

Encouraging signs but a tepid recovery still likely



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Business conditions *may* be improving for at least some regions based upon recent leading indicator data. The global JPMorgan PMI improved in September (Chart 1) but still remained below 50, the crossover point between contraction and expansion. Per Chart 2 the world, the USA, Europe, China and Japan had improved PMIs in September while S Korea and Taiwan declined. More encouraging was that the USA moved to actual growth with a PMI of 51.5. We are clearly not “out of the woods” yet and results vary region-to-region but at least there are some positive signs.

The PMI data above is for September. Less timely July & August electronic equipment regional shipment growth rates (Chart 3) show all major areas contracting (3/12 < 1) in late summer. In the USA both electronic equipment orders and shipments continued to drop in August (Chart 4) and defense capital goods orders plunged sequentially from what was a likely “blip” in June and July (Chart 5).

August semiconductor shipments were sequentially flat globally on a 3-month average basis (Chart 6) and down 3.2% for August 2012 vs. August 2011. All regions

declined but the USA and Europe dropped the most comparing August of this year to August 2011 (Chart 7).

Custer Consulting Group’s semiconductor leading indicator points to a slow short-term recovery in global semiconductor shipments with year/year actual growth perhaps not returning until early 2013 (Chart 8).

Printed circuit board growth remains negative in the USA, Europe and SE Asia but it is improving on a 3/12 basis (Chart 9). However, Custer Consulting Group’s PCB leading indicator also points to a slow recovery (Chart 10).

What does all this mean? Based upon the September PMI results at least some countries are moving back to growth territory however the leading indicators suggest that this autumn’s “busy season” will be weak and the current business cycles’ electronics recovery will be tepid—at least until early 2013.

End markets

Global IT spending will rise 1.9% y/y to \$1.569 trillion in 2012—JPMorgan revised forecast

Worldwide media tablet market forecast

was raised to 117.1 million units in 2012 by IDC.

Smart connected device shipments increased 27.4% y/y to 267.3 million units in 2Q’12.—IDC

Smartphone sales are expected to reach 220-230 million units in 2012.—NPD DisplaySearch

Global TV shipments declined 8% y/y to 51.6 million units in 2Q’12.—NPD DisplaySearch

Worldwide external controller-based disk storage market revenue grew 6.7% y/y to \$5.5 billion in 2Q’12.—Gartner

EMS, ODM & related assembly activity

Global EMS design market revenues are expected to grow at an 8.9% CAGR from \$11.93 billion in 2011 to \$29.62 billion in 2018.—Frost & Sullivan

India’s electronics manufacturing industry revenue is projected to grow to \$125 billion (Rs.6.8 trillion) by 2014 and \$400 billion by 2020.—National Electronics Policy 2011

Outsourced manufacturers in 2011 were responsible for 87.5% of tablet production.—IHS

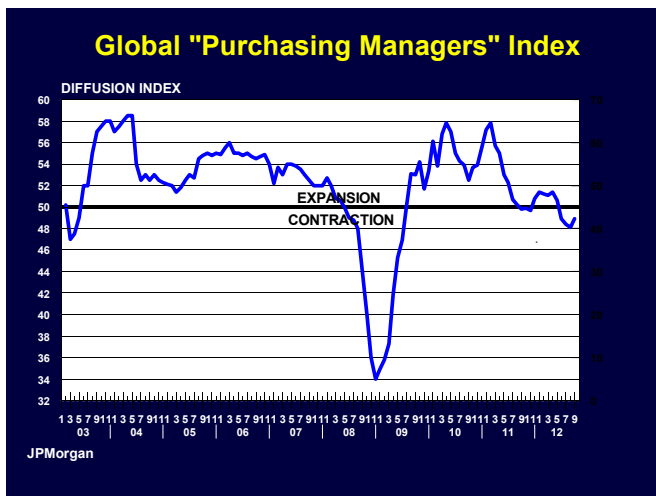


Chart 1.

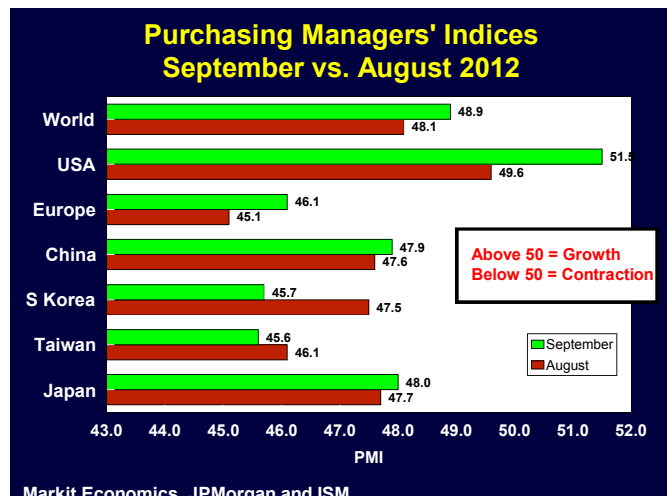


Chart 2.

