

Variance Evaluation
For the Financial Statements Statistics of Corporations by Industry
(Excluding Finance and Insurance)

1 Sample design for the Financial Statements Statistics of Corporations by Industry

The stratified sampling method is used for the Financial Statements Statistics of Corporations by Industry, in which enterprises are stratified into six strata based on the amount of paid-up capital, and then these strata are further classified into 45 groups by industry. The specific sampling methods are described below:

Amount of paid-up capital	Sampling method
10 million yen up to 20 million yen	Systematic sampling with equal probability
20 million yen up to 50 million yen	Systematic sampling with equal probability
50 million yen up to 100 million yen	Systematic sampling with equal probability
100 million yen up to 500 million yen	Systematic sampling with equal probability
500 million yen up to one billion yen	Complete enumeration
One billion yen or over	Complete enumeration

2 Computational method of standard error ratio

The following symbols are used in formulas for standard errors.

N : Population size y_i : Value of the i -th sample enterprise

n : Sample size \bar{y} : Sample mean $\frac{1}{n} \sum_{i=1}^n y_i$

$$\text{Standard error} = \left\{ N^2 \frac{n-1}{n} \sum_{i=1}^n (y_i - \bar{y})^2 \right\}^{1/2}, \quad \text{Standard error ratio} = \frac{\text{Standard error}}{N\bar{y}}$$

3 Standard error ratio (%)

April-June 2023	Total assets	Sales	Investment in P&E*
All Industries	1.1	1.4	2.0
Manufacturing	1.1	1.4	2.4
Non-Manufacturing	1.5	2.0	2.9

*Investment in P&E includes investment in software.

Notes: All Industries and Non-Manufacturing don't include Finance and Insurance.

Variance Evaluation
 For the Financial Statements Statistics of Corporations by Industry
 (Finance and Insurance)

1 Sample design for the Financial Statements Statistics of Corporations by Industry

The stratified sampling method is used for the Financial Statements Statistics of Corporations by Industry, in which enterprises are stratified into three strata based on the amount of paid-up capital, and then these strata are further classified into 11 groups by industry. The specific sampling methods are described below:

Amount of paid-up capital	Sampling method
10 million yen up to 100 million yen	Systematic sampling with equal probability
100 million yen up to one billion yen	Complete enumeration
One billion yen or over	Complete enumeration

2 Computational method of standard error ratio

The following symbols are used in formulas for standard errors.

N : Population size y_i : Value of the i -th sample enterprise

n : Sample size \bar{y} : Sample mean $\frac{1}{n} \sum_{i=1}^n y_i$

$$\text{Standard error} = \left\{ N^2 \frac{n-1}{n-1} \sum_{i=1}^n (y_i - \bar{y})^2 \right\}^{1/2}, \quad \text{Standard error ratio} = \frac{\text{Standard error}}{N\bar{y}}$$

3 Standard error ratio (%)

April-June 2023	Total assets	Investment in P&E*
Finance and Insurance	0.5	1.9

*Investment in P&E includes investment in software.