

Global Electronic Supply Chain Forecast 2012 vs 2011

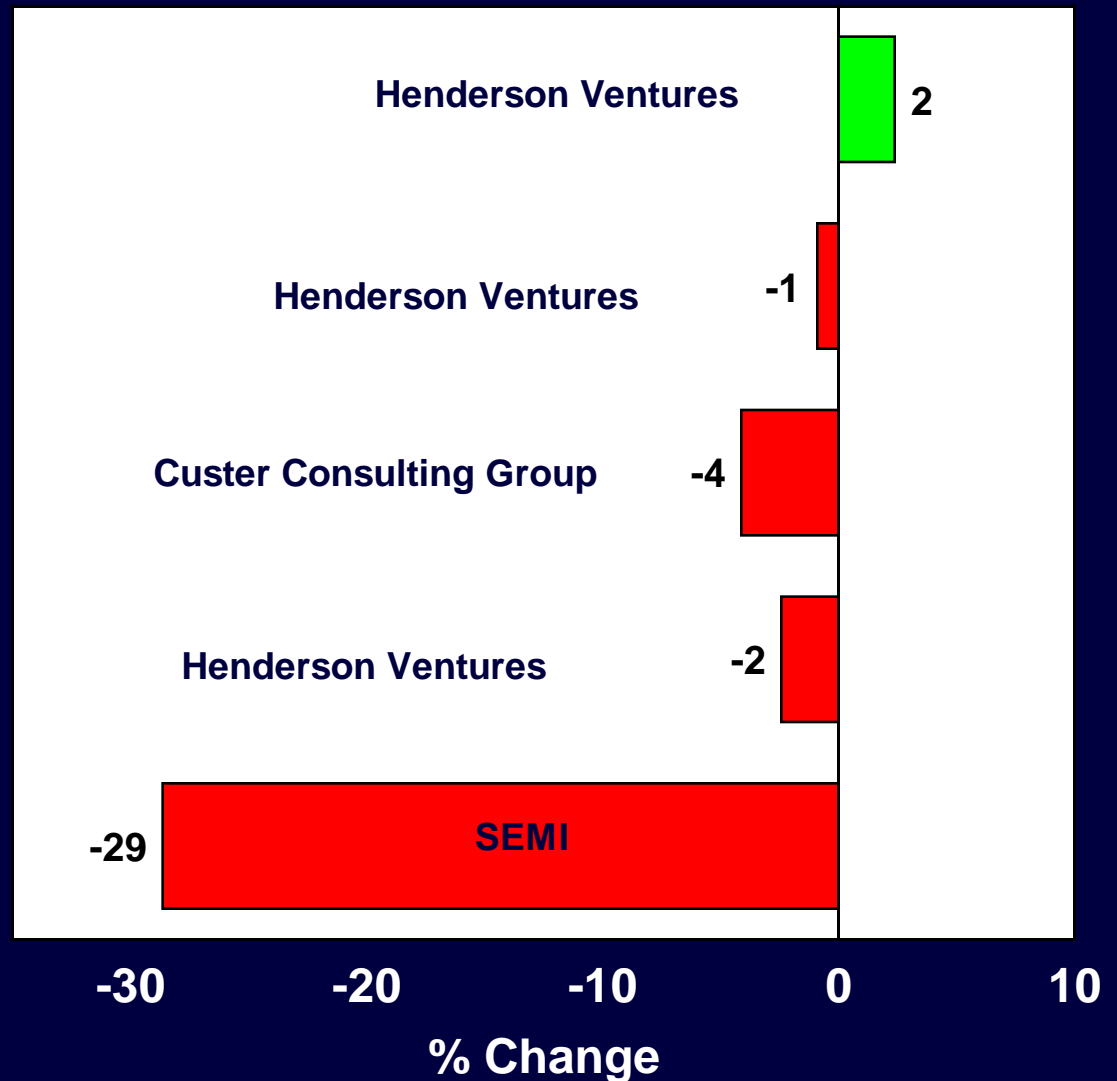
Combined GDP

Electronic Equipment

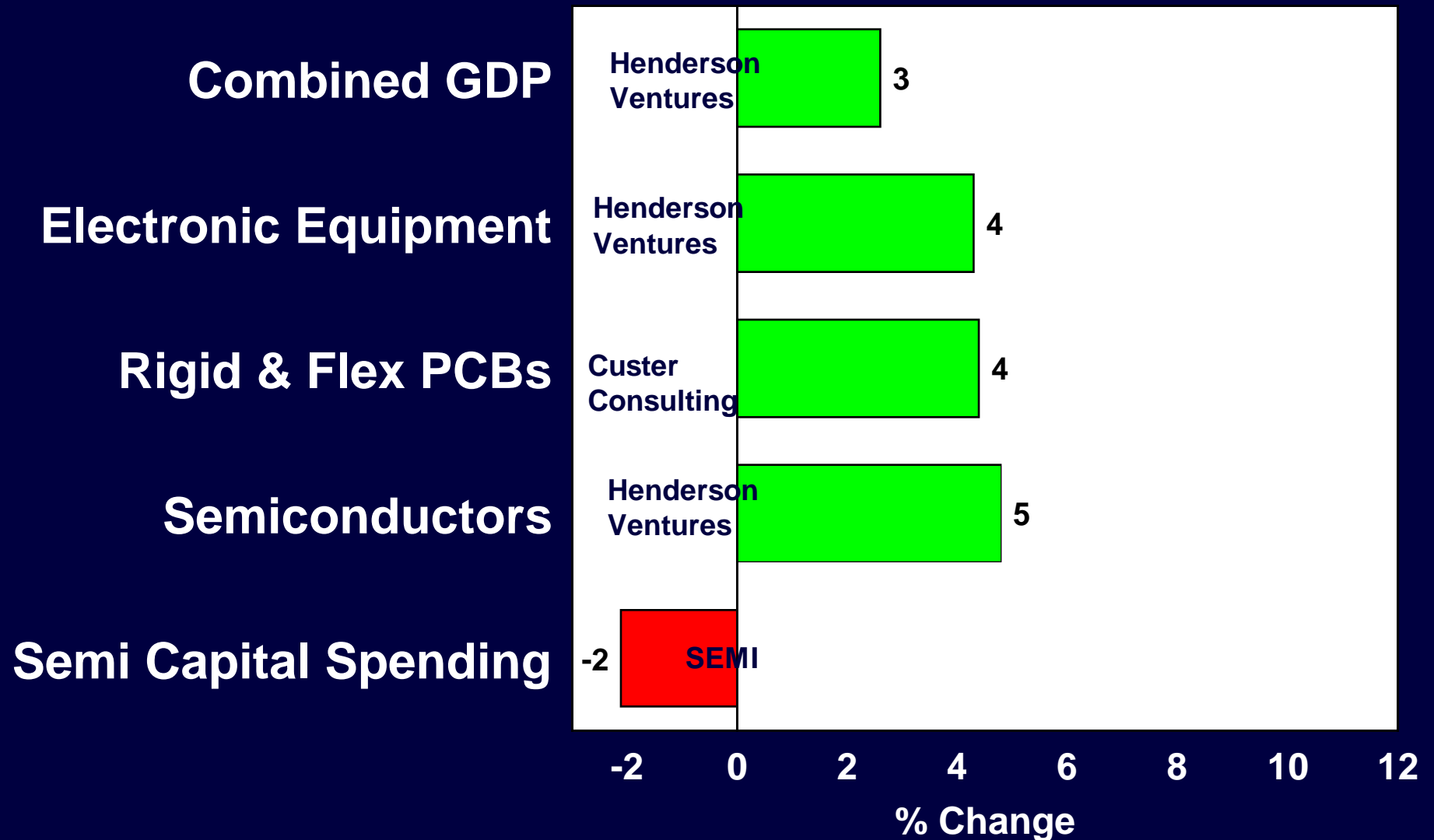
Rigid & Flex PCBs

Semiconductors

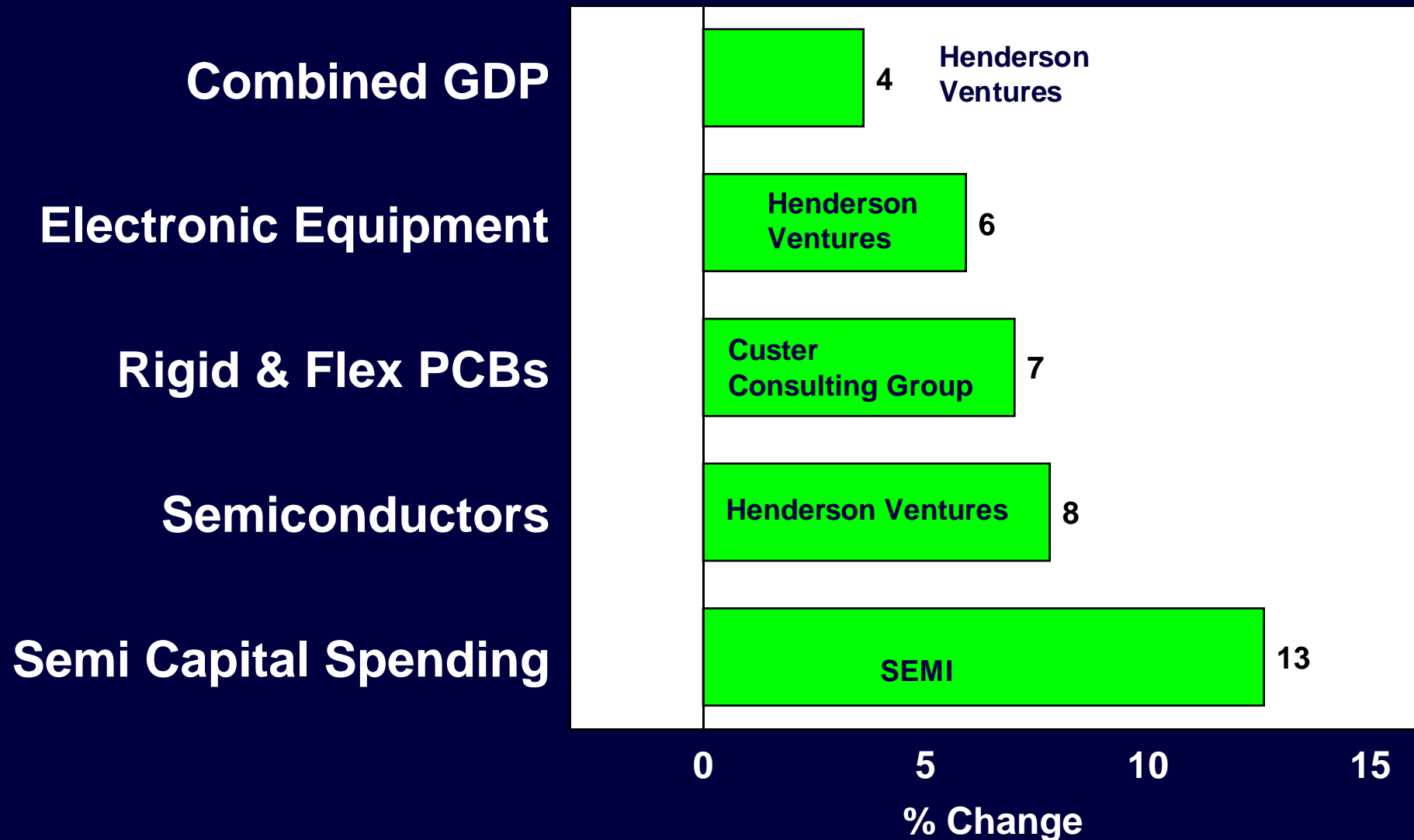
Semi Capital Spending



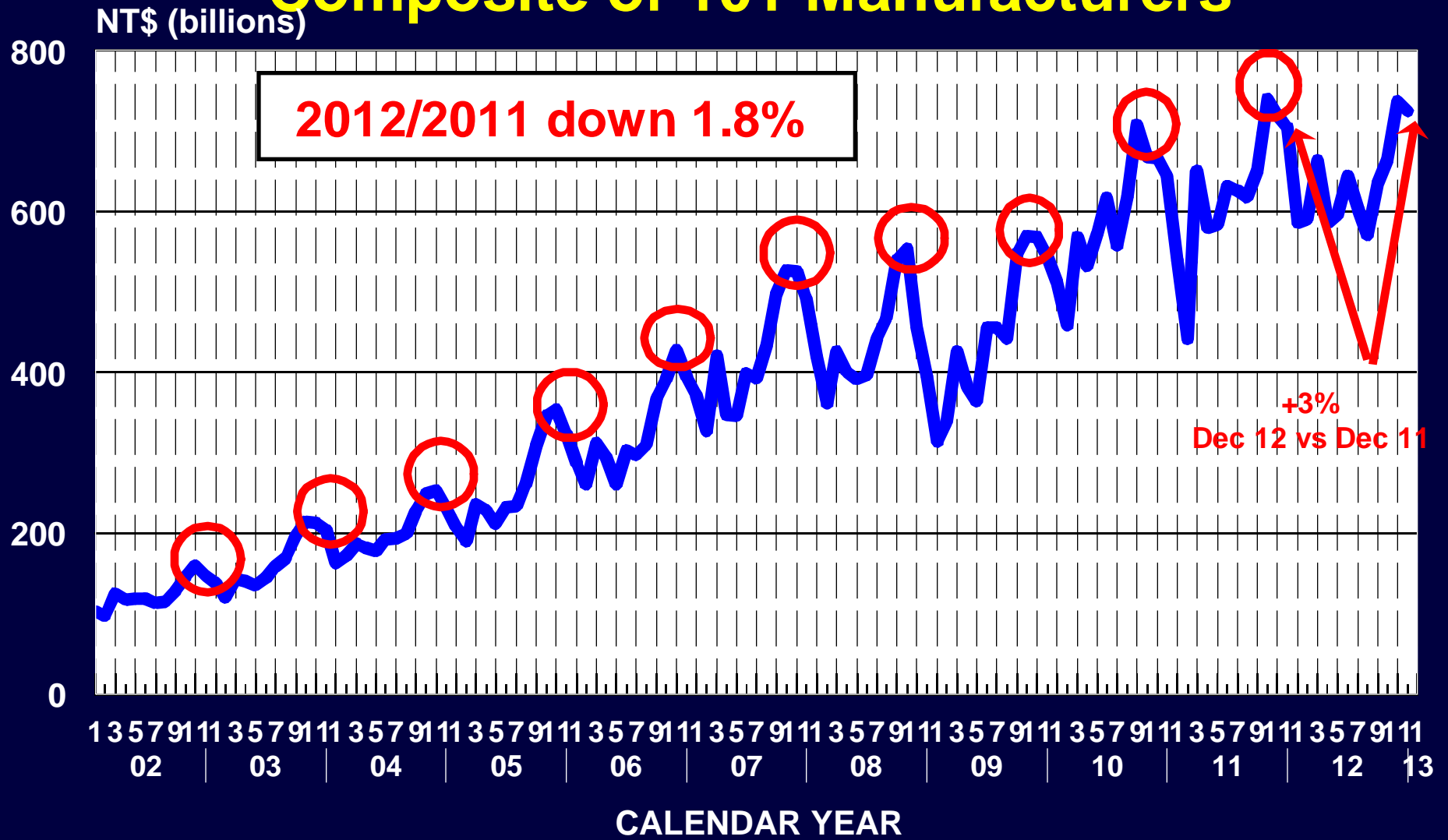
Global Electronic Supply Chain Forecast 2013 vs 2012



