Banks in trouble – same old story or something new?

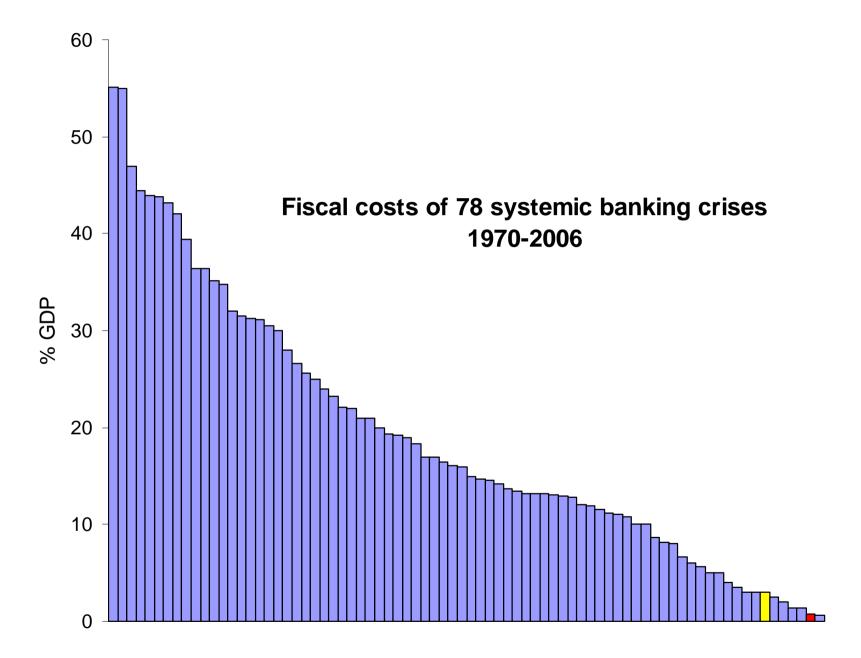
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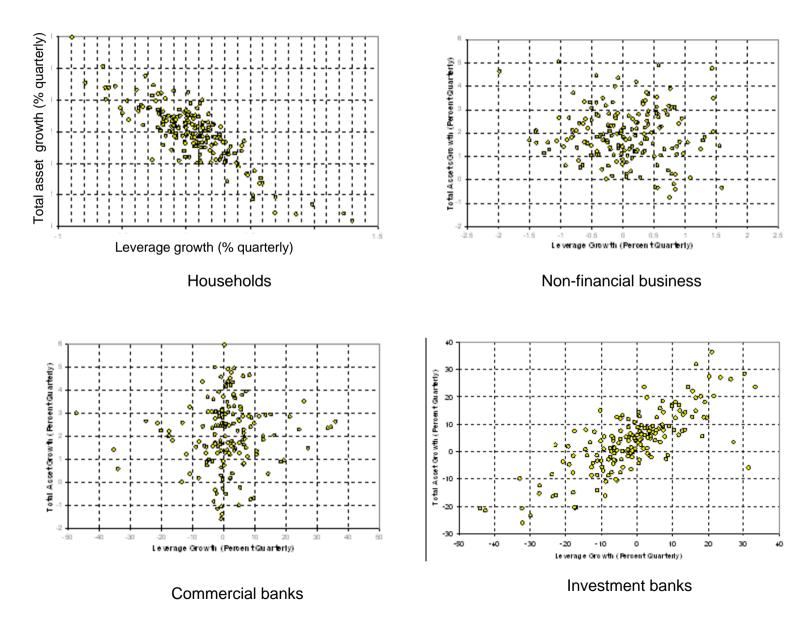




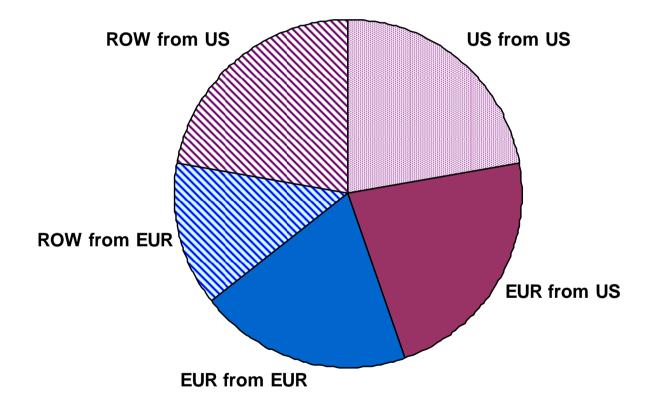
Mean and Median Fiscal Costs for Crises 1970-2006

