



Metsäteho

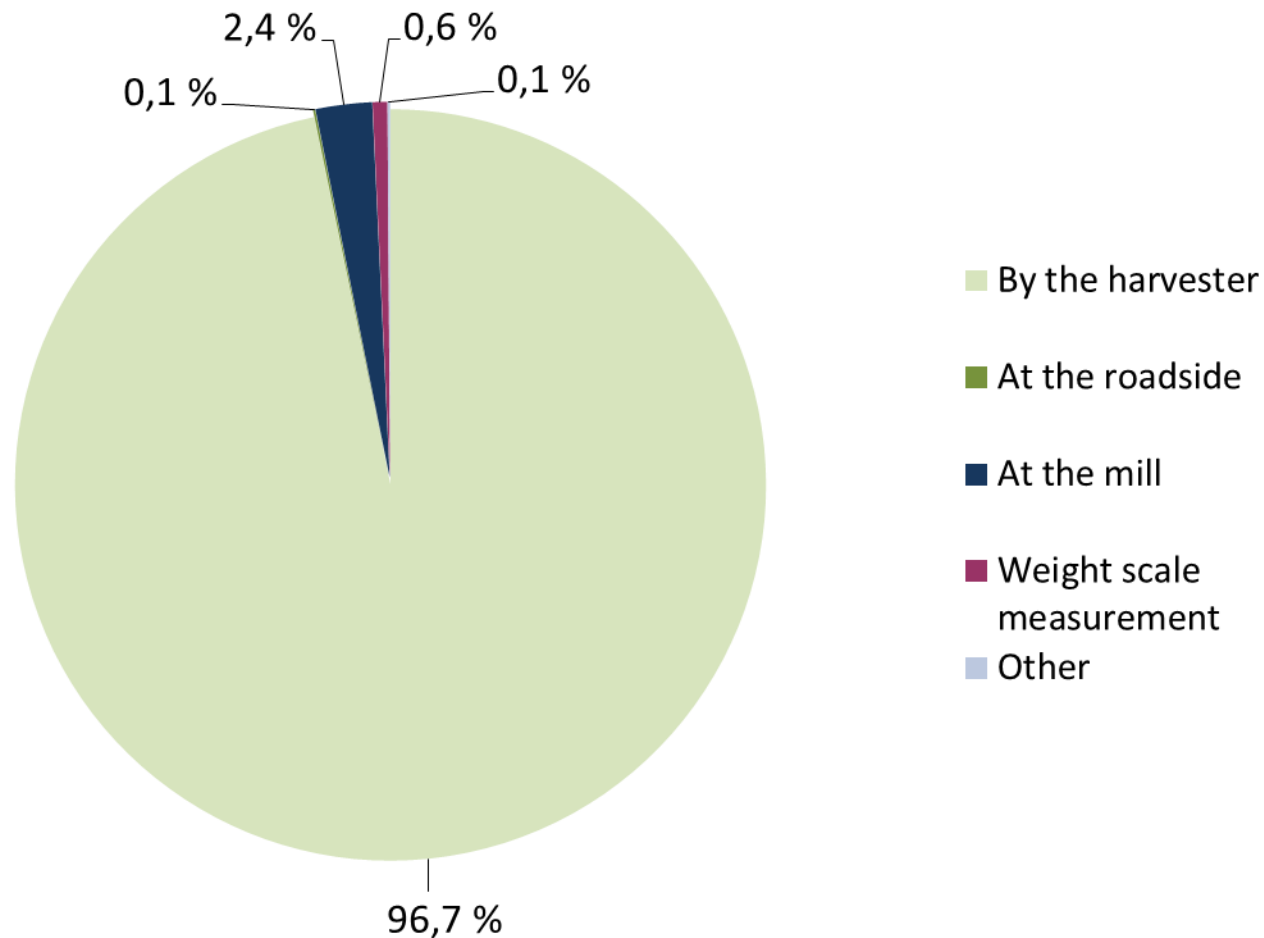
Wood measuring methods used in Finland 2013

