

## Monitoring on Japanese markets

### Abstract:

This document, which is an updated version of CCSBT-CC/0810/21, provides results of the market monitoring, including the monthly monitoring of the Tsukiji Market. By inputting the updated market information into the methodology used in the Independent Review of Japanese SBT Market Data Anomalies (JMR) report, the estimated domestic catch based on the domestic market information was calculated. Consequently, it is concluded that differences is negligible between the estimated domestic catch and reported domestic catch.

### 要旨:

本ドキュメントは、CSBT-CC/0810/21 をアップデートしたものであり、築地市場における毎月のモニタリングを含む、市場モニタリングの結果を提供するものである。ミナミマグロ資本市場データの不調和に関する独立レビュー（JMR）報告書が用いている方法に、市場に関する最新の情報を入力して、市場情報に基づく推定国内漁獲量を算出した。その結果、市場情報に基づく推定国内漁獲量と報告漁獲量の差は無視できるものと結論づけられる。

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### **1. Background:**

Japan changed its domestic regulations for SBT fisheries in April 2006. The new domestic regulations include 100% landing inspection by government officials, establishment of 8 designated ports for SBT landing, tagging requirement for individual SBT caught, and prohibition of selling or buying illegally caught SBT. These regulations are strong enough to ensure the accuracy of Japan's reported catch; nonetheless, Japan has been conducting the market monitoring and presenting its results (i.e. CCSBT-CC/0810/21) to the CCSBT in order to provide further assurance regarding domestic SBT fisheries management.

Furthermore, at the CCSBT 15, "Australia and Japan expressed their intention to work for improvement of monitoring of Japanese wholesale markets and Australian SBT farming operations and report back the results to the 16th Extended Commission Meeting. The Extended Commission welcomed this cooperative initiative. Members agreed on the need to work cooperatively in order to clarify the actual global SBT catch to the greatest extent possible." (See paragraph 17 and 18 of the CCSBT 15 report)

### **2. Market information and methodology used in this document:**

#### (1) In-Market Frozen Farmed SBT:

Japan obtained updated information on in-market frozen farmed SBT between 2005 and 2008 from wholesalers in the Tsukiji Market. The following ratio, which is based on the information from the

wholesalers, is used to estimate domestic catch based on information from the domestic market in this document.

| Year | Ratio                                     |
|------|---|
| 2005 | 12.66% (Information from the wholesalers) |
| 2006 | 15.50% (Information from the wholesalers) |
| 2007 | 32.37% (Information from the wholesalers) |
| 2008 | 35.64% (Information from the wholesalers) |
| 2009 | 35.64% (same as for year 2008)            |

(2) In-Market Frozen Wild imported SBT:

Japanese government officials and scientists have been visiting the Tsukiji market once a month since December 2007 in order to obtain information on (a) time lag of SBT caught by Japanese longline vessels between catching and selling at the market and (b) in-market frozen wild imported SBT. Japanese government officials and scientists visit the Tsukiji market around 4 AM on Friday once a month. It has been decided to conduct this monitoring on Friday, because the volume of SBT sold at the Tsukiji market on Friday is generally larger than on any other days of week. Detailed results of the monthly monitoring of the Tsukiji Market are described in Attachments 4 and 5. Attachment 4 shows the ratio of domestic and imported frozen wild SBT, and the following ratio is used to estimate domestic catch based on information from the domestic market in this document.

| Year | Ratio   |
|------|---|
| 2005 | 5% (same as for the JMR report)                                     |
| 2006 | 12.02% (Linear interpolation with 2005, 2007, 2008, and 2009 ratio) |
| 2007 | 16.85% (Information from the monitoring at the Tsukiji Market)      |
| 2008 | 30.48% (Information from the monitoring at the Tsukiji Market)      |
| 2009 | 37.89% (Information from the monitoring at the Tsukiji Market)      |

(3) Time lag of SBT caught by Japanese longline between catching and selling at fish market:

The tagging requirement for individual SBT when caught enables a direct calculation of the time between capture by Japanese longline vessels and sale at the market. The first results using this approach were given last year's Extended Scientific Committee meeting (CCSBT-ESC/0809/40). However, the first results were based on relatively few data (829 individual tag data), and the continuing monthly monitoring has provided a much larger data (1859 individual tag data). The results shown in Appendix 5 are based on the larger data and more reliable than those provided last year. The following formula, which is based on the larger data, is used to estimate domestic catch based on information from the domestic market in this document.

