

# On track for modest recovery in 2013



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November saw a delayed but significant increase in global electronic equipment shipments (Chart 1); however this late autumn upturn was primarily a normal seasonal surge in preparation for holiday sales of consumer electronics. SE Asian-made media tablets and smartphones were the major growth drivers (Chart 2).

Semiconductor shipments mirrored the seasonal 4Q'12 electronic equipment upturn (Chart 3) and Custer Consulting Group's semiconductor leading indicator now points to real (not just seasonal) growth in early 2013 (Chart 4).

The most recent World Semiconductor Trade Statistics forecast showed a 3.2% chip shipment decline in 2012 followed by modest 4.5% growth in 2013 (Chart 5). Gartner seconded the WSTS 2013 growth prediction of 4.5% in its December forecast revision.

Although semiconductor sales are predicted to increase in 2013 the SEMI trade organization forecast that the semiconductor capital equipment market would decline 2% from \$38.3 billion in 2012 to \$37.4 billion in 2013 (Chart 6). The much-anticipated electronic supply chain "recovery" is still a bit tenuous!

Looking forward 3/12 growth rates for semiconductors, PCBs and the global PMI leading indicator appear to have all passed their recent low points. Supply chain demand was still eroding (but at a slower pace) in late 2012 (compared to late 2011), but there now is good likelihood of returning to real growth (3/12 >1) in early 2013.

Things look mildly promising for 2013 but don't expect a sharp upturn until global economic health improves further.

## End markets

### Computers & peripherals

- Global all-in-one PC shipments will grow 1.5% y/y to 13.2 million units in 2012 and an additional 19.7% to 15.8 million units in 2013.—Digitimes Research
- Worldwide tablet shipments are expected to grow from 122.3 million units in 2012 to 172.4 million units in 2013.—IDC
- Worldwide server shipments grew 3.6% y/y to 2.4 million units and revenue declined 2.8% to \$13 billion in 3Q'12.—Gartner
- Workstation shipments increased 5.5% q/q to 932,000 branded units in Q3'12.—Jon Peddie Research
- Worldwide external disk storage systems factory revenues grew 3.3% y/y to just over \$5.9 billion in 3Q'12 for 7,104 petabytes total disk storage systems capacity shipped.—IDC
- E-book readers will tumble 36% in 2012 to 14.9 million units and then drop another 27% to 10.9 million units in 2013. Media tablets have taken much of the E-book reader market.—IHS iSuppli

### Mobile communications

- Mobile communications equipment revenue is expected to grow from \$376 billion in 2012 to \$444 billion in 2013.—IHS iSuppli
- Worldwide smart connected device shipments grew 27.1% y/y to 303.6 million units valued at \$140.4 billion dollars in 3Q'12.—IDC
- Mobile infrastructure market will grow from \$376 billion in 2012 to \$444 billion in 2013.—HIS

### Automotive

Global automotive sales are projected to increase 2.6% y/y to 82.9 million cars and light trucks in 2013.—LMC Automotive

