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Abstract

Many papers discuss causes of Iceland's financial crisis, but none has examined what the Icelandic crisis revealed about international financial markets prior to 2008. Global financial markets' failure to recognize the familiar signs of an oncoming crisis reflects either an ignorance of developing economies' antecedents to Iceland's financial liberalization and crisis, or an overriding belief that Iceland was somehow different. They also illustrate Keynesian and Minskyian theories about the instability of finance and its tendency toward crisis. This paper briefly reviews theories of the linkage between financial liberalization and crisis, empirical evidence of that connection, and analyses of Iceland's financial crisis. It contributes a comprehensive depiction of Iceland's macroeconomic fundamentals leading into 2008, as well as an explanation of how positive reports like Frederic Mishkin's and Richard Portes's as well as credit rating activity by Moody's bolstered positive views of Iceland's financial and economic stability. It culminates with an explanation of why Iceland's crisis was a surprise in global financial markets, despite ample empirical evidence and reports by academics, policy makers, and private credit rating agencies that Iceland was destined for a collapse.

JEL Codes: E02, F36, G01, G15, O57

Keywords: Finance-led Growth, Financial Crisis, Financial Liberalization, Economy-wide Country Studies

1.1 Introduction

In 2008, Iceland's financial crisis appeared to be a great surprise to Western media and economists; however, there are many reasons why Iceland's financial development in the 1990s and early 2000s ought to have caused concern among observers and Icelandic policy-makers. Despite Icelandic economic and financial fundamentals indicating the significant potential for crisis, ample historic precedence for rapid financial liberalization resulting in financial and economic crises, and several prominent reports by policy makers, academics, and private financial interests about the likelihood of a crisis, Icelandic and international bankers' continued to shift large capital flows among themselves, the Icelandic krona continued to appreciate, internationally respected economists like Frederic Mishkin and others wrote reports about the quality of the Icelandic economy and financial sector, and credit rating agencies continued to rate the country's debt favorably. Why, given the aforementioned fundamentals, past precedent, and bad press, did so many academics, policy-makers, and financial actors fail to recognize the danger of Iceland's imminent financial crisis?

This question is important for several reasons. First, if Iceland's financial sector could heat up as profoundly as it did with little apparent public notice, what is to stop something similar from occurring again, in Iceland or elsewhere? Further, the costs of the financial crisis in Iceland have been substantial, despite how favorably Iceland's economic performance may compare with other European countries that experienced financial crises around 2008. Finally, emphasizing that large-scale financial crises can occur in developed countries that seem to have good public integrity is important for insuring against the costs of such crises in the future.

A literature exists that has explored the causes of the Iceland's financial crisis in 2008. These articles and books have mainly explored the crisis's origins in excess consumption, monetary policy, and corrupt or fraudulent activity; all tell isolated stories of how Icelandic government policies, banking excess, and household behavior helped doom the Icelandic economy. However, this literature is missing a broader analysis of the story that provides the historical context of that crisis and illustrates the bigger institutional picture that allows conditions to foment crisis, namely broad scale irrational exuberance, moral hazard, and the inadequacy of global financial supervision in the lead-up to the 2008 financial crisis at the international and domestic levels. This paper contributes a unified narrative of Iceland's financial crisis that links Iceland's developing country financial crisis narrative with the developed country financial crisis narrative, identifies the institutional short-sightedness of investors during the rise of Iceland's investment banking sector, and shows the potential for this sort of 'mistake' on a grand scale to repeat, if academics, policy-makers, and private sector actors are unobservant in the future.

The paper is organized as follows. The second section briefly reviews the existing literature about the Icelandic financial crisis, with attention to recurring arguments about institutional changes in Iceland's monetary and financial architecture, and broad theories of the connection between financial liberalization and the onset of financial crisis. The third section compiles monetary and financial data to illustrate the substantial change in Icelandic economic fundamentals prior to the onset of its crisis, as well as the effects of the aftermath of the crisis. The fourth section illustrates how irrational exuberance and moral hazard enable financial sector growth to unsustainable proportions, even in the presence of a growing literature arguing about an imminent Icelandic financial collapse, only to eventually lead to financial crisis. The final section of the paper revisits the paradox of Iceland's crisis being a surprise, despite the ample evidence and past precedent that ought to have alerted more observers than were aware of its accumulating problems.

1.2 Literature review

This section is divided into three parts – the first summarizes literature detailing the theoretical causes of financial crises, the second examines empirical studies of the linkage between financial liberalization and crisis, while the third focuses on analyses of the particulars of the Icelandic financial crisis, and the holes that remain.

1.2.1 Theoretical Causes of Financial Crisis

Analyses of financial crisis focus on different theoretical causes depending on whether a country is considered to be developing or developed. A well established theoretical and empirical literature supports the notion that rapid liberalization of financial sectors are likely to be associated with the onset of financial crisis, particularly in developing countries that may lack institutional integrity. Minskyian and Keynesian analyses of finance, as well as the behavioral finance literature, also argue that developed countries are prone to dynamics that increase financial and economic instability as their financial sectors grow relative to the rest of an economy. (Minsky, 1982; Keynes, 1933; Shleifer, 2000; Shiller, 2000) These literatures are relevant to understanding how the Icelandic economy changed in the years preceding 2008, and why the risk of a financial crisis was so immensely increased.

A broad literature examines the likely consequences of monetary policies that target inflation, and their likely implications for capital inflows. Similarly, a literature about hot inflows examines why developing economies that liberalize financial sectors too rapidly face the increased prospects of financial crisis. Monetary policy that targets inflation is associated with increasing interest rates as aggregate demand and GDP increase; as the economy expands, and as prices rise, central bankers raise interest rates, which should theoretically stem domestic investment and borrowing. However, these policies may have the unintended effect of encouraging more investment in the domestic economy from foreign interests, who pursue higher yields and appreciating currencies. As a result, even proponents of inflation-targeting monetary policy may caution against its application too abruptly in emerging economies, in order to prevent potential bubbles from forming. (Mishkin and Eggertson, 2006) While capital account liberalization may increase domestic access to credit and promote more domestic investment, there may be a simultaneous risks of hot inflows, as domestic GDP grows, and of capital flight in the event of a downturn. Conventional development and international finance literature thus cautions against rapid capital account liberalization until a country has a sufficiently robust financial regulatory apparatus, in order to hedge against these potential capital surges and sudden stops. (Eichengreen, 2003, Jeanne, Subramian, and Williamson, 2012) The Icelandic Central Bank's reorientation of monetary policy in the 1990s, and the subsequent change in FDI, and overall capital flows into that country, highlight the importance of understanding this connection.

When considering the connection between financialization and the onset of crisis in developed countries, Keynes, Minsky, behavioral finance theorists like Shiller and Shleifer, and systemic risk analysts like Gorton, Adrian, Shin, and others model the linkage between financial expansion and crisis. Keynes argued that herd behavior could result in adverse economic outcomes, and Minsky argued that economies open to all capital flows were prone to financial booms and subsequent financial fragility as economies would overheat. Shiller and Shleifer have written about irrational exuberance and bias of market participants preventing financial actors from recognizing downturns that are imminent or have begun, increasing the costs of ensuing crashes for all. Adrian, Shin, Gorton, and others argue that the substantial shift toward market oriented finance, shadow banking, and wholesale finance have created vulnerabilities throughout the financial system, increasing systemic risk, potential likelihood of crisis, and the costs of financial crisis. These dynamics were all present when considering the lead-up and onset of the Icelandic financial crisis.

1.2.2: Studies of the Linkage Between Financial Liberalization and Crisis

An extensive literature examines the historical and empirical context of financial liberalization and financial crisis. Narrative accounts by Charles Kindleberger (2005), Reinhart and Rogoff (2009), Bordo and Eichengreen (2003), and Grabel (2003) describe the correlation between financial liberalization and crisis, as well as the recurring nature of financial crises throughout history, in both developed and emerging markets. Econometric analyses by Bordo et al (2001), Eichengreen and Arteta (2000), Barrell et al (2010), and Rodrik (2005), among several, demonstrate correlation and causality of financial liberalization and the onset or incidence of financial crisis, using various econometric techniques, country samples, and time periods. The overwhelming conclusion of these authors is that financial liberalization in developing states that lack sophisticated financial regulatory apparati bear substantial risks of financial crisis if they liberalize too rapidly, and that the costs of these crises are likely to inhibit economic growth.

There is also an extensive literature that has investigated the likelihood of financial crisis in developed economies. Jorda, Schularick, and Taylor (2011), Forbes and Warnock (2012), and Broner et al, (2013) have written about the correlation between credit bonanzas and the onset of financial crisis, in developing and developed economies. Systemic risk is associated with trends such as increasing prevalence of shadow banking and securitization, and implies increasing uncertainty about asset values and risk levels, as banks move assets off of balance sheets and partake of novel securitization techniques, which is more likely in developed financial sectors. Academics like Acharya and Schnabl (2010), Adrian and Shin (2008), and Adrian and Ashcraft (2012) have performed econometric analyses that support the notion that increased systemic risk is associated with financial crisis in a broad sense. Further, analysis of rising systemic risk in the European financial system by Ang and Longstaff (2013), Schüler (2003), and Engle, Jondeau, and Rockinger (2015), have also demonstrated that European states with presumably sophisticated financial institutions have had greater likelihood and incidence of financial crisis as systemic risk, financialization, and securitization have increased. Given these dynamics, it is imperative to consider both the nature of the financial arena that Iceland's financial sector entered in the late 20th century, as well as the leverage, capital, and financial dynamics present in Iceland's financial sector in the lead-up to the 2008 crisis.

