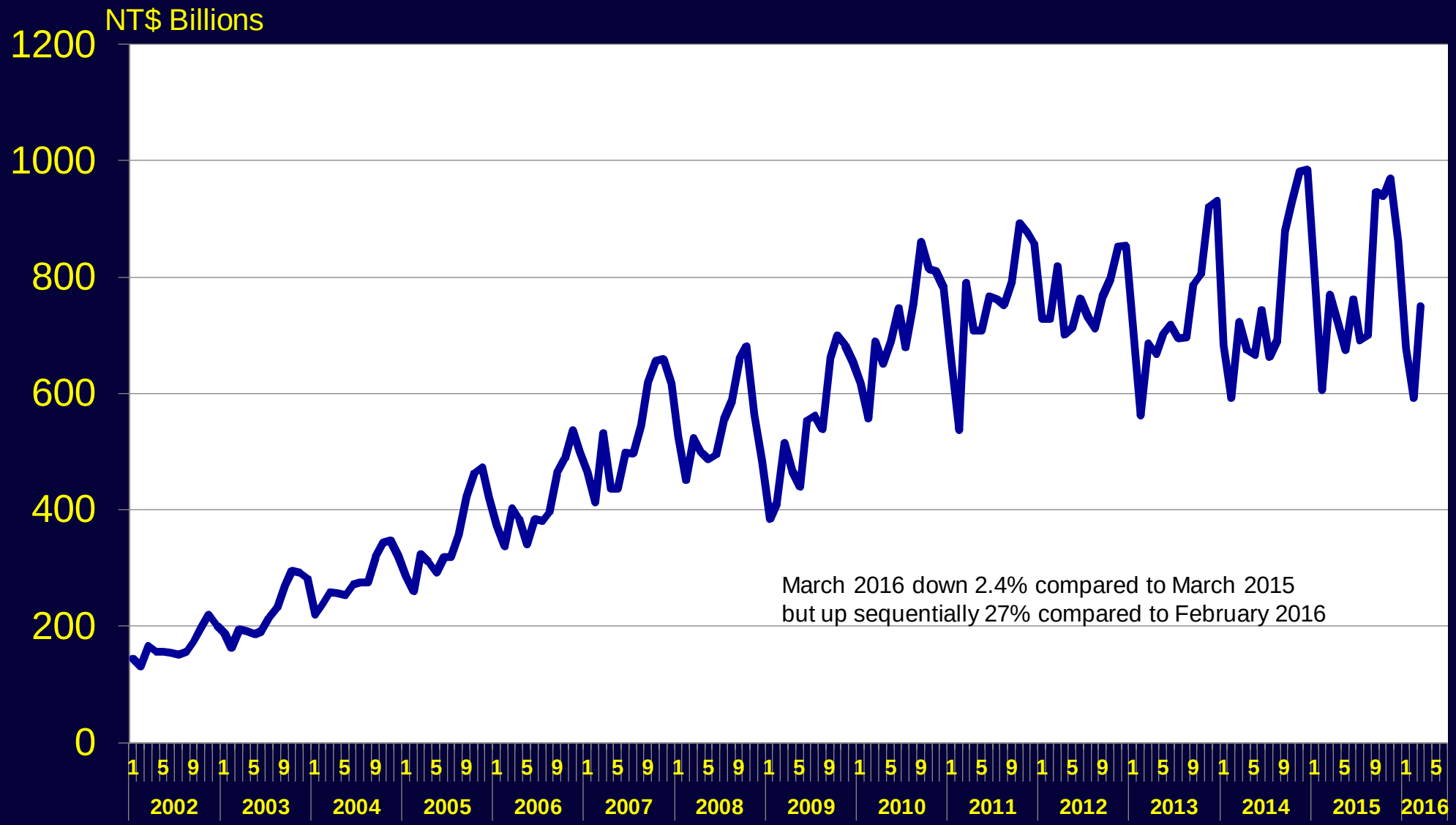
Chart 1

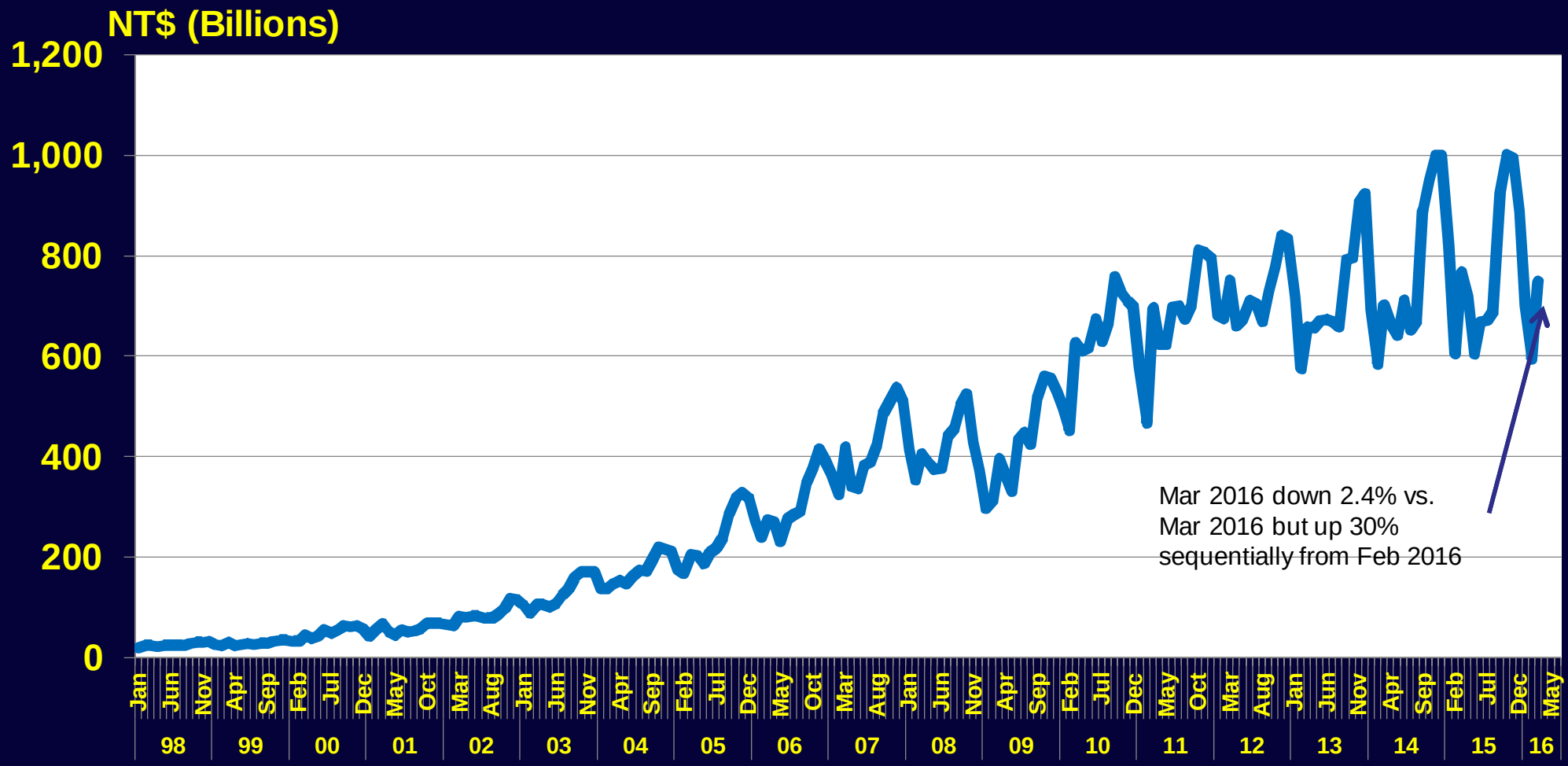
Taiwan/China Electronic Equipment Producers
Composite of 101 Manufacturers
Consolidated Revenue



