

**Japan's Non-Performing Asset Problem
and
the Prospects for Economic Recovery**

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Listed Companies (excluding the Finance and Insurance Sector)

Yen, trillion	Companies	Sales	Operating Profits	Shareholders' Equity	Borrowings	Employees ('000)	Capital Investment
Non-borrowing	240	8.6	1.0	7.8	0.0	231	0.3
Net Non-borrowing	995	100.1	6.1	57.2	4.5	2,193.9	3.7
Non-borrowing Total	1,235	108.7	7.2	65.0	4.5	2,425	4.0
In the Red	247	17.2	-0.5	2.9	6.1	396	0.5
Under 1%	49	3.6	0.0	0.9	7.6	74	0.5
Over 1%-2%	54	24.7	0.1	2.0	7.1	130	1.0
Over 2%-3%	77	26.0	0.3	2.0	14.7	221	0.7
Over 3%-4%	83	31.6	0.5	2.4	13.7	246	0.6
Over 4%-5%	88	14.5	0.4	2.9	8.9	269	0.9
Over 5%-6%	82	21.7	0.6	2.8	10.7	263	0.5
Total	680	139.2	1.5	15.9	68.9	1,598	4.8
Over 6%-7%	67	10.3	0.6	2.7	6.4	204	0.6
Over 7%-8%	77	24.1	1.9	8.4	14.3	384	2.5
Over 8%-9%	64	13.8	0.7	2.9	7.5	221	0.7
Over 9%-10%	73	18.7	1.0	5.9	8.0	393	1.0
Over 10%-11%	49	11.2	0.6	2.9	5.0	174	0.5
Over 11%-15%	190	44.6	2.2	13.0	15.7	706	2.2
Over 15%-20%	160	42.9	2.6	16.0	12.2	1,046	4.5
Over 20%-30%	197	28.5	1.3	9.7	5.0	646	1.5
Over 30%	582	82.6	5.7	36.3	11.0	1,831	5.2
Total	1,459	276.7	16.6	98.0	85.0	5,605	18.8
Grand Total	3,374	524.6	25.3	178.9	158.4	9,628	27.6

Share	Companies	Sales	Operating Profits	Shareholders' Equity	Borrowings	Employees ('000)	Capital Investment
Non-borrowing	7.1%	1.6%	4.0%	4.4%	0.0%	2.4%	1.1%
Net Non-borrowing	29.5%	19.1%	24.3%	32.0%	2.8%	22.8%	13.3%
Non-borrowing Total	36.6%	20.7%	28.3%	36.3%	2.8%	25.2%	14.5%
In the Red	7.3%	3.3%	-2.0%	1.6%	3.8%	4.1%	1.9%
Under 1%	1.5%	0.7%	0.2%	0.5%	4.8%	0.8%	2.0%
Over 1%-2%	1.6%	4.7%	0.5%	1.1%	4.5%	1.4%	3.6%
Over 2%-3%	2.3%	4.9%	1.4%	1.1%	9.3%	2.3%	2.6%
Over 3%-4%	2.5%	6.0%	1.8%	1.4%	8.7%	2.6%	2.3%
Over 4%-5%	2.6%	2.8%	1.7%	1.6%	5.6%	2.8%	3.4%
Over 5%-6%	2.4%	4.1%	2.3%	1.6%	6.8%	2.7%	1.7%
Total	20.2%	26.5%	5.9%	8.9%	43.5%	16.6%	17.5%
Over 6%-7%	2.0%	2.0%	2.2%	1.5%	4.1%	2.1%	2.2%
Over 7%-8%	2.3%	4.6%	7.7%	4.7%	9.0%	4.0%	9.2%
Over 8%-9%	1.9%	2.6%	2.9%	1.6%	4.7%	2.3%	2.7%
Over 9%-10%	2.2%	3.6%	4.0%	3.3%	5.0%	4.1%	3.5%
Over 10%-11%	1.5%	2.1%	2.3%	1.6%	3.2%	1.8%	1.8%
Over 11%-15%	5.6%	8.5%	8.5%	7.3%	9.9%	7.3%	7.8%
Over 15%-20%	4.7%	8.2%	10.4%	9.0%	7.7%	10.9%	16.4%
Over 20%-30%	5.8%	5.4%	5.1%	5.4%	3.1%	6.7%	5.6%
Over 30%	17.2%	15.8%	22.6%	20.3%	6.9%	19.0%	18.9%
Total	43.2%	52.7%	65.7%	54.8%	53.7%	58.2%	68.1%
Grand Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Nikkei NEEDS, Calculations by NIER