Timo Melkas

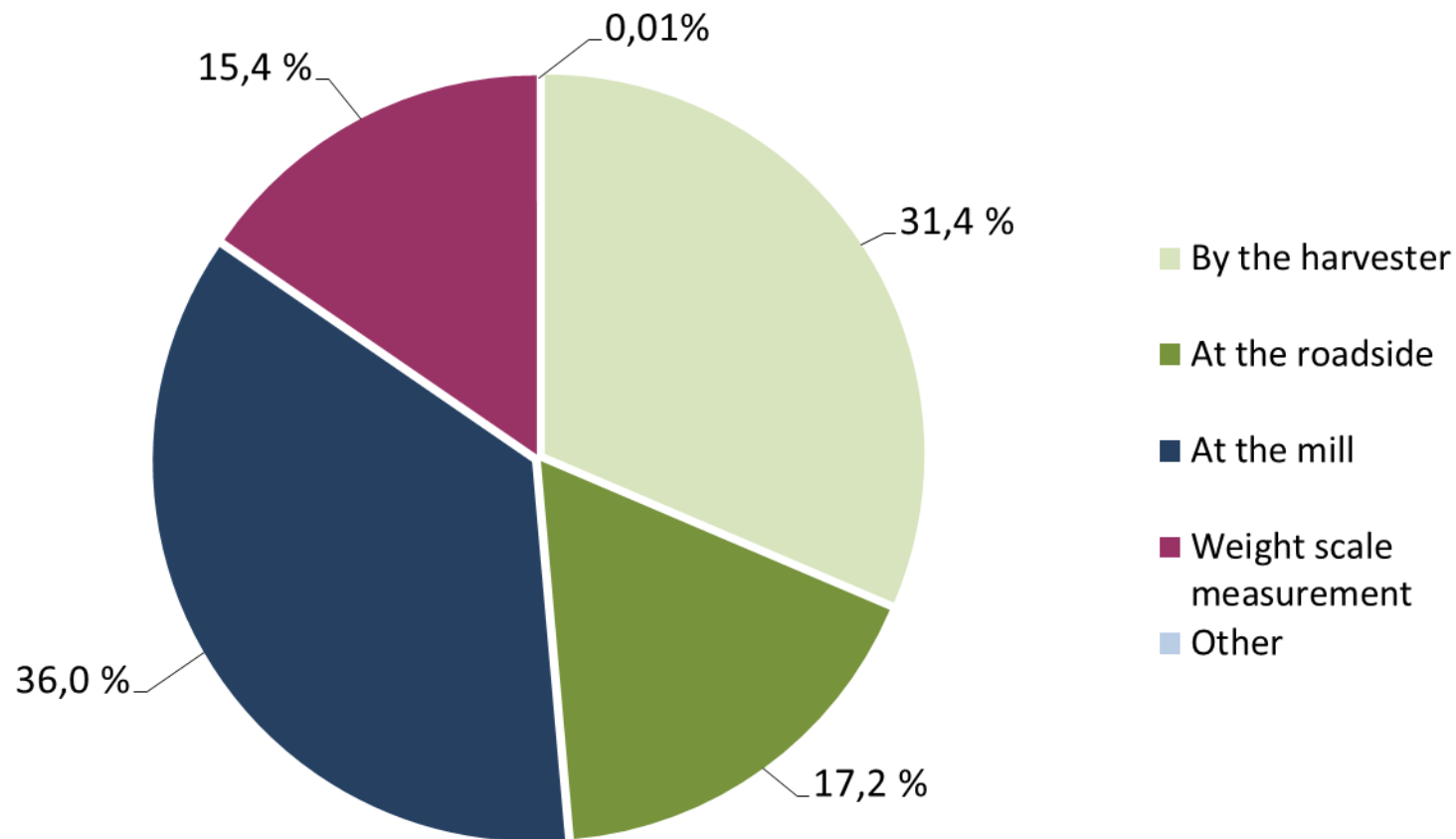
The volume of wood measuring in 2013

- Wood measuring methods used in 2013 -statistics based on the answers which Metsäteho owners, the Finnish forest industry companies and Metsähallitus, have reported. It consists of only domestic timber felling.
- The used volumes (m³ sob) in statistics are the next:
 - Standing sales in private-owned forests 27.3 million m³
 - Delivery sales in private-owned forests 5.6 million m³
 - Forest industry-owned forests and state-owned forests managing by Forest and Park Service 11.6 million m³
 - Together 44.6 million m³
- In 2013, the volume of standing sales was **37.7** million m³ sob and delivery sales **7.0** million m³ sob from private-owned forests. (Source: Metla = Finnish Forest Research Institute)
- Timber felling from industry-owned and state-owned forests totalled **11.4** million m³ sob. (Source: Metla)
- Commercial roundwood fellings in 2012 stood at **56.1** million m³ sob in Finland, of which sawlogs amounted to **23.8** and pulpwood **32.2** million m³ sob. (Source: Metla)
- Timber volume is expressed in cubic metres, real solid volume over bark.