Global Electronic Supply Chain Forecast 2014 vs 2013

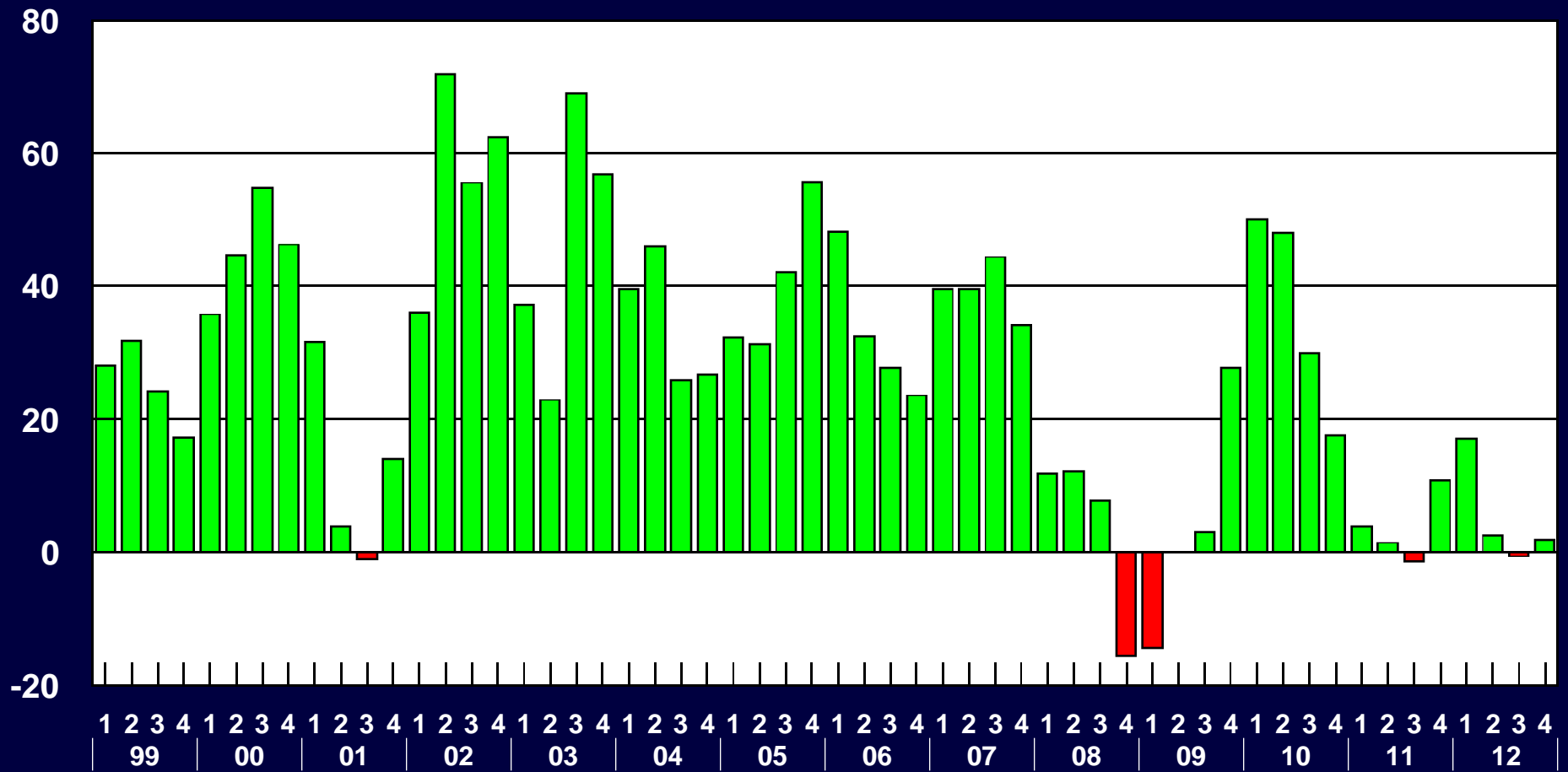


Taiwan/China Electronic Equipment Producers Composite of 101 Manufacturers



Taiwan listed companies, often with significant manufacturing in China

Large ODM Companies Composite of 10 Public Manufacturers Quarterly Revenue Growth



Asustek Computer, Compal Electronics, Foxconn, Chimei Innolux, Inventec, Inventec Appliance, Lite On Technology, Mitac International, Quanta Computer, Wistron

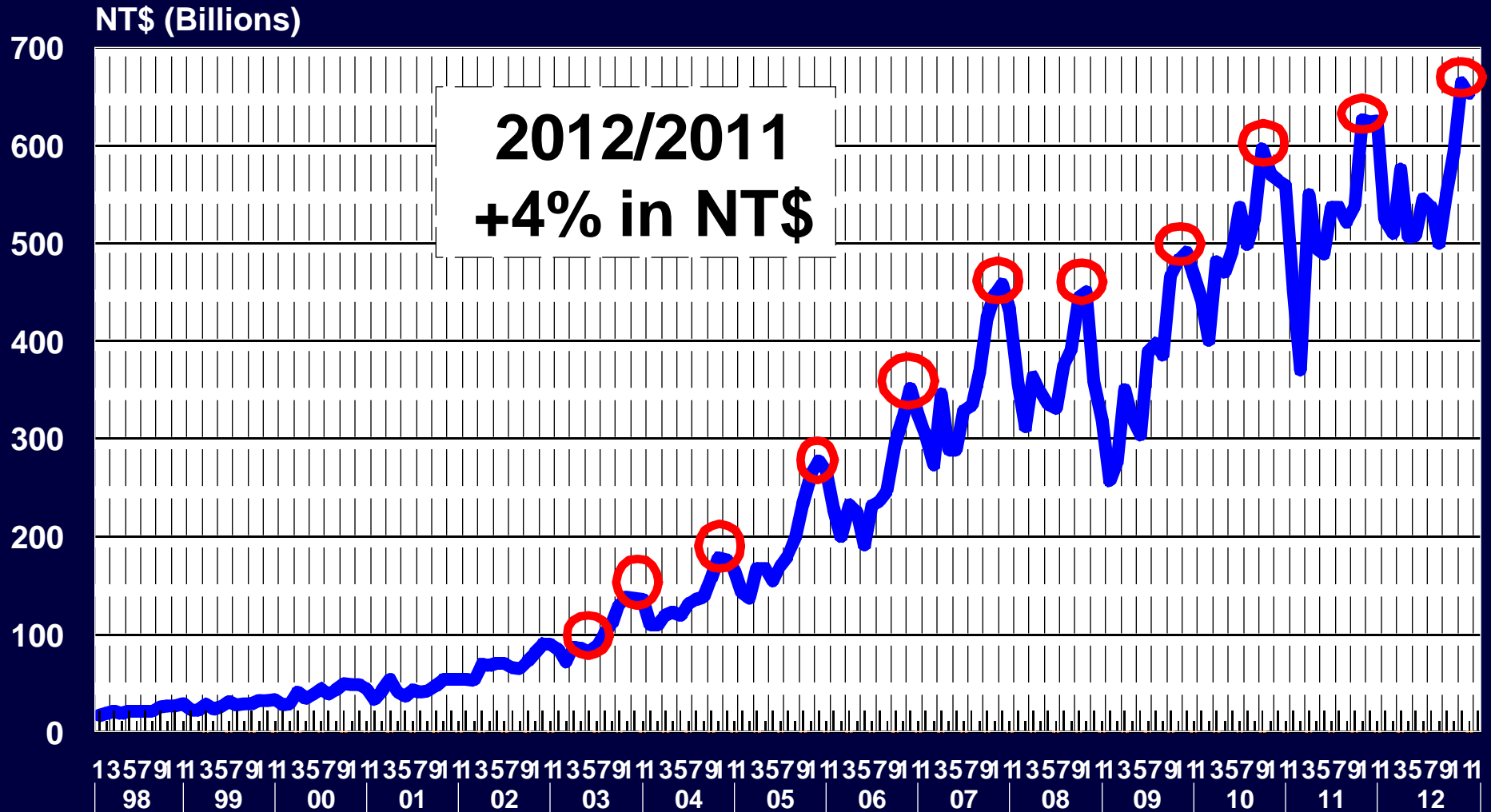
Large Taiwan ODM Providers

2012 vs. 2011 Sales (\$M)

	<u>2011</u>	<u>2012</u>	<u>2012/2011 Growth %</u>
Foxconn (Hon Hai)	93,837	108,937	16%
Quanta Computer	35,884	32,659	-9%
Compal Electronics	21,976	29,562	-6%
Wistron	19,827	20,260	2%
Chimei Innolux	16,424	15,955	-3%
Asustek Computer	10,749	12,693	18%
Inventec	11,451	10,843	-5%
Lite On Technology	3,201	2,597	-19%
Mitac International	1,138	962	-15%
Inventec Appliance	837	0	0%
Total	215,324	234,468	+ 9%

Source: Company data, NT\$ converted at constant avg 2012 exchange (29.554 NT\$ = 1US\$)

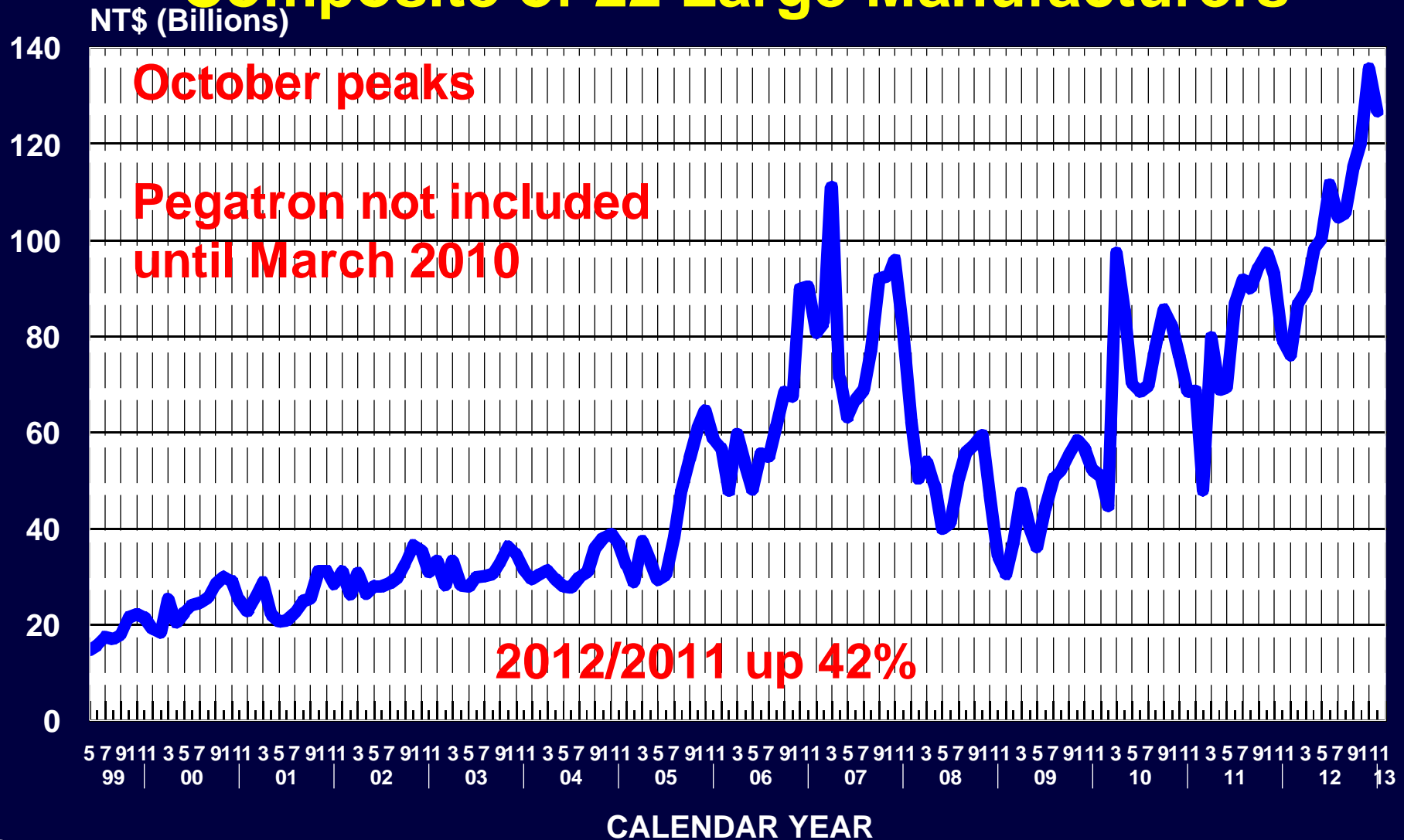
Taiwan ODM Companies Composite Sales of 10 Large Manufacturers



Company Financial Releases

Asustek Computer, Chei Mei, Compal Electronics, Foxconn, Chimei Innolux, Inventec, Inventec Appliance, Lite On Technology, Mitac International, Quanta Computer, Wistron, Chei Mei Display replacing Chei Mei & Innolux Display 3/10 & later

Taiwan Motherboard Vendor Sales Composite of 22 Large Manufacturers



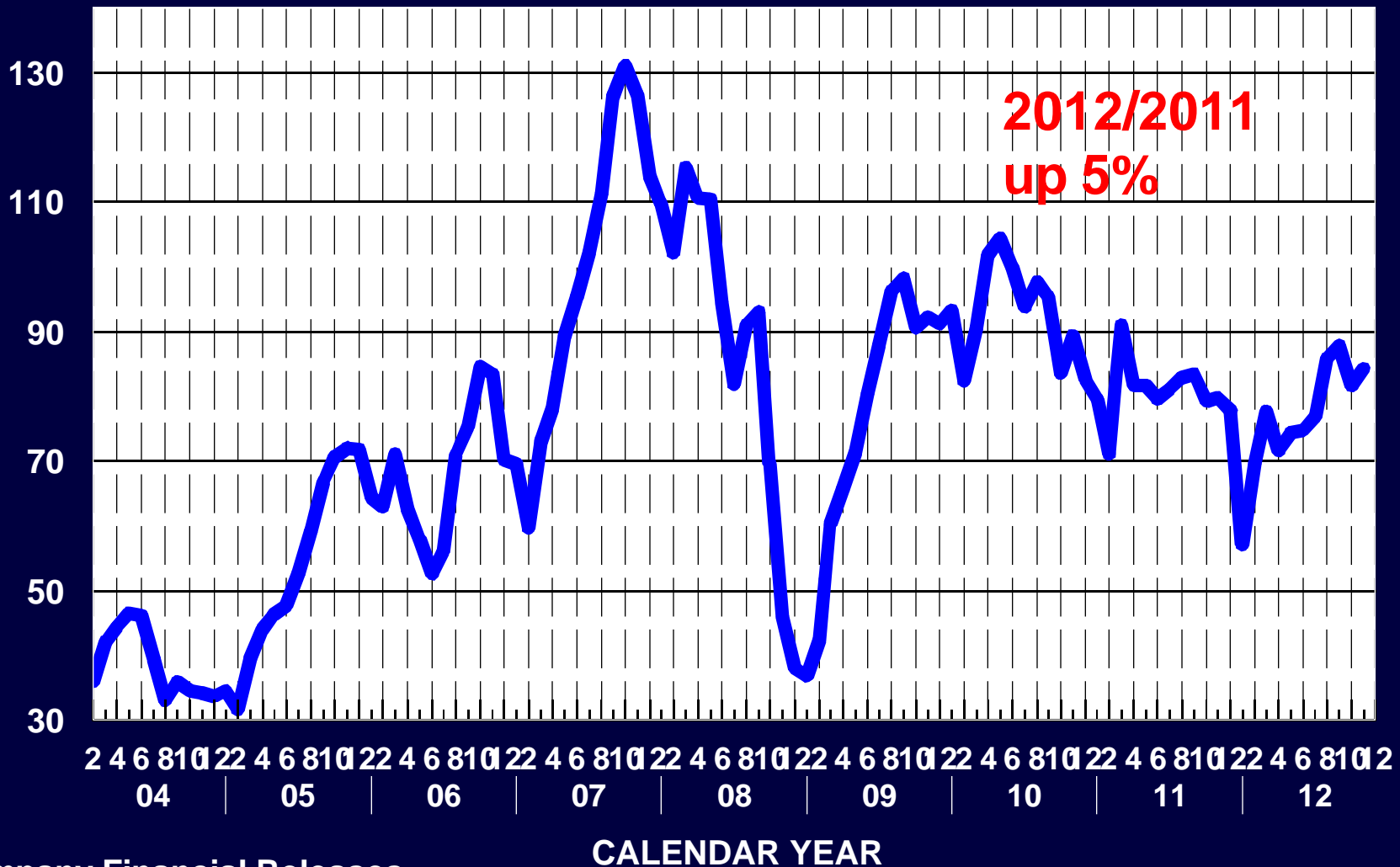
Company Financial Releases

Albatron, AOpen, Asustek, Biostar, Chaintech, Diamond Flower, Elite Group, Epox, Flytech, Giga-Byte, ICP, Jetway, Keimei, Kinpo, Leadtek, Microstar Intl, Mitac, New Era, Shuttle, Soyo, Tul, Universal Scientific