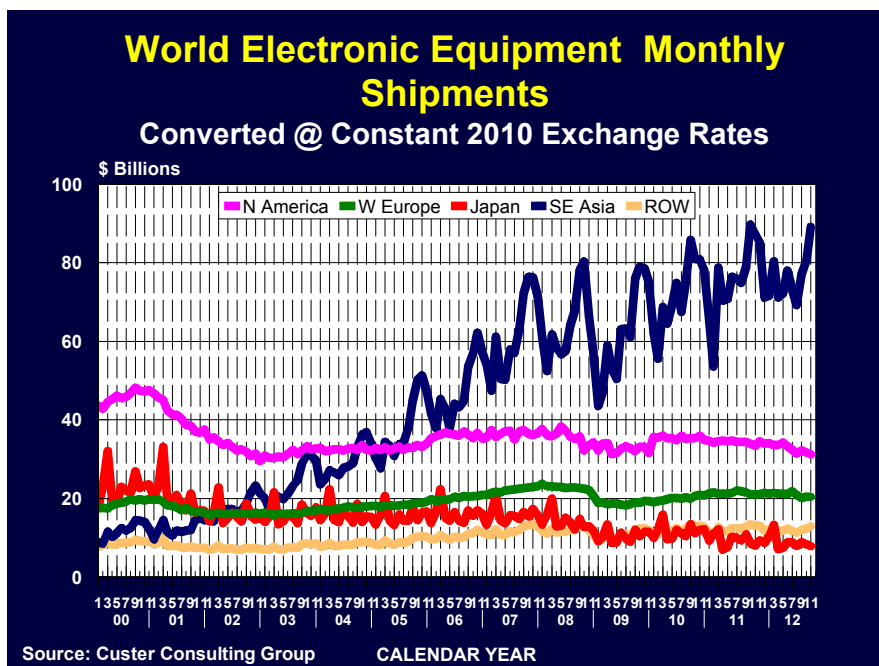


Chart 1.

### EMS, ODM & related assembly activity

European EMS industry is expected to decline 2% to Euro 26.0 billion in 2012.— Electronics.ca Publications

AMS Electronics added a SMT Placement machine in Pennsylvania.

Apple plans to spend more than \$100 million to return some Mac production to U.S. in 2013.

Asteelflash received international ISO TS 16949 standards certification on several of its production sites across the world

Axis Electronics installed and commissioned new automated cleaning processes consisting of Two Solvac T1 500 co-solvent cleaners and a PBT Super Swash stencil cleaner.

BuS Elektronik invested in iTAC.MES. Suite.

#### Celestica

- formed an advisory council for its growing healthcare segment.
- named Darren Myers Executive VP and CFO.

CG built an electronics assembly plant in the Jigani Industrial Area of Bangalore.

Colonial Electronic Manufacturers added Europlacer iineo-II flexible SMT placement machines in Nashua, New Hampshire.

Crane Aerospace & Electronics appointed Greg Gomez-Cornejo VP of its Electronics Group.

CTS EMS added Pemtron TROI 5700HL 3D solder paste inspection systems.

Delta Group Electronics leased 50,000 SF of industrial space for its regional office and manufacturing operations in Grand Prairie, Texas.

EC Electronics added its third Philips Topaz -X Assembléon based pick and place line.

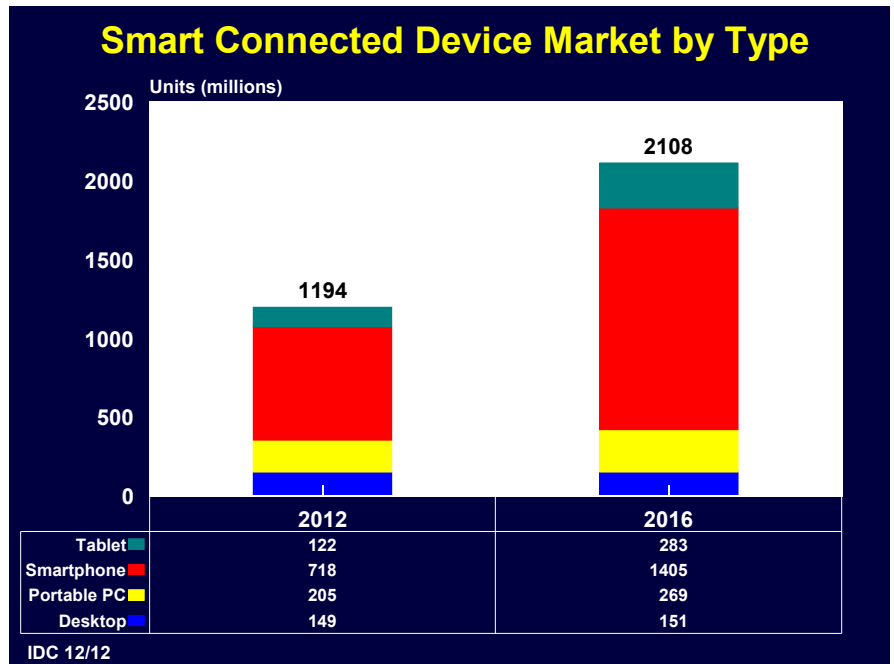


Chart 2.

