## TDB Trends Research (Research & Summary for January 2019)

# Domestic economy, signs of entering a recession phase

~ Affected by a slowdown in exports to China, etc., against the backdrop of US-China trade disputes  $\sim$ 

(Companies researched: 23,035; Valid responses: 9,856; Response rate: 42.8%; Survey start date: May 2002)

# < Overview of January 2019: Signs of entering a recession phase >

The economic diffusion index (DI) in January 2019 was 48.1, down 1.3 points from the previous month, and worsened for the second consecutive month. In addition to a slowdown in exports to China, the climate's tendency of unusually warm winters and a manpower shortage were also negative factors. As a result, the domestic economy has worsened and begun to show signs of entering a recession phase.

## < Future outlook: Uncertainty has intensified >

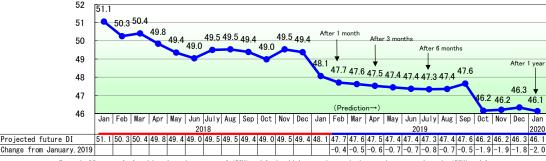
The future domestic economy is likely to be pushed downward due to growing risks centered around overseas, in addition to the consumption tax rate hike and increasing cost burden. Uncertainty has intensified further.

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By industry: All twelve business categories in "Manufacturing" worsened. with a significant drop of 2.1 points.

By size: "Large enterprises," "SMEs," and "small enterprises" all worsened for the first time in seven months.

By region: All ten regions worsened for the first time in two years and eleven months.



\*: Economic DIs are calculated based on the structural ARIMA model, in which economic statistics are incorporated to the ARIMA model

# Economic Diffusion Index (Economic DI)1/2

	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Ratio to the PrFDious Month
Total	51.1	50.3	50.4	49.8	49.4	49.0	49.5	49.5	49.4	49.0	49.5	49.4	48.1	<b>▲</b> 1.3
Large Firms		52.2	52.5	52.2	51.6	51.3	51.8	51.6	51.4	51.4	51.4	51.7	50.6	<b>▲</b> 1.1
Small to Medium-sized Firms	50.5	49.8	49.9	49.3	48.8	48.5	48.9	49.0	48.9	48.4	49.0	48.8	47.4	<b>▲</b> 1.4
Micro Firms	49.6	49.0	49.2	48. 1	48. 1	47.6	48.1	48.4	48.4	47. 9	48.2	48.2	47.0	<b>▲</b> 1.2

		Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Ratio to the PrFDious Month
Agriculture,Forest	Agriculture,Forestry,Fisheries		45.5	44. 4	43.5	44. 2	43.3	43.4	45.7	43.8	41.5	40.7	40.7	41.8	1. 1
Finance		49.6	48.0	50.3	49.4	47.8	47.2	49.5	47.5	48.5	46.2	47.1	46.5	46.1	▲ 0.4
Construction		54.0	53. 4	52. 9	51.4	51.8	51.9	52.8	53. 1	53.8	53.4	53.9	54. 1	53.9	▲ 0.2
Real Estate		52.3	52.1	53. 1	50.9	51.0	51.1	50.5	51.1	50.7	49.3	49.3	49.7	49.1	▲ 0.6
	Food,BEWerages,Livestock Feed	44.0	43.2	41.9	42.9	43.4	43.2	43.1	43.3	42.9	42.0	42.4	43.0	41.6	<b>▲</b> 1.4
	Textile, Textile Products, Clothing	39. 1	41.3	42.4	42.4	42.7	42.8	42.1	41.8	41.9	41.4	41.6	41.3	37.7	▲ 3.6
	Construction Materials, Furniture, Ceramics, Stone and Clay Products	46.8	46. 2	46.3	45. 7	45.8	45. 9	46.6	45.6	45. 2	46. 1	47.5	48.3	47.1	<b>▲</b> 1.2
	Pulp, Paper and Paper Products	46.6	44. 1	45.8	46.3	43.1	45.2	44.5	44.5	45.4	44. 3	46.5	49.3	44.6	<b>▲</b> 4.7
	Publishing, Printing	36.4	37.4	37. 1	36.2	36.3	33. 7	35.0	33.8	34.6	33. 2	34.8	35.0	33.5	<b>▲</b> 1.5
Manufacturing	Chemical	53.9	53. 2	53.8	52.3	51.8	51.6	52.2	51.3	51.4	50.4	51.4	50.2	48.1	<b>▲</b> 2.1
	Steel, Nonferrous Metals, Mining	57.6	55.6	55.6	53.7	53.5	53.3	54.1	54.2	52.8	53.0	54.4	52.5	50.4	<b>▲</b> 2.1
	General Machinery	62.4	62.0	61.2	60.9	60.6	60.3	60.7	59.9	59.1	58. 1	57.5	55.9	52.5	▲ 3.4
	Electrical Machinery	56.9	56. 5	54.8	54.9	53.4	53.4	52.8	52.0	53.3	52.9	52.5	50.5	49.2	<b>▲</b> 1.3
	Transportation Machinery, Equipment	57.9	56.6	59.8	57.6	58.4	57.3	56.6	58.7	58.3	56.9	56.4	53.8	52.3	<b>▲</b> 1.5
	Precision Machinery, Medical Instruments and Equipment	57. 4	56. 2	54.8	57.5	56.6	57. 2	55. 1	54.8	54. 3	53. 7	53. 4	54.0	51.3	<b>▲</b> 2.7
	Other	43.4	43.1	43.8	43.2	44.3	42.5	41.5	40.7	42.6	42.8	41.8	42.8	42.7	▲ 0.1
	Total	52.6	51.9	51.6	51.0	50.8	50.4	50.6	50.2	50.0	49.5	50.0	49. 2	47.1	<b>▲</b> 2.1
	Food,BEWerages	42.9	42.1	43.0	42.9	42.8	42.4	40.9	41.9	41.3	40.6	41.9	41.1	39.4	<b>▲</b> 1.7
	Textile, Textile Products, Clothing	37.2	35.5	37.2	37.2	36.8	37.3	35.9	37.3	35. 1	35.3	33.5	34. 3	34.0	▲ 0.3
	Construction Materials, Furniture, Ceramics, Stone and Clay Products	46. 2	44.9	44. 7	45.0	43.3	44. 4	44.8	44. 2	44. 8	43. 9	46. 9	47.8	47. 4	▲ 0.4
Wholesale	Paper Products, Stationery, Books	37.6	34. 9	36.8	38.0	37.5	36. 2	35. 4	36.6	36.9	36.5	38.1	39.3	37.9	<b>▲</b> 1.4
	Chemical	49.7	49.0	49.1	49.1	49.1	46.8	48.9	48.1	47.1	47.0	47.8	47.7	45.3	<b>▲</b> 2.4
	Recycled Resources	56. 2	51.0	51.9	49.5	46.6	50.6	48.2	51.2	47.8	49.4	44.0	47.6	39.8	<b>▲</b> 7.8
	Steel, Nonferrous Metals, Mining Products	53. 1	51.9	50.8	49. 7	48. 2	47.8	48.0	50.3	49. 2	49. 4	48.8	50.2	46. 3	▲ 3.9
	Machinery, Equipment	52.3	51.4	51.8	51.1	50.6	50.0	50.9	51.0	50.2	49.6	49.9	50.0	48.4	<b>▲</b> 1.6
	Other	43.9	42.8	43.8	45.4	43.4	43.3	43.2	42.4	42.4	43.4	44.0	43.9	41.9	<b>▲</b> 2.0
	Total	47.8	46.6	47.1	47.0	46.1	45.7	45.9	46.3	45.6	45.4	46.0	46.3	44. 4	<b>▲</b> 1.9

