

GLOBAL ELECTRONICS INDUSTRY BUSINESS OUTLOOK

WALT CUSTER
CUSTER CONSULTING GROUP
www.custerconsulting.com
December 2004

Historical Review

2000 - "Bubble demand", double ordering & inventory building

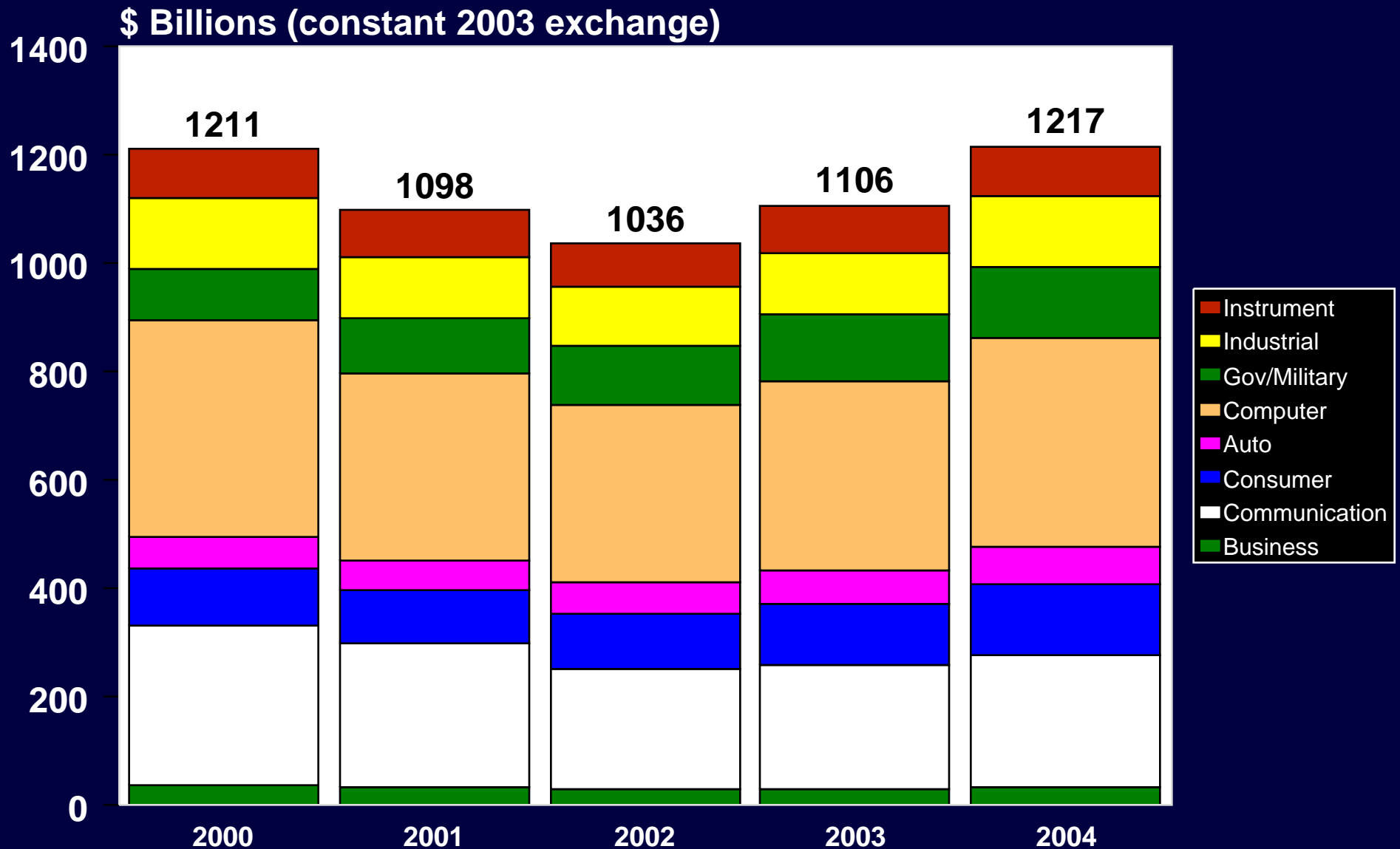
2001 - Dot.com & telecom crash, sharply lower demand, inventory reductions, Sept 11

2002 - declining global demand; rapid shift to Asian manufacture; N. American & European shutdowns; massive China buildup; overcapacity & price degradation throughout supply chain

2003 - Mid East unrest & SARS; recovery accelerates in late 2003; weakening US\$

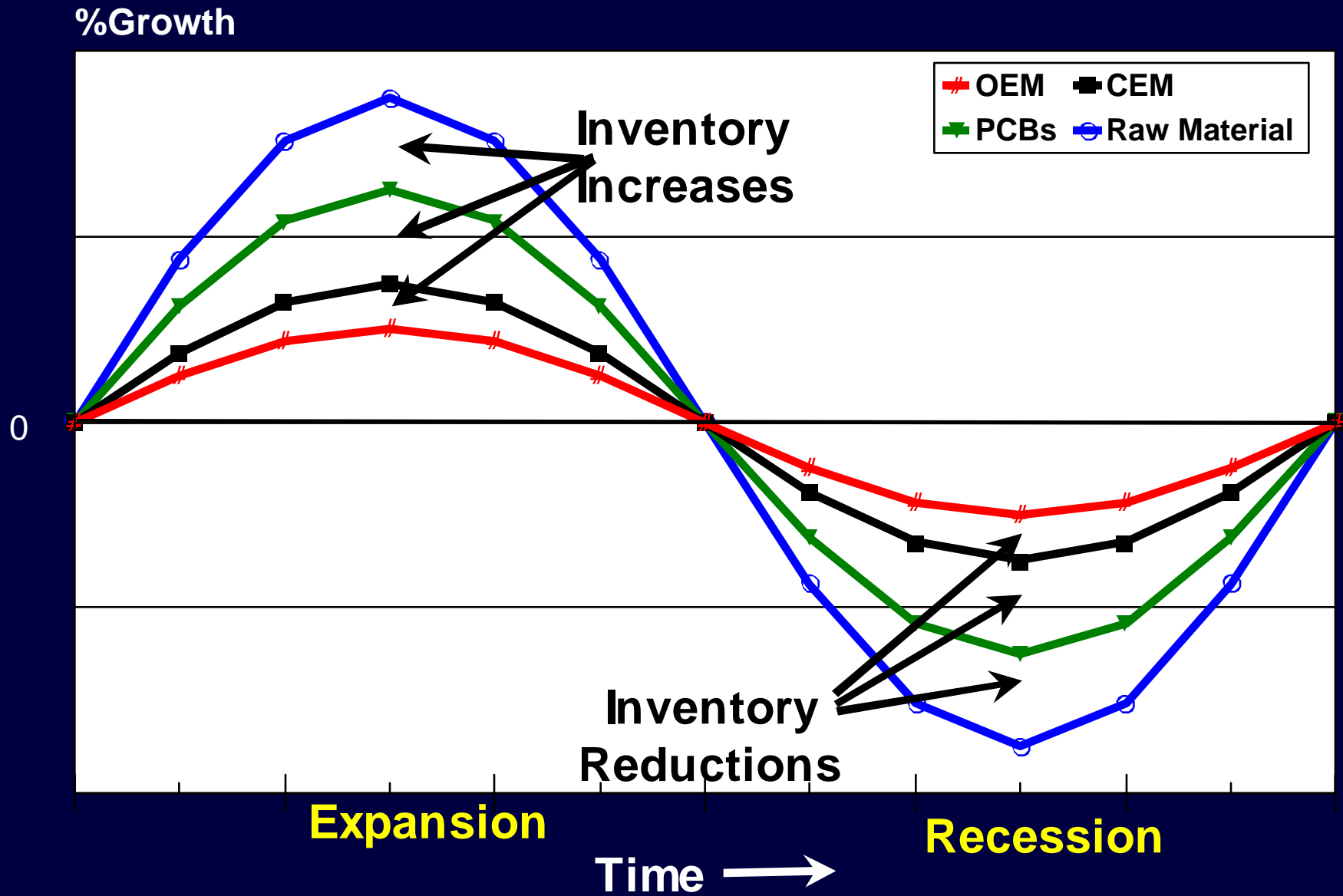
2004 - Strong 1Q'04 (over-ordering, inventory building, shortages & raw material cost increases); Downward "correction" in 2Q & 3Q'04; SE Asia growth continues; US\$

World Electronic Equipment Production by Type



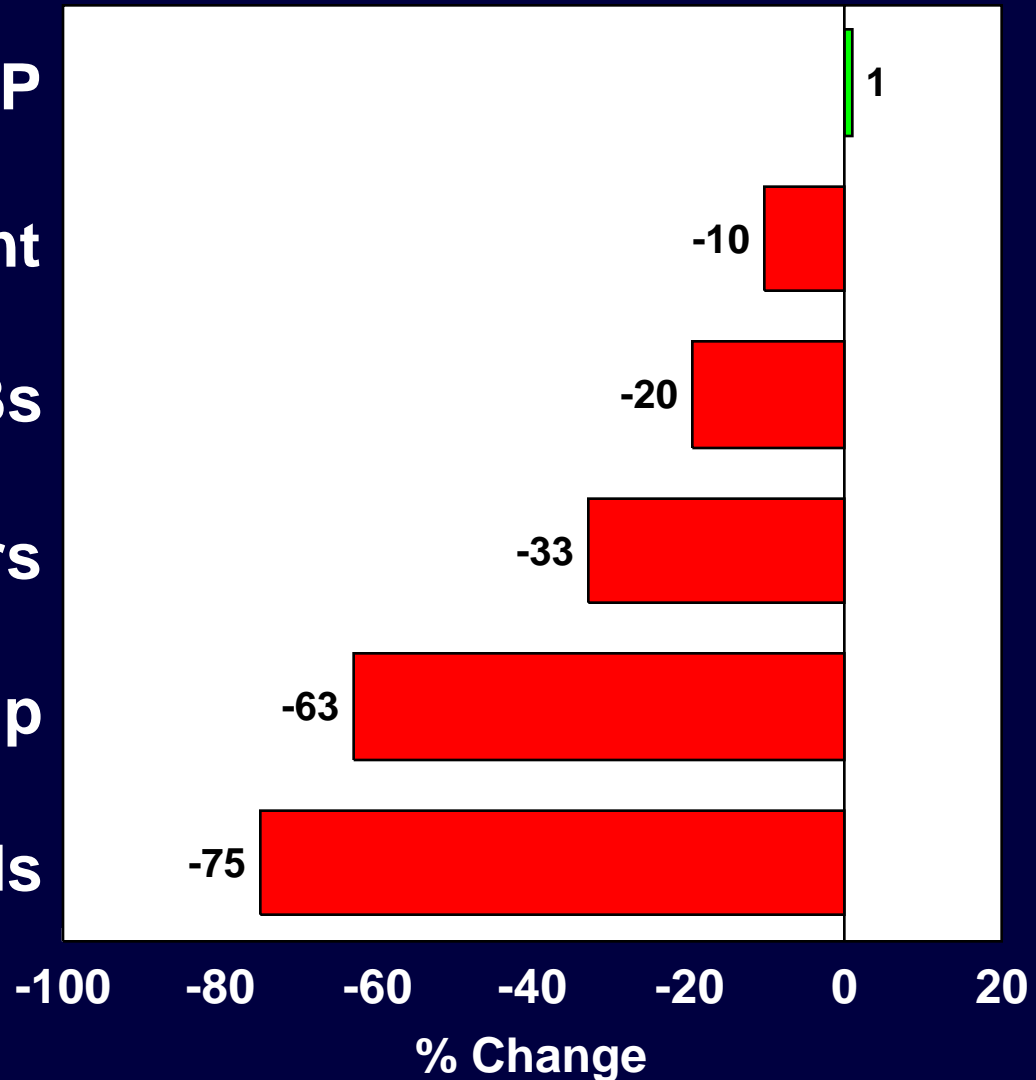
BUSINESS CYCLE

SUPPLY CHAIN EFFECT

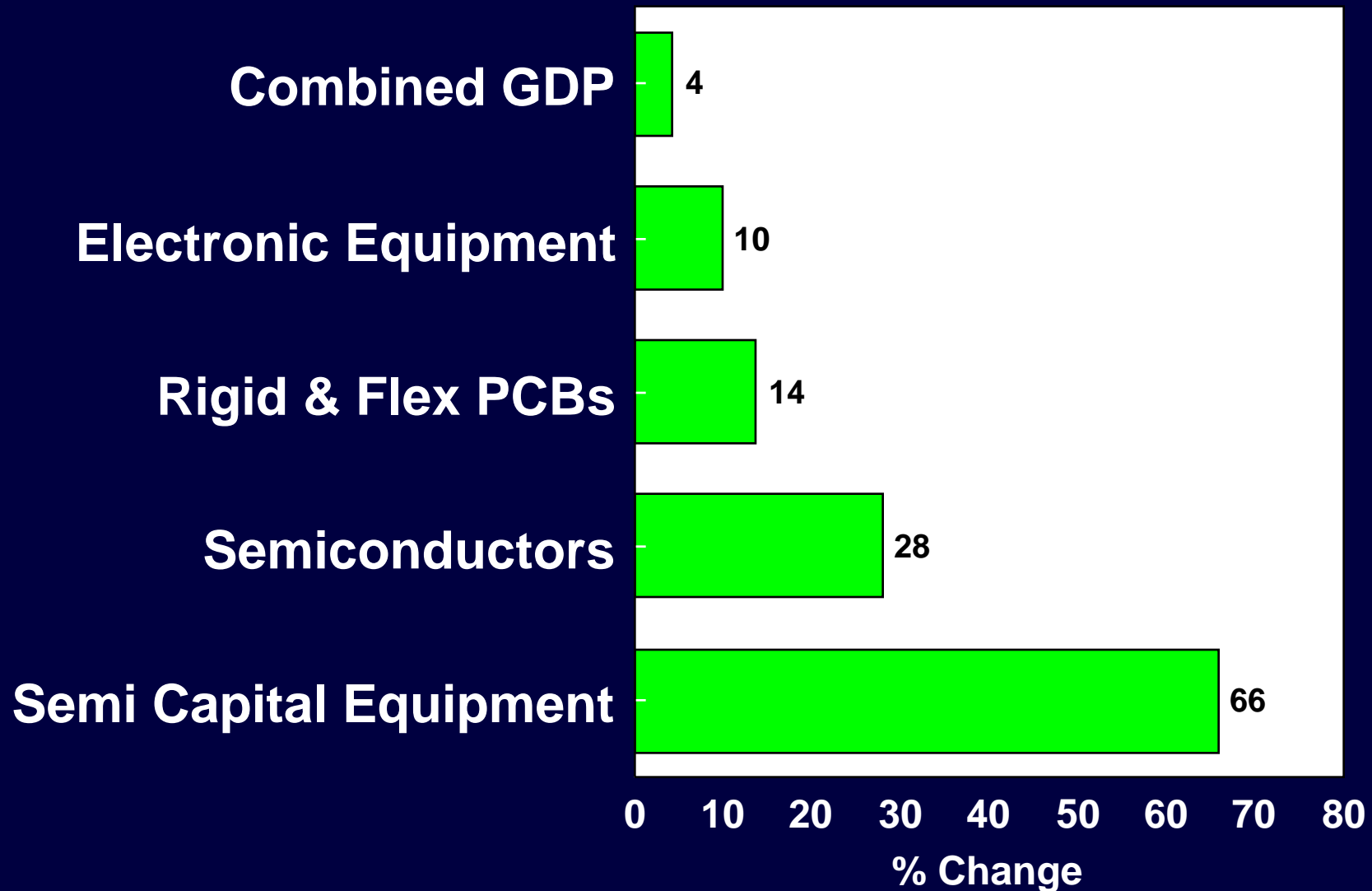


Global Impact 2001 vs 2000

Combined GDP
Electronic Equipment
Rigid & Flex PCBs
Semiconductors
Semi Capital Equip
DRAMs



Global "Electronic Foodchain" Outlook 2004 vs 2003



Exchange Rates

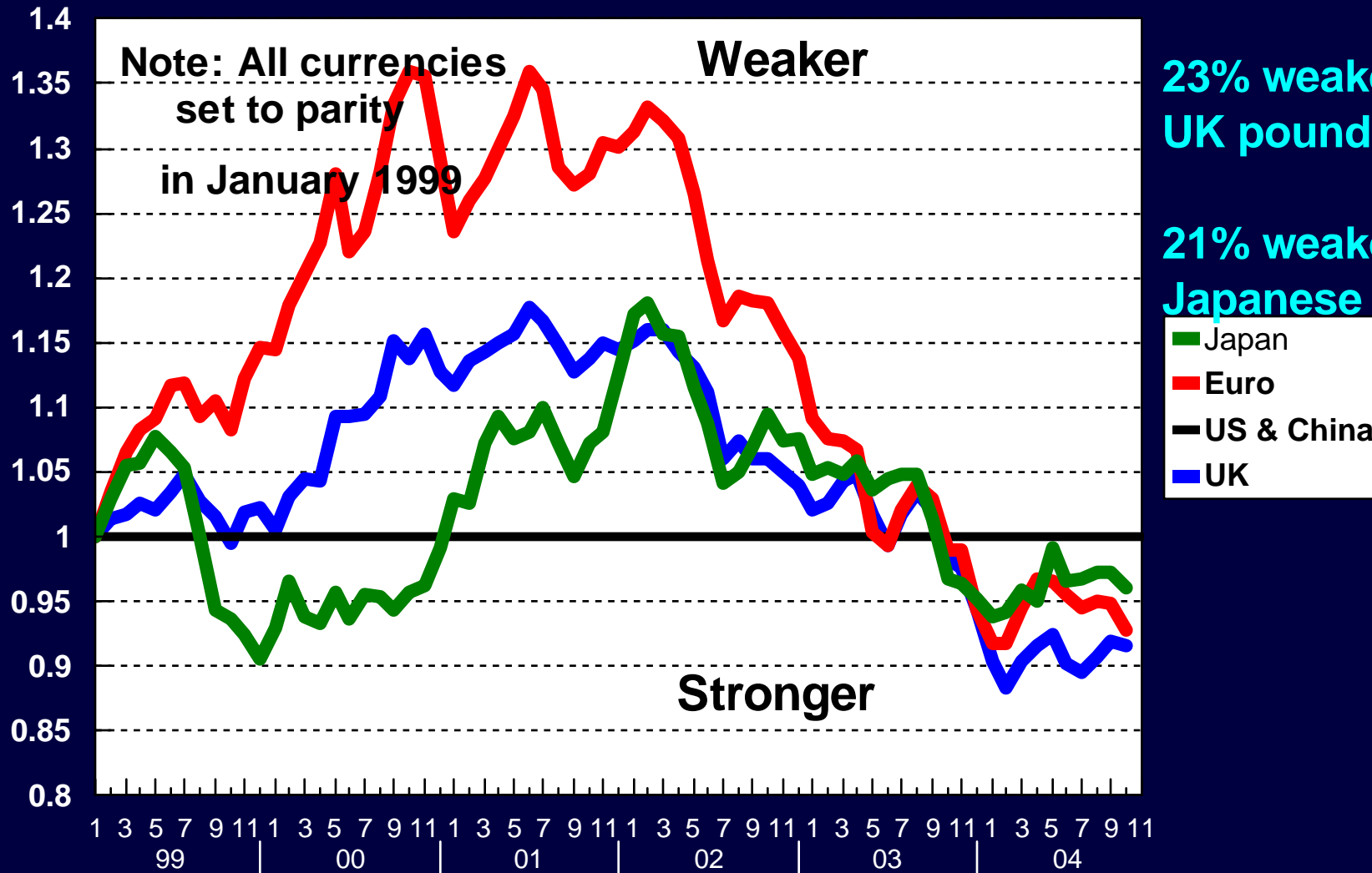
China Yuan & US\$ vs. European & Japanese Currencies

