

Gambling for resurrection in Iceland: the rise and fall of the banks

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Overview of paper

1. Introduction
2. The panic and collapse of September-October 2008
3. Analytical framework
4. Rise of Iceland's financial sector
5. August 2007 – September 2008
6. Aftermath: crisis response and adjustment
7. Conclusions



Note: See paper for data sources. The most important source is the report of the *Special Investigative Commission* (2010)

Brief background

- Banks were mostly state-owned until 1998 when privatisation started
 - Privatisation completed in 2003
- Three major banks, Glitnir, Landsbanki and Kaupthing
- Each controlled by a small group of owners ...
- ... who were active investors with large (leveraged) stakes in other sectors, internationally
- Banks grew very rapidly, from €16 bn in 2003 to €124 bn (combined) in 2007
 - 2007 GDP \approx €14 bn
- Large in comparison to domestic economy, but small internationally, even on a Nordic scale
- Reportedly, highly profitable and solvent until the very end
- That picture was dramatically changed by evidence published in the (massive) SIC report (2010).



The panic and collapse of September-October 2008



Banks' liquidity August 2008

- H1 presentations all claimed sufficient funds for next year
- End-August liquidity reports to CBI claimed adequate liquidity for next two months
- Fall of Lehman on September 15 had immense global consequences for interbank markets and funding generally
- This affected Icelandic banks too
- But the reports hid serious weaknesses

Reported liquidity at Icelandic banks at end of August 2008

Flows are those expected for September-October 2008. Amounts are in € bn

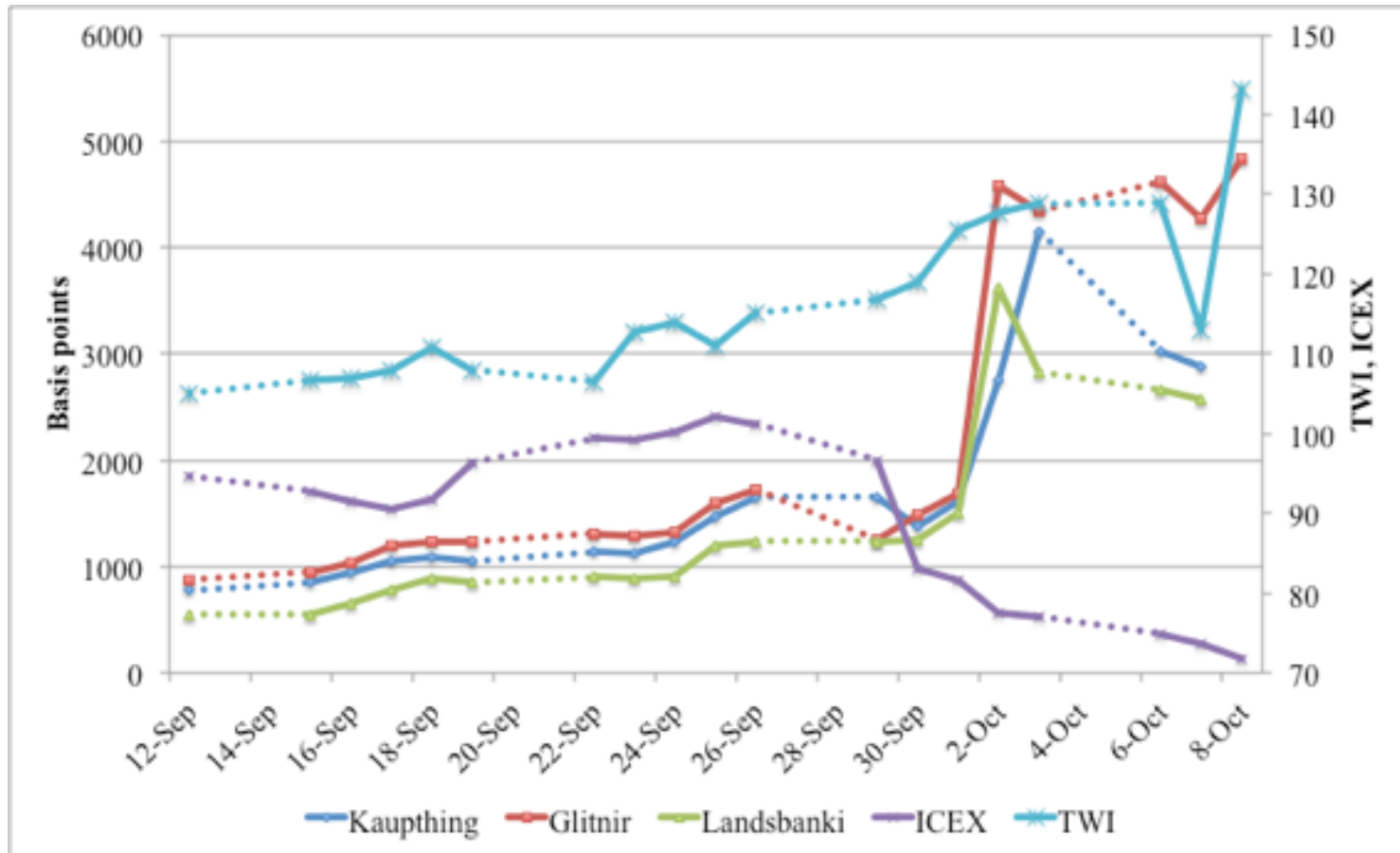
	Glitnir	Landsbanki	Kaupthing
Total			
Liquid assets	7.3	12.0	22.5
Known outflows	4.3	8.5	15.2
Balance	3.0	3.5	7.3
Foreign currency			
Liquid assets	5.4	9.8	20.2
Known outflows	2.9	7.0	13.2
Balance	2.5	2.8	7.0
Included in liquid assets			
Repoable assets	1.9	4.3	2.2
Credit lines w.o. MAC	1.0	0.2	3.5
Total	2.9	4.5	5.7



Collapse began at Glitnir

- After Lehman Glitnir lost €0.5 bn liquidity in cancelled loans and margin calls
 - Planned sale of Norwegian assets did not go through
- Liq. margin should still have been €2 bn
- But asked CBI for €0.6 bn emergency loan
- CBI found collateral inadequate and noted large payments ahead
- Decided to nationalise Glitnir instead and inject €0.6 bn as new equity, writing down existing equity by 85%
- -> Ratings downgrades
- -> Covenants in loans and credit lines triggered
- -> Glitnir gap widened from €0.6 bn to €2 bn
- -> Market conditions deteriorated, generally

CDS spreads of banks, the Icelandic Stock Exchange (ICEX) main index, and the Trade-weighted exchange rate index (TWI)



Contagion to other banks

- Confidence weakened
- Loan book of Landsbanki hit
 - as well as that of Glitnir itself – the new equity would have been mostly (80%) wiped out immediately
- Intensified withdrawals from Icesave accounts
- Demand for cash reserves from UK FSA
- Margin calls from ECB
- Landsbanki liquidity position ↓ €1.5bn
 - And remaining €1bn margin appears to have evaporated too
- UK FSA demanded €2bn from Kaupthing due to Edge accounts

On Friday October 3 it was clear that all three banks needed emergency funding:

- Glitnir needed well over €2 bn
 - of which €0.64 bn to meet margin call from the ECB
- Landsbanki needed €0.72 bn
 - €0.32 bn to pay UK FSA
 - €0.4 to meet margin call from the ECB
- Kaupthing needed €2 bn to meet demands of UK FSA for cash reserves
- In total about €5 bn needed in emergency funding
 - €2.3 bn to UK FSA and €1 bn to ECB
- Currency reserves €2.6 bn

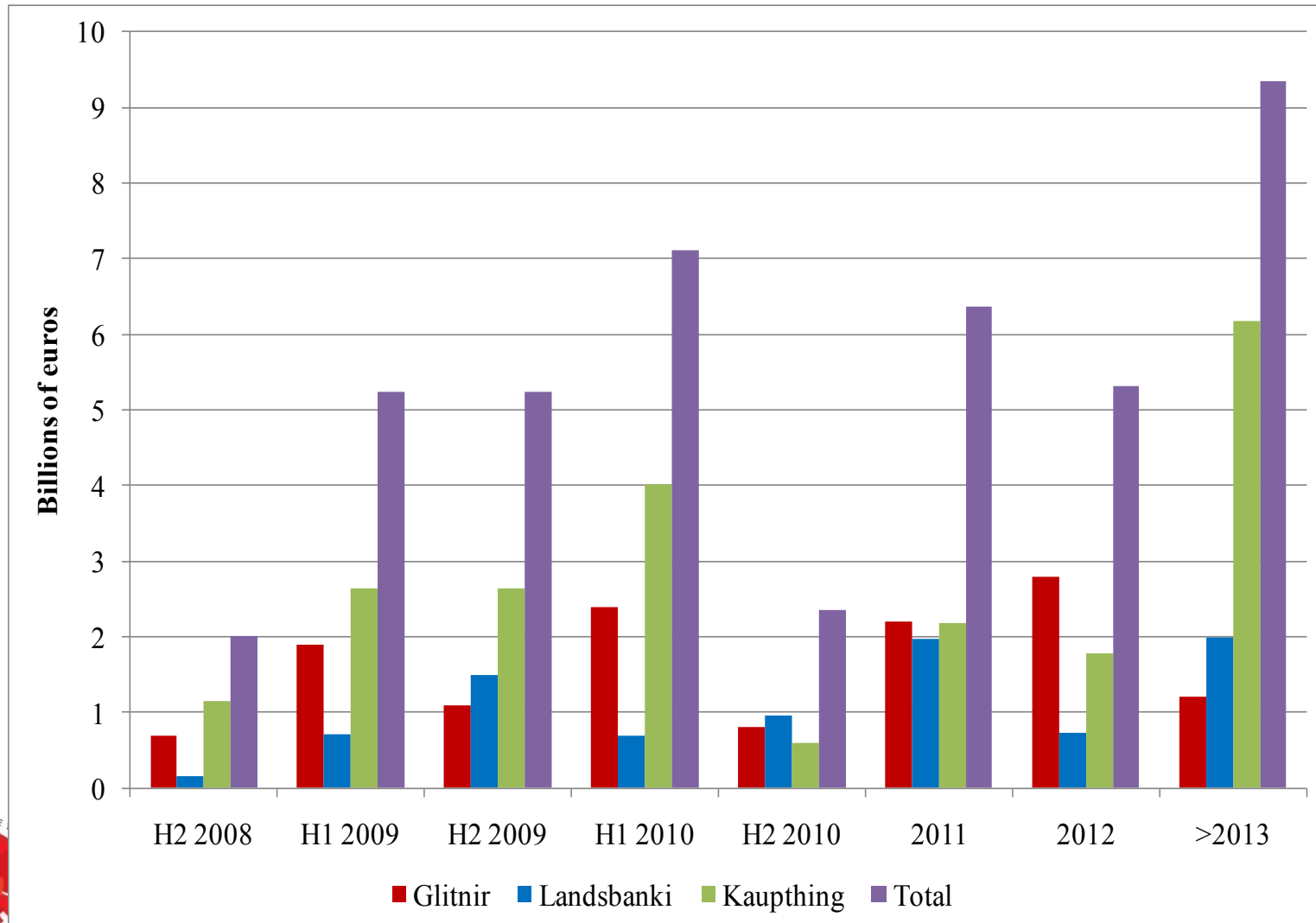
So banks could not be saved in absence of external funding



... and they should not have been saved!

