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inside the contract manufacturing industry

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Top 25 CMs Push Growth Above 30%

The 25 largest contract manufacturers for 2010 combined for the fastest growth rate and the highest sales total of any Top 25 group that *MMI* has presented. Overall sales growth for these 25 EMS providers and ODMs amounted to 30.6%, a fast rate for most any industry but a striking result for an outsourcing business that is said to be mature.

Top 25 revenue for 2010 totaled an all-time high of \$302.9 billion, up from \$231.9 billion in the prior year. This is the first time that combined sales broke through the \$300-billion barrier.

It's also the first time in the eight years of Top 25 selections that a group of the largest EMS providers has outgrown a group of the largest ODMs. The 15 EMS providers in the Top 25 together generated revenue growth of 38.5%, compared with 21.5% produced by the 10 ODMs in this exclusive club (Chart 1). But the EMS group owes its 17 percentage point advantage to its largest member, Hon Hai Precision Industry (Foxconn), which grew at a 60% clip in U.S. dollars. Without Hon Hai, the EMS group would fall behind the ODMs by 3.2 percentage points (Chart 2, p. 3).

The EMS group represented a clear majority of Top 25 sales in 2010. Combined revenue on the EMS side came to \$172.0 billion, or 56.8% of the total, while the ODMs as a group

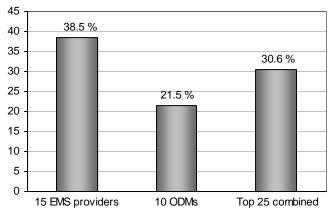
brought in sales of \$130.9 billion, or 43.2% of the total (Chart 3, p. 3).

Last year's 30.6% growth rate for the Top 25 indicates that the contract manufacturing business snapped back from a dismal 2009, making a full recovery in a single year, not something that would

been widely predicted at the beginning of 2010. A surge in end market demand from 2009's abysmally low levels together with continued outsourcing provided a perfect recipe for 2010 growth. Only one year in the last eight – 2004 – came close to producing a Top 25 growth rate on par with the 2010 increase (Chart 4, p. 3).

A significant portion of that growth, however, can be attributed to Hon Hai. Excluding Hon Hai, the rest of the Top





25 would have achieved collective growth of 20.3% (Chart 2), still quite healthy, but 10.3 percentage points below the Top 25 rate. So Hon Hai was responsible for 10.3 points, or about one-third, of the 30.6% growth calculated for the 2010 Top 25.

At \$95.5 billion in 2010 sales, Hon Hai was more than two and a half times the size of its nearest competitor and accounted for 31.5% of Top 25 sales. Hon Hai has established a virtu-

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ally unassailable position at the top of the order when the Top 25 contract manufacturers are ranked by calendar 2010 sales in U.S. dollars. See the table on this page. In second position for the second year in a row was Quanta Computer, followed by Compal **Electronics** in third. Compal unseated Flextronics, which dropped to fourth place. Wistron maintained its fifth position from the year earlier, while Jabil Circuit moved up to sixth place from eighth. Next was **Pegatron** in the seventh spot, down one step from 2009. Inventec landed in eighth position from seventh the year before. Completing the top 10 were TPV Technology and Celestica in ninth and tenth place respectively for the fourth straight year.

It took a minimum of \$6.53 billion to make the top 10 in 2010. Last year's revenue growth raised the barrier to entry from \$6.09 billion in 2009. Likewise, the Top 25 cutoff increased to \$987 million in 2010 from about \$850 million in 2009. The Top 25 minimum for 2010 was \$75 million below its peak in 2008 (Chart 5, p. 3).

The 2010 Top 25 includes one new member, **Shenzhen Kaifa Technology**, a China-based EMS provider. Making room for the new member, **Innolux Display**, a company on the 2009 list, did not return for 2010 because Innolux was part of a 2010 merger that created an upstream supplier.

Two EMS providers with Chinacentric production had the highest growth rates in the Top 25. Hon Hai and Shenzhen Kaifa both grew their sales by well over 50%. In addition, 10 CMs achieved growth rates (in U.S. dollars) of 30% or more. Revenue declined for two EMS providers and two ODMs on the list (table).

Taiwan-based contract manufacturers continue to claim an ever larger share of Top 25 revenue. In 2010, they accounted for 77.1% of total sales (Chart 6, p. 3). That's up from 75.7%