1/99 = 1.00

42% weaker vs. euro

23% weaker vs. UK pound

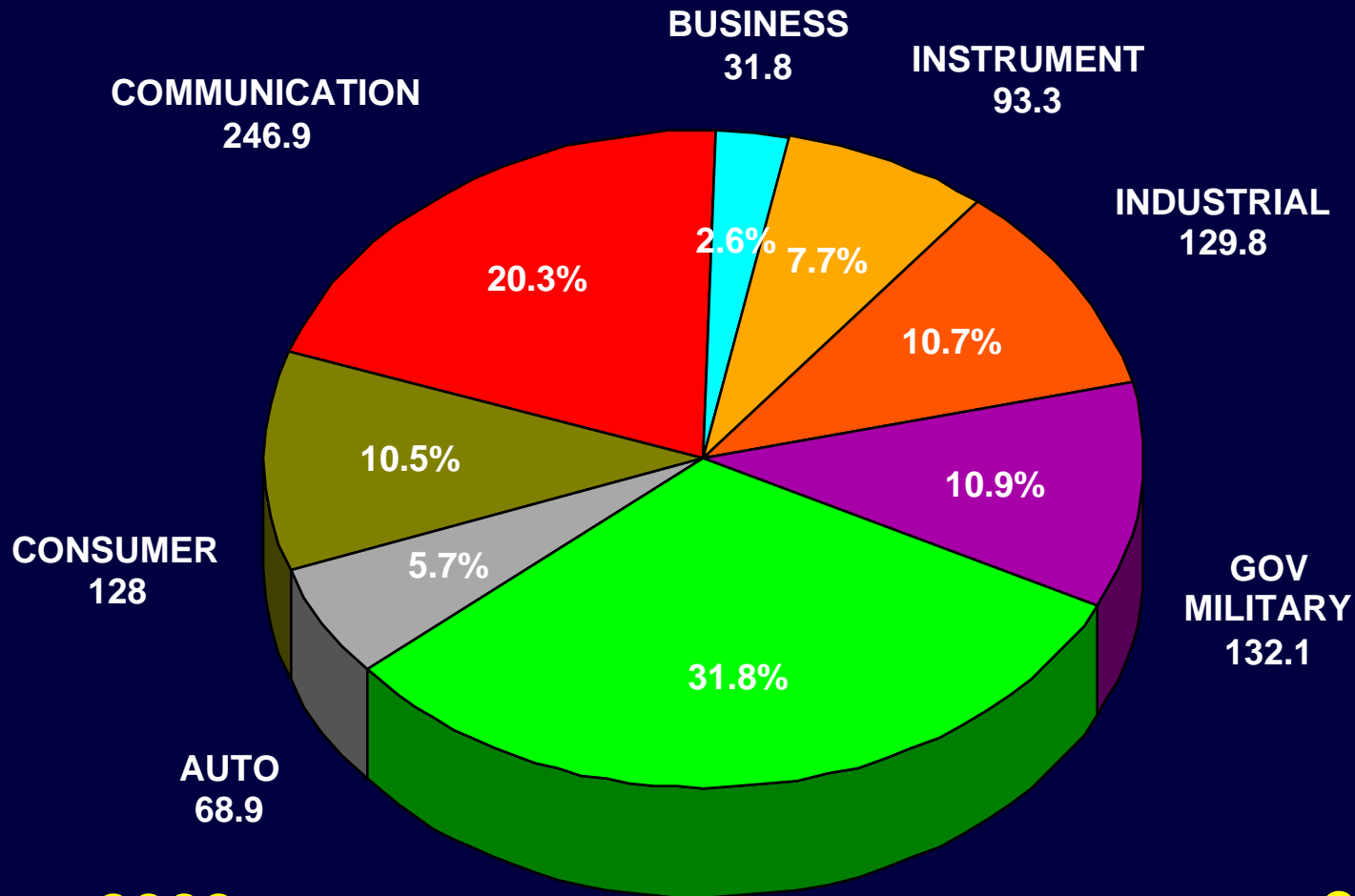
21% weaker vs. Japanese Yen



Electronic Equipment

WORLD EQUIPMENT PRODUCTION

2004



2003
\$1106 B

10%

COMPUTER
386.6

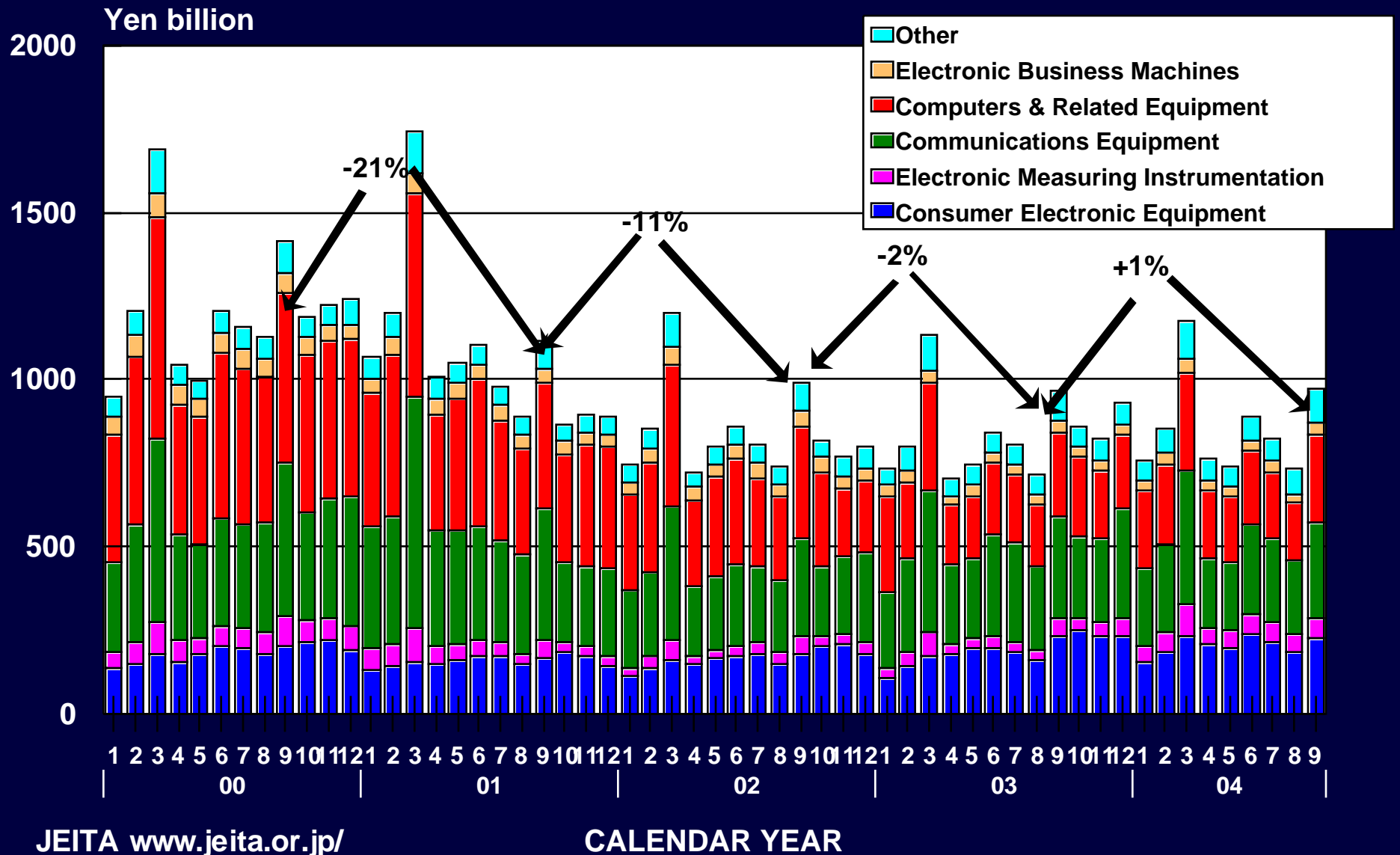
+7.8%

2005
\$1312 B

Electronic Outlook 9/04

TOTAL \$1218 B

Japan Electronic Equipment Production



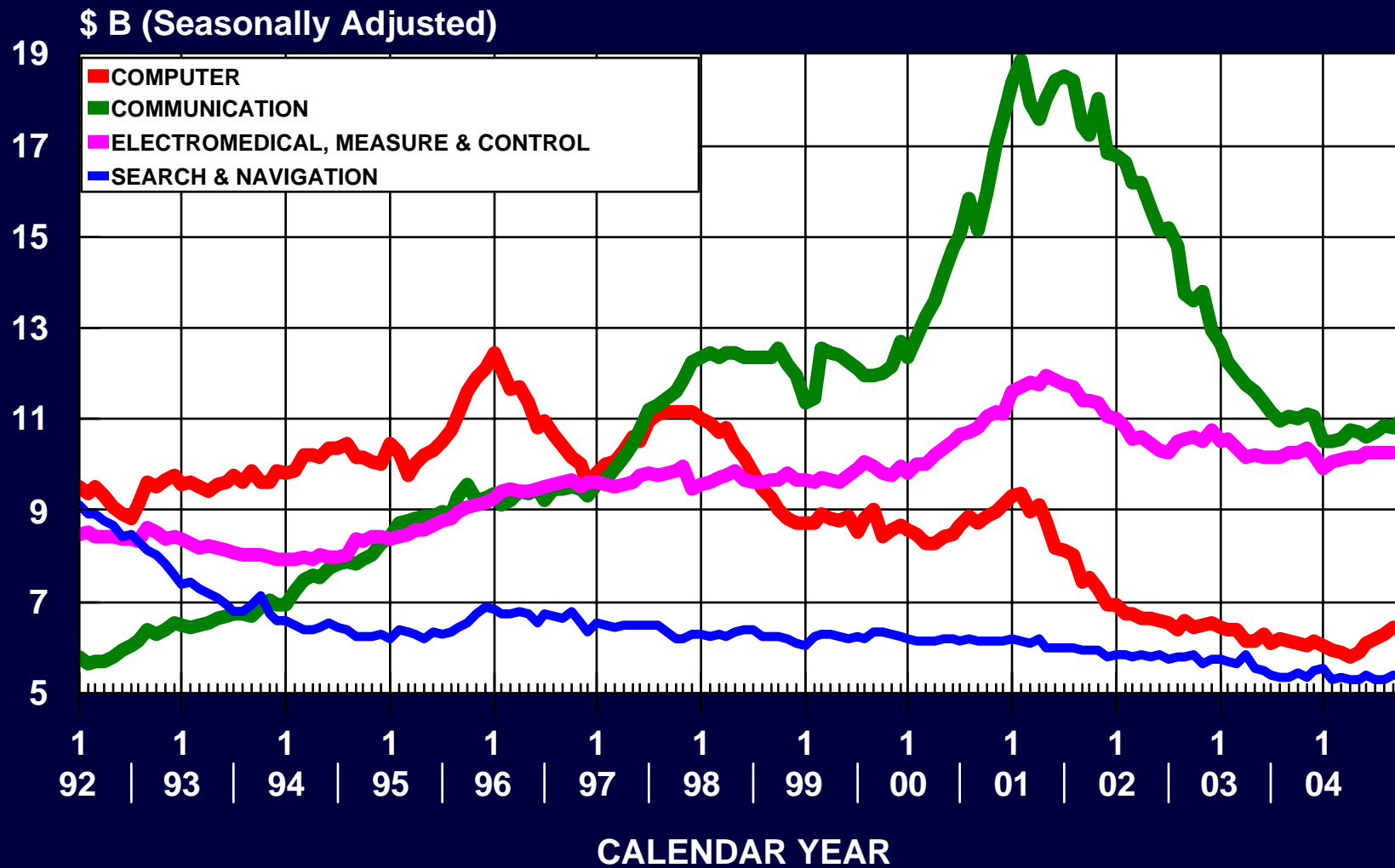
US Electronic Equipment Orders & Shipments

Communications, Computer, Military, Instruments



US Electronic Equipment Inventories

Monthly Data

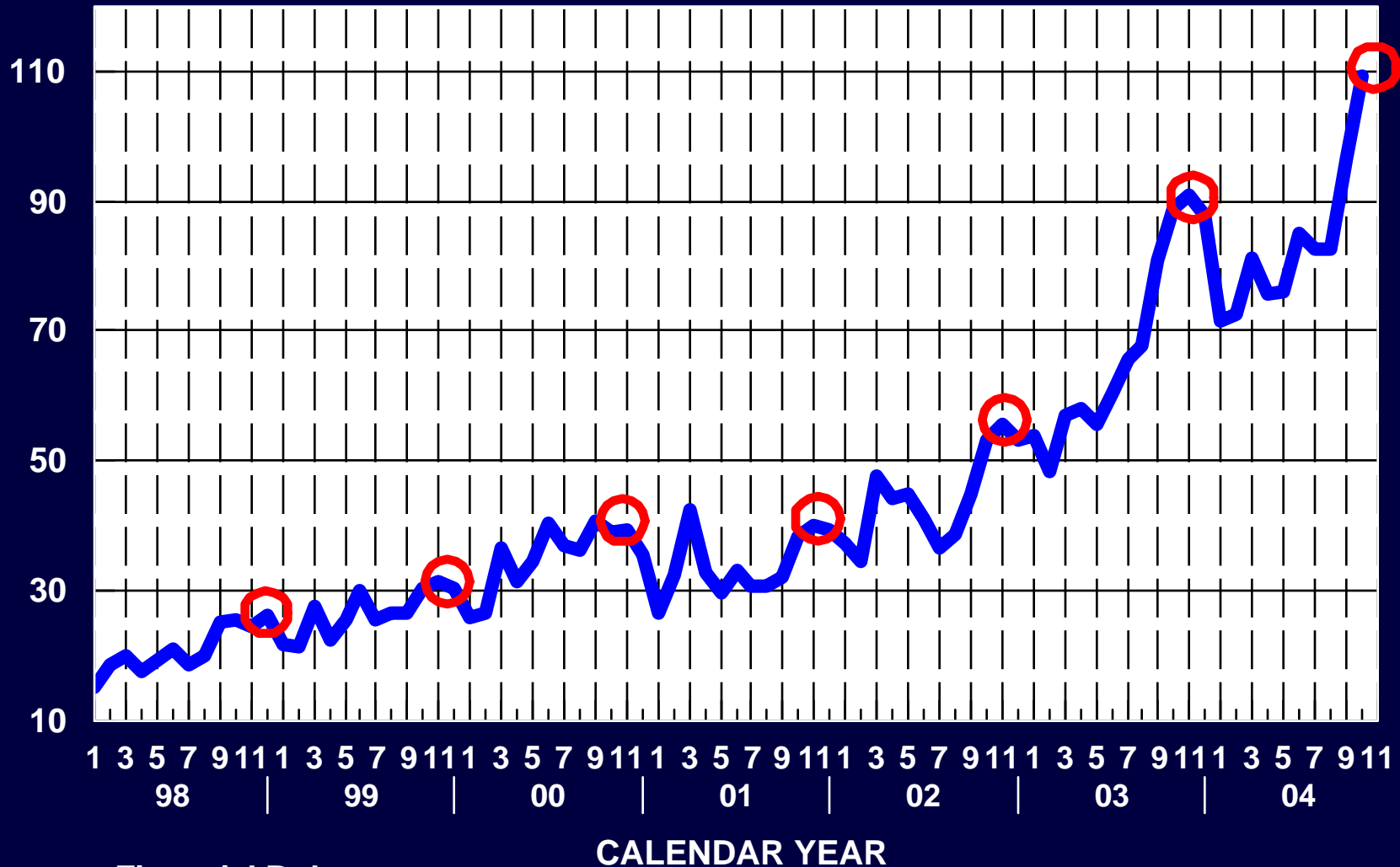


<http://www.census.gov/indicator/www/m3/>

11/04

Taiwan Region Electronic Equipment / ODM Sales Composite of 7 Large Manufacturers

NT\$ (Billions)

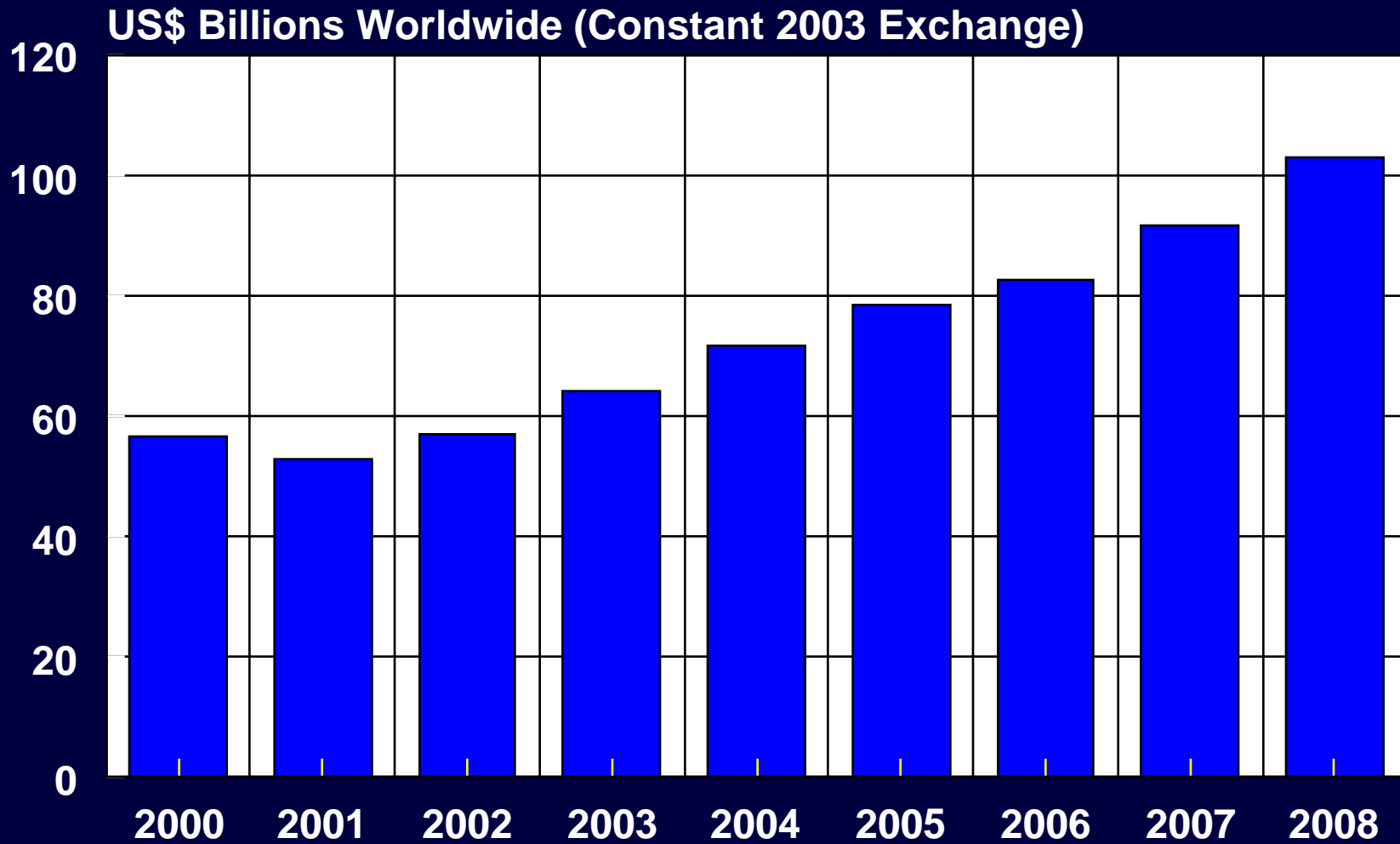


Company Financial Releases

Acer, BenQ, Compal, First Intl Computer, Inventec, Mitac, Quanta

Automotive Electronics

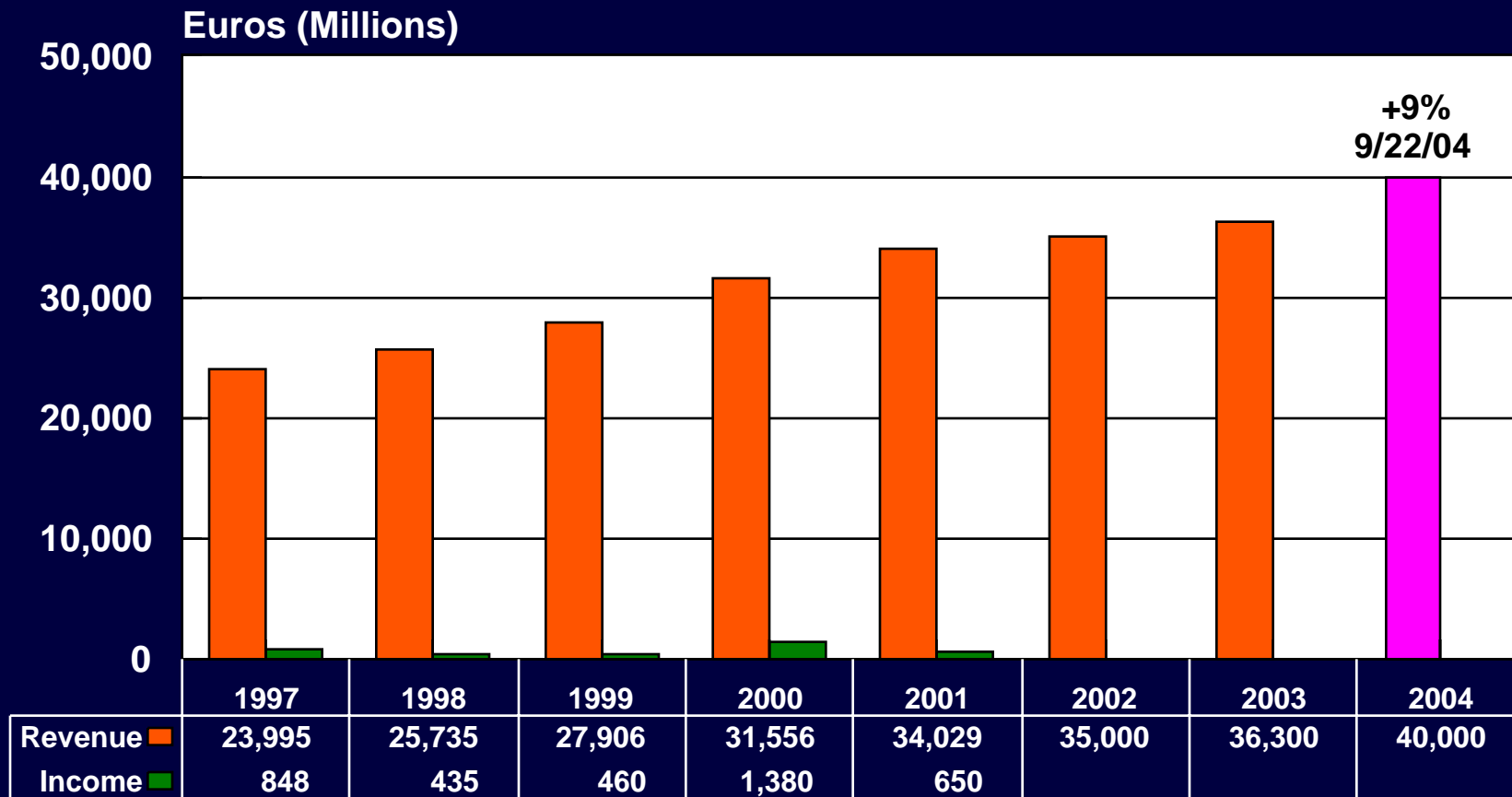
Auto Electronics



Robert Bosch GmbH

Revenue & Net Income

Bosch will invest 270 million euros in a new research and production centre in Wuxi and will spend 100 million euros on a production plant in India. 9/22/04



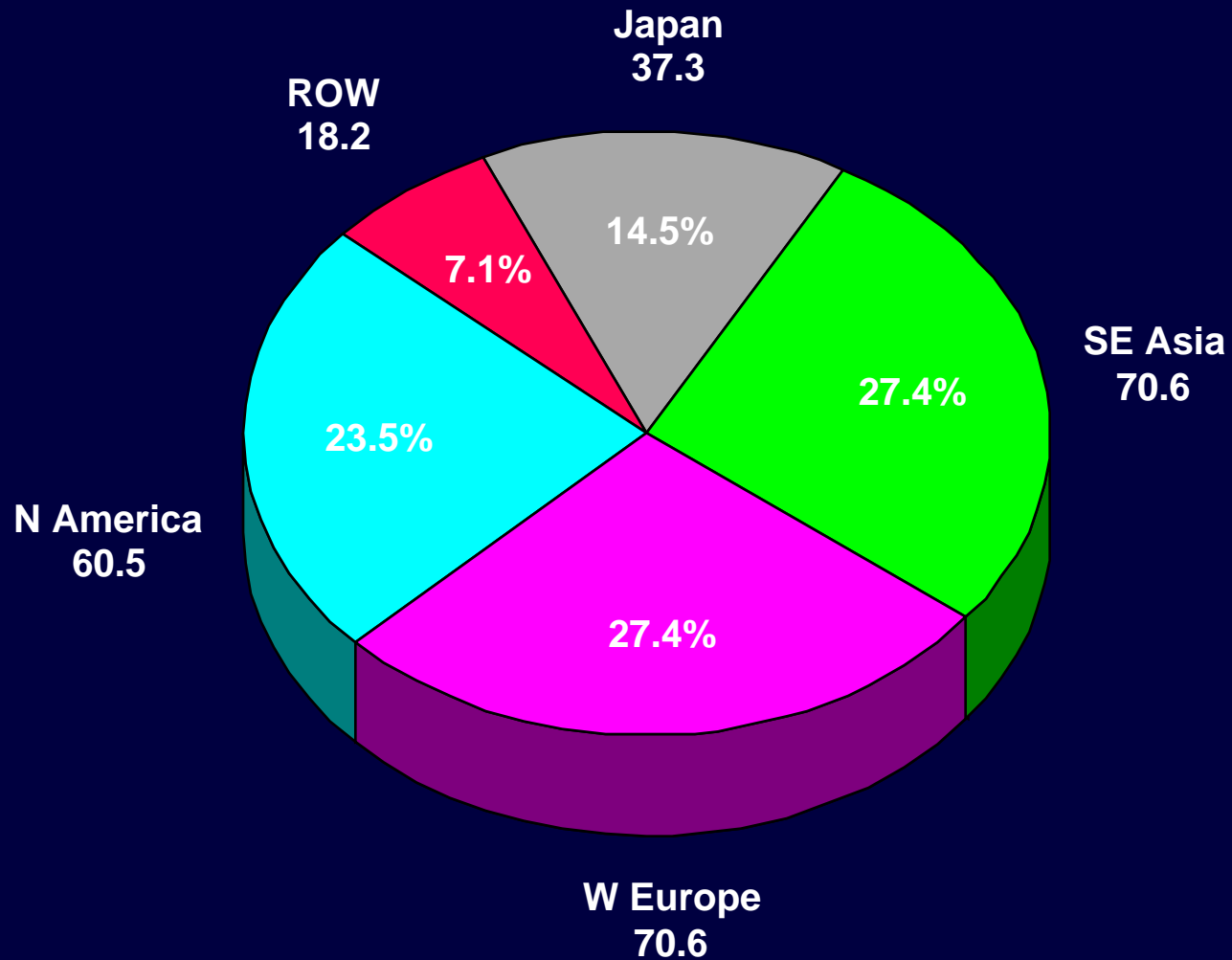
Automotive Related

- **Visteon** investing 40 million euros in new 400-employee plant in Nitra, Slovakia, to support Kia and PSA Peugeot Citroen. Production begins in spring 2006. Visteon has plants in Czech Republic (Novy Jicin, Rychvald and Hluk), Poland (Praszka and Poznan) and Hungary (Szekesfehervar)
- **Delphi** closed Flint Michigan plant as it reduces its U.S. hourly work force by 6,000 people by year end 2004. Also closing plants in Anaheim, California, Olathe, Kansas, and Tuscaloosa, Alabama.
- **Visteon** sold its 270 employee auto parts assembly operation in Chicago to its supplier Plastech Engineered Products. The 215,000 SF Visteon facility does final assembly of parts for Ford.
- **Siemens** may transfer up to 400 jobs at Siemens VDO, its automobile electronics division, from Wurzburg, Germany to the Czech Republic.

Communications Equipment

WORLD COMMUNICATIONS EQUIPMENT PRODUCTION

2004



TOTAL \$257 Billion

Worldwide Telecommunications Equipment Manufacturers (\$B)

	2000	2001	2002	2003	<u>2003/2000 % Change</u>
Nokia	27.9	28.0	28.9	34.0	+21.8
Cisco	23.9	18.3	19.2	19.9	-17.1
Motorola	37.6	30.0	26.7	27.1	-28.0
Alcatel	28.8	22.6	15.9	14.9	-48.2
Ericsson	29.7	20.7	15.3	14.9	-50.0
Nortel	28.0	17.5	10.6	9.8	-64.8
Lucent	26.2	20.5	10.8	8.7	-66.9
Top 7 Total	201.9	157.3	127.3	129.1	-36.0

- Siemens not included due to multiple product lines

Source: Company financial statements

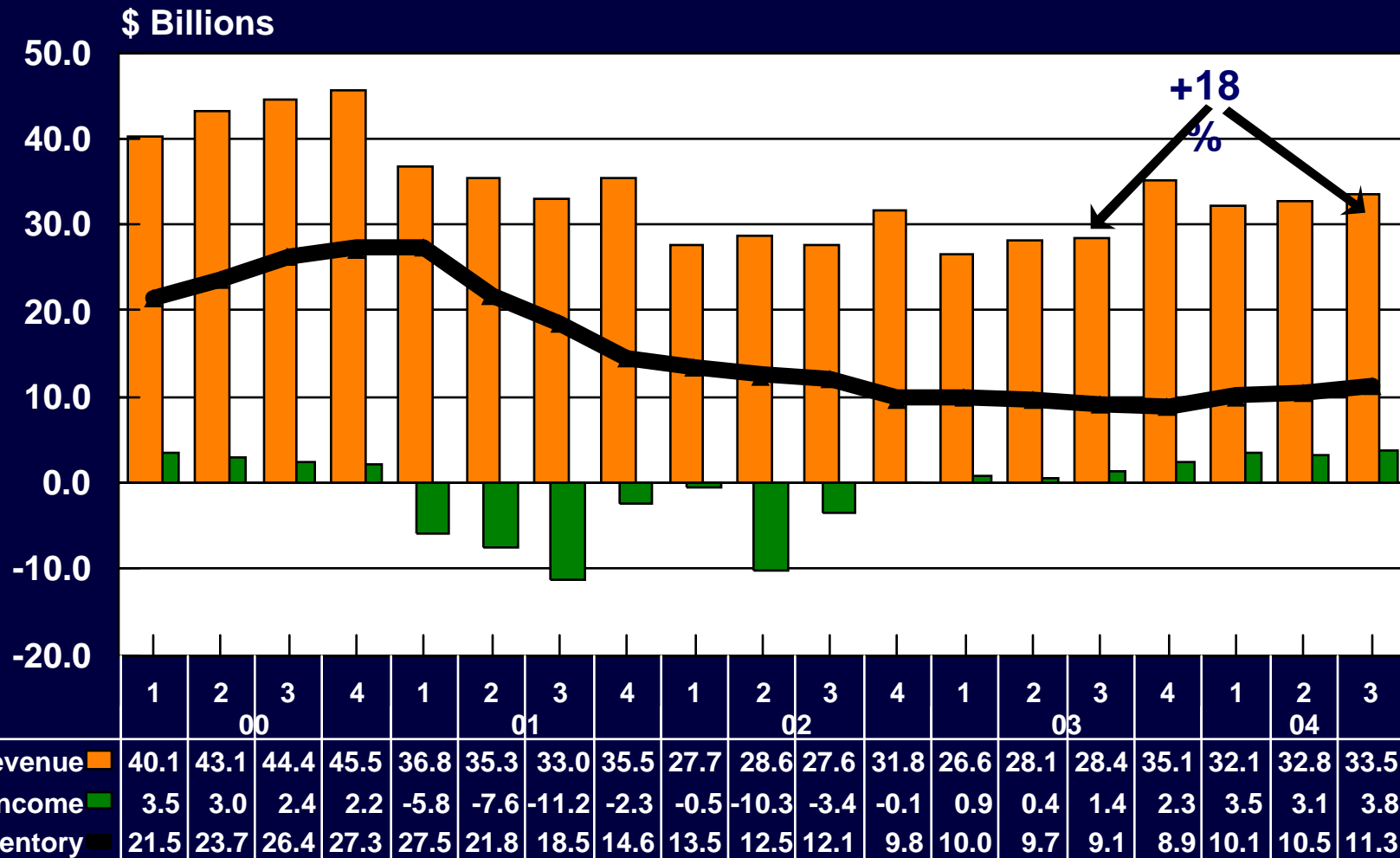
Alcatel & Ericsson calculated @ fluctuating exchange

