

Sigurjonsson, Throstur Olaf

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Governance Failure and Iceland's Financial Collapse

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Governance Failure and Iceland's Financial Collapse

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Throstur Olaf Sigurjonsson

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Throstur Olaf Sigurjonsson
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THESIS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

Governance Failure and Iceland's Financial Collapse

Throstur Olaf Sigurjonsson

Copenhagen Business School

Ph.D. dissertation submitted to

The Department of International Economics and Management

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EXECUTIVE SUMMARY

Weak corporate governance as a cause of the Icelandic financial crisis

Currently, the corporate governance has the agenda of categorizing reality and thereby determining which systems are more effective and efficient in a given context. A question is posed; how has the internationalization of markets, liberalization, deregulation, and privatization adapted to rapid changes in traditionally based models of corporate governance? When corporate governance practices are exported from one country to another, they tend to be translated and customized to local practices before being adopted. The objective of this thesis is to examine this type of adaptation and explain the circumstances that led to a collapse of governance mechanisms, using Iceland as an example.

Governance issues are interwoven with the Financial Crisis of 2008 and the effects of the crisis were perhaps the most devastating in Iceland, where the whole banking system collapsed, resulting in an economic and political crisis. The five years leading up to the 2008 Financial Crisis appear to have been characterized by high levels of strain on governance mechanisms. Therefore, the overarching research question for this thesis is; *which governance mechanisms came under strain, broke, and triggered a complete collapse of a developed economy?* A follow up research question is; *why did those governance mechanisms become so vulnerable?*

This thesis addresses a number of governance issues on several levels: at governmental, firm, and civil society. Therefore, a hybrid research strategy is appropriate and subsequently the empirical basis for this research encompasses multiple case studies, longitudinal quantitative data, social network analysis, and evaluations by expert panels.

The research reveals how fragile governance issues can become. However, by themselves, weak governance and misguided actions do not constitute an adequate explanation for a crisis; rather the findings suggest that it was the interaction between them that was most influential. Specifically, this thesis examines how the interaction of different governance mechanisms influences a collapse. The research contributes insight about the greater call for actor-centered analysis of firms and greater attention to the diverse identities and interests of different stakeholders and new actors. Furthermore, the research suggests the importance of introducing diverse perspectives to corporate governance based on culture, law, and politics, in order to recognize the many mechanisms and structures that might reasonably enhance organizational function.

Another important contribution of the paper is insight regarding how procedures that created economic growth, when combined with a lack of governance over liberalization and privatization, a weak business culture, and a lack of transparency, led to challenges that ultimately were too big to solve. Treating privatization as a discrete act rather than part of a progressive process appears to have been a policy mistake in the case of Iceland. Liberalization and deregulation

bred entrepreneurship and greater risk taking, which governments should encourage to a certain extent, but governments also need to ensure that appropriate regulations and supervision are in place.

Resumé

En svag virksomhedsledelse som årsag til Islands finansielle krise

I skrivende stund forsøger virksomhedsledelse generelt at kategorisere virkeligheden for derigennem at fastslå, hvilke systemer er de mest virkningsfulde og effektive i en given sammenhæng. Det stille spørgsmål er: hvordan har internationaliseringen af markederne, liberalisering, deregulering og privatisering tilpasset sig de hurtige ændringer i de traditionelt baserede modeller af virksomhedsledelse? Ved overføring af en praksis inden for virksomhedsledelse fra ét land til et andet bliver denne gerne fortolket og tilpasset til de forhåndenværende praksisser før den bliver indført. Målsætningen med denne afhandling er at undersøge denne type tilpasning og forklare de omstændigheder, der ledte til sammenbruddet i ledelsesmekanismerne. Island vil blive brugt som eksempel.

Spørgsmål omkring ledelse og forvaltning er tæt forbundet med finanskrisen i 2008, og virkningerne af denne var måske de mest knusende i Island, hvor hele banksystemet brød sammen og forårsagede en økonomisk og politisk krise. De fem år forud for krisen i 2008 synes at have være karakteriseret af et stærkt pres på ledelsesmekanismerne. Derfor er det overordnede research-spørgsmål i denne afhandling det følgende: hvilke ledelsesmekanismer kom under pres, brød sammen og afstedkom et fuldstændigt sammenbrud af en udviklet økonomi? Et

opfølgningsspørgsmål i min research er derefter: hvorfor blev disse ledelsesmekanismer så sårbare ?

I afhandlingen stilles en række spørgsmål omkring ledelse på flere niveauer: regerings-, virksomheds- og samfundsniveau, og en hybrid research-strategi er derfor den mest hensigtsmæssige. Følgelig vil det empiriske grundlag for denne research omfatte multiple case-studier, kvantitative forløbsdata, analyser af sociale netværk og ekspertgruppers vurderinger.

Undersøgelsen viser, hvor skrøbelige ledelsesmekanismer kan blive. I sig selv udgør en svag ledelse og ugenomtænkte handlinger imidlertid ikke en fyldestgørende forklaring på krisen. Resultaterne tyder derimod på, at det var samspillet mellem dem der havde den største virkning. Denne afhandling undersøger specifikt hvordan samspillet mellem forskellige ledelsesmekanismer har indflydelse på et sammenbrud. Undersøgelsen giver indsigt i den stigende efterspørgslen efter aktør-centrerede analyser af firmaer og den stigende opmærksomhed omkring de mange forskellige interessentgrupper, nye aktører og disses interesser. Yderligere peger undersøgelsen på vigtigheden af at indføre andre perspektiver i ledelsen af virksomheder, som ville være baseret på kultur, jura og politik. Formålet med denne ændring ville være at anerkende de mekanismer og strukturer der synes at have indflydelse og har potentiale til at øge organisatorisk funktion.

Et andet vigtigt punkt i afhandlingen er behandlingen af hvordan de procedurer der skabte den økonomiske vækst – når de blev koblet sammen med manglende ledelse gennem liberalisering og privatisering, en svag virksomhedskultur og mangel på gennemsigtighed – medførte problemer, der i sidste instans blev for store til at løse. Håndteringen af privatiseringen som et diskret projekt i stedet for som del af en progressiv proces synes i Islands tilfælde at have været en strategisk fejltagelse. Liberalisering og deregulering resulterede i initiativ- og risikotagning hvilket regeringer til en vis grad bør tilskynde, men de må dog samtidigt sikre, at relevant lovgivning og kontrol er til stede.

ACKNOWLEDGEMENTS

INTRODUCTION

Pursuing my Ph.D. project has been like climbing a five thousand meter high glacier, both a pleasant and a painful experience. I, however, always felt I was hiking towards a visible summit. Nonetheless, especially during the first two thousand meters, I was coming across enormous crevasses, making me find new routes to cross them. I often felt I was losing too much time and making too little progress. Then gradually I realized that I was actually finding my way up the glacier and the hike began to progress. Hiking from two thousand to four thousand meters, I loved being there. I was making more progress, and I felt that I knew exactly how to handle the unexpected challenges and the view was amazing. The last one thousand meters demanded more than I had anticipated. I had to gather all the skills and experience from the first part of my ascent, work collectively and really push myself for the last meters. Finally, when I had reached the peak, I looked down and the feeling was heavenly. A reflection on all the different learning experience I had gathered and the challenges accomplished made me proud.

Although I hiked solo and occasionally felt lonely, I could not have made it to the top without good advice and support from good people. Firstly, I would like to thank the one who guided me from the very start, from planning the journey to all the way to the summit, never appearing to run out of clever ideas, or firm

structures and processes in order to reach the next camp. My supervisor, Professor Steen Thomsen at Copenhagen Business School (CBS), was relentless at finding solutions to pass the next seemingly un-crossable crevasse. Keeping up morale, Steen never lost his sense of humor, although he had to deal with a mountaineer who, especially during the difficult first two thousand meters, seemed to lose his way often.

During the last and difficult one thousand meters, my Ph.D. committee gave valuable advice on how to learn from the experience. They made me collect each milestone and combine them into the knowledge and insight needed to conquer the last steep meters. I am grateful to Professor Jette Steen Knudsen, my chairman, Professor Michael Wolff and Professor Trond Randøy. I want to thank Professor Niels Mygind, head of the Department of International Economics and Management (INT) at CBS, especially for coming up with suggestions on how to approach some of the tough ice walls that I needed to climb.

Special thanks also go to my colleagues at INT at CBS, for their positive attitude towards the hiker, who was a frequent visitor at their place, seeking their ideas and advice on various aspects of the hike. Assistant Professor Therese Strand is warmly regarded for always being willing to answer endless basic questions regarding the necessary survival kit. Likewise, I also want to thank Assistant Professor Thomas Poulsen for his patience towards elementary questions as well. I wish to express my gratitude to others at INT, Professor Ole Risager, Professor Ari Kokko, and Assistant Professor Aleksandra Gregoric, for their always welcoming attitude towards the glacier hiker.

At the base camp, Reykjavik University, I want to thank especially one person, Associate Professor Marina Candi. I believe I owe Marina more red ink than I can repay, so often has she read through my papers and given me criticism and ideas for strengthening my research. Other colleagues have been forthcoming with good advice particularly Dr. Vlad Vaiman, Ph.D. students, Mar Wolfgang Mixa, Axel Hall and Haukur Freyr Gylfason, Dr. Katrín Ólafsdóttir, Dr. Rögnvaldur Sæmundsson, Dr. Friðrik Már Baldursson and Dr. Jón Þór Sturluson. These are my next-door neighbors at base camp, who have put up with me in various conditions during the hike, but always were supportive and understanding.

Many of the visiting professors at Reykjavik University have also contributed to my journey. Their long research experience and unselfishness of guiding and advising has contributed to the quality of my research. What started as formal guidance has turned into life-long friendship. I want to thank Professor David Schwarzkopf from Bentley Colleague for his positive criticism and calmness during my whole journey. Likewise, Professor Murray Bryant from Ivey, who always has had a good eye for creative and clever approaches to my research. I am in debt to my great friends at IESE, Professor Ahmad Rahnema and Professor Eric Weber, who both have supported me in so many ways. I would as well like to thank my CBS colleagues, Professor Jesper Rangvid and Professor Claus Parum, who never got tired of my constant need to discuss my work with them.

I would not have finished the journey without supplies in the form of self-discipline and endurance. I believe these to be my strongest personal strengths,

acquired in my upbringing. Therefore, I want to thank my parents, Kristín Briem and Sigurjón H. Ólafsson, for in my first 25 years, always requiring organization and for giving me the belief that with perseverance, all projects will be completed. This hike of mine surely was long and high, demanding both extreme discipline and endurance. Still, these qualities would mean nothing without an abundance of time. That time my wife, Dr. Audur Arna Arnardottir, has selflessly provided me with. Not only has she done so, but she has as well been my number one academic consultant and advisor in methodology and statistics. She has taken all the nightshifts and weekends, for years, keeping our family together when I, the husband and the father of Kristín and Ólafur, was forging a new route. I am endlessly indebted to Auður. Without her, I would not be standing at the summit.

This mission has been completed and the feeling is great. However, now in front of me are a numerous research summits to climb. I have already started some of them, now in company with great scholars and friends. The journey has just begun.

Reykjavík, February 2011

Throstur Olaf Sigurjonsson

INTRODUCTION AND SUMMARY OF THESIS

INTRODUCTION

The backbone of this thesis is that corporate governance “... understood as the determination of the broad uses to which organizational resources will be deployed and the resolution of conflicts among the myriad participants in organizations” (Daily, Dalton and Cannella, 2003) influences the performance of organizations. The study of corporate governance has become extensive over the last two decades and has ignited substantial interest in international comparison. Governance literature has historically divided the world into the binary systems of the Anglo-American corporate governance system, which is characterized by short-term equity finance, dispersed ownership, strong shareholder rights, active markets for capital control, and flexible labor markets, and the Continental European corporate governance system, which is characterized by long-term debt financing, concentrated block holder ownership, weak shareholder rights, inactive markets for capital control and rigid labor markets (La Porta, Lopez-de-Silanes, Shleifer and Vishny, 1998; Shleifer and Vishny, 1997; Hall and Soskice, 2001). Research that is more recent has refined these dual frameworks to fit better the empirical realities better in different countries. The Anglo-American and European Continental models seem only partially relevant to realities in East Asia, Japan, the emerging economies, and many of the European countries (Aoki, Jackson and

Miyajima, 2007; Feenstra and Hamilton, 2006; Lubatkin, Lane, Collin, and Very, 2005; Chung and Luo, 2008).

The current agenda consists of categorizing the corporate governance reality and thereupon determining which system is more effective and efficient in a given context. To what degree the internationalization of markets, liberalization, deregulation, and privatization has led to rapid changes in traditionally based models of corporate governance is the subsequent debate in this area. Therefore, when corporate governance practices are exported from one country to another, they tend to be translated and customized to local practice before being adopted. These adaptations can lead to new or hybrid forms of these practices (Ahmadjian and Robbins, 2005; Buck and Shahrim, 2005; Sanders and Carpenter, 2003). This type of adaptation is the core of the analysis presented in the papers of this thesis, explaining the circumstances that led to the collapse of governance mechanisms.

Issues of governance are interwoven with the Financial Crisis of 2008 and the effects of the crisis was perhaps the most devastating in Iceland, where the whole banking system collapsed, resulting in an economic and political crisis. The five years leading up to the Financial Crisis appear to have been characterized by high levels of strain on governance mechanisms. Therefore, the overarching research question for this thesis is; *which governance mechanisms came under strain, broke, and triggered a complete collapse of a developed economy?* A follow up research question is; *why did those governance mechanisms become so vulnerable?*

Iceland provides a valuable base for researching the governance changes antecedent to the Financial Crisis of 2008. Few other developed countries endured a systemic collapse on the scale that occurred in Iceland. Most of the variables that could go wrong did, and a series of erroneous actions progressively assumed mountainous proportions. Governance appears to have been vulnerable on a number of levels, including the firm level, the macro level, and the policy level. By themselves, weak governance and misguided actions do not constitute an adequate explanation for the crisis; it was the interaction between them that was influential in the breakdown. Specifically, this thesis sheds light on how the interaction of different governance mechanisms influenced a collapse of a whole economy.

This thesis consists of five papers. The first paper is “To Privatize Newly Nationalized Firms or Not”. It carries out empirical research on the operations of divested State Owned Enterprises (SOEs) in Iceland, particularly, the ownership change caused by the privatization process between 1992 and 2005 which contributed momentarily to the governance changes during the boom period in Iceland. The findings help to understand the antecedents to the crisis as well as the aftermath of it, during which policy makers must make decisions on whether to privatize badly hurt private firms that have been nationalized. Such decisions should not be made without analyzing the effects of previous privatizations. The second paper, “The Icelandic Bank Collapse: Challenges to Governance and Risk Management”, presents a case examining the governance failures that led to the systemic collapse in Iceland. The

failures were widespread: from deregulation and privatization being treated as a discrete act rather than a progressive process, to faulty governance arrangements within the financial sector.

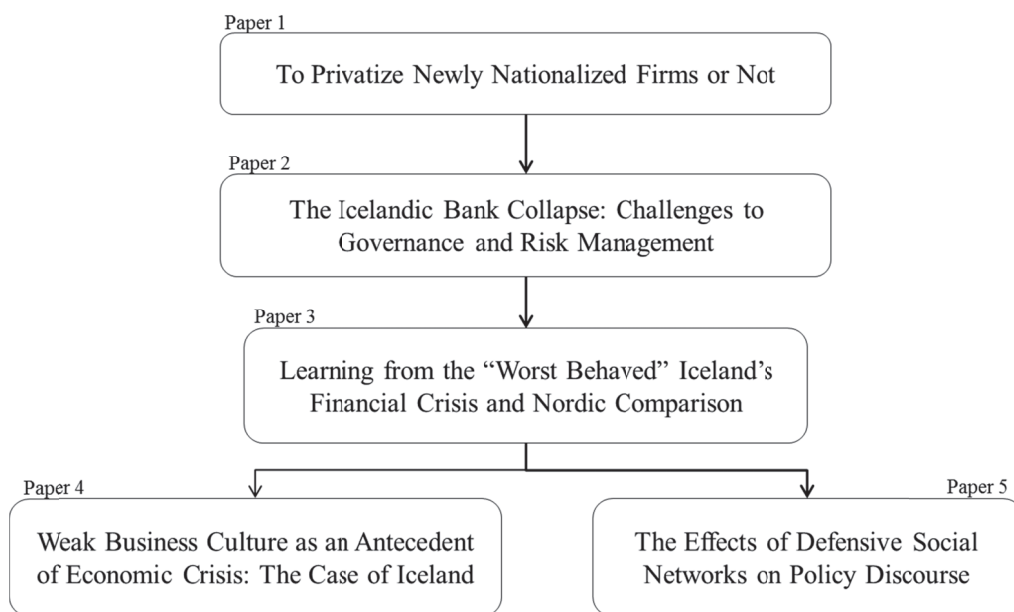
Based on the findings of the second paper, the research question for the third paper arose; *what were the warnings signs leading up to the crisis?* This paper provides a comparison of the recent Icelandic Crisis and the similar crisis in Scandinavia during the 1990s, with the objective of contextualizing the Icelandic experience by focusing on the similarities between the two crises and the possible contrasts. The paper concludes that warning signs did exist and were prominent.

These findings are followed up in the next research question, which is examined in the fourth and fifth papers; *were the governance weaknesses hidden, either deliberately or unintentionally?* Papers four and five are entitled: “Weak Business Culture as an Antecedent of Economic Crisis: The Case of Iceland” and “Defensive Social Networks and the Loss of Policy-System Transparency”. The fourth paper argues for the existence of concealed corruption and consequently the need to revise the mainstream concept of corruption. Corruption did play a role in the Icelandic Crisis, but the form of corruption in Iceland was unacknowledged by conventional corruption measures, and therefore conventional corruption measures did not identify practices that were corrupt in Iceland. The fifth paper reveals how a strong social network of stakeholders was quickly created as a response to foreign criticism of the Icelandic economy and the Icelandic banks. This defensive

network adversely affected the discourse about the need for and the formation of policy interventions.

The sequence and the relation of the papers in this thesis are presented in figure 1.

Figure 1. Papers presented in the thesis.



The remainder of the introductory chapter is organized as follows: section two explores the theory behind the papers. Section three outlines the methodologies and major findings of each of the five research papers. Section four provides an overview of the research presented in the papers and its relevance and section five summarizes the major conclusions.

THEORETICAL BACKGROUND AND CONSIDERATIONS

Little consensus exists regarding what factors explain, change, or potentially converge corporate governance practices over time. Subsequently, there have been many conceptualizations of corporate governance within and across disciplines, which is evident in the many definitions of corporate governance. Thomsen (2007) and Shleifer and Vishny (1997) indicate, that corporate governance has been defined broadly as the study of power and influence over decision making in firms, and more narrowly as the financial relationship between suppliers of finance and firms' performance. This approach is the subject of researchers of corporate governance who come from a variety of disciplines, such as, economics, management, law, political science, culture, and sociology. The subject has also become a major undertaking in public policy around the world (Aguilera and Jackson, 2010). As such, providing a clear and a universal definition of corporate governance is a challenging task. How the firm is conceptualized has also influenced the definitions of corporate governance.

Some economists tend to look at corporate governance as the connection of contracts among owners who pursue private means in running their firms rather than taking societal stake (Zingales, 1998). Other economists approach corporate governance from an agency perspective, although within a discipline, such as Shleifer and Vishny (1997) who argue that corporate governance "...deals with the ways in which suppliers of finance to corporations assure them of getting a return on their investment." The

ideology is that shareholders in managerial managed firms will want to minimize the agency cost. Agency theory has been central to the research of many management scholars, offering different corporate governance mechanisms, such as, boards of directors, ownership structures and the control of firms (Dalton, Hitt, Certo and Dalton (2007)).

Theory of the firm has likewise inspired economists and management scholars toward new approaches to corporate governance, such as on the nature of the employment relationship (Gospel and Pendleton, 2005). Additionally, stakeholder theory has become a framework to clarify the wider relationship between the different stakeholders in the firm (Schneper and Guillen, 2004). Legal scholars define corporate governance more broadly, to contain items that go beyond private contractual arrangements. They tend to give a great deal of attention to the legal context, which shapes the rights and responsibilities of firm actors. An example of a legal impacted corporate governance definition is “...the whole set of legal, cultural and institutional arrangements that determine what publicly traded corporations can do, who controls them, how control is exercised and how the risk and returns from the activities they undertake is allocated” (Blair, 1995).

Organizational sociologists, who are mostly concerned with the power and authority relationships within the firm (Davis, 2005), take an even broader view. They are interested in the structures, processes, and institutions circulating the firm internally and externally. Political institutions and interest groups are the subject of political science, which identifies corporate

governance as the system that provides investors protection and growth as well as creating employment and equality of opportunities (Gourevitch and Shinn, 2005). An institutional actor-centered view of the firm is taken by Aguilera and Jackson (2003), in which the different stakeholders in the firm compete for resources, and corporate governance is defined as the rights and responsibilities of these stakeholders toward the firm. Furthermore, they state that corporate governance differs across different forms of firms, industries, and countries. The next section analyses the effects of ownership change on governance, in light of altered forms, by elaborating on the economic theory of privatization.

The Governance of Ownership Change - the Economic Theory of Privatization

The economic theory of privatization is a subset of the vast literature on the economics of ownership and of the role for government ownership (or regulation) of productive resources. The theoretical argument for government intervention is based on the grounds of efficiency, that the assumptions for markets have failed in some sense, and that the government can resolve the market failure. The assumptions include the requirements that there are no externalities in production or consumption, that the product is not a public good, that the market is not monopolistic in structure, and that information costs are low. Privatization, in turn, is a response to the failings of state

ownership. The impact of privatization should therefore depend on the degree of market failure. Subsequently, as welfare theory claims, privatization should have the most positive impact where there is the least need for the government to correct market failure (as when SOEs are placed in competitive markets, or when markets can become competitive) (Sheshinski and López-Calva, 1999). On the other hand, competition throughout industries may put pressure on SOEs to maximize productive efficiency without the ownership change of privatization (Shirley and Walsh, 2000).

State versus private ownership can influence efficiency but definitions of ownership objectives are, most often, dissimilar. The shareholder wealth-maximizing model has become common, partially because it has well defined, firm objectives, where governments have other objectives that can change from one administration to the next. On the one hand, lack of commitment to policy can reduce the efficiency an SOE's operations and governance, and on the other, social welfare goals can often be difficult to measure (Hansmann and Kraakman, 2000). Another complication of state ownership is how diffuse it can become under the public (the nation's citizens), where monitoring managers' incentives become difficult. This is a subset of an argument based on property rights and agency costs. The ability to tie managers' incentives to the returns of their decisions is difficult for the owners of the public firms. This is because there is a narrower range of monitoring devices under public ownership (Megginson and Netter, 2001). However, the government can intervene in the operations of any public or private firm of course, but it

should be less accessible in the case of the private firm. To the extent that government intervention has a greater cost than benefit, private ownership is preferred to public one. Welfare economics argues that greater efficiency can be achieved through increased competition, hence to the extent that privatization fosters competition, it will contribute to efficiency gains. Unavoidably, the development of markets will simultaneously have an influence on the effectiveness of privatization programs, thus the impact of privatization will vary between markets that differ in their strengths.

The government aims of promoting development, incentivizing markets, and minimizing political intervention, locates the Icelandic privatization in the economic theory of privatization. Political interference and regulation had long plagued Icelandic financial markets, creating economic difficulties, which in the neo-liberalization era with its large-scale privatization programs, initiated a paradigm shift. On the one hand, the paper “To Privatize Newly Nationalized Firms or Not” reveals the success of the government’s privatization goal of increasing competition, decreasing political interference, establishing a stock market, and improving fiscal condition (National Audit Office, 2003). On the other hand, the paradigm shift described led to insufficient awareness of structural changes in corporate governance. Paradigm shifts occur regularly and Scandinavia experienced one in the early 1990s (Jonung, 1999), making it harder for policy makers and regulators to be aware and understand the nature of the changes. The potential for a paradigm

shift following deregulation seems to be a neglected component in the literature of privatization.

The privatization of the Icelandic banks led to harsh consequences (discussed in detail in the paper “The Icelandic Bank Collapse: Challenges to Governance and Risk Management”). The privatization outcome of other industries was more positive and in line with the economic theory of privatization, although the improvements were only marginal and less than the literature claims in the case of a developed country. An explanation could be that the Icelandic SOEs were already efficient under public ownership and kept on being so after privatization. Positive spillover effects for private firms were obvious because they benefited from the structural changes that created healthier competition when state guaranteed competing SOEs lost their state support.

The result of the above findings makes it most likely difficult for the Icelandic government not to use privatization as a tool to improve the fiscal deficit and to stimulate battered industries. Following the 2008 Financial crisis, the state took over dozens of private firms from all industries. According to the IMF (RUV, 2011) more than 60% of all Icelandic firms needed financial rescuing because of the financial crisis. In a country where over-indebtedness was the norm, all firms were affected when the local currency lost half of its value. In such circumstances, it does not matter whether debt is in foreign currency or in the local one, the collapse is only at different levels. On the other hand, the export industries should flourish under such circumstances, but only those not

burdened with over-indebtedness. Grappling with more than two years of declining GDP and historically high unemployment, any government is most likely to consider privatization as a mean to fix the deficit and stimulate the economy.

The lessons from the paper “To Privatize Newly Nationalized Firms or Not”, are in line with the economic theory of privatization; that privatizing state ownership greatly improves fiscal status, stimulates economic growth and increases the efficiency of firms, both privatized and private. The reduction of state employment will also ease government deficit, where managers, trying to maximize profits, have no interest in excess employment. However, the significant growth in the private sector will substitute for the decline in state employment (this experience is in line with the literature, for example see, Boycko, Shleifer and Vishny, 1996; Megginson, and Netter, 2001; Boubakri, Cosset, and Guiedhami, 2001).

The poor results from the privatization of the Icelandic state owned banks will most likely not only force the government towards re-establishing public trust in privatization, but also require gradual implementation of privatization, instead of putting into effect a comprehensive program and fast implementation. Priority should be given to privatizing those industries where consumer benefits are likely to be greatest. The potential benefits will depend upon the size of the industry, whether it has already received attention, and whether competition rather than monopoly is likely to ensue. In the light of the small size of Icelandic society, the government should consider at least a

partial sale to foreigners. The negative aspect of this small size is addressed in most of the papers, revealing a surprisingly high level of corruption, in part because of considerable degree of nepotism.

The privatization process is complex and can become crucial to the health of an economy, as this thesis demonstrates. To generalize, the analysis of Iceland reveals that privatization is not to be treated as a discrete act but rather as a part of a progressive process. These complexities are discussed further in the next two sub-chapters, discussing corporate governance mechanisms through the lenses of the agency and public choice theories.

Corporate Governance Mechanisms and Agency Theory

Agency theory still prevails when it comes to corporate governance research (Dalton et al., 2007; Dalton, Daily, Certo and Roengpitya, 2003). The essence of the theory is the contact between principals (shareholders) and agents (managers), and appears to be a constant challenge in corporate governance. This separation of ownership and control calls for a mechanism to coordinate vested interests of the principals and agents (Fama, 1980). In the case of the shareholders, they are assumed to want to maximize their returns at a reasonable risk, while management might prefer growth to profits, or empire building to establish prestige, or higher pay (potentially maintaining costly standards above the necessary minimum). The dilemma shareholders face is that monitoring managers brings on agency costs: information is imperfect to

make qualified decisions, and contractual limits to management discretion may be difficult to enforce (Eisenhardt, 1989). In order to minimize the agency costs, corporate governance mechanisms have been introduced, including the structure of ownership, board structure, executive compensation, the market for corporate control, accounting rules, the role of gatekeepers and more. Furthermore, blockholder control might solve agency problems, where one or few blockholders retain tight control over the firm through concentrated ownership and by this way can influence management (Morck, 2005). It differs between countries how monitoring is performed. In some countries, large shareholders monitor, because they have greater incentives, in others, shareholders are fragmented, and with greater liquidity, therefore they have less individual incentive to monitor. In many European countries, there are large blockholders such as families, banks, and corporations (Becht and Roell, 1999).

The financial system can play a considerable role in determining the corporate governance structures of industries. The supply side of finance can be a critical variable determining the capacity of the banking sector to engage in industrial finance (Aoiki and Patrick, 1994, Cox, 1986) and equity stakes (Edwards and Fisher, 1994). Banks have a direct impact on governance when they acquire ownership stakes in industrial companies (Yanagawa, 2007). State policies towards banks can also explain the different corporate ownership patterns, where some states have encouraged their banks to facilitate and expand close lending and ownership ties between banks and

industrial corporations (Aguilera and Jackson, 2003). This style of ownership pattern developed in Iceland after the privatization of the state owned banks and is discussed in the papers “The Icelandic Banks Collapse: Challenges to Governance and Risk Management” and “Learning from the “Worst Behaved”: Iceland’s Financial Crisis and Nordic Comparison”. The banks not only provided funding for projects, but also facilitated many of them using what can be called a “package effect”, where the banks followed their customers and often created partnerships in ventures. Early on, it became evident that partnership had turned into ownership where, in some instances, major customers had gained a considerable stake in the banks and were appointed to board positions. The banks had become equity partners with their clients in investments rather than keeping an arms-length commercial banking relationship.

A continuation of the above-mentioned financing can be found in the economic perspective of stakeholder theory, which influences corporate governance. Under stakeholder theory, the firm is seen as a set of relationships between interrelated stakeholders that all have an interest in the firm creating a broad set of goals to be met (Freeman et al., 2010). The economic theory suggests that stakeholder participation is related to efficiency, resting on the commitment of stakeholders, their firm specific investments and risk sharing (Parkinson, 2003). On the other hand, the two papers mentioned above point out that apart from the few largest owners of the Icelandic banks, shareholders were weak and dispersed. They had to cope

with the increasingly complicated operation of the banks, where there were new financial products such as credit derivatives, swaps, and so forth to decipher. Deregulation made it possible for banks to diversify into related activities like insurance services and mortgages and to organize a substantial share of their activities in off balance sheet operations (Thomsen, 2009). Hence, shareholders had to rely on corporate governance mechanisms to protect their interests. These mechanisms were lacking. Shareholders were uneducated and did not rebel at annual meetings, elect new board members, or elect a hostile raider to clean up the operations. Performance related incentives were to overcome agency problems, but were ill structured. Another governance mechanism is reputational risk (Eisenhardt, 1989). It should motivate executives to perform well for fear of reputational loss, but the bank executives during the boom period were treated like celebrities. Agency problems cannot be completely eliminated, and the Icelandic case shows how fragile governance issues can become.

It is possible for firms to contain stock of firm-specific capital invested by employees. This can change how boards are viewed, not only as agents of shareholders, but also as trustees of stakeholders. The economic cooperation of employees can be a way to increase trust between labor and management, facilitate investments, and improve internal information flows (Leibenstein, 1966), decreasing the need for both parties to specify terms and conditions of employment. Furthermore, Rajan and Zingales (2000) argue that the growing participation of employees should lead to rejection of the agency theory view

of the firm grounded on property rights over physical capital. Nonetheless, corporate governance scholars, inspired by agency theory, have not agreed on the degree of the role of employees in corporate governance, although most agree on that a role exists (Aguilera and Jackson, 2010). As such, corporate governance is increasingly seen as an independent variable, which facilitates the concerns of human resource management, and conversely, employees are seen as an independent variable affecting corporate ownership. Drawing on agency theory, some scholars stress how employee rights can increase agency costs to shareholders. This could happen when a board's power dilutes where collusion between management and employees increase (Pistor, 1999). Fauver and Fuerst (2006) ascertained that employee power is used in coalition with shareholders to promote greater accountability and this way it decreases agency costs through increased monitoring of managerial pay, demanding transparency, disclaim prestige investments and sometimes partnering up with shareholders in restructuring. Jackson (2007) found a positive relation between the use of stock options for management, equity-based performance measures, and increased market oriented employment patterns.

Creating such a positive relationship, as Jackson (2007) describes, was a deliberate strategy of the just-privatized Icelandic banks. The CEO of one of the Icelandic banks explains:

The glue that has kept this crew together rests on friendship, common vision and an aggressive incentive system. Kaupthing was a pioneer establishing the first

true investment banking incentive system in Iceland.

(Sigurðsson, 2007).

This strategy became regrettable. Kaupthing loaned its top executives nearly US \$1 billion to buy shares in the bank. The only collateral were the shares themselves. These loans were bullet loans, where the debtor pays the principle at the end of the loan period, which in these cases were often extended (Special Investigation Commission, 2010). Some of the executives and board members of the banks were personally liable for their debts, making them extremely vulnerable to a downswing in the share price. The internal lending of the banks became excessive. For example, according to information recently leaked to the public (see wikileaks: <http://wikileaks.org/leak/kaupthing-bank-before-crash-2008.pdf>), Kaupthing bank lent around €6.5 billion to six companies, four of which were in non-arm's length relationships with the bank's major shareholders (Mason, 2009). Either partial or no collateral for these loans was required. Exacerbating the situation was that apart from a few largest owners of the banks, other shareholders were weak, dispersed, and unprotected. With little assistance coming from the regulatory agencies, these shareholders had to rely on corporate governance mechanisms to protect their interests, but unfortunately, these mechanisms were not enforced. The thousands of shareholders should have addressed these agency concerns because so many of the Icelandic public had a stake in the banks, due to the government successfully establishing incentives for share ownership. The public was inactive and

challenged neither the boards nor the executives. The boards, which should have been the most central internal governance mechanism, acted more as partners of the managers than supervisory bodies.

Aguilera and Jackson's (2010) argument correlates closely to what occurred in Iceland. Their argument is that corporate governance should be better grounded in the "micro questions" of how actors at the firm level define their own identities and interests. This argument demands a more actor-centered analysis on firms and greater attention to the diverse identity and interest of different blockholders and new actors. This view reflects Vogel's claim (2006) that theories of corporate governance must be anchored in a more subtle understanding of how different owners exert power and influence at the firm level. The Icelandic story supports the need to introduce a number of other perspectives to corporate governance based on culture, law and politics, to recognize the many mechanisms and structures that might reasonably enhance organizational functioning. Interconnected ownership was established when adventurous entrepreneurs became the largest shareholders of banks and, as such, board members and managers became considerable owners of shares, creating a complex conflict of interests between them and other agents as other shareholders and stakeholders.

In line with this, studies show that managers have quite different views on the reasons for the existence of the firm (Witt and Redding, 2009). Witt and Redding discovered that US managers strongly subscribe to shareholder value thinking, where other stakeholders are secondary, German managers value the

importance of serving society and balancing the interests of employees and shareholders and Japanese managers put their emphasis on the interests of employees and society. Neither German nor Japanese managers were positive towards shareholder value thinking.

The new “Icelandic Model” veered closer to the Anglo-Saxon one than the European or the Nordic model. The Anglo-Saxon countries, the US, Britain, Canada, Australia, and New Zealand, established stronger capitalism. The vision in Iceland was to foster growth and employment by increasing the flexibility of the labor market, and lowering welfare benefits in order to increase the autonomy of people and enterprises (while restricting state interference). Historically, Iceland has related itself to the other Nordic countries, but that perspective changed during the boom period. The Icelandic story might be viewed as an extreme case of a Nordic European country instituting Anglo-Saxon corporate governance mechanisms. A remark from the Icelandic Chamber of Commerce demonstrates this change in a rather self-evident way:

The Icelandic Chamber of Commerce recommends that Iceland stops comparing it to the other Nordic countries, since we are more advanced than they in most areas

(Iceland Chamber of Commerce, 2006).