Taiwan Display Producers

Composite of 6 TFT-LCD Panel Manufacturers

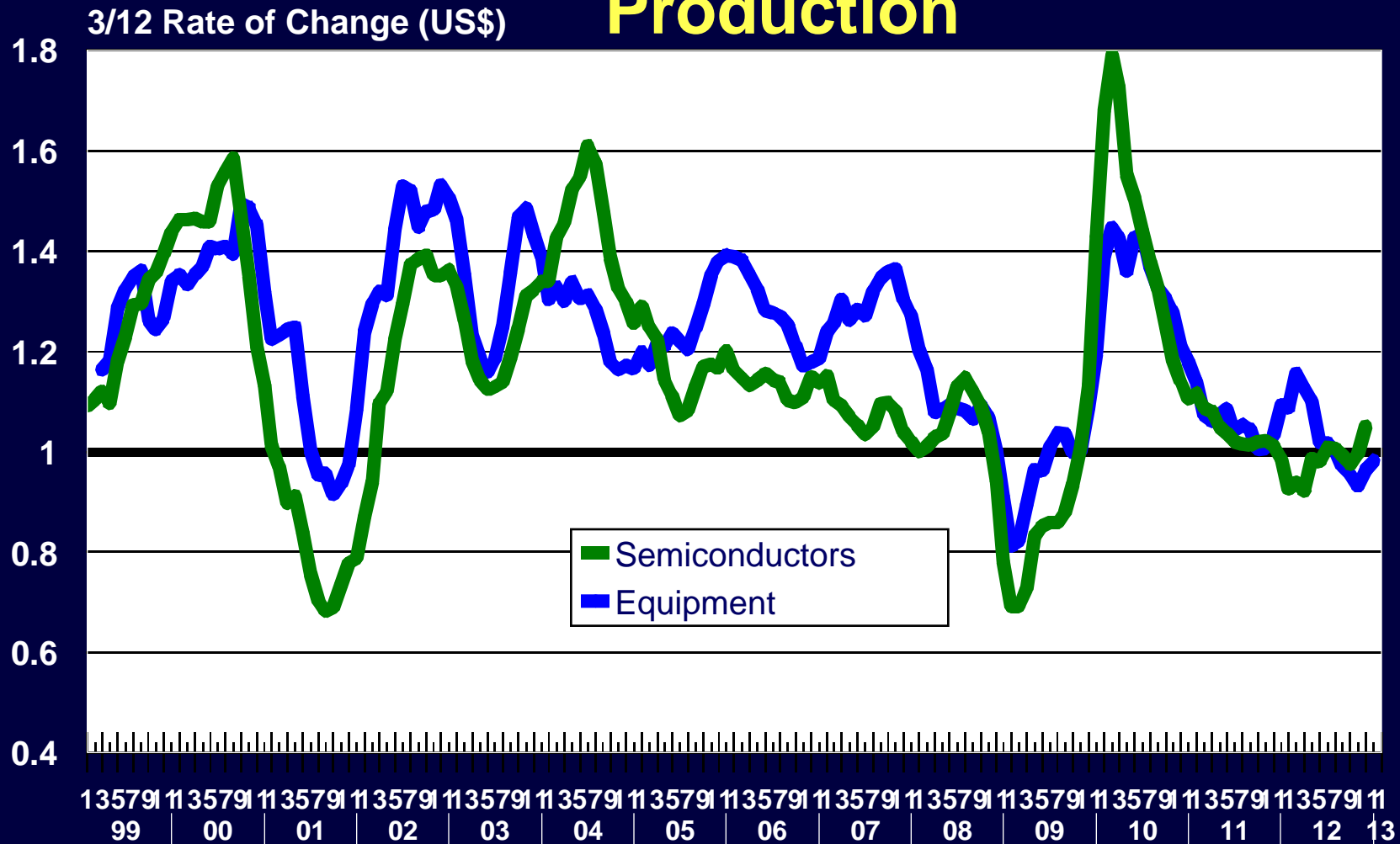
NT\$ (billions)



Company Financial Releases

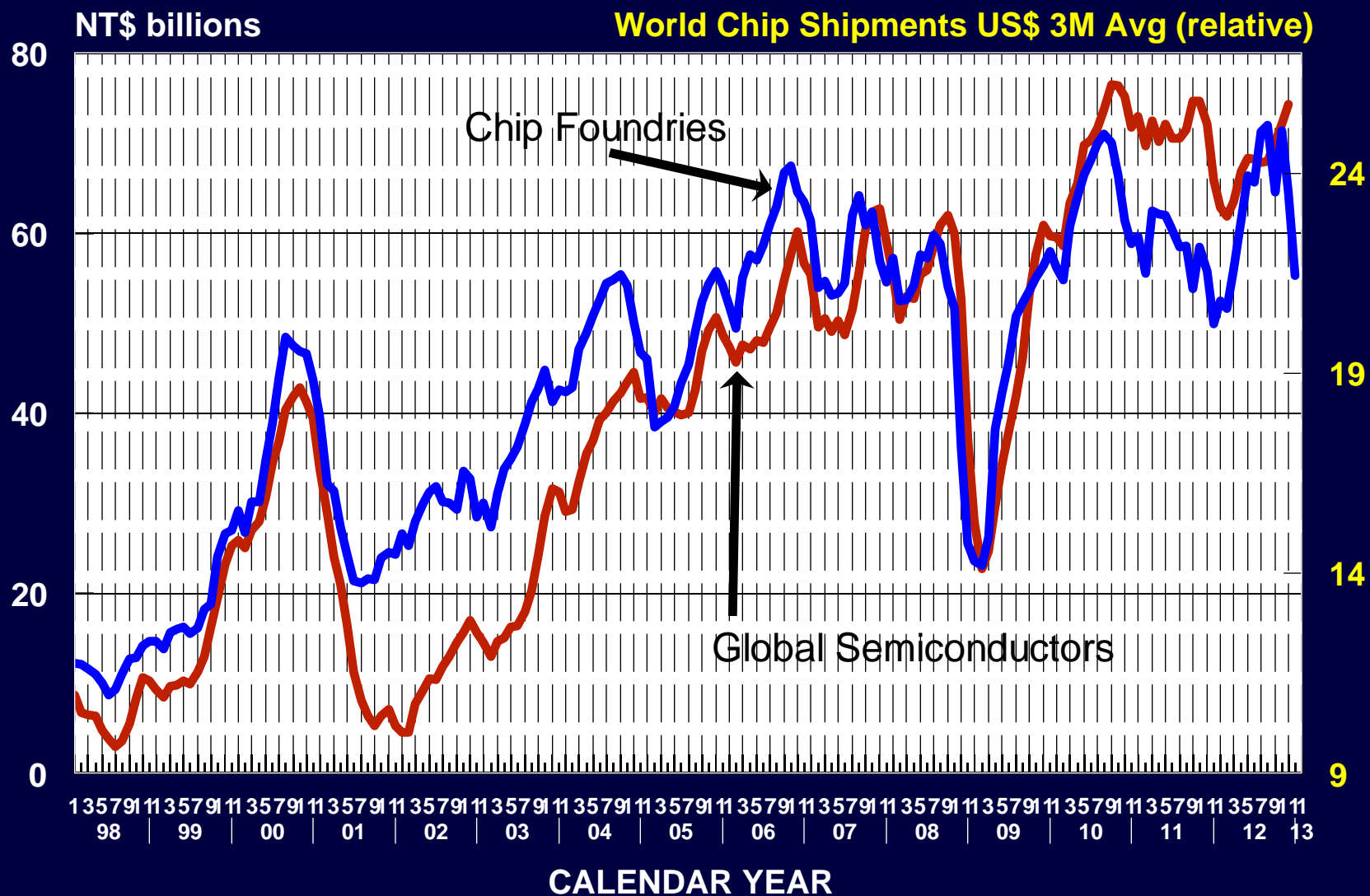
AU Optronics, Chi Mei Optoelectronics, Chunghwa Picture Tube, Hannstar Display, Innolux Display, Quanta Display, Chimei Innolux 3/10 & later

Semiconductor Shipments to SE Asia vs. Taiwan/China Electronic Equipment Production

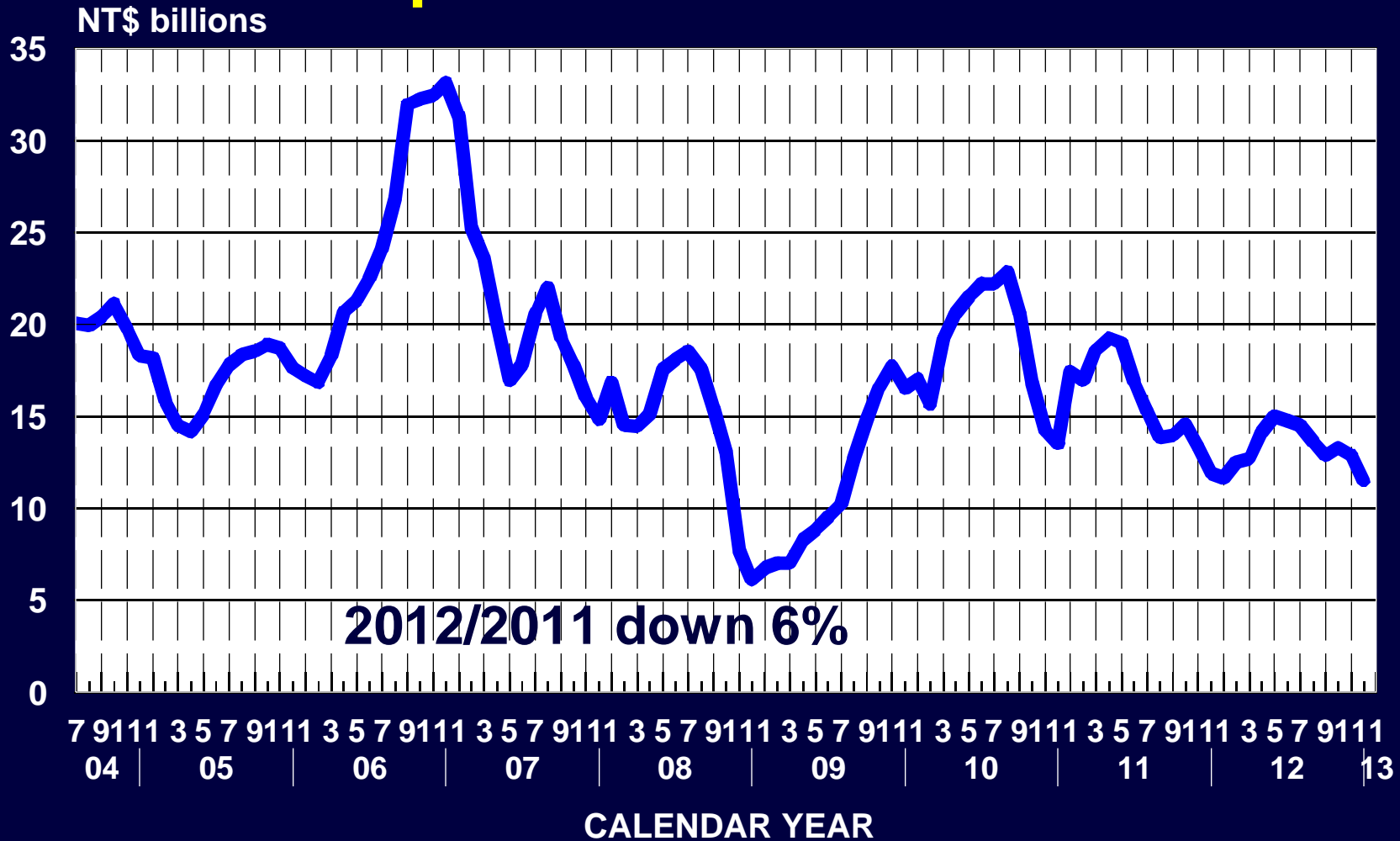


Total \$ Semiconductor Shipments from All Countries to SE Asia www.sia-online.org/
 101 Taiwan listed companies, often with significant manufacturing in China

Taiwan Wafer Foundry Composite vs Global Semiconductor Revenues

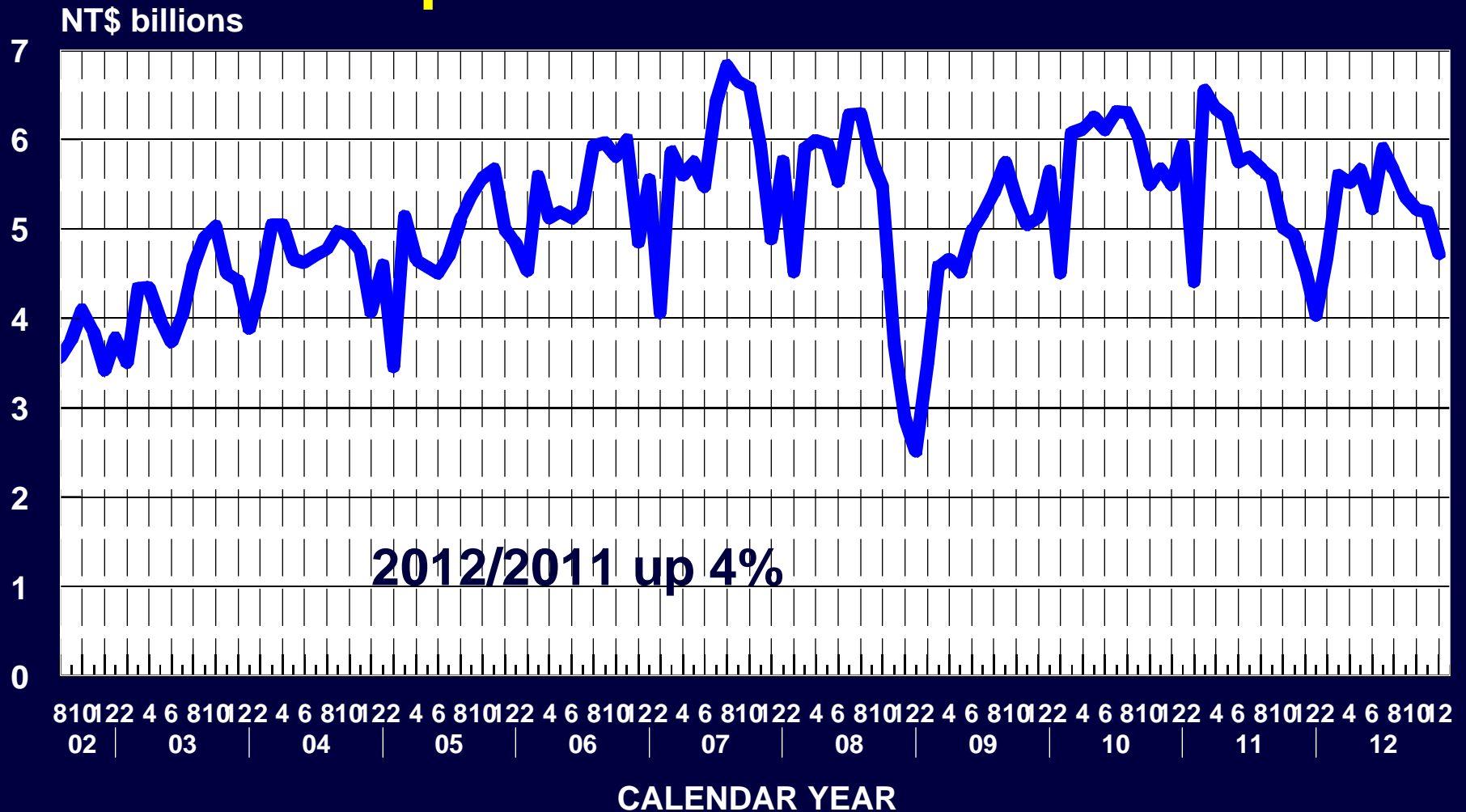


Taiwan Memory Companies Composite of 8 Manufacturers



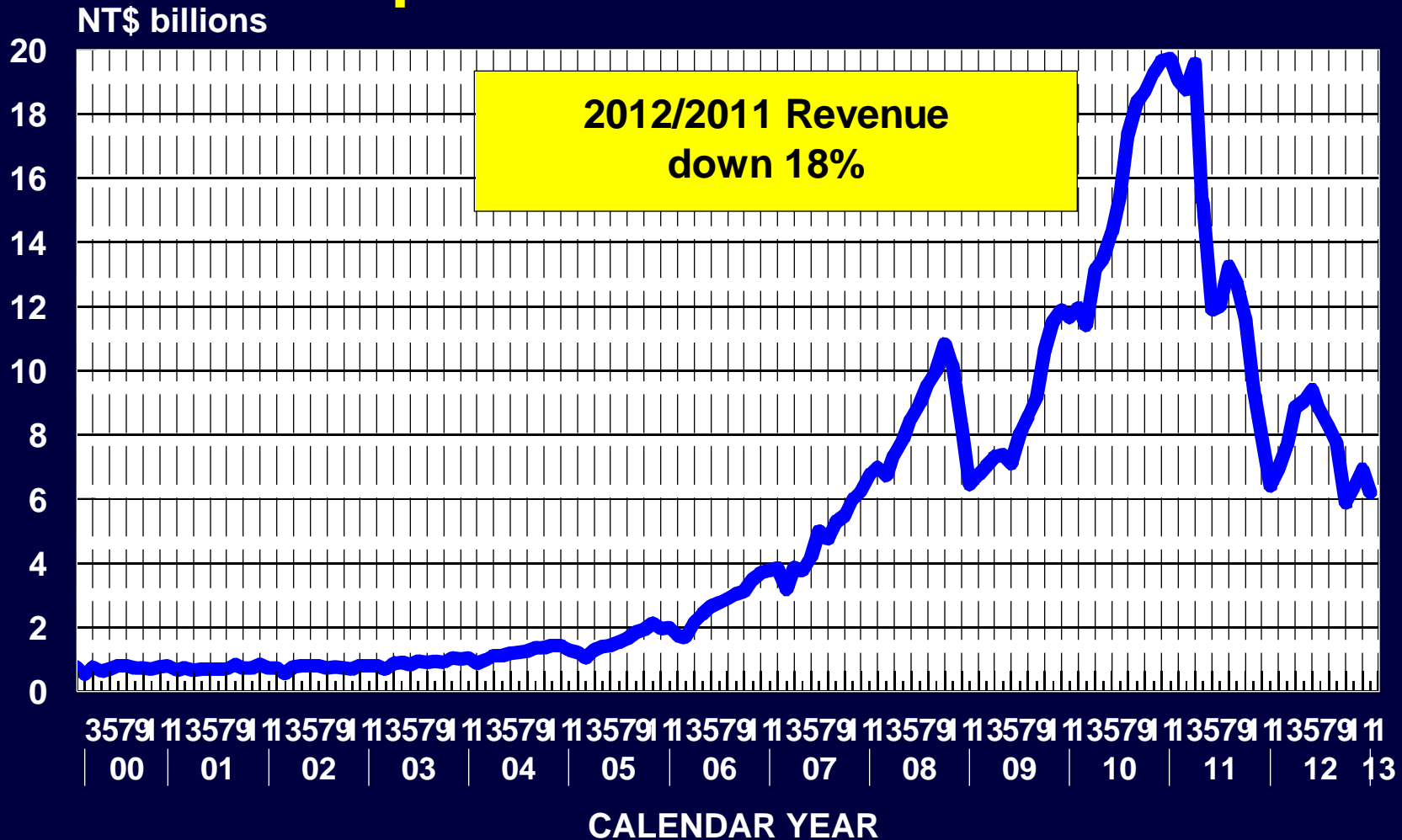
Silicon Integrated Systems, Inotera Memories, Macronix Intl, Mosel Vitelic, NanYa Tech, Powerchip Semiconductor, ProMOS, Winbond Elec