**Growth
Resumes**

Large "Communications" Equipment Suppliers

Composite of 6 Public Companies

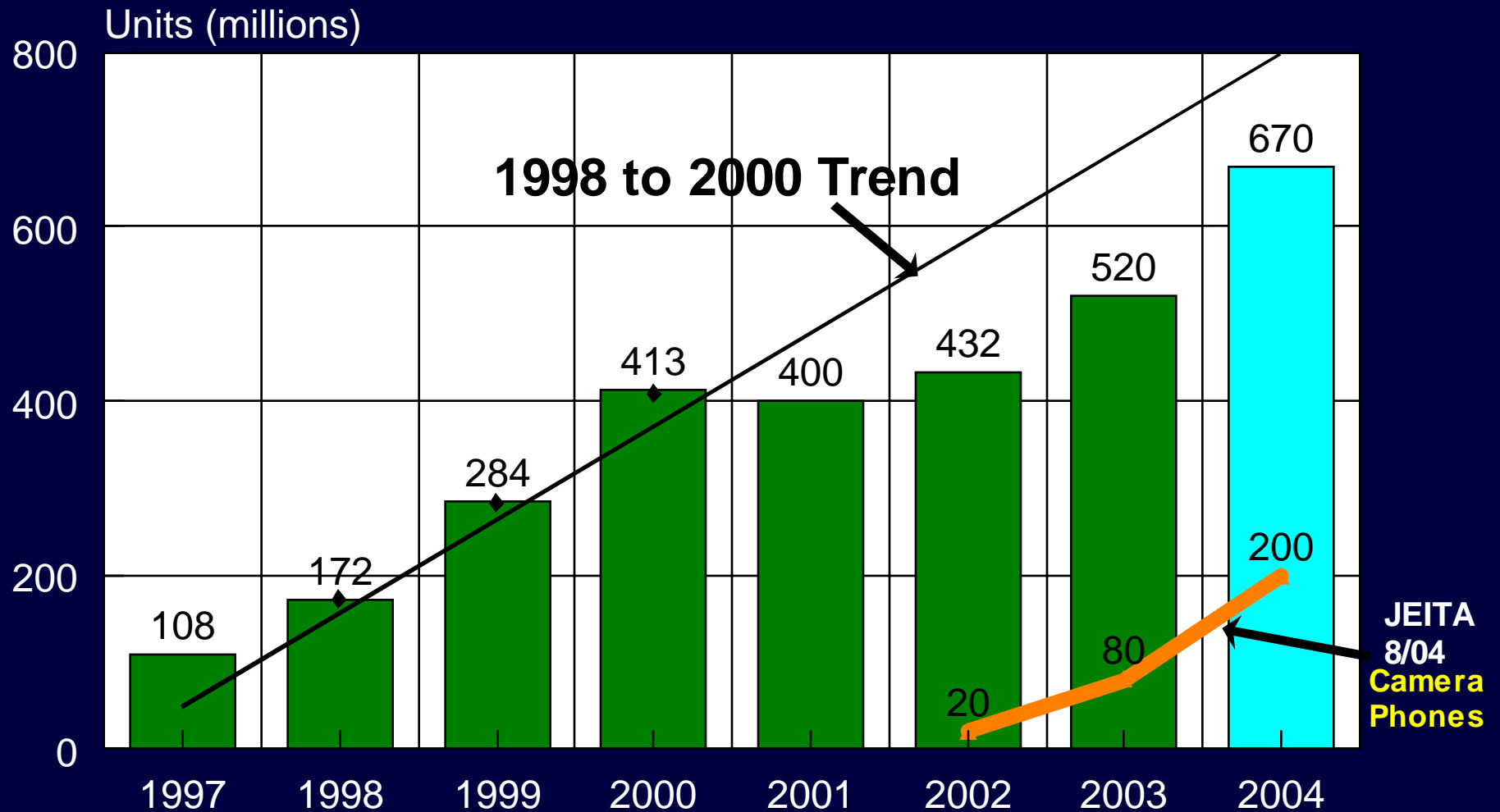
Revenue, Net Income & Inventory



Alcatel, Cisco, Ericsson, Lucent, Motorola, Nokia
 Euros & Krona converted at fluctuating exchange

World Mobile Phone Unit Shipments

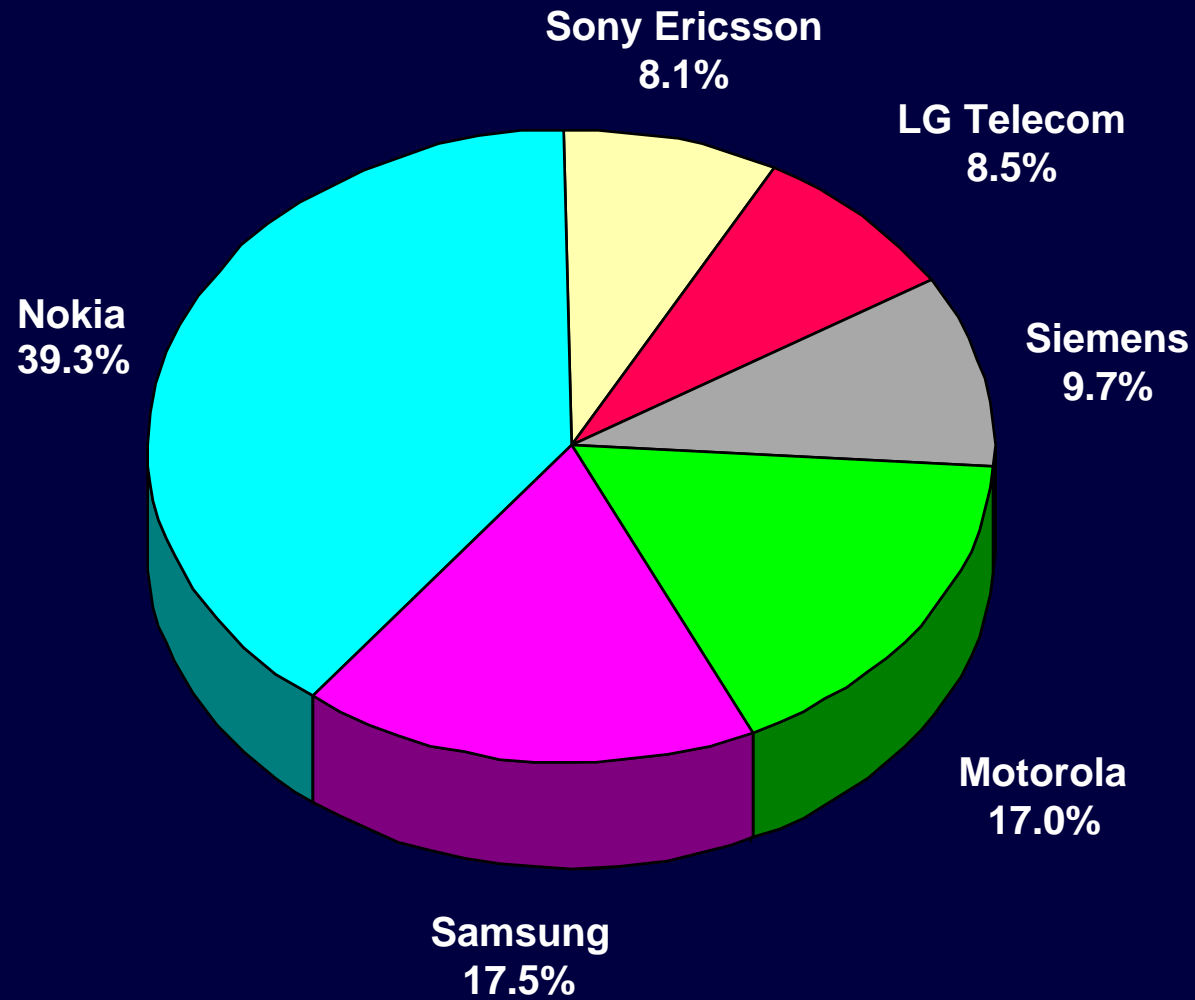
Total Sales - Analog & Digital



Dataquest 11/2004, custer estimate for 2004 based upon 1-3Q'04 actuals plus normal seasonal growth in 4Q'04

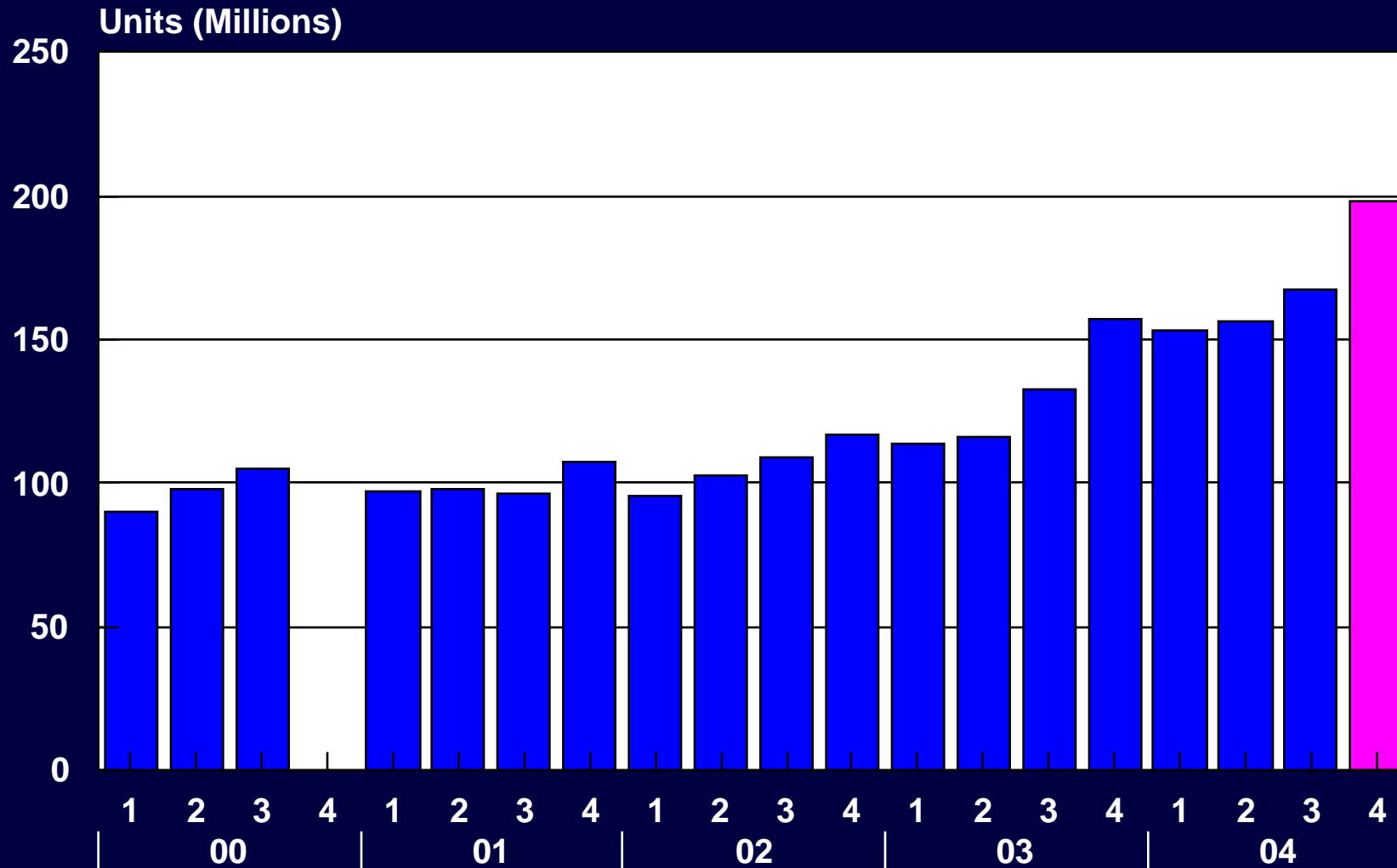
WORLD CELLULAR PHONE SALES

3Q'04



TOTAL: 167 MILLION UNITS

Mobile Phone Unit Shipments World

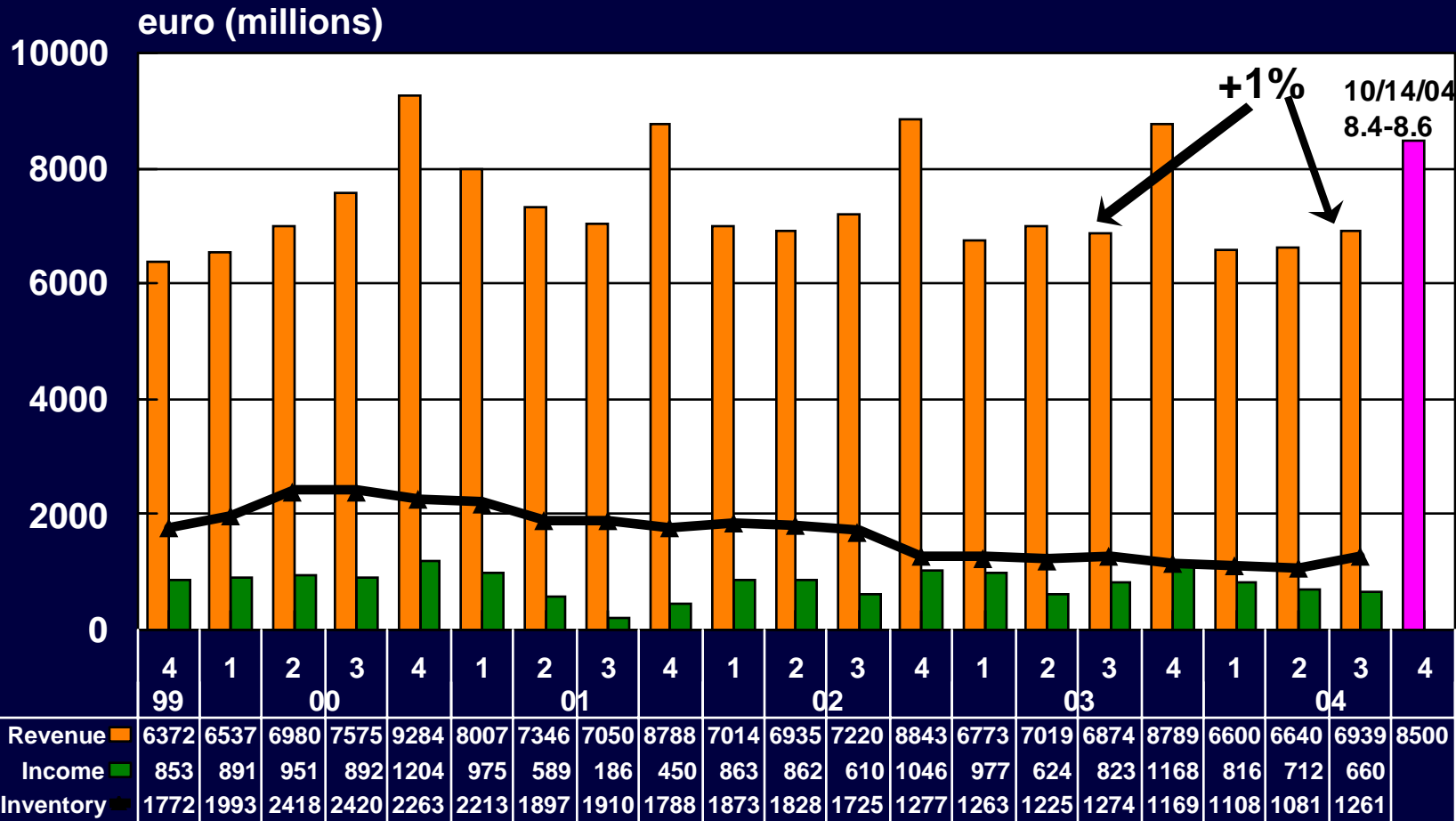


Gartner DataQuest 11/04, Custer estimate for 4Q'04

Nokia

Revenue, Net Income & Inventory

With more competitively positioned mobile devices in the replacement market and an attractive offering for rapidly growing markets, Nokia's mobile device volume reached 51.4 million units in the third quarter. While Nokia was able to deliver products in higher-than-expected volumes during the quarter, industry-wide component tightness affected our overall volumes. 10/14/04



CY

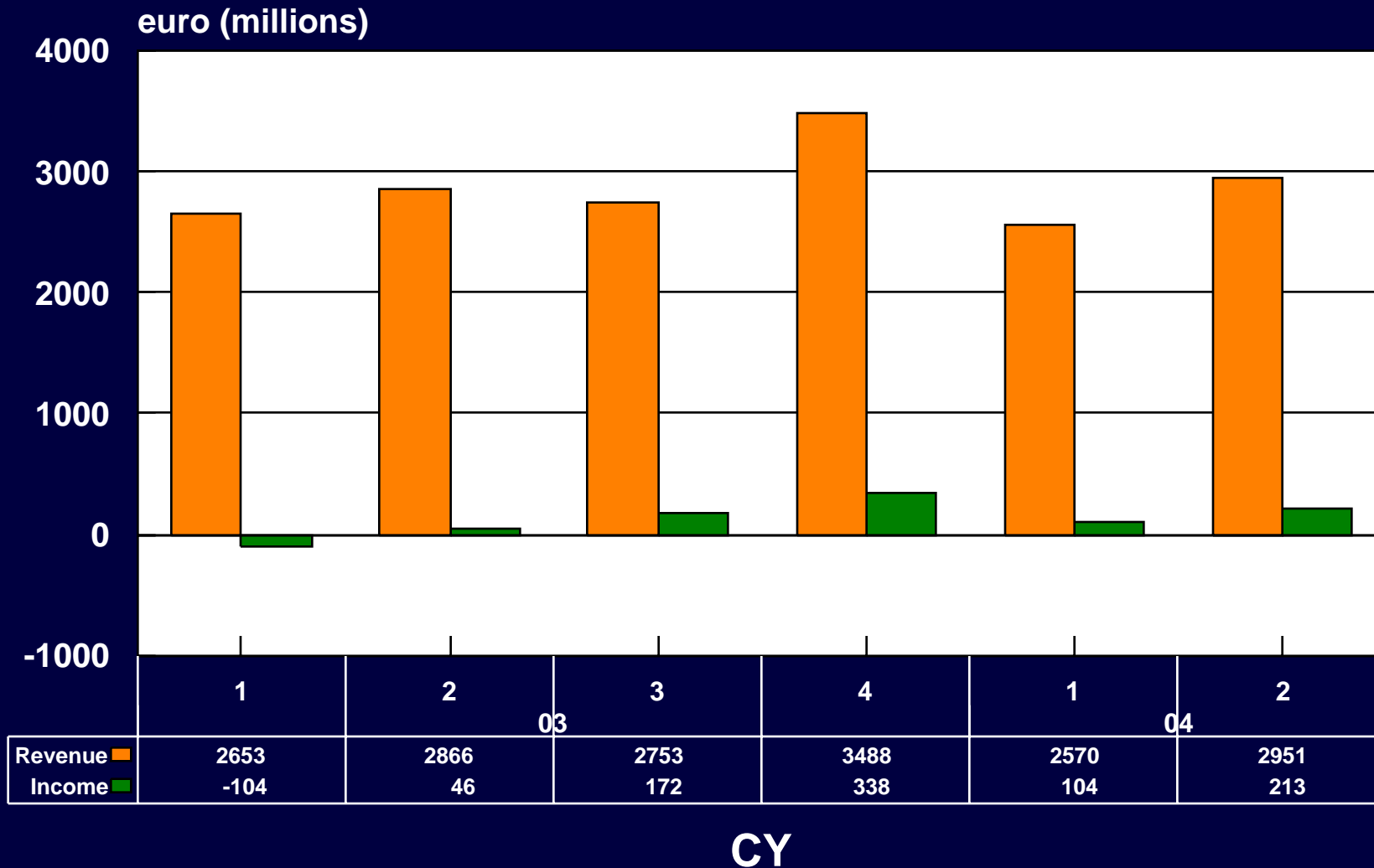
NOK

FY=CY

TCL & Alcatel Mobile Phones Ltd

Revenue & Income from Operations

Joint Venture formed Aug 31, 2004



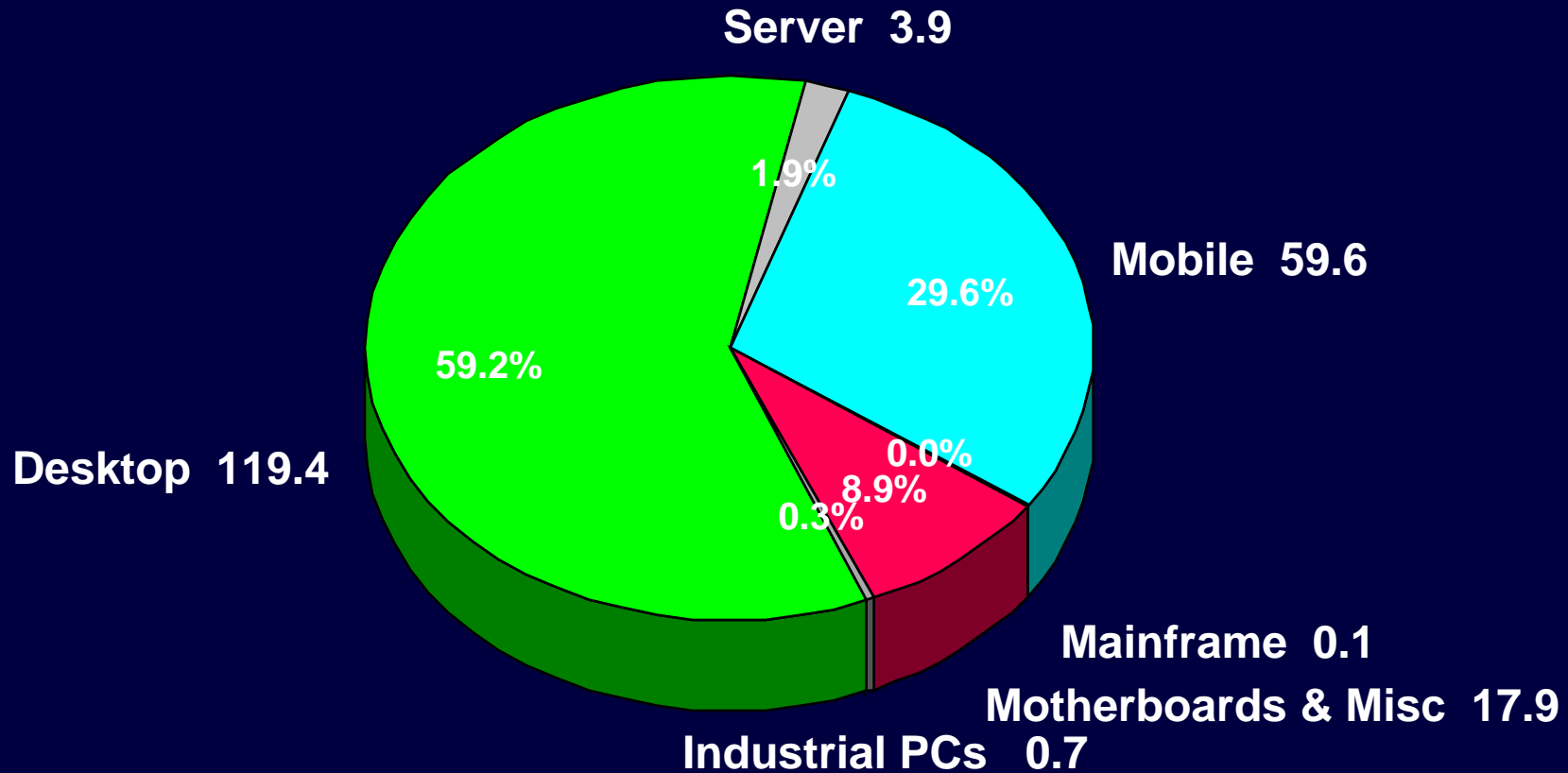
FY=CY

The mobile phone supply chain is undergoing changes since cellular phone telephone makers no longer have the leverage they once did.

Service providers are determining what hardware suppliers provide and are taking more control of the value chain - thus dictating which models and features are offered.

