

# Still waiting for a solid upturn



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The much-awaited 2013 “global recovery” experienced some regional setbacks this spring. Based upon May PMI leading indicator data (*Chart 1*) the world is just barely in a growth mode with Japan and Europe reporting improved Purchasing Managers’ Indices, China, Taiwan and S. Korea seeing weakening and the USA falling back into contraction.

On a 3/12 growth basis (*Chart 2*) key components of the electronic supply chain (semiconductors, PCBs and electronic equipment) have had declining revenues with their leading indicator pointing to minimal growth (excluding seasonality) in the near term.

Global electronic equipment production (*Chart 3*) suffered in early 2013 and sales results through April showed only a modest seasonal “electronics end market” recovery.

In the USA most of the electronic supply chain has been contracting in 2013

(*Chart 4*) with military electronics (*Chart 5*) being especially hard hit. One encouraging sign was the April improvement in measurement and control equipment orders (*Chart 6*) but overall domestic electronics demand has been weak.

In SE Asia suppliers are being forced to adjust to diminished personal computer demand as tablets and smartphones have assumed the roles of many traditional PCs (*Chart 7*).

World semiconductor demand remained flat through April with Custer Consulting Group’s semiconductor leading indicator pointing to minimal improvement over the next few months (*Chart 8*). The recent WSTS update of its semiconductor forecast (*Chart 9*) now predicts growth of world chip shipments to be only +2% in 2013 (followed by +5% next year).

In summary 2013 is not shaping up as the solid growth year that was hoped. We will see a normal seasonal expansion this

summer and autumn but robust year-on-year expansion still remains elusive.

## End markets

IT spending expectations were lowered to 4.9% growth by IDC as sequester and global economic uncertainty diminished business confidence.

### Mobile Communications

- Mobile phone sales increased 0.7% y/y to nearly 426 million units in 1Q’13. More than 226 million mobile phones were sold in Asia/Pacific.—Gartner
- Global handset touch panel shipments are expected to grow 5.5% q/q to 284 million units in 2Q’13.—Digitimes Research
- Global smartphone shipments are expected to reach 937 million units in 2013.—NPD DisplaySearch
- NFC (Near Field Communication) enabled cell phone shipments will reach 1.2 billion units from 2012 through 2017.—IHS subsidiary of IMS Research

### Computers & Peripherals

- Notebook touch screen shipments increased 51.8% q/q to 57 million units in 1Q’13.—Displaybank
- Worldwide PC shipments are expected to fall by 7.8% y/y in 2013 as market shifts to tablets.—IDC
- Worldwide tablet shipments are expected to grow 58.7% y/y to 229.3 million units in 2013.—IDC
- Worldwide server shipments declined 0.7% y/y to 2.3 million units in 1Q’13.—Gartner
- Personal & entry level storage market grew 73.4% y/y with 20.2 million units shipped in 1Q’13.—IDC
- Taiwan’s contract notebook shipments are forecast to drop 9% y/y in 2013.—SinoPac Securities

### Data Communications

- Optical network hardware market (including SONET/SDH and WDM equipment) totaled \$2.6 billion in 1Q’13.—Infonetics Research
- Home networking device market increased 5% y/y to \$4.9 billion in 2H’12.—Infonetics Research