1.2.3: Prominent Analyses of Iceland's Crisis

Past narratives of the arc of Iceland's financial expansion and crisis paint an unflattering portrait of the Icelandic political system, central bank, and financial sector as a whole. These include reports of broad corruption and interest group dominance in the narrative of Icelandic finance, discussions of ill-fated liberalization and monetary policy by Icelandic academics, popular economic writings about the scope of the Icelandic economic transformation prior to 2008, and discussions of the corruption of bank management as sources of international finance dried up in the years immediately preceding the global financial crisis.

In brief, the Icelandic financial crisis, as analyzed by many, had its origins in monetary and regulatory policy. In the 1990s, the Icelandic government and Central Bank liberalized and privatized the Icelandic banking sector, which set the stage for large capital inflows. As inflows increased, Icelandic banks' increased their trading activity and acquisition of foreign assets and enterprises, and their profits rose. (Zoega et al, 2011; Lewis, 2010; Johnsen, 2014) The Icelandic government encouraged Icelanders to buy shares in Icelandic banks, which also pushed up the banks' share prices.

A consequence of these rapid inflows was an increase in Icelandic GDP, which further contributed to currency appreciation and inflation dynamics. The Icelandic Kronur (ISK) appreciated as a consequence of large-scale capital inflows, which further encouraged foreign investment in Icelandic financial markets. Icelanders also began to engage in currency carry trades to finance purchases of expensive imports. When foreign investors scaled back their lending to Icelandic banks, several of Iceland's big three banks introduced international retail banks, and households in other parts of Europe, like the UK and the Netherlands, opened accounts, to take advantage of Iceland's high interest rates. In the moment of the financial crisis, these monetary dynamics and the activities that they had prompted extended the scope of those affected by Iceland's financial boom and bust.

Wade and Sigurgeirsdottir (2010 and 2012) have written about interest group involvement by conservative politicians and business interests, who worked together to transform the nature of Icelandic finance from fundamentally stability oriented to remarkably active by European standards. They have also described conflicts of interest between the media and the three large banks, in which private media were disinclined to report unfavorable news about Icelandic finance given cross holdings of shares in media companies by the banks, and shares in the banks by the media companies, as well as an environment in which the government effectively threatened to defund public institutions that published data and reports critical of the expansion of the financial system.

Zoega, Danielsson, and Sigurjonsson have written about the transformation of Icelandic monetary and fiscal policy, aggregate demand, and corporate culture of the financial sector in their analyses of the Icelandic financial crisis. They have argued that the significant shift away from a monetary policy centered around financial stability to inflation targeting increased the potential for instability in the Icelandic economy, as the ISK appreciated, capital flows increased, and the Icelandic price level rose substantially. These policy shifts occurred in tandem with decreasing corporate tax rates, but no change in government spending, which contributed to expanding aggregate demand, and inflationary pressures. Finally, they have focused on changing corporate governance, as banks consolidated and changed compensation structures to increase bank employees' motivation to increase stock prices, at the expense of financial stability and sustainability. Together, Zoega, Danielsson, and Sigurjonsson argue that the integrated effect of these policy and corporate governance changes has been to destabilize the Icelandic financial sector, and economy at large.

Gudrun Johnsen has written in depth about changes in Icelandic financial corporate governance, particularly in the wake of the publication of the Icelandic crisis report. She describes in great detail the scope of international borrowing that Iceland's big three banks engaged in following their privatization and liberalization, and of their subsequent innovation of of 'love letters', "new unsecured bonds in the domestic market at a favorable rate," issued in ISK that banks exchanged and resold with other Icelandic banks, and later issued in euros, which Icelandic banks exchanged and resold to Eurozone banks. (Johnsen, 2014, 93) She has also written about the private sector assessments of the quality of the Icelandic financial sector – specifically, the credit rating agency Moody's assessment that the Central Bank of Iceland would act as a lender of last resort in the event of a crisis, given the size of Iceland's financial sector and its improved rating of Icelandic sovereign debt as motivators of international investment in the Icelandic financial sector. She also describes the network of linkages between Icelandic real sector actors and financial firms that developed in the lead-up to the crisis, and the conflicts of interest that such connections would create.

Finally, Michael Lewis (2010) has written about the scope of international exuberance surrounding Iceland's currency appreciation in the lead-up to the 2008 financial crisis, and the consequences of that for Iceland's domestic economy. Lewis's account focuses on the relative newness of Iceland's active financial system, the size of the business it conducted, and European willingness to invest billions of euros in Iceland's appreciating currency, as well as the carry trade that developed among households eager to benefit from the appreciating ISK to finance their growing consumption. Despite the relative inexperience of Iceland's financial actors, their willingness to engage in highly leveraged borrowing and investment in tandem with European partners' willingness to lend and invest large sums in the Icelandic banks fomented growth, and exacerbated the domestic and international costs of Iceland's inevitable crisis.

This literature taken together tells a compelling story about the causes of Iceland's crisis; what it fails to do is reveal what Iceland's financial boom and bust reveals about the broader global economy. Iceland's banks and economy could not have grown as rapidly or as substantially as they did without international participation; hence, understanding how outside investors failed to recognize signs of a crisis in the making is important to either avoid complicity in financial bubbles or to spur local regulatory bodies into stability minded policies. The remainder of this paper addresses the warnings – data and reports – that outside investors and institutions should have recognized as signs of a bubble in the making, as well as the reasons why those outsiders were so likely to ignore those signals.

1.3 Empirical Analysis

In the lead-up to the 2008 crisis, monetary, capital account, and inflation data support the notion that Iceland's financial status better reflected that of a developing, rather than a developed, economy. Once the Icelandic Central Bank shifted to a solid inflation-targeting policy regime, the initial decrease in inflation rate was later reversed as interest rates rose, capital inflows increased, exchange rates appreciated, and price levels rose. These rising capital inflows, a result of the higher interest rates that global financial actors and institutions could earn in Icelandic markets, increased the instability of the Icelandic financial and economic arena, particularly since Icelandic banks used those funds to invest heavily in securities and shares, both within the Icelandic financial sector, as well as internationally. At the same time, these inflation-targeting policies had the perverse effect of eventually increasing Icelandic inflation to unprecedented levels. These processes reflected the experiences of other developing economies that shifted from stability minded to inflation targeting monetary policies, and set the stage for other changes in Icelandic finance that would precipitate the onset of financial crisis.

As these dynamics developed, Icelandic banks simultaneously adopted and benefited from trends developing in other developed financial markets, namely increasing financialization of the Icelandic economy, increased credit and financial intermediation, and increased turnover in security and equity markets that increased systemic risk in the Icelandic financial sector. This pairing of developing and developed economy trends toward crisis exacerbated the costs of Iceland's eventual financial crisis.

From 1984 until 1995, the Icelandic Central Bank shifted from stability focused monetary policy that restricted capital flows and maintained very low interest rates to a regime that targeted inflation, and rapidly increased interest rates. From the early 1990s through 2008, average Icelandic interest rates for savings accounts, general lending, and CPI indexed securities rose. [Figure 1, Data Appendix.] This contrasted with a period of low interest rates in US and European markets, and encouraged increasing capital inflows to Icelandic banks. [Figure 2, Data Appendix.] At the same time, the ISK appreciated relative to the US dollar. [Figure 3, Data Appendix.] Iceland's increasing foreign financial liabilities were matched with increasing claims in international financial markets, and Iceland's appreciating currency correlated with increasing imports and a rising current account deficit. [Figures 2 and 4, Data Appendix.] These changes in foreign claims and liabilities fostered increasing vulnerability to international crisis, particularly in an era of rapid financial globalization in the West. Finally, these changes were associated with rising Icelandic inflation, as the Central Bank failed to sterilize the price effects of the increasing capital inflows. [Figure 5, Data Appendix.]

The Icelandic dynamic of inflation-targeting policies matched with capital account liberalization, associated with inflation and financial instability had precedent in Latin American and Turkish experiences in the 1990s and early 2000s. The Southern Cone states of Chile, Uruguay, and Argentina rapidly liberalized their financial sectors while reorienting monetary policy to inflation targeting in the 1970s and 1980s; the end result was a general increase in the influx of hot money, and a subsequent appreciation of interest rates, and exchange rates came to be overvalued. (Diaz-Alejandro, 1985) As these states' terms of trade improved, citizens purchased more imports, which increased current account deficits and national debt. Iceland's process of financial liberalization after trade liberalization, and in the midst of inflation targeting generated similar capital flow dynamics, with similar effects on the exchange rate. As Icelanders purchased more imports, and as firms became more dependent on borrowing flows financed in part by international inflows, the economy as a whole became more vulnerable to sudden stop in foreign capital. In the moment that hot inflows ceased in Chile, Argentina, and Uruguay, the downturns were rapid and substantial.