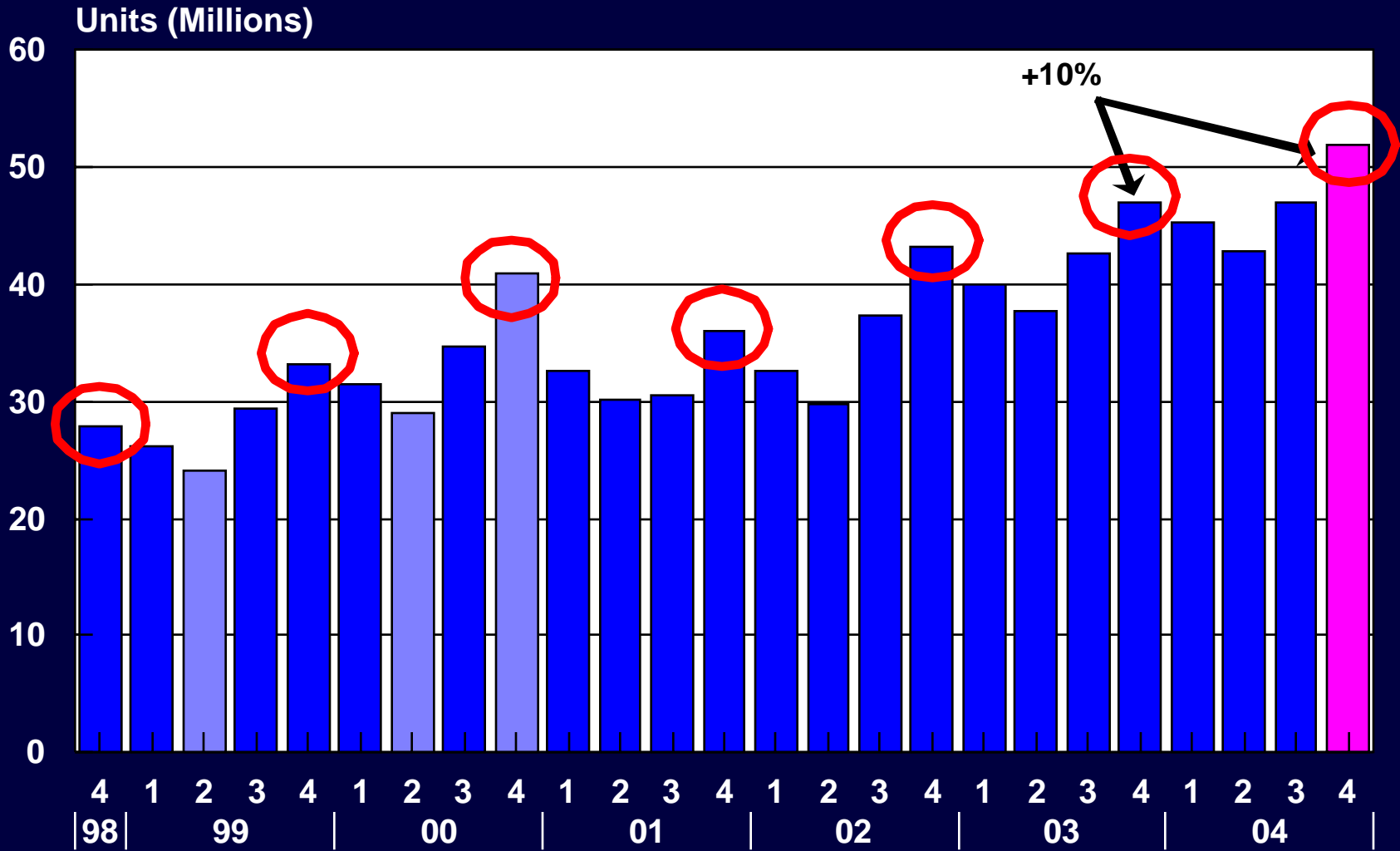
Computers & Related Products

World Computer Equipment Market 2004



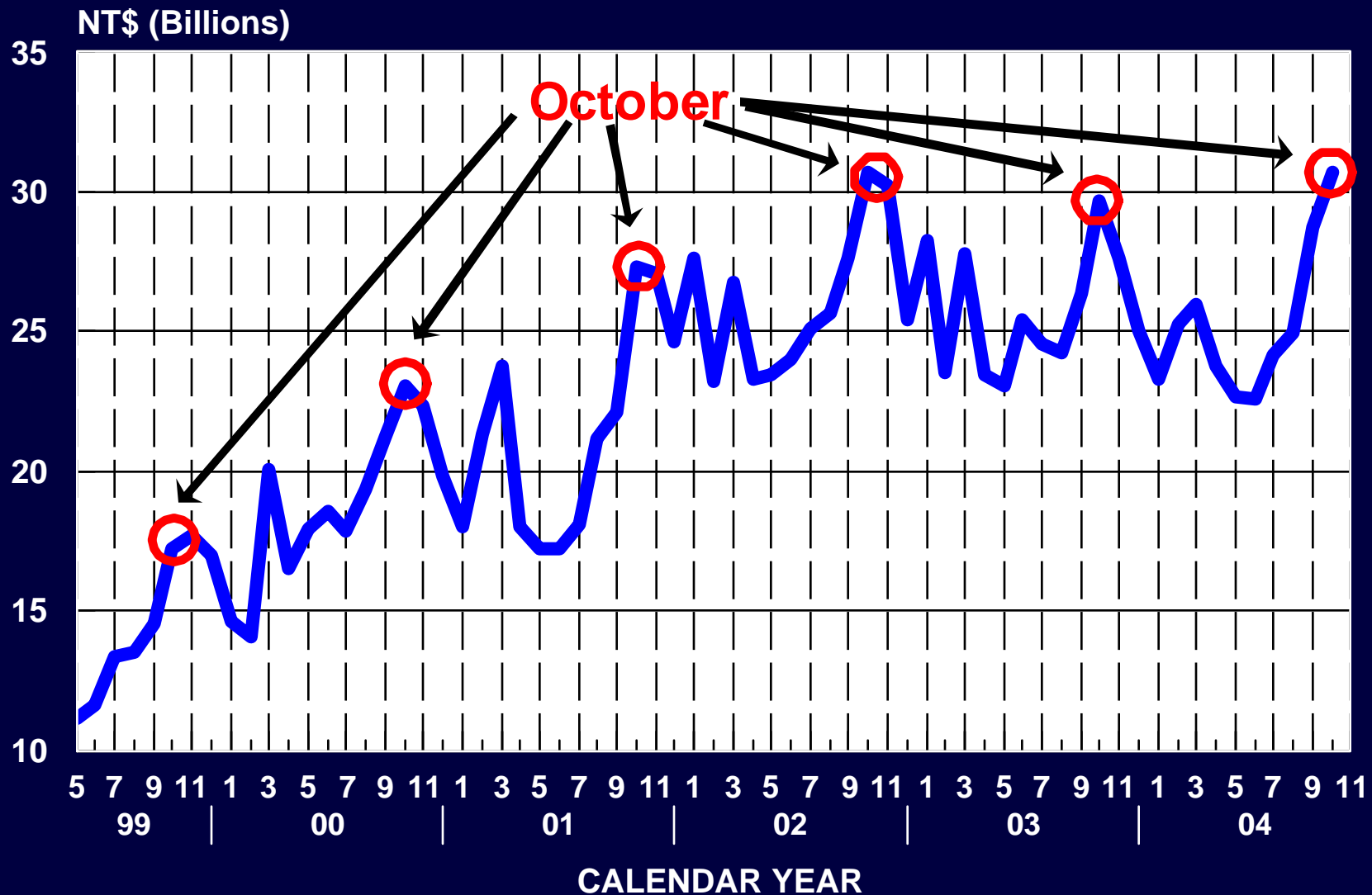
Total: 201 Million Units

Personal Computer Unit Shipments World



Gartner 11/04 & Custer estimates (light blue)
Servers not included

Taiwan Motherboard Vendor Sales Composite of 13 Large Manufacturers

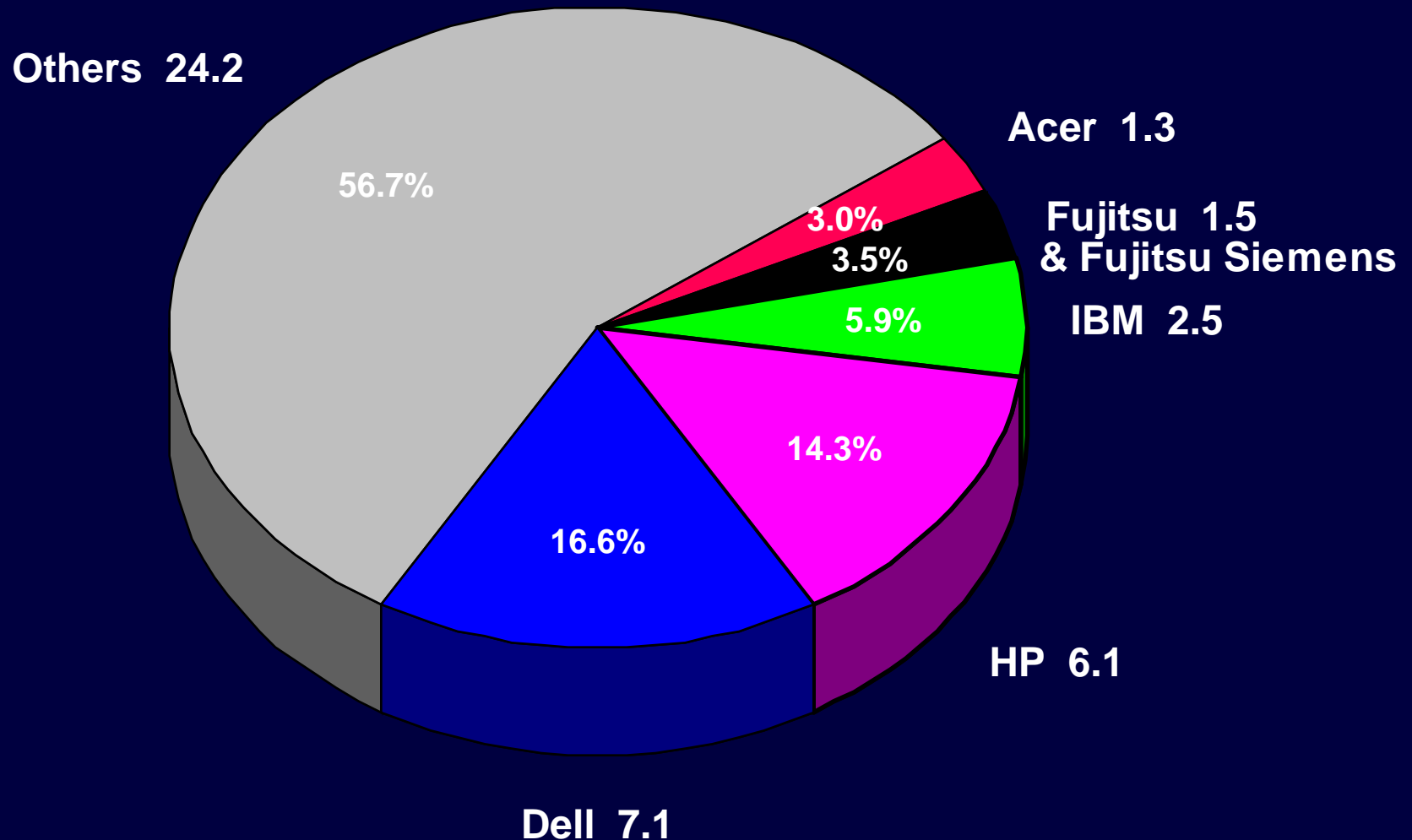


Company Financial Releases

ABIT, AOpen, Asustek, Biostar, Chaintech, Elite Group, Epox, Giga-Byte, Leadtek, Microstar Intl, Shuttle, Soyo, Universal Scientific

Personal Computer World Unit Shipments

2Q 2004



Gartner 7/2004

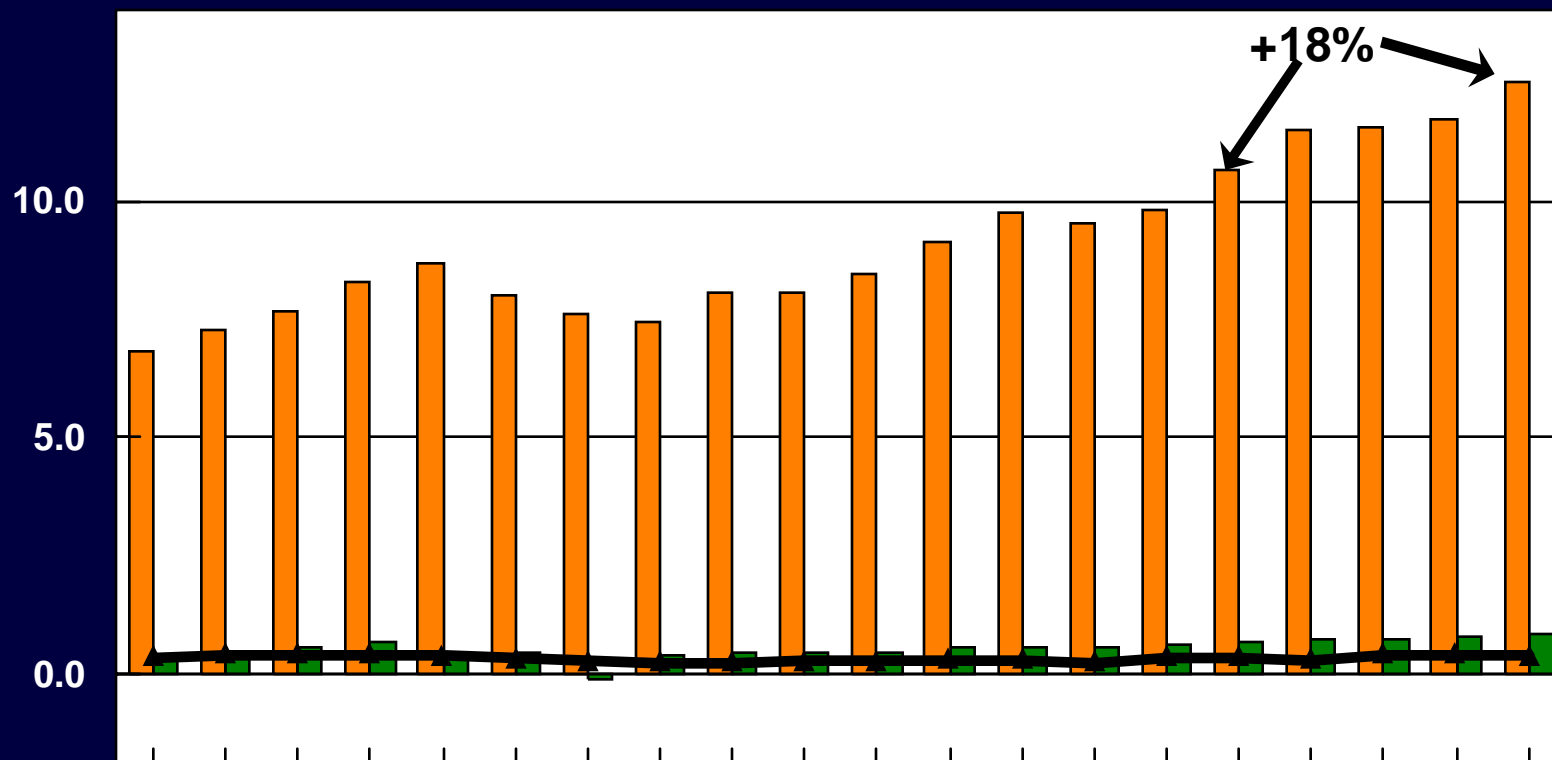
TOTAL: 42.8 M UNITS

Preliminary: Data includes desk-based PCs, mobile PCs & IA32 servers

Dell Computer

Revenue, Net Income & Inventory

\$ Billions



	4 99	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3
	00				01				02				03				04			
SALES	6.8	7.3	7.7	8.3	8.7	8.0	7.6	7.5	8.1	8.1	8.5	9.1	9.7	9.5	9.8	10.6	11.5	11.5	11.7	12.5
PROFITS	0.4	0.5	0.6	0.7	0.4	0.5	-0.1	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.8
Inventory	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.4	0.4	0.4

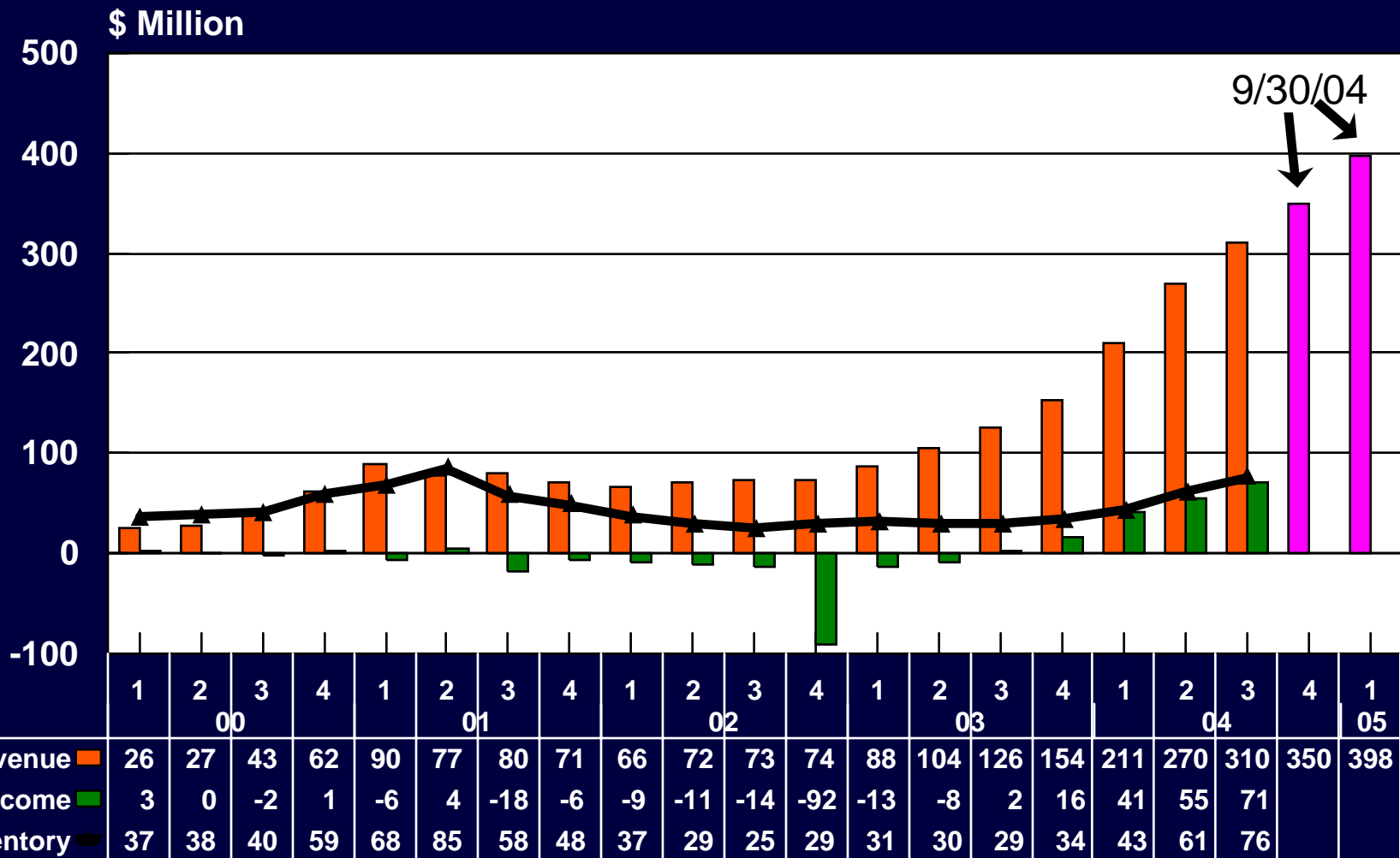
FY ends October

CY

DELL

Research in Motion (RIM)

Revenue, Net Income & Inventory



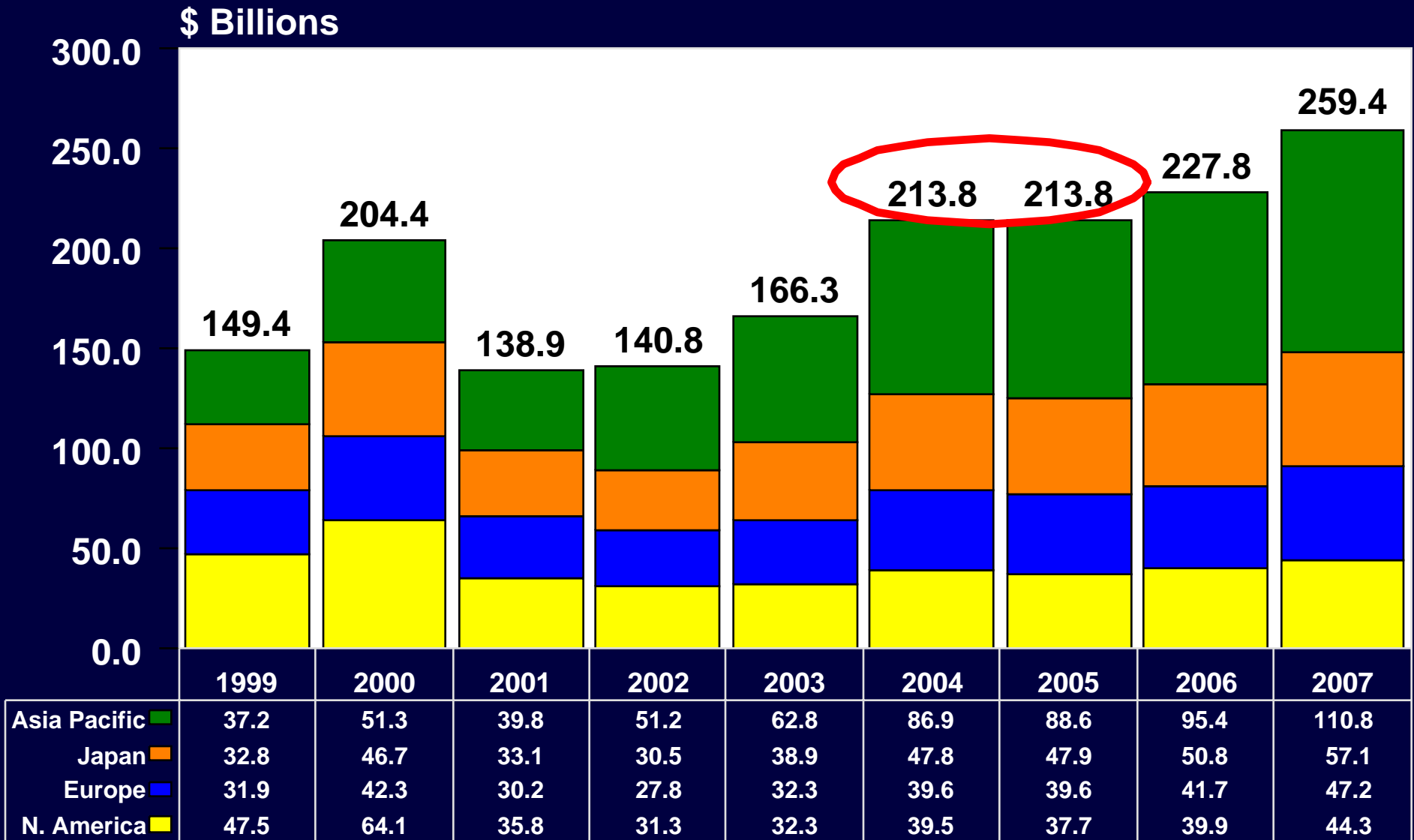
CY

RIMM

Semiconductors

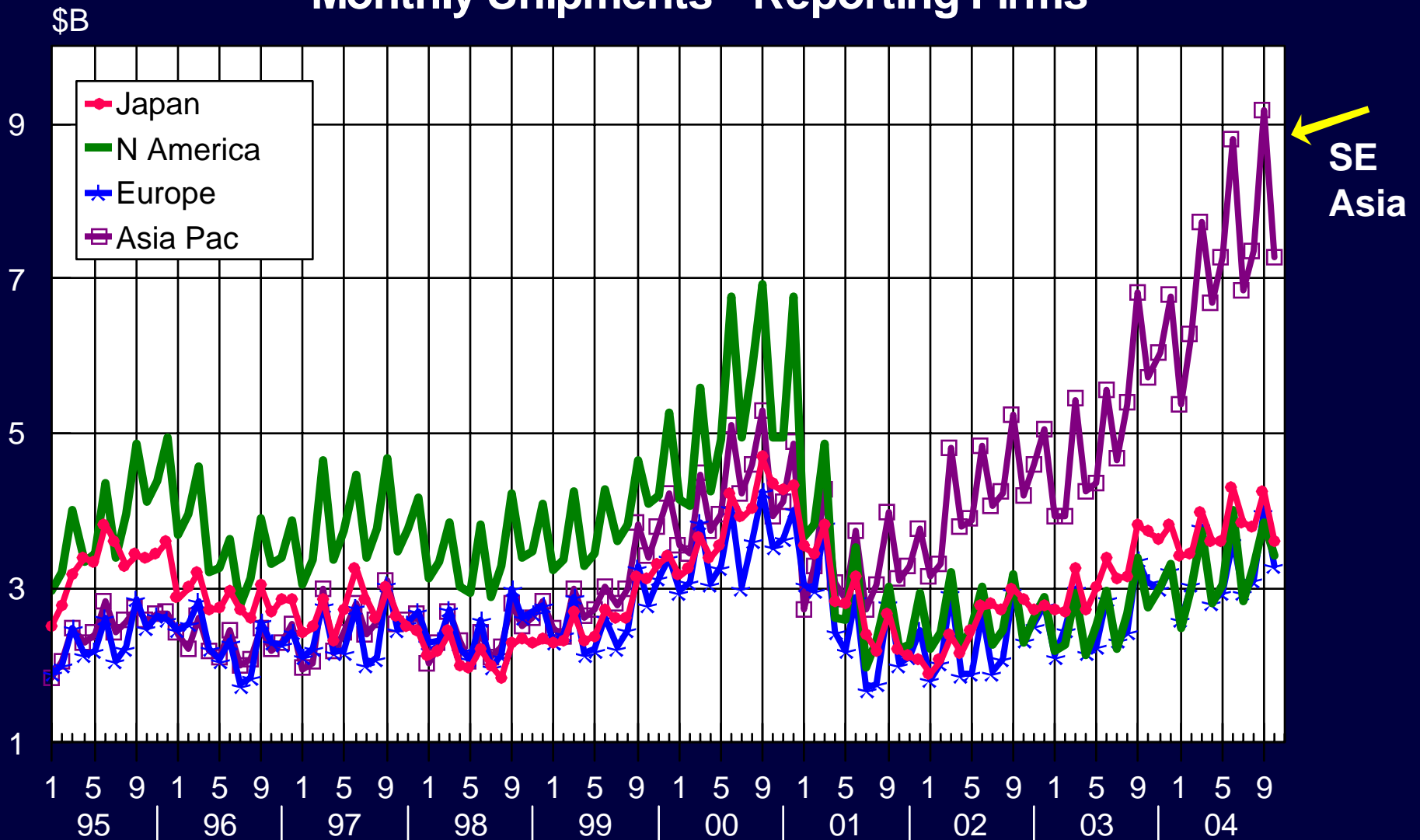
Worldwide Semiconductor Market by Geography