The Nordic countries were blamed for having an overgrown welfare system that produced problems in practice (Iceland Chamber of Commerce, 2006). However, it was ignored that, historically, the Nordic countries have been ranked among the most competitive nations in the world. The Icelandic Chamber of Commerce was searching for role models in the more capitalistic countries where the corporate and free enterprise culture was prevailing, and where the workforce submits (Icelandic Confederation of Labour, 2006). It illustrates that neoliberalism was placed high on Iceland's agenda during the boom period, with welfare placed second. That agenda was not solely created by the private sector. The public sector had a large stake in the ideological shift, and the following section discusses and extends the analysis of the interaction between the public and private agents of society.

Little Public Choice and Public Choice Theory

Public choice theory has directed researchers to think about the individual incentives underlying government policies. These policies are not the result of a decision by the government, but rather a decision taken by individuals within government institutions (van Winden, 1999). The perspective of this analysis is that politicians and bureaucrats bring their own interest to the decision making process. The interaction between these agents is at the center of analysis and the core of the paper "Weak Business Culture as an Antecedent of Economic Crisis: The Case of Iceland". Political tradition and a

history of heavy state intervention in the Icelandic economy helped to create an unprecedented bond between politics and business, where the political elite was making all the major decisions on who was going to be involved in and who was going to miss out on the best business opportunities (Jonsson, 2009). This, along with having political connections as a key guiding business principle, made both regulation and oversight close to impossible (Sibert, 2009). The privatization of state-owned banks and other companies had allegedly occurred in a similar manner. The most valuable and sought after assets, such as banks, were transferred at under the market value to a limited number of closely connected groups most of whom had not had much experience in managing large and sophisticated financial institutions (Wade, 2009). Although the original goal of bank privatization was to attract a small but diverse group of international investors, in reality domestic political interests were given a priority. To return the favor, the newly privatized banks became the largest donors to the parties in government (Iceland National Audit Office, 2009). However, how corruption is conventionally defined does not include a weak business culture of the sort that Iceland showed, and that may contribute to the public's lack of knowledge. The lack of supervision, in turn, led to an unsustainable expansion of the Icelandic financial institutions, which prompted partially the crisis.

The Icelandic case shows how important is to take into account the social groups and organizations in a given society (see the papers "Weak Business Culture as an Antecedent of Economic Crisis: The Case of Iceland" and

“Defensive Social Networks and the Loss of Policy-System Transparency”), although it does not seem to have played an essential role in public choice research (van Winden, 1999). There has been a neglect of the importance of social groups (in both organizations and unorganized forms), even though there is strong evidence for what an essential role social groups play in the determination of individual behavior that is found in the social psychological literature. Interests (motivation), beliefs (cognition) and decision making (a cognitive, motivational and emotional process) are deeply dependent on group influence and lack of information and control play a crucial role herein (van Winden, 1999). The consortium that people choose to belong to provides them with not only information and other resources to promote their interest, but influences their interest. Policymakers confront an information problem concerning the social and economic consequences of their policies’ as well as the valuation of citizens. This way a potential lack of information and control is more problematic for decision making in the political sphere than in the private sphere. A potential consequence is that policymakers focus more easily on groups of citizens, and are interested in receiving information on the likely consequences of their policies for these groups (van der Zee, 1997). Policymakers, who are sometimes framed as “spokesmen” representing interests, are explained by this phenomenon (van der Zee, 1997). This might not come as a surprise where politicians are representatives of parties who represent interests of various social groups, as may be seen in the case of the Icelandic bankers. The analysis in the paper “Defensive Social Networks and

the Loss of Policy-System Transparency” shows why it was difficult to challenge the concept of “financial stability”, advanced by those who believed the Icelandic banks were stable. Challengers were likely to realize that it was hard to identify one group as the key advocacy force or one type of argument as the main basis for the claims of stability. Therefore, focusing on the views of one group or on one particular style of debate in hopes of breaking the network apart (and thus communicating an alternative perspective) was difficult. This meant that counter-claims to stability were likely to have a hard time finding an open forum.

A number of useful concepts have been developed by public choice theorists to explain the motives for government intervention in society. The core assumption of public choice is that public officials, as people in general, react to incentives in the same way, and pursue their own interests, leading governments to shape legislation and policies in direction to maximize their power (Tasic, 2010). Another assumption is that politicians expect an uninformed and naïve public (Buchanan, 1995). This ignorance of the public allows corrupt or less responsible politicians, to cheat the public in that way. The assumption that individuals are rational and selfish but the public in general (voters) are ignorant about political issues became the landmark concept in public choice theory, just as rent seeking, budget-maximizing bureaucracy, and powerful interests groups did (Buchanan and Tullock, 1962). In the Icelandic case, the defensive social network adversely affected discourse over the need for, and the form of, policy interventions. Citizens

could not form a clear picture of whether a critical system was working or near collapse. It seemed that even the policymakers themselves did not receive reliable feedback to design necessary policy interventions or renovations. Furthermore, administrators could not determine the extent to which policy measures were implemented or were being effective.

METHODOLOGY

This dissertation includes five research papers. The papers and their specific research questions follow a sequence reflected in the way they are presented here. The strategy has been to expose the papers in academic forums in order to obtain relevant feedback and critique. All the papers have gone through blind peer review processes and three of them have been accepted for publication in academic journals, while the other two are in the review process.

The first paper, “To Privatize Newly Nationalized Firms or Not”, sheds light on the results of the governance changes from privatization in Iceland and is, at the time of writing, in the review process of an academic journal. The paper finds that the government can expect some improvements in privatized SOEs, but not significant ones. On the other hand, fiscal conditions will improve, and the influence on the private sector can be expected to be beneficial. Additionally, SOEs will immediately begin their improvement process

concurrently with the announcement of their privatization. Lost jobs in the public sector will be compensated for in the private sector.

The sample for the study consists of all Icelandic privatized companies for which there were at least three years' annual accounting data before and after privatization. The firms come from all types of industries and are of various sizes. Therefore, the database is free of a bias that is present in much of the previous research on privatization, caused by the unavailability of data for mid-sized and smaller firms. The database is also free of a "cream of the crop" selection bias, since it does not only include SOEs known to be a good fit to the market. During the privatization period of 1992 to 2005, the Icelandic government privatized 33 companies, which was close to all SOEs potentially fit for privatization. Most of the privatization took place in the form of SIP (Share Issue Privatization). On four occasions, an asset sale was used, leaving a sample of 29 firms. Where accounting data were not publicly available, the firms were contacted and visited. This second approach applied to most of the firms. On occasion data was not available, for example, when privatized firms merged with private ones within three years from privatization, or where privatization had already begun in 1992. In a few instances, the owners declined to make data available. Despite the compulsory delivery of annual reports to the Icelandic Directorate of Internal Revenue, not all firms follow that rule. Subsequently, the information encompassed the data for 20 privatized firms.

A control group of privately owned firms, spanning a wide variety of sectors and firm sizes is included in the study. The ÍSAT2008 industry coding system was used in order to choose appropriate firms to create pairs of privatized SOEs and private firms. The ÍSAT2008 system is based on the European Union's NACE Rev. 2 industry indexation, which applies to all member countries of the European Economic Area (including Iceland). A list of all private firms belonging to the same industry indexation as the privatized ones was obtained from the Directorate of Internal Revenue. Those private firms that matched the industry indexation, and that operated during the same three years before and after privatization, were chosen as the control group. The same rule applied for data collection from the private firms as for the privatized ones. When possible, public accounting data was gathered; where this was not available, the firms themselves were directly contacted. Ultimately, 29 private companies were fit for comparison purposes. All data used for the analysis were adjusted for inflation (applying the consumer price index (CPI)), using the year of privatization (year 0) as a base year. Local currency data (Icelandic krona) was employed in all analysis and ratios were computed using nominal data in both the numerator and the denominator. Overall, the study used 20 privatized firms and 29 private firms, which totals 49 firms.

This study uses the methodology introduced by Megginson, Nash and van Randerborgh (1994). Change in any given indicator of performance is measured by comparing the three-year mean or median operating and

financial performance of privatized firms to their own mean or median performance during their last three years as an SOE. It rests on six broad indicators of performance: (1) profitability, (2) operating efficiency, (3) output, (4) capital investment, (5) leverage, and (6) employment. Profitability was calculated using three ratios: operating profits to assets (ROA), net profit to total equity (ROE), and operating profit to sales (ROS). In order to capture changes in operating efficiency, three ratios were calculated: sales to number of employees, net profit to number of employees, and operating profit to number of employees. Change in output was measured with two variables and defined as sales as a proportion of total assets, and sales comparison between periods. The impact privatization had on investments was analyzed by examining the stock of fixed assets in relation to sales and total assets. Leverage was measured as the ratio of liabilities to assets. A simple measure of the number of employees before and after privatization was used for analysis of reduction of employment. The study controls for macroeconomic and industry factors by computing the same indicators used to describe the performance of privatized firms for the control sample of private firms.

The second paper, “The Icelandic Bank Collapse: Challenges to Governance and Risk Management”, published in *Corporate Governance: An International Journal of Business in Society* (Vol. 10, Issue 1), covers the subject of the governance failures within the Icelandic economy antecedent to the Financial Crisis in 2008. Multiple governance failures are presented, which resulted in a society not adequately alert to the increased risk of

governance changes. The research was based on an in-depth case study of the evolution of the governance challenges facing the Icelandic financial industry and the research strategy was based on the suggestions of Yin (2003) for conducting case analysis. The analysis in the study was on both the process and the context of change related to the liberalization process in Iceland and the privatization of the state owned banks. Data was collected from within the three Icelandic banks and comparable banks in the other Nordic countries. Economic data on the Icelandic economy were also analyzed in order to compare balances between the state and the banks. Sources of the data included industry reports, annual reports and news media reports. Interviews were conducted with CEO's and VP's of the banks, a former governor of the Icelandic Central Bank (who held the post during the time of the privatization), and a CEO of a pension fund, in order to gain in-depth knowledge about the changes in the banks' operations and their cultures. The interviews were transcribed and coded and documents were analyzed based on the same coding system as the interviews. The coding system included categories for changes in bank operations, changes in corporate culture and financial indicators, warning signs, fortuitous signs, and so forth.

The third paper, "Learning from the "Worst Behaved": Iceland's Financial Crisis and Nordic Comparison", was published in *Thunderbird International Business Review* (Vol. 53, Issue 2). Keeping the conclusions of the first and second papers in mind, the question of whether or not there were warning indicators arises. In order to answer that, paper three provides comparative

research to contextualize the experience Iceland went through. To this end, it compares the Scandinavian Crisis of the 1990s with the Icelandic Crisis, focusing on the similarity between the two crises and possible contrasts. For comparison reasons, a common time line for Scandinavia and Iceland was created. The starting point used is the beginning of the deregulation process in each case. This was 1982 for Scandinavia but 1999 for Iceland. Although the deregulation process in Iceland began somewhat earlier, it took longer and the effects were, for a long time, barely visible. The year 1999 is approximately four years prior to the beginning of the lending boom in Iceland, but also an approximation of when deregulation began to change the Icelandic financial landscape. Using these assumptions, 1982 is used as a starting point for Scandinavia in the paper and 17 years later for Iceland. Thus, the year 1999 is defined as Period 1 or T for Iceland and 1982 or T minus 17 for Scandinavia. The length of the periods differs somewhat, mainly because some data was no longer available after the Icelandic banks went into default.

The findings show that Iceland, by a wide margin, had more significant signs of over-expansion than Scandinavia, in practically all aspects. Scandinavia did not experience, as Iceland did, questionable business practices at the firm level leading to the danger of extensive collapse via a domino effect. At the macro level, the experiences of both Iceland and Scandinavia suggest that fiscal and monetary policies must involve consistent goals. When monetary and fiscal policy were unrestrained, this created a destabilized economy, and the doors that deregulation had unlocked were thrown open. A common

denominator was the unrestricted inflow of foreign capital due to interest rate differences. Hence, at the policy level, authorities should have ensured sufficiently strict regulation to monitor the slack at both the firm and macro levels, but did not.

Paper four, “Weak Business Culture as an Antecedent of Economic Crisis: The Case of Iceland”, was published in the *Journal of Business Ethics* (Vol. 98, Issue 2) and displays how corruption, but not in its traditional sense, contributed greatly to the collapse of the economy. Iceland was ranked as one of the least corrupt countries in the world (the least corrupt one in 2005 and 2006 by Transparency International’s Corruption Perception Index (CPI)). The findings of the paper, on the other hand, demonstrate that the measures employed to determine the level of corruption did not account for the variations found in the Icelandic society. The paper argues that there was a high level of corruption in Iceland that existed, not in the form of particular incidents yielding concrete benefits to the parties involved, but as an overall attitude that allowed a weak business culture and unethical business behavior to flourish. In order to illustrate how the Icelandic business culture helped to create an atmosphere susceptible to unethical and corrupt business practices, several key experts were approached and asked to provide examples of such practices, and explain how these practices contributed to the ensuing economic crisis. The interviewees came from different positions, such as a Member of Parliament, a manager at the Financial Supervisory Authority, an advocate to the Supreme Court and others.

Why was it difficult to ascertain the financial stability of Iceland? Alternatively, if it was not difficult, why was there no public outcry for change? Paper five, “Defensive Social Networks and the Loss of Policy-System Transparency”, poses these questions and is, at the time of writing, in the review process of an academic journal. The paper suggests that the Icelandic response to foreign criticism (especially from Danske Bank in 2006), involved a social network that included bank executives, analysts, politicians, academics and newspapers, making arguments against challengers. The network that the defenders formed made it difficult for outsiders to be heard. Hence, citizens could not form a clear picture of whether a critical system, such as the financial system, was working properly or drifting towards a collapse. Policy makers did not receive reliable feedback in order to design necessary policy interventions or renovations. Although not the first analysis to raise concerns about the Icelandic economy and banking, the Danske Bank report that was published on 21 March 2006 was the sharpest in its criticism. While the Danish bank’s challenge came in the form of technical economic arguments, the historic ties between Iceland and Denmark provided a particular emotional element to the debate that Icelandic groups were quick to bring to the fore, a strong characteristic of the hubris prevailing in Iceland at the time.

Social network analysis illustrates how those responsible for the maintenance of a complex system defend challenges to that system’s stability. By using a sample selection of 31 articles written in the Icelandic press in response to the

Danske Bank challenge of 2006, the paper illustrates and analyses the dense network of people and arguments that were formed. Arguments are the rationalizations, speculations, or suggestions that people advance for the actions or positions taken by challengers, defenders, or others. Arguments fell into three broad categories: those based on data given in the Danske Bank or other formal reports ('report-based', seven items); those based on psychological affects or emotions ('affective', seven items); and issues or suggestions that were raised for parties to consider and act upon ('issues', four items). An argument is counted only once per person per article. Each argument that a person made in an article is separately identified. Similarly, each person is counted separately, regardless of whether that person made the same argument as another person in the same article.

RELEVANCE AND RELATIONSHIP BETWEEN THE PAPERS

The public at large relies on good corporate governance for the protection of its interests. As such, strong governance is central to economic health and social welfare. The relevance of good governance is considerable, and is a basis for institutions such as the Organization for Economic Co-operation and Development (OECD), who promote good governance throughout the world (OECD, 2010). Some scholars choose to define corporate governance in a strict way, focusing on the financial aspects of corporate governance (see, for example, Shleifer and Vishny, 1997). However, a case such as the Icelandic

one requires a broader scope of the term “corporate governance”. Thomsen (2007) argues that corporate governance is a multidisciplinary topic, drawing on the fields of economics, law, sociology, psychology, and political science. The papers included in this thesis will support this argument.

Publicly available information and processes are what stakeholders (whether shareholders, employees, customers, creditors or the public) use to be informed of a company’s actions, and hence they use this information for their decision-making. The premise is that both a company’s processes and information are valid. In an ideal democracy, politicians are the agents of citizens; bureaucrats are the agents of the politicians, and managers are agents of shareholders. Agents are expected to act on behalf of their principal. According to this approach, agency problems arise when agents renege on their agreements with principals, in favor of their personal interest (Lancaster and Montinola, 1997).

Misleading measures and concealed information are outlined in the paper “Weak Business Culture as an Antecedent of Economic Crisis: The Case of Iceland”. It finds agency and public choice problems arising in all sectors of governance: the private sector, the public sector and in the civil society. It suggests that corruption in Iceland was at a high level prior to the Financial Crisis of 2008, while admitting that the unreliability of measures applied to identify corruption and the methodology used for collecting information are imperfect. The research shows that corruption is conventionally construed in such a way that it misses the practices that have the same impact as

corruption, but do not fall within the mainstream notion used by institutions such as the OECD or Transparency International. The consequence of this is that the public is unaware of the level of corruption and thus unable to address it properly, creating a dilemma of asymmetric information.

The agency problem in the form of asymmetric information is the central theme of the paper “Defensive Social Networks and the Loss of Policy-System Transparency”. Both moral hazard and adverse selection are noticeable, but as the paper shows, this is only when a strong network of defending stakeholders has been dismantled. Bank executives and politicians alike met foreign criticism about the stability of the Icelandic economy and banks prior to the 2008 Financial Crisis with great defiance. A “defenders’ network” was formed and defended the financial stability until it became a “black box”, meaning a concept or construct that is so difficult to challenge that it became taken for granted. Ideas can become “black boxes” as advocates build on the work of others, making it hard to dispute a present fact without implicitly challenging past facts (Latour, 1987). Social network analysis is used in the paper to illustrate how those responsible for the maintenance of the complex financial system within the Icelandic community defended the challenges that were posed by outsiders to the system’s stability. It demonstrates how this defense was structured to reduce the transparency of the system to members of the community. It also adversely affected discourse regarding the need for, and the form of, policy interventions. In this way, the public is not able to form a clear picture of whether the financial system is

working or is near collapse. Therefore, policy makers do not receive reliable feedback to design necessary policy interventions or renovations and administrators cannot determine the extent to which policy measures are implemented or effective.

Agency problems are further revealed and discussed in the other papers. Thomsen (2007) presents a list of classical agency problems and many of them are highlighted in the paper “The Icelandic Bank Collapse: Challenges to Governance and Risk Management”. The paper discusses how a collection of governance failures accumulated, starting with deregulation and privatization, followed by process of liberalization evolving into the laissez faire attitude of the government, and ending with entangled ownership issues within industries, preventing sufficient public debate to prompt reasonable criticism of both government and industry. Agency theory states that private ownership can decrease familiar threats found in public ownership. According to a former governor of the Central Bank of Iceland, this is what took place at the privatization of the Icelandic banks:

[Before privatization,] managers of the public banks were not thinking too much about profitability. Things went fine if the institutions would show some profits but too much meant political difficulties. Then politicians would want to get that money for other projects. This all changed with privatization. Today there are thousands of shareholders in the banks and to them it is extremely important that the banks are efficient

and make profit. There is a complete change in ideology.

(Gunnarsson, 2007).

The “complete change in ideology”, as the governor puts it, appeared to have driven the vast growth of the Icelandic banks. However, soon the new owners’ ideology raised questions related to classic agency problems. Liberalization and privatization were, in the Icelandic case as in some others, treated as a discrete act rather than a part of a progressive process (examples can be seen from the Scandinavian Banking Crisis in the 1990’s, e.g. Jonung, 2008; Englund and Vihrala, 2007).

Were there no warnings signs of the mounting governance vulnerabilities? The Scandinavian Banking Crisis took place only a decade and a half prior to the Icelandic Crisis and there is a substantial political and economic resemblance among the Nordic countries (Iceland, Norway, Sweden, Finland, and Denmark). Could Iceland have learned from what went wrong in Scandinavia? The paper: “Learning from the “Worst Behaved”: Iceland’s Financial Crisis and Nordic Comparison” takes this perspective and asks if there were warning signs antecedent to the Icelandic Crisis.

The similarities between the two crises are remarkable. Reinhart and Rogoff (2008) defined the Scandinavian Crisis as one of the “Five Big Ones”. Although all instances showed signs of a threat, Iceland showed by a much wider margin substantial signs of a threat in practically all aspects. At the firm level, governance issues became more questionable in Iceland than in

Scandinavia, and were of such a scale that they ultimately facilitated the collapse. Close managerial relationships, cross-ownership, and cross-lending all established imbalances in favor of business over regulatory authority. This was not a problem in Scandinavia, since overexpansion there was mostly limited to real estate (Jonung, 2008). Nor did foreign criticism manage to influence the general discussion in the Icelandic media. The abolishment of the Glass-Steagall Act in 1999, allowing investment banks in the US to again become part of the general banking system, had adverse results. The outcome was that banks in the international arena imitated the mingling of commercial and investment banking. Icelandic banks took this further; they increasingly became investment banks rather than commercial banks, although they remained traditional banks on the surface. With a partial government guarantee, risk-taking bankers grew their institutions to nine times the country's GDP, creating the circumstances in which all the banks stood a chance of failing, within parameters of certain negative events. At a policy level, deregulation both in Iceland and Scandinavia has been discussed as a primary root of the respective financial collapses. However, that is a simplification. Demirguc-Kunt and Detragiache (1998) find that a financial crisis is more likely in an unregulated environment where there is a lack of respect for the rule of law and corruption is widespread. However, when a *laissez faire* attitude reigns, and monetary and fiscal policy are unrestrained, deregulation and adventurous business culture is strongly embraced.

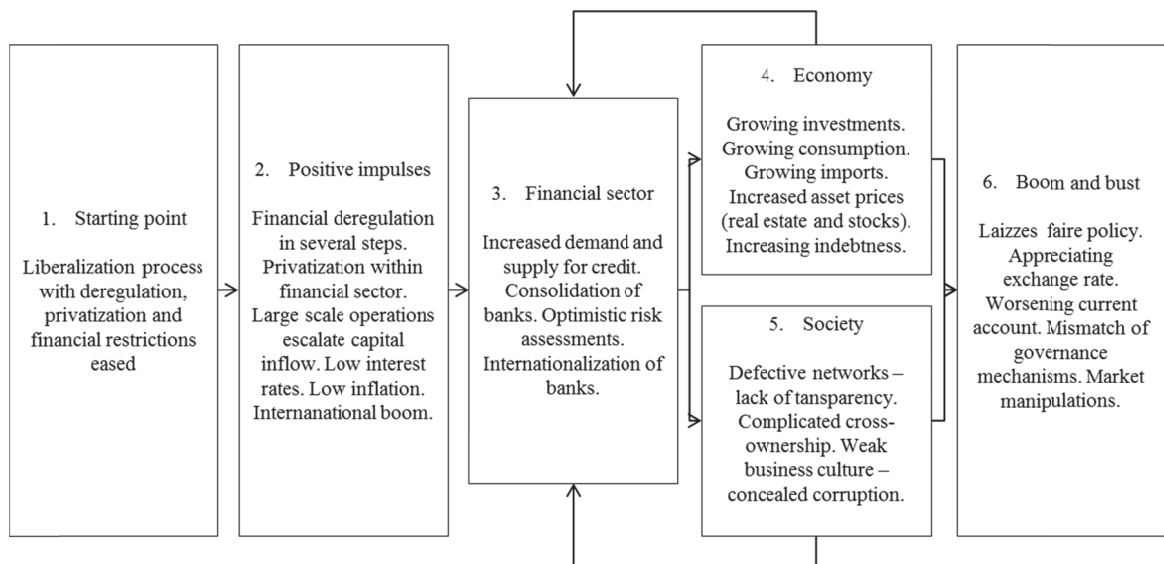
Privatization was a large and important part of the liberalization and deregulation process which provided economic benefits to Iceland, as the paper “To Privatize Newly Nationalized Firms or Not” reveals. As discussed earlier, the privatization process of the public banks could have been more successful, to say the least. After the collapse of the economy, the government was given a second chance to get privatization right, as it had taken over dozens of badly hurt private firms. The findings of the paper indicate that even though Icelandic State Owned Enterprises (SOEs) seem to be efficient, improvements follow privatization, and many of the side effects of privatization are positive. The private sector, being faced with new and structurally different competition following the privatization of the SOEs, also showed significant improvements in performance. In addition, the fiscal conditions of the state improved, for obvious reasons. The paper also reveals a strong “announcement effect” from the time of the privatization being reported, as announcing privatization immediately began driving the recovery of the SOEs. To summarize, the findings support the prediction that privatization can have a significant role in creating economic growth, but the privatization process itself must not be careless or corrupt, as the Icelandic experience reveals.

CONCLUSIONS

Iceland’s experience exhibits procedures that created economic growth, which was combined with a lack of governance over liberalization and privatization,

a weak business culture, and a lack of transparency. This led to challenges that, in the end, were too big to solve. Treating privatization as a discrete act rather than a part of a progressive process turned out to be a policy mistake. Liberalization and deregulation bred entrepreneurship and greater risk taking, which governments should encourage to a certain extent, but accompanying regulation and supervision did not materialize. Agency problems were far from eliminated by this new liberalism. Figure 2 shows the process which Iceland followed: the start of the liberalization process, the privatization of public banks, opening up to globalization, the extraordinary economic success that was based on fragile governance mechanisms, and the failure of these mechanisms, which facilitated a bust.

Figure 2. Iceland’s progress from boom to burst



All five papers separately investigate different but connected reasons for the governance failures in Iceland and do so by utilizing different types of methodologies. Preventing such failures from happening a second time

requires widespread action. The papers show how important it is for policy makers to be aware of the structural elements of networks that can form around policy issues. A theoretical key point that is often neglected, but is a core of the thesis, is that what matters are the particular combinations of institutions, taking into account a range of possible interactions and complementarities among institutions. The resulting clusters or configurations of institutions are more complex than simple bipolar models of corporate governance such as shareholder versus stakeholder, market versus bank, or outsider versus insider (Aguilera and Jackson, 2003).

Networks, as discussed here, arise to defend a community's institutions, which can work against transparency. Without understanding the true state of complex systems, social policy can be misdirected. A valuable future research would be to design ways to map such networks quickly, as they are arising, in order to show the citizenry and others affected by the outcome of the debate, who is participating in the discussion and who is not. In the case of Iceland, it would have proven beneficial to citizens and legislators to highlight in a tangible way the ownership connections between companies, the connections between boards of directors, and the connections between media outlets, politicians, and companies. This challenge could be met by establishing an institution that can serve as a "translator" of such networks. Members of such an institution would have to be chosen before a crisis occurs, coming from trusted and separate segments of the community. Foreign representatives

would be important since Iceland is a small state; therefore, kinship ties closely link the community.

Inadequate indices for measuring corruption reveal a different and possibly more menacing form of corruption, which was not detected using traditional notions and measurements of corruption. How corruption is defined should depend on evaluating corruption at the macro level. In this way, the weak business culture that flourished in Iceland might have been exposed. The proposed definition of corruption is:

It is corruption when one or more sector dominates other sectors of the society and abuses that position in the organization of resources, public goods, or to exercise undue influence.

This definition captures the situation when industries (such as the financial industry in Iceland) misuses its power to collect resources, whether private or public goods, and simultaneously diminishes the leverage of institutions, such as the FSA. Improving the indicators for corruption might enable policy makers to measure whether healthy power balances exist within a society. This would make an interesting new research. One indicator might be the relative size and influence of a particular sector. Another indicator could be the extent to which authorities enforce existing rules. The next indicator might measure the degree to which the public and supervisory authorities are engaged with the private sector to promote ethics and a responsible business

culture, since having rules and regulations often do not suffice. A further indicator could look into the relationship between the media and major businesses in a country and whether or not these entities are tightly connected through direct or indirect ownership. An important indicator, and related to the proposal of installing an independent supervisory institution, is the use of international experts, i.e. people not affiliated with any sort of political or business interest in Iceland.

Business practices in Iceland have become questionable and the ownership structure and the organizational design of such a fundamentally important industry as banking should change. The extensive collapse was the result of managerial relationships, cross-ownership, cross-lending, and the bank owners themselves becoming large users of bank credit. One reason why things got so unmanageable is that the Icelandic banks operated as investment banks, imitating US banks' operations after the Glass-Steagall Act was repealed in 1999, but becoming more investment banks than commercial ones. The impecunious supervisory authority had little chance to control the powerful financial players. The separation that existed between investment and commercial banking should be re-enacted. Another measure that should be taken is to enforce a legal separation between entities that banks have combined on a single balance sheet, thus providing separate capitalization and separate governance structures for different operations. Furthermore, transparency for stakeholders should increase, leading to better governance and by diminishing complexity, firmer action from regulators.

Neither boards nor shareholders seem to have understood the characteristics of the new and complex finance industry, undervaluing the risk the banks were running. The mechanisms to oversee and control management were not in place. A “fit and proper” criterion should be reconsidered for both boards and management. It is even worthwhile to consider whether such tests should be extended to a lower level of management. Furthermore, a new regulatory agenda should contain an increase in the minimum capital requirements and stricter rules on liquidity management, keeping in mind that the banks financed themselves through money markets that evaporated. The quality of assets and securities must be addressed, as these can be constraints on liquidity.

This thesis addresses a number of governance issues on several levels. These are governmental, firm, and civil society. Government obviously has a need to strike a balance between entrepreneurial growth, risk exposure, and balanced societal development. The Icelandic case describes a *laissez faire* attitude, where risk and balanced development issues were neglected. Furthermore, the civil society in Iceland cherishes welfare growth, but has lacked critical insights into core processes. Presumably, a critical non-governmental organization and analyst engagement with good information could have triggered a much more adequate public debate, which would in turn have put pressure on both government and industry.

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APPENDIX. INTERVIEWEES

Gunnarsson, B.Í., governor of the Central Bank of Iceland. 30 July 2007.

Sigurdsson, H.M., CEO of Kaupthing bank. 15 July 2007.

**PAPER 1: TO PRIVATIZE NEWLY NATIONALIZED FIRMS
OR NOT**

Throstur Olaf Sigurjonsson

Under review for publication in an academic journal

Abstract

Existing research suggests that privatization leads to both the financial and operating improvements of divested firms in developed (for example, Bishop and Kay, 1988; Vining and Boardman, 1992) and developing (Megginson and Jeffrey Netter, 2001) countries alike. This research uses data from the Icelandic privatization era of 1992-2005 and data from a comparison group of private firms during the same period. The data is free of a bias that is present in much of the previous research on privatization, namely the unavailability of data for mid-sized and smaller firms, and also free of a “cream of the crop” selection bias, since it does not include only State Owned Enterprises (SOEs) known to be a good fit to the market. Since the financial crisis of 2008, many governments have taken over private firms, either in full or partially, and the decision whether to re-privatize has to be taken. In Iceland, the government took over the majority of the country’s largest firms. It is important for future decisions on re-privatization to understand past outcomes. This empirical research suggests that privatization did not lead to improvements of the divested SOEs in Iceland as their operation was efficient, both before and after privatization. Nevertheless, control groups of private firms perform better.

Keywords: Privatization, Deregulation, Corporate Governance, Financial Crisis, Policy Making, Iceland.

I. Introduction

The collapse of the Icelandic economy in the autumn of 2008 led to the nationalization of many of the country's largest firms. Consequently, the government found itself in the position of having to decide whether or not to privatize, and having to consider the issue of whether private firms perform better than public firms do. Hence, the research question is; did the privatized SOEs of the 1992-2005 privatization era lead to operational improvements of the divested firms? This question is relevant for other countries in which the state has taken over badly hurt firms.

Iceland carried out an extensive privatization program during the period from 1992 to 2005 during which the government privatized more or less every SOE (33) fit for divestment (National Audit Office, 2003). The same right wing pro-liberalization and privatization coalition governed for the entire period. Following the 2008 crisis, a new left wing government had to take over dozens of private firms, providing the government with a second opportunity to launch a privatization program. The issue for the government is whether or not to privatize, a decision that should not be made without analyzing the results from the initial privatization program of 1992 to 2005. This paper presents the findings of the first research on this privatization program.

The literature is clear about the effects of privatization, suggesting positive improvements. Within emerging economies the results of privatization have

largely been successful (although the variance is great), but most success stories come from high or middle-income countries (Kikeri and Nellis, 2002). The Nordic countries (Norway, Sweden, Finland, Denmark and Iceland) have mostly been omitted from the literature on privatization and this type of research is non-existent for Iceland. The Nordic countries have a well-established legal and institutional framework (OECD, 2006), which is an important premise for successful privatization. On the other hand, the Nordic countries' SOEs are already efficient (Willner, 2003), which might reduce the gains to be expected from privatization.

This research provides the first empirical estimates of the results from the privatization program in Iceland by analyzing privatized firms and comparing them with a control group of private ones. The results provide support for policy makers, both in Iceland and in other countries that are faced with decisions about whether to privatize nationalized firms or not.

The paper is organized as follows. Section II discusses the empirical literature. Section III describes the methodology and the data. Section IV presents the basic empirical results and Section V provides a summary and conclusion.

II. Literature

Keeping in mind the necessary premises for a successful privatization process, the initial privatization program in Iceland should have been a success. The

premises are identified by, among others, Kikeri and Nellis (2002) and Megginson (2003). Political commitment is an important premise and one very much in evidence in Iceland during the entire privatization period. The same prime minister was at the helm throughout the program and his right wing cabinet established a strong coalition for change, providing both political and administrative commitment. Commitment from the public was secured by, in addition to other incentives, a considerable tax rebate on stock purchases of the privatized firms. This resulted in the public making up a large portion of the owners of the divested firms (Magnusson, 2007). In addition, personal income and corporate taxes were reduced, reaching the lowest levels in Europe (IMF, 2007). Another important premise is to ensure competition within the industries that the privatized firms were to enter. In order to ensure competition, the government prevented mergers within industries that were influenced by privatization (Sigurjonsson, 2010). Financial sector reform is another premise, which occurred gradually, a major milestone of this being the joining the European Economic Area (EEA) in 1993. Hence, Iceland adapted most of the EU's legal and institutional frameworks. Deregulation goes hand in hand with successful privatization, which was a part of the government's program in Iceland from 1979 (Sigurjonsson and Mixa, 2011). The aim was to strengthen the stock market by allowing institutional investors (e.g. pension funds) to invest in a domestic stock and bond market. Transparency is a key premise to ensure trust and positivity of both the public and investors. The National Audit Office in

Iceland regularly published reports on the progress of privatization with the aim of monitoring and providing transparency to the public.

The privatization of the state owned banks was a somewhat different story. The banks were amongst the last SOEs to be privatized (in 2003) and the process was not a conventional one. The state privatization committee initially intended to offer the banks to a number of small institutional investors (where foreign ownership was to be a consideration), and individuals. However, the two ruling political parties focused on domestic political interests and therefore majority ownership was sold to domestic groups of investors who had no prior experience in commercial banking, but were closely tied to the political parties (Special Investigation Commission, 2010). The banks soon became the ruling parties' greatest sponsors (Icelandic National Audit Office, 2009). Furthermore, the new owners were significant owners of Icelandic business, resulting in broad cross-ownership and therefore creating a large risk of extensive collapse if one link in the chain was to fail. Because of this process, the new shareholders of the banks (many of them being the banks' board members) also became the banks' largest debtors (Vaiman, Sigurjonsson and Davidsson, 2011). Within a few years, the banks' balance sheets grew to become nine times Iceland's GDP. A lack of transparency soon became evident but criticism petered out as the media did not act as a watchdog for stakeholders, possibly because the media outlets were owned by the same investors as the banks. The conduct of corporate governance within the Icelandic banks did not foster sustainability (Vaiman et al, 2010;

Sigurjonsson, 2010), and within five years of privatization, the banks were all bankrupt.

Even though the privatization of the banks was a failure (mainly because of to whom the banks were privatized), the government met most of the necessary premises for a successful privatization program. On the other hand, if a country already has efficient SOEs, the incremental benefits from privatization may be diminished.

The vast literature on privatization suggests, almost without exception, that privatization brings benefits to society. The exceptions appear when the necessary premises for successful privatization are not in place. The benefits of privatization are traditionally measured as changes in operating and financial performance of the SOEs (Estrin et al, 2009), such as, SOEs becoming more efficient, more profitable, financially healthier and increasing their capital investment spending, both in developed and developing countries (Megginson and Netter, 2001; Bishop and Key, 1988; Vining and Boardman, 1992). The results have led to a widespread policy argument in favour of privatization.