Note	Top 25 Contract Manufacturers for 2010								
Precision Industry (Foxorn) Pleximon Precision Industry (Foxorn) Precision Industry (F					0.0		Sales		
Model Mode	Organization	⊔oodquarters			2009			Business	
Hon Hai Precision Industry Taiwan Taiwan San Jose, CA	Olyanization	Пеацуиансью			rank			model	
Precision Industry (Foxconn)	<u> </u>		, ,			, ,	. ,		
Computer Gueishan, \$35,762 2 2 \$25,528 40 ODM			\$95,543	1	1	\$59,540	60		
Quanta Computer Taoyuan, Taiwan Gueishan, Taoyuan, Taiwan \$35,762 2 2 \$25,528 40 ODM Compal Electronics 1 Electronics 1 Taipei, Taiwan \$28,171 3 4 \$20,550 37 ODM Flextronics Singapore \$27,761 4 3 \$23,753 17 EMS/components/ODM Wistron Hsinchu, Taiwan \$19,555 5 \$16,600 18 ODM/EMS Jabil Circuit St. Petersburg, FL \$14,403 6 8 \$11,390 26 EMS/materials Pegatron 2 Taipei, Taiwan \$13,830 7 6 \$14,372 -4 ODM/EMS Inventec Taipei, Taiwan \$11,986 8 7 \$13,498 -11 ODM TVP Technology Taipei, Taiwan \$11,986 8 7 \$13,498 -11 ODM/EMS New Kinpo Group¹ Taipei, Taiwan \$1,986 8 7 \$13,498 -11 ODM/EMS Sanmina-SCI San Jose, CA \$6,526 10 10 \$6,092 7 EMS/components	,	iaiwan							
Taoyuan, Taiwan	` '	Gueishan	\$35.762	2	2	\$25 528	40		
Electronics Flextronics	·	Taoyuan, Taiwan							
Mistron		Taipei, Taiwan	\$28,171	3	4	\$20,550	37	ODM	
Jabil Circuit St. Petersburg, FL FL FL FL FL FL FL FL	Flextronics	Singapore	\$27,761	4	3	\$23,753	17		
Jabil Circuit St. Petersburg, FL FL FL FL FL FL FL FL	Wistron	Hsinchu, Taiwan	\$19,555	5	5	\$16,600	18	ODM/EMS	
Pegatron	Jabil Circuit	St. Petersburg,		6	8		26		
Inventec	Pegatron ²		¢13.830	7	6	\$1 <i>A</i> 372	-4		
TPV Technology							-		
Celestica Toronto, Canada \$6,526 10 10 \$6,092 7 EMS		•			-			~=	
Sannina-SCI	0,								
New Kinpo Group¹ Taipei, Taiwan \$5,059 12 14 \$3,800 33 EMS/ODM		•						_	
Group1		•						nents	
Taoyuan, Taiwan Shenzhen Kaifa Shenzhen, China \$3,081 14 new \$1,955 58 EMS/ODM Technology AmTRAN Chong He City, \$2,439 15 18 \$2,040 20 ODM Technology Taiwan Senchmark Angleton, TX \$2,402 16 17 \$2,089 15 EMS Electronics Plexus Neenah, WI \$2,149 17 19 \$1,591 35 EMS Universal Nantou, Taiwan \$2,029 18 20 \$1,563 30 EMS/ODM Scientific Industrial (USI) Venture 3 Singapore \$1,967 19 15 \$2,355 -16 EMS/ODM Ability Enterprise Taipei, Taiwan \$1,644 20 22 \$1,116 47 ODM Inventec Taipei, Taiwan \$1,584 21 21 \$1,503 5 ODM/OBM Appliances Elcoteq 3 Luxembourg \$1,415 22 16 \$2,073 -32 EMS SIIX Osaka, Japan \$1,076 23 24 \$865 24 EMS Zollner Elektronik Zandt, Germany ~\$1,056 24 25 \$837 26 EMS Beyonics Singapore \$987 25 23 \$972 1 EMS Technology 4 Taiwan Taiw	•	Taipei, Taiwan	\$5,059	12	14	\$3,800	33	EMS/ODM	
Technology	Qisda		\$4,337	13	13	\$4,554	-5	ODM/EMS	
AmTRAN Technology Chong He City, Taiwan \$2,439 15 18 \$2,040 20 ODM Benchmark Electronics Angleton, TX \$2,402 16 17 \$2,089 15 EMS Plexus Neenah, WI \$2,149 17 19 \$1,591 35 EMS Universal Scientific Industrial (USI) Nantou, Taiwan \$2,029 18 20 \$1,563 30 EMS/ODM Ability Enterprise Taipei, Taiwan \$1,967 19 15 \$2,355 -16 EMS/ODM Ability Enterprise Taipei, Taiwan \$1,644 20 22 \$1,116 47 ODM Inventec Appliances Taipei, Taiwan \$1,584 21 21 \$1,503 5 ODM/OBM Elcoteq 3 Luxembourg \$1,415 22 16 \$2,073 -32 EMS SIIX Osaka, Japan \$1,076 23 24 \$865 24 EMS Zollner Elektronik Zandt, Germany ~\$1,056		Shenzhen, China	\$3,081	14	new	\$1,955	58	EMS/ODM	
