

The Icelandic financial crisis and self-fulfilling prophecies: Chronicles of a prophesied bankruptcy (2006-2008)

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[special issue of *Réalités Industrielles*, August 2016]

Abstract:

The meltdown of the three major Icelandic banks in the autumn of 2008 has been set down to phenomena as varied as: bloated assets in financial statements, “adventuresome” deregulation, inadequate supervision, the banks' poor governance, weak ethics, a macroeconomic disequilibrium and the lack of international cooperation. As a review of more than a hundred reports issued between the start of 2006 and the summer of 2008 by commercial banks, credit-rating agencies and public authorities shows, this banking system began melting thirty months before its collapse owing to a stigmatization process. A circular argument based on analyses of the risks related to sovereign debt and to the banking system laid the grounds for a self-fulfilling prophecy that would ultimately deter the banks' efforts to refinance or reimburse their debts. Our understanding of the financial turmoil triggered by evaluations of the risk of a default would be improved by precise studies of market opinion, as expressed in reports released by rating agencies or public authorities.

Within a few days in 2008, between the end of September and the start of October, the three principal Icelandic banks — Glitnir, Kaupthing (Kaupþing) and Landsbanki — were unable to meet payments and were nationalized. Strong growth had pushed their balance sheets to a total of more than one hundred billion euros.¹

The report published in 2010 by the Special Investigative Commission (SIC) of the Althing (the Icelandic parliament: Alþingi) on the causes of this collapse leaves little doubt about the three banks' mistakes and wrongdoings in the months and years prior to this final crisis. These banks had grown too big for their lender of last resort, the Icelandic state. They were too exposed to the Icelandic real estate market. They had made big loans to controlling shareholders. They had even gone as far as to finance purchases of their own shares in an effort to prop up prices. Finally, two of them had engaged in an aggressive on-line campaign for opening deposit accounts for foreigners. Such excessive risk-taking could have led to insolvency, the evidence being that their assets after collapse amounted, on the average, to a third of the value before (Althing 2010). However this depreciation was, in part, due to the recession into which their collapse plunged the country.

¹ Total calculated using the balance sheets of 30 June 2008 at an exchange rate of 0.008 euro/ISK (the Icelandic crown, *króna*). The translation of this article by the author has been revised by Noal Mellott (Omaha Beach, France), and many references have been updated.

Nonetheless, the banks were not killed in 2008 from the diseases diagnosed by the Althing. Unable to refinance loans due by mid-October, Glitnir received €600 million from the Icelandic government in exchange for 75% of its equity on 29 September. Owing to this government intervention, current liabilities fell due immediately, whence a default followed by nationalization on 7 October. In the week of 29 September, there was a bank run on Landsbanki's and Kaupthing's London branches, and both banks defaulted in the United Kingdom. As a consequence, their current liabilities had to be paid, and the Icelandic government took over these two banks on 7 and 8 October.

Behind Glitnir's short-term refinancing needs or Landsbanki's and Kaupthing's excessive use of foreign deposits via on-line banking, a single cause can be clearly identified. All three banks had been shut out of the debt market since the beginning of 2008 (Althing 2010), well before the default of Lehman Brothers on 15 September. They were in the paradoxical situation of banks whose shares (unlike Lehman's) had barely lost value and whose balance sheets, till the summer of 2008, compared favorably with those of major Scandinavian banks (Table 1). Neither auditors nor financial analysts challenged the sincerity of these results (Flannery 2010). Nonetheless, the debt market refused to allow the banks to issue new bonds.

| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008: 1st semester |
|--|-------------|-------------|-------------|-------------|-------------|-------------------------------|
| Return on assets | | | | | | |
| Iceland | 1.13% | 1.53% | 1.70% | 1.89% | 1.19% | 0.54% |
| Scandinavia | 0.54% | 0.71% | 0.73% | 0.75% | 0.74% | 0.27% |
| Return on equity | | | | | | |
| Iceland | 16.93% | 23.10% | 23.85% | 26.92% | 19.69% | 9.87% |
| Scandinavia | 13.59% | 16.27% | 17.90% | 18.39% | 18.26% | 7.04% |
| Capital ratio: Equity/balance sheet | | | | | | |
| Iceland | 6.67% | 6.62% | 7.13% | 7.02% | 6.04% | 5.47% |
| Scandinavia | 3.97% | 4.36% | 4.08% | 4.08% | 4.05% | 3.84% |

Source: The author's calculations based on data from FLANNERY (2010).

Table 1: Return on assets, return on equity and capital ratios: Average of the three Icelandic banks compared with that of six big Scandinavian banks from 2003 to the first semester 2008

Most of the criticisms made by the Althing in 2010 drew attention to the quite dangerous risks that could have been realized after 2008 but that did not actually cause the meltdown. Instead, adverse opinions about the banks were a determinant of the debt market's refusal, for nearly a year before the meltdown, to allow them to refinance. According to the prevailing narrative about the Icelandic banks, they died from their sins. The purpose herein is not to absolve the banks, nor to underestimate the imperfections of Icelandic bankers. Instead, I would like to suggest a counternarrative: the Icelandic banks died because the debt market did not believe in their survival, a belief stemming from a particular way of looking at the risks run by Iceland and its banks.

Reviewing the literature and staking out a position

The studies published in the years right after 2008 can be used to detect several explanations of the insolvency of the three banks.

A first explanation has to do with the circumstances of the default in October 2008 and the crisis between Iceland and the United Kingdom or, to a lesser extent, between Iceland and the Netherlands. Accordingly, the Icelandic banks were victims of deficient, or inexistent, international cooperation not only with the UK and the Netherlands but also with the other Nordic countries (Central Bank of Iceland, 2009, Hilmarsson 2015, Gudmunsson 2011, Jonsson 2009). The European Central Bank and the US Federal Reserve had a share of responsibility for this situation (Hilmarsson 2014).

A second explanation points to the three banks' very fast growth during the four to five years preceding the crisis and to the resulting discrepancy between their assets and the Icelandic GDP (or the government's budgetary resources). As a consequence, it would have been difficult for the government to be credible as a lender of last resort (Gudmunsson 2011, Gylfason *et al.* 2010, Flannery 2010, Fridriksson 2009, Buitert & Sibert 2008 & 2009, Barth & Schnabel 2013). Iceland was too small for the global economic order (McDonald 2015).

A third explanation evokes macroeconomic disequilibria: monetary turbulence was caused by the independent status of Iceland's currency and exacerbated by the financial crisis (Buitert & Sibert 2009, Jun & Yuan 2011, Aliber 2008, Halldorsson & Zoega 2010). Furthermore, lenient policies overheated the economy (Matthiasson 2008).

Besides the lack of international cooperation, size discrepancy (bank assets vs. GDP) and monetary turbulence, a fourth explanation was much more frequently heard: it focused on the Icelanders' ill-conceived policies or poor practices. Deregulation since 2000 had been excessive (Althing 2010, Aliber & Zoega 2010, Boyes 2009, Benediktsdottir *et al.* 2010, Halldorsson & Zoega 2010, Durrenberger & Palsson 2014, Cuéllar & Hamann 2009). Supervision was poor (Gylfason *et al.* 2010, Jun *et al.* 2011, Hilmarsson 2013.2, Althing 2010, Kallestrup & Lando 2010, Nielsson & Torfason 2012, Sigurjonsson 2010, Sigurjonsson & Mixa 2011, Ong & Čihák 2010) — perhaps poorer because of the small island syndrome, where everyone knows everyone (Jonsson 2009). Bank governance was very inadequate, and did not exercise enough control over risks (Gylfason 2010, Althing 2010, Benediktsdottir *et al.* 2010).

A fifth explanation, linked to the previous one, refers to ethics and even psychology (Russell 2012). Lack of moral values in the political and financial spheres was to blame for the default of the banks and the country's subsequent economic slump (Árnason 2010, Hilmarsson 2013 -1, Bryant *et al.* 2014, Sigurthorsson 2012). According to some sources, the usual, narrow definition of corruption was not appropriate for qualifying the wrongdoings committed in Iceland; it had to be broadened (Vaiman *et al.* 2011). This "moral" crisis accounted for the aftermath of the Icelandic financial turmoil, a period of "transitional justice" with demands for accountability and a "truth report", all this being somewhat comparable to transition periods from authoritarian regimes (Ingimundarson 2012). During the years of prosperity leading up to the collapse, Iceland, a country difficult to compare

with others (Gylfason 2014, Danielsson & Zoega 2009-2), ended up seeing itself as a land whose unique characteristics predestined it for conquering the financial world as brilliantly and suddenly as the medieval Vikings (Loftsdóttir 2015, Bergmann 2014, Trættemberg 2011, Wade 2009).

The present article does not discuss these issues of regulation, supervision or governance; and does not engage in the controversy about Iceland's financial ethics. My intent herein is to connect the impossibility of obtaining refinancing for the banks in 2008 with the changing market opinion about the risks borne by Iceland's economy and banks. For this purpose, I have studied the reports from rating agencies, merchant banks, and public organizations, both Icelandic and international, during the two and a half years before the crisis in September 2008 (See the appendix). I have analyzed these reports as arguments about risk-taking and not as mere justifications of ratings or as recommendations for trading. This analysis enables us to place in a historical perspective the controversy about the risks run by Icelandic banks. This controversy lasted for thirty months; and the prevailing market opinion soon led to a stigmatization of the banks and a self-fulfilling prophecy, similar to what studies on nonfinancial phenomena have described (Jussim *et al.* 2000).

Since the so-called minicrisis of February-March 2006, this stigmatization of the Icelandic banks was perceptible on the CDS market. A credit default swap (CDS) is an agreement of credit protection whereby a "protection-buyer" pays to the "protection-seller" a periodic payment (spread) on a notional bond related to a reference entity (corporation or government). The seller commits to pay the entire notional amount to the buyer in the case of a "credit event" (such as default). CDSs are traded, and the changes in spreads reflect the risk premiums on bond issuers as viewed by the market. In relation to the spread set at the time of the transaction, the buyer is betting on a future increase in the spread — thus on a depreciation, as perceived by the markets, of the reference entity's credit-worthiness. In contrast, the seller of credit protection is betting on a decrease in the spread — thus on an appreciation of this credit-worthiness, as perceived by the markets.

CDS spreads on the three Icelandic banks started widening during the winter of 2006 and had reached catastrophic proportions by the turn of the year 2007/2008. These figures provide a numerical illustration of the risks run by the Icelandic banks. These spreads can be considered to be the technical cause of bankruptcy: no bank or investor accepted to refinance the banks at this level of risk, nor at the level reached by the spreads when refinancing became indispensable in September 2008.

Nonetheless, it is difficult to make a direct inference from the trend in spreads about what the markets understood to be a risk. Academic articles have tended to focus on the relations between CDSs and other markets (Ammer & Cai 2007, Coudert & Gex 2011, Delatte *et al.* 2012, Norden & Weber 2009, Longstaff *et al.* 2005) or, when studying banking risks, on the relation between CDS spreads and financial assessments of bank performance or fragility (Ballester *et al.* 2011, Calice *et al.* 2011, Demirguc-Kunt & Huizinga 2010).