Taiwan Passive Component Companies Composite of 25 Manufacturers



Chilsin Electronics, Cyntec, (FCE) Feei Cheng Enterprise, Holy Stone Enterprise, 3H (Honey Hope Honest Enterprise), HJC (Hua Jung Components), Inpaq, Jaan Chem Technological, Kaimei Electronic, King Core Electronics, Laser Tek, Leatec Fine Ceramics, Lelon Electronics, Linton Technology, PTTC (Polytronics Technology Corp), PDC (Prosperity Dielectrics Co), Ralec Electronic, Ta-I Technology, Taiwan Alpha Electronic, Team Young Advanced Ceramics, Teapo Electronic, Thinking Electronic Industrial, WTC (Walsir Technology Corp), Yageo, YCTC (Yeh-Chiang Technology Corp)

Taiwan Solar/Photovoltaic Panel Companies Composite of 17 Manufacturers

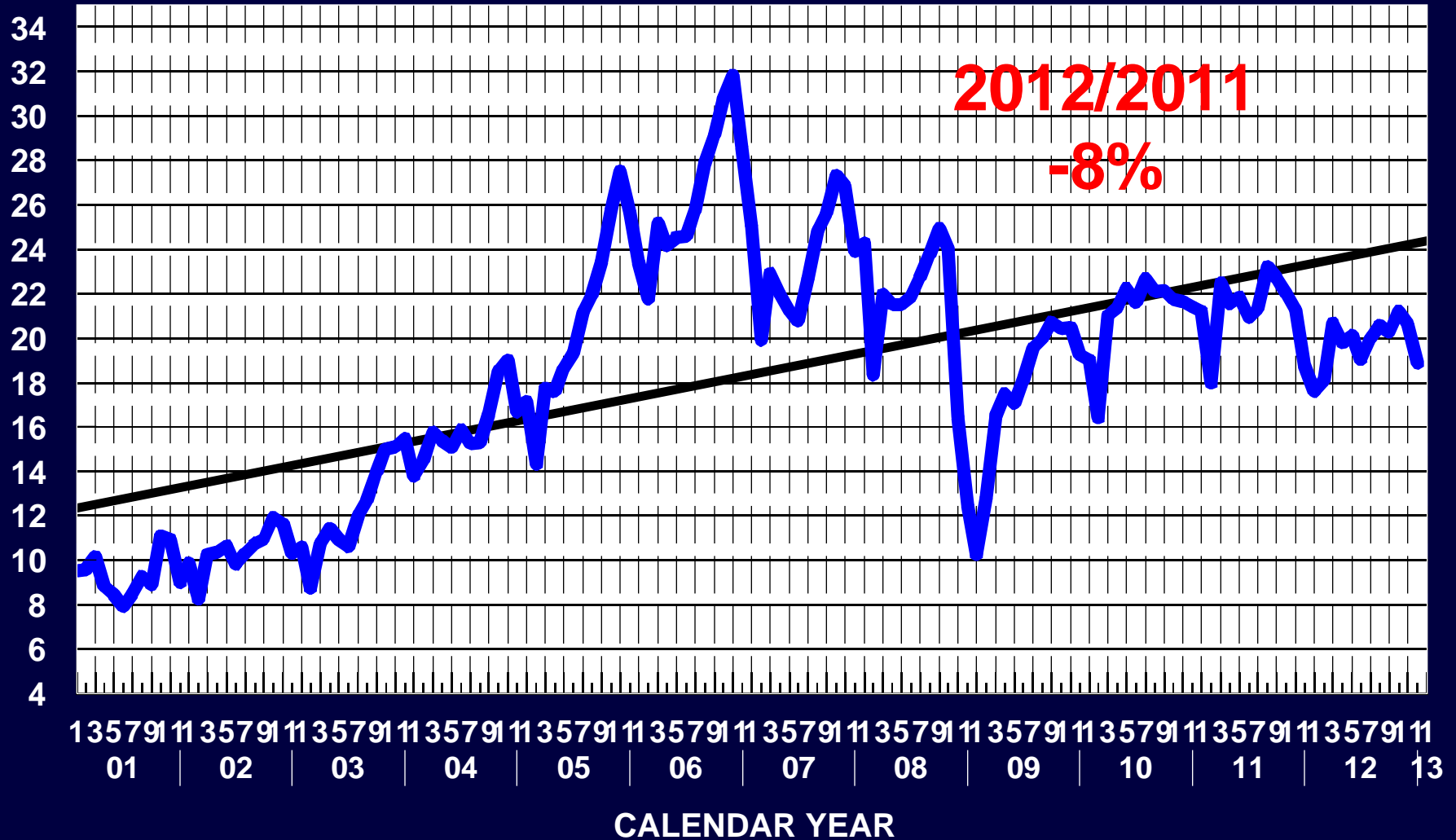


Big Sun Energy Technology, Daxon, DelSolar, e_TON Solar Tec, Eversol, Gintech, Green Energy Technology (GET), Ligitek, Motech, Neo Solar Power, Phoenixtec Power Co (PPC), Precision Silicon, Sino-American Silicon Products, Sonartech, Sysgration, Tyntek, Wafer Works

Taiwan Rigid PCB Shipments

Composite of 42 Taiwan-listed Manufacturers

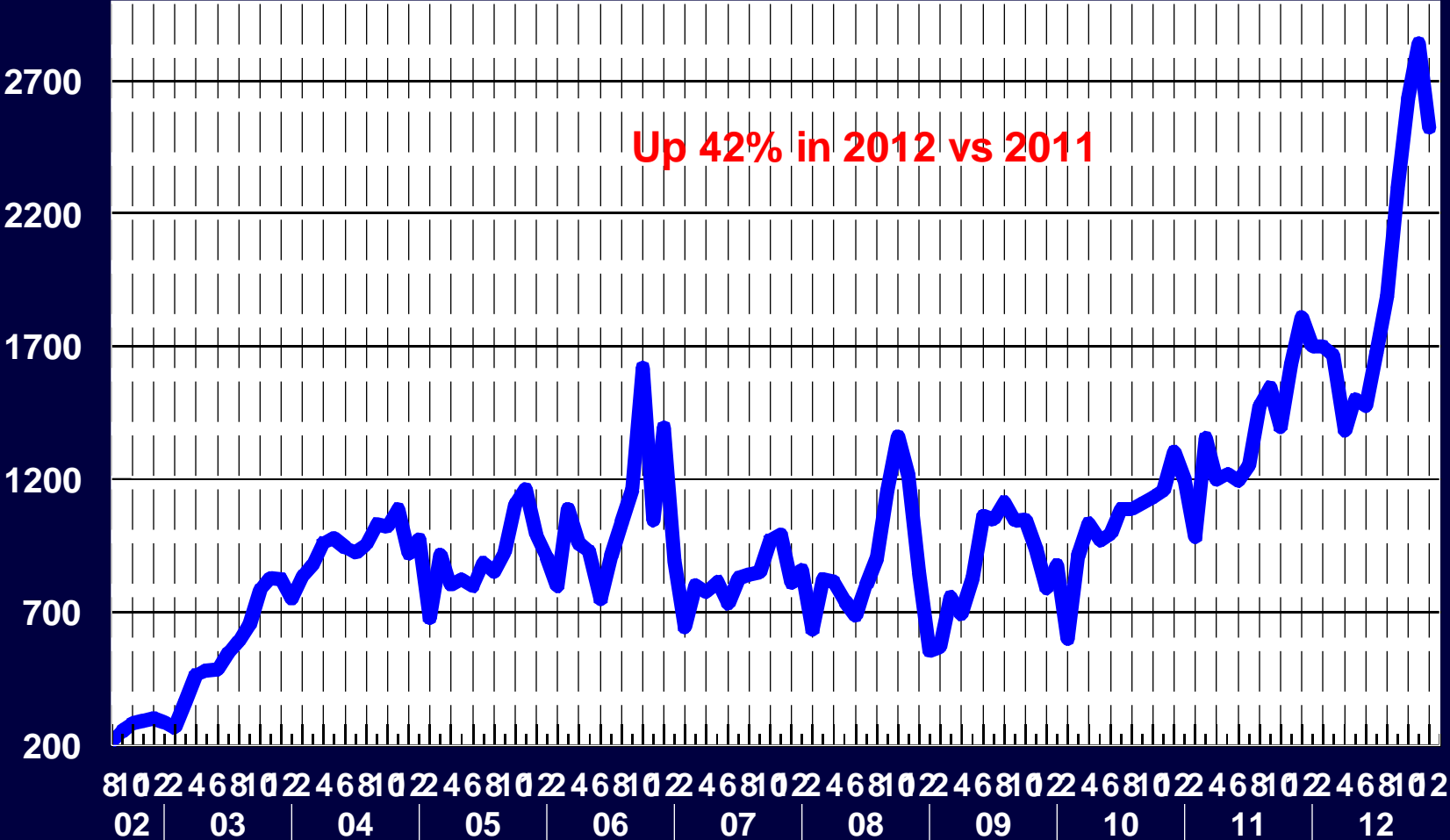
NT\$ Billions



Company Financial Releases

Taiwan Flex Circuit Shipments Composite of 3 Manufacturers

NT\$ Millions



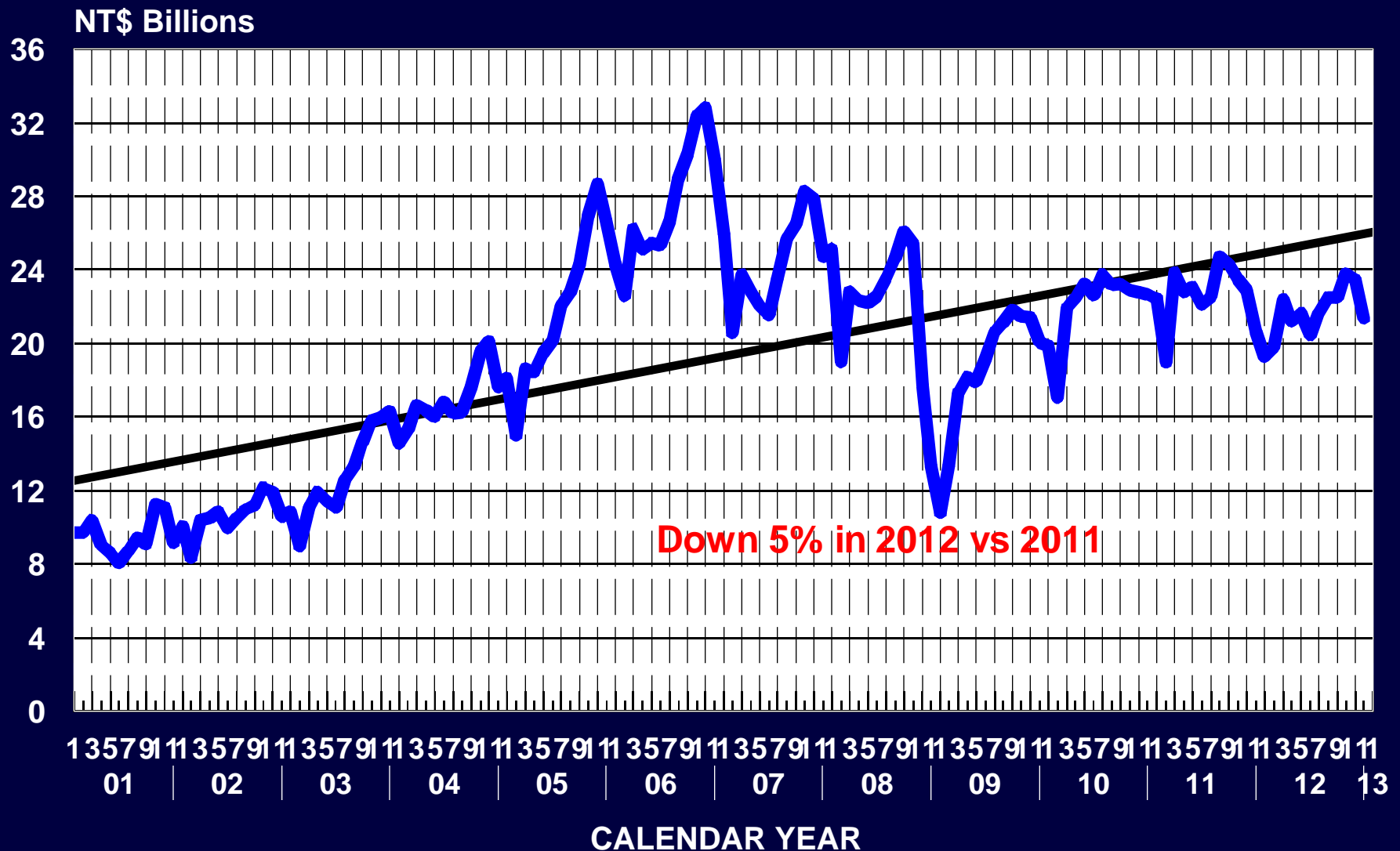
Up 42% in 2012 vs 2011

Company Financial Releases
Career Tech, Flexium Interconnect, Uniflex

CALENDAR YEAR

Taiwan Rigid & Flex PCB Shipments

Broad Composite of 46 Taiwan-listed Manufacturers



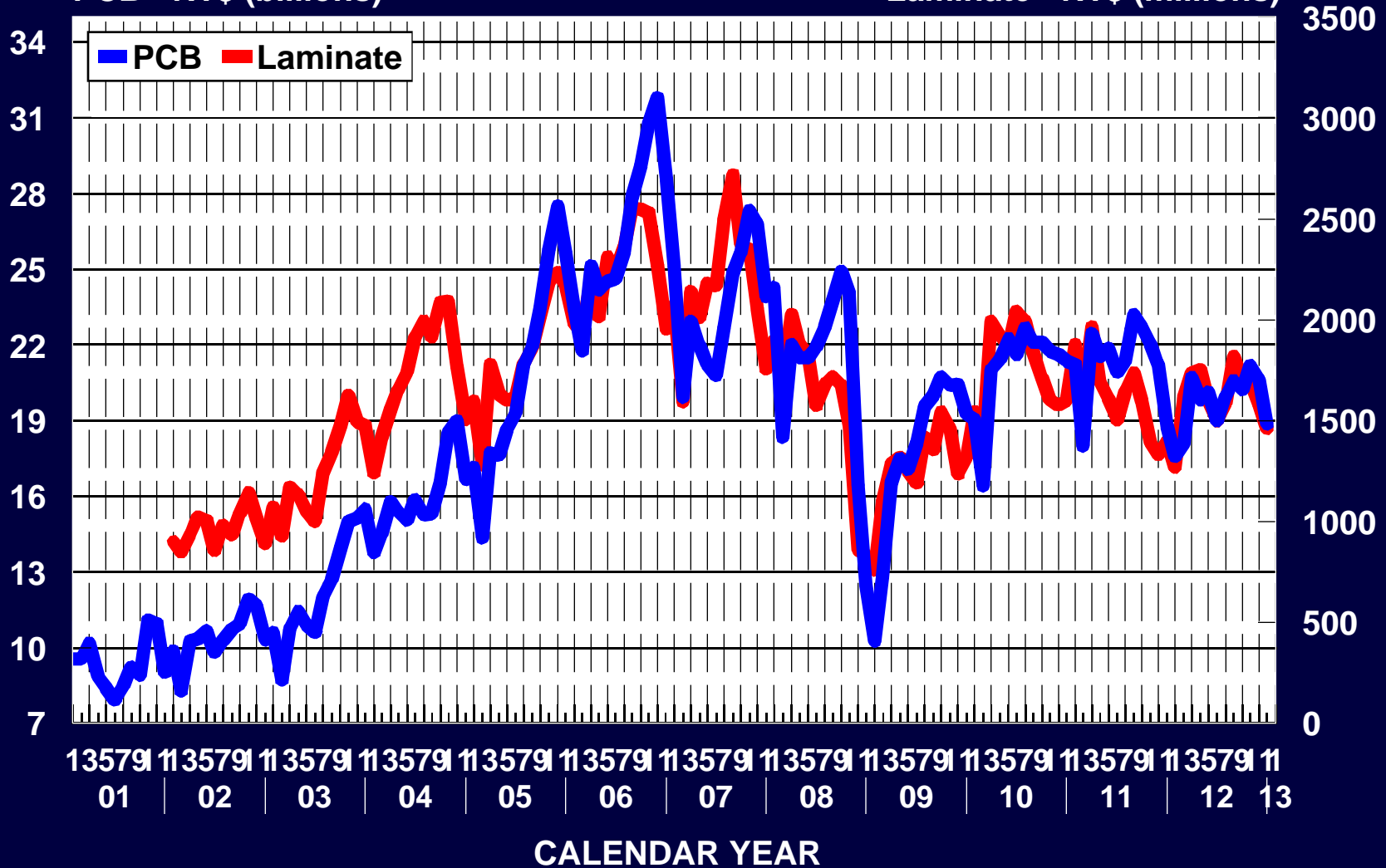
Company Financial Releases

Taiwan Shipments

42 Rigid PCB & 8 Laminate Manufacturers

PCB - NT\$ (billions)