Benchmark Electronics Electronics Plexus Neenah, WI \$2,149 17 19 \$1,591 35 EMS	AmTRAN		\$2,439	15	18	\$2,040	20	ODM	
Plexus Neenah, WI \$2,149 17 19 \$1,591 35 EMS	Benchmark	Angleton, TX	\$2,402	16	17	\$2,089	15	EMS	
Universal Nantou, Taiwan \$2,029 18 20 \$1,563 30 EMS/ODM Scientific Industrial (USI) Venture 3 Singapore \$1,967 19 15 \$2,355 -16 EMS/ODM Ability Enterprise Taipei, Taiwan \$1,644 20 22 \$1,116 47 ODM Inventec Taipei, Taiwan \$1,584 21 21 \$1,503 5 ODM/OBM Appliances Elcoteq 3 Luxembourg \$1,415 22 16 \$2,073 -32 EMS SIIX Osaka, Japan \$1,076 23 24 \$865 24 EMS Zollner Elektronik Zandt, Germany ~\$1,056 24 25 \$837 26 EMS Beyonics Singapore \$987 25 23 \$972 1 EMS Technology 4 Taipei, Taiwan \$1,056 24 25 \$837 26 EMS EMS Technology 4 Taipei, Taiwan \$1,056 24 25 \$837 26 EMS Technology 4 Taipei, Taiwan \$1,056 24 25 \$837 26 EMS Technology 4 Taipei, Taiwan \$1,056 24 25 \$837 26 EMS Technology 4 Taipei, Taiwan \$1,056 24 25 \$837 26 EMS Technology 4 Taipei, Taiwan \$1,056 24 25 \$837 26 EMS Technology 4 Taipei, Taiwan \$1,056 24 25 \$837 26 EMS Technology 4 Taipei, Taiwan \$1,056 24 25 \$837 26 EMS Technology 4 Taipei, Taiwan \$1,056 24 25 \$837 26 EMS Technology 4 Taipei, Taiwan \$1,056 25 23 \$972 1 EMS Taipei, Taiwan \$1,056 Taipei, Taip		Neenah, WI	\$2,149	17	19	\$1,591	35	EMS	
Scientific Industrial (USI)		•							
Venture 3 Singapore \$1,967 19 15 \$2,355 -16 EMS/ODM Ability Enterprise Taipei, Taiwan \$1,644 20 22 \$1,116 47 ODM Inventec Appliances Taipei, Taiwan \$1,584 21 21 \$1,503 5 ODM/OBM Elcoteq 3 Luxembourg \$1,415 22 16 \$2,073 -32 EMS SIIX Osaka, Japan \$1,076 23 24 \$865 24 EMS Zollner Elektronik Zandt, Germany ~\$1,056 24 25 \$837 26 EMS Beyonics Technology4 Singapore \$987 25 23 \$972 1 EMS	Scientific		• ,			,			
Ability Enterprise Taipei, Taiwan \$1,644 20 22 \$1,116 47 ODM Inventec Appliances Taipei, Taiwan \$1,584 21 21 \$1,503 5 ODM/OBM Elcoteq 3 Luxembourg \$1,415 22 16 \$2,073 -32 EMS SIIX Osaka, Japan \$1,076 23 24 \$865 24 EMS Zollner Elektronik Zandt, Germany ~\$1,056 24 25 \$837 26 EMS Beyonics Technology ⁴ Singapore \$987 25 23 \$972 1 EMS	` ,	Singapore	\$1,967	19	15	\$2,355	-16	EMS/ODM	
Inventec	Ability Enterprise			20	22		47	ODM	
Appliances Elcoteq ³ Luxembourg \$1,415 22 16 \$2,073 -32 EMS SIIX Osaka, Japan \$1,076 23 24 \$865 24 EMS Zollner Elektronik Zandt, Germany ~\$1,056 24 25 \$837 26 EMS Beyonics Singapore \$987 25 23 \$972 1 EMS Technology ⁴	, ,	•	\$1,584	21	21		5	ODM/OBM	
SIIX Osaka, Japan \$1,076 23 24 \$865 24 EMS Zollner Elektronik Zandt, Germany ~\$1,056 24 25 \$837 26 EMS Beyonics Singapore \$987 25 23 \$972 1 EMS Technology ⁴	Appliances								
Zollner Elektronik Zandt, Germany ~\$1,056 24 25 \$837 26 EMS Beyonics Singapore \$987 25 23 \$972 1 EMS Technology ⁴	Elcoteq ³	Luxembourg	\$1,415	22	16	\$2,073	-32	EMS	
Beyonics Singapore \$987 25 23 \$972 1 EMS Technology ⁴	SIIX	Osaka, Japan	\$1,076	23	24	\$865	24	EMS	
Technology⁴	Zollner Elektronik	Zandt, Germany	~\$1,056	24	25	\$837	26	EMS	
,		Singapore	\$987	25	23	\$972	1	EMS	
	, , , , , , , , , , , , , , , , , , ,		\$302,897			\$231,905	30.6		