Taiwan listed companies, often with significant manufacturing in China

Chart 2

Taiwan ODM Companies
Composite Sales of 11 Large Manufacturers



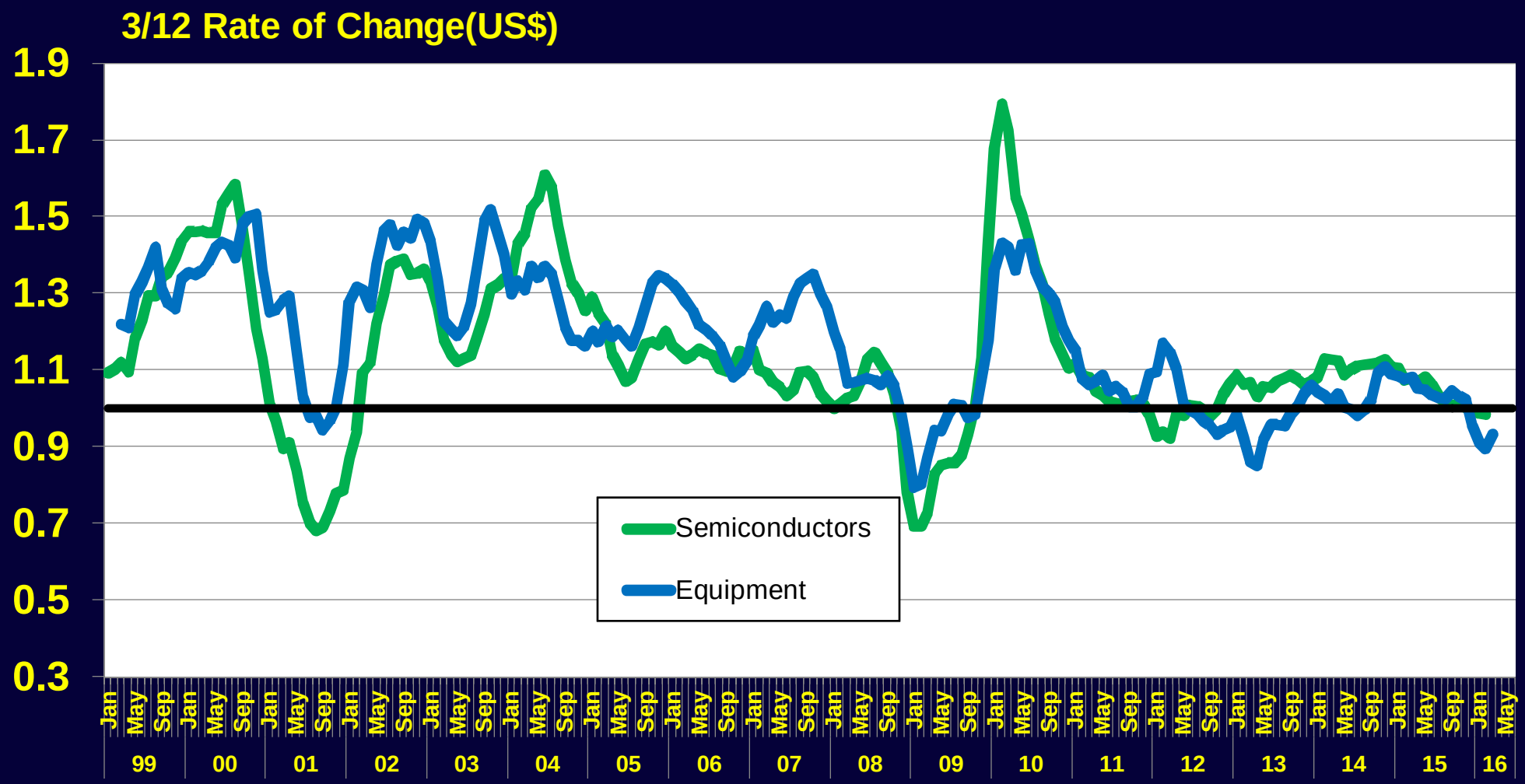
Company Financial Releases

Calendar Year

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

Chart 3

Semiconductor Shipments to Asia/Pacific 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

Chart 4

Taiwan Wafer Foundries
Composite of 14 Manufacturers



VIA Technologies, Advance Microelectronics, Advance Wireless Semiconductor, Episil Technologies, Inotera Memories, Macronix Intl, Mosel Vitelic, Powerchip Semi, Precision Silicon, ProMOS Tech, TSMC, United Microelectronics, Vanguard International Semi, Winbond Electronics

Chart 5

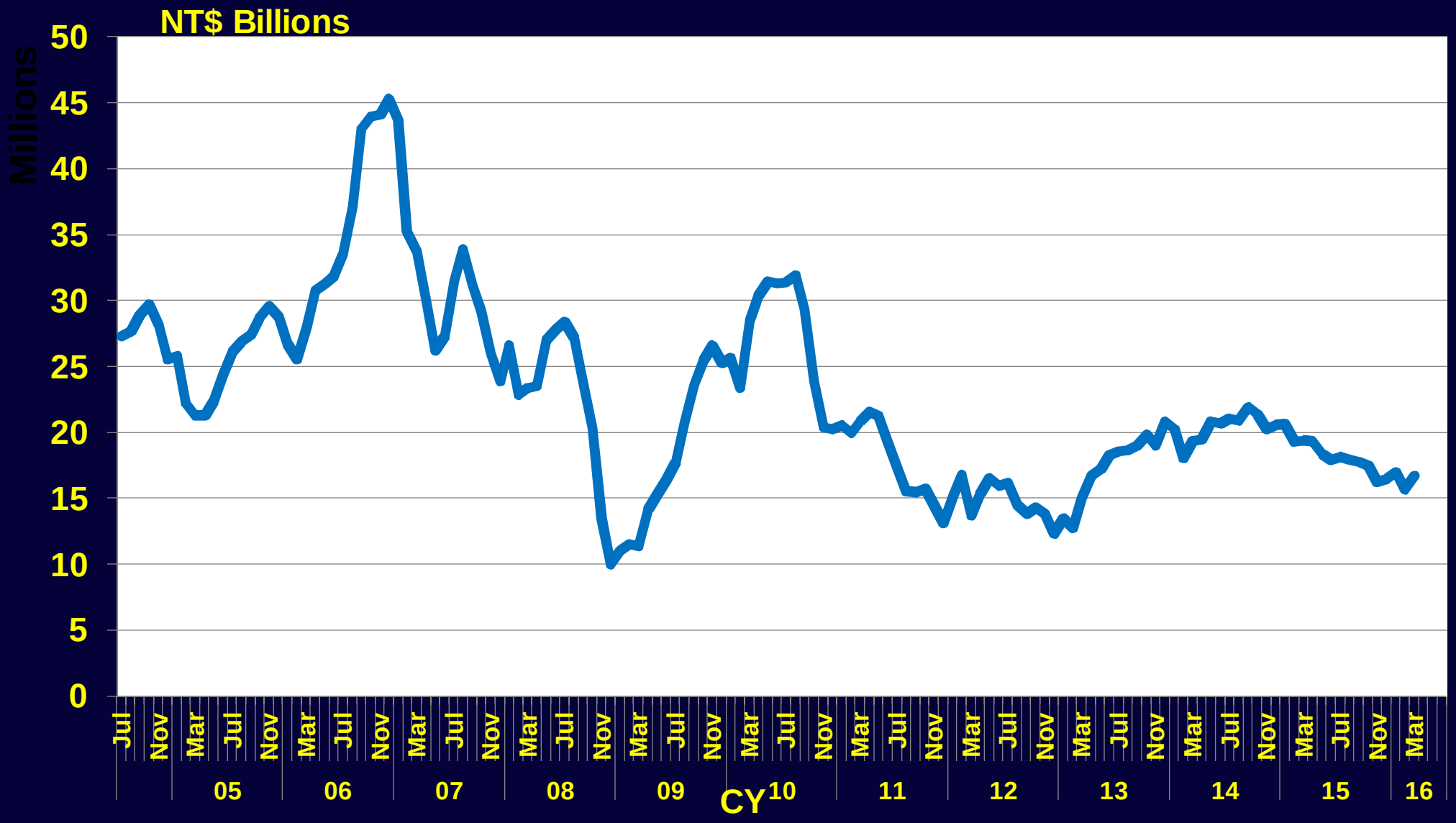
Taiwan Package & Test Companies Composite of 20 Manufacturers



ASE, Ardentec, ChipMOS Tech, Chipbond Tech, E'dale Tech, Formosa, Advance Tech, Fupo Elec, Greatek Elec, International Semiconductor Tech, King Yuan Elec, Lingsen Precision, Orient Semiconductor, Powertech Tech, Signality System, Sigurg Microelectronics, SPIL, Thalin Semiconductor, Vate Tech, Walton Advanced Tech