$$\text{SBT distributed (sold) Market Year (i)} = 0.1\% \text{ caught in year (i-3)} + 7.7\% \text{ caught in year (i-2)} + 66.8\% \text{ caught in year (i-1)} + 25.4\% \text{ caught in year (i)}$$

## (4) Double counting ratio for 2006-2009:

This document uses average double-counting ratio from 2003 to 2005 in the JMR report (Case 1=11.82%, Case 2=4.35%) for 2006 to 2009.

|      |                | Case 1        | Case 2       |
|------|----------------|---------------|--------------|
| Year | 2003           | 11.80%        | 4.54%        |
|      | 2004           | 12.27%        | 4.44%        |
|      | 2005           | 11.39%        | 4.06%        |
|      | <u>Average</u> | <u>11.82%</u> | <u>4.35%</u> |

## (5) Details of calculation:

Regarding other factors, such as off-market domestic wild SBT, this document uses the methodology which has been used in the JMR report. Details of calculation are included in Attachments.

**3. Result and conclusion:**

By inputting the abovementioned updated market information into the methodology used in the JMR report, the estimated domestic catch based on the domestic market information was calculated. Consequently, it is concluded that differences is negligible between the estimated domestic catch and reported domestic catch.

|  | 2005   |        | 2006   |        | 2007   |        | 2008   |        |
|--|--------|--------|--------|--------|--------|--------|--------|--------|
|  | Case 1 | Case 2 | Case 1 | Case 2 | Case 1 | Case 2 | Case 1 | Case 2 |
| 1. Estimated domestic catch based on domestic market information<br>(See Attachment 1, whole weight) | 8,554  | 9,419  | 5,059  | 5,669  | 3,186  | 3,630  | 2,925  | 3,341  |
| 2. Reported domestic catch including NZ/Japan Joint Venture<br>(whole weight)                        | 7,942  | 7,942  | 4,312  | 4,312  | 3,054  | 3,054  | 3,152  | 3,152  |
| 3. Differences (1.-2.)   | 612    | 1,477  | 747    | 1,357  | 132    | 576    | -227   | 189    |

Note: Following the CCSBT Rules of Procedure 10.8, the release of this document outside the CCSBT shall be restricted.

## Attachment 1

Calculation of Japanese domestic LL SBT catch by year using catch/market lag formula

See attachment 5: SBT distributed (sold) Market Year (i) = 0.1% caught in year (i-2) + 7.7% caught in year (i-3) + 66.8% caught in year (i-1) + 25.4% caught in year (i)

### Case 1 (Double Count 11.82%)

| Market Year (i)                | Total domestic caught SBT distributed in Japan and exported (see attachment 2) |
|--------------------------------|--|
| 2005                           | 10,686   |
| 2006                           | 8,265  |
| 2007                           | 4,096  |
| 2008                           | 2,868  |
| 2009 (Estimated)               | 2,949  |
| 2010 (tentative, same as 2009) | 2,949  |

| i-3 (0.1%) | Year of Catch | i-2 (7.7%) | Year of Catch | i-1 (66.8%) | Year of Catch | i-0 (25.4%) | Year of Catch |
|------------|---------------|------------|---------------|-------------|---------------|-------------|---------------|
| 11         | 2002          | 823        | 2003          | 7,139       | 2004          | 2,714       | 2005          |
| 8          | 2003          | 636        | 2004          | 5,521       | 2005          | 2,099       | 2006          |
| 4          | 2004          | 315        | 2005          | 2,736       | 2006          | 1,040       | 2007          |
| 3          | 2005          | 221        | 2006          | 1,916       | 2007          | 728         | 2008          |
| 3          | 2006          | 227        | 2007          | 1,970       | 2008          | 749         | 2009          |
| 3          | 2007          | 227        | 2008          | 1,970       | 2009          | 749         | 2010          |

### Estimate of Japanese domestic Longline catch using catch/market lag formula

| Year | Total domestic caught SBT distributed in Japan and exported (see attachment 2) |
|------|--|
| 2005 | 8,554  |
| 2006 | 5,059  |
| 2007 | 3,186  |
| 2008 | 2,925  |