Companies with multiple businesses were classified as EMS or ODM as indicated by the first acronym in the business model description. Where possible, currency conversions were done on a quarterly basis using average quarterly exchange rates from the US Federal Reserve. ¹A member of the Kinpo Group. ² Sales correspond to the company's core DMS business. ³ Because quarterly exchange rates were applied, sales were adjusted from Top 50 values published in March.

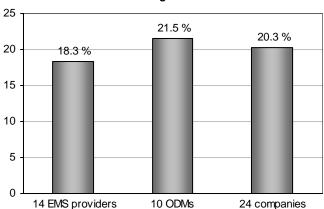
⁴ Rank corresponds to EMS portion of company sales.

of revenue for the 2009 list, which was slightly more weighted toward Taiwan.

Editor's note: A company was

classified as EMS or ODM based on which model supplied the company's primary source of revenue or was estimated as such. The EMS-versus-ODM

Chart 2: 2010 Growth Percentages in US\$
Excluding Hon Hai



analysis presented here does not allow for the fact that some companies pursue both EMS and ODM business.

The Top 25's sales of \$302.9 billion were not all derived from EMS and ODM work. As shown in Table 1, some companies mix in revenue from other businesses such as components or own-brand manufacturing (OBM). To some degree, Top 25 sales and growth figures have been influenced by revenue from businesses outside the

realm of contract manufacturing. In a few cases, the addition of other business to contract manufacturing revenue might have unfairly boosted a company's rank.

Chart 3: Top-25 Sales by Type of Provider

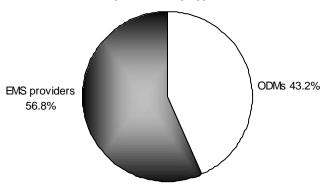


Chart 4: Top 25 Growth Rates (%)

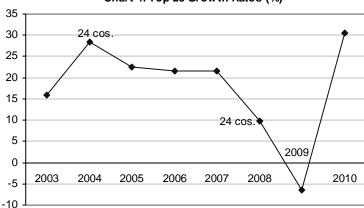


Chart 5: Top 25 Cutoff (Millions USD)

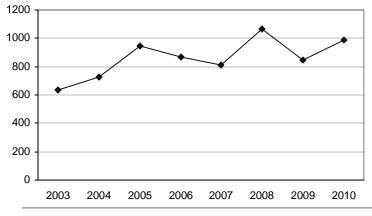
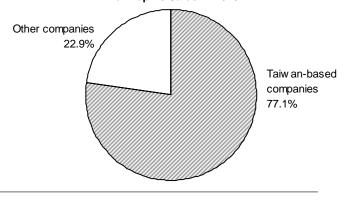


Chart 6: Taiwan-Based Companies' Share of Top-25 Sales in 2010



Q1 Sales Results Below Estimates

On both a sequential and year-overyear basis, combined Q1 sales results for the six largest U.S.-traded EMS providers did not measure up to what was estimated by *MMI*. Q1 revenue totaled \$15.26 billion, down 8.3% from the prior quarter. This decline was 280 basis points worse than the projected drop of 5.5% (Feb., p. 7). In addition, group sales grew 16.9% year over year, 360 basis points below *MMI's* estimate of 20.5%.

MMI based its estimates on the midpoint of each company's sales guidance for Q1. Sales at three providers – **Benchmark Electronics**, **Flex-**

tronics and Sanmina-SCI – fell below the range specified in their guidance. Overall, the group's revenue of \$15.26 billion was 3% below *MMI's* estimate of \$15.74 billion (Feb., p. 7).

Five out of six providers posted sequential declines in sales for Q1, generally regarded as seasonally weak quarter (Table 1, p. 4). Flextronics and Benchmark saw their sales decrease by

double digits.

Year-over-year results looked much better, as four out of six companies reported double-digit growth on that basis. What's more, the group's Q1 growth of 16.9% year over year, while less than estimated, still gives 2011 a healthy start on which to build.

Five out of six providers reported Q1 results according to GAAP. The sixth, **Celestica**, has switched to IFRS reporting, which differs from GAAP in some respects such as the treatment of restructuring charges. Except for sales, GAAP and IFRS operating results are not comparable. With respect to gross and operating profit and net income, Celestica's results will from now on be considered apart from those of the other five companies (Table 1).

For the other five, aggregate gross margin (GAAP) in Q1 held steady at 6.6% despite an 8.9% sequential decline in revenue. But the same cannot be said for operating margin. Collectively, their Q1 operating margin was 2.6%, down 60 basis points from the prior quarter. All five providers experienced sequential declines in their operating margin. Still, the aggregate Q1 margin came in 30 basis points higher than the year-earlier result (Table 1).

In all five cases, net income (GAAP) also fell sequentially, and the aggregate decline amounted to 35.5%. But on a year-over-year basis, com-

bined net income for the five rose 75%. All five providers but one (Benchmark) reported year-over-year gains in net income. Celestica's IFRS net income also grew from a year earlier.

Q1 summaries for two providers

Last month's issue covered Q1 results for four out of the six large U.S.-traded providers. Results for the remaining two companies are briefly summarized below.

Benchmark Electronics. Q1 sales of \$538 million fell short of the company's original guidance of \$565 million to \$605 million, and EPS of \$0.25 was below its original outlook of \$0.30 to \$0.36. Anticipating that results would be below expectations, Benchmark lowered its Q1 guidance last month. The company said it was disappointed with its financial results for the quarter. During the quarter, Benchmark saw weaker than projected demand primarily due to customer inventory adjustments following strong demand in Q4 2010. A revenue shortfall in the medical sector caused by a components issue was also a factor, but to a lesser extent. Q1 sales declined 14% sequentially and 6% year over year. Compared with the prior quarter, revenue fell in the computing (-29%), medical (-26%) and telecom (-8%) sectors, while remaining approximately flat in the test and instrumentation and industrial control sectors.