Costs	CK estimates		Augmented estimates		
(% of GDP)	All in database	Systemic only	All in database	Systemic only	
Mean	14.3	16.8	16.7	19.1	
Median	10.0	13.1	13.2	15.5	
No. of cases	56	45	93	78	

Growth in total assets and in leverage, US sectors, 1963-2006



Credit risk transfer: within and between global zones



(Face value – not weighted by asset quality)

Reported credit losses at big banks, 2007-8

	Company	Credit losses since Jan 2007 (\$ bn)
1	Citigroup	42.9
2	UBS	38.2
3	Merrill Lynch	37.0
4	HSBC	19.5
5	IKB Deutsche	16.1
6	Royal Bank of Scotland	15.3
7	Bank of America	14.8
8	Morgan Stanley	12.6
9	JPMorgan Chase*	9.8
10	Credit Suisse	9.7
11	Washington Mutual	9.1
12	Credit Agricole	8.4
13	Deutsche Bank	7.7
14	Other European banks	7.5
15	Wachovia	7.0
16	HBOS	6.9
17	Bayerische Landesbank	6.8
18	Fortis	6.7
19	Societe Generale	6.4
20	Mizuho Financial	6.2
21	ING Groep	6.1
22	Barclays	5.2
23	Other Asian banks	2.8
	Worldwide	382.6

Source: Bloomberg and FT (May 22, 2008)

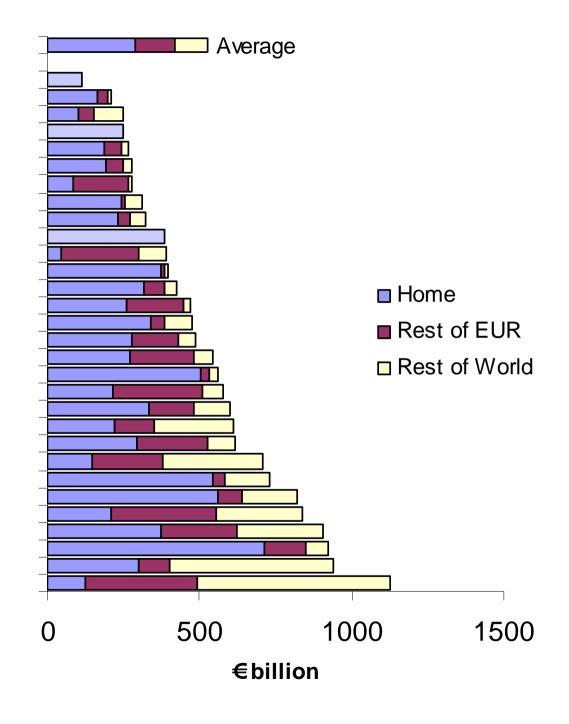
^{*}Excluding likely 9 bn charge for Bear Stearns

Cross-border European banking

Shows the distribution by country of total assets

for the 30 European-based banks with the largest capital (Tier 1)

(Data for end-2004)



based on Goodhart and Schoenmaker (2006)

Table I. Top ov European banko (2004 ngujeo)

