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The Icelandic Financial Services Cluster

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Microeconomics of Competitiveness

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May 2nd 2008

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1. COUNTRY ANALYSIS

1.1. Country Profile[1]

Geography: Iceland is an isolated, volcanic island in the middle of the North Atlantic Ocean. London and Copenhagen are 3 hours away by air and Boston and New York 5 hours away. With an area of 103,000 km^2 its size is similar to that of South Korea, Ohio and Cuba, but only the area around the coast is habitable. Iceland's main resources are its fertile fishing waters and its abundant geothermal and hydro energy.

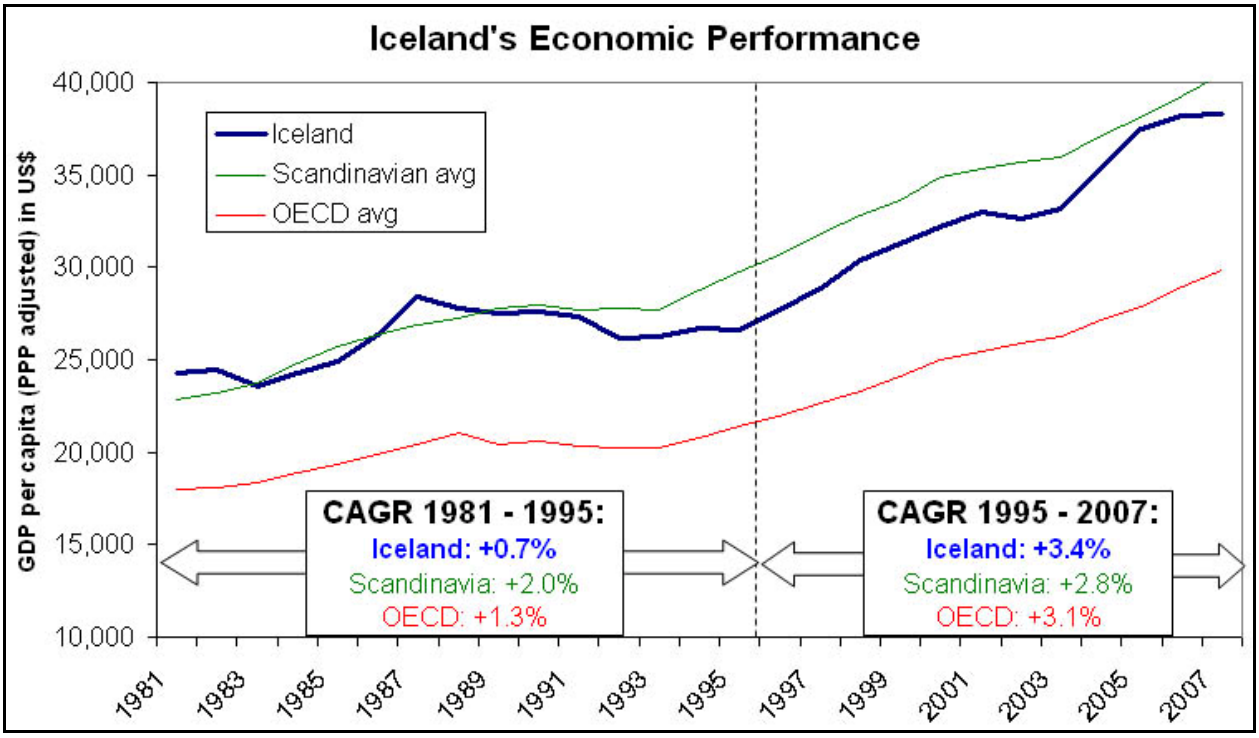
Population: Iceland was settled in the 9th and 10th centuries by people of Norwegian and Celtic origin and remains a homogenous society with its own language and a strong national and cultural identity. Iceland has a population of 316,252 (April 2008), of which more than 60% reside in and around the capital, Reykjavik. Iceland's demographics are enviable as it boasts Europe's highest fertility rate (2.08 children per woman) and a young population with a median age of 34.5.[1]

Political System: Iceland, a constitutional republic with one of the oldest parliaments in the world (*Althingi* – established in 930), has been ruled by coalition governments since independence in 1944, leading to a tradition of political stability and consensus. Since 1991, Iceland's center-right Independency party has led the government. Iceland is culturally related to the other Nordic countries and actively co-operates with them (e.g. through the Nordic Council). Iceland has not applied for EU membership, but was a founding member of the European Economic Area (EEA) in 1993. The EEA is based on the same four freedoms as the European Community and membership means Iceland is part of the European Single market and has to adopt part of EU laws and regulations. Iceland is the only NATO country with no military.

[1] Central Bank of Iceland, Statistics Iceland, http://www.statistics.is/ http://www.sedlabanki.is/, accessed April 2008

1.2. Overall Economic Performance

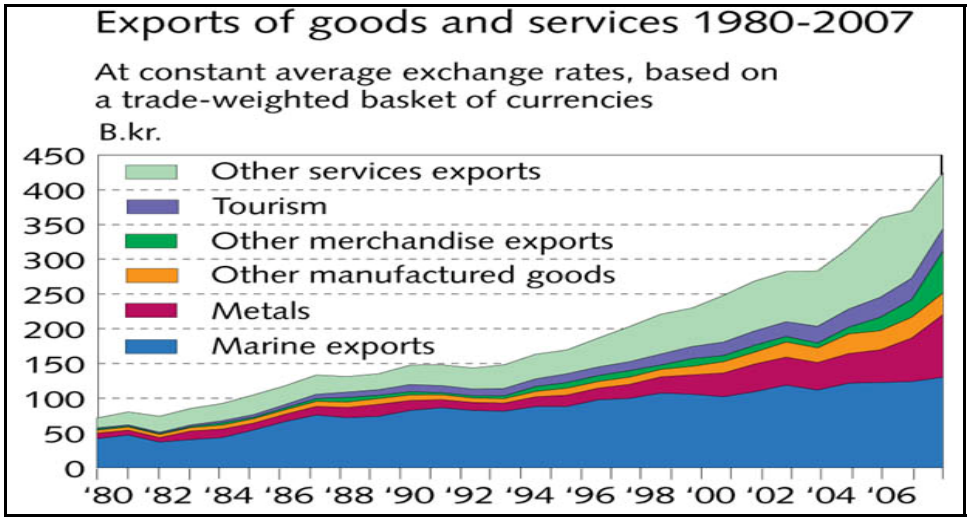
Overview: Iceland has transformed from one of Europe's poorest countries at the start of the 20th century to a prosperous and modern economy. The principal drivers of growth came from successfully exploiting its marine and energy resources. Post WWII growth has been higher than in most other OECD countries but variations in fish catch and export prices caused significant volatility. After a decade of slow growth followed by an economic crisis in the early 1990s, Iceland has followed an economic policy of liberalization, privatization, and tax reforms. These structural changes played a key role in unleashing entrepreneurial dynamism leading to strong growth, diversification and an astronomical rise of the financial sector. However, Iceland now faces significant challenges with a large current account deficit, macro-economic imbalances and large international debt position. Making global headlines and called "An island victim of the global credit crunch"[2] by The Economist magazine, Iceland seems headed for a recession.



Source: Groningen Growth and Development Centre and The Conference Board (2007), authors' calculations

[2] The Economist magazine, "Till debt us do apart", April 26, 2008.

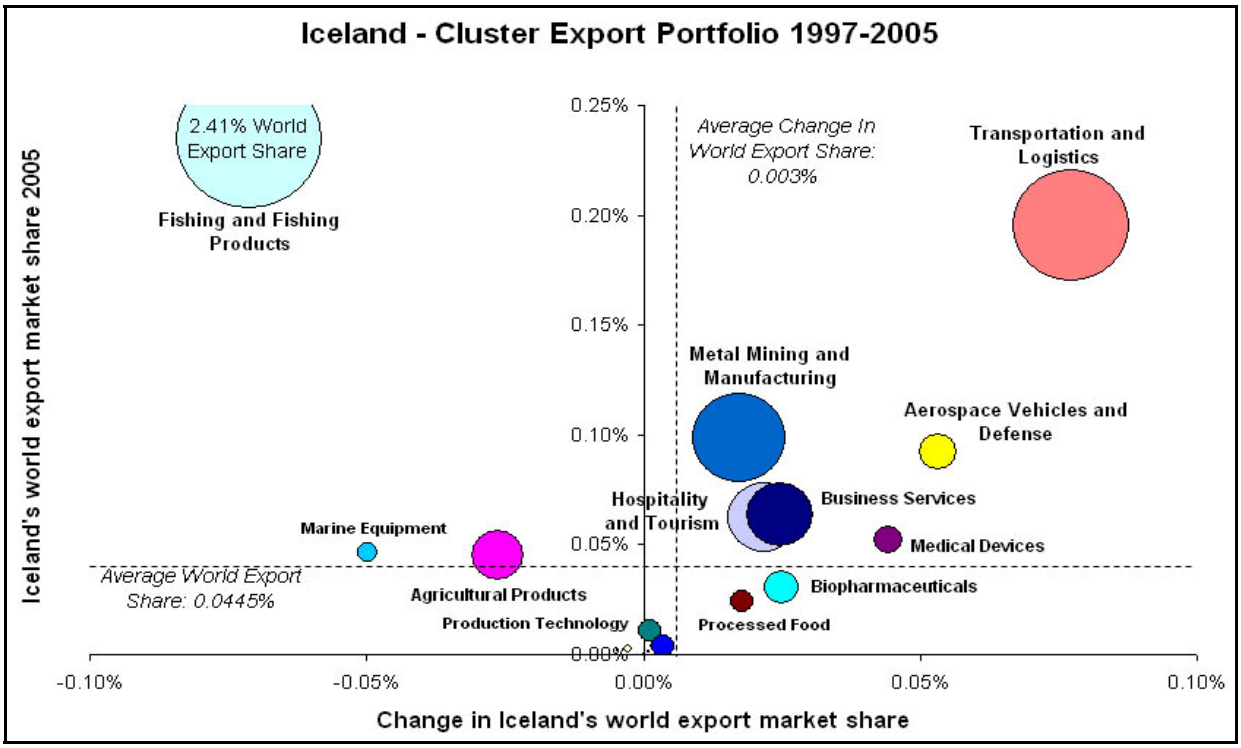
Trade: Iceland is an open economy with imports and exports of goods and services amounting to 51% and 33% of GDP respectively in 2006. The mainstay of merchandise exports is marine products, although, as a share of total exports, it is declining. In 2006, they were 51% of merchandise exports and roughly 34% of all exports, down from 82% and 60% in 1991[3]. Iceland meets 80% of its energy needs by harnessing its hydro and geothermal resources, relying on petroleum imports only for transportation fuels[4]. Iceland is unable to directly export electricity due to its isolation but has been increasingly successful in attracting energy-intensive industry (mainly aluminum smelters), relying on stable, long-term access to cheap (and green) electricity. This trend can be seen by the rapid rise in the export of metals. Furthermore, several new projects are coming on-line or being planned, including Iceland's largest hydro power plant to date and an accompanying ALCOA aluminum smelter which began production in late 2007. Led by aluminum, medical, and pharmaceutical products, exports of manufactured goods have been growing fast and accounted for 38% of merchandise exports in 2006. Export of services has also soared and services now account for almost 35% of total export revenues, up from 26% in 1990[3].



