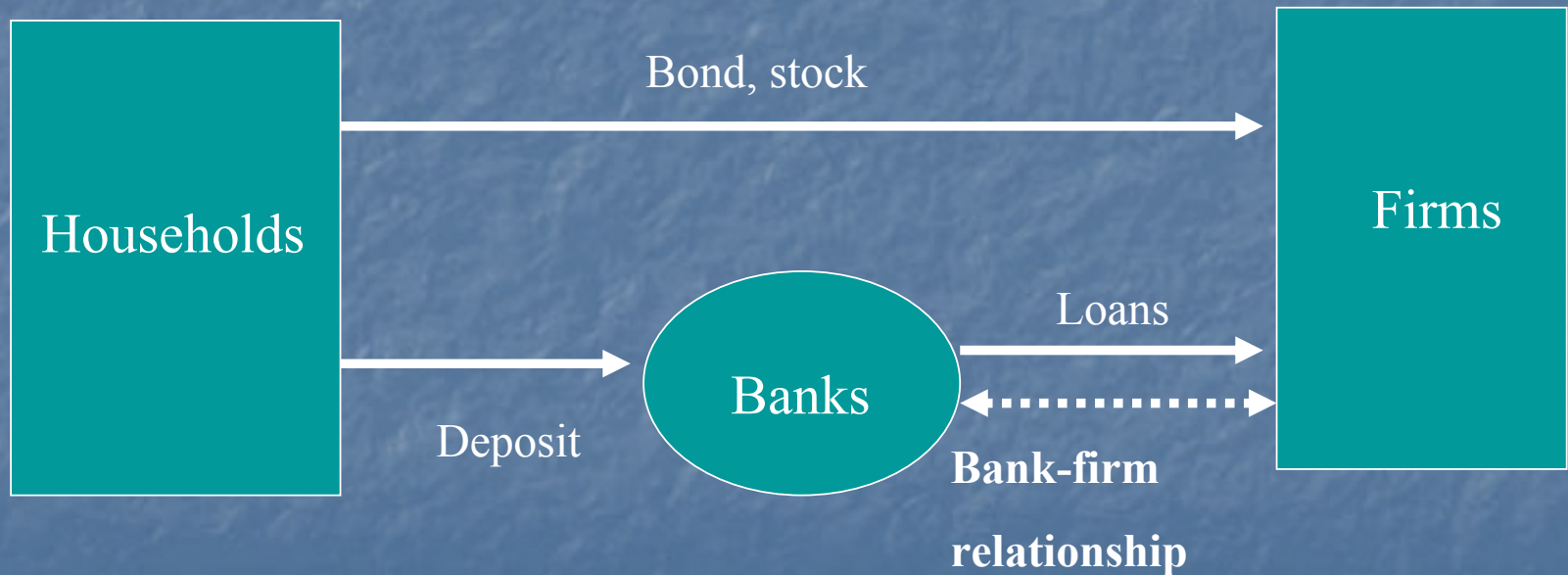# Does Main Bank's Health Matter in Firm Customers' Behavior?