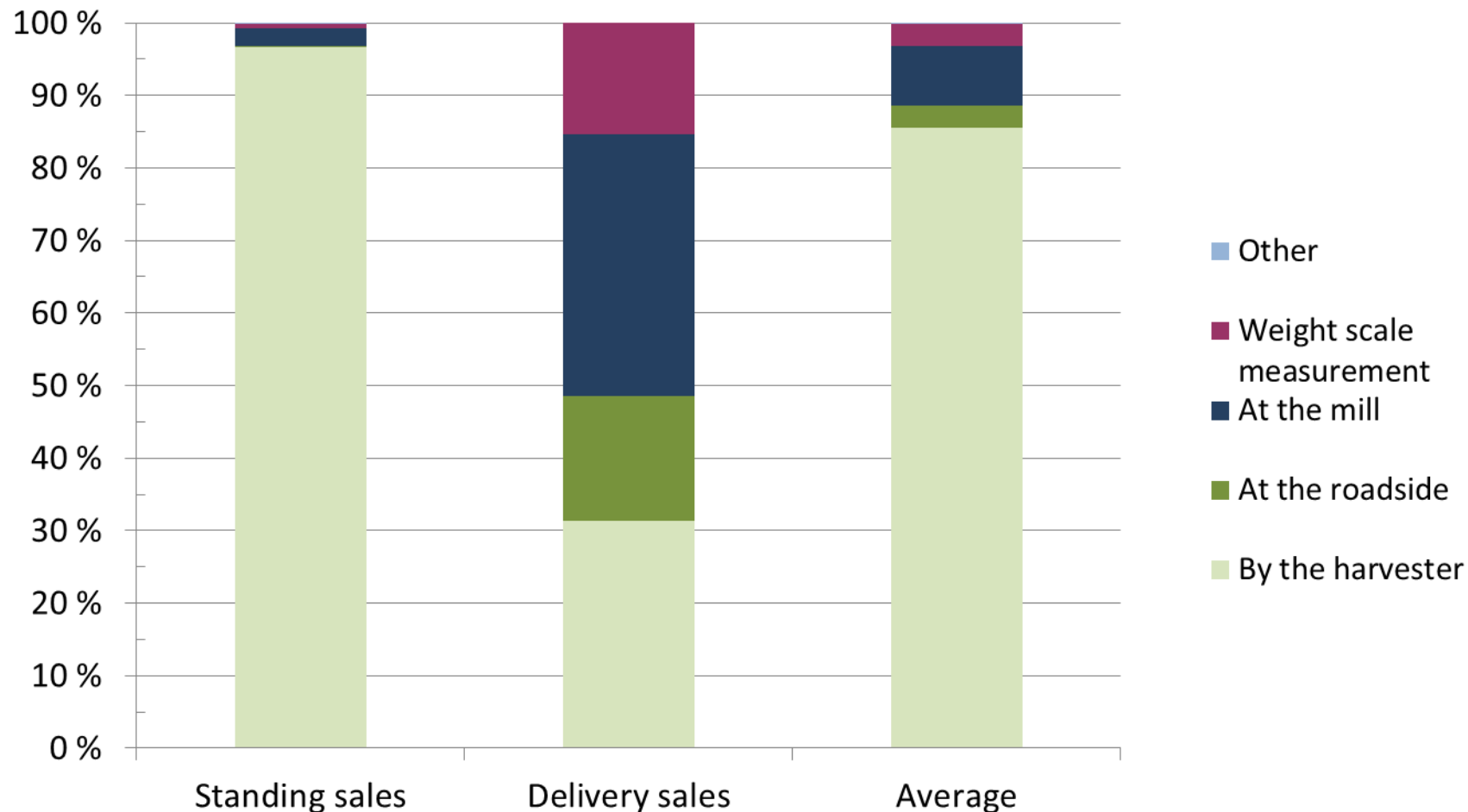
Measurement methods in standing sales of private-owned forests in 2013 (about 27.3 million m³)



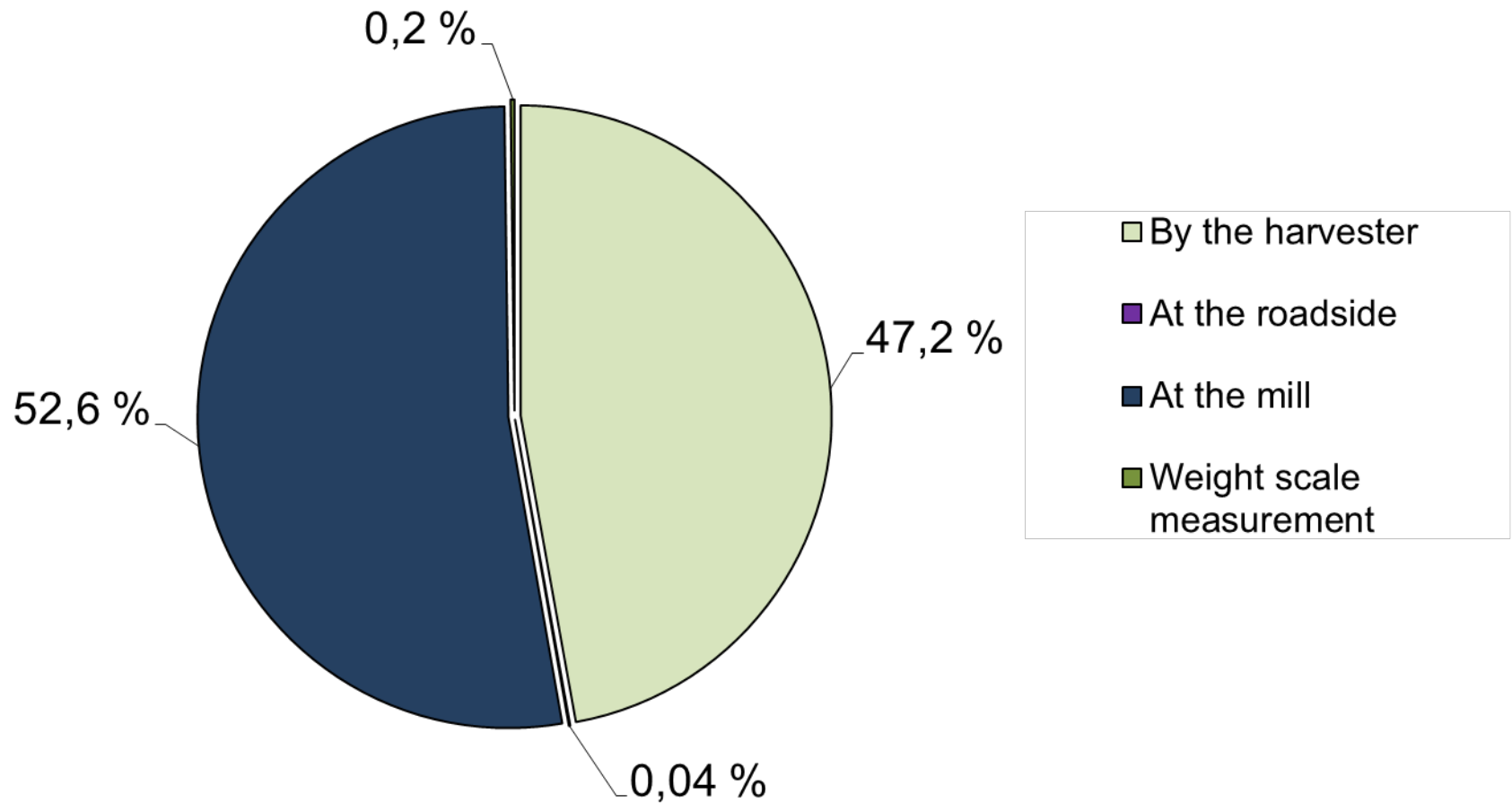
Measurement methods in delivery sales of private-owned forests in 2013 (about 5.6 million m³)