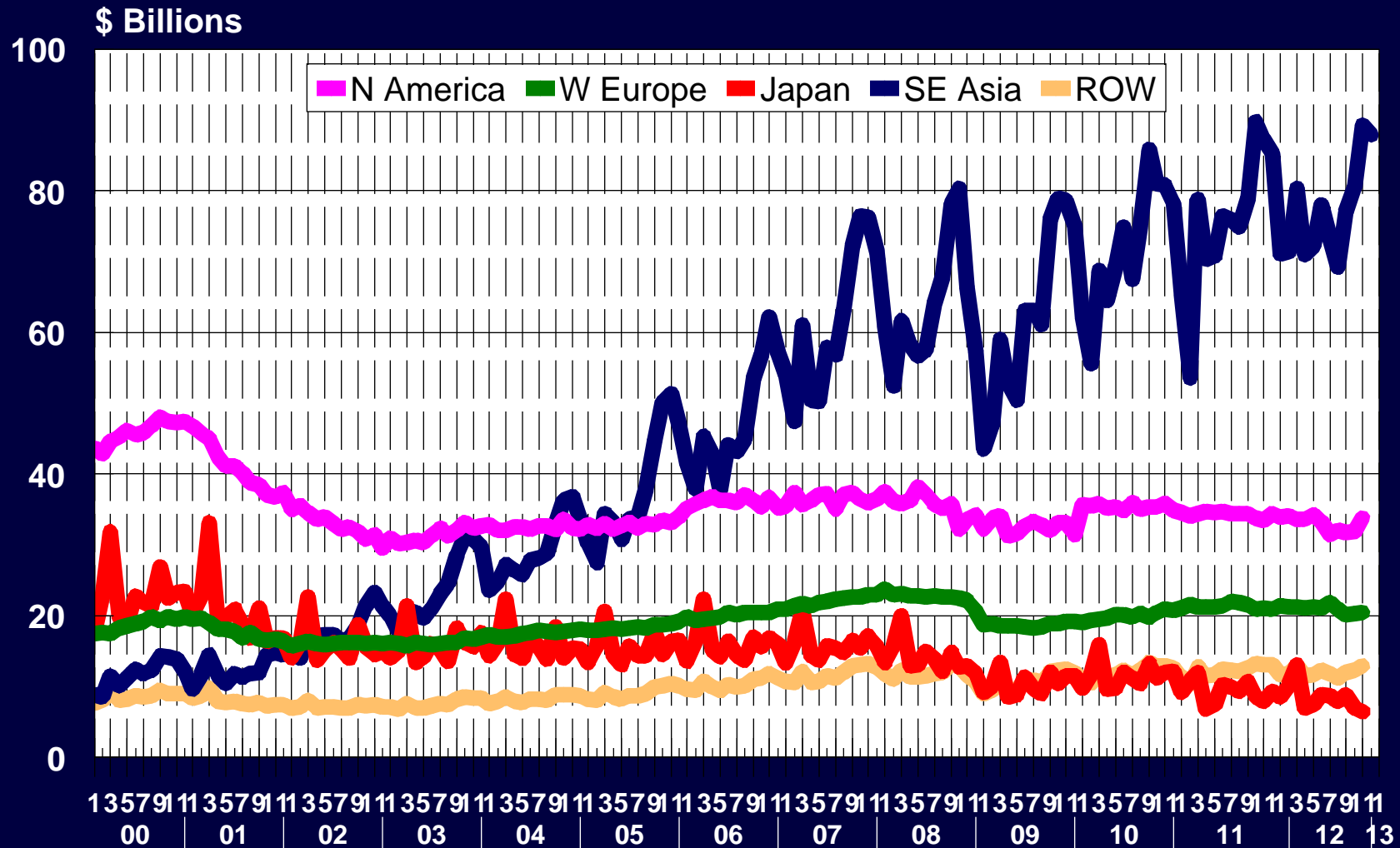
Laminate - NT\$ (millions)



Company Financial Releases

World Electronic Equipment Monthly Shipments

Converted @ Constant 2010 Exchange Rates

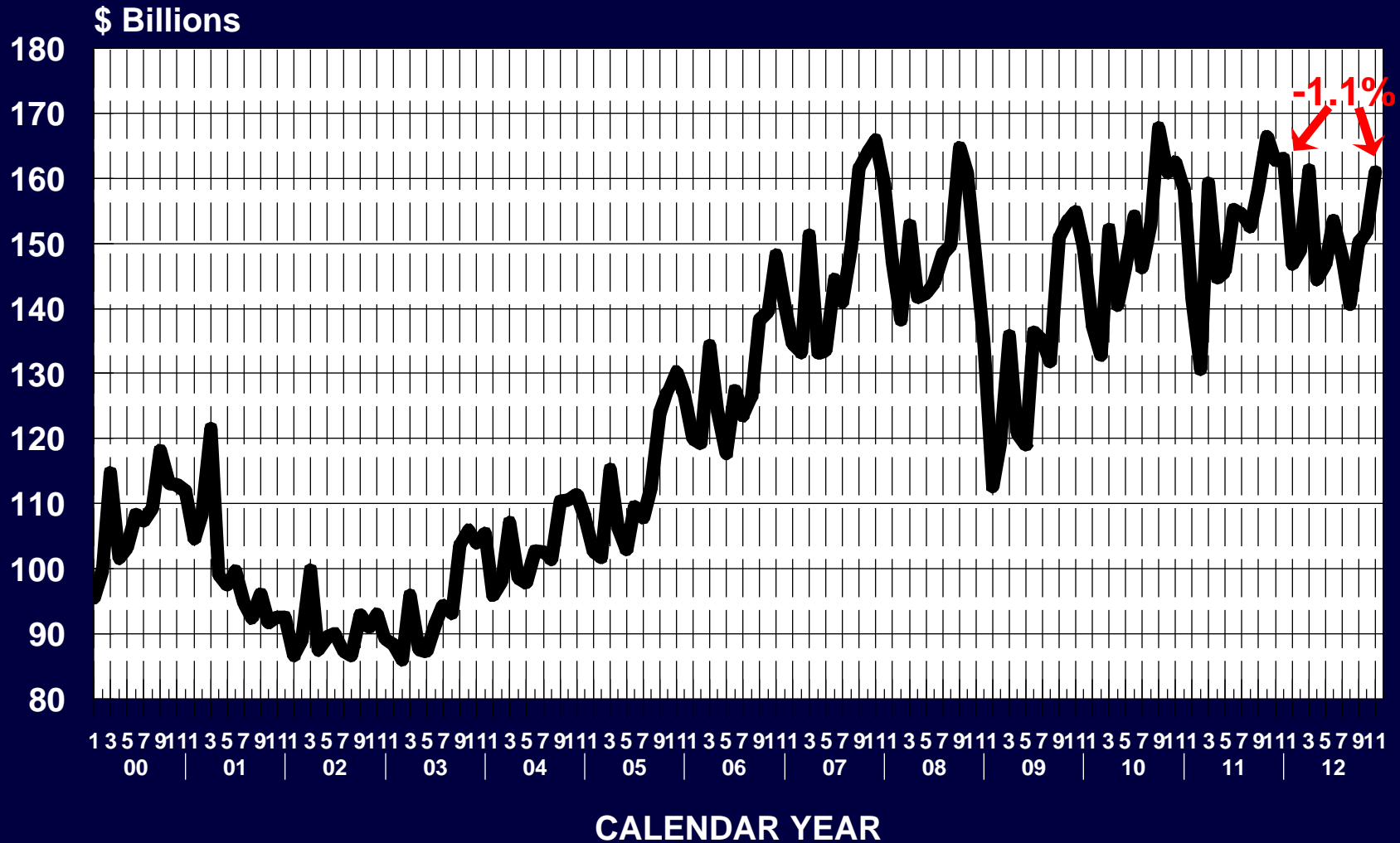


Source: Custer Consulting Group

CALENDAR YEAR

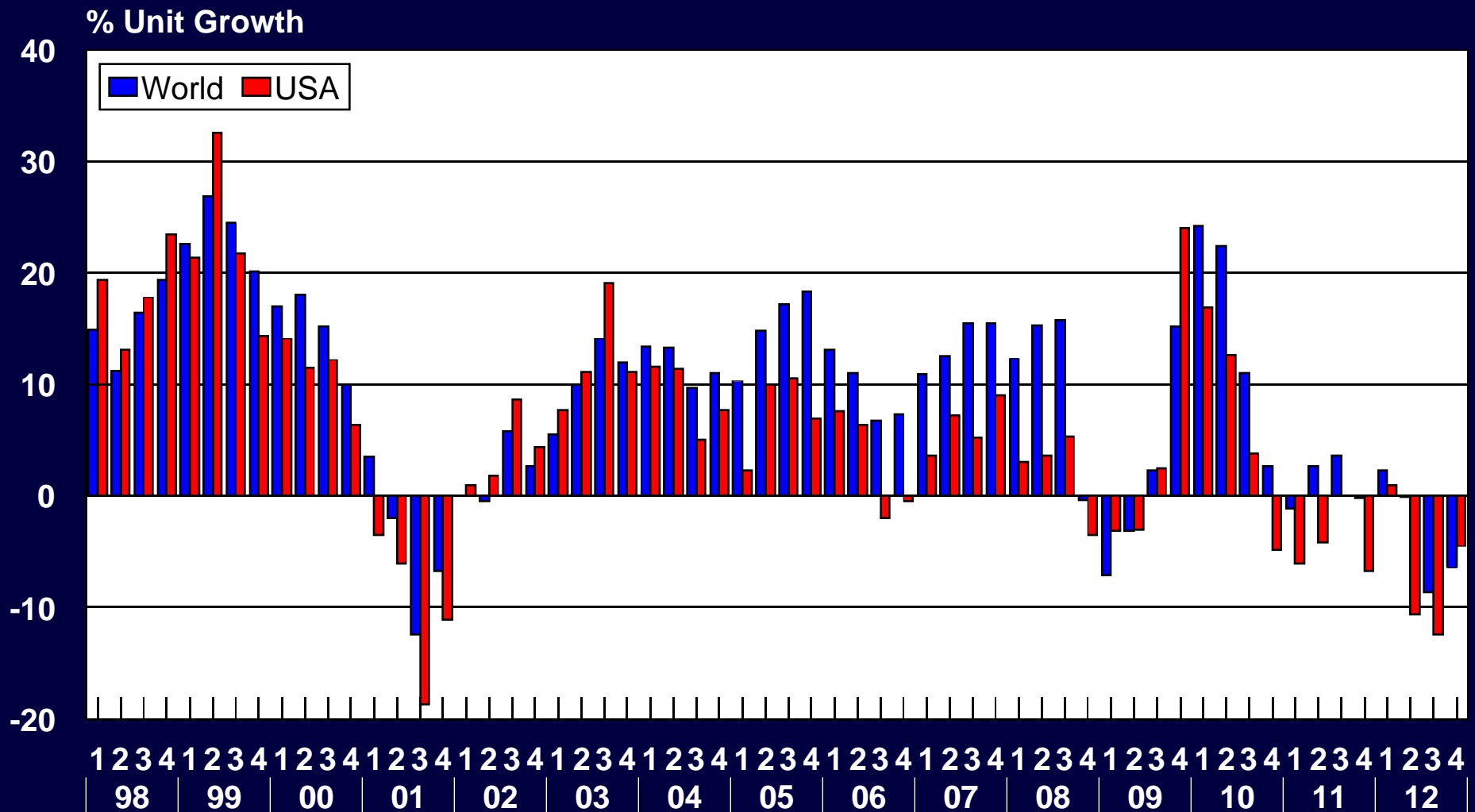
World Electronic Equipment Monthly Shipments

Converted @ Constant 2010 Exchange Rates



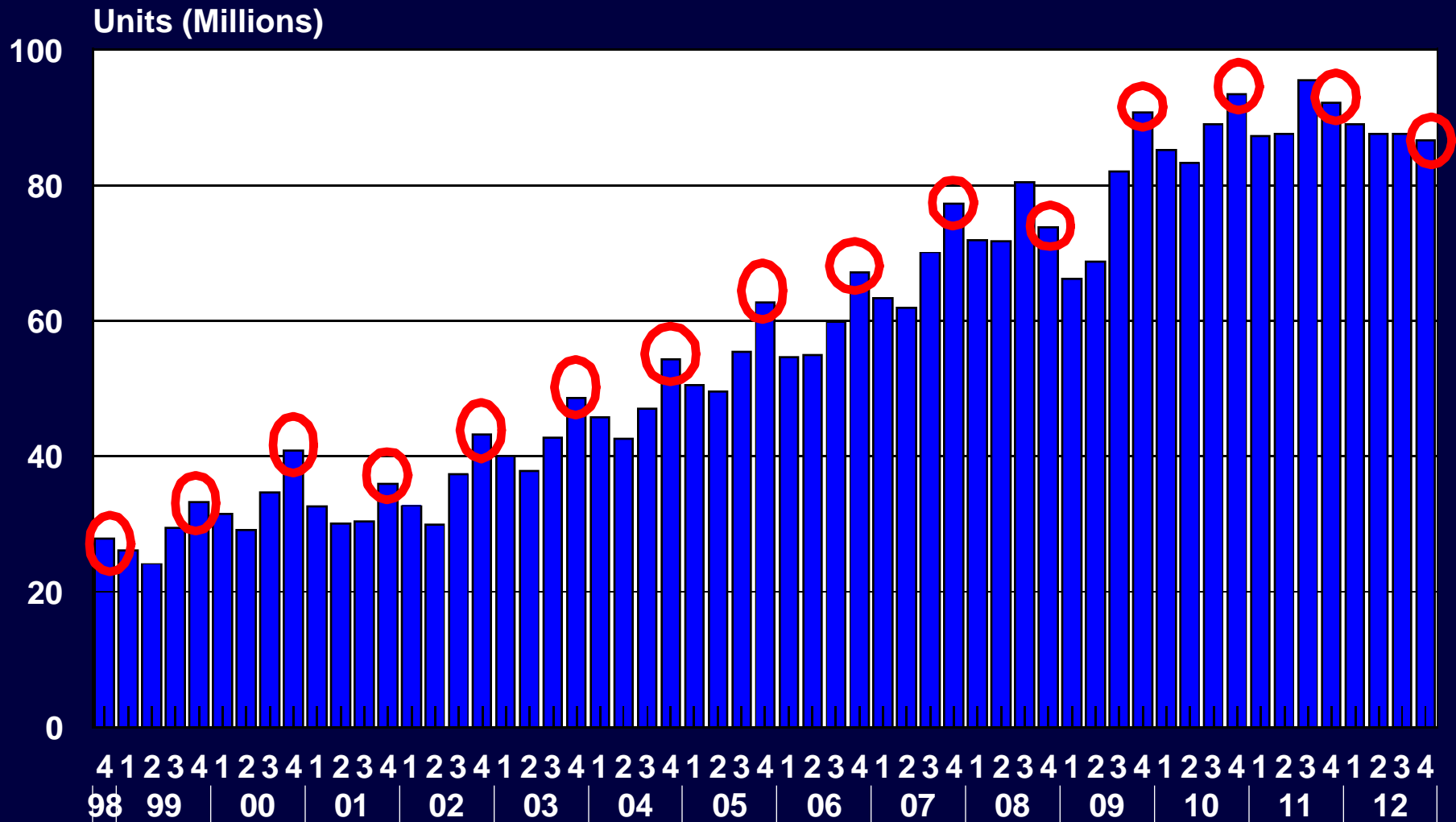
Source: Custer Consulting Group

Personal Computer Market Growth World & USA



IDC 1/2013 (excludes Handhelds, x86 Servers & Media Tablets)

