NEWS RELEASE

Aozora Bank & Sophia University Joint Research;
One year since start of research on Senior Consumption Index
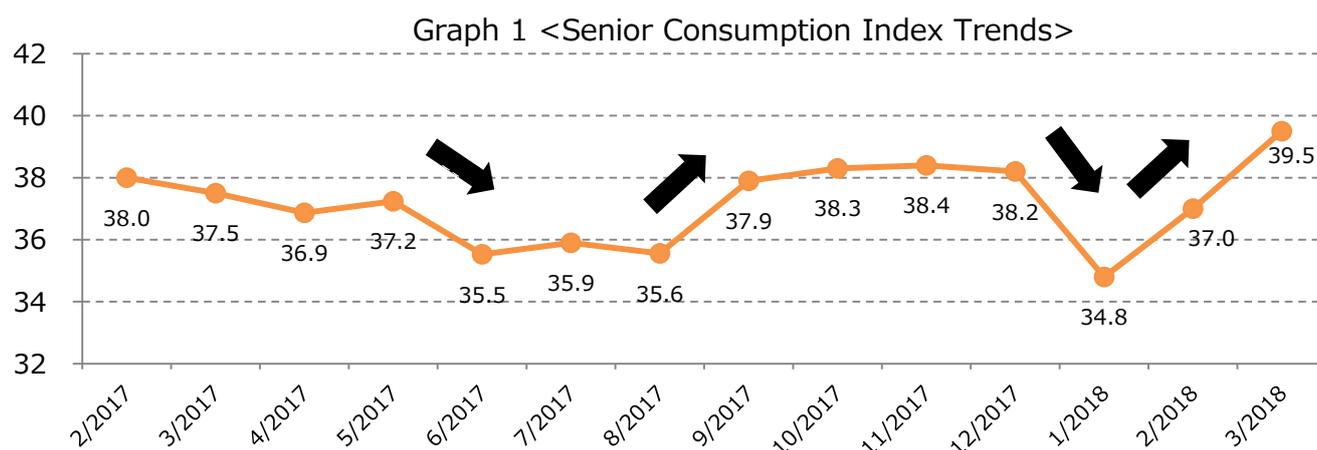## ～Consumer Confidence Stronger in March 2018～

Aozora Bank, Ltd. (President and CEO: Shinsuke Baba; Head Office: Chiyoda-Ku, Tokyo) and Sophia University (President: Yoshiaki Terumichi; Chiyoda-Ku, Tokyo) have been working together since February 2017 to create an index that tracks senior consumer trends and their willingness to purchase goods and services. The index derived from this research is entitled the "Aozora-Sophia Senior Consumption Trend Index" (hereafter referred to as the "Senior Consumption Index"). This research is being conducted to provide a basic reference for senior market trends in industries such as travel, distribution, retail, health services, food and household electric appliance manufacturing. Now, 14 months after the research project first began, Aozora Bank and Sophia University have released the index trends from February 2017 ~ March 2018 and year-on-year comparisons for February and March.

1. Summary of Senior Consumption Index for February 2017 ~ March 2018
- **Senior Consumption Index reached a record high of 39.5 in March 2018**

～Consumption trend weakened in the summer and early in the year, rose at the year's end～

★From February to May 2017, the senior consumption index was weak but remained relatively stable; however, it fell 1.7 points in the early summer starting in June and continued at that low level throughout July and August. In September, the index rose 2.3 points, and the period from October to December saw the index surpass its summer levels by almost 3 points. While the beginning of 2018 marked a record low of 34.8, the index climbed to 37 points in February and then 39.5 in March; a record high since the study began. However, this is still lower than the baseline value of 50 (the standard level where senior consumption confidence is neither strong nor weak), and the low consumer confidence level among seniors indicated at the beginning of the study still continues. The index values for the period of February 2017 ~ March 2018 (original series) are shown below. (Graph 1)

Graph 1 <Senior Consumption Index Trends>

Month	Value
2/2017	38.0
3/2017	37.5
4/2017	36.9
5/2017	37.2
6/2017	35.5
7/2017	35.9
8/2017	35.6
9/2017	37.9
10/2017	38.3
11/2017	38.4
12/2017	38.2
1/2018	34.8
2/2018	37.0
3/2018	39.5

Points of Caution and How to Read the "Aozora Sophia Consumption Index"

The baseline for the Senior Consumption Index is 50 and any value higher or lower than this baseline indicates strong or weak consumption trends. In order to improve accuracy, the difference between survey samples and population composition has been adjusted by post-stratification using national census data. However, the currently released index values are from the pre-seasonal adjustment original series and are offered as a preliminary estimate with the likelihood of retroactive revision after seasonal adjustment, elimination of outliers and confirmation of some time series data related to consumer consumption. The term "original series" refers to index data that has not undergone seasonal adjustment.