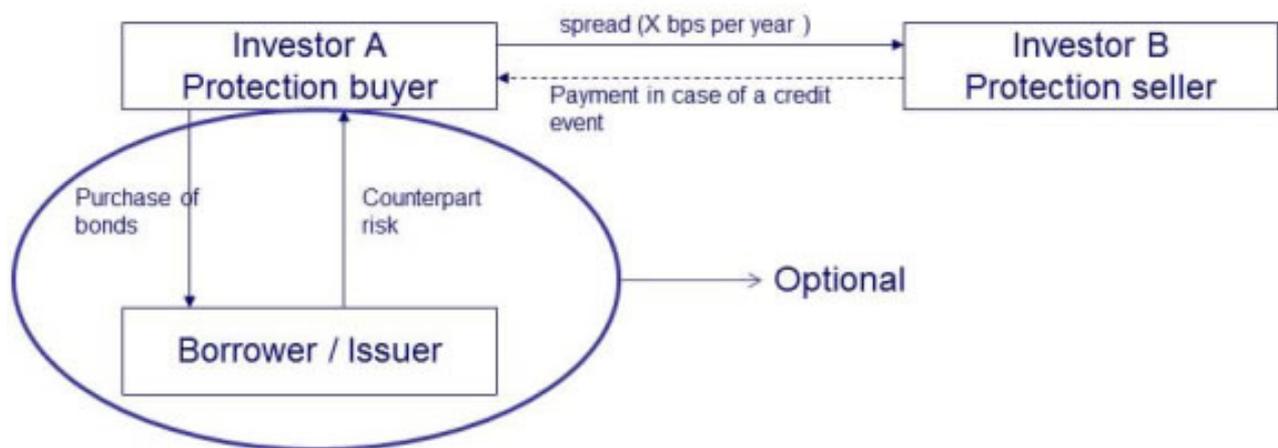


Figure 1: A credit default swap (CDS).

Although the importance of risk perception by the market has already been pointed out when discussing the Icelandic banks (Barth & Schnabel 2013, Danielsson & Zoega 2009-1, Danielsson 2009, Portes 2008), it has never been central to the analysis of their collapse. The academic literature has focused on the connection between the market's opinion of a financial security's performance and its actual performance, but mostly by adopting binary approaches that reduce the market's assessment to positive or negative recommendations (Cervellati *et al.* 2014, Keasler & McNeil 2010, Liden 2004, Sant & Zaman 1996, Schuster 2003). This binary approach does, of course, allow for simulating the linkage between performance and the perception of it, and for building models of eventually self-fulfilling prophecies, what has been called "multiple equilibria" (Gärtner & Griesbach 2012, Flood & Marion 1996, Morris & Shin 1998, Obstfeldt 1996, De Grauwe & Jil 2012).

However none of these studies on self-fulfilling prophecies in financial markets has adopted a historical perspective; nor tried, by using analyses of specific cases, to reconstitute trends in risk-perception. This question of perceptions changing over time is of prime importance. For this reason, I shall present the opinions of rating agencies, merchant banks and public organizations in chronological order, without classifying them by institution. These opinions all come from financial analysts with similar backgrounds and stable careers during the period under consideration (as can be verified in the appendix). Their opinions depended very much on the moment when they were formulated.

The Icelandic risk before the first thunderbolts

The major Icelandic banks' principal risks were known well before the first signs of nervousness in the CDS market. In September 2004, the CBI's *Monetary Bulletin* pointed to the close relations between increased lending and the rising prices of financial assets, as well as between the number of new loans and the low ratio of provisions for them. About the exposure of bank assets to capital markets, the Central Bank of Iceland (henceforth CBI) noted how trading gains contributed substantially to the banks' profits and how necessary it was to have a "critical view" of stock prices given the bull in the Icelandic stock market during the spring and summer of 2004. As for the bank liabilities, the CBI was aware that the dependence on market financing exposed the banks to "a setback in refinancing, e.g. sparked by a downturn in market conditions or change in credit rating"; but such a scenario was deemed unlikely. In September 2004, the CBI's position was ambiguous. To be sure, stock prices and loans might have grown too fast, but the banks' capital positions still allowed them "considerable scope for expansion".

Seven months later, in April 2005, for the launching of a yearly *Financial Stability Report*, the CBI moved a step farther in describing the banks' risks. An economic downturn in Iceland was not to be dismissed, given rising inflation and the current account deficit. Were Iceland to experience a recession, the banks would be in trouble owing both to their exposure on the Icelandic stock market and to their sizeable loan portfolio (in particular loans to stakeholders). The depreciation of the Icelandic crown (*króna*; ISK) would be an aggravating circumstance, owing to the banks' dependence on foreign funds, "one of the weakest links in the economy". The only event that could set off a crisis, according to the CBI in April 2005, would be a hard landing of the Icelandic economy. Was this likely? It did not seem so, since we read that stock prices "do not appear to have risen so high that a major risk of a slide can be inferred" — a more optimistic view than in September 2004. Moreover, the profitability of the banks stood "at a record level" with the "highest capital adequacy ratio for a decade"; and the banks had managed to move the "majority of foreign currency-denominated financing" into the "long term".

An Icelandic downturn might occur at the end of the current investment cycle, but healthy public finances with fiscal surpluses and low debt should enable the government to avoid a hard landing, according to Moody's on 19 July 2005 as it confirmed the triple A rating of government bonds. Moody's Investors Service did admit that the risks were higher because the banks relied on funding from foreign investors, who might have qualms about their debt structure. For Moody's in July 2005, the only crisis scenario for the Icelandic banks would be a downturn in the nation's economy — a moderate risk according to Fitch, which, on 3 August, stated, "Iceland's public finances are well-placed to withstand the impact of a hard landing". S&P (31/10/05) did not analyze the situation any differently while, interestingly, it looked for countries that would stand comparison with Iceland — lands as diverse as New Zealand, Bermuda, Andorra, Hong Kong, Portugal, Slovenia and Belgium. Iceland seemed a special case in northern Europe given the seldom occurring combination of a high level of development, strong growth, small size, low economic diversification and an independent currency.

The potential distortion between, on the one hand, assets exposed to capital markets and domestic securities and, on the other hand, liabilities from foreign lenders in foreign currencies was one of the main topics in the report from the Icelandic Financial Services Authority (henceforth FME: Fjármálaeftirlitsins) published in the autumn of 2005. For the FME, the expansion of the banks overseas was ambivalent. On the one side, it added to foreign debt; but on the other side, it reduced the banks' exposure to Iceland and a possible domestic downturn, since half the net income of the major banks came, in 2005, from operations abroad. The FME described its efforts to increase cooperation with regulatory authorities in the countries where the banks were doing business: international expansion was to be matched by more efficient regulation.

After a first small increase by approximately 9 bps (from 36 to 45 basis points) in the CDS spreads of the three major banks, Barclays Capital (24/01/06) confirmed at the start of the new year that the main risk for the Icelandic banks was asset exposure, specifically credit exposure to a potential downturn. Questions were also raised about whether the small Icelandic economy would be able to back one or more of its big banks in that event. However the three banks were highly profitable and had strong balance sheet ratios, and Barclays recommended several transactions on their CDSs. It is worth pointing out that Kaupthing was perceived as having surer prospects than the German Commerzbank, since Barclays advised buying credit protection on the latter and selling it on the former. Five-year protection on Kaupthing was trading at 43 bps, a level perceived by Barclays Capital as too high in comparison with the 16.5 bps of Commerzbank.

Fitch, February 2006 — Merrill Lynch, March 2006: Thunderbolts out of a clear sky

Fitch's downgrading of the outlook on Iceland on 21 February 2006 has often been considered the main triggering event of the so-called minicrisis that struck the Icelandic banks in February and March. This report should, however, be read along with the reports on Icelandic banks: the one, two days later, also by Fitch (23/02/06); and the other, two weeks later, by Merrill Lynch (07/03/06).

In its first report, Fitch (21/02/06) downgraded the outlook on foreign and local currency issuer default ratings (IDRs) of the Republic of Iceland from stable to negative. Its main reason was the risk, already mentioned in 2005, that the signs of an overheated Icelandic economy — rising inflation, rapid credit growth, buoyant asset prices, a steep current account deficit and escalating foreign debt — were a forewarning of a downturn. A major risk was the size of bank indebtedness, mostly due to foreign capital markets. According to this report (Fitch 21/02/06), the banks *“could ill afford to be shut out of international capital markets for any length of time”*.

Like S&P a few months later, Fitch had trouble finding international comparisons for Iceland that would make sense. Australia and New Zealand looked like good candidates since, like Iceland, they had high development levels, low economic diversification and high but volatile growth; but their economies had the additional advantage of being *“much better documented”* and *“successfully stress tested”* over a longer period.

Despite the handicaps of the Icelandic economy and the volume of bank debts in foreign currencies, Fitch, two days later (23/02/06), maintained its previous ratings for the main Icelandic banks with a stable outlook. Its justification for this decision was that the ratings assigned in November 2005 had already taken account of the Icelandic macroeconomic risk — even though, two days earlier, this risk had been deemed more important mainly because of bank indebtedness. Interestingly, Fitch pointed to the banks’ geographical diversification with substantial foreign lending as “*offsetting to some extent*” domestic risks.

In the second report, devoted to the banks, we see the connection made between sovereign and bank risks. By growing internationally, the banks had significantly reduced their exposure to the Icelandic economy whereas, according to the report on Iceland dated two days earlier, they had increased the exposure of their liabilities since they ran the risk of being “*shut out of international capital markets*”. The internationalization of banking activities might give rise to a sovereign risk owing to the accumulation of foreign debt; whereas, according to the report on the banks, the banks’ risks were partly offset thanks to this internationalization (financed by taking on more debt), which reduced the exposure to risks related to the domestic economy. Bank indebtedness caused concern, since it could destabilize the national economy; but by financing the banks’ international expansion, these debts sheltered them from the domestic risk and enabled them to be more confident about reimbursing or refinancing their debts. Given the circularity established between the sovereign and bank risks, the Fitch reports of 21 and 23 February amount to a sophism.

Whereas the Icelandic crown started falling in relation to the euro after Fitch’s revision of its outlook for Iceland, bank CDS spreads, after momentarily increasing, were hardly affected by the these two reports. This seemed to confirm Fitch’s conclusion that sovereign risk had already been priced into the spreads. These spreads remained stable for two weeks, until the Merrill Lynch report of 7 March suddenly triggered their widening (Figure 2).

