DigiTimes Research: ICT Report – 1Q 2005

Taiwan's optical disc drives

Original Chinese: Alvis Hsieh, DigiTimes Research, Apr 26, 2005

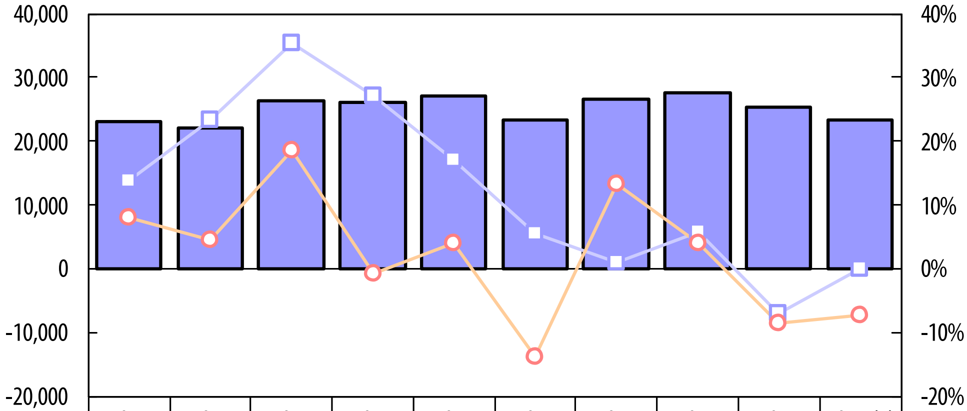
English edition: Rodney Chan, DigiTimes.com, Jun 6, 2005

Introduction

The departure of several minor optical disc drive (ODD) players in Taiwan during the second half of 2004 has resulted in a significant decline in shipments. Taiwan's ODD shipment for the first quarter of 2005 dropped to 25.23 million units, down 7.1% on year and 8.5% on quarter. The on-quarter fall was also due to the preceding peak season from October to December. The exiting players caused a reduction in shipments of lower-end models and some international PC vendors shifted part of their orders to major Japan and Korea ODD makers, exacerbating Taiwan's shipment decline.

Shipments are expected to continue dropping in the second quarter, which is still a traditional low season for the ODD sector. However, the decline of 0.1% on quarter and 7.3% on year will be smaller than that of the first quarter, as first-tier makers are increasing shipments of DVD+RW and other high-end models.

Chart 1: Taiwan ODD shipment trend, 1Q03-2Q05 (k units)



	1Q03	2Q03	3Q03	4Q03	1Q04	2Q04	3Q04	4Q04	1Q05	2Q05 (e)
Shipment	23,208	22,174	26,276	26,104	27,161	23,427	26,527	27,602	25,230	23,394
Y/Y growth	13.8%	23.3%	35.5%	27.1%	17%	5.6%	1%	5.7%	-7.1%	-0.1%
Q/Q growth	8%	4.5%	18.5%	-0.7%	4%	-13.7%	13.2%	4.1%	-8.5%	-7.3%

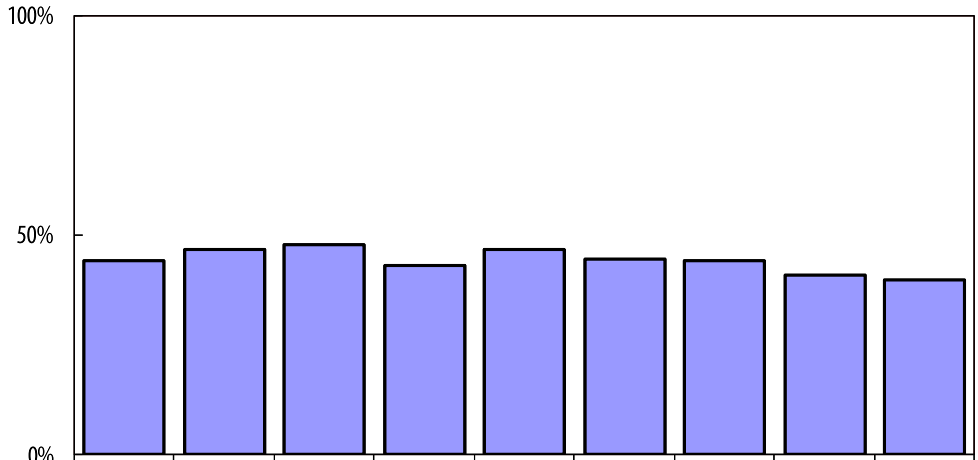
Source: DigiTimes Research, April 2005

The first quarter

The fast growth that the DVD+RW segment enjoyed in 2004 began to slow down in the first quarter, as the worldwide ODD market grew only 1% with total shipments of 63.24 million units. Taiwan's first-quarter proportion of worldwide ODD shipments dropped below 40%.

At the same time, Taiwan's market share dropped to 39.9% because of the departure of the small-to-medium makers, part of whose business ended up in Japan and South Korea. Top Taiwan makers, under strong competition from the Japan and Korea makers' pricing campaigns, only managed to see their shipments remain at similar levels recorded for the same quarter of 2004.

Chart 2: Taiwan's share of global ODD market, 1Q03-1Q05



	1Q03	2Q03	3Q03	4Q03	1Q04	2Q04	3Q04	4Q04	1Q05
Taiwan share	44.1%	46.6%	47.9%	43.2%	46.9%	44.7%	44.1%	40.8%	39.9%

Source: DigiTimes Research, April 2005

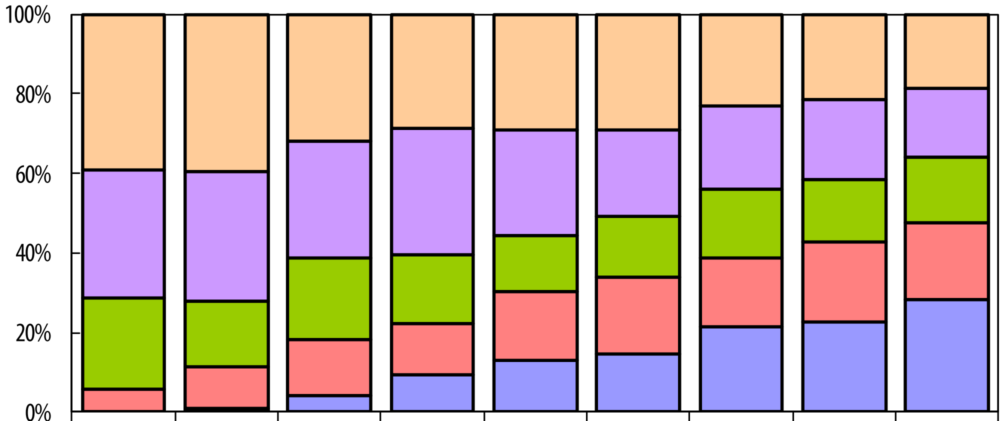
DVD+RW: the mainstream

DVD+RW has become Taiwan's chief ODD product, with first-quarter shipments in the segment amounting to 7.08 million units, or 28% of Taiwan's total ODD shipments. However, on-quarter growth for the segment was only 9.5%, the first time it dropped into single digits since the second quarter of 2004.