Chart 6

Taiwan Memory Companies
Composite of 8 Manufacturers



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

Chart 7

Taiwan Passive Component Companies Composite Sales of 25 Manufacturers



Chilsin Electronics, Cyntec, (FCE) Feei Cheng Enterprise, Holy Stone Enterprise, 3H (Honey Hope Honesty 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 (Walsin Technology Corp), Yageo, YCTC (Yeh-Chiang Technology Corp)

Chart 8

Taiwan Solar/Photovoltaic Panel Companies
Composite of 27 Manufacturers

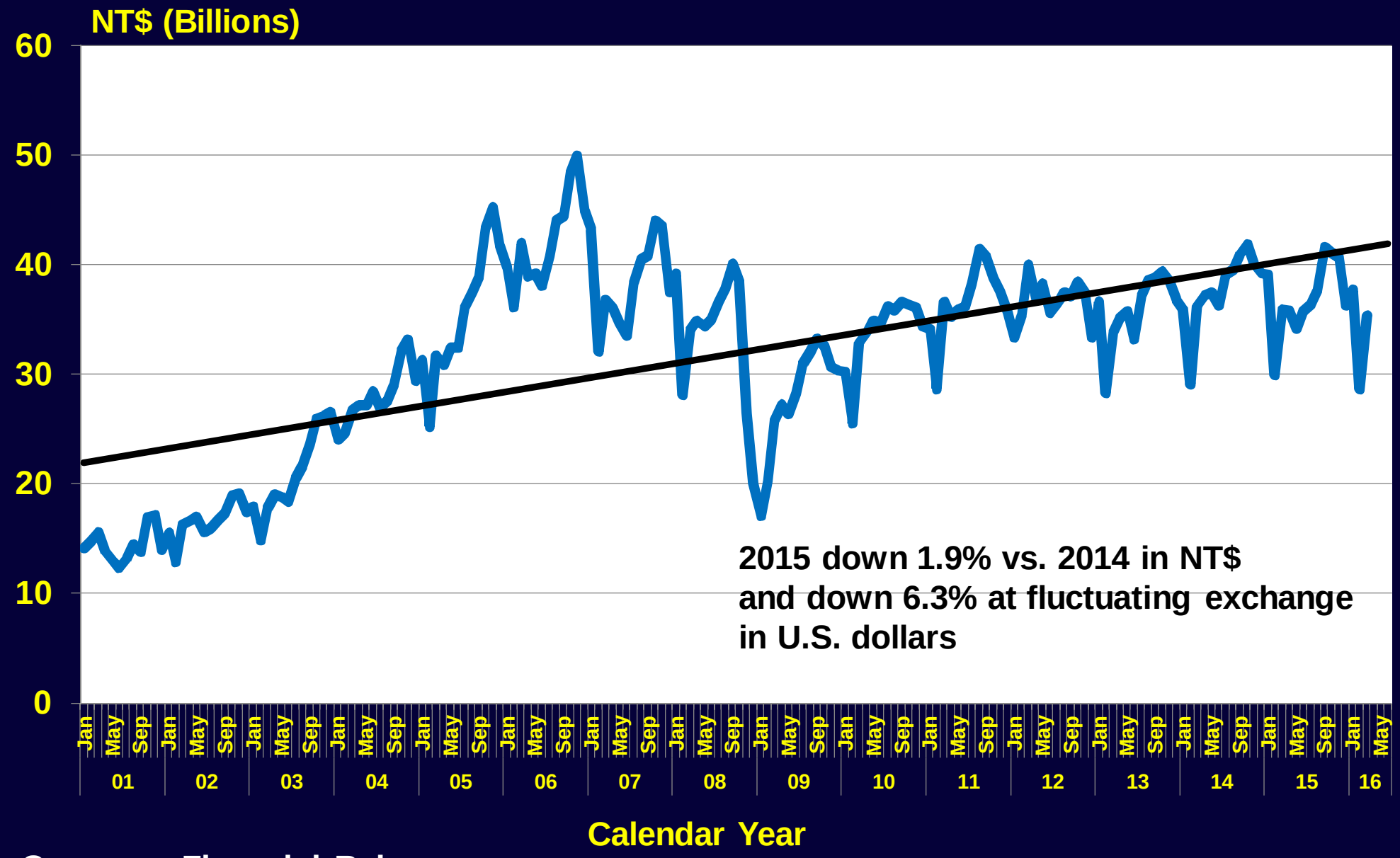


Acter, Big Sun Energy Technology, Chen Full Intl, Danen Technology, Daxon Technology, DelSolar, Delta Electronics, e_TON Solar Tec, Invetec Group, Eversol, Gigasolar materials, Gintech, Green Energy Technology (GET), Higher Way Elec, Kenmec Mechanical, Ligitek, Motech, Neo Solar Power, Phoenixtec Power Co (PPC), Powermate, Precision Silicon, Sino-American Silicon Products (SAS), Solar Applied Materials Technology, Solartech Energy Corp, Sunrise Global Solar Energy, Sysgration, Tainenergy Tech, Tera Autotec, Tyntek, Wafer Works, Wholetech System Hitech

Chart 9

Taiwan Rigid & Flex PCB Shipments

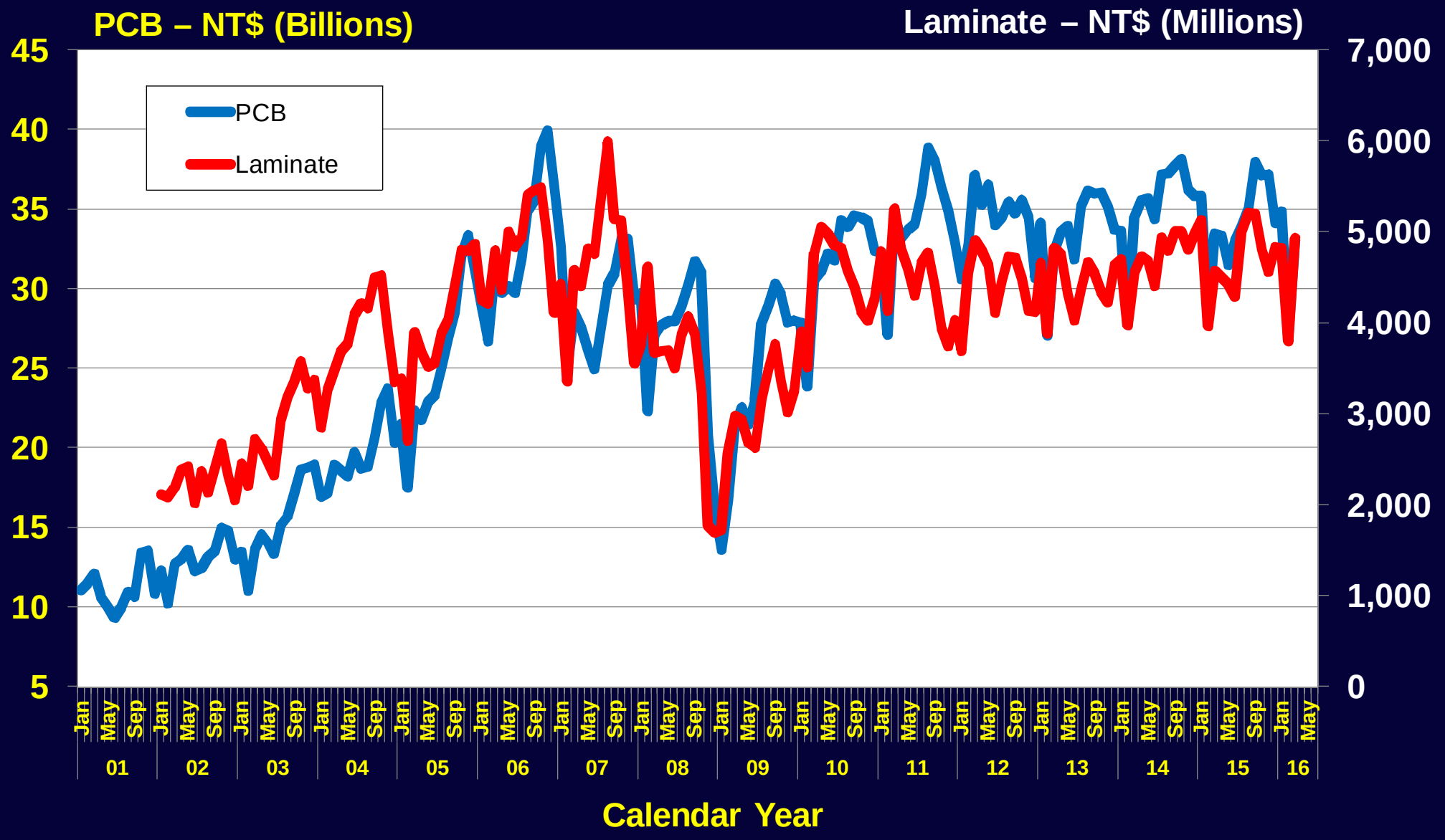
Broad Composite of 46 Taiwan-listed Manufacturers



