

**Sagnfræðingar eru frá  
Mars og hagfræðingar eru  
frá Venus**

Hrunið frá ólíkum  
sjónarhólum

BHM, 28. okt. 2009

Gudni Th. Jóhannesson, gj@ru.is



HÁSKÓLINN Í REYKJAVÍK  
REYKJAVÍK UNIVERSITY

# Nokkrar spurningar

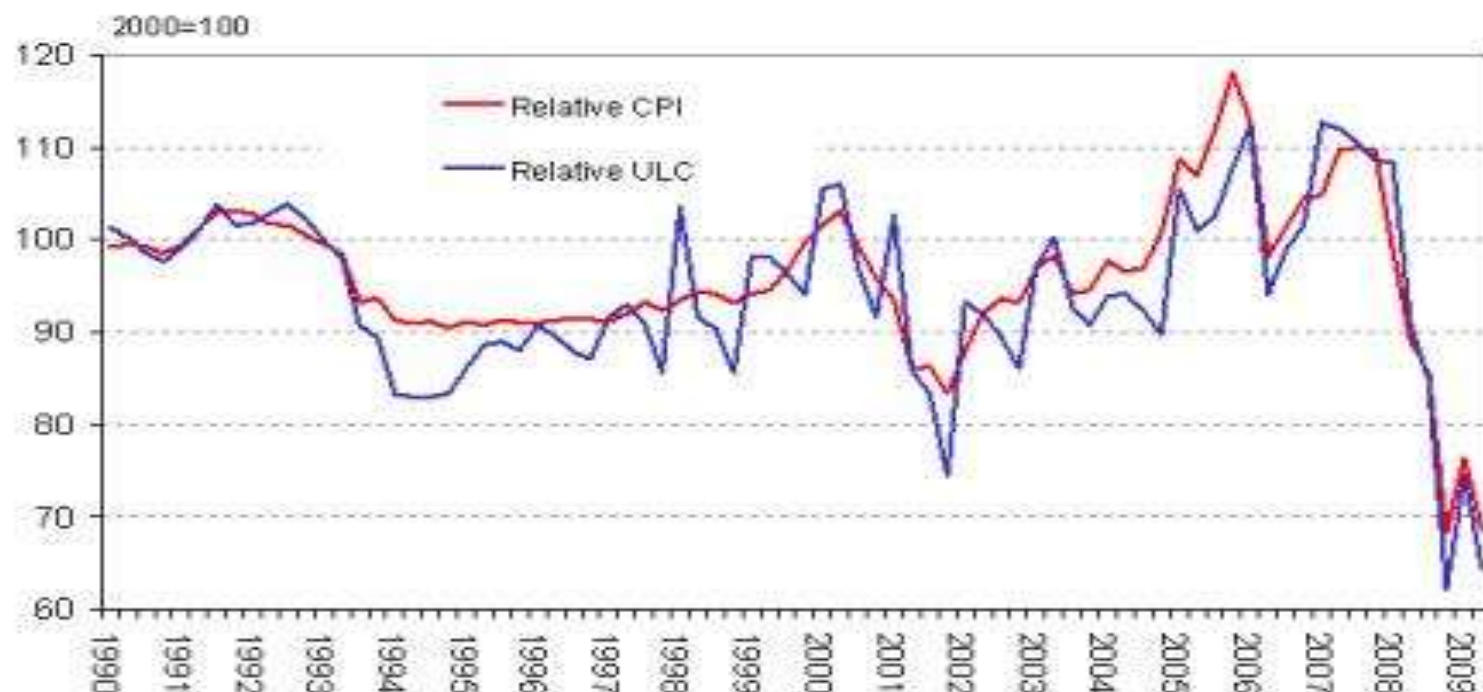
- Hvað gerðist?
- Hverjum að kenna?
- Hvað vitum við?
- Sagnfræðingar gegn hagfræðingum?