Divesting of ownership can be driven by various motives: financial, political and economic. Governments have financial motives where privatization is a source of revenue collection and eliminates subsidies to SOEs (Vickers and Yarrow, 1988). The Icelandic government collected over 2.6 billion USD through privatization

and reduced the net public debt as a percentage of GDP from 33.7% to 7.4% (Icelandic Ministry of Finance, 2007).

The political motives for privatization often include the argument that the market has a superior ability to allocate resources compared with the state's weakness in this area. In addition, privatization may introduce foreign capital and institutional investors, which can help develop capital markets. The privatization ideology in Iceland was of this kind, although it did not open up to foreign ownership in the privatized SOEs (Special Investigation Commission, 2010). The superiority of private ownership over public ownership is argued in most of the empirical research on privatization (Boubakri, Cosset, and Guiedhami, 2001; Ehrlich, Gallais-Hamonno; Megginson, Nash, and Randenborgh, 1994; Ng and Seabright, 2001; Wei, Varela, D'Souza, and Hassanet, 2003). Although these findings state that privatization in itself does not have to be the main cause of the observed improvements in the performance of privatized firms. Factors that can influence performance after privatization might be management issues and competitiveness within industries. Policy reforms would have to be a prerequisite for successful transition (Svejnar, 1989; Lipton and Sachs, 1990; Blanchard, Dornbusch, Krugman, Layard, and Summers, 1991; Aghion and Blanchard, 1994; Choi and Silanes, 2010).

The methodology of measuring the performance change of privatized firms has become classic; this methodology was introduced by Megginson and Netter,

2001; Megginson, Nash and van Randenborgh, 1994; Boubakri and Cosset, 1998; and D'Souza, Nash and Megginson, 2000. They all use a similar methodology, using data from three years pre and post privatization and comparing financial and operational performance measures, in both developed and developing countries. The results of this are uniform. There is a statistically significant privatization improvement in the most common measures used (profitability, efficiency, output, leverage). They also name the most significant factors for improvement, these being changes in incentive and management structure along with improved corporate governance.

However, not all studies show improvements in the divested firms. Research by Choi and Silanes (2010), where the performance of privatized companies up to 10 years is taken into account, claims that measured improvements from privatization is a mere reflection of the world business cycle. Campbell and Bhatia (1998) found that through new investments, the poorer countries experienced an increase of their capacity utilization, new technology was introduced and markets were expanded. Boubakri and Cosset (1998) came to similar conclusions, but profitability, efficiency, output and leverage did not change much. However, positive fiscal effects have consistently been found, no matter the type of country (Davis, Ossowski, Richardson and Barnett, 2000). When the privatized firms begin to pay taxes, budget deficits declined, net transfers to SOEs are reduced and start to become positive (Sheshinski and Lopez-Calva, 1999). Taxes paid by privatized firms tend to be considerably

higher than pre-sale dividends (Kikeri and Nellis, 2002). The welfare consequence from privatization is a general increase in the total resources in the economy. However, it is rare for all stakeholders (sellers, buyers, consumers, employees and competitors) to gain welfare benefits out of privatization. This depends on how the transaction is organized, what the level of institutional development is, and the competence of the economy. An example of this is when a government prices an SOE lower than it might otherwise do. In this way, the government ensures that lower income, first time shareholders can participate in the issue, and the sale process itself should be swift and successful. Shareholders gain, but the seller collects less.

III. Data and methodology

Data

The sample used to investigate the relation between changes in ownership structure and firm performance consists of all Icelandic privatized companies for which there was at least three years' annual accounting data before and after privatization. The firms come from all types of industries and are of various sizes. Hence, the database is free of a bias that is present in much of the previous research on privatisation, namely the unavailability of data for mid-sized and smaller firms (Choi and Silanes, 2010). The database is also free of a "cream of the crop" selection bias, since it does not include only SOEs known to be a good fit to the market (Kikeri and Nellis, 2002). During the privatization era of 1992 to 2005, the Icelandic government privatized 33 companies, which was close to all

the SOEs potentially fit for privatization (Sigurjonsson, 2010). Most of the privatization took place in the form of SIP (Share Issue Privatization). On four occasions an asset sale was used, leaving a sample of 29 firms (the method of asset sales led to the incorporation of the divested firms' assets into the books of the purchasers; hence data is not available for research). Table 1 provides an overview of all the privatized SOEs, the year of privatization and the form of the privatization method. Where accounting data was not publicly available, the firms were contacted and visited. This second approach applied to most of the firms. On occasion, data were not available where privatized firms merged with private ones within three years from privatization. Where the privatization had already begun in 1992, in some cases the data were not available. On a few occasions, the owners declined to hand over the data. Despite the compulsory delivery of annual reports to the Icelandic Directorate of Internal Revenue, not all firms follow that rule. The missing 13 firms are spread over both in terms of industry and size. The data finally encompassed that of 20 privatized firms.

A control group of privately owned firms, spanning a wide variety of sectors and firm sizes is included in the study. The ÍSAT2008 industry coding system was used in order to choose appropriate firms to create pairs of privatized SOEs and private firms. The ÍSAT2008 system is based on the European Union's NACE Rev. 2 industry indexation which applies to all member countries of the European Economic Area (including Iceland). The aim of the indexation is to secure parallelism in comparison between nations. A list of all private firms

belonging to the same industry indexation as the privatized ones was obtained from the Directorate of Internal Revenue. Those private firms matching the industry indexation, being of similar size and operating during the same three years before and after privatization were chosen as the control group. The same rule applied for data collection of the private firms as for the privatized ones. When possible, public accounting data were gathered. Where this data was not available the firms themselves were contacted. Ultimately, 29 private companies were fit for comparison purposes.

All data used for the analysis was adjusted for inflation (applying the Consumer Price Index (CPI)), using the year of privatization (year 0) as a base year. Local currency data (Icelandic krona) was employed in all analysis and ratios were computed using nominal data in both the numerator and the denominator. Overall, the study used 20 privatized firms and 29 private firms, which totals 49 firms.

Methodology

Megginson, Nash and van Randerborgh (1994) first introduced a methodology for privatization studies. Change in any given indicator of performance is measured by comparing the three-year mean and median operating and financial performance of privatized firms to their own mean or median performance during their last three years as an SOE (Choi and Silanes, 2010). This study

(using the above methodology) rested on six broad indicators of performance: (1) profitability, (2) operating efficiency, (3) output, (4) capital investment, (5) leverage and (6) employment.

Profitability was calculated using three ratios: operating profits to assets (ROA), net profit to total equity (ROE), and operating profit to sales (ROS). Using operating profits provided information on “pure” efficiency gains where net profit takes into consideration effects of changes in leverage, which often accompany privatization (Barber and Lyon, 1996).

In order to capture changes in operating efficiency, three ratios were calculated: sales to number of employees, net profit to number of employees, and operating profit to number of employees. Operating efficiency ratios are interesting to use where SOE have been criticized for lacking efficiency (Frydman, Gray, Hessel and Rapaczynski, 2000; Kornai, 1998; Berglof and Roland, 1998).

The privatization literature mostly documents significant increases in output following privatization (Choi and William Megginson, 2010). In this study, change in output was measured by two variables, and was defined as sales as a proportion of total assets and sales comparison between periods.

The impact that privatization has on investments was analysed by examining the stock of fixed assets in relation to sales and total assets. Large capital investment

spending is required on some occasions in order to have well functioning infrastructure. It was therefore of interest to see what results privatized firms achieved in this respect.

According to the literature, capital structure seems to change following privatization (Hansmann and Krakkman, 2000; Martin and Parket, 1997). SOEs may enjoy implicit or explicit loan guarantees enabling them to borrow more cheaply than private firms may. In addition, SOEs cannot usually issue stock. Therefore, it can be expected that they are more leveraged than private firms. Leverage was measured as the ratio of liabilities to assets.

The literature reports evidence of both layoffs and wage cuts because of privatization (e.g. La Porta and Silanes (1999) report a reduction in employment by half) and no evidence of employment reduction (Megginson, Nash and van Randerborgh, 1994). In this study, a simple measure of the number of employees before and after privatization was used for analysis.

The study controlled for macroeconomic and industry factors by computing the same indicators used to describe the performance of privatized firms for the control sample of private firms. Table 2 shows the indicators of performance change that were used for analysis.

IV. Results

The performance of the privatized firms is presented in Table 3. Immediately noticeable is that five out of twelve variables change significantly after privatization. One out of three profitability ratios show a significant increase ($p < 0.1$) (ROE). Return on sales (ROS) and return on assets (ROA) do not change significantly, although ROS shows an improvement in profitability by 65% of firms.

The three variables for efficiency, namely sales efficiency (measured by real sales per employee), net income efficiency (measured by net income per employee) and operating income (measured by operating income per employee) all change significantly according to the predicted relationship. They also show a significant improvement ($p < 0.05$) in all measures for 75%, 70% and 75% of the firms, respectively. These results suggest that the Icelandic SOEs significantly improve their efficiency, an objective that governments launching privatization programs often emphasize.

The results show a significant increase in real sales ($p < 0.05$). The firms' total output increased by 65%, from 4646165 (811422) to 12629330 (869008) (in Icelandic krona) after privatization. This seems to contradict the often-mentioned argument that SOEs tend to overproduce to satisfy political objectives (Boycko, Shleifer and Vishny, 1994). An explanation could be that private firms often have more flexible financing opportunities and greater incentives for increased

output (Megginson, Nash and van Randenborgh, 1994). Sales in relation to assets, on the other hand, do not show significant change, although 60% of firms show an increase of that ratio.

Neither measures of change in investments show a significant increase. Nonetheless, half of the firms show movement in the direction of an increase. The literature suggests such a trend (Megginson, Nash and van Randenborgh, 1994), but a significant change does not apply here.

The results report no significant change in the level of leverage after privatization. It was predicted that leverage would decrease as private firms do not have the same access to “cheap” money as SOEs do in some instances and SOEs do not issue stocks. A quite large share of the firms in fact moved in the direction of increased leverage (60%).

Studies on privatization report mixed results in changes in employment of divested firms. La Porta and López-de-Silanes (1999) reported a significant decline in the number of employees where Megginson, Nash and van Randenborgh (1994) found a non-significant decline in employment. The result for the Icelandic case is non-significant.

Comparison of the mean and median values reveals a difference between these two measures. For example, changes in employment. The mean increases after

privatization while the median declines. When concurrently examining the data for each industry, the financial industry stands out in its improvement (although an unsustainable one as earlier discussed). In Table 4, the financial industry is excluded from the sample. The results change from showing five measures changing significantly, to only two out of twelve measures showing a significant change. The ROE does not show a significant change in net profit per employee or in changes in output (real sales). More often, a significant change in direction is seen, or in six cases out of twelve.

Research on privatization has been criticized for not controlling for the general level of economic activity before and after privatization (Choi and Silanes, 2010). The argument is that such studies are incapable of distinguishing between changes in firm attributes arising from change in ownership and from ordinary fluctuations in economic activity. Iceland enjoyed economic growth from the time of the first privatization in 1992 until its last one in 2005. Hence, there is a reason for analyzing whether increases in profits, efficiency and sales growth of privatized firms are mere manifestations of economic and industry factors. Table 5 presents a control group of the private firms used for this comparison. The private firms are “twin firms” of the privatized ones in the sense that they come from the same industries, have the same industry indexation (see Section III, on data and methodology) and the data comes from the same privatization period (the same three years before and three years after).

When the results for the control group are analyzed, it becomes evident that there is a significant change in eight measures out of twelve. Table 5 shows these results. Significant changes are found in many of the variables where the privatized firms do not show significant changes, such as investments in fixed assets, leverage and employment. The control group shows an increase in employment as well, a decrease in leverage and an increase in fixed assets. On the other hand, improvements in operating efficiency measures are seen in only one out of three, and significant changes in profitability measures are seen in only one out of three. When financial firms are omitted from the calculations, less significant changes are seen (as in the case of the privatized firms). The drop in significant variables is from eight out of twelve to five out of twelve. The private firms still show significant changes in one of the profitability measures (ROS), both measures of output and in leverage and employment (see Table 6). These improvements by the private firms could most likely be explained by the fact that they were faced with increased competition from their privatized “twin” firms.

The profitability of the median Icelandic SOE is not too different from that of its private sector peer. Profitability grows noticeably after privatization, as the significant changes in performance of the SOEs indicate. Figures 1 to 3 illustrate this point by graphically showing the behaviour of the median profitability measures through time, for both the sample of SOEs and the control group of private firms. SOEs show ROE before privatization similar to private firms but

overtake them after privatization. Regarding the ROA measure, SOEs are lagging behind private firms before privatization but improve greatly after privatization. It is only in ROS where the privatized firms do not catch up with private firms, although they improve. See Figures 1 to 3.

Operating efficiency measures are reported in the same descriptive way in Figures 4 and 5 (by sales to employees and net profit to employees). Operating efficiency increases after divestiture, supporting the idea that privatization can have a significant anticipation effect. This result would be consistent with Martin and Parker (1995) and Dewenter and Malatesta (2001). In all the measures for operating efficiency, SOEs show significant improvements. See Figures 4 and 5.

On the other hand, the number of employees initially decrease considerably (a great deal prior to privatization (years -3 to 0), and moderately after that (nearly 50%)). The private firms increase their number of employees for the comparison period. This indicates that employment cuts are a part of the story of observed gains in efficiency. See Figure 6.

When combining the results into one table (see Table 7), excluding financial firms (therefore $N=18$ for privatized firms and $N = 18$ for private firms), the comparison reveals that privatized firms barely show significant changes (in only two out of twelve measures) whereas private firms do better and show a significant change in five out of twelve measures. In operating efficiency

measures, SOEs show significant improvements. Private firms show improvements in a variety of measures; profitability, output, leverage and employment. It does not seem that SOEs are able to catch up with industry trends in their post-privatization period, where private firms outperform them. There is a tendency of the two groups to meet the predicted direction of change for each measure (see the last two columns of Table 7). Although running a chi-square test on the two categorical samples (see Table 8), reveals that there is generally not a statistical significant association between the two groups.

V. Concluding remarks

The findings support the argument that Icelandic SOEs are efficient before privatization and continue to be so after divestment. Although there is little significant change in their operations after privatization, the general direction is towards improvement. Significant changes are only found in two measures out of twelve (when financial firms are excluded), or in sales to employees, and operating profit to employees. These two significant changes seem to be driven by the reduction in numbers of employees especially during the three years leading up to the privatization year (Figure 6 shows this trend).

Controlling for potential market changes, privatized firms are equal to their private counterparts in many measures. On the other hand, when faced with new competition, private firms show significant improvements in more measures than

privatized firms do. Hence, the privatization effect on industry's efficiency is positive. Private firms show significant improvements in a variety of measures (profitability, output, leverage and employees), where privatized firms show only significant improvements where decrease in number of employees is the denominator. This indicates that privatization does not lead to significant improvements unless reduction of employees is prior to privatization. Private firms, on the other hand, prepare themselves for increased competition and potential expansion into new markets by searching for efficiency and effectiveness. They improve on most categories of measures, although not on operating efficiency, the reason being the significant increase in number of employees.

The fiscal effects of privatization are very positive, decreasing public debt to GDP in Iceland from 33.7% to 7.4%. State subsidies are also greatly affected as almost all SOEs are privatized. The announcement effects of declaring forthcoming privatization seems to be considerable as the 40% decrease of employment at SOEs prior to privatization indicates (years -3 to 0). However, the efficiency gains take a few years to materialize as figures one to five imply.

The research question asks whether privatized SOEs improve their operations after privatization. The short answer is no. Nevertheless, the research shows the positive side effects of privatization. Privatized SOEs continue to be efficient and move in positive directions. Private firms improve their operation on a variety of

measures, although in running the chi-square test it shows that on two measures (leverage and employment) the private firms move significantly in the opposite direction to privatized ones. Private firms are 5.26 times more likely to move in the direction of decreasing their leverage than privatized ones and 3.57 times more likely to increase their number of employees than privatized ones. On the other hand, privatized firms are 5.26 times more likely to increase the Sales/Total assets ratio than private ones. On other measures, there is no significant difference in the direction privatized and private firms move.

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Table 1. Overview of all privatized firms

This table provides an overview of all privatized SOEs during 1992 – 2005, year of privatization and method of privatization.

	Company	Year of privatization completed	Method of privatization
1	Flugskóli Íslands hf. (aviation)	2005	Share issue privatization (SIP)
2	Landssími Íslands hf. (telecom)	2005	Mixed
3	Lánasjóður landbúnaðarins (finance)	2005	SIP
4	Barri hf. (manufacturing)	2004	SIP
5	Búnaðarbanki Íslands hf. (finance)	2003	Mixed
6	Íslenskir aðalverktakar hf. (construction)	2003	SIP
7	Landsbanki Íslands hf. (finance)	2003	Mixed
8	Sementsverksmiðjan hf. (manufacturing)	2003	SIP
9	Íslenska járnblendifélagið hf. (manufacturing)	2002	SIP
10	Steinullarverksmiðjan hf. (manufacturing)	2002	SIP
11	Kísiliðjan hf. (manufacturing)	2001	SIP
12	Stofnfiskur (fishing industry)	2001	SIP
13	Intís hf. (IT)	2000	SIP
14	Áburðarverksmiðjan hf. (manufacturing)	1999	SIP
15	FBA (finance)	1999	SIP
16	Hólalax hf. (fishing industry)	1999	SIP
17	Íslenska menntanetið hf. (IT)	1999	SIP
18	Skólavörubúð Námsgagnastofnunar (retail)	1999	Asset sale
19	Skýrr hf. (IT)	1998	SIP
20	Bifreiðaskoðun hf. (??)	1997	SIP
21	Jarðboranir hf. (research)	1995	SIP
22	Lyfjaverslun Íslands hf. (pharmaceutical)	1995	SIP
23	Þörungaverksmiðjan hf. (manufacturing)	1995	SIP
24	Þormóður rammi hf. (fish industry)	1994	SIP
25	Rýni hf. (research)	1993	SIP
26	SR-mjöl hf. (fish industry)	1993	SIP
27	Ferðaskrifstofa Íslands hf. (tourist industry)	1992	Direct sale to employees
28	Framleiðsludeild ÁTVR (manufacturing)	1992	Asset sale
29	Íslensk endurtrygging hf. (finance)	1992	SIP
30	Menningar sjóður (culture)	1992	Asset sale
31	Prentsmiðjan Gutenberg hf. (manufacturing)	1992	SIP
32	Ríkisskip (transportation)	1992	Asset sale
33	Þróunarfélag Íslands hf. (finance)	1992	SIP

Table 2. Measures used in the research and predicted relationship

This table presents the economic characteristics examined for changes resulting privatization. The predicted changes in the characteristics are detailed. The symbols a and b in the predicted relationship column stand for after and before, respectively.

Characteristics	Description	Predicted relationship
<i>Profitability</i>		
Return on assets (ROA)	Operating profits divided by total assets	$ROA_a > ROA_b$
Return on equity (ROE)	Net profit divided by total equity	$ROE_a > ROE_b$
Return on sales (ROS)	Operating profits divided by sales	$ROS_a > ROS_b$
<i>Operating efficiency</i>		
SALES/EMP	Sales divided by the number of employees	$SALES/EMP_a > SALES/EMP_b$
NP/EMP	Net profit divided by the number of employees	$NP/EMP_a > NP/EMP_b$
OP/EMP	Operating profits divided by the number of employees	$OP/EMP_a > OP/EMP_b$
<i>Output</i>		
Sales /Total Assets (Sales/TA)	Sales divided by total assets	$Sales/TA_a > Sales/TA_b$
Sales (SALES)	Sales comparison between periods	$SALES_a > SALES_b$
<i>Investment</i>		
INV/Sales	Increase in fixed divided by sales	$INV_a > INV_b$
INV/Total Assets	Increase in fixed assets divided by total assets	$INV_a > INV_b$
<i>Leverage</i>		
Total leverage (LEV)	Liabilities divided by assets	$LEV_a < LEV_b$
<i>Employment</i>		
(EMP)	Number of employees	$EMP_a < EMP_b$

Table 3. Results from test of predictions for the full sample of all privatized firms

This table presents the empirical results for the complete sample of available privatized firms for the period 1992 – 2005. For each performance measure, the table provides the mean and the median values for the three-year period before and after privatization. Change in mean and values of the performance indicators are provided after versus before privatization in column five. The sixth column provides the Wilcoxon Z statistics for the difference in median values. The two remaining columns provide the proportion of firms whose performance changed as predicted and the significance test of this change from 50%. ***, **, * denote significance levels of 1.5 and 10 percent, respectively.

<i>Variables</i>	<i>N</i>	<i>Mean before (median)</i>	<i>Mean after (median)</i>	<i>Mean change (median)</i>	<i>Z-Statistics for difference in medians (after-before)</i>	<i>Percentage of firms that changed as predicted</i>	<i>P-value for proportion Test</i>
Profitability							
ROA	20	3.12 (1.96)	5.92 (3.99)	2.80 (2.03)	$z=-0.971$ ns	0.50	0.500
ROE	20	4.22 (5.77)	7.67 (8.96)	3.45 (3.19)	$z=-1.755$, $p<0.1$ *	0.70	0.037**
ROS	20	-8.03 (4.86)	2.06 (11.41)	10.09 (6.5)	$z=-0.859$ ns	0.65	0.090*
Operating efficiency							
Sales/EMP	20	13993 (12004)	25209 (14004)	11216 (2000)	$z=-2.427$, $p<.05$ **	0.75	0.013**
NP/EMP	20	262 (263)	2272 (992)	2010 (729)	$z=-1.755$, $p<0.1$ *	0.70	0.037**
OP/EMP	20	679 (561)	1702 (1182)	1023 (621)	$z=-2.165$, $p<.05$ **	0.75	0.013**
Output							
Sales/Total Assets	20	0.8376 (0.7045)	0.9811 (0.8468)	0.1435 (0.1423)	$z=-1.195$ ns	0.60	0.190
Real sales	20	4646165 (811422)	12629330 (869008)	7983165 (57586)	$z=-2.091$, $p<.05$ **	0.65	0.090*
Investments in fixed assets							
Fixed assets/sales	20	0.71 (2.04)	9.50 (3.50)	8.78 (1.46)	$z=-0.560$ ns	0.55	0.330
Fixed assets / total assets	20	1.8440 (0.6892)	-1.0928 (1.6215)	-2.9368 (0.9323)	$z=-0.485$ ns	0.50	0.500
Leverage							
Liabilities/ Assets	20	47.59 (46.76)	55.32 (54.50)	7.73 (3.74)	$z=-1.008$ ns	0.40	0.814
Employment							
EMP	20	244 (86)	324 (60)	80 (-26)	$z=-0.112$ ns	0.45	0.673

Table 4. Results from test of predictions for the full sample excluding financial firms

This table presents the empirical results for the complete sample of available privatized firms excluding financial firms. For each performance measure, the table provides the mean and the median values for the three-year period before and after privatization. Change in mean and values of the performance indicators are provided after versus before privatization in column five. The sixth column provides the Wilcoxon Z statistics for the difference in median values. The two remaining columns provide the proportion of firms whose performance changed as predicted and the significance test of this change from 50%. ***, **, * denote significance levels of 1.5 and 10 percent, respectively.

<i>Variables</i>	<i>N</i>	<i>Mean before (median)</i>	<i>Mean after (median)</i>	<i>Mean change (median)</i>	<i>Z-Statistics for difference in medians (after-before)</i>	<i>Percentage of firms that changed as predicted</i>	<i>P-value for proportion Test</i>
Profitability							
ROA	18	3.40 (3.91)	6.51 (6.72)	3.11 (2.81)	$z=-1.154$ ns	0.50	0.500
ROE	18	4.00 (4.22)	7.40 (8.96)	3.40 (4.74)	$z=-1.502$ ns	0.67	0.079*
ROS	18	-9.97 (3.95)	-0.42 (9.17)	15.13 (5.22)	$z=-0.4145$ ns	0.61	0.170
Operating efficiency							
Sales/EMP	18	12419 (10816)	22555 (12298)	10135 (1482)	$z=-2.069$, $p<0.05$ **	0.72	0.030**
NP/EMP	18	112 (176)	717 (748)	605 (572)	$z=-1.198$ ns	0.67	0.079*
OP/EMP	18	557 (425)	1279 (887)	721 (462)	$z=-1.677$, $p<0.1$ *	0.67	0.030**
Output							
Sales/Total Assets	18	0.92 (0.78)	1.08 (0.89)	0.16 (0.11)	$z=-1.372$ ns	0.67	0.079*
Real sales	18	2361000 (781267)	2700600 (764709)	339600 (-16558)	$z=-1.590$ ns	0.61	0.170
Investments in fixed assets							
Fixed assets/sales	18	-0.11 (1.11)	1.41 (-0.55)	1.52 (-1.66)	$z=-0.152$ ns	0.50	0.500
Fixed assets/total Assets	18	1.95 (0.55)	-1.70 (-1.35)	3.65 (-1.90)	$z=-0.762$ ns	0.44	0.680
Leverage							
Liabilities/Assets	18	42.44 (43.78)	51.38 (51.99)	8.94 (8.21)	$z=-1.154$ ns	0.33	0.092*
Employment							
EMP	18	172 (74)	144 (52)	-28 (-22)	$z=-0.719$ ns	0.50	0.500

Table 5. Results from test of predictions for the full sample of private firms (control group)

This table presents the performance changes for the private firms (the control group). The table presents, for each empirical proxy the number of observations, the mean and median values of the proxy for the three year periods prior and subsequent to the privatization years, the mean and median change in the proxy's value after versus before privatization. Wilcoxon signed rank test (with its z-statistic) is used as the test of significance for the change in median values. The two remaining columns provide the proportion of firms whose performance changed as predicted and the significance test of this change from 50%. ***, **, * denote significance levels of 1, 5 and 10 percent, respectively.

<i>Variables</i>	<i>N</i>	<i>Mean before (median)</i>	<i>Mean after (median)</i>	<i>Mean change (median)</i>	<i>Z-Statistics for difference in medians (after-before)</i>	<i>Percentage of firms that changed as predicted</i>	<i>P-value for proportion Test</i>
Profitability							
ROA	29	6.83 (5.43)	6.44 (1.22)	-0.3894 (-0.42145)	$z=-0.205$ ns	0.48	0.570
ROE	29	5.32 (5.65)	4.65 (4.98)	-0.6625 (-0.6781)	$z=-0.811$ ns	0.45	0.710
ROS	29	5.49 (10.32)	24.65 (24.24)	19.17 (13.93)	$z=-3.03$, $p<.05$ **	0.69	0.021**
Operating efficiency							
Sales/EMP	29	21439 (24225)	21949 (19566)	510 (-4659)	$z=-0.097$ ns	0.52	0.436
NP/EMP	29	1578 (1004)	4924 (1746)	3345 (743)	$z=-3.276$, $p<.05$ **	0.72	0.008***
OP/EMP	29	876 (726)	896 (788)	20 (62)	$z=-0.443$ ns	0.48	0.574
Output							
Sales/Total Assets	29	0.9495 (0.7979)	0.7894 (0.6865)	-0.1601 (-0.1114)	$z=-2.952$, $p<.05$ **	0.21	0.999
Real sales	29	2646694 (1272771)	4777186 (1437757)	2130491 (164986)	$z=-3.319$, $p<.05$ **	0.72	0.008***
Investments in fixed assets							
Fixed assets/sales	29	-0.45 (2.65)	13.07 (10.71)	13.52 (8.05)	$z=-2.887$, $p<.05$ **	0.76	0.003***
Fixed assets/total Assets	29	-2.27 (0.88)	3.79 (2.51)	6.07 (1.63)	$z=-2.087$, $p<.05$ **	0.76	0.003***
Leverage							
Liabilities/Assets	29	72.04 (82.13)	64.79 (81.84)	-7.25 (-0.29)	$z=-2.519$, $p<.05$ **	0.72	0.008***
Employment							
EMP	29	128 (62)	165 (72)	37 (10)	$z=-3.473$, $p<.05$ **	0.21	0.999

Table 6. Results from test of predictions for the full control group sample excluding financial firms

This table presents the empirical results for the complete sample of available private firms excluding financial firms. For each performance measure, the table provides the mean and the median values for the three-year period before and after privatization. Change in mean and values of the performance indicators are provided after versus before privatization in column five. The sixth column provides the Wilcoxon Z statistics for the difference in median values. The two remaining columns provide the proportion of firms whose performance changed as predicted and the significance test of this change from 50%. ***, **, * denote significance levels of 1, 5 and 10 percent, respectively.

<i>Variables</i>	<i>N</i>	<i>Mean before (median)</i>	<i>Mean after (median)</i>	<i>Mean change (median)</i>	<i>Z-Statistics for difference in medians (after-before)</i>	<i>Percentage of firms that changed as predicted</i>	<i>P-value for proportion Test</i>
Profitability							
ROA	18	11.15 (9.16)	10.55 (10.95)	-0.60 (1.79)	$z=-0.109$ ns	0.56	0.319
ROE	18	9.46 (9.21)	8.77 (10.12)	-0.69 (0.91)	$z=-0.370$ ns	0.50	0.500
ROS	18	7.03 (11.03)	25.98 (26.21)	18.95 (15.18)	$z=-2.069$, $p<.05$ **	0.61	0.173
Operating efficiency							
Sales/EMP	18	15689 (12977)	14784 (11612)	-905 (-1365)	$z=-0.457$ ns	0.50	0.500
NP/EMP	18	784 (383)	1507 (804)	723 (421)	$z=-1.590$ ns	0.61	0.173
OP/EMP	18	1401 (733)	1436 (1151)	35 (418)	$z=-0.457$ ns	0.56	0.389
Output							
Sales/Total Assets	18	1.45 (3.25)	1.21 (0.99)	-0.24 (-2.26)	$z=-2.504$, $p<.05$ **	0.28	0.970
Real sales	18	1443826 (1297738)	2004309 (1356869)	560483 (59131)	$z=-2.417$, $p<.05$ **	0.72	0.030**
Investments in fixed assets							
Fixed assets/sales	18	2.16 (2.94)	4.41 (3.64)	2.25 (0.70)	$z=-0.675$ ns	0.61	0.173
Fixed assets/total Assets	18	-3.21 (2.99)	4.60 (6.22)	7.81 (3.23)	$z=-1.032$ ns	0.68	0.079*
Leverage							
Liabilities/Assets	18	60.67 (59.95)	52.02 (54.59)	-8.65 (-5.36)	$z=-1.807$, $p<.01$ *	0.72	0.030**
Employment							
EMP	18	125 (73)	158 (129)	33 (56)	$z=-2.983$, $p<.05$ **	0.78	0.009***

Table 7. Results from test of predictions for the combined sample of privatized and private firms

This table presents the combined performance changes for the privatized firms and the control firms. The table presents, for each empirical proxy the number of observations, the mean and median values of the proxy for the three-year periods prior and subsequent to privatization, the mean and median change in the proxy's value after versus before privatization, and a test of significance of the mean change. Wilcoxon signed rank test (with its z-statistic) is used as the test of significance for the change in median values. The two remaining columns provide the proportion of firms whose performance changed as predicted and the significance test of this change from 50%. ***, **, * denote significance levels of 1, 5 and 10 percent, respectively.

<i>Variables</i>	<i>Type</i>	<i>N</i>	<i>Mean before (median)</i>	<i>Mean after (median)</i>	<i>Mean change (median)</i>	<i>Wilcoxon</i>	<i>Percentage of firms that changed as predicted</i>	<i>P-value for proportion Test</i>
Profitability ROA	Privatized	18	3.40 (3.91)	6.51 (6.72)	3.11 (2.81)	z=-1.154	0.50	0.500
	Private	18	11.15 (9.16)	10.55 (10.95)	-0.60 (1.79)	z=-.109ns	0.56	0.319
ROE	Privatized	18	4.00 (4.22)	7.40 (8.96)	3.40 (4.74)	z=-1.502ns	0.67	0.079*
	Private	18	9.46 (9.21)	8.77 (10.12)	-0.69 (0.91)	z=-.370ns	0.50	0.500
ROS	Privatized	18	-9.97 (3.95)	-0.42 (9.17)	15.13 (5.22)	z=-.415ns	0.61	0.170
	Private	18	7.03 (11.03)	25.98 (26.21)	18.95 (15.18)	z=-2.069, p<.05 **	0.61	0.173
Operating efficiency								
Sales/EMP	Privatized	18	12419 (10816)	22555 (12298)	10135 (1482)	z=-2.069, p<.05**	0.72	0.030**
	Private	18	15689 (12977)	14784 (11612)	-905 (-1365)	z=-.457ns	0.50	0.500
NP/EMP	Privatized	18	112 (176)	717 (748)	605 (572)	z=-1.198ns	0.67	0.079*
	Private	18	784 (383)	1507 (804)	723 (421)	z=-1.590ns	0.61	0.173
OP/EMP	Privatized	18	557 (425)	1279 (887)	721 (462)	z=-1.677, p<.01*	0.67	0.030**
	Private	18	1401 (733)	1436 (1151)	35 (418)	z=-0.457ns	0.56	0.389
Output								
Sales/Total assets	Privatized	18	0.92 (0.78)	1.08 (0.89)	0.16 (0.11)	z=-1.372ns	0.67	0.079*
	Private	18	1.45 (3.25)	1.21 (0.99)	-0.24 (-2.26)	z=-2.504, p<.05 **	0.28	0.970

Sales	Privatized	18	2361000 (781267)	2700600 (764709)	339600 (-16558)	$z=-1.590$ ns	0.61	0.170
	Private	18	1443826 (1297738)	2004309 (1356869)	560483 (59131)	$z=-2.417$, $p<.05^{**}$	0.72	0.030 ^{**}
Investment in fixed assets								
Fixed assets / sales	Privatized	18	-0.11 (1.11)	141 (-0.55)	1.52 (-1.66)	$z=-.152$ ns	0.50	0.500
	Private	18	2.16 (2.94)	441 (3.64)	2.25 (0.70)	$z=-.675$ ns	0.61	0.173
Fixed assets / total assets	Privatized	18	1.95 (0.55)	-1.70 (-1.35)	3.65 (-1.90)	$z=-.762$ ns	0.44	0.680
	Private	18	-3.21 (2.99)	4.60 (6.22)	7.81 (3.23)	$z=-1.032$ ns	0.68	0.079 [*]
Leverage								
Liabilities/ Assets	Privatized	18	42.44 (43.78)	51.38 (51.99)	8.94 (8.21)	$z=-1.154$ ns	0.33	0.092 [*]
	Private	18	60.67 (59.95)	52.02 (54.59)	-8.65 (-5.36)	$z=-1.807$, $p<0.1^{*}$	0.72	0.030 ^{**}
Employment								
Employment	Privatized	18	172 (74)	144 (52)	-28 (-22)	$z=-.719$ ns	0.50	0.500
	Private	18	125 (73)	158 (129)	33 (56)	$z=-2.983$, $p<.01^{***}$	0.78	0.009 ^{***}

Table 8. Results from Pearson chi-square test on the two privatized and private samples

The test examines whether there is an association between the two categorical variables (privatized and private and whether they improve on measures or not, incident to privatization). The Pearson chi-square statistic tests whether the two variables are independent.

