

STOCKS

It was a flat week for U.S. blue chip stocks as the Dow rose just 0.1%. Tech stocks did much better as the Nasdaq added 2.0% and the SOX climbed another 6.0% last week.

MARKET INDEXES

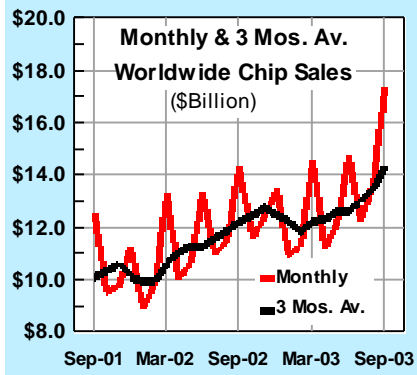
INDEX	Ticker	Close 11/07	Change Week
DJ-30 Ind.	DJ30	9809.79	0.1%
Nasdaq	COMP	1970.74	2.0%

ATE STOCKS

COMPANY	Ticker	Close 11/07	Change Week
Aehr Test	AEHR	\$3.92	0.8%
Aetrium	ATRM	\$4.08	34.7%
Advantest	ATE	\$19.73	4.4%
Agilent Tech	A	\$27.20	9.1%
Cohu	COHU	\$21.11	5.2%
Credence	CMOS	\$16.73	2.6%
Electroglas	EGLS	\$4.18	21.5%
ESI	ESIO	\$26.25	8.2%
FormFactor	FORM	\$26.40	5.9%
inTest	INTT	\$6.75	3.0%
K & S	KLIC	\$16.35	11.0%
LTX	LTX	\$15.77	10.4%
MCT	MCTI.OB	\$1.47	0.0%
Mosaid (\$C)	MSD	\$10.70	23.7%
Photon Dyn.	PHTN	\$40.90	8.1%
Teradyne	TER	\$25.16	10.4%
Average Change Last Week			9.9%

EDA STOCKS

COMPANY	Ticker	Close 11/07	Change Week
Cadence	CDN	\$16.66	8.3%
LogicVision	LGVN	\$3.95	-4.4%
Mentor	MENT	\$16.96	1.0%
Synopsys	SNPS	\$30.85	-2.7%
Average Change Last Week			0.5%



INDUSTRY

The SIA's 'actual numbers' showed that global chip sales in September were even stronger than their 3-month report (below) indicated. While the 'average numbers' put September sales at \$14.44 billion, 'monthly actuals' showed September sales spiked to \$17.38 billion (Graph above.) – up 27% sequentially and 21% YoY. However it should be noted that This number included the additional sales due to data-actuator products that the SIA has retrospectively included for the whole of 2003.



The SOX rose 29.9 points, 6.0% last wk.

The SIA has added data-actuator products to its global chip report – resulting in an increase its overall sales figures for the chip sector by \$1.46 billion since the beginning of this year – increasing sales by about 1.25%. In the first three quarters of 2003, worldwide chip sales hit \$118.3 billion, including data-actuator products. Without those numbers, the global chip market reached \$116.84 billion for the first three quarters, it was noted. In the first three quarters of 2002, the worldwide chip market hit \$103.2 billion, not including actuators.

September '03 Worldwide Chip Sales

The SIA reported that worldwide chip sales (3-month average) increased 6.5% to \$14.4 billion in September, up from \$13.6 billion in August, and the seventh consecutive monthly increase. September's performance – the strongest percentage change since 1990 – propelled third-quarter revenue to \$43.3 billion, a 17.5% increase over the same quarter of 2002, and a 13.7% sequential rise over the second quarter of 2003. "September and third quarter data confirm that demand in the global semiconductor market is rising briskly," stated SIA president **George Scalise**. "Performance is strong in all major market sectors -- computation, communications and consumer, indicating a solid, continuing and broad-based growth cycle."

September 2003 (US\$billion)

Market	Aug'03	Sept'03	Chng	Sep'02	Chng.
Americas	2.61	2.75	5.4%	2.63	4.5%
Europe	2.55	2.72	6.6%	2.32	17.3%
Japan	3.21	3.36	4.6%	2.83	18.8%
Asia Pacific	5.20	5.61	8.0%	4.51	24.4%
Total	13.56	14.44	6.5%	12.29	17.5%

The SIA released its forecast for 2003-2006 last week, highlighting a strong growth forecast for 2004. The association is now expecting global sales of semiconductors this year to increase by 15.8% to \$163 billion and it projects 2004 revenues to increase by 19.4% to \$194.6 billion. However, it expects revenue growth to slow to 5.8% to \$206.0 billion in 2005, and 6.6% to \$219.6 billion in 2006.