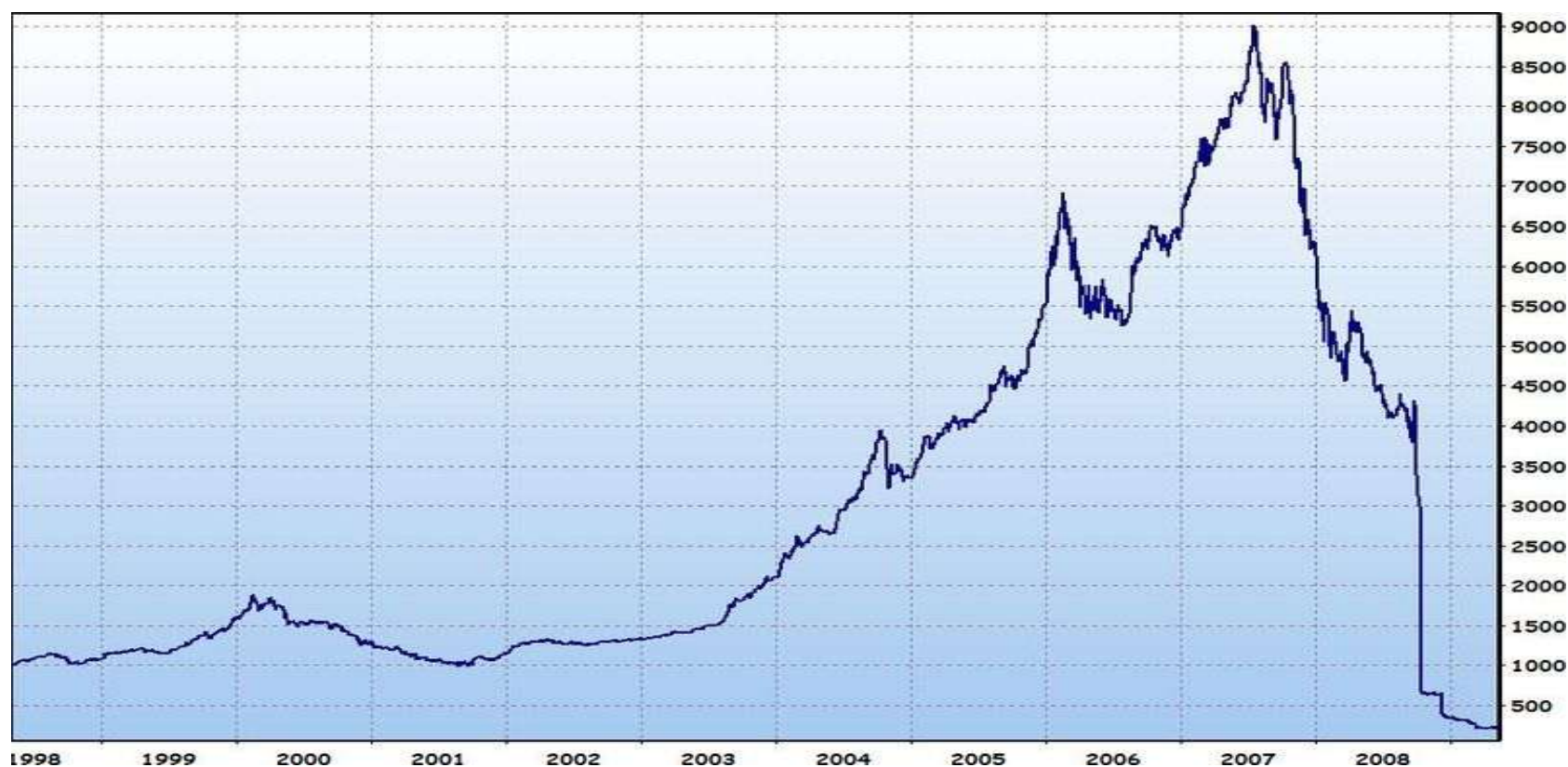
# Hvað gerðist? 1) Gjaldeyriskreppa

## Quarterly real effective exchange rate

1990/Q1 - 2009/Q1



# Hvað gerðist? 2) Verðbréfabóla

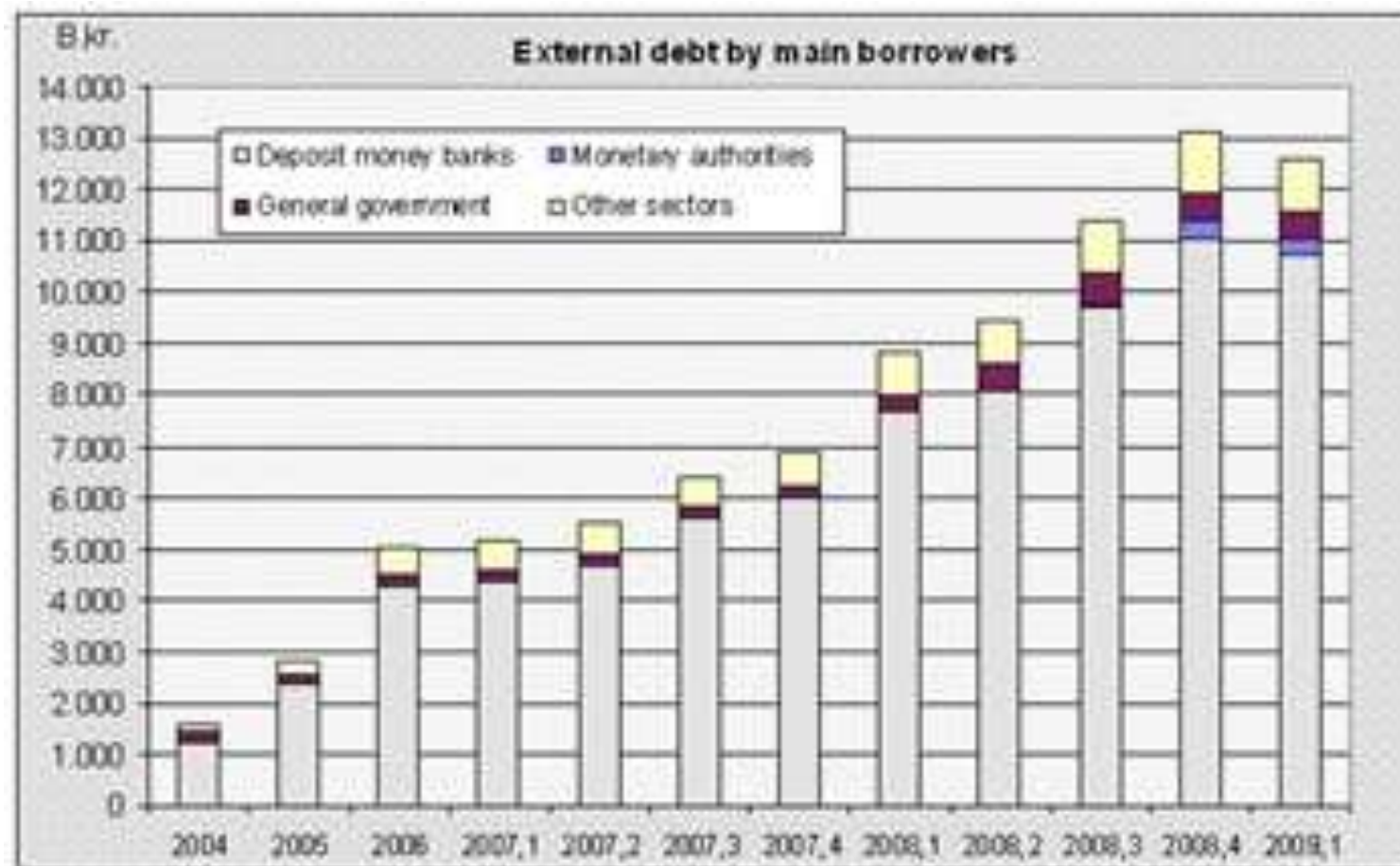


# Hvað gerðist? 3) Fasteignabóla

Vísitala í búðarverðis  
Höfuðborgarsvæðið



# Hvað gerðist? 4) Ofvöxtur banka, að láni





# Hvað gerðist? 4) Ofvöxtur banka, að láni

- „Sko, sjáðu, þegar ég var lítill voru þrjú hundruð bátar við höfnina en þrír að vinna í bankanum. Nú eru þrír bátar við höfnina en þrjú hundruð að vinna í bankanum.“