Table 1 <Items Selected as Factors Having Impact on Customer Behavior>

Senior Consumption Index	2017											2018		
	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Aozora/Sophia Senior Consumption Index	38.0	37.5	36.9	37.2	35.5	35.9	35.6	37.9	38.3	38.4	38.2	34.8	37.0	39.5
1. Want to spend more money next month	36.43	35.53	33.81	33.05	32.55	34.32	32.33	33.69	35.70	40.77	36.50	31.37	34.93	38.17
2. Expect more expense next month	52.65	52.19	52.02	49.53	48.73	52.57	45.87	49.21	51.89	64.88	55.78	47.18	52.07	54.05
3. Plan to travel within 3 months	51.37	50.87	51.02	50.79	47.53	48.48	50.20	52.63	51.22	43.87	46.54	47.59	51.35	56.21
4. Intend to increase spending on leisure/hobbies	41.08	41.64	41.55	41.11	39.46	40.01	39.25	42.74	40.97	38.72	41.89	38.35	40.04	44.15
5. Plan to go out with friends within 1 month	47.66	44.47	44.98	46.28	45.37	39.66	42.62	49.15	49.55	45.46	46.69	44.52	44.61	48.34
6. Want to increase spending on hobbies next month	39.22	39.36	37.36	38.36	36.26	35.90	37.32	37.54	38.10	36.86	38.04	34.63	37.83	40.20
7. Good timing to buy durable goods	30.54	30.45	29.31	29.90	28.83	28.29	30.84	31.78	31.75	30.97	33.37	29.21	31.14	32.26
8. Intend to increase spending on cleaning & house keeping services	14.22	13.68	13.10	13.67	13.80	14.29	13.63	14.07	14.43	14.66	15.19	13.26	13.68	12.98
9. Intend to buy new clothes within a month	32.14	33.22	33.42	35.90	31.29	32.56	31.68	34.33	35.31	33.74	34.13	30.54	31.32	34.30
10. Want to eat out more next month	34.74	33.59	32.17	33.84	31.50	32.88	31.90	34.09	33.72	34.18	33.82	30.85	32.57	34.73

*The numbers in the table are post-stratification averages.

- **1 year since the study began: calculation of year-on-year comparison.**
  ～YOY of February 2018 is -1.0, YOY of March 2018 is +2.0～
  ★February 2018 marks 1 full year since research on the index first started in February 2017. The index fell 1.0 points during this period (YOY) but climbed 2.0 points during the period of March 2017 and March 2018. In particular, consumer confidence for item 3 (Plan to travel within the next 3 months) and item 7 (Good timing to purchase durable goods such as long use items like furniture and electric appliances) showed improvement. Compared to the same period in the previous year, consumer confidence for going out/replacement purchases is rising. (Table 1)

- **The causes for the decline in June, July, and August differ depending on the month. Everyday consumption was high at year's end, while motivation to purchase luxury items was strong in March 2018**
  ～Consumption declined in summer: "going out"/"purchase of durable goods" in July and "overall consumption" in August～
  ★Looking at each item used to compile the senior consumption index, those that have the lowest score in July 2017 are item 5 (Plan to go out with friends within the next month) and item 7 (Good timing to purchase durable goods). In August, overall consumer confidence was low as seen in the response to item 2 (Expect more expenses next month). This indicates that the cause of weak consumer motivation from June to August is not due to any one particular item but by declines across various alternating factors. (Table 1)

  ～Overall consumption was the driving force from October to December～
  ★Meanwhile, in November 2017, response to item 1 "Want to spend more money next month" and item 2 "Expect more expenses next month" reached a record annual high in overall consumption. In particular, figures for item 2 largely exceeded the baseline of 50 at 51.89 for October, 64.88 in November, and 55.78 in December, indicating strong consumer confidence. In addition, in December, items 7 (Good timing to purchase durable goods) and 8 (Intend to increase spending on cleaning & house keeping services), which has consistently maintained the lowest levels out of all items, both improved to 33.37 and 15.19 respectively. Although the figures are still low in terms of absolute value, these record high values contributed to securing the high level from October to December. (Table 1)