3CEMS expanded its manufacturing facility in Danriver System, China.

API Technologies received a \$3.1 million order for critical EMI filtering solutions in support of U.S. Department of Defense's weapons platform and a \$3.4 million order to provide microwave products for next generation counterfire target acquisition AESA radar.

Assel added two Universal Pick & Place GC60 machines.

Asteelflash bought EN Electronic Network.

Ayrshire Electronics is expanding operations in Corinth, Mississippi.

Celestica acquired D&H Manufacturing.

Connect Group obtained ISO 13485 medical certificate for its Kladno, Czech Republic facility.

Creation Technologies moved into 75,000 SF manufacturing facility in Changzhou, China.

Dutron installed a cleanroom in Srem, Poland.

Enics formed a task force to identify and handle disruptions with suppliers and

partners caused by anti-Japanese protests in China.

Fabrinet appointed Richard Vincent, VP of North American Business Development and Greg Reny, Sr. Director of Business Development.

FERCAD Elektronik added one JUKI KE-1070, two KE-1080 mounters and one TR-6 tray holder in its facility in the Cologne, Germany region.

Flextronics

- and Nokia Siemens opened assembly plant in Brazil.
- introduced quality management software that flags problems, cuts costs, fosters collaboration, and improves time to market.
- Shanghai workers went on strike over relocation of their factory to Suzhou, China.
- laid-off 600 in Zalaegerszeg, Hungary.

Foxconn/Hon Hai

- temporarily closed its Taiyuan, China plant after 40 workers were injured in a brawl involving 2,000 workers.
- acquired 32% of Microelectronics

Technology for NT\$1.8 billion (US\$61.12 million).

- bought LCD panel patents from NEC For Y9.45 billion.
- is investing about \$500 million to set up a new production complex in Sao Paulo, Brazil to make tablets, smartphones and components.

GPV is building an EMS factory in Bangkok, Thailand.

Harris received a \$25 million order from a government in the Middle East for Falcon high-frequency tactical radios.

InnoTek named Chong Teck Sin a Non-Executive, Independent Director.

Integrated Micro-Electronics renewed its Bosch preferred supplier status.

Jabil Circuits acquired Lighting Science's Monterrey, Mexico production and manufacturing operations.

Kitron received NOK 70 million (9.46 million euros) in military communications equipment orders from Kongsberg Defence & Aerospace.

SMTC acquired Seksun Array Electronics (Suzhou).

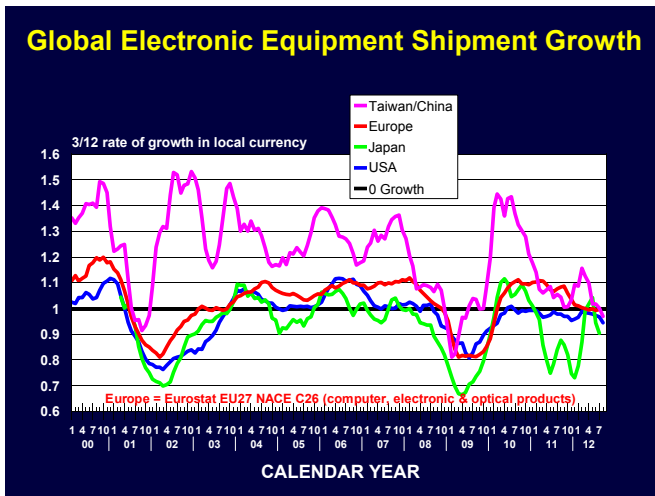


Chart 3.

