

Recommendation 25

Resolution framework. The importance of a well planned and tested Resolution Framework is evident. Work should be emphasized to develop this expeditiously with appropriate legal underpinning to take the place of the Emergency Act 2008. The regime most appropriate for Iceland's circumstances should be prepared and made ready for operation in a manner that is consistent with FSB and EU requirements.

3.3.2 Some issues in relation to resolution

The approach to dealing with a crisis depends crucially on whether the problem is identified as being confined to an individual institution or is judged to reflect a threat to the system – specifically the banking system – as a whole. Although the changes in the banking system in Iceland since 2008 have no doubt reduced the potential for a systemic crisis, nonetheless the failure of one of the three main banks might well cause systemic consequences. In addition the exit in due course from capital controls suggests that there is merit in reviewing the arrangements both for individual failures and for a systemic crisis. A number of relevant components follow.

(Please note that decisions in either of the cases at 3.3.2.1 or 3.3.2.2 which follow, in terms of trigger from peace to war would in all probability need to be decided by the Council either based a proposal from MG or the Minister of FE).

3.3.2.1 Issues relevant to resolving individual 'non-systemic' institutions

1. *Triggers.* If the problem is confined to an individual institution, measures to deal with it are increasingly set within the context of a formal resolution regime, distinct from normal commercial insolvency processes. Application of such regimes will typically be triggered when pre-determined criteria are met, for example when an institution reaches the point of non-viability, where it either fails or is about to fail to meet the regulators' authorisation criteria (point of non-viability, or PONV). There is however a debate about how "hard" the criteria should be. Hard criteria reduce the risk of regulatory forbearance but can be excessively rigid in the face of intrinsically unpredictable contingencies. A possible way of addressing this is to specify a trigger based on hard criteria which are acted on unless the resolution authority wishes explicitly to argue for holding off – in which case it would be held accountable afterwards for its decision.

2. *Resolution Authority.* Beyond the trigger point, however defined, the nominated resolution authority – which might be the regulator or the central bank (see below) – will become empowered to deploy various resolution tools. These might include an attempt to organise a private sector acquisition of the assets, liabilities or both of the bank in difficulty, the transfer of business to a specially established bridge bank, temporary public ownership of the bank, in whole or in part, or so-called bail-in where certain debt liabilities of the bank are either written down or converted into equity. The objective of these measures is essentially to minimise the disruption which an insolvency or a disorderly failure might otherwise involve and, in some cases, to limit any potential claim on fiscal resources.

A significant issue is whether it would be appropriate, as raised in the paper produced by FSB dated October 2011 (entitled 'Key attributes of Effective Resolution Regimes for Financial Institutions') to form an operationally independent Resolution Authority, outside the normal judicial process. Clearly questions arise as to whether this is necessary for a small jurisdiction with an uncomplicated financial system. The likelihood of the 'throughput' of cases or frequency of triggers being invoked is hopefully low. It may therefore be more appropriate to ensure that powers, resources, and an address list of people with the relevant experience and skills are immediately accessible to a predetermined point of focus on a contingency basis rather than creating a standing authority as such. Emerging practice in other jurisdictions would suggest that this point of focus should be a specific 'contingent department' at the central bank. In theory it could also be lodged at the supervisory authority. Those who would be involved could be kept engaged and 'up to the mark' inter alia by engaging in scenario tests from time to time (such as that undertaken by Andrew Gracie before the crisis).

3.3.2.2 Issues involved with systemic crisis

1. *Triggers.* In this case the problem is assessed to affect all or a large part of the financial system. Triggering a move into "crisis mode" becomes more judgemental and would typically be a joint decision of the financial authorities in a country. In the case of a systemic event, or crisis, the trigger could be used to invoke the availability of resolution powers. Macroprudential analysis through the MG is likely to have a key role to play in any such decision, given that its objective is precisely to assess the scale of the threats to and the robustness of the financial system as a whole.

2. *Resolution Authority.* See comments under individual institutions in 3.3.2.1 above.

3. *Fiscal Capacity.* Whether or not to use public funds must in principle reflect a cost/benefit analysis at the time against the alternative of not doing so. Usage of public funds also clearly risks exacerbating moral hazard. But a more powerful constraint, which now applies in many countries, including some in the G20, is simply fiscal capacity; a number of countries would now find it difficult or impossible to deploy public funds on the scale which they judged, very likely correctly, was needed in responding to the crisis of 2007/08 and which continue today. This makes it all the more important that approaches to crisis management which do not involve the large scale commitment of public funds are shown to be viable. Iceland hardly needs reminding of this situation.

4. *Legal underpinnings.* There are a number of issues for consideration in underpinning a (perhaps contingent) resolution authority. Effective legal underpinning would provide greater clarity and greater certainty, particularly in relation to powers and decision-making, as well as a more explicit and expanded role for CBI.

It is also important to bear in mind that resolution powers may be invoked in two distinct sets of circumstances – on the one hand, a problem affecting an individual bank and, on the other, a system-wide problem affecting multiple institutions. Although the mechanics of the resolution process may be similar in the two cases, the choice of instruments and the other policy actions carried out in parallel may differ.

To the extent it has not already been carried out a review of resolution regimes and their legal underpinning in other countries, including those in the Nordic countries and the regime introduced in the UK in 2009 (and subsequently extended), would be of value as providing possible templates.

1. *Powers.* Specific legal underpinning should be considered for various powers of intervention. In particular, the resolution authority must be able to effect private sector purchase and assumption operations, to set up a bridge bank and transfer activities to it, to enforce (obviously in conjunction with the Ministry of Finance) the transfer of a firm into Temporary Public Ownership, and to apply bail-in to some or all of the classes of debt holders in a failing institution.