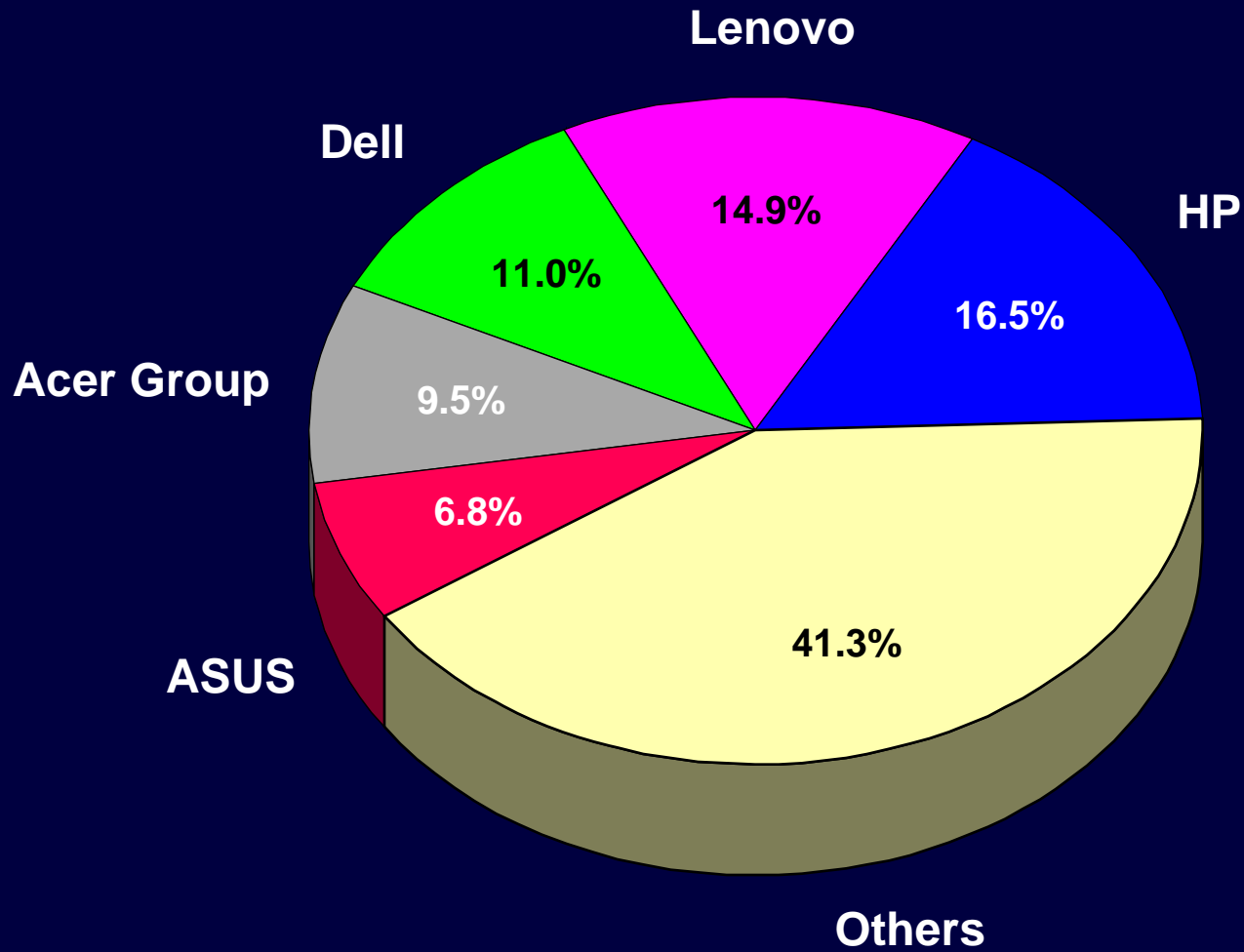
Personal Computer Unit Shipments World



Gartner 10/2012 (with IDC 4Q'12 growth)
Servers & Media Tablets not included

WORLD PERSONAL COMPUTER MARKET

2012

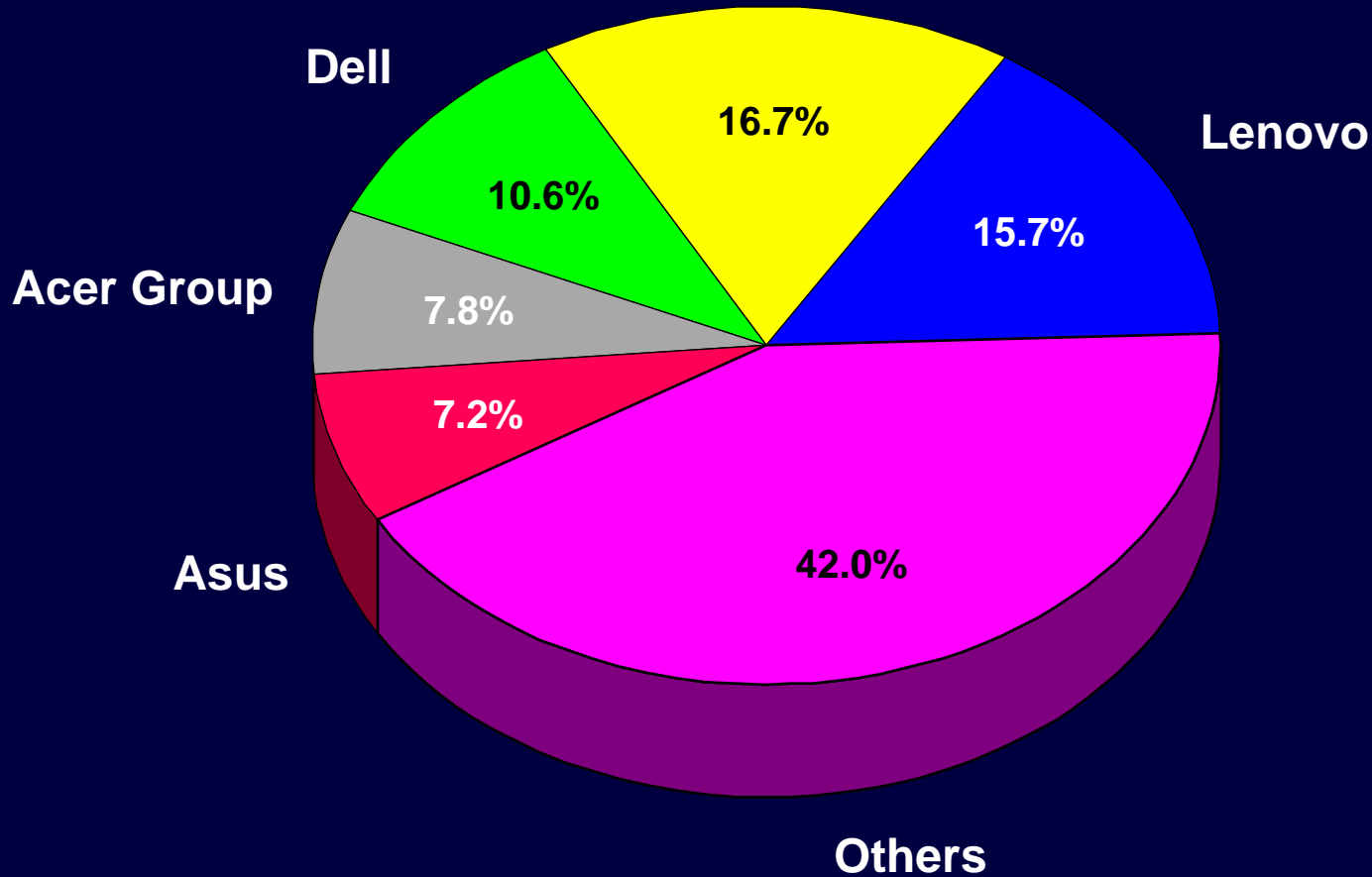


Total: 352.4 Million Units

WORLD PERSONAL COMPUTER MARKET

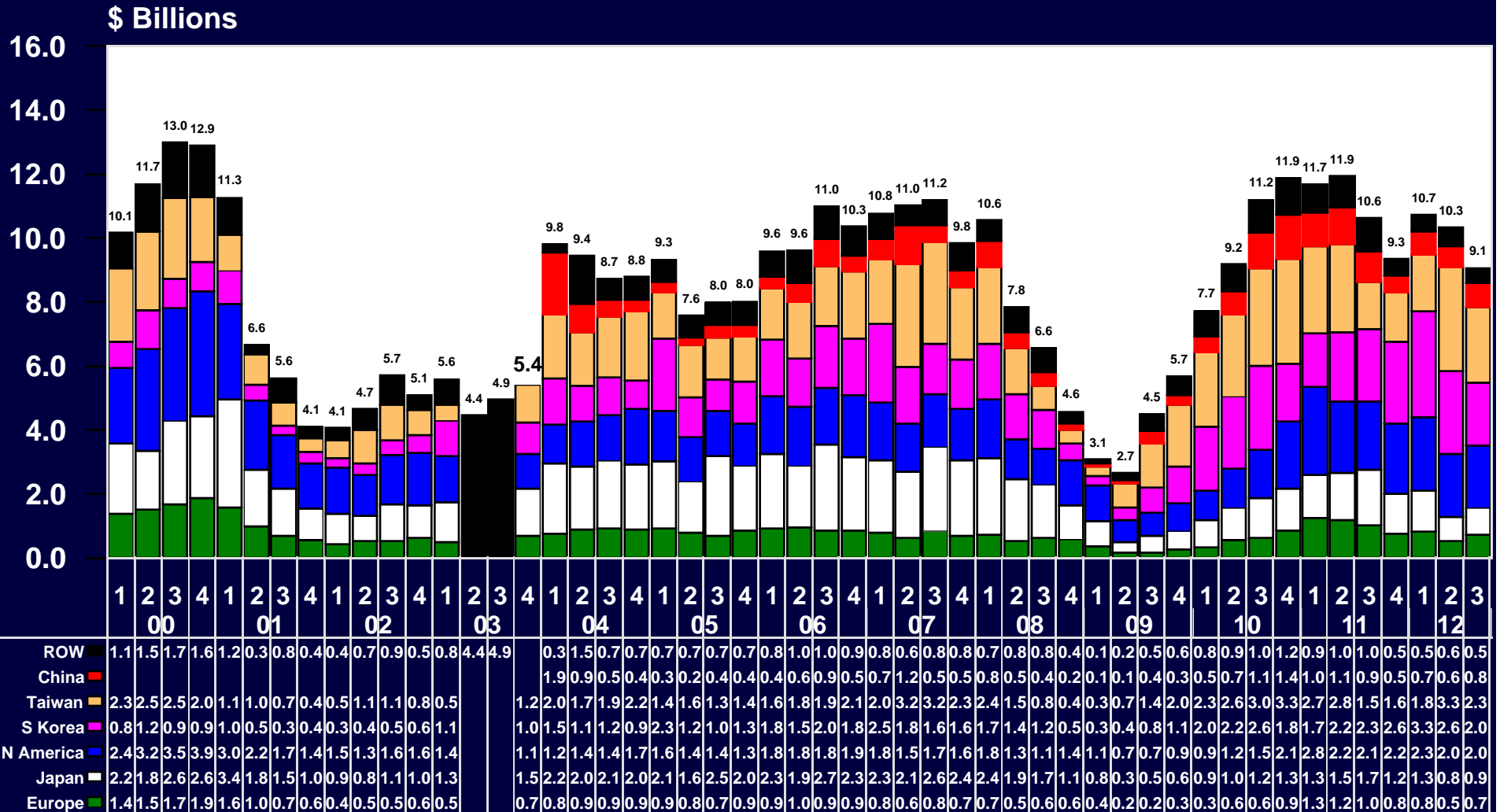
4Q'12

HP

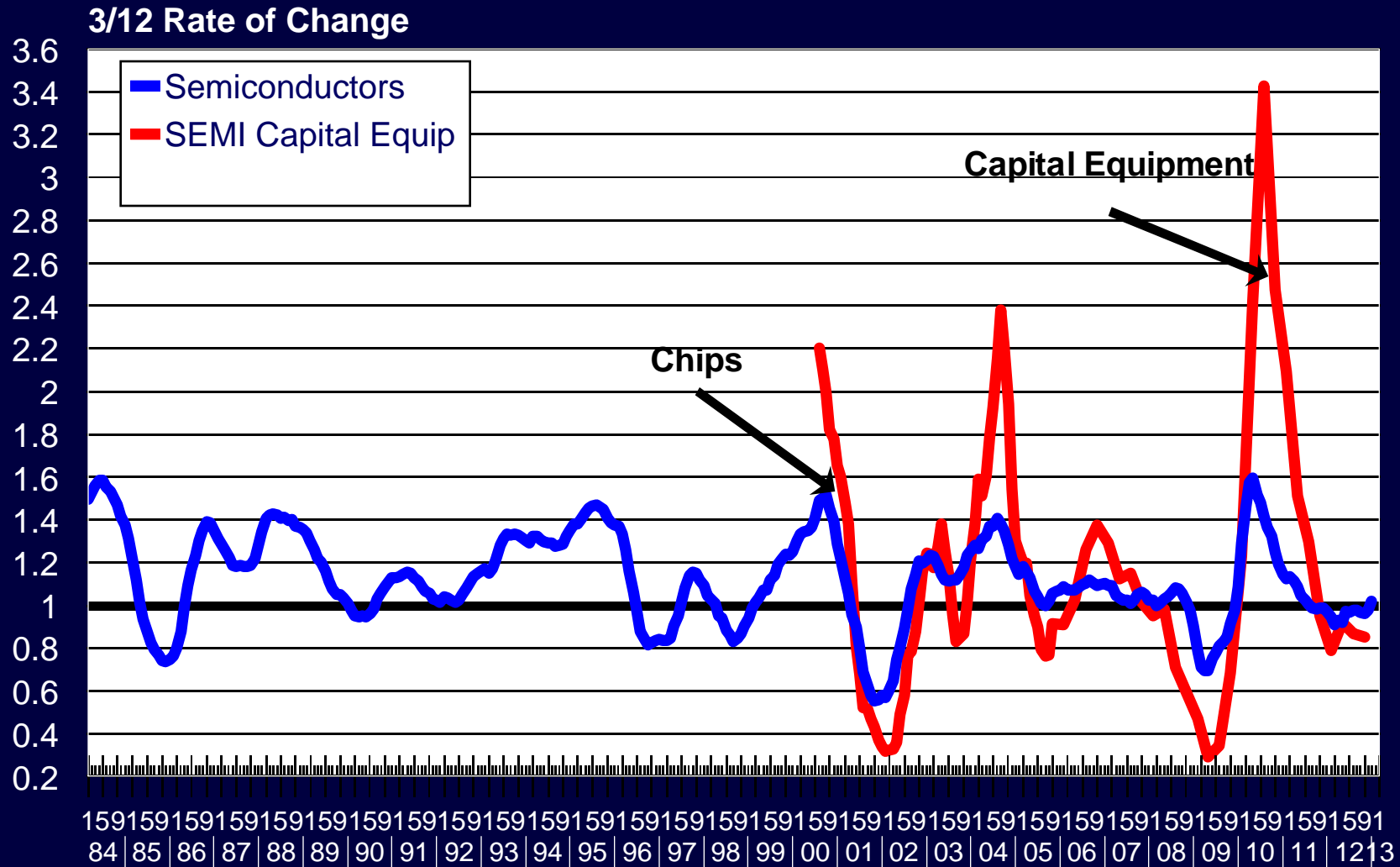


TOTAL: 89 M UNITS

Semiconductor Capital Equipment Shipments by Area

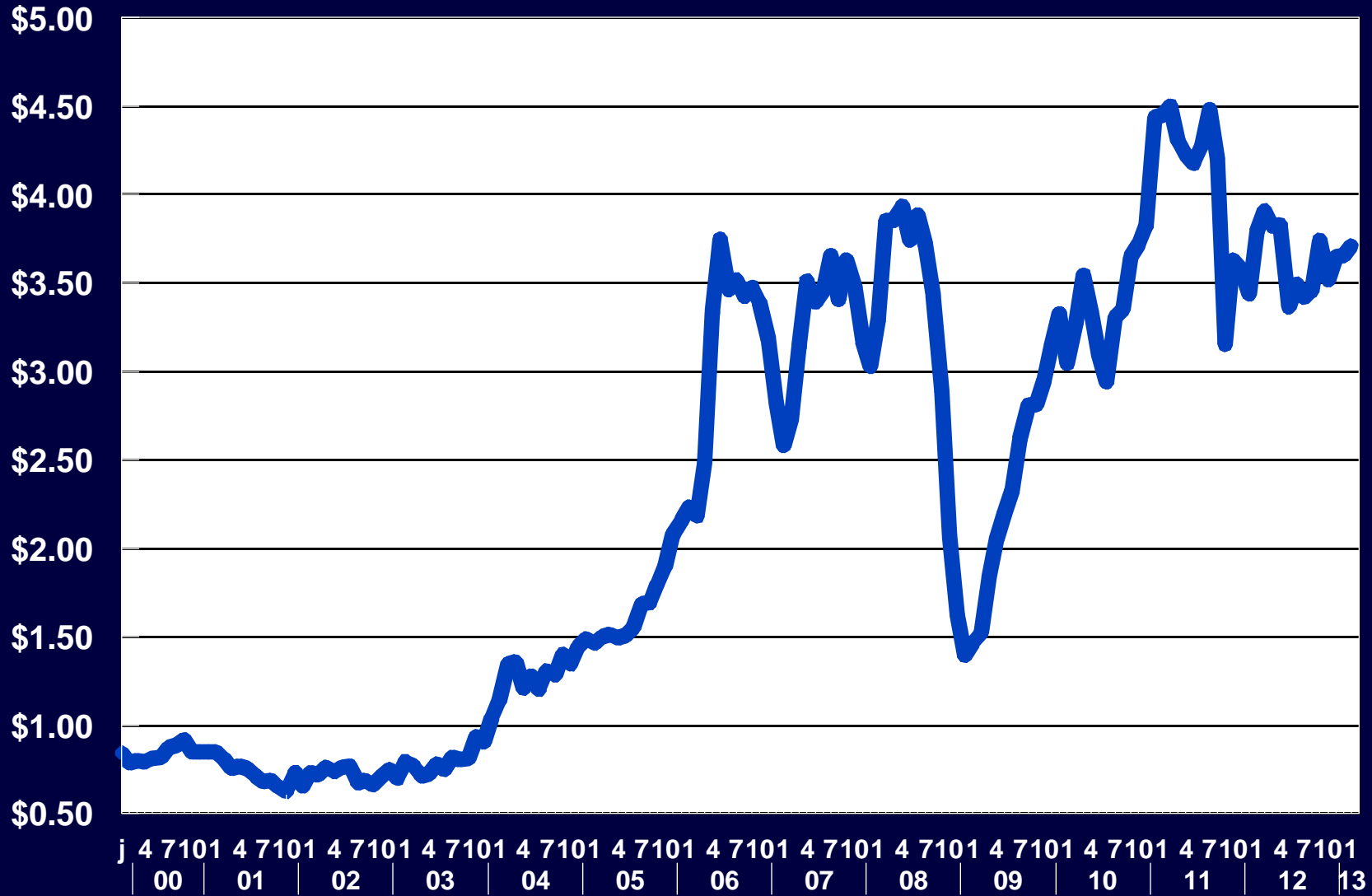


Global Semiconductor & Semiconductor Capital Equipment 3-Month Shipment Growth Rates on \$ Basis