Turkey is another example of a state that liberalized trade and capital flows in an attempt to court economic growth, following a period of strong economic regulation and financial repression, that ultimately experienced hot money flows, inflation targeting induced exchange rate appreciation, and ultimately financial crises. After an initial rapid liberalization of the capital account that resulted in various scandals in the late 1970s, the Turkish government proceeded with subsequent liberalization more gradually. It liberalized the foreign exchange regime in 1984, then created an interbank market "for short-term borrowing … in 1986," followed by the Central Bank's initiation of open market operations in 1987, and eventual "reopening of the Istanbul Stock Exchange." (Boratav and Yeldan, 2006, 421) In 1989, the Turkish state eliminated capital controls, and "full convertibility of the Turkish lira was realized at the beginning of 1990." (Boratav and Yeldan, 2006, 422) These changes set the course for increasing waves of foreign capital inflows, but ambiguous real sector consequences. Gross inflows to domestic banks rose dramatically between 1990 and 1995, before dropping substantially from 1996 to 1998, and then they resumed at high volumes in 1999. Overall, gross bank inflows grew from $50 billion in 1991 to $120 billion in 1995, and under the disinflation policy of 2000, gross capital inflows were $209 billion, while gross capital outflows were $204 billion. (Boratav and Yeldan, 2006)

Turkey eventually experienced three major financial crises in the 1990s and early 2000s. These occurred in 1994, following the downgrading of the Turkish credit raging, in 1998-1999, prompted by contagion effects in the global crisis in Russia and East Asia, and in 2000-2001, after several banks failed in 2000 following another period of hot money flows, and triggered a subsequent episode of capital flight. The reversals of capital flows and costs of these crises were each dramatic: in 1994, capital outflows were 4.8 percent of Turkish GNP; in 1998, they were 3.9 percent of GNP, and 8 banks were essentially nationalized; in 2000, the Turkish Central Bank lost "nearly $7 billion" in reserves, and 52% of its "net external assets." (Boratav and Yeldan, 2006, 426) Iceland's financial losses following the sudden stop of lending from large US investment banks were even larger, particularly given the size of the Icelandic population; the parallel experience of economic destabilization after financial liberalization holds.

Taken together, these experiences reflect cautionary advice promoted by Frederic Mishkin, who recommended inflation-targeting monetary policy as well as capital account liberalization, with the proviso that it could be associated with financial instability, and should be pursued cautiously in developing economies that lacked sophisticated financial regulatory institutions. (Mishkin, 2000; Jeanne, Subramian, and Williamson, 2012). In a broader perspective, Iceland's rapid financial liberalization together with inflation-targeting policies that would entice large-scale foreign investment should have been a signal to domestic and international financial actors of the risk of sudden stops and financial crisis; that it did not indicates some sense that Iceland was different, despite its rational lack of financial regulatory sophistication.

As Icelandic capital account changes and inflation-targeting monetary policy took effect, financialization of the total Icelandic economy increased in ways that increased the systemic risk of the Icelandic financial sector and broader economy. Financial asset holdings and liabilities increased across the Icelandic economy, and holdings of securities and shares increased as a share of these holdings. [Figures 6 and 7, Data Appendix.] Further, the total Icelandic economy issuance of securities and shares increased over this period as well. [Figure 8, Data Appendix.] These dynamics increased broad Icelandic interdependence on financial outcomes, and increased the Icelandic population's vulnerability to credit and financial crises that might affect those assets and liabilities.

Icelandic financial corporations' behavior also increased the systemic risk of the Icelandic economy as a whole. Financial corporations issued more loans, securities, and shares in this period, while simultaneously increasing their borrowing and debt issuance as a share of financial corporations' liabilities. [Figure 9, Data Appendix.] These dynamics increased Icelandic banks' vulnerability to the consequences of financial and real sector shocks, as well as domestic and international vulnerability to those shocks. At the same time, Icelandic credit intermediation, the share of loans held as financial corporations' assets relative to borrowing by non-financial firms, the general government, households, and non-profits, increased, as did Icelandic financial intermediation, the share of total financial assets held by financial corporations relative to total financial assets held by the total economy. [Figure 10, Data Appendix.] Further, the share of Icelandic GDP represented by finance, insurance, and real estate services (FIRE industries) rose relative to real sector employment in this period. [Figure 11, Data

Appendix.] These ratios and trends indicate the growing importance of the Icelandic financial sector relative to the rest of the Icelandic economy, and the increasing vulnerability of the economy to some sort of financial crisis.

Other elements of financialization also increased the Icelandic economy's vulnerability to systemic risk and financial crisis in this period – specifically, rising securitization, and activity of financial markets in the Icelandic financial sector. This period was characterized by increasing Icelandic issuance of securities and shares, as well as increasing bank (and total economy) holdings of securities and shares. Further, the turnover of Icelandic security markets, particularly securities, equities, and housing related bonds, increased substantially in this period. [Figure 12, Data Appendix.] The increased scope of activity in these markets positively affected prices of these assets, and increased short-term growth of holdings. However, they simultaneously increased the magnitude of an eventual crash, if prices in these markets began to fall. Though Icelandic banking profits rose during this period, authors like Lewis, Sigurjonsson, and Johnsen have illustrated how artificial those profits were, depending in large part on banks' willingness to trade with other Icelandic banks, and the Icelandic public's willingness to comply with the Icelandic state's encouragement of their purchase of those banks' shares. (Lewis, 2010; Sigurjonsson, 2011; and Johnsen, 2014)

This section of the paper has shown trends in Icelandic macroeconomic data that indicated a growing bubble that was likely to burst in a crisis. These trends should have signaled domestic and international financial interests about the instability of the Icelandic financial system, and increased stability measures both within and outside of Icelandic markets. These trends also reflected dynamics that led to crises in developing economies, and were the sorts of phenomena studied in the vast literature that has examined the linkage between financial liberalization and the onset of financial crisis in those economies. That these phenomena, and the existence of that literature, failed to sway international investors indicates a disconnect between Iceland's assumed financial sophistication, and the actual ability of its regulators to protect against a large-scale crisis. The next section of this paper investigates how the global reaction to Iceland's financial performance also reflected Minskyian assumptions about financialization and crisis, as well as behavioral finance theories of irrational exuberance and moral hazard.

1.4 The Keynes-Minsky story

In addition to empirical evidence that Iceland was likely to experience some form of financial crisis in the 2000s, narrative accounts of institutional change in Iceland prior to 2008 also demonstrated its propensity for a financial crisis. Despite ample analysis from Danske Bank, the IMF, and the OECD demonstrating the fragility of Iceland's financial sector, and the likely costs for Iceland's broader economy, as well as reports by academics like Robert Wade and the negative assessments of the credit rating agency Fitch, Icelandic banks continued to trade as they had in the early 2000s, and many international banks continued to lend to Icelandic banks. Even after Iceland experienced the Geysir crisis that would provide some preview of the events of the 2008 crisis, Icelandic banks continued to accrue international business, though increasing in the retail-banking sector. This section of the paper discusses how reports by economists like Frederic Mishkin and Richard Portes, and the credit rating agency Moody's decision to upgrade Iceland's credit rating in 2007, assuaged investor and consumer confidence so as to allow Icelandic banks to continue to grow, as well as how they demonstrated conventional assumptions about Iceland's institutional integrity and lack of state corruption. The existence of public critiques of Iceland's rapid financialization and the precarious state of its economy attest to some broader understanding that Iceland was bound for some kind of financial crisis; the dominance of the counter narrative that Iceland's economy and banks were fundamentally strong illustrates key elements of Keynesian and Minskyian theories of what causes financial crises, namely irrational exuberance, as well as the importance of moral hazard in understanding the build-up to Iceland's crisis.

Iceland's lack of transparent information about its financial sector was another parallel with the common story about developing country's propensity for financial crises; the international financial community's apparently conscious ignorance of evidence of Icelandic financial instability, as described by researchers at Danske Bank, the IMF, and elsewhere, attests to strong irrational exuberance in the investment community. Positive reports by Mishkin and others specifically cite the integrity of Iceland's institutions in their arguments that Iceland should not be considered at risk of a developing economy style financial crisis. (Mishkin, Herbertsson, 2006) However, the Icelandic Special Commission Report, Wade and Sigurgeirsdottir, and others have identified the Icelandic state's role in threatening to defund public Icelandic institutions and agencies that published reports contradicting the narrative of a robust financial infrastructure, and a rosy growth picture; at the same time, the Icelandic Chamber of Commerce courted and paid economists like Mishkin and Portes hundreds of thousands of dollars to write their favorable reports about Iceland's financial sector and overall economic growth prospects. (Wade and Sigurgeirsdottir, 2010)

Domestic media coverage of Iceland's financial health reflected the consequences of increasing financialization in Iceland's broader economy. Prior to 2008, Icelandic news media consistently underpublished reports critical of the Icelandic financial sector, while publishing many stories that praised Iceland's big three banks. (Andersen, 2011) Sigurjonsson (2011) identified the root cause of this disparity as the cross-ownership of media company shares by Icelandic financial actors and institutions, as well as financial corporation shares by Icelandic media institutions. The interconnectedness of these industries created conflicts of interest for Icelandic financial institutions, the Icelandic public, and the international financial community.

Moral hazard also played a role in bolstering the international financial community's trust in Iceland's economy. The credit ratings agency Moody's decision to upgrade Iceland's credit rating, even after Fitch had downgraded it, increased broad confidence in Icelandic financial stability. Moody's decision to improve Iceland's credit rating stemmed from the agency's assessment that Iceland demonstrated such financial leverage that its central bank was certain to bail out the big three banks in the event of financial crisis as the lender of last resort. Iceland's financial system was assumed to be 'too big to fail', which further lulled international investors and retail banking customers into trusting Icelandic financial actors with their capital, and fueled more Icelandic financial activity.