In addition normal bankruptcy processes will need to be overridden given the almost inevitably slower workings of the Court system.

Furthermore the authorities would benefit from more explicit and “aggressive” powers of intervention. Once a bank has breached the trigger threshold, action should lie clearly with the authorities without any need to seek the agreement of the existing owners or Board. (The history in Iceland is of clear relevance here).

2. *Private Property Rights.* Such procedures necessarily involve some over-riding of private property rights, the rationale for which is that the alternative of pursuing a normal insolvency process would involve greater overall economic and social costs. This argument is now widely accepted in relation to banks, at least major banks; but the argument may be harder to make in the case of other kinds of financial intermediary, because the risk of contagion is likely to be less and the time scale over which a problem can be resolved is likely to be longer. Any development of NBFIs over time will likely raise this issue.

3. *Use of Public Funds.* There would be merit to state clearly the criteria for use of public funds in resolution and the associated decision-making process. Note that this needs to allow rapid disbursement if called for in a crisis, which may mean formal approval has to be given ex post.

To minimise the likelihood of needing to call on public funds, it has been proposed that the EU legislation should include a requirement for the establishment of a national resolution fund to be contributed by the banks. The interplay of this with existing or planned Depositors' and Investors' Guarantee Fund will need to be addressed as will the relative merits of ex ante and ex post funding mechanisms. The question of whether there would need to be an autonomous entity to manage such a fund will also arise.

4. *Compatibility of Law.* Any amended resolution regime should be fully compatible with the general law on insolvency and administration insofar as those aspects of the law continue to apply (as we understand it this is achieved at present through the status of the FU as *lex specialis* being able to effect a 'carve-out'). There should be no ambiguity in the law about the distinction between the resolution and the bankruptcy regimes.

5. *Scope of Law.* There needs to be clarity as to whether the law extends beyond deposit taking banks to other potentially systemically relevant institutions. This suggests for example the HFF and although

there may be little activity in the NBFi area at this stage, the potential for growth, particularly after the exit from capital controls, should not be overlooked.

6. *Who's in charge?* More generally, it is crucial that the legal framework and any associated memoranda of understanding should deliver clarity about who is in overall charge in a crisis. This can be one of the most difficult and sensitive areas, involving wider questions of inter-agency relations. In a crisis it is essential that there is no ambiguity about who has the power and responsibility to make decisions. It is vital to ensure that the fiscal authority, the central bank and the regulatory agency can act quickly and in concert and that, in the event there are differences of view, someone is clearly recognised to have the last word. The cooperation agreement between CBI and FME is certainly relevant here, but appears cumbersome for issues that require an integrated approach (hence the preference to have an independent standing or contingent resolution authority in a number of jurisdictions, as referred to above). As argued in Issue VII above, (Chapter 1) 'How should the transition from peacetime to crisis and crisis itself be handled?' there would be a presumption that this role probably be handled by the Ministry of Finance, and indeed the Minister. The proposed Council will provide a framework for this leadership.

On the assumption that the Ministry of Finance will be the lead, it is important that it should have the formal capacity to over-ride where necessary at least some of the powers which might normally rest with other agencies where those powers might cut across or constrain the crisis management actions which the Ministry judges are necessary.

(Note that the comments above in relation to 'who's in charge;' and the use of public funds are likely to be more relevant in the context of a system-wide crisis than in dealing with a single non-systemic bank. The criteria for the use of public funds could, for example, include a condition that they should only be available in dealing with system-wide problems.)

3.3.3 Disclosure, governance and accountability

This needs to be both adequate and timely.

Given that some potentially draconian actions may be taken in the context of managing a crisis, including interference with private property rights, it is important to have in place an effective and credible framework for holding those responsible for crisis management to account.

It is broadly accepted that issues of competition and moral hazard can limit the amount of transparency and what it is desirable to publish in the heat of a crisis, and, partly as a result, the accountability which it is reasonable to seek. Here there is the familiar problem of balancing transparency of support operations against the risk of further eroding confidence by premature disclosure. An arrangement which allows deferred disclosure (although perhaps with real-time disclosure to a neutral individual in Parliament) can help to deal with this.

Accountability is probably better regarded as an ex post discipline, with decision-makers knowing that, while their decisions may not be made public at the time, they will be subject to ex post scrutiny on the basis of well-defined audit trails of the process that was followed and basis for decisions. But even this is not at all straightforward and the temptation by those asked to judge to indulge in "20/20 hindsight" can be strong. It may nevertheless be sensible to establish a presumption that both at the time of the crisis management framework being triggered and during the crisis itself, there will subsequently be a report to Parliament. The question of whether this should be produced by a group wholly or partly independent of the financial authorities needs to be addressed in a way which reflects the Icelandic context.

Chapter 4: CBI organization

Considers desirable organizational change at CBI to reflect the recommendations in this report, both in the case of FME remaining an independent organization, and in respect of possible architectural change.

4.1 Architectural status quo

Assuming that the FME remains as the independent microprudential supervisor, and that the MA is constructed as in chapter 1 above, five main aspects of change in the organisation of CBI could be desirable to accommodate them.

4.1.1 Governors

It is noticeable that CBI has a single Deputy Governor (DG). Equally the span of responsibility of the CBI would be increased to accommodate the enhanced role in relation to financial stability.

Experience in other jurisdictions suggests that there could be merit in considering the appointment of a second DG. The two DGs would then be responsible to the Governor respectively for monetary policy, Deputy Governor for Monetary Policy (DGMP) and Deputy Governor for Financial Stability (DGFS). This could have the benefit both of spreading the load for the Governor, as well as ensuring appropriate focus on the two different areas. It might also provide a basis for the Governor to act as arbiter for any tensions between the two areas of policy.