	Type	N	Firms increase on measure	Firms decreasing on measure	Chi-square	Odds ratio
Profitability ROA	Privatized	18	9	9	$\chi^2(1, N=36) = 0.110, ns$	0.8
	Private	18	10	8		
ROE	Privatized	18	12	6	$\chi^2(1, N=36) = 1.029, ns$	2.0
	Private	18	9	9		
ROS	Privatized	18	11	7	$\chi^2(1, N=36) = 0.000, ns$	1.00
	Private	18	11	7		
Operating efficiency						
Sales/EMP	Privatized	18	13	5	$\chi^2(1, N=36) = 1.870, ns$	2.6
	Private	18	9	9		
NP/EMP	Privatized	18	12	6	$\chi^2(1, N=36) = 0.120, ns$	1.27
	Private	18	11	7		
OP/EMP	Privatized	18	12	6	$\chi^2(1, N=36) = 0.468, ns$	1.6
	Private	18	10	8		
Output						
Sales/Total assets	Privatized	18	12	6	$\chi^2(1, N=36) = 5.461, p < .05$	5.26
	Private	18	5	13		
Sales	Privatized	18	11	7	$\chi^2(1, N=36) = 0.500, ns$	0.6
	Private	18	13	5		
Investment in fixed assets						
Fixed assets / sales	Privatized	18	9	9	$\chi^2(1, N=36) = 0.50, ns$	0.64
	Private	18	11	7		
Fixed assets / total assets	Privatized	18	8	10	$\chi^2(1, N=36) = 1.800, ns$	0.4
	Private	18	12	6		
Leverage						
Liabilities/ Assets	Privatized	18	6	12	$\chi^2(1, N=36) = 5.461, p < 0.05$	0.19
	Private	18	13	5		
Employment						
Employment	Privatized	18	9	9	$\chi^2(1, N=36) = 3.010, p < 0.1$	0.28
	Private	18	14	4		

Figures 1 – 6 present performance proxies for the privatized firms and the control firms before and after going public, one accounting measure in each panel.

Figure 1. Return on assets for privatized firms versus private firms

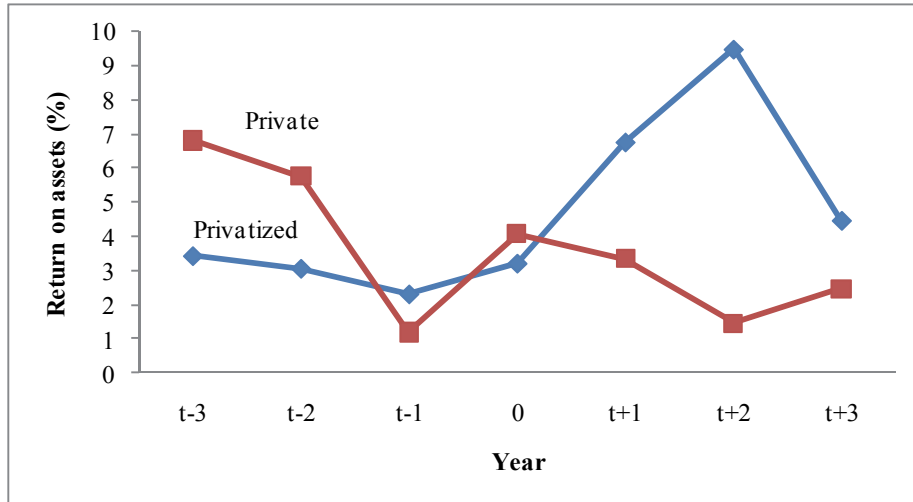


Figure 2. Return on equity for privatized firms versus private firms

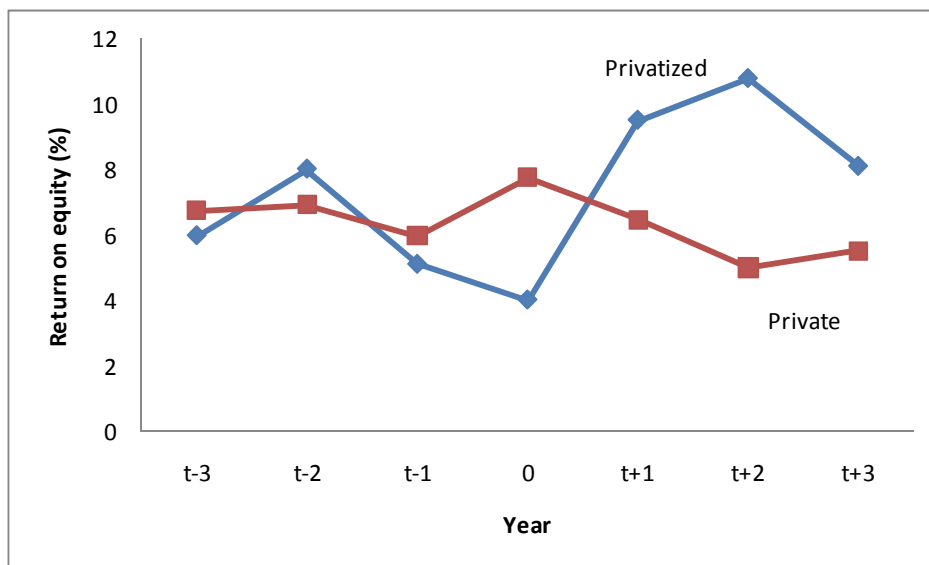


Figure 3. Return on sales for privatized firms versus private firms

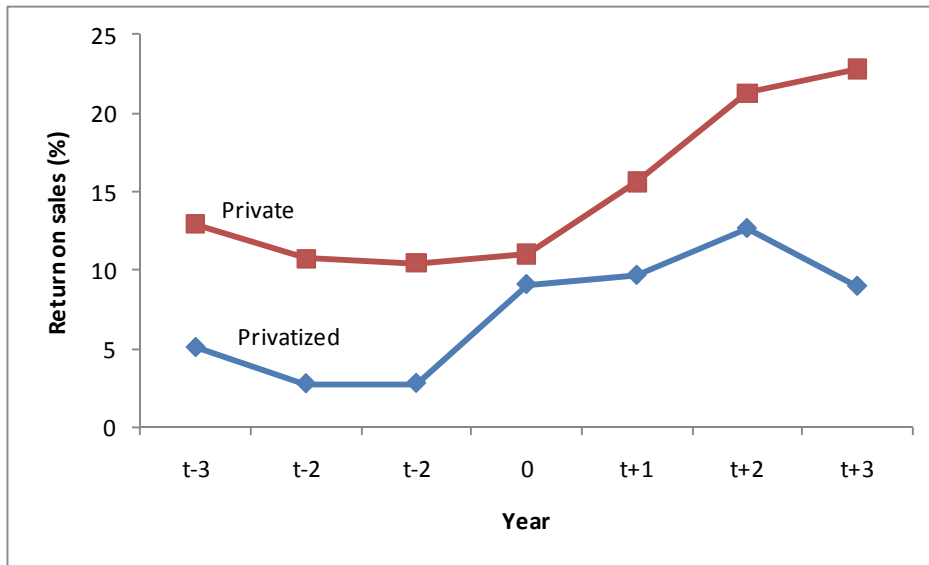


Figure 4. Median ratio of sales over employees for privatized firms versus private firms

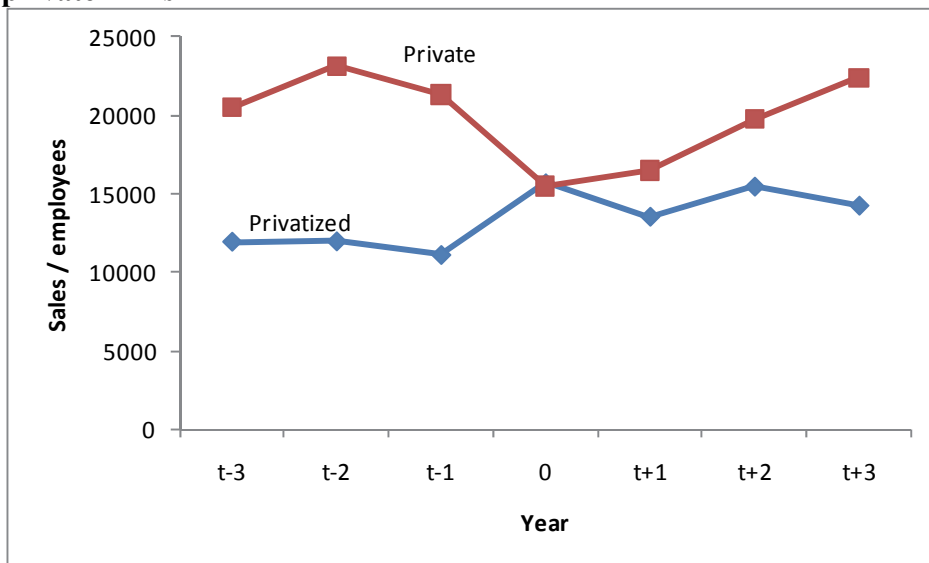


Figure 5. Median ratio of net profit over employees for privatized firms versus private firms

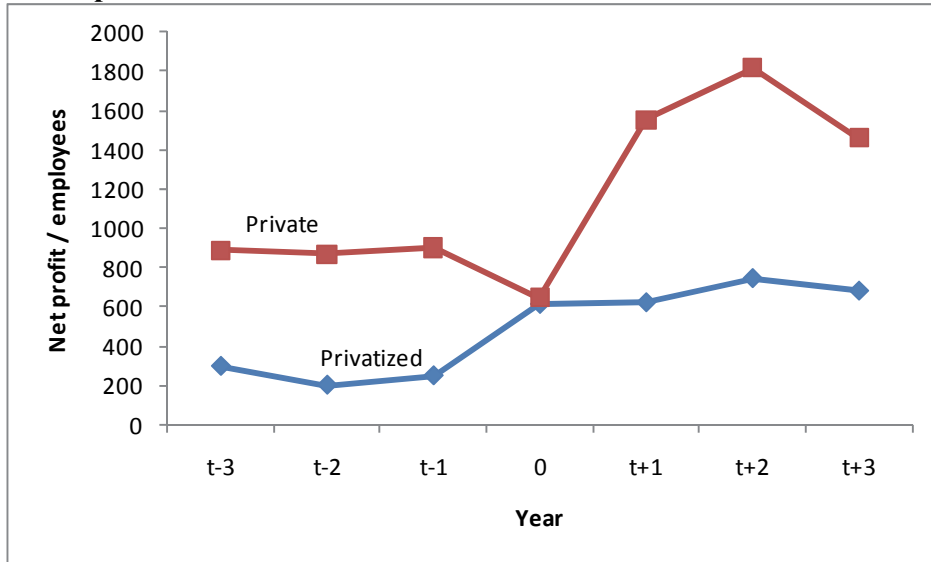
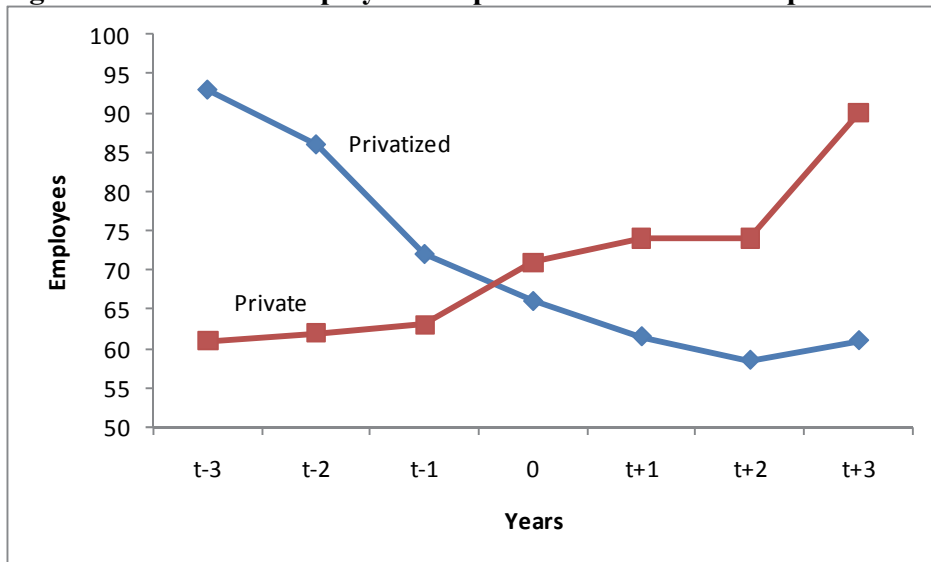


Figure 6. Number of employees for privatized firms versus private firms



**PAPER 2: THE ICELANDIC BANK COLLAPSE: CHALLENGES
TO GOVERNANCE AND RISK MANAGEMENT**

Throstur Olaf Sigurjonsson, 2010

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Abstract

Purpose - The purpose of this article is to examine the extreme case of the Icelandic banking crisis in relation to critical governance issues at governmental, industry and civil society levels.

Design/methodology/approach - Case study of the Icelandic banking collapse in 2008.

Findings – The examination of governance failures within the Icelandic banking system reveals that government institutions need to find a balance between entrepreneurial growth, risk exposure and sustainable societal development. A euphoric attitude of *laissez-faire*, where risk issues and issues of balanced development are largely ignored create challenges for sustainable banking. The findings suggest that achieving the necessary balance requires stressing governance issues on three levels; at the government level; at the industry level and at the civil society level.

Practical implications - This paper illustrates why some of the corporate governance challenges facing sustainable banking should be addressed at multiple levels. Government should strive for realistic information and evaluation of societal risks; government should implement adequate regulatory frameworks; the finance industry itself should have effective self-regulatory procedures and mechanisms; and, from a civil society point of view, the public at large should have realistic expectations and be adequately alerted of the potential risks of governance failure.

Originality/value – This paper examines interactions between governance failures at different levels and has important implications for governance and policy makers, particularly those faced with re-structuring national financial industries.

1. INTRODUCTION

The collapse of the Icelandic banks in October 2008 was interwoven with corporate governance issues. The saga begins with deregulation and privatization through the liberalization process of financial markets and capital mobility in the 1990's, along with the EEA (European Economic Area) agreement. These conditions, initiated by the government, created an environment for the Icelandic financial service industry to thrive and where risk taking and an adventurous business culture were embraced. Not only was this embraced by government and industry, Icelandic society as a whole also participated. The lack of critical insights into core processes because of the largely *laissez faire* attitude of the government, lack of transparency, and entangled ownership issues within the industry prevented sufficient public debate to prompt reasonable criticism of both government and industry.

In October 2008, the three largest Icelandic banks were put into receivership by the Icelandic government. This marked the end of a seven-year period of unprecedented growth in which the banks had grown from small local banks, serving mostly Icelandic clients, to become amongst the major players in Europe.

Only a few days after the collapse, it became evident that a severe crisis could not be avoided and the whole nation would suffer. The supervisory authorities should have stopped or limited the scope of the banks' acts. The Central Bank of Iceland should have taken firm action on the mounting imbalances occurring over the preceding years. However, this did not occur. Policy makers, as well as practitioners in the financial sector, should bear the Icelandic case, which vividly demonstrates the necessity of particular governance measures, in mind.

This article is organized as follows: First, the main characteristics of the evolution of the financial industry in Iceland in the 1990's are analyzed, with primary emphasis on the resulting "boom" period. This provides a description of the sowing of the seeds of the crisis. Second, the governance changes within the Icelandic banks are examined—changes that led to a complete change in banking ideology. Third, the downfall of the Icelandic banks is described, highlighting the weak governmental measures taken, including bank privatizations that were treated as a discrete act rather than as a progressive process. Fourth, the findings of multiple governance failures resulting in a society not adequately alert to the increased risk of governance changes are presented. The final section discusses the policy recommendations that can be derived from the Icelandic case.

2. FINANCIAL EVOLUTION IN ICELAND

The Icelandic government implemented a program of market liberalization and deregulation throughout the late 1980's and the early 1990's. The motivation for this program was the need to adjust the Icelandic legislative and regulatory

structures to those of the European Union. This was necessary in conjunction with Iceland's entry into the European Economic Area in 1994. Table 1 shows the financial evolution in Iceland prior to and during the privatization phase.

[Fix table 1 here]

Part of the evolution was fueled by an attempt to increase economic efficiency through privatization. This resonates with agency theory, public choice theory and organization theory (Vickers and Yarrow, 1988, 1991; Martin and Parker, 1997; Boycko and Vishny 1996; Bishop and Thompson, 1992; Villalonga, 2000). The privatization of socially important institutions as banks has often been received with reluctance by politicians (Jones, 1985; Kikeri, Nellis and Shirley, 1994; Shleifer and Vishny, 1997; Boycko, Shleifer and Vishny, 1996; Shleifer, 1998; Sappington and Sidak, 2000; and Shirley and Walsh, 2000). A government argument for privatization is that it encourages entrepreneurship, but entrepreneurship involves risk-taking, which appears to be a factor largely neglected by governments.

At the beginning of the 1980's political interference and rigorous restriction of financial markets were creating a crisis in Iceland. Inflation was at double digits, resulting in high negative real interest rates that led, in turn, to a reduction in bank deposits, essentially halving the banking system. Dramatic structural and legislative reforms were implemented and the financial sector was opened up to international capital. Interest rates and other prices reflected supply and demand,

and innovation was both encouraged and rewarded. The taxation system underwent a complete overhaul and tax rates were lowered considerably, becoming among the lowest in Europe (Portes and Baldursson, 2007). During and after the privatization reform era, there was a strong need for new investment opportunities. Liberalization of the financial markets was taking place, providing new opportunities for provisions of securities.

The privatization of the public banks stimulated strong growth in the financial system. Landsbanki and Bunadarbanki were privatized in the period between 1999 and 2003 (Bunadarbanki merged with the private investment bank Kaupthing in 2003). FBA, originally a public investment credit fund, was privatized in 1998 and merged with the private commercial bank Glitnir, then Islandsbanki. The Icelandic banking privatization was somewhat different from the process of privatization in other countries. While most countries had privatized their institutions with at least some foreign ownership, the Icelandic government initially decided to encourage foreign ownership, then backed away from that decision. Instead, individual domestic entities gained controlling interests in the banks. These investors had no prior experience in commercial banking (Sigurjonsson, 2010). A wave of consolidation followed closely on the heels of privatization, supplying the banks with the necessary instruments and scale for both domestic and international growth. Figure 1 shows the acquisitions of the Icelandic banks following privatization.

[Fix figure 1 here]

In a domestic market of only 330,000 people, the future growth of the newly privatized banks would have to come from abroad. In the interest of seeking further consolidation and growth opportunities, a strategy of international acquisitions was implemented. The diversification of risk was also a significant concern. The banks needed to vary their revenue streams. At the beginning of the first decade of the 21st century, historically low global interest rates and decreased credit spreads brought into existence the ideal platform for fast growth strategies. At the same time, asset growth was strong in Iceland, especially in equity and real estate. The fast growing pension funds also controlled considerable equity (with assets amounting to 130% of GDP), and they searched for investment opportunities (Sigurmundsson, 2009). It was clear that the domestic economy could never provide an investment platform for this capital.

The banks also benefited from the expansion of various other Icelandic sectors. Drivers for growth were identical to the ones for the financial industry; favorable international conditions, a mature domestic market and an essential diversification strategy to decrease risk. The banks were inspired to seek out new customers in their international expansion, many of them being Icelandic firms seeking growth abroad. Therefore, the banks not only provided funding for projects but facilitated many of them as well, using what can be called a “package effect”, where the Icelandic banks followed their customers and often created partnerships in ventures. Early, it became evident that partnership had

turned into ownership, where major customers had in some instances gained a considerable stake in the banks, and were appointed board positions.

However, rapid growth and vast cross-border expansion could not occur without risk. The Icelandic banks encountered what has been called the *Informational Crisis* in early 2006 (Portes and Baldursson, 2007). Among others things, this arose from criticism by the Fitch rating firm and Danske Bank (Central Bank of Iceland, 2006; Valgreen, 2006). The criticism centered on the banks' dependence on the wholesale market for financing, and on the practice borrowing short term but lending long term, leading the banks to become very sensitive to financial turmoil in international markets. Doubts about governance matters such as cross-ownership, lack of transparency in strategy, operation and corporate structure drew criticism as well. A Danske Bank analyst wrote:

The economy is clearly overheating, since the labour market is extremely tight, wage pressures are unsustainable, the inflation rate is among the highest in the OECD area despite an overvalued currency, and the central bank is stamping on the brakes (Valgreen 2006).

These observed imbalances in the economy led to a downgrade by Fitch Ratings of Iceland's state from stable to negative. The belief was that Iceland could not escape a crisis when forced to correct the imbalances.

The Icelandic economy has become increasingly dependent on foreign capital and international terms of lending. Iceland seems not only to be overheating, but also looks very dependent on the willingness-to-lend of global financial markets. This raises the question of whether the economy is facing not just a recession – but also a severe financial crisis. Valgreen (2006).

The Icelandic banks were criticized for being transparent in neither their operations nor their media relations. The reality was that nearly all Icelandic newspapers and business magazines during this period became indirectly owned by the banks through their largest shareholders. The same largest shareholders were also their largest debtors. An attempt to institute legislation against media monopolies was declined by the president of Iceland who has veto power over parliament (Sigurjonsson, 2010). The international media became suspicious and investor confidence eroded. Dramatic headlines in the major international newspapers appeared and were full of skepticism: “Iceland’s poets of enterprise lose their rhythm” (Fleming, 2006), “Meltdown worries put Iceland’s UK raids under threat” (Padgham, 2006), and “Icelandic charm melts away as debt crisis grips” (Fletcher, 2006).

This market suspicion led to a 25% depreciation of the ISK (Icelandic Króna) and the stock index fell comparably. In financing their rapid growth since

privatization, the banks had relied heavily on wholesale funding. At the time of this criticism, the maturities of the securities were relatively front-loaded. The banks had to alter their strategy, limit their reliance on the wholesale markets and raise retail deposits. The banks already had a dominant share in the domestic market, but through their subsidiaries and branches abroad, they managed to raise customer deposits.

The privatized banks took the path of globalizing their market positions. Within a few years after privatization, growth was extraordinary, with asset multiples of 8 to 12. This growth, however, was from a small asset base. A broader income base and dispersed risk were intended to soften any setbacks that the Icelandic economy might suffer. On the other hand, large shifts in the values of the foreign assets and liabilities of the banks created problems of how to insulate the domestic economy, which depended on the regular flow of production of goods and services. Over a period of a few years, the Icelandic banks leveraged their capital base to buy up banking assets worth several times the country's GDP. If the value of these assets (mostly bought in the years of the banking and credit boom between 2003 and 2006) were to be revalued at much lower prices, the financial institutions would become insolvent.

3. GOVERNANCE CHANGES

Amongst the players within the finance industry there is no agreement on whether it was the deregulation and privatization or the entrepreneurial spirit of

the newly privatized banks that drove their growth. When interviewed, an executive from Glitnir responded that it was based more on the pre-privatization process and the foundation of necessary infrastructure, than on internal parameters:

It was the privatization itself that unleashed the hidden force within the Icelandic economy. After years of economic growth, after the process of liberalization in nearly every aspect of the society, after extreme growth within the pension fund system and so forth, all this is being released into the privatization of the banks. The state owned banks were privatized in the framework of these circumstances so success was bound to happen (Kristjánsson, 2007).

This view is in favor of the government policy and is supported by various elements, as Table 1 demonstrated. The government undertook a very large political commitment to enable the process and was in a good position to do so, as the government was in power for 16 consecutive years. It managed to build widespread public support for the process. A *laissez faire* policy was enacted, in which the newly freed market was supposed to take care of itself. Another view is that governance changes within the privatized banks were even more important. The noticeable changes were governance changes within boards and at executive levels, completely new and aggressive compensation systems, stock

option plans for employees and flat organizational structures. The CEO of Kaupthing explained:

We have had the same leadership team since 1995, from the time we were a small investment bank prior to merging with the privatized Bunadarbanki. The glue that has kept this crew together rests on friendship, common vision and an aggressive incentive system. Kaupthing was a pioneer establishing the first true investment banking incentive system in Iceland. (Sigurðsson, 2007).

However, it remains unanswered how the risk profile was altered in response to these governance changes. The strategies and structures of the Icelandic banks began to differ from the other Nordic banks in many ways. The Icelandic banks were neither ordinary commercial banks nor pure investment banks, but somewhere in between. They followed many of their growing customers in cross-border acquisitions and often would do so more intimately than conventional banks. The Central Bank of Iceland was observing the financial institutions at this time. The governor explained:

There were many young companies in Iceland carrying out to its full extent their international strategy and delivering rapid growth. The Icelandic banks took advantage of that, which led to their own increased international operations. Entrepreneurial spirit was very strong in

Iceland at that time, much stronger than it seemed to be in the other Nordic countries, at least on this scale (Gunnarsson, 2007).

Arguments put forward in the agency theory become quite clear in the ownership transactions of the Icelandic banks. As suggested by proponents of agency theory, private ownership eliminated familiar threats from the period of public ownership. This is explained further by the governor:

Managers of the public banks were not thinking too much about profitability. Things went fine if the institutions would show some profits but too much meant political difficulties. Then politicians would want to get that money for other projects. This all changed with privatization. Today there are thousands of shareholders in the banks and to them it is extremely important that the banks are efficient and make profit. There is a complete change in ideology (Gunnarsson, 2007).

The complete change in ideology, as the governor puts it, indeed seemed to have driven the vast growth of the Icelandic banks. However, soon the new owners' ideology raised questions related to classic agency problems. When cross-ownership was examined the lack of transparency became evident and corporate governance at the firm level became a real issue. The root of this is traced to the time when the banks began their growth period. In a small and fast growing economy, ownership was more entwined than in a larger economy. The most significant cases involved Kaupthing and Landsbanki. Kaupthing had acquired a

stake in Exista (a holding company) when the latter was established. Then, over a short period, Exista became the largest shareholder in Kaupthing. Within a few years, Exista became the largest investment firm in Iceland with huge stakes in some Nordic financial firms. Kaupthing solved the cross-ownership issue by distributing its shares in Exista to shareholders of the bank itself. Then later the largest shareholders of Exista became the largest owners of Kaupthing and very sizable customers. In the other case, Landsbanki owned a substantial share in one of the largest investment banks, Straumur. Landsbanki aimed to solve the cross-ownership dilemma by selling its shares in Straumur to Grettir Investments in May 2006. The major stakeholder in Landsbanki and chairman of the board, Bjorgolfur Gudmundsson, owned 28.52% in Grettir through his company Hansa. His son, Bjorgolfur Thor Bjorgolfsson, owned 20.66% in Grettir through his company Opera Investments. Bjorgolfur Thor was the chairman of the board at Straumur. After this transaction, firms under the control of the father and his son managed 37% of Straumur (see Nasdaq's OMX Nordic news page). Corporate governance issues remained convoluted and opaque.

It can be claimed that the responsibility of unsolved cross ownership issues rested with the boards. As can be anticipated the composition of the boards of the banks changed after privatization. The board members were practically all new. There was only one member serving on Landsbanki's board who was there prior to privatization. At Kaupthing, all the board members were new. Board members should be able to exercise an objective independent judgment and have relevant

industry experience. But no “fit and proper” person tests were carried out. Board members consisted mostly of self-made entrepreneurs without any banking or financial experience. They were, on the other hand, the banks’ largest shareholders and debtors. This is unfortunate keeping in mind the specific role of corporate governance within banks. The liabilities of implicit or explicit government guarantee changes the role of corporate governance for shareholders, boards and executives in banks.

At the executive level, vast changes were also made. At Landsbanki, seven people at the executive level, out of eleven, were new. Only one executive from the public Bunadarbankinn kept his chair at Kaupthing. None of these executives were foreign bankers with experience, because the government decided to privatize to Icelandic agents only. The very young Icelandic financial industry provided executives mostly in their late twenties or thirties. The banks went from public to private with considerable stock options for executive level managers. A completely new compensation policy was implemented, encompassing an aggressive investment banking style incentive system. This led to excessive risk taking. Glitnir provided employees in Corporate Finance Division bonuses for lending. They received 10% of the bank’s fee, which was normally 3-4% of a loan (DV, 2009). Kaupthing loaned its top executives some 50 billion ISK to buy shares in the bank. The only collateral were the shares themselves. These loans were bullet loans, where the debtor pays the principle at the end of the loan period, which in these cases were often extended (Morgunbladid, 2009). Some of

the executives and board members of the banks were personally liable for their debts, making them extremely vulnerable to a downswing in the share price. The lending of the banks became excessive. A leak of Kaupthing's loan book unveils unusual lending practices (see wikileaks: <http://wikileaks.org/leak/kaupthing-bank-before-crash-2008.pdf>). The highest loans (5.5 billion Euros) were given to companies that were related to six customers, four of them major shareholders in the bank. Collateral was none or only partial.

These agency concerns should have been addressed by the shareholders, and there were thousands. Nearly all the Icelandic public had stake in the banks, as the government had successfully established incentives for share ownership. The public was inactive and challenged neither the boards nor the executives. Icelandic media, indirectly owned by the banks, did not provide constructive criticism. Rather, it reacted negatively towards the foreign criticism of the Icelandic banks. The politicians acted in a similar manner and denied any faultfinding (Schwarzkopf and Sigurjonsson, 2010). No institution, neither public nor private, provided public protection in terms of informative criticism. From a civil point of view, the public at large clearly had no realistic critical information and was not adequately alerted.

4. THE DOWNFALL

A period of economic growth had infused leaders with courage. Banks and companies had solid credit, and business opportunities were there for the taking.

The privatization era in Iceland had replaced a time characterized by restrictions with one characterized by optimism and risk taking. Access to cheap capital appreciated asset prices in whatever form by multiples. Real estate prices doubled and the stock market appreciated seven times in a few years. Assets were bought with the belief that prices would appreciate further, regardless of revenue stream. Then expectations and access to capital became a prime driver for a rise in asset prices. With assets booked at market value, equity appreciated, thus justifying further borrowing. Therefore, an asset bubble was created. This situation applied to most of the western world in 2007. The Icelandic banks took part in this bonanza, presumably more enthusiastically than most others did.

The assets and liabilities of the Icelandic banking sector (denominated in foreign currency) amounted to ten times the Icelandic GDP within six years of privatization. These assets became extremely vulnerable in the liquidity crisis of 2008. The Icelandic banks depended heavily on wholesale financing and deposits, resulting in a situation where creditors believed that other creditors would refuse to roll over present loans, and therefore refused to extend new credit. It is in circumstances such as these that banks usually fail.

The months of September and October 2008 were decisive for the Icelandic banks. After the fall of the investment bank Lehman Brothers in September 2008, money markets and interbank lending froze completely. The Central Bank of Iceland was unable to act as an effective lender of last resort to the Icelandic

banks. It simply did not hold enough foreign currency to do this. Glitnir bank was hit first. With short run credit lines closed, Glitnir had to request a short-term loan from the Central Bank of Iceland, which refused. The government put Glitnir into receivership, the first step towards a formal bankruptcy, on October 6, 2008. The bank was not nationalized as the state would have become responsible for the bank's huge liabilities. The consequence was a debt downgrade and a sharp fall in the already depreciated ISK. Figure 2 shows the crash of the ISK.

[Fix figure 2 here]

Short run funding evaporated and margin calls came from the European Central Bank. Landsbanki found itself unable to meet its commitments and was put into receivership on October 7. However, for the moment Kaupthing appeared viable. Landsbanki had operated the Icesave 1200 billion ISK deposit account out of Iceland as a branch (not as a subsidiary), passing the ultimate liability (the 20,887 Euros liability per deposit owner) on to the Icelandic state. The Icelandic Central Bank made some remarks that were construed to mean that Iceland would not meet these obligations to British depositors. The reaction of the United Kingdom was to seize the UK assets of all the Icelandic banks by invoking anti-terrorist laws. Kaupthing was ruined by the confiscation of its subsidiary, Singer and Friedlander, as covenants on loan agreements were activated. Kaupthing was then also put into receivership on October 9. Figure 3 shows the evolution of the banks' stock prices, from privatization to a total collapse in October 2008.

[Fix figure 3 here]

With the spectacular growth of the banks, their largest owners became highly leveraged. This led to a high level of vulnerability to financial shocks. The dramatic reversal was phenomenal. All the Icelandic banks had recently passed a stress test but, unfortunately, the test did not ask all the essential questions. The Financial Supervisory Authority's (FSA) stress test did not account for vulnerability to a liquidity crisis. European laws applied (through the EEA treaty), but there was no attempt to adjust the tests towards Icelandic circumstances. The *laissez faire* policy had kept the FSA weak. The institution received only 18% increase in its annual budget and employees increased from 27 to 45 during the years 2001 to 2007. Concurrently the banks grew ten times. An aggressive incentive system encouraged the out of control growth, and risk taking became excessive. There was no regulatory framework preventing Icelandic banks from opening branches (rather than subsidiaries) abroad, therefore they were transferring liability onto the Icelandic state. The privatization of the banks was treated as a discrete act, unfortunately, without necessary regulatory and governance measures taken.

5. MAJOR FINDINGS

In the case of Iceland, the results of the governance of liberalization and privatization are equivocal. The government's procedures seem to have bred economic growth. In that sense, the deregulation process led to efficiency gains.

On the other hand, governance measures taken post-privatization seem to have been lax. However, this failure of governance is similar to the process in many countries. Liberalization and privatization have often been treated as discrete acts rather than as parts of a progressive process. An example can be seen in the case of the Scandinavian banking crisis in the 1990's (see, for example, Jonung, 2008, Englund and Vihrala, 2007).

In their expansion, the Icelandic banks relied on market funding. As international conditions deteriorated—whether credit markets, equity prices or other factors—vulnerability became much greater than before. Neither the Central Bank of Iceland nor the National Treasury followed the banks' growth by establishing the necessary reserves, which in the case of a considerable recession or liquidity crisis, leads to extreme difficulties. It was suggested earlier that liberalization and privatization breeds entrepreneurship and greater risk taking. This saga clearly supports that, where commercial banks turn unhindered into highly risk taking investment banks, encouraged by aggressive incentive systems, they leave the risk to the public.

The public gained a false sense of security through both governmental and industry contentment with the development, and became fascinated by all the economic growth, as frail as it was. Critical insights into core processes were lacking. The close ties between banks and media did not encourage transparent and informative reporting. Correct information and critical analyst engagement

could have triggered a much more adequate public debate, which would have put pressure on both government and the banking industry.

The corporate governance arrangements within the Icelandic banks failed for a number of reasons. A mismatch between incentive systems, risk management and internal control systems appeared to have been unseen by the banks' boards. Self-regulatory procedures and mechanisms were not in place. The corporate governance aspect of risk management collapsed. Boards and other stakeholders (including government agencies) were at best ignorant of the risks taken. The evidence supports that boards were aware of the risk but decided to ignore it, expecting greater returns and higher share prices. Kaupthing's loan book shows appalling practices in which a bank lends enormous amounts to holding companies and individuals so that they can buy shares in the bank. This is a way of appreciating share prices in the bank. The financial supervision had focused on regulatory capital ratios (as Basel I capital requirements). The liquid risk, which is not being measured, is crucial where banks are especially vulnerable towards marketability of securities. The Icelandic banks relied heavily on marketability of their securities for liquidity needs.

Apart from the few largest owners of the banks, shareholders were weak and dispersed. They had to cope with the increasingly complicated operation of the banks, where there were new financial products such as credit derivatives, swaps and so forth to decipher. Deregulation made it possible for banks to diversify into

related activities like insurance services and mortgages, and to organize a substantial share of their activities in off balance sheet operations (Thomsen, 2009). Hence, shareholders had to rely on corporate governance mechanisms to protect their interests. These mechanisms were lacking. Shareholders were uneducated and did not rebel at annual meetings, elect new board members or elect a hostile raider to clean up the operations. Performance related incentives were to overcome agency problems, but were ill structured. Another governance mechanism is reputational risk. It should motivate executives to perform well for fear of reputational loss, but executives of banks during the boom period were treated like celebrities. Agency problems cannot be eliminated altogether (Tirole, 2006). Nonetheless, the Icelandic case shows how fragile governance issues can become. Only a few days after the collapse of the Icelandic banks, it became evident that a deep crisis was unavoidable and the whole nation would suffer.

6. POLICY RECOMMENDATIONS

Policy makers as well as practitioners in the financial sector should bear in mind the Icelandic case, which demonstrates the governance measures needed to be taken by governments before liberalization and deregulation, as well as emphasizing the increased risk that goes along with it. Some proposals are highlighted below:

1. Public financial education needs to be a priority in the future rehabilitation process complementing governance and regulatory reform.