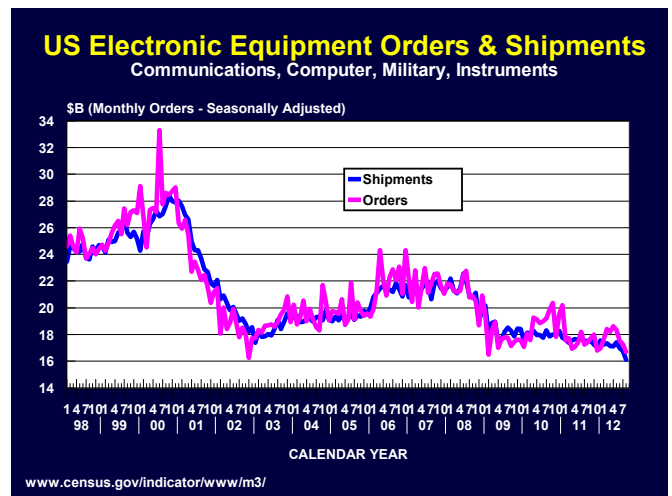


Chart 4.



Chart 5.

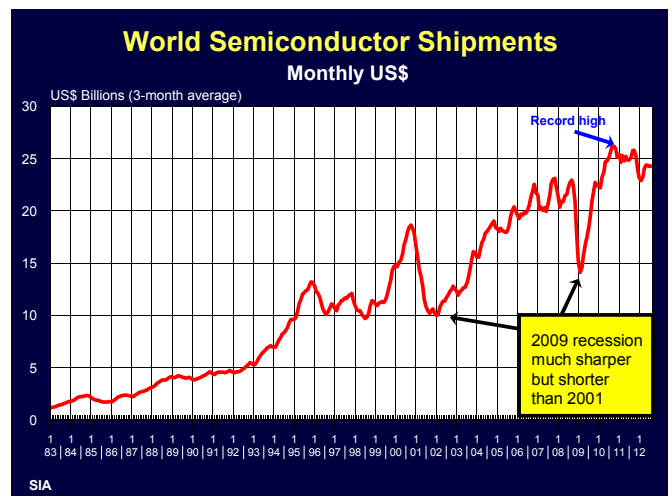


Chart 6.

Monthly Semiconductor Shipments \$ Billions (3-month average)			
	8/11	8/12	% CH
Americas	4.58	4.19	-8.6%
Europe	3.07	2.77	-9.8%
Japan	3.64	3.64	-0.3%
Asia Pacific	13.81	13.71	-0.7%
Total	25.10	24.30	-3.2%

SIA www.sia-online.org/

Chart 7.

Subtronics Assembly added board handling equipment, a pick & place unit, a reflow oven and a Speedprint SP700avi. **Surface Technology** purchased three Y.Cheetah X-ray systems from YXLON. **Telefield** purchased 53% of enlarged issued share capital of Fargo Telecom for HK\$15 million (1.47 million euros). **Total Electronics** changed its name to CalComp Indiana. **Traffitec** installed an additional Juki JM-10 mounter.

PCB fabrication

The South Korean PCB industry had a market scale of US\$10 billion in 2011 with PCB manufacturing accounting for 68% of the total, raw materials 13%, auxiliary materials 2%, equipment 4%, chemical products 10%, and OEM/ ODM (original equipment/ deign manufacturing) 3%.— ITRI

Advanced Circuits added 51,000 SF to its manufacturing facility in Aurora, Colorado. Barco Silex opened a design office in Ghent, Belgium. **Bay Area Circuits** introduced free PCB Creator which enables easy design of 2 and 4 layer PCBs. **Cirly** added an Orbotech Discovery 8200 AOI system in Lyon, France. **Dyconex** purchased a CO2/UV Combi-Laser from Hitachi. **Enthone** appointed Mario Orduz, PWB Global Technical Manager. **Epec** introduced its InstantFLEXQuote online flexible circuit quoting tool. **Firan Technology Group** hired Chris Woodland as VP and GM of FTG Aerospace, Toronto Division. **Multicircuits** installed an Orbotech Paragon 9800 LDI system and OLEC accu-tray ATH30 solder mask imager.

Panasonic temporarily closed its Suzhou PCB factory due to Chinese anti-Japan protests. **Ruwel** added a 411 kWp rooftop photovoltaic installation to its plant in Geldern, Germany. **Streamline Circuits** received Zeta® certification. **Sumitomo Electric** is investing 8 billion yen to increase manufacturing capacity of flexible circuits. **Sunstone Circuits**

added CadSoft EAGLE PCB design software. **Tripod Technology** is expanding capacity by one million SF of PCBs/ month in Hubei, China. **TTM Technologies**

- entered into \$450 million credit facility with banks.
- was ranked 38th on Fortune’s 2012 list of fastest-growing U.S. public companies.

Viasystems’ Denver, Colorado and North Jackson, Ohio facilities achieved AS9100C certifications.