Gross margin in Q1 was 7.1%, 70 basis points below Q4's non-GAAP level, while operating margin stood at 3.1%, down 100 basis points from the non-GAAP result of the prior quarter. The margin declines resulted from unabsorbed manufacturing overhead costs. In Q1, Benchmark, which did not report any restructuring charges for the quarter, earned GAAP net income of \$15.3 million, compared with \$19.1 million a year earlier excluding such charges.

During the quarter, Benchmark booked 15 new programs with estimated annual revenues of \$101 million to \$121 million. About 40% of these bookings were in the medical sector.

The provider expects sales to rebound in the second quarter, as its customers achieve a balancing of inventory levels to match demand. At the midpoint of Q2 guidance, sales would increase 8% sequentially. (See Table 1A on p. 5).

Flextronics. For its fiscal Q4 ended March 31, sales of \$6.86 billion were below the company's guidance of \$7.1 billion to \$7.4 billion. Non-GAAP EPS of \$0.21 came in at the low end of guidance. Revenue was down 12% sequentially but up 15% year over year.

Compared with the prior quarter, communications infrastructure and

	Table	1: Q1 20	11 Res	sults for	Six La	rge EN	/IS Prov	/iders,	U.STr	aded (N	I US\$	or %)		
Company	Q1 '11 sales	Q4 '10 sales	Qtr qtr. chg.	Q1 '10 sales	Yryr.	Q1 '11 gross marg.	gross		oper.	Q4 '10 oper. marg.	oper.		Q4 '10 net inc.	
Flextronics	6,858.9	7,832.9	-12.4	5,940.2	15.5	5.6	5.5	5.4	2.41	2.6 ¹	1.9 ¹	135.3	198.3	60.1
Jabil	3,928.72	4,082.2	-3.8	3,004.6	30.8	7.5	7.6	7.4	2.7	3.8	2.1	55.7	106.7	29.8
Sanmina-SCI	1,569.1	1,662.5	-5.6	1,527.5	2.7	7.4	7.7	7.7	2.8	3.7	3.0	13.1	28.4	10.1
Plexus	568.1	565.8	0.4	491.0	15.7	9.8	9.7	10.3	4.6	4.9	4.8	23.9	25.0	20.7
Benchmark	538.3	626.9	-14.1	571.9	- 5.9	7.1	7.8	7.9	3.1	3.3	3.7	15.3	19.0	18.3
Subtotal/avg.	13,463.1	14,770.3	-8.9	11,535.2	16.7	6.6	6.6	6.6	2.6	3.2	2.3	243.3	377.4	139.0
Celestica	1,800.1	1,876.1	-4.1	1,518.1	18.6	6.5	not	6.9	1.9	not	1.9	30.0	38.4	28.5
							avail.			avail.				
Total/avg.	15,263.2	16,646.4	-8.3	13,053.3	16.9									

All results are based on GAAP except those of Celestica, which has converted to IFRS reporting. With the exception of sales, GAAP and IFRS results are not comparable. ¹ Intangible amortization was subtracted from reported operating income. ² For the quarter ended Feb. 28.

computing business fell by 12% and 15% respectively, and both results were below expectations. Sales in the mobile and consumer digital segments declined 15% and 30% respectively, in line with expectations. On the plus side, the industrial, automotive, medical and other segment showed a sequential increase of 8%. Sales in this segment rose by 31% in fiscal 2011, the fastest such growth of any segment.

Non-GAAP gross margin was 5.6%, unchanged from the prior quar-

ter. Non-GAAP operating margin amounted to 2.8%, down 20 basis points sequentially. This operating result was lower than expected because of the revenue shortfall and the related rise in SG&A of 30 basis points despite spending cuts. Operating margin was affected by losses in personal computing due to revenue ramps. The company's component businesses produced a slight loss for the quarter. Still, non-GAAP net income rose 25% year over year, while GAAP net income climbed 125%.

In the March quarter, Flextronics generated free cash flow of \$208 million.

The provider has achieved four straight quarters of double-digit growth year over year and believes that this trend will continue into fiscal 2012. At the mid point of June quarter guidance, sales would increase by 12% year over year (Table 1A below).

After a \$200-million stock buyback program was completed in the quarter, Flextronics' board authorized another \$200-million program.

Double-Digit Estimate for First-Half Growth

MMI estimates that combined sales for the six largest U.S.-traded EMS providers will increase by 14.5% in the first half. If this estimate is borne out, then 2011 would essentially duplicate 2010's first-half growth of 14.7% for the U.S.-traded group. With such a result, one could conclude that through the first half at least, 2011 is looking much like 2010 for this EMS group. That's good news for this group, because it would indicate that so far there is no drop-off in the group's growth from 2010 to 2011. Such a result, if it holds up through year-end, would also contradict those forecasters who were looking for growth to moderate in 2011 after snapping back in

2010.

Four out of six providers will achieve double-digit growth in the first half, according to *MMI's* estimates, which are based on the midpoints of companies' sales guidance for Q2. **Jabil** leads the group with projected first-half growth of 25.1%, although it must be noted that Jabil's results correspond to the six months from December 2010 to May 2011 rather than the first half of calendar 2011.