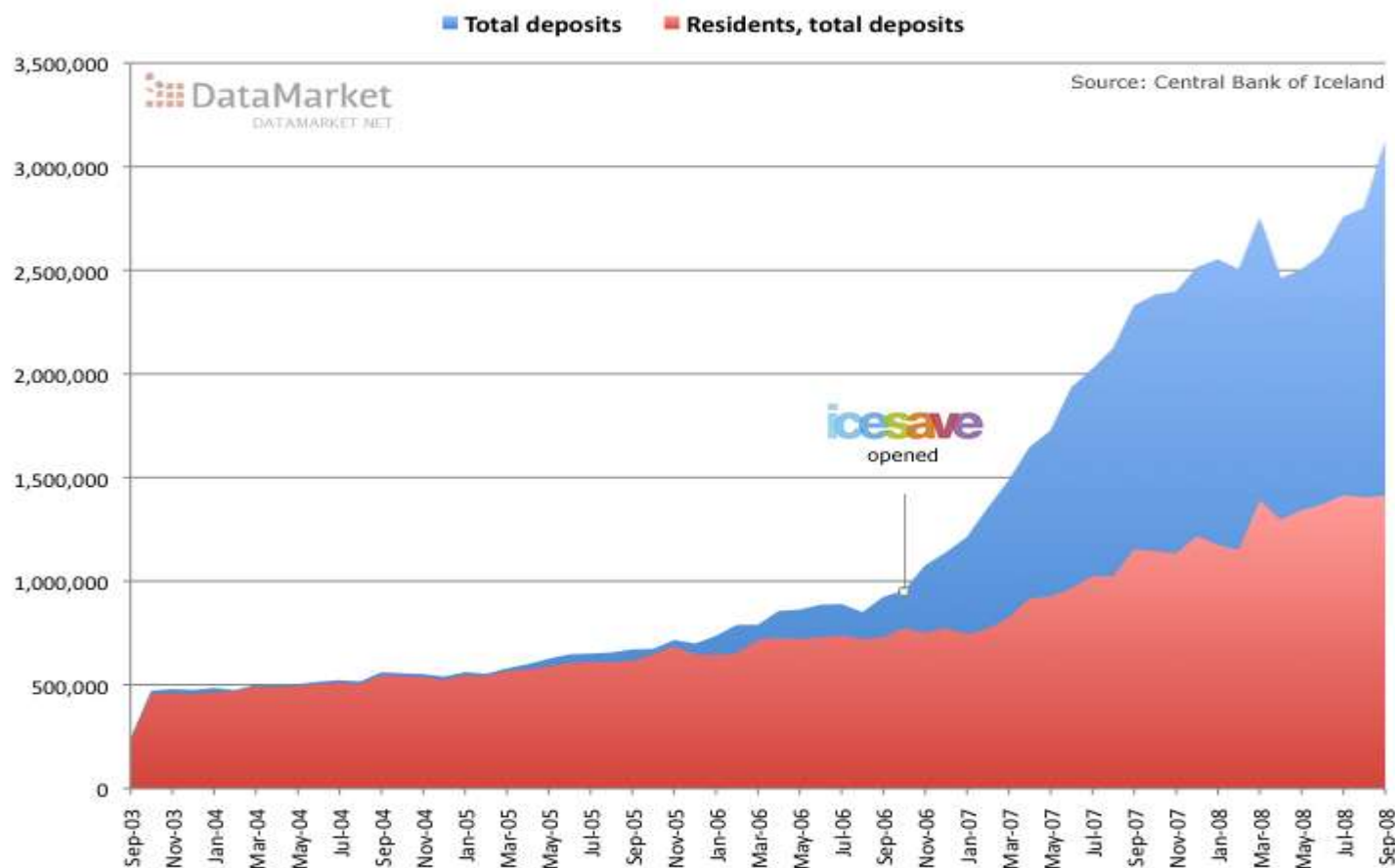


# Hvað gerðist? 5) Vantraust



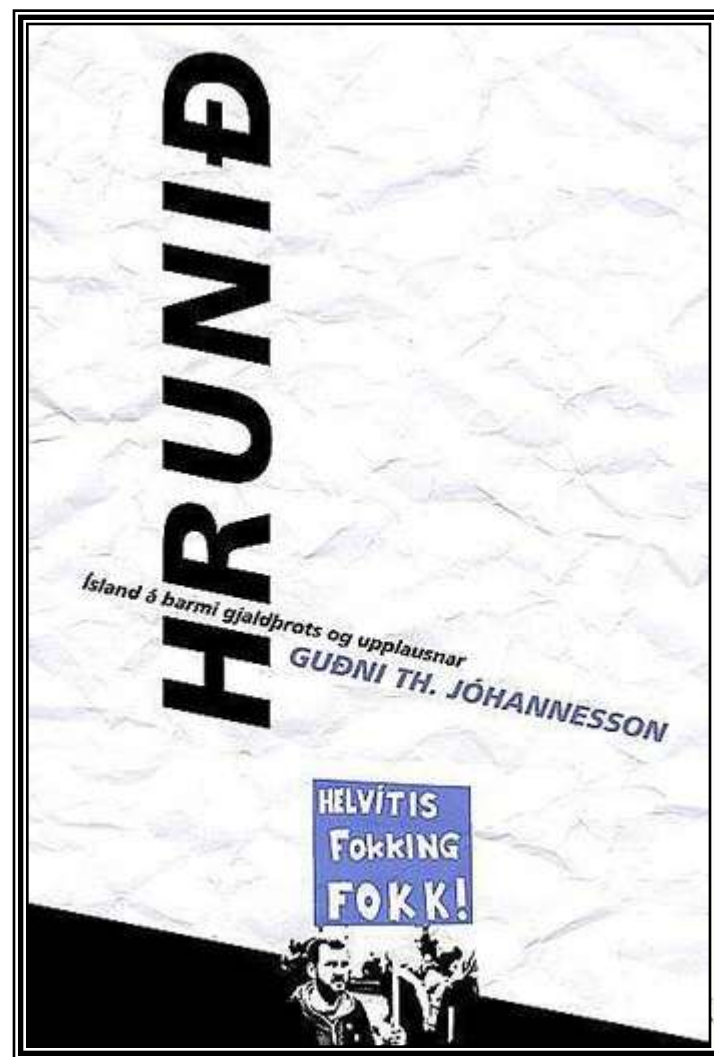


# Hvað gerðist? 6) Innlánasöfnun banka ytra



# Hvað gerðist haustið 2008?

- 15.-25. sept. **Óveðursský.**
- 25.-29. sept. **Brotsjór.**
- 29. sept.-3. okt. **Rekald.**
- 3.-6. okt. **Skipbrot.**
- 6.-9. okt. **Tundurskeyti.**
- 9. okt.-19. nóv. **S.O.S.**



# 15.-25. september. Óveðursský

- „Ég hygg nú að við förum að sjá til lands á næstu mánuðum [en] ég ætla ekki að spá, okkar sérfræðingar eru betri í því.“  
Halldór J. Kristjánsson,  
bankastjóri Landsbanka Íslands, á málpingi bankans,  
„Öfundsverðar langtímahorfur“, 23.  
september 2008



# 25-29 september. Brotsjór

- *„Þetta er stærsta bankarán Íslandssögunnar og augljóslega hluti af stærri átökum sem hafa ekki farið fram hjá neinum.“*
  - *Jón Ásgeir Jóhannesson, 30. sept. 2008.*
- *„The end is near.“*
  - *Yfirmaður hjá Landsbankanum, lok sept. 2008.*



29. sept – 3. okt. Rekald



- *„Íslenska fjármálakerfið er komið í greiðsluþrot, við getum ekki staðið við ... skuldbindingar okkar í erlendri mynt og það er meira að segja ekki hægt að útvega gjaldeyri núna til þess að flytja inn eðlilegar vörur.“  
Gylfi Magnússon hagfræðingur, 3. okt. 2008*



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## 3.-6. okt. 2008. Skipbrot

- *"„Sú hættta er raunveruleg, góðir landsmenn, að íslenska þjóðarbúið myndi, ef allt færi á versta veg, sogast með bönkunum inn í brimrótið og afleiðingin yrði þjóðargjaldþrot. ... Guð blessi Ísland."*
  - *Geir H. Haarde, 6. okt. 2008.*