Company Financial Releases

Chart 10

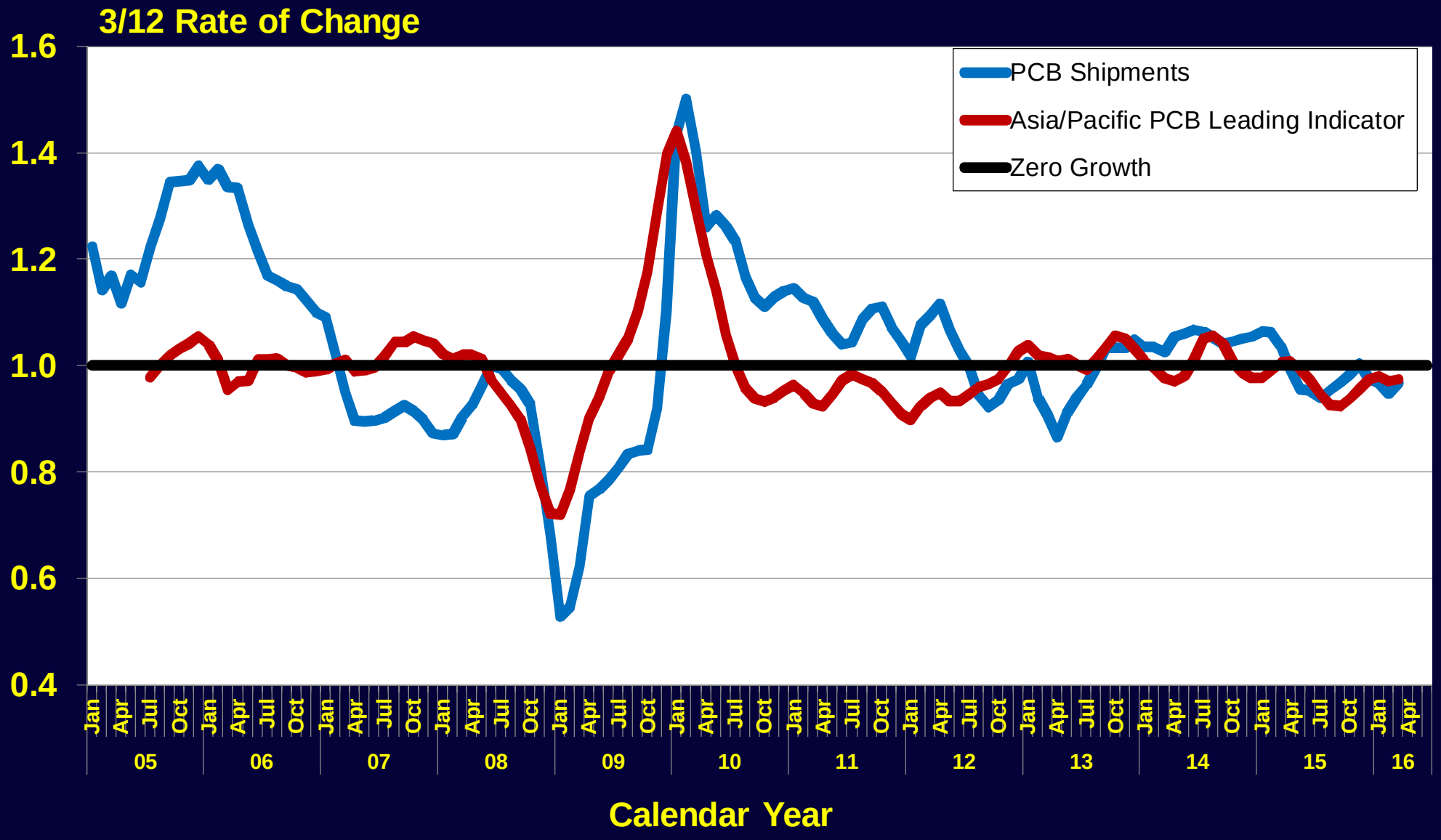
Taiwan Shipments
42 Rigid PCB & 8 Laminate Manufacturers



Company Financial Releases

Chart 11

Asia Pacific CCG PCB Leading Indicator vs. China/Taiwan PCB Shipments @ Fluctuating Exchange