Despite the consistency of first-half data from 2010 to 2011, the group's projected sales growth in Q2 falls below the year-over-year pace set in Q1. Estimated Q2 sales for the group of six providers total \$16.12 billion, representing a 12.3% increase from a year earlier. That's 4.4 percentage points below the Q1 rate of 16.7%. Projected Q2 growth rates range from -1.6%

(**Benchmark**) to 20.1% (Jabil), with three out of six providers in double digits (Table 1A).

At five out of six providers, revenue is projected to increase from Q1 to Q2. At the high end of sequential growth estimates are Benchmark and **Flextronics** with projected gains above 7% quarter to quarter. *MMI* estimates that Q2 sales for the six providers will collectively rise by 5.6% from the prior quarter (Table 1A).

Based on Q2 guidance, Jabil, **Sanmina-SCI** and Benchmark expect a sequential increase in their non-GAAP EPS for Q2. On the other hand, **Plexus** has issued guidance suggesting that its non-GAAP EPS will decline from Q1 to Q2. For the other two companies, no conclusions can be drawn from their EPS outlook (Table 1A).

Table 1A: Q2	2011 Guidance	and Esti	mates fo	or the Si	x Larges	t U.STı	raded Pro	viders	(sales in	B\$ exce	pt as noted)
Company	Q2 guidance	Q2 midpoint	Q1 '11 sales	Qtrqtr. estim. chg.	Q2 '10 sales	Yryr. estim. chg.	Q1-2 '11 estim. sales	Q1-2 '10 sales	Estim. change	Q1 EPS adjust- ed* \$	Q2 guidance adjusted* \$
Flextronics	7.1 - 7.6	7.35	6.86	7.2%	6.57	11.9%	14.21	12.51	13.6%	0.21	0.20 - 0.23
Jabil**	4.1 - 4.2	4.15	3.93	5.6%	3.46	20.1%	8.08	6.46	25.1%	0.54	0.55 - 0.59
Celestica	1.75 - 1.9	1.83	1.80	1.4%	1.59	15.1%	3.63	3.10	16.8%	0.25	0.22 - 0.28
Sanmina-SCI	1.6 - 1.7	1.65	1.57	5.2%	1.63	1.5%	3.22	3.15	2.1%	0.30	0.33 - 0.37
Plexus	550 M - 580 M	0.57	0.57	-0.5%	0.54	5.3%	1.13	1.03	10.3%	0.59	0.52 - 0.57
Benchmark	560 M - 600 M	0.58	0.54	7.7%	0.59	-1.6%	1.12	1.16	-3.7%	0.25	0.28 - 0.34

Q2 estimates equal midpoint of Q2 guidance. First-half estimates equal Q1 sales plus midpoint of Q2 guidance.

*Adjusted EPS may not be comparable from company to company. **Q2 data correspond to the quarter ending May 2011.

14.36 12.3%

31.38 27.41 14.5%

5.6%

16.12

15.26

Total/avg.

Hon Hai Poses Dilemma

Adding up Q1 sales for 11 of the largest EMS providers would seem to give a rough indication of how well the EMS industry is doing early in 2011. Problem is, results can be interpreted in two ways: with **Hon Hai Precision Industry** (Foxconn) and without it. Including Hon Hai, the 11 providers together generated Q1 sales of \$42.4 billion, up 31.9% year over year. But without Hon Hai, the growth rate falls to 16.0% (Table 1B).

As has been written here before, Hon Hai continues to defy the law of large numbers, which says a company will eventually reach a size that will no longer support a high growth rate. Hon Hai, whose Q1 sales were larger than those of the other 10 companies combined, also had the highest growth rate. When expressed in U.S. dollars, Hon Hai's Q1 sales rose 46%, well above the growth rates of the other providers (Table 1B). The company received a 12 percentage-point boost from a stronger Taiwan dollar (Table

2B). To complicate matters, Hon Hai is in a number of businesses outside of EMS, and the company has never provided a breakdown of its sales.

But on a sequential basis, Hon Hai hurt the Q1 sales performance of the group. With Hon Hai, combined Q1 sales dropped 16.4% from the prior quarter. Excluding Hon Hai, the decline is a more palatable 9.4% (Table 1B). Only **Elcoteq** experienced a greater sequential drop (in U.S. dollars) than Hon Hai did

In Q1, Hon Hai faced margin erosion compared with the year-earlier period. Gross margin amounted to 7.25%, down 141 basis points year over year, while operating margin came in at 1.74%, 192 basis points below the yearago result. These lower margins coincide with higher wages paid by Hon Hai to its Chinese workers.

All five providers that are based and traded outside the U.S. showed double-digit sequential drops in their Q1 sales reported in non-U.S. currencies (Table 2B).