The Size and Value of Bad Debt for Listed Companies (excluding the Finance and Insurance Sector)

Companies with Operating Profits/Net Interest Bearing Liabilities under 6%, Stock Prices under 300yen, Shareholders' Equity/Net Interest Bearing Liabilities under 30%

Yen, trillion	Companies	Sales	Operating Profits	Shareholders' Equity	Borrowings	Employees ('000)	Capital Investment
In the Red	50	3.8	-0.1	0.2	2.2	84	0.1
Under 1%	11	1.0	0.0	0.2	3.9	19	0.0
Over 1%-2%	16	0.7	0.0	0.0	0.7	8	0.0
Over 2%-3%	27	11.8	0.2	0.3	10.3	113	0.3
Over 3%-4%	21	12.5	0.2	0.3	6.4	81	0.1
Over 4%-5%	28	4.8	0.1	0.3	2.8	64	0.1
Over 5%-6%	18	5.6	0.2	0.7	4.1	100	0.2
Total	171	40.1	0.7	2.0	30.5	470	0.9

Share	Companies	Sales	Operating Profits	Shareholders' Equity	Borrowings	Employees ('000)	Capital Investment
In the Red	1.5%	0.7%	-0.4%	0.1%	1.4%	0.9%	0.5%
Under 1%	0.3%	0.2%	0.1%	0.1%	2.5%	0.2%	0.1%
Over 1%-2%	0.5%	0.1%	0.0%	0.0%	0.4%	0.1%	0.0%
Over 2%-3%	0.8%	2.2%	0.9%	0.2%	6.5%	1.2%	1.1%
Over 3%-4%	0.6%	2.4%	0.8%	0.1%	4.0%	0.8%	0.2%
Over 4%-5%	0.8%	0.9%	0.5%	0.2%	1.8%	0.7%	0.3%
Over 5%-6%	0.5%	1.1%	0.9%	0.4%	2.6%	1.0%	0.9%
Total	5.1%	7.6%	2.8%	1.1%	19.3%	4.9%	3.1%

Source: Nikkei NEEDS
Calculations by NIER

The Size and Value of Listed Companies (excluding the Finance and Insurance Sector)

Yen trillion	Annual Corporate Enterprise Survey (A)	Non-listed Companies,		Listed Companies,		Listed 'Good' Companies		Listed 'Bad' Companies	
		Total*	Share of (A)	Total (B)	Share of (A)	Share of (B)	Share of (B)	Share of (B)	
Companies	2,548,399	2,545,025	99.9%	3,374	0.1%	3,207	95.0%	168	5.0%
Sales	1,435.0	910.4	63.4%	524.6	36.6%	478.6	91.2%	46.1	8.8%
Operating Profits	37.7	12.4	32.9%	25.3	67.1%	24.6	97.3%	0.7	2.7%
Shareholders' Equity	336.3	157.4	46.8%	178.9	53.2%	177.2	99.0%	1.7	1.0%
Interest Bearing Liabilities	556.3	330.0	59.3%	226.3	40.7%	194.7	86.1%	31.6	13.9%
Borrowings	484.1	325.8	67.3%	158.4	32.7%	129.0	81.4%	29.4	18.6%
Interest Payments	13.6	7.8	57.7%	5.7	42.3%	5.1	88.9%	0.6	11.1%
Employees (mil)	39.4	29.8	75.6%	9.6	24.4%	9.2	95.8%	0.4	4.2%
Capital Investment	38.9	11.3	29.0%	27.6	71.0%	27.1	98.0%	0.5	2.0%
Personnel Expenses	202.5	171.7	84.8%	30.8	15.2%	28.9	93.6%	2.0	6.4%
Operating Profits/Interest Bearing Liabilities	6.8%	3.8%		11.2%		12.6%		2.2%	
Shareholders' Equity/Interest Bearing Liabilities	60.5%	47.7%		79.1%		91.0%		5.5%	
Interest Payments / Interest Bearing Liabilities	2.4%	2.4%		2.5%		2.6%		2.0%	

*: (A)-(B)=Non-listed Companies

Source: Nikkei NEEDS, Annual Corporate Enterprise Survey by MOF
Calculations by NIER

Impact of Low Interest Rates on Interest Income in the Household Sector

(in trillion yen)

	FY90	FY99	(A)*	(B)**
a. Fixed Income Vehicles (cash & deposits and bonds)				
Interest receivable	31.6	9.6		
Outstanding assets	595.6	840.3		
Investment yield	5.3%	1.1%	44.5	34.9
b. Pension and Insurance				
Interest receivable	14.2	12.1		
Outstanding assets	211.3	383.6		
Investment yield	6.7%	3.2%	25.7	13.6

Estimated loss caused by low interest rates	48.5
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* Interest income that households could have gained if these assets had earned the same yield as in 1990.