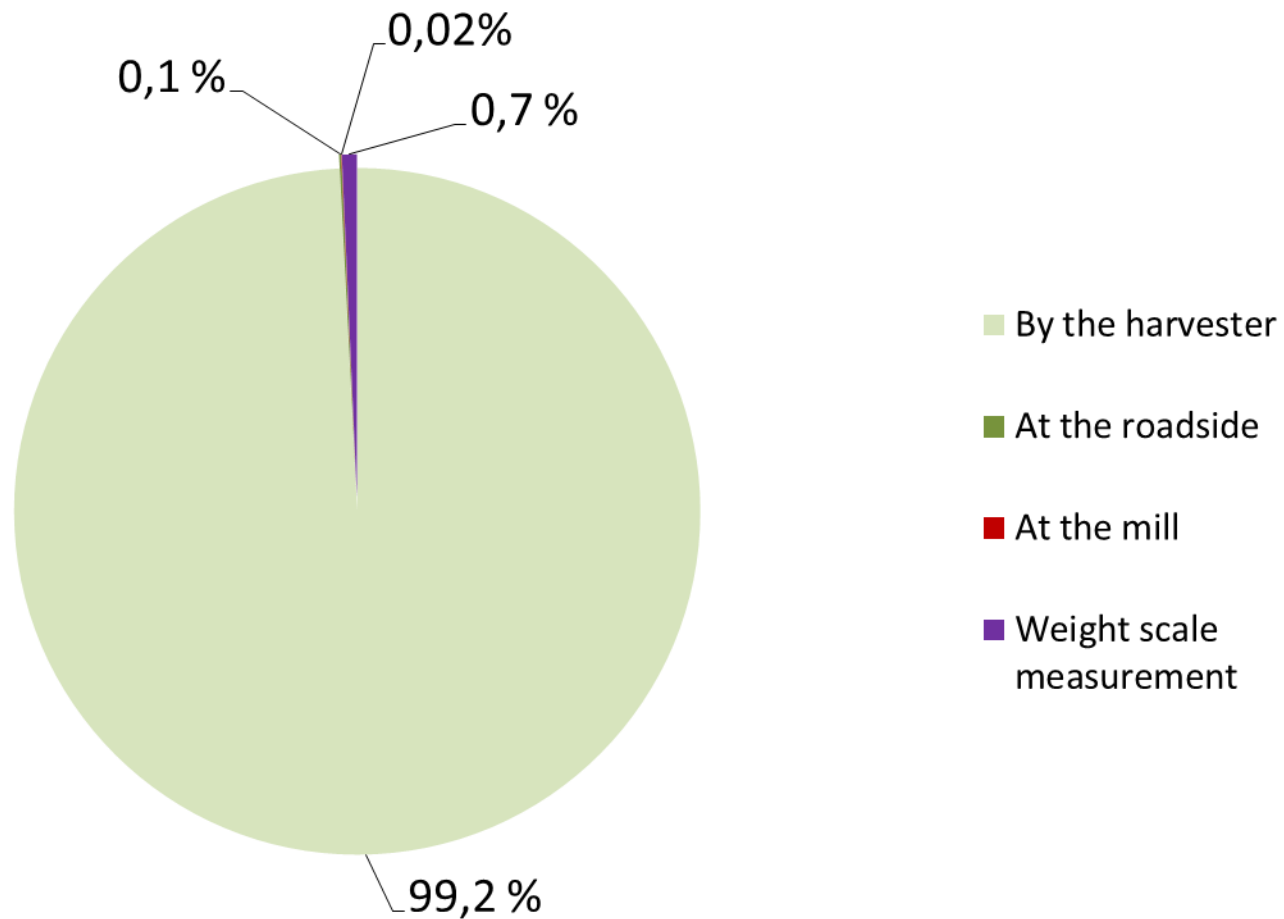
Measurement methods in private-owned forests in 2013 (standing and delivery sales, about 33.0 million m³)