In-Stat/MDR said that it is keeping its forecast for growth of the global chip market in 2003 at 16.7% and that it expects the market in 2004 to be \$206.8 billion, 25.9% ahead of 2003.

Semico Research said its *Inflection Point Indicator* continued to make steady gains in September – up 17.8% in September and 5.1% from 12.7% in August it said. The Semico IPI is a proprietary algorithm that compiles numerous industry data points into a unique index number. It predicts the strength and direction of the semiconductor industry six to eight months in advance, according to that market research company.

Forward Concepts has raised its forecast for the DSP market, predicting 20% growth this year, to \$5.8 billion. Next year the firm is predicting another 25% rise in shipments to \$7.3 billion. “When you compare this with the 2.3 per cent increase of the worldwide IC’ market over the same period, DSP is a clear winner,” its analyst, Will Strauss, said.

Gartner-Dataquest raised its estimates for Q4 PC shipments. It now expects worldwide PC shipments will total 47.2 million units in the quarter, a 12.4% increase from the same period last year. That would put 2003’s PC shipments at about 164 million units, a 10.9% increase from 2002, up from the 8.3% projection in their September version.

Intel CEO, Craig Barrett, is optimistic about the future but said many uncertainties make a near-term forecast difficult. “In principle I am optimistic about the future – about a time span of five or 10 years, but regarding the next quarter there are many imponderables. SARS could break out again, there could be war again. Demand of businesses in the United States, our biggest market, shows no signs of recovery,” he said.

SEMI is soliciting papers from authors for the technical symposium and FPD conference, which will be held in conjunction with the SEMI-CON China 2004 exhibition, March 17-19, 2004. Prospective authors are requested to submit an abstract of 200–250 words and a 100–word biography by November 25, 2003. For specific details visit: www.semi.org

Jerry Ardizzone, exec. VP of worldwide sales for ARM, said in an interview that, “The global IC design industry gradually shifting to Asia from North America.” The UK-based microprocessor IP provider said it has seen the highest growth in the number of its Asian clients, which contributed about 30% of ARM’s total sales in the third quarter of this year. Business from No. America, still accounted for half of ARM’s total sales, but showed a decline, Ardizzone said.

iSuppli noted last week that while the DRAM market achieved strong momentum in July and August, it largely dissipated in September. The WSTS numbers indicate that DRAM ASPs flattened out in September. Moreover, megabit shipments rose only a marginal 6% on a sequential basis during the month. This is significantly weaker than the recent historical performance for September. DRAM bit shipments rose 16% sequentially in September 2001 and by 12% during the same month in 2002.

COMPANIES

Agilent Technologies said that ASE has purchased 21 Agilent 93000 SoC Series test systems. ASE’s additional purchase of these 93000 test systems adds to what Agilent says is “the world’s largest installed base of 93000 SoC test platforms.”

Agilent also announced a collaboration with the *Microprocessor Research and Development Center (MPRC) of Peking University* to develop a production test solution for the Unity-863 CPU on the 93000 SOC Series tester. The Unity-863, is for high-speed computing and communications applications. “The Unity-863 has been embedded with high-end design-for-test (DFT) technologies to serve sophisticated testing requirements,” said Cheng Xu, director of MPRC. “The Agilent 93000 tester is widely recognized as a leader in the DFT arena, and has a track record of success in China,” he added.

Credence Systems said that Taiwan-based King Yuan Electronics – a company with integrated IC back-end capabilities for IC Test and package & assembly services, for CMOS image sensors – has selected its ASL 3000RFTM test system as one of its wireless device test platforms. It said “King Yuan selected the system based on its ability to meet the significant technical and economic challenges presented by next-generation wireless devices and applications, including 802.11 standards.”

FormFactor said 5 million of its common shares were priced Tuesday at \$26 each in a follow-on stock offering. The Livermore, California-based company said the offering consists of 3,500,134 shares offered by existing shareholders and employees, and 1,499,866 shares offered by the company. FormFactor said underwriters may buy another 750,000 shares.