6.9. okt. 2008. Tundurskeyti



- *"The Icelandic government, believe it or not, have told me yesterday they have no intention of honouring their obligations here".*
  - *Alistair Darling fjármálaráðherra, 8. okt. 2008.*
- *„Brown and Darling, PLEASE PLEASE HELP US."*
  - *Jason í Wokingham, 8. okt. 2008.*



## 9. október-19. nóvember. Neyðarkall.

- „Það er ekki veikleikamerki að biðja um hjálp, það er veikleikamerki að biðja ekki um hjálp. Þetta er eins og ef börnin manns verða fyrir slysi og maður hringir ekki til læknis af því að maður er of stoltur, þú veist maður gerir ekki svoleiðis.“  
Gylfi Zoëga, prófessor í hagfræði, 10. október 2008



*Sic transit gloria mundi...*



# Hverju og hverjum að kenna?

- Alþjóðakreppan, kapítalismi, gráðugir banka- og businessmenn, krosseignatengsl, lögbrot og undanskot, kynslóðaskipti í viðskiptalífinu, gallað regluverk ESB, íslenskt dramb og stærilæti, sinnuleysi eftirlitsstofnana, lítill og ónýtur gjaldmiðill, engir vinir í raun í útlöndum, eyðslugleði ríkis, sveitarfélaga og einstaklinga





# Maður líttu þér nær!?

- Háskólasamfélagið
  - Lítið aðhald
  - “Klappstýrur bankanna og viðskiptalífsins”
  - Keyptar skýrslur og niðurstöður um sterka stöðu bankanna og viðskiptalífsins



# Það voru hagfræðingarnir!

NATURE | Vol 455 | 30 October 2008

OPINION

## ESSAY

### Economics needs a scientific revolution

Financial engineers have put too much faith in untested axioms and faulty models, says **Jean-Philippe Bouchaud**. To prevent economic havoc, that needs to change.

