Are Thai Banks Vulnerable? :
A Structural Analysis of
Bank Corporate Loan Portfolio and Implications

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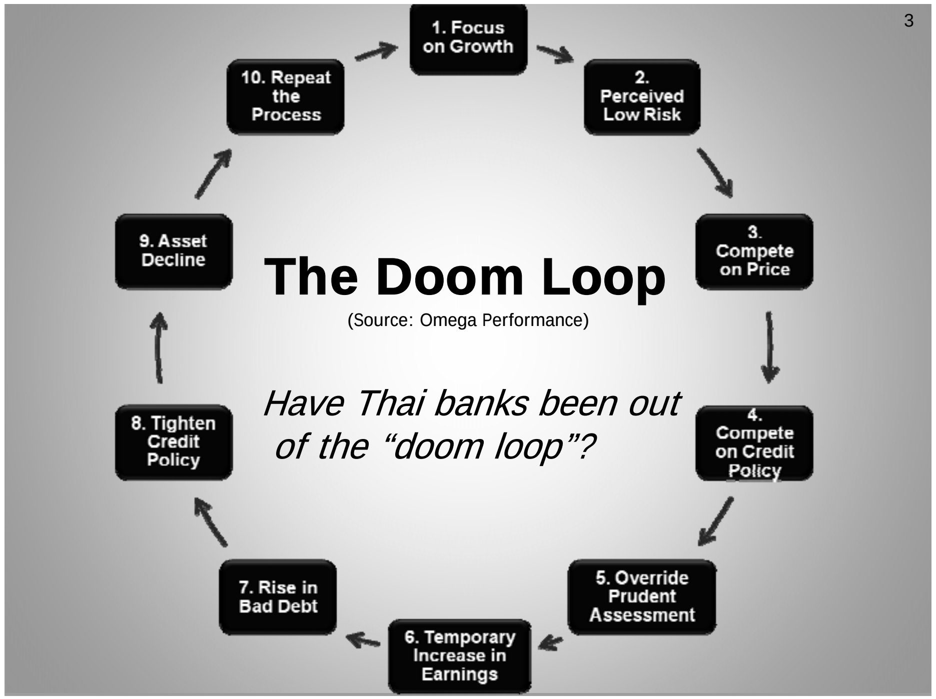
The key question

10 years after the 1997 financial crisis

The question remains…

Are Thai banks still vulnerable?



Agenda

I. Conventional ratio analysis
II. Analysis of Default Risks in Corporate Loan Portfolio
III. Analysis of Risk Pricing
IV. Implications and Conclusions

Conventional ratio analysis show industry in good health and stability

Key financial ratios of Thai banks, 2004 Q3-2007 Q2

	2004		2005				2006				2007	
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Number of banks	12	12	12	12	13	14	14	14	14	14	14	14
Profitability												
ROA	1.40	1.25	1.54	1.48	1.48	1.36	1.45	1.33	1.27	0.77	1.06	0.51
Pre-provision profit	1.30	1.75	1.91	1.86	1.90	1.85	2.20	2.08	2.05	1.88	1.89	1.99
Net interest margin	2.50	2.55	2.76	2.77	2.86	2.85	3.15	3.15	3.16	3.16	3.07	3.13
Efficiency												
Cost-to-income	53.2	54.1	50.1	51.9	51.9	52.7	50.8	52.2	53.1	56.7	55.9	54.3
Operating expenses/avg. assets	1.97	2.05	1.92	2.00	2.05	2.06	2.27	2.27	2.32	2.47	2.41	2.37
Non-interest income/total income	24.8	25.3	22.0	21.9	21.5	21.0	21.3	18.9	18.5	17.9	17.3	17.9
Capital and asset quality												
Capital adequacy ratio	12.2	11.9	12.4	12.7	13.2	13.2	13.3	13.4	14.3	13.6	13.9	12.9
Actual to required reserves	135	137	137	131	131	144	153	179	139	121	119	132
Gross NPL	12.6	11.9	11.9	11.5	11.1	9.1	9.1	9.1	8.9	8.1	8.2	8.5

Plusses

+ Robust profitability
+ Room for smooth Basel II transition
+ Cushion against impaired assets