Materials & process equipment

Advanced Engineered Systems appointed Brian Brunson, VP of Operations and Technology and Charles Berget, SR Financial Analyst. **Agilent**

- appointed Lars Holmkvist, President of its Diagnostics and Genomics Group.
- introduced breakthrough methodology to accelerate large-scale active antenna calibration and testing.

BASF increased its Lutropur (methanesulfonic acid) production to 30,000 tons/year in Ludwigshafen, Germany. **Camtek** appointed Moshe Baruch, VP Technologies and Dr. Boaz Nitzan, VP DMD Product Line. **CCI Eurolam** celebrated its 25th anniversary in Germany. **Elite Material** will boost monthly output of CCLs to 300,000 units by end of 2012. EMS Analytical Labs received Nadcap accreditation for Aerospace Quality System AC7004. **H.B. Fuller** acquired Engent. **Henkel** was listed as sector leader in the Dow Jones Sustainability Index and Dow Jones Sustainability Index Europe. **KIC** set up in-country product repair and calibration center in Guadalajara, Mexico. Linde LienHwa China acquired Zhenjiang **Xinhua Industrial Gases** in Zhenjiang, China. **LPKF** named Christian Bieniek as a member of its Management Board. **MYDATA** appointed Marko Andrejka,

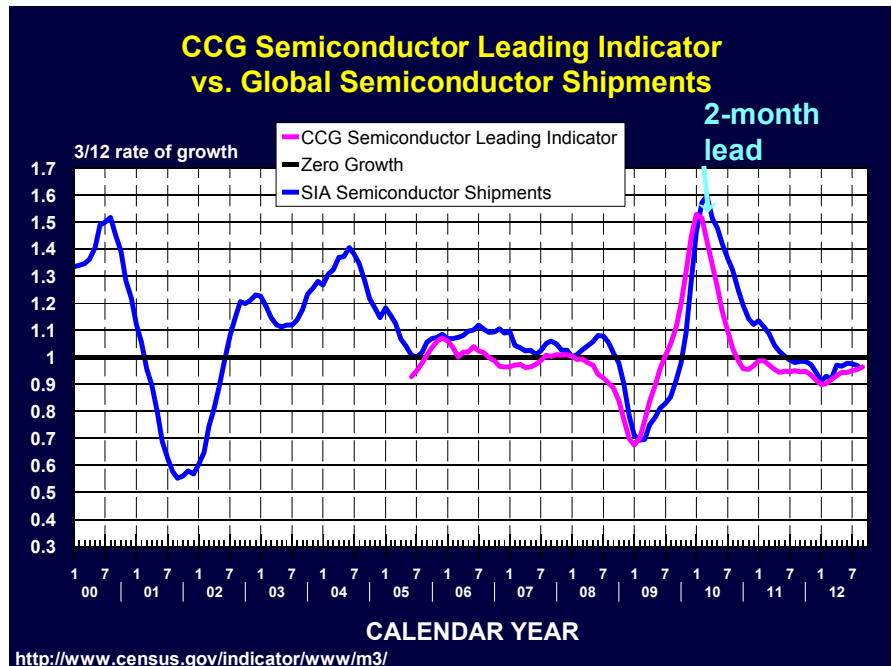


Chart 8.

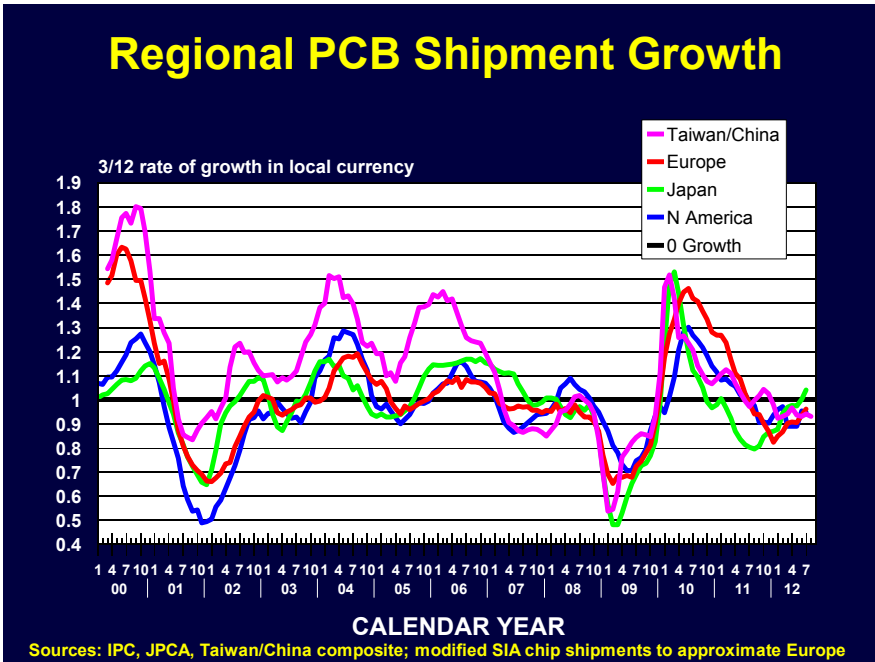


Chart 9.