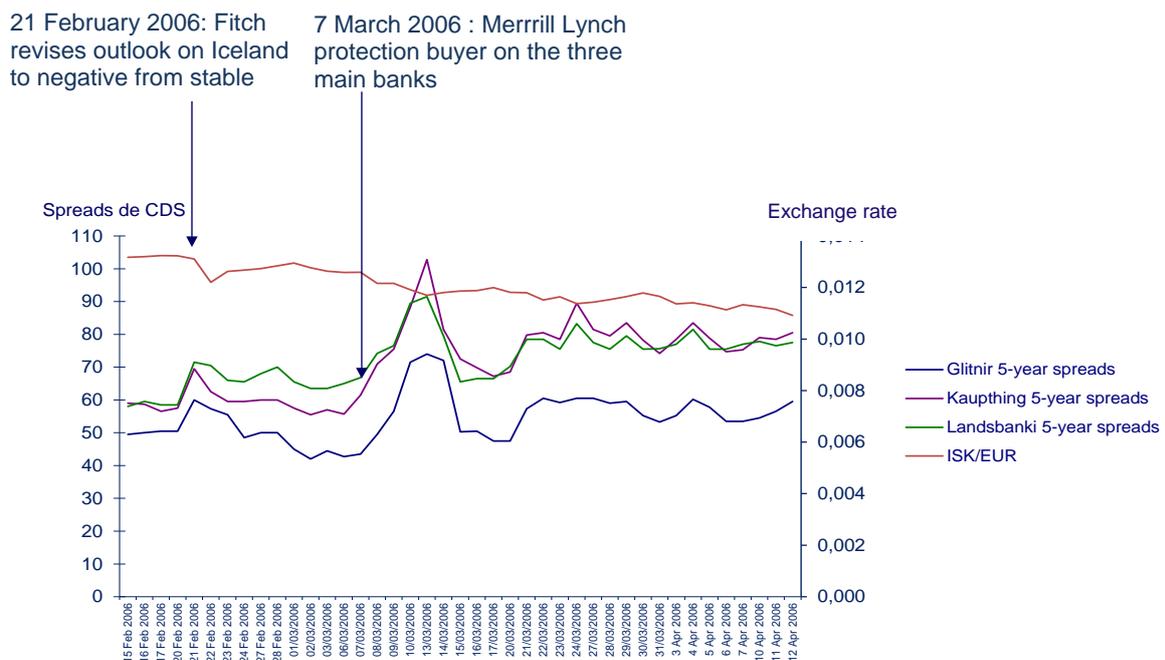


Figure 2: The two thunderbolts: Bank CDS spreads and Icelandic Crown exchange rates (in relation to the euro) from mid-February to mid-April 2006.

The title of this Merrill Lynch report, “Icelandic banks: Not what you are thinking” (07/03/06), clearly announced a controversy. It analyzed the risks related to both the assets and liabilities of the banks. It described the exposure of these assets to the probable risk of an Icelandic recession (through loan portfolios and leveraged equity investments) and mentioned the crossholdings between banks and shareholders. The report described these asset-related risks with an evocative formula, the “*icy winds of systemic risk*”; but the only system in question was the Icelandic economy because of the risks of its growth suddenly coming to a halt. The report was less categorical about the risks related to the banks’ liabilities. Faced with a close range of maturity dates on their debts, the banks would have “*obvious difficulties in raising funding*”, a view tempered a page earlier with the acknowledgment that the “*banks were already actively raising finance at the beginning of 2006 which may have resolved some or all of their needs for this year*”. For the authors, the banks’ presumed difficulties were to be attributed to “*market sentiment*”; only a “*volte-face*” in sentiment over “*the next six months or so*” could prevent “*a significant refinancing risk for the banks in 2007*”.

In short, according to Merrill Lynch, “*market sentiment*” was the only thing to fear about the CDS spreads, since “*Iceland could ‘afford’ to fix a banking crisis*” in spite of the difference in size between the banks’ assets and the country’s GDP. This is a circular argument similar to Fitch’s: the risk of the exposure of the banks’ assets to the island’s economy was mitigated by Iceland’s capacity for controlling the banks’ risks.

The publication of this Merrill Lynch report (07/03/06) was probably a decisive event during the remaining life-span of the three Icelandic banks: thirty months. The story it told would not change during this time. The banks were exposed (owing to their debt and equity investments) to an overheated Icelandic economy, and this exposure was even more serious due to crossholdings (substantial loans made to shareholders or for leveraged stock purchases). This risk was reflected in the “*sentiment*” of bond investors as shown by CDS spreads — even though these spreads tended to widen after, not before, the Merrill Lynch report. Since the financial agencies had not taken this risk into account, their ratings of the bank were inconsistent with CDS spreads. The Icelandic banks were risky financial institutions similar to those in emerging lands. Merrill Lynch concluded that the risk had not yet been fully priced into the banks’ CDS spreads and recommended buying protection for investments in them. This recommendation was apparently followed: the CDS spreads widened during the “*minicrisis*” that would last till September 2006 (Figure 3).

Contrary to previous reports by other institutions, Merrill Lynch found banks for comparison with Iceland’s not in Scandinavia or Germany but in emerging countries, such as South Africa, Russia, Kazakhstan and Ukraine.

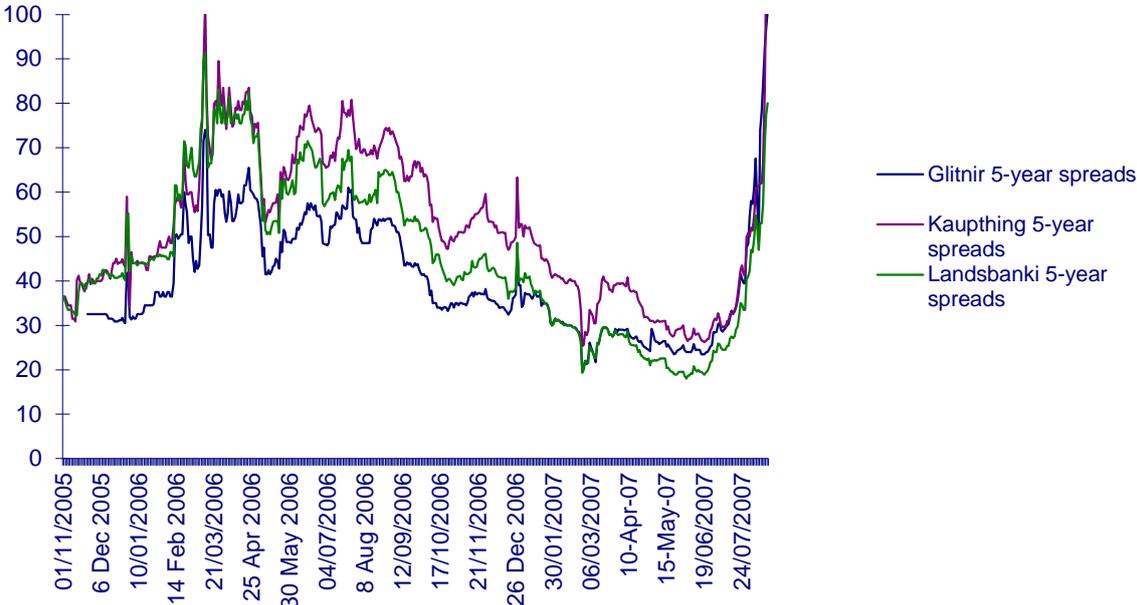


Figure 3: The 2006 minicrisis and the subsequent narrowing of spreads: Bank CDS spreads and Icelandic Crown exchange rates (in relation to the euro) from November 2005 to July 2007.

The Merrill Lynch report predicted that the “next bout of spread widening could be catalyzed by something as simple as the negative outlook from Fitch on the sovereign which was what catalyzed the latest bout of widening”. Fitch’s downgrading caused a slight increase in the bank CDS spreads, and Merrill Lynch’s report apparently opened a protracted period of spread widening. Market sentiment clearly turned adverse only after its publication.

The resulting minicrisis set off a controversy between investment banks, rating agencies and Icelandic public organizations about banking risks in Iceland and — a distinct but related question — about the sovereign risk related to the national economy.

March — July 2006: The risk of a recession, market opinion and the controversy about the Icelandic banking risk

The sovereign risk, as perceived in the spring of 2006, mainly amounted to the probability of a recession in Iceland during 2007. This risk, mentioned by S&P on 16 March, was the mainstay in a report by Danske Bank on 21 March with the telling title “Iceland: Geyser Crisis”. This indictment of the Icelandic economy was equivalent to Merrill Lynch’s (07/03/06) indictment of the banks. Announcing as “*likely*” a “*full-scale financial crisis*”, the Danske Bank’s financial analysts thought that Iceland’s “*economy is heading for a recession in 2006-7*” with a GDP decline of “*probably 5-10% in the next 2 years*”. The report precisely described the causal chain from a sovereign to a banking risk and then from the banking risk back to the sovereign risk. The hard landing of the country’s economy would lead to cuts in domestic lending, and the Icelandic banks would have a harder time securing their own funding; and this, in turn, would cause their ratings to be downgraded and force them to tighten even more their lending conditions. On the day when the Danske report was released, the three banks’ CDS spreads widened by 10 bps.

In March 2006, the controversy about the banking and associated sovereign risks centered around two points: the banks’ ability to withstand a recession in the country (despite the lack of a consensus on the likelihood and amplitude of such an event) and the widening spreads on the CDSs. On 20 April, the Danske Bank, observing that the Icelandic crown was still losing value since its previous report, concluded that the situation was “*turning into a full-blown crisis*” and recommended selling Icelandic crowns. The belief in an Icelandic downturn also cropped up in S&P (28/03/06) and Moody’s (04/04/06) reports. On 11 April, Barclays Capital stated that the risk was not priced into the banks’ spreads, since the Icelandic economy would probably experience zero or negative growth in 2007. It foresaw serious effects on the country’s banks (via loan portfolios and investments in equity or leveraged equity).

Not all merchant banks shared this pessimism about Iceland and its banking sector. Morgan Stanley (13/03/06), Dresdner Kleinwort Benson (14/03/06) and JPMorgan (24/03/06) thought that the risk was more than priced into the spreads and that adverse opinion on the CDS market was the major risk for the Icelandic banks. Morgan Stanley observed that the banks were trading wider than Banca Popolare Italiana (whose CEO had just been sent to prison). JPMorgan commended the banks on their profitability levels and their ability to refinance in spite of difficult market conditions. In a clear reference to the Danske report three days earlier, it stated that “*the publication of a negative report by one of the Icelanders’ Nordic rivals*” was “*exacerbating volatility*”.

The realization that wide spreads might result from an unfounded opinion did not necessarily lead, however, to the conclusion that the spreads would narrow. On 26 March, CreditSights held a roundtable for investors who also compared the Icelandic banks with Banca Popolare Italiana but while noting the differences, since the risk to the Italian bank was “*tangible and clearly identifiable*”. In the roundtable’s opinion, the Icelandic banks’ overreliance on market funding had made them “*hostages [of] market sentiment*”, and market opinion could turn for the worse.

Significantly, the analysts made very little difference between the three Icelandic banks. S&P only rated Glitnir, but the main risks it had mentioned on 28 March (a possible downturn in the country's economy and the bank's overreliance on market financing) also concerned the other banks. On 11 April, Barclays Capital saw Glitnir as the least at risk of the three but noted that "*risks are more systemic than 'micro'*".

The risks were systemic, but the Icelandic economy was the only system that financial analysts' reports in the spring of 2006 considered at risk. The banks had already internationalized their activities, half of their assets now being abroad. Depending on whether analysts emphasized assets or liabilities however, their opinions differed about this internationalization. Although internationalization of the banks' activities had to be financed through the debt market, whence a widening of CDS spreads, it provided a welcome reduction in the exposure to Iceland's sovereign risk. CreditSights (26/03/06) saw internationalization as a positive point whereas, for JPMorgan (24/03/06), foreign subsidiaries were less likely to be bailed out by the Icelandic government if the banks had trouble refinancing.