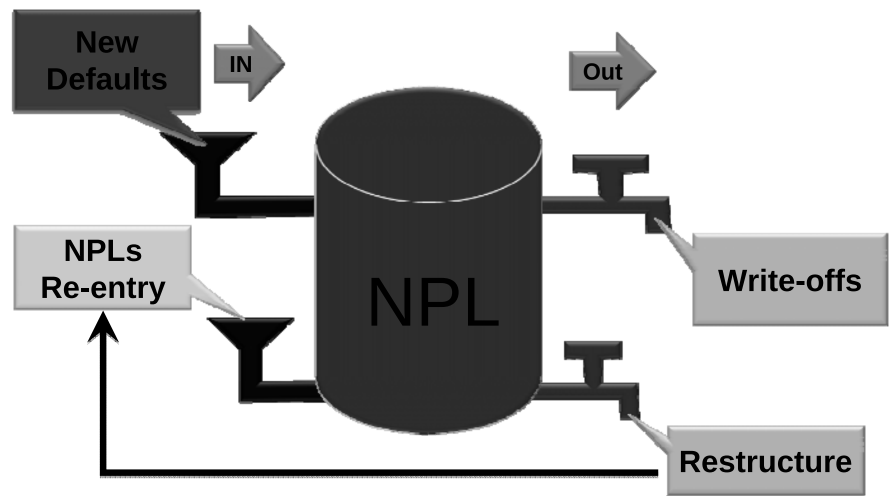
Minuses

- Remaining NPLs still an Achilles' heel
- Increasing dependence on interest income

Limitations of conventional financial ratio analysis

- Purely backward looking
- Accounting figures can be manipulated
- Limited information on underlying credit risk

Our main analysis focuses on new defaults



What we will try to do

- Assess the default risk of Thai banks' corporate loan portfolio and the extent of risk-based pricing in the Thai market
- Establish historical benchmarks for Thai corporate defaults
- Establish an additional surveillance tool for bank supervisor

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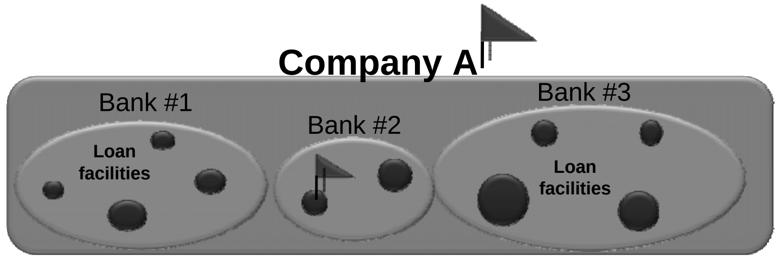
Conservative Default Definition

- Flagged default if
  - Delinquent 90 days or more
- Conservative approach

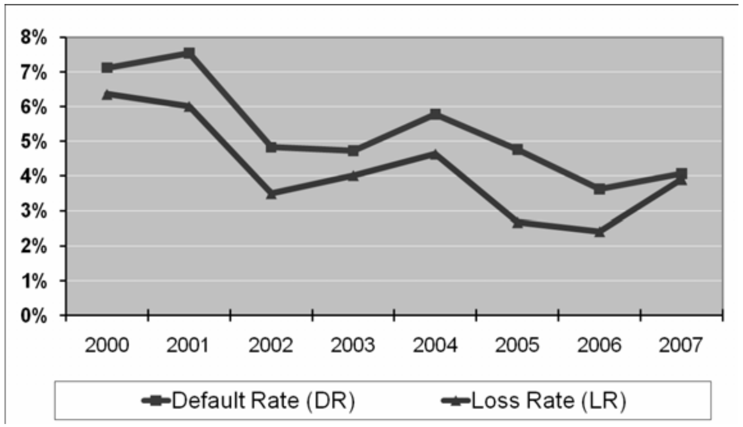


2 Measures of Default Risks

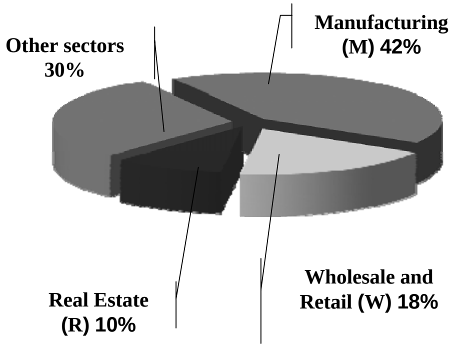
Head Count (DR)	Exposure Loss Rate (LR)
# Defaults / Total # of Corp	Defaulted Outstanding / Total Outstanding