Source: Central Bank of Iceland

[3] Central Bank of Iceland, http://www.sedlabanki.is/, accessed April 2008.

[4] National Energy Authority, http://www.os.is/, accessed April 2008.



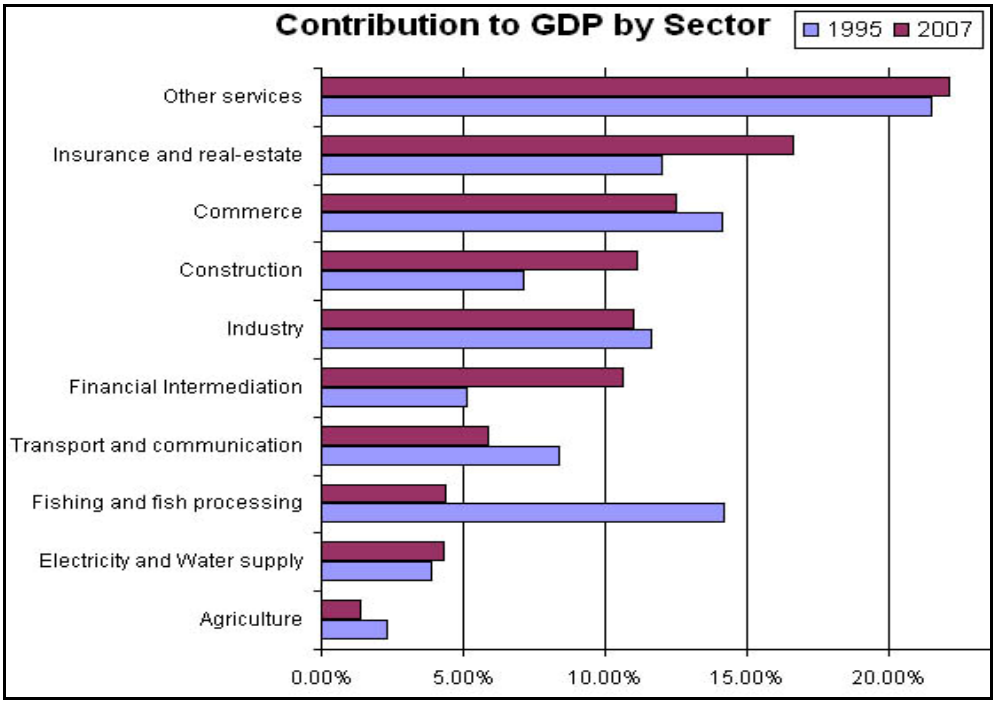
Source: Professor M. E. Porter, International Cluster Competitiveness Project, Institute for Strategy and Competitiveness, Harvard Business School; R. Bryden, Project Director. Underlying data drawn from the UN Commodity Trade Statistics Database and the IMF BOP statistics.

Icelandic firms have been expanding aggressively abroad since the turn of the century and rising exports only tell a partial story. Many leading Icelandic firms have chosen to expand through acquisitions and investments abroad and the non-resident workforce of Icelandic companies now roughly equals resident work force, leading to an explosive increase in outward FDI. Outward FDI now equals more than 82% of its GDP (Ecowin, 2007). Outward FDI and equity portfolio exceeded inward by EUR 10.3 billion at the end of 2006[5].

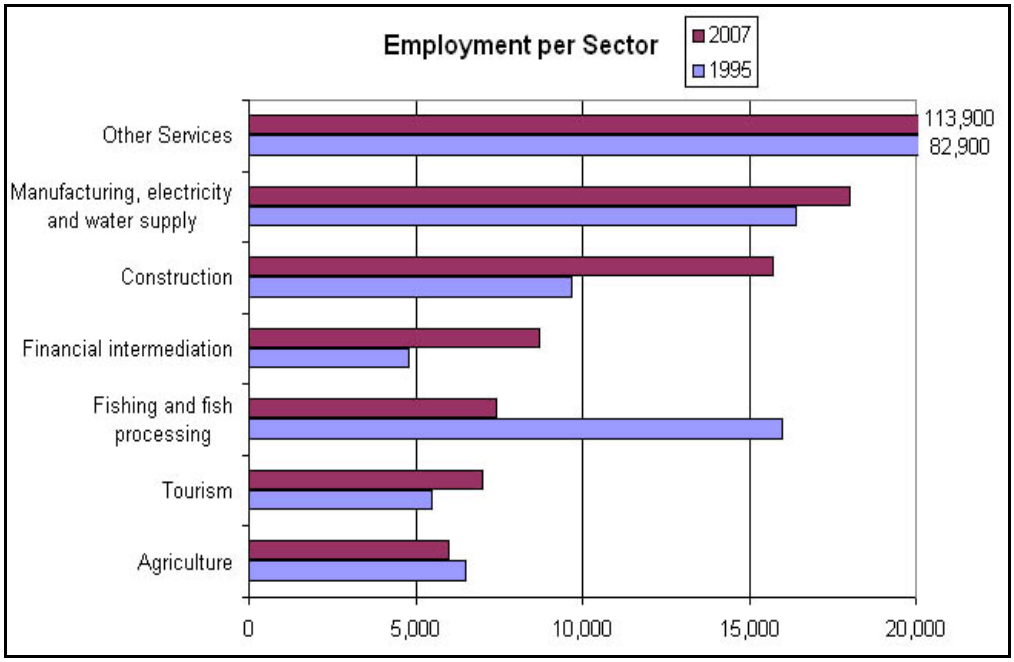
Composition of the Economy: Increased diversification of exports, rising share of services in the economy, and increased participation in the global economy led to a decline in the volatility of growth. Non-tradable services accounted for 67% of GDP in 2007. The fastest growing sector in recent years has been the finance, insurance and real estate sector whose share of GDP has risen from 17% in 1998 to 27% in 2007. As share of employment, financial intermediation has

[5] Central Bank of Iceland, http://www.sedlabanki.is/, accessed April 2008.

grown from 4,800 employees in 1995 to 8,700 in 2007 comprising about 5% of the work force. Private consumption contributed on average about 58% of GDP in 2002-2006, public consumption, and gross fixed investment 25% and 24% respectively.[6]



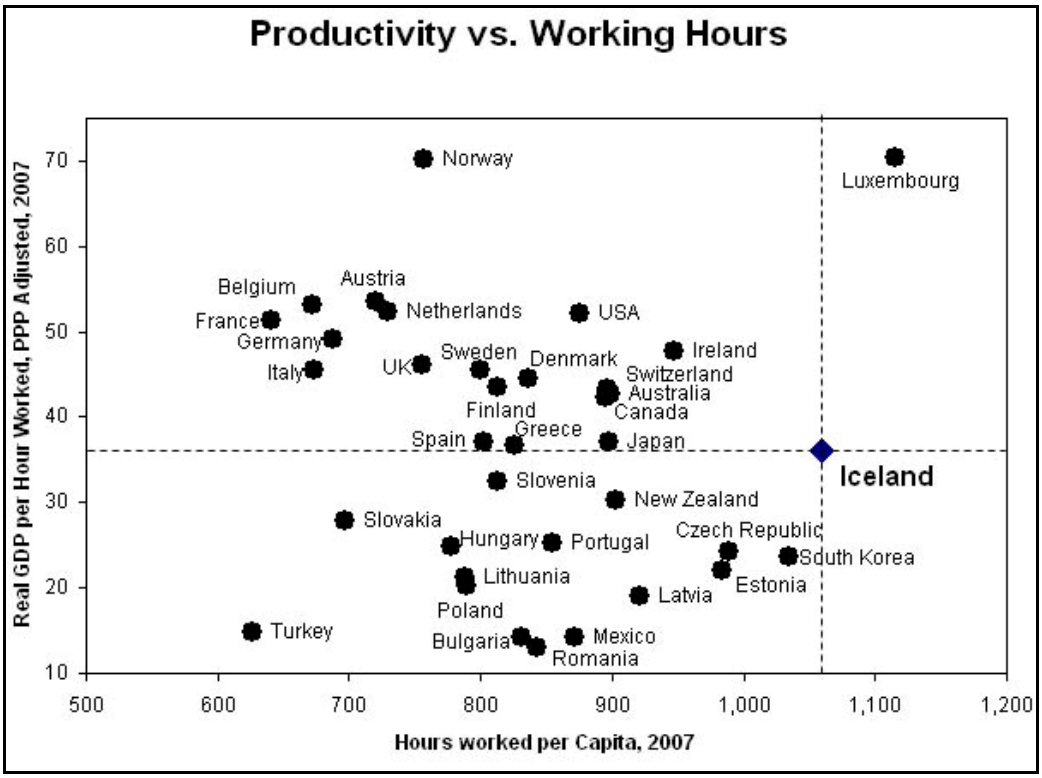
Source: Statistics Iceland



Source: Statistics Iceland

[6] Statistics Iceland, http://www.statstics.is/, accessed April 2008.