The enhanced activity in relation to financial stability would include

- the work associated with hosting the MG as part of the macroprudential framework,
- day to day responsibility for the affairs of the Macroprudential Committee,
- the enhanced role of the Financial Stability Unit (see below) and
- oversight of the important linkages as between the various relevant units at CBI which will provide inputs to the Financial Stability Unit, as well as the important links with external parties with whom engagement will be needed.

It would be for discussion as to the split of responsibility as between the two DG's for other operational areas, but one possibility for consideration might be for payment systems to come under DGFS and for DGMP to include Market Operations, and Statistics apart from Economics and Monetary Policy. Capital controls could perhaps go either way.

Central functions could be split between them to even the load.

4.1.2 Macroprudential Committee

The Committee could be situated organisationally in a similar position to the existing Monetary Policy Committee. It would be hierarchically of similar 'status', and under the Chair of the Governor

4.1.3 Financial Stability Unit

The Financial Stability Unit would be taking on more explicit responsibilities in relation to financial stability areas generally. It would house the Support Unit and act as Secretariat for the MG. It would be the focal point of contact as regards the important linkages and engagement with the various relevant

units at CBI which will provide inputs to the Financial Stability Unit, as well as the external links with the microprudential Supervisor FME and the Ministry of Finance.

4.1.4 Inputs and engagement with other areas

- Other areas of CBI.

The Support Unit of MG, as part of the Financial Stability Unit, will require engagement with each of Market Operations, Capital Controls Surveillance, Payment Systems, Economics & Monetary Policy, Statistics and Microprudential Policy units.

- FME and other parties outside CBI including Ministry of Finance.

The 'terms of engagement' as between CBI and outside entities will no doubt be a matter for CBI's Board, and policy related issues that arise as regards the relationships will be for the Governor or DGFS. However day to day management of these interactions will fall to the Financial Stability Unit.

Resolution Authority

Debate and decisions are needed with respect to creating a (perhaps contingent) resolution authority as recommended in Chapter 3.

If it was decided to house this activity with CBI, (rather than constituting it independently, or housing it with FME), it would be logical to locate the responsibilities for this under the DGFS.

It would be for discussion whether those involved should become a new unit operating alongside Financial Stability, or be part of that unit. The initial project management and set up of the contingent organisation may argue for a separate dedicated unit to accomplish that task. However once in place the fact that the facility would be 'contingent' and not permanently staffed might suggest that the Financial Stability Unit could be a logical home with the responsibility for keeping it 'ready for action' There are of course other options.

4.2 Architectural change

Chapter 2 considered two possible changes to the architecture as far as microprudential policy is concerned. Firstly the possibility of a full merger of CBI and FME, and secondly a Twin Peaks approach with the transfer to CBI of the microprudential supervision of financial institutions, with responsibilities for market conduct and consumer protection remaining in a financial conduct authority based on the existing FME.

What follows is clearly only of relevance if this essentially political decision is taken, and this report is not concerned with the potential organisation of the activities conducted by FME.

However in either case the implications for the organisation of CBI would be material. If the activities of FME should be considered as two streams of activity: namely microprudential supervision on the one hand and market conduct on the other, then in the case of Twin Peaks only the former would transfer to CBI, whereas in a full merger they both would do so.

Either solution could argue in favour of a third DG (this is the solution chosen by inter alia the Bank of England where the Twin Peaks approach is being constructed.) The three DG's cover monetary policy, financial stability and microprudential supervision. Handling financial conduct would need consideration in the event of a full merger, though perhaps this area could be left under the DG responsible for microprudential supervision.

As regards financial stability the crucial linkages with microprudential supervision, which under the status quo are external, would be internalised. They would require continued management, as for other internal linkages.

In the event of a full merger the necessary linkages and engagement as between the Financial Stability Unit and financial conduct would be internalised, whereas if the latter remain within an independent FCA they would be handled in the same way as with FME today.

4.5 Governance of CBI

Please note that this chapter does not consider the Governance features of CBI. The additional powers and responsibilities that could be in prospect for CBI however do suggest that a thorough review of these arrangements should be undertaken as suggested in Chapter 2 above. Effective checks and balances would be needed if the central bank were made a more powerful institution. This could involve greater scrutiny by Parliament of policy in line with the arrangements now in place for monetary policy and more effective oversight by the CBI's Board Governance arrangements.

Recommendation 26

CBI internal organisation. Consequential organisational issues arise depending on the extent to which the recommendations in this report are followed and decisions with regard to both the handling and location of the resolution authority, and microprudential supervision.

Issues of relevance to organisation that merit discussion and decision in any event include:

- Possible appointment of a second Deputy Governor with responsibility for financial stability to handle the 'status quo' architecture (with further consideration of a third DG in the event that microprudential supervision is relocated to CBI).
- Clarification and extension of roles of the Financial Stability Unit, including the housing of the Support Unit and secretariat of MG.
- Location of the (Macroprudential) Committee alongside that for monetary policy.
- Management of linkages by the Financial Stability Unit with relevant units of CBI to ensure appropriate levels of engagement.
- Management of linkages by the Financial Stability Unit with parties external to CBI to ensure appropriate levels of engagement.

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May 2012

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Appendix 1

Consolidated list of recommendations

1. The need for a definition and objectives. A definition of financial stability and a statement of the associated objectives should be developed as guidance for the construction of a policy framework. Ideally they should be set out in statute.

2. Definition of Financial Stability. 'Financial Stability' is a state in which there are no and there is confidence that there are likely to be no, substantial discontinuities or disruptions in the functioning of the financial system and in which, should such disturbances occur, their impact on the financial system and real economy is minimized. This definition should be placed in statute.