SIA Forecast



TOTAL SEMICONDUCTOR \$ SHIPMENTS TO AREA

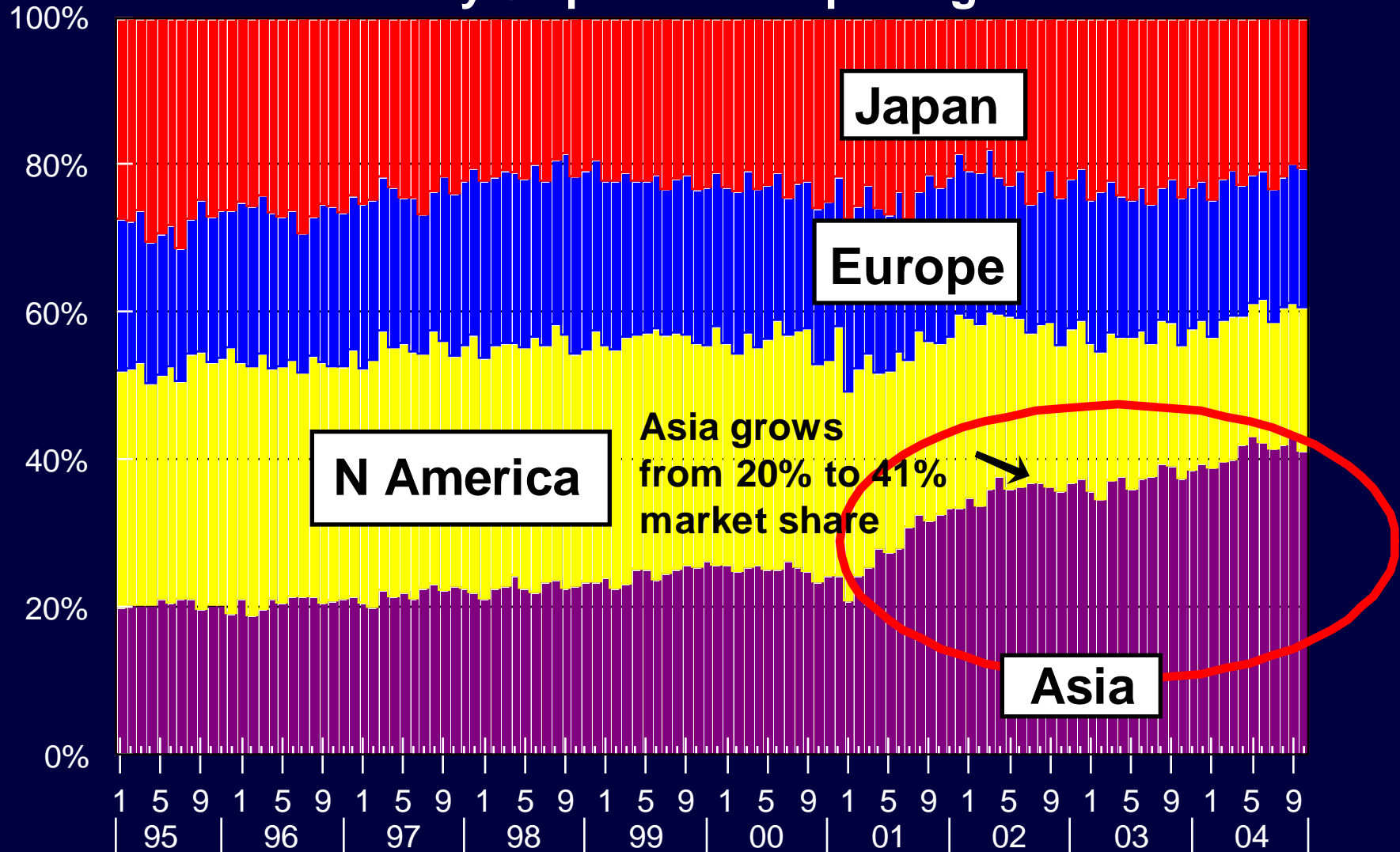
Monthly Shipments - Reporting Firms



SIA website: www.sia-online.org/

TOTAL SEMICONDUCTOR \$ SHIPMENTS TO AREA

Monthly Shipments - Reporting Firms



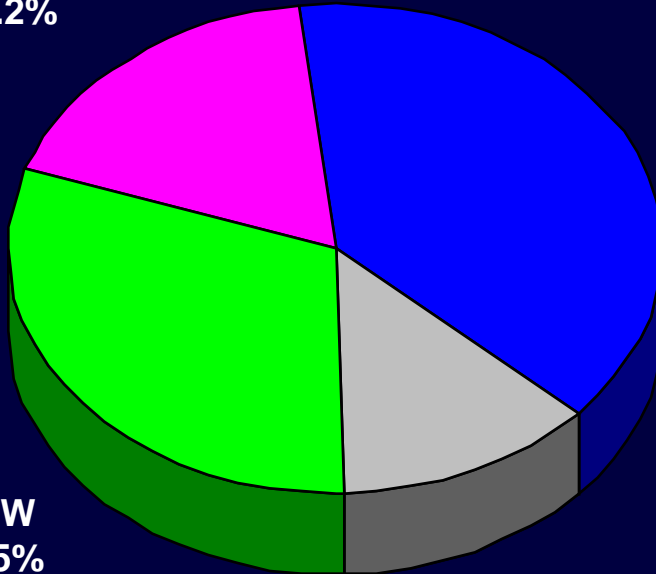
WORLD ELECTRONIC EQUIPMENT PRODUCTION

2004

Final Assembly

Electronic Assembly

W EUROPE
18.2%



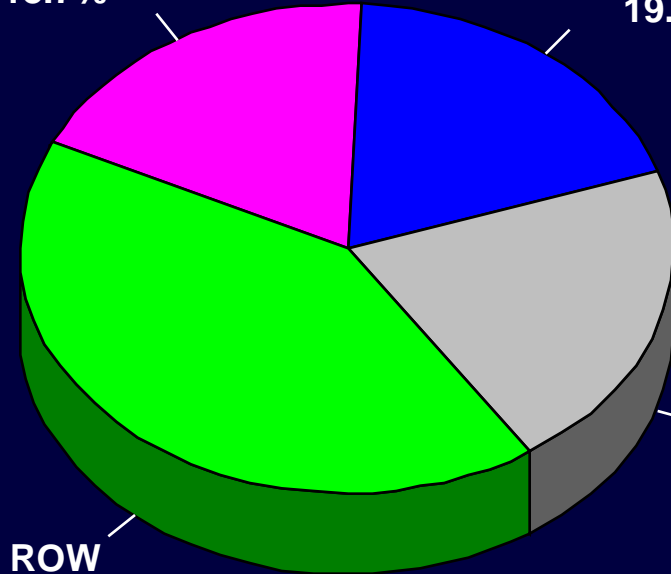
ROW
30.5%

JAPAN
13.0%

N AMERICA
38.3%

W EUROPE
18.7%

N AMERICA
19.3%



ROW
41.4%

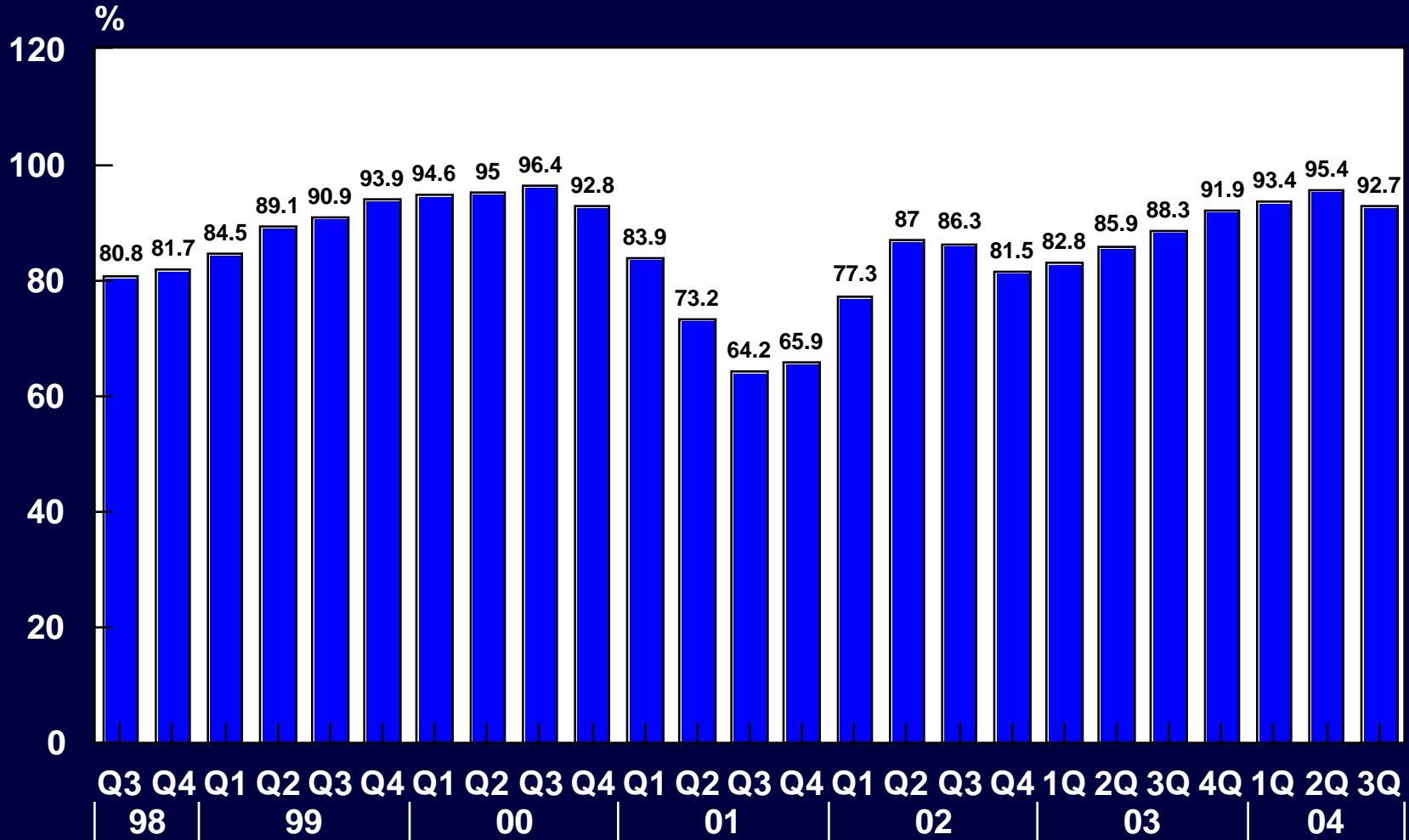
JAPAN
20.6%

TOTAL \$1218 Billion

Custer Consulting based on Electronic Outlook 9/04 & SIA data 10/2004

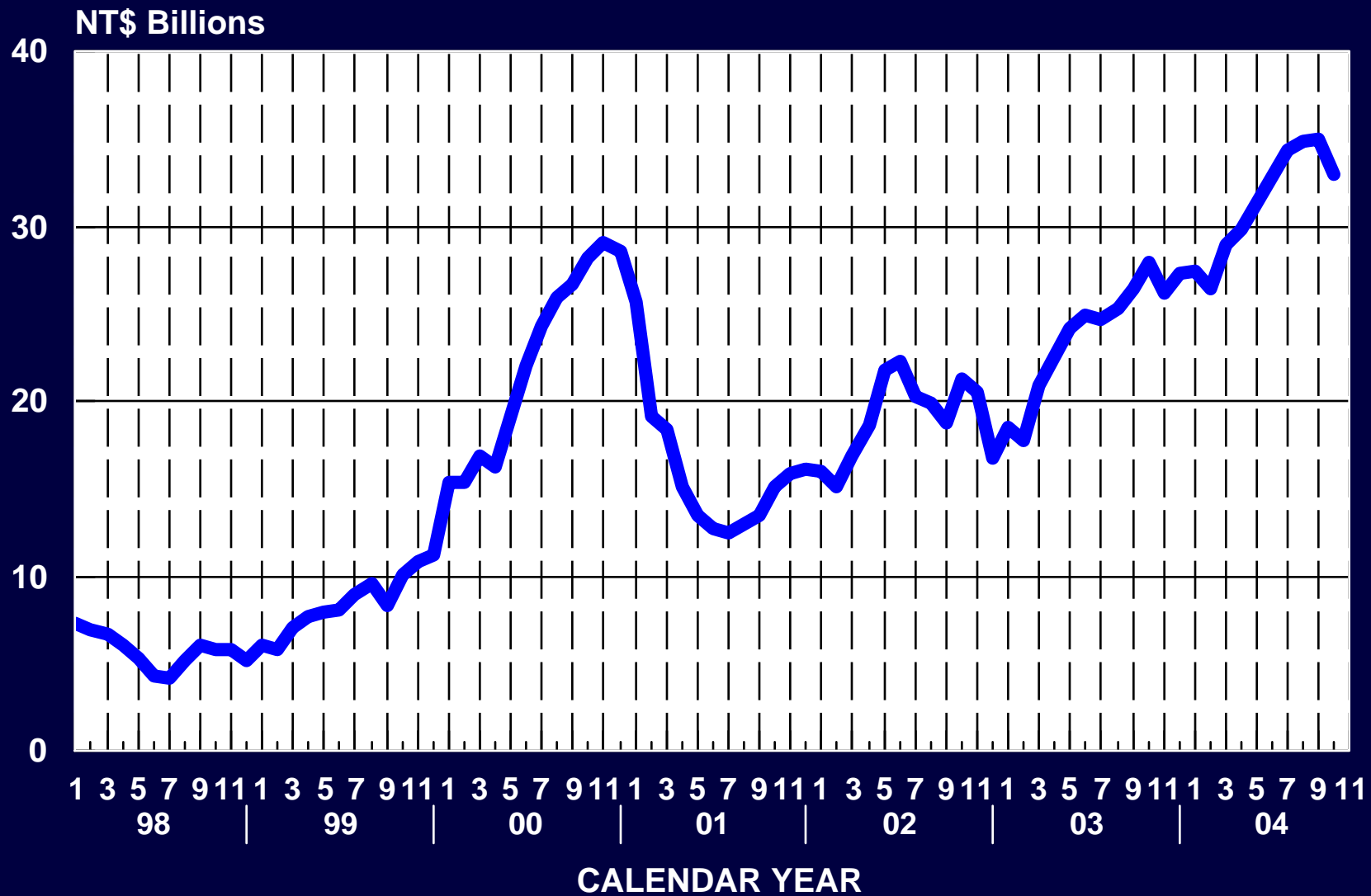
Wafer Fab Utilization Rates

Estimated % of World Chip Capacity Used



www.sia-online.org/, www.eeca.org/
Semiconductor International Capacity Statistics (SICAS)

Taiwan Region Chip Foundry Revenues Composite of TSMC & UMC

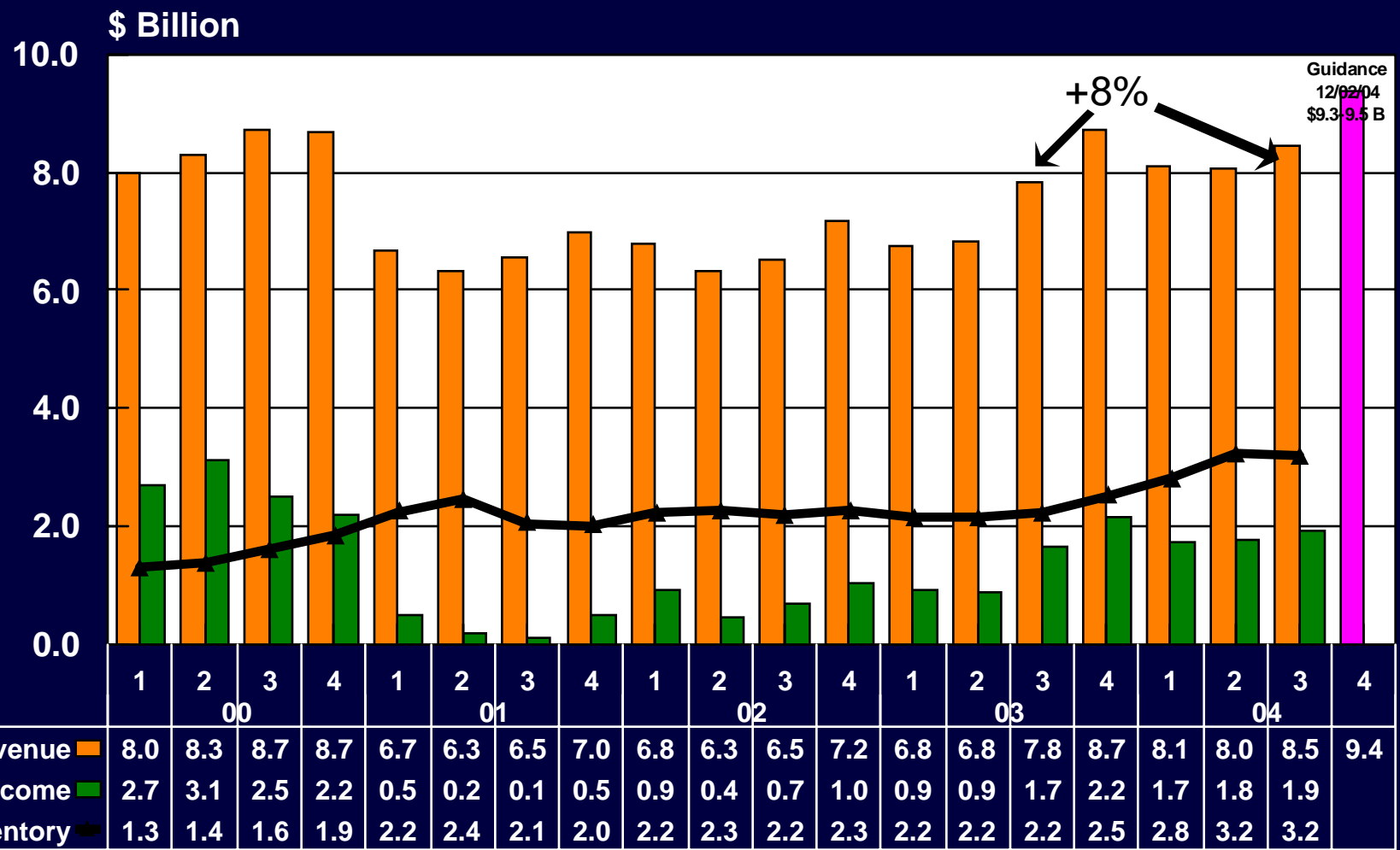


Company Financial Releases

Taiwan Semiconductor Manufacturing Company & United Microelectronics

Intel

Revenue, Net Income & Inventory



FY=CY

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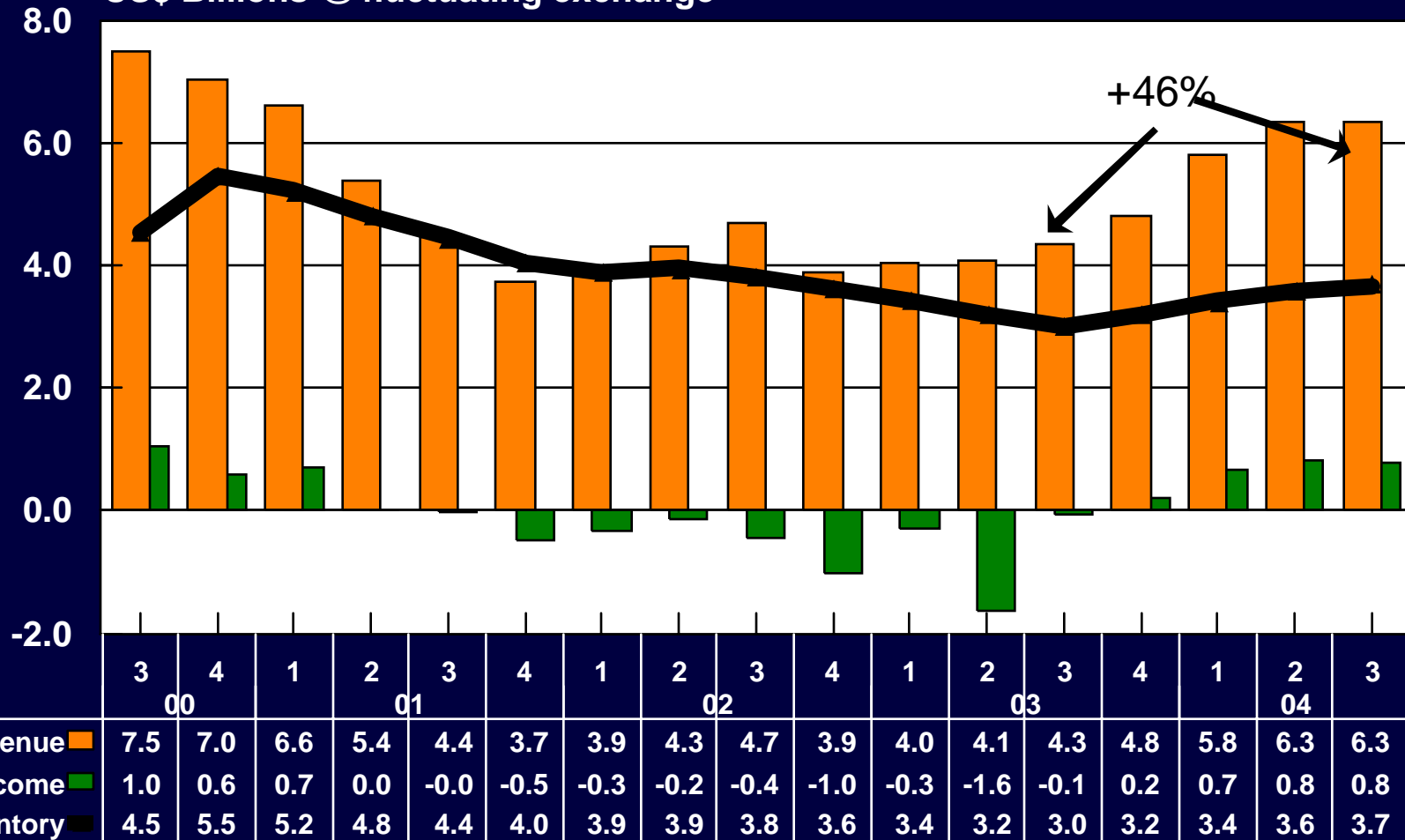
INTC

**Semiconductor
Fab, Assembly,
Packaging, Test &
Measurement
Equipment**

Semiconductor Fab, Test & Measurement Composite of 14 Public Companies

Revenue, Net Income & Inventory

US\$ Billions @ fluctuating exchange

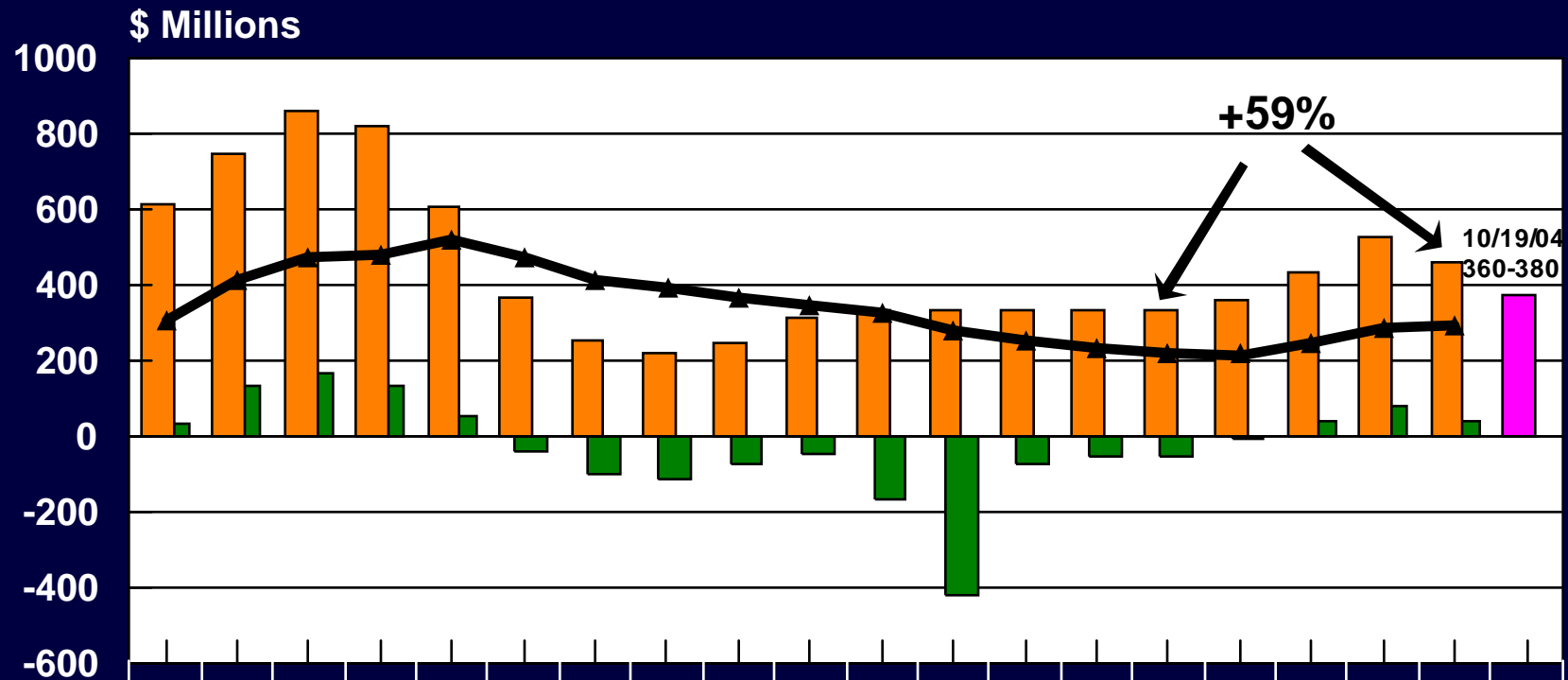


Applied Materials, KLA-Tencor, Novellus Systems, Agilent Technologies, BTU International, FEI Co, IBIS Tech, Kulicke & Soffa, MKS Instruments, ST Assembly Test Services, Teradyne, Ultratech Stepper,

Teradyne

Revenue, Net Income & Inventory

"Our customers sharply lowered their capital spending in the third quarter, resulting in a significant reduction in our orders compared with the second quarter. We're responding to this by lowering our shipment plan and reducing our costs in the fourth quarter. At the same time, we're maintaining our investments in new products and customer support. 10/19/04



	00				01				02				03				04			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Revenue	615	747	859	822	605	366	249	220	248	310	331	334	335	332	329	358	431	526	458	370
Income	29	129	163	132	54	-40	-103	-113	-77	-51	-167	-424	-76	-52	-54	-11	40	80	41	
Inventory	308	412	473	478	520	475	413	395	364	342	327	280	252	234	221	215	248	284	292	