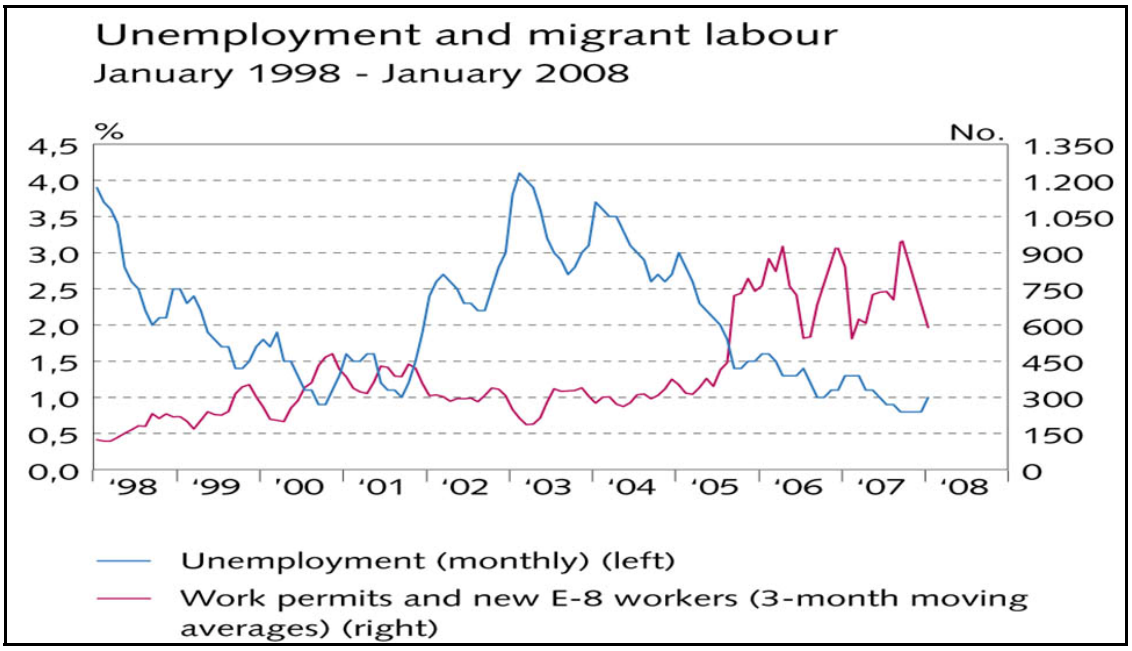
Labor Market and Productivity: Iceland's high GDP per capita (PPP) (approx: USD 40,000, 8th world-wide) is achieved through hard work. Hours worked per capita (1,060 hours per year) are among the highest of OECD countries, while GDP per hour worked is close to the OECD average and lower than in the Scandinavian and most Western European countries.[7] High number of hours worked per capita result from ultra-low unemployment of less than 1% in 2007 (over-employment), high number of hours worked per employee and one of the world's highest labor participation rates, especially with regard to women and people aged 55-65 (88% in total, 91% for males, 84% for females).[8] Iceland also experienced an influx of migrant labor in the past few years to meet soaring demand for labor. Labor participation, hours worked and temporary foreign labor correlate positively with the business cycle and therefore act as a cushion during slowdowns.



Source: Groningen Growth and Development Centre and the Conference Board (2007)

[7] Groningen Growth and Development Centre and The Conference Board (2007)

[8] Central Bank of Iceland, http://www.sedlabanki.is/, accessed April 2008. Underlying data from Directorate of Labor.

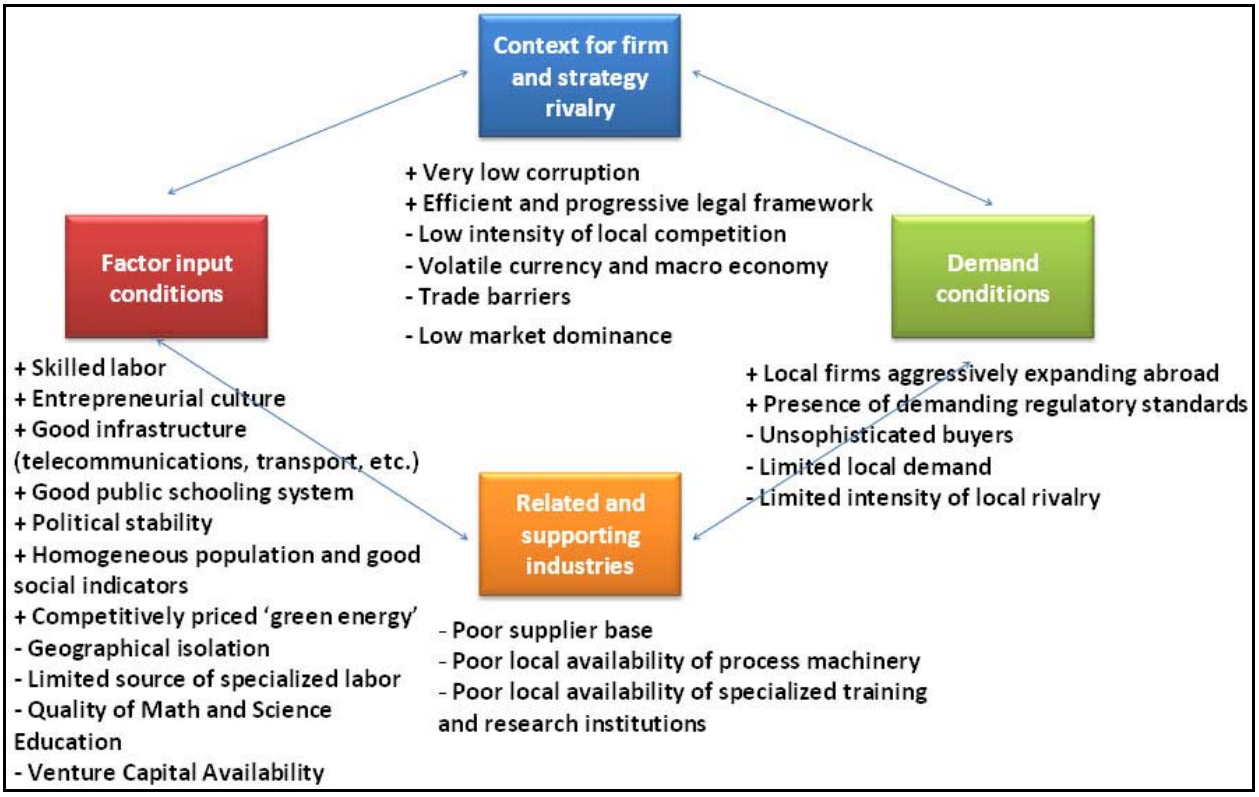


Source: Central Bank of Iceland. Underlying data from the Directorate of Labor.

Social Indicators and Welfare: In 2007, Iceland was ranked Number 1 world-wide on the Human Development Index[9], a normalized measure of life-expectancy, literacy, education, standard-of-living and GDP per capita. Icelandic citizens enjoy universal, tax-financed health care, education and a high degree of social security. Over quarter of its GDP in 2003 was spent on health, education, social security, welfare and other social affairs. Iceland has one of the highest life expectancy rates in the world and one of the lowest infant mortality rates (1.4 per 1,000 live births in 2006)[10]. The standard of education is high and public education is compulsory between the ages of six and sixteen. A good command of English and the Scandinavian languages is widespread. Education is offered free of charge or at a nominal fee and the government provides heavily subsidized student loans for higher education. Higher education is offered at several universities although specialization is limited due to the small size of the population, leading one fifth of Icelanders to receive their University degree abroad[10].

[9] United Nations Development Program (2008), "Human Development Report 2007/2008".
[10] Statistics Iceland, http://www.statistics.is/, accessed April 2008.

1.3. National Competitiveness: Country Diamond



Source: Authors' mapping based on The Global Competitiveness Report

<u>Factor (Input) Conditions:</u> Iceland has a skilled, young, well educated and entrepreneurial labor force and a good public schooling system. In 2005, 31% of the employed labor force held a university degree[11] although Iceland lags peers in the quality of Math and Science education. *"Many Icelanders either study or work abroad (mainly Europe and USA) before returning to Iceland. This diverse international experience is an important intangible factor in the international expansion of Iceland firms"* (Olafsson, 2008)[12]. The Icelandic labor force is among the most entrepreneurial in the world, according to the Global Entrepreneurship Monitor.[13]

The main drawbacks are the country's isolation, high cost of labor, and the small size of the workforce, leading to limited source of specialized labor.

[11] Invest in Iceland Agency (2008), "Doing Business in Iceland. February 2008".

[12] Authors' interview with Frosti Ólafsson, Economist at the Icelandic Chamber of Commerce, March 19, 2008.

[13] Global Entrepreneurship Monitor 2007 Report. Sponsored by Babson College and London Business School.

Icelandic businesses enjoy good infrastructure: competitively priced green energy, efficient ports and airport, and a modern telecommunication system. Internet penetration and computer literacy is among the highest in the world[14].

Context for Firm Strategy and Rivalry and Demand Conditions: A stable society, short distances, low corruption, low corporate taxes (currently 18%, soon to become 15%), an independent judiciary, a progressive legal framework, and a highly efficient bureaucracy make Iceland an attractive place to do business.

However, the tiny size of the local market is a major drawback, allowing for limited intensity of local rivalry and limited local demand and buyer sophistication. The small market (along with Iceland's isolation and volatile macro-economy) has prevented Iceland from attracting much FDI and few foreign firms therefore operate in Iceland. Restrictions on foreign ownership of fisheries and in the energy and aviation sector are also to blame for low FDI.

Therefore, most Icelandic companies are locally owned. The only significant exception is foreign-owned aluminum plants (FDI seeking low cost energy) but these firms are mostly isolated from the rest of the economy. Limited growth opportunities at home have pushed Icelandic companies in diverse markets such as pharmaceuticals, financial services, food production, retail commerce, property development, aviation and shipping to aggressively acquire subsidiaries abroad to extend their reach. Access to credit has been excellent during the past several years, but has been severely restricted in the past few months due to the global credit crunch, prohibitively high interest rates and the bank's precarious debt position.

Related and Supporting Industries: Both the quality and quantity of local suppliers is weak, again mostly due to the tiny market size.

[14] Invest in Iceland Agency (2008), "Doing Business in Iceland. February 2008".

There are few research institutions and specialized training programs. Iceland holds a leading research position in fishing and geothermal energy. The most prominent bodies are the Marine Research Institute and the National Energy Institute, both government institutions.