Again, these events in Iceland paralleled the experience of Southern Cone states in the 1980s. Privatization of banks in the Southern Cone did not necessarily make them better or more efficient, though it made them less risk-averse. Chilean banks invested in risky ventures, and there is ambiguous evidence whether newly liberalized banks invested in firms that were most deserving of capital from a quality standpoint, or whether they invested in firms to whom they were connected politically. (Diaz-Alejandro, 1985, Corbo and de Melo, 1987) Moral hazard increased in these states as well: Argentina's Central Bank offered guarantees on bank deposits, which encouraged more capital inflows, and though Chile's government initially stated that it would not insure deposits, its Central Bank ultimately would guarantee them in an effort to preserve the integrity of its banking system after an initial wave of panics early in the liberalization process. Diaz-Alejandro argued, in 1983, that foreign governments' willingness and ability to use their leverage in order to ensure that governments or Central Banks would insure their investments guaranteed a moral hazard problem for developing countries considering financial liberalization, given the absence of an international regulatory body meant to offer global macro-prudential supervision. (Diaz-Alejandro, 1983) Despite the lack of an official claim that the CBI would act as lender of last resort, Icelandic banks and foreign investors behaved in ways that implied a similar trust that no government would allow its banks to enter insolvency; international ratings agencies specifically cited the Icelandic banks' 'too-big-to-fail' stature in their criteria for upgrading Iceland's credit rating in the early 2000s. (Johnsen, 2014)

These institutional arrangements further support the notion that Iceland's economy and institutions should have been considered vulnerable to dynamics viewed – or feared – in developing economies. The overwhelming trust for these governing bodies, reporters, and financial institutions – even in the face of reports and data unfavorable to the narrative of financial and economic stability – illustrates an unwillingness of eager parties to accept negative counternarratives, and to consider the possibility of failure in the Icelandic financial sector. They also demonstrate why financial actors cognizant of problems in Icelandic finance were either hesitant to speak out or eager to profit from internal knowledge of Iceland's inevitable financial collapse: observers that voiced problems could assume they would be pilloried by Icelandic government and financial institutions and ignored by international investors; if they could profit from their knowledge, shorting Icelandic banks would be a rational reaction. (Lewis, 2010)

1.5 Revisiting Iceland's paradox

Given the ample evidence of Icelandic financial instability – empirical, narrative, from academic, public, and private sources, why should Iceland's financial crisis have still presented a surprise for the broader global economy? This paper points to three factors. First, the prevailing notion that Iceland's economy should succeed in the wake of monumental financial change given its status as a Western European state with supposedly robust institutions increased institutional trust in Icelandic banks, despite Iceland's rapid growth and short history of financial liberalization. Second, Iceland's crisis illustrates the power of irrational exuberance and moral hazard to diminish caution about the risks of rapid financial expansion and crisis, and the tendency of investors to assume the best, despite evidence to the contrary. Finally, Iceland's crisis reveals the inherent instability created by rapid financialization. When a country adopts a financial approach to economic growth that deregulates banks, encourages international capital inflows through inflation-targeting monetary policy, and promotes wide-scale acquisition of shares and securities in those financial institutions by banks, households, non-financial firms, and the government, financial firms appear to be artificially profitable, and conflicts of interest develop that weaken the stability of the financial sector and broad economy.

Though a substantial literature has emerged since 2008 explaining the particulars of the Icelandic financial crisis, little attention has been paid to what Iceland's crisis reveals about global economic dynamics. This paper has demonstrated how Iceland's rapid financialization created systemic risks for the Icelandic economy as a whole, illustrating Keynesian and Minskyian arguments that financial systems are inherently prone to crisis without adequate regulatory apparati to counteract that tendency. The Icelandic Central Bank's decision to change the course of policy from stability promotion to inflation targeting set the stage for rising interest rates, precipitous increase in capital flows, and ultimately, rising prices, as well as asset bubbles in the housing market. The Icelandic government's policy to promote non-financial firms' and households' purchase of shares in Icelandic banks created perverse incentives for the banks to raise their share prices, and increased the scope of losses in the event of the banks' decline. Together, these processes increased Icelandic instability, and increased the costs of the inevitable financial crisis.

This paper also demonstrates the global prevalence of behavioral finance theories of irrational exuberance and moral hazard: investors and banks had access to data demonstrating trends toward instability, as well as to analyses illustrating the risks of investing in Iceland's financial system and economy at large. Many continued to follow the advice of economists like

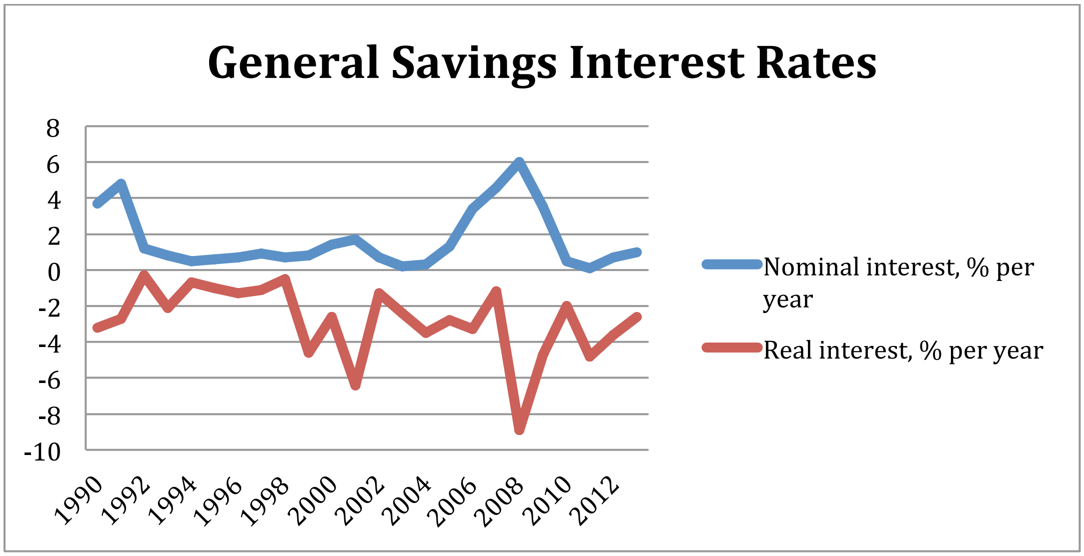
Mishkin and Portes, who argued that Iceland's financial sector was robust and stable, and that Iceland should not be assumed to have the same financial risks as developing economies, despite the newness of its supercharged financial system. Alternately, they followed the rationale set forth by Moody's that Iceland's financial system was so large that it was guaranteed to be bailed out by the Central Bank of Iceland in the event of some disaster. Whatever the source of confidence in Iceland's economy and financial sector, these outside investors' continued willingness to lend to Iceland increased the leveraged state of Icelandic banks, and increased the scope and costs of the eventual financial crisis.

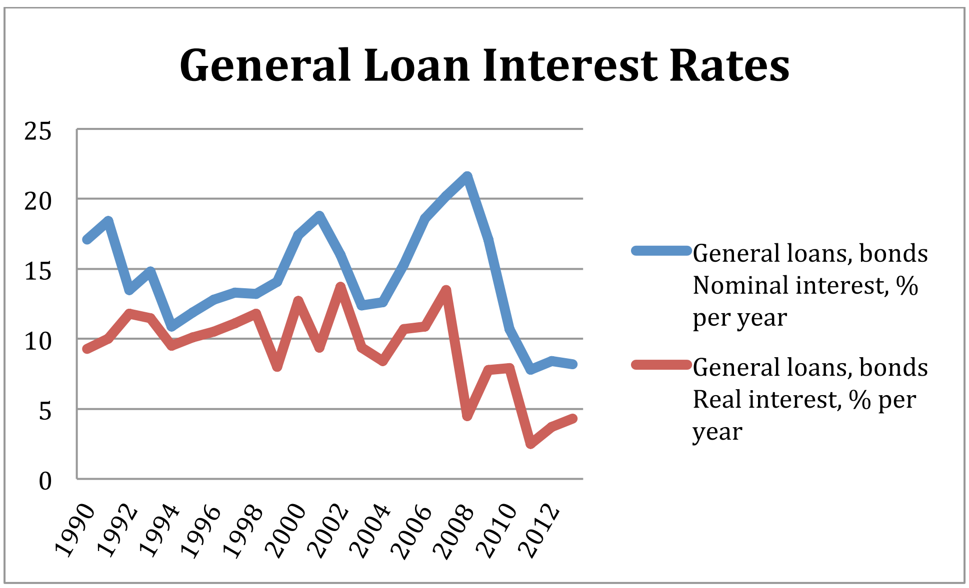
This willful ignorance or irrational exuberance extended to historical experience. Iceland's government orchestrated a remarkably fast liberalization of the state's financial sector alongside a reorientation of national monetary policy from stability oriented to inflation-targeting; historic experience has many examples of states pursuing these sorts of policies and then incurring financial crises in short order. The national and international unwillingness to compare Iceland's policy actions and history to that of developing economies like Turkey and Latin America demonstrates a bias in favor of western European economies, and an assumption that Icelandic institutions were ready for the job of supervising a radically transformed financial sector that embraced the newest financial technologies whose risks were underestimated even in sophisticated financial centers like Switzerland, London, and Wall Street. Further evidence that the Icelandic government actively repressed the publication of data and narratives counter to the story of a commanding and successful Icelandic financial sector, as well as the Icelandic media's general unwillingness to publish unflattering stories give lie to the notion that Western European states' financial institutions and governments can be trusted to ensure the public welfare and reveal information that may have adverse consequences for the domestic economy or financial interests.