- Immediate needs \approx half GDP
- Likely funding needed over next year \approx 3 x GDP
- it was out of the question for the state to take on the contingent liability

Maturity profiles for long-term debt



On Saturday morning Oct 4 it was clear that it was not possible to save all the banks

- But what was to be done about it?
- There was no agreed upon plan but in the end the “Emergency Legislation” was passed late October 6 following Prime Minister’s televised speech

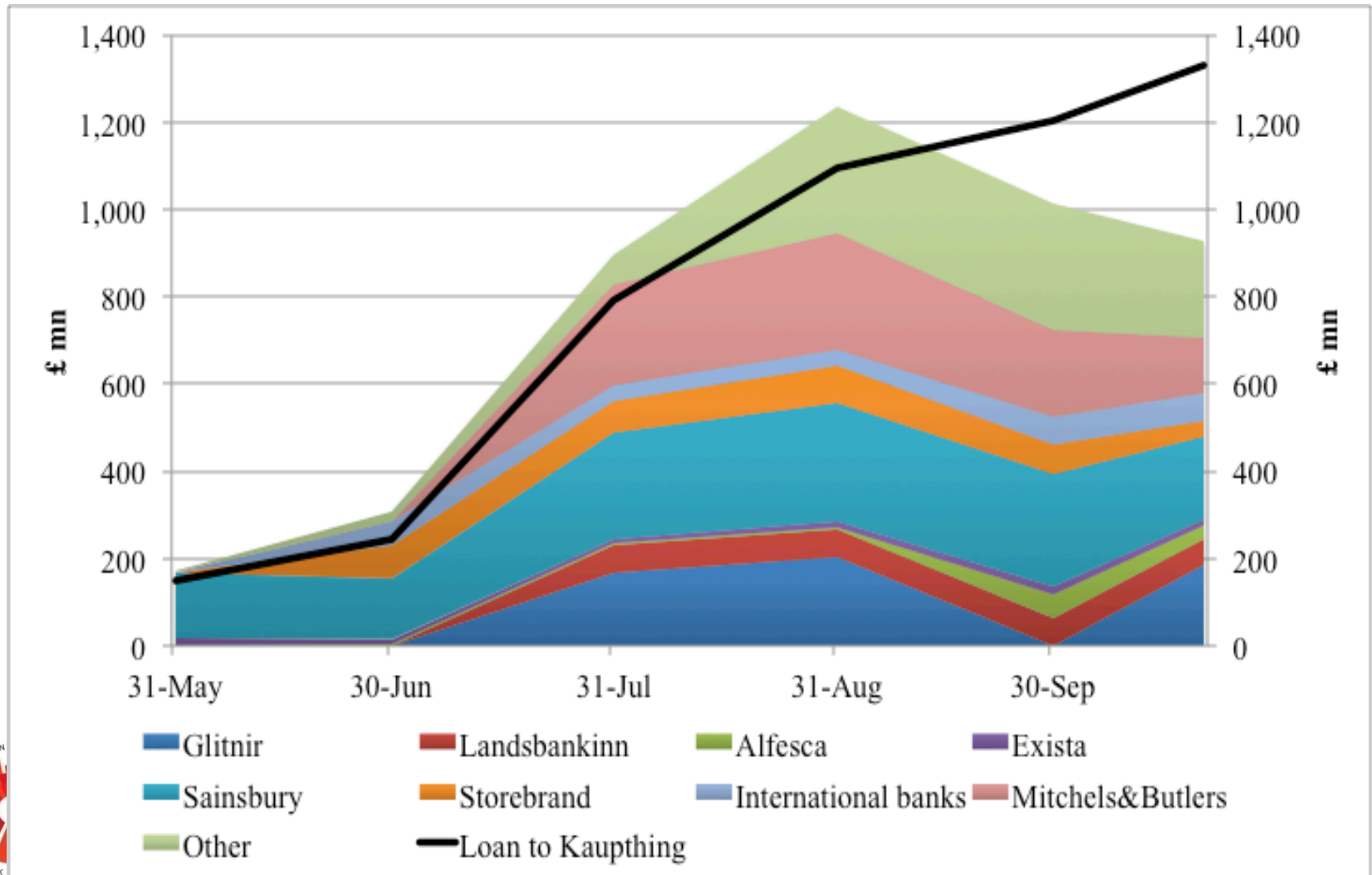
Landsbanki collapsed in the early hours of October 7 2008

- Actions by force of Emergency Legislation:
 - New bank created out of domestic assets and liabilities (deposits)
 - International assets and liabilities including Icesave deposits left in old bank
 - Deposits and deposit insurance given priority status as claims on old bank
- On October 8 UK authorities seized the London branch and subsidiary of Landsbanki ...
- ... and issued a freezing order on Landsbanki assets by force of Anti-terrorism, Crime and Security act

Collapse of Glitnir and Kaupthing

- Planned nationalisation of Glitnir abandoned ...
- ... so the bank fell late on October 7
- Kaupthing was lent €0.5 bn for four days on October 6 with Danish subsidiary as collateral ...
 - Circumstances of this loan unclear (at least to outsiders)
 - And unclear what happened to the money – it did not go to the UK where the pressure was on to pay €2 bn
- ... but went under after UK authorities seized KSF and a large part of its funding came due by force of cross-default provisions
 - Done under Northern Rock Act

KSF lending to Kaupthing against collateral



Cross-border interaction

- UK FSA and Treasury provided much of the final push that sent banks over the edge
- Some countries (Denmark and Sweden) were cooperative
- But generally there was little support or sympathy
- Damage might have been limited had authorities cooperated rather than acted unilaterally
- Iceland a victim of lagging European regulation on cross-border banking
- Recent UK actions on Cyprus banks in London the opposite of what was done with Landsbanki and Kaupthing

On the decision to nationalise Glitnir

- Poorly prepared and poorly executed both by Glitnir and CBI
- The nationalisation decision was utterly futile – could have been foreseen with better analysis
- Allowing press to learn of talks at CBI made it necessary to present what was to be done before opening of markets on Monday September 29
- Two weeks (until Glitnir needed the money) which could have been used for analysis and exploration of other alternatives were lost

Story highlights how ephemeral liquidity can be

- Liquid funds include various kinds of assets, scheduled payments on loans, contracts etc.
- In systemic crisis assets may become illiquid and fall considerably in value
- Scheduled payments may fail
- Contracts for credit lines become null and void
- Loan covenants dependent on credit ratings may cause loans to come due
- Liquidity reports hid the difficult position of the banks
- But even with truthful reports it is not clear whether they would have survived after Lehman

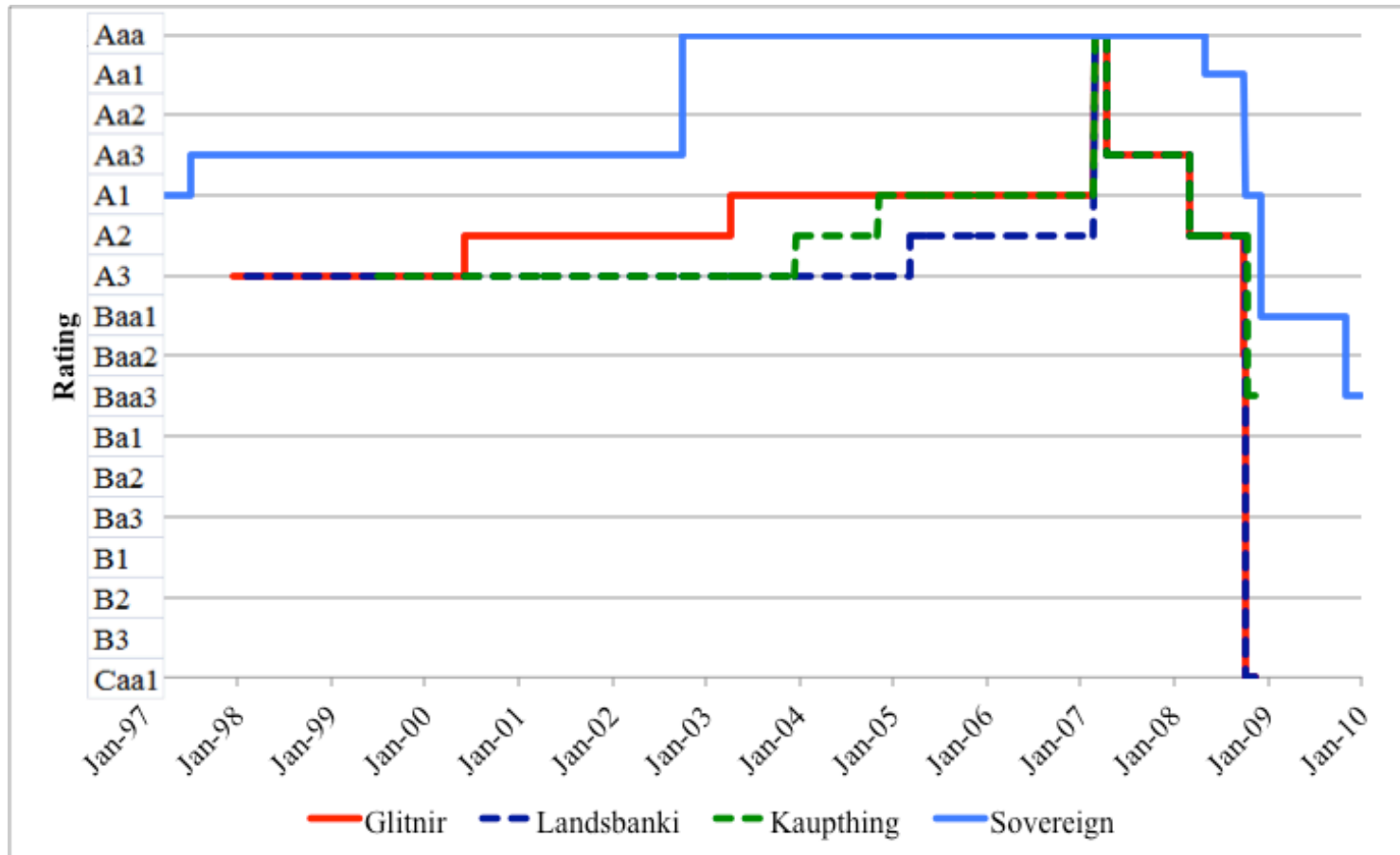
The banks before August 2007



How were Icelandic banks able to become so large?

- Ample supply of funds in international markets
- Supportive government policy (Benediktsdottir et al. 2011)
- Positive ratings ...
- ... based on what was seen as sound economic policy and good performance of the banks
- Positive aspects of fast growth were emphasised
 - (taking advantage of profitable opportunities created by Icelandic entrepreneurs, geographic diversification, etc.)
- And most were too uncritical of this story
 - Ratings firms, IMF, OECD, Baldursson and Portes (2007)
- But lower credit standards, relaxed collateral requirements, seem to have been the major drivers
- Also lack of realism at ratings firms about capacity for lending of last resort