BCI Performance: Iceland ranks 16th on the Business Competitiveness Index (BCI)[15], slightly below the Scandinavian countries (Denmark, Sweden and Norway rank 4, 5, and 13 respectfully). Despite significant weaknesses, mainly caused by its isolation and small population, Iceland is highly competitive.

	Strengths		Weaknesses	
Factor (input) conditions	Infrastructure quality	11	Quality of math and science education	30
	Judicial independence	10	Quality of scientific research institutions	30
	Freedom from corruption	4		
	Quality of primary education	14		
	Venture capital availability	11		
	Ease of access to loans	4		
Demand conditions	Presence of demanding regulatory standards	14	Buyer sophistication	25
			Government procurement of advanced technology	26
Related and supporting industries			Local supplier quantity	30
			Local availability of process machinery	36
Context for firm strategy and rivalry	Lack of favoritism in decisions of gov't officials	8	Intensity of local competition	33
			Absence of trade barriers	39
	Intellectual property protection	10	Extent of market dominance	59

Table by authors. Underlying data from the Global Competitiveness Report 2007-2008

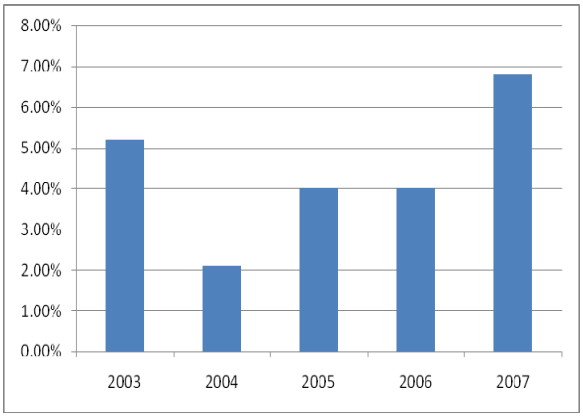
1.4. Strategic Challenges

Iceland's explosive growth during the past decade has been accompanied by macro-economic imbalances and an accumulation of huge foreign debt, mostly incurred by the banking sector borrowing freely on the international capital markets. In the wake of the global credit crunch, the Icelandic economy now faces severe challenges.

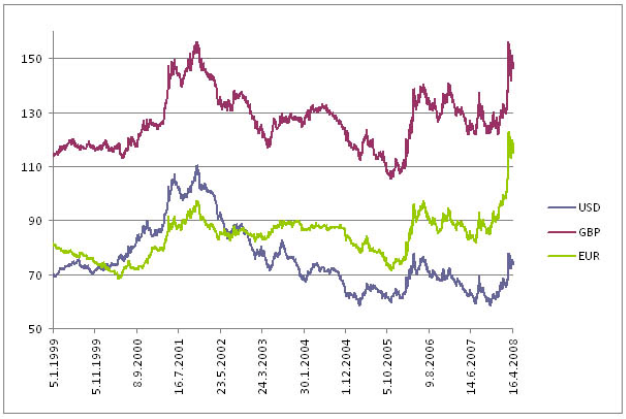
[15] The Global Competitiveness Report 2007-2008

Macro-economic imbalances: Iceland's central bank has battled inflation through high interest rates. Yet inflation has remained at close to double the bank's target of 2.5%[16] in the past several years, partly due to easy access to low-interest foreign-currency loans and partly due to a booming economy and a sharp increase in the equity and housing markets. High interest rates have made Iceland a prime target for the "carry trade" in recent years, resulting in a strong Krona. A strong Krona encouraged further spending and foreign-borrowing and a vicious cycle emerged leading to an enormous current account deficit (peaking at 26.2 % in 2006). High inflation, and reduced "carry trade" due to the global credit crunch, led to severe deflationary pressure on the Icelandic Krona, which has lost more than a fifth of its value against the euro in 2008 (22 %). Inflation is now (May 2008) running as high as 11.80% (a 20 year high) and the Central Bank recently (April 2008) increased its policy rate to **15.50 %,** the highest of all OECD countries. Rumors of speculative attacks on the Icelandic currency by foreign hedge funds surfaced in early 2008, perhaps exacerbating the problem[17].

Inflation Rates 2003 – 2007



Development of ISK Jan 1999 – April 25 2008

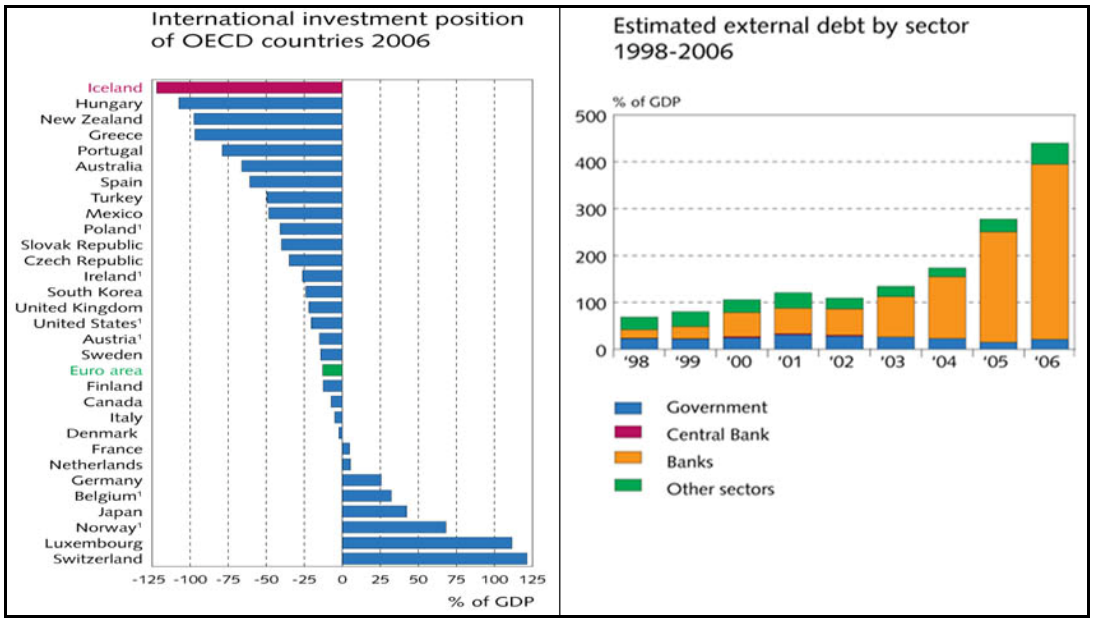


Source: Data from Central Bank of Iceland. Graphs by authors.

[16] The main objective of the Central Bank of Iceland is price stability, which takes priority over other objectives. Price stability is defined as a 12-month rise in the CPI (Consumer Price Index) of 2.5 % with an upper and lower limit of 1-4%. If it deviates by more than 1.5 % in either direction, the Central Bank is obligated to present to the government a report, explaining the reasons for the deviation from the target.

[17] According to the Financial Times of April 18th (*Iceland fends off hedge fund attacks*) the Iceland's Financial Supervision Authority is currently investigating alleged speculative attacks involving manipulation of the Credit Default Market (CDS) market and distribution of misleading information.

High Foreign Debt: The explosive growth of Icelandic firms has been financed by aggressive borrowings by Iceland's three largest banks and the total external debt of the economy is now more than 5 times GDP[18], i.e. the economy is highly leveraged. The negative debt position is partially explained by investment in new power plant capacity, the rapid expansion of Icelandic firms abroad, high levels of outward FDI, young population, consumer spending and, perhaps, misleading accounting. *"Taking into account pension fund assets and stock market assets, households aren't in such a bad situation – debt vise. It's better than often thought. The government is also virtually debt free. The bulk of the debt is on the banks' balance sheets (as well as most the assets). Complicating the situation is the fact that many Icelandic firms and individuals own foreign holding companies, and that the assets are sometimes not adequately accounted for because some investments are accounted for by book value, and therefore underestimated, while the liability side is presumably correct. There is considerable uncertainty but the banks' balance sheets appear healthy"* (Baldursson, 2008)[19].



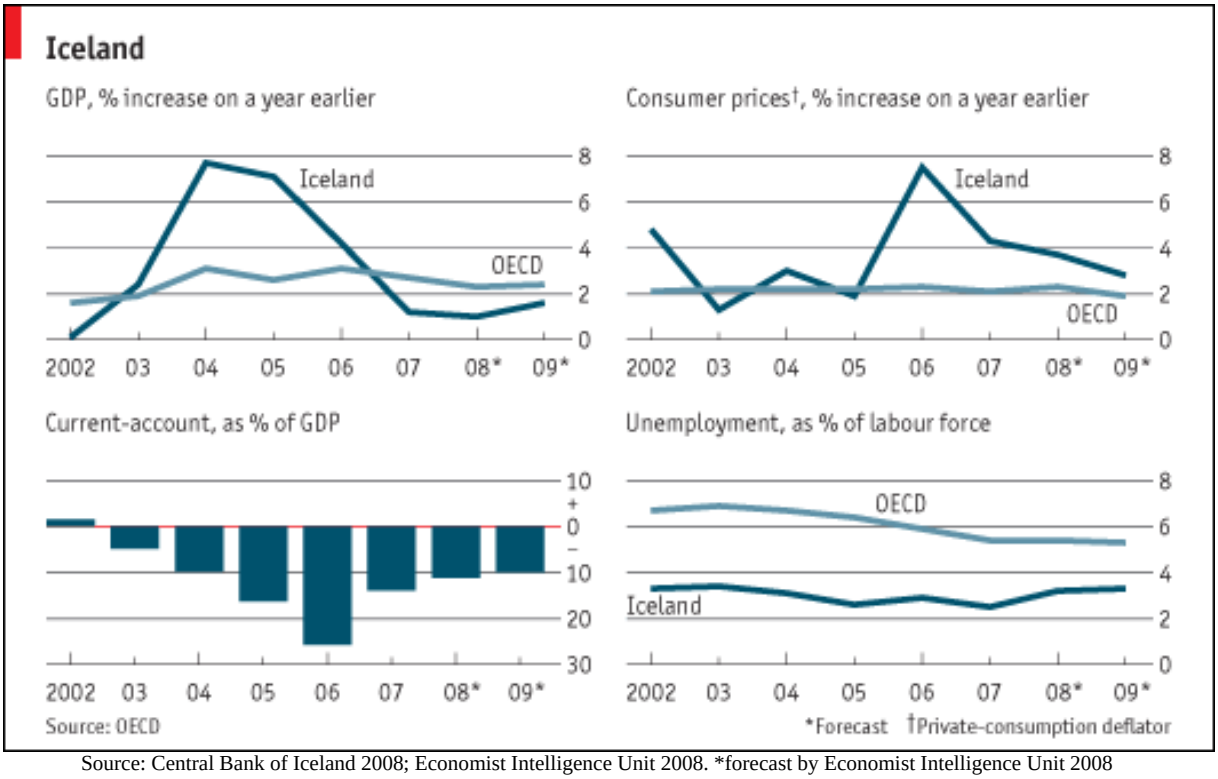
Source: Central Bank of Iceland

[18] Central Bank of Iceland, http://www.sedlabanki.is/, accessed April 2008.