### Case 2 (Double Count 4.35%)

| Market Year (i)                | Total domestic caught SBT distributed in Japan and exported (see attachment 2) |
|--------------------------------|--|
| 2005                           | 11,712   |
| 2006                           | 9,107  |
| 2007                           | 4,641  |
| 2008                           | 3,276  |
| 2009 (Estimated)               | 3,368  |
| 2010 (tentative, same as 2009) | 3,368  |

| i-3 (0.1%) | Year of Catch | i-2 (7.7%) | Year of Catch | i-1 (66.8%) | Year of Catch | i-0 (25.4%) | Year of Catch |
|------------|---------------|------------|---------------|-------------|---------------|-------------|---------------|
| 12         | 2002          | 902        | 2003          | 7,824       | 2004          | 2,975       | 2005          |
| 9          | 2003          | 701        | 2004          | 6,083       | 2005          | 2,313       | 2006          |
| 5          | 2004          | 357        | 2005          | 3,100       | 2006          | 1,179       | 2007          |
| 3          | 2005          | 252        | 2006          | 2,188       | 2007          | 832         | 2008          |
| 3          | 2006          | 259        | 2007          | 2,250       | 2008          | 855         | 2009          |
| 3          | 2007          | 259        | 2008          | 2,250       | 2009          | 855         | 2010          |

### Estimate of Japanese domestic Longline catch using catch/market lag formula

| Year | Total domestic caught SBT distributed in Japan and exported (see attachment 2) |
|------|--|
| 2005 | 9,419  |
| 2006 | 5,669  |
| 2007 | 3,630  |
| 2008 | 3,341  |

## Attachment 2

Calculation of total Japanese (Domestic) wild SBT distributed in Japan and exported from 2005 to 2009 (Metric Tones) using methodology from the Independent Review of Japanese SBT Market Anomalies Report (JMR)

|  | (Unit: MT) |        |           |        |           |        |           |        |           |        |        |        |
|--|------------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|--------|--------|
|  | Year 2005  |        | Year 2006 |        | Year 2007 |        | Year 2008 |        | Year 2009 |        |        |        |
|  | Case 1     | Case 2 | Case 1    | Case 2 | Case 1    | Case 2 | Case 1    | Case 2 | Case 1    | Case 2 | Case 1 | Case 2 |
| A. Tokyo Market amount   | 7,648      | 7,648  | 6,722     | 6,722  | 4,543     | 4,543  | 3,974     | 3,974  | 4,650     | 4,650  | 629    | 629    |
| B. Yaizu market amount   | 946        | 946    | 756       | 756    | 575       | 575    | 613       | 613    | 629       | 629    | 629    | 629    |
| 1. Total In-Market Frozen SBT (MW) = (A+B)/0.79 (Estimate using 2005 Tokyo and Yaizu auction sales 79% of total Japanese auction sales, see page 47 of JMR report) | 10,878     | 10,878 | 9,466     | 9,466  | 6,479     | 6,479  | 5,806     | 5,806  | 6,681     | 6,681  | 6,681  | 6,681  |
| 2. In-Market Frozen Farmed SBT   | 1,377      | 1,377  | 1,467     | 1,467  | 2,097     | 2,097  | 2,069     | 2,069  | 2,381     | 2,381  | 2,381  | 2,381  |
| 3. Double Count: Case 1=11.82%, Case 2=4.35%   | 1,240      | 442    | 1,119     | 412    | 766       | 282    | 686       | 253    | 790       | 790    | 291    | 291    |
| 4. In-Market Frozen Wild Imported SBT = (1.-2.-3) x (Info in Attachment 4)   | 413        | 453    | 827       | 912    | 609       | 691    | 930       | 1,062  | 1,330     | 1,330  | 1,519  | 1,519  |
| 5. Tokyo Fresh Domestic SBT (Est. Same figure as for JMR 2005)   | 1          | 1      | 1         | 1      | 1         | 1      | 1         | 1      | 1         | 1      | 1      | 1      |
| 6. In-Market Domestic Wild Frozen SBT = 1.-2.-3.-4.-5.   | 7,847      | 8,605  | 6,052     | 6,674  | 3,006     | 3,408  | 2,120     | 2,421  | 2,179     | 2,179  | 2,489  | 2,489  |
| 7. Off-Market Domestic Wild SBT = 6./85%x15% (JMR adopted 15% for off-market frozen SBT sales as a percentage of total domestic wild SBT distributed in Japan)     | 1,385      | 1,519  | 1,068     | 1,178  | 530       | 601    | 374       | 427    | 385       | 385    | 439    | 439    |
| 8. Total Domestic Wild SBT distributed in Japan = 6.+7.  | 9,232      | 10,124 | 7,120     | 7,852  | 3,536     | 4,009  | 2,494     | 2,849  | 2,564     | 2,564  | 2,929  | 2,929  |
| 9. Total Domestic Wild SBT distributed in Japan (Converted to WW) 8. x 1.15  | 10,616     | 11,642 | 8,188     | 9,030  | 4,066     | 4,611  | 2,868     | 3,276  | 2,949     | 2,949  | 3,368  | 3,368  |
| 10. Domestic Exported Frozen SBT (Converted to WW) Exports (MW) x 1.15 (Source: Japan Ministry of Finance, trade data)   | 70         | 70     | 77        | 77     | 30        | 30     | 0         | 0      | 0         | 0      | 0      | 0      |
| 11. Total Domestic Caught SBT distributed in Japanese and Exporter (WW) = 9.+10.   | 10,686     | 11,712 | 8,265     | 9,107  | 4,096     | 4,641  | 2,868     | 3,276  | 2,949     | 2,949  | 3,368  | 3,368  |