Default rates of aggregate portfolio

Clear improvement in Thai banks' portfolio quality

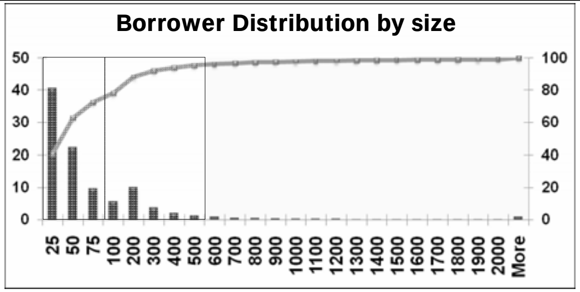


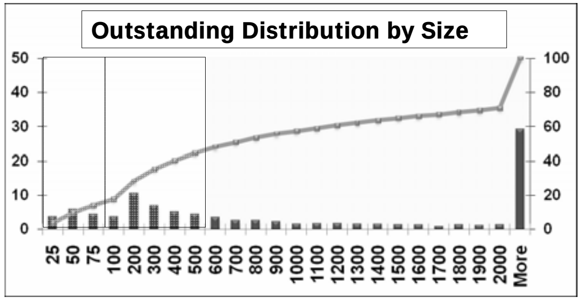
Default rates by business sector



- 3 largest sectors : M, W, R
  - 70% of outstanding balance
  - 80% of corporate
- Exposure grows at 5% p.a. on average with constant composition

Default rates by loan size





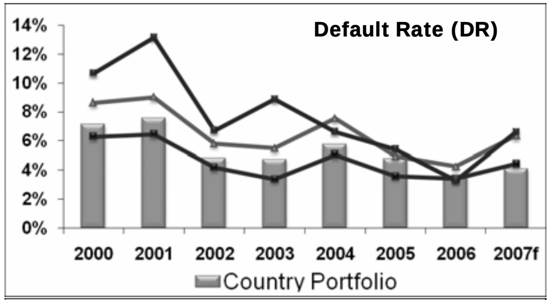
3 Size segments

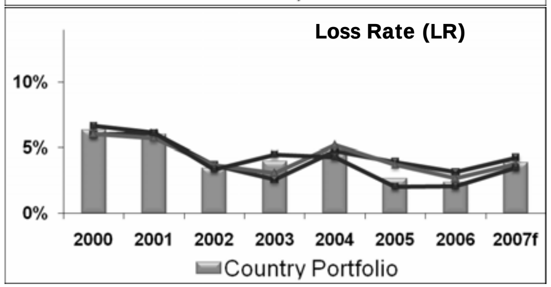
1. Small [0 – 75MM]
   - 73% of observations
   - 14% of outstanding
2. Medium [75 – 500MM]
   - 23% of observations
   - 31% of outstanding
3. Large [500+MM]
   - 5% of observations
   - 55% of outstanding

Default rates by loan size

Unexpected results

- Unconventional relationship between default rates and loan size
- No different in LR
- Plausible explanation
  - Small-sample bias
  - "Banks control small firms, large firms control banks"
  - Cut-off for large not large enough
  - SME used to be underserved sector





Recap

- Different characteristic has different risk profile
- Downward default rates indicates improved ability to discriminate good from bad risks on top of good economy.
- In line with developments in banks' Risk Management
  - Focus on ability to pay rather than collateral value
  - Separation of front and risk unit
  - Internal Rating System

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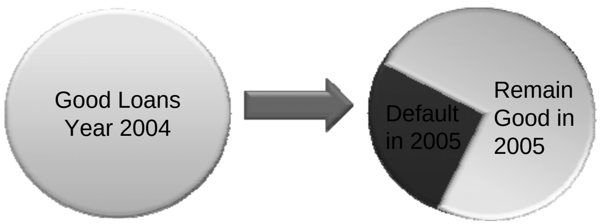
Pricing loans according to risk

- Customized internal rating system (IRS) to sector and size to screen good and bad risks within segment
- Effective and stable IRS also allow better risk-pricing.
- Additional DMS data used (rates and outstanding balance)

Analysis of risk pricing

Country Portfolio Level – Good and Bad Risks Differentiation



Ability to price good and bad risks

	Exposure-weighted Average Interest Rate		
	Overall	Defaulted	Non-defaulted
2003	4.07%	5.15%	4.03%
2004	4.87%	5.23%	4.85%
2005	5.97%	7.21%	5.92%
2006	6.95%	8.20%	6.94%

Putting it all together…

Banking concerns risk-adjusted returns.
Risks and returns should not be considered in isolation.

Economic Profits from Credit business

Credit risk premium covers the loss

Economic Profit (%) ≅ Interest rate charged (%)