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Overview

Bank-Firm (Main Bank) Relationship from the Standpoint of Flow-of-Funds

Households → Bond, stock → Firms

Households → Deposit → Banks

Banks → Loans → Firms
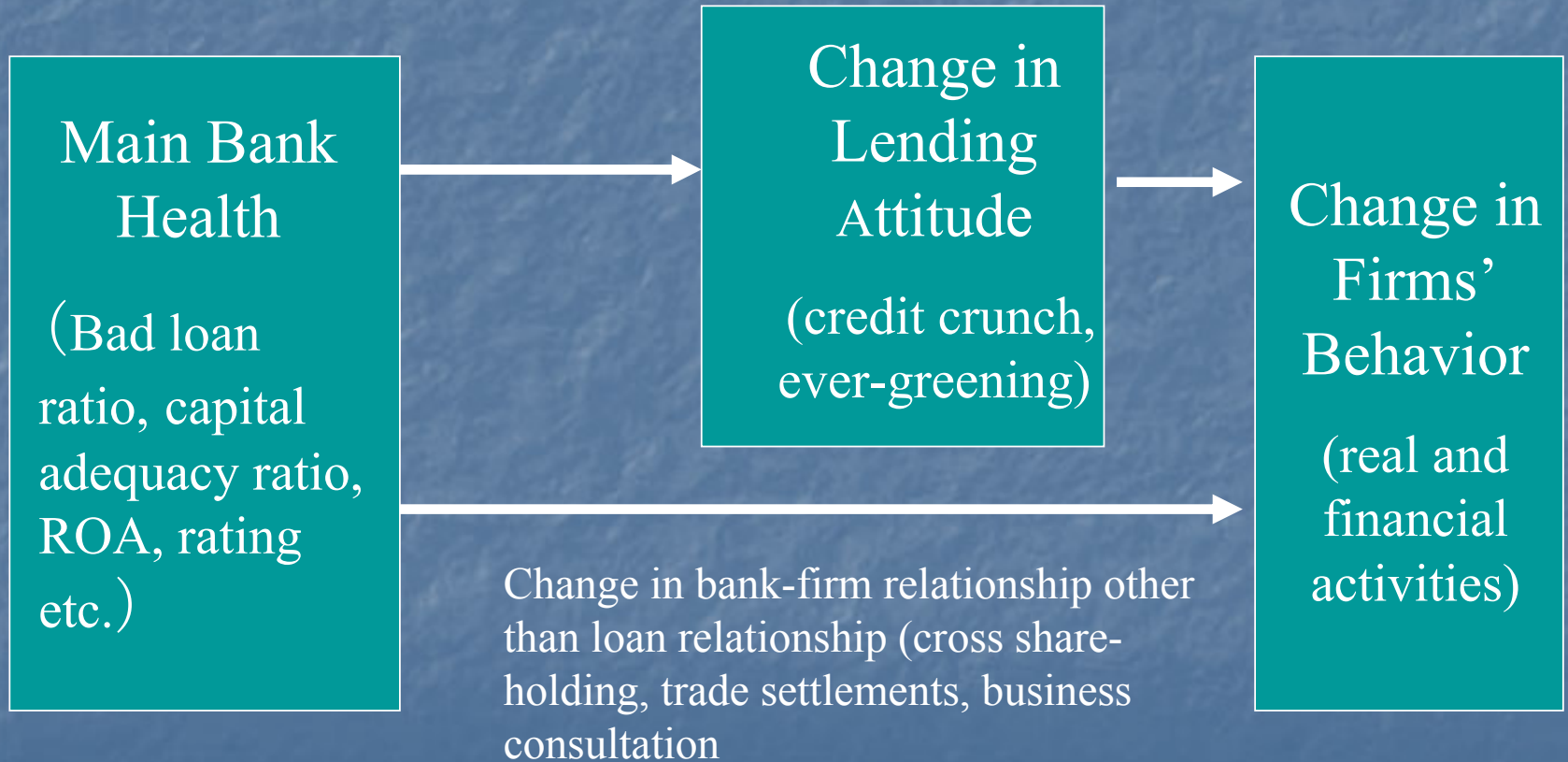
Banks ⇠⇢ Firms **Bank-firm relationship**

Information gathering, screening, monitoring etc.

1. Purpose of the Study

- How does the main bank's health affect the behavior of its small and medium-sized enterprise (SME) customers?

- In what channel was the deterioration of banks' balance sheet in the late 90s to the early 2000s transmitted to firms' activities?

- Empirical analysis based on bank-firm matched sample in the survey data conducted by the Small and Medium Enterprises Agency.

2. Main Bank Health and Firms' Behavior: Theoretical Review

| Main Bank Health

（Bad loan ratio, capital adequacy ratio, ROA, rating etc.） | → | Change in Lending Attitude

(credit crunch, ever-greening) | → | Change in Firms' Behavior

(real and financial activities) |

Change in bank-firm relationship other than loan relationship (cross share-holding, trade settlements, business consultation

3. Four Features of the Study

1.Which aspect of firms do we shed light on?

This study covers a variety of firm activities including
   1) fixed investment
   2) employment
   3) inventory
   4) liquid financial assets
   5) trade credit.

2.How can we identify "main bank" of a firm?

This study relies on direct information on main bank in the survey. The 2002 survey has the following question:

"Which bank do you perceive as your main bank, irrespective of loan relationship?"

Do You Have Your "Main Bank" ?

(%)

	2001	2002	2003
Yes	95.6	94.4	92.6
No	4.4	5.6	7.4

Source：Small and Medium Enterprises Agency,
Survey on Financial Environment of SMEs,
2001-2003.

# Main Bank by Type of Financial Institutions

(%)

	2001	2002	2003
City banks, long-term credit banks and trust banks	34.9	33.7	28.9
Regional banks	49.6	51.6	53.5
Shinkin banks and credit cooperatives	12.4	11.7	15.2
Public financial institutions	2.3	2.1	1.8
Others	0.8	0.8	0.6
Total	100.0	100.0	100.0

Source： Small and Medium Enterprises Agency,
Survey on Financial Environment of SMEs, 2001-2003.