	Table 1B: Q1 2011 Sales for 11 Large EMS Providers (M US\$ or %)								
Company (in order of Q1 sales)	Q1 '11 sales	Q4 '10 sales	Qtr qtr. chg.	Q1 '10 sales	Yryr. chg.				
Hon Hai (Foxconn)	24,895	31,377	-20.7	17,055	46.0				
Flextronics	6,859	7,833	-12.4	5,940	15.5				
Jabil	3,929	4,082	-3.8	3,005	30.8				
Celestica	1,800	1,876	-4.1	1,518	18.6				
Sanmina-SCI	1,569	1,663	-5.6	1,528	2.7				
Cal-Comp Electronics	1,007	1,207	-16.5	831	21.3				
Plexus	568	566	0.4	491	15.7				
Benchmark Electroncs	538	627	-14.1	572	-5.9				
Universal Scientific Industrial	515	568	-9.2	454	13.4				
Venture	460	542	-15.0	456	1.0				
Elcoteq	262	362	-27.7	305	-14.2				
Total/avg.	42,403	50,701	-16.4	32,154	31.9				
Total/avg. without Hon Hai	17,508	19,325	-9.4	15,100	16.0				

Results in non-U.S. currencies were converted to U.S. dollars by applying a three-month average rate for the corresponding period. Average exchange rates were based on monthly 2010 and 2011 data from the U.S. Federal Reserve.

Table 2B	: Q1 2011 I	Results f	or Five L	arge EM	S Pro	viders B	ased (Outside	the U.S	
Company (in order of Q1 sales)	Head- quarters	Cur- rency	Q1 '11 sales	Q4 '10 sales	Qtr qtr. chg.	Q1 '10 sales		Q1 '11 net profit	Q4 '10 net profit	net
Hon Hai (Foxconn)	Taiwan	M NT\$	729,259	952,134	-23.4	544,370	34.0	14,401	21,432	17,990
Cal-Comp Electronics	Thailand	M baht	30,752	36,158	-14.9	27,316	12.6	213	241	382
Universal Scientific Industrial	Taiwan	M NT\$	15,095	17,228	-12.4	14,506	4.1	342	411	530
Venture	Singapore	KS\$	587,644	705,466	-16.7	639,531	-8.1	41,159	54,175	39,457
Elcoteq	Luxem- bourg	M euros	191.4	266.3	-28.1	220.5	-13.2	(20.4)	0.2	39.9

Healthy Start for North American Group

A group of eight mid-tier and smaller EMS providers based in North America is starting the year with respectable Q1 growth of 14.7% year over year. Collectively, they nearly kept pace with their large U.S.-traded

counterparts, whose combined Q1 sales increased just 2.2 percentage points faster (see article on p. 3-4). Four out of eight providers in the midtier and smaller group posted revenue growth above 30% year over year, led by CTS Electronics Manufacturing Solutions at 42% (table, p. 7).

Yet on a sequential basis the group of eight mid-tier and smaller providers

outperformed their large U.S.-traded competitors. Q1 sales for the mid-tier and smaller group rose 4.4% sequentially, compared with an 8.3% drop in aggregate sales for the large counterparts. Only two providers in the midtier and smaller group reported sequential declines.

The group of eight mid-tier and smaller providers consists of six stand-

alone EMS companies, all publicly traded, and two EMS units within larger publicly held corporations (table). Together, the six companies produced a Q1 gross margin of 14.1%, unchanged from the prior quarter but down 30 basis points from a year earli-

er. Four out of six providers had Q1 gross margins in double digits, with **LaBarge's** 20.3% taking top honors (table).

Combined Q1 operating margin for the six was 4.7%, down 10 basis points sequentially and 60 basis points year over year. **IEC Electronics** achieved a Q1 high of 9.5%. Q1 net income rose from the prior quarter at three out of six companies (table). The same can be said for **Kimball Electronics Group**, the EMS unit of Kimball International.

Q1 2011 GAAP	Results	for Eig	ht Mic	l-tier an	d Sma	ller EM	S Prov	iders B	ased in	n North	Americ	ca (M\$ c	or %)	
Organization	Q1 '11	Q4 '10	Qtr qtr.	Q1 '10	Yryr.	Q1 '11 gross	Q4 '10 gross			Q4 '10 oper.	oner	Q1 '11 (
Organization	sales	sales	chg.	sales	chg.	marg.	marg.	gross marg.	marg.	marg.	oper. marg.	net inc. n	et inc.	net inc.
				Stan	d-Alone	EMS I	Provider	'S						
LaBarge	83.2	81.4	2.2	74.7	11.3	20.3	20.0	20.6	7.6	8.9	9.4	3.7	4.4	4.1
Key Tronic	63.4	61.0	3.9	51.7	22.7	6.7	8.9	10.1	1.5	2.8	4.3	0.7	1.7	4.4
SMTC	56.3	64.6	-12.9	61.4	-8.2	9.1	10.7	10.4	2.2	3.2	4.3	0.7	4.5	2.1
Sparton	50.4 ¹	46.3	8.7	38.6	30.3	16.3	16.3	14.4	5.3	3.4	1.0	2.5	1.4	0.7
IEC Electronics	35.1	28.6	22.5	25.2	39.0	19.8	16.0	15.9	9.5	6.9	7.9	1.7	1.0	1.0
Nortech Systems	29.0	27.4	5.7	21.7	33.4	11.0	10.2	12.1	1.0	0.9	1.5	0.6	0.1	0.1
Subtotal/avg.	317.4	309.5	2.5	273.4	16.1	14.1	14.1	14.4	4.7	4.8	5.3	10.0	13.3	12.4
			E۱	1S Units	of Lar	ger Pub	lic Com	panies						
Kimball Electronics Group	199.0	181.4	9.7	190.1	4.7				2.3	0.1	5.3	3.2	(0.1)	10.8
CTS Electronics Manufacturing Solutions	79.5	79.6	-0.1	56.0	42.0				0.0	1.3 ²	-4.8			
Total/avg.	595.9	570.6	4.4	519.5	14.7									
¹ Defense & Security Syste	¹ Defense & Security Systems (non-EMS) represented about 32% of Sparton's Q1'11 sales. ² Segment operating income excluded restructuring and related charges of \$1.7 million not allocated to business segments.													