Semiconductors & other components

DRAM average content in smartphones will expand to 666 MB in 2012, up from 453MB in 2011 and 202MB in 2010.—**HIS Global IC industry's** production value is expected to grow at an 8% CAGR from 2011 to 2021 with shipments rising from 192.7 billion units in 2011 to 380 billion units in 2021.—**IC Insights**

Global power management semiconductor revenue grew 9.7% y/y to \$7.9 billion in 2Q'12.—**IHS**

MEMS sensor market in mobile devices is expected to grow from \$1.2 billion in 2012 to \$2.8 billion in 2017.—**ABI Research**

OLED market revenue is forecast to grow at a 34% CAGR from over \$1.69 billion in 2011 to \$7.39 billion in 2016.—**Frost & Sullivan**

Wireless connectivity chipsets revenues are expected to exceed \$10 billion in 2012 with Wi-Fi chipsets accounting for 40% of market.—**ABI Research**

North American semiconductor equipment industry posted an August 2012 Book/Bill ratio of 0.84 with \$1.12 billion in bookings and \$1.34 billion in billings.—**SEMI**

Worldwide semiconductor manufacturing equipment billings fell 13% y/y to US\$ 10.34 billion in 2Q'12.—**SEMI**

Global semiconductor CAPEX is expected to drop 6% y/y to \$65.6 billion in 2012.—**IC Insights**

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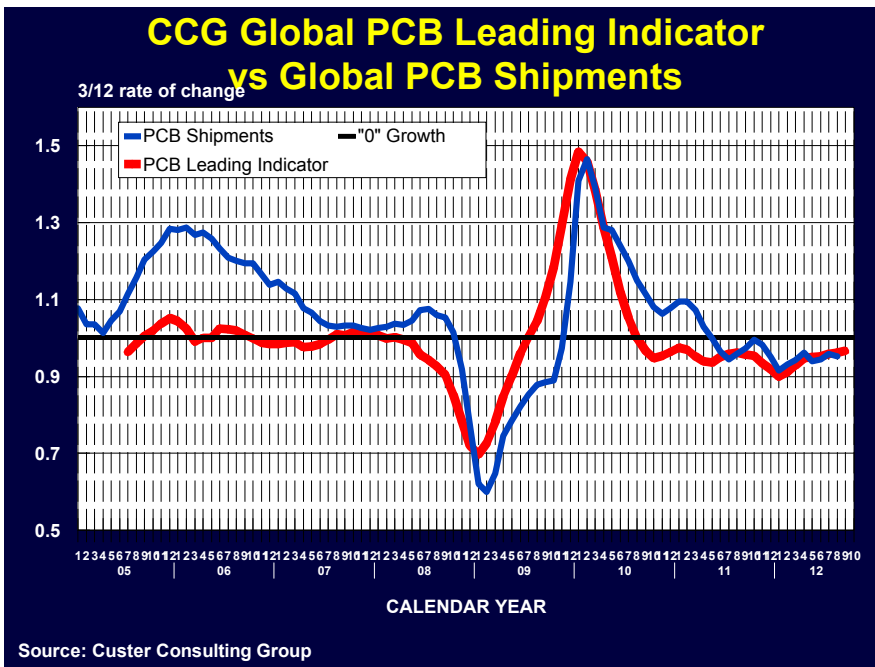


Chart 10.

Sales Manager for Bavaria, Austria and Slovenia.

Ormet Circuits raised \$1 million in equity financing.

Panasonic developed 10µm-thick "PGS Graphite Sheet" used for releasing heat from mobile devices.

Polar Instruments added equipment sales & service in Beaverton, Oregon.

Semblant launched its Semblant plasma finish premier partner program.

Technical Resources appointed Andres

Torres to run new office in Ponce, Puerto Rico.

Tektronix opened a service lab in Penang, Malaysia.

Teledyne will name Susan Main, Sr. VP and CFO when Dale Schnittjer retires in November.

Tropical Stencil added full service PCB sourcing.

US Tech launched its web site www.ustech-corp.com.