Shipments of CD-ROM and CD-RW drives, originally the chief products for the now departed makers, took a deep plunge, declining 22.7% and 24.1% respectively. Their decline contributed to DVD+RW's much bigger share of first-quarter shipments.

DVD-ROM and combo drives shipments remained stable, with slight on-year growths of 3.4% and 1.3% respectively.

Chart 3: Taiwan ODD shipments by drive function, 1Q03-1Q05



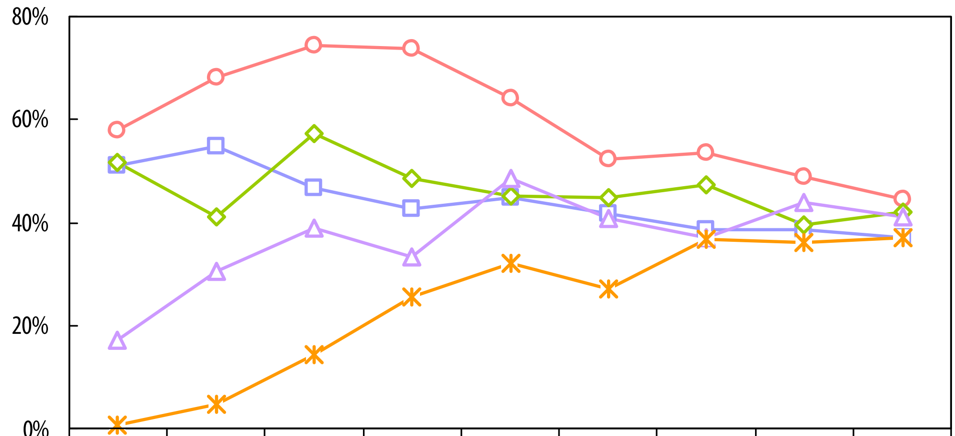
	1Q03	2Q03	3Q03	4Q03	1Q04	2Q04	3Q04	4Q04	1Q05
CD-ROM	39.2%	39.5%	31.7%	28.6%	29.0%	29.0%	23.1%	21.4%	18.7%
CD-RW	32.0%	32.6%	29.5%	31.7%	26.5%	21.8%	20.8%	20.1%	17.3%
DVD-ROM	23.2%	16.6%	20.6%	17.4%	14.4%	15.2%	17.4%	15.7%	16.6%
Combo	5.4%	10.3%	13.9%	13.1%	17.2%	19.5%	17.3%	20.0%	19.3%
DVD+RW	0.2%	1.0%	4.3%	9.2%	12.9%	14.5%	21.4%	22.7%	28.1%

Source: DigiTimes Research, April 2005

The growing popularity of DVD + RW resulted in a worldwide 30% on-year decline in demand for CD-ROM and CD-RW in the first quarter. Taiwan's shipments of CD-ROM and CD-RW drives dropped 40%.

For DVD + ROM, Taiwan's share of worldwide shipments stayed flat at 36.9%.

Chart 4: Taiwan's share of worldwide market by ODD type, 1Q03-1Q05



	1Q03	2Q03	3Q03	4Q03	1Q04	2Q04	3Q04	4Q04	1Q05
CD-ROM	51.0%	54.6%	46.8%	42.7%	44.7%	41.7%	38.5%	38.6%	37.2%
CD-RW	57.7%	68.0%	74.4%	73.8%	64.1%	52.3%	53.5%	48.8%	44.6%
DVD-ROM	51.5%	41.2%	57.1%	48.5%	45.2%	44.7%	47.4%	39.4%	41.9%
Combo	17.2%	30.5%	39.0%	33.2%	48.5%	40.9%	37.1%	43.9%	41.2%
DVD+RW	0.6%	4.9%	14.5%	25.5%	32.1%	27.2%	36.8%	36.2%	36.9%

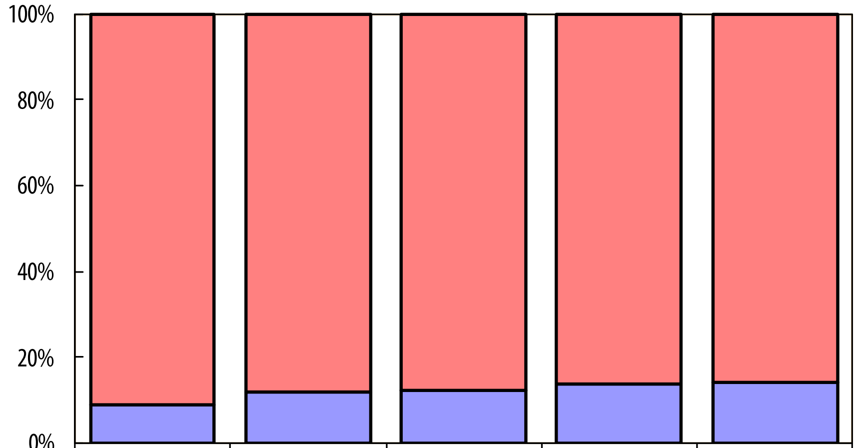
Source: DigiTimes Research, April 2005

Slim-type and half-height

Quanta Storage and Lite-On IT remained the two biggest Taiwan makers of slim-type ODDs in the first quarter. Slim-type shipments were mostly for notebook OEMs. For Asustek and Philips BenQ Digital Storage (PBDS), despite their status as first-tier ODD makers, they still lagged behind Quanta and Lite-On in slim-type production.

Of the entire first-quarter Taiwan ODD shipment, slim-type shipments accounted for 14%, or 3.52 million units, up slightly sequentially. Most of the slim-type drives were DVD+RW and combo models, totaling 920,000 and 2.08 million units respectively. Half-height (H/H) models accounted for 86%, or 21.69 million units.

Chart 5: Taiwan ODD shipments by dimension (slim-type and H/H), 1Q04-1Q05



	1Q04	2Q04	3Q04	4Q04	1Q05
H/H	91.3%	88.1%	87.8%	86.3%	86%
Slim-type	8.7%	11.9%	12.2%	13.7%	14%

Source: DigiTimes Research, April 2005

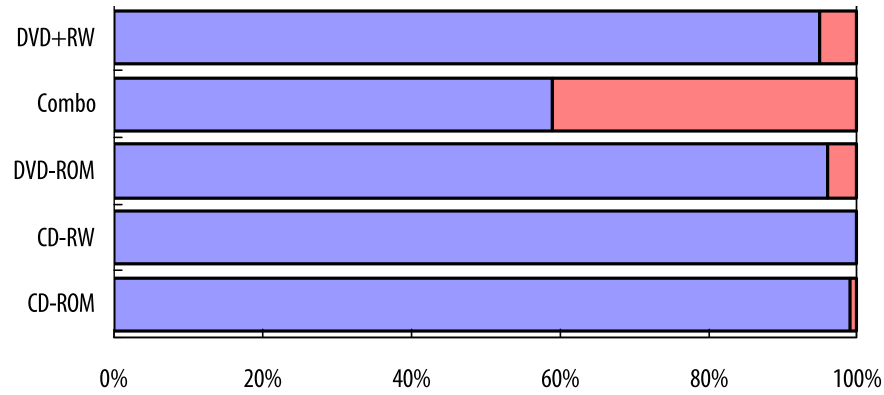
Drive function and dimension

Most of the slim-type models Taiwan shipped were combo and DVD + RW drives. Because of large orders from Dell for slim-type combos, Taiwan's first-quarter shipment of the segment rose almost 20% over the first-quarter of last year. In contrast, H/H combo shipments suffered an on-year-decline of 11.6% because of strong competition from H/H DVD + RW. Of the entire first-quarter combo shipments, slim-type drives accounted for 48.9%, up 7.5 percentage points from the first quarter of 2004.