EE Technologies installed its 10th SMT line in Empalme, Sonora, Mexico.

Electronic Manufacturing Solutions acquired Applied Assembly.

Enics Group appointed Hannu Keinänen CEO.

Fideltronik added a 4,000 M2 facility in Sucha Beskidzka, Poland.

#### Flextronics

- acquired Motorola's manufacturing operations in Tianjin, China and assumed management and operation of Motorola's Jaguariuna, Brazil facility.
- acquired Saturn Electronics & Engineering.
- and Angel Medical Systems achieved the 600th patient implant of a cardiac medical device.

- CEO Mike McNamara believes that the U.S. manufacturing is becoming more feasible as emerging market costs surge.
- laid-off 1,100 employees in Zalaegerszeg, Hungary.
- Foxconn/Hon Hai
- International chairman Samuel Chin retired and was replaced by Tong Wenhshin.
- received authorization from the Brazilian government to begin production of the iPhone 5 and iPad Mini in Brazil.
- seeks to expand its operations in North America as customers request more of their products to be made in U.S.A.
- acquired three factories located in Mexico, Malaysia and Nanjing, China

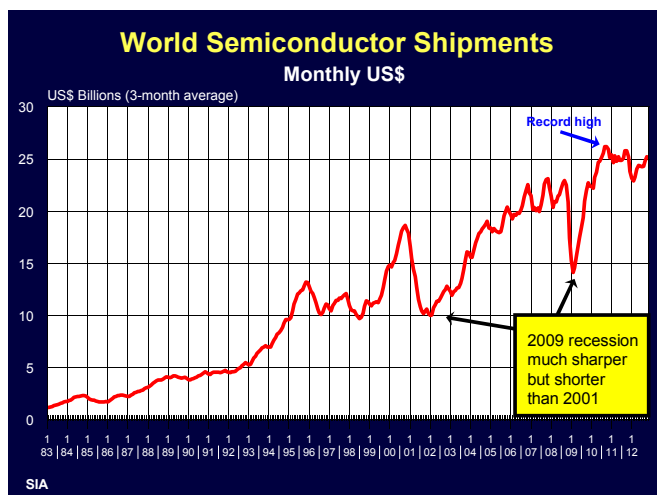


Chart 3.

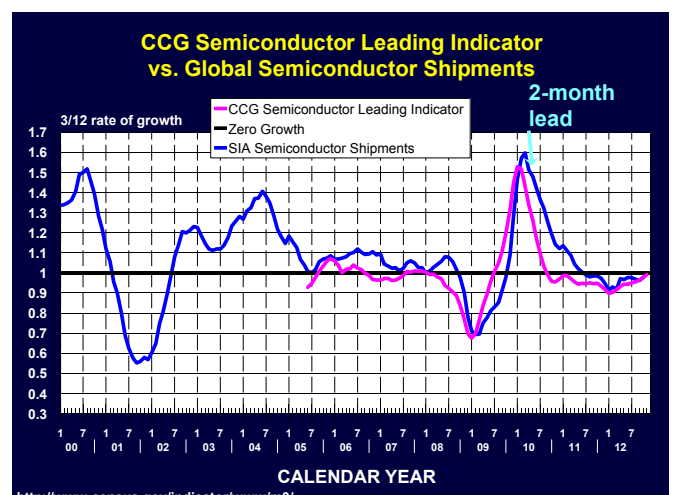


Chart 4.