## Attachment 3 Yaizu and Tokyo Market Frozen SBT Auction

## Yaizu Frozen SBT (Auction)

(unit: Kg)

|      | JAN    | FEB     | MAR     | APR     | MAY    | JUN    | JUL    | AUG    | SEP     | OCT     | NOV     | DEC     | TOTAL     |
|------|--------|---------|---------|---------|--------|--------|--------|--------|---------|---------|---------|---------|-----------|
| 2004 | 84,965 | 100,823 | 133,053 | 112,620 | 75,333 | 66,423 | 94,648 | 78,944 | 109,822 | 138,602 | 125,706 | 167,666 | 1,288,605 |
| 2005 | 69,898 | 70,576  | 108,630 | 84,219  | 51,920 | 66,438 | 66,221 | 56,053 | 60,735  | 95,434  | 87,602  | 128,002 | 945,728   |
| 2006 | 71,379 | 71,401  | 82,238  | 78,723  | 51,562 | 39,719 | 47,837 | 41,555 | 47,116  | 56,012  | 76,136  | 92,402  | 756,080   |
| 2007 | 33,092 | 29,984  | 53,413  | 43,905  | 42,503 | 39,023 | 50,335 | 39,287 | 31,793  | 46,552  | 80,777  | 84,657  | 575,321   |
| 2008 | 44,755 | 36,282  | 46,292  | 37,778  | 36,068 | 49,505 | 54,830 | 45,896 | 35,030  | 49,053  | 76,778  | 100,567 | 612,833   |
| 2009 | 33,892 | 38,667  | 64,261  | 51,799  | 34,372 | 34,150 |        |        |         |         |         |         |           |

Source: <http://www.yaizu-gyokyo.or.jp>

|                             |
|-----------------------------|
| Yaizu Auction sale in 2008  |
| Jan-Jun (A) Jul-Dec (B) B/A |
| 250,680 362,154 1.44468645  |

|                    |
|--------------------|
| Yaizu Auction sale |
| Jan-Jun 2009       |
| 257,141 (kg)       |

|                    |
|--------------------|
| Est. Yaizu Auction |
| Jul - Dec 2009     |
| 371,488 (kg)       |

|                                  |
|----------------------------------|
| Est. Total Yaizu Auction in 2009 |
| 628,629 (kg)                     |

## Tokyo Market Frozen SBT (Auctioned)

Metric Ton

|      | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | TOTAL |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| 2004 | 668 | 685 | 874 | 903 | 657 | 601 | 659 | 677 | 635 | 694 | 603 | 948 | 8,604 |
| 2005 | 527 | 571 | 853 | 728 | 659 | 575 | 564 | 530 | 517 | 555 | 642 | 927 | 7,648 |
| 2006 | 528 | 567 | 741 | 609 | 520 | 567 | 537 | 498 | 520 | 491 | 497 | 643 | 6,722 |
| 2007 | 357 | 375 | 521 | 429 | 410 | 326 | 337 | 361 | 298 | 308 | 328 | 492 | 4,543 |
| 2008 | 245 | 288 | 356 | 313 | 274 | 247 | 309 | 267 | 353 | 388 | 342 | 590 | 3,974 |
| 2009 | 296 | 324 | 369 | 368 | 325 | 335 |     |     |     |     |     |     |       |