Bank-firm Relatioship by Years: 2002 Survey
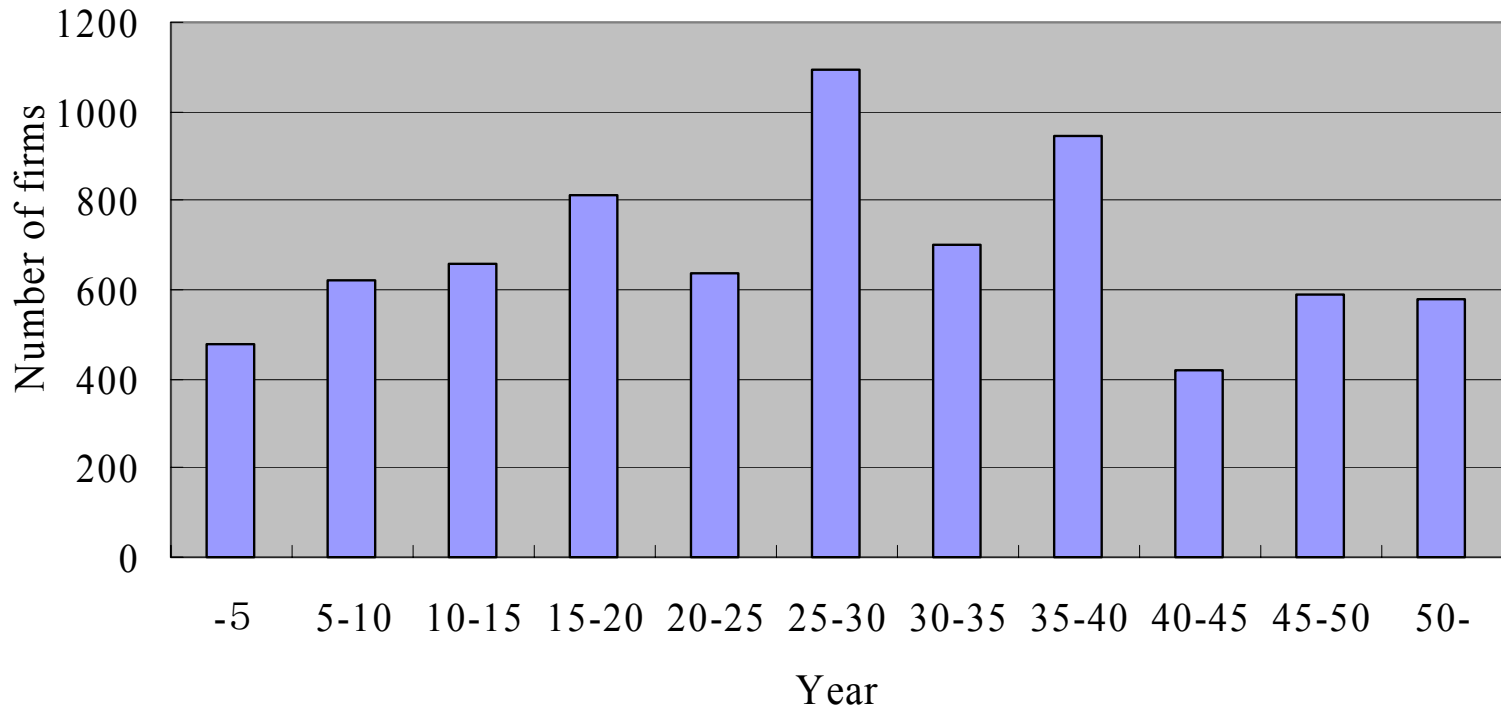
Average: 26.4 years

Source: Small and Medium Enterprises Agency, *Survey on Financial Environment of SMEs*, 2001-2003.

3.Bank-firm relationship is analyzed using the
  matched sample of SMEs and their main bank.

4.We can identify the channels through which
  bank health affects affiliated firms:
    - loan-relationship channel
    - other channels (see the next table for
      the services firms receive from bank-
      firm relationship)

What Kind of Services Do SMEs Receive from Bank-firm Relationship? （%）

	Proportion of firms receiving service
Checking account	77.1
Time deposit	62.5
Deposit at notice	15.8
Wage Payment of employees into main bank accounts	60.5
Delegation of collecting bills	54.3
Settlement of bills payable	55.2
Transaction of foreign exchange	13.7
Buying newly issued stock	8.4
Accepting personnel from main bank	5.2
Transactions with the firms associated with bank	11.7
Joining customer meetings sponsored by main bank	27.8
Advice on financial affairs	9.1
Introduction of customers	11.7

Source： Small and Medium Enterprises Agency, *Survey on Financial Environment of SMEs*, 2003.