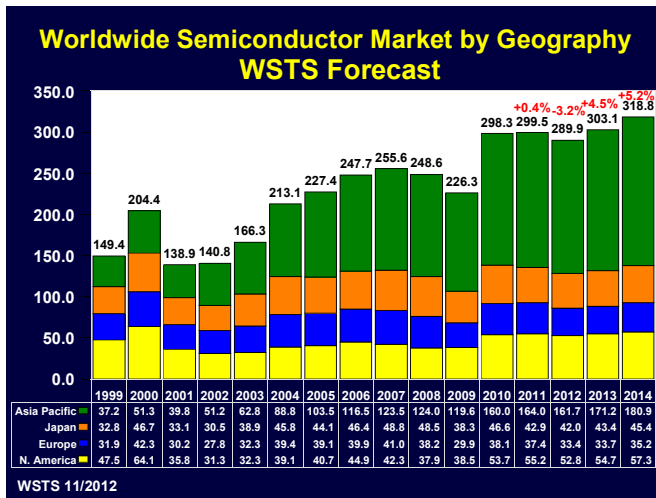


Chart 5.

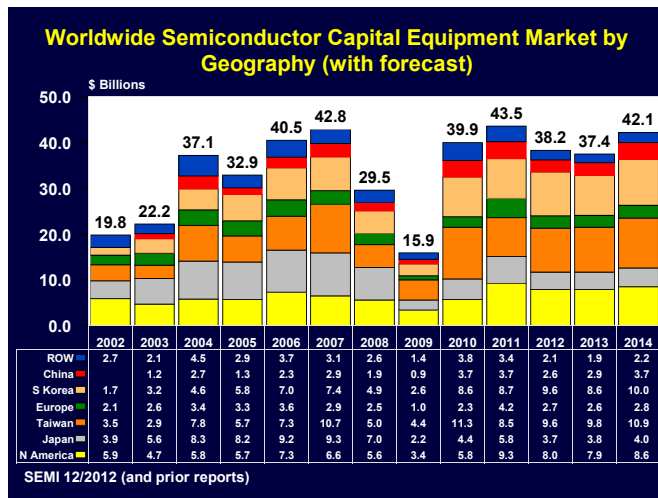


Chart 6.

from Sharp for US\$667 million.

- plans to open a TV manufacturing facility at its complex in the Kaohsiung Software Technology Park in Taiwan.
- postponed construction of its planned mobile phone factory in Indonesia.

**GPV** is expanding its facility in BangPoo Industrial Estate, Bangkok.

**Innokas Medical** set up new plant in Tallinn, Estonia. Its plant in Rakvere will mainly concentrate on PCB manufacturing.

**Integrated Micro-Electronics** issued 200 million shares to EPIQ NV.

**Lenovo** plans to set up desktop and notebook assembly lines in the U.S.

**NBS** added Juki GL stencil printers to five manufacturing lines in Santa Clara, California.

**Nortech Systems** acquired a 58,000 SF headquarters and manufacturing building from Winland Electronics in Minneapolis, MN.

**NRI Electronics** added a Juki KE-2080EN high-speed flexible moulder and a TR-6DER matrix tray changer in Anoka, MN.

**Plexus** added 130 new jobs in West Lothian, Scotland as part of a £9m expansion.

**Probe Manufacturing** was recognized by the Orange County Business Journal as 9th Fastest Growing Public Company in Orange County, CA.

**Rocket EMS** received ISO 13485:2003 certification.

**SMTA** elected Bill Barthel (Plexus) as President, Randy Schueller (DfR Solutions) Treasurer and Scott Nelson (Harris Corporation) to its Planning Committee.

**SMTC**

- acquired Seksun Array Electronics (Suzhou).
- and FICOSA entered strategic manufacturing agreement which includes

Ficosas’ transition of manufacturing of select programs to SMTC’s Suzhou plant.

**Soncebuz** added two Panasonic NPM-W modules.

**Sterling Medical Devices** added a 4,600 SF hardware design center in Rochelle Park, New Jersey.

**STI Electronics** celebrated its 30th anniversary.

**Suntron**

- increased its placement and inspection capabilities for highly complex boards with 01005 components.
- joined the EDGE® Innovation Network (sponsored by General Dynamics C4 Systems).