MCT announced the receipt of capacity expansion orders totaling over \$700K from a "large integrated device manufacturer" for *Tapestry SC* strip test handling and *SmartSolutions* products. The systems are scheduled to ship over the next 4 months.

Credence Systems' Optonics subsidiary announced a technology partnership with the *Microelectronics Research Center (MRC)* at the **University of Texas** at Austin (UT-Austin), Optonics will donate semiconductor equipment to UT-Austin for education, research and training. The partnership will focus on the further development of photon counting detector technology for semiconductor ICs.

MOSAID Technologies filed an amended counterclaim in the litigation with **Infineon Technologies** and an amended complaint in the litigation against **Samsung Electronics**. On September 15, 2003, the U.S. Judicial Panel on Multidistrict Litigation consolidated the two litigation cases in New Jersey for coordinated pretrial proceedings and permitted amendments which allow MOSAID to add two new patents to its claims in the actions against both Infineon and Samsung.

Applied Materials is reported begun placing significant orders within its component supplier base, including from the likes of **Advanced Energy, BOC Edwards, Celerity, MKS,** and others. Applied is apparently ramping up for what the company expects to be a new and big round of tool shipments as early as the first quarter of 2004..

SanDisk will be added to the Nasdaq-100 Index on Nov. 13.. The FLASH storage company's stock rose 46 cents on the news Friday, climbing to \$85.13, the stock nearly reached its 52-week high of \$85.45.

Micron Technology broke ground last week for a DRAM memory module assembly and test facility at San Antonio Technological Park, Aguadilla, Puerto Rico. The 48,000-square-foot facility is intended for assembly and test of a range of memories including DDR2-based synchronous DRAM modules. The schedule for completion of the facility or the number of employees to be hired has not yet been determined, it said.

AMD could once again return to profitability this quarter, depending on what happens with FLASH memory, said company CEO **Hector Ruiz**. The company hasn't reported a quarterly profit since Q2 of 2001. "We expect the microprocessor business to be profitable, and we are looking at FLASH to get there," Ruiz said

Intel accounted for 82.6% of the x86 microprocessors that shipped in the third quarter, up 1.2% sequentially, according to figures from **Mercury Research**. **AMD**, meanwhile, saw its market share sink by 0.8%, from 16.6% to 15.8% sequentially, according to Mercury Research..

Intel has acquired **Mobilian** (Hillsboro, OR), a maker of wireless local-area networking chips. Intel has not announced the deal, which closed a week ago. Terms were not disclosed, Mobilian, employs about 70 people and had raised \$70 million in funding since it was founded in early 1999.

Intel said it has found a way to insulate transistors that prevents them from 'leaking' power and throwing off heat. It claims to have developed a new 'high-k dielectric' insulating material to replace the silicon dioxide that has been used as the industry standard for about 30 years. However, the company said it would be 2007 before the new technology is in production

ASIA

China

Hynix Semi is reported to be planning a DRAM chip production plant in China – aiming at circumventing anti-dumping duties and at expanding its output.

Taiwan-based MediaTek, the world's largest designer of chips for DVD players, said it may start using semiconductor suppliers in China "so it can respond more quickly to customer orders and meet rising demand there." "Designers of chips are going there to be close to customers and to avoid import duties," said **Eric Chen**, an analyst with **Nomura Securities** in Taipei. "They will move step by step."

Shanghai Hua Hong NEC Silicon and Storage Technology (Sunnyvale, CA) and have expanded their relationship to enable HHNEC to serve as a foundry for embedded FLASH solutions based on SST's 0.25 micron *SuperFlash* technology. HHNEC will also license the SST 0.25 micron SuperFlash technology to manufacture ASICs, microcontrollers and other products for its customers

Japan

The SIA now expects Japan will be the fastest growing semiconductor market in 2003, followed by Asia-Pacific, Europe, and then the Americas. Helped by a stronger yen, the Japanese chip market is expected to grow 24.3% to \$37.9 billion in 2003, according to the SIA.

NEC Electronics and its wholly owned subsidiary **NEC Yamagata**, plan to jointly construct a 300mm, 90nm fab on the first floor of NEC Yamagata's existing fab. It will have a monthly capacity of 4,000 wafers, roughly equivalent to processing nearly ten thousand 200mm wafers, per month by the end of 2004.