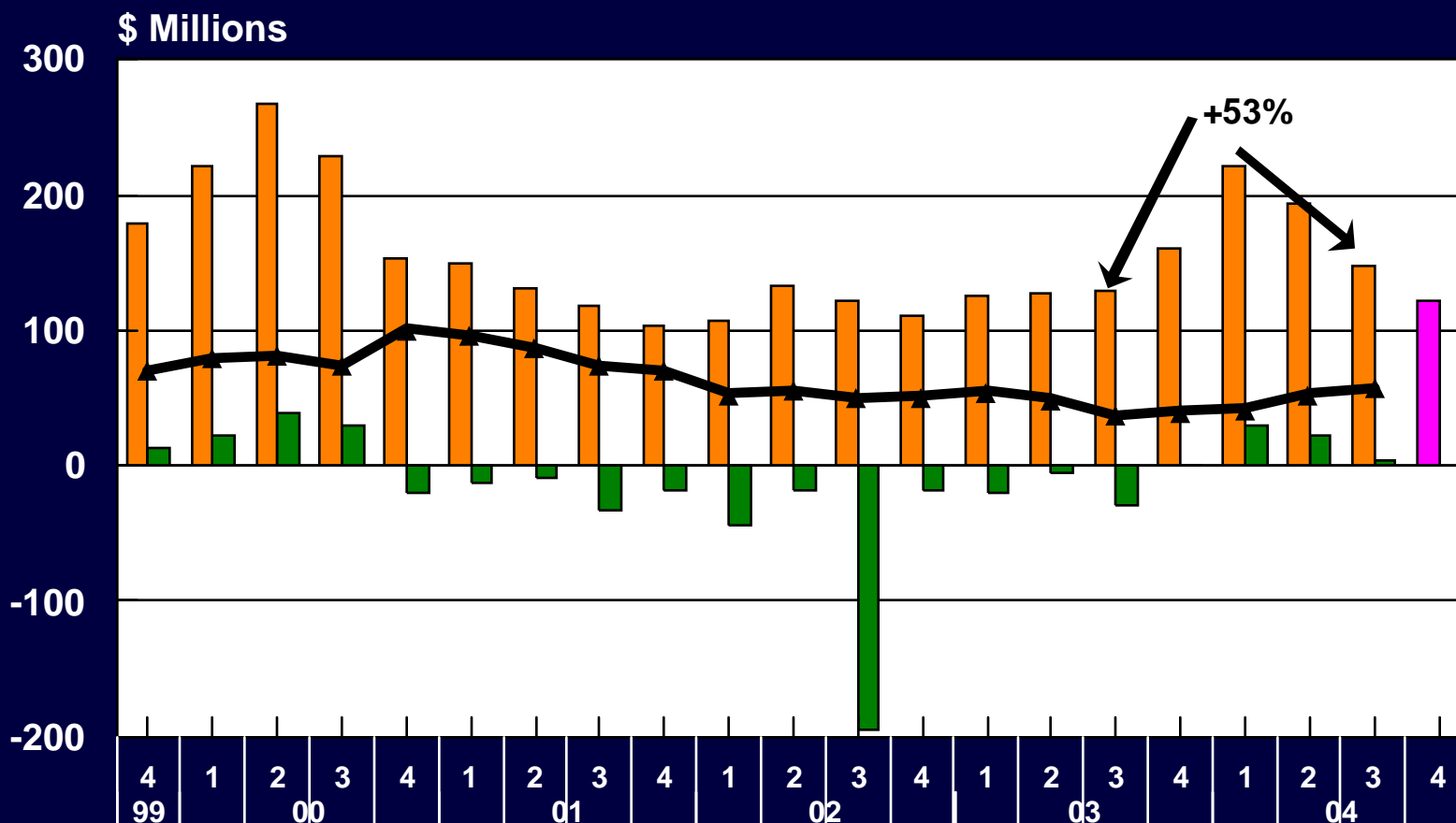
CY

TER

Kulicke & Soffa

Revenue, Net Income & Inventory

"As the semiconductor industry moves toward the trough of this cycle, we expect continued pressure on sales, with December quarter revenue in the \$115 million to \$130 million range. While we can't change the cycle, we can focus on the inevitable recovery, continuing to reshape the Company to maximize our performance over the whole cycle." 11/18/04



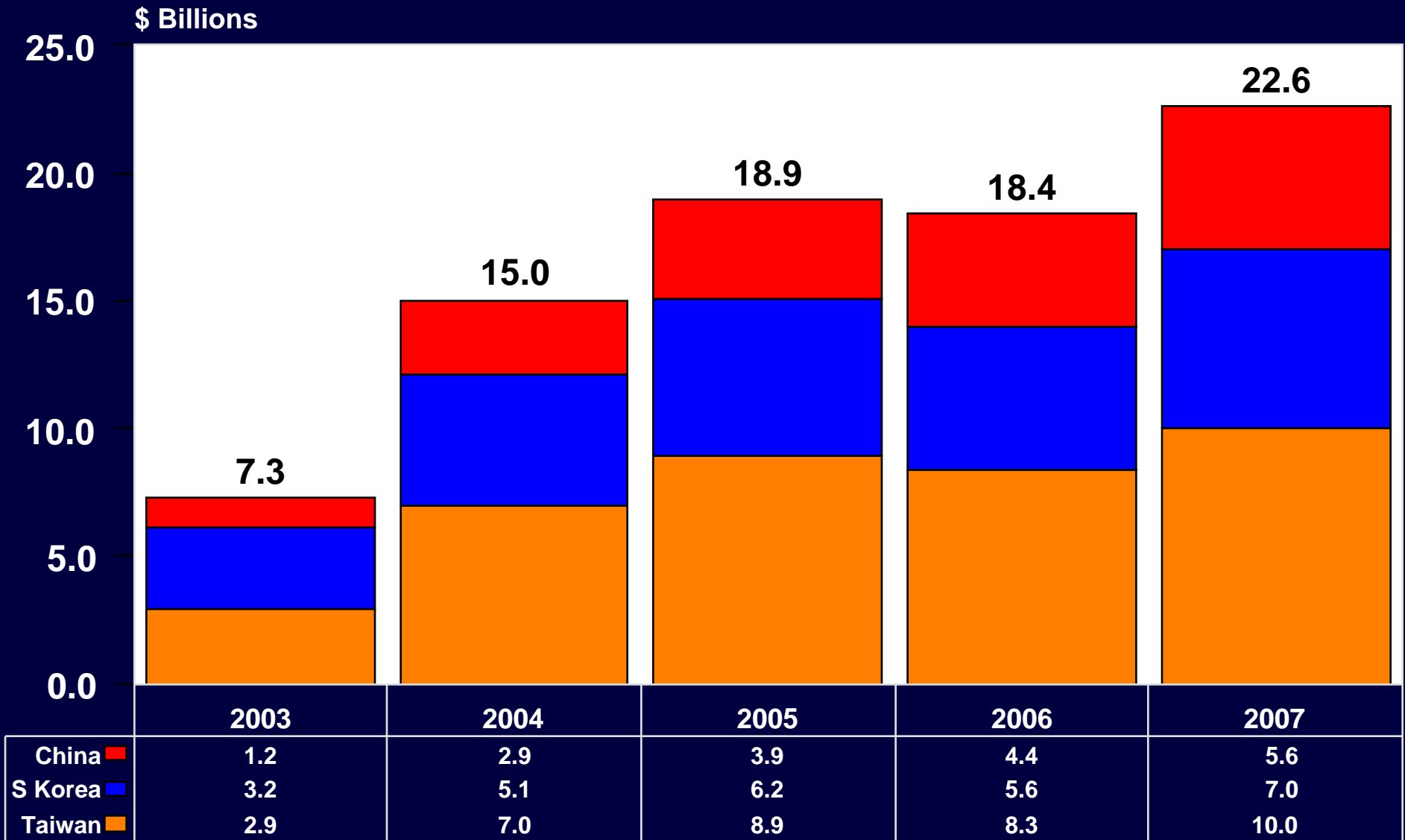
Revenue	180	222	268	229	153	149	131	118	103	107	132	122	111	126	128	129	160	222	195	148	123
Income	13	22	38	30	-20	-12	-9	-33	-17	-44	-18	-195	-18	-19	-6	-28	1	29	23	3	
Inventory	70	80	82	74	101	97	87	74	71	53	56	51	51	55	49	38	40	42	54	58	

FY ends September

CY

KLIC

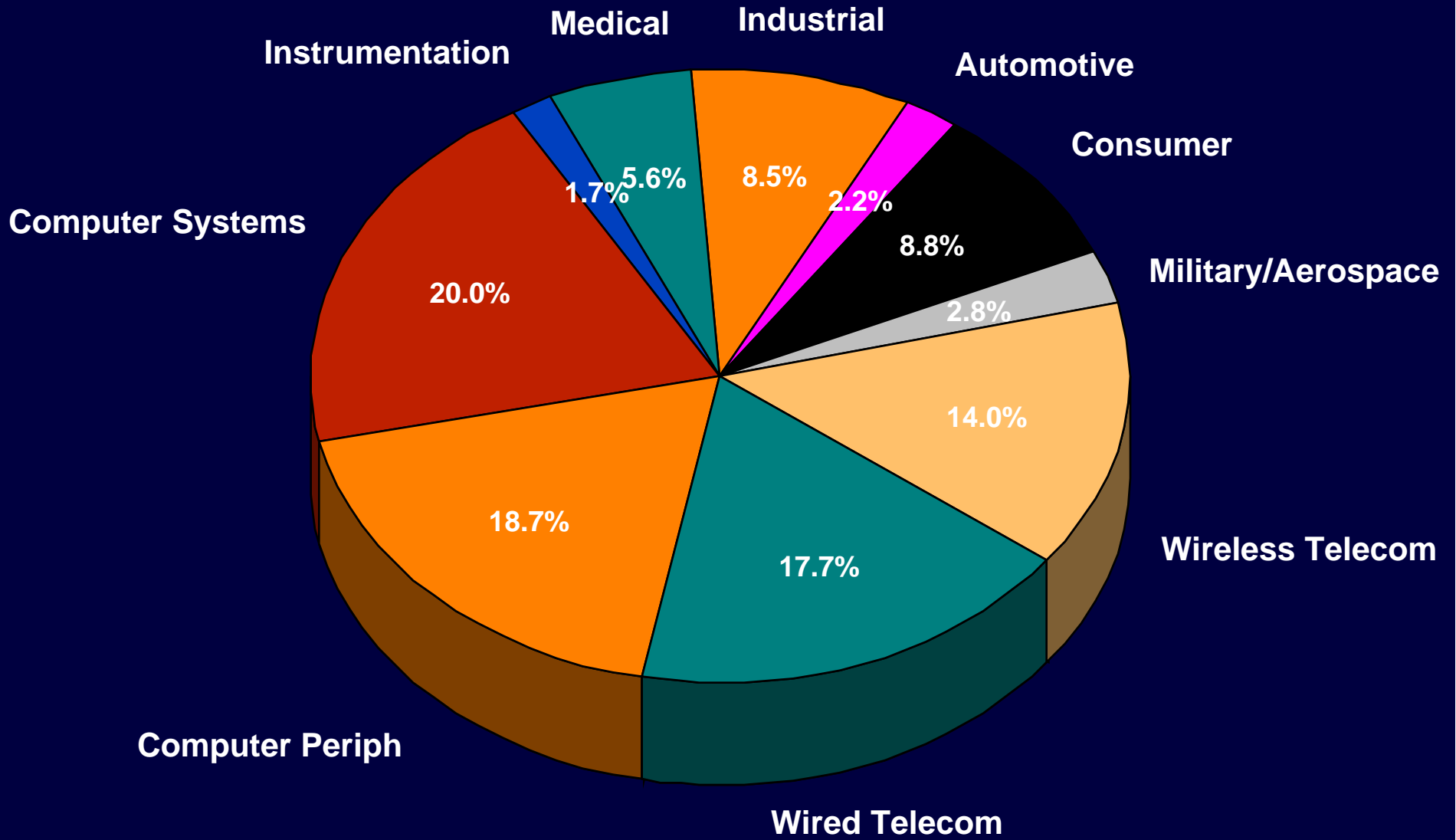
Worldwide Semiconductor Capital Equipment Shipments



Electronic Manufacturing Services

EMS Segment by Revenue

2003



ODM Segment by Revenue

2003

Consumer

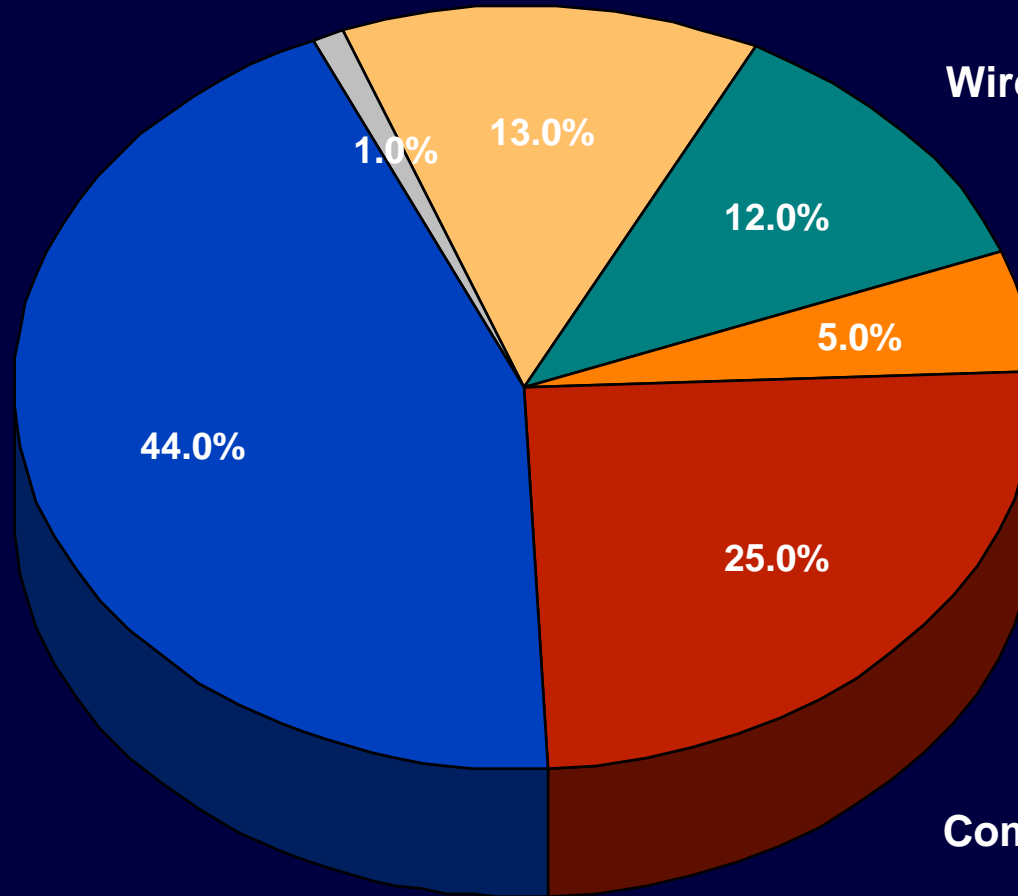
Automotive

Wireless Telecom

Wired Telecom

Computer Periph

Computer Systems



Large World EMS Providers

		<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2004/2003</u> <u>Growth %</u>
Flextronics	Singapore	13,615	13,822	16,050	16%
Sanmina-SCI	USA	10,168	10,795	12,650	17%
Solectron	USA	12,261	11,144	11,950	7%
Hon Hai (Foxconn)	Taiwan	7,251	9,705	11,700	21%
Celestica	Canada	8,272	6,736	8,760	30%
Jabil Circuit	USA	3,729	5,170	6,400	24%
Elcoteq Network	Finland	1,749	2,564	3,100	21%
Benchmark Electronics	USA	1,630	1,840	2,000	9%
Venture	Singapore	1,333	1,829	1,750	-3%
Universal Scientific	Taiwan	820	1,011	1,400	39%
Plexus	USA	889	841	1,100	31%
Total		61,717	65,457	75,860	+17%

2004: Estimated based on 1-3Q actual plus company 4Q guidance or Custer estimate based upon historic 4Q seasonality

Sources: Company Data

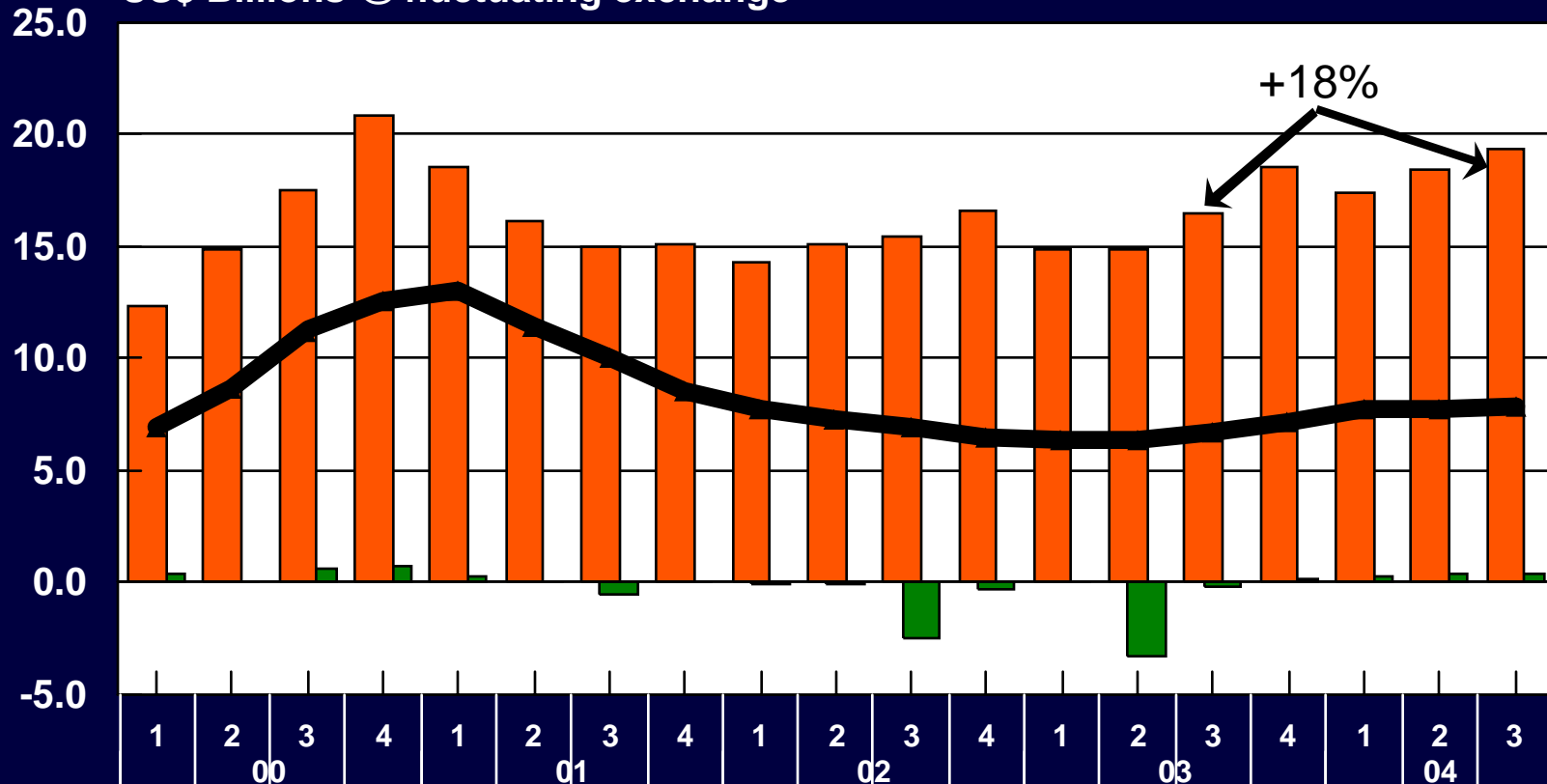
\$US Millions converted at fluctuating exchange

Large EMS Providers

Composite of 12 Public Companies

Revenue, Net Income & Inventory

US\$ Billions @ fluctuating exchange



	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3
	00				01				02				03				04		
Revenue	12.3	14.9	17.5	20.8	18.5	16.1	14.9	15.1	14.2	15.0	15.4	16.5	14.9	14.8	16.5	18.5	17.4	18.4	19.4
Income	0.4	-0.0	0.6	0.7	0.3	0.0	-0.6	0.0	-0.1	-0.1	-2.6	-0.3	0.1	-3.3	-0.2	0.1	0.3	0.4	0.3
Inventory	6.9	8.6	11.2	12.5	13.0	11.4	10.0	8.5	7.7	7.2	6.9	6.4	6.4	6.4	6.7	7.1	7.7	7.8	7.9

Benchmark, Celestica, Elcoteq, Flextronics, Foxconn, Jabil, MSL, Pemstar, Plexus, Sanmina-SCI, Solectron, Sypris

Alternative Business Models to Improve Margins

- **Vertical Integration**

Flextronics capabilities include camera module components, flexible printed circuits, antennas and power supplies. It provides silicon design services through a semiconductor operation and investments in the fabless semiconductor companies Inphi and inSilica.

- **World Class Manufacturing as Core Competence**

Jabil Circuit and **Benchmark Electronics** are examples

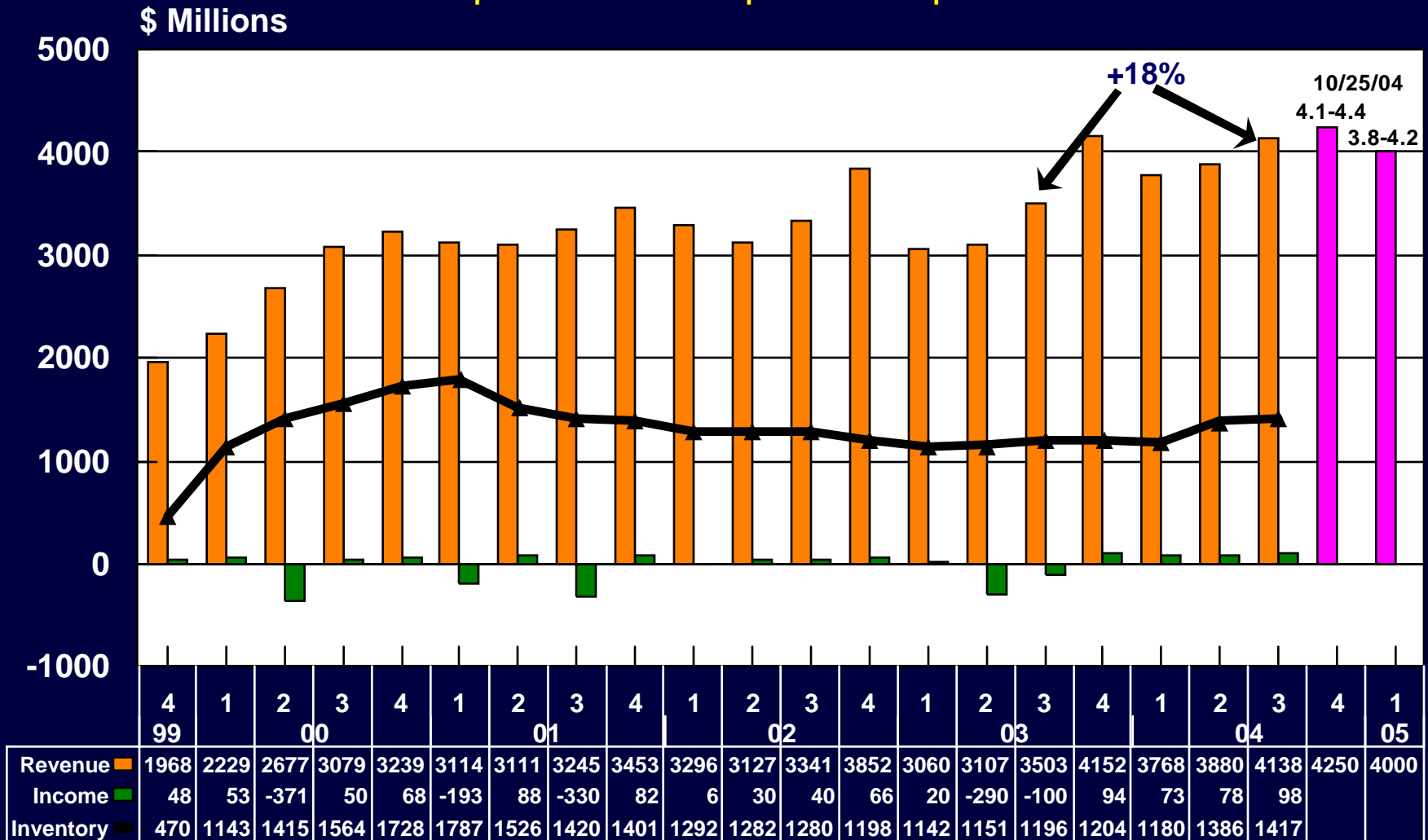
- **ODM Activities**

Elcoteq, **Flextronics**, **Celestica** and **Sanmina-SCI** are examples

Flextronics

Revenue, Net Income & Inventory

"Not only is our profitability returning to all-time high levels, our cash flow metrics are better today than at any time in the past. Capital expenditures exceeded \$700 million in fiscal 2001 compared to \$181 million in fiscal 2004, and the fixed asset to sales ratio was 15% in fiscal 2001 compared to 10% in the September 2004 quarter." 10/25/04



FY ends 3/31

CY

FLEX

Flextronics

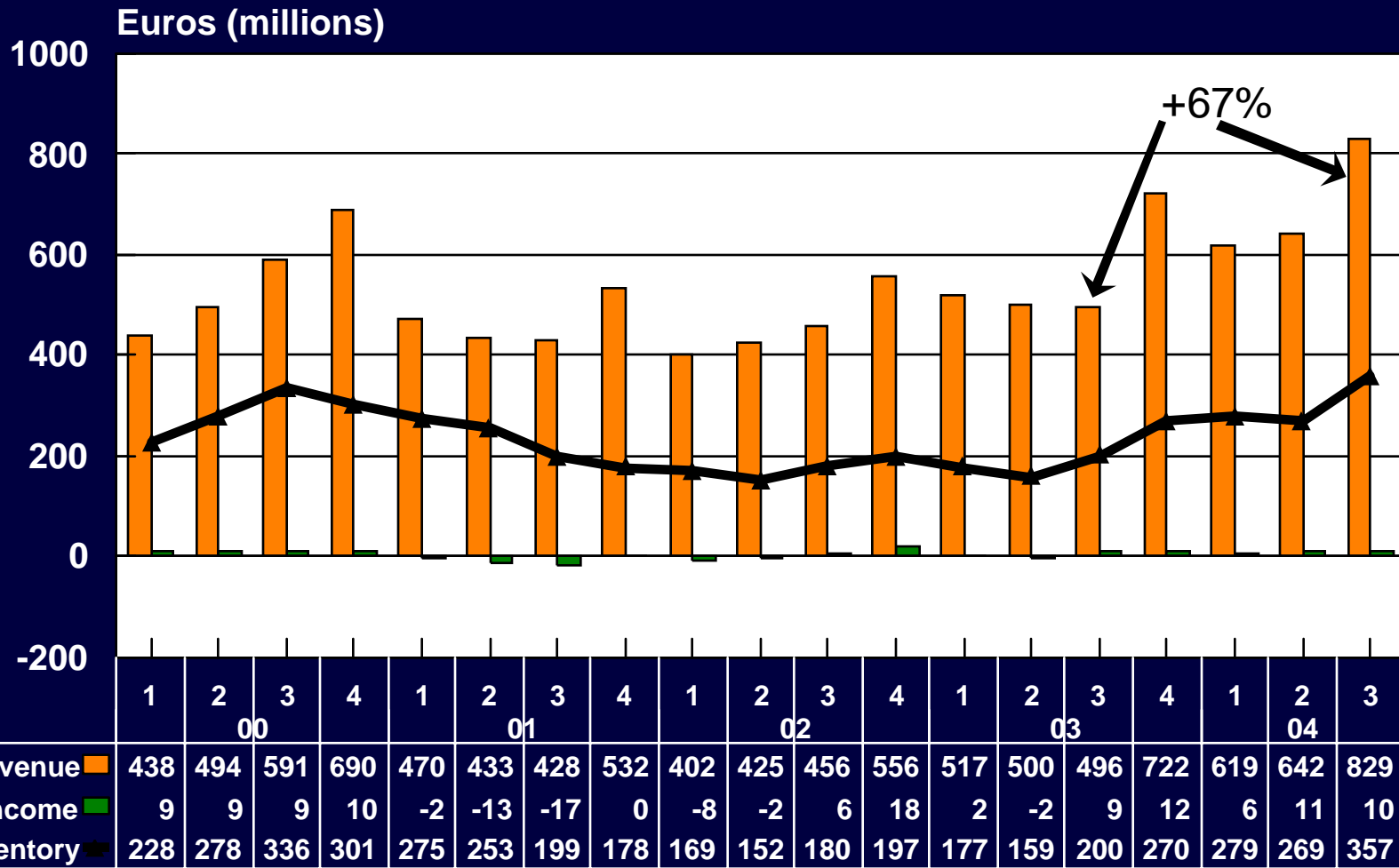
- **Ongoing vertical integration**
- **Expanding and maintaining Mobile TeleSystems' Ukrainian GSM network.**
- **Closing 210 person plant in Oulainen, Finland. Production moving to Poland and China.**
- **Stopped producing disposable cameras at Sárvár, Hungary. Displaced employees offered jobs at Flextronics, Zalaegerszeg.**
- **Cut 150 jobs at 620-employee factory in Laval, France - blaming market share loss by Alcatel, its main customer.**

Flextronics

- **Acquired mobile multimedia solutions provider Emuzed with development centers in Bangalore and Chennai, India employing 220 people.**
- **Opened its industrial zone in Jiadiang, Shanghai - focusing on EMS production for telecommunications, automotive and semiconductors markets.**
- **Bought Brazilian fixed-line maintenance firm TSP Telecommunication Services. Will offer maintenance service to the Telefónica network in São Paulo and the rest of Latin America.**
- **Manufacturing Sony Ericsson mobile phones Sorocaba, Brazil.**

Elcoteq Network, Finland

Revenue, Net Income & Inventory



CY

Elcoteq Network

- Expanded its second manufacturing plant in Tallin Estonia. Elcoteq will employ 3200 employees and maintain 42,000 square meters of factory space in Tallinn.
- Spending US\$ 100 million on a new 1500-person telecom equipment and handset production plant in St. Petersburg, Russia.
- Building 15 million euro, 14,700 sq. meter EMS plant in St. Petersburg for its Russian subsidiary ZAO Elcoteq - including offices and production facilities to be completed 3Q'05.
- Formed outsourcing business relationship with Research In Motion - augmenting RIM's manufacturing capacity and starting manufacturing activities for RIM in Europe and Mexico.