**TBP Electronics** invested in totally integrated SMT manufacturing solution from

Mydata and manufacturing execution software from Aegis.

**TT electronics** acquired the majority of business and assets of ACW Technology.

Universe Group sold certain assets of its Contract Electronics Manufacturing Division to Custom Keyboard Electronics.

**Wistron** is evaluating the feasibility of a request from Acer to set up a factory in Brazil.

**PCB fabrication**  
**Japanese PWB industry** total revenue fell 14.3% y/y to 45.3 billion yen in June 2012 and total shipments decreased 6.9% y/y to 1.40 million M2—METI  
**Taiwan PCB makers** (including those in mainland China) are expected to increase

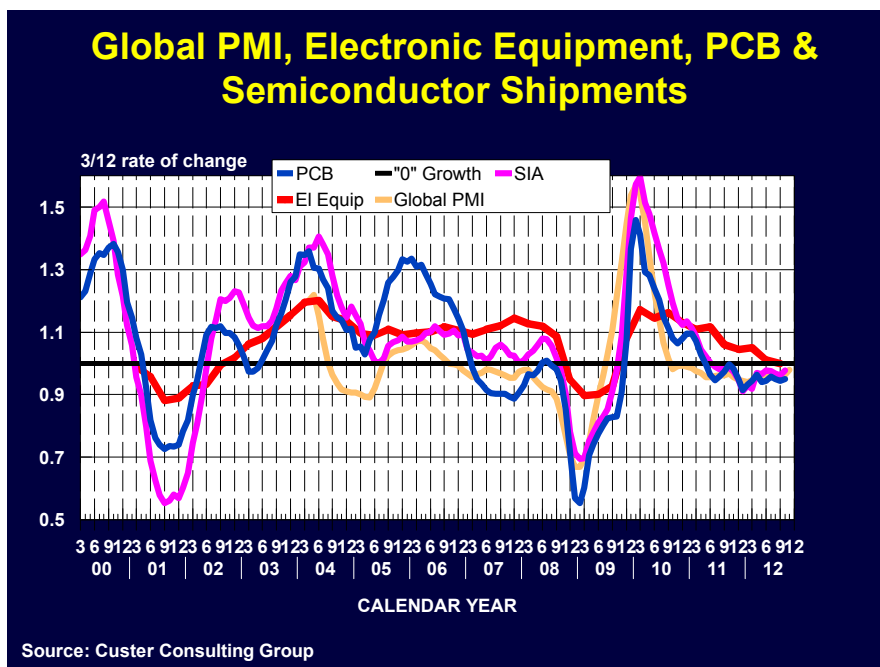


Chart 7.

2.58% y/y to total revenue of NT\$534 billion in 2013.—IEK

**Advanced Circuits** parent company Compass Diversified Holdings appointed Alan Offenbergh CEO.

**All Flex** obtained an additional 5,000 SF building for manufacturing in Northfield, MN.

**Allied Circuit** will focus product development on 20-and-above layer PCBs and HDI boards over the next three years.

**BBG** was ranked #97 on 2012 Tampa Bay Business 100 List.

#### **Cicor**

- appointed CFO Patric Schoch to the position of interim CEO after Roland K pfer left the company.
- established Cicor Americas in Minnesota.

**Compeq** is building a second PCB plant in Chongqing, China with an initial production of 200,000-300,000 SF of HDI boards/month.

**Firan Technology Group** appointed Claude Bougie President of FTG Aerospace Tianjin, Randy Drake, Director of Operational Excellence and Amelia Zheng, Contracts Administrator.

**Global Brands Manufacture** inaugurated its new PCB plant in Chongqing, China with an initial capacity of 600,000 SF/month.

**IPC** named Phil Carmichael President of IPC China.

**Iteq** plans to ramp up its FCCL monthly production capacity at its plant in Taiwan by 100,000 m<sup>2</sup> when its new facilities come online in 3Q'13.