4. Data Set and Descriptive Statistics

■ Sample firms: the firms whose information is available for three consecutive years in the 2001-2003 survey. Moreover, we choose firms with more than 2 years relationship with their main bank that are city banks, regional banks, long-term credit banks, trust banks, shinkin banks or credit cooperatives.

Total number of observations・・・5166

Descriptive Statistics of Major Balance Sheet Items

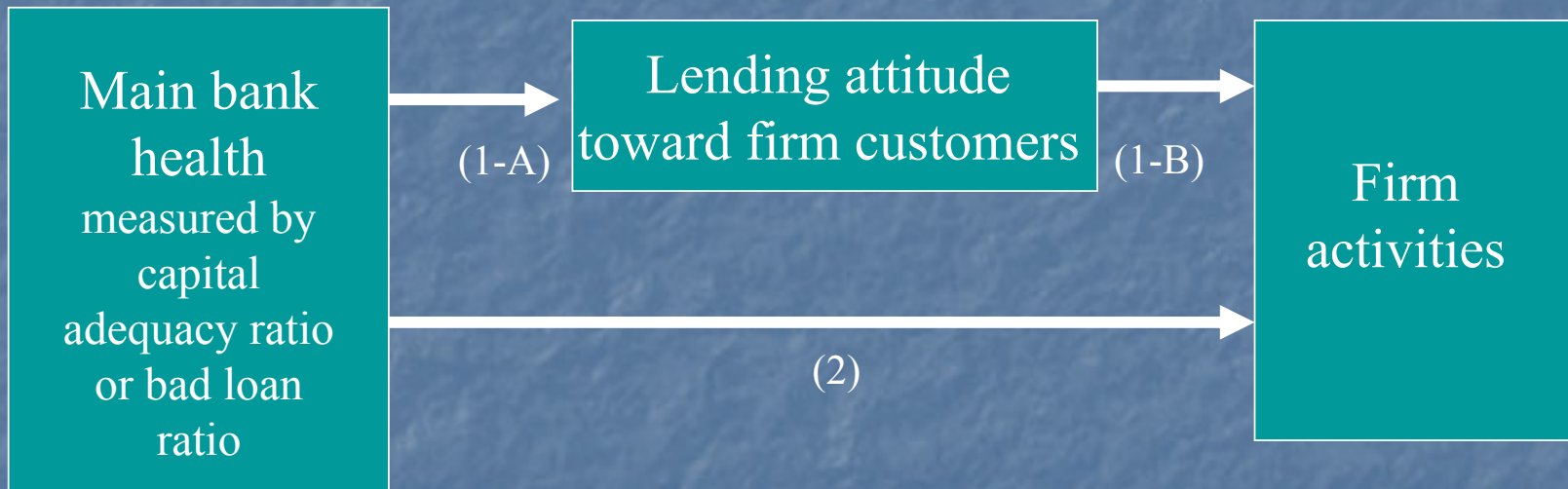| Variable	Average	Median	S.D.
Tangible assets excluding land and construction in progress	949.2	167.5	3315.5
Current assets	555.0	207.1	1094.7
Borrowings	1604.3	385.5	4592.3
Accounts receivable	974.4	276.7	2560.1
Accounts payable	732.7	205.9	1901.8
Total assets	4050.4	1364.7	8024.8
Sales	4027.3	1618.6	7271.2
Number of employees (person)	141.6	44.0	644.5
Debt-asset ratio	0.7036	0.7472	0.2517
Ratio of ordinary profit to equity	0.0239	0.0180	0.0544
Ratio of ordinary profit to sales	0.0193	0.0147	0.1547

Unit: one-million yen
Source: Small and Medium Enterprises Agency, *Survey on Financial Environment of SMEs*, 2001-2003.

5. Estimation Strategy

- Identification of two different channels through which main bank health affects its affiliated firms

| Main bank health measured by capital adequacy ratio or bad loan ratio | → (1-A) | Lending attitude toward firm customers | → (1-B) | Firm activities |

(2) Main bank health → Firm activities

(1-A),(1-B) Bank-firm relationship through lending channel

(2)   Bank-firm relationship through other channel

I) How does main bank health affect lending attitude? (1-A)

The survey contains bank response to loan application by affiliated firms

《Three choices》
- ・Rejection or reduction of loan application
- ・Lending as is applied by firms
- ・Giving offers to lend more than applied

Lending attitude of main bank (%)

	1999	2000	2001	2002	2003
Rejection or reduction of loan application	7.6	8.7	12.2	11.0	16.3
Lending as is applied by firms	72.5	67.8	60.2	59.0	57.7
Giving offers to lend more than applied	19.9	23.5	27.7	29.9	25.9
Total	100.0	100.0	100.0	100.0	100.0

Source: Small and Medium Enterprises Agency, *Survey on Financial Environment of SMEs*, 2001-2003.