Economic	Diffusion	Index (	Economic	DI)2/2

		Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Ratio to the PrFDious Month
	Food,BEWerages	44.1	45.6	46.1	47.4	45.7	45.2	44.5	45.3	45.7	44. 4	45.5	42.8	43.4	0.6
	Textile, Textile Products, Clothing	41.0	38. 2	37. 3	38. 9	36. 7	32. 1	34.6	32. 7	30.6	32.7	31. 3	34.0	30.9	▲ 3.1
	Drugs,Sundries	46.4	45.7	47.2	44. 9	47.1	42.9	41.0	41.3	40.2	38. 4	42.4	44.4	44.8	0.4
	Furniture	43.9	35. 2	35.0	36.7	35. 2	38. 3	38. 3	37.0	37.0	37. 9	37. 5	35.4	38. 9	3.5
Retail	Electrical Household Appliances, Information Machinery and Equipment	41. 9	40. 4	45. 7	46. 5	40. 2	41. 9	45. 5	43. 7	42. 8	40.6	39. 7	43. 1	39. 0	<b>▲</b> 4.1
	Motor Vehicles, Motor Vehicle Parts	49. 2	47.8	48.3	48.2	43.5	42. 9	45.0	43.5	46. 1	40.8	41.5	42.2	44.6	2.4
	Special Merchandise	41.9	42.5	42.9	41.0	39. 7	39. 7	40.7	39. 1	39. 1	39.7	43.3	43.2	41.9	<b>▲</b> 1.3
	Various Merchandise	46.9	46.0	47.5	49.6	44. 1	44. 2	48.2	46.5	43.6	46.4	43.6	44.7	42.9	<b>▲</b> 1.8
	Other	50.0	43.3	41.7	36. 1	41.7	33. 3	36. 1	40.5	38. 9	41.7	38. 1	35. 7	35.7	0.0
	Total	44. 3	43.8	44.8	44.6	42.0	41. 3	42.7	41.7	41.6	40.9	42. 1	42.3	41.6	▲ 0.7
Transportation	on,Warehousing	50.7	49.6	50.5	50.0	49.3	48.7	50.3	50.3	49.5	48.7	50.1	50.5	49. 1	▲ 1.4
	Restaurants	45. 2	43.6	44. 2	44.7	45.0	42.5	42.7	42.5	39. 3	37.0	37.6	40.7	37. 9	▲ 2.8
	Postal, Telecommunications	56. 1	59. 1	57.7	56. 9	50.0	54. 5	55.6	55.0	56. 1	59.7	57. 1	54. 5	60.0	5.5
	Electricity,Gas,Water,Heat	60.4	58. 3	61.1	54. 2	56.3	57.4	56.3	57.4	59.3	56.7	57. 1	61.9	57.4	<b>▲</b> 4.5
	Leasing,Rentals	56. 9	56.0	56.0	55. 2	51.5	52. 9	54. 5	54. 2	55. 9	56. 5	57. 1	55.7	55.0	▲ 0.7
	Lodging, Hotels	46.9	48.7	52.0	51.7	50.6	50.0	45.2	46.6	43.6	41.0	45.5	45.7	44. 9	▲ 0.8
	Recreation	41.7	42.2	42.5	41.5	39. 5	40.9	39.8	40.0	39. 9	35. 5	40.6	39. 3	38. 9	▲ 0.4
	Broadcasting	47.6	47.4	47.0	39.7	37. 2	40.3	42.3	38. 5	41.7	40.5	40.0	36.7	40.5	3.8
Service	Maintenance, Guarding, Testing	51.5	50.7	51.1	49.9	50.2	48.5	50.5	52.3	51.8	51.4	51.6	50.7	50.7	0.0
	Advertising	46.1	42.3	43.4	44. 2	43.0	40.2	41.7	41.4	42.3	42.3	41.2	41.7	40.4	<b>▲</b> 1.3
	Information	59.4	58.8	58.6	59.4	58.4	58.8	58.7	59. 1	59.7	59.8	60.7	59.3	60.1	0.8
	Labor Dispatching	58.6	56. 5	57. 9	57.8	59.0	59. 1	59.3	59. 2	58.0	59.4	58.8	59.0	57. 2	<b>▲</b> 1.8
	Special Services	53.4	53. 1	54.3	53.6	53.7	54.6	54.8	55.3	53. 9	55.0	54.6	53.6	53. 5	▲ 0.1
	Medical, Welfare, Public Health	47.6	48.6	48. 1	48.8	48.0	46.8	46. 1	48.2	48.3	48.8	48. 3	47.4	47.5	0.1
	Education	45. 1	41.7	44. 2	42.4	42.8	40.6	42.6	46.5	46.4	43.8	43.5	46.2	38. 5	▲ 7.7
	Other	51.6	51.3	51.8	50.7	50.8	50.0	51.3	50.2	51.6	49.3	49.8	52.0	50.2	<b>▲</b> 1.8
	Total	53. 4	52. 7	53. 1	52.8	52. 1	52.0	52.4	52.8	52. 9	52. 9	53. 2	52.7	52.4	▲ 0.3
Other		47.8	47.9	50.8	49. 2	50.0	46.3	46. 1	45.0	46.3	46. 2	45.3	46.6	44. 1	<b>▲</b> 2.5