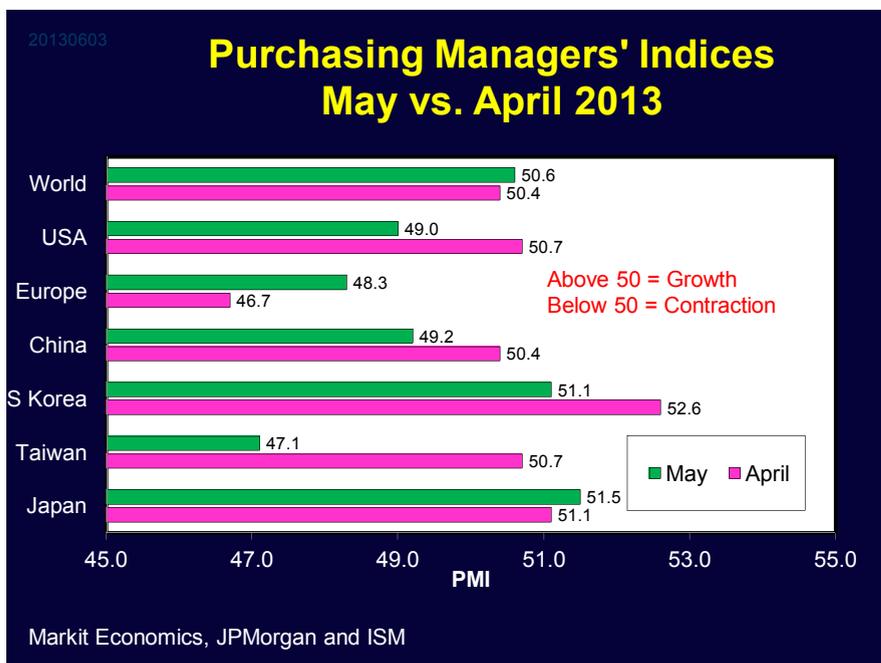


Chart 1.

- Internet of Everything to grow from more than 10 billion wirelessly connected devices in 2013 to over 30 billion devices in 2020.—ABI Research
- Enterprise videoconferencing and telepresence equipment market revenue declined 13.2% y/y to \$563.4 million in 1Q'13.—IDC

**Other**

- Automotive electronics market is set to rise more than 50% from \$157 billion in 2010 to \$240 billion in 2020.—IMS
- LED light bulb shipments are forecast to increase 151% y/y to 842 million units in 2013.—Digitimes Research
- LCD monitor OEM shipments decreased 13.9% y/y to 33.1 million in 1Q'13.—TPV
- Touch-screen panel shipments will double from 2012 to nearly 3 billion units in 2016.—IHS
- Large-area TFT LCD revenue is expected to fall 2% y/y—from \$83.6 billion in 2012 to \$81.7 billion in 2013.—NPD DisplaySearch
- Hardcopy peripherals market decreased 9.7% y/y with 25.8 million units shipped in 1Q'13.—IDC
- Large format printer market declined 12.0% y/y in 1Q'13 on shipments of approximately 75,000 units.—IDC

**EMS, ODM & related assembly activity**

**Medical industry EMS opportunities** will grow from \$16.43 billion in 2012 to \$34.38 billion in 2019.—Frost & Sullivan  
**Bittele Electronics** began offering prototype PCB assembly services.  
**Cirtronics** added two Pillarhouse Jade selective solder machines, two MY100DX pick and place machines and a PDR IR-C3 Chipmate SMT rework system.  
**Connor Solutions** appointed Steve

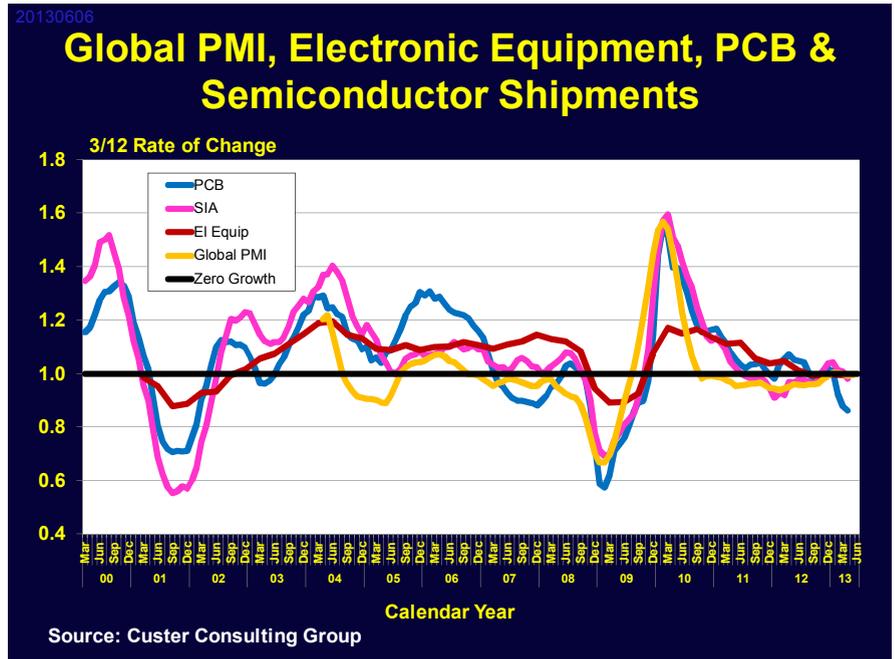


Chart 2.