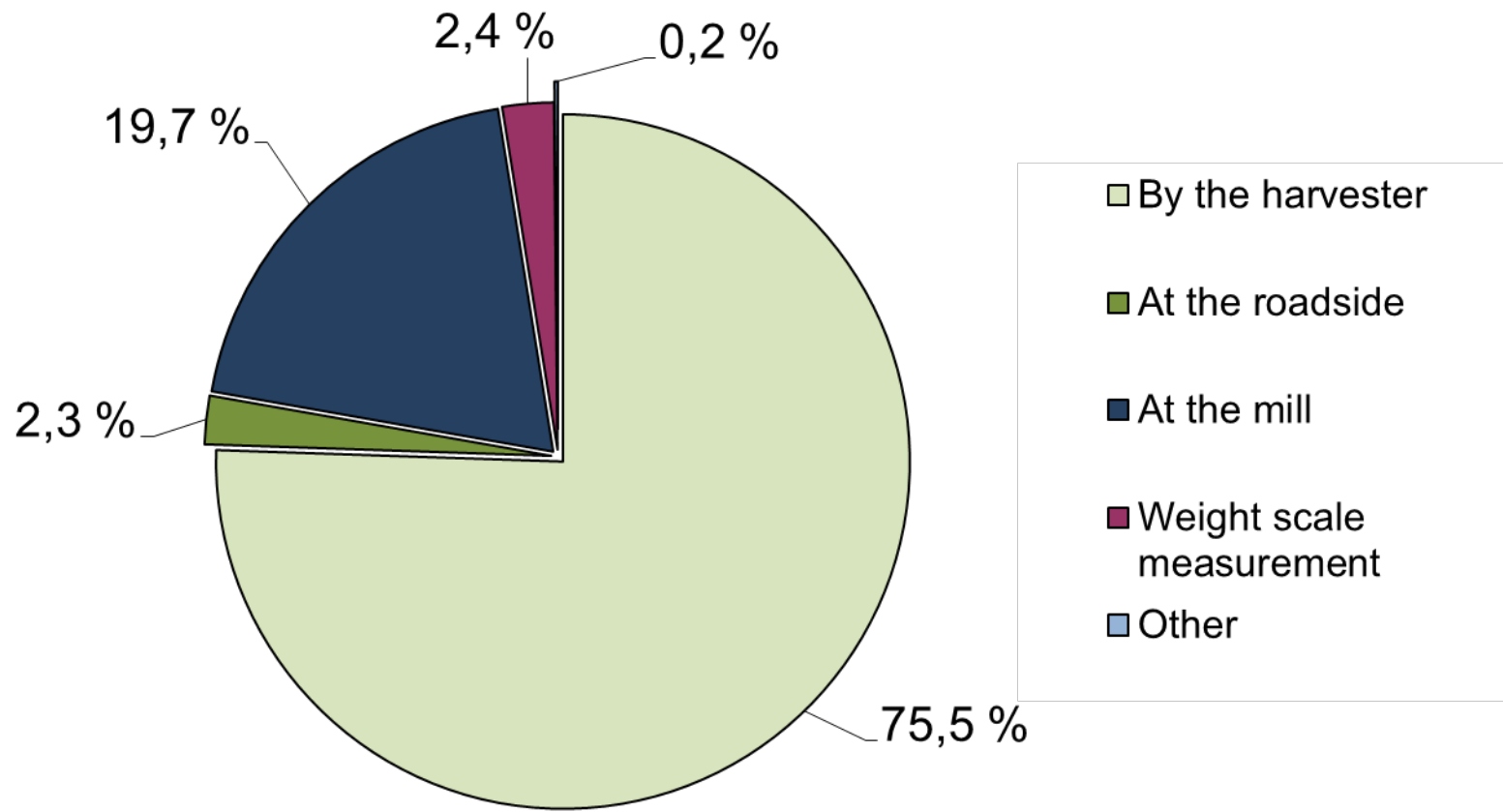
Measurement methods in industry-owned forests and state-owned forests in 2013 (about 11.6 million m³)



Work measurement methods in industry-owned forests and state-owned forests in 2013 (n. 11.6 milj. m³)