Compared with physics, it seems fair to say that the quantitative success of the economic sciences has been disappointing. Rockets fly to the Moon; energy is extracted from minute changes of atomic mass. What is the flagship achievement of economics? Only its recurrent inability to predict and avert crises, including the current worldwide credit crunch.

Why is this so? Of course, to paraphrase Isaac Newton, modelling the madness of people is more difficult than modelling the motion of planets. But statistical regularities should emerge in the behaviour of large populations, just as the law of ideal gases emerges from the chaotic motion of individual molecules. To me, the crucial difference between modelling in physics and in economics lies rather in how the fields treat the relative role of concepts, equations and empirical data.

Classical economics is built on very strong assumptions that quickly become axioms: the rationality of economic agents (the premise that every economic agent, be that a person or a company, acts to maximize his profits), the 'invisible hand' (that agents, in the pursuit of their own profit, are led to do what is best for society as a whole) and market efficiency (that market prices faithfully reflect all known information about assets), for example. An economist once told me, to my bewilderment: "These concepts are so strong that they supersede any empirical observation." As economist Robert Nelson argued in his book, *Economics as Religion* (Pennsylvania State Univ. Press, 2002), the marketplace has been deified.

Physicists, on the other hand, have learned to be suspicious of axioms. If empirical observation is incompatible with a model, the model must be trashed or amended; even if it is conceptually beautiful or mathematically convenient. So many accepted ideas have been proven wrong in the history of physics that physicists have grown to be critical and uneasy about their own models.

Unfortunately, such healthy scientific revolutions have not yet taken hold in economics, where ideas have solidified into dogmas.

institutions over the past few decades, they seem to have forgotten the methodology of the natural sciences as they absorbed and regurgitated the existing economic lore.

The supposed omniscience and perfect efficacy of a free market stems from economic work done in the 1950s and 1960s, which with hindsight looks more like propaganda against communism than plausible science. In reality, markets are not efficient, humans

tend to be over-focused in the short-term and blind in the long-term, and errors get amplified, ultimately leading to collective irrationality, panic and crashes. Free markets are wild markets.

#### Picture imperfect

Reliance on models based on incorrect axioms has clear and large effects. The Black-Scholes model, for example, which was invented in 1973 to price options, is still used extensively. But it assumes that the probability of extreme price changes is negligible, when in reality, stock prices are much jerkier

than this. Twenty years ago, unwarranted use of the model spiralled into the worldwide October 1987 crash; the Dow Jones index dropped 23% in a single day, dwarfing recent market hiccups. Ironically, it was the very use of a crash-free model that helped to trigger a crash.

This time, the problem lies, in part, in the development of structured financial products that packaged subprime risk into seemingly respectable high-yield investments. The models used to price them were fundamentally flawed: they underestimated the probability that multiple borrowers would default on their loans simultaneously. These models again

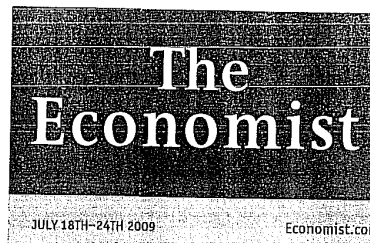
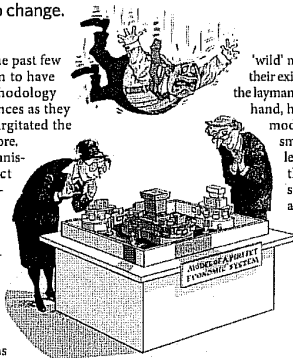
'wild' markets, even though their existence is so obvious to the layman. Physics, on the other hand, has developed several models that explain how small perturbations can lead to wild effects. The theory of complexity shows that although a system may have an

optimum state, it is sometimes so hard to identify that the system never settles there. This optimum state is not only elusive, it is also hyper-fragile to small changes in the environment, and therefore often