	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Ratio to the PrFDious Month
Hokkaido	47.8	45.7	46.6	46.2	45.8	46.5	46.6	47.5	44.3	43.9	45. 2	45. 2	43.9	<b>▲</b> 1.3
Tohoku	46.9	46. 1	46.4	45.7	45.0	44. 2	46.8	46.6	46.4	45.9	46.5	45. 4	44. 4	<b>▲</b> 1.0
kitakanto	52. 3	51.7	51.4	50.7	49.8	49.4	50.6	50.0	50.0	49.0	48.5	48.5	45.8	<b>▲</b> 2.7
minamikanto	51.8	51.0	51.5	50.7	50.3	50.2	50.3	50.0	50.4	49.8	50.4	50.1	49.0	<b>▲</b> 1.1
Hokuriku	49.7	47.7	48.5	48.7	48.5	48.7	49.4	49.8	49.3	49.4	49.3	48.6	47.7	▲ 0.9
Tokai	52.6	52.5	52. 3	51.9	51.9	50.9	51.6	51.8	51.4	51.3	51.8	51.8	50.1	<b>▲</b> 1.7
Kinki	51.1	50.3	50.0	49.7	48.8	48.4	48.6	49.4	48.9	48.8	49.7	49.7	48.4	<b>▲</b> 1.3
Chugoku	50.8	50.1	49.6	48.7	48.7	47.9	47.0	47.1	48.0	48.6	48.5	48.7	47.7	<b>▲</b> 1.0
Shikoku	49. 4	48. 5	48. 4	48. 2	47.8	47.2	47. 5	47.9	47.0	47.6	47. 2	48. 4	46.8	<b>▲</b> 1.6
Kyushu	51.7	51.8	51.7	51.4	50.4	49.8	50.9	50.6	50.8	49. 1	50.6	50.7	49.7	<b>▲</b> 1.0

# **Appendix**

# 1.Research Subjects(Companies Researched 23,035; Valid responses: 9,856; Response rate: 42.8%)

#### Appendix

#### 1.Region

Hokkaido	507	Tokai	1,072
Tohoku	622	Kinki	1,670
kitaKanto	733	Chugoku	553
minamikanto	3,163	Shikoku	290
Hokuriku	548	Kyushu	698
		Total	9,856

#### 2.Industry (10 Industries 51 Lines of business)

Agriculture, For	estry,Fisheries	58
Finance		12
Construction		1,460
Real Estate		299
	Food,Beverages,Livestock Feed	308
	Textile, Textile Products, Clothing	111
	Construction Materials, Furniture, Ceramics, Stone and Clay Products	215
	Pulp, Paper and Paper Products	98
	Publishing, Printing	172
Manufacturing	Chemical	398
3,223	Steel, Nonferrous Metals, Mining	479
	General Machinery	428
	Electrical Machinery	32
	Transportation Machinery, Equipment	98
	Precision Machinery, Medical Instruments and Equipment	78
	Others	94
	Food, Beverages	337
	Textile, Textile Products, Clothing	187
	Construction Materials, Furniture, Ceramics, Stone and Clay Products	326
Wholesale	Paper Products, Stationery, Books	94
3,959	Chemical	258
	Recycled Resources	31
	Steel, Nonferrous Metals, Mining Products	300
	Machinery, Equipment	878
	Others	330