Moody's ratings of Iceland (sovereign) and Icelandic banks



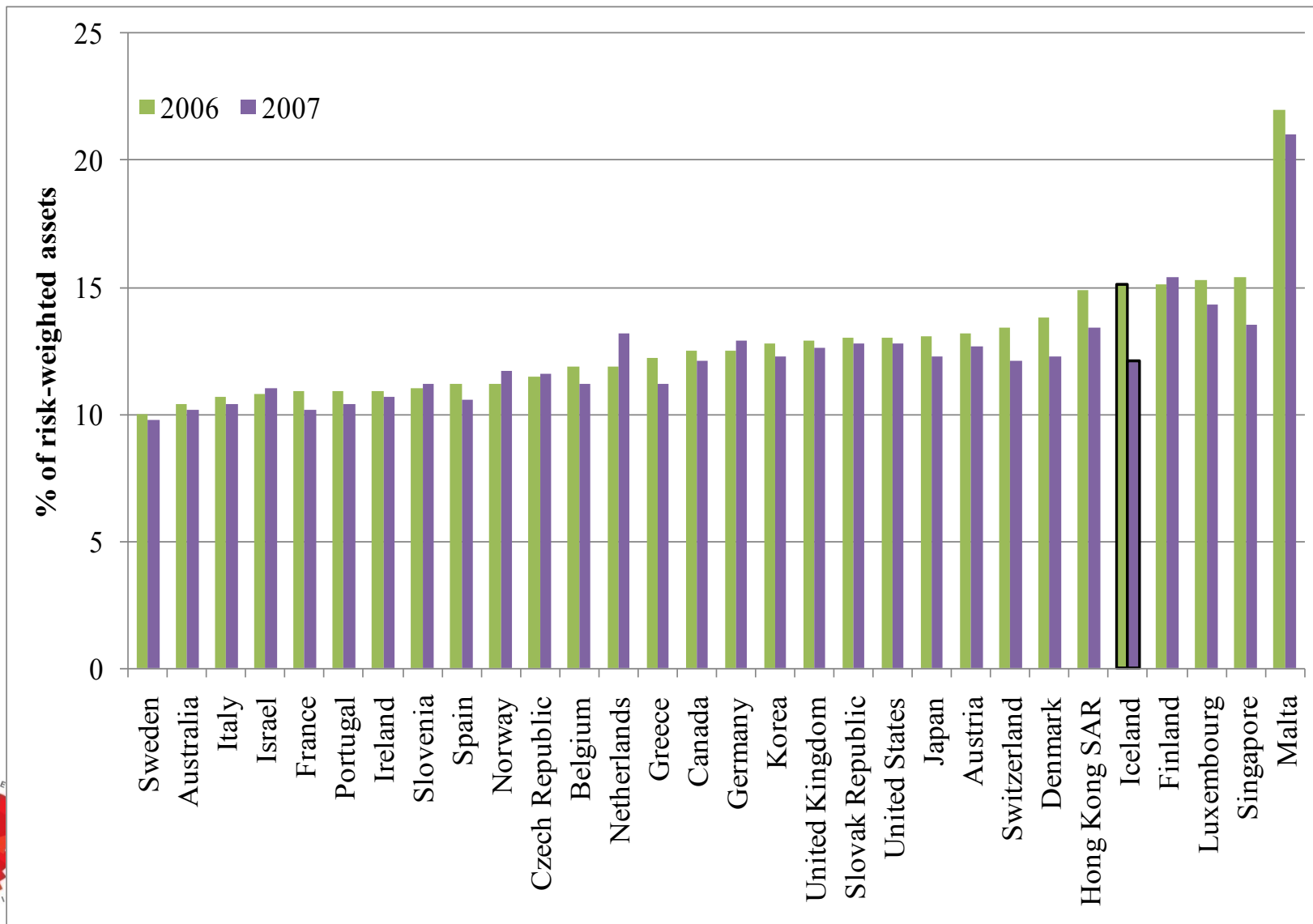
Efficiency/Profitability measures

(In percent)

	2003	2004	2005	2006	2007
Net interest margin					
USA	3.8	3.6	3.6	3.4	3.4
Europe	1.5	1.2	1.0	0.9	0.9
Iceland	2.5	2.2	1.9	1.9	1.7
Efficiency ratio					
USA *)	56.5	58.0	57.2	56.3	59.2
Europe **)	73.1	64.8	60.9	59.8	63.0
Iceland **)	55.0	47.0	36.0	38.0	51.0
*) Non-interest expense less amortization of intangible assets as a percent of net interest income plus noninterest income.					
**) Cost-to-income ratio					



Capital adequacy ratio in advanced economies



Macroeconomic context

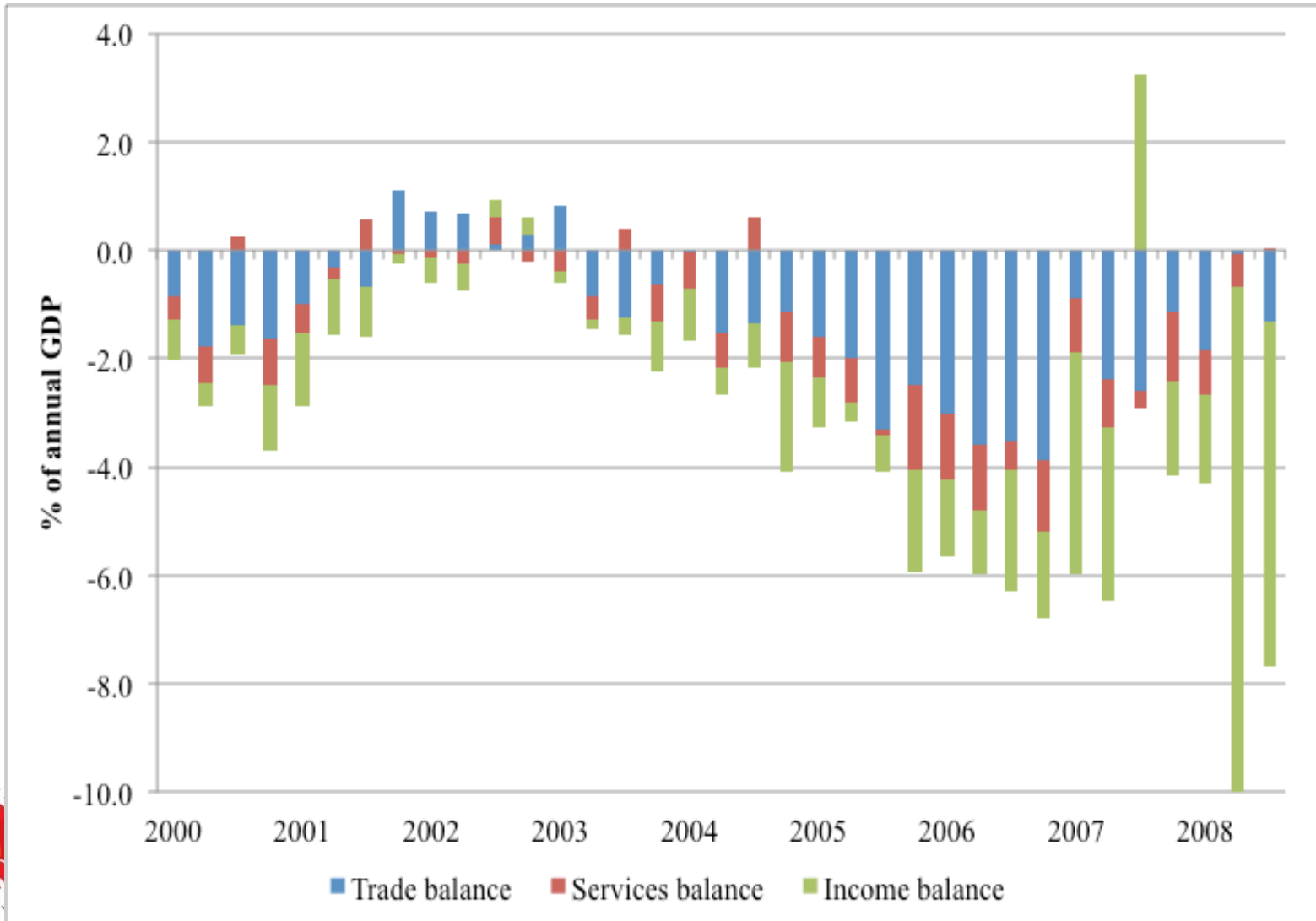


Macroeconomic boom 2004-2007

- Growth of financial sector both cause and consequence
- Great internal and external imbalances
 - Inflation (5.8% in 2007)
 - Housing bubble
 - Large current account deficit
 - Strained labour market (1% in 2007)
- Debt-financed investments abroad expanded external assets and liabilities
 - Iceland resembled a large venture-capital firm
- Banks fuelled the boom
 - To considerable extent with external funding
 - Overvalued and overleveraged asset holdings financed to a considerable degree by foreign currency loans undermined loan quality