The analysts who evaluated the risks of the banks and of the country had difficulty understanding the Icelandic situation. Evidence of this is the vast array of countries and banks chosen from one report to the next for comparison. The Danske Bank (21/03/06) had no doubts: Iceland was an emerging country, riskier than Thailand "*before its crisis in 1997, and only moderately healthier than Turkey before its 2001 crisis*". JPMorgan more optimistically compared the Icelandic and Gulf markets (solid but relatively closed and, therefore, volatile); and the Icelandic banks with German ones. For analysts, the other Scandinavian banks were not valid comparisons. The exception was Barclays Capital, which made a telling comment about the difficulty of understanding Iceland. When its analysts visited Reykjavik on 11 April, they had problems discussing with the FME's supervisor because of the "*language barrier*" (which was less of a problem with the CBI). True, the FME's 2006 and 2007 reports in English egregiously contained "*insuarance*" instead of "*insurance*", misprints overlooked by local reviewers.

Despite language barriers, Icelandic public institutions did not remain silent as international concern was being voiced about the island and its banks. In May 2006, two reports presented an Icelandic view on the banks.

The CBI's annual *Financial Stability Report* discussed the relation between domestic and international risks. If growth were to slacken, there would be a soft landing, as in 2002, instead of a hard one, unless international interest rates were to rise. The widening spreads of the banks' CDSs were perceived as an international risk that could both increase bank lending rates to domestic borrowers and overheat the island's economy, thus triggering a recession. The Icelandic risk did not cause wider CDS spreads; but wider spreads — essentially linked to market opinion — increased the risk of a downturn of Iceland's economy.

The 2006 *Financial Stability Report* did not try to deny bank risks but, instead, to show that they were limited. The banks had successfully passed the FME stress test; and the country best suited for comparison with Iceland was New Zealand, also an island with a developed society and strong growth but a weakly diversified economy. The CBI pointed out the contradiction between Fitch's revised outlook for sovereign debt and its unchanged outlook for the banks. For Fitch, a major factor in the sovereign risk was the size of foreign debt, most of it being bank debts that the Treasury would have to assume in the event of a crisis. The sovereign risk was (implicitly) related to bank risk, but the CBI described the latter as "highly improbable".

The second report presenting an Icelandic view came out in May 2006; it noticeably tried to react against negative market opinion. *Financial Stability in Iceland*, commissioned by Iceland's Chamber of Commerce, was written by two scholars, an Icelander and an American, a choice probably motivated by the desire to solicit an international opinion in the midst of an international controversy.² This report was mainly a macroeconomic demonstration that no evidence supported the prediction of an imminent hard landing of Iceland's economy. The authors concluded that a banking crisis was improbable, but added that "self-fulfilling prophecies, otherwise known as multiple equilibria, in which concerns about an Icelandic financial meltdown could lead to massive withdrawals out of Icelandic assets, which would then lead to a financial meltdown, even if fundamentals do not warrant it, cannot be ruled out". The opinion expressed in this report was not far from Morgan Stanley's, Dresdner's or JPMorgan's: stress was laid on market sentiment, whether founded or not.

After five months of controversy, Merrill Lynch (21/07/06) reiterated its judgment on the banks. According to this report, the "consensus view" about Iceland was of "zero, if not negative, GDP growth in 2007". Widening spreads were, therefore, a risk factor as such when coupled with the banks' refinancing needs for 2007, the year when the Icelandic economy might experience a hard landing. Spreads stayed wide and volatile till late September. Moody's (12/09/06) reaffirmed concern about Kaupthing's "high dependence on wholesale funding combined with a volatile, contracting domestic economy".

August 2006 — July 2007: Iceland back to growth, banks back to normalcy?

The conditions on global capital markets improved, and the banks' spreads narrowed starting at the end of September 2006. Of the two major risks identified by analysts for 2007, the first — banks unable to refinance — had vanished by autumn, when each of the three banks announced it had completed refinancing for 2007; and the second risk — an Icelandic hard landing — seemed less and less probable as the new year approached. In fact, the Ministry of Finance upped, on 16 January 2007, the official forecast of GDP growth from 1% to 2.2%.

² Frederic Mishkin, the American, is set in a poor light in *Inside Job*, which was filmed after the 2008 crisis. This documentary criticized him for his fees and for changing the report's title in his bibliography from "stability" to "instability". It is, however, worthwhile to take a look at this report since it played a part in the controversy.

The IMF's *Article IV Consultation* for 2006, issued in August of that year, apparently signaled a new sentiment about the banks' risk profiles. The Icelandic financial system, *"to be able to manage its risks, has taken and should continue taking"* measures for coping with liquidity requirements, maintaining the high quality of loan portfolios and reducing crossholdings.

Analysts from various institutions (Fitch 30/08/06 on Kaupthing, Fitch 14/11/06, R&I 06/06/07) now looked backwards to what was seen as a minicrisis, already over. It had proved the Icelandic banks' ability to respond to market concerns by diversifying their funding (new debt markets and foreign deposits), stretching out their debt maturity schedule and undoing crossholdings. In December, Moody's (14/02/06) described the Icelandic banking system as *"well-capitalized, amply liquid [with] strong oversight"* inasmuch as the *"large amortizations [to be made in 2007] are already almost fully funded"*. Even Merrill Lynch (08/11/06) seemed to have lowered its guard on the Icelandic banks: it was *"not averse to a long position in the Icelandic banks"*³ and even gave them credit for having *"generally moved to address investor concerns"*.

Now that refinancing for 2007 was complete, the story of the Icelandic banks moved toward a narrative about their high growth and profitability and about their increasing disconnection from a volatile domestic economy. The Citigroup equity analysts who recommended buying Kaupthing stock defended this position (twice: 03/01/07 & 30/01/07). They thus joined those who thought that the banks' risks did not deserve such wide CDS spreads. This improved outlook for Iceland's growth motivated Morgan Stanley (21/02/07) to join Citigroup in recommending the purchase of Kaupthing's stock, since a story of growth could now be told that was again consistent with an Icelandic situation no longer under the threat of a downturn. To Morgan Stanley's analysts, *"the macro-related risk has become less of an issue over the past months; the fear of a hard landing in the fast growing economy has been reduced since the recent upward revision of GDP estimates"*.

Analysts did, during these months, learn about an important parameter: they were now much more frequently referring to market sentiment. Market opinion was not missing from the Fitch report (21/02/06), which had downgraded Iceland's outlook while limiting the banking risk to the banks being shut out of debt markets. Although the banks had now secured funding for 2007, Fitch (14/11/06) did not rule out adverse market opinion since *"a sudden change of investor sentiment driven by shifting international interest rate expectations [might result] in a further sharp correction of the Icelandic crown"*.

In the first quarter of 2007, the same Fitch (15/03/07) placed a damper on the positive mood and downgraded Iceland's sovereign debt, a possibility looming since its downgrading of the outlook on foreign and local currency issuer default ratings the year before. The same day, it maintained the ratings on the three banks. Fitch's two reports, the one on Iceland and the other on the banks, used the same circular argumentation as in February 2006. The principal potential cause of an Icelandic hard landing was the amount of *"private sector-driven macroeconomic imbalances and spiraling net external indebtedness"* with the banks as *"the main obligor"*. Given the amount of debt, the banks' major risk was that *"their domestic operating environment could become more difficult, should a 'hard landing' materialize"*. In summary, Iceland would be in trouble if the banks did not repay their debts; and the banks

³ A long position is positive for a security. In the case of a CDS, this means selling existing credit protection because the perceived risks have diminished.

would be unable to repay their debts if Iceland were in trouble. The impression of circularity is reinforced in the report on the banks by Fitch’s positive comments about their “strengthened access to funding” and their “lengthened maturity profile”. A month later in their reports on Glitnir, Moody’s (16/04/07) and S&P (25/04/07) also saw the risk of an Icelandic downturn for this bank’s assets and the risk of adverse market sentiment for its liabilities. However R&I (06/06/07) foresaw a soft rather than a hard landing of the country’s economy and felt a financial crisis was “very unlikely”.

The reduction of the banks’ exposure thanks to geographic diversification was still seen in positive terms; but this diversification put more strain on their liabilities. This dilemma was clearly visible in the variety of opinions about foreign acquisitions. Fitch tended to see them positively, for example the consolidation of Glitnir’s “second home market in Norway” (30/08/06) or Landsbanki’s expansion in the UK and on continental Europe (28/11/06). Other analysts, more cautious, did not judge Landsbanki and Glitnir alike, since the graphs of their CDS spreads had crossed during the winter.

In November 2006, when Landsbanki’s spreads were wider than Glitnir’s (Figure 4), Merrill Lynch (8/11/06) had gone against the prevailing market opinion about these two banks. It had praised Landsbanki’s management “for its step-by-step addressing of credit market concerns”, whereas Glitnir’s frequent acquisitions were evidence of a “pronounced risk appetite”. A year later, a few days after the spreads of the two banks became almost equal, Merrill Lynch recommended, once again, a long position on Landsbanki (26/01/07). From late March 2007 till the autumn of 2008, Landsbanki’s spreads were narrower than Glitnir’s.

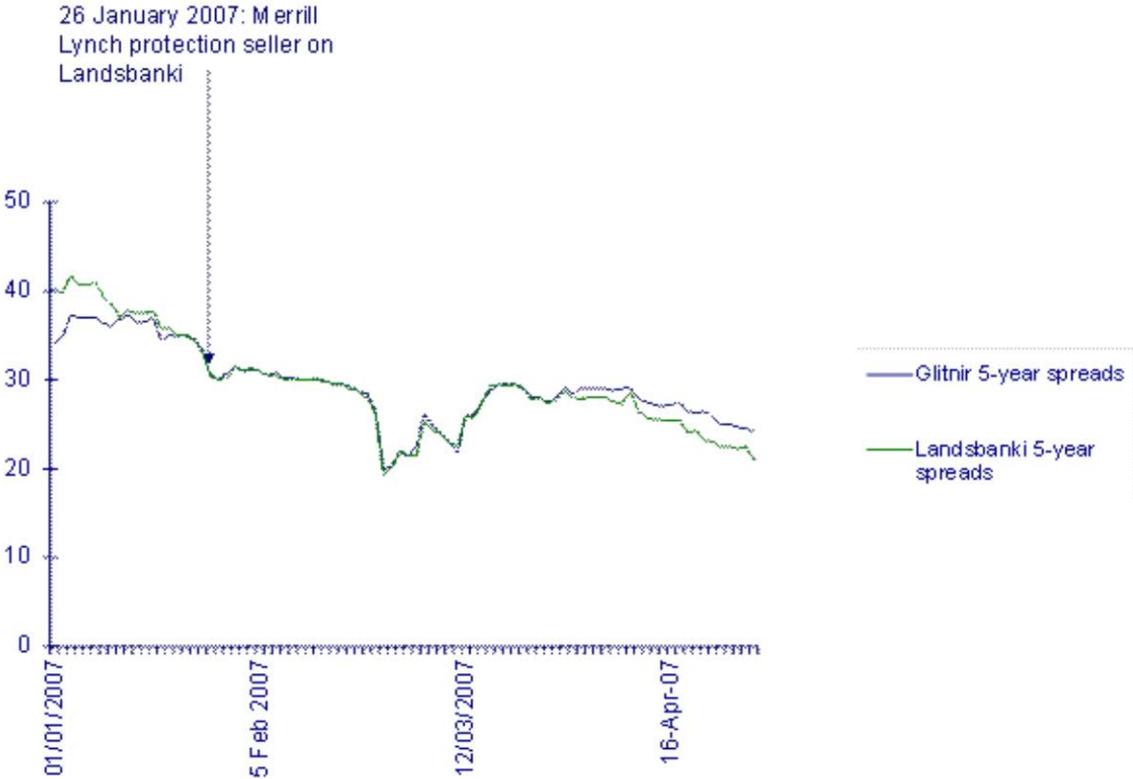


Figure 4: Risk perceptions of Landsbanki and Glitnir: CDS spreads from January to April 2007.