3. Objectives. The financial stability function should aim to deliver and maintain financial stability as defined above. To achieve this, practical objectives should be set for:

1. Macroprudential policy: to review and assess the systemic conjuncture and structure of the financial system; to identify actual or incipient threats to financial stability or actual system-wide vulnerabilities; and to apply the policy instruments or tools available to address these threats.
2. Supervisory (microprudential) policy and oversight: to identify specific vulnerabilities or threats affecting individual (or groups of) financial institutions or markets, together with regulatory/supervisory measures to address them; and
3. Crisis handling and resolution: involving the development and preparation of efficient means of invoking crisis management mechanisms, the associated resolution issues should they arise, and the crisis handling mechanism itself (including statement of 'who is in charge').

Addendum: The estimated direct and indirect cost of implementing policies and actions to deliver financial stability should be less than the estimated cost of failing to achieve it.

4. Creation of a Macroprudential Policy Framework. A framework should be designed to meet the macroprudential objective with responsibility for regular monitoring and assessment of systemic risks and for initiating and pursuing action in response. It should reflect both experience and emerging international practice. This suggests the creation of a Macroprudential Authority as an institutional point of focus. Due regard should be paid to the Icelandic environment.

5. Macroprudential Authority and conflict resolution. The Macroprudential Authority should oversee and manage conflicts of policy both within the financial sector, and, with the appropriate ministerial interface, as they relate to other authorities in Government. It should assert the 'case' for financial stability measures so that appropriate mechanisms are found to ensure that tradeoffs are consciously thought through and the primacy of delivering systemic stability is respected.

6. Approach to Statute. A statutory approach would be desirable, balancing clarity with the need for flexibility. Candidates for inclusion in statute include:

- Definition of financial stability. (see recommendation 2)
- Objectives of each of the three policy areas, perhaps by administrative order. (see recommendation 3)
- Specific responsibilities of the CBI and the FME in relation to financial stability.
- Data/information required from beyond the regulatory perimeter.

- Appropriate powers to deploy policy instruments.
- Separate but connected backing for a resolution framework.

It is accordingly recommended that on completion of this exercise, and depending on which recommendations may be accepted, an exercise to examine existing legal powers is undertaken to see what set of coherent alterations may be desirable.

Consideration should be given to the needs for flexibility, with statute being reserved for high level issues, and more detailed intent being handled through forms of regulation and administrative process.

7. International Fora. There would be value for Iceland to continue to participate to the extent that resources permit in relevant international fora. The intent would be twofold.

First, to ensure that Icelandic authorities understand clearly international initiatives in the macro and microprudential fields in order to facilitate sensible implementation.

Second, through financial diplomacy and example, to seek to influence outcomes (perhaps collectively with other smaller jurisdictions), so as to ensure that the concerns of Iceland as a smaller jurisdiction are adequately accommodated.

8. Conflict handling and ministerial involvement. The new Ministry of Finance and Economy (MFE) should have lead responsibility for all aspects of financial stability including those falling under the purview of CBI and FME. This would include macroprudential policy, microprudential policy, the preparations for and handling of crisis, and associated resolution policy.

Supervision of the HFF should be undertaken by the FME acting under the MFE's overall responsibility.

9. Macroprudential Authority: a two tier structure. The two tier structure for macroprudential policy should consist of a top level policy orientated Council linked to the political process, and an operationally active MG.

10. Design of Council. The Council should be tasked with steady state responsibilities to resolve policy conflicts, set the mandate for the MG (see below), and respond to recommendations from the MG.

The Council should be composed at the least of the Minister of Finance (in the Chair), the Governor of CBI, and the CEO of FME.

The Council would also be responsible for triggering the transition to crisis mode and take overall charge if crisis situations arise (see Chapter 3).

11. Design of MG. A dedicated MG would undertake the process of formulating policy response and ensuring delivery. It should operate under the mandate set regularly by the Council. It would be chaired by the Governor. Key participants in this Group would be the CBI and FME. A representative of the MFE as an observer would be an advantage.

12. Composition of the MG. Two functions need to be accommodated: assessment and decision making. Accordingly the MG could include a Committee chaired by the Governor of CBI on the one hand, and a dedicated Support Unit on the other.

13. MG Mandate and objectives. The objectives should ideally be accorded under statute. The mandate would be set by the Council and be refreshed from time to time. It should contain language requiring it to take account of, or 'have regard to', other policy objectives as laid down by the Council.

14. Location of the MG. The lead role of the MG should be allotted to CBI where its activities should be located and anchored.

15. Authority of MG. The MG should have full authority to deploy microprudential instruments for macroprudential purposes. Should it seek use of instruments beyond the financial sector it should have the duty to make recommendations for decision by the Council.

16. Data/information. Careful analysis of data/information sources, availability, timeliness and relevance should be undertaken. A process to obtain relevant data from beyond the regulatory boundary should be put in place with relevant legal underpinning.

17. Indicators and 'radar' capability. Careful analysis by the MG will be required as to how best to create an effective radar capability with the skills to establish the most relevant indicators of vulnerabilities on a continuing basis.

18. Assessment and decision making process Resources and skills should be deployed to assess data and indicators. A regular process of assessment and decision making should be established.

19. Transparency of policy decisions. Mechanisms should be put in place to ensure transparency of policy decisions with adequate publication of both vulnerabilities and policy judgements and decisions. This will enhance legitimacy and understanding of macroprudential issues.

An appropriate governance and accountability process needs to be in place to enhance understanding and act as an incentive for all involved to achieve their macroprudential objectives. This could include reports and appearance before Parliament.

20. The transition from steady state to crisis. Specific machinery with appropriate legal underpinning should be designed to ensure a smooth transition from a steady state environment to one of crisis and resolution. The potential role of the MG, both in the lead up to the invocation of resolution arrangements and in times of crisis should be clarified.