Elcoteq Network

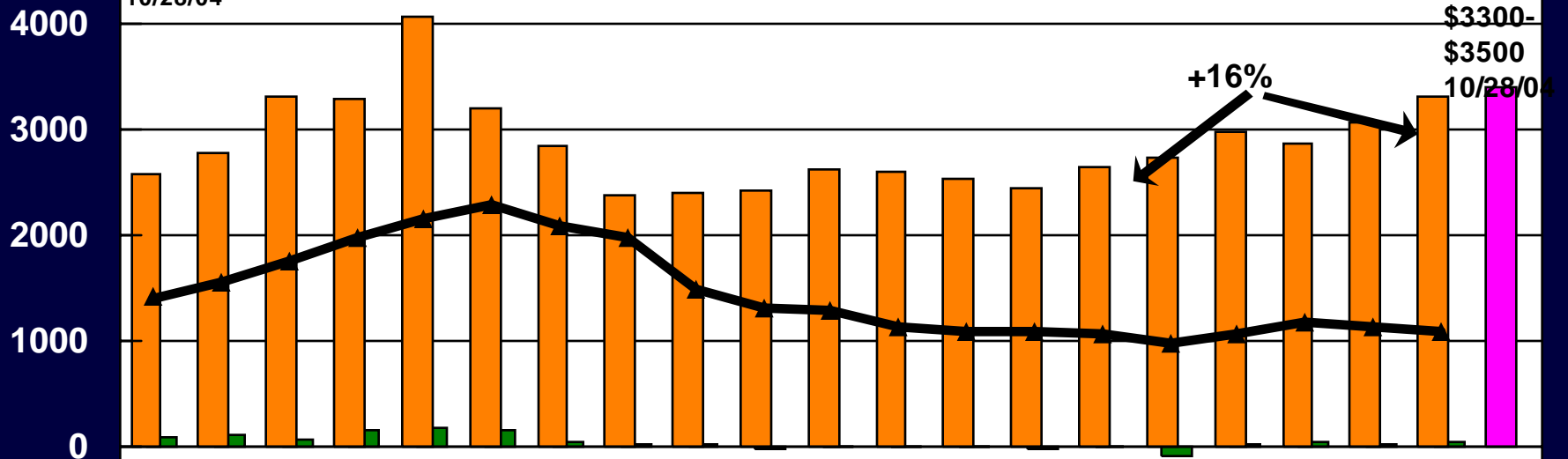
- **Establishing a manufacturing facility for the first 'Made-in-India' mobile telephones. The 1000-person facility will be on 2500 square meters of land in the Electronics City, near Bangalore. Elcoteq manufactures handsets for Sony Ericsson, Motorola, Philips, and Aastra.**
- **Began operations in Manaus, Brazil in autumn 2004 - focusing on manufacturing and supply chain services for communications technology with emphasis on the terminal products business.**
- **Manufacturing CDMA phones in Manaus for Vitelcom Mobile Technology**

Sanmina-SCI Corp

Revenue, Net Income & Inventory

\$ Millions

"The outsourcing opportunities for EMS companies are increasing, and Sanmina-SCI is well positioned for future and organic growth, offering customers complete end-to-end solutions that include design, engineering, manufacturing and logistics."
10/28/04



	4 99	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
	00				01				02				03				04				
Revenue	2575	2772	3307	3300	4068	3208	2842	2366	2406	2411	2618	2602	2537	2444	2649	2732	2970	2862	3070	3301	3400
Income	85	94	59	147	177	157	30	22	7	-39	-5	3	1	-32	-12	-86	16	27	11	42	
Inventory	1406	1552	1759	1980	2151	2297	2096	1971	1480	1303	1273	1123	1084	1092	1059	978	1070	1165	1120	1088	

CY

SANM

FY ends 9/30

(historical data = combined Sanmina & SCI)

Sanmina-SCI

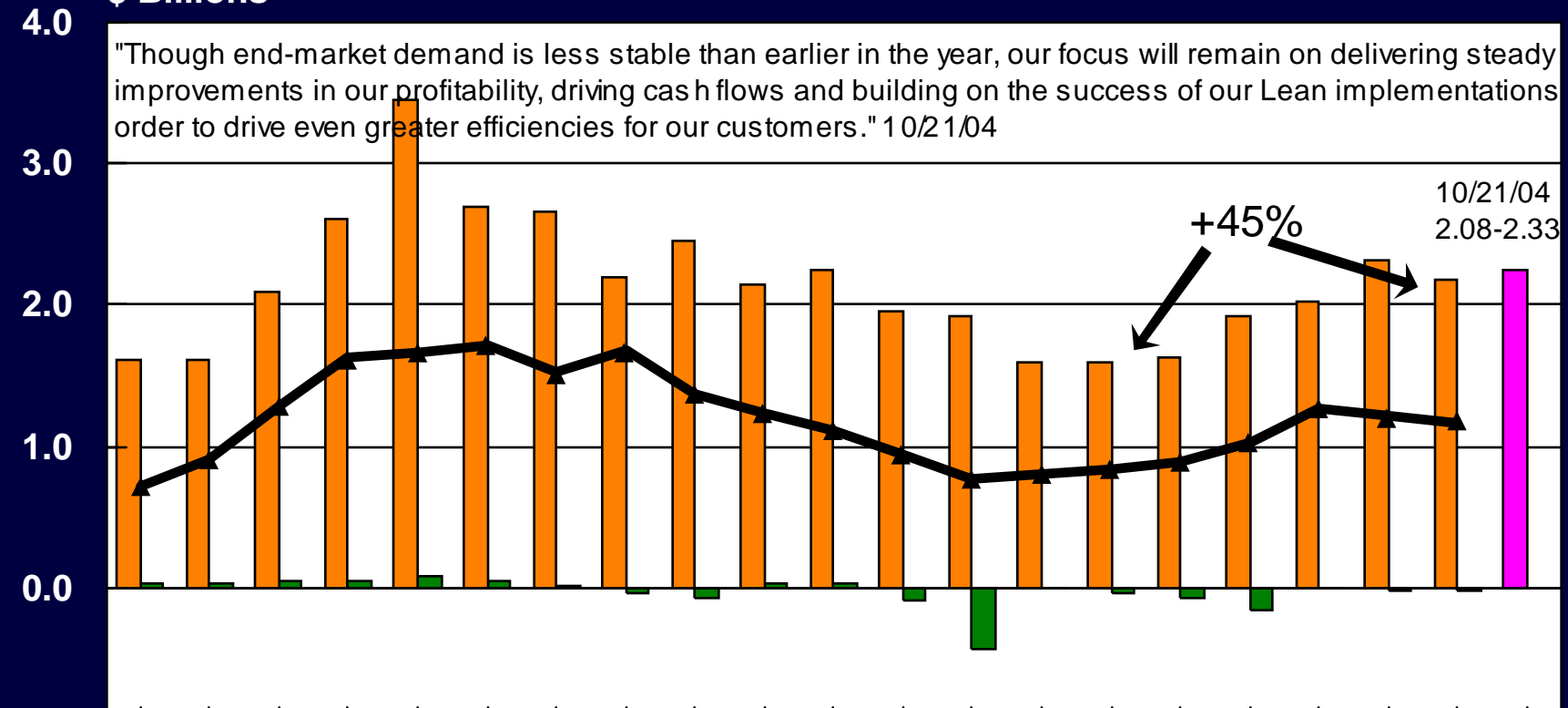
- **Closing its EMS 320 person plant in Fife, Scotland. "Lack of orders has meant that the Kirkcaldy factory is no longer viable."**
- **Manufactures high-speed InfiniBan cable assemblies at Kunshan, China. The Kunshan facility is also Sanmina-SCI's site for PCB assembly, backplanes, enclosures and new product introductions.**
- **Acquired PCB maker Pentex-Schweizer with plants in China & Singapore.**
- **Received a contract to develop the Longbow Apache Manned/Unmanned Common Architecture Program Aircraft Interface Unit for Boeing, Mesa, Arizona.**
- **Closed Westbrook, Maine enclosure plant cutting 325 Jobs. "We just have more facilities than we have work to fill."**

Celestica

Revenue, Net Income & Inventory

\$ Billions

"Though end-market demand is less stable than earlier in the year, our focus will remain on delivering steady improvements in our profitability, driving cash flows and building on the success of our Lean implementations in order to drive even greater efficiencies for our customers." 10/21/04



	4 99	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Revenue	1.6	1.6	2.1	2.6	3.4	2.7	2.7	2.2	2.4	2.2	2.2	2.0	1.9	1.6	1.6	1.6	1.9	2.0	2.3	2.2	2.3
Income	0.0	0.0	0.0	0.1	0.1	0.1	0.0	-0.0	-0.1	0.0	0.0	-0.1	-0.4	0.0	-0.0	-0.1	-0.2	-0.0	-0.0	-0.0	-0.0
Inventory	0.7	0.9	1.3	1.6	1.7	1.7	1.5	1.7	1.4	1.2	1.1	0.9	0.8	0.8	0.8	0.9	1.0	1.3	1.2	1.2	

CY

FY=CY

CLS

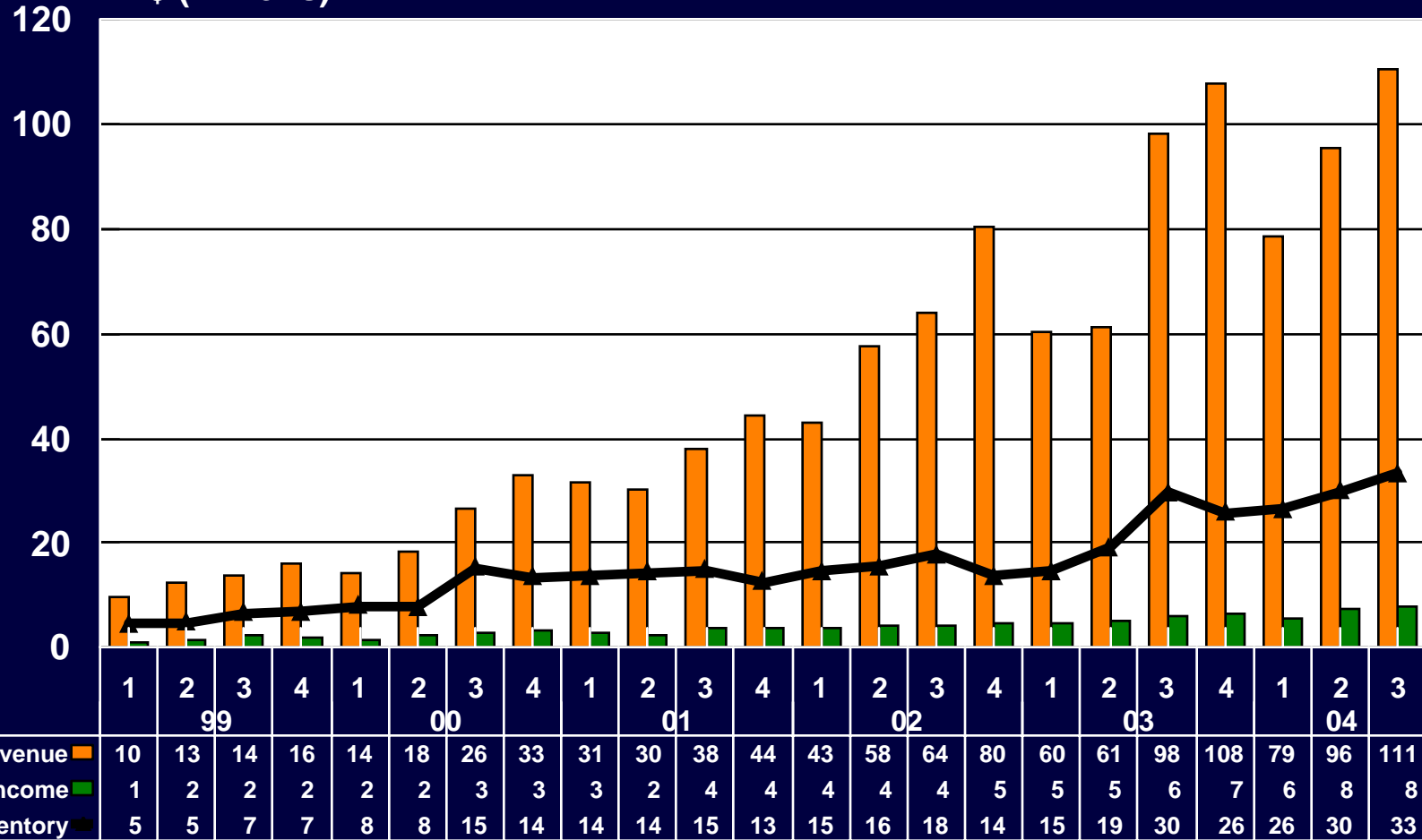
Celestica

- **Acquired Manufacturing Services Ltd in early 2004.**
- **Opening a "Greenfield" factory, in Bors, northwestern Romania. The \$100 million plant will employ 500 people and include 4 independent production units, beginning operations by year-end 2004.**
- **May produce parts in Russia as local demand for personal computers and communications equipment grows.**
- **Closing its 390 person Kidsgrove, UK facility.**

Foxconn Electronics (Hon Hai), Taiwan

Revenue, Net Income & Inventory

NT\$ (Billions)



CY

Foxconn (Hon Hai)

- **Expanding its Czech flat-screen monitor plant - investing \$40 million and employing a further 1,800 workers. Started production of computers and electronic parts at its \$660 million plant in Pardubice, Czech Republic in 2001, and currently employs 3,200 people.**
- **Became EMC's first supplier of finished equipment. "This is the first time that EMC's gone to a company to do subassembly, final assembly and test for everything," said Steven Fitz, Asia Pacific president of EMC.**
- **Setting up an auto parts and components manufacturing zone in Shanxi Province China. It is diversifying its businesses into six areas - computing, communications, consumer electronics, content, channeling and car making.**

Other Key Activities

- **Asustek Computer** investing CEK 65 million to assemble 200,000 personal computers per month in Ostrava, Czech Republic. Plant will have 250 employees during the first stage increasing to 1,000.
- **BenQ** may set up manufacturing lines in Slovakia due to the tariff reasons.
- **Tatung**, Taiwan will employ 1,200 near Plzen, western Bohemia. It will start with computer assembly in 1Q'05 hiring 50 people. Later, it will expand to assembling of plasma and LCD TV sets, plasma monitors and displays.
- **HCL Infosystems, Acer India, IBM and Samtel India** have computer manufacturing facilities in Pondicherry, India. There are also 60 small-scale players in this area.
- **LG Electronics** constructing new mobile phone plant in Sao Paulo, Brazil, tripling its local capacity to 2.2 million units per year.
- **Micro-Star International** launched motherboard production in Brazil, investing \$12 million. Its goal is 10% of the 4-million unit annual Brazilian PC market.
- **NOTE AB** will lay off 195 employees at three of its units in Sweden, relocating most of its production to EEC countries in Central Europe.

OEM Activities

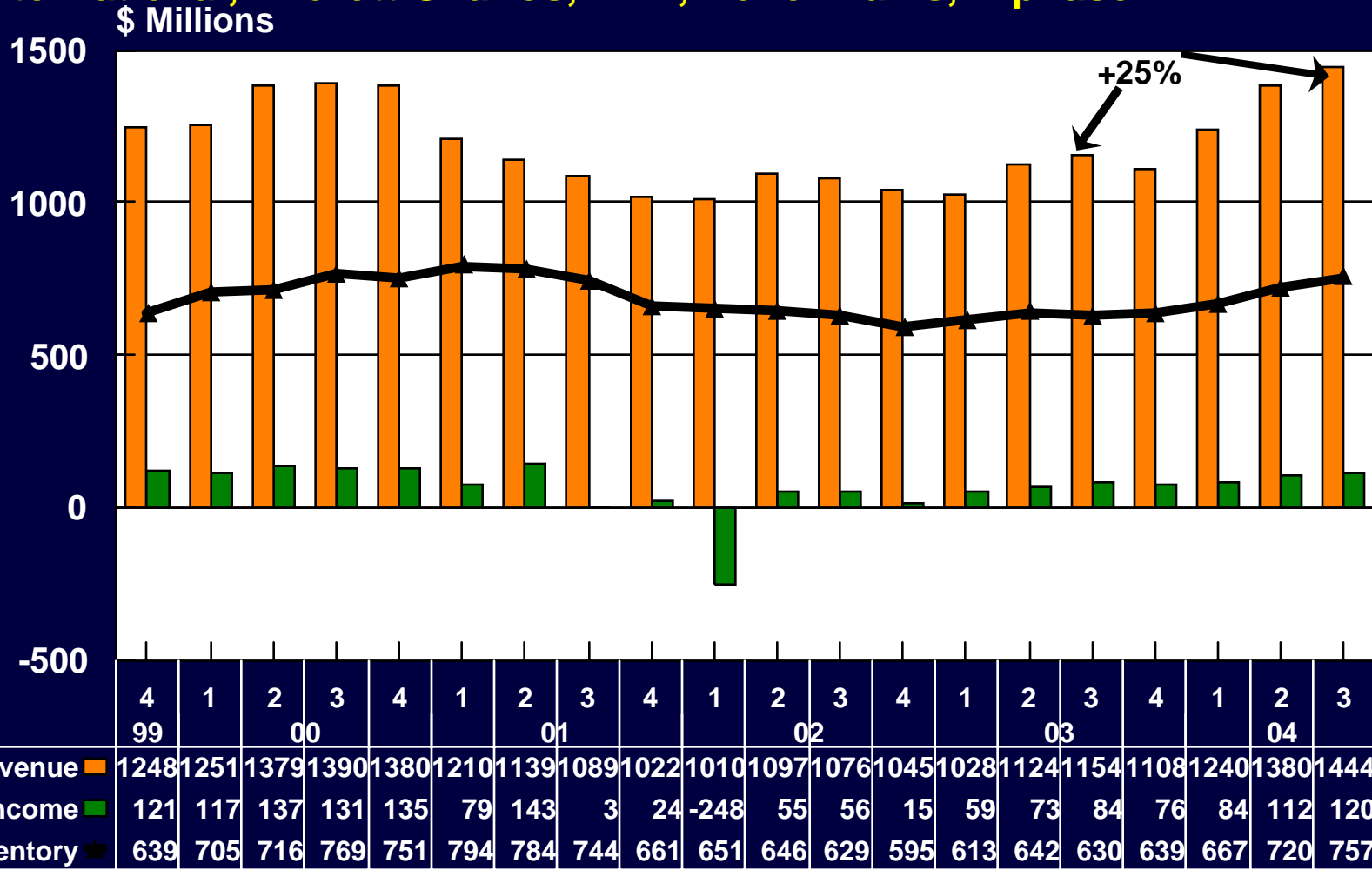
- ♦ **Dell** constructing new 500,000-square-foot personal computer assembly plant in North Carolina. The expansion is part of the company's strategy of locating assembly operations near its large markets, to reduce shipping costs and provide faster delivery.
- ♦ **Nokia** launched a new EUR 50 million production hall at its Komarom, Hungary plant - doubling its production capacity and making it Hungary's leading exporter.
- ♦ **Samsung** will invest US\$200 million to expand its electronics manufacturing plants in Tijuana and Queretaro, Mexico. It produces TV sets, refrigerators, DVD sets, cellular telephones and air conditioning systems there.
- ♦ **Panasonic** cut 500 people at its Pentwyn, Cardiff, Wales, UK plant - switching production of TVs and set-top boxes to the Czech Republic.