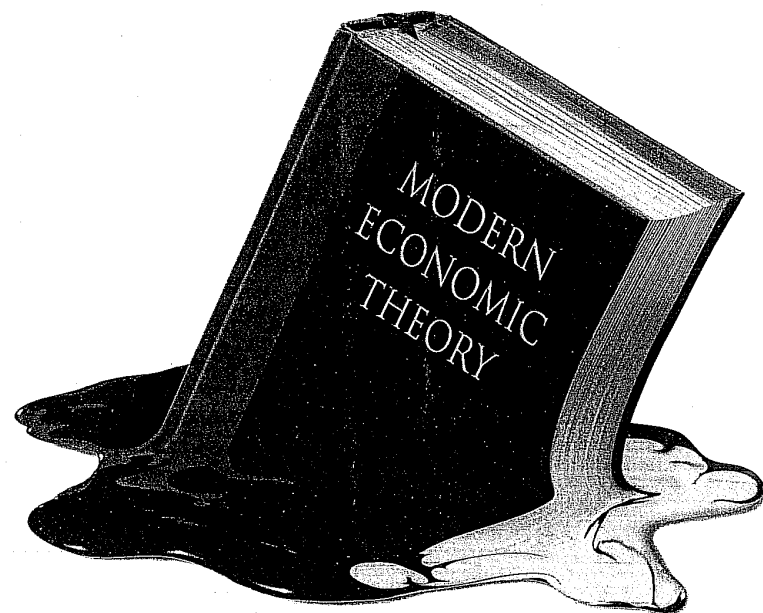
irrelevant to understanding what is going on. There are good reasons to believe that this paradigm should apply to economic systems in general and financial markets in particular. We need to break away from classical economics and develop completely different tools. Some behavioural economists and econo-physicists are attempting to do this now, in a patchy way, but their fringe endeavour is not taken seriously by mainstream economics.

While work is done to enhance models, regulation also needs to improve. Innovations in financial products should be scrutinized, crash-tested against extreme scenarios outside the realm of current models and approved by independent agencies, just as we have done with other potentially lethal industries (chemical, pharmaceutical, aerospace, nuclear energy).

Crucially, the mindset of those working in economics and financial engineering needs to change. Economics curricula need to include more natural science. The prerequisites for more stability in the long run are the development of a more pragmatic and realistic representation of what is going on in financial markets, and to focus on data, which should always supersede perfect equations and aesthetic axioms.



Britain agonises about Afghanistan  
The rot in Japan's governing party  
Europe's energy insecurity  
Goldman Sachs's record profits  
Summer camp for atheists



## Where it went wrong—and how the crisis is changing it

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# Hagfræði falsfræði?

*Nature*, Oct. 2008

„What is the flagship achievement of economics? Only its recurrent inability to predict and avert crises, including the current worldwide credit crunch.”

*Economist*, July 2009

„Of all the economic bubbles that have been pricked, few have burst more spectacularly than the reputation of economics itself.”

# Hvað segir sagan?

- „I do not describe it as history, for that belongs to another generation. But I claim with confidence that it is a contribution to history which will be of service to the future.”  
Winston Churchill, *The Gathering Storm*, bls. iv





# Lærdómur sögunnar

- As soon as my time machine was finished, I traveled back to 1890, so I could kill Hitler before he was old enough to commit any of his horrible crimes. It wasn't as gratifying as I thought it would be.
  - „Oh my God. You killed a baby.”
  - „Yes, but the baby was Hitler.”
  - „Who?”
  - „*Hitler*. It's complicated.”
  - „Officer? This man just killed a baby.”





# Þetta eigum við að vita

- Ófullkomin gögn og upplýsingar
- Kenningar hafa sín takmörk
  - Í rúmi
  - Í tíma
- Framtíðarspár og greiningar eru ágiskun
  - Óteljandi einstaklingar koma við sögu
  - Máttur tilviljana



# Engar jöfnur!



- „I would tell people to learn more accounting, more computer science, ***more business history, more financial history***. And I would ban portfolio theory immediately. It's what caused the problems. Frankly, anything in finance that has equations is suspicious. I would also ban the use of statistics because unless you know statistics very, very well, it's a dangerous, double-edged sword.”



# „Fólk er fífl...”

- „Hinn raunsæi maður” (The rational actor) er ekki til...
  - „Risky behavior of the sort I have been describing was individually rational during the bubble. But it was collectively irrational” (Richard A. Posner)
- „...economists often find that apparently erratic behavior is, at heart, rational. It helps that the definition of rationality can be stretched to include emotion which „is not necessarily or even typically irrational,” Posner argues. Reckless greed, incompetent assessments of probability, blindness to the inevitability of downturns, failure to hedge risks so big that they threaten a firm’s very existence: all are rational.”