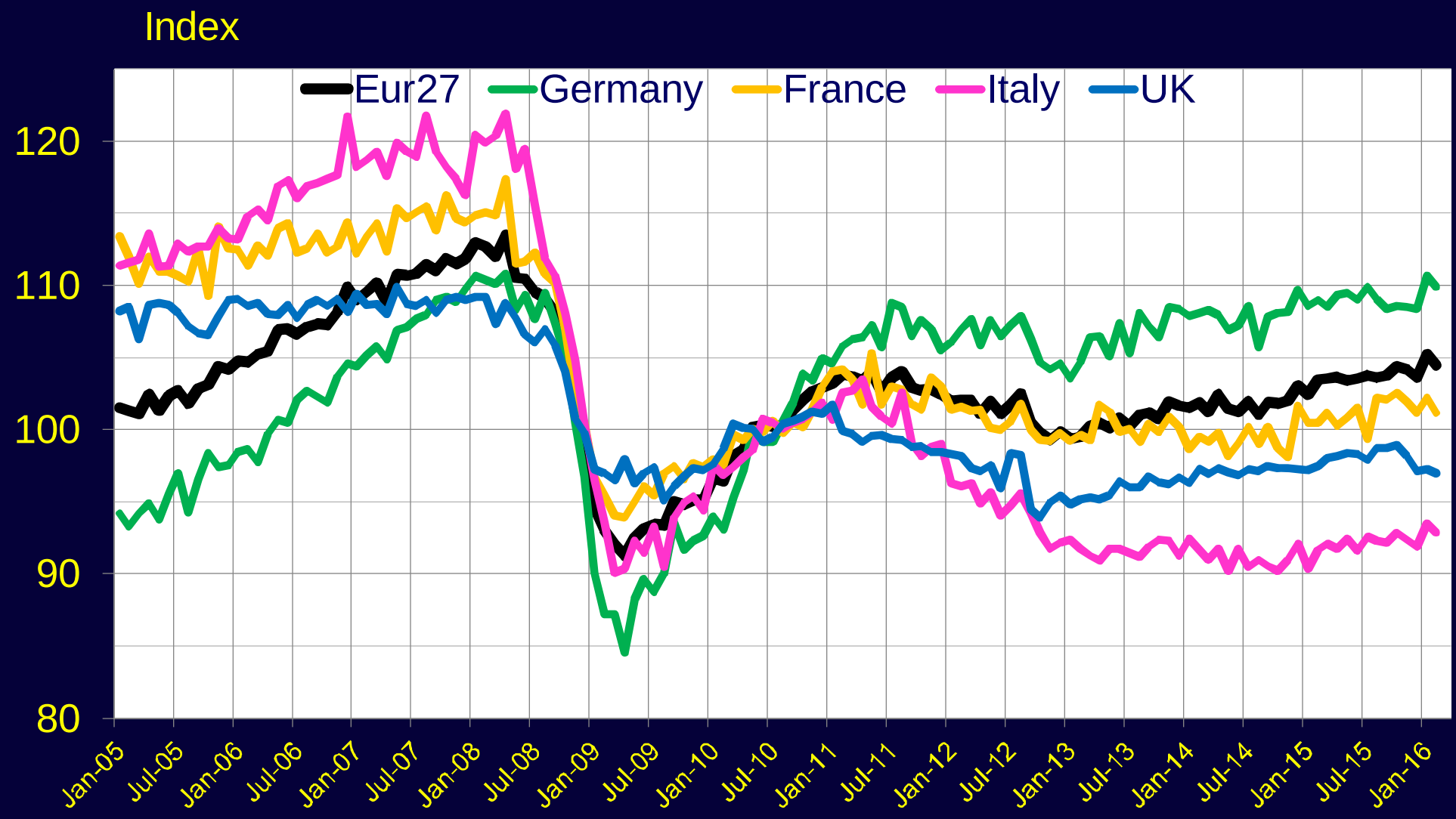


Source: Custer Consulting Group

Chart 12

Industrial Production - Europe

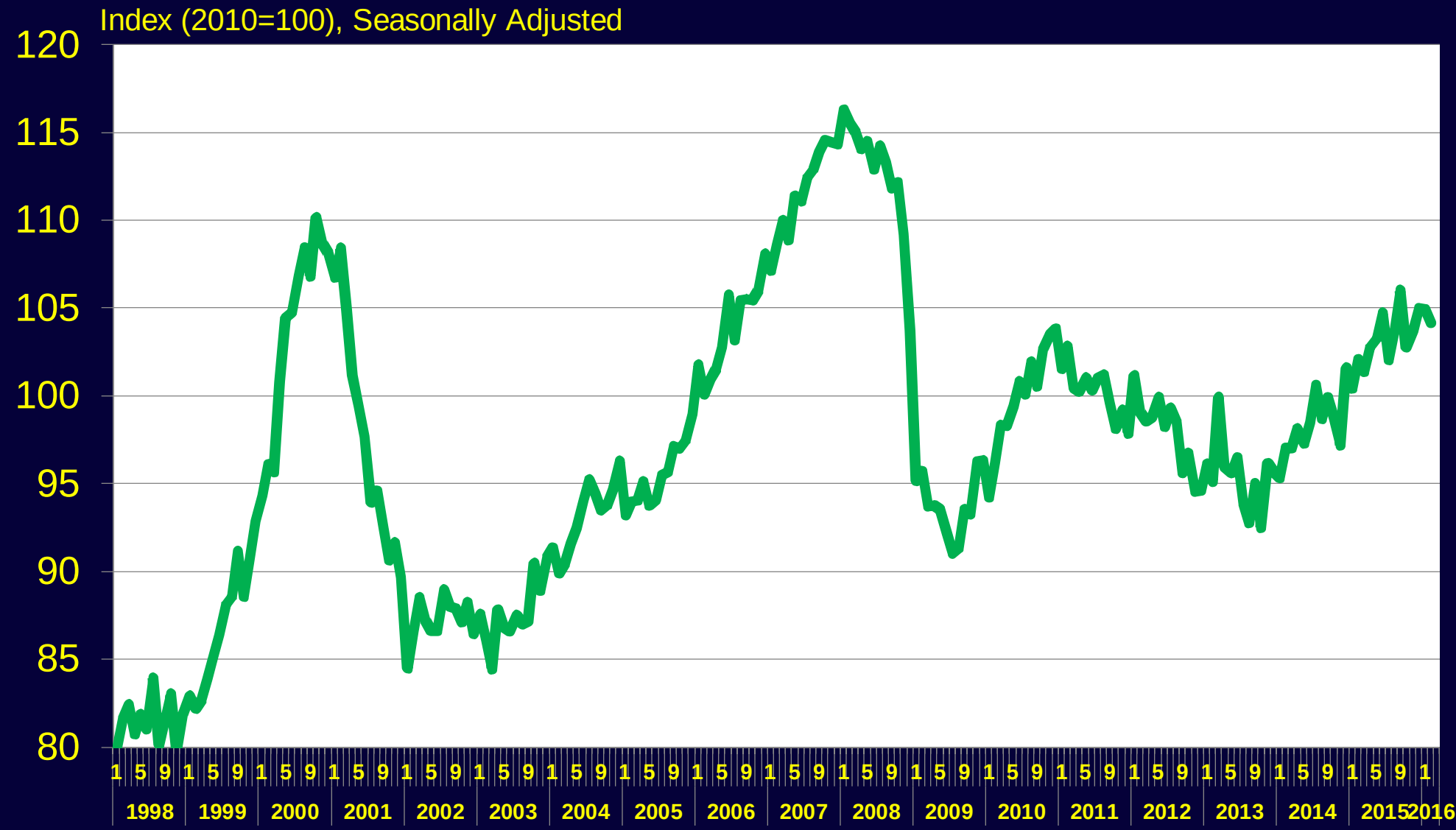
Index (2010 Avg. Month = 100, Seasonally Adjusted)