These three lessons from Iceland's crisis indicate the need for the following policies moving forward. First, in an era of unprecedented financial complexity, any state that liberalizes or changes the fundamental premise of monetary policy rapidly should be subject to increased scrutiny. Iceland is not unique as a country that liberalized its financial sector and redirected its monetary policy rapidly and later experienced unsustainable financial growth and crisis; its fate as a supposedly sophisticated western state indicates the broader need for scrutiny of financial markets at the domestic and international levels. Further, the consequences for Iceland's population demonstrate that while some actors and institutions may recognize the potential for financial crisis, and act in ways that maximize their profits, the broader public must be aware of the changes of their new financial landscapes – greater financial literacy across the economy can help local populations insure against broader economic losses in the event of a crisis that originates in the private sector. Finally, states should reconsider finance-led growth strategies – the costs of financialization, given moral hazard and irrational exuberance, expand rapidly without meaningful oversight. Iceland's experience illustrates the effects of such to the rest of the world.

Data Appendix:

Figure 1: Icelandic Interest Rates – Data Source: Statistics Iceland





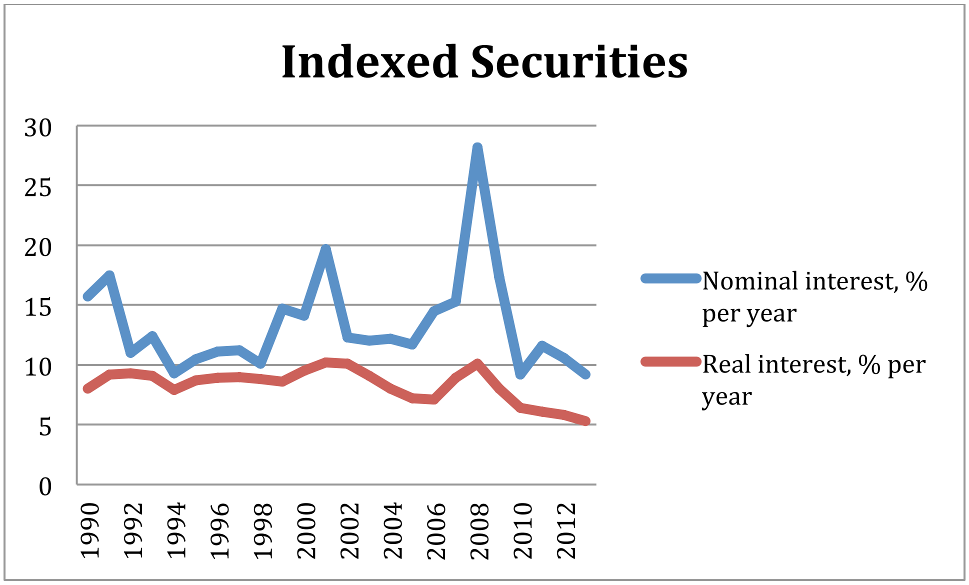
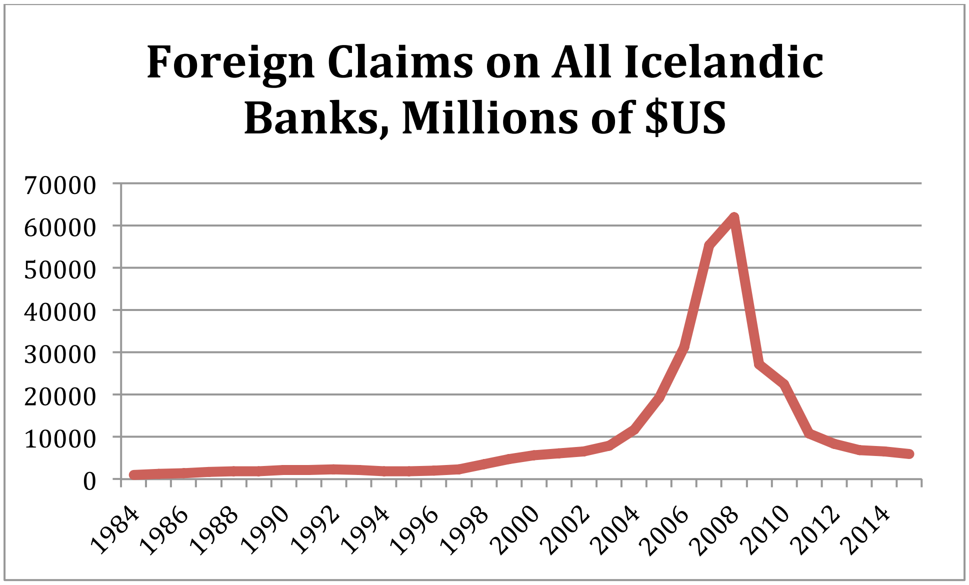

Indexed Securities
30
25
20
15
10
5
0
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
Nominal interest, % per year
Real interest, % per year

Figure 2: Icelandic Foreign Liabilities – Absolute and Relative to GDP
Sources: Bank of International Settlements and OECD Statistics