Sources: SIA; Semiconductor Equipment Association of Japan, www.semi.org, Custer Consulting Group SEMI equipment sector composite 2012 growth

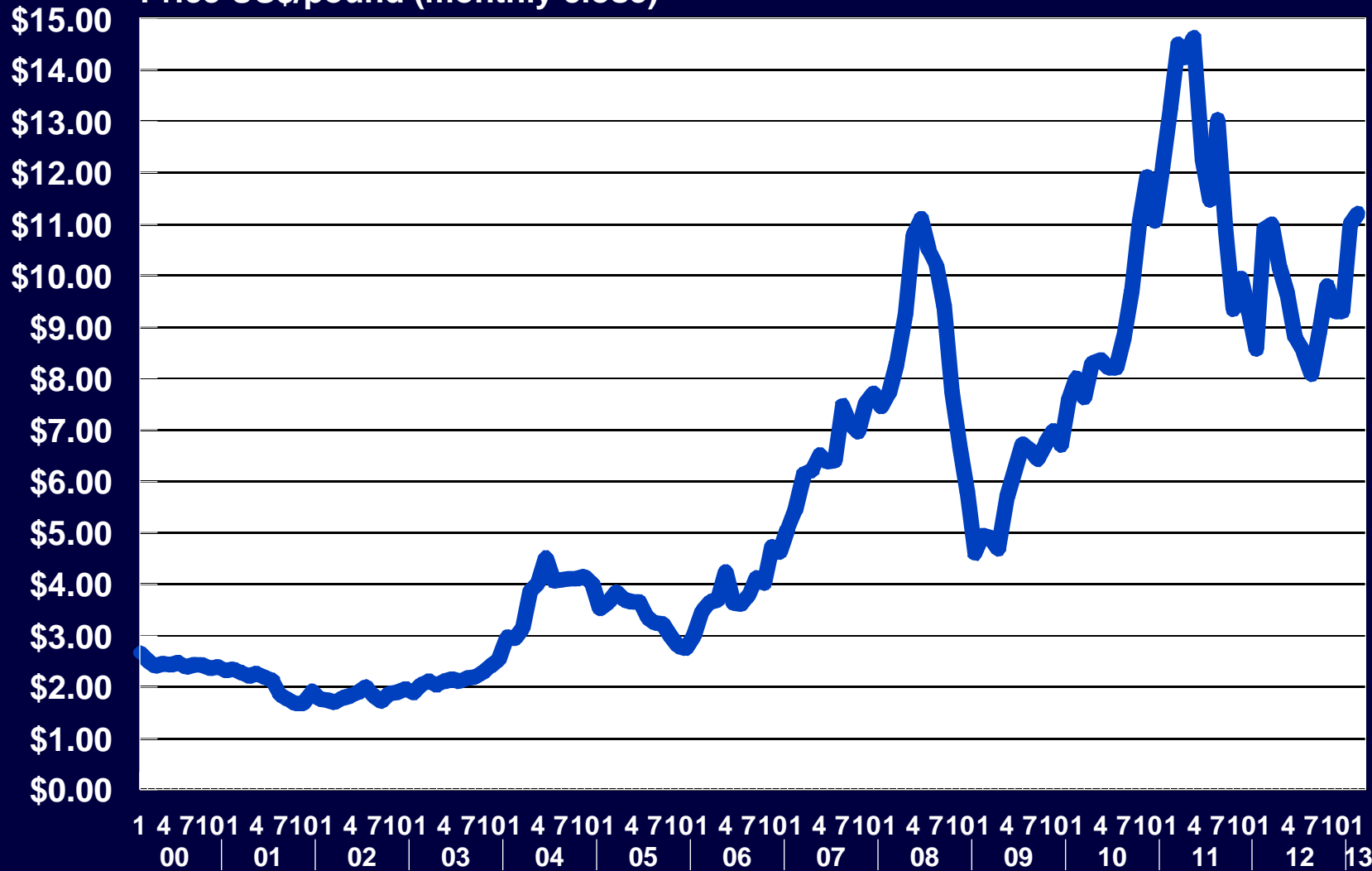
Copper, High Grade (HG, Comex)



<http://futures.tradingcharts.com/chart/CP/B9>

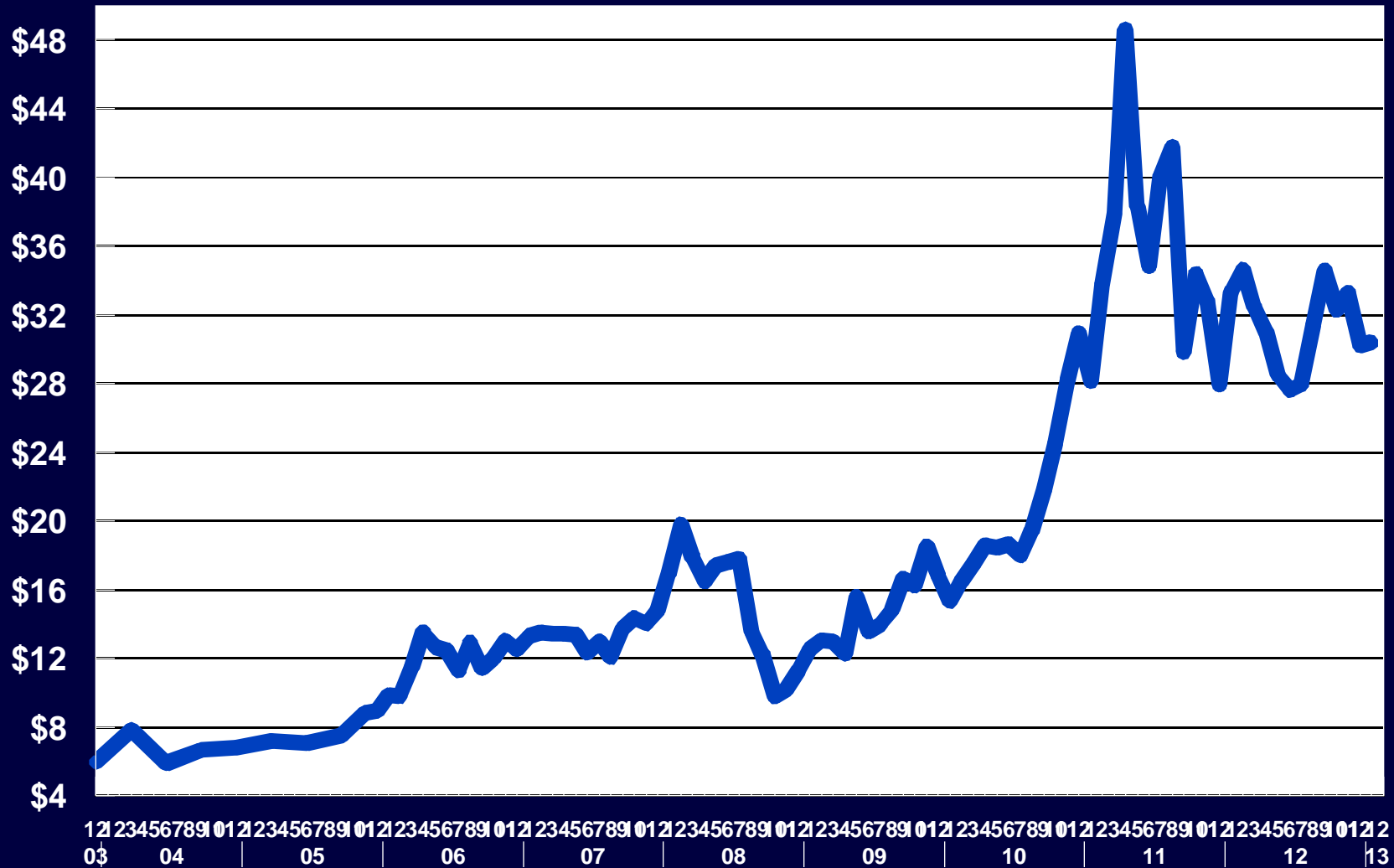
Tin

Price US\$/pound (monthly close)



Silver, 5000 oz (Si, Comex)

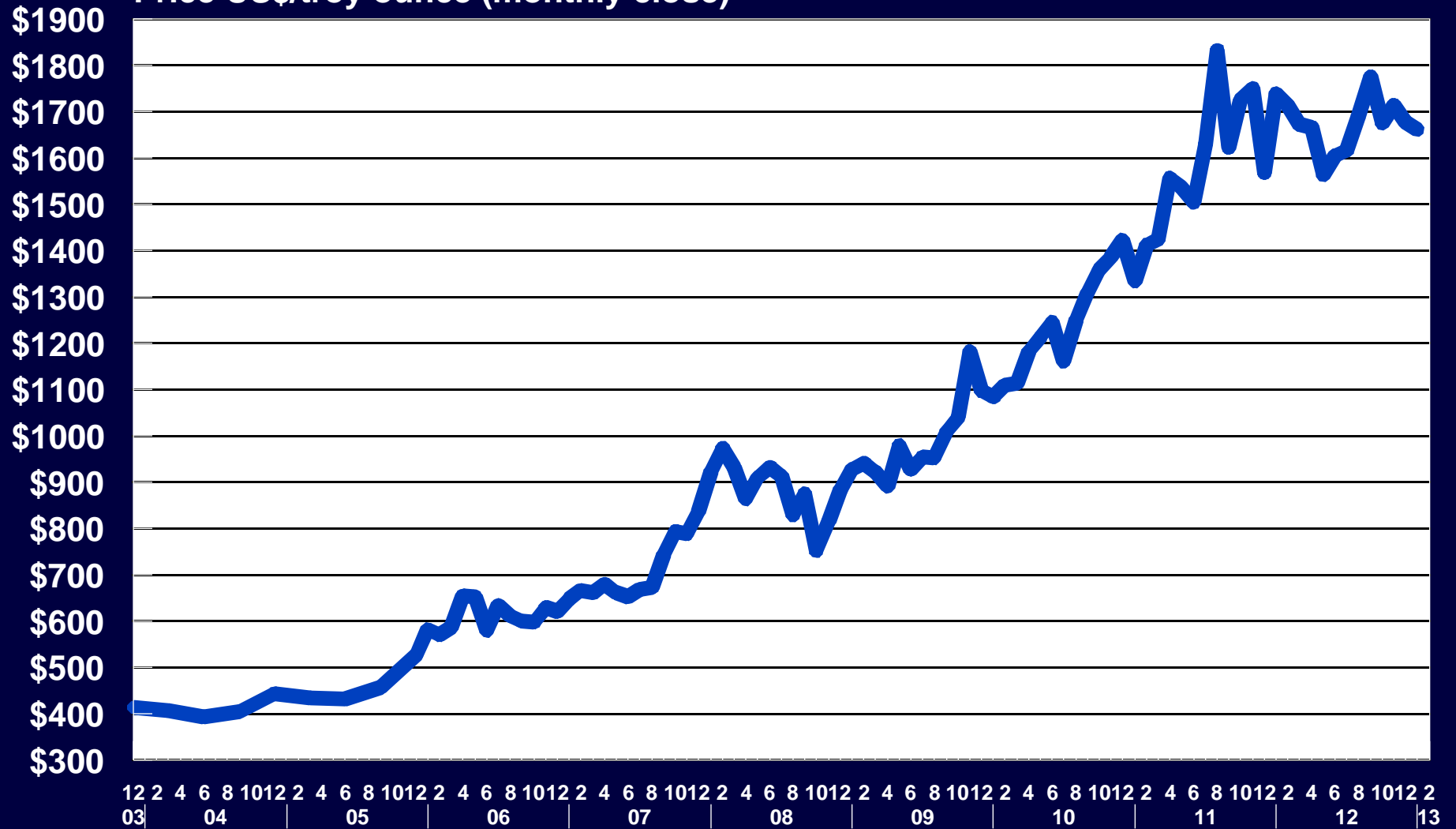
Price US\$/troy ounce (monthly close)



<http://futures.tradingcharts.com/chart/SV/39>

Gold, 100 oz (GC, Comex)

Price US\$/troy ounce (monthly close)



<http://futures.tradingcharts.com/chart/GD/49>

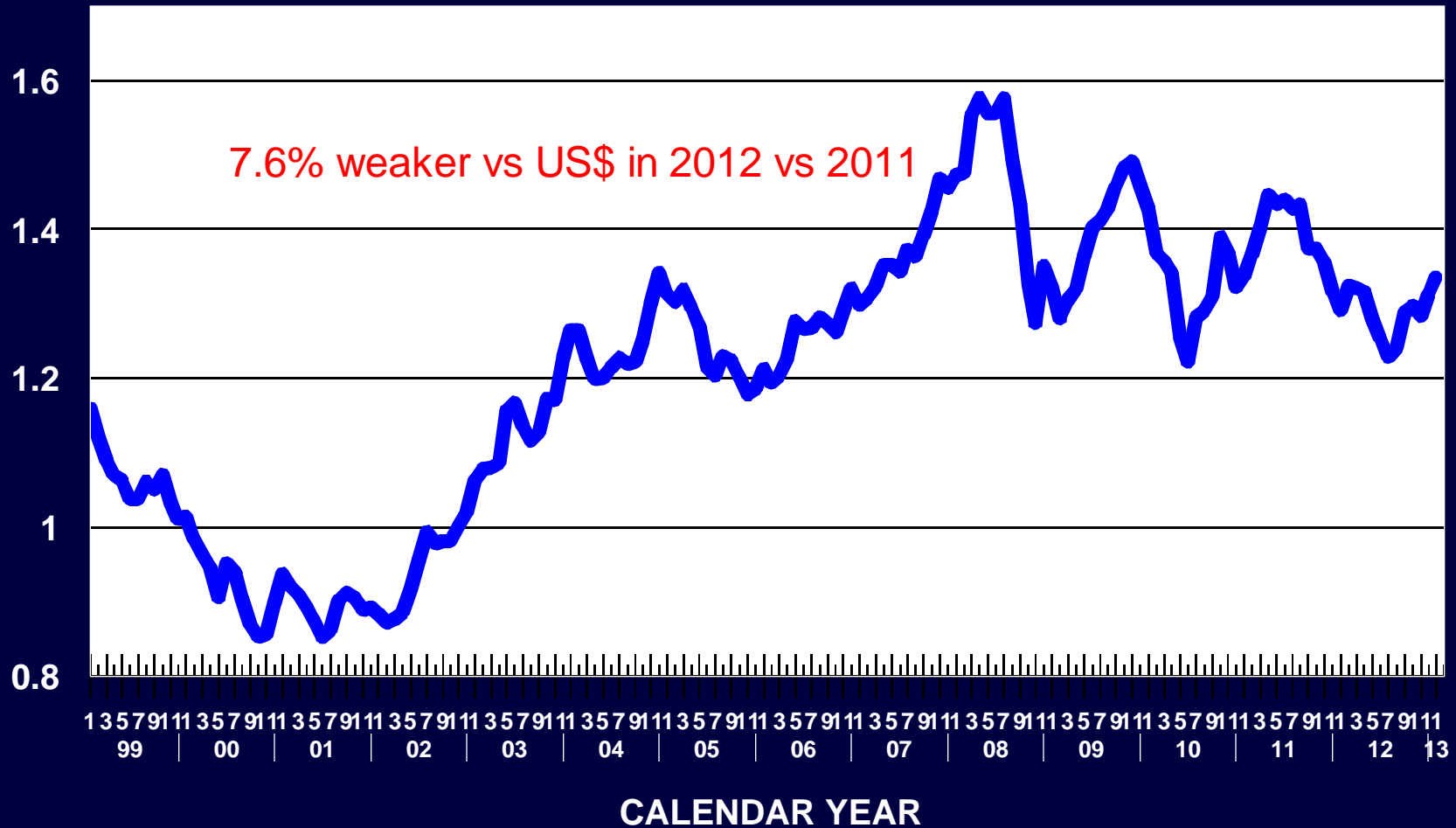
Trade-Weighted Exchange Value of U.S. Dollar Broad