Eurostat

Chart 13

European Computer, Electronic & Optical Products Production



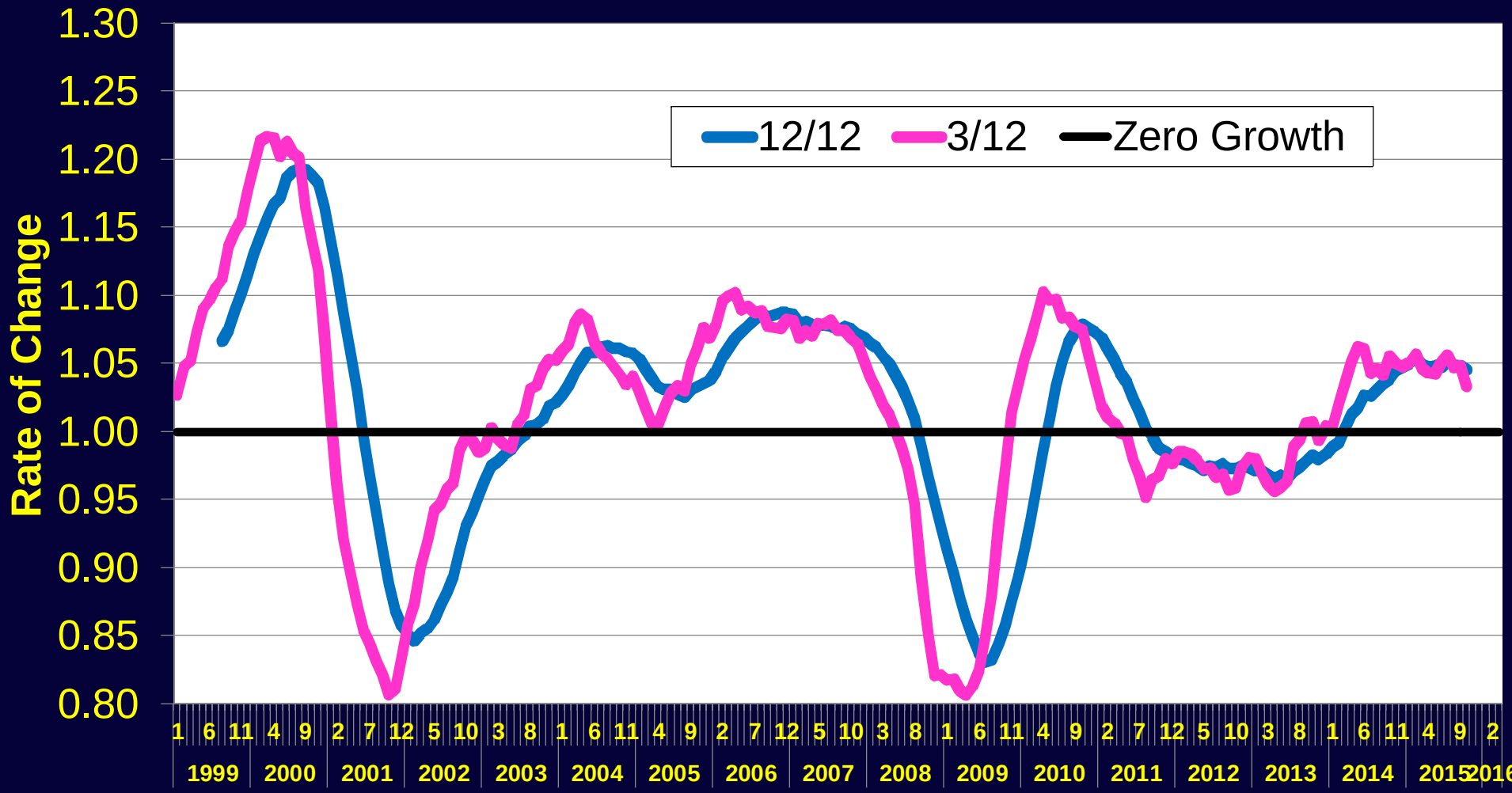
Eurostat, C26 category, EU 27 countries

Chart 14

Europe- EU27

Manufacture of computer, electronic & optical products

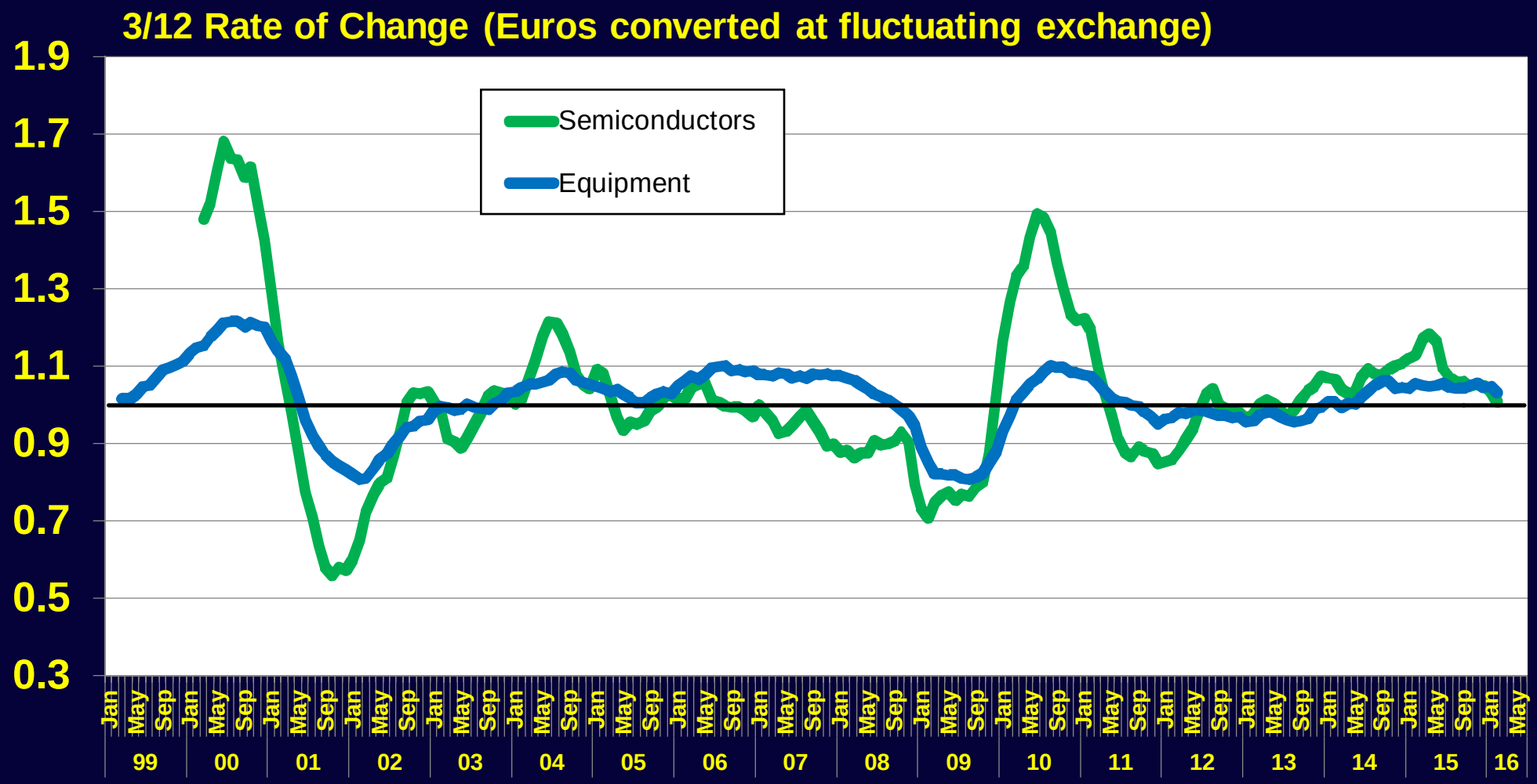
12/12 & 3/12 Rate of Change



Eurostat

Chart 15

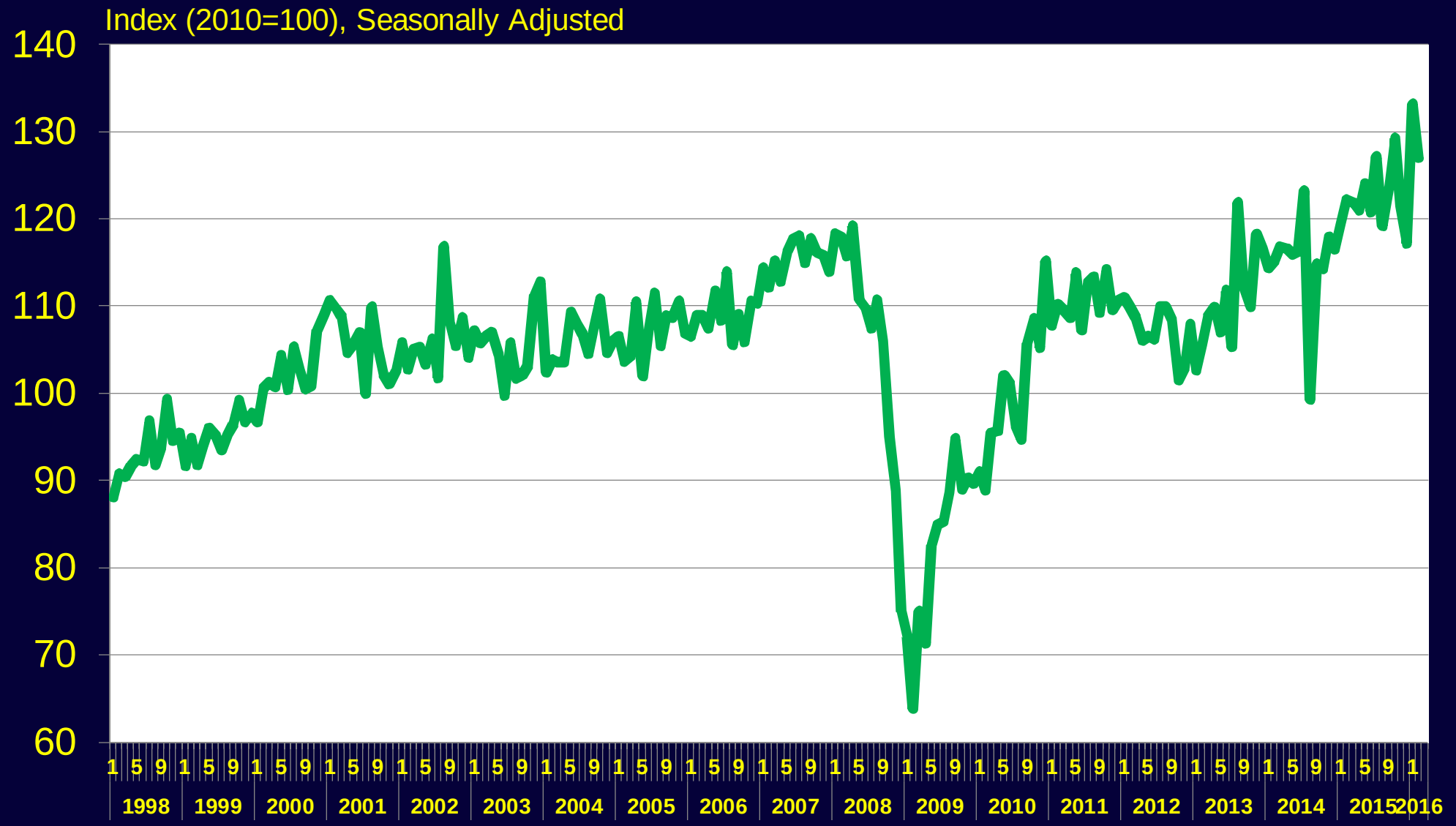
Semiconductor Shipments to Europe vs. European Electronic Equipment Production