An independent agency, free from uncertainty of financial support, should be established to gather, analyze and supply reliable information for stakeholders, government included. Legislation against media monopolies must be passed. Well-informed individuals react more efficiently and critically and will also better understand the need for change in both regulatory and governance practices. Furthermore, consumer protection in respect to financial products must be addressed, although the MiFID decree from 2007 provides some protection. The vast development of credit markets has made the public vulnerable to inappropriate financial products and selling strategies. A redress mechanism in the case of abuse should be implemented.

2. The position of Chief Risk Officer should be established in each bank. A system that allows the incumbent to report directly to the board should be implemented, functioning as internal control and reporting to audit committees. These functions should be independent from management and with sufficient access to relevant information. The risk management role of the CEO's is not to be diminished, rather the boards' concerns are to be highlighted. In the light of the poor risk management culture of the Icelandic banks, more importance should be given on risk mechanism and the risk management culture itself, and less to checklists of innumerable possible risks. Risk management should be more comprehensive in scope as well. The case of Landsbanki and its Icesave deposit accounts in the

UK shows that the legal borders of a bank can become wider than its economic ones.

3. Changes must be implemented in terms of the organizational structure of the banks. The fallen Icelandic banks contained on one balance sheet various entities as commercial banking, investment banking, asset management, an insurance arm, and a pension fund, creating contagion risk. An improved structure should entail a legal separation between entities and thereby separation of balance sheets that a non-operating holding firm could parent (the OECD is putting forward such suggestions, (OECD, 2009)). This way the entities become separately capitalized and can be listed or non-listed. Different reporting obligations can be applied as well as separate governance structures. Transparency for stakeholders should increase, leading to better governance. In times of difficulties, regulators can act firmly, not having to deal with the complexity of the existing structures. The risk of the commercial banks' balance sheet will become less, an arrangement that would have saved the Icelandic public from a lot of damage.
4. New types of bank owners must be sought, now that the Icelandic government is being given a second chance to create a healthy financial system. A *laissez faire* policy of risk and balanced development issues should be shelved. The sheer enormity of the banking sector in relation to the public resources was an evidence of bad policymaking. The government must demand much lower leverage and a higher equity base

in future banks. It should be aiming to bring new capital into the system, by not selling to existing financial institutions, but rather to foreign investors with modest leverage, preferably respectable and reliable major international banks. Once bitten, twice shy, the government should not sell the banks to agents likely to become users of bank credit. As proposed above, a new corporate structure for the future banks should provide for clear and transparent deposit insurance, and guarantee systems. Creditors of financial institutions not covered by explicit systems must realize that the institutions can fall. Risk should become transparently priced.

5. Market conditions will guide how quickly the government can and should sell off the new public banks. A long-term government owned controlling might be feasible. It then becomes the responsibility of the government to secure changes in corporate governance arrangements within the banks. This responsibility should be given to a new administrative agency that ought to have the autonomy to prepare and implement needed changes. If and when a competitive sales process takes place, a selection criteria should identify the private buyer best suited to guarantee necessary changes. A pre-qualification process followed by bidding among selected candidates allows for a more careful selection process of preferred groups of investors. The selection criteria should be disclosed and the objectives for post privatization processes demanded. The restructuring of the banks might be necessary to minimize potential dominant market positions and

to encourage competition. Anti-trust regulation should be a part of an adequate regulatory framework where an element of monopoly is likely to persist.

6. Financial supervision and regulation were weak and provided the wrong incentives, contributing to excessive risk taking. Neither the boards nor the shareholders seemed to understand the characteristics of a new and complex financial industry, undervaluing the risks the banks were running. The mechanisms to oversee and control management were not in place. A new regulatory agenda will have to be created to address these failures. This agenda should contain an increase in minimum capital requirements and stricter rules on liquidity management. The level of capital required should be increased relative to the risk being taken, keeping in mind how banks financed themselves through money markets that eventually evaporated. In addition to liquidity levels, quality of assets and securities, as well as funding, must be addressed, as these can be constraints on liquidity. Boards, or sometimes managers, did not always properly understand internal risk management models. The “fit and proper” criteria should also be reconsidered. The Icelandic Financial Supervisory Authority had introduced a competence test for CEO’s of financial institutions. It is worthwhile considering whether such tests should be extended to lower level management and to boards, ensuring these agents fully understand complex instruments and methods. Policy makers must also address the remuneration issues. Excessive levels of

remuneration became a matter of social and political dissatisfaction, and motivated high risk-taking and short term thinking which impacted risk management negatively. Full transparency concerning incentives should also be guaranteed. The Financial Supervisory Authority must then oversee the adequacy of the incentive policies. It should be able to step in and get policies reassessed, or to require a bank to provide additional capital. Supervisors should be called upon frequently to inspect banks' internal risk management systems. These systems must be fully independent within the banks and be made responsible for independent stress testing. The above-mentioned role of a risk officer should be created and hold a high rank in the hierarchy with a direct access to the board. Supervisory control should be considerable and enforced through frequent inspection regimes.

The reforms proposed above stress governance issues, on a number of levels: at the government level; at the firm level; and at the civil society level. Traditional public government is not sufficient to address a number of critical issues in the modern economy. Government obviously has a need to strike a balance between entrepreneurial growth and risk exposure and balanced societal development. The Icelandic case describes a *laissez faire* attitude, where risk and balanced development issues were neglected. The sheer oversize of the banking sector in relation to the public resources is an evidence of this. Civil society obviously also cherishes welfare growth, but has lacked critical insight into core processes.

Presumably, a critical non-governmental organization and analyst engagement with good information could have triggered a much more adequate public debate, which would again have put pressure on both government and industry.

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APPENDIX. INTERVIEWEES

Gunnarsson, B.Í., governor of the Central Bank of Iceland. 30 July 2007

Kristjánsson, T., Vice President at Glitnir bank. 20 June 2007

Sigurdsson H.M., CEO of Kaupthing bank. 20 July 2007

Sigurdsson O., CEO of Stafir Pension fund. 15 August 2007

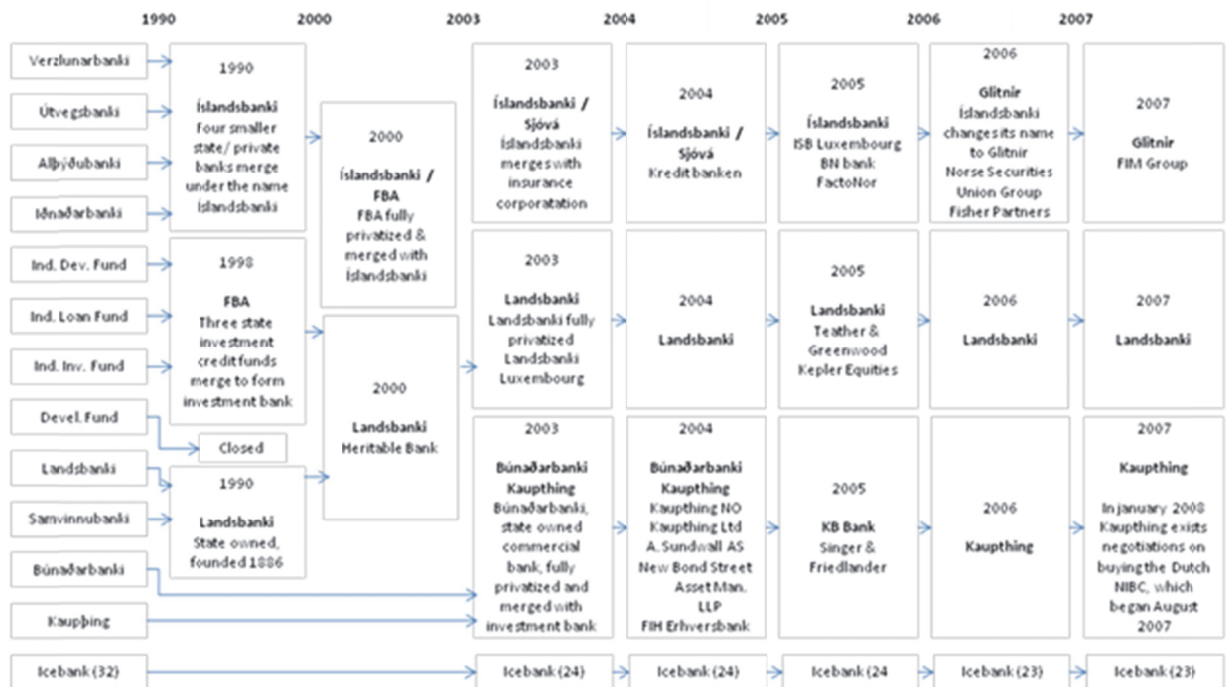
TABLES AND FIGURES

Table 1. Financial Evolution in Iceland

<i>Event</i>	<i>Year</i>
Financial Indexation Permitted	1979
Liberalization of domestic bank rates	1984-1986
Iceland Stock Exchange established	1985
Interest Rate Act: Interest rates fully liberalized	1987
Stepwise liberalization of capital movement begins	1990
Treasury overdraft facility in the Central Bank closed	1992-1993
New foreign exchange regulations marks the beginning of the liberalization of cross-border capital movements	1992
Interbank market for foreign exchange established	1993
Iceland becomes a founding member of the EEA	1994
Long term capital movements fully liberalized	1994
Short term capital movements fully liberalized	1995
Foreign direct investment liberalized in accordance with EEA agreement	1995
Interbank money market	1998
Interbank FX swap market	2001
Privatization of state owned banks completed	2003

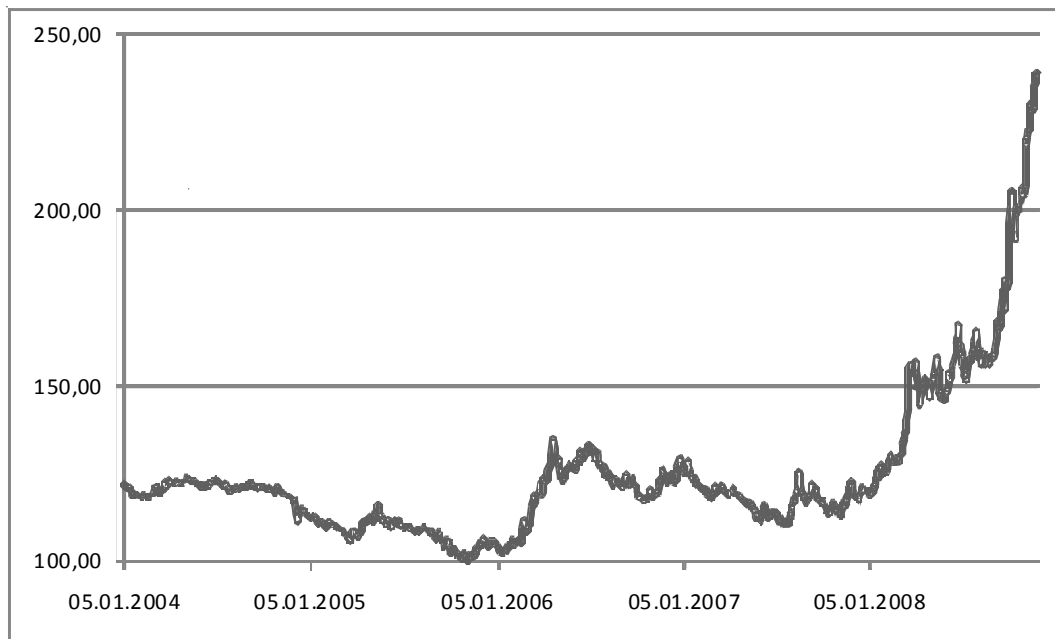
Source: Central Bank of Iceland.

Figure 1. Consolidation Process Post Privatization.



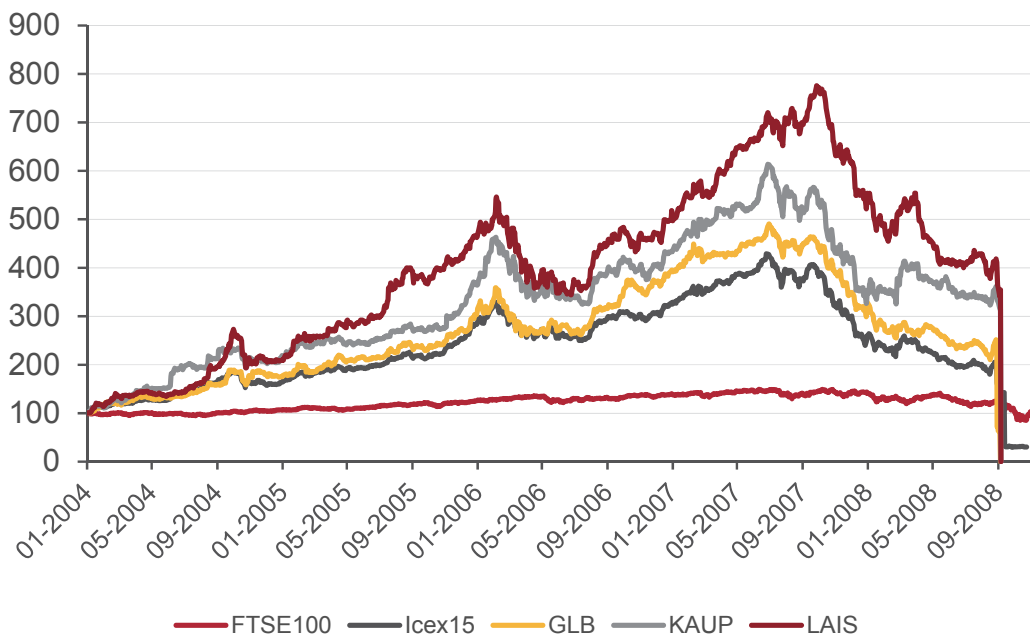
Source: Central Bank of Iceland and author.

Figure 2. Development of the ISK (the Icelandic trade weighted index)



Source: Calculation by the author

Figure 3. Stock Price of the Icelandic Banks, Icx15 and FTSE100.



Source: Calculation by the author

**PAPER 3: LEARNING FROM THE „WORST BEHAVED“.
ICELAND‘S FINANCIAL CRISIS AND NORDIC
COMPARISON**

Throstur Olaf Sigurjonsson and Mar Mixa, 2011

Thunderbird International Business Review, Vol. 53, Issue 2.

Abstract

This paper explores how the financial crisis in 2008 could have been partially avoided by Iceland through observing the warning signs. Iceland experienced the harshest consequences from the financial crisis in the western world such as the total collapse of its banking sector. This paper compares the prelude of Iceland's financial crisis to the Scandinavian one, less than 20 years ago, providing an understanding of the sources of the crisis and its impact. Results show that signs of overexpansion in Iceland were clear and numerous. Iceland's structural weaknesses resemble many other badly hit countries, simply more extreme.

Keywords: Financial Crisis, Corporate Governance, Iceland, Policy Making, Scandinavian Crisis

INTRODUCTION

Iceland is a good illustration when drawing lessons from the errors that resulted in the 2008 Global Financial Crisis. No other developed country endured a systemic collapse in its banking sector on the scale that occurred in Iceland, or indeed, rarely in the history of finance. Most of the variables that could go wrong undeniably went wrong, and the collection of these wrong doings systematically assumed mountainous proportions. Whether it was the fiscal policy of the government, the monetary policy of the Central Bank of Iceland, or the financial supervisory, corporate governance and risk management of the banks that were the causes; the situation turned out to be catastrophic. However, individually, these factors are an inadequate explanation. It was the interaction of these factors, which played an important role in the breakdown of the financial system.

Consequently, the question of whether or not there were warning signs arises. Comparative research to contextualize the experience Iceland went through provides an understanding of the dynamics that led to the financial and economic collapse in 2008. Hence, this research compares the Scandinavian Crisis of the 1990s to the Icelandic Financial Crisis, focusing on the similarity between the two crisis' and possible contrasts, illuminating the severity of the current crisis in Iceland. The Scandinavian countries and Iceland (often referred to as the Nordic countries) all bear a resemblance in their economic and societal structure and considering there is less than twenty years occurring between the crises, provide a comparable viewpoint. The Scandinavian countries had to provide their

banking sector a considerable amount of public support and their crisis became widespread. However, an underlying question throughout this discussion is what went wrong within the banking institutions and how the changes within the public policy arena (itself being influenced by general social trends) may have contributed to the crisis.

Firstly, this article will examine the main reasons for the sudden and extraordinary growth of the Icelandic banks. Resulting from this growth, the increased vulnerability of the banks and the following collapse is reviewed in part two. Thirdly, the paper compares the Icelandic Crisis and the Scandinavian Crisis, involving the examination of similarities between the two, and the identification of factors that are unique to either banking crisis. Lastly, is a short summary regarding what lessons may be learned from the recent crisis, and what policy recommendations can be derived from the situation. Of special interest is the fact that the Scandinavian Crisis occurred within a banking environment where the separation of investment and commercial banking was mostly still intact. Following the abolishment of the Glass-Steagall Act of 1999, the international banking landscape changed; meaning that banks' risk appetite increased. That complacency spread to the general public. After the abolishment of the act, it took less than a decade for the international banking system to collapse, the meltdown being worst in Iceland. It also appears that the Scandinavian Crisis was limited to abnormal lending growth, mostly related to mortgage loans, while Icelandic banks lent a great deal to holding companies, often with limited collateral.

1. A SUDDEN PROSPERITY

Iceland experienced the worst financial collapse of any western country when its banking system fell apart in October 2008. Most of its financial system toppled when its three largest banks, Kaupthing, Landsbanki and Glitnir, with 182 billion USD in assets, were taken into receivership, creating the third largest collapse after Lehman Brothers and Washington Mutual (Bibler, 2010). They had grown from small local commercial banks into international commercial and investment banks with combined balance sheets amounting to ten times Iceland's GDP. International conditions had been optimal, supplying funding at historically low interest rates at a low risk premium (Central Bank of Iceland, 2009). As early as in 1993, when Iceland became one of the founding members of the European Economic Area (EEA) agreement, Icelandic banks obtained the right to operate within the border of the EU countries. At the same time, Iceland instituted the EU regulatory framework for financial institutions and markets. Still, it was not until 2003, when the Icelandic banks were privatized in full, that they capitalized on money market funding, opened branches abroad and acquired foreign financial institutions in large numbers (Sigurjonsson, 2010a).

The banks capitalized on the rapid growth that much of Icelandic industry enjoyed during the first years of the 2000's. These were industries such as pharmaceutical, retailing, real estate, food processing and transportation. The

drivers for this growth were similar to the drivers for the financial industry. These were favorable international conditions, a mature domestic market and an essential diversification strategy to decrease risk. The banks took advantage of this development and collaborated with both large and growing firms within these industries. The partnership did not only consist of lending but became, in many instances, joint ventures in which banks invested their own equity in their customer's projects. That gave later rise to speculation regarding a conflict of interests and dependence on a few large customers, (some of whom were owners of the banks) and all were not necessarily geographically diversified nor diversified by industry (Portes and Baldursson, 2007).

The privatization of Icelandic banking was conducted somewhat differently from the process of privatization in many other countries. Most countries privatized their institutions with at least some foreign ownership whereas the Icelandic government initially decided to encourage foreign ownership, but then backed away from that decision. Instead, individual domestic entities gained controlling interests in the banks. These investors had no prior experience in commercial banking (Sigurjonsson, 2010b).

Within three years of privatization, (in 2006), the banks were hit by what was called the Informational Crisis (Portes and Baldursson, 2007). Fitch Ratings and Danske Bank were the strongest critics of the banks mostly focusing on how dependent the Icelandic banks were on wholesale markets for financing and how "short maturity they had on their borrowing". The criticism was that these conditions would create great vulnerability in the case of financial turmoil and a

liquidity crisis. Concerns about potential cross-ownership, earning quality and lack of transparency in the banks' operation drew criticism as well (Central Bank of Iceland, 2006a; Valgreen, 2006).

When cross-ownership in Iceland was scrutinized, the lack of transparency was evident and corporate governance within the banks became a real issue. The root of these issues can be traced to the time when the banks began their growth period. In a small and fast growing economy, ownership was more entwined than in a larger economy. The young Icelandic financial industry promoted executives mostly aged in their late twenties or thirties. The banks went from public to private with considerable stock options for executive level managers. A completely new compensation policy was implemented, encompassing an aggressive investment banking style incentive system. This led to excessive risk taking.

The criticism led to a depreciation of 25% in the ISK, and to a similar drop of the ICEX (the Icelandic Stock Exchange Index) during the early part of spring 2006. The banks had, until then, relied on wholesale market financing with short maturities. Their income stream was vulnerable, with 50% of total income as none core income. The banks had no choice but to alter their strategies (Sigurjonsson, 2010a). With an already dominant share in the domestic market, they sought vast growth through their subsidiaries and branches abroad, where they managed to raise customer deposits, especially through Internet accounts.

The banks were successful in this strategy and managed to raise the total deposit/asset ratio to similar levels that other Nordic banks enjoyed. Growth continued at extraordinary levels as indicated by asset multiples of 8 to 12 during 2003-2007 (annual reports of the banks 2003-2007). Within 18 months, Landsbanki and Kaupthing managed to collect over £4.8 billion in the UK and €2.9 billion in the Netherlands through their Icesave and Edge Internet deposit accounts. The goal was to create a broader income base and distribute risk, intended to soften any setbacks that the Icelandic economy might suffer (Jannari, 2009). On the other hand, large shifts in the value of the foreign assets and liabilities of the banks created problems of how to insulate the domestic economy, which depended on the regular production flow of goods and services. The Icelandic banks, over a period of a few years, had leveraged their capital base to buy up banking assets worth several times Iceland's GDP (Sigurjonsson, 2010b) and the potential depreciation of assets made the leveraged banking sector highly vulnerable. There was thus little leeway for declining assets values, mostly purchased during the years of the banking and credit boom period of 2003-2007, in preventing the banks' equity to dry up. Neither the National Treasury nor the Central Bank of Iceland had the necessary foreign reserves to support any of the larger banks. A lender of last resort in foreign currency, therefore, did not exist in Iceland's post-privatization era.

2. THE END OF PROSPERITY

The Icelandic financial industry was gradually de-regulated prior to the privatization of the banks. At the time of the privatization, a laissez-faire policy of the Icelandic government fostered a period of optimism and risk taking on behalf of the business community. With ample credit, business opportunities were there for the taking. Asset prices appreciated in an era of easy access to cheap capital. The belief in further appreciation encouraged people to purchase assets, regardless of revenue stream. With equity appreciating further and with assets booked at market value, continued borrowing was justified, eventually creating asset bubbles. Most of the Western world experienced a similar environment of low interest rate policies for some years, with the negative effects of such policies only surfacing in 2007 (Kirkpatrick, 2009).

In 2007, liquidity difficulties accumulated with mounting revelations of severe flaws in the US housing credit market. Trust within financial markets diminished and the trouble only accelerated in 2008. Less liquidity in asset markets made financing through bond markets yet more difficult. Central banks had to interfere and provide liquidity, among which was the Central Bank of Iceland. The Icelandic banks had been successful with their Internet deposit accounts abroad where they decreased their “loan/deposit ratio“ from 3.2 in 2005 to 2.0 in 2007 (Carey, 2009). At the time the largest bank in Europe, HSBC, had its ratio as 0.84 to 1.00. However, this initiative of the Icelandic banks provided merely temporarily relief. The fact that Landsbanki gained a larger market share in the UK than the largest Internet deposit bank internationally, ING Direct, should

have been a clue that the deposit growth was vulnerable; such depositors were probably inclined following whatever Internet bank provided the highest interest rates at any given time.

The Icelandic banks became a gauge of the negative effects to come. Their assets became extremely vulnerable and when creditors began believing that other creditors would refuse to roll over present loans and extend new credit and the banks lost credibility. This is a classic situation that leads to the failure of banks.

The fall of Lehman Brothers in September 2008 did not have a great direct influence on the Icelandic banks but its indirect influence was catastrophic. The bankruptcy of Lehman Brothers demonstrated that a large financial firm could go bankrupt without the state rescuing it. International money markets froze completely, interbank markets became inactive, liquid resources vanished and assets became untradeable. This was the point of no return for the Icelandic banks. A bank run began, not on a single Icelandic bank, but the complete Icelandic financial system (some international foreign exchange dealers informed their Icelandic counterparts that their banks had ceased lending to Iceland). When short run funding evaporated, margin calls came from the European Central Bank. Glitnir bank was the first to search for a lifeline at the Icelandic Central Bank, which refused to help, and the bank was taken over by the government the next day, October 6th. Landsbanki, which could not meet its obligations, went into receivership. On October 7th Kaupthing appeared to be still viable and had received an 80 billion ISK loan from the government on October 6th. The UK authorities had a substantial role in the events that followed. Landsbanki, with its

UK branch, collected 1,200 billion ISK through its Icesave deposit accounts. By operating a branch, but not a subsidiary, the bank had transferred the liability to the Icelandic state. Comments from the Central Bank of Iceland stating that the Icelandic state would not be able to meet these obligations led to an immediate reaction by the UK authorities, applying anti-terrorist laws to seize the UK assets of the Icelandic banks. Kaupthing's operation in the UK was ruined as covenants on loan agreements were activated, and Kaupthing was put into receivership on October 9th.

Interestingly, all of the Icelandic banks had passed stress tests only a few weeks earlier by the Financial Supervisory Authority (FSA) (FSA, 2008), but unfortunately these stress tests did not account for vulnerability to a liquidity nor currency crisis¹. While the banks' assets grew ten times, the staff of the FSA only grew from 27 to 45 employees (FSA, 2009). Additionally, promising lawyers and economists at the FSA were swiftly 'bought' by the banks, maintaining an imbalance of corporate knowledge and skills in favor of the banks. The FSA became thus increasingly weaker, causing limited control of the banks' growth, with aggressive incentive systems that encouraged excessive risk taking. Since there was not a regulatory framework preventing Icelandic banks from opening branches (rather than subsidiaries) abroad, the ultimate liability was transferred to the Icelandic public.

¹ Kamallakharan & Tómasson (2009) describe why the test proved to be worthless, stating that the test assumed no more than a 20% fluctuation in the Icelandic Krona when in reality its worth against the currency basket fell more than 50% in a matter of weeks during the fall of 2008.

3. COMPARISON OF CRISES

A study by Reinhart and Rogoff (2008) identified 18 financial crises from WWII until 2007 when the subprime crash unfolded. Among the five “Big Ones” are the crises in Norway, Sweden and Finland at the beginning of the 1990s. They conclude that the crises followed a similar pattern although the tipping point in each case seems to differ. The crises usually follow a pattern in which regulation changes lead to some sort of increase in lending (Easy Money) that develops into an asset bubble. When such bubbles burst, especially related to real estate, asset prices tumble with the consequence of mass bankruptcies. Losses related to write-offs and asset depreciation causes a banking crisis that, along with a currency crisis, exacerbates losses, especially in circumstances where loans financed during the bubble were denominated in foreign currencies. The consequence is a contraction in loans to companies that are still in business, adding further pressure on a systematic collapse and necessary governmental interference to assist the financial system (Englund, 1999).

This paper focuses on the crises in Sweden and Finland. These crises had similar characteristics within the same timeframe, and are often called “twin crises”, while the crisis in Norway was somewhat different, regarding both time and external developments (Jonung, 2008). However, the figures used here still include Norway, in order to provide a fuller picture. Adding Iceland to that equation, with its uncanny similarities, draws forth the possibility of “triplet crises”, the main difference being that Iceland experienced its boom and bust just under two decades later.

Even those who believe that the deregulation process itself did not cause the crisis usually attribute the beginning to the Scandinavian Crisis to the deregulation process that occurred at the start of the 1980s. The processes of deregulation differed somewhat between countries, but the start and end points were similar (Englund, Vihriala, 2003). The main characteristics of this deregulation were the liberation of interest rates and the free flow of capital in international markets, importantly including financing (Jonung, Kiander, Vartia, 2008).

The new financial landscape was mostly unnoticed by regulators in Sweden where the laws remained largely unchanged following the rapid development and in addition, changes to the tax system resulted in incentives for households and corporations to increase lending (Honkapohja, 2009).

Whilst the deregulation process took less than a decade in Scandinavia from start to finish, with the indirect effects in increased lending taking three to four years to materialize, the period in Iceland was much longer, as seen in Table 1. It can be inferred that the Icelandic period was around 25 years, making comparison somewhat difficult.

Table 1. Financial Evolution in Iceland

<i>Event</i>	<i>Year</i>
Financial Indexation permitted	1979
Liberalization of domestic bank rates	1984-1986

Iceland Stock Exchange established	1985
Interest Rate Act: Interest rates fully liberalized	1987
Stepwise liberalization of capital movement begins	1990
Treasury overdraft facility in the Central Bank closed	1992-1993
New foreign exchange regulations marks the beginning of the liberalization of cross-border capital movements	1992
Privatization process launched	1992
Interbank market for foreign exchange established	1993
Iceland becomes a founding member of the EEA	1994
Long term capital movements fully liberalized	1994
Short term capital movements fully liberalized	1995
Foreign direct investment liberalized in accordance with EEA agreement	1995
Privatization process of the Icelandic banks begins	1998
Interbank money market	1998
Interbank FX swap market	2001
Privatization of state owned banks completed	2003

Source: Central Bank of Iceland, 2006b and authors' addition.

The main years of deregulation were 1982 to 1986 for Scandinavia but for Iceland it was 1984 to 2003. However, the lending growth period was immediate in Scandinavia from 1986 to 1990; while in Iceland such growth started during the latter part of the 1990s but the explosive growth, leading to the bust, began after 2003. Nevertheless, the seeds of growth were planted once the interbank

lending started in 1998, which quickly spread to add fluidity in currency market dealings.

The starting point for the comparison period may appear being subjective. We look at the start of the deregulation process as a starting point in Scandinavia, i.e. in 1982. In Iceland, the deregulation process began during a similar period, but took longer and the effects were for a long time barely visible. Therefore we use 1999 as the starting point in Iceland, which is four years prior to the beginning of the lending boom (which is the same as the Scandinavians starting point), but also an approximation of when deregulation began in reality to change the Icelandic financial landscape. At that time, the privatization processes in two of the three Icelandic state owned banks had just begun and rapid changes were implemented soon after.

Using the above assumptions, we use the year 1982 as the starting point for Scandinavia in this paper and 17 years later for Iceland. Thus, we define year 1999 as Period 1 or T for Iceland and 1982 or T minus 17 for Scandinavia. The length of periods differs somewhat, mainly because some data is no longer available after the Icelandic banks went into default.

Lending Growth

Following the deregulation process, the banks in Scandinavia decreased their emphasis on services and cost structure, and instead began to concentrate on pricing and added market share. This resulted in additional risk taking (Honkapohja, 2009) and loans to new markets followed. However, financial

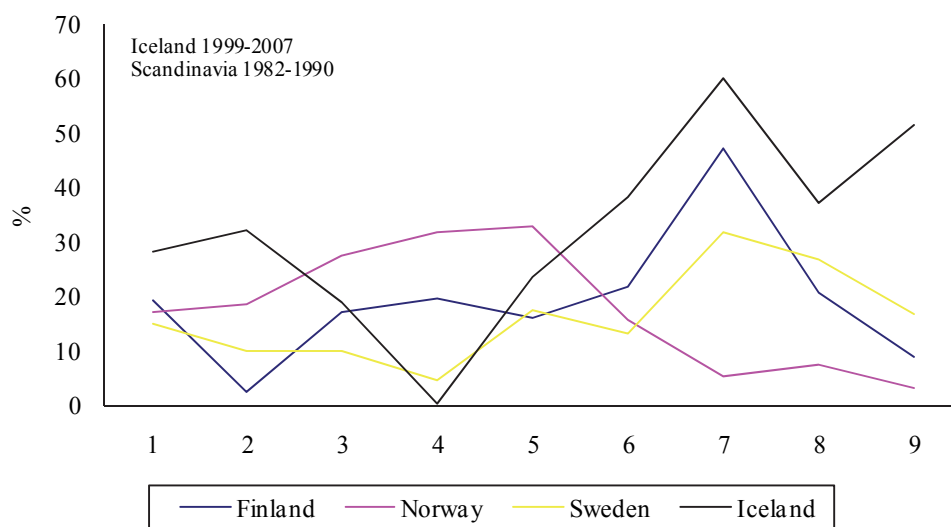
institutions were working in a new environment where their ability to measure risk adequately became more difficult (Berg, 1998).

Initially the lending increase caused no alarm. After a long period of lending restriction, in which real rates were negative and thus there was some sort of privilege associated with receiving loans, a higher lending equilibrium was to be expected. Added demand for money caused interest rates to rise, leading to an increased rate difference between domestic rates and international rates. This made borrowing in foreign denominated currency even more tempting within the environment of free capital flow, making interest rate policies in Scandinavia increasingly toothless (Honkapohja, 2009). Due to the pegging of domestic currencies to the German Mark, domestic loan takers perceived the likelihood of currency losses to be minimal. Berg (1998) maintains that without the foreign capital inflow the increased lending growth would have been impossible.

The privatization process of the banks began in Iceland 1997 with the aim of establishing a widely distributed ownership structure. The policy change in 2002, with the controlling interest in two of the three main banks falling into the hands of investor groups with little banking experience, set the stage for the banks' transformation in which lending growth exploded in Iceland. As in Scandinavia a few years earlier, the Icelandic banks (with savings banks following suit) began to concentrate on market share and pricing with added risk associated to their business model. The true explosive lending growth period thus began in 2003 in Iceland, 17 years after the same development in Scandinavia.

A comparison of lending growth in Iceland and Scandinavia is shown in Figure 1. Since two different periods are compared, the starting point is defined as being T or Period 1, representing 1999 for Iceland and T minus 17 (or 1982) for Scandinavia, in line with the assumptions previously explained.

Figure 1. Lending Growth Comparison – Iceland vs. Scandinavia².



Sources: Central Bank of Iceland, 2009a.

It is worthwhile pointing out that lending growth remained very high following the Informational Crisis in 2006, dipping a little the following year but was still higher than the other comparison periods in all comparison countries. Lending growth was actually in a similar range in Iceland in the early part of the comparison period, as it was in the latter one in Scandinavia. The later part of

² Lending growth information is available for the first nine months of 2008. Nominal growth that year is almost 60%. The authors, however, assume that the depreciation of the Icelandic Krona, which during that period was approximately the same percentage as the nominal growth, is largely responsible for the increase (by that point $\frac{3}{4}$ of lending was denominated in foreign currency) in addition to inflation.

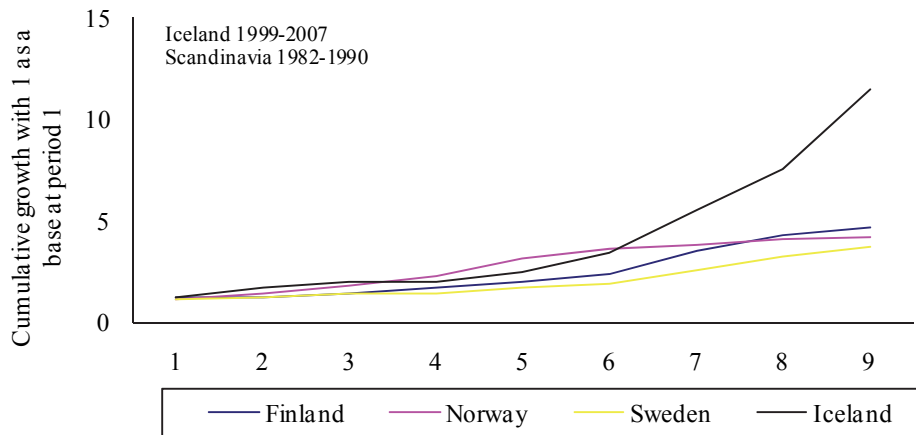
the comparison period shows that lending growth in Iceland was approximately double compared to Scandinavia, only with a short period in Finland being the exception.