21. Consolidation of supervisors. Ultimately the decision either to merge FME and CBI, or to adopt a Twin Peaks model with prudential supervision being transferred to CBI is a political choice.

On balance the arguments in favour of moving to one or other of these two options are quite strong given the importance of the financial stability framework to the economy.

One essential implication of this would be the need to reconsider, and strengthen, the accountability and governance process of CBI given the extra power that would accrue to it.

22. Deposit Insurance. We are aware of the draft Bill (at present not translated from Icelandic) in relation to the Depositors and Investors Guarantee Fund. This should be enacted as soon as is realistic.

23. Recovery and Resolution Plans. Such plans should be put into place for at least the three main Icelandic banks.

24. LOLR provision. The CBI should re-examine the extent of its authority in relation to LOLR provision with a view to obtaining any necessary changes in law. CBI should be in a position to use a suite of possible instruments to conform to the wide set of instruments presently in use in different jurisdictions.

25. Resolution framework. The importance of a well-planned and tested resolution framework is evident. Work should be emphasized to develop this expeditiously with appropriate legal underpinning to take the place of the Emergency Act 2008. The regime most appropriate for Iceland's circumstances should be prepared and made ready for operation in a manner that is consistent with FSB and EU requirements.

26. CBI internal organisation. Consequential organisational issues arise depending on the extent to which the recommendations in this report are followed and decisions with regard to both the handling and location of the resolution authority, and microprudential supervision.

Issues of relevance to organisation that merit discussion and decision in any event include:

- Possible appointment of a second Deputy Governor with responsibility for financial stability to handle the 'status quo' architecture (with further consideration of a third DG in the event that microprudential supervision is relocated to CBI).
- Clarification and extension of roles of the Financial Stability Unit, including the housing of the Support Unit and secretariat of MG.
- Location of the (Macroprudential) Committee alongside that for monetary policy.
- Management of linkages by the Financial Stability Unit with relevant units of CBI to ensure appropriate levels of engagement.
- Management of linkages by the Financial Stability Unit with parties external to CBI to ensure appropriate levels of engagement.

Appendix 2

Macroprudential frameworks: International comparisons

Evolving practice internationally: Models under development in different jurisdictions

A number of comparative reviews of institutional arrangements have been conducted by the IMF and by the BIS (see for example “Towards Effective Macroprudential Policy Frameworks: An Assessment of Stylised Institutional Models”, IMF Board paper, 30 August 2011).

The IMF review does not condone a single model but nevertheless makes a number of general observations on institutional arrangements which seem relevant:

- the need to recognise that “One size does not fit all” given that arrangements need to take account of local circumstances
- the benefits of ensuring a close relationship between the central bank and the regulatory authorities (where separate) and of avoiding undue fragmentation of the latter
- the issues involved in relation to the (finance) ministry involvement, particularly the need to guard against political considerations colouring the assessment of risks or the form and timing of a response
- the need to ensure effective mechanisms for sharing information amongst the relevant authorities and the desirability of having a clear institutional lead in macroprudential analysis, which in many cases might sensibly be the central bank
- the need for clear decision-making processes so as to facilitate timely action and proper accountability without unduly constraining the capacity and willingness to take unpopular but necessary measures
- the need to ensure that appropriate powers, with where necessary a sound statutory basis, are available to support necessary policy actions
- the need to institutionalize in some way “symmetry” in the conduct of macroprudential policy, to guard against an excessively restrictive approach which might unduly constrain risk taking and economic growth
- the need for effective coordinating mechanisms amongst all the authorities whose policy responsibilities interact in a significant way.

The following synopsis under seven headings of the ESRB's mandate are also relevant:

- existence of a financial stability Council
- Council membership and chair
- frequency of Council meetings
- assignment of macroprudential mandate
- range of Council powers, eg powers of direction, powers of formal recommendation, informal coordination
- decision-making process at Council meetings
- extent of dedicated resources supporting the Council

EU⁶

Existence of a Financial Stability Council	<ul style="list-style-type: none">• European Systemic Risk Board (ESRB) at the European Central Bank (ECB)
Council membership and Chair	<ul style="list-style-type: none">• The ESRB consists of a General Board, a Steering Committee, a Secretariat, an Advisory Scientific Committee and an Advisory Technical Committee• The General Board of the ESRB consists of the President and Vice-President of the ECB, the Governors of the 27 national central banks, a member of the Commission, the Chairperson of the European Supervisory Authorities (banking, insurance and pensions, securities markets), the Chair and the two Vice-Chairs of the Advisory Scientific Committee, and the Chair of the Advisory Technical Committee• In addition, members without voting rights include the president of the Economic and Financial Committee (EFC) and one high-level representative per (27) Member State of the competent national supervisory authorities• The ESRB is chaired by the President of the ECB for the first 5 years; the Chair for subsequent terms will be designated in accordance with the modalities determined on the basis of a review of the ESRB Regulation by the European Parliament and Commission by 17 December 2013
Frequency of Council meetings	<ul style="list-style-type: none">• General Board meetings are convened by the Chair of the ESRB at least four times a year• Extraordinary meetings may be convened at the initiative of the Chair of the ESRB or at the request of at least one third of the members of the General Board with voting rights
Ownership of macroprudential mandate	<ul style="list-style-type: none">• The ESRB has a macroprudential policy mandate, and is responsible for the macroprudential oversight of the financial system within the Union
Range of Council powers	<ul style="list-style-type: none">• The ESRB is designed to issue warnings, and, where appropriate, make recommendations for remedial action on the basis of 'comply or explain'• But the ESRB explicitly has no power to direct
Decision-making mechanism	<ul style="list-style-type: none">• The General Board shall act by a simple majority of members present with voting rights; In the event of a tie, the Chair of the ESRB shall have the casting vote
Existence of dedicated staff/resources	<ul style="list-style-type: none">• The ESRB is supported by ECB staff

NB The ESRB has recommended that each individual jurisdiction in the EU develop a national macroprudential framework by 1 July 2013.