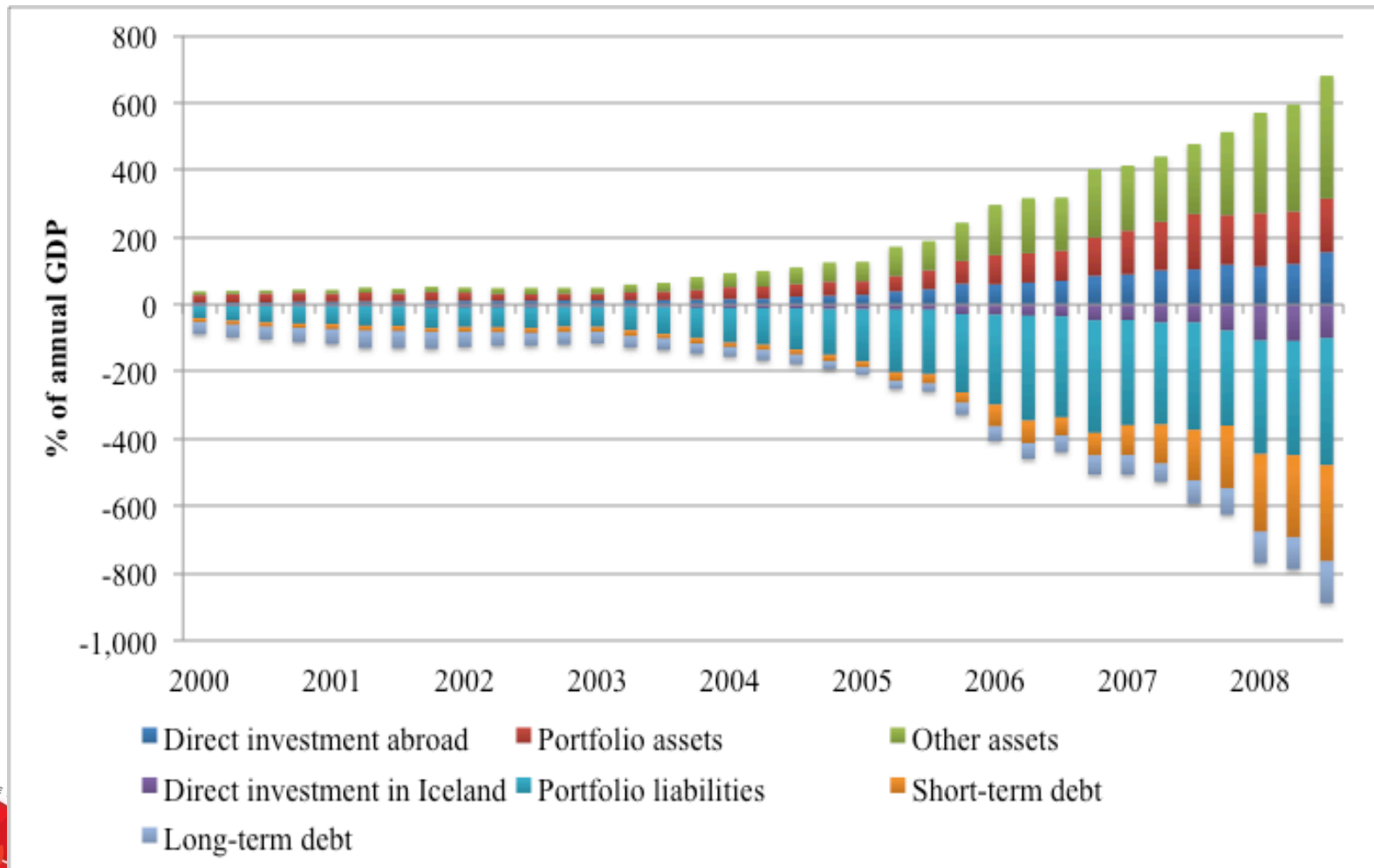
Current account balance

2000:Q1-2008:Q3



External assets and liabilities

2000:Q1-2008:Q3

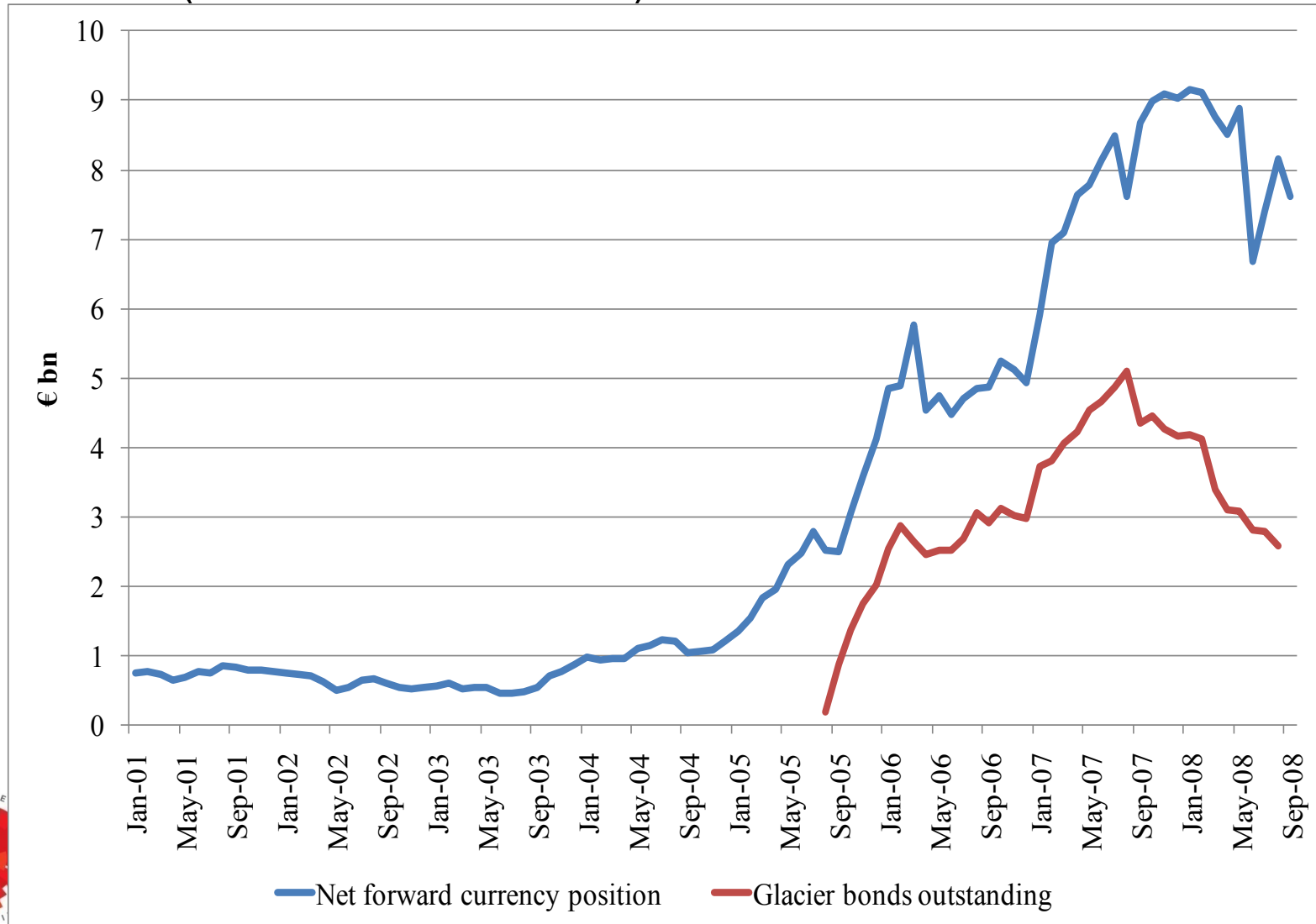


Economic policies

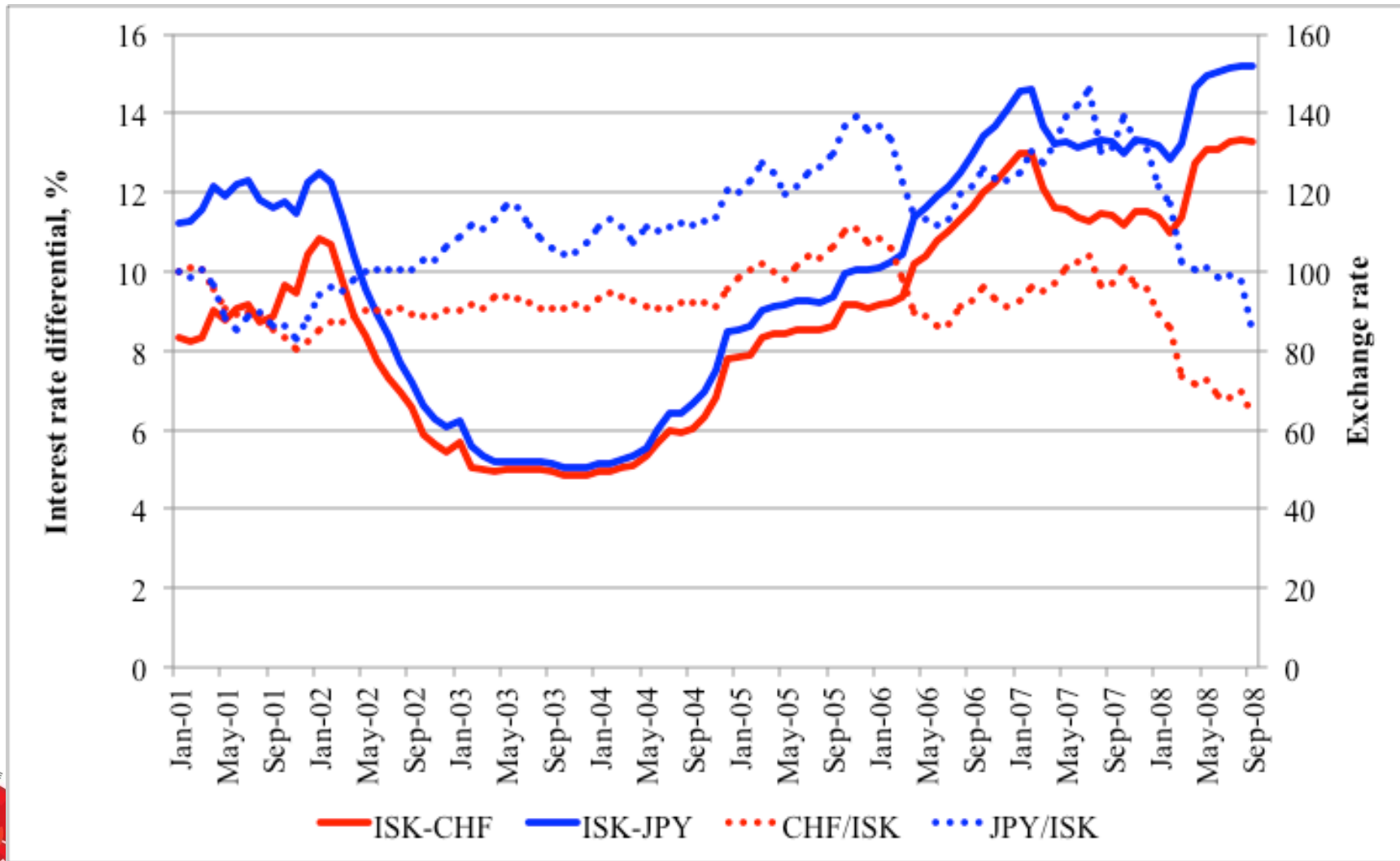
- Fiscal and structural policies supportive of overheating
 - Taxes lowered
 - Expenditure increased
 - Government Housing Financing Fund competed vigorously with banks for market share
 - Large-scale investments in energy sector led by government owned companies
- CBI attempted to stem inflation by raising interest rates
 - Erred in focusing overtly on preventing depreciation of krona
 - Encouraged destabilising carry trade and domestic FX borrowing

Iceland “poster child” for damage of carry trade

(Plantin and Shin 2011)