Shipments of slim-type DVD + RW enjoyed a five-fold on-year increase to 920,000 units for the first quarter, as first-tier makers started ramping up production of the segment. Of all DVD + RW shipment for the first quarter, slim-type accounted for 13%. The percentage was lower than the previous quarter's 15.5%, because of higher first-quarter growths for H/H DVD + RW models.

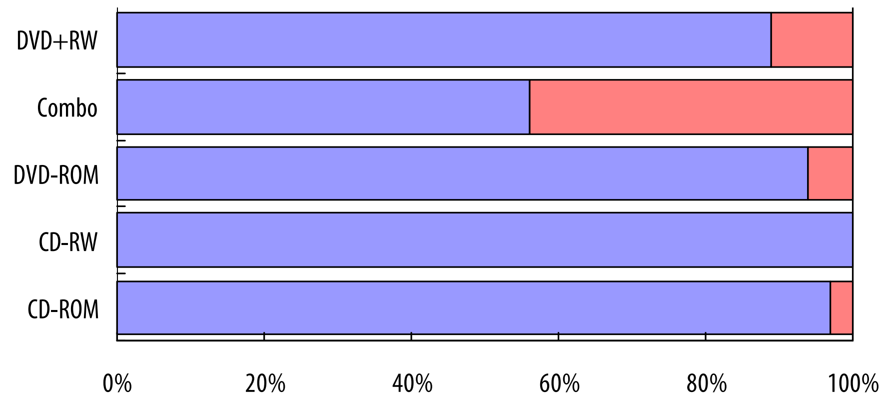
Chart 6: Taiwan ODD shipments by drive function and dimension, 1Q04-1Q05

1Q04



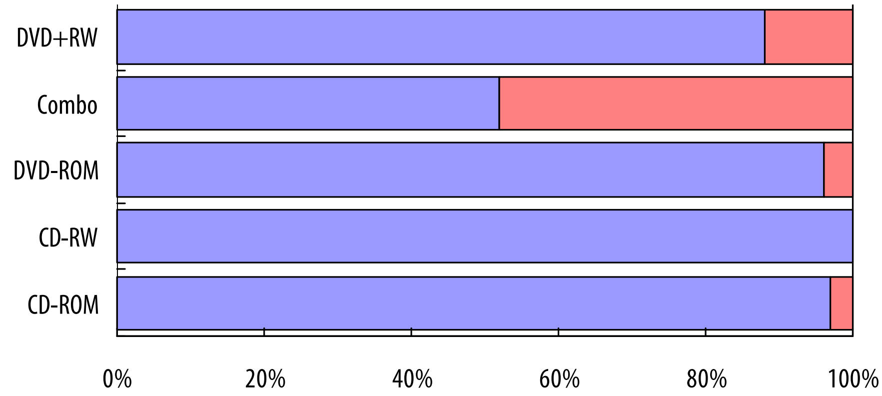
	CD-ROM	CD-RW	DVD-ROM	Combo	DVD+RW
Slim-type	1%	0%	4%	41%	5%
H/H	99%	100%	96%	59%	95%

2Q04



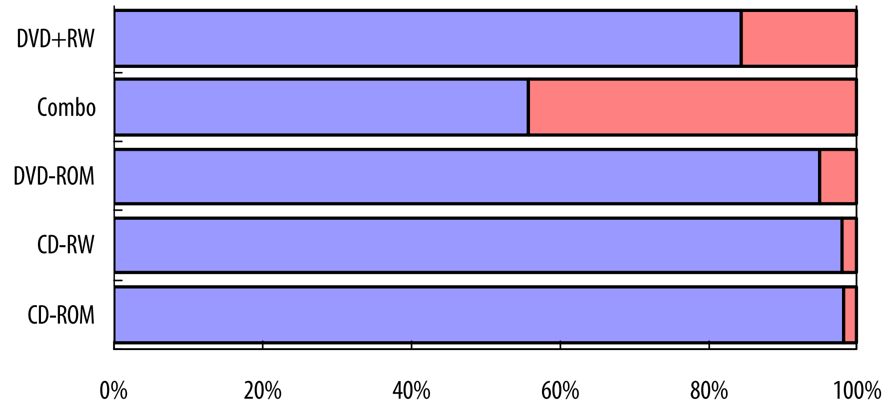
	CD-ROM	CD-RW	DVD-ROM	Combo	DVD+RW
Slim-type	3%	0%	6%	44%	11%
H/H	97%	100%	94%	56%	89%

3Q04



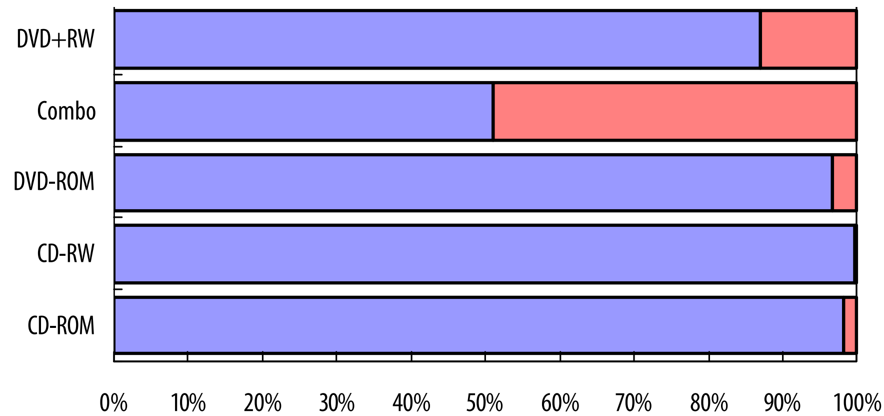
	CD-ROM	CD-RW	DVD-ROM	Combo	DVD+RW
Slim-type	3%	0%	4%	48%	12%
H/H	97%	100%	96%	52%	88%

4Q04



	CD-ROM	CD-RW	DVD-ROM	Combo	DVD+RW
Slim-type	1.9%	2.0%	5.1%	44.3%	15.5%
H/H	98.1%	98.0%	94.9%	55.7%	84.5%