[19] Authors' interview with Fridrik Mar Baldursson, Professor of Economics at Reykjavik University, March 14, 2008.

In any case, it seems clear that the global credit crunch hit Iceland at a vulnerable time. Icelandic banks, consumers and firms are suddenly faced with a falling currency and prohibitively high borrowing costs. Doubts have been cast on the government's ability to support the Icelandic banks, simply due to the fact that the combined balance sheets of the three largest banks were 887% of GDP at the end of 2007[20]. The vulnerabilities of maintaining an independent monetary policy have also become clear and debate has been vigorous on how to better defend the currency or, alternatively, to adopt a stronger currency. Government officials point to a debt-free government, healthy banks and a flexible economy as key buffers,[21] but recession seems likely.

Economic Indicators



Source: Central Bank of Iceland 2008; Economist Intelligence Unit 2008. *forecast by Economist Intelligence Unit 2008

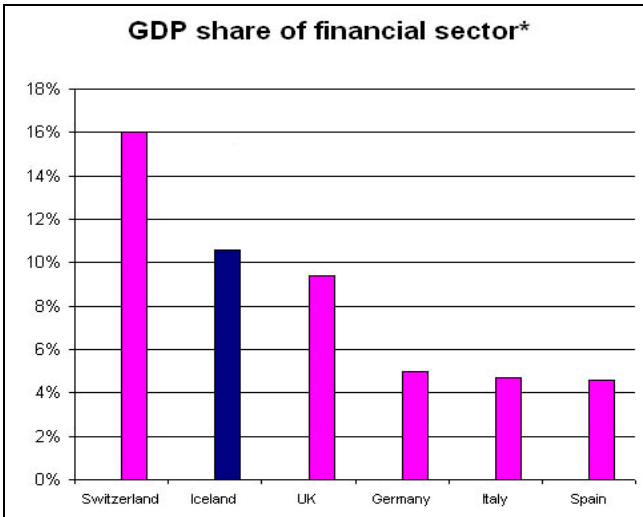
[20] The banks' 2007 annual reports. GDP numbers from statistics Iceland, and authors' calculations

[21] Authors' notes from presentation by Geir Haarde, Iceland's Prime Minister at an IACC conference in NYC on March 13, 2008

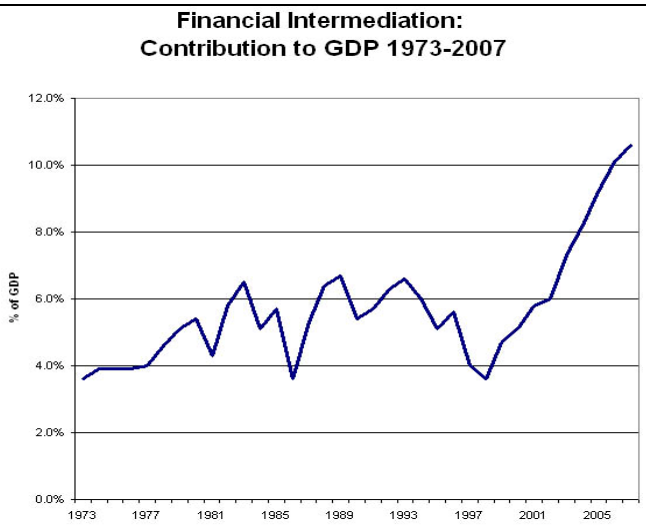
2. CLUSTER ANALYSIS

2.1 Introduction

The foundations of the Icelandic Financial Cluster were laid in the 1990s followed by explosive growth since the turn of the century. Financial intermediation's share of GDP increased from 4% in the 1970s to an average of 5.5% in the 1990s and to 10.6% in 2007.[22] The sector's contribution to GDP is now larger than that of fishing and energy combined. Combined total assets and combined market cap of the three large banks, Kaupthing, Landsbanki, and Glitnir, equaled 889% and 95%, respectively, of GDP at the end of 2007.[23] (2007 nominal GDP of Iceland was roughly USD 20 billion). These three banks are all among the 12 largest banks of the Nordic countries.



* 2005 or latest available data (UK, 2006, Iceland, 2007). Definitions may vary due to different sources.
Source: Deutsche Bank Research, Statistics Iceland, the Financial Express, Swiss Federal Department of Finance



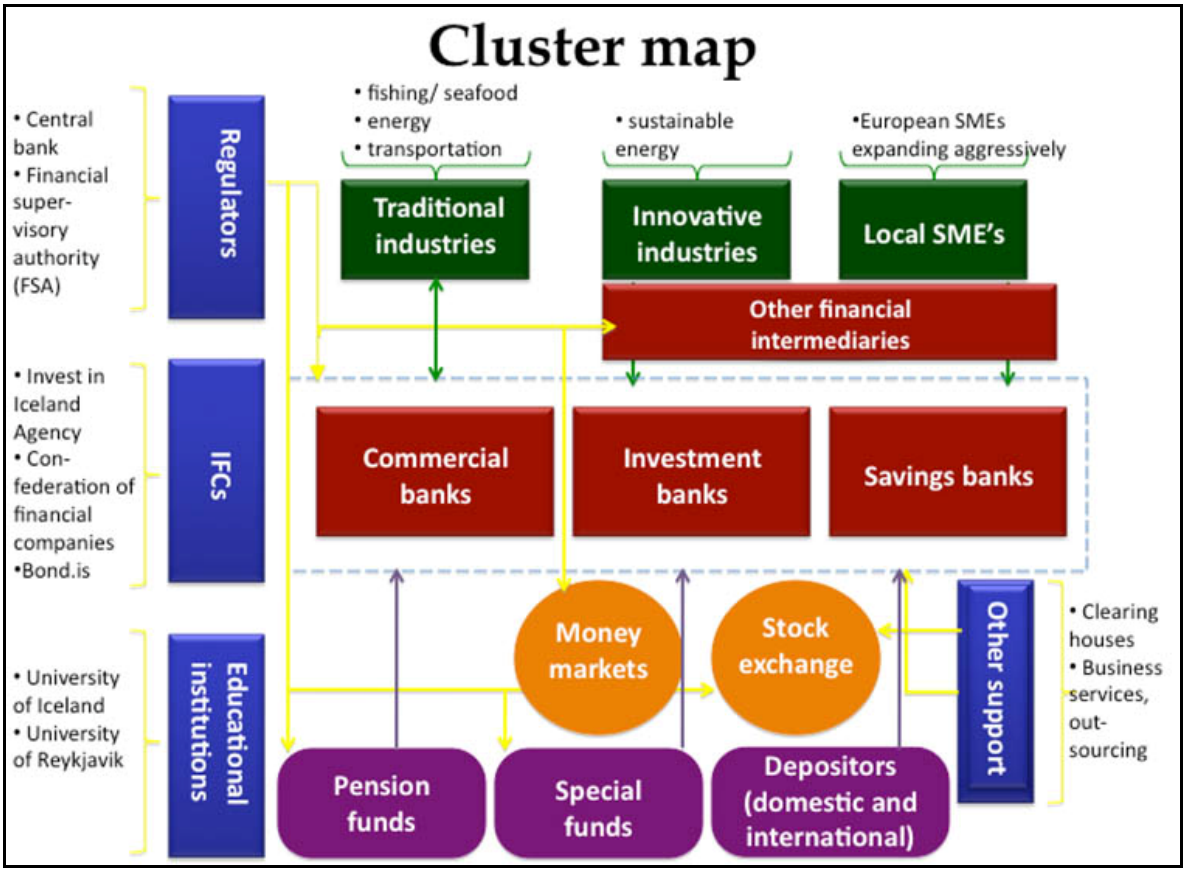
Source: Statistics Iceland

[22] Statistics Iceland, http://www.statistics.is/, accessed April 2008. Authors' calculations

[23] Banks' 2007 Annual reports. Statistics Iceland. Authors' calculations

2.2 Mapping and Defining the Cluster

Cluster Map: Banks are the foundation of the Icelandic Financial cluster. After a period of consolidation, four banks emerged as leading financial institutions. Glitnir, Landsbanki and Kaupthing are listed and their stocks are publicly traded. Icebank is not listed, but owned by 8 local savings banks (57.3%) and various investors (there are 23 savings banks in total).



Source: Authors' mapping

There is no clear distinction between commercial and investment banks as all of the three large banks offer both types of services, however, traditionally Kaupthing is seen as more of an investment bank. The fourth largest bank, Straumur, is purely an investment bank. Almost half of the total assets of the largest banks were held in foreign subsidiaries, mostly in northern Europe. In 2007 about 60% of their overall income was generated outside of Iceland.[24]

[24] Banks' 2007 annual reports

There are several other financial intermediaries: three leasing companies, two independent investment funds, and twelve insurance companies with total assets of EUR 1.8 billion. The three largest insurance companies (Sjóvá, VÍS and TM), control over 90% of the market.

The OMX Nordic Exchange operates the only regulated market for listed securities in Iceland and includes exchanges in all the Scandinavian and Baltic countries. OMX Nordic Exchange listing requirements are based on those stipulated in various EU Directives.

Pension funds in Iceland are often organized along labor union lines. With net assets at the end of 2007 of ISK 1,647.1 billion (USD 26.5 billion) or 130% of GDP, they are an important source of capital for the Icelandic financial system and a rare example of a fully funded pension system.