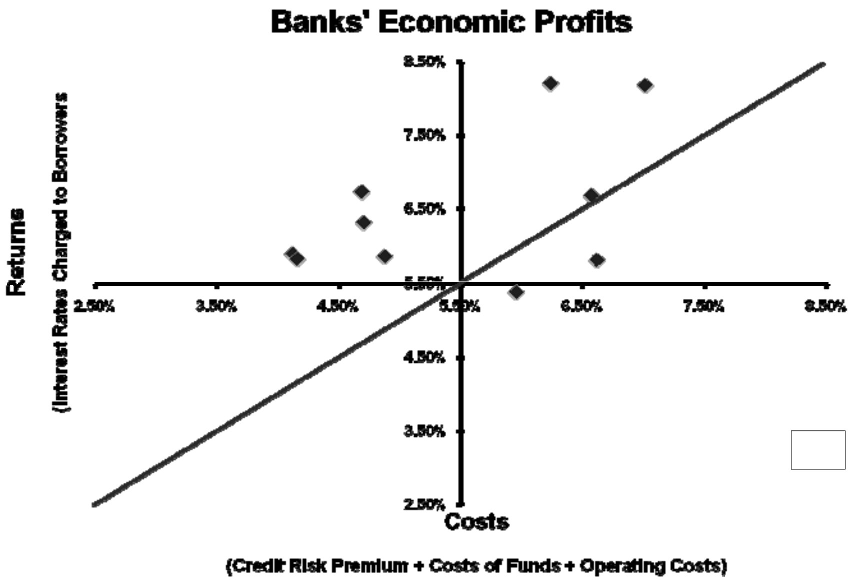
- Credit Risk Premium (%)

LR x LGD

Loss Given Default – Discounted recovery cash flows after default

- Costs of Funds (%)
- Operating Costs (%)

Economic Profits by Banks



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Are Thai banks still vulnerable?

- Credit business is cyclical and economy exposure is enclosed by the banking sector
- So banks are never shielded from the business cycles
- However, banks should <u>not</u> be more vulnerable to cyclicality than real sector
- Unless, we are still stuck in the Doom Loop

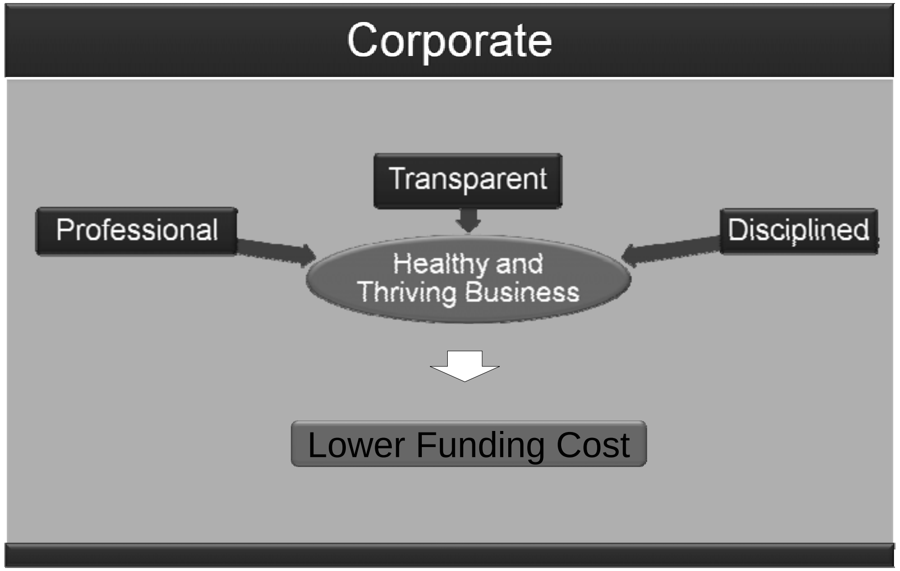
Are we out of the Doom Loop?

We have reasons to believe so…

- Trend of lower default rates
- Significant improvement in banks' risk management
- Banks are holding back excessive growth

To ensure the end of the Doom Loop

The least obvious party is corporate



Banks have to improve risk management

Banks

Internal Rating System is Key

Ownership → Tools Development → Tools Implementation → Strong Credit Culture

Ownership
- Board ownership
- Conflicts between growth and risk control?

Tools Development
- Data and IT
- Internal Rating System

Tools Implementation
- Underwriting decision
- Pricing and risk-return analysis

Strong Credit Culture
- Careful business expansion

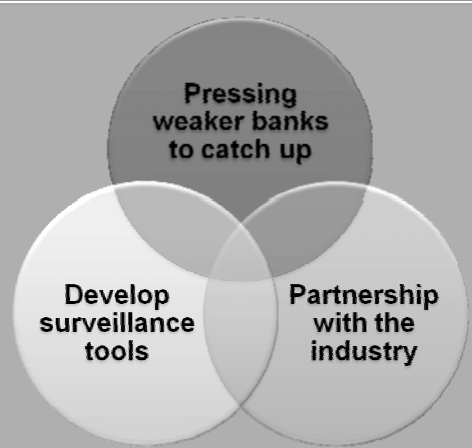
No longer just a loss control function…

Banks

Risk Management is at the forefront among key profitability factors!

Concerted efforts by all parties

Regulator



Thank you!