1Q05



	CD-ROM	CD-RW	DVD-ROM	Combo	DVD+RW
Slim-type	1.9%	0.3%	3.3%	48.9%	13%
H/H	98.1%	99.7%	96.7%	51.1%	87%

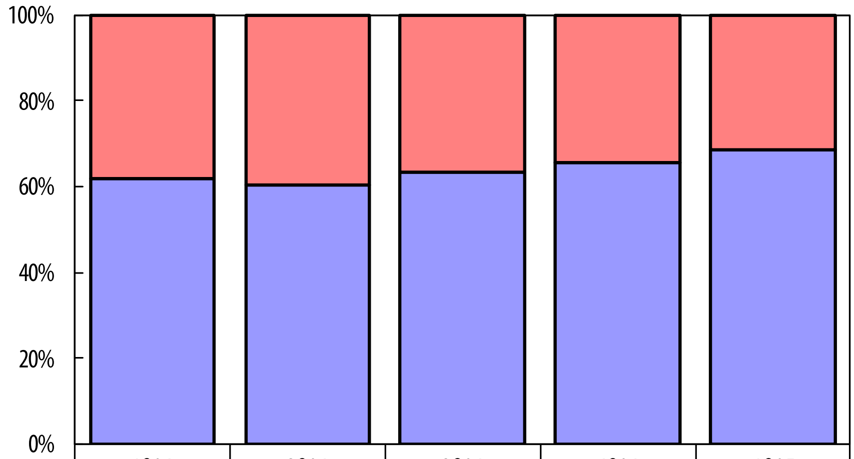
Source: DigiTimes Research, April 2005

Production mode: OBM, OEM/ODM

In the first quarter, OEM/ODM shipments increased 3.1% on-year to reach 68.7% of the total Taiwan ODD shipments, as OBM shipments decreased 17.4% on-year partly because of the exit of the minor makers.

Taiwan ODD makers' output will not see a significant increase in the near future, as they currently have no plans for capacity expansion, leaving them with less room for price-reduction than their Japan and Korea competitors, Hitachi-LG Data Storage (HLDS) and Toshiba-Samsung Storage Technology (TSST), who have recently announced plans for expansion. With a smaller business scale, Taiwan makers will find it even harder to vie for OEM orders.

Chart 7: Taiwan ODD shipments by production mode, 1Q04-1Q05



	1Q04	2Q04	3Q04	4Q04	1Q05
OBM	38.1%	39.6%	36.7%	34.4%	31.3%
OEM/ODM	61.9%	60.4%	63.3%	65.6%	68.7%

Source: DigiTimes Research, April 2005

Production mode and drive function

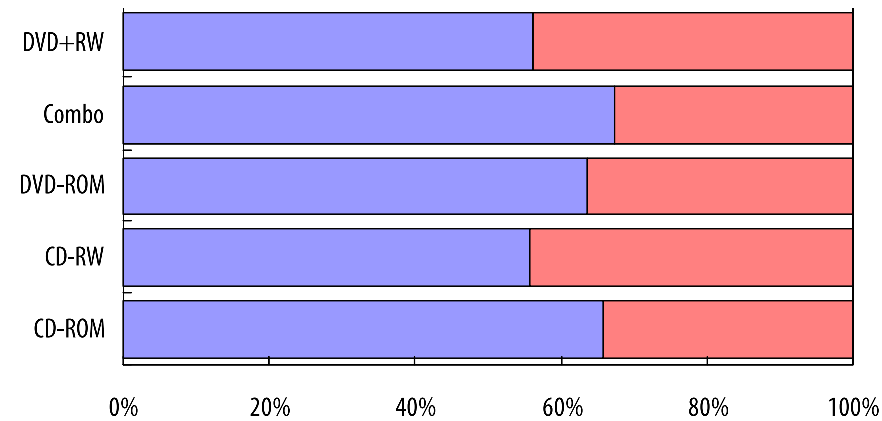
Of the first-quarter CD-ROM and DVD-ROM shipments, the proportions between OBM and OEM/ODM remained similar to the previous quarter. OEM shipment proportions for combo and DVD+RW drives, however, reached new heights to more than 70% each.

As demand from PC makers for DVD+RW grew, first-tier ODD makers received more OEM orders in the first quarter. The increase in OEM shipments of combo drives was chiefly the result of a dramatic rise in slim-type shipment of the segment. As for the mature product of CD-RW, its OEM shipments decreased, resulting in a rise in the proportion for OBM shipments of the type.

As first-tier makers reallocated their capacity to high-end models, OEM shipments of the mature products dropped.

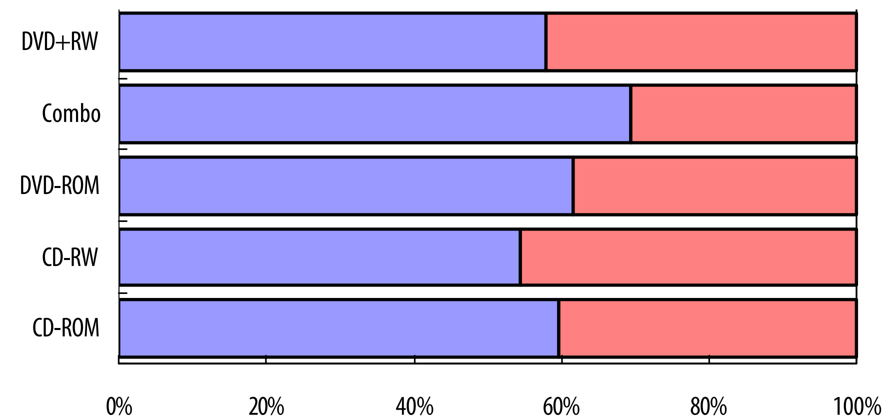
Chart 8: Taiwan ODD shipments by production mode and drive function, 1Q04-1Q05

1Q04



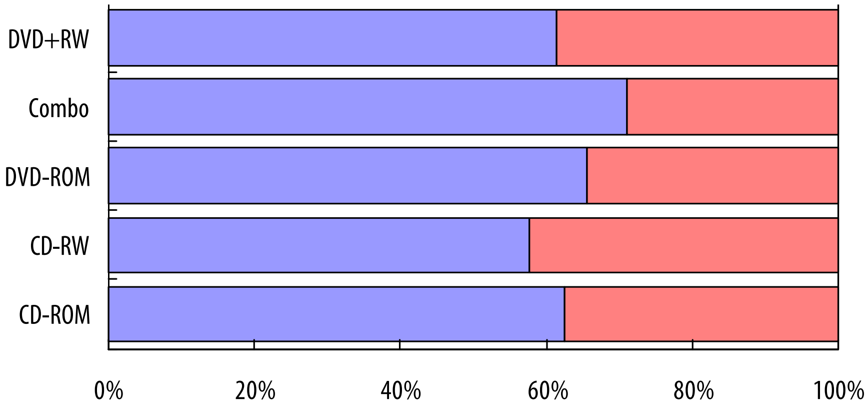
	CD-ROM	CD-RW	DVD-ROM	Combo	DVD+RW
OBM	34.2%	44.3%	36.4%	32.6%	43.8%
OEM/ODM	65.8%	55.7%	63.6%	67.4%	56.2%