Henderson as Business Development Director

**Creation Technologies'** facility in Ontario, Canada achieved FDA registration.

**Dorigo** celebrated 25 years as an EMS provider.

**EastBridge Engineering** established its Design Launch division.

**EMS Solutions** moved into a 45,000 SF facility in Business Depot Ogden in Ogden, Utah.

**Engent** joined the High Density Packaging User Group.

**Escatec**

- added a Nikon XTV160 2.5D X-Ray inspection system.
- appointed Johan Halling, GM of Escatec Electronics and Escatec

Medical in Penang, Malaysia.

**Flextronics** spent \$25 million on improvements and equipment at its 445,870 SF Fort Worth, Texas facility, which began smartphone assembly for Motorola.

**Foxconn/Hon Hai**

- acquired technology for carbon nanotube touch panel production.
- became major investor in Tai Tung Communication's fiber-optic JV.
- opened a display R&D center in Sakai City, Japan.
- partnered with PT Erajaya Swasembada to build a factory to produce mobile phones, tablets and other telecommunication products in Indonesia.
- was ranked 5th among top 1,000 firms in Greater China.—Commonwealth Magazine poll

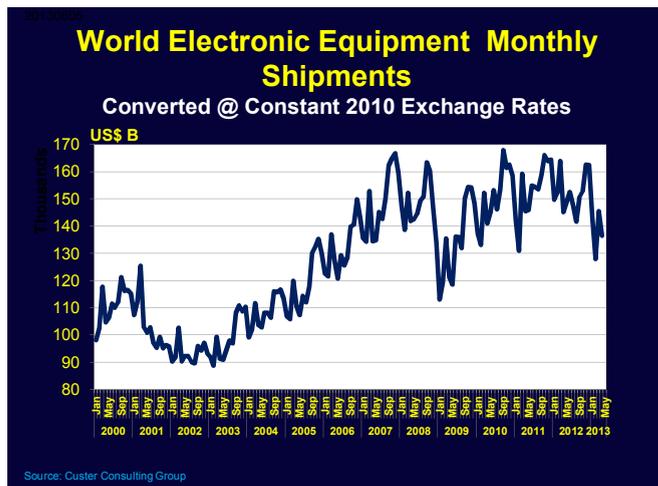


Chart 3.

	Latest Month	Annual Growth	3-Month Growth
<b>Electronic Component \$</b>			
Rigid PCB Orders (N Amer)	4/13	97.8	99.6
Rigid PCB Shipments (N Amer)	4/13	94.3	92.7
Flex Circuit Orders (N Amer)	4/13	90.0	91.9
Flex Circuit Shipments (N Amer)	4/13	103.3	100.4
Electronic Component Orders	4/13	98.9	97.0
Electronic Component Shipments	4/13	97.8	94.2
Semiconductor Shipments to N America	4/13	99.2	95.7
<b>U.S. Electronic Equipment Orders \$</b>			
Computer & Related Communication	4/13	99.5	96.6
Medical, Measurement & Control	4/13	104.5	97.1
Search & Navigation	4/13	89.2	87.5
Defense Capital Goods	4/13	89.6	80.7
Military Electronics	4/13	101.9	80.7
Total Electronic Equipment	4/13	83.9	77.5
<b>U.S. Industrial Production</b>			
	4/13	103.0	102.5

NOTE: 3 month growth rates compare most recent 3 months to same 3 months one year earlier

Chart 4.