Korea

The on-again, off-again merger of the foundry businesses of **Hynix Semiconductor** and **DongbuAnam Semiconductor** may be on-again according to sources in Korea. The Korean government said to be pushing the deal and **Hynix** would like to sell its foundry fabs and associated debt to **DongbuAnam** and focus on its DRAM business. **DongbuAnam** wants the fabs, but not the debt.

Singapore

ST Assembly Test (STATS) is moving its Singapore corporate office to a new location, making way for additional manufacturing capacity at its current facility. **STATS'** 580,000-sq.ft. facility in Yishun includes 300,000 sq.ft. of operational space, state-of-the-art manufacturing equipment and a class 10K clean room environment. With the move of its corporate office to a new location, **STATS** will convert an estimated 45,000 sq.ft. of vacated space for operations purposes.

STATS also said that its Shanghai manufacturing facility is ready for operations. Located in Pudong, **STATS'** new facility offers wafer probe and final test services to cater to the growing mixed signal market in China. Its present contracts with **SMIC** will be transferred to the new facility.

Taiwan

Increased demand and tightening supply is resulting in prices of substrates, lead frames and raw materials for solder bumps in Taiwan are expected to rise due to according to packaging material company sources. Prices for tape carrier packaging (TCP) are also expected to rise further in the first quarter of 2004, thanks to tightening supply in Taiwan, said **SJ Cheng**, chairman of **ChipMOS**.

Siliconware Precision Industries (SPIL), Taiwan's second largest test and assembly subcon, said its revenue rose to \$77.5 million in October, up 6.8% sequentially and 23.2% YoY

TSMC and UMC are experiencing tight capacity due to rising orders, according to sources in Taiwan. **TSMC** is said to have reached full utilization on processes of 0.18-micron and below and has extended its lead time from four weeks to over six weeks on upcoming orders. **UMC** has not extended its lead time, but has suggested LCD driver IC and consumer electronics IC design companies confirm their orders six to eight weeks before wafer input, compared to two to four weeks originally. **UMC** said that the tight supply could last through the first quarter of next year.

TSMC reported record sales of US\$597.2 million in October, up 7.4% sequentially and 33.3% YoY. **TSMC's** revenues for January through October 2003 totaled about US\$4.83 billion) an increase of 21.8% over the same period in 2002.

UMC reported US\$225.4 million in October sales, up 1.9% sequentially and 27.2% YoY. In the first ten months of 2003 **UMC** achieved net sales of NT\$68,808 (about US\$2.02 billion), an advance of 23.05% over the same period in 2002.

PBGA suppliers, including **Nan Ya Printed Circuit Board** and **Phoenix Precision Technology**, are in talks with clients on price hikes. Two-layer and four-layer PBGA (plastic ball-grid array) substrates are expected to grow 10-15% by early 2004 because of limited supply. Four-layer products may exceed US\$0.62 by early next year and two-layer may rise to over US\$0.30 from about US\$0.27 now.

PEOPLE

Jan Willis was named Sr. VP of the newly created Industry Marketing organization at **Cadence Design Systems**. She was previously VP of Strategic Third Party Programs. She will report directly to **Ray Bingham**, **Cadence** president and CEO.

Wilf Corrigan, chairman/CEO of **LSI Logic** was elected as the 2004 **SIA** board chairman. **Steve Appleton**, chairman/CEO/president of **Micron**, was elected **SIA** vice chairman..

George E. Pataki New York State Governor, representing all New Yorkers, was honored last week as the 2003 recipient of its *Robert Noyce Award* at its *Forecast and Award Dinner* last week, where Governor Pataki delivered the keynote address. The **SIA** Board cited his "leadership and steadfast support for New York State's efforts in semiconductor research, development, and commercialization."

Governor Pataki, at the awards dinner, claimed that New York has the world's most advanced 300-mm wafer fab (**IBM** in Fishkill). However, later in the evening, **Craig Barrett**, CEO of **Intel** while praising Pataki's efforts in New York, disagreed about the governor's position on 300-mm fabs, saying "I would say that **IBM** has *one* of the most advanced 300-mm facilities in the world!"

JAPANESE ATE STOCKS

INDEX	Ticker	Close 11/07	Change Week
NIKKEI 225	N225	10,629	0.7%
Adv antest	6857	8,680	6.0%
JEM	6855	2,230	-1.3%
MJC	6871	1,560	2.0%
TEL	8035	8,410	6.7%
TSK	7729	3,530	2.6%
Yokogawa	6841	1,290	0.4%
Average Change Wk.			2.7%