2Q04



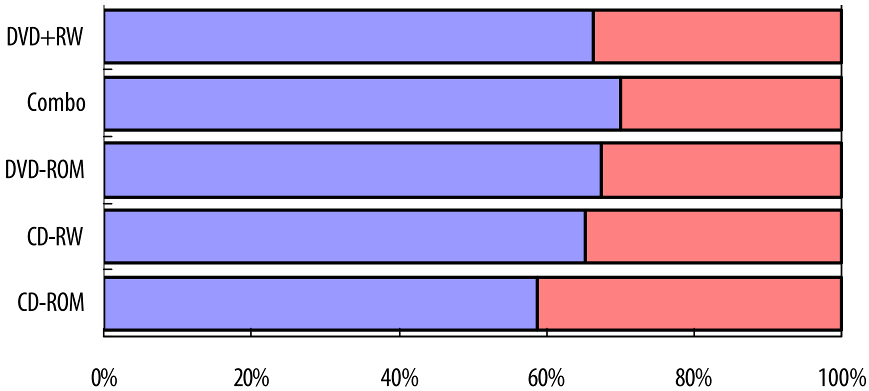
	CD-ROM	CD-RW	DVD-ROM	Combo	DVD+RW
OBM	40.5%	45.6%	38.5%	30.7%	42.2%
OEM/ODM	59.5%	54.4%	61.5%	69.3%	57.8%

3Q04



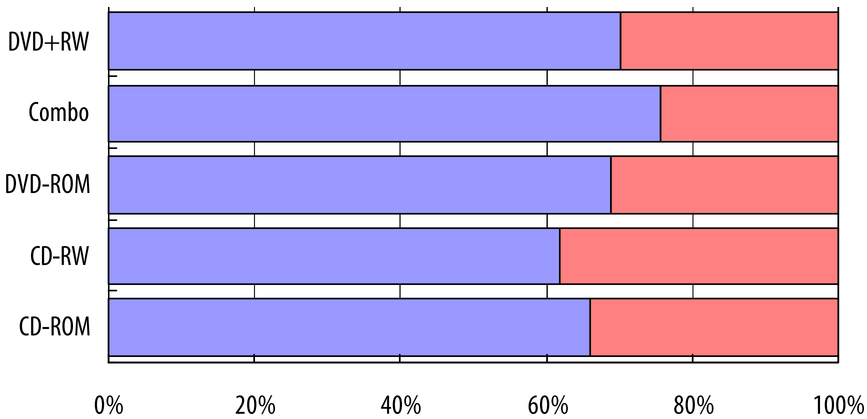
	CD-ROM	CD-RW	DVD-ROM	Combo	DVD+RW
OBM	37.4%	42.4%	34.5%	28.9%	38.6%
OEM/ODM	62.6%	57.6%	65.5%	71.1%	61.4%

4Q04



	CD-ROM	CD-RW	DVD-ROM	Combo	DVD+RW
OBM	41.2%	34.7%	32.7%	29.9%	33.8%
OEM/ODM	58.8%	65.3%	67.3%	69.9%	66.2%

1Q05



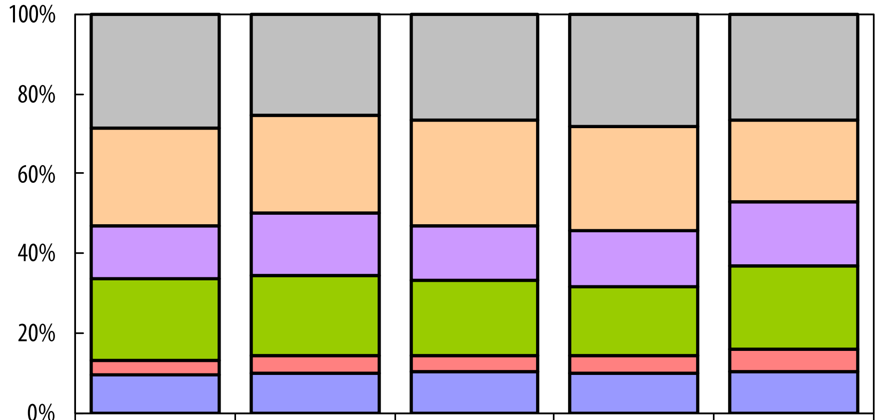
	CD-ROM	CD-RW	DVD-ROM	Combo	DVD+RW
OBM	34%	38.2%	31.2%	24.4%	29.8%
OEM/ODM	66%	61.8%	68.8%	75.6%	70.2%

Source: DigiTimes Research, April 2005

OBM market

First-quarter OBM shipments totaled 7.89 million units, down 17% on-year. The proportion of OBM shipments to the United States dropped to 20.6%. The shipment volume for Asia (including China, Taiwan and Japan) surpassed the combined amount for the US and Europe.

Chart 9: Taiwan OBM ODD shipments by region, 1Q04-1Q05



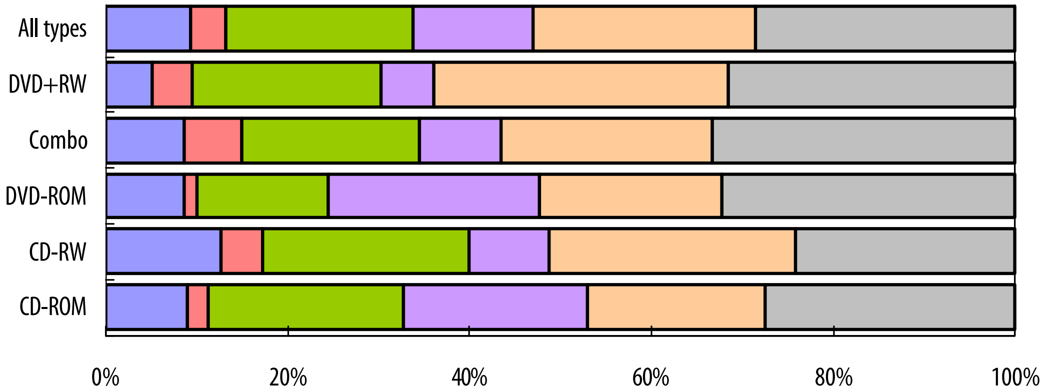
	1Q04	2Q04	3Q04	4Q04	1Q05
Europe	28.6%	25.6%	26.5%	28.1%	26.7%
US	24.4%	24.5%	26.5%	26.1%	20.6%
China	13.3%	15.3%	13.9%	14.3%	16.0%
Asia	20.5%	20.4%	18.8%	17.0%	20.9%
Japan	3.8%	4.2%	4.1%	4.7%	5.7%
Taiwan	9.4%	10.0%	10.2%	9.8%	10.1%

Note: China, Japan and Taiwan not counted in Asia. Source: DigiTimes Research, April 2005

Europe replaced the US as the biggest market for DVD+RW drives shipped from Taiwan, taking 33% of the first quarter output. The US market's first-quarter share of OBM shipments of DVD+RW drives from Taiwan dropped drastically to 22%, from 33% for the fourth quarter. The proportions of OBM DVD+RW shipments to Taiwan and China rose to 10% from 8%, and to 12% from 9%, respectively. In addition, Asia became the biggest market for Taiwan's OBM shipments of mature ODD models.