The main regulators in Iceland are the Central Bank of Iceland (CBI) and The Financial Supervisory Authority (FSA). CBI administrates Iceland's foreign exchange reserves and performs traditional functions of an independent central bank. The main monetary instrument of the Central Bank is the rate on repurchase contracts.

FSA is an independent state authority, which monitors compliance with laws and regulations covering factors such as liquidity and capital adequacy of all banks, securities companies, brokerages and other financial intermediaries.

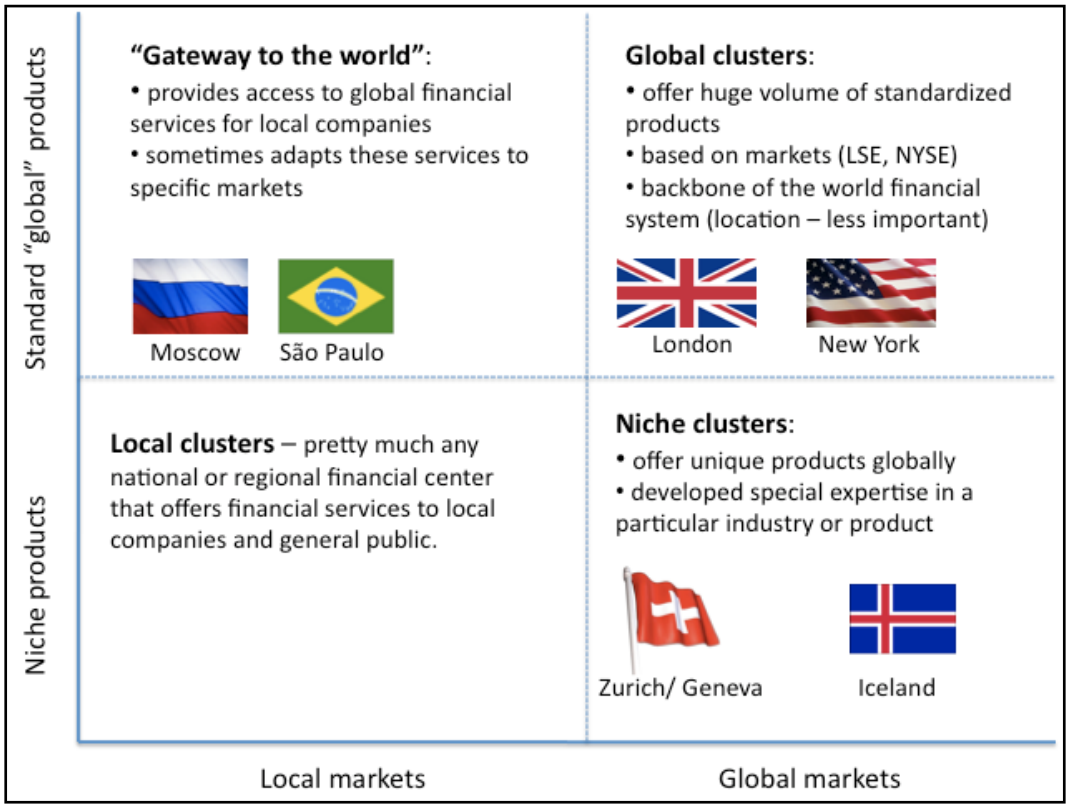
Iceland has a few Institutes for Collaboration, notably Invest in Iceland Agency, Confederation of Financial Companies, and "Bonds.is" a joint platform for communication. The major banks also jointly operate a data processing institution (clearing house).

University of Iceland and University of Reykjavik have recently significantly expanded their business and finance programs due to high popularity of finance occupations among Icelanders.

Conceptualizing the Cluster:

Financial clusters can be classified by type of products they offer as well as by target market:

Classification of Financial Clusters



Source: Authors' analysis

The Icelandic cluster historically was a typical local cluster, but favorable conditions as well as the rapid expansion of Icelandic businesses abroad drove rapid expansion of the cluster and its transition towards the niche type. Now, Icelandic banks possess globally competitive expertise and innovative business models in certain niches. For example, Glitnir is a world leader in serving seafood and geothermal energy firms. Kaupthing and Landsbanki have carved out a niche in serving small and medium enterprises (SMEs) in Europe that require more complex services than what local banks can typically offer (e.g. related to cross-border expansion).

All the major banks demonstrate high levels of operational efficiency. Kaupthing, for example, boasts one of the lowest cost-to-income ratios in the world of 47%[25]. They are also active in cross-selling traditional banking services to niche clients, usually with attractive profit margins.

[25] Presentation by Hreidar Mar Sigurdsson, CEO of Kaupthing bank, April 1, 2008, Boston

It is worth noting that the Icelandic banks are not providing their services by "exporting" them from Iceland, like many global banks in the established financial centers do. Instead they operate through subsidiaries and local offices abroad, mostly in Northern Europe. These activities therefore show up as outward FDI or portfolio income in the Icelandic national accounts.

Product range: The products offered by the Icelandic banks can be put in two groups:

- Locally competitive or traditional (remained from "local cluster" times):
    - Standard deposit/ loan services for general public (retail banking) and corporations (corporate banking)
    - Investment management services
    - Capital and money market services
- Globally competitive or innovative:
    - Niche banking
        - Services to Seafood and Sustainable Energy Industries
        - Services for European SMEs that are globalizing
        - Active equity investments in corporate clients
    - High-interest savings accounts / virtual banks

Niche Banking: Iceland traditionally has been one of the world leaders in fishing and geothermal energy industries. Utilizing this expertise, Glitnir has built a team of experts in these industries and offers specialized investment banking and advisory services to clients in seafood/ fishing and alternative/ geothermal energy industries across the globe.

According to Glitnir's director of strategic growth: *"We might advice a US seafood firm to buy a firm in Asia while local banks don't have the same global view"* and *"We have our own experts to assess risk of geothermal projects. Of all the geothermal projects being presently considered in the USA, our experts have evaluated them all and might believe that, say, 25% of them are viable. We then aggressively go after those projects and often offer consulting and equity as part of the deal. We don't compete on price and tend to get into projects early and build*

relationships. We often syndicate deals with large banks and sometimes go entirely out of the deal when major financing is required"[26]

Glitnir's niche loan portfolio is now ISK 260 billion (13% of total), compared to ISK 100 billion (9%) in 2005. It has higher net interest margin than bank's average loan portfolio. In the investment banking business, the role of niche clients is even more important. 42% of Glitnir's corporate finance advisory fees in 2007 came from servicing niche customers. Glitnir is particularly strong in serving seafood industry. 62% of Glitnir's niche loan portfolio is in seafood industry and the bank serves 46% of today's Top 100 seafood companies in the world[27].

Other Icelandic banks pursue niche strategies in different industries. Both Kaupthing and Landsbanki are targeting European SMEs that require complex services, but are too small to get much attention from the major investment banks. "*Apart from the big investment banks, few players can offer a full range of services to SMEs that want to globalize. We typically compete with local banks but sometimes the big investment banks too*."[28] The Icelandic banks acquired initial expertise in this area by helping Icelandic SMEs expand globally in recent years[29].

Another distinctive feature of the business models of the Icelandic banks is that they often take an equity stake in their corporate clients. This helps them win deals and strengthens their commitment to their clients' success but requires sophisticated equity risk management. "*Our head of risk has been saying for years that credit risk is underestimated. This view has been vindicated in the wake of the global credit crunch*"[30]. *"Kaupthing was the innovator with the equity angle – the other banks followed a similar route*."[18]

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[26] Authors' interview, with Vilhem Mar Sigurdsson, Glitnir's Director of Strategic Growth, March 14, 2008.

[27] "A Focused and Well Positioned Nordic Bank" Presentation by Larus Welding, Glitnir's CEO on March 13, 2008, NYC

[28] Authors' interview with Björn Rúnar Gudmundsson, Head of Research at Landsbanki, April 5, 2008.

[29] Examples of Icelandic SMEs that have recently expanded abroad: Bakkavor (prepared food), Marel (food processing equipment), Ossur (medical equipment).

[30] Authors' notes from presentation by Hreidar Sigurdsson, Kaupthing's CEO at an IACC conference in NYC on March 13, 2008

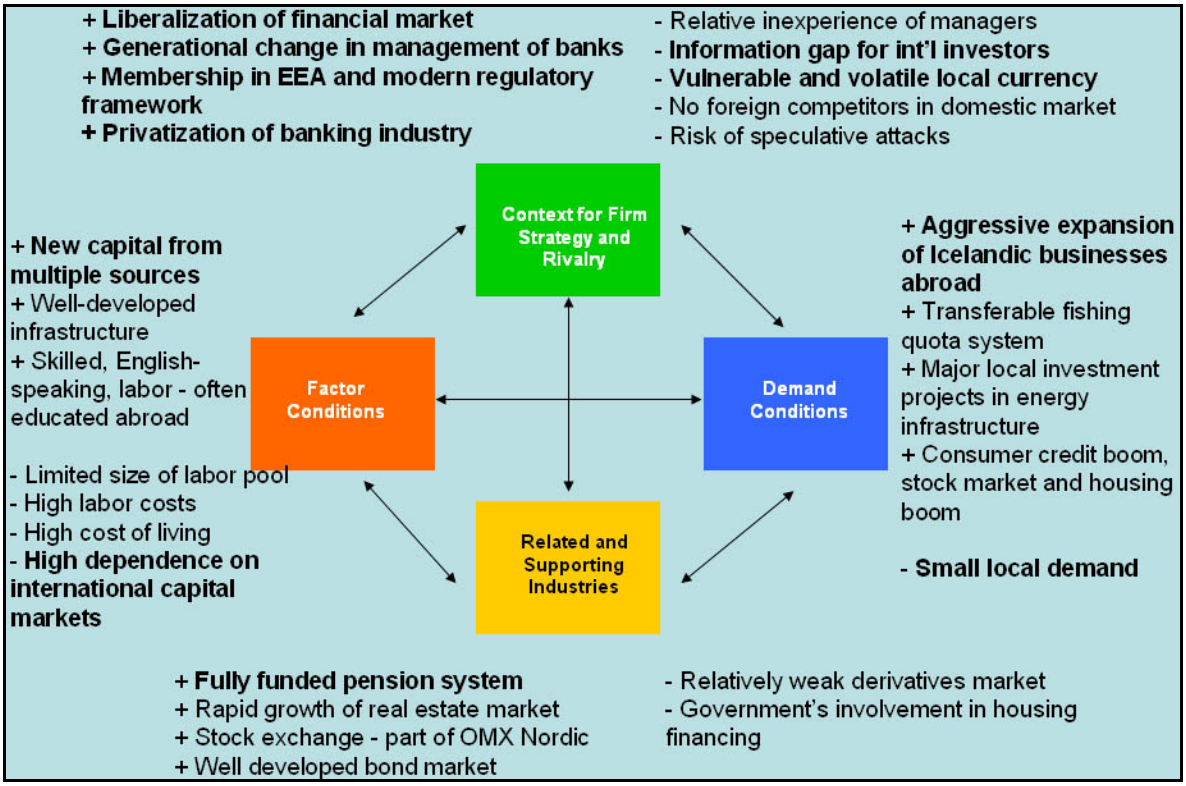
Competing for European Deposits: Deposits are the most attractive form of bank financing, leading to fierce global competition. Kaupthing and Landsbanki have both successfully reached beyond their small local deposit base by tapping into the large European deposit market. They are offering standardized, low-cost, web-based, high-interest, savings accounts to European retail customers. So far, the Icelandic banks have been successful in this game. Both Kaupthing and Landsbanki offer savings rates 1-2% higher than many similar products by local banks and 70-80% of each bank's deposit base comes from outside Iceland[31].