**K&F Electronics** joined the Semblant Plasma Finish Premier partner program.

**MOOG Components Group** received Zeta<sup>®</sup> certification allowing it to produce PCBs using Integral's dielectric films.

**Nitto Denko** completed its second flex circuit manufacturing plant in Ho Chi Minh City, Vietnam.

**Schoeller-Electronics** appointed Paul Joseph Handler as National Sales Manager for North America.

**Stickleback Manufacturing** acquired D.E.B. Electronics.

**Taiwan PCB Techvest** opened an optoelectronics board manufacturing plant in Sichuan, China.

**ThinFlex** added new coating and laminating lines in Kaohsiung, Taiwan.

**TTM Technologies** appointed Thomas Edman President.

**Unimicron** increased its embedded component PWB manufacturing capacity to three million units/month in 4Q'12.

## **Materials & process equipment**

**Electronic specialty gas market** grew 5% y/y to \$2.1 billion and bulk gases reached \$1.1 billion in 2012.—Techcet Group

**Brewer Science** introduced conductive single-walled carbon nanotube pastes designed for screen-printing for conductive trace applications.

**BTU International** promoted Peter Tallian to COO.

**Cogiscan** and **MIRTEC** entered an AOI machine partnership.

**Cookson** demerged its Performance Materials division.

**CyberOptics** cut its workforce by 10%.

**Data I/O** celebrated its 40th anniversary.

**Dow Electronic Materials** introduced two new MICROFILL<sup>™</sup> copper plating products that enhance the performance of HDI and IC substrate PCBs.

**DuPont Microcircuit Materials** introduced three new screen printed conductor materials for the printed electronics market. They are designed to offset the rising cost of silver.

**Enthone** will open its Shanghai technical and manufacturing center in Fengxian, China in spring 2013.

**Hermes Microvision** is building an electron beam inspection equipment production factory in the Southern Taiwan Science Park in Taiwan.

**Juki Automation Systems** named Carlos Eijansantos "Regional Sales Manager of the Year."

**Koh Young** sold its 4000th 3D in-line Inspection (SPI) system to Magic LCD in Guangzhou, China.

**LPKF** appointed Dr. Christian Bieniek as a board member.

**Maskless Lithography** received a purchase order from its North American distributors Technica USA for six Digital Imaging systems.

**Plasma Etch** introduced its Magna Series PCB plasma etching treatment system that eliminates the need of CF4 gas in PCB production.

**PROMATION** discontinued its interconnecting and inspection conveyor production line in Shenzhen City, Guangdong Province, China.

**Shenmao Technology** is investing US\$10 million to establish a tin-based soldering materials factory in Yunnan Province, China.

**Speedprint** appointed Phoenix United Associates as its equipment manufacturers' representative in Delaware, West Virginia and Maryland.

**Teradyne** named Mark Jagiela president.

## **Universal Instruments**

- hired Julio Miyazaka as GM of Latin American customer operations and Justin Poet as GM of production tooling.
- launched an enhanced spare parts website at [www.uic-tooling.com](http://www.uic-tooling.com).

**Vitronics Soltecs** consolidated its XPM reflow machine manufacturing to Suzhou, China.

## **Semiconductors**

**Worldwide semiconductor market** is expected to grow 4.5% y/y in 2013 from US\$290 billion in 2012.—WSTS

**Discrete GPU shipments** increased 4.5% q/q (and declined 5.2% y/y) to 34.3 million units in 3Q'12.—Jon Peddie Research

**Global mobile device IC market** is expected to have grown 5% to US\$74 billion in 2012.—IHS iSuppli

**GPS/GNSS IC market** is expected to have surpassed \$2 billion in 2012.—ABI Research

**Semiconductor new equipment market** is forecast to grow 2.6% y/y in 2013 and 12.5% y/y in 2014 from \$38.2 billion for 2012.—SEMI

**Worldwide semiconductor sales** are forecast to expand 4.5% y/y to \$311 billion in 2013.—Gartner

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