It was, however, not only the increased lending to households and companies that caused this increase. Icelandic banks evolved quickly from being traditional commercial banks into becoming investment banks who took positions in their commercial customers' projects. Jannari (2009) explains this by stating that the majority holders who gained control in 2002-2003 had a mindset more like investment bankers rather than commercial bankers. Incentive systems were enacted in line with common features abroad where short term profits were paramount. This created an atmosphere in which the main objective was getting a deal done, as percentages employees received of loans provided could be around 0.3% to 0.4% in the form of bonuses. Those bonuses were given regardless of long-term consequences and inherent risks associated with the deals. In fact, as McLean and Elkind (2003) described the situation with Enron a few years earlier, an incentive scheme evolved in which it became advantageous to minimize the potential risk associated with deals taking place in order to make sure that they were completed and thus commissions paid.

Once the contraction in lending growth subsided in the comparison periods, about 3 to 4 years after the common starting point (T and T-17), lending growth became much higher in Iceland compared to Scandinavia. Another, and maybe a more descriptive, way to look at this is viewing the cumulative increase as shown

in Figure 2, representing the Icelandic lending growth compared to the “irrational” one in Scandinavia during the late 1980s.

Figure 2. Cumulative Lending Growth Comparison – Iceland vs. Scandinavia.



Sources: Central Bank of Iceland, 2009a.

The cumulative growth was already much more than it had been in the comparison countries when the Informational Crisis hit in 2006. The enormous continued growth shows how much more the expansion of the Icelandic banking system was compared to the Scandinavian countries during the 1980s. This growth corresponds with the growth of Icelandic banks’ balance sheets, which combined were just under the size of the country’s 1999 GDP, but are estimated at being ten times larger than Iceland’s GDP in 2008 (Central Bank of Iceland, 2009).

One explanation of why the negative effects of deregulation filtered down so late into the Icelandic financial system is that the government retained its controlling

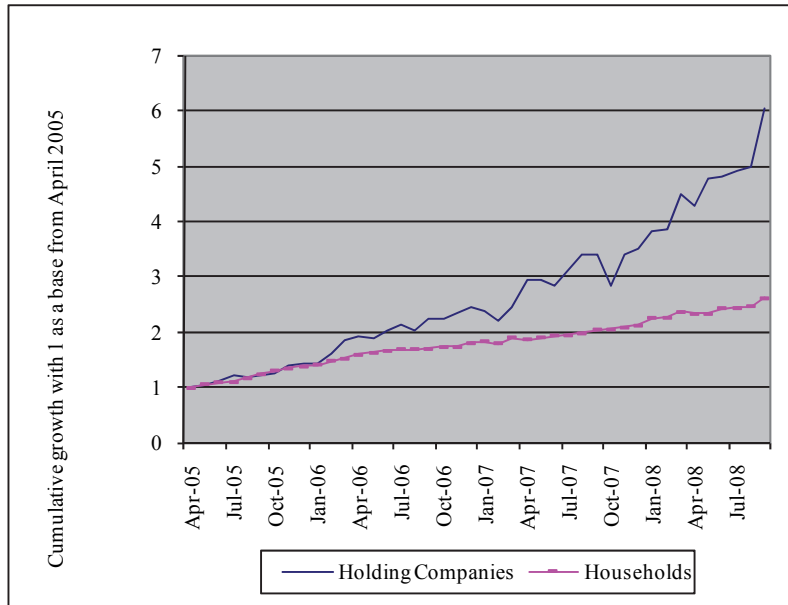
stake in the banking system whilst the changes were taking effect. Thus, despite the free flow of capital, there were implicit restrictions on lending growth. That is not to say that lending growth was non-existent during those years (as Figure 2 demonstrates); but during that period it was understandable due to the easing of lending restrictions leading to a natural higher lending equilibrium.

Information surfacing after the crash (for example, the leaked loan book of Kaupthing Bank) indicates that the loans were not merely ill considered but were even questionable from legal and ethical standpoints. The collateral for loans were in an abnormally low percentage range or even simply only the equity bought. This raises the question why Icelandic banks did not simply buy the equity themselves and thus reap all the benefits themselves if they turned out to be successful. In some instances, such loans were used to finance purchases of the bank's own shares, so in effect banks were lending money to buy shares in themselves, with those shares being the only collateral. During the writing of this paper investigations are under way regarding market manipulation due to such loans, with banks accused of lending money in the attempt of keeping their share prices artificially high.

As with Japan in the late 1980s, where loans were increasingly made to holding companies with the main purpose of investing in other companies (Chancellor, 1999), loans by Icelandic banks were often related to cross-ownership or other relations between parties in which dubious collateral was placed (Jannari, 2009). This was not a concern in Scandinavia (Jonung, 2008). Figure 3 shows the nominal increase in total lending Icelandic holding companies scaled to April

2005, compared to the growth in lending to domestic households, many of whose sole purpose was investing in equities of other companies (Jannari, 2009).

Figure 3. Lending Growth to Icelandic Holding Companies and Households.



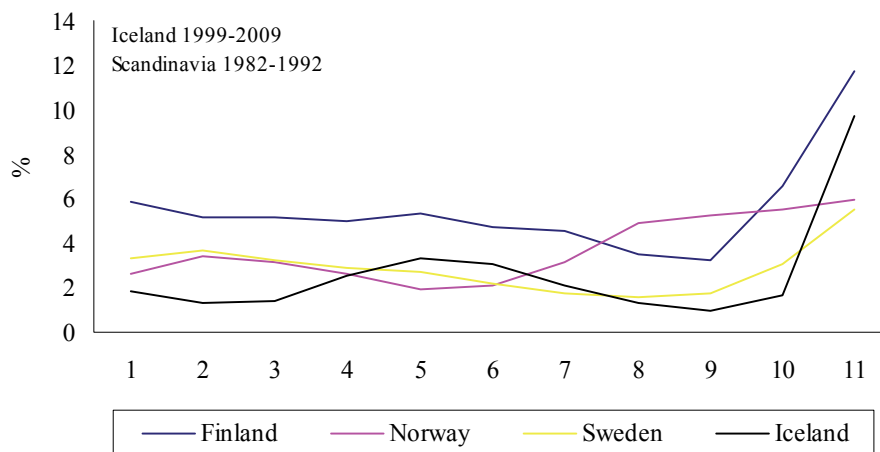
Source: Central Bank of Iceland (2009a).

Despite the frenzied increase in lending to households, it pales compared to the increase in lending to holding companies. Often with little (if any) collateral on the table, the owners of the holding companies stood a chance of striking it rich if they were successful in their investments, it appears that stockholders, bondholders and taxpayers may have to pick up a sizeable amount of the tab if unsuccessful.

Unemployment, GDP and (asset) Inflation

Unemployment in Scandinavia was generally low during the 1980s (see Figure 4). In Finland, it gradually decreased during the latter part of the decade. In Sweden, unemployment never went above 4% and for a period during that period was below 2%. A common government policy in the region was maintaining full employment (Jonung, Kiander, Vartia, 2008).

Figure 4. Unemployment % Comparison – Iceland vs. Scandinavia.



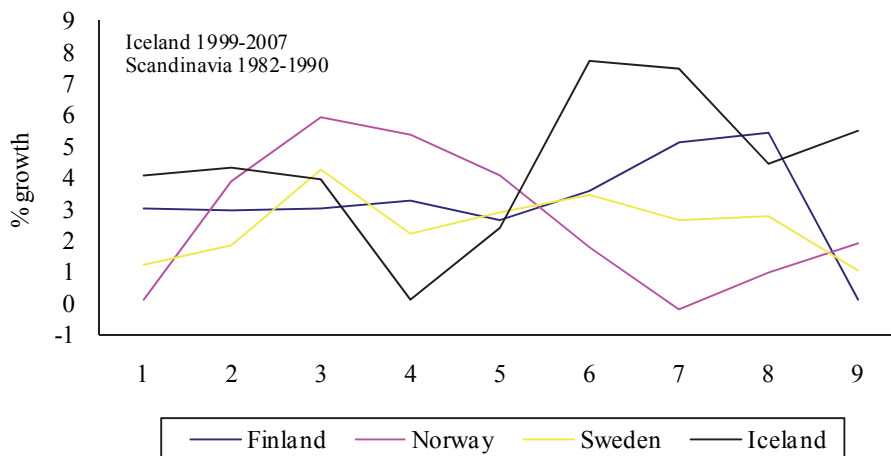
Source: IMF (statistical analysis, 2009).

As with the Scandinavian countries during the 1980s, Iceland experienced almost non-unemployment, which is partially explained by major construction projects. Thus, the expansion in loans in both comparison periods created an illusion of a stable and healthy economy, only turning out to be an obvious mirage when unemployment skyrocketed following the bust.

Information from the IMF shows that unemployment in Finland reached 17% for a short period during the ensuing bust; that figure in Iceland, at the time of writing, hovers around 8% (Directorate of Labour in Iceland, 2010).

All the countries showed a stable increase in GDP during the period, especially Iceland that had a mean annual growth of 4%. This is in contrast to the 2-2.5% mean annual growth in the comparison countries within the decade actually being 6% annually during the boom years 2003-2007 (see Figure 5).

Figure 5. Real GDP Growth Comparison – Iceland vs. Scandinavia.



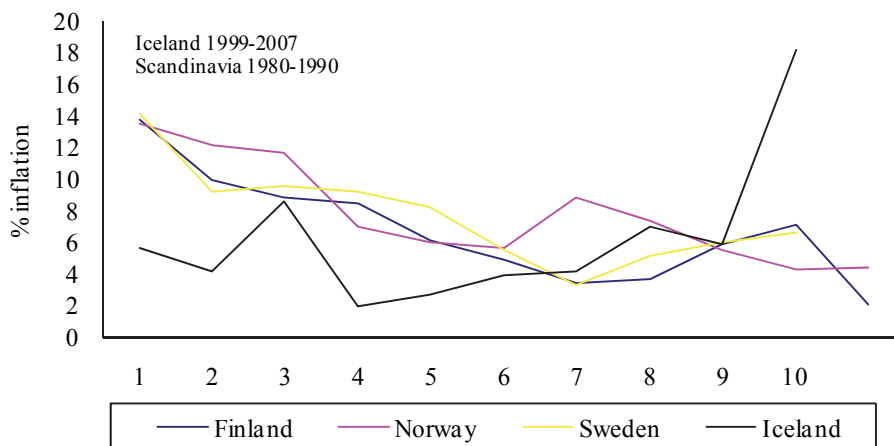
Source: IMF, 2009.

What is probably most striking is the extraordinary high GDP growth in Iceland once the boom period took hold. Monetary issues were not the only cause. The government implemented enormous power plant projects that totaled 10.5% to 12% of GDP in 2005 and 2006 (Central Bank of Iceland, 2009). During the

same period municipalities engaged in various projects keeping demand for labor high.

The comparison of inflation as seen in Figure 6 shows that it remained relatively mild in Iceland during the boom years. That does not mean that it did not exist, the Central Bank's goal of keeping inflation at or below 2.5% was seldom reached. Inflation was, in a sense, partially hidden due to the strength of the ISK, making imports cheaper than otherwise. Domestic factors were thus mostly instrumental in causing added inflation.

Figure 6. Inflation % (end of period) Comparison – Iceland vs. Scandinavia.



Source: IMF, 2009.

When the ISK tumbled following the financial meltdown, inflation shot up. Its strength had held back inflation for many years but when that development reversed inflation quickly spiked, as seen in Figure 6, since importers had little choice but to hand the added expense partially to the customers.

Adding insult to injury, many Icelandic companies had, on the surface, operated in a stable and profitable manner, by merely looking at the net income numbers. No study has been done yet in this particular field, as far as the authors are aware, but by scanning a few annual reports, it shows that by comparing EBITDA numbers to net loans and fixed assets, under normal circumstances companies were losing money on their operations. However, by having a huge amount of their loans denominated in foreign currencies, interest costs were little, with artificially low interest rates and an increasingly strong ISK. Once the ISK depreciated, the strengthening reversed and exposed the 'hidden' risk via currency fluctuations in financing, leading to many companies' equity disappearing almost overnight.

The monetary policies in Iceland and Scandinavia during the boom periods have been criticized for different reasons. Many academics have questioned the pegging of the currencies to the German Mark (Jonung, 2008; Honkapohja & Koskela, 2000; Englund, 1999). Although those thoughts are inconclusive, most argue that a floating currency would have resulted in a 'corrective' currency adjusting to interest rate spreads.

Judging from Iceland's recent experience, those arguments appear to be falling flat. At the beginning of the decade, the ISK was floated with the aim of keeping inflation below 2.5%, which was the Central Bank's main interest rate objective. This policy proved to be futile, as Figure 7 demonstrates, as was the pegging in Scandinavia during the comparison period, within an environment of free flowing capital. While pegging created an imbalance too great between

currencies, the floating ISK with the Central Bank policy of increasingly higher interest rates led to an inflow of capital that strengthened the ISK. Like the Scandinavians during the late 1980s, Icelanders (both households and municipalities) began taking foreign loans in large amounts. The rationale for many people was that historically such loans had provided more advantageous interest rates and, maybe more importantly, the ISK showed no signs of weakening (this is a case of the short term memory the public has of financial markets, the ISK had weakened considerably 2001, and this seemed already to be a distant memory).

The consequences proved to be dire. Icelanders not only took foreign loans because of their belief in its continued strength but also, paradoxically, used much of that money to buy foreign goods, which had become so cheap because of the strong ISK. Jannari (2009) maintains that this eventually resulted in the high interest rate policy of the Central Bank not only being toothless, but in reality with the free flow of capital adding to the inflationary pressure. A lesson to be drawn is that monetary policies alone do not suffice within such circumstances, fiscal policies with the same aim are necessary.

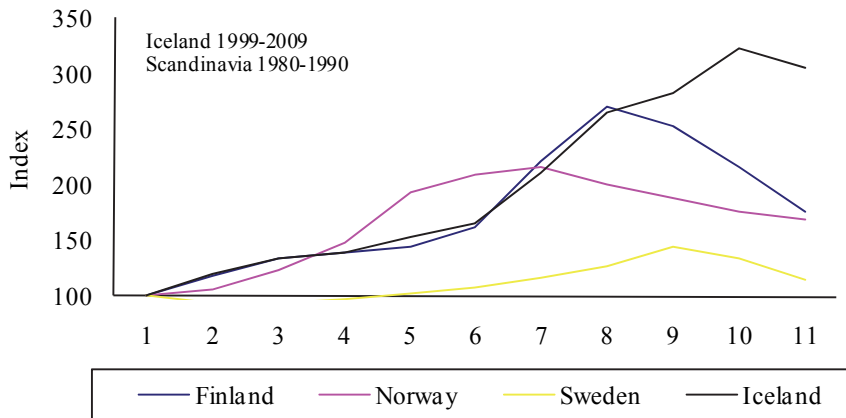
Therefore, measuring asset inflation during this period is difficult. The underlying factors that were taking place did not necessary show up in normal studies. A simple approach is looking at the nominal inflation price of real estate, which takes inflation, underlying inflation to some extent, and the level of risk appetite into account. It also measures the consequences of access to money, or M1. The case in point is Scandinavia during the 1980s. Englund (1999) points

out that while deregulation may have opened the door to asset inflation, it was not until the Loan-To-Value (LTV) ratio went from 75% to 90% in 1988, and 3 years after deregulation had firmly taken place that real estate values went up 35% within a short amount of time. Until that, real estate prices remained stable and even lowered during much of the decade (Berg, 1998). Furthermore, Englund asserts that a higher LTV ratio is, in a sense, a measure of risk appetite, which plummeted following the bust and the LTV ratio quickly fell again. The ratio thus increased when there was no need for it, but decreased when liquidity problems surfaced. The Swedes surely were aware of this, therefore the lesson simply was that a 90% LTV ratio is too high, even during bust periods.

This development was even more extreme in Iceland. The government decided to raise the LTV ratio in a few steps from 65% to 90%. People began to take advantage of this by taking mortgage loans that were partially government sponsored in an indirect way and using the money, not only for household purposes, but also to increase spending and paying down overdraft loans. The banks responded by lowering interest rates even more and in the spirit of gaining market share one bank began offering 100% LTV loans³. The fierce competition led to a negative interest rate spread. One of the major savings banks, for example, financed itself via long-term bonds paying 4.90% to 5.20% interest but lent its customers at the same time money to finance real estate at 4.15%. (NASDAQ OMX Nordic (2009).

³ http://www.sa.is/files/Sp%E11%-EDkan%20um%20EDb%FA%F0af%E1rfestingar_1723061657.pdf

Figure 7. Real Estate Nominal Price Inflation Comparison (index set at 100 as starting point)



Sources: Berg (1998) and Icelandic Property Registry (2009).

Figure 7 shows that the paths of Iceland and Finland, during the comparison period, were for many years almost identical. However, prices kept on increasing in Iceland, and judging from the Scandinavian experience will decrease to about half of their value from their peak prices. This prediction is not impossible. Various home builders joked during the boom period that there was a 20/50 aim on new buildings, i.e. put 20 million in building an apartment and selling it for 50 million. As Englund and Berg point out, prices in Sweden were stable for most of the period but as the LTV ratio was raised, prices shot up only to fall again concurrent with the lowering of the LTV ratio.

The above factors demonstrate not only an overheating of the economy, but indicate how the general population perceived the economy, i.e. added optimism leads to added consumerism. Therefore a vicious cycle forms, in which the main

driver of economic growth is consumption (of various forms) financed by loans. In a sense, the current lifestyle is funded by sacrificing the future, although that is usually not the general perception at such a given point. Carey (2009) for example points out that the savings ratio of Iceland was negative during the boom years, 2003 to 2007.

As previously mentioned, the high interest rate policy of the Central Bank may have increased underlying inflation, being expansionary in a sense. However, the monetary policy regarding Easy Money was clearly accommodating; broad based monetary aggregates such as M1 grew above 20% or more every year from 2002 until the crash (Bagus & Howden, 2009). As Woods Jr. (2009) explains, prices can only increase simultaneously (apart from decreasing supply of all goods) by increasing the amount of money in the economy. Hence, despite a high interest rate climate, the Austrian School of thought maintains that monetary policy in tandem with fiscal policy was adding oil to fire as opposed to reigning in inflation. Money was thus being flooded into society that invested it into long-term projects, such as houses, but put the Icelandic nation on a short lease, as recent events underline.

Berg (1998) asserts that the Scandinavian banks would have not been able to increase their lending growth without access to foreign capital. This was the case in Iceland also, where people with loans in foreign currencies had enjoyed favorable interest rates for years and even had their underlying debts decrease in value due to the strength of the ISK. This is further amplified when people see others making money by speculative trading (not limited to the stock market but

even to a larger degree housing loans in foreign denominated currencies), adding a tendency to follow the crowd. Kindleberger (1996) described this as “Monkey see, monkey do”.

Thus, by adding insult to injury, in the expansionary climate Icelanders began increasing their appetite for foreign loans considerably as the boom period continued. Such loans increased a great deal in 2006 and at the start of 2008 represented 14% of household debt (Carey, 2009). During the fall of 2007, banks were beginning to shut down foreign denominated loans. The increase, measured in ISK, is after that point mainly due to the weakening of the ISK.

On paper, such loans were as safe for banks as the loans were denominated in the domestic currency. Currency contracts were generally hedged but could only be done so to a certain extent, with fluctuations being assumed to stay within certain parameters. Such hedges proved of limited use due to the discrepancy of the length of maturities between financing and loans provided. When the ISK plummeted in value, the hedging only provided support for the short term. Long-term contracts were ‘naked’ against such fluctuations. Carey (2009) also points out that although banks theoretically had adequate hedges against such fluctuations, their customers did not. Implying that while banks appeared to be safe, their customers simply could not pay back the loans under such different circumstances, therefore, write-downs became inevitable.

A recent report by the Institute of Economic Affairs maintains that the root of the collapse for many US banks partially lies in the fact that the government

encouraged banks to increase mortgage loans to income groups with less money (Schwartz, 2009). In Iceland, where a tradition of equality is rooted within society, such a development occurred to a higher degree with the increase of the LTV ratio. Thus governmental policies contributed to this in both countries, and even internationally, in creating the real estate asset bubble via the Easy Money policy. A lesson from this experience is that governmental controls must be in place during deregulation and Easy Money policy periods. Such controls are paramount in keeping lending growth within reasonable levels and they need not be an infringement on the free market. If banks were to lend recklessly without government guarantees, knowledgeable depositors and financiers would take notice and withdraw their money, but lesser educated people might not, therefore leaving trust in the system at the mercy of speculators disguised as bankers. A simple restriction of LTV ratios and foreign denominated loans would be the most effective strategy. Without such simple measures, another crisis due to the same underlying factors would soon occur, only in a different form.

4. CONCLUSION

The similarity of the two comparison periods (T & T-17) is remarkable. Despite the Scandinavian crisis being defined as one of the five “Big Ones” by Rogoff and Reinhart, Iceland shows, by a wide margin, more significant signs of over-expansion in practically all aspects.

An obvious question is how Iceland came to be a victim of such a similar euphoria so shortly after a similar crisis by their neighbors. Monetary issues are not the sole explanation. Galbraith (1997) maintains that credit has on numerous occasions (for instance both before and after the “Roaring Twenties”) been easy without causing speculation. As with deregulation, easy money by itself does not cause unsound speculation leading to disaster. Galbraith states that the mood is far more important than the rate of interest, some sort of conviction that ordinary people should be rich. The answer is in short provided by Reinhart and Rogoff (2009). Icelanders, in line with a common syndrome associated with financial crises, thought that they were smarter and had learned from past mistakes; such crises only happened to other people during other times. The reality was that not only had Icelanders not learned from past mistakes, but there are vast indications that past mistakes were visible both qualitatively and quantitatively. Striking similarities are also to be found in recent examples in Argentina a decade ago, Asia during the 1990s, and even the “Roaring Twenties” in the US (Mixa, 2009).

Iceland imitated all the main features of Scandinavia such as deregulation, a real estate boom, huge lending increase and an increased amount of foreign capital flow. As the increase of lending to holding companies shows, lending growth was not only more prevalent in Iceland but had an added category where risk taking among insiders took constantly a bigger share of the lending pie. Such added risk appetite was also prevalent in banks’ increased exposure in direct ownership of companies.

4.1 Firm Level

Business practices in Iceland became questionable and of such a scale that they ultimately facilitated the collapse of the Icelandic economy. The close-knit society, partially created by managerial relationships, cross-ownership and cross lending, established imbalances in favor of business over regulatory authority. This consequence was an extensive collapse, where if one link in the chain was to fail a domino effect throughout the entire economy was created. As pointed out in this paper, this was not a problem in the other Nordic countries (Jonung, 2008). The foreign criticism from financial institutions, rating agencies and foreign media in 2006 did not manage to influence the general discussion in the Icelandic media in such a way that the international expansion of the Icelandic banks was scaled down. On the contrary, the growth only escalated. In a country where nearly all the newspapers and business magazines are in ownership indirectly or directly by the banks themselves through their largest shareholders, attempts to criticize become negatively addressed and extinguished (Vaiman, Sigurjonsson and Davidsson, 2010).

One possible reason why things got so out of control in Iceland is that the Icelandic banks operated as if they were investment banks. In the shadow of the Great Depression, the Glass-Steagall Act was enacted in 1933, separating commercial banking and investment banking. During the Scandinavian crisis, those walls still held. They were, however, abolished 1999 and it was within that landscape that the Icelandic banks grew so quickly. It took the international banking system less than a decade to collapse after investment banking became

again part of the general banking system. Icelandic banks, expanding partially because they had some sort of governmental guarantee, were the worst culprits and, as such, suffered the worst consequences. This questions how systematic the crash was in reality, whether the similarity of the buildup created the circumstance in which all of the banks stood a chance of failing within parameters of certain negative events, with or without domino effects. It can thus be argued that this experiment of abolishing the Glass-Steagall Act was an expensive one (Mixa, 2009), with Iceland suffering the highest cost. This also raises the question why such separation has not been re-enacted.

4.2 Macro Level

The recent experience in Iceland and the experience in Scandinavia two decades ago suggest that fiscal and monetary policies must involve consistent goals. Interest rate tools within an environment of free flow of capital were used in both instances, in Iceland with the aim of keeping inflation at bay with a floating currency whilst the Scandinavian countries aimed at stabilizing the economy by pegging their currencies. History shows that both these courses become toothless once speculation within an environment of rising asset inflation. The real rate of interest was disguised with foreign denominated loans freely available. During the prelude to the crash of 1929, the rate of interest of some margin loans for stock purchases went to 40-50% with added collateral required (Rappoport & White, 1994) without dampening the amount of speculation since the stock market had become a cornerstone in a sociological sense (Galbraith, 1997).

While the Central Bank of Iceland raised interest rates to keep the economy's growth under control, the government increased to ceiling of LTV for housing purchases, lowered taxes and kept an expansionary policy in the tight labor market. The signals given by the Central Bank via higher interest rates and expansionary policy by the government and its subsidiaries raises the question what sort of policy was in place and partly answers the question why nobody warned against the buildup of foreign loans.

4.3 Policy Level

Much discussion has revolved around the effects of added deregulation in Scandinavia. Englund (1999) maintains that such a view simplifies reality. Demirgüç-Kunt and Detragiache (1998) find that a financial crisis occurs more likely in an unregulated environment, especially where a lack of respect is for the rule of law and corruption is widely spread. They find, however, no correlation between financial crises and changes from a regulated environment to a lesser regulated one. Englund (1999) concludes that what counts is a balanced macro environment in keeping the financial system stable within a deregulated environment.

Claiming that deregulation was the root of the financial collapse in Iceland is a simplification. Deregulation in neither Iceland nor Scandinavia was the cause of excessive lending. However, once the monetary and fiscal policy got out of hand, creating a destabilized economy, the doors that deregulation had unlocked were opened. The main impetus at first was real estate loans, leading to higher

real estate values in tandem with increased risk in lending. In Iceland the privatization of the state-owned banks accelerated, where size was clearly all that mattered, and with risk taking becoming much more via holding companies within a historically low interest rate environment.

Banking is among the structural factors within societies today, just as schools, electricity and transportation to name a few. Regulation issues within banking are thus of vital importance for the public. Regulations – detailed or general – are not a substitute for proper business practices within banks (Gregg, 2009). Authorities must ensure that not only are such practices within the banks in line with general good practices, but also the interaction of banks and regulatory institutions and stakeholders. It may appear clichéd, but prudent banking is needed to create trust, and banking is built on that basis. Trust in the banking system is deservedly lacking in the banking system and needs to be re-built. A lesson from what went wrong in Iceland is a good starting point.

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**PAPER 4: WEAK BUSINESS CULTURE AS AN
ANTECEDENT OF ECONOMIC CRISIS: THE CASE OF
ICELAND**

Vlad Vaiman, Throstur Olaf Sigurjonsson and Pall A. Davidsson,

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Abstract

The authors of this article contend that traditional corruption, which was largely blamed for the current situation in the Icelandic economy, was perhaps not the most fundamental reason for the ensuing crisis. The weak business culture and a symbiosis of business and politics have actually allowed for the bulk of self-serving and unethical decisions made by the Icelandic business and political elite. In order to illustrate this point, 10 expert interviews have been conducted within the period of 6 months in 2009 to support in-depth research carried out by the authors. The article also discloses questionable business practices that have recently come to the attention of the public both in Iceland and abroad and that ultimately facilitated the downfall of the Icelandic economy. While traditional corruption has probably played its role in this downfall, the measures currently employed to determine its level did not account for various peculiarities of Icelandic society. The article thus argues that there was a high level of corruption in Iceland, but it was outside of the traditional definition. This other corruption has ultimately prevented the government from acting appropriately upon the questionable business practices mentioned above. The article also offers some general recommendations which should be useful to both policy makers and business leaders wishing to engage in business activities in a transparent, ethical manner and learn from the tragic Icelandic experience. Among these recommendations are the necessity to recognize the limitations of current definitions of corruption, as well as a word of caution to commercial enterprises to pay a close attention not only to commonly accepted indices and mainstream

reports but also to a country's history, culture, and political environment, prior to making any sort of investment decisions in that country.

KEY WORDS: business culture, business ethics, corruption, Iceland

Introduction

The authors of this paper contend that, to an extent, the collapse of the financial sector and the subsequent economic crisis in Iceland in 2008 was not caused by corruption in its traditional sense, but mainly by the Icelandic society's weak business culture, which enabled conditions conducive to corruption and questionable business practices that, arguably, should be considered as a different kind of corruption, the one outside of the traditional definition. This weak business culture, which can be identified as the lack of tradition and consideration towards the set of explicit and implicit rules that facilitate business interactions in a society (adapted from the Oxford English Dictionary, 1989), on a micro-level was compounded by the lack of diversity and tight personal networks in managerial relationships and ownership which were characteristic of Icelandic business.

Furthermore, to aggravate the overall situation, political tradition and a history of heavy state intervention in the economy helped to create an unprecedented bond between politics and business, where the political elite was making all the major decisions on who was going to be involved in and who was going to miss out on the best business opportunities (Jonsson, 2009). It was this kind of societal nepotism alongside with a total disregard for commonly accepted business ethics standards, which greatly contributed to the incompetence of the civil service. This, along with having political connections as a key guiding business principle, made both regulation and oversight close to impossible (Sibert, 2009). The lack

of supervision, in turn, led to an unsustainable expansion of the Icelandic financial institutions, which prompted the entire crisis.

More specifically, this paper argues that traditional corruption, which was largely blamed for the current situation in the Icelandic economy, was not the most fundamental reason for the ensuing crisis. This paper will demonstrate that it was the aforementioned weak business culture and a symbiosis of business and politics that was responsible for the bulk of self-serving, unethical, and corrupt decisions made by the Icelandic business and political elite. This combination, in turn, further exacerbated weaknesses in the Icelandic business culture. To illustrate this point, the paper discloses questionable business practices on both the societal and company levels that have recently come to the attention of the public both in Iceland and abroad. These practices reveal specific types of dubious business deals on a scale that ultimately facilitated the downfall of the Icelandic economy. While corruption (as it is currently defined and measured) has probably played its role in this downfall, the measures currently employed to determine its level did not account for the various specificities of the Icelandic society.

The paper thus argues there *was* a high level of corruption in Iceland that emerged not in the form of particular incidents yielding concrete benefits to the parties involved (as is the case is with traditional corruption), but rather as an overall attitude that allowed a weak business culture and unethical business behavior to flourish. This attitude, created by close business and political

connections and the nepotism that is prevalent in the Icelandic society, has ultimately prevented the government from acting appropriately upon the questionable business practices. That these practices were not identified using the mainstream concepts and measurements of corruption raises the question of whether they need to be adjusted to give an adequate warning to investors and potential business partners about the level of integrity in a given country.

This paper also offers some general recommendations to both policy makers who would want to consider revising the mainstream concept of corruption, and to business leaders wishing to engage in business activities in a transparent, ethical manner and learn from the tragic Icelandic experience.

Iceland: Rapid Economic Growth and Collapse

Icelandic business culture¹ is much younger than that of other European nations: Iceland has been able to transform itself from a very poor farming society to an advanced economy in around one century (Eyjolfsson and Smith, 1996). Today, Iceland is a developed democracy with a vibrant consumer economy based primarily on fishing and accompanying infrastructure industries, as well as tourism, aluminum smelting, and information technology. Icelanders are among the world's most educated people, with sophisticated preferences and tastes for both domestic and international consumer goods (Pálsson and Durrenberger, 1996). Largely due to financial deregulation, a strong performance by its fishing

industry, and an abundance of inexpensive energy, Iceland experienced sustained economic growth in the 1990s, which, after a short interruption in 2001, continued until 2008. Iceland's economy is highly export-oriented, with marine products constituting the bulk of goods exports (Icelandic Trade Council, 2009). Other essential exports include aluminum, various alloys, machinery and equipment for the fishing industry, software, and woolen goods (see Table 1 for basic statistics on Iceland and its economy).

Insert Table 1 about here

In the autumn of 2008, Iceland started to experience extensive financial problems. In the wake of the global financial crisis and unavailability of international credit facilities, Iceland's three major private banks collapsed and were taken into government administration with all of this happening practically overnight (Danielsson and Zoega, 2009). The failure of the banking sector, which was several times larger than the entire Icelandic economy, along with the rapid depreciation of the Icelandic currency caused an extraordinary economic and financial crisis.

The resulting contraction of the national economy has had an overwhelming effect on Iceland and its population. External debt has soared, and sharp increases in both unemployment and inflation rates are now having substantial and adverse effects on people's lives (Wade, 2009a). Only two years prior to the collapse, the average income in Iceland was 1.6 times of that of the U.S. Iceland also ranked at the top of the Human Development Index, which is a comparative

measure of life expectancy, literacy, education and standards of living for 177 U.N. member countries (UNDP, 2007). Hence, how could Iceland literally overnight go from being the most prosperous country in the world to the country that fell first and hardest in the wake of the current financial crisis?

In the frenzy of dialogue, interviews, articles, and blog entries that ensued because of the collapse, many commentators blamed corruption (Johannesson, 2009). This view was reflected by a significant shift of attitude measured by Gallup International after the onset of the economic crisis. According to a survey issued in May 2009, 78% of Icelanders considered the private sector to be rather or very corrupt (grade four or five on the scale of five), a significant increase from the 62% that gave the same rating in 2007 (Capacent Gallup, 2009). A similar trend is observed in the public opinion of corruption among the members of ruling (so-called, governmental) parties as the numbers jumped from 12% from 2007 to 71% in 2009. In addition, according to the same 2009 survey, 40% of Icelanders considered their public officials to be corrupt. Unfortunately, it is not possible to compare this figure with any previous findings, since it was the first time such a question was asked (Capacent Gallup, 2009).

These public concerns over corruption in Iceland are in contrast with Iceland's apparent position as one of the least corrupt countries in the world. In 2005 and 2006, Transparency International's Corruption Perceptions Index (CPI) ranked Iceland as the country with the least perceived corruption. These two years were merely the peak of an otherwise outstanding performance by Iceland. Since 2001 (the oldest figures on Iceland available from Transparency International) it

has always ranked among the top seven with a CPI score between 8.9 to 9.7 out of 10 (a high score indicating little corruption). According to the 2008 CPI index, which was issued after the collapse, Iceland retained its place in the top seven, receiving 8.9, and sharing seventh place alongside the Netherlands as the least corrupt country (Transparency International, 2009).

This dichotomy between public opinion and CPI ranking both prior to and post-collapse begs the question of the actual role of corruption in the dramatic downfall of the Icelandic economy and, if any, reasons why was it not detected by leading indices measuring corruption? In answering this question, it has to be noted that there have been no reports on actual corruption in Iceland by anti-corruption agencies. However, the Council of Europe's States against Corruption (GRECO) did dispatch a team to evaluate anti-corruption measures in Iceland, and some of their relevant findings are mentioned below.

Corruption: definitions and measurements

Corruption has existed as long as there has been power to corrupt, but the concept has evolved in line with dynamic changes in society. Plato, Aristotle, and Machiavelli all used the word, referring to the moral health of whole societies, judged in terms of distribution of wealth and power, relationships between leaders and followers, sources of power, and the moral rights of rulers to rule. This classical notion has today given way to a categorization that focuses

more on particular behavior rather than the moral fiber of society (Johnston, 1996). However, the matter is in no way settled.