Source: <http://www.shijou.metro.tokyo.jp>

|                             |
|-----------------------------|
| Tokyo Auction sale in 2008  |
| Jan-Jun (A) Jul-Dec (B) B/A |
| 1,723 2,249 1.30528149      |

|                    |
|--------------------|
| Tokyo Auction sale |
| Jan-Jun 2009       |
| 2,017 (MT)         |

|                    |
|--------------------|
| Est. Tokyo Auction |
| Jul - Dec 2009     |
| 2,633 (MT)         |

|                                  |
|----------------------------------|
| Est. Total Tokyo Auction in 2009 |
| 4,650 (MT)                       |

## Attachment 4

Ratio of domestic (Japanese) and imported wild SBT at Tsukiji Market (Kg)

| Month of survey  | Domestic (Japanese) SBT | Imported SBT |            |        | Total   | Percentage |          |        |
|------------------|-------------------------|--------------|------------|--------|---------|------------|----------|--------|
|                  |                         | Korea        | Philippine | Taiwan |         | Domestic   | Imported |        |
| 2007 Dec         | 11,296.6                | 2,288.4      | 113.8      | 686.4  | 1,488.2 | 13,585.0   | 83.15%   | 16.85% |
| 2008 Jan         | 6,112.0                 | 2,191.4      | 1,771.2    |        | 420.2   | 8,303.4    | 73.61%   | 26.39% |
| Feb              | 7,272.8                 | 1,815.0      | 1,488.0    |        | 327.0   | 9,087.8    | 80.03%   | 19.97% |
| Mar              | 6,702.2                 | 3,164.8      | 1,840.0    | 217.0  | 1,107.8 | 9,867.0    | 67.93%   | 32.07% |
| Apr              | 5,825.0                 | 2,485.2      | 1,277.4    | 898.8  | 309.0   | 8,310.2    | 70.09%   | 29.91% |
| May              | 5,961.0                 | 1,207.6      | 877.2      | 330.4  |         | 7,168.6    | 83.15%   | 16.85% |
| Jun              | 3,677.8                 | 3,744.1      | 2,255.5    | 457.0  | 1,031.6 | 7,421.9    | 49.55%   | 50.45% |
| Jul              | 5,995.4                 | 3,313.2      | 2,575.6    |        | 737.6   | 9,308.6    | 64.41%   | 35.59% |
| Aug              | 6,806.8                 | 2,817.8      | 1,948.0    |        | 869.8   | 9,624.6    | 70.72%   | 29.28% |
| Sep              | 8,946.2                 | 3,921.8      | 3,921.8    |        |         | 12,868.0   | 69.52%   | 30.48% |
| Oct              | 9,901.4                 | 4,303.8      | 3,610.2    |        | 693.6   | 14,205.2   | 69.70%   | 30.30% |
| Nov              | 7,452.8                 | 5,390.6      | 2,498.8    |        | 2,891.8 | 12,843.4   | 58.03%   | 41.97% |
| Dec              | 13,538.0                | 4,312.6      | 2,010.2    | 451.0  | 1,851.4 | 17,850.6   | 75.84%   | 24.16% |
| 2008 Jan-Dec Ave | 7,349.3                 | 3,222.3      | 2,172.8    | 470.8  | 1,024.0 | 10,571.6   | 69.52%   | 30.48% |
| 2009 Jan         | 6,276.6                 | 4,912.4      | 3,481.0    |        | 1,431.4 | 11,189.0   | 56.10%   | 43.90% |
| Feb              | 6,983.8                 | 3,939.0      | 3,581.0    |        | 358.0   | 10,922.8   | 63.94%   | 36.06% |
| Mar              | 5,746.0                 | 5,211.8      | 4,354.0    |        | 857.8   | 10,957.8   | 52.44%   | 47.56% |
| Apr              | 6,978.2                 | 4,507.4      | 4,052.0    |        | 455.4   | 11,485.6   | 60.76%   | 39.24% |
| May              | 7,676.0                 | 3,360.0      | 2,640.2    |        | 719.8   | 11,036.0   | 69.55%   | 30.45% |
| Jun              | 6,185.4                 | 2,380.4      | 1,950.2    |        | 430.2   | 8,565.8    | 72.21%   | 27.79% |
| 2009 Jan-May Ave | 6,641.0                 | 4,051.8      | 3,343.1    | 0.0    | 708.8   | 10,692.8   | 62.11%   | 37.89% |