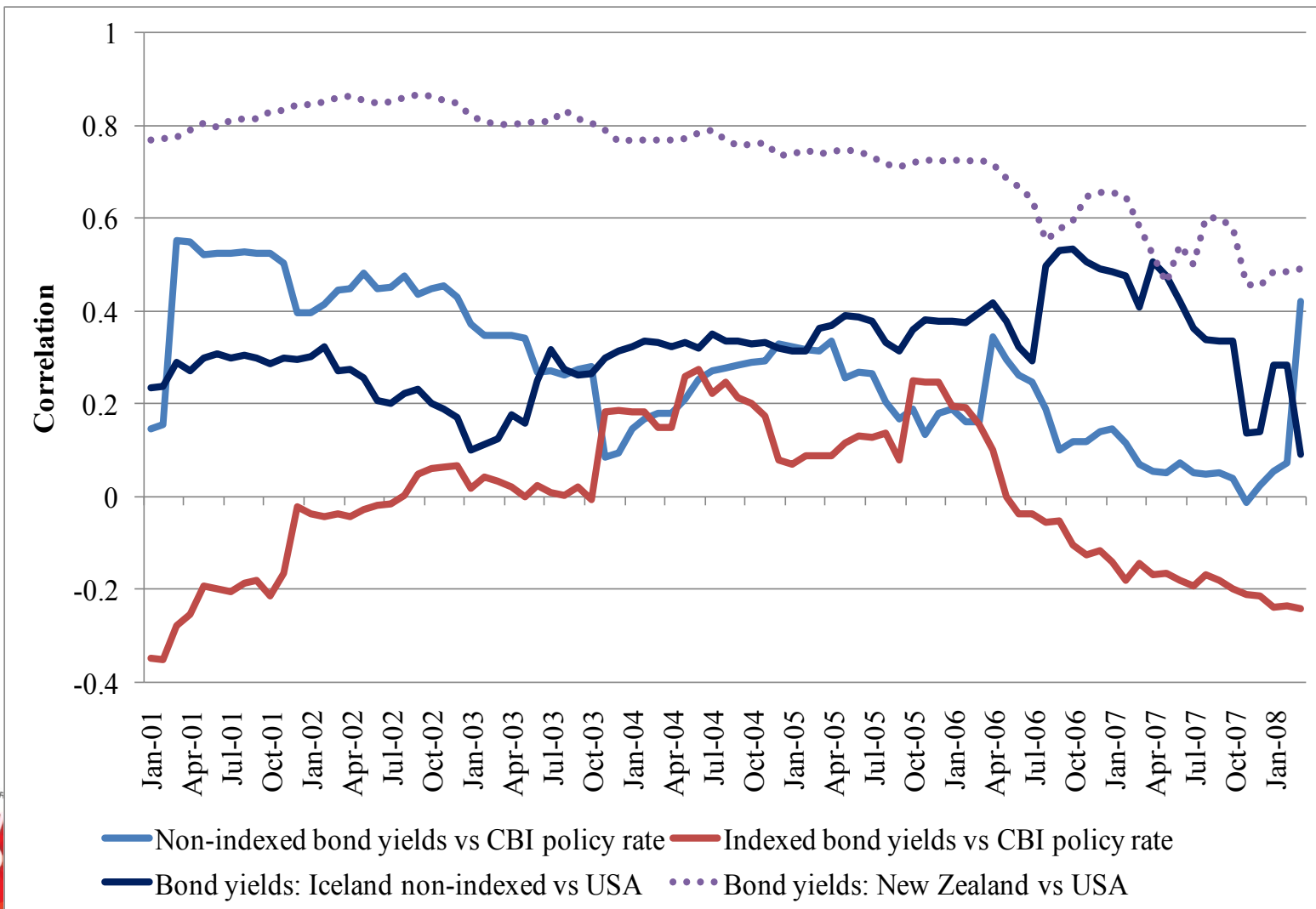


Carry and exchange rate

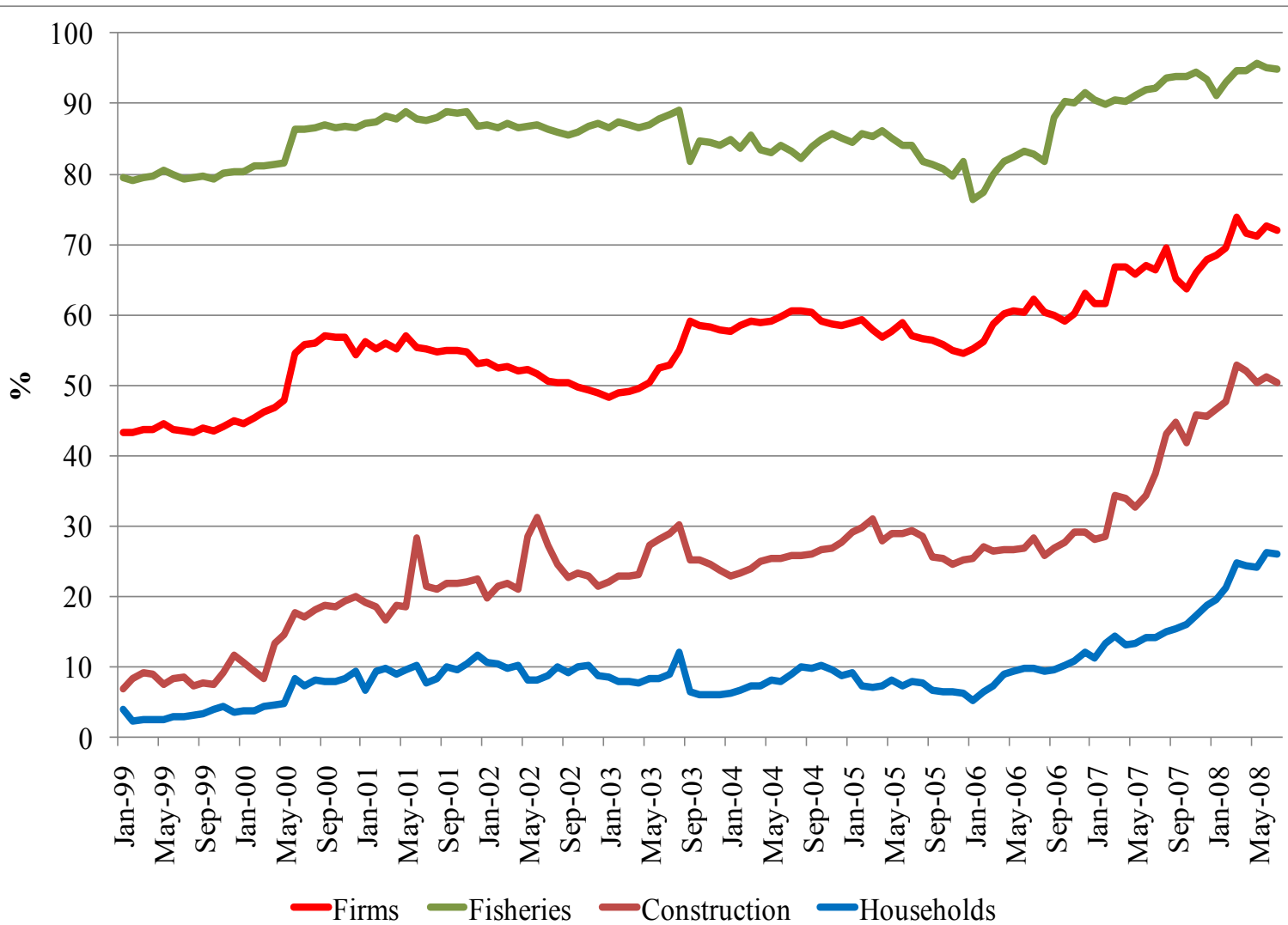


Transmission of interest rates

Moving correlations between monthly changes in yields; three-year lagged window



Share of foreign currency in banks' domestic lending



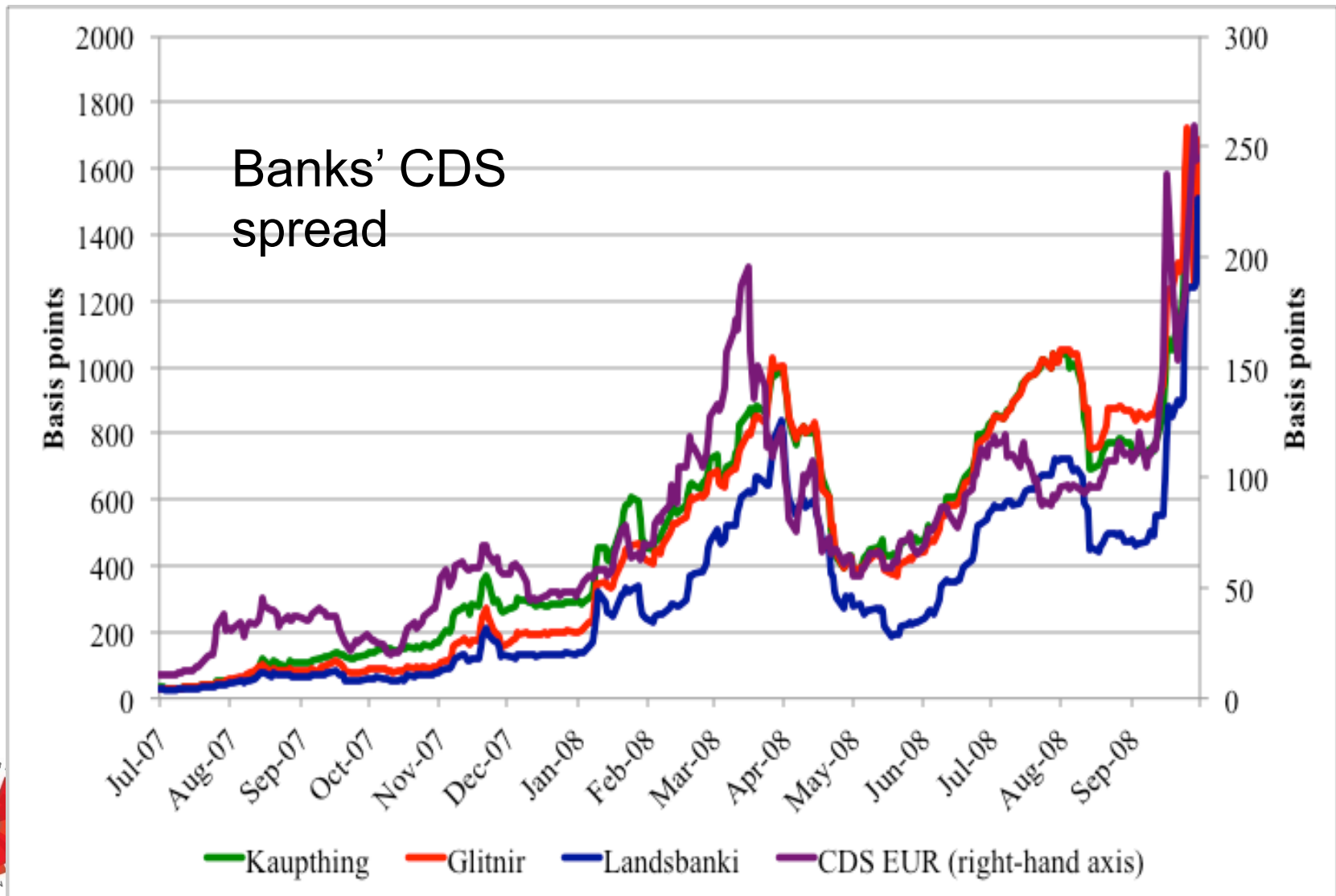
Strong forces at play

- Iceland's financial sector was subject to powerful forces that would have posed problems regardless of the size and behavior of banks
- Low risk aversion and volatility associated with
 - Big cross-border credit flows
 - Rapid domestic credit creation, rising asset prices
 - Monetary policy tightening in response
- Resulting feedback loop sustains prolonged departure from uncovered interest parity → carry trade (Miranda Agrippina and Rey, 2012)
- Rey (2013) argues this can only be countered by macroprudential measures or capital controls
- Iceland had neither and hence, in practice, no monetary policy independence