Sustaining their competitive advantage will be challenging and relies on continued access to high-return investment opportunities, obtained through competitive corporate banking.

2.3 Explaining Historical Performance (Cluster Diamond)

The cluster evolution and performance can be explained by looking at a cluster diamond:

Financial Cluster Diamond

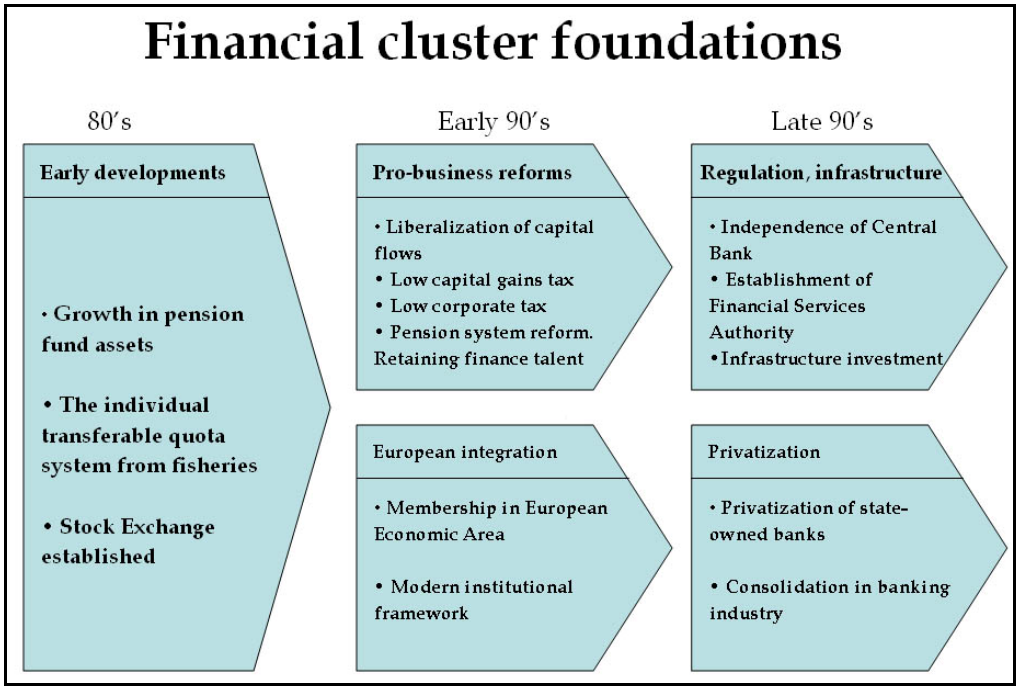


Source: Authors' analysis

[31] Banks' 2007 Annual reports

Context for Firm Strategy and Rivalry:

Strong Foundations: The government played an essential role in laying the cluster foundations. Iceland undertook major structural reforms in the 1990s, liberalizing its financial markets, adopting a progressive regulatory environment and privatizing the state owned banks.



With solid foundations in place, conditions were ripe for explosive growth of the sector.

Strong Rivalry: The small domestic market led to a fierce rivalry among the banks. The banks had to continually improve their performance to successfully compete. The banks, for example, forcefully entered the local retail mortgage market in 2004, historically handled by the state-owned Housing Financing Fund, constantly outbidding each other. While not collaborating directly, good ideas spread quickly when employees switch banks[32].

Factor Conditions:

New Capital: A major growth driver was an infusion of a new capital from multiple sources. Tradable fishing quotas and privatization proceeds brought new capital to the financial sector. A

[32] Authors' interview with Fridrik Mar Baldursson, Professor of Economics at Reykjavik University, March 14, 2008.

housing and stock market boom also contributed although the government remains heavily involved in this market through the state-owned Housing Financing Fund.

Entrepreneurial Managers and Skilled Labor: The banks' privatization led to the generational change in the management of the banks. Young, entrepreneurial managers used flat organizational structures and efficient decision-making processes to grow their banks. *"The Icelandic bankers are young, outward-looking, educated and highly receptive to new technology."*[33] *"The international experience of the labor force is an important intangible factor in the growth story."*[34]

Cheap, External Credit: The abundance of cheap, easily accessible global credit, aggressively exploited by Icelandic firms and banks, coincided with other favorable factors to further fuel the growth. However, this made the cluster vulnerable to the whims of international capital markets.

Demand Conditions:

Aggressive Expansion of Icelandic Companies Abroad: Due to the tiny size of the local market, ambitious Icelandic firms are forced to look abroad for expansion. Finding willing partners in the newly privatized local banks, many of them were able to implement aggressive expansion plans to a greater extent than before, almost making it a national competition. Total direct investments abroad grew at astoundingly high CAGR of 68% from 1998-2006. In 2006 the FDI abroad constituted ISK 335 billion. (USD 5 billion)[35]

Major Investment Projects: Large government projects to invest in infrastructure and power-plant capacity were another important driver.

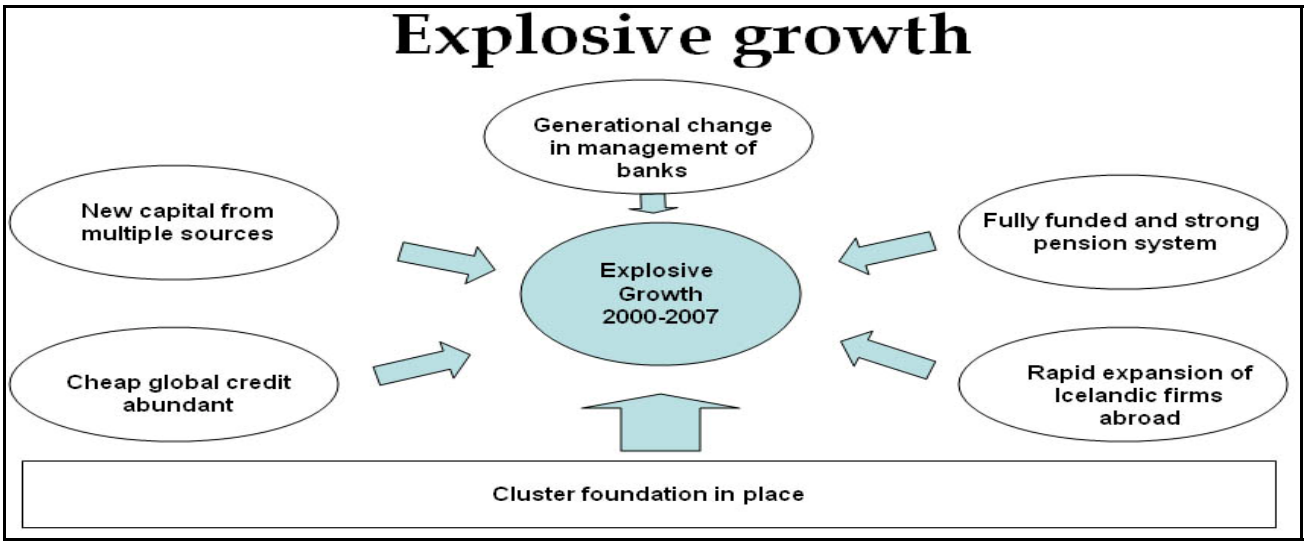
Related and Supporting Industries:

[33] Tulip, P. (2007), "Financial markets in Iceland", OECD Economics Department Working Papers, No. 549, OECD Publishing. doi:10.1787/213215274840

[34] Authors' interview with Frosti Ólafsson, Economist at the Icelandic Chamber of Commerce, March 19, 2008.

[35] Central Bank of Iceland (2008), Statistics on FDI, http://www.sedlabanki.is/, accessed April 2008.

Strong Pension System: The pension system has perhaps been the single most important growth driver. "*The fully funded pension funds are the backbone of the Icelandic financial system. They are strong institutional investors and need to invest all the time, providing liquidity to the system. They require financial services which are mostly provided by the Icelandic banks, providing certain grounding.*"[36] New equity from the fishing quota system (est. 1984) and indexation and liberalization of interest rates led to strong pension fund asset growth in the 1980s. In the 1990s, pension fund demand was the catalyst for the forming of a strong market of securities.[37] Another important early contribution of the pension funds was offering career opportunities to finance educated Icelanders.