** interest income vanished with low interest rates

Source: Cabinet office

30% Cut in Excess Labor and Equipment with a 6% Lending Rate (Savings Rate 5%, Y160/\$)

FY2000 (Yen trillion)

Sales	1,435
Added Value(A)*	318
Personnel Expenses(B)	203
Gross Profits (A)-(B)	116
Interest Payments	14
Depreciation	42
Current Profits	36
Shareholders' Equity	336
Interest Bearing Liabiliti	556
Total Assets	1,310
Employees (m)	39.4

→

1,435
306
142
164
23
29
87
235
389
917
27.6

△ 61

10

△ 12

51

△ 167

△ 11.8

◇Negative Effects

Decrease in Personal Income : 11.8m people × Y 5.1m (Income per person) = Y 60.2tr

Decrease in Personal Consumption : (Y 5.1m × 70%) × 11.8m people = Y 42.1tr

→ Y 3.6m (Consumption per person) → A

Withdrawal of Savings : Y 1.5m

+ Public Subsidies : Y 1.5m = Y 3.0m → B

→ Y 1.5m × 11.8m people = Y 17.7tr① (Total public subsidies)

● Net Decrease in Personal Consumption per Person (A - B) = Y 0.6m

→ Y 0.6m × 11.8m people = Y 7.1tr② (Net total decrease of personal consumption)

Decrease in Capital Investment : Y 35.8tr × 30% = Y 10.7tr

Increase in Capital Investment by healthy companies (+10%) : Y 35.8tr × 70% × 10% = Y 2.5tr

● Net Decrease in Capital Investment : Y 8.2tr③

● Interest Increase of Public Debt : Y 700tr × (6% - 3%) = Y 21tr④

	per Employee (Yen million)				Labor Share	Current Profits (Yen trillion)	Growth Rate (healthy company base)	Current Profits / Shareholders' Equity	After Tax Profits / Shareholders' Equity	Pre-Tax Profits / Total Assets	Interest Rate
	Sales	Added Value*	Personnel Expenses	Current Profits							
FY2000	36.4	8.1	5.1	0.9	63.6%	36		10.7%	6.4%	2.7%	2.4%
Case1**	52.0	11.1	5.1	3.1	46.4%	87	245.8%	36.9%	22.1%	9.5%	6.0%
Case2**	45.5	9.8	5.1	2.1	52.3%	68	135.9%	25.2%	15.1%	6.5%	5.0%
Case3**	40.5	8.9	5.1	1.4	58.0%	50	53.8%	16.4%	9.8%	4.2%	4.0%

*Added value including depreciation

**Case1: 30% cut in excess labor and equipment with a 6% interest rate

Case2 : 20% cut in excess labor and equipment with a 5% interest rate

Case3 : 10% cut in excess labor and equipment with a 4% interest rate

◇Positive Effects

● Increase in Current Profits : Y 50tr

● Increase in Corporate Tax Revenue : Y 50tr × 40% = Y 20tr⑤

● Increase in Interest Income : (Y 1,400tr - Y 400tr) × 5% = Y 50tr

● Increase in Withholding Tax : Y 50tr × 20% = Y 10tr⑥

● Increase in Personal Consumption (Propensity to Consume 80%) : Y 50tr × 80% × 80% = Y 32tr⑦

● Profits Increase due to Lower Yen (30% depreciation) : Y 57tr × 30% = Y 17tr

● Wealth Effect, The effects of elevated stock prices

◇Net Effects

Total Demand = Y 32tr - Y 7.1tr - Y 8.2tr = Y 16.7tr (3.3% of GDP)...(⑦- ② -③)

Fiscal Balance = Y 20tr + Y 10tr - Y 17.7tr - Y 21tr = -Y 8.7tr...(⑤+⑥ -① -④)

Source: MOF

Calculations by NIER