	Motor Vehicles, Motor Vehicle Parts	62
	Special Merchandise	128
	Various Merchandise	42
	Others	7
[ransportation	n, Warehousing	445
	Restaurants	44
	Telecommunications	10
	Electricity,Gas,Water,Heat	9
	Leasing, Rentals	107
	Lodging, Hotels	26
	Recreation	51
Service	Broadcasting	14
1,384	Maintenance,Guarding,Testing	159
	Advertising	95
	Information	431
	Labor Dispatching	53
	Special Services	244
	Medical,Welfare,Public Health	101
	Education	26
	Others	151

Total

Electrical Household Appliances, Information Machinery and Equipment

Textile, Textile Products, Clothing

Drugs,Sundries

Retail

#### 3.Size

	Large Firms	1,980	20.1%
8	Small to Medium-sized Firms	7,876	79.9%
	micro Firms	2,623	26.6%
	Total	9,856	100.0%

9,856

63

27

16

35

#### 2.Research Items

\*Business Confidence (current, in 3 months, in 6 months, in 1 year)

\*Business Conditions (sales, purchasing and selling unit price, inventory, capacity utilization ratio, number of employees, overtime work hours)

# 3. Research Period and Methodology

Internet-based survey conducted January 18 – 31 2019

# The explanation of the Economic Diffusion Index

## **Research Purpose/Researched Terms**

TDB Economic Trend Research (started from May 2002) is a monthly statistical survey conducted for over 20,000 nationwide corporations on their general business activities including the current condition and future outlook of the industry business performance and operating climate. The primary purpose of such a survey is to assess the current state of Japan's economy.

# **Selection of the Subject Corporations**

Companies of all sizes in all domestic industries are eligible to participate in the survey.

#### **DI Calculation**

The DI (Diffusion Index) is calculated by multiplying the number of responses for each assessment category by the number given in parentheses in the table below, to a seven-level assessment rated by companies.

Selection category	Extremely good	good	fairly good	neither good nor bad	fairly bad	bad	very bad
points	6	5	4	3	2	1	0
number of responses for each category	$N_6$	$N_5$	N <sub>4</sub>	$N_3$	$N_2$	$N_1$	$N_0$

#### Economic DI

$$= \frac{\text{Total of (Points for each category} \times \text{Number of responses for each category})}{\text{Number of valid responses} N} \times \frac{1}{6} \times 100$$

$$\equiv \frac{\sum_{i=0}^{6} i \times N_i}{N} \times \frac{1}{6} \times 100$$

An economic DI of 50 is <u>the point separating good and bad</u>, so a DI over 50 means "good," and below 50 means "bad." (The numbers are rounded off to one decimal place.) No weight is given according to a company's size, and calculations are made on the basis of "one company, one vote."

#### **Size Classification**

Industry	Large Firms	Small to Medium-Sized Firms (Micro Firms included)	Micro Firms
Manufacturing and	Capital: More than 300 million yen	Capital: Below 300 million yen	No. of Fourteeness Balance 00
Other Industries*	and No. of Employee: Over 300	or No. of Employee: Below 300	No. of Employee: Below 20
Wholesale Trade	Capital: More than 100 million yen and No. of Employee: Over 100	Capital: Below 100 million yen or No. of Employee: Below 100	No. of Employee: Below 5
Retail Trade	Capital: More than 50 million yen and No. of Employee: Over 50	Capital: Below 50 million yen or No. of Employee: Below 50	No. of Employee: Below 5
Service**	Capital: More than 50 million yen and No. of Employee: Over 100	Capital: Below 50 million yen or No. of Employee: Below 100	No. of Employee: Below 5

Note1: Large Firms refer to companies that rank in the top 3% in terms of sales volume according to the type of business, among small to midium-sized corporations excluding micro firms, which are defined in Small and Medium Enterprises Basic Act.

Note2: Small to Medium-Sized Firms refer to companies that rank in the bottom 50% in terms of sales volume according to the type of business, among those not categorized as small to midium-sized corporations in Small to Medium-Sized Enterprises Basic Act.