It would, however, be an exaggeration to claim that analysts had a negative opinion of Glitnir's acquisitions at the start of 2007. Moody's (06/02/07) and S&P (07/02/07) were concerned about Glitnir's acquisition of the Finnish FIM; but Fitch (05/02/07) appreciated Glitnir's Nordic expansion. Moody's, despite its concerns in February, seemed, in May (22/05/07), to have a better opinion about acquisitions by both Glitnir and Landsbanki as a diversification of their sources of income.

Even as market tensions were subsiding, it was still challenging to try to find international comparisons for Iceland and its banks. Like Danske Bank, Fitch (14/11/06) cited the precedent of the Asian meltdown, while describing Iceland as an emerging market, like South Africa, Turkey, Indonesia, the Philippines or Brazil. Citigroup (03/01/07) and Morgan Stanley (21/02/07) made commendable comparisons with German banks, such as Deutsche or Commerzbank. The CBI's 2007 report drew a comparison with New Zealand. Several analysts insisted on the need for international capital markets to better understand the specific characteristics of the Icelandic banks, Citigroup (03/01/07) even hoping that this would open the way to listing the banks on the London exchange.

The minicrisis in the first quarter of 2006 was set down to the difficulty of understanding Iceland. During this calmer period, Icelandic institutions capitalized on this explanation in their reports at the end of 2006 and in the spring of 2007.

According to the FME's 2006 report (covering the period from the start of July 2005 till the end of June 2006), the Icelandic financial system was capable of finding answers to the criticisms made by foreign analysts. In effect, the banks had successfully passed stress tests, and Iceland was cooperating with foreign supervisors to oversee the banks' international expansion: *"The extraordinary growth of the Icelandic banks [with] their record rates of return and their substantial overseas acquisitions raised questions and even suspicion among those who are not familiar with how this could be accomplished in such a short period of time"*. Improved information on the banks' activities and their reduction of crossholdings, along with their successful refinancing for 2007, should *"calm the waves of criticism levied by foreign analysts"*.

The CBI's *Financial Stability Report* of April 2007 mentioned, like the rating agencies, the risks related to both the banks' assets and liabilities. However the tone was more positive, with the motivation of presenting a favorable economic outlook and demonstrating the banking system's resilience: *"although the main function of a financial stability report is to highlight risks, factors conducive to strengthening the long-term economic outlook should also be duly noted"*. For example, two tables were presented at the end of the introduction (a new addition since the previous year): the one on *"main vulnerabilities"*, and the other on *"resilience"*. The Icelandic banks had proved their resilience in 2006 by responding to adverse market sentiment, and now *"the problem that loomed around this time a year ago is a thing of the past"*. One major macroeconomic risk was an increase in international interest rates (a risk already mentioned in the 2006 report), which would add to domestic borrowing costs and cause loan losses for the banks. The main risk thus came from abroad, and the CBI's reports had to be read and understood abroad. To this end, an expert from the Bank of England had been asked to review the quality of the CBI's 2006 report; this review, a positive one, was published as an appendix in the 2007 report.

It is noteworthy that the Iceland Chamber of Commerce was still referring to the report of May 2006, which it had commissioned, and to the conclusion on self-fulfilling prophecies in *Iceland's Advance*, a report released in February 2007. This conclusion "The genius of Iceland" (pp. 99-101) by Simon Anholt had a nearly nationalistic tonality. This genius was that "of a people with both ice and fire in their souls. Icelanders combine a very Nordic love of order, efficiency, fairness and competence, with a flair, warmth, informality and passion that are distinctly Mediterranean."

The Icelandic banks' CDS spreads started widening again in late June 2007 (Figure 5). Nevertheless, on 26 July, following Kaupthing's strong second quarter earnings, Citigroup as well as Fitch commended the largest Icelandic bank for having responded to investors' concerns and diversified abroad both its assets and funding sources. Published in August 2007, the IMF's *Iceland: 2007 Article IV Consultation* approved the banks' response to the 2006 minicrisis while insisting on the importance of a coordinated Nordic supervision and on the "vulnerability to capital market sentiment".

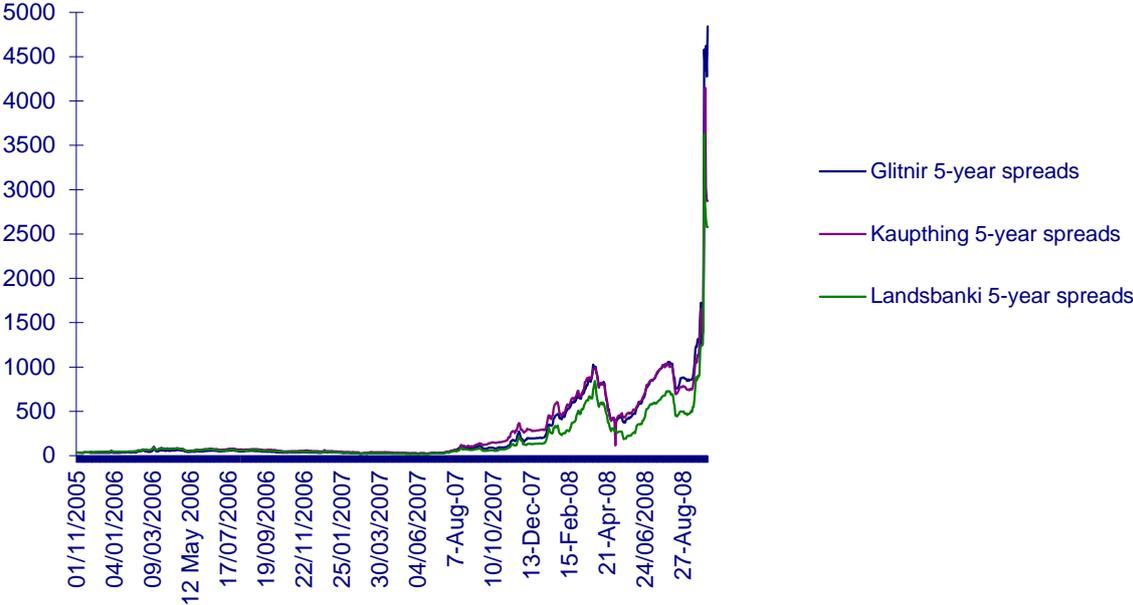


Figure 5: A prophesied bankruptcy? Bank CDS spreads from November 2005 to September 2008.

August 2007 — September 2008: Chronicle of a prophesied bankruptcy?

The CDS spreads of the three Icelandic banks evolved catastrophically from summer 2007 till the meltdown in early October 2008 (Figure 5). Direct contagion from foreign banks cannot be evoked as an explanation, since Icelandic banks were marginally exposed to the subprimes, which Bear Sterns and BNP Paribas had just made known to the general public by suspending CDOs (the collateralized debt obligations used to repackage mortgage-backed securities). Financial analysts did not overlook this low exposure to the subprimes (Moody's 25/10/07 & 20/11/07/07, UBS 05/12/07, CreditSights 30/03/08), but given worse conditions in the global market, they obviously came to see the Icelandic banks as high-risk.

Growth by acquisition was now sanctioned by the market. The announcement on 15 August 2007 of Kaupthing's acquisition of NIBC, a Dutch investment bank reeling from the subprime debacle, triggered a widening of Kaupthing's spreads in comparison with the other banks' (Figure 6), even though the NIBC's subprime portfolio was not part of the transaction. Till early 2008, the CDS market, along with analysts (BNP Paribas 23/01/08), would see Kaupthing as the riskiest of the three banks.

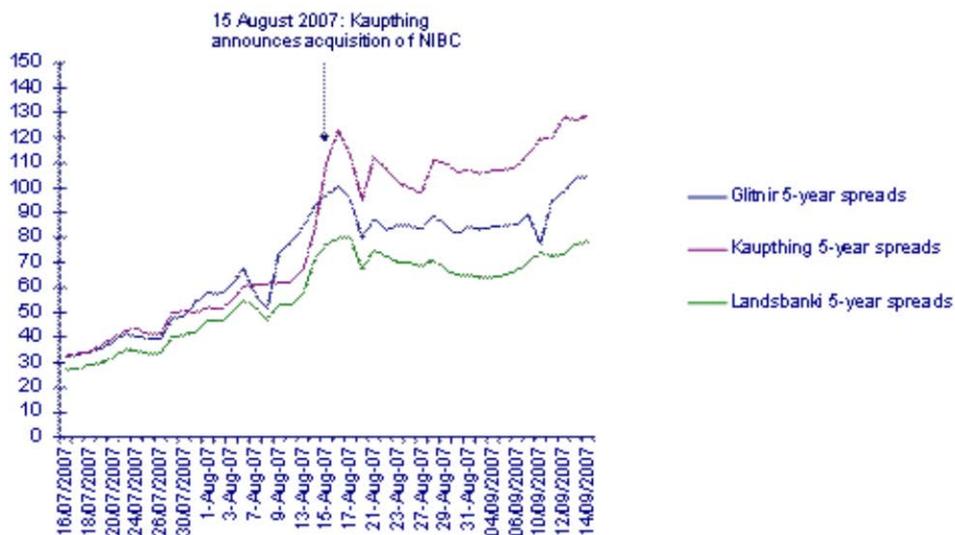


Figure 6: Kaupthing's acquisition of NIBC: Bank CDS spreads from mid-July 2007 to mid-September 2007.

When examining the banks' international growth however, analysts distinguished acquisitions depending on whether they were financed through the market or through retail deposit accounts. The reliance on market funding was a problem given the growing instability (Fitch 15/08/07, Moody's 20/11/07 on Kaupthing's acquisition of NIBC, Fitch 23/08/07 and Moody's 25/10/07 on Glitnir). In contrast, UBS (20/02/08) considered as positive Landsbanki's, and to a lesser extent Kaupthing's, efforts to increase the proportion of deposits as a source of funding.

With regard to the banks' assets, international diversification was still seen favorably (Fitch 23/08/07 on Glitnir), especially by those who feared a downturn of the island's economy (Moody's 25/10/07 on Glitnir; Moody's 20/11/07 on Kaupthing; UBS 05/12/07 on the disappointing 1% GDP growth in 2007). The fear of a global recession was now adding to the risk of an Icelandic recession; and this weighed on the evaluation of the banks' international diversification (UBS 05/12/07, S&P 20/03/08), especially if the latter meant acquiring an investment bank — Moody's (27/11/07) had a negative opinion of Kaupthing's acquisition of NIBC.