6. Regulation (EU) No 1092/2010 of the European Parliament and of the Council on European Union macroprudential oversight of the financial system and establishing a European Systemic Risk Board (24 November 2010)

Fuller comparative information is contained in the following source documents:

Towards Effective Macroprudential Policy Frameworks: An Assessment of Stylized Institutional Models, IMF Working Paper WP/11/250 (November 2011)

Identification of practices and arrangements in place in selected jurisdictions, IMF Macroprudential Policy (draft report, marked confidential) (2011)

Country Case Studies, IMF Background Paper (August 2011)

Overview of Progress in the Implementation of the G20 Recommendations for Strengthening Financial Stability, FSB paper (September 2011)

The Structure of Financial Supervision, Group of Thirty (2008)

Appendix 3

Definitions, Indicators, Data/information and Instruments

1. Definitions of Financial Stability

Several possible high-level definitions of financial stability can be considered. In themselves, however, most do not provide observable and practical objectives – an important consideration given the need for such objectives to be both legitimate and achievable. Accordingly we also set out some suggestions on objectives in ‘Financial Stability: Introduction, Definition and Objectives’ in the main report. As for definitions, some candidates are:

1. Maintaining financial stability means ensuring an effective mechanism for channelling savings into investment.

Comment: although this is indeed the ultimate objective, as a definition it is arguably both too wide and too narrow. It is too wide because numerous other factors (such as the tax regime, competition and the degree of openness of the economy) affect the channelling of savings into investment. It is too narrow because financial stability is important for other things, such as making payments and managing risk. Other definitions based on the link to overall economic performance suffer from the same problem: overall performance reflects many factors and many areas of policy, and is itself therefore not a good indicator or measure of the particular impact of financial stability (or instability).

2. Maintaining financial stability means avoiding “excessive” volatility in asset prices and financial flows.

Comment: on this definition, the mechanics of the financial system may function perfectly satisfactorily at the micro level but the dynamic characteristics of the system as a whole may allow or encourage “excessive” volatility, with an associated economic cost. Apart from the obvious question about what is “excessive”, this raises a more fundamental point: making the system more efficient by eliminating frictions may also make it more susceptible to overshooting. Or again it might permit the system to return to equilibrium more quickly. We simply do not know. Here again, however, there is the problem that many factors (eg monetary policy and macroeconomic policy generally) may contribute to volatility, so that avoiding it is not a deliverable objective for financial stability policy alone.

3. Maintaining financial stability means ensuring that if the financial system is subject to a shock it returns to its original equilibrium position or moves smoothly to a new equilibrium.

Comment: this is really a variant of (ii), but with the additional thought that, in the absence of some change in fundamentals, the system should return to its original position rather than jumping to some new position or collapsing. Observation suggests that no such reversion can be relied upon.

4. Maintaining financial stability means avoiding substantial discontinuities or disruptions in the functioning of the financial system on a scale which leads to significant costs for the economy as a whole.

Comment: this is probably closest to the “common sense” definition if we take “discontinuities and disruption” to mean eg disorderly institutional failures or sudden market unavailability and has accordingly been chosen for our recommendation.

2. Indicators

Identification of indicators: having the right people

Various processes can make an important contribution in identifying vulnerabilities and the build-up of risks in the financial system. These include data/information gathering, collecting qualitative market intelligence, in-house analysis, and reviewing academic analysis.

Probably the most important factor, however, in a successful “radar” function is having a focused team of smart, experienced and inquiring people of the highest quality. They need extensive knowledge of financial activity generally (including a capacity to interpret the implications of new products and forms of business activity) and particular knowledge of the national (or regional) financial system, to be able to spot features that look as if they could become a threat to stability. Equally important, particularly in Iceland, is to have people who understand the international linkages. It helps if such teams include individuals with practical financial experience, notably of past crises.

For a small jurisdiction like Iceland this presents a significant challenge, particularly given the sheer breadth or capability needed, including the need to understand the international factors. This suggests that organizational solutions will need to be found which maximize the potential use of available talent.

Indicators for specific purposes

Conjuncture based features: Unsustainable trends in financial aggregates

Indicators of this kind have probably attracted the most attention and have been subject to the most intensive analysis in the past. The analysis has covered certain developed economies but also, importantly, emerging economies, particularly in Asia and Latin America, with experience of the 1990s crisis.

The list of potentially useful indicators is well known and includes overall leverage ratios for banks and for the principal domestic sectors of the economy; growth rates and levels of lending and debt related to particular sectors; and the maturity structure of liabilities, including dependency on wholesale funding. In many emerging markets the size and form of capital flows also provide a significant set of indicators.

Even with the long runs of data available for some of these indicators, however, it has proved difficult to come up with reliable procedures to identify incipient crises. And it is hard to avoid cases where a problem is thought to exist where in fact there isn't one or of a failure to respond to a signal where there is. This reinforces the message that, for the time being at least, it will remain necessary to rely heavily on the qualitative judgments referred to above.

Conjuncture based features: Unstable patterns of financial exposure

These may be spotted through collection and analysis of more conventional financial data (at the firm level and in the aggregate), although again, market intelligence may provide useful indications of where to look. One difficulty here is that historical data, collected mainly for monetary and macroeconomic and (micro) prudential reasons, may not be well adapted for macroprudential analysis. Recent initiatives have begun to address some of these deficiencies, but it will be several years before sufficient data are available to form a reliable view of what is or is not relevant. (Experience with the evolution of shadow banking is a current case in point.)