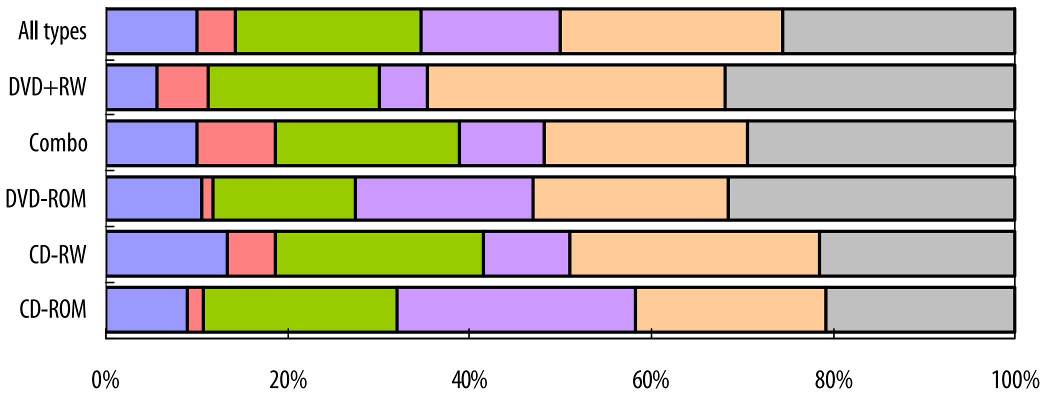
Chart 10: Taiwan OBM ODD shipments by region and drive function, 1Q04-1Q05

1Q04



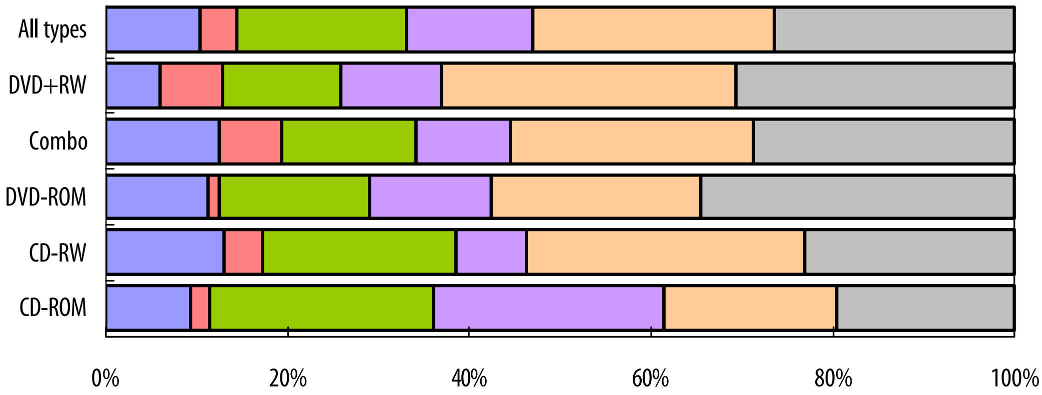
	CD-ROM	CD-RW	DVD-ROM	Combo	DVD+RW	All types
Europe	27.6%	24.2%	32.3%	33.4%	31.6%	28.6%
US	19.5%	27.0%	20.1%	23.2%	32.3%	24.4%
China	20.2%	8.9%	23.2%	8.9%	5.8%	13.3%
Asia	21.5%	22.7%	14.4%	19.6%	20.8%	20.5%
Japan	2.3%	4.6%	1.3%	6.2%	4.4%	3.8%
Taiwan	8.9%	12.6%	8.7%	8.7%	5.1%	9.4%

2Q04



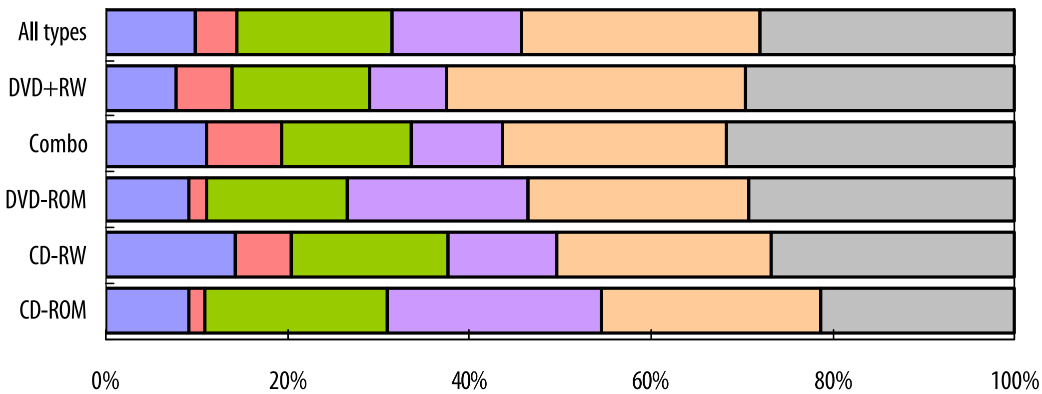
	CD-ROM	CD-RW	DVD-ROM	Combo	DVD+RW	All types
Europe	20.9%	21.6%	31.5%	29.5%	31.9%	25.6%
US	20.8%	27.3%	21.5%	22.3%	32.7%	24.5%
China	26.2%	9.5%	19.5%	9.3%	5.3%	15.3%
Asia	21.4%	22.9%	15.8%	20.2%	18.9%	20.4%
Japan	1.7%	5.4%	1.2%	8.6%	5.6%	4.2%
Taiwan	9.0%	13.3%	10.5%	10.1%	5.6%	10%

3Q04



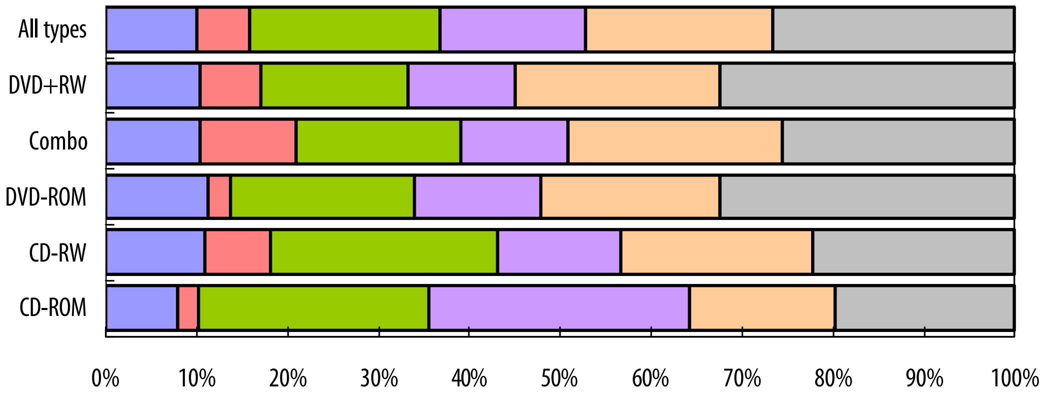
	CD-ROM	CD-RW	DVD-ROM	Combo	DVD+RW	All types
Europe	19.6%	23.1%	34.6%	28.8%	30.7%	26.5%
US	19%	30.6%	23%	26.7%	32.3%	26.5%
China	25.4%	7.8%	13.3%	10.4%	11.1%	13.9%
Asia	24.6%	21.3%	16.6%	14.8%	13.1%	18.7%
Japan	2%	4.1%	1.3%	6.8%	6.9%	4.1%
Taiwan	9.4%	13.1%	11.2%	12.5%	5.9%	10.3%