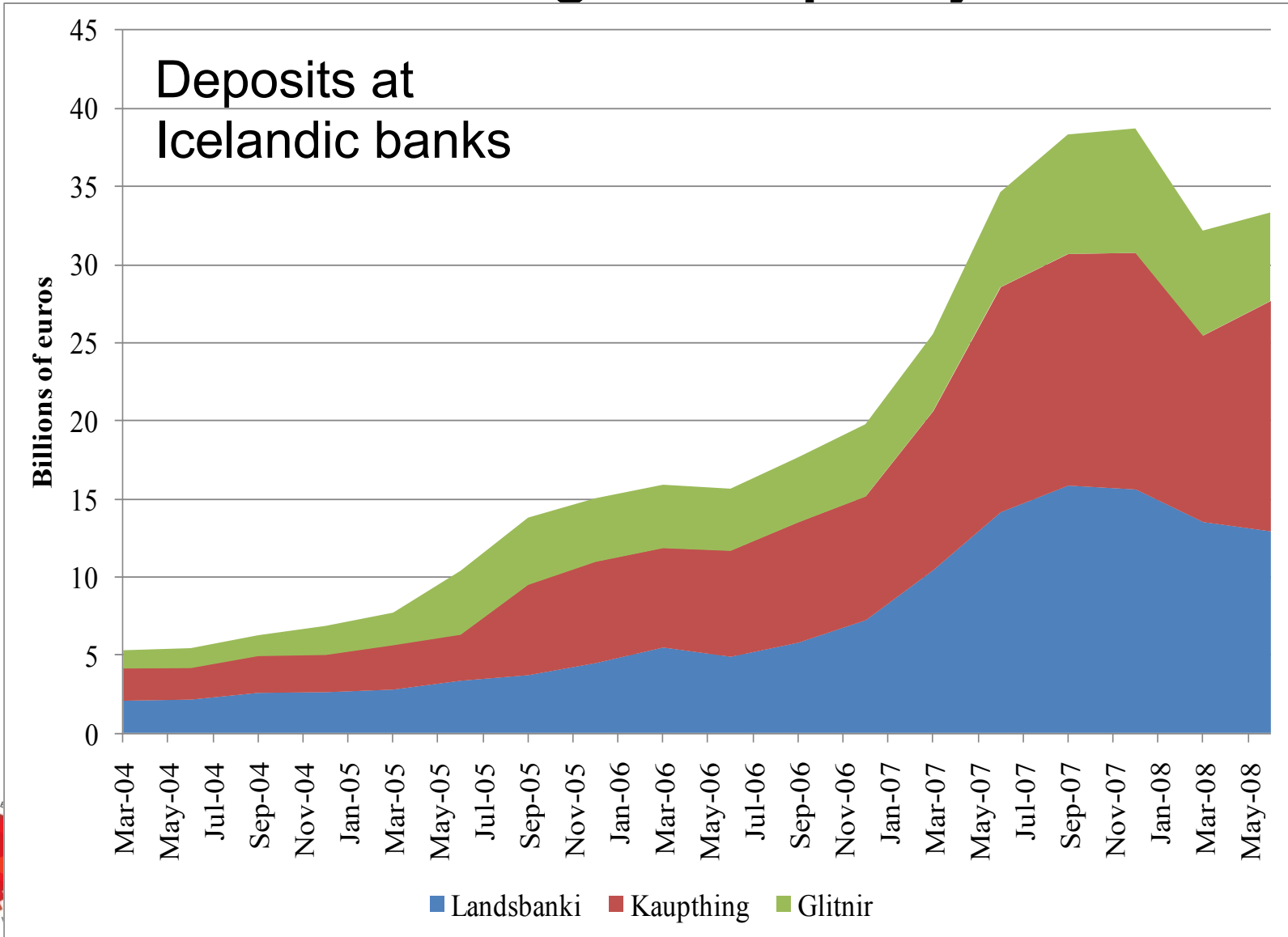
August 2007 – September 2008



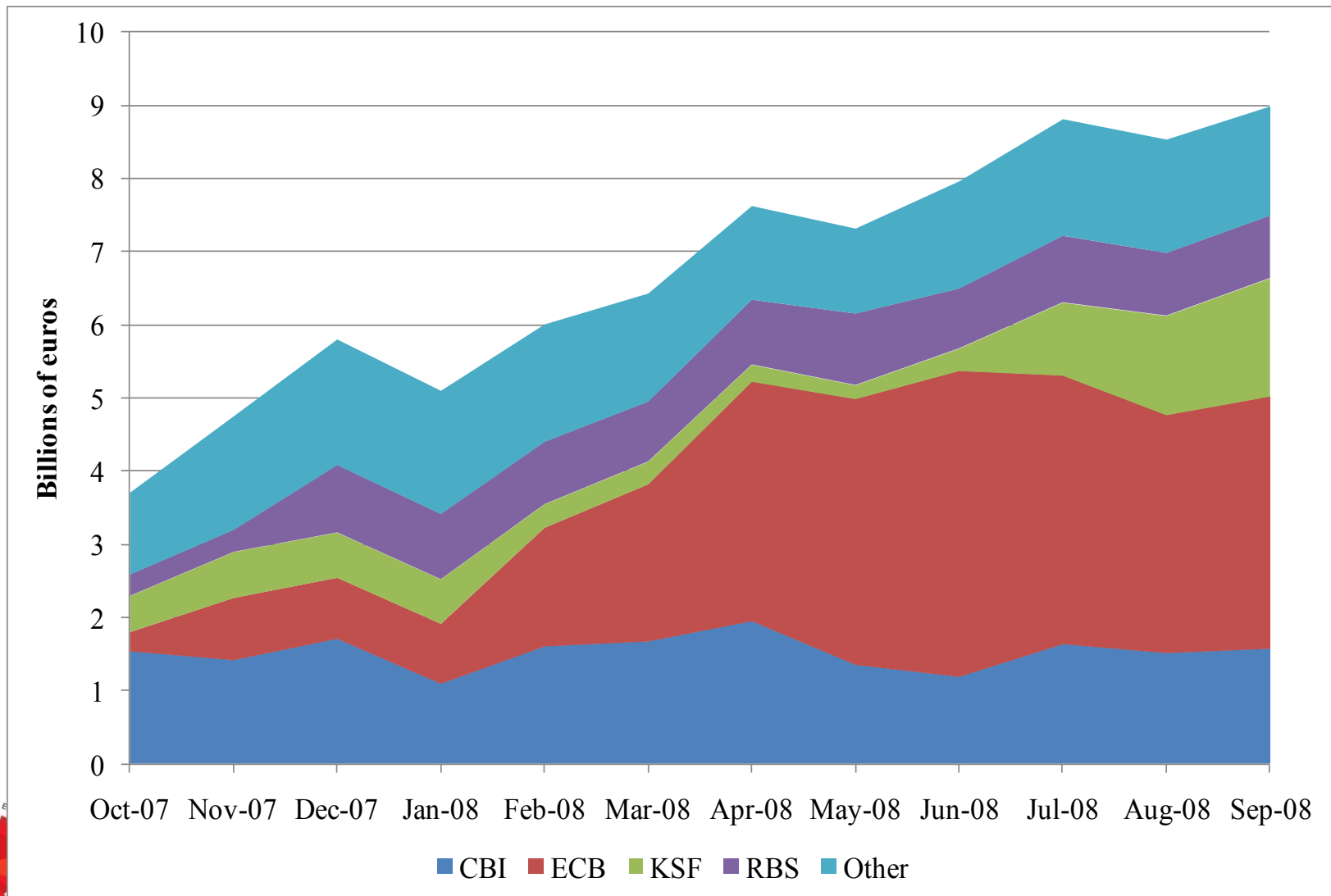
Icelandic banks shut out of long-term capital markets after August 2007



Collected deposits, but that provided no effective cushion against liquidity crisis ...



... then turned to (short-term) collateralised funding



Moral hazard and gambling for resurrection

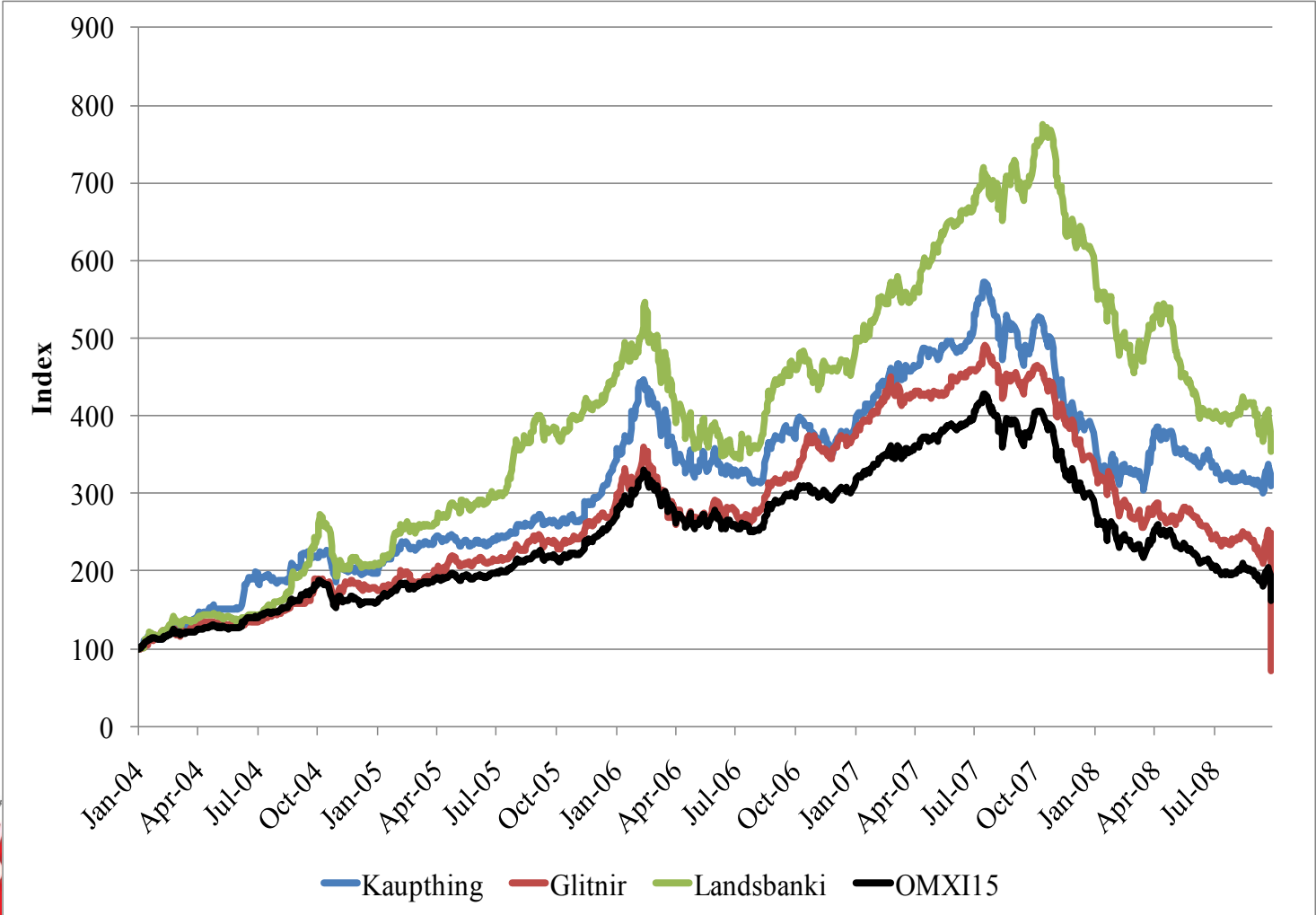
- Consider bank after being hit by negative shock to assets
 - Observed by bank
 - Unobserved by regulator
 - Strong incentives to go on and hide losses, doubling down with risky bets, hoping for resurrection:
 - Limited liability
 - Asymmetric information
 - Positive (even if small) probability of recovery in markets
 - (In a worst case bankers may abandon hope and loot the bank if they have the opportunity, Akerlof et al, 1993)
 - In light of this it is less surprising that apart from the 1st quarter of 2008 the banks did little in the way of deleveraging
 - The parent banks of Kaupthing and Landsbanki expanded vigorously in the 2nd and 3rd quarters of 2008
- Glitnir deleveraged slowly throughout 2008



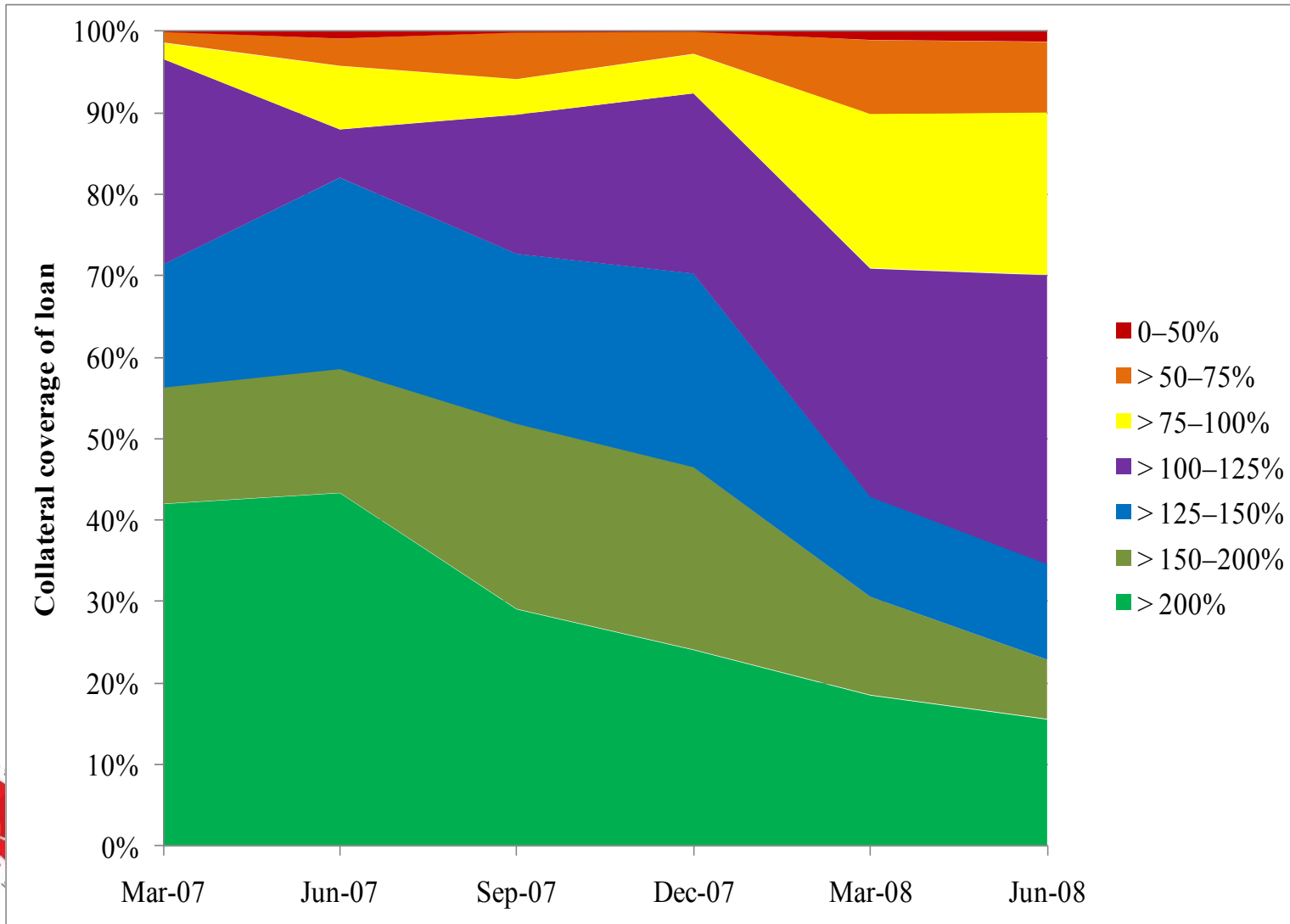
Asset quality at Icelandic banks was severely affected by financial crisis

- At the outset of the crisis probably half of parent banks' lending was to holding companies
- About 60% of shares placed as collateral came from the Icelandic stock market ...
- ... which was dominated by the banks themselves