Crossborder banking in Europe – top 30 banks

	Tier 1 Capital	Assets		
Bank (Country)	in € bn	in € bn	h (%)	e (%)
1. HSBC (UK)	49,4	937,4	32	11
2. Crédit Agricole (France)	46,5	912,6	77	15
3. Royal Bank of Scotland (UK)	32,2	821,9	68	10
4. HBOS (UK)	26,9	557,7	90	5
5. BNP Paribas (France)	26,2	905,9	41	28
6. Santander Central Hispano (Spain)	24,4	575,4	37	52
7. Barclays Bank (UK)	23,6	728,4	75	5
8. Rabobank Group (Netherlands)	22,6	475,1	72	9
9. ING Bank (Netherlands)	21,1	616,5	48	37
10. UBS (Switzerland)	20,1	1125,5	11	33
11. ABN AMRO Bank (Netherlands)	19,8	608,6	36	22
12. Deutsche Bank (Germany)	18,7	840,0	25	41
13. Groupe Caisse d'Epargne (France)	18,4	543,9	50	38
14. Société Générale (France)	18,4	601,1	56	24
15. Crédit Mutuel (France)	18,2	387,3	n.a.	n.a.
16. Lloyds TSB Group (UK)	16,6	396,7	94	3
17. Credit Suisse Group (Switzerland)	15,9	706,8	21	33
18. HypoVereinsbank (Germany)	15,7	467,4	56	40
19. Banca Intesa (Italy)	15,6	274,6	71	20
20. Banco Bilbao Vizcaya Argentaria (Spain)	14,7	311,1	78	3
21. Fortis Bank (Belgium)	14,3	484,1	57	32
22. Groupe Banques Populaires (France)	13,4	250,4	n.a.	n.a.
23. Unicredit (Italy)	11,9	265,8	70	21
24. Dexia (Belgium)	11,0	389,1	12	65
25. SanPaolo IMI (Italy)	10,9	211,1	79	16
26. Nordea Group (Sweden)	10,6	276,0	30	67
27. Commerzbank (Germany)	10,5	424,9	75	15
28. KBC Bank (Belgium)	9,8	249,2	40	22
29. Bayerische Landesbank (Germany)	9,4	324,8	72	14
30. Caja de Ahorros y Pen. de Barcelona (Spain)	8,4	113,1	n.a.	n.a.
Average top 30 banks	19,2	526,1	55	25

Goodhart & Schoenmaker, 2006

Outline

- Same old story...or something new?
 - costs still much smaller than typical crises of the past (relative to GDP)
 - confidence and risk appetite more important than capital losses
 - the banking system at fault
 - A variant on historic experience—but the differences matter
- A flawed approach to regulation:
 - misplaced application of rules vs. discretion
 - gaming of rules increasingly treacherous
- Institutions for crisis management
 - and regulation of deeply internationalized banking system
 - a wake-up call for Europe

Features we observe: Something old, something new

OLD

Rapid credit growth

Over-optimism/risk pricing

Borrow short, lend long

Regulatory arbitrage

Illiquidity and insolvency hard to disentangle

Principal-agent

Depositor runs lead to official over-reaction

Predatory lending

Innovation is risky

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OLD NEW-ISH

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Innovation is risky

Mechanical rules for capital

Credit rating incentive structure exposed

Conduits and SIVs

Originate to sell

Derivative miscalculations (Carlyle)

Features we observe: Something old, something new

OLD **NEW-ISH** Rapid credit growth Over-optimism/risk pricing Borrow short, lend long Mechanical rules for capital Regulatory arbitrage Credit rating incentive Illiquidity and insolvency hard, structure exposed to disentangle Conduits and SIVs Principal-agent Originate to sell Depositor runs lead to official Derivative miscalculations over-reaction **Predatory lending** Innovation is risky

But the big thing that went wrong was...

Reliance and

Gaming

of

Rules-based risk management

(externally and internally)

"Inverted ratings approach"

"The advantage of high-yield bonds is that, while they are risky, they are obviously so." (John Gapper, FT, May 1, 2008)

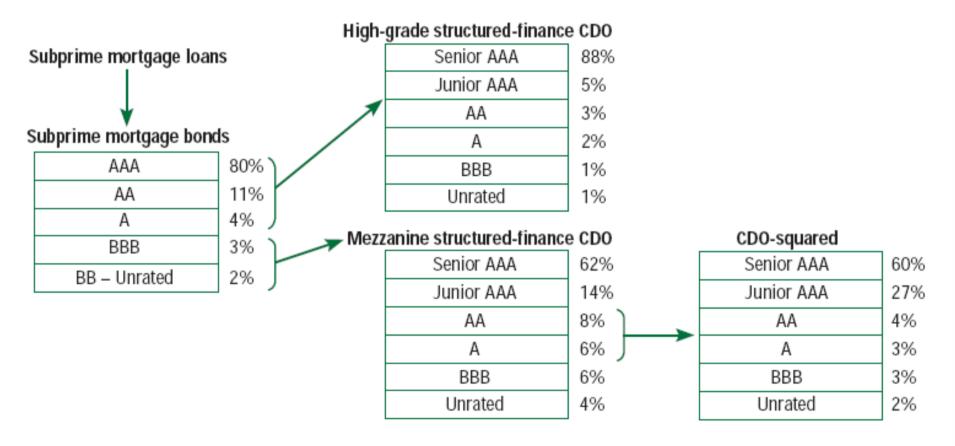
Examples:

- Cantilevering (in)secur-itization models to maximize size of AAA-rated tranches
 - Not just underestimate of expected losses
 - But over-optimistic correlation assumptions (short track record)
 - Cliff-edge effect
 - note prominence of AAA tranches in bank runs like Sachsen, Northern Rock
 - and in UBS

2. UBS

 Internal risk models neglected catastrophe tails and were gamed by first-loss insurance (another cliff)

Matryoshka — Russian Doll: Multi-Layered Structured Credit Products



Source: IMF staff estimates.