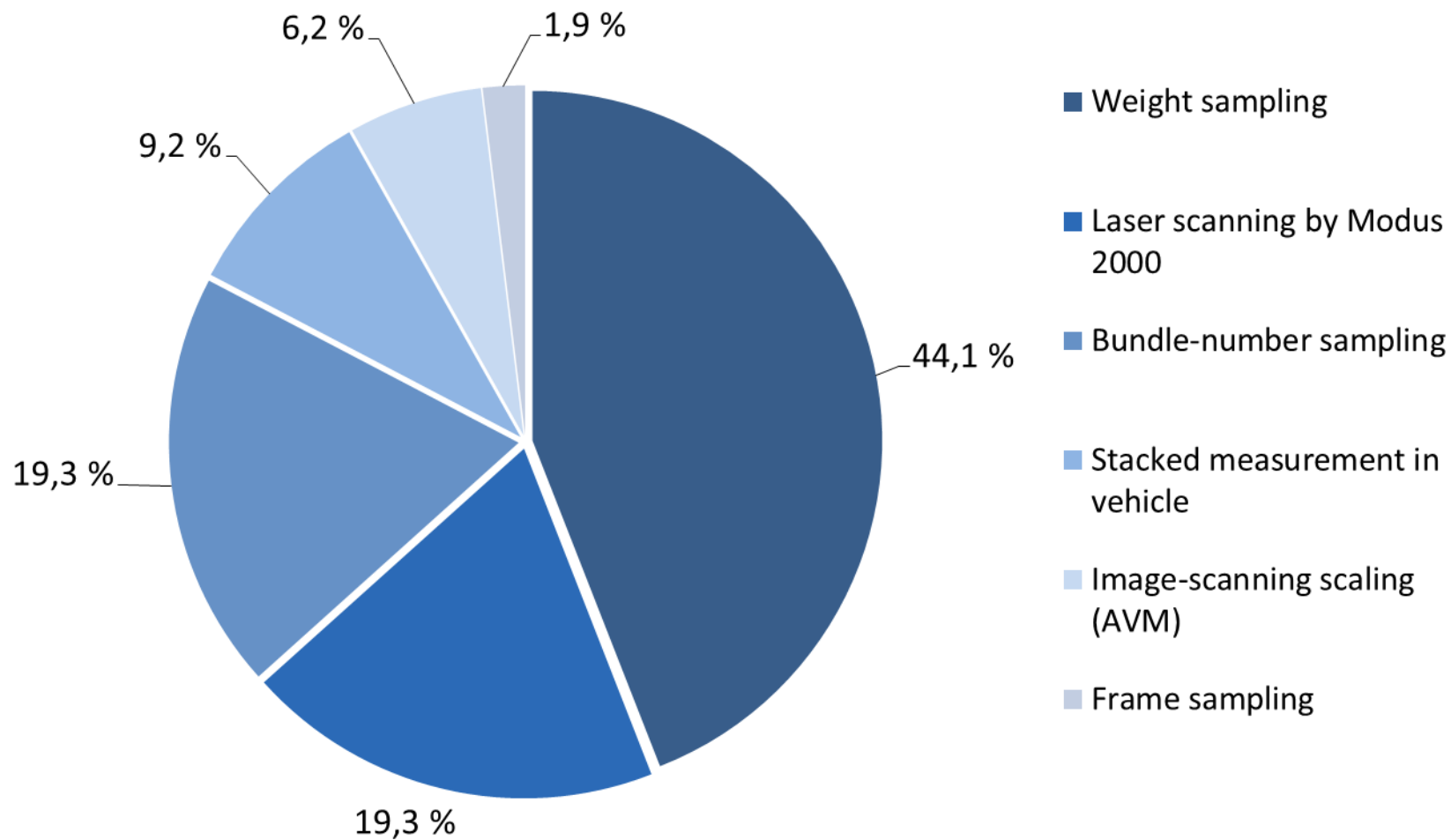
Measuring methods in the total commercial roundwood fellings in 2013 (about 44.6 million m³)



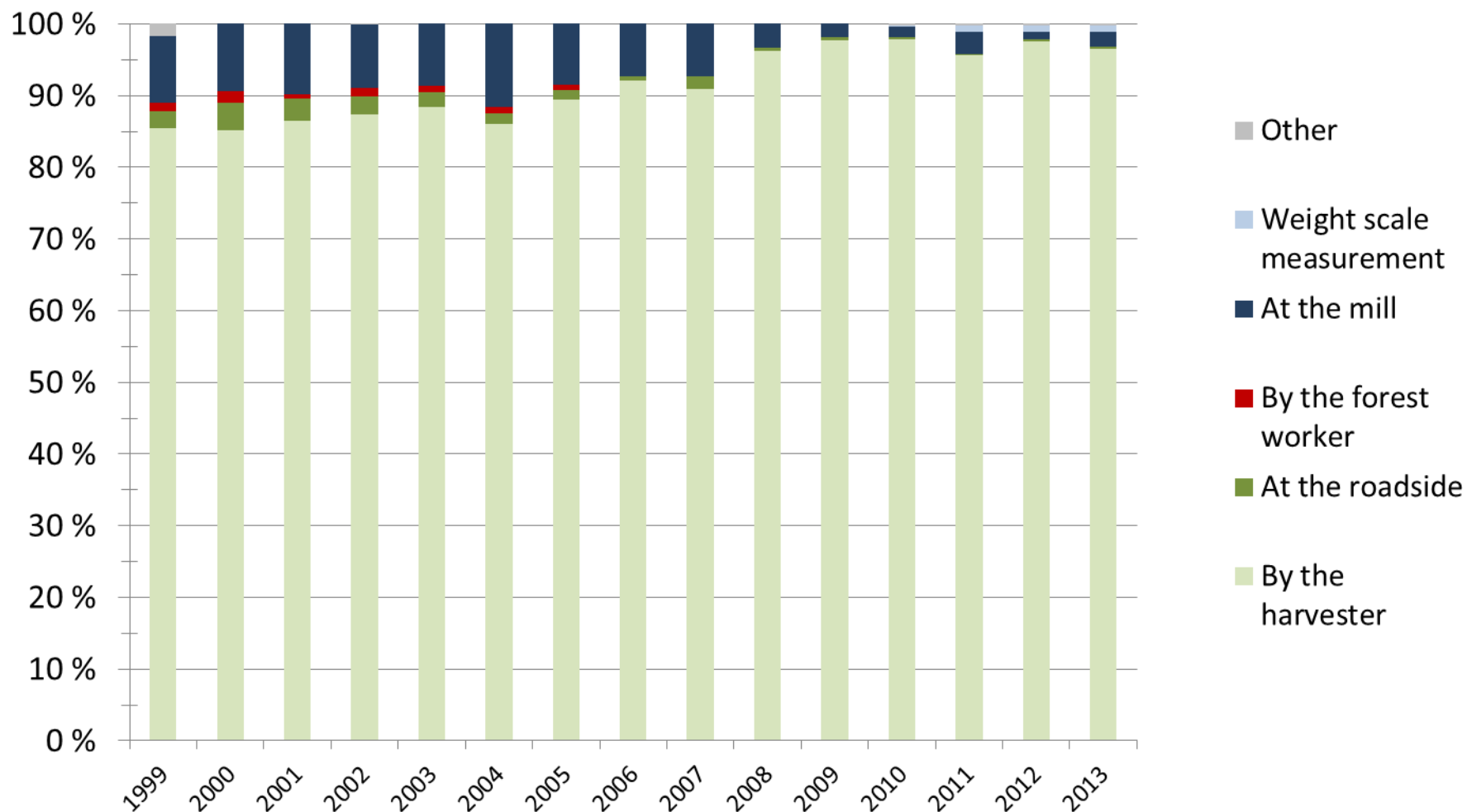
Sawlogs and pulpwood measured at the mill and at the roadside in 2013