<http://research.stlouisfed.org/fred2/series/TWEXBMTH>

Euro vs. U.S. Dollar

Exchange Rate US\$/euro



Canada \$ vs. U.S. \$

Exchange Rate Cn\$/US\$

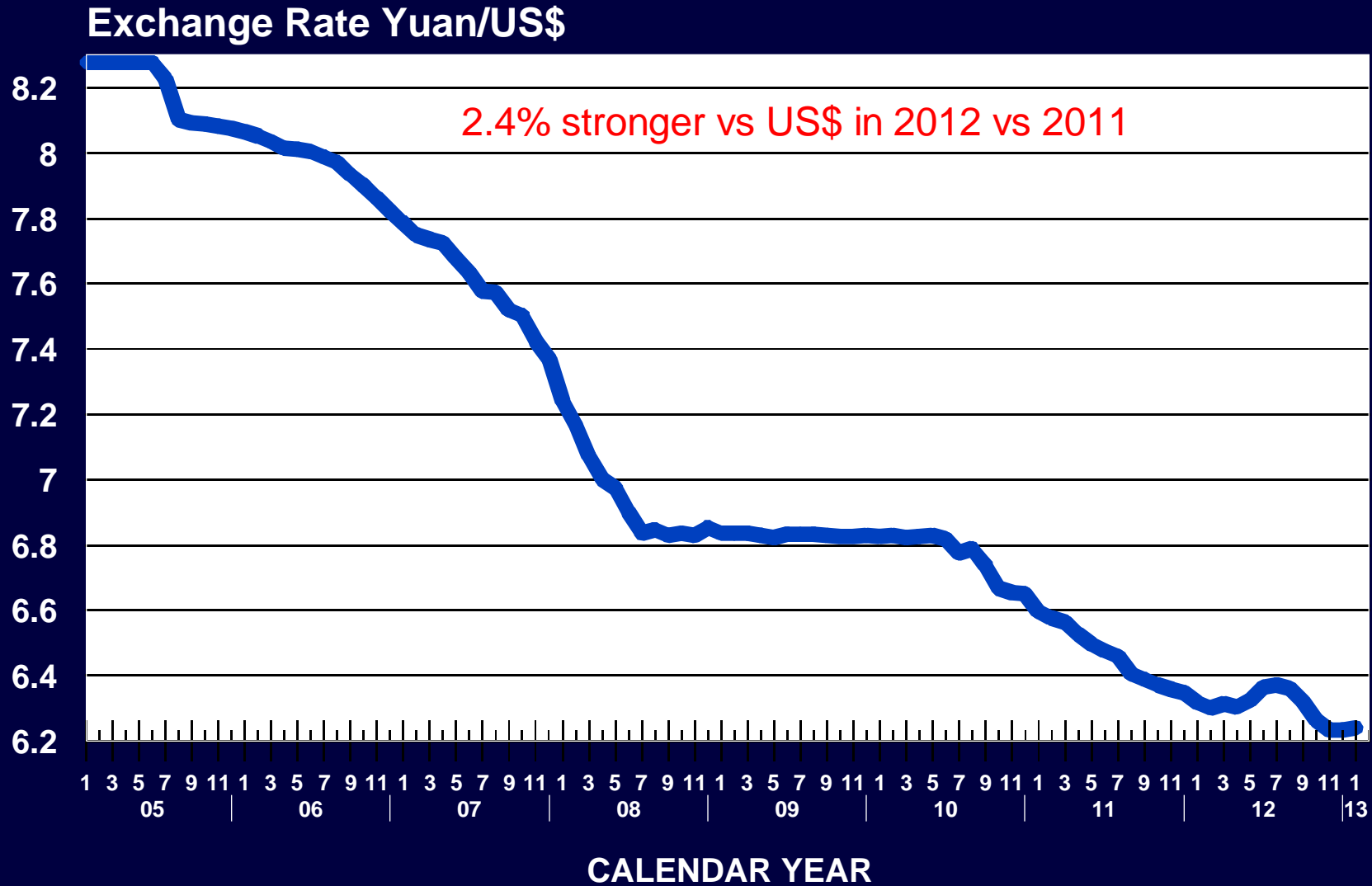


Japanese Yen vs. U.S. Dollar

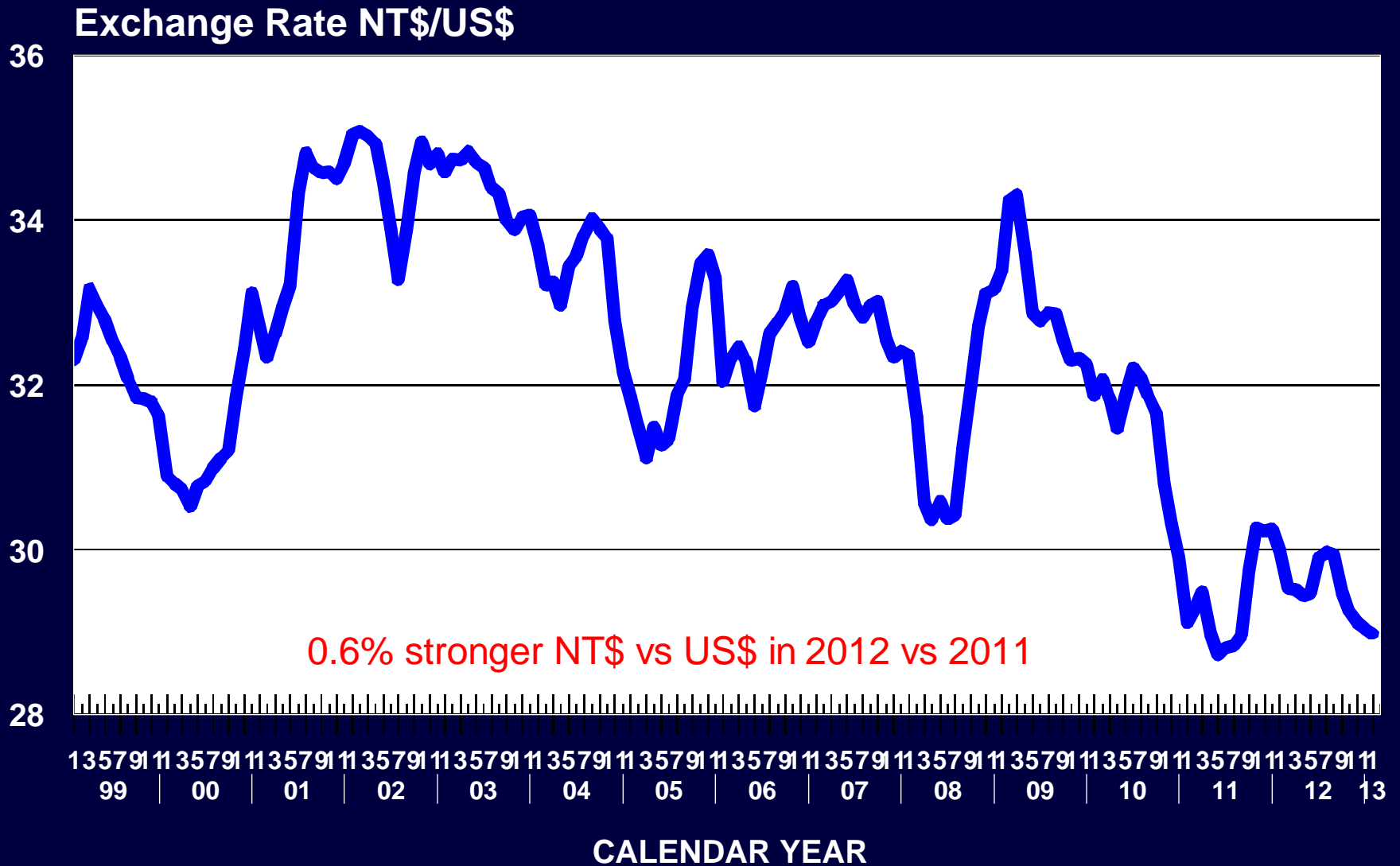
Exchange Rate Yen/US\$



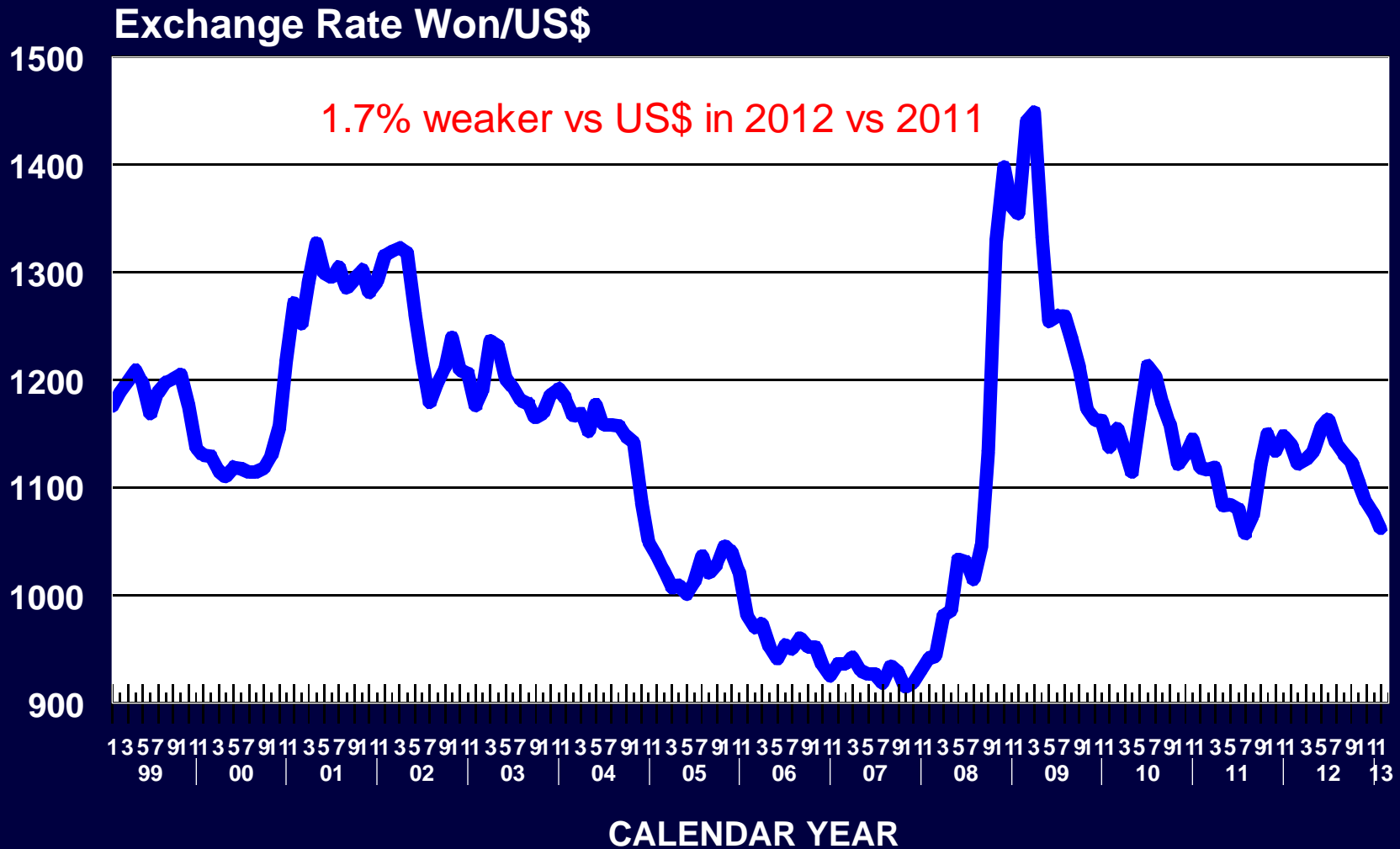
China Yuan vs. U.S. Dollar



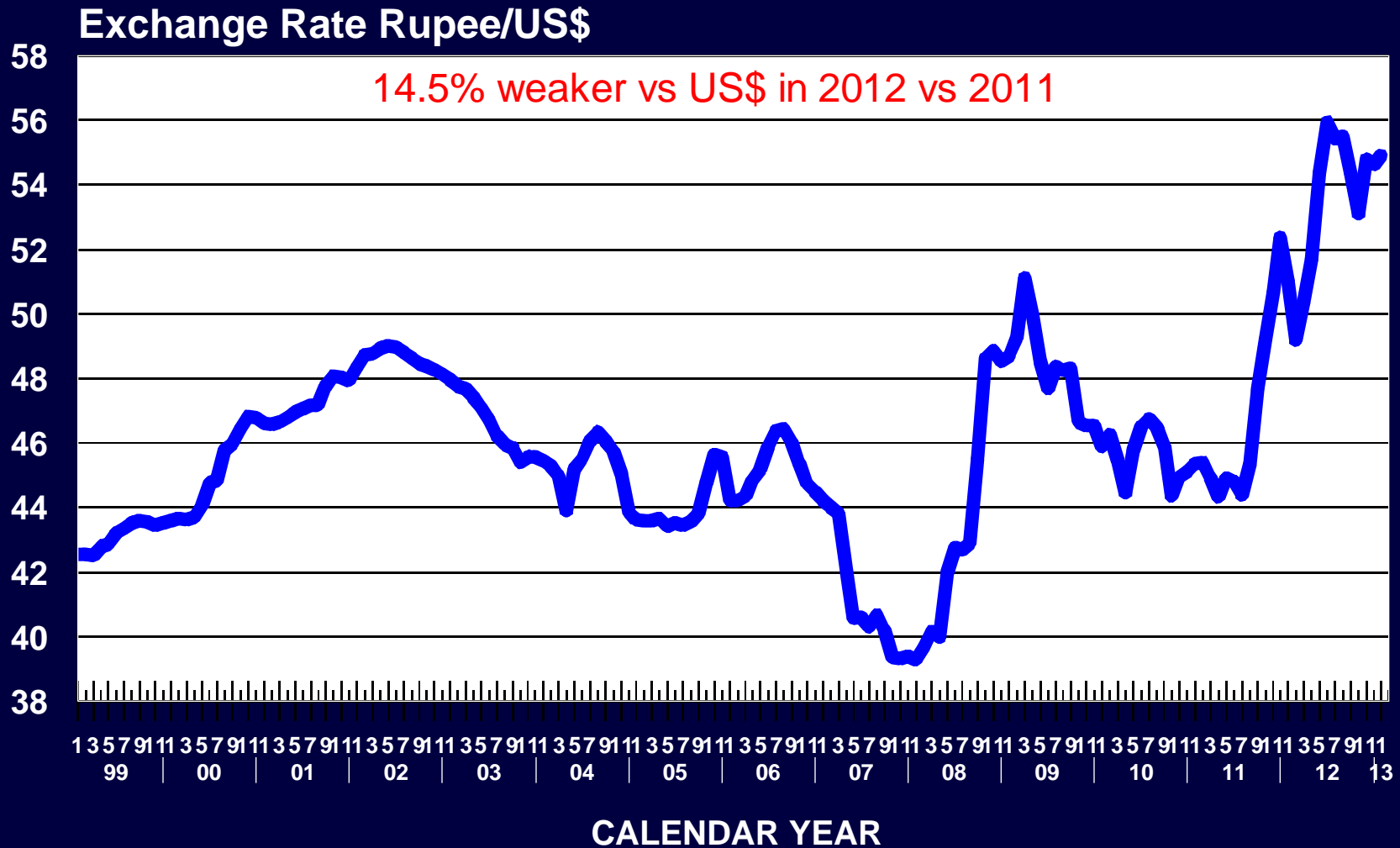
Taiwan vs. U.S. Dollar



S. Korean Won vs. U.S. Dollar



Indian Rupee vs. U.S. Dollar



Brazilian Real vs. U.S. Dollar