Note: CDO = collateralized debt obligation.

Correlation matters: if higher than expected, then bad for senior tranche; good for junior

Example: a tranched securitization of two €100 loans, each with a 10 per cent default rate and a 60 per cent loss-given-default rate.

Expected default loss for loans and securitization tranches

Correlation of defaults:	0	1
Each loan	6.0	6.0
Senior tranche	0.2	2.0
Junior tranche (first 50%)	11.8	10.0

If priced on the basis of too low a correlation, the yield on the junior tranche will be too high; the yield on the senior tranche will be too low

We've long known the danger of rules-based regulation amplifying risk

- Kahane (JBF 1977) may be the first formal model
- Pillars 2 (supervisory discretion) and 3 (market discipline) are the possible solutions, (one for each end of the political spectrum)

(cf. Honohan and Stiglitz, 2001; Barth, Caprio and Levine, 2005)

Use both!

Pillar 2 strengthening in practice

- higher margin of error in capital requirements
- close scrutiny (and risk-penalization) of gross positions
- greater attention to personal incentive structures
- qualitative assessment of these institutions' overall risk management systems (not merely their mathematical risk models)

Managers at better performing firms...

"...relied on a wide range of measures of risk...to gather more information and different perspectives on the same exposures.

"Many were able to **integrate** their measures of market risk and counterparty risk positions **across businesses**.

"Moreover, they effectively **balanced** the use of **quantitative** rigor with **qualitative** assessments...enabling the firm ...to reduce exposures when risks outweighed expected rewards."

And...

 Countercyclical speed limits in capital adequacy regulation (Honohan and Vittas, 1995, Goodhart and Persaud, 2008)

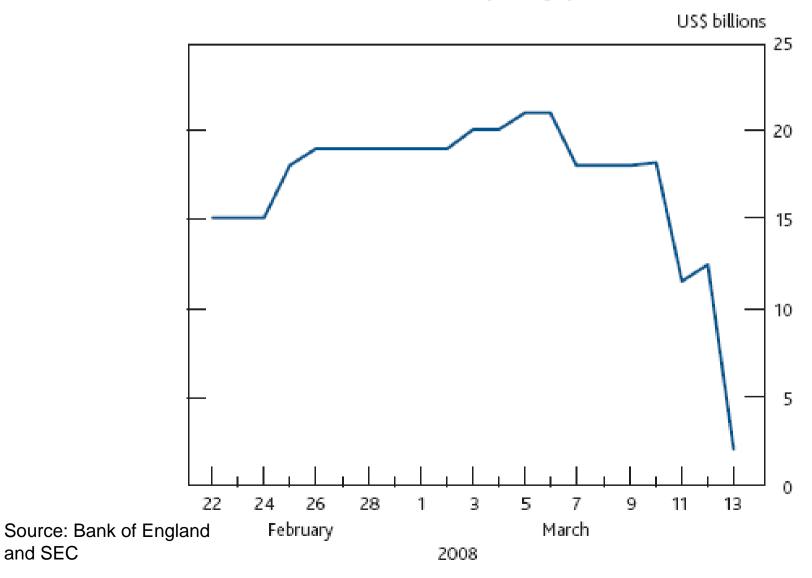
Liquidity regulation...hmm (see Bear Stearns picture)

For Pillar 3: question of internal remuneration incentives

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A big pot of liquidity may not help...

Bear Stearns' liquidity pool



and SEC

Cross-border institutional structures

For enforcement...

- ...and crisis management
- ...and to ensure socially optimal policies (crossborder spillovers

Many ideas on the table

(especially for EU/Eurozone)

Schinasi and Teixeira (2007) Single European license/regulator/bankruptcy

Goodhart and Schoenmaker (2006) loss-allocation formula

Cross-border institutional structures

Why reluctance to act?

Sense that ECB is in charge

Advantages of local regulatory knowledge

Fear that national 2big2fail criteria would be ignored

View that cooperative regulatory "colleges" for main banks may be enough