The size reached by the banks through international growth made it less likely that the Icelandic government would be able to bail them out in case of default (UBS 05/12/07). Public institutions in the country tried to respond to this preoccupation. The Iceland Chamber of Commerce commissioned another report, *The Internationalisation of Iceland's Financial Sector*, released in November 2007. Written by a foreign (British) and two Icelandic scholars (on the model of the Chamber's 2006 report), it tried to cast doubt on the "country premium risk" that the markets wanted to apply to Icelandic banks, unjustifiably so since the discrepancy between bank size and GDP was common in the small countries that had become international financial centers. The advocates of this premium were challenging Iceland's right to a growing financial sector capable of competing with countries such as Luxemburg.

The FME's 2007 report also described the current situation in terms of conflicting perceptions. Its tone was more aggressive than in previous reports. The main challenge facing the country's banks was a problem of communications: "*In 2006 Icelandic financial undertakings realized that their expansion in foreign markets was attracting the interest and attention of foreign parties, which increasingly became interested in the Icelandic economy and financial system. Suddenly the discussion turned against the Icelandic financial undertakings and, in fact, to a great extent against the Icelandic financial and economic system.*" In this conflict of perceptions, the FME had to "*ensure that Icelandic financial markets are known for integrity and reliability*". Accordingly, it insisted on the banks' profitable accounts, very favorable ratios and positive results in the stress tests.

Some analysts (UBS 05/12/07) still believed that the narrative about the Icelandic banks might turn into a story of long-lasting growth. Although the banks' CDS spreads were not correlated with profitability (Moody's 20/11/07, UBS 05/12/07, Morgan Stanley 11/01/08, CreditSights 17/01/08 & 30/03/08), their widening soon became the major topic in discussions about the Icelandic banks.

By early November 2007, all three banks' CDS spreads had risen above 100 bps. In January 2008, following the difficulties of Gnupur — one of the main direct or indirect shareholders of Kaupthing and Glitnir — the spreads exploded: 300, 400 and 500 bps for, respectively, Landsbanki, Glitnir and Kaupthing.

Iceland – Unsustainable was the title of Morgan Stanley’s new report (11/01/08); it warned investors of a self-fulfilling prophecy: “General worries over Iceland, and in particular Kaupthing, could become a self-fulfilling prophecy [...] Our greatest fear is that, although all three banks have strong liquidity positions right now, the longer these CDS levels stay so wide, the more difficult their situation will become”. While recognizing the positive results of the FME’s periodic stress tests and conceding an “initial overreaction” by the markets to the Gnipur affair, the BNP (23/01/08), nonetheless, stated: “If cash and CDS levels remain where they are, funding will again become increasingly an issue”.

By January 2008, the prevailing opinion was fearful, and the markets reacted poorly to good news. When Kaupthing canceled the acquisition of NIBC at the end of the month, its CDS spreads narrowed for a few weeks only. The tangible result of this cancellation was that Kaupthing’ and Glitnir’s spreads would be very close by February (Figure 7).

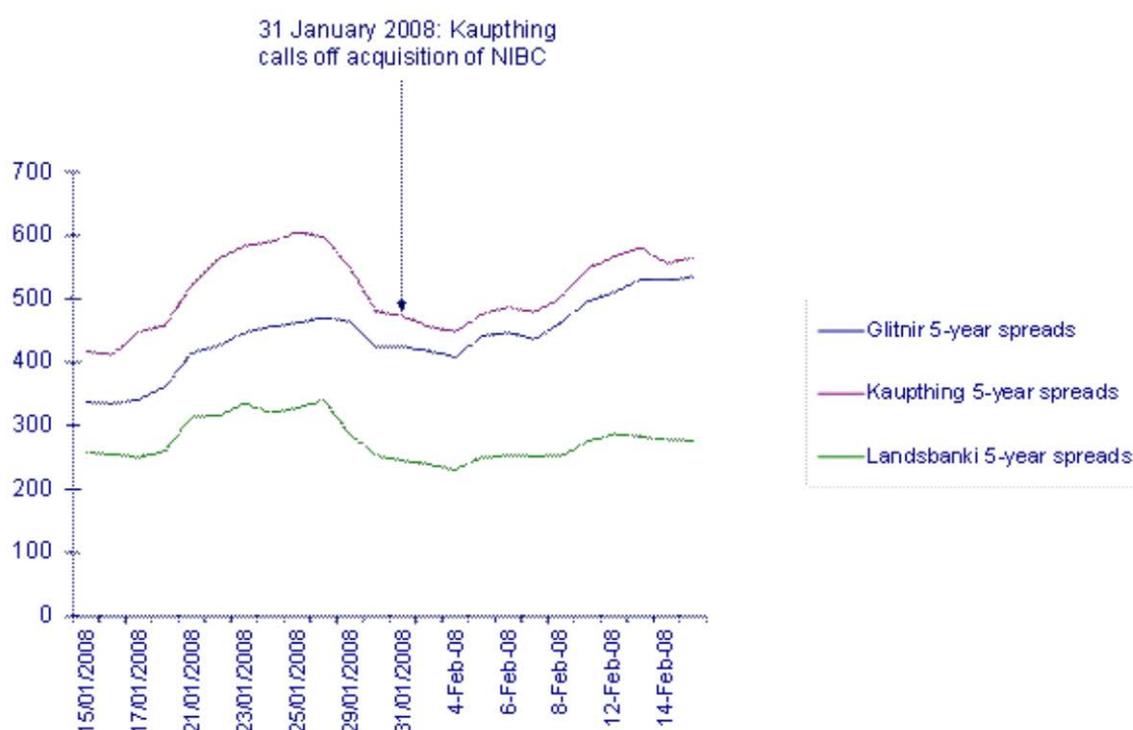


Figure 7: Good news, no news? Bank CDS spreads from mid-January 2007 to mid-February 2007.

An often expressed view in these reports — though seldom during the minicrisis (JP Morgan 24/03/06) — was that internationalization made it harder for the Icelandic government to be capable of bailing out the banks. The reason had to do with not only the size of banks’ balance sheets but also the complexity of crossborder operations, which would complicate any bailout not just of the banks but also of foreign deposit accounts. Foreign deposits, till then seen as a good source of funding, could vanish as fast as confidence (Moody’s January 2008 on Iceland). Like UBS (05/12/07) and CreditSights (30/03/08), Moody’s report hesitated about whether or not the Icelandic government was capable of rescuing the banking sector: “The growth of the country’s internationalized banking system is stretching the authorities’ ability to manage a crisis should one arise”; and the “massive growth in bank balance sheets to a multiple of eight times Icelandic GDP has ballooned the government’s contingent liabilities to extraordinary levels”. Nonetheless, it still concluded that “the authorities have sufficient liquidity in both foreign and local currency to manage a systemic crisis”.

On 28 February 2008, Moody's — overlooking the three banks' *"sound"* liquidity profiles or their *"good performance"* in 2007 — downgraded them because their assets were exposed to a potential recession. But the risk of a downturn no longer concerned Iceland alone: it was worldwide, and this affected the Icelandic banks. In a new twist to the relation between the bank indebtedness and sovereign debt, the Icelandic government would, in the event of a global recession, have to come to the rescue of the Icelandic banking sector's international activities. Consequently, Moody's (05/03/08) assigned a negative outlook to Iceland and downgraded its banks' CDSs. The risk of contagion among the three banks was very strong, evidence of this coming from the CDS spreads themselves. According to Moody's in January 2008, this contagion *"was witnessed in the minicrisis of early 2006 and again recently with the widening of the banks' credit default swap spreads"*.

At the end of March, Glitnir's spread crossed the 1000-bps threshold, Kaupthing's trailing a few points behind. This set off a new round of alarming comments. The risk of a prophecy fulfilling itself had come to the fore, as in Merrill Lynch's report (31/03/08). According to it, the CDS spreads showed *"an institutional run on the banks"*, a prelude to a *"retail/corporate deposit run"*. Yet, even to Merrill Lynch — whose report by the same analyst two years earlier had triggered the minicrisis of 2006 — it was *"doubtful"* that the government's policies and the banks' position *"warrant a full-blown financial crisis"*. Merrill Lynch *"wants to make the point very clear: the Icelandic banks are currently nowhere near having solvency problems on any reasonable analysis of their published financial statements"*. The lack of market confidence concerned reckless newcomers, banks perceived as conquerors, whose excesses Merrill Lynch described with a series of adjectives: *"too fast, too young, too much, too short, too connected, too volatile"*. The rating agency recommended that the government should buy the banks' debt, or at least the portion of it that would mature in the next three years.

In April 2008, Moody's described the banks' CDS spreads as *"unreasonably exaggerating credit risk"*, while Fitch (01/04/08) noted the contrast between, on one hand, *"currently sufficient banks' liquidity"* and *"sound business fundamentals"*, and, on the other hand, *"diminishing confidence severely restricting funding options"*. On the same day (01/04/08), Fitch and S&P revised downwards their outlooks for Iceland owing to the risks of financial distress. In addition, Fitch downgraded the outlook for the three banks.

Unlike in 2006 when market opinion feared lest a recession of the Icelandic economy generate risks for the banks and, in turn, for the country, the situation had changed. It was no longer the fear of an international recession that hovered over the banks and, thus, over the country. The dominant concern now was that bank indebtedness, owing to its costs, was threatening both the banks' sustainability and the level of interest rates in the country. This last factor could potentially have a negative impact on both the domestic economy and the banks' assets.

The circular argumentation was still the same between the banks' liabilities, their assets and the Icelandic economy but with a different spin: financial analysts now took as the starting point the tensions that the spreads exercised on the banks' liabilities; their argument then moved on to the state of Iceland's economy before returning to the question of the banks' assets. Two S&P reports illustrate this: *"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" (S&P on Iceland 17/04/08); and this "heightened pressure on the Icelandic economy may result in a sharp deterioration of the asset quality of Glitnir's domestic portfolio" (S&P on Glitnir 21/04/08). As analysts knew since the 2006 minicrisis, the missing link in this circle was the deteriorating quality of assets with, as a result, pressure on external funding.

During this period, the countries or banks cited for comparison with the Icelandic situation were less often Nordic. Those mentioned by S&P (08/05/08) were diverse, ranging over Lithuania, Estonia, Latvia, New Zealand, Cyprus, Italy, Malta and Greece. CreditSights (30/03/08) made more ominous comparisons with recently bailed-out banks, such as Northern Rock or Bear Stearns.

Although spreads narrowed in April and May, financial analysts were still sounding the alarm about a causal link between the banks' problems of funding liabilities (higher borrowing costs for S&P 08/05/08; exposure to unstable foreign markets for Fitch 09/05/08) and the risk of a long-lasting contraction of the Icelandic economy. Their reports ever more often mentioned the risk to public finances if banks with balance sheets nine times as big as the GDP had to be bailed out (Fitch 09/05/08, Moody's 20/05/08).

The CBI's annual *Financial Stability Report* released in May 2008 changed the tone but not the conclusion from the previous year: *"In the analysis published in Financial Stability 2007, the Central Bank of Iceland concluded that the financial system was broadly sound. That has not changed."* To justify the Icelandic banks' right to grow like banks in *"Luxembourg, Holland, Great Britain, Denmark and Ireland"*, the CBI mentioned stress-tested profitability, sound international diversification and very little exposure to subprimes.