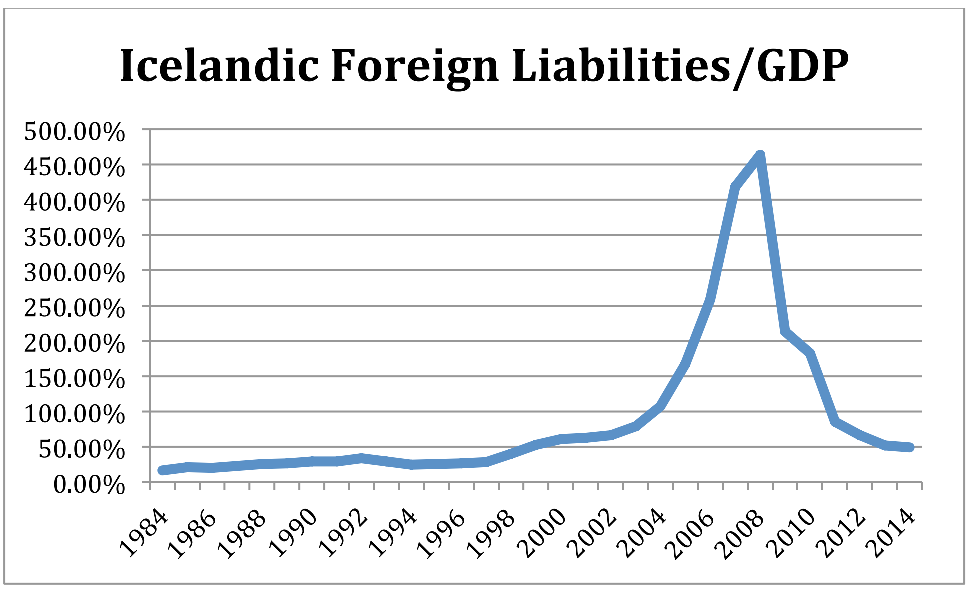


Figure 3: Icelandic Exchange Rate – ISK/US$
Source: Statistics Iceland

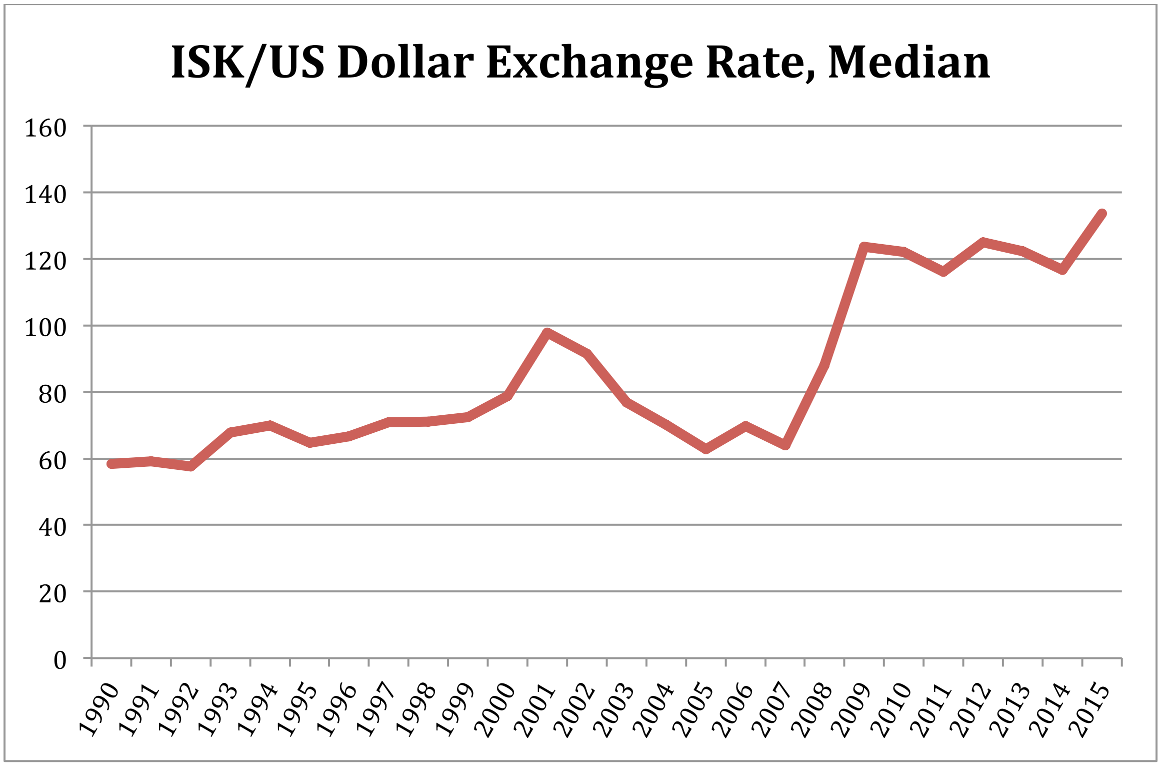
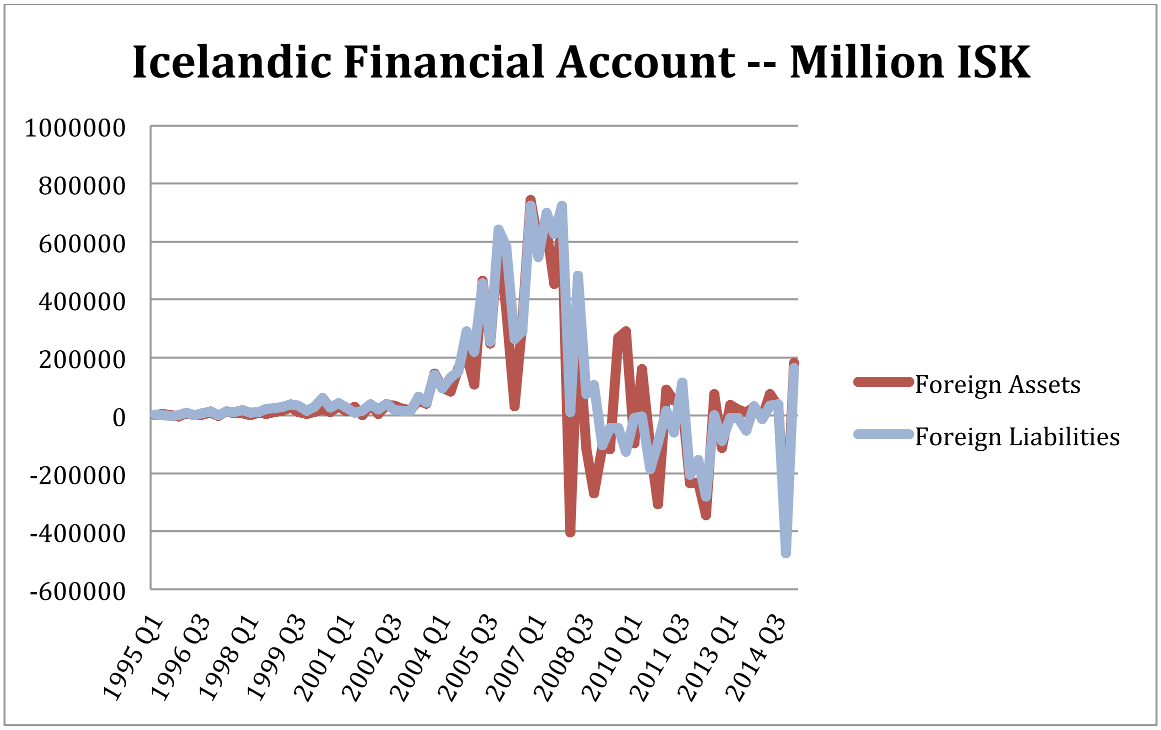


Figure 4: Icelandic Capital and Current Accounts
Source: Icelandic Central Bank



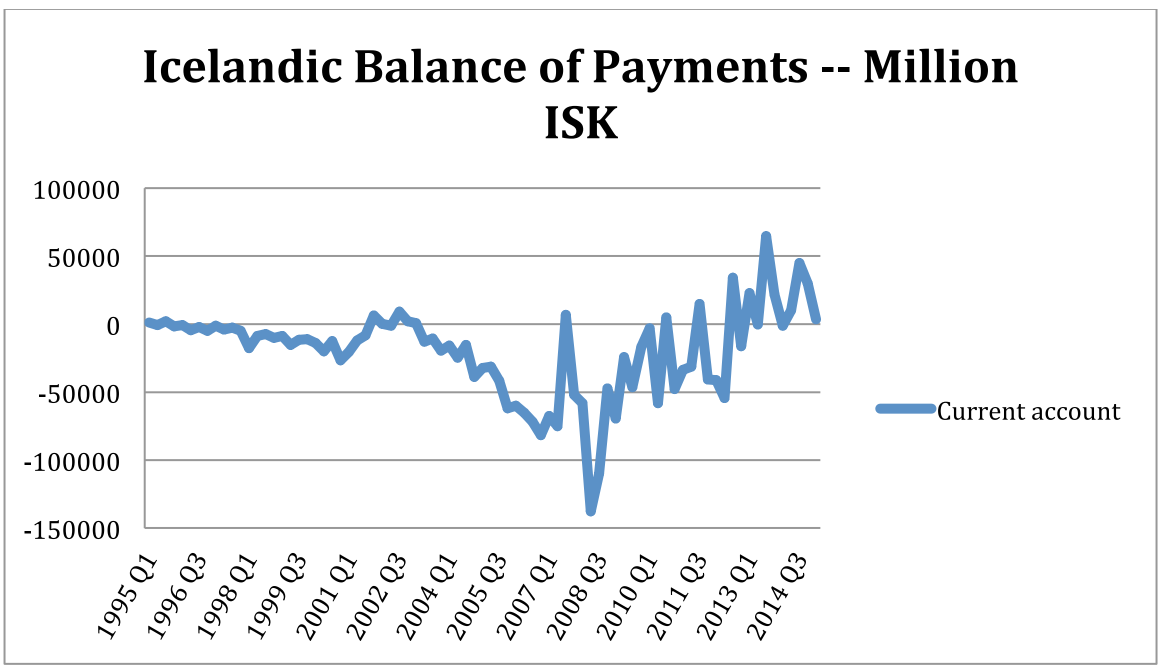


Figure 5: Icelandic Inflation Rates
Source: Statistics Iceland

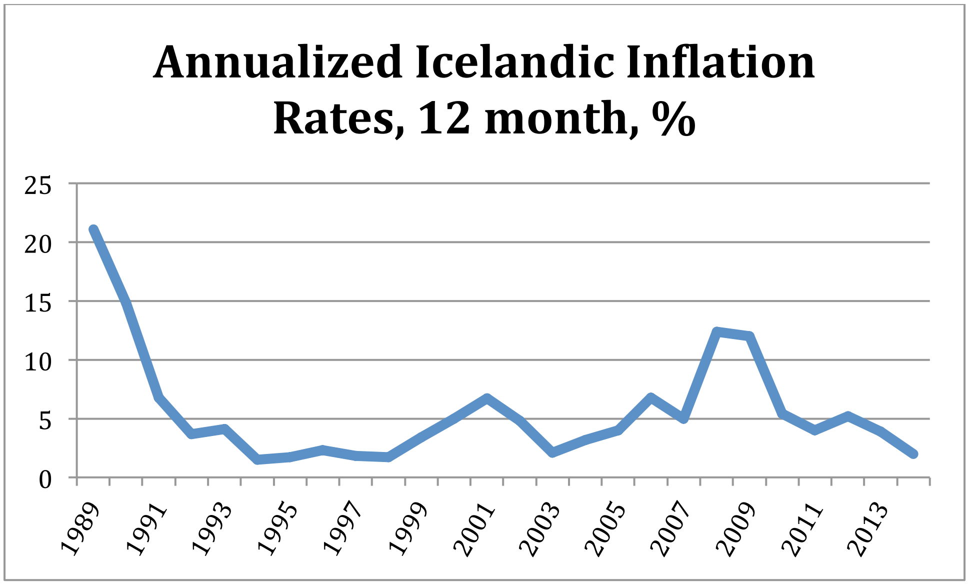
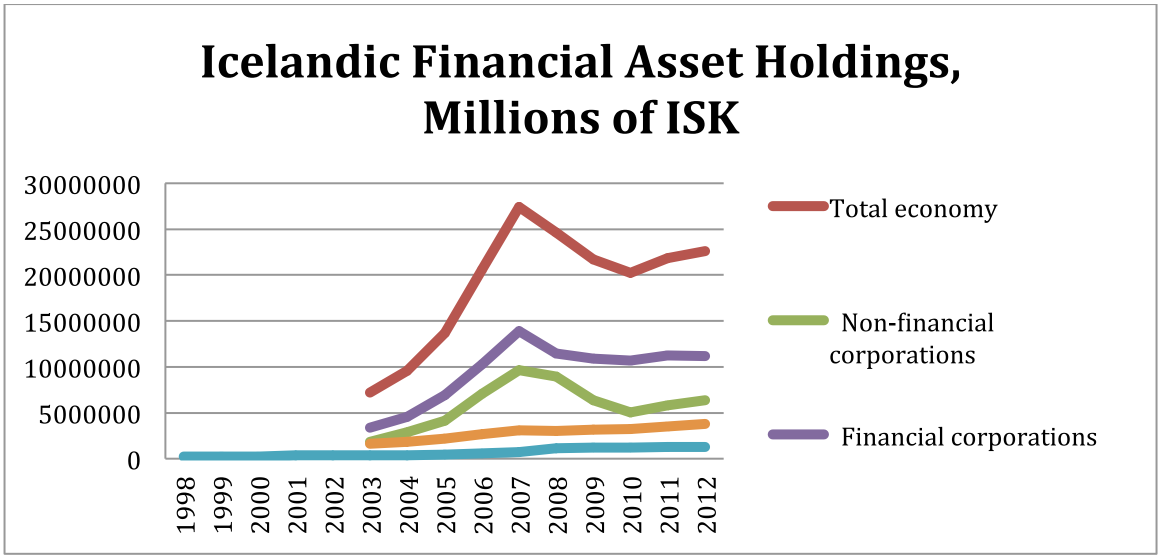