One of the problems with defining corruption is evident when considering international anti-corruption efforts. The OECD is engaged in a range of activities to combat corruption and to that effect has developed a legally binding instrument: the *OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions*. The Council of Europe also takes an active part in anti-corruption efforts and promotes both the *Criminal Law Convention on Corruption* and the *Civil Law Convention on Corruption*. The former lays down the criminal elements for various corrupt acts, whereas the latter requires its signatories to provide civil remedies to those harmed by corruption. The issue is addressed globally through the *UN Convention against Corruption*, which is the most comprehensive international anti-corruption convention, having 136 signatories as of April 2009. Nevertheless, none of these important instruments actually defines corruption. Instead, they establish offences for specific behavior, thus addressing certain forms of corruption without providing a generic offence of corruption. For instance, the OECD convention prohibits the bribery of foreign public officials (active bribery); the Council of Europe Convention is more comprehensive, stipulating the liability of bribers as well as the liability of foreign officials who solicit or receive a bribe (passive bribery). The UN Convention covers the broadest range of corruption offences including active and passive bribery, obstruction of justice, illicit

enrichment, and embezzlement. The conventions thus establish crimes for specific acts of corruption instead of providing a generic offence of corruption. This reluctance to define corruption can be understood from a criminal law perspective, as generic definitions tend to lack the precision needed to enable prosecution. Members of the Istanbul Action Plan, an anti-corruption agenda for certain Eastern European Countries, defined corruption as a specific crime but have had very few prosecutions or convictions for these offences (OECD Glossary on Corruption, 2008).

Definitions for policy purposes, which are intended to guide policy development, raise awareness and develop anti-corruption strategies, do not have the same practical limitations as definitions for criminal law purposes. Various scholars and practitioners have attempted to define corruption without entering into the complex realm of law and legal requirements (Lancaster and Montinola, 1997). While there seems to be an agreement among those scholars that corruption "denotes deviation or perversion from some ideal state or natural condition" the problem remains to determine what the condition is that has been deviated from or perverted. Some scholars define corruption as deviation from behavior in the public interest; others find that description as too open and define it as a deviation from legal norms. The third group sees corruption as a deviation of not only written rules but also from norms or moral standards (Lancaster and Montinola, 1997). These definitions offer different angles from which to view corruption but share the same problem: they refer to terms subject to cultural

variations. The content of legal and moral norms is not the same across the world because what some consider as public interest may not be considered as such by others. The understanding of corruption will thus vary depending on the laws, traditions, cultures, and other norms where the questionable conduct takes place.

Other definitions look at the construction of public administration and whether it is based on the recruitment of personal dependents of the ruler rather than professional qualifications. Different ones offer a more basic approach, considering it to be corruption when civil servants regard public offices as private businesses to allocate goods (Lancaster and Montinola, 1997). There are also scholars that define corruption as the perversion of the agency relationship that define democracy (Rose-Ackerman, 1978). In an ideal democracy, the politicians are the agents of their political supporters and bureaucrats are the agents of the politicians. Both are expected to act on behalf of their principal. According to this approach, corruption takes place when agents renege on their agreements with principals in favor of their personal interests (Lancaster and Montinola, 1997).

Clearly, there is divergence of opinion regarding what constitutes corruption, with each approach having its strengths and weaknesses. The OECD has sought to create some clarity by pointing out that certain definitions are more common than others are, and submits that a frequently used definition covering a broad range of corrupt activities is *"Abuse of public or private office for personal*

gain". Apart from this general wording, which the authors also accept as an operational definition for the purposes of this paper, there does not appear to be any consensus about how to define corruption and what specific acts should be included or excluded (OECD Glossary on Corruption, 2008, p 22).

In understanding corruption, agreeing on what corruption means is only the first step, the second requires measuring the level of corruption in a given country. This task is surrounded by numerous pitfalls including methodological difficulties in obtaining raw data. Generally, one of the following two methods are used to measure corruption in a country. Written documents such as press reports, judicial records, and records from anti-corruption agencies are compiled to give an indication of the level of corruption and then comparative statistical analysis is engaged in when events are recorded over a substantial length of time. Another method is to use data from surveys of the public, which is a relatively recent method. The best-known tool to measure corruption is the Corruption Perceptions Index referred to above. Developed by Transparency International (TI), it ranks approximately 180 countries based on perceived levels of corruption. Its strength is that it is a composite index making use of a range of sources to enhance the reliability of measuring and comparing the level of corruption from one country to another. It is however subject to some criticism. For instance, Golden and Picci (2005) point out that the reliability of the information surveyed is largely unknown. For example, the information collected is based on surveys, and those questioned are not inclined to report on corruption

if they are actually involved in corrupt activities. Additionally, those who are surveyed, and are not personally exposed to corruption, may not have reliable information. A further problem is that the CPI does not record firsthand experiences of corruption but the perceptions of it. Over time, the CPI may actually influence those perceptions so that those surveyed are not reporting their own perceptions, but they are reporting what they believe to be the level of corruption, based on the highly publicized results of the most recent TI index or information delivered by others such as media reports and political statements (Golden and Picci, 2005).

However, the authors of this paper are less concerned about problems of methodology than whether the baseline approach to corruption is construed in such a way it misses the widespread practices that have the same impact as corruption, but do not fall within the mainstream notion used by the OECD and Transparency International. When measuring corruption in Iceland for the 2008 report, TI used five indices (out of 13 sources that are used by TI). The first index was supplied by The *Economist Intelligence Unit*, which asked its panel of experts to assess the incidence of corruption using the common definition of misuse of public office for personal financial gain. The second index was derived from *The International Institute for Management Development in Lausanne* from 2007 that surveyed representatives of business elite to assess whether or not bribing and corruption exist in a given country. The third index came from *Grey Area Dynamics Rating* by the Merchant International Group compiled in 2007, which asked its panel of correspondents to assess levels of

corruption. Corruption in their definition ranged from bribery of government ministers to inducements payable to the “humblest clerk”. Fourth, *The World Economic Forum 2007*, which asked respondents to make an estimate of how commonly the firms make undocumented extra payments or bribes in their industry. The final index was compiled by *Global Insight (GI) 2008*, which provided an assessment of the likelihood of encountering corrupt officials, where corruption was considered everything from petty bureaucratic corruption to grand political corruption (Lambsdorff, 2008).

In general, TI recognizes that corruption comes in many forms and argues that none of the data included in the CPI emphasizes one form of corruption at the expense of another. Looking at all the five indices, though, one cannot help but notice that there is a clear focus on traditional kinds of corruption that take form of bribery and other types of financial inducements. In line with this approach, Transparency International has adopted a definition similar to that referred to by the OECD: "the abuse of entrusted power for private gain". However, instead of looking at abuse of public power only, it applies equally to all three sectors of governance: the private, public, and civil society. Moreover, according to this approach, corruption in Iceland was quite low. This finding coincides with judicial practice in Iceland. For the period between 1997 and 2007 there was only one case of bribery leading to conviction (Council of Europe, 2008).

The reason behind such considerable differences between these results and the public's view of corruption is that there are some specific local peculiarities which fall outside of the traditional notion of corruption, but which the public in

Iceland see as pure and simple corruption. In order to shed some light on these peculiarities, it is important to explore the way the Icelandic society evolved, identify some important characteristics of the Icelandic culture, and the way Icelanders do business.

Iceland: History and Culture

In order to fully understand the Icelandic specificities, it is important to venture into the history of the nation, which, along with its culture, has formed the attitudes and behaviors of its people. In turn, an understanding of the formation of Icelandic society and Icelandic cultural norms will assist in understanding the Icelandic's perceptions of corruption.

Iceland was first settled in the ninth century by Vikings who embarked on a westward expansion that eventually took them to the eastern shores of the North American continent. The first settlers were people of Scandinavian (Norse) and Celtic (Irish) descent – a fact that undoubtedly added some peculiarities to the character of modern Icelanders. The settlements expanded quite rapidly, both in terms of population and civil society, and in the year 930AD the nationwide Assembly (Althingi) was established, effectively making Iceland one of the oldest democracies in the world. Another pivotal event in the formation of Icelandic culture occurred in the year 1000AD. This is when Iceland became Christian, by a decision of the Assembly.

In the second half of the 13th century, Iceland came under the rule of Norway, and subsequently Denmark, when Norway came under Danish rule in 1380. This was one of the most important and fundamental events in the nation's history. It facilitated the creation of a sense of national identity for Icelanders, and thereby affected the culture and national character of the Icelandic people (Durrenberger, 1992). This strong sense of national identification manifested itself in the so-called "independence struggle" which started in the middle of the 19th century. To serve and support core ideas of that struggle, the nation developed idiosyncratic images of "Icelandness" reflected mainly in the country's history, folklore, and proud literary tradition, which included the sagas². The central mission of the independence movement was to develop a national idea that would unite the people and prove that the patriotic power struggle could change the lives of ordinary people. The main goal of this ideology was to protect and embrace the old order. The ancient splendor of the sagas, for example, was hailed as a model, and even a number of national festivities were resurrected to emphasize the relationship between the past and the present. Hence, Icelandic culture became an embodiment of the noble and glorious Norse experience and many people, especially in Northern Europe, started looking to Iceland for inspiration.

Danish rule ended abruptly when the Nazis occupied Denmark at the beginning of World War II. This prompted the British government (and subsequently the American government) to take Iceland under their protection, since the country served as an important Atlantic outpost for ships moving military and civil cargo

to both Europe and the USSR. Towards the end of WWII, or more precisely on June 17, 1944, Iceland declared independence and became a republic. Accounting for population growth and availability of foreign capital, the Icelandic government made a decision to focus on the development of commercial fisheries as a backbone of its economy.

At present, most Icelanders live in the capital area, and although they still cherish their cultural heritage, the Icelandic culture itself has undergone some changes. This has made it more susceptible to international (mainly US) influences. Despite this, Icelandic culture is quite close to that of other Scandinavian countries, both in terms of Hofstede's dimensions and visible cultural artifacts. Even though there are no published cultural studies on Iceland, Hofstede, based on his preliminary data collected in the country, estimates that PDI (Power Distance Index) in Iceland is around 25-30, UAI (Uncertainty Avoidance Index) is 40, MAS (Masculinity index) is rather low at 10, and IDV (individualism index) is around 70 (Hofstede, 2009).

These figures translate into the following cultural characteristics of the Icelandic society: Iceland's PDI is rather low, which means that people do not expect or accept that power in the society is distributed unequally, and that people are expected to make their own decisions and to take responsibility for their actions. An UAI of 40 is also on the low side, which means that Icelanders are willing to take considerable risks in their decisions and actions. This also shows that Icelanders are quite open and tolerant towards other cultures – a fact that is very prominent in the daily lives of most Icelanders.

In regards to MAS, a score of 10 is also low. This translates into greater equality between genders, both in terms of one's position in society, and in terms of respect. Other indicators of a "feminine" culture are a strong emphasis on social values (Iceland has a very generous social welfare system), freedom, and group decision making. With the IDV index of around 70, Icelanders are quite individualistic – this means that there is a strong distinction between personal and work environments, as well as a higher importance of immediate family and closest friends over the rest of one's relations. Overall, these characteristics are somewhat similar to Hofstede's description of what is referred to as the "Scandinavian culture".

Extrapolating these and other cultural attributes of the Icelandic society to its business environment, Eyjolfsson and Smith (1996) ascertain there are two main characteristics that perfectly illustrate the most important values in determining the way Icelandic society, therefore, its organizations function. The first one is egalitarianism, which is closely related to low power distance, high individualism, and high femininity. In the world of business, these values might be exemplified in Icelanders by being consensus seekers, i.e. preferring to work in flat organizations with a harmonious atmosphere. In addition, Icelandic business people can be characterized as somewhat courageous, original, resourceful, ambitious, and confident.

The authors call the second characteristic a "reaction to adverse nature", which comprises of low uncertainty avoidance (due to the ambiguous nature of fishing, historically the main economic activity of Icelanders, and the tough natural

environment in which Icelandic people live) and a relaxed attitude towards time. This characteristic translated into strong optimism, excessive risk taking, and even adventurism among Icelandic business people, as well as the lack of self-discipline. All these cultural traits – and especially, both disproportionate risk taking and adventurism – played an important role in the Icelandic business culture, and consequently, in the events that transpired throughout the 1990s and early 2000s and culminated in the events of late 2008.

The Business Environment in Iceland

As mentioned earlier, for several years Iceland has stood out as one of the least corrupt countries in the world. In a piece appearing in US News & World Report (Cole, 2007) it asked what Iceland was doing right. The CEO of Transparency International explained that the top countries had in place a "social contract between the government and the people" as well as "a culture of accountability". Mr. Olafsson, chairman of the Icelandic-American Chamber of Commerce, in the interview for the article added that the Icelandic public was educated, well informed, and active in politics. Moreover, Iceland's compact size, relative isolation, and cultural characteristics allegedly helped to create an environment where people knew each other and made it hard to do questionable things without being noticed (Cole, 2007). Only a year later, the Icelandic financial sector collapsed literally overnight. The numerous problems that have surfaced in the wake of the collapse suggest that the situation in Iceland was somewhat

more complicated. The close links between individuals and other characteristics of the society turned out to be weaknesses rather than strengths, since they contributed tremendously to establishing an environment of unprecedented nepotism. This kept weakening the business culture, and furthermore created and maintained an atmosphere conducive to unethical business practices and corruption (Sigurjonsson, 2010a).

Nepotism and Business Culture

Even though Iceland was one of the founding members of the common European Economic Area (EEA) (a circumstance that allowed the country to enjoy many of its benefits, including free movement of goods, services, people, and capital) the political culture and a history of heavy state intervention in the economy created an unparalleled bond between politics and business (Jonsson, 2009). The political elite were making decisions regarding who was going to get a piece of the "juiciest" business action and who was going to miss out on such opportunities – all based on the business owners' loyalty and political affiliations (Sigurjonsson, 2010a).

In order to illustrate how the Icelandic business culture helped to create an atmosphere susceptible to unethical and corrupt business practices, the authors approached several key experts and asked them to provide examples of such practices and explain how these practices contributed to the ensuing economic crisis. Please note that in this paper the authors are reporting perceptions and

accounts of the interviewees, which, as opposed to objective evidence, may limit validity of the results.

All ten interviews were conducted in person, between March and September 2009. The authors have taken certain measures to protect the confidentiality of respondents, given both the sensitivity of the topic and the ease with which people can be identified in such a small society as Iceland. Nevertheless, the most important descriptions of the interviewees, such as their general area of work and the position in the organizations they represent, are presented in Table 2, below.

Insert Table 2 about here

Primarily, the experts name nepotism as one the key features of the Icelandic business culture and point out that it is among the most important causes of both unethical behavior and corruption in the country. For instance, this political favoritism was reflected in the adoption of the individually transferrable quota in fisheries. In essence, these public assets worth enormous amounts of money were “distributed” to a group of government loyalists (Interviewee #8, 2009). The privatization of state-owned banks and other companies had allegedly occurred in a similar manner. The most valuable and sought after assets, such as banks, were transferred at under the market value to a limited number of closely connected groups most of whom had not had much experience in managing large and sophisticated financial institutions (Wade, 2009b). Although the original goal of bank privatization was to attract a small but diverse group of international

investors, in reality domestic political interests were given a priority. To return the favor, the newly privatized banks became the governmental parties' largest donors (Iceland National Audit Office, 2009).

Corrupt Practices as a Product of Weak Business Culture

Many international experts, as well as the Icelandic public, now began to see that the financial and economic crisis in Iceland was brought about by the entire business culture. This culture was not as strong, open, and transparent as that of many other developed countries (European Commission, 2010; Sibert, 2009; Wade, 2009b). Recently, situations that illustrate Iceland's weak business culture have become apparent. First, the system of checks and balances of business was ineffective due to the prevalence of strong connections between politicians and business owners. This situation was aggravated by the existence of powerful corporations in a small country, which resulted in imbalances in favor of business over regulatory authority, making the latter hesitant or incapable of challenging complicated business transactions (Wade, 2009a). In addition, general criticism of the ruling party and its close business and political allies was muted by the acquisition by big business of Iceland's most important media assets (Sigurjonsson, 2010b).

On a company level, the weak business culture was compounded by a lack of diversity and tight personal networks in managerial relationships, and by cross ownership. In Iceland, the 10 largest business owners owned approximately 40

of the 100 largest corporations (Interviewee #2, 2009). A report from the Icelandic Internal Revenue Directorate (Björnsson, 2009) stated that banks and other financial institutions had a confirmed ownership of the 300 largest corporations. This became a serious issue, because one of the consequences of such cross ownership (when corporations own significant stakes in each other) was that the risk of extensive collapse was multiplied if one link in the chain was to fail. Moreover, as practice showed, if financial institutions were amongst the corporations involved in such cross ownership, the damage could become critical, which is exactly what happened when a failure of one financial institution created a "domino effect" throughout the entire economy.

Another emerging issue was that relatively small ownership (equity contribution of an investor) could bring along a great deal of control. The owner of 15% equity of a corporation could acquire stakes in other corporations and that way leverage his or her control in excess of the original equity contribution (Interviewee #5, 2009). Cross ownership – when companies own significant stakes of each other – also functioned as an upward or downward spiral, where corporations were counting profits or losses many times over for the purposes of offsetting each other's earnings and paying less tax, or for the purposes of overstating profits and artificially increasing stock prices. This sort of practice potentially led to much greater financial vulnerability and subsequent long-term instability (Interviewee #1, 2009).

In addition, it now appears that in many cases the ownership of corporations was to some extent concealed (Davidsdottir, 2009). The motives for such measures

were in most circumstances to avoid taxation, hide cross ownership, avoid compulsory notification regarding ownership in corporations (5% ownership stake or more), and to avoid obligations in case of takeover (minimum 30% ownership stake). A variety of holding companies was registered in countries like Luxembourg and the Netherlands, despite conducting their business almost exclusively in Iceland. While not being tax shelters, Luxemburg and the Netherlands could offer other significant advantages. For example, the Dutch legislation on holding companies made it especially attractive to register there, even though taxes were relatively high. In Luxembourg there was and still is an effective banking law that protects customers' right to privacy, which makes it easy to conceal information. Actual tax havens, such as the British Virgin Islands, Cyprus, and the Isle of Man were also used to evade taxation and conceal ownership. Furthermore, there were cases when corporations were transferring a part of their balance sheets offshore to artificially improve their domestic balance and enhance their equity ratio (Interviewee #1, 2009).

Another unfortunate development of the economic boom in Iceland was the increase in the dominance of major stockholders over the smaller ones. This development resulted in larger shareholders receiving funding from the corporations where they were "big players" (both in terms of massive amounts and favorable interest rates), to an extent which was not available to the smaller shareholders (Interviewee #8, 2009). Rules of maximum lending were exceeded, especially in cases when ownership was concealed. The rules regarding collateral were also bent: while they clearly stated that lending for buying stocks

must not exceed 60% of their market value, actual cases showed that large shareholders were receiving lending which amounted to 100% of the purchase price. Furthermore, the largest and most important shareholders were also receiving more favorable borrowing terms than the smaller ones, and were enjoying additional dividend payments (Interviewee #1, 2009). Taking advantage of these encouraging conditions, large shareholders leveraged their positions and bought more shares of the corporations they owned (funded by the banks, with little or no collateral), in order to drive up the share prices (Interviewee #7, 2009). The business culture in general also allowed for large imbalances in favor of businesses over regulatory authorities. This fact later proved to be fatal for the financial system in the country (Wade, 2009b).

Change in a society's business culture can take the form of a sudden transformation in lifestyle, leading to frivolity and excess, on the part of the business elite. This was the case in egalitarian Iceland, and it was a rather dramatic lifestyle transformation (Interviewee #9, 2009). Private jets, helicopters, winter palaces in Switzerland, summer palaces in France, apartments in London and New York are all examples of how assets were compiled in Iceland and transferred abroad (Interviewee #8, 2009). There were countless other examples that demonstrated a deteriorating business culture in Iceland. For instance, individuals were chosen to sit on boards of the privatized banks with little knowledge about the economy and business life. There were unclear strategies in terms of corporate social responsibility, and little cautiousness in business operations prevailed throughout (Interviewee #6, 2009).

Furthermore, the conduct of corporate governance within the Icelandic banks did not foster sustainable banking. A mismatch between incentive systems, risk management and internal control systems appeared to have been unnoticed by the banks' boards. First of all, incentive systems were directed towards extreme risk taking, with risk management often in the hands of people in their late twenties or early thirties with no prior experience in risk management or internal control. In addition, board members had no stimuli for reasonable risk management efforts, since many of them were the largest debtors of their respective banks (Special Investigation Commission, 2010).

Moreover, self-regulatory procedures and mechanisms were lacking in day-to-day operations, and most boards and large shareholders were ignorant of the significant risks taken (Interviewee #10, 2009). Within the banks, a radically new compensation system (encouraging aggressive investment strategies as well as excessive risk taking) was established (Sigurjonsson, 2010b). Private and institutional lending also reflected such strategies. For example, according to information recently leaked to the public³, one of the country's major banks lent around €6.5 billion to six companies, four of which were in non-arm's length relationships with the bank's major shareholders (Mason, 2009). What is even more amazing is that either partial or no collateral for these loans was required. Exacerbating the situation was that, unlike from a few largest owners of the banks, other shareholders were weak, dispersed, and unprotected. They had to cope with the increasingly complicated operations of the banks, where there were new financial products (derivatives, swaps, etc.) introduced nearly every month.

With little assistance coming from the regulatory agencies, these shareholders had to rely on corporate governance mechanisms to protect their interests, but unfortunately, these mechanisms were not enforced (Interviewee #4).

While the banking system in Iceland was expanding at a tremendous pace, foreign financial institutions, international rating agencies, and foreign media began criticizing the Icelandic banks for the lack of transparency in their operations, strategy, and media relations. The main point of their criticism was relating to the lack of direct and unbiased coverage of the banking expansion in the Icelandic media. The reality was that nearly all the Icelandic newspapers and business magazines during this period were indirectly owned by the banks themselves through their largest shareholders (Interviewee #9, 2009). The same shareholders, many of them board members of the banks, were also their largest debtors. Any attempts to criticize the banks or institute legislation against media monopolies were promptly quashed by the government. Moreover, although the banks had thousands of shareholders all around the country, in majority they were quite inactive in challenging either boards or bank executives. Therefore, there was no media to act as a watchdog, and likewise, the politicians denied any wrongdoing on the part of the banks (Schwarzkopf and Sigurjonsson, 2010). The close ties between the banks, the media, and the government did not obviously encourage transparent and informative reporting. Ideally, the accurate information and critical analysis could have triggered both a much more adequate public debate and a closer regulatory supervision, which would have put pressure on both government and the banking industry to do business in a

more transparent and honest way. Unfortunately, Icelandic business culture did not provide for such an ideal setting.

All these practices led to a significant exaggeration of business capabilities, where projects that many corporations chose to participate in, and the new heights that the country's banking sector was trying to reach, were way beyond their means. Ignorance might be the cause of such business behaviors on some occasions, but when these behaviors and practices became a commonly accepted way of doing business, the business itself becomes unsustainable. As soon as the international financial "springs" – an abundance of easily available and cheap credit – dried out, the Icelandic economy collapsed like a house of cards: all due to the highly unethical and blatantly corrupt business practices described above.

To conclude, it is important to mention that similar business practices were not exclusive to the Icelandic economy and Icelandic enterprises, but what distinguishes the cases illustrated above from the rest is the unprecedented direct and indirect involvement of the political elite in the way that business was conducted (Haralz, 2007). To extend the argument, both political favoritism (nepotism) and the weak business culture are to blame for the demise of the Icelandic economy and significantly, in Iceland these two factors are strongly interrelated. According to Brynjarsson (2009), nepotism is the most significant reason for the weak business culture in Iceland. It influenced not only how business was being conducted but also the capacity of the civil service to exercise restraint and oversight over the private sector. The ratio of political appointments to governmental positions is a striking revelation of this problem.

In the period between 2006 and 2009, approximately 50% of appointments to official positions were influenced by the political connections of the appointees leading to waste, inefficiency, and lack of talent within public administration (Kristinsson, 2009). This nepotism, along with political connections being a guiding business principle, made both regulation and oversight close to impossible (Interviewee #3, 2009).

Although nepotism is in some way an unavoidable phenomenon in a small, mono-cultural, and geographically isolated society, many, as Mr. Olafsson cited above, considered the small size of Iceland to be a guarantee of transparency in the conduct of affairs. Small size, apparently, did entail risks of corrupt behavior due to the presence of close links between government and business community, as well as ever-present state interference in the economy (Council of Europe, 2008). The lack of supervision by public authorities subsequently led to an unsustainable expansion of the Icelandic banks, which prompted the entire crisis.

To summarize this section, it is important to reiterate that all of the questionable practices presented above may be explained by a weak business culture in the society. This weakness was compounded by a company-level lack of diversity and tight personal networks in managerial relationships and asset ownership. To aggravate the situation, political culture and a history of extreme state intervention in the economy have created an unprecedented bond between politics and business, some sort of a symbiosis of the political and business elites (Jonsson, 2009). The members of the newly created elite decided who was to be involved in lucrative business opportunities largely based on connections among

the individuals or companies involved. This new symbiotic "entity" was vigorously making all the key business decisions in Iceland, and various regulatory and supervisory bodies simply could not, and in many instances, did not want to keep pace.

Conclusion and Recommendations

Conclusion

In conclusion, it is important to reiterate that given the Icelandic experience, indices for measuring corruption and common definitions of corruption proved inadequate, as they focused on acts and omissions of individuals rather than on the overall business culture. This created conditions conducive to corruption and failed to recognize that public officials could be corrupted without making a tangible personal gain.

Of course, Iceland like any other country has to deal with corruption in the traditional sense, most commonly defined as the abuse of public or private office (entrusted power) for personal gain. Iceland's high ranking on TI's composite Corruption Perceptions Index demonstrates, however, that the level of this type of corruption is relatively low. Nevertheless, the collapse of the country's economy has revealed that there was a different and possibly more dangerous form of corruption lurking in the environment that was not detected using traditional notions and measurements of corruption.

While there is still no direct evidence that Icelandic public officials have taken direct actions for their personal gain, all of them were subjected to circumstances that had the potential to corrupt their capacity to act (European Commission, 2010). This fact made it more difficult for them to monitor the economy and correct business behavior and business culture as necessary. Such systemic wrongdoings in the business environment were extremely difficult to discover and act upon, since they had become the norm and the standard of accepted behavior (Caiden and Caiden, 1977). As one could see from the multiple cases of concealed ownership, cross ownership, close managerial relationships, elusive leverage buyouts, etc., it was nearly impossible for public officials to monitor compliance with law and ethics.

These instances demonstrate the potential to corrupt and are examples of circumstances where the actions and decisions of public officials (as well as business leaders) were actually influenced in a corrupt manner. Yet it would be hard to fit them within traditional notions of corruption, as the Icelandic circumstances tend to involve systemic negligence, ignorance, and confusion, rather than direct abuse, and they did not necessarily result in concrete personal benefits for the officials involved. Therefore, it would be fair to conclude that although there was a high level of corruption in Iceland, it transpired not so much in direct benefits to the parties involved but rather as an attitude that allowed a weak business culture and unethical business behaviors to flourish, and that the traditional measures of corruption proved inadequate in capturing it.

The consequence of this was that before the crisis businesses and the society as a whole were largely unaware of the level of corruption in Iceland and therefore unable to address it properly. Plato, Aristotle, and Machiavelli would possibly have given a more useful warning about the risks of corruption in Iceland by focusing on the moral health of the entire society rather than individual actions of officials and their motives.

Recommendations

Based on the tragic experience of Iceland, it is important to make several general recommendations to both business leaders and policy makers wishing to engage in business activities in a transparent, ethical manner.

One of the most important recommendations to policy makers would be to recognize the limitations of current definitions of corruption. In this article, the authors argue that definitions that focus on the actions of individuals, whether for criminal law or for policy purposes, are not adequate, as even the aggregate of individual actions may not give an accurate picture of the level of corruption within a given society. A more specific definition should therefore be used to evaluate corruption at the macro level. From that perspective corruption is seen as a mechanism of social domination, and could be defined in the following way:

It is corruption when one or more sector dominates other sectors of the society and abuses that position in the organisation of resources, public goods, or to exercise undue influence.

Quite a few indicators will enable policy makers to measure whether healthy power balances exist within a given society. For example, one obvious indicator would be the relative size and influence of a particular sector. Another indicator could be the extent with which the authorities enforce existing rules. The next indicator could measure the degree to which the public and the supervisory authorities are engaged with the private sector to promote ethics and responsible business culture, since having the official rules and regulations often do not suffice. Yet another indicator could look into the relationship between the media and major businesses in a country, and at whether or not these entities are tightly connected through direct or indirect ownership. The next indicator can stem from the attitudes that authorities in a given country have towards rapid growth and excessive risk taken by the country's major business enterprises. As one could observe, a relaxed and ignorant attitude can lead to devastating results for these enterprises, and sometimes, depending on the relative size and importance of these enterprises, the society as a whole. The last indicator should deal with the use of independent international experts, or in other words, people not affiliated with any sort of political or business interests in a given country, especially, if the country in question is a small and tightly knit society like Iceland. The definition offered above, of course, needs to be validated through further research that should provide some more insight into its academic reliability as well as practical relevance.

In regards to commercial enterprises, it is recommended that these enterprises pay close attention not only to commonly accepted indices and mainstream

reports but also to a country's history, culture, and political environment, prior to making decisions on investing in that country. That is because corruption may be concealed in unusual forms, as demonstrated in the example of Iceland, making it difficult to understand local business practices and to estimate the level of corruption by relying simply on publicly available information.

Notes

1. For the purposes of this paper, business culture is identified as a set of written and unwritten rules of conduct that facilitate social interactions in regards to business transactions (adapted from Oxford English Dictionary, 1989)
2. According to the Merriam-Webster's Dictionary, saga is "a prose narrative recorded in Iceland in the 12th and 13th centuries of historic or legendary figures and events of the heroic age of Norway and Iceland."
3. For more information, please refer to <http://wikileaks.org/leak/kaupthing-bank-before-crash-2008.pdf>

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Table 1

Basic Statistics for Iceland

Population of Iceland:	306,694 (July 2009 est.)
Inflation rate (consumer prices):	12% (2009 est.)
Labor force:	189,000 (2009 est.) country comparison to the world: 172
HDI (Human Development Index)	3rd place (behind Norway and Australia), according to the UNDP Human Development Report.
Unemployment rate:	8.8% (2009 est.) country comparison to the world: 96 1.642% (2008 est.) note: this figure climbed to 9.4% as of February

	2009
Life expectancy at birth:	total population: 80.67 years country comparison to the world: 13 male: 78.53 years female: 82.9 years (2009 est.)
Literacy:	definition: age 15 and over can read and write total population: 99% male: 99% female: 99% (2003 est.)
GDP (purchasing power parity):	\$12.2 billion (2009 est.) country comparison to the world: 141
GDP - real growth rate:	-6.3% (2009 est.) country comparison to the world: 198 1.3% (2008 est.) 5.5% (2007 est.)
GDP - per capita (PPP):	\$39,800 (2009 est.) country comparison to the world: 19

	<p>\$42,800 (2008 est.)</p> <p>\$42,600 (2007 est.)</p> <p>note: data are in 2009 US dollars</p>
GDP - composition by sector:	<p>agriculture: 5.2%</p> <p>industry: 24%</p> <p>services: 70.8% (2009 est.)</p>

Sources: Statistics Iceland, 2009; CIA World Factbook, 2010

Table 2

Interview Details

#	Position
1	Manager at the Internal Revenue Directorate
2	Analyst at the Internal Revenue Directorate
3	Historian at an Icelandic university
4	Manager at Icelandic Financial Supervisory Authority (FSA)
5	Editor in Chief of an Icelandic business magazine
6	CEO of a media research firm

7	Advocate to the supreme court
8	Chairman of the Board of a large Icelandic pension fund
9	Member of the Icelandic Parliament
10	Professor at an Icelandic university

**PAPER 5: DEFENSIVE SOCIAL NETWORKS AND THE
LOSS OF POLICY-SYSTEM TRANSPARENCY**

David Schwarzkopf and Throstur Olaf Sigurjonsson

Under review for publication in an academic journal

Abstract

Those entrusted with the administration of a community's complex systems can present an instable system as stable. Actor-network theory suggests that these defenders of the constructed 'fact' of system stability will form defensive social networks that can adversely affect transparency and policy discourse. We illustrate this by examining details of the network that formed in Iceland, a close-knit community, in response to a Danish bank's warning of Icelandic banking instability. We show how this network made it difficult for the Danish challenge to incite discussion and policy review within the community. We suggest ways to improve transparency when challenges to complex policy systems that are critical to close-knit communities arise.

Key words: actor-network theory, Denmark, Iceland, media coverage, social networks, network stability.

Introduction

The effectiveness of social policy relies heavily on stable complex systems, since these policy systems not only deliver detailed interventions to the community but also provide information about citizen needs and feedback on the effectiveness of interventions. However, one of the lessons of the recent economic crisis is that assessing the stability of a complex system is difficult. As long as the system's 'customer-facing' operations function in the way users are accustomed to, its long-term stability—that is, its ability to continue to provide assistance to the public and further government's strategic aims—can avoid being questioned. But without an understanding of long-term stability, those evaluating policy effectiveness risk making faulty assessments, leading to inefficient administration if not misguided interventions or neglected needs. Added complications come from the incentives those parties entrusted with the system's operations have to give signs that the complex system is stable. Of course, if the public does not take for granted that the system is stable, doubt could cause the system to experience high costs to avoid the panic that would cause the instability that the public dreaded in the first place. Problems arise, however, when an inherently unstable system is presented as stable. Rather than addressing the instability, those entrusted with the system's operations may spend time and effort defending the system against claims that it is unstable. That is, the 'defenders' are defending a fact that they have created, whether the fact can stand scrutiny or not.

In general, challenges to policy systems have value to the extent that they bring about reviews of legislative or administrative strategy and implementation. Well-founded challenges prevent systems from becoming ‘stale’—failing to meet new or changed needs in the community. More specifically, challenges to claims of system stability raise awareness of taken-for-granted policy delivery methods and strategic intent.

The resulting loss of transparency that can be engendered by a defence of system stability adversely affects the design, implementation and administration of social policy. Citizens are unable to get a clear picture of whether a critical system or institution in their community is working smoothly to meet their needs or is near collapse. Policymakers do not receive reliable feedback to design necessary policy interventions or renovations. Administrators cannot determine the extent to which policy measures are reasonably implemented or effective.

Actor-network theory (Callon, 1986; Latour, 2005; Law, 2009) shows the forms this defence can take and the costs it can impose on those who hope to challenge the ‘fact’. In this paper, we use actor-network theory to demonstrate how this defence can be structured to reduce the transparency of the system to members of the community and outsiders. Using social network analysis, we illustrate how those responsible for the maintenance of a complex system within a close-knit community defend themselves against outsiders’ claims that the system has stability problems. We show how the types of arguments used in defence of the system form connections among different groups within the community. We also demonstrate how connections form between different types of arguments—data-

based and emotional—to construct or activate¹ dense networks that make it difficult for those inside or outside the community to judge the system's true stability. We show a wider application for actor-network theory than previously discussed in the literature at the same time as we draw implications of defensive network formation or activation for policymakers and administrators.

Our analysis focuses on reactions in the Icelandic press to a report issued in 2006 by a leading Danish bank (Danske Bank, 2006) that cautioned that the Icelandic banking system was not as stable as it appeared. As a small, close-knit community, Iceland provides an excellent example of reaction to an outsider's challenge². While the Danish bank's challenge came in the form of technical economic arguments, the historic ties between Iceland and Denmark (which ruled Iceland from 1380 until 1918) provided a particular emotional element to the debate that Icelandic groups were quick to bring to the fore. The defensive network used in 2006 effectively delayed discussion of institutional stability among Icelanders until the system's collapse in 2008. Although banking is a commercial enterprise, its role in economic development and consumer well-being, together with the involvement of politicians and government officials in its defensive network, brought it to prominence in Icelandic social policy. In our conclusion we discuss the value of attention to defensive networks in other social policy areas.

We next describe actor-network theory as the foundation for our inquiry, before providing details on the Danish challenge to Iceland's banking system. We then present our research method, results, and analysis. We conclude with a

discussion of the implications of our findings and suggestions for further research.