- At the mill altogether 8.8 million m³ was measured, which represents 19.7 % of total commercial roundwood fellings in 2013. The proportion of the sawlogs measured at the mill was 38.9 % and pulpwood 61.1 %.
 - The sawlogs were mainly measured by using log scanners.
 - The pulpwood measuring methods are presented in the next slide (slide number 10).
- At the road side altogether 1.0 million m³ was measured, which represents 2.3 % of total commercial roundwood fellings in 2013. The proportion of sawlogs measured at the mill was 19.8 % and pulpwood 80.2 %.
 - The sawlogs were measured based on the top diameter of the log and the pulpwood was measured by using pile scaling method.
- Altogether 1.1 million m³ was measured with loader scales, which represents 2.4 % of total commercial roundwood fellings in 2013.

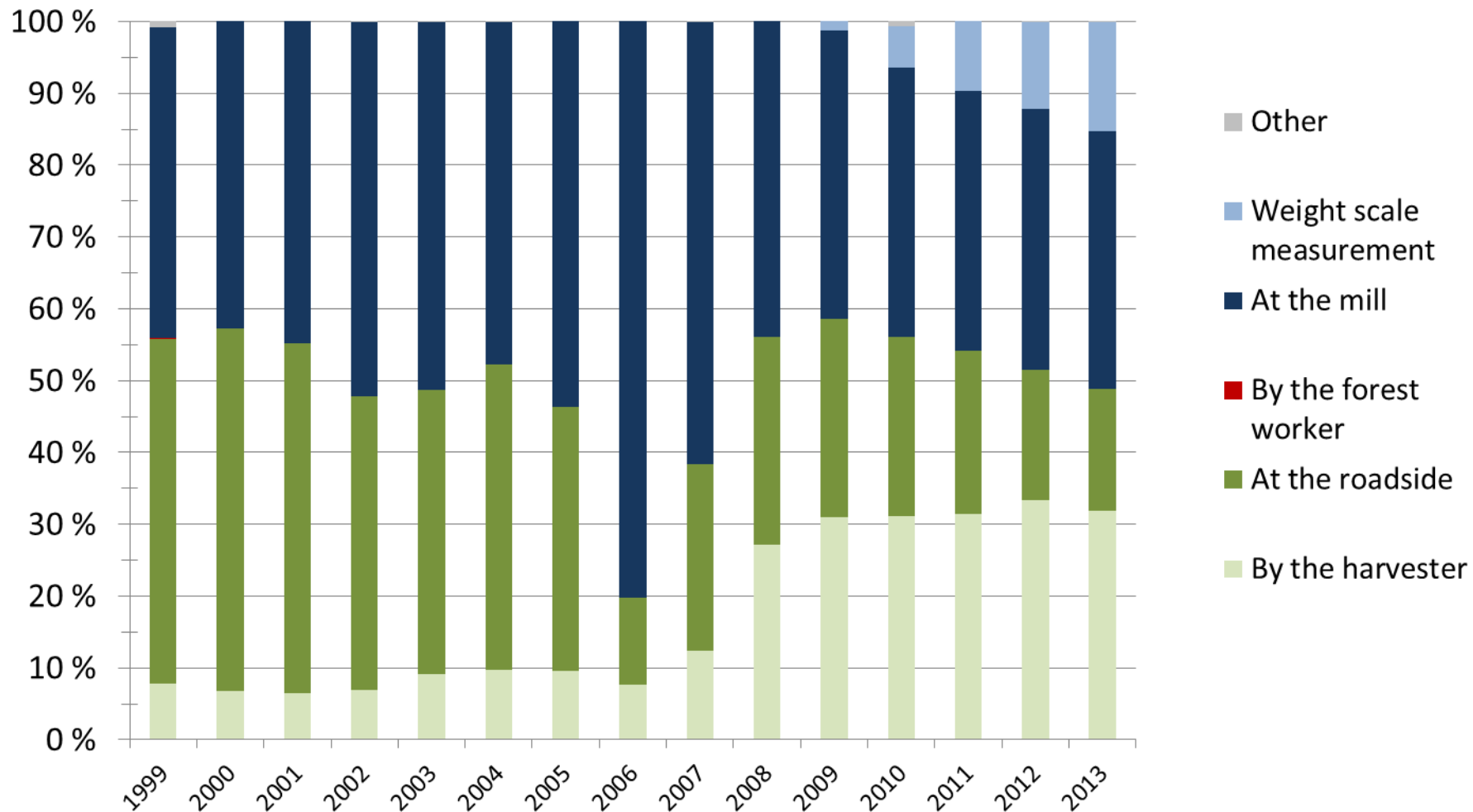
Methods used for pulpwood measuring at the mills in 2013 (about 5.4 million m³)