**PCB
Assembly
Equipment**

Dover Corp

Revenue, Net Income & Inventory

includes: Universal Instruments, Vitronics Soltec, Vectron, Dielectric, Dow Key, OK International, Everett Charles, DEK, Hover Davis, Alphasem



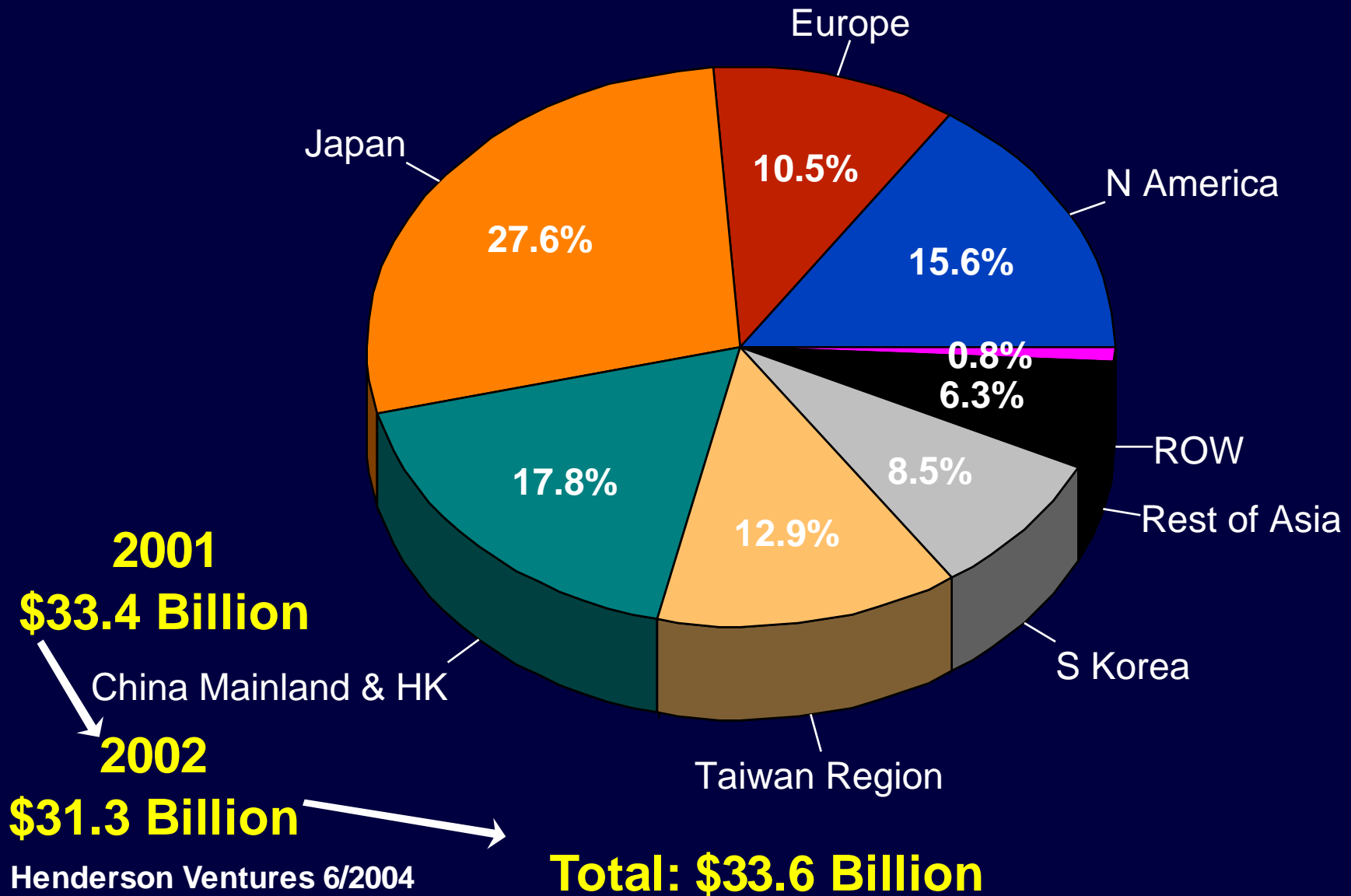
CY

DOV

PCB Fabrication

2003 WORLD RIGID & FLEX PCB PRODUCTION

BY GEOGRAPHICAL AREA (US\$ M @ Constant 2003 Exchange)

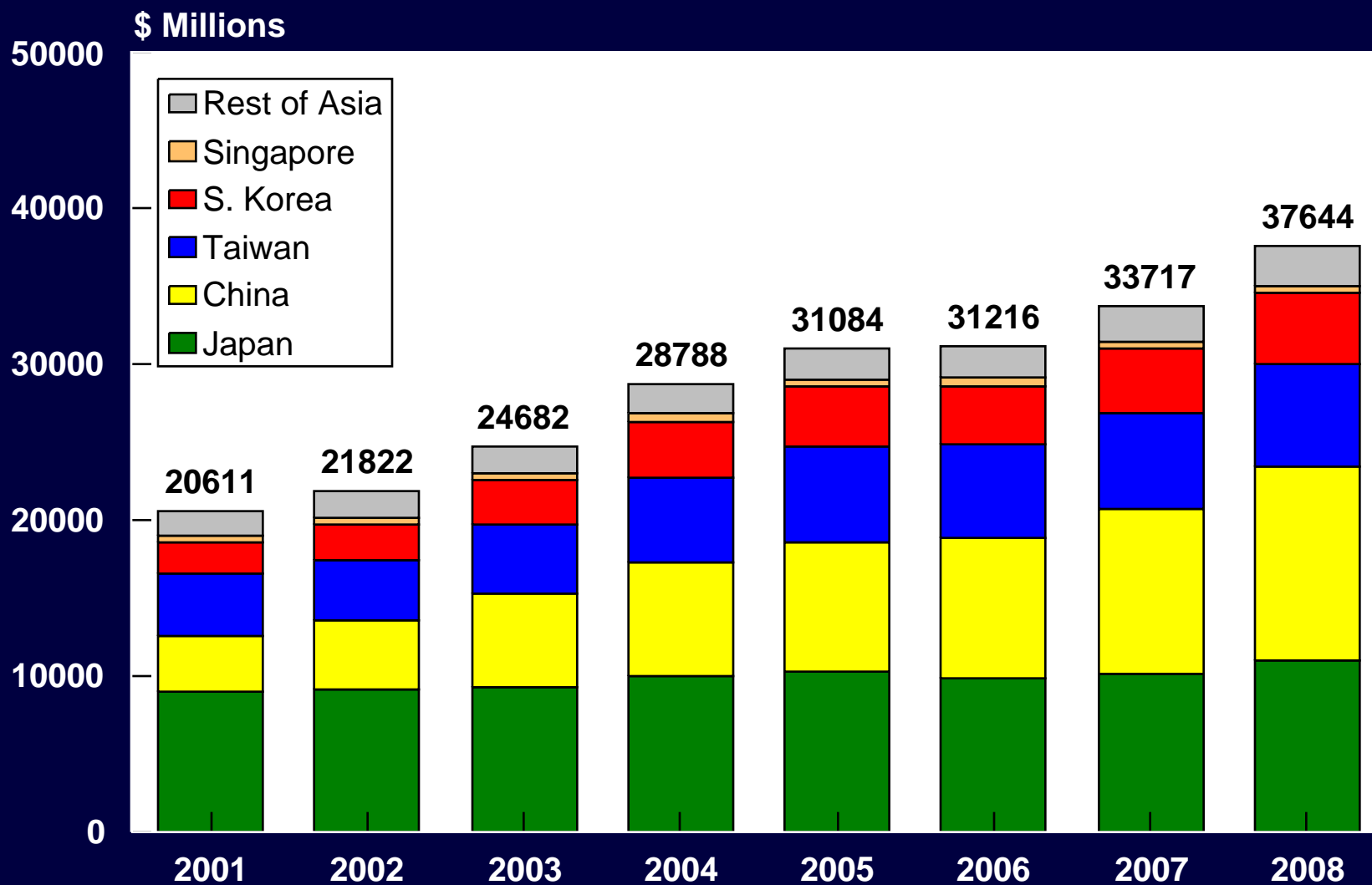


Top 25 World PCB Manufacturers (\$M)

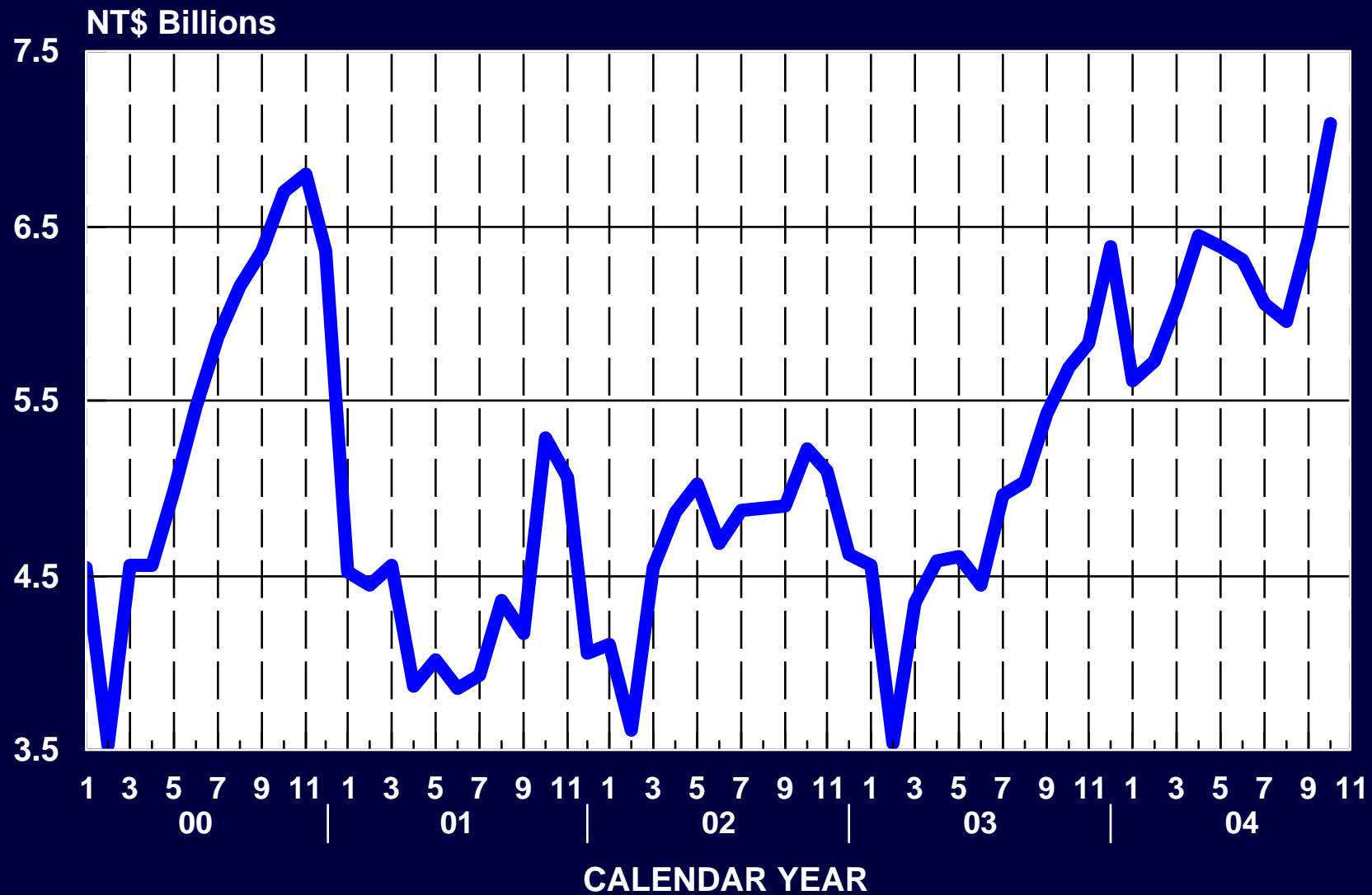
	Company	2003	2002	Growth (%)
1.	Nippon Mektron	1175	968	21.4
2.	CMK	1049	1015	3.3
3.	Ibiden	1027	1017	1.0
4.	Hitachi Chemical	685	613	11.7
5.	Shinko Electric	636	458	38.9
6.	Unimicron	609	465	31.0
7.	Samsung Electro	545	469	16.2
8.	Compeq	462	515	-10.3
9.	Nanya PCB	453	354	28.0
10.	Daeduck Group	422	428	-1.4
11.	Viasystems Group	420	410	2.4
12.	Fujikura	400	340	17.6
13.	Sanmina-SCI	360	395	-8.9
14.	Multek	350	380	-7.9
15.	AT&S	345	312	10.6
16.	Tyco PCB	330	335	-1.5
17.	MACO (Matsushita)	318	304	4.6
18.	Kyoden Group	315	257	22.6
19.	Korea Circuit Group	310	280	10.7
20.	LG Electronics	305	265	15.1
21.	Toppan-NEC	300	298	0.7
22.	Nitto Denko	300	254	18.1
23.	Elec & Eltek	282	238	18.5
24.	NT Information Systems	270	240	12.5

Asian PCB Production

Current \$ converted @ 2003 Exchange Rates



Taiwan Region Rigid PCB Shipments Composite of 8 Large Manufacturers

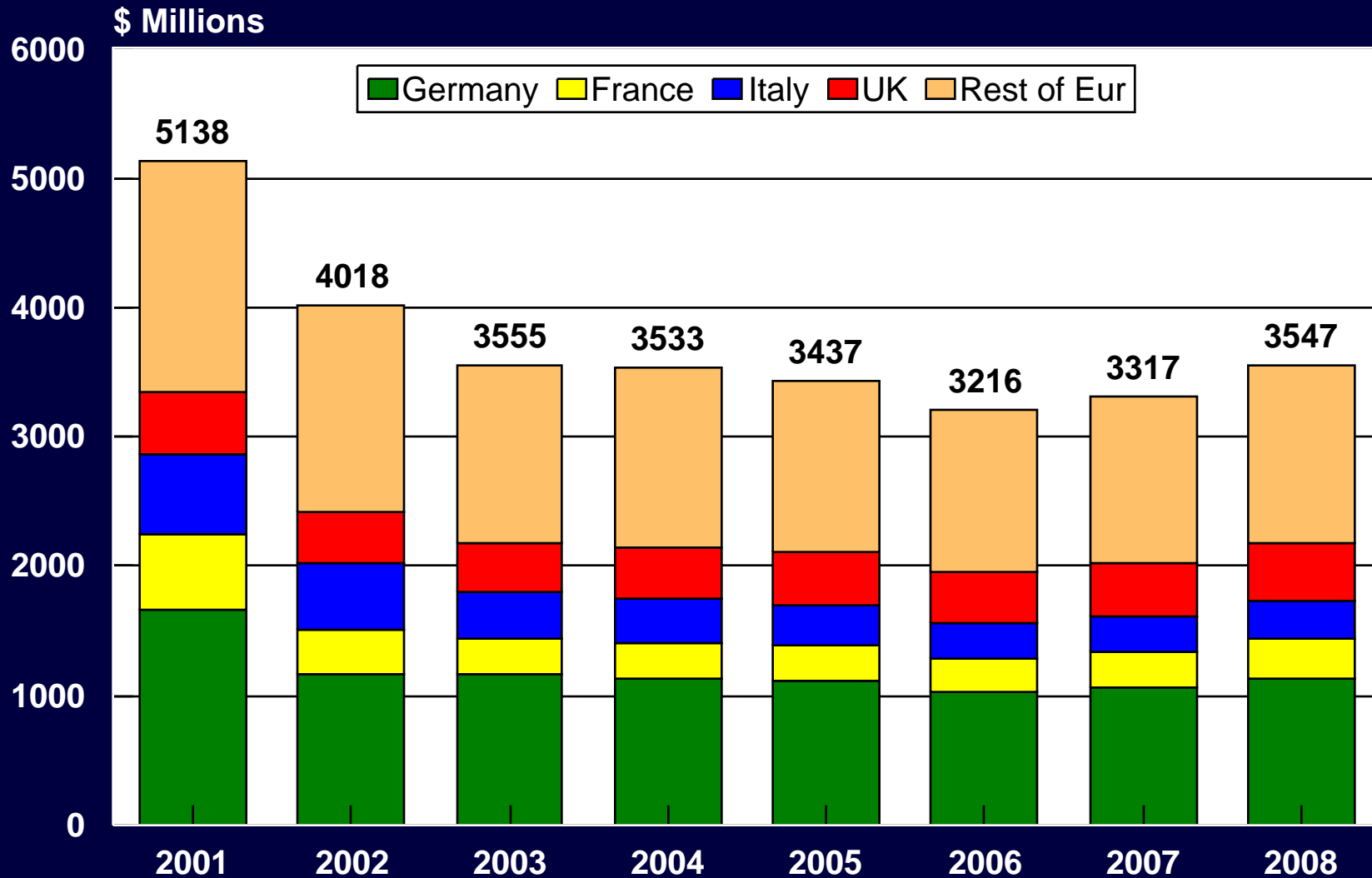


Company Financial Releases

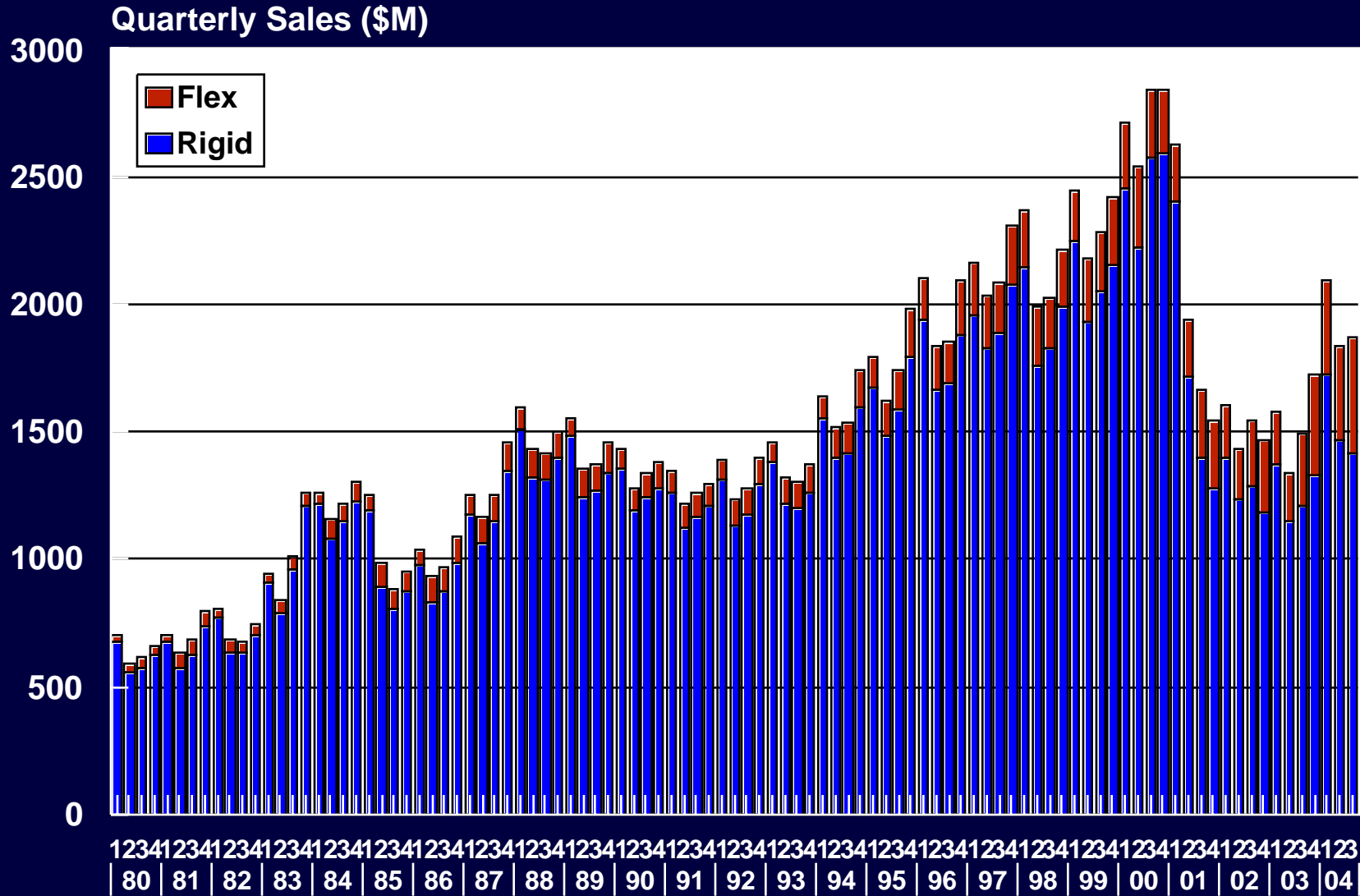
Chin Poon, Compeq, Gold Circuit, Tripod, Unimicron, Unitech, Vertex, Wus

European PCB Production

Current \$ converted @ 2003 Exchange Rates



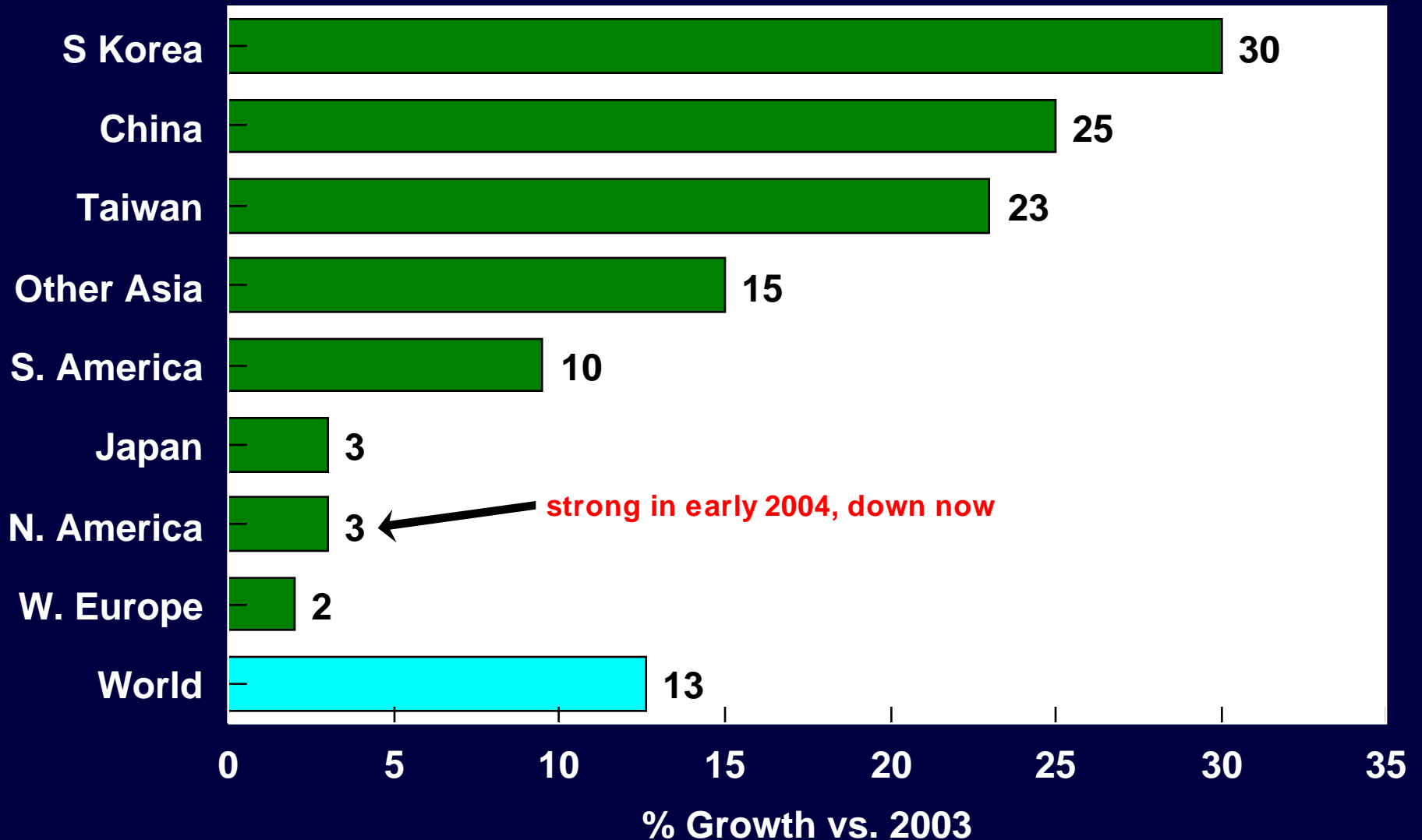
N. AMERICAN TOTAL PCB SHIPMENTS



IPC T/MRC data with Custer interpretation

2004 Estimated PCB Growth

Based upon Jan-Dec 2004 Data



Conclusions

Summary

- **China is the EMS growth area but expansions are occurring in other ASEAN countries, Eastern Europe, India, and Brazil.**
- **Shutdowns & downsizing are common in the USA and Western Europe.**
- **Automotive suppliers are moving production to "low cost" regions.**
- **N. America is more focused on niche and protected markets - medical, military, high technology, short run, prototype**
- **Asian EMS & ODM companies are building plants in Eastern Europe**

Longer Term Outlook

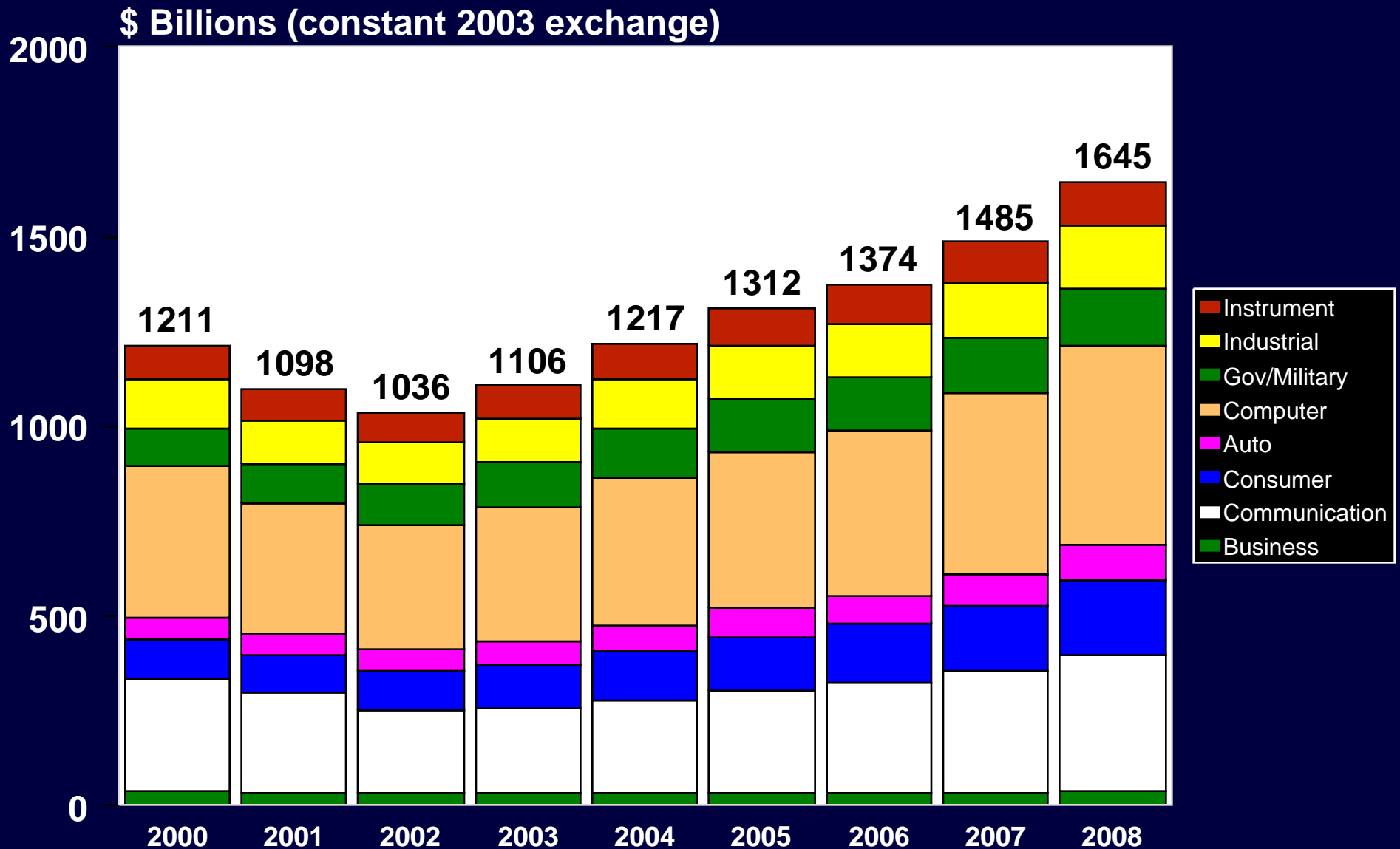
- Higher interest rates will eventually (6-12 months) slow growth.
- Geopolitical situation & energy costs remains worrisome
- Weak US \$ and Yuan are causing global trade concerns
- Telecom/datacom growth should eventually accelerate
- Barring a global crisis 2005 should be a "low growth" year globally but "double digits" in China.
- USA & W. Europe will focus on niche and "protected" markets. Volume production has shifted to SE Asia & to a lesser extent Eastern Europe.

Electronic Equipment Production Growth

Current \$ Growth Rates Converted @ Constant Exchange Rates

	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>
World	-5.5	6.8	10.0	6.6	5.5
USA	-9.5	6.0	9.6	4.9	2.0
W Europe	-8.2	-1.5	3.6	2.8	3.4
Japan	-14.4	6.9	3.1	2.8	3.6
Four Tigers	4.0	5.1	14.8	8.2	5.8
China	12.1	32.6	24.8	17.7	15.9

World Electronic Equipment Production by Type



Global "Electronic Foodchain" Outlook 2005 vs 2004