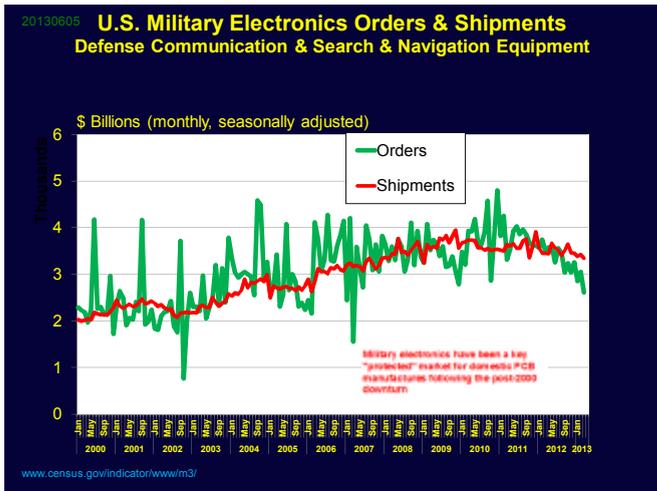


Chart 5.

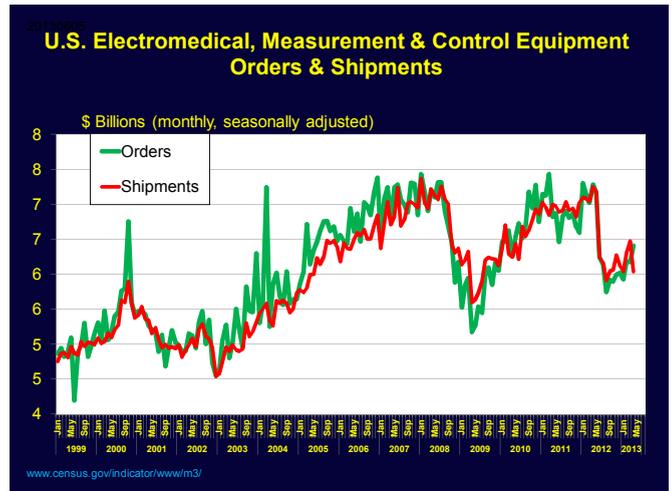


Chart 6.

**Inovar** appointed Gene Sparks as Southwest U.S. Sales Director.

**Lacroix** appointed François Beauxis as Managing Director of its electronics division.

**PCA Technology** was acquired by MSKK Investments.

**Pegatron** plans to hire 40,000 new workers in 2H'13.

**Pektron Group** upgraded two production lines that include six Hitachi Sigma Series machines in Derby, UK.

**Power Design Services** achieved ITAR compliancy under the U.S. Department of State.

**Proto-Pac Engineering** leased a 42,872 SF manufacturing building in Wilmington, MA.

**Saline Lectronics** appointed David Cusumano, VP of Engineering.

**Sanmina** received a contract to provide the majority of repair services for Motorola Solutions.

**Season Group** acquired Outsource Electronics Limited.

**SMTC** appointed Larry Silber as Interim CEO, Clarke Bailey as Executive Chairman and Steve Brown as VP, Quality and Engineering.

**TT electronics-IMS** division merged with New Chapel Electronics.

**PCB fabrication**

**Flexible devices** (primarily flexible printed circuits) manufactured by roll-to-roll technologies will grow from \$10.8 billion

in 2012 to nearly \$22.7 billion by 2017.—BCC Research

**Printed, flexible and organic electronics** will grow at a 15.3% CAGR from \$16.04 billion in 2013 to \$76.79 billion in 2023.—IDTechEx

**Taiwan PCB production value** is expected to rise 3% q/q to NT\$119 billion (US\$4 billion) in 2Q'13.—IEK

**Asian Circuits** launched a turn-key PCB assembly service.

**AT&S** plans to close its Klagenfurt plant at the end of 2013.

**Farnell and Eurocircuits** entered quick-turn bare board PCB prototyping services collaboration.

**Invotec Group** appointed John Fitzpatrick, Sales Account Manager for South East UK.

**MTI Electronics** installed an AOI system.

**Stevenage Circuits** added an Orbotech Sprint 120 ink jet legend printing machine. Sumitomo Electric

- developed thin construction for flexible circuits filling via holes with conductive nano paste.
- began mass-production for new type FPCs at Minakuchi Works.