Total $ Semiconductor Shipments from All Countries to Europe www.sia-online.org/, Eurostat class C26, EU27, European Computer, Electronic & Optical products Production

Chart 16

European Motor Vehicle Production



Eurostat, C291 category, EU 27 countries

Chart 17

European Production
Aircraft, Spacecraft & Related Equipment

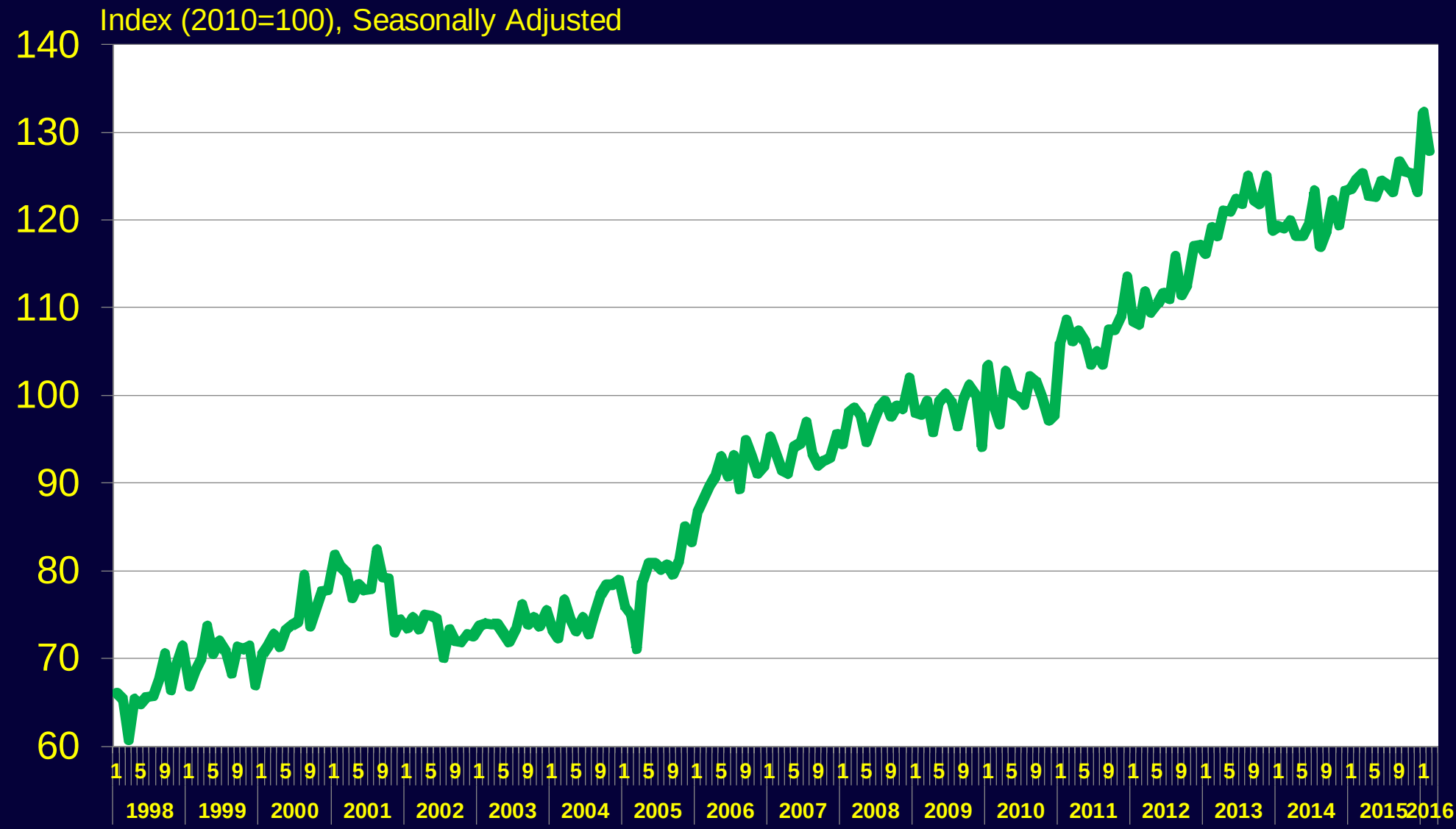

Index (2010=100), Seasonally Adjusted
140
130
120
110
100
90
80
70
60
1 5 9 1 5 9 1 5 9

Chart 18

European Production - Instruments & Appliances for Measuring, Testing & Navigation