  ～Reaction to end-of-the-year consumption leads 5 out of 10 items to fall to all time low～
  ★Despite strong consumer confidence towards the year's end, responses in January 2018 for half of all 10 items, item 1 (Want to spend more money next month), item 4 (Intend to increase spending on leisure and hobbies), item 6 (Want to increase spending on hobbies next month), item 9 (Intend to buy new clothes within the month), item 10 (Want to eat out more next month), all marked an all time low due to a rebound effect from the strong consumer confidence in the previous months. (Table 1)

  ～Consumption of luxury items such as Travel/Leisure/Hobbies in March 2018～
  ★In addition to the overall increase of consumer confidence in February 2018, responses to items 3 (Plan to travel within the next 3 months), 4 (Intend to increase spending on leisure and hobbies) and 6 (Want to

increase spending on hobbies next month) all posted record highs, indicating an increased confidence regarding luxury goods. (Table 1)

2. Correlation between Actual Consumer Spending and Index

- **Positive correlation with Ministry of Internal Affairs and Communications' Statistic Bureau's "Family Income and Expenditure Survey" (correlation coefficient 0.44)**
  ～Senior consumption index shows actual household expenditure of seniors over 65 years～
  ★An analysis of the correlation between the senior consumption index and the actual consumer spending trends released in the "Family Income and Expenditure Survey" (Statistic Bureau, Ministry of Internal Affairs and Communications) was conducted. This was done by analyzing the most recent results from the "Family Income & Expenditure Survey" of the household expenditures of respondents over 65 years of age that were polled starting when the senior consumption index study began in February 2017 up until January 2018.
  ★The result was that the correlation coefficient between the senior consumption index and the "Family Income & Expenditure Survey" was 0.44. This correlation is not strong, but positive, and shows that the senior consumption index reflects actual household consumer spending trends of seniors over 65 years of age. Furthermore, correlation with items within the consumer confidence survey that were used as the basis of the senior consumption index, like those directly addressing overall spending such as item 1 (Want to spend more money next month) and item 2 (Expect more expenses next month), is quite high at 0.92 and 0.94, respectively. (Table 2)

<Statistic Bureau, Ministry of Internal Affairs and Communications "Family Income and Expenditure Survey" (From Ministry of Internal Affairs and Communications website)>
9,000 households nationwide are selected through a statistical sampling method and a monthly survey on household income, expenditure, savings, loans etc. is conducted. The results of the survey are acquired by obtaining understanding and responses from members of these households and are used as basic reference for understanding business trends, reviewing standards for social aid, and determining the criteria and weighting of the consumer price index. These results are used by local governments, private businesses, research institutions and labor unions.

Table 2 <Family Income & Expenditure Survey (consumer spending) Correlation Coefficient>

Category	Correlation Coefficient
Senior Consumption Index	0.44
1.Want to spend more next month	0.92
2.Expect more expense next month	0.94

<Correlation Coefficient Calculation Methods>
Calculated the correlation between the change in Senior Consumption Index value and change in the Family Income and Expenditure survey results from one month after the index value had been calculated.
Subject period: February 2017 ~ January 2018

3. Other
- **Example of Businesses Using the Senior Consumption Index**
  ～ARATA Corporation uses Senior Consumption Index in the field～
  ★As of February 2018, the ARATA Corporation (listed on the First Section of the Tokyo Stock Exchange), an everyday sundries wholesaler, has started using the "Aozora/Sophia Senior Consumption Index" to measure senior consumer confidence in sales negotiations. Salespeople who have used the index have commented that, "Senior consumption is an interesting topic that is useful not only in sales negotiations but also as general knowledge" and "The index will become a good reference material since the proportion of seniors will increase in the future". User opinion will be gathered for use in review, analysis and improvement of survey items.

<ARATA Corporation>
The nation's largest wholesaler of everyday sundries and cosmetics. A breakdown of sales (accumulated total in March 2018 2Q) shows that 47.8% of all sales are made to drug stores and 17.0% to hardware stores, a total of over 60%. The company's main subsidiaries are Japell Co., Ltd., the industry's leading pet related commodities wholesaler and Fashion Arata, a cosmetics/health & beauty sundries wholesaler. ARATA Corporation is also expanding their business into China and Thailand.

About Aozora Bank and Sophia University

  Aozora Bank has entitled Japan's energetic and active senior generation, mainly comprised of people in their sixties, as the "Brilliant 60's" and is committed to supporting their active lifestyles through providing asset management consulting services.
  Sophia University is focused on gaining a better understanding of the actions and the underlying reasons for behavior of senior citizens as a basis for researching how senior citizens may lead happier lives.
The index, specializing in consumer sentiment/trends of seniors, is believed to be the first of its kind in Japan.