News

Fatal Blast at Hon Hai Site in Chengdu, China

A May 20th explosion in a polishing workshop at **Hon Hai Precision Industry's** Chengdu facility in southwestern China resulted in three deaths and injuries to 15 other employees.
The company has shut down this workshop and others with similar processes and aims to reopen them after a thorough examination. According to published reports, initial findings point to combustible dust in an air duct as the cause of the explosion.

In the fall of 2010, Hon Hai (Foxconn) reportedly opened the Chengdu plant, where the company was investing in a tablet PC operation (Oct. 2010, p. 7). It is widely reported that Hon Hai carries out some production

of **Apple's** iPad 2 tablets in Chengdu.

A May 6 report by SACOM (Students & Scholars Against Corporate Misbehavior) was critical of the working conditions in the Chengdu polishing department. According to the report, "Workers in the polishing department also complain that the department is full of aluminum dust....Some workers comment that ventilation on [the] shop floor should be improved."

China Real Time Report noted that, according to Hon Hai, robots do the polishing in its workshops.

IMI To Acquire Three EPIQ Plants

Top 50 EMS provider **Integrated Micro-Electronics**, **Inc.** (Laguna, Philippines) has entered into an agreement with another Top 50 provider,

EPIQ (Tessenderlo, Belgium), to acquire EPIQ subsidiaries in Bulgaria, Mexico and the Czech Republic. The purchase price is about 43 million euros, to be paid in a combination of cash and 200 million newly issued IMI shares representing about 12% of IMI's common shares on a fully diluted basis. The EPIQ subsidiaries generated revenue of 90 million euros and net income of about 4 million euros in 2010.

According to IMI, the acquisition will enable it to establish a global geographic footprint in manufacturing as well as in technology development and engineering.

"IMI is pursuing this value-enhancing acquisition to expand its customer base and to support its market specialization strategy in the automotive and industrial segments. As regional manufacturing picks up steam, we are expanding our operations to locations near our global customers in Europe and North America to be of better service to them," said Arthur Tan, IMI's president and CEO.

EPIQ is retaining its operations in France, Germany and China.

After the deal is closed, Gilles Bernard, EPIQ's CEO, will join IMI's management team.

Automotive cooperation...According to published reports, Foxconn has entered into an alliance with Chinese automaker **Jianghuai Automobile Co.** (JAC), which is already building electric vehicles.

New solar business...Under an expanded agreement with a Singapore affiliate of MEMC Electronic Materials, Flextronics (Singapore) expects to build about 270 megawatts of solar panels a year in Malaysia for MEMC's SunEdison subsidiary (see Dec. 2010, p. 7). Also, SolarEdge Technologies (Hod Hasharon, Israel) has launched a PV inverter production line for North America at the Flextronics factory in Newmarket, Ontario, Canada. The production in Ontario complies with the province's domestic content requirement and therefore enables installers to benefit from the Ontario microFIT and FIT (feed-in-tariff) programs. SolarEdge became a Flextronics customer last year (Mar. 2010, p. 6)....Under a two-year partnership, **JA** Solar Holdings (Shanghai, China) expects to supply Jabil Circuit (St. Petersburg, FL) with up to 400 megawatts of solar cells over the two years as well as certified module designs to be used by Jabil for manufacturing up to 200 megawatts per year of modules with JA Solar cells. JA Solar intends to grant Jabil the right to manufacture JA Solar's portfolio of OEM modules, and the companies will further collaborate on marketing and selling JA Solar modules to customers, especially in the U.S....Sanmina-SCI (San Jose, CA) will manufacture Santerno's solar inverters for commercial applications at Sanmina-SCI's Ottawa, Ontario, facility. Producing the inverters at the Ontario facility expands Santerno's manufacturing base into North America, while meeting Ontario's FIT requirement for domestic content. The Santerno Group is a leading company in the Italian photovoltaic market.

Flextronics Pulling Out of PC ODM Space

At an investor and analyst meeting this month, Flextronics announced that it is taking steps to reduce its PC ODM business and reposition assets of that business.

The company stated that the risk

adjusted return in the PC ODM space is inadequate.

"Even if you have a marginally acceptable return on capital at the one and half or two percent [operating margin],...is that an appropriate risk adjusted return? There's too much variability and risk in that model," said Flextronics CEO Mike McNamara during the meeting.

The company disclosed that over the last few months it has not been pursuing any opportunities in the PC ODM space.

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