Actor-network Theory

Actor-network theory holds that one cannot explain the workings of society by appealing to social constructs, because those concepts are themselves built by the society one is trying to study (Latour, 2005). Thus, one must look at the activities undertaken within society and describe how those activities are interpreted and presented by the parties undertaking them. That is, one must see how society is constructed by its participants, rather than assume that there is a social force that does the construction (Latour, 2005).

This view of ‘constructing society’ arose from a series of studies into the workings of the natural-science community (e.g., Latour, 1987, who cites Fleck [1979 (1935)] as a predecessor in this line of inquiry). Among the principle findings of these studies are insights into the ways in which scientists interpret natural phenomena and present these interpretations as ‘facts’. These ‘facts’ in turn form the basis for further interpretation and presentation unless they are successfully challenged. (A parallel line of thought concerning these challenges can be found in Kuhn’s [1970] notion of ‘paradigm shifts’. Kuhn also acknowledges Fleck’s role as a pioneer in this area.)

Two of actor-network theory’s noteworthy contributions to our view of society inform the motivation and structure of this research. First, those who form a fact

will try to defend it until it becomes a ‘black box’—a concept or construct that is so difficult to challenge that it becomes taken for granted (Latour, 1987). Ideas become ‘black boxes’ as scientists build on the work of others, making it hard to dispute a present fact without also implicitly challenging past facts. To make present concepts difficult to challenge, defenders will form networks—that is, connections of actors. Thus a challenger must not only discredit the ‘inventor’ or chief advocate of the fact, but also those upon whose work this person relied in constructing the fact or those who agree with the chief advocate in his or her interpretation of a phenomenon.

The second contribution of actor-network theory that we use is the idea that an actor need not be human or animate. Latour (1987) points to the need for challengers of a fact to ‘argue’ against the tools and laboratories that scientists use for their research. In this vein, Callon (1986) shows how the behaviour of non-human actors (scallops) played a part in disrupting a network that marine researchers had established to advance their view of effective shell-fish harvesting, while Law (1986) illustrates how navigational tools were part of the network of exploration. Thus, challengers must not only dispute people but also must fight the tools people use.

Putting these ideas in the context of our research, we expect that those charged with the maintenance of the banking system in Iceland would form a network to defend the ‘fact’ of the system’s stability in the face of the Danish challenge. While there may be many actors in such a network, we focus on people and the arguments they present, as these are most easily traceable in the historic record.

Actor-network theory has been used in research into economic and industrial development (Murphy, 2006) and public sector initiatives (Heeks & Stanforth, 2007), among other areas. Although there has been a reasonable amount of research done with actor-network theory as its base, there is a scarcity of work that actually shows the network that forms. Therefore, one of our research questions is: What does the defenders' network look like? That is, what kinds of people-actors and argument-actors are involved, and what are the relationships among them? Before we describe our approach to these questions, we discuss the situation upon which we focus.

Icelandic Banking and the Danish Challenge of 2006

As of 2006, Icelandic banks had been operating in a liberalised marketplace for only twelve years. Through a period of growth and consolidation following the opening of the banking market, three large banks emerged to form the core of the Icelandic international banking system: Glitnir, Kaupthing Bank, and Landsbanki³. In 2000, the banks' assets were less than Iceland's gross domestic product (GDP). By 2006, thanks in part to a booming domestic economy, they were over eight times GDP (Jännäri, 2009). With a newfound investment banking mentality, the banks collaborated with their clients in equity positions as well as serving as corporate finance consultants and providing lending to them (Special Investigation Commission, 2010: Ch. 6). Among these collaborations, Icelandic investors began taking controlling interests in established Danish

retailers, airlines, and real estate firms (Markaðurinn, 2005; Morgunblaðið, 2005a, 2005b, 2006).

In late 2005 and at the beginning of 2006, foreign analysts began to express doubts about the banks' ability to sustain the funding for their growth. In addition, some raised concerns about the banks' culture, risk management, dependence on wholesale financing, and lack of transparency in their ownership and holding structures (Jännäri, 2009). Although it was not the first analysis to raise concerns about Icelandic banking⁴, the report issued on March 21st by Danske Bank (2006: 1–2) was the sharpest in its criticism. From its title ('Iceland: Geyser crisis') to its sweeping statements (e.g., 'On most measures, the small Icelandic economy is the most overheated in the OECD area'), to the comparisons it made (e.g., 'Iceland looks worse on almost all measures than Thailand did before its crisis in 1997'), the report drew the ire of many Icelanders (Jónsson, 2009). The Danske Bank analysts held that 'there has been a stunning expansion of debt, leverage and risk-taking that is almost without precedents [sic] anywhere in the world' and cautioned 'we see a substantial risk of a financial crisis developing as an integral part of an Icelandic recession in 2006-7'. At the same time, the analysts admitted that 'Iceland is not a core part of our research universe', but decided to issue 'this special report' because of increased interest in Iceland and because 'recent market jitters suggest that a material change of dynamics is in the air'. During the week following the report's publication, each of the three major banks' shares lost about 10% of their pre-report value and the Icelandic króna lost 4% in value against the U.S. dollar.

It is now well known that there were flaws in the Icelandic banking system that contributed to its spectacular collapse in the autumn of 2008 (Special Investigation Commission, 2010: Ch. 2). During the ensuing financial crisis, Icelandic commentators looked back on the events of 2006 and saw them now as warning signs, although the bitterness of the debate lingered. Thus, for example, the present Governor of the Central Bank of Iceland holds that ‘the 2006 crisis should have been used to stop the growth of the Icelandic banks before their assets became ten times Iceland’s GDP [in 2008]’ (Morgunblaðið, 2010). At the same time, the chief economist of Kaupthing Bank has written, ‘the Danske Bank analysts achieved their goal of becoming prominent Icelandic commentators on international newswires, and modesty was not one of their virtues’ (Jónsson, 2009: 77).

While these comments were made with the benefit of hindsight, it is noteworthy that the 2006 debate remains salient to the Icelandic community. This leads us to ask a second research question: What factors in the network that was constructed or activated to defend the notion of financial stability among the banks made it difficult for the public to ascertain whether the banks were stable in 2006?

Method

Sample selection and coding

We focus on the first week after release of the Danske Bank report in order to show how quickly a defensive network can be activated or form to influence

subsequent efforts at evaluating the system. Working with a press-research service, we identified 31 news articles that mentioned the Danske Bank report and that were published by Icelandic sources during the first week after the report's release⁵.

As mentioned, actor-network theory holds that 'actors' can be people or other animate beings, or the tools people use to construct facts. This suggests that there are two broad categories of actors in this defensive network: people and the arguments they use. Thus, our analysis is based on a two-mode social network.

Coding of people and arguments began with the native Icelandic author translating selected articles into English for the non-Icelandic co-author. Both authors then discussed these articles to agree on a coding scheme. The Icelandic author summarised all articles in detail for the co-author to code. The Icelandic author then reviewed the coding and proposed corrections. Both authors discussed all suggested changes to agree on a final coding.

We classified people by nationality—Dane (d) or Icelander (i)—and by occupation. Occupational categories, abbreviations and counts include economist or analyst at a bank ('bank analyst', designated 'n', six Icelanders, three Danes), bank executive ("b," four Icelanders, one Dane), non-bank business executive ("x," three Icelanders), government official or politician ("p," five Icelanders), academic ("c," two Icelanders, one Dane), or newspaper editor or reporter ("z," three Icelanders). Thus we identified 23 Icelanders and 5 Danes in the 31 articles⁶.

Arguments are the rationalisations, speculations, or suggestions that people advance for the actions or positions taken by challengers, defenders, or others. Arguments fell into three broad categories: those based on data given in the Danske Bank or other formal reports ('report-based', seven items); those based on psychological affects or emotions ('affective', five items); and issues or suggestions that were raised for parties to consider and act upon ('issues', one item).

We counted an argument only once per person per article. We separately identified each argument that a person made in an article. Similarly, we counted each person separately, whether or not that person made the same argument as another person in the same article⁷. Table 1 shows the different arguments, together with their abbreviations and the number of times each appeared in the articles. Report-based arguments represent 63% of the total (53 appearances), affective arguments account for 36% (30 appearances), and issues 1% (1 appearance).

Insert Table 1 here.

Analytical Approach and Results

Implications of two-mode social network analysis

Although two-mode social networks can offer insights into network structure and activity beyond those suggested by typical single-mode networks, there are limits

to the kinds of quantitative analyses that can be meaningfully applied to them (Hanneman & Riddle, 2005: Ch. 17). Therefore our quantitative analysis relies primarily on dividing the two-mode network into two single-mode networks: one for people and one for arguments. Our qualitative analysis, however, uses the two single-mode networks and the two-mode network.

A two-mode network shows both people and arguments as nodes, which means the link or connection between the two can be interpreted as ‘appears with’. A single-mode network of people shows only people as nodes, connected by arguments. Thus one can read the links as ‘makes the same argument as’. The second single-mode network features arguments as nodes connected by people, building on actor-network theory’s view that the tools animate actors use to construct or defend a fact are also actors. Here, one can interpret the links as ‘is made by the same person as’. Arguments do not have to appear in the same article to be connected; an individual’s arguments are considered as being made within the time-period being analysed. For example, an Icelandic analyst need not have made two arguments in the same article or on the same day for them to be counted as two arguments connected by the same person.

Measures used for quantitative analysis

We used typical measures of network composition and actors’ positions in our analysis. Measures of network composition describe how many connections there

are, how closely connected members of the network are, whether there is a tendency to form subgroups within the network, and whether connections are mostly made between members with the same role (e.g., academic, analyst, or politician) or between members with different roles. The specific measures that we use are density, average shortest distance, reach, clustering, core/periphery formation, and diversity. Table 2 summarises the conceptual approach and basis of measurement for these, based on Hanneman and Riddle (2005) and Wasserman and Faust (1994).

Insert Table 2 here.

Measures of individual actors' position within the network focus on the concept of centrality and complement the network composition measures. A 'central' person is one whose arguments are shared by a high number of other people or one who connects a high proportion of other people by the particular arguments he or she makes. This could happen if the central person makes many arguments that are used by many other people or if he or she simply offers a high number of arguments that scattered others also use. Similarly, a 'central' argument is one that connects a high proportion of other arguments. Our centrality measures are Freeman degree, closeness, Bonacich power (beta centrality), Freeman betweenness, and flow betweenness. Table 3 summarises the conceptual approach and basis of measurement for these indicators, again based on Hanneman and Riddle (2005) and Wasserman and Faust (1994).

Insert Table 3 here.

We used UCINET (Borgatti, Everett & Freeman, 2002) for our quantitative analyses. Illustrations of the network come from NetDraw (Borgatti, 2002), a visualisation package.

Results

Qualitative analysis. The 31 articles featured 28 people making 13 arguments. The two-mode network depicted in Figure 1 suggests the importance of both report-related and affective arguments. A number of people make economic-technical (ectech) arguments, along with accusations of misinterpreted data (misint) and use of the wrong data (wrdata). In addition to these report-related items, charges of Danish envy (dnenvy) and that the Danes do not know Iceland (dkisl), both appeals to the emotions, seem to dominate. Note that politicians (ip) particularly use these two arguments and thus help connect these affective arguments to report-based ones. Report-based arguments, on the other hand, appear prominently in the bank analysts' (dn, in) repertory, which is not surprising.

A moderate amount of the possible connections are present in Week 1's 'people-network' (Figure 2)—that is, many people are making arguments in common. Bank analysts seem to represent one well-connected group, while politicians may be on the periphery, making arguments that connect others who would otherwise be rather isolated. Non-bank business executives (x) and newspaper commentaries or editorials (z) do not appear much at this stage.

Finally, the ‘argument-network’ for the first week (Figure 3) shows that affective arguments and report-based arguments are already well-connected—that is, there are people making both kinds of arguments early on. Only one issue, the need for better reporting or transactional transparency from the banks (transp), appears at this time.

Insert Figures 1, 2 and 3 here.

Quantitative analysis of network structure. Visual depictions of networks are suggestive rather than definitive, in part because the software used can be manipulated to move nodes around in the drawing⁸. Quantitative methods provide more details.

Analysis of the people-network reveals that it is moderately dense (57% of all possible connections are present) and relatively compact, with an average shortest distance of 1.51 steps between actors, suggesting that it is easy to go from one ‘end’ of the network to the other. In fact, one quarter of the people in the network can reach three quarters of the network in one step—that is, one quarter of the individuals share at least one argument with three fourths of the rest of the people. The tendency to form groups, clustering, is high (87%). Nearly all of the individuals (92%) can be said to be in a single core group, and 64% of the possible connections among these individuals are present. Eighty two per cent of the people have 80% or more of their shared arguments take place with individuals who are not in the same role (analyst, bank executive, academic, etc.) as they. See the first column of Table 4 for details. A closer inspection shows

that eight people from four groups (ib7, ic4, in1, in4, in5, in11, in13 and ip6) are connected to at least 80% of the core's members.

The argument-network reveals a similar structure. The network is moderately dense (58%) and relatively compact (average shortest distance = 1.50 steps). Nearly one quarter of the arguments (23%) are connected to three quarters of the other arguments in one step, which means that nearly one quarter of the arguments are made in conjunction with 75% of the other arguments by the people in the network. There is a high tendency towards clustering (81%), with 38% of the arguments in one core group that is completely internally connected. Thirty eight per cent of the arguments were made in conjunction with 80% or more arguments that were not of the same type (report-based, affective, or issues). Details appear in the second column of Table 4.

Insert Table 4 here.

Quantitative analysis of individual network actors. We chose normalised scores more than one standard deviation above the mean in determining central actors on the various measures. See the top half of Table 5 for a summary of 'central people'. While no person is noteworthy on all centrality measures, there are prominent actors. In particular, four analysts (in1, in5, in11 and in13) and one politician (ip6) score high on three of the five measures. Equally important, 12 of the 28 people in the network can claim to be central based on at least one of these measures.

Both affective and report-based arguments offer candidates for ‘central arguments’. ‘Danes do not know Iceland’ (dkisl) scores high on all five centrality measures, as does ‘compensating data are missing’ (compdm). ‘Danes are envious of Icelanders’ (dnenvy), ‘they are misinterpreting the data’ (misint), and ‘the wrong data are used’ (wrdata) are also prominent actors in the argument-network, based on at least one of the centrality measures. Central arguments appear in the bottom half of Table 5.

Another way of assessing centrality is to examine which actors make the network vulnerable to splitting up. Using KeyPlayer1 software (Borgatti, 2003), we found that fragmenting these networks to approximately one half of their cohesion—equivalent to dividing the networks into two roughly same-sized sub-networks—would require removing seven people from three groups (ib, in and ip) and three arguments, both report-related and affective, from the argument-network. ‘Removing’ means discrediting the views of the people in the people-network or overcoming the arguments in the argument-network.

Insert Table 5 here.

Interpretation. Both the people-network and the argument-network at the end of the first week following the Danske Bank report’s release are dense, compact, and show a tendency toward clustering. Moderate numbers of both kinds of actors can reach an extensive portion of their respective network within one step. The cores of both networks are large and dense. A high proportion of people show a high proportion of their connections outside of their particular role.

This means that many people are connected by similar arguments and many arguments are connected by being made by the same individuals. Further, a moderate proportion of these connections are ‘close’—that is, arguments are made in common by a high proportion of other people. People in particular form a large core group, which means there are not many people who make just one or a few arguments. While core membership may be due to one’s role within an occupational group, the frequency of one’s public statements, or one’s availability for interviews, it is noteworthy that core members come from different groups and constitute a large enough number to make a challenge to their advocacy difficult. Finally, report-based arguments are likely to be made in conjunction with affective arguments, while arguments of either type are likely to be made by people of different roles.

The centrality analyses suggest that a high proportion of people can be regarded as important to the network, where importance means these people offer many arguments or offer arguments that are shared by a large number of others. In addition, these central people come from four different groups (bank analysts, bank executives, politicians, and academics). At the same time, there are both report-based and affective arguments that are central—made in common with other arguments. Further evidence of the difficulties inherent in challenging these networks comes from the analysis of network vulnerability. Obviously, discrediting one quarter of the people or overturning one quarter of the arguments would be a large undertaking, particularly since a challenger could not

simply blame a particular perspective on an entire group (akin to saying, ‘Of course politicians would say that’).

In sum, at the very start of its construction or activation, the network that arose around the idea of ‘financial stability’ was sufficiently closely interwoven—yet not very centralised—that anyone who would challenge the notion that the Icelandic banks were stable would have had to discredit many different role-players and would have had to overturn both technical and emotional arguments. In other words, a challenger could not simply decry one group (e.g., politicians, bank executives or analysts) as a whole, since each group had representative ‘central players’. Neither could a challenger be easily heard by dismissing arguments as emotional or as technical and arguing from the other perspective. Rather, a challenger would have to address both emotional and technical arguments at the same time.

Finally, analyses of the networks through the end of 2006 show they kept the same structural pattern and generally produced highly similar diagnostic data, lending further support to the idea that the initial network activation or formation seen here set the defensive network’s foundation⁹.

Discussion and Conclusion

Our analyses show the difficulty the Danske Bank faced in trying to get its message heard. The defensive network made it hard for challengers to identify one group as the key advocacy force or one type of argument as the main basis

for the claims of the Icelandic banks' stability. Therefore, focusing on the views of one group or on one particular style of debate in hopes of breaking the network apart, and thus communicating an alternative perspective, was problematic.

It is important to bear in mind that none of this necessarily implies any wrongdoing on anyone's part. Analyses of this sort cannot impute motives. Simply because many parties presented the same argument does not mean they conspired in their presentation. Neither does it mean that any party intentionally distorted any facts¹⁰. We also acknowledge the necessary limitations of this study. We may not have captured all relevant newspaper articles. We confined our analysis to print sources, although anecdotally we know that other media outlets in Iceland were reporting on the debate along the same lines. We understand that important 'behind-the-scenes' discussions and activities were taking place during the time of the debate, focusing on suggestions made for improving the banking system. As these usually were not well publicised, our analysis could not include them.

Defensive social networks arise naturally, according to actor-network theory. Their effects are especially pernicious in close-knit communities, since challenges are seen as affronts to accepted ways of life in the community and to trust in community members. In the social policy arena, community-based complex systems can support initiatives in local delivery of healthcare; social services such as food banks, childcare, and eldercare; transportation; and environmental monitoring and remediation. We believe defensive social

networks are likely to form in these areas to protect the interests of those responsible for the underlying systems, should the systems' stability be challenged. Similar effects may be experienced in national complex systems, but often these systems are established with monitoring and review mechanisms built into them. This leads to the question of how defensive social networks can obscure or hamper such mechanisms—a question that is worth future research.

Those designing or implementing social policy need to be aware of the structural elements of the networks that form or are activated around a policy issue. First, networks that arise to defend a community's institutions can work against the best efforts at transparency. Without knowing the true state of a complex system, social policy can be misdirected, enactment of necessary improvements may be delayed, and the effects of implementation may be unknown or misinterpreted. Second, these defensive networks complicate communications 'into' the community and increase the chance that social policymakers will be treated as outsiders who neither understand nor care for the community's needs. Third, defensive network structures cause policymakers to expend effort to get past network members to the community itself, thus decreasing efficiency, raising costs, and diverting time that could be better spent on policy design and implementation.

Iceland represents a community closely knit by kinship ties, but 'close-knit' need not be determined solely by ethnic or historical background. Challenges by those outside the community to a 'fact' constructed within the community are likely to face the construction or activation of a defending network. If those entrusted with

the operation of complex systems—be they financial, judicial, legislative, or other—tend to defend the facts they have constructed, and if the defenders’ arguments come from different parties mixing emotional and rational appeals, citizens affected by those systems will not have any clear, unbiased way to understand whether the fact has any merit. In light of this, it is likely to prove valuable to design ways to map such networks quickly, as they are arising, in order to show the citizenry and others affected by the outcome of the debate who is participating in the discussion (and thus, who is not) and how the arguments are being framed. For example, in the Icelandic case it may have proven useful to citizens and legislators to show visually the ownership connections between companies, the connections between boards of directors, and the connections between media outlets, politicians, and companies. This is what the Special Investigation Commission (2010) included in its report on the 2008 bank failure, but of course only after the collapse. A similar public display and description, published before a debacle, can bring such taken-for-granted structures to light and open up worthwhile discussion or at least deepen understanding when debates occur.

One way around the dilemma posed by defensive networks is to have the community agree to establish a group outside of the community that can serve as ‘translators’ of the arguments presented. This group would function much as an arbitration board does, with the important difference that the group would not come to any decisions on behalf of the disagreeing parties, but would serve to present the arguments in a clear manner, identifying emotional components as

such. The design of such a ‘board of translators’ forms part of our current research agenda¹¹. While we are far from any complete picture of what the board would look like, we realise the community would need to choose members before a crisis occurs, members would have to be trusted by different segments of the community, and the threat of ‘capture’ by particular groups within the community would need to be addressed.

Our study holds theoretical and practical implications. On the theoretical side, we have shown how a network such as actor-network theory posits can indeed form to defend against a challenge to a social ‘fact’. We have seen that non-animate actors (here, arguments) play a crucial role in that network and help explain the network’s tenacity. A worthwhile extension of this work is to examine whether such networks actually form in defence of the fact or merely get activated (having already been formed but lying dormant) when the challenge occurs. Activation in terms of the emotional arguments in the network suggests that there may be prejudices simmering below the surface in the community. It is advisable for policymakers and administrators to know of these—and of the connections between these arguments—when intervening in community systems.

We also have shown how one can measure the structure of these networks while identifying key actors in them. An intriguing question that is worth future study is the extent to which members of the network identify spokespeople who are to be the most identifiable defenders of the fact, and who thus become some of the central actors in the network by design. All involved in social policy stand to benefit from knowing who these ‘designated representatives’ are, either in order

to interpret their statements as indicators of interest group sentiment or to weigh their statements for possible bias.

One must remember that ‘challengers’ are simply those actors who are outside of the groups that hold a particular view. In the situation we analyse, these challengers could as easily be Icelandic citizens as well as Danes. It is worthwhile to ask what network elements—structural or participatory—turn ‘by-standers’ to a debate into a new set of challengers.

Obviously there is much work yet to be done in this area. As actor-network theory suggests, the construction and activation of networks both to challenge and to defend a fact is a natural occurrence. The least one can do is to make these networks visible in hopes of improving the quality of the debate and the accountability of the actors.

Notes

¹ Since it is not possible to tell whether these networks existed but were inactive before this event or formed in response to the event, we talk about their ‘construction or activation’.

² The U.S. State Department notes, ‘Because of its small size and relative homogeneity, Iceland holds all the characteristics of a very close-knit society’ (U.S. Department of State, 2010). Iceland’s estimated population as of January 2006 was 299,000 (317,000 as of January 2010). The country comprises 103,000 square kilometers (39,600 square miles) in area (Statistics Iceland, <http://www.statice.is>, accessed September 2010).

³ See Jónsson (2009) for a history of the Icelandic banking system.

⁴ Fitch Ratings (2006) and Merrill Lynch (2006) had issued earlier reports.

⁵ Contact the authors for a list of the articles used. We had hoped to map the ‘challenger network’ as well by including Danish articles, but we found too few sources to allow this.

⁶ While the Danes quoted in Icelandic newspapers tended to agree with the challengers, the newspapers featured their arguments either as further information for the debate or as a counterpoint to particular Icelanders’ arguments. Therefore we include them in our study.

⁷ A coding scheme for network analysis can also include differentiation of human actors by their overall attitude toward the situation. For example, this could be shown by distinguishing between a person who supports a particular argument and one who disagrees with the argument, or by separately identifying those who

believed the Icelandic economy was on perilous ground and those who thought otherwise. In fact, we found that less than 10% of the Icelandic human actors in the network expressed any reservations about the stability of the financial system, and none of those had concerns about the ‘hard landing’ predicted by Danske Bank. Since this is too small a proportion upon which to draw any meaningful conclusions, we did not code actors by their overall attitude. We thank our colleagues for the suggestion, however.

⁸ Our illustrations use NetDraw’s default drawing condition, which approximates a multi-dimensional scaling (MDS) technique. MDS places nodes so that the distances between them correspond as closely as possible to the proximities shown in the input data (Borgatti, Everett & Freeman, 2002). As Borgatti et al. (2002) note, MDS solutions are not unique—thus our caution in interpreting the graphic display.

⁹ Contact the authors for data related to subsequent periods in 2006.

¹⁰ But see the report of the Special Investigation Commission to the Icelandic Parliament (2010) for their conclusions on wrongdoing in events leading to the 2008 collapse.

¹¹ Iceland’s National Economic Institution (Thjóðhagsstofnun) was formed in 1974 to monitor economic policies, but was dissolved in 2002. Recently, a Parliamentary Review Committee has suggested that the Icelandic Parliament establish a similar group. Although our suggested ‘board of translators’ would have a different mandate, we offer these examples as signs that the idea of such a board is not unreasonable.

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Table 1. Argument Types, Abbreviations & Counts

Report-based ('rational'), n = 53

- economic-technical (ectech, n = 19)
- 'They are misinterpreting the data' (misint, 15)
- 'The wrong data are used' (wrdata, 7)
- 'Bad comparisons are made' (badcmp, 4)
- 'Compensating data are missing' (compdm, 4)
- 'The reports take a questionable approach' (oddapp, 3)
- 'Another report disagrees' (contrp, 1)

Affective ('emotional'), n = 30

- 'Danes do not know Iceland' (dkisl, n = 12)
- 'Danes are envious of Icelanders' (dnenvy, 9)
- 'Icelanders are risk-takers' (isrisk, 4)
- 'The media's approach is questionable' (mediaq, 3)
- 'Danes are competing with Icelanders' (dncomp, 2)

Issues, n = 1

- 'Icelandic banks should be more transparent' (transp, n = 1)
-

Notes. Arguments are expressed in terms typically found in the newspaper articles. Counts are tallies of the number of appearances of the argument. Mentions by the same person in different articles and mentions by different people in the same article are each counted separately and included in the total shown.

Table 2. Measures of Network Composition

Measure
Conceptual approach
<i>Basis for measurement</i>
Density
Networks can be described by how connected actors are.
<i>Proportion of possible connections that are present</i>
Average shortest distance
Networks can be described by how compact they are—the average shortest distance between every pair of actors.
<i>Average of the shortest distance (geodesic difference) between each pair of actors</i>
Reach
Networks can be described by how closely connected actors are.
<i>Number of others connected to an actor within x steps (here, 1 step = shared argument or person)</i>
Clustering
Networks can be described by their tendency to form subgroups—clusters of ‘better-connected’ actors.
<i>Proportion of connections shared by subgroups of actors</i>
Core/periphery formation
Networks can be described by the size of a single group that is well-connected and the number of actors not in this well-connected group.
<i>Proportion of connections between actors</i>
Diversity
Networks can be described by the tendency of actors within an affiliation group to communicate within or outside of that group.
<i>Proportion of an actor’s connections that are made with those not in the actor’s group (here, occupational group)</i>

Sources. Hanneman & Riddle (2005); Wasserman & Faust (1994).

Table 3. Measures of Centrality

Measure
Conceptual approach
<i>Basis for measurement</i>
Freeman degree A central actor can share messages with many others. <i>The number of ties that involve the actor</i>
Closeness Messages from a central actor do not have to travel through many intermediaries to reach others. <i>The inverse of the sum of the distances from the actor to all other actors, standardized</i>
Bonacich power Messages from a central actor reach those who can relay the message to many others. <i>Ties between the actor and others who have a high number of connections</i>
Freeman betweenness A central actor can facilitate or impede messages sent directly from one actor to another. <i>Proportion of direct paths between other actors on which the central actor lies</i>
Flow betweenness A central actor can facilitate or impede messages sent from others directly or indirectly. <i>Proportion of all flows between actors that involve the central actor</i>

Sources. Hanneman & Riddle (2005); Wasserman & Faust (1994).

Table 4. Network Characteristics

	People (n = 28)	Arguments (n = 13)
Density	57%	58%
Compactness	77%	78%
Percent of network reaching 75% of others in one step	25%	23%
Clustering	87%	81%
Percent of actors in the core	92%	38%
Density of the core	64%	100%
Percent of actors with 80% or more of their ties occurring outside of their group	82%	38%

Table 5. Central People and Arguments

Network	Group	Measure of Centrality				
		Closeness	Bonacich Power	Flow Betweenness	Freeman Degree	Freeman Betweenness
People						
	ib	--	--	2 7	--	7
	ic	4	--	--	--	--
	in	1 4 5 11 13	1 5 11 13	--	1 5 11 13	--
	ip	6	6	4 8	6	4 7 8
Arguments						
	rational	compdm misint --	compdm misint wrdata	compdm -- --	compdm misint --	compdm -- --
	affective	dkisl --	dkisl --	dkisl denvy	dkisl --	dkisl denvy

Note. Numbers in the people-network cells identify group members.

Figure 1. Two-mode Network of People and Arguments

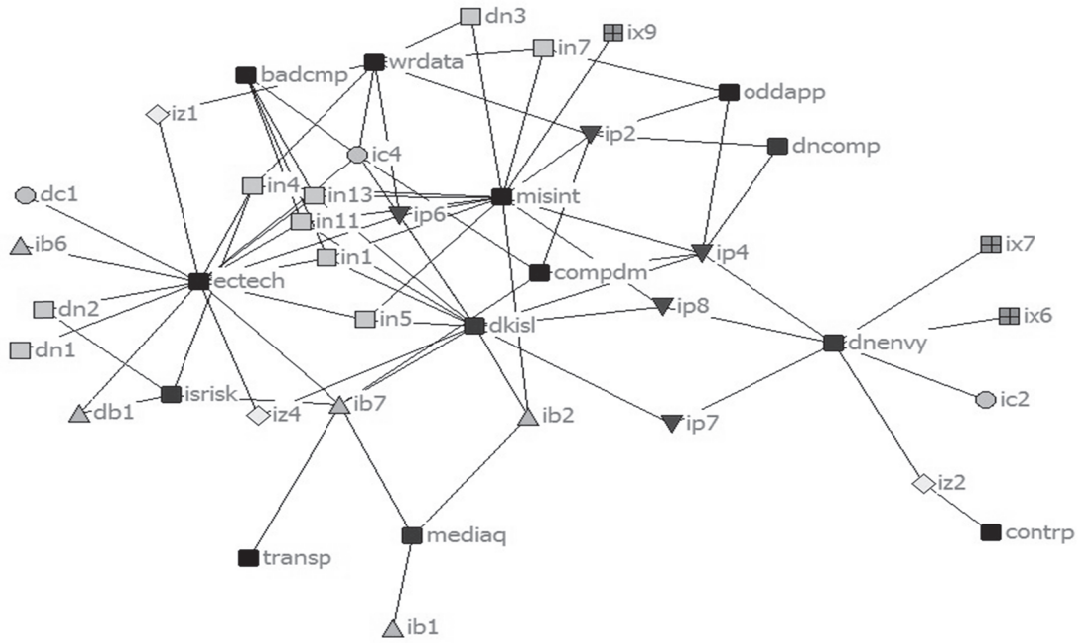


Figure 2. People network

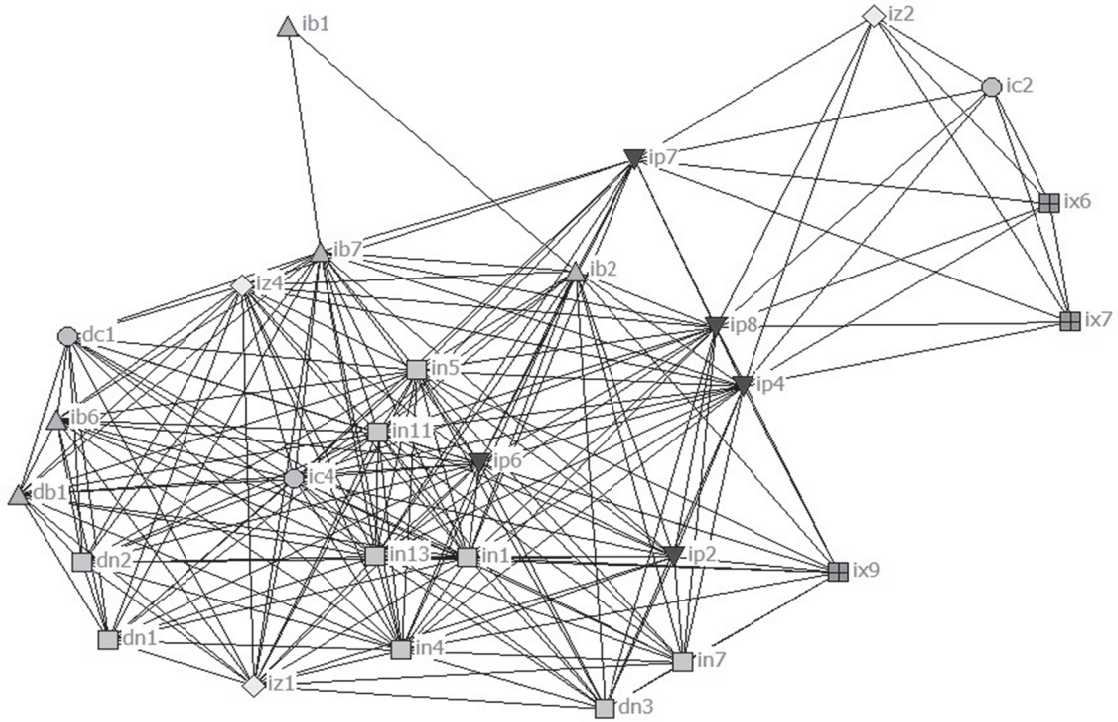
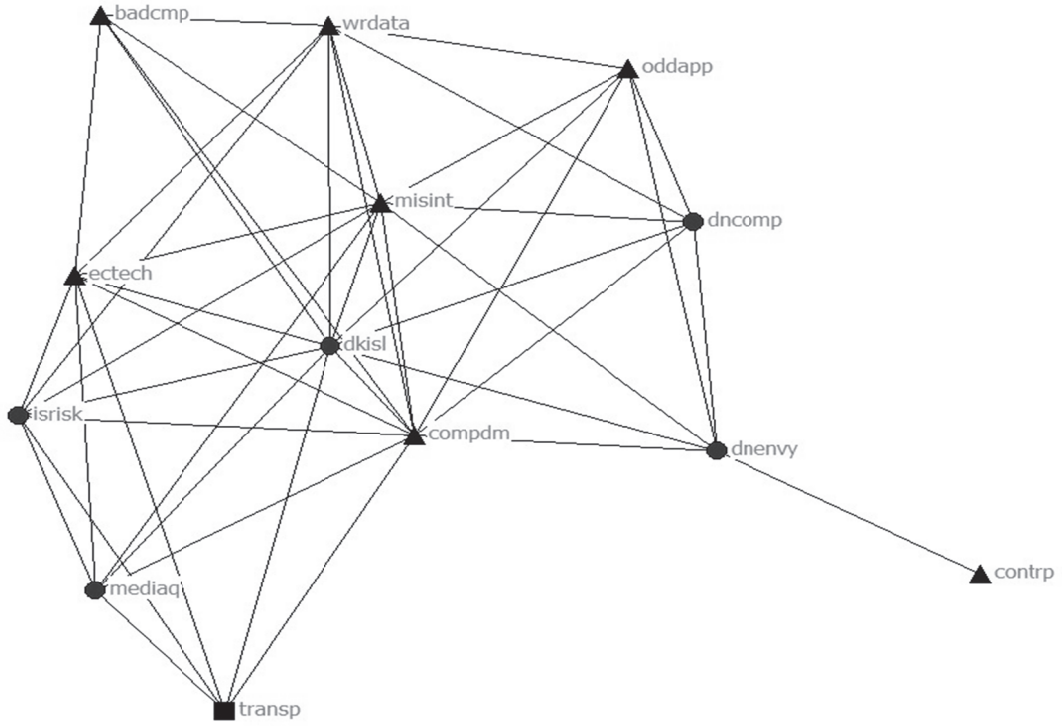


Figure 3. Argument Network



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