Source: Monthly monitoring of the Tsukiji Market

Note: Except for January 2009, the monitoring has been conducted on Friday, when volume of SBT handled by wholesalers is, in general, larger than other days of the week.

| Year | Domestic | Imported |
|------|----------|----------|
| 2005 | 95.00%   | 5.00%    |
| 2007 | 83.15%   | 16.85%   |
| 2008 | 69.52%   | 30.48%   |
| 2009 | 62.11%   | 37.89%   |
| 2006 | 87.98%   | 12.02%   |

JMR report  
Observed in Dec 2007  
Observed in 2008  
Observed from Jan-Jun 2009  
linear interpolation

## Attachment 5

### Time lag of Southern Bluefin Tuna caught by Japanese longline between catching and selling at Fish Market

Table 1 Number of SBT with the catch monitoring tag checked at Tsukiji market and their year of caught.

| Date      | 2006 fishing season | 2007 fishing season | 2008 fishing season | Total |
|-----------|---------------------|---------------------|---------------------|-------|
| 7-Dec-07  | 19                  | 145                 |                     | 164   |
| 18-Jan-08 | 17                  | 65                  |                     | 82    |
| 8-Feb-08  | 13                  | 99                  |                     | 112   |
| 7-Mar-08  | 4                   | 67                  |                     | 71    |
| 18-Apr-08 | 13                  | 76                  |                     | 89    |
| 16-May-08 | 1                   | 95                  |                     | 96    |
| 20-Jun-08 | 2                   | 42                  |                     | 44    |
| 18-Jul-08 | 13                  | 76                  |                     | 89    |
| 8-Aug-08  | 2                   | 71                  |                     | 73    |
| 26-Sep-08 |                     | 61                  | 109                 | 170   |
| 10-Oct-08 | 6                   | 36                  | 107                 | 149   |
| 14-Nov-08 | 13                  | 5                   | 76                  | 94    |
| 5-Dec-08  | 1                   | 16                  | 123                 | 140   |
| 8-Jan-09  |                     | 7                   | 74                  | 81    |
| 20-Feb-09 |                     | 11                  | 96                  | 107   |
| 13-Mar-09 |                     | 3                   | 72                  | 75    |
| 3-Apr-09  |                     | 1                   | 80                  | 81    |
| 15-May-09 | 2                   | 21                  | 44                  | 67    |
| 19-Jun-09 |                     |                     | 75                  | 75    |

Table 2 Time lag between catch and sale at market in year (i) at Tsukiji by month.

| Month          | Catch in year (i-3) | Catch in year (i-2) | Catch in year (i-1) | Catch in year (i) |
|----------------|---------------------|---------------------|---------------------|-------------------|
| Jan.           | 0.0%                | 14.7%               | 85.3%               | 0.0%              |
| Feb.           | 0.0%                | 10.9%               | 89.1%               | 0.0%              |
| Mar.           | 0.0%                | 4.8%                | 95.2%               | 0.0%              |
| Apr.           | 0.0%                | 7.9%                | 92.1%               | 0.0%              |
| May            | 1.5%                | 16.2%               | 82.3%               | 0.0%              |
| Jun.           | 0.0%                | 2.3%                | 97.7%               | 0.0%              |
| Jul.           | 0.0%                | 14.6%               | 85.4%               | 0.0%              |
| Aug.           | 0.0%                | 2.7%                | 97.3%               | 0.0%              |
| Sep.           | 0.0%                | 0.0%                | 35.9%               | 64.1%             |
| Oct.           | 0.0%                | 4.0%                | 24.2%               | 71.8%             |
| Nov.           | 0.0%                | 13.8%               | 5.3%                | 80.9%             |
| Dec.           | 0.0%                | 0.4%                | 11.5%               | 88.1%             |
| <b>Average</b> | <b>0.1%</b>         | <b>7.7%</b>         | <b>66.8%</b>        | <b>25.4%</b>      |

Source: Monthly monitoring of the Tsukiji Market

Note: Except for January 2009, the monitoring has been conducted on Friday, when volume of SBT handled by wholesalers is, in general, larger than other days of the week.