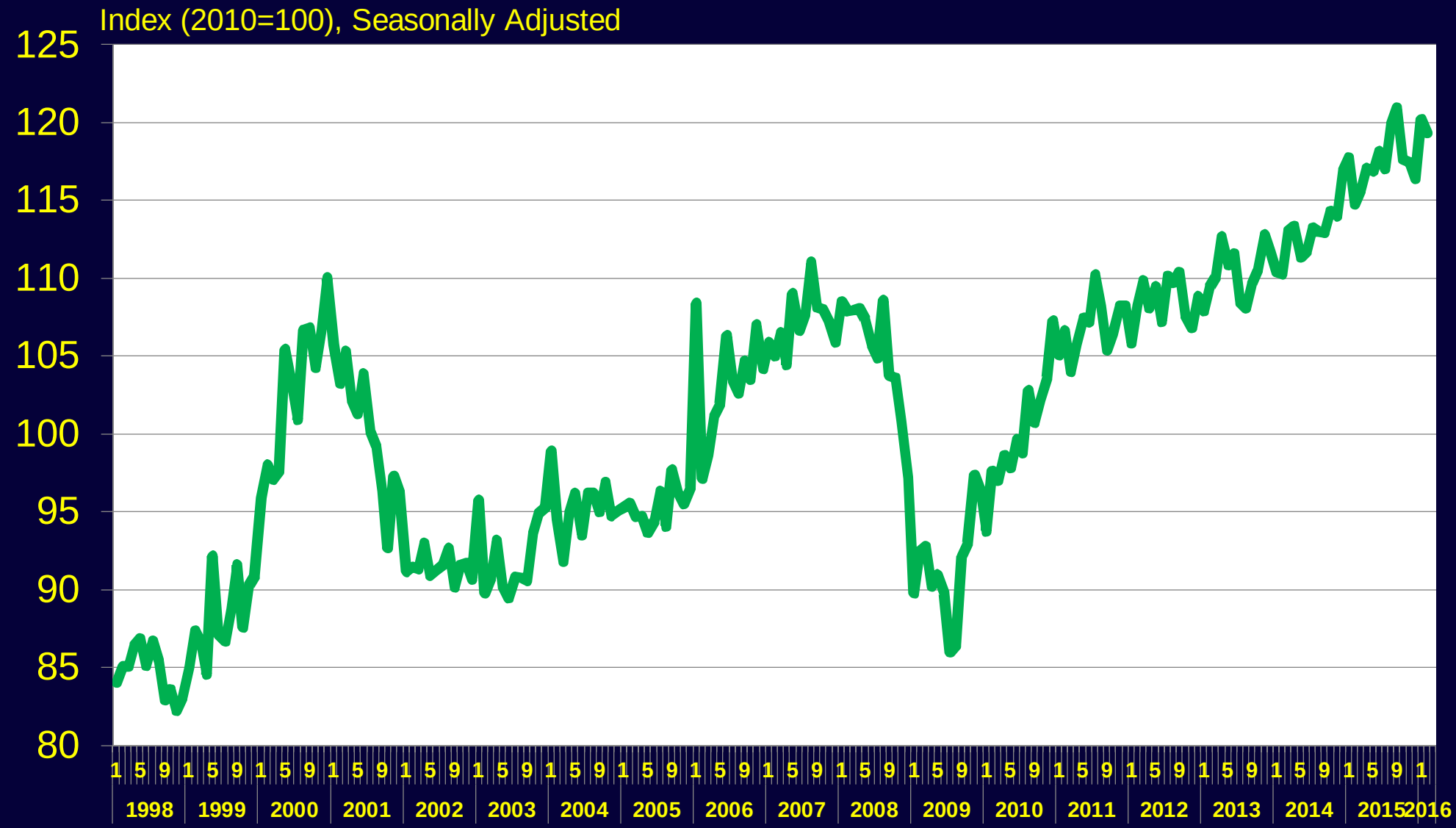
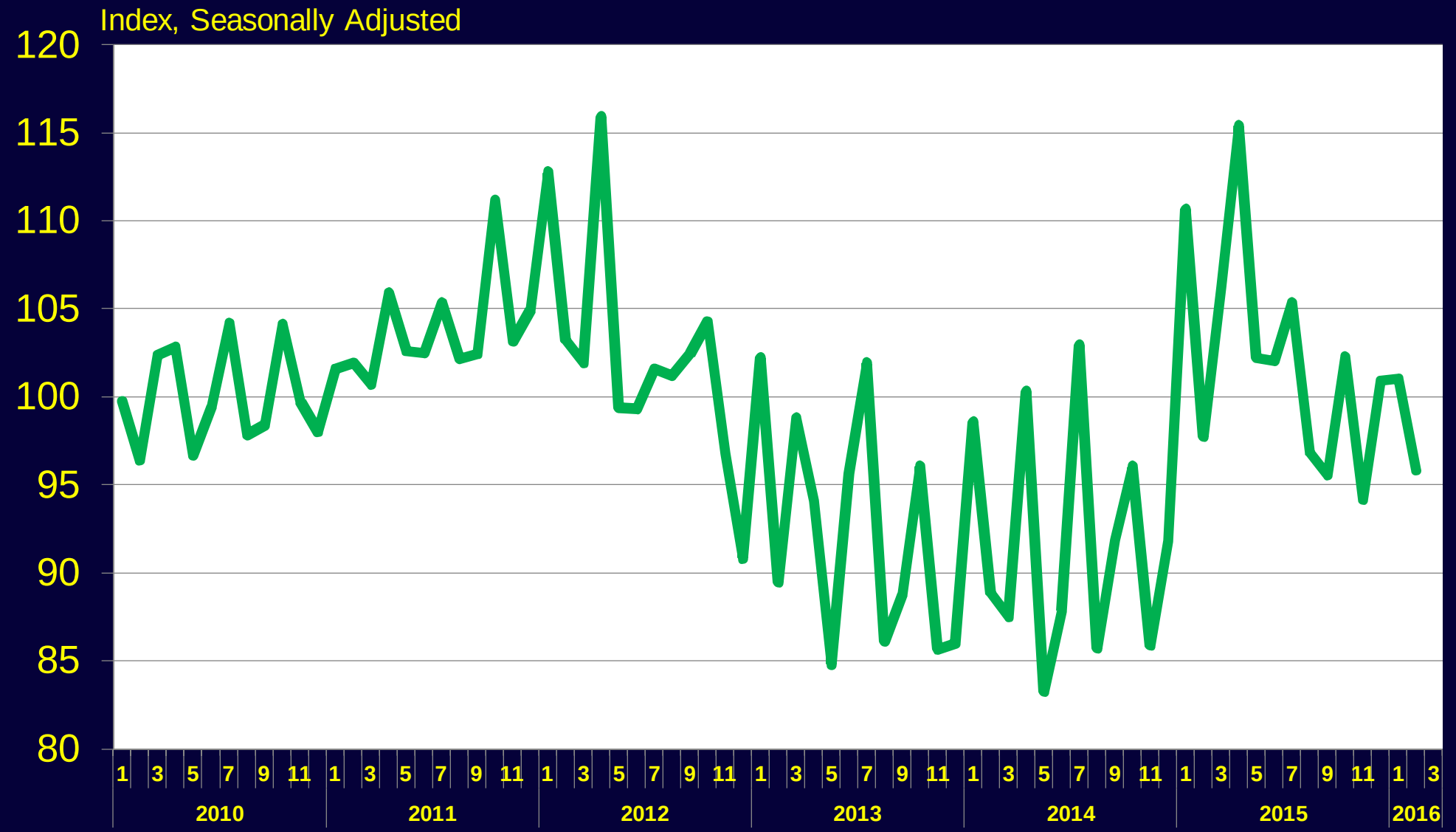

Index (2010=100), Seasonally Adjusted
125
120
115
110
105
100
95
90
85
80
1 5 9 1 5 9 1 5 9

Chart 19

European Production - Irradiation, Electromedical & Electrotherapeutic Equipment



Eurostat, C266 category, EU 27 countries

Chart 20

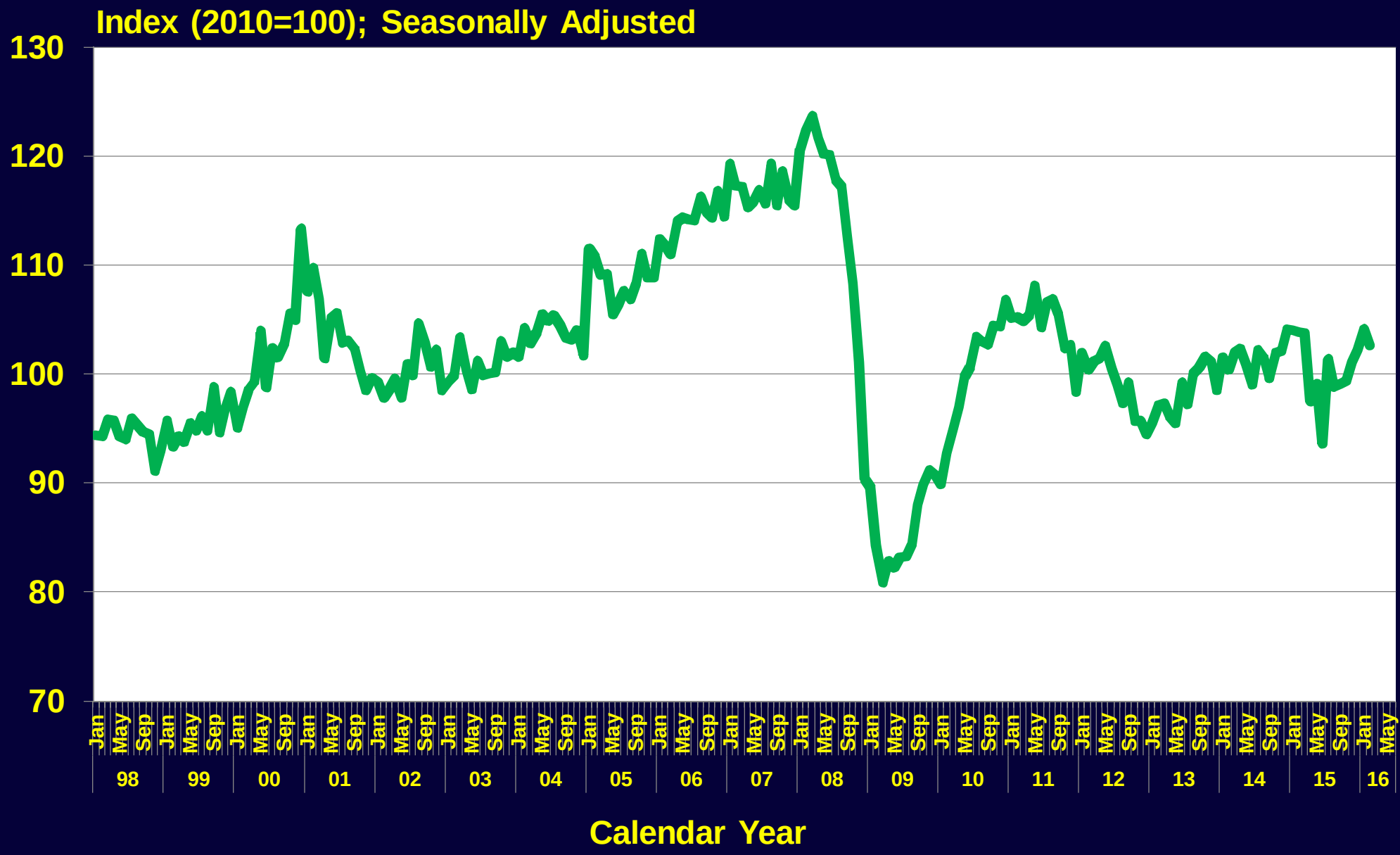
European Loaded Electronic Board Production



Eurostat, C2612

Chart 21