**Würth Elektronik** began offering wire bonding service.

**Materials & process equipment**

**Global laser materials processing systems market** grew 9% y/y to €7.9 billion in 2012 (market grew 1% when measured in US-dollars)—Optech Consulting

**OLED materials market** will grow from \$450 million in 2013 to over \$4.6 billion by 2021.—NanoMarkets

**Taiwan's specialty chemicals output** will grow 6% y/y to NT\$678.54 billion (US\$22.79 billion) in 2013.—Industry and

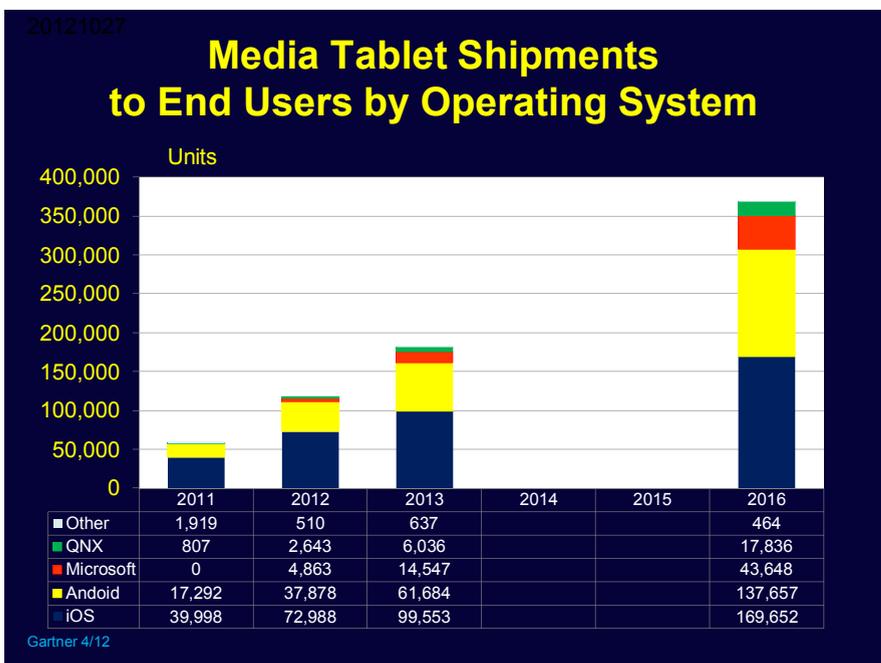


Chart 7.

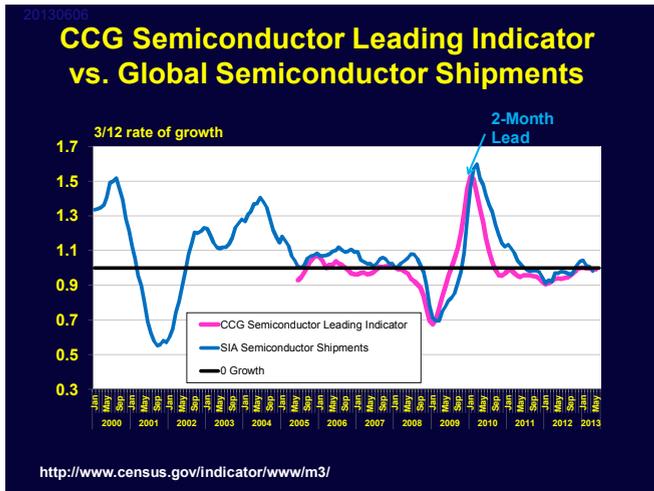


Chart 8.