By June 2008, CDS spreads had started widening again, Glitnir and Kaupthing rising above the 1000-bps threshold at the end of July, when Merrill Lynch released its report, *"Icelandic banks: Distress and default"*. On the day of publication (24/07/08), the chief author of the report was interviewed on the Icelandic TV's evening news (Althing 2010). He agreed that the banks were *"generally sound"*, but thought that *"as the CDS of a company trades north of +1000 bps, the market is stating that it expects a default"*. For him, the only solution was refinancing through Icelandic or other Nordic central banks, or even the IMF. The reports issued during the summer repeated the expectation of the default announced by the graph of the banks' CDS spreads. According to CreditSights (07/08/08), *"the Icelandic bank CDS story is no longer really about the banks' fundamentals"*; and the Royal Bank of Scotland (08/08/08) dryly remarked that the last quarter was not yet the *"big one"* of a fated catastrophe.

Circular reasoning, financial stigmatization and self-fulfilling prophecies

To understand self-fulfilling prophecies, this article has introduced a historical perspective and analyzed market opinion. Such prophecies have mostly been studied by using mathematical models and reducing opinions to binary recommendations.

The current study has drawn attention to the seemingly irresistible force of circular reasoning during the two years and a half just before the three Icelandic banks collapsed. The island's economy seemed menaced by the banks' liabilities, the latter menaced, in turn, by the exposure of the banks' assets to the national economy. This circularity varied but little in the arguments used throughout the period under question. It was, however, enlarged in 2008 to tensions in the global economy, in particular the fear lest capital markets require higher interest rates from the banks, which would be passed on to domestic borrowers, thus damaging the banks' assets and acting back upon bank indebtedness. Nevertheless, the main risk identified by financial analysts during the period from February 2006 till September 2008 was the impact of a hard landing of the Icelandic economy on the banks' ability to repay or refinance their debts. This risk was not, however, the cause of the 2008 meltdown.

After 2008, public authorities blamed the banks' directors for a long list of mistakes, even criminal offences (Althing 2010). While abstaining from making a judgment about that, this article does point out that a major cause of the collapse was the financial stigma placed on the Icelandic banks since early 2006. This stigma would keep them from obtaining refinancing for 2008. A lack of knowledge about Iceland might have reinforced this stigmatization, evidence of this being the hesitation about which countries and banks were comparable and the wide variety of those retained for comparisons with the North Atlantic island. A newcomer to world finance could probably not stake out a position for itself so fast without worrying other players.

Further research using as sources the international and domestic press, along with declarations by public decision-makers, is needed to describe in further detail how a controversy between financial analysts helped to fulfill their prophecy of a bankruptcy. Related subjects for research that would shed light on self-fulfilling prophecies are the various sovereign bond crises affecting member states of the eurozone in recent years. Our understanding of the turmoil triggered by assessments of the risk of a default could be improved thanks to precise studies on market opinion, as it was formulated in the reports released by rating agencies or public institutions from 2010 to 2012 about the risk related to the Greek, Italian or Spanish sovereign debts.

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Appendix

Reports by financial analysts examined for the writing of this article

The reports from rating agencies or merchant banks were downloaded from the CBI's website: www.bonds.is. The reports from other institutions were downloaded from their websites.

| Date | Signing institution | Authors / Analysts | Entities covered | Rating decisions | Trading recommendations |
|------------|--------------------------------|---|---|--|--|
| 19/07/2005 | Moody's | Joan Feldbaum-Vidra | Republic of Iceland | Affirms Aaa | |
| 03/08/2005 | Fitch | Paul Rawkins, Lionel Price | Republic of Iceland | Affirms Iceland at AA- / AAA / F1+ (long-term foreign / long-term local / short term foreign) Outlook stable | |
| 31/10/2005 | Standard & Poor's | Kai Stukenbrock (primary), Eileen Zhang, Timothy Reid (secondary) | Republic of Iceland | FC AA-/A1+/Stable LC AA+/A1+/Stable | |
| 24/01/2006 | Barclays Capital | Paul Fenner-Leitão, Vincent Cooper, Mahesh Bhimalingam | Kaupthing, Glitnir, Landsbanki | | Sell Kaup 1 yr and buy Kaup 5 yr, Sell Kaup 1 yr (resp 5 yr) and buy Commerzbank 1 yr (resp 5 yr), sell Kaup 5 yr and buy Glitnir 5 yr |
| 21/02/2006 | Fitch | Paul Rawkins, Brian Coulton, Alexandre Birry | Republic of Iceland | Outlook of foreign and local currency Issuer Default Ratings (IDRs) revised to negative from stable. Ratings affirmed at AA- / AAA / F1+ / AA (long-term foreign / long-term local / short term foreign / country ceiling). | |
| 23/02/2006 | Fitch | Alexandre Birry, Alison Leveridge | Kaupthing, Glitnir, Landsbanki, Straumur | Affirms Kaupthing at A, F1, B/C, 2, Landsbanki at A, F1, B/C, 2, Glitnir at A, F1, B/C, 2, Straumur at BBB-, F3, C/D, 3. Outlook for the four banks stable | |
| 07/03/2006 | Merrill Lynch | Richard Thomas (main author), Tolu Alamutu, David Lewis | Kaupthing, Glitnir, Landsbanki | | Underweight senior debt 30% (protection buyers) |
| 13/03/2006 | Morgan Stanley | Christine Miyagishima (primary), Jackie Ineke | Kaupthing, Glitnir, Landsbanki | | Sell 5 yr protection on Glitnir and Landsbanki, not so comfortable on Kaupthing |
| 14/03/2006 | Dresdner Kleinwort Wasserstein | Nigel Myer | Kaupthing, Glitnir, Landsbanki | | High-risk trade : selling protection |
| 16/03/2006 | Standard & Poor's | Kai Stukenbrock (primary), Eileen Zhang (secondary) | Republic of Iceland | Affirms FC AA-/A1+/Stable and LC AA+/A1+/Stable | |
| 21/03/2006 | Danske Bank | Carsten Valgreen, Lars Christensen, Peter Possing Andersen, Rene Kallestrup | Republic of Iceland | | n.a. |
| 24/03/2006 | JP Morgan | Ben Ashby, Roberto Henriques | Kaupthing, Glitnir, Landsbanki, Republic on Iceland | | Buyer of protection on all three banks at below 40 bps, seller of protection on all three banks at above 50 bps, no buyer of protection on sovereign |
| 26/03/2006 | CreditSights | Simon Adamson | Kaupthing, Glitnir, Landsbanki | | No recommendation |
| 28/03/2006 | Standard & Poor's | Martin Noréus, Miguel Pintado, Peter Dutton | Glitnir | Assigns A-/A2/Stable | |
| 04/04/2006 | Moody's | Lynn Valkenaar | Kaupthing, Glitnir, Landsbanki | Affirms the deposit and debt ratings of Kaupthing and Glitnir at A1/P-1, and those of Landsbanki at A2/P-1. Financial strength of Kaupthing (C+) on review for possible downgrade and outlook changed to negative from stable for the financial strength of Glitnir and Landsbanki | |
| 11/04/2006 | Barclays Capital | Paul Fenner-Leitão, Vincent Cooper, Puneet Sharma | Kaupthing, Glitnir, Landsbanki | | Buyer of protection on all three banks |
| 20/04/2006 | Danske Bank | Lars Christensen, Rene Kallestrup | Republic of Iceland | | Sell ISK, buy EUR |
| 06/06/2006 | Standard & Poor's | Eileen X. Zhang (primary), Kai Stukenbrock, Moritz Kraemer (secondary) | Republic of Iceland | Revises Iceland's outlook to negative from stable (FC AA-/A1+; LC AA+/A1+). | |
| 06/06/2006 | Standard & Poor's | Miguel Pintado (primary), Peter Dutton and Michelle Brennan (secondary) | Glitnir | Glitnir unaffected (A-/A2/Stable) by revision of Iceland's outlook | |
| 21/07/2006 | Merrill Lynch | Richard Thomas (main author), Tolu Alamutu, David Lewis | Kaupthing, Glitnir, Landsbanki | | Still buyers of protection (on 5yr CDS) |
| 30/08/2006 | Fitch | Alexandre Birry, Olivia Perney Guillot | Kaupthing | Affirms Kaupthing at A, F1, B/C, 2. Outlook on IDRs stable | |
| 30/08/2006 | Fitch | Alexandre Birry, Olivia Perney Guillot | Glitnir | Affirms Glitnir at A, F1, B/C, 2. Outlook on IDRs stable | |
| 12/09/2006 | Moody's | Lynn Valkenaar | Kaupthing | Downgrades financial strength to C from C+. Affirms long term debt and deposit rating of A1 and short-term rating of P-1. Stable outlook on all ratings | |
| 08/11/2006 | Merrill Lynch | Richard Thomas (main author), Tolu Alamutu, David Lewis | Kaupthing, Glitnir, Landsbanki | | Still buyers of protection (on 5yr CDS), but to a lesser extent than in March. Happy to take short term risk (1year) |
| 14/11/2006 | Danske Bank | Lars Christensen | Iceland as early warning for emerging markets | | n.a. |
| 14/11/2006 | Fitch | Paul Rawkins, Brian Coulton | Republic of Iceland | Affirms Iceland at AA- / AAA / F1+ / AA (long-term foreign / long-term local / short term foreign / country ceiling). Outlook remains negative | |