Figure 6: Icelandic Financial Asset Holdings, by Sector
Source: OECD Statistics



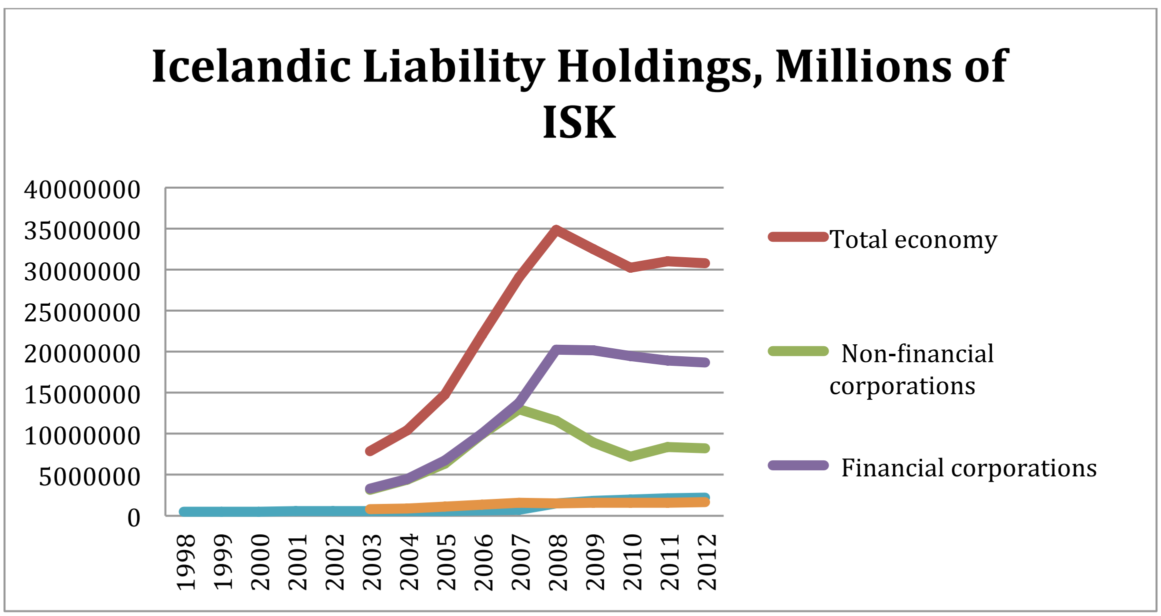
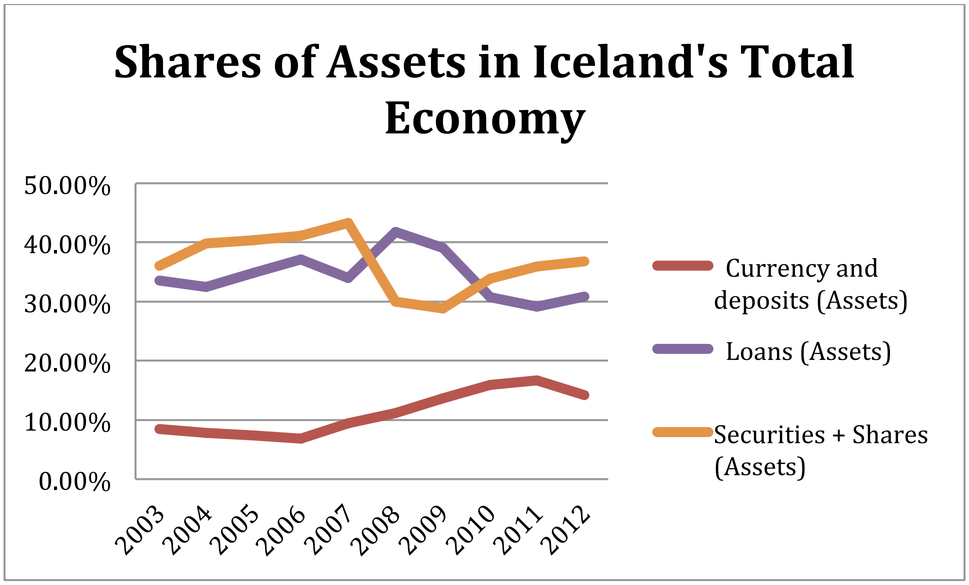


Figure 7: Shares of Financial Assets
Source: OECD Statistics



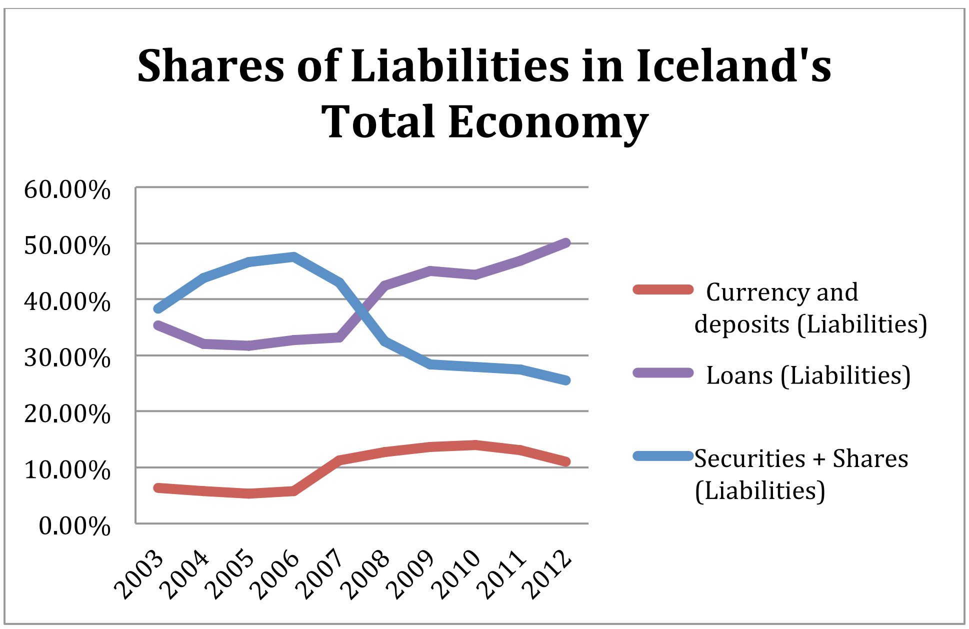


Figure 8: Icelandic Issuance of Shares
Source: OECD Statistics

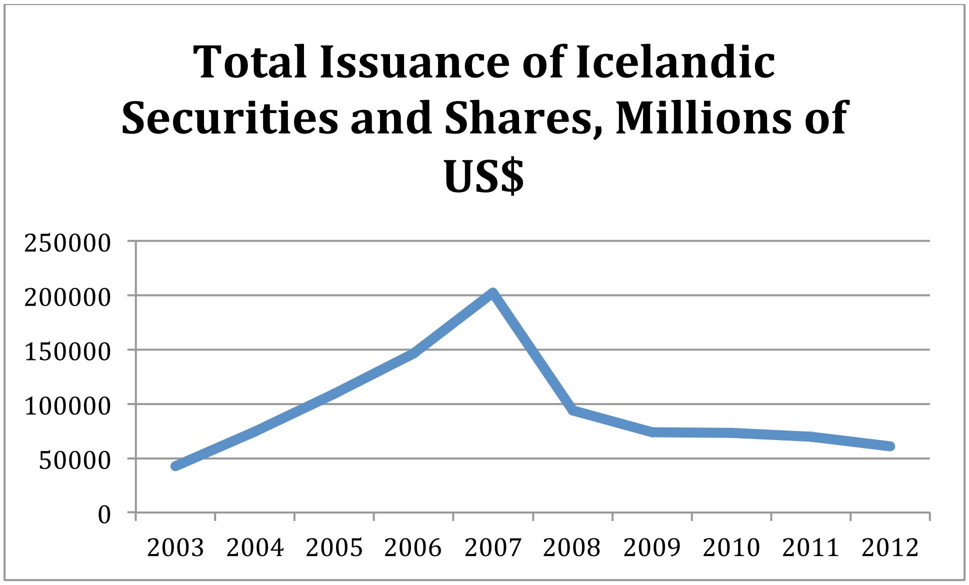


Figure 9: Icelandic Financial Corporations' Liability Shares
Source: OECD Statistics