《Estimation results》

Bank health

· Bad loan ratio $\qquad$ + →

Firm Attributes

· Debt-asset ratio $\qquad$ +

· Profit rate $\qquad$ −

· Firm size (total asset) $\qquad$ − →

· Ratio of land to total assets +

· Information disclosure $\qquad$ −

Probability of rejection or reduction of loan application

II) In what channels does main bank health affect firms' behavior, lending channel or other channel? (1-B), (2)

Firm activities are measured by the rate of change in

- tangible assets excluding land and

  construction in progress
- employees
- liquidity (cash + securities)
- inventory
- trade credit

Bank health

- Bad loan ratio
- BIS ratio

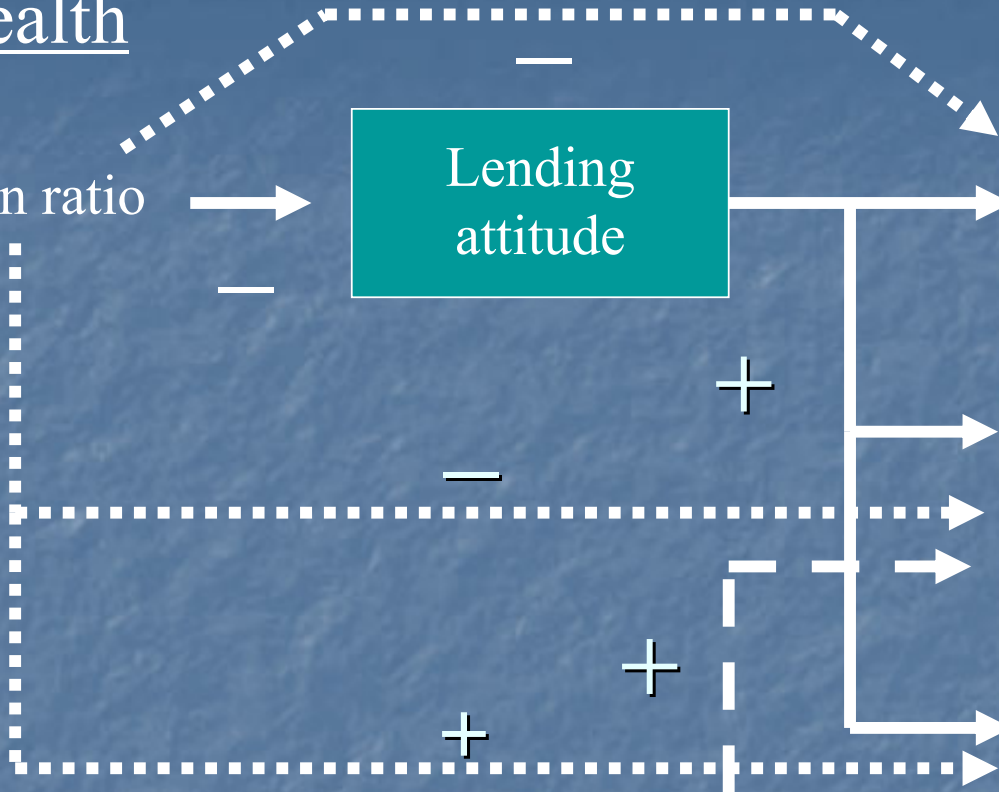Lending attitude

Tangible asset

Employment

Liquidity

Inventory

Accounts payable

− − + − + + − −

Summary of Findings

- Main bank health affects affiliated firms' **long-run real decisions** (fixed investment and employment) through lending channel as well as other channels.

- Deterioration of bank health makes firms decrease liquidity through lending channel, but leads to an increase of demand for liquidity for precautionary purpose.

6．Implication of the Study

- Main bank plays a role of supplying loans to firm customers. Moreover, main bank plays additional role to support SME customers.

- Deterioration of main bank health led to stagnancy of investment and employment of SMEs by decreasing loan supply and weakening other aspects of bank-firm relationship.

- Sound bank-firm relationship is indispensable for long-run growth potentials of SMEs!