| Date | Signing institution | Authors / Analysts | Entities covered | Rating decisions | Trading recommendations |
|---------------|---------------------|--|--|---|--|
| 28/11/2006 | Fitch | Alexandre Birry, Olivia Perney Guillot | Landsbanki | Affirms Landsbanki at A, F1, B/C, 2. Outlook on IDRs stable | |
| 14/12/2006 | Moody's | | Republic of Iceland | Aaa, P-1, stable | |
| December 2006 | Standard & Poor's | | Republic of Iceland | Downgrades to A+, A-1, AA, A-1+, stable from AA-, A-1+, AA+, A-1+, negative (FC LT ST LC LT ST) | |
| 03/01/2007 | Citigroup | Geoff Dawes, Ronit Ghose (main authors), Kimon Kalamboussis, Kato Mukuru | Kaupthing | | Buy (stock rating) |
| 26/01/2007 | Merrill Lynch | Richard Thomas | Landsbanki | | Overweight 30% Landsbanki senior debt (seller of protection) |
| 30/01/2007 | Citigroup | Geoff Dawes, Ronit Ghose (main authors), Kimon Kalamboussis, Kato Mukuru | Kaupthing | | Buy / high risk (stock rating) |
| 05/02/2007 | Fitch | Alexandre Birry, Olivia Perney Guillot | Glitnir | Affirms Glitnir at A, F1, B/C, 2. Outlook on IDRs stable | |
| 06/02/2007 | Moody's | Lynn Valkenaar | Glitnir | Downgrades financial strength to C from C+. Affirms long term debt and deposit rating of A1 and short-term rating of P-1. Stable outlook on all ratings | |
| 07/02/2007 | Standard & Poor's | Martin Noréus (primary), Miguel Pintado (secondary) | Glitnir | Affirms (A-/A2/Stable) | |
| 21/02/2007 | Morgan Stanley | Per K Lofgren, Guglielmo Zadra | Kaupthing | | Overweight (stock rating) |
| 26/02/2007 | Moody's | n.a. | Kaupthing, Glitnir, Landsbanki | Following implementation of new JDA methodology, Kaupthing and Glitnir rated at Aaa long term (deposits and senior debt) from A1, and at P-1 short term. Landsbanki rated at Aaa long term (deposits and senior debt) from A2, and at P-1 short term. | |
| 15/03/2007 | Fitch | | Republic of Iceland | Downgrades Iceland to A+ / AA+ (long-term foreign / long-term local) from AA- /AAA | |
| 15/03/2007 | Fitch | Alexandre Birry, Olivia Perney Guillot | Kaupthing, Glitnir, Landsbanki, Straumur | Affirms Kaupthing, Landsbanki and Glitnir at A (stable outlook), F1, B/C, 2, Straumur at BBB- (stable outlook), F3, C/D, 3. | |
| 03/04/2007 | Moody's | n.a. | Kaupthing, Glitnir, Landsbanki | Long term local currency debt and deposit ratings under review for possible downgrades along with 43 other banks pursuant to refinement in methodology | |
| 10/04/2007 | Moody's | n.a. | Kaupthing, Glitnir, Landsbanki | Downgraded by three notches to Aa3 from Aaa (all the other banks downgraded by less than three notches or affirmed) | |
| 16/04/2007 | Moody's | Lynn Valkenaar, Janne Thomsen, Adel Satef | Glitnir | Long-term deposit and senior debt Aa3, short-term deposits and debt P-1, financial strength C | |
| 25/04/2007 | Standard & Poor's | Martin Noréus (primary), Miguel Pintado (secondary) | Glitnir | A-/A2/Stable | |
| 02/05/2007 | Moody's | Lynn Valkenaar | Glitnir | Affirms Aa3/C/P-1 (long-term, financial strength, short-term) with stable outlook | |
| 22/05/2007 | Moody's | Lynn Valkenaar | Glitnir, Landsbanki | Unaffected by acquisitions announced at Aa3/P-1/C/Stable | |
| 06/06/2007 | R&I | Not mentioned | Kaupthing | Assigns A+/Stable | |
| 06/06/2007 | R&I | Not mentioned | Republic of Iceland | Assigns FC AA+/Stable | |
| 26/07/2007 | Citigroup | Geoff Dawes, Ronit Ghose (main authors), Kimon Kalamboussis, Kato Mukuru | Kaupthing | | Buy / high risk (stock rating) |
| 26/07/2007 | Fitch | Alexandre Birry, Olivia Perney Guillot | Kaupthing | Affirms Kaupthing at A, F1, B/C, 2, BBB. Outlook on long-term IDRs stable | |
| 15/08/2007 | Fitch | Alexandre Birry, Olivia Perney Guillot | Kaupthing | Affirms Kaupthing at A, F1, B/C, 2, BBB. Outlook on IDRs stable | |
| 15/08/2007 | Moody's | Adel Satef, Janne Thomsen | Kaupthing | Kaupthing and NIBC on review for possible downgrade | |
| 23/08/2007 | Fitch | Alexandre Birry, Olivia Perney Guillot | Glitnir | Affirms Glitnir at A, F1, B/C, 2, BBB. Outlook for long-term IDR stable | |
| 25/10/2007 | Moody's | Kimmo Rama, Janne Thomsen | Glitnir | Affirms long-term deposit Aa3, financial strength C. Outlook stable | |
| 20/11/2007 | Standard & Poor's | Kai Stukenbrock (primary), Frank Gill, Eileen Zhang (secondary) | Republic of Iceland | Outlook revised to negative from stable (FC A+/A1 and LC AA/A1+) | |
| 20/11/2007 | Standard & Poor's | Miguel Pintado (primary), Louise Lundberg, Claire Curtin (secondary) | Glitnir | Unaffected (A-/A2/Stable) by revised outlook on Iceland | |
| 20/11/2007 | Moody's | Kimmo Rama | Kaupthing | Aa3 (deposits), C | |
| 22/11/2007 | Fitch | Alexandre Birry, Olivia Perney Guillot | Landsbanki | Affirms Landsbanki at A, F1, B/C, 2, BBB. Outlook on long-term IDR stable | |

| Date | Signing institution | Authors / Analysts | Entities covered | Rating decisions | Trading recommendations |
|--------------|---------------------|--|--|--|---|
| 27/11/2007 | Moody's | | Icelandic Banks vs Nordic peers, Powerpoint presentation | | |
| 29/11/2007 | Moody's | Kimmo Rama, Lynn Exton | Kaupthing | Maintains Aa3 / C ratings under review for possible downgrades, due to contemplated acquisition of the Dutch NIBC, itself under review for possible downgrade | |
| 05/12/2007 | UBS | Michael Schenk | Kaupthing, Glitnir | | Kaupthing neutral Glitnir sell (stock rating) |
| 11/01/2008 | Morgan Stanley | Jackie Ineke, Emma Borgstrom, Lee Street | Kaupthing, Glitnir, Landsbanki | | Bearish view |
| 17/01/2008 | CreditSights | Simon Adamson | Kaupthing, Glitnir, Landsbanki | | No recommendation |
| 23/01/2008 | BNP Paribas | Olivia Frieser, Axel Swenden | Kaupthing, Glitnir, Landsbanki | | No recommendation |
| 30/01/2008 | Moody's | Kimmo Rama | Kaupthing, Glitnir, Landsbanki | Aa3/C ratings of Landsbanki and Glitnir placed on review for possible downgrades. Review of Aa3/C ratings of Kaupthing maintained. P-1 short term ratings of all three banks affirmed. | |
| 31/01/2008 | Fitch | Gordon Scott | Kaupthing | Affirms Kaupthing at A, F1, B/C, 2, BBB. Outlook on IDRs changed to stable from negative | |
| January 2008 | Moody's | Joan Feldbaum-Vidra, Kristin Lindow, Pierre Cailleteau | Republic of Iceland | n.a. | |
| 20/02/2008 | UBS | Michael Schenk | Landsbanki | | Neutral (stock rating) |
| 28/02/2008 | Moody's | Kimmo Rama | Kaupthing | Downgrades long term (deposit and senior debt) to A1 from Aa3, financial strength to C- from C and affirms short term at P-1. Outlook stable | |
| 28/02/2008 | Moody's | Kimmo Rama | Landsbanki | Downgrades long term deposit ratings to A2 from Aa3, financial strength to C- from C and affirms short term at P-1. Outlook stable | |
| 28/02/2008 | Moody's | Kimmo Rama | Glitnir | Downgrades long term deposit ratings to A2 from Aa3, financial strength to C- from C and affirms short term at P-1. Outlook stable | |
| 05/03/2008 | Moody's | Joan Feldbaum-Vidra, Kristin Lindow | Republic of Iceland | Outlook changed to negative from stable on government bond ratings and country ceiling on foreign currency bank deposits | |
| 11/03/2008 | Jyske Bank | Ole Severinsen | Republic of Iceland | | Buy bonds / sell protection |
| 12/03/2008 | SEB | Rolf Danielsen | Republic of Iceland | | n.a. |
| 14/03/2008 | Jyske Bank | Kent Bæk Iversen | Republic of Iceland | | Sell ISK (currency rating) |
| 20/03/2008 | Standard & Poor's | Miguel Pintado, Louise Lundberg | Glitnir | A- long term rating placed on credit watch negative. A2 short term ratings affirmed | |
| 30/03/2008 | CreditSights | Simon Adamson | Kaupthing, Glitnir, Landsbanki | | No recommendation |
| 31/03/2008 | Merrill Lynch | Richard Thomas | Kaupthing, Glitnir, Landsbanki | | No formal recommendation, still very negative |
| 01/04/2008 | Fitch | Paul Rawkins, David Heslam, Alexandre Birry | Republic of Iceland | Outlook of foreign and local currency Issuer Default Ratings (IDRs) revised to negative from stable | |
| 01/04/2008 | Fitch | Alexandre Birry, Lidsey Liddell, Gordon Scott | Kaupthing, Glitnir, Landsbanki | Rating watch negative for the three banks on IDRs, individual rating and subordinated debt (ratings affirmed at A, F1, B/C, A-). Support rating and support rating floor affirmed at 2 and BBB | |
| 01/04/2008 | Standard & Poor's | Eileen X. Zhang (primary), Franklin Gill (secondary) | Republic of Iceland | LT ratings FC A+ and LC AA placed on credit watch negative. ST ratings FC A1 and LC A1+ affirmed | |
| 17/04/2008 | Standard & Poor's | Eileen X. Zhang (primary), Kai Stukenbrok, John Chambers (secondary) | Republic of Iceland | Downgrades long term FC and LC to A and AA- from A+ and AA. Credit watch negative removed. Negative outlook. Short term FC A1 and LC A1+ affirmed. | |
| 21/04/2008 | Standard & Poor's | Miguel Pintado (primary), Louise Lundberg (secondary) | Glitnir | Long term rating downgraded to BBB+ from A-. A2 short term ratings affirmed. Credit watch negative removed. Outlook negative. | |
| April 2008 | Moody's | Joan Feldbaum-Vidra, Kristin Lindow, Pierre Cailleteau | Republic of Iceland | n.a. | |
| 08/05/2008 | Standard & Poor's | Eileen X. Zhang (primary), Kai Stukenbrok, Franklin Gill (secondary) | Republic of Iceland | FC A/A1/Negative and LC AA-/A1+/Negative | |
| 09/05/2008 | Fitch | Alexandre Birry, Lidsey Liddell, Gordon Scott | Kaupthing, Glitnir, Landsbanki | Downgrades the long-term IDRs of Glitnir and Kaupthing to A- from A. Affirms Landsbanki's long-term IDR at A. Rating watch negative removed. Negative outlook assigned | |
| 13/05/2008 | Morgan Stanley | Per K Lofgren | Kaupthing | | Underweight (stock rating) |
| 16/05/2008 | Deutsche Bank | Gillian Edgeworth | ISK | | Positive on ISK (currency rating) |

| Date | Signing institution | Authors / Analysts | Entities covered | Rating decisions | Trading recommendations |
|------------|------------------------|--|---|---|---|
| 20/05/2008 | Moody's | Kimmo Rama | Republic of Iceland, Kaupthing, Glitnir, Landsbanki | Downgrades Iceland's AAA government bond and foreign currency country ceiling to Aa1. Leaves Kaupthing (A1/P-1/Stable), Glitnir and Landsbanki (A2/P-1/Stable) unaffected | |
| 24/07/2008 | Merrill Lynch | Richard Thomas | Kaupthing, Glitnir, Landsbanki | | Underweight senior debt 30% |
| 07/08/2008 | CreditSights | Simon Adamson | Kaupthing, Glitnir, Landsbanki | | No recommendation |
| 08/08/2008 | Royal Bank of Scotland | Tom Jenkins, Corinne Cuningham | Kaupthing, Glitnir, Landsbanki | | Buy curve steepeners, betting on short term yield relative decrease |
| 17/09/2008 | Moody's | John Feldbaum-Vidra, Kristin Lindow, Pierre Cailleteau | Republic of Iceland | Ratings affirmed at Aa1(senior debt and deposits) / P-1 / Stable. Country ceilings at AAA for debt and Aa1 for deposits. | |
| 28/09/2008 | SEB | Rolf Danielsen | Republic of Iceland | | n.a. |