Share prices on the Icelandic stock exchange



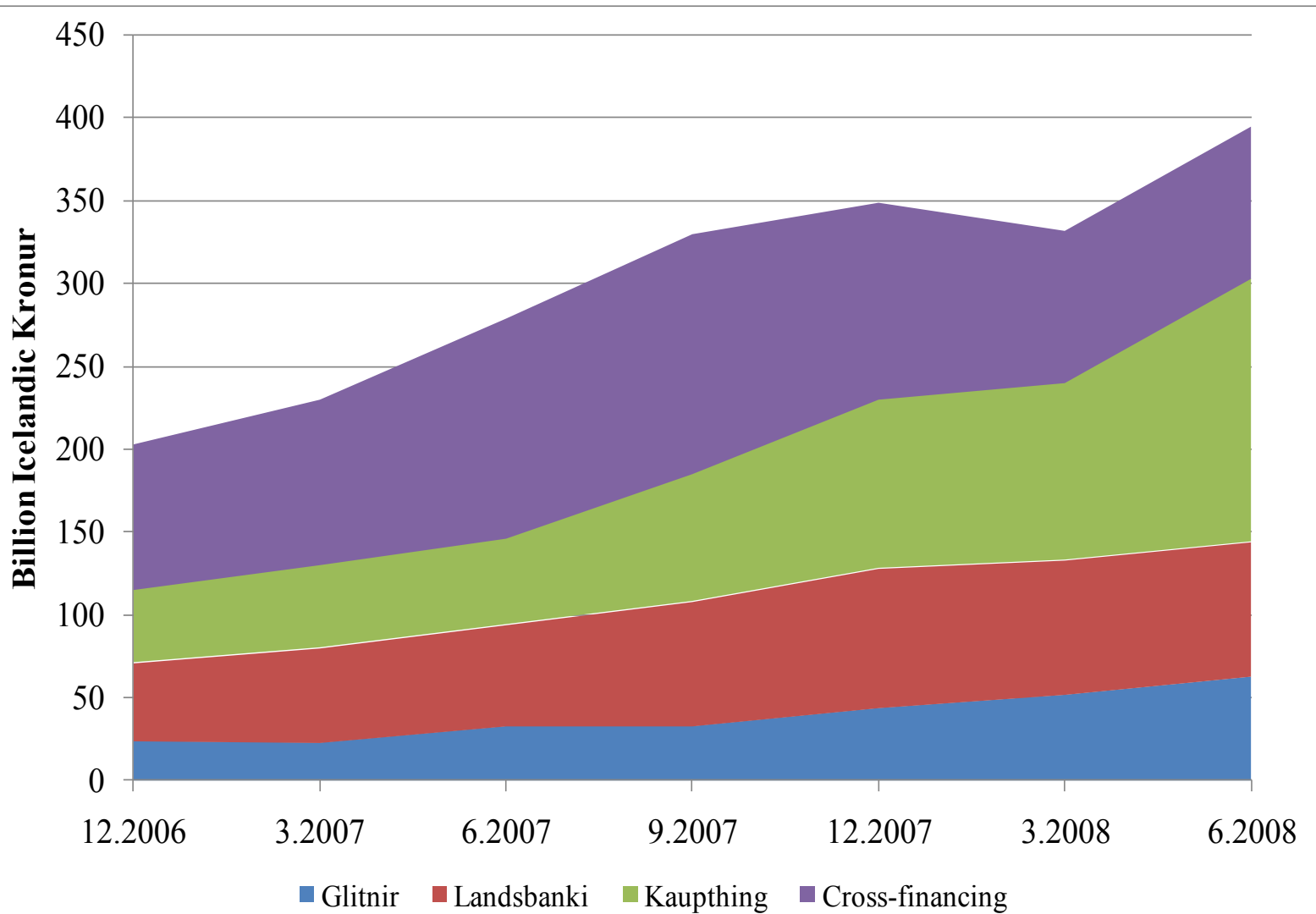
Coverage of lending with shares as collateral



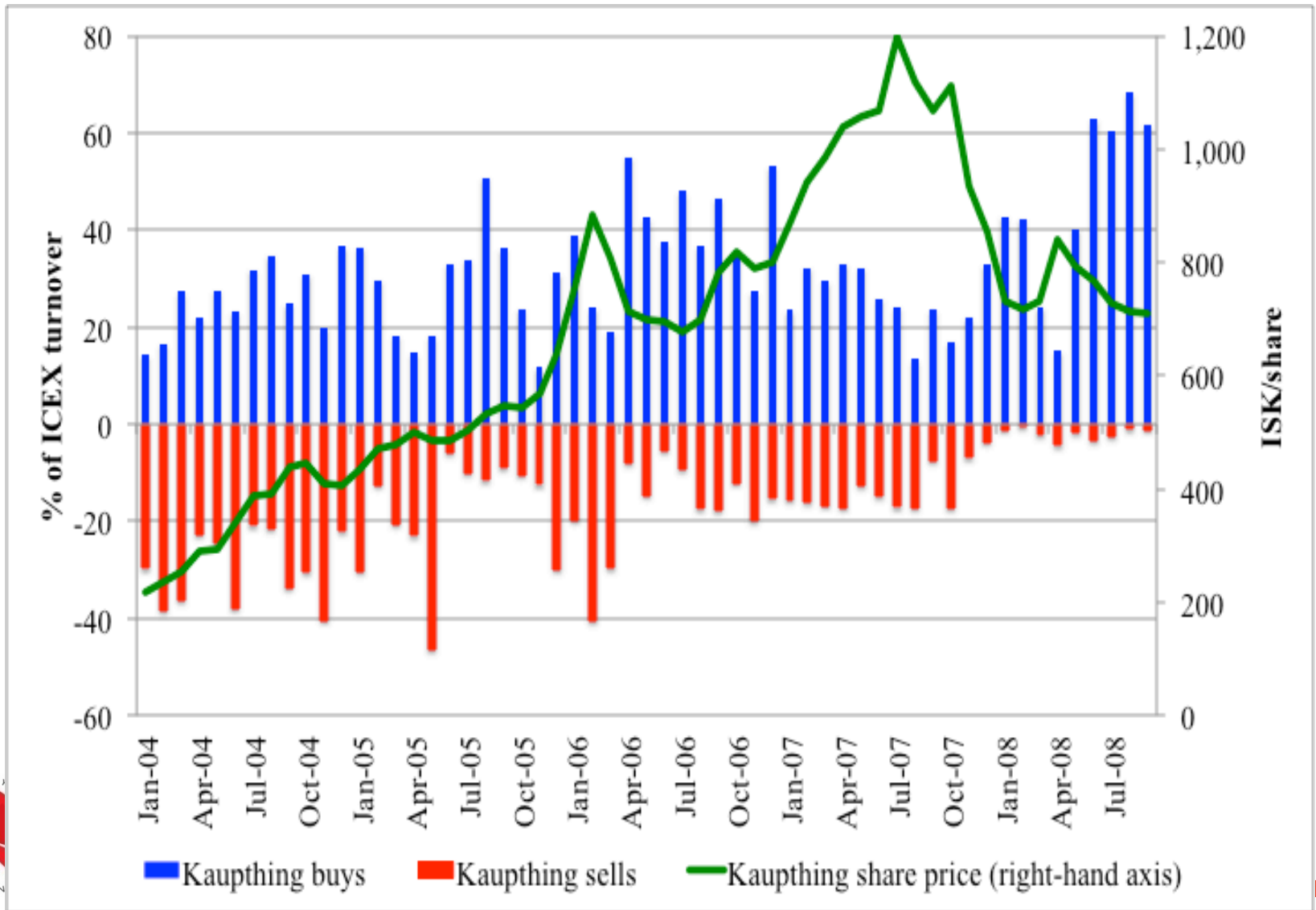
Banks supported their own share price

- The banks each had a strong incentive to support their own share price – and did so by purchases in the stock market
- Accumulated shares were offloaded in private deals outside the stock exchange usually financed by the banks themselves
- Began already in 2005, but intensified greatly in Autumn 2007
- Neither the stock exchange nor the FSA seems to have investigated the extent to which the banks supported their own share prices