Resilience-related structural features

Many disparate issues fall under this heading, involving inputs from a wide variety of sources.

Monitoring the creation and development of new instruments, and the emergence of new forms of business activity, can give important clues to potential sources of risk. Are they, for example, designed to arbitrage regulatory requirements? Do they involve new, perhaps opaque, ways of providing credit? And are they doing so internationally in ways which are relevant to the situation in Iceland? The development of “shadow banking” is again a case in point.

Equally important is the identification of critical nodes in the system. Even if an institution is “small”, extensive linkages in critical areas can make the system vulnerable to its failure.

In addition, important issues may arise in relation to market infrastructure such as payments, clearing and settlement systems, and from the authorities', especially the central bank's own market operations,

which may also highlight public sector financial exposures. (Such considerations were, for example, a principal driving force behind the introduction of Real Time Gross Settlement (RTGS) payment systems, which reduced contagion risk and at the same time central bank exposures in payments systems.)

Finally, other matters such as trading rules, accounting standards, disclosure requirements, legal provisions, and aspects of the form and effectiveness of the regulatory system, which may be leading to perverse or unintended consequences, can all be relevant to an overall assessment of systemic resilience.

3. Data/information

Several considerations in relation to data are of significance.

Existing data/information sources

Much of the data collected for macroeconomic and monetary policy purposes and by the micro financial regulator(s) will be relevant for macroprudential analysis. So, for example, information on sectoral financial balances, levels and growth of bank credit, sectoral distribution of exposures, individual firm capital, liquidity and risk profiles, and the maturity profile of debt form an essential part of the necessary information base. But it may include less detail on, for example, the pattern of individual banks' counterparty exposures, on secured versus unsecured liabilities, on the maturity breakdown of assets and liabilities and foreign exchange liabilities, than is needed to assess systemic vulnerabilities.

Additional data for macroprudential purposes

In broad terms, the main additional data requirements are as follows. Aggregate data that will help identify a build-up of risks in the financial system as a whole, especially where these are not evident at the level of individual institutions. This may seem straightforward in principle, but at a micro level the data currently collected from individual firms may not be compatible in terms of definitions, timing, and coverage, and are therefore difficult to aggregate.

- Data on individual institutions that help to assess their likely behavior under stress (as opposed to providing a snapshot of their current position) and the way this behavior is likely to knock-on to other parts of the financial system (for example, through balance sheet and capital market contagion).
- Data on markets as opposed to institutions, including price trends, measures of volatility, market depth and continuity, implied market views about future price movements (through, for example, option prices), and credit standing (through, for example, credit default swap prices and bond spreads), and so forth.
- Data on market structure and the complexity of financial groups.
- Relevant data as above to cover the international dimension.
- Data to be supplemented by market intelligence obtained from monetary operations and private sector firms operational in Iceland, or with Icelandic counterparties whether based there or not.

Other factors

Data need to be timely, accurate and reliably available. Some of them may need to come from beyond the normally regulated boundary. At the same time, data overload needs to be avoided. A particular need is to identify trends in behavior, instances of regulatory arbitrage, new products, and new legal constructs.

For this reason, the approach to data and information collection needs to be selective and flexible, taking account of what seems relevant at a particular time and in particular circumstances. Moreover, it needs to extend beyond the regulatory boundary to identify potential risks arising from new institutions or markets outside the boundary (and may point to the possible need to adjust the boundary). All the above points to the importance of the quality of resources deployed in determining data needs.

Cost Considerations

These are significant including the cost (for the industry) of providing them and (for the authorities) of analyzing them. The costs for financial institutions can be reduced by allowing a reasonable period for phasing in new requirements so that the necessary system changes can be synchronized with their internal information technology cycles. The costs for both the authorities and the banks can be contained by judging carefully what data are really needed and what is the most cost-efficient way of collecting them, drawing especially on qualitative intelligence. This is sometimes inexpensively available but can be extremely helpful in focusing more formal data collection initiatives.

International practice

Emerging practice could usefully be studied in other jurisdictions eg Malaysia, UK etc as to how most effectively to obtain information from beyond the regulatory boundary.

Separately as the strategy in place to lift capital controls unfolds it will be important to consider how data needs will alter and ensure that mechanisms to obtain it are in place.

4. Instruments

A categorisation of instruments to accord with the policy intent is of value.

Instruments relevant in addressing conjunctural risks

- If the goal is to influence overall credit creation in the economy (including the shadow banking system), or by banks specifically, the obvious candidates are instruments that affect the price of credit or aim directly to constrain balance sheet growth. In this category fall short-term interest rates (affecting the cost of funds), overall capital or leverage requirements (affecting the cost of intermediation), and perhaps liquidity requirements (which raise the shadow price of illiquid loans). There are, however, considerable calibration uncertainties about how much impact these measures are likely to have and over what period. In addition, their effects are likely to vary from bank to bank depending on their overall capital and liquidity position. There is the separate possibility of imposing quantitative limits on either the level or growth of credit, but experience with such direct controls indicates that they are ineffective beyond the short term and become increasingly distortionary.
- If, instead, the goal is defined “from the borrower side” in terms of increases in debt, instruments that (as above) affect the supply of credit are again clearly relevant. However, there is the additional problem of “leakage”; certain categories of borrower may be able to borrow from outside the banking sector or at least outside the domestic banking sector, and whether domestically or internationally. This might be addressed by measures that make borrowing generally less attractive, for example, by increasing collateral requirements (including, for example, LTVs) or by changing the tax treatment of interest paid. Some of these measures may, however, be difficult to enforce without a considerable degree of international harmonization and coordination.