Other Aozora Bank ✕ Sophia University Collaboration Projects

  Aozora Bank relocated its head office to the Sophia Tower inside the Sophia University campus in May 2017. In addition to this joint research, the bank and the university are collaborating on various projects such as the Economics Department working with the bank to offer a course on Finance.

★Coordinated Course ″Basic Banking Seminar″
  Officers and employees of Aozora Bank make use of their abundant experience and hands-on expertise to offer practical lectures on finance. The course was developed to support students at Sophia University, known for its highly globalized education, to improve their financial literacy.

In addition, Aozora Bank also offers an experience based learning internship program for Sophia University students.

End

Media Inquiries To:

Aozora Bank, Business Strategy Division	Goto	03-6752-1217
Sophia University, Office of Faculty of Economics	Arai	03-3238-3203

Attachment: Developing the "Aozora Sophia Senior Consumption Trend Index"

Aozora Bank and Sophia University agreed to conduct a joint research in July 2016 and developed the "Aozora-Sophia Senior Consumption Trend Index" (hereafter referred to as the "Senior Consumption Index"). In preparation for developing the index, started in August 2016, many on-line and interview surveys were conducted. Research conducted on expenditure trends and the intent to increase expenditures in the near future is expected to be a promising reference point, serving as a leading indicator for industries targeting the senior generation such as travel, distribution, health services, food and electronic appliance manufacturers businesses.

1. Process of Developing the Senior Consumption Trend Index

- **In-depth interview regarding the lifestyles and values of the senior generation (August 8 ~ October 2016)**
  - ★The Faculty of Human Science's Psychology Department at Sophia University conducted one-on-one in-depth interviews lasting 1.5 to 2 hours with Aozora Bank customers (12 male & female seniors in their 60's & 70's) and obtained firsthand perspectives on the lifestyles and values of the senior generation.

- **A questionnaire comprised of 75 items was compiled based on the results of the interview survey. Two preparatory questionnaire surveys were conducted. (November ~ December 2016)**
  - ★Based on the firsthand opinions obtained in the interviews, the Faculty of Economics at Sophia University compiled a 75 item questionnaire on senior consumption behavior.
  - ★To narrow down the items for the questionnaire, two preparatory surveys were conducted under the supervision of the Faculty of Economics of Sophia University. (First survey: 200 respondents, second survey: 1,000 respondents)
  - ★The two preparatory surveys were conducted online.

- **Analyzed important factors from the results of the preparatory surveys. Determined 22 items for the main survey. (January 2017)**

- **Conducted a fixed point survey with the 22 selected items on 1,000 men and women in their 60's and 70's. (main survey)**
  Selected 10 items that best reflect consumer behavior for use in calculating the index.
  (Conducted on monthly basis since February 2017)
  - ★Conducted survey every month, using the selected 22 items as the main survey, on 1,000 seniors (men & women in their 60's and 70's).
  - ★Out of the 22 items in the attitude survey, 10 items selected based on factors affecting consumer behavior were then used to calculate the Senior Consumption Index. The main survey was also conducted online.
  - ★A Diffusion Index (DI), in which the 5 response options for each survey item were converted into a numerical value, was used to gather the statistics.
  - ★Going forward, the survey will be conducted with 1,000 seniors on the 4th Friday of every month, in principal. Index results will be released the following month.

<Summary of Development Process>

	Period	Details	Sophia University Faculty in Charge
I	August–October 2016	■In-depth interview on the lifestyles/values of senior generation	Faculty of Human Science
II	November - December 2016	■Develop 75 items for questionnaire from interview ■Conduct online preparatory survey	Faculty of Economics
III	January 2017	■Determine 22 items for main survey based on factor analysis on preparatory survey	
IV	February 2017~	■Monthly online administration of main survey ■Develop method to calculate Senior Consumption Index (adopt 10 items to derive index)	

2．Professors in Charge of Research (Sophia University)

Name	Title/Field of Study
Mitsuru Hisata	Professor, Department of Psychology, Faculty of Human Sciences Field of Expertise:　Community Psychology, Clinical Psychology
Noriko Arai	Professor, Department of Management, Faculty of Economics Field of Expertise:　Consumer Behavior Analysis, Marketing
Asuka Takeuchi	Associate Professor, Department of Economics, Faculty of Economics Field of Expertise:　Statistics, Empirical Analysis of Volatility

End