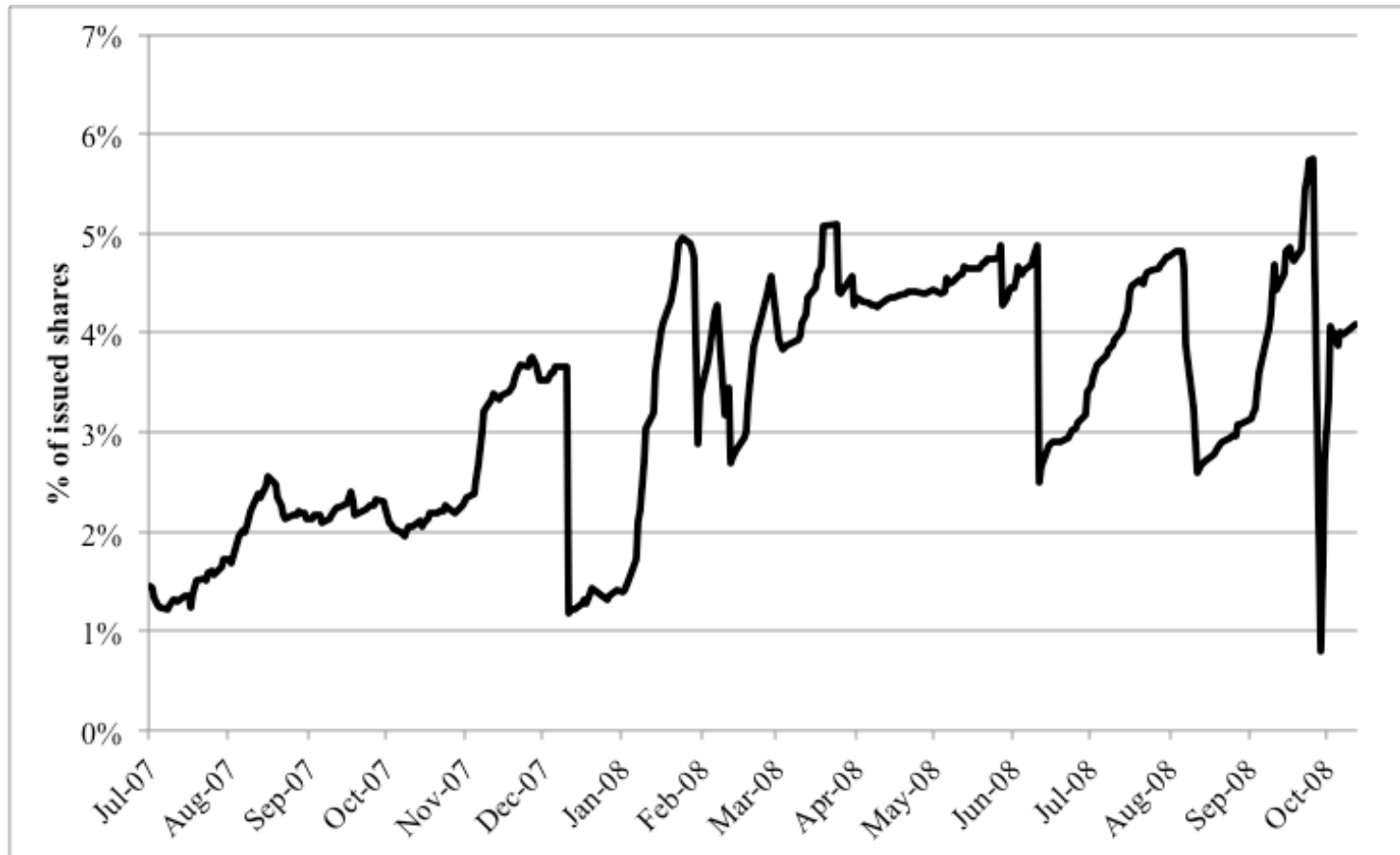
Financing of bank shares



Kaupthing's trading in its own shares



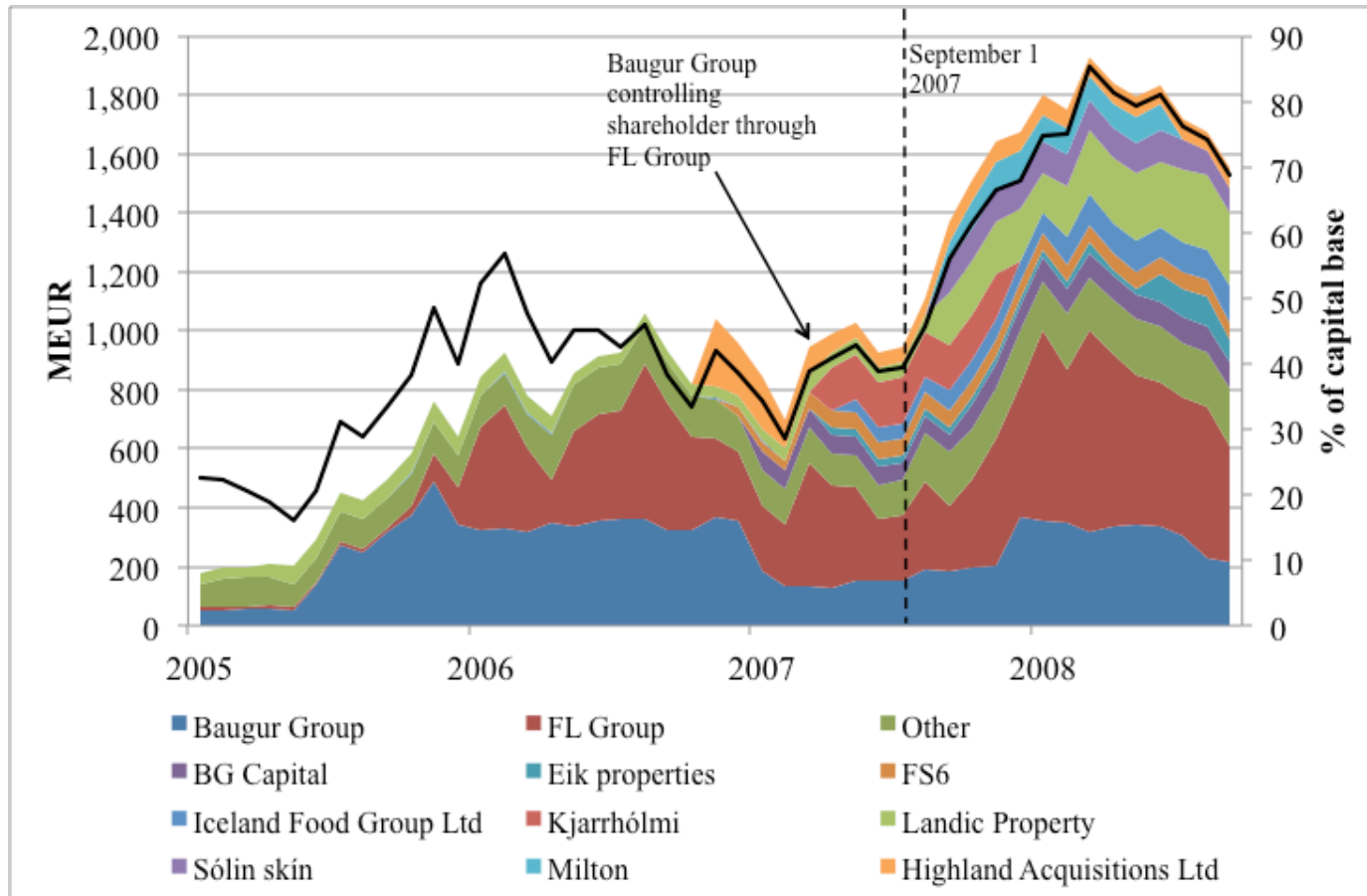
Kaupthing's ownership of own shares



Gambling for resurrection in Iceland

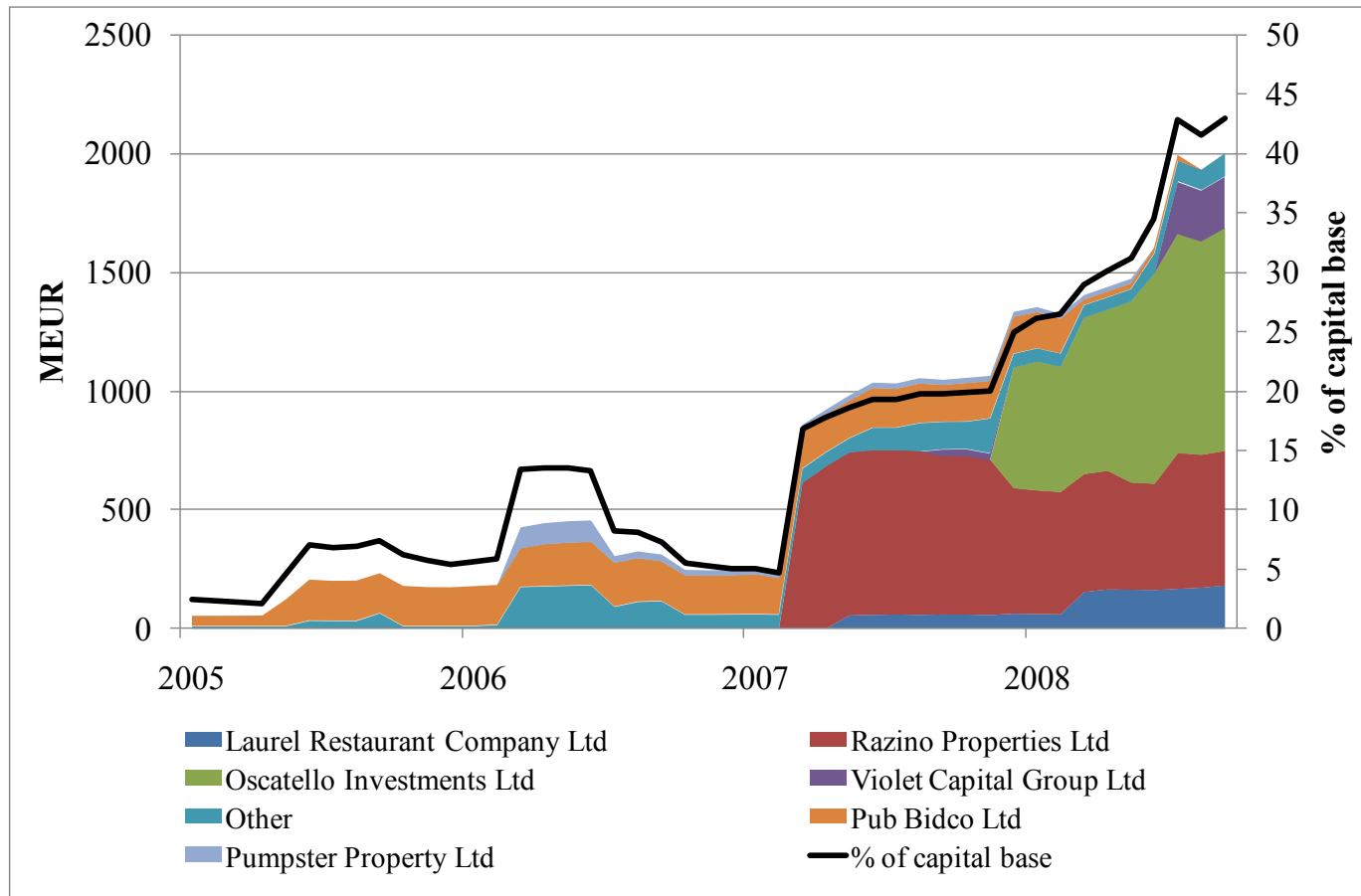
- Gambling motives intensified by double role of controlling shareholders in Icelandic banks – they were big borrowers too
- Lending to owners and loans to support share prices dramatically increased from Fall 2007
- Rather than deleveraging and securing liquidity positions the banks gambled on resurrection
- Expanding balance sheets and refinancing investments of owners and other big borrowers
- All this apparently unseen and certainly unhindered by regulators

Lending of Glitnir Bank to Baugur Group and related parties



A large exposure due to a group of connected parties should not exceed 25% of regulatory capital

Lending of Kaupthing Bank to companies related to Robert Tchenguiz



Concentration of risk

- Baugur is the most egregious example, having borrowed almost 50% of total regulatory capital of the banks at end 2007
- But this was a general phenomenon: controlling owners borrowed from “their” banks in all cases
- And considerable lending from one group of owners to another
- Resulting concentration of risk made system very fragile ...
- ... and increasingly so from autumn 2007 until the crash

Was this legal?

- To some extent the ratios in the figures are a consequence of SIC definition of “related parties”: two parties are related if one owns at least 20% of the other
- FSA did not lay down a precise rule but relied on qualitative EU definition
 - One party has control over another or difficulty of one party leads to difficulty for another
- So in practice the definition of related parties was at discretion of each bank
- The FSA tried to intervene in some cases but was resisted by the banks

How could this happen?

- FSA was aware of the risks of concentrated holding and claimed to monitor large exposures closely
- CBI – responsible for financial stability – was aware of potential systemic risk but had limited understanding of how it had materialised
- There was insufficient cooperation between FSA and CBI
- CBI did not have access to data on individual borrowers, but should have been able to do a similar systemic analysis as SIC (2010) presents
- *Together, the FSA and the CBI had legal powers to access, and the means to analyse, the information that the SIC brought forward in March 2010. But they did not*

Conclusion



Emergency legislation limited damage

- Ring-fenced domestic assets and liabilities in new banks and gave deposits and deposit insurance priority status
- Bailing out of banks largely avoided – mainly due to lack of resources
- So contagion from banks' failure to sovereign debt was limited
- But the cost was substantial
 - Net direct fiscal costs more than 20% of GDP
 - Gross public debt at 125% of GDP

Earlier intervention?

- Weaknesses seriously exacerbated over last year of banks' operations
- Could damage have been limited by earlier action?
 - Cf. offer from Bank of England governor April 2008 to help reducing the size of the banking system
- All analysts outside the banks – including at FSA and CBI – believed the banks were solvent
 - Last FSA stress test confirming this in August 2008
- Extremely difficult to enforce direct deleveraging by “fire sales”
- But prudential regulation could have limited loan expansion at banks during 2nd and 3rd quarters of 2008

Aftermath

- Iceland entered into a programme with the IMF, concluded in August 2011
- “Heterodox” policies (Krugman 2011)
 - Capital controls
 - “Repudiation” of debt – a consequence of Emergency Legislation, implicitly supported by IMF
- Adjustment has been successful in many respects
- But important problems remain unsolved
- Lifting capital controls and resolving old banks is a major challenge
 - Baldursson and Portes, *Capital Markets Law Journal*, 2013

Lesson: be more critical of information presented by banks

- Regulators and others – including ourselves – put too much faith in the banks' annual and quarterly reports which presented profitable, solvent and liquid banks until the very end.
- The SIC report made public unprecedented information on what went on behind the scenes at the banks, within regulatory institutions, and at the highest level of government.
- This may distort the picture somewhat when it comes to a comparison of Iceland and other countries – we do not (yet) have comparable information for the USA, UK, Ireland, Spain, Greece, or Cyprus

Policy lessons (1)

- Adequate information and disclosure are essential to avoid moral hazard and maintain a healthy financial sector.
- Conventional criteria for assessing the health of banks (*e.g.*, CARs and stress tests) may be seriously misleading.
- The bigger the banking system relative to the economy, the more important are effective supervision and regulation, as well as insuring that the lender of last resort is capable of filling that role.
- Supervision and regulation may be ineffective even with apparently adequate resources and an adequate regulatory framework, if the authorities are unwilling to use their powers to enforce disclosure. Again, information is key.

Policy lessons (2)

- Liquidity is ephemeral; even legally committed funding may vanish in a crisis. Regulators need detailed information on, for example, loan repayment accelerations that would be triggered by covenants dependent on credit ratings, potential margin calls dependent on asset prices, etc.
- It is impossible to assess solvency in a crisis.
- Bankers will gamble for resurrection. Again, the only counterweight is good supervision and regulation based on adequate information.
- International cooperation to safeguard the interests of depositors and taxpayers would be more effective than unilateral actions.

Policy lessons (3)

- In Iceland, serious macroeconomic imbalances (partly policy-induced) interacted in a destabilising manner with domestic financial sector weakness, domestic lending in foreign currency, and the carry trade – all seriously exacerbated by the global financial crisis.
- There is a strong case for banning foreign currency borrowing by households and for restricting unhedged foreign currency borrowing by non-financial firms.
- More broadly, macroprudential measures are essential in an economy open to capital flows.