Another potential policy instrument — although again carrying the risk of long-term distortions — is the selective use of capital controls, particularly in response to external macroeconomic shocks. These are already a significant instrument used in the Icelandic context.

- If the goal is to address risks associated with the pattern of exposures among financial intermediaries, instruments of a more “micro” nature are likely to be required, such as capital requirements against particular concentrations of exposure, or minimum margin requirements against particular kinds of contracts (for example, derivatives and repo). Some of the measures in the following paragraph may also be relevant, such as requirements for central clearing of derivative contracts. All such interventions would be directed at avoiding an excessive build-up of exposures within the financial sector or concentrations of exposure to particular external parties.

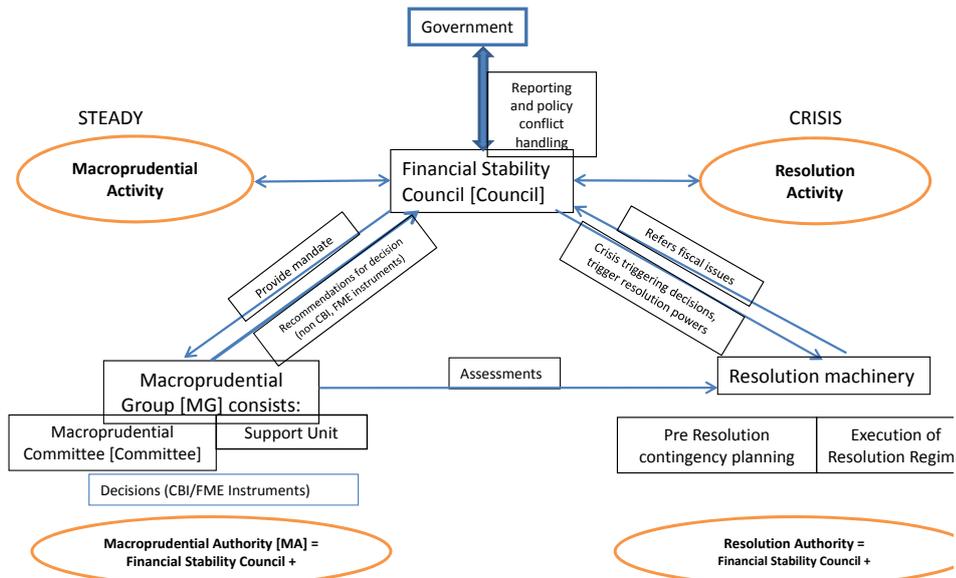
Instruments relevant to structure

- To the extent that the goal is set, instead, in terms of remedying structural weaknesses, interventions of a rather different kind are likely to be necessary. In some cases, they may involve the encouragement or facilitation of infrastructure projects (for example, securities settlement systems) designed to reduce risk or clarify its location. In others, they may take the form of promoting changes in rules on accounting or disclosure, or the legal treatment of certain kinds of transactions. They may also involve reinforcing aspects of microprudential supervision.

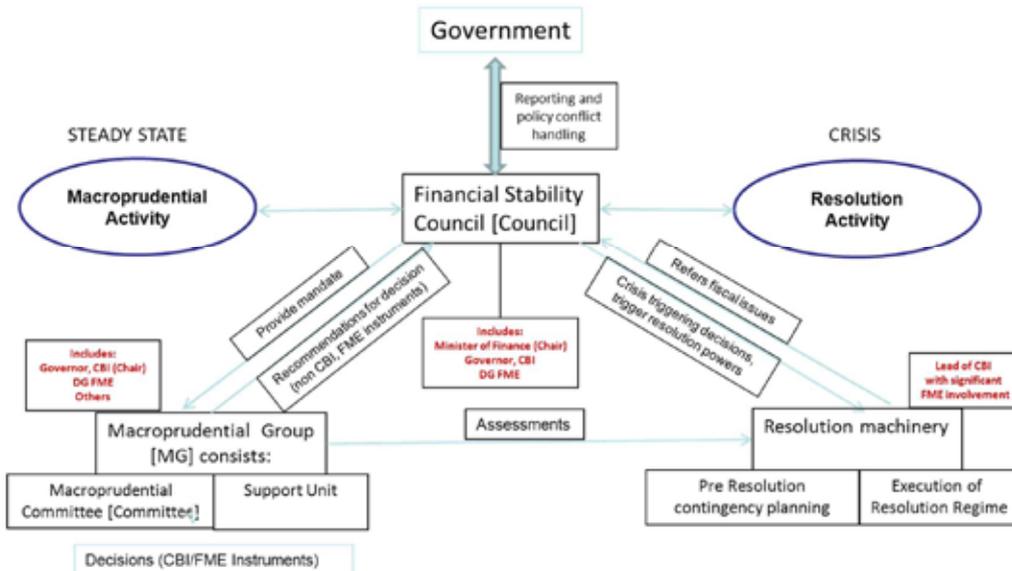
Appendix 4

Framework for Macroprudential and Resolution Policy

Framework for Macroprudential and Resolution Policy in [based on supervision status quo as per Chapter 1]



Framework for Macroprudential and Resolution Policy in Iceland



Central Bank of Iceland Special Publications

Financial Stability: The Role of the Central Bank of Iceland. No. 8, 2012.

Iceland's currency and exchange rate policy options. No. 7, 2012.

Prudential rules after capital controls. No. 6, 2012.

The role of central banks in financial supervision. No. 5, 2011.

Monetary policy after capital controls. No. 4, 2010.

Indexation of loan financing and interest rate policy in Iceland. No. 3, 1998.

The Economic and Monetary Union – EMU. No. 2, 1997.

Resolution of complaints to the Central Bank Banking Supervision in the years 1990 – 1996. No. 1, 1997.