Proportions of different wood measuring methods in standing sales, 1999 - 2013



Proportions of different wood measuring methods in delivery sales, 1999 - 2013



Wood quantities and proportions of methods in 2013

Private-owned forests

| Method | Total, 1000 m ³ | | | Total, % | | |
|--------------------------|----------------------------|----------------|---------------|----------------|----------------|--------------|
| | Standing sales | Delivery sales | Together | Standing sales | Delivery sales | Average |
| By the harvester | 26 452 | 1 774 | 28 226 | 96,7 | 31 | 85,6 |
| At the roadside | 26 | 971 | 997 | 0,1 | 17 | 3,0 |
| At the mill | 664 | 2 031 | 2 695 | 2,4 | 36 | 8,2 |
| Weight scale measurement | 173 | 870 | 1 043 | 0,6 | 15 | 3,2 |
| Other | 30 | 1 | 31 | 0,1 | 0 | 0,1 |
| Total | 27 345 | 5 647 | 32 991 | 100,0 | 100,0 | 100,0 |

Industry-owned forests and state-owned forests

| Method | Yhteensä | |
|--------------------------|---------------------|--------------|
| | 1000 m ³ | % |
| By the harvester | 5 448 | 47,0 |
| At the roadside | 8 | 0,07 |
| At the mill | 6 073 | 52,4 |
| Weight scale measurement | 23 | 0,2 |
| Other | 42 | 0,36 |
| Total | 11 593 | 100,0 |

Proportions of wood measuring methods, 1999 - 2013

STANDING SALES OF PRIVATE-OWNED FORESTS

| Year | Proportion of method, % | | | | | | Total |
|------|-------------------------|-----------------|----------------------|-------------|--------------------------|-------|-------|
| | By the harvester | At the roadside | By the forest worker | At the mill | Weight scale measurement | Other | |
| 1999 | 85 | 2 | 1 | 9 | - | 2 | 100 |
| 2000 | 85 | 4 | 2 | 9 | - | 0 | 100 |
| 2001 | 86 | 3 | 1 | 10 | - | 0 | 100 |
| 2002 | 87 | 3 | 1 | 9 | - | 0 | 100 |
| 2003 | 88 | 2 | 1 | 9 | - | 0 | 100 |
| 2004 | 86 | 1 | 1 | 12 | - | 0 | 100 |
| 2005 | 89 | 1 | 1 | 8 | - | 0 | 100 |
| 2006 | 92 | 1 | 0 | 7 | - | 0 | 100 |
| 2007 | 91 | 2 | 0 | 7 | - | 0 | 100 |
| 2008 | 96 | 1 | 0 | 3 | - | 0 | 100 |
| 2009 | 98 | 1 | 0 | 2 | - | 0 | 100 |
| 2010 | 98 | 0 | 0 | 2 | 0 | 0 | 100 |
| 2011 | 96 | 0 | 0 | 3 | 1 | 0 | 100 |
| 2012 | 98 | 0 | 0 | 1 | 1 | 0 | 100 |
| 2013 | 97 | 0 | 0 | 2 | 1 | 0 | 100 |

DELIVERY SALES OF PRIVATE-OWNED FORESTS

| Year | Proportion of method, % | | | | | | Total |
|------|-------------------------|-----------------|----------------------|-------------|--------------------------|-------|-------|
| | By the harvester | At the roadside | By the forest worker | At the mill | Weight scale measurement | Other | |
| 1999 | 8 | 48 | 0 | 43 | - | 1 | 100 |
| 2000 | 7 | 50 | 0 | 43 | - | 0 | 100 |
| 2001 | 6 | 49 | 0 | 45 | - | 0 | 100 |
| 2002 | 7 | 41 | 0 | 52 | - | 0 | 100 |
| 2003 | 9 | 40 | 0 | 51 | - | 0 | 100 |
| 2004 | 10 | 42 | 0 | 48 | - | 0 | 100 |
| 2005 | 10 | 37 | 0 | 54 | - | 0 | 100 |
| 2006 | 8 | 12 | 0 | 80 | - | 0 | 100 |
| 2007 | 12 | 26 | 0 | 62 | - | 0 | 100 |
| 2008 | 27 | 29 | 0 | 44 | - | 0 | 100 |
| 2009 | 31 | 28 | 0 | 40 | 1 | 0 | 100 |
| 2010 | 31 | 25 | 0 | 37 | 6 | 1 | 100 |
| 2011 | 31 | 23 | 0 | 36 | 10 | 0 | 100 |
| 2012 | 33 | 18 | 0 | 36 | 12 | 0 | 100 |
| 2013 | 32 | 17 | 0 | 36 | 15 | 0 | 100 |