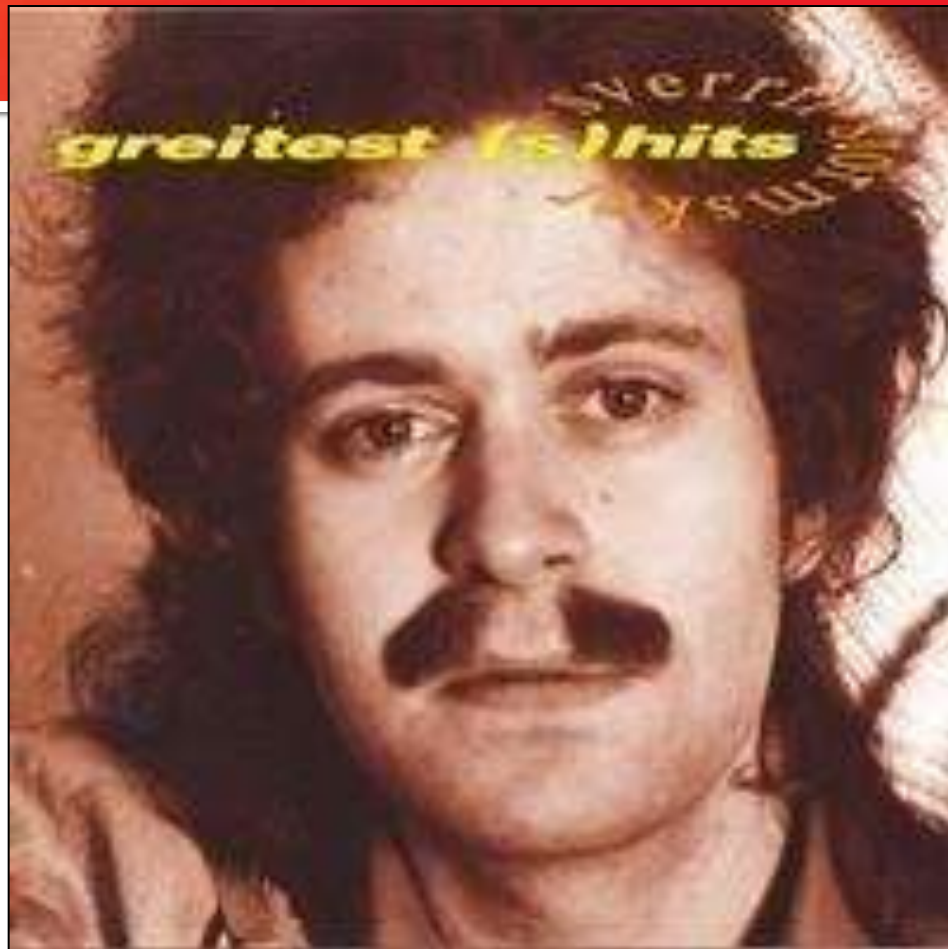
# „Fólk er fífl...”

- „Ég get spáð fyrir um gang himintunglanna, en ekki heimsku mannanna.”  
*Isaac Newton*



# Það sem hagfræðingar geta lært af sagnfræðingum...

- „Að trúa á mikilvægi efans og efast um mikilvægi trúarinnar“





# Vísdomurinn á blogginu...

- „Þrettán þingmenn hagfræðingar“  
*<http://blog.eyjan.is/stefan/2009/07/04/threttan-thingmenn-hagfraedingar/>*
  - 4.7 2009 | 09:25 | [22 ummæli](#)
  - Þrettán: Óheillatala. Þrettán: Tala jólasveinanna.
- Athugasemdir
  - Ég gagnrýndi hagfræðina fyrst í grein í Lesbókinni árið 2003, hún var þöguð í hel.  
Síðan hef ég birt greinar um hennar ömurlega eðli og stend nú eftir hrunið með pálmann í höndunum



# Vísðómurinn á bloggínu...

## ■ Athugasemdir

- Hagfræðin er svona álíka vísindi og kaffibollaspámennska, það er búið að sína sig. Enda er ekki annað hægt en að hlægja af þessu sprenglærða liði, þegar það kemur fram og bullar og þvælir um ekki neitt, og státar af þessum líka flottu háskólagráðum, þegar það hefði verið nóg að fara í helgarkúrsus til Siggú spá og vera jafn mikið menntað í þessum „vísindum“



# Vísdomurinn á blogginu...

- Athugasemdir
  - Ég segi það enn og ég segi það aftur:  
Hagfræðingar þekkja öll svörin,  
en skilja ekki spurningarnar.
  - Áhugaverð umræða sem þú settir hér af stað,  
Stefán. Var það ekki annars J.K.Galbraith sem  
sagði: “The only function of economic forecasting  
is to make astrology look respectable”.