4Q04



	CD-ROM	CD-RW	DVD-ROM	Combo	DVD+RW	All types
Europe	21.3%	26.9%	29.3%	31.7%	29.6%	28.1%
US	24.2%	23.4%	24.2%	24.7%	32.9%	26.1%
China	23.6%	12%	19.9%	10%	8.5%	14.3%
Asia	20.0%	17.3%	15.6%	14.3%	15.1%	17.0%
Japan	1.7%	6.2%	1.8%	8.2%	6.2%	4.7%
Taiwan	9.2%	14.2%	9.2%	11.1%	7.7%	9.8%

1Q05



	CD-ROM	CD-RW	DVD-ROM	Combo	DVD+RW	All types
Europe	19.7%	22.3%	32.5%	25.5%	32.5%	26.7%
US	16.0%	21.1%	19.7%	23.6%	22.4%	20.6%
China	28.8%	13.5%	13.9%	11.8%	11.8%	16.0%
Asia	25.3%	25.0%	20.1%	18.1%	16.3%	20.9%
Japan	2.2%	7.2%	2.5%	10.7%	6.7%	5.8%
Taiwan	8.0%	10.9%	11.3%	10.3%	10.3%	10.0%

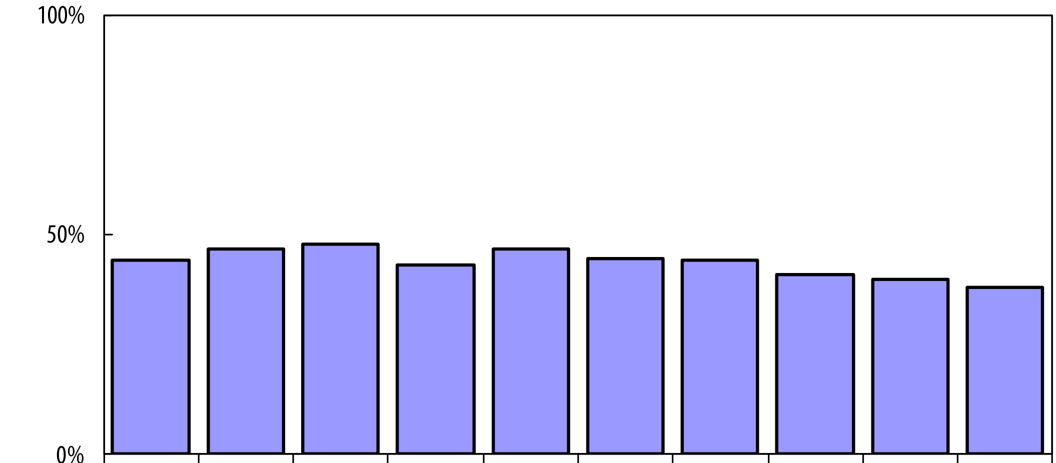
Source: DigiTimes Research, April 2005

The second quarter

HLDS and TSST are expected to see 20% on-year growth each in production for the second quarter, as their new production lines start operations. Their increased production means lower costs and shipment prices.

In contrast, Taiwan ODD makers have been cautious about expanding their production lines. Their second-quarter shipments are expected to take an even smaller share of global ODD shipments, at 38%.

Chart 11: Taiwan's share of global ODD market, 1Q03-2Q05

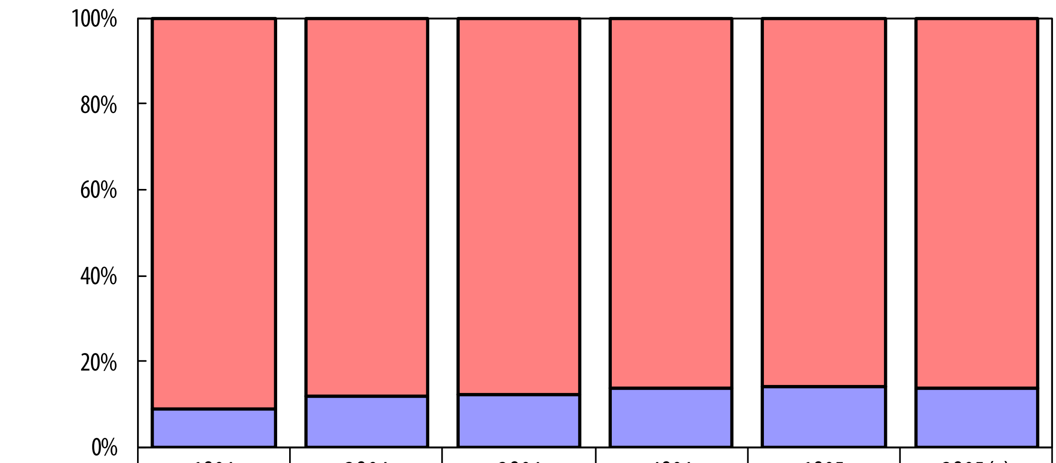


	1Q03	2Q03	3Q03	4Q03	1Q04	2Q04	3Q04	4Q04	1Q05	2Q05 (e)
Taiwan	44.1%	46.6%	47.9%	43.2%	46.9%	44.7%	44.1%	40.8%	39.9%	37.9%

Source: DigiTimes Research, April 2005

Japan makers are expected to take a firm hold of the slim-type market, which have higher margins and a higher technology threshold. The proportion of slim-type drives in Taiwan's second-quarter ODD shipments will drop slightly to 13.7%.