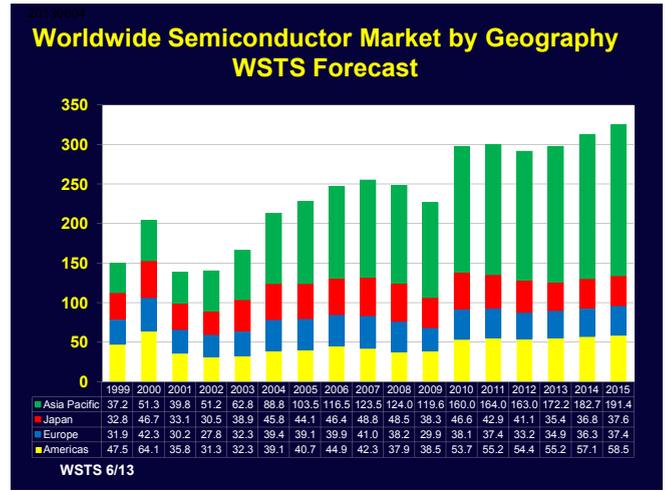


Chart 9.

Technology Intelligence Services  
**Agfa Materials** appointed Rich Breitlow, Channel Sales Manager for North America  
**Agilent** laid-off 450 workers.  
**Aismalibar North America** named Gareth Parry, Chief Field Application Engineer.  
**Bayer MaterialScience** inaugurated a regional innovation hub in Shanghai.  
**Cambridge Nanotherm** is building a nanoceramic-aluminium substrate prototype manufacturing plant in Haverhill, UK.  
**Chomerics** achieved ISO 14001: 2004 certification for its facility in Saint Ouen l'Aumone, France.  
**Dymax** named Marufur Rahim, R&D Manager and Margo Martin, Global Account Manager.  
**Equipment Technologies** merged with North East Automation.  
**Finetech & Martin** named Al Cabral, Regional Sales Manager.  
**GT Advanced Technologies** acquired Thermal Technology.  
**H.B. Fuller** entered electronics and assembly materials market with total solutions "eco-system" approach that includes materials, processes and equipment.  
**Isola** enhanced its Quick Turnaround Service in Europe.  
**Manncorp** moved into its 18,000 SF headquarters in Huntingdon Valley, Pennsylvania.  
**MYDATA Royonic** moved into new offices in Unterhaching, Germany.  
**Optomec** is developing new digital production solution that enables direct printing of antennas used in mobile device applications.  
**Park Electrochemical** appointed Linda Lagnese, Director of Human Resources.  
**SIPLACE** appointed **Technica USA** as its new sales partner for its SMT placement equipment, software and services in

*China electronic components distributors expect 23% revenue growth in 2013.*

Western USA.  
**Teledyne** acquired Axiom IC.  
**ZESTRON** appointed Stefan Theil, Regional Sales Manager for South Germany.

### Semiconductors & other components

**China electronic components distributors** expect 23% revenue growth in 2013.—Global Sources  
**European semiconductor distribution sales** fell 5% y/y to 1.48 billion Euros in Q1/CY13.—DMASS  
**IC Insights** lowered its forecast for 2013 semiconductor market from 6% to 5%, citing tepid 1Q'13 GDP estimates in many of the world's largest economies.  
**North American semiconductor equipment industry** posted \$1.17 billion in orders worldwide in April 2013 (3-month average basis) and a book-to-bill ratio of 1.08.—SEMI  
**Combo MEMS sensors** used in motor vehicles are expected to grow by 77% y/y from \$92 million in 2012 to \$163 million in 2013.—IHS iSuppli

**Global nanomagnetic materials and devices market** will reach \$9 billion by 2017.—BCC Research  
**iNEMI** published its tenth roadmap.  
**Smart grid sensor market** is expected to top \$100 million in 2015.—IHS  
**Taiwan-based IC design houses'** shipments grew 21.6% y/y to NT\$20.18 billion (US\$673.8 million) in 1Q'13.—Digitimes Research  
**Total MPU sales** will grow 10% y/y to \$62.0 billion in 2013.—IC Insights  
**Worldwide semiconductor market** contracted 2.2% y/y in 2012 to \$295 billion however 3-4% revenue growth is expected in 2013.—IDC

**Worldwide silicon wafer area shipments** increased 4.8% y/y to 2,128 million square inches in 1Q'13.—SEMI

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