

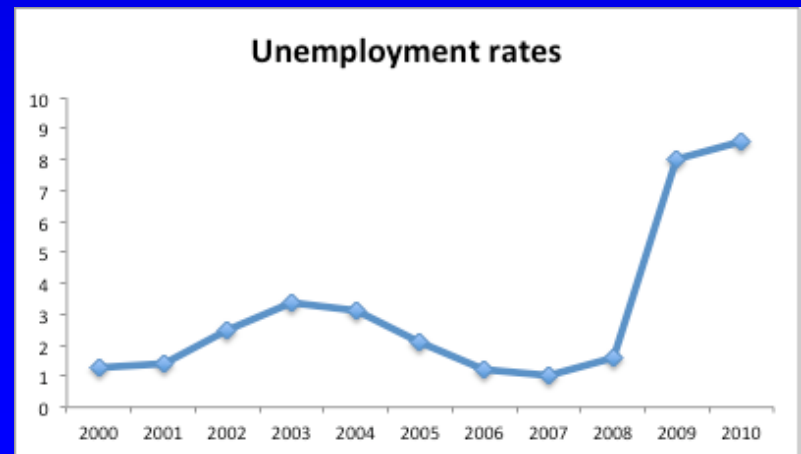
Gambling in the shadows of a national  
economic crisis: Results from a follow-up  
study

Daníel Þór Ólason,  
Tobias Hayer, Tim Brosowski & Gerhard Meyer

# Total collapse in October 2008

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- The Icelandic stock market was almost wiped out
- The collapse ranks as third biggest bankruptcies in USA
- Price levels went up by almost 30% on average
- House holds debts, indexed by inflation leading to a substantial increases in debts
- Governmental debts rose from 27% of GDP to 120%.



# Method

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- A representative sample of 5,000 18-70 year old Icelanders were drawn randomly from the National Registry in 2007.
- Information for gambling and problem gambling was collected by telephone and response rate was 63.3%.
- About 2,707 (90.9%) gave verbal agreement for participation in a follow-up study.
- Requirements from the Data Protection Authority led to further collection of written informed consents.
- In total, 1,780 (59%) sent in written consent and 1,531 (51%) participated in the follow-study in 2011.

# Completers and non-completers

	Non-completers (n = 1,473)	Completers (n = 1,531)	Total sample (n = 3,004)
<b>Gender***</b>			
Males	51.4	44.9	48.1
Females	48.6	55.1	51.9
<b>Age groups***</b>			
18-25	21.0	10.1	15.5
26-40	32.2	30.6	31.4
41-55	28.6	36.8	32.8
56-70	18.1	22.5	20.3
<b>Education***</b>			
Primary	29.4	20.9	25.0
Secondary	43.5	40.4	41.9
University	27.2	38.7	33.2

# Instruments

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- Participants were asked about their participation in 12 different types of gambling behavior a T1 and T2.
- Problem Gambling Severity Index (Ferris and Wynne, 2001).
- To examine the potential influence of the economical collapse participants answered two proxy questions.
  1. How easy or difficult has it been for you and/or your family to make ends meet financially every month for the past 12 months?
  2. In general, how is your standard of living today when compared to how it was before the collapse of the banks in 2008?