Chart 12: Taiwan ODD shipments by drive dimension, 1Q04-2Q05

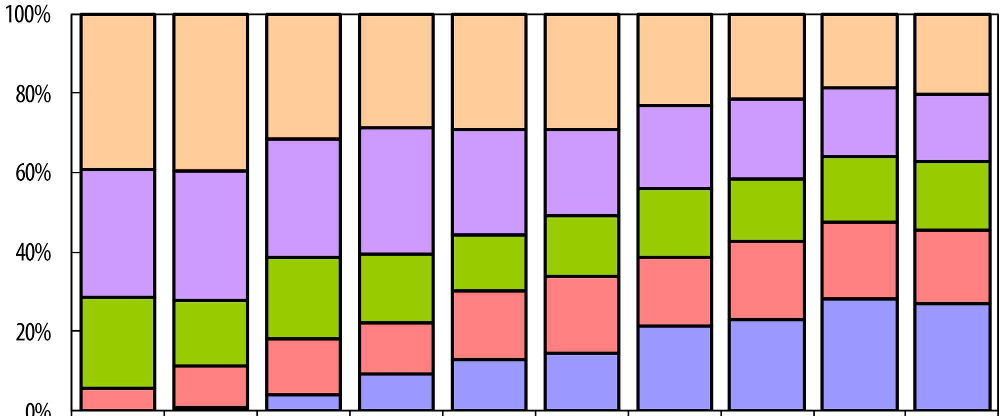


	1Q04	2Q04	3Q04	4Q04	1Q05	2Q05 (e)
Half-height	91.3%	88.1%	87.8%	86.3%	86.0%	86.3%
Slim-type	8.7%	11.9%	12.2%	13.7%	14.0%	13.7%

Source: DigiTimes Research, April 2005

Second-quarter DVD+RW shipments are expected to remain at 27-28% of all Taiwan ODD shipments. As very few Taiwan makers can have a quarterly DVD+RW shipment of more than 500,000 units, and some others lack the technology for the high-end models, Taiwan's DVD+RW shipment is unlikely to rise significantly in the near future.

Chart 13: Taiwan ODD shipments by drive function, 1Q03-2Q05



	1Q03	2Q03	3Q03	4Q03	1Q04	2Q04	3Q04	4Q04	1Q05	2Q05 (e)
CD-ROM	39.2%	39.5%	31.7%	28.6%	29%	29%	23.1%	21.4%	18.7%	20.4%
CD-RW	32.0%	32.6%	29.5%	31.7%	26.5%	21.8%	20.8%	20.1%	17.3%	16.7%
DVD-ROM	23.2%	16.6%	20.6%	17.4%	14.4%	15.2%	17.4%	15.7%	16.6%	17.2%
Combo	5.4%	10.3%	13.9%	13.1%	17.2%	19.5%	17.3%	19.9%	19.3%	18.7%
DVD+RW	0.2%	1%	4.3%	9.2%	12.9%	14.5%	21.4%	22.9%	28.1%	27.0%

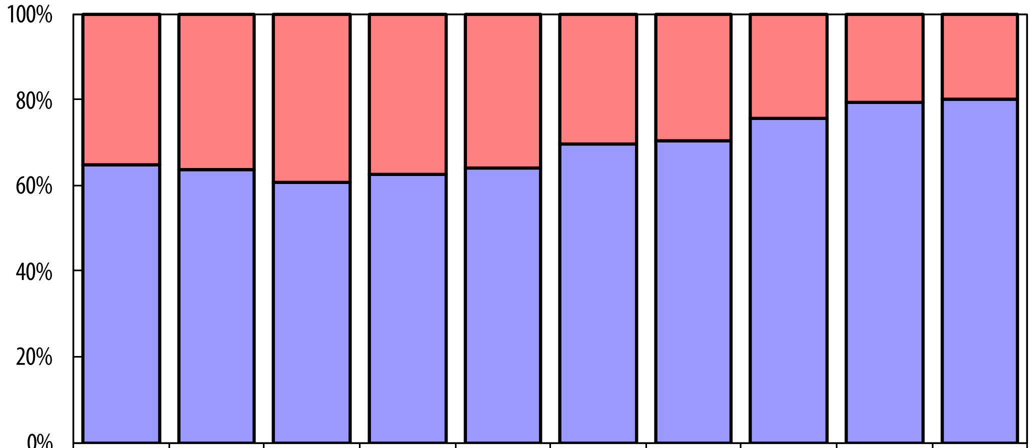
Source: DigiTimes Research, April 2005

Top three getting larger combined share

After the restructuring of the ODD sector in Taiwan, first-tier makers have taken an even bigger share of the pie. In the fourth quarter, the top three makers accounted for 75.5% of the total shipments from Taiwan. The top three's combined share of the total shipments for 2004 reached 72%. Their share reached 79.5% for the first quarter, and is expected to climb to 80.2% for the second quarter.

As DVD+RW has become the mainstream, the top four Taiwan makers, Lite-On IT, Philips BenQ Digital Storage (PBDS), Quanta Storage, and Asustek, with better technology than their minor competitors, are expected to continue dominating the Taiwan ODD sector.

Chart 14: Taiwan ODD shipment concentration, 1Q03-2Q05



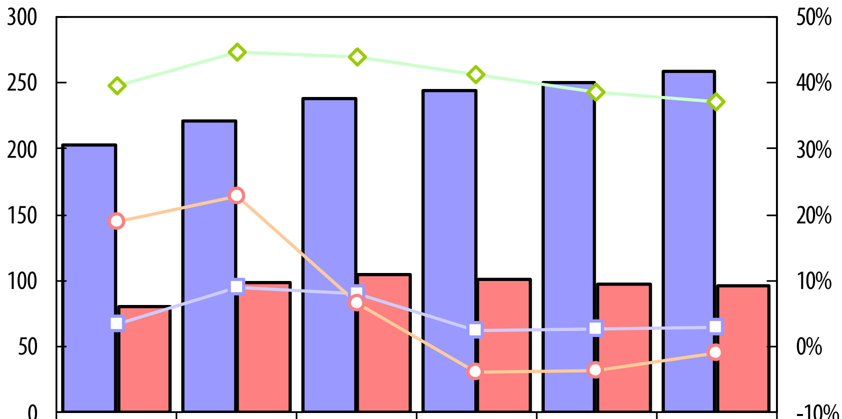
	1Q03	2Q03	3Q03	4Q03	1Q04	2Q04	3Q04	4Q04	1Q05	2Q05 (e)
Others	35.1%	36.2%	39.4%	37.3%	39.6%	30.5%	29.5%	24.5%	20.5%	19.8%
Top 3	64.9%	63.8%	60.6%	62.7%	70.4%	69.5%	70.5%	75.5%	79.5%	80.2%

Source: DigiTimes Research, April 2005

Predictions for 2005-2007

More Taiwan makers may withdraw from the ODD sector in 2005 and beyond, as they find it hard to survive on low margins and high royalties for patented technologies. Taiwan's shipment volume and their share in the worldwide market will drop.

Chart 15: Shipment trend 2002-2007 (million units)



	2002	2003	2004	2005 (f)	2006 (f)	2007 (f)
Worldwide shipment	202.5	220.6	238.07	244.02	250.6	258.12
Taiwan shipment	80.01	98.24	104.7	100.5	96.8	95.8
World's growth	3.5%	8.9%	7.9%	2.5%	2.7%	3.0%
Taiwan's growth	18.9%	22.8%	6.6%	-4.0%	-3.7%	-1.0%
Taiwan's market share	39.5%	44.5%	44.0%	41.2%	38.6%	37.1%

Source: DigiTimes Research, April 2005