<u>Mini-crisis in 2006:</u> The financial services cluster went through short-lived crisis in early 2006. After aggressive expansion, foreign analysts criticized the banks for excessive cross-shareholdings, over-dependence on funding at short maturities, lack of transparency, and questioned their earnings quality. As described in an Harvard Business School case-study on the topic: *"Although concerns about Iceland's economy had been brewing since the fall of 2005, they came to a head when Fitch rating agency revised its rating outlook for the country to*

[36] Authors' interview with Fridrik Mar Baldursson, Professor of Economics with Reykjavik University, March 2008

[37] Portes, R., Baldursson, F. M. (2007), "The Internationalisation of Iceland's Financial Sector", Iceland Chamber of Commerce.

negative in February 2006. The Fitch report cited an overheating Icelandic economy with excessive indebtedness. Research reports released in March 2006 echoed Fitch's concerns and gave rise to a spate of news headlines casting an unfavorable light on the Icelandic economy. Investor response to the media frenzy was dramatic—the Icelandic Krona depreciated by more than 15% during March, while the Iceland Stock Exchange (ICEX) lost one-fifth of its value. Credit default swap (CDS) spreads widened, indicating that investors' assessment of the creditworthiness of Icelandic debt was deteriorating."[38] The crisis proved short lived, however, and the banks responded strongly to address the main criticisms. They significantly improved their funding sources by increasing the share of deposits in the three major banks from an average of around 30% at the end of 2005 to over 50% by the end of 2007. The banks also diversified their funding sources geographically and increased their average debt maturity.[39] Other improvements included mostly eliminating cross-shareholdings and significantly improving transparency and corporate communication. In hindsight, the mini-crisis proved to be a blessing in disguise as it prepared the banks well for the more serious 2008 credit crunch crisis.

2.4 Challenges

Iceland's financial cluster is currently facing significant short-term and long-term challenges.

Global credit crunch: Although none of the banks have any subprime exposure, having deemed those instruments too risky, the global credit crunch has triggered renewed concerns over their health. In spite of significant improvements in the banks' funding mix and geographical diversification since 2006, Moody's downgraded Kaupthing, Glitnir, and Landsbanki in February 2008, citing concerns about asset quality, profitability and more difficult funding conditions on the global capital markets. On the positive side, Moody's added that all banks had

[38] Harvard Business School Case Study by Kimbrough, Miller, Dessain, and Jensen, "Navigating Turbulent Waters: Glitnir Bank's Communication Challenge during a Macroeconomic Crisis", 2007.

[39] Banks' 2007 annual reports

sound liquidity profiles. The February downgrade was Moody's fourth change of the banks' ratings in less then a year, reflecting both increased concerns and changes in Moody's methodology.

Drawbacks of Being Icelandic: On April 17, 2008, S&P lowered the long-term foreign currency rating of the, virtually debt free, Republic of Iceland for the second time in four months, to 'A' from 'A+'. *"The downgrade of the sovereign reflects increasing economic policy challenges, largely due to pressure on Iceland's external funding for the nation's commercial banks."*[40] In other words, the banks' funding problems are now the government's problem too, and vice versa, as the government's ability to support the banks, if crisis hits, is being questioned. This is hardly surprising given the enormous size of the banks in relation to the Icelandic economy, and means the banks are seen in a more negative light on account of being domiciled in Iceland. Also, even though all the banks have been fully hedged against drops in the Icelandic currency, the imminent recession in Iceland is likely to degrade the quality of bank's domestic assets. The banks have responded by distancing themselves from their home country, claiming to be healthy, well run and well diversified, European banks that happen to be headquartered in Iceland.[41] In any case, the drawbacks of being domiciled in a small country with a volatile economy and a vulnerable currency have become increasingly clear in the current market turmoil.

Information Gap: Just like in the mini-crisis of 2006, the Icelandic banks are having a hard time explaining the "*Icelandic condition*" to the outside world. Experts, with a nuanced view of the situation, argue that the Icelandic financial sector is being unfairly and disproportionately punished by the international financial community. Professor Richard Portes at the London Business School argues that Iceland is an exceptional case and that the markets either are not

[40] Standard & Poor's research update on April 17, 2008, "Iceland Sovereign Ratings Lowered On External Funding Risks"".

[41] Team notes from presentation by the banks' CEOs at an IACC conference in New York on March 13, 2008

fully informed or put a *country risk premium* on its banks. He claims the external debt position is sustainable and that factor income and net international investment position is mis-measured. *"Official data indicating that Iceland's investments abroad are substantially less profitable than foreigners' investments in Iceland are inconsistent with high profitability and growth of Iceland's international banks and corporations"*[42]

Credit default swap (CDS) spreads, a measure of the banks' cost of borrowing, gradually rose to ultra-high levels, reflecting highly negative market sentiment. *"Based on prices quoted in the credit markets, international investors reckon Kaupthing, Iceland's biggest bank, is about seven times more likely to default than the typical European bank."*[43]. The banks still face a high cost of borrowing although prices have come down by more than half since peaking in March 2008.

Credit Default Spreads for the major Icelandic banks

Source: Bloomberg

Professor Gregory Miller at the Harvard Business School argues that outsiders see Iceland as "volatile" and "uncertain" and that the outside view itself is also not stable. He further argues

[42] Presentation by Portes and Baldursson: The Internationalization of Iceland's financial sector

[43] Dey, I., "Is Iceland headed for meltdown?", *The Telegraph*, February 5, 2008.

that Moody's frequent rating changes and the lack of historical precedents (the Icelandic financial sector is young) further exacerbate the problem. He warns this is dangerous for Iceland due to the possibility of "*information cascade*" – when market participants dismiss or mistrust their own opinions because of persistent rumors of bad health – meaning that persistent negative rumors can become self-fulfilling.[44]

The banks and the government are reacting swiftly to address these challenges. First, the banks have stopped expanding. In January 2008, Kaupthing announced that it had cancelled a EUR 3 billion acquisition of Dutch merchant bank NIBC Holding.[45] The banks are also cutting costs, and continue to improve their funding mix by increasing the share of deposits and long-term financing. Stress tests by the Icelandic FSA affirm their health and indicate that all the banks can withstand quite extreme movements in market variables specific to Iceland[46].

The core operations of the banks remain strong and the majority of revenues are coming from outside of Iceland. "*Icelandic banks come out well in a comparison with Nordic peers – and their overall and core profitability is higher*" (Portes, Baldursson, 2007)

Cluster Sustainability: The major long-term challenge for the Icelandic financial cluster is the sustainability of its growth and continued presence in Iceland. Recent turmoil on the financial markets has highlighted the drawbacks for the banks of being domiciled in Iceland and even though their business models are rooted in Icelandic conditions they are not dependent on the location. Future growth is likely to largely happen outside of Iceland and it seems plausible that one or more Icelandic bank could be acquired by a foreign bank. In this scenario, Icelandic operations are likely to be downgraded to serving local needs only.

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[44] Authors' notes from presentation by HBS professor Gregory Miller at an IACC conference in New York on March 13, 2008

[45] Nordic Business Report, "Kaupthing Bank Cancels Acquisition of NIBC Holding NV", Web-site, http://findarticles.com/p/articles/mi_m0HXI/is_2008_Jan_30/ai_n25018348, accessed April 2008.

[46] "Icelandic Economy March 2008". Presentation by the Icelandic Prime Minister's Office (2008)

The cluster is at a cross roads. Its explosive growth has upgraded financial services to a major pillar of the small Icelandic economy but further widening and deepening of the cluster is needed to sustain and secure its long-term viability.

3. RECOMMENDATIONS

3.1 Recommendations to Policy Makers

Address current macro-economic imbalances: This should, quite obviously, be the government's first priority. And since this is partly a joint problem of the banks and the government they should work together to improve market confidence. Specific recommendations are:

- Provide clarity on how and under what circumstances the government will support the banks
- Formally collaborate with the financial sector to develop better accounting methods and communicate Icelandic conditions abroad
- Improve fiscal discipline to help reduce the current account deficit
- Strengthen the currency by either significantly increasing reserves or seeking formal agreements with other European central banks to support it. Alternatively, consider adopting another currency.

Adopt cluster approach to support the financial sector: One of the key objectives of the government should be retention of financial institutions in Iceland. As noted above "detachment" of Icelandic banks from their home country seems plausible. This should be a major concern for the government because the sector has become a major tax payer and offers precisely the kind of high-paying jobs for well educated people that every government strives for.

The government played a key role in the rapid rise of the financial sector by providing a favorable, progressive legal framework, and access to the European market but more should be done going forward. Iceland now has a unique opportunity to build on the recent successes, foster further development of the cluster and improve its long-term competitiveness. Specific cluster-centric recommendations include:

- Develop a realistic strategic vision for the cluster in cooperation with its players: define what kind of financial center Iceland wants to become, how it can attract foreign financial firms, and how to encourage links and knowledge flow with other financial centers, such as London and New York
- Establish formal, government-endorsed institutions for collaboration that support the cluster. The purpose should be to organize the cluster to solve joint problems, improve communication and marketing, foster competitiveness and innovation, etc.
- Eliminate obvious cluster barriers: (1) prevent Housing Finance Fund from competing with the banks (perhaps retain social function), (2) abolish taxes on repatriation profits earned by foreign companies, (3) conduct tax reform to remove incentives for locals to move assets to foreign holding companies
- Invest in cluster-related base research and development. Create a finance-related, locally linked, research institute just like the government is currently supporting energy and fishing research through the Marine Research Institute and the National Energy Institute. One of its goals should be to develop better accounting methods and metrics for the cluster.
- Directly address the risk of the banks leaving the country. Provide general incentives for financial firms to keep their headquarters and main operations in Iceland. These

incentives should also work to attract foreign financial institutions to set up shop in Iceland.

- Maintain a competitive general business environment.

3.2 Recommendations to Cluster Participants

- Focus on sailing safely through the current crisis. Pursue a conservative strategy in the short-term. Continue improving operational efficiency, earnings quality and funding mix.
- Better organize the cluster to jointly address the common challenges. Focus on improving the Icelandic financial sector image in light of recent negative media that tarnished its reputation. Solicit support from the government through formal collaboration for joint marketing and communication.
- Consider approaching strong foreign banks for partnerships or to invest as minority shareholders. This could help get rid of the negative country premium and facilitate knowledge sharing with other financial centers.
- Further develop niche banking strategies. The long-term competitive advantage of the current strategy of serving globalizing SMBs in Europe seems uncertain. Therefore we recommend investing more in innovation to develop new niches and strengthen the competitive advantages of the existing ones.

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Required Disclosures: Georg Ludviksson is the only member of the team who is Icelandic. No team members traveled to Iceland during the course of this project. Apart from information obtained through interviews with cluster participants and experts, no special or non-public information was utilized in writing this report.