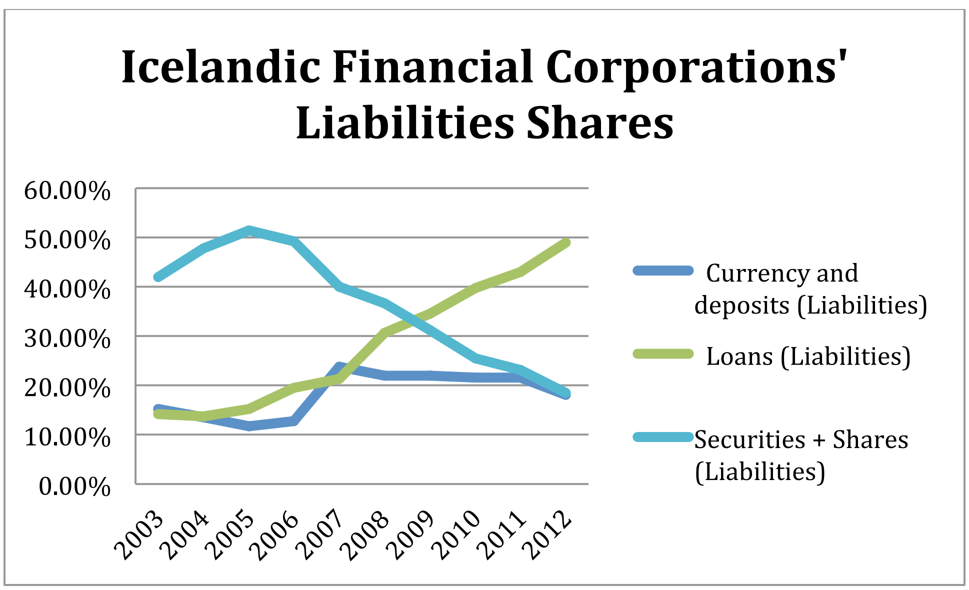


Figure 10: Credit and Financial Intermediation
Source: OECD Statistics

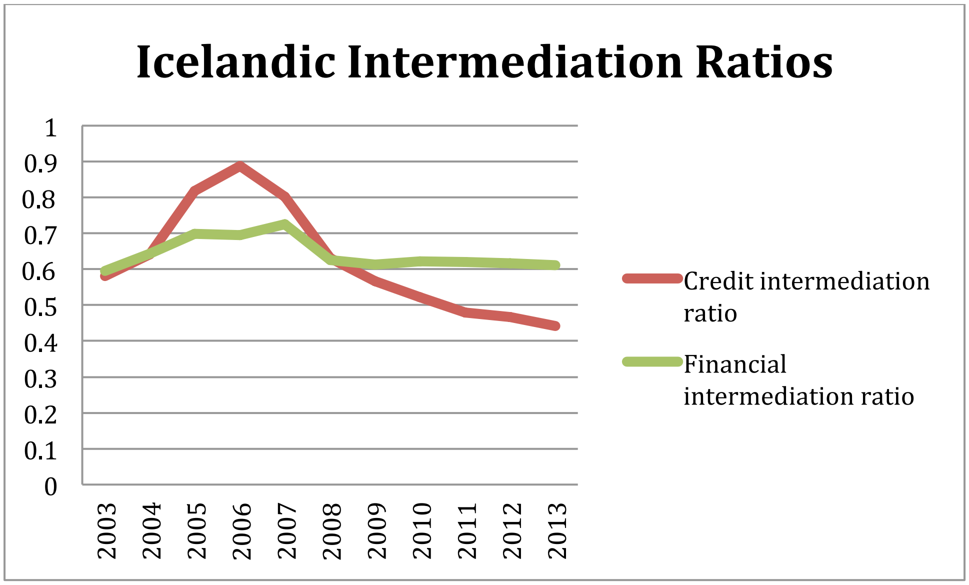


Figure 11: Sectoral Contributions to GDP
Source: Statistics Iceland

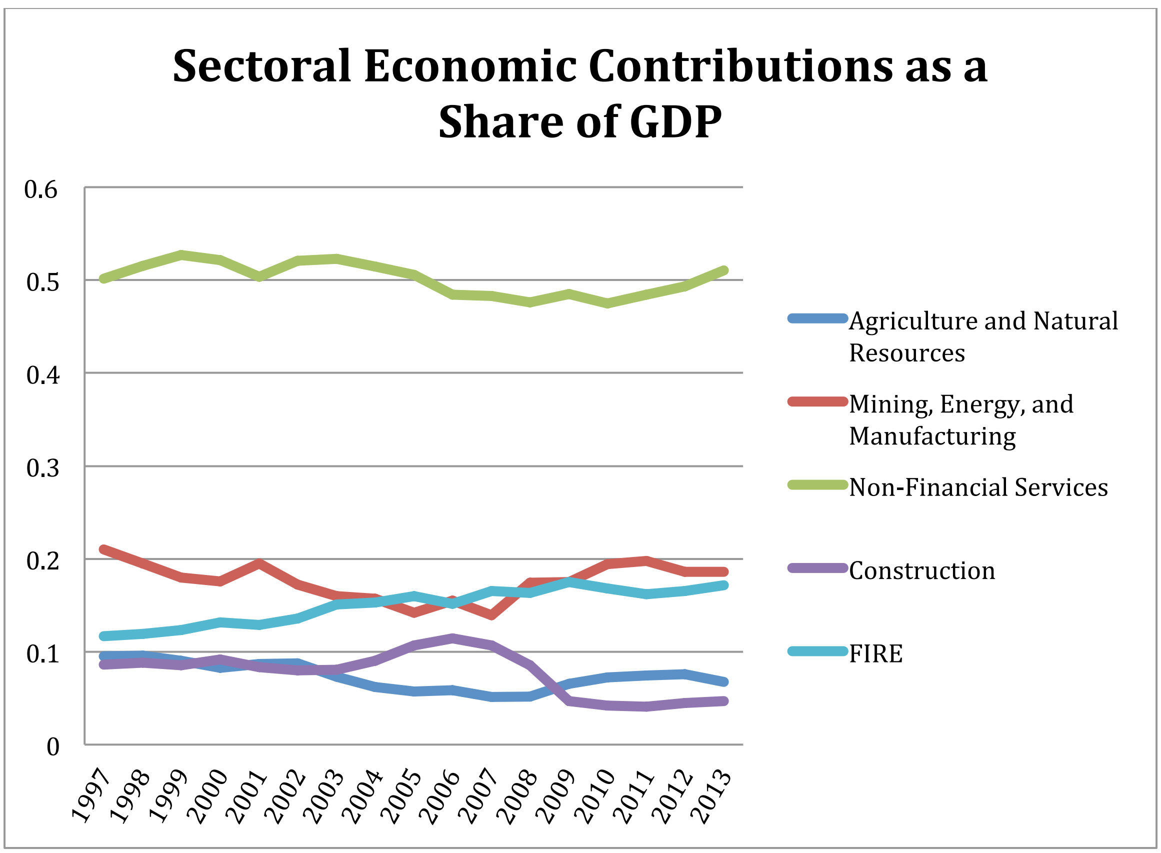
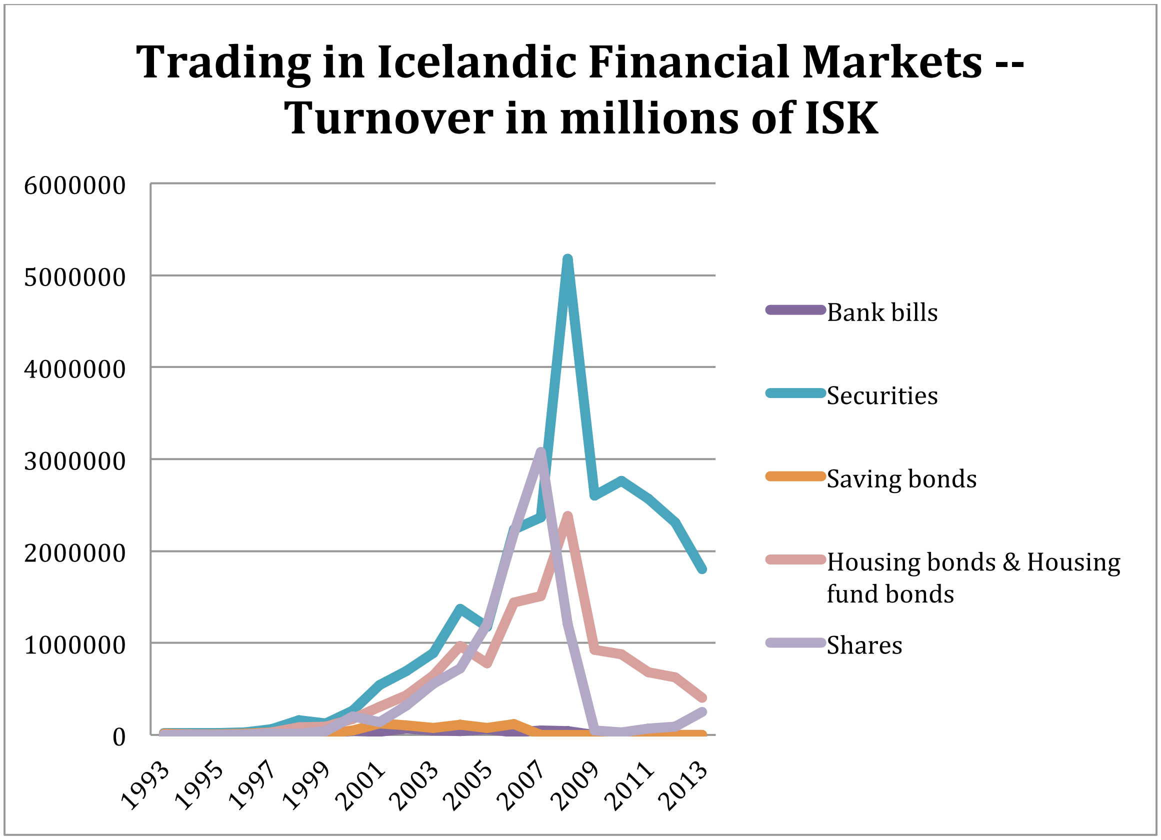


Figure 12: Turnover in Iceland Securities Markets
Source: Statistics Iceland



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