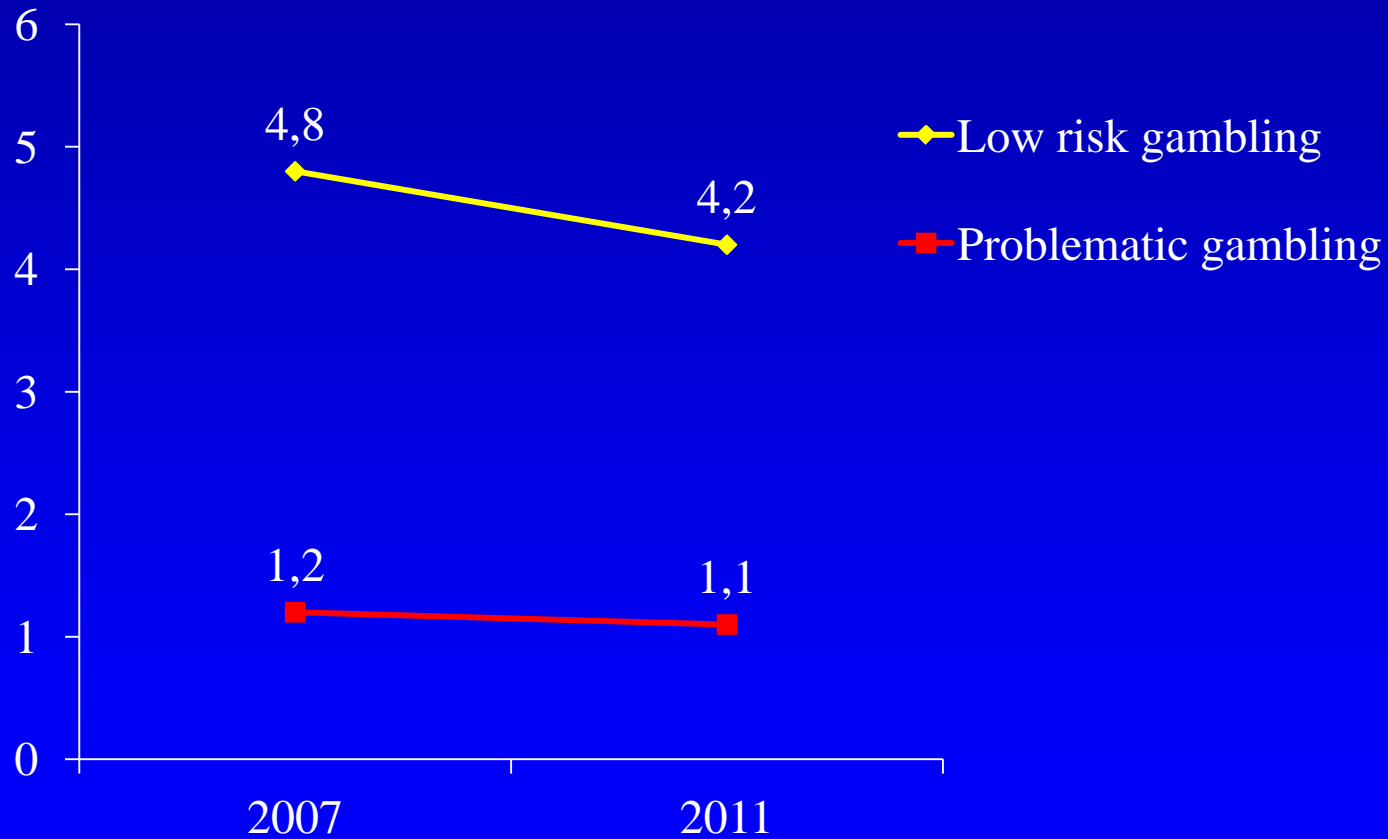
# Total gambling trends over time

	2007 %	2011 %	McNemar Chi-square	% change
All participants	68.8	79.5	84.01***	+10.7
Gender				
Males	69.8	79.4	31.53***	+9.6
Females	67.9	79.6	51.69***	+11.7
Age groups				
18-25	59.0	67.9	3.52	+8.9
26-40	68.6	83.8	45.79***	+15.2
41-55	68.8	78.8	27.01***	+10.0
56-70	73.4	80.1	9.87**	+6.7
Education				
Primary	74.1	84.3	15.19***	+10.2
Secondary	71.5	82.3	34.21***	+10.8
University	64.1	75.4	36.01***	+11.3

# Total gambling figures by types of gambling

	2007 %	2011 %	McNemar chi square	% change
Lotto	49.7	65.7	154.64***	+16.0
Bingo	4.8	10.8	42.86***	+6.0
Monthly lottery	33.8	37.2	12.37***	+3.4
Scratch tickets	16.3	19.6	8.12**	+3.3
EGMs	7.3	4.8	13.93***	-2.5
Poker	5.1	5.6	0.39	+0.6
Football pools	6.3	6.9	0.86	+0.6
Sport betting	3.6	3.1	0.73	-0.5
Games of skill	1.6	1.6	0.0	0.0
Live sports betting	0.5	0.2	0.34#	-0.3
Illegal casinos	0.3	0.3	1.00#	0.0
Internet gambling	1.1	1.1	1.00#	0.0

# Problematic gambling groups





# Consistency of gambling groups over time

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Gambling groups in 2007	Gambling groups in 2011			
	Non - gamblers	Non-problem gamblers	Low risk gamblers	Problematic gamblers
Non-gamblers	<b>238 (49.8)</b>	232 (48.5)	6 (1.3)	2 (0.4)
Non-problem gamblers	68 (7.1)	<b>851 (88.6)</b>	34 (3.5)	7 (0.7)
Low risk gamblers	7 (9.5)	42 (56.8)	<b>22 (29.7)</b>	3 (4.1)
Problematic gamblers	1 (5.6)	9 (50)	3 (16.7)	<b>5 (27.8)</b>

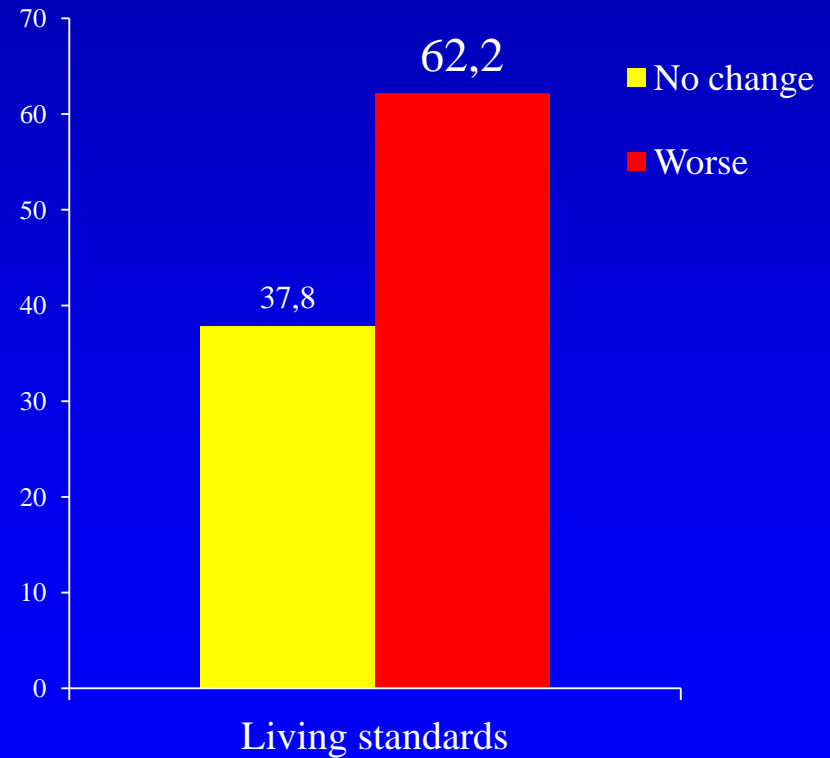
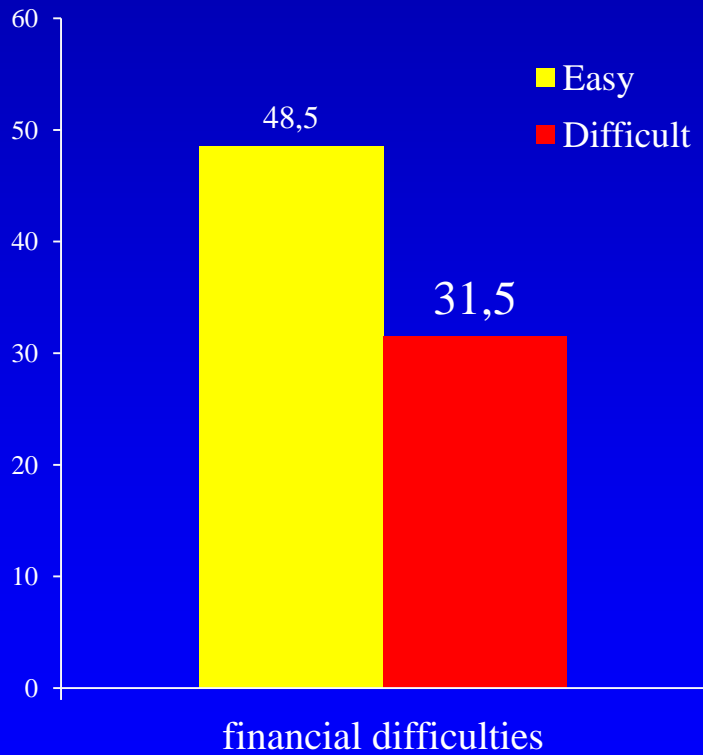
# Gambling and the economic collapse

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1. Testing for association between the two proxies and demographics.
2. A series of simple binary logistic regressions were performed to test the association between the two proxies and gambling and problem gambling.
3. Subsequently we tested the significant effects obtained in step 2 with a more constrained model controlling simultaneously for gender, age and education.
4. Finally, the effects were again tested adding past gambling behavior (2007) as control along with gender, age and education.

# Proxies of the economical crisis

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# Step 1. Background variables

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- Females (44.6%) were more likely to report financial difficulties than males (32.6%) ( $p < 0.001$ ).
- Those with primary education (53%) were more likely to report financial difficulties than those with secondary (38.7%) or University (34%) education ( $p < 0.001$ ).
- Those in the age group 44-58 (71%) were more likely to report worse living standards than other age groups (43 – 61%) ( $p < 0.001$ ).

# Financial difficulties; Odds for Step 2-4

	Model 1. simple regressions	Model 2. adjusted for demogr.	Model 3. Adjusted for demogr. + past behavior
Total gambling	1.68**		
Lotto	1.77**		
Scratch tickets	1.55**		
Poker	0.78ns		
Football pools	0.94ns		
Sport betting	1.01ns		
Monthly lotteries	1.01ns		
EGMs	1.04ns		
Games of skill	0.72ns		
Bingo	0.96ns		
Internet gambling	0.89ns		
Problematic gambling	1.56ns		

# Living standards; Odds for Step 2-4

	Model 1. simple regressions	Model 2. adjusted for demogr.	Model 3. Adjusted for demogr. + past behavior
Total gambling	1.51**		
Lotto	1.43**		
Scratch tickets	1.24ns		
Poker	0.55**		
Football pools	0.87ns		
Sport betting	0.71ns		
Monthly lotteries	1.04ns		
EGMs	0.70ns		
Games of skill	0.91ns		
Bingo	0.91ns		
Internet gambling	0.54ns		
Problematic gambling	0.42ns		

# Conclusions

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- Gambling participation has increased in Iceland over a 3.5 year period.
  - This increase is qualified by increases in “low risk” types of gambling.
  - Notably, problem gambling did not change over the same period.
- Potential effects of the national economic crisis?
  - The fully constrained model suggested that both financial difficulties and negative changes in living standards influence gambling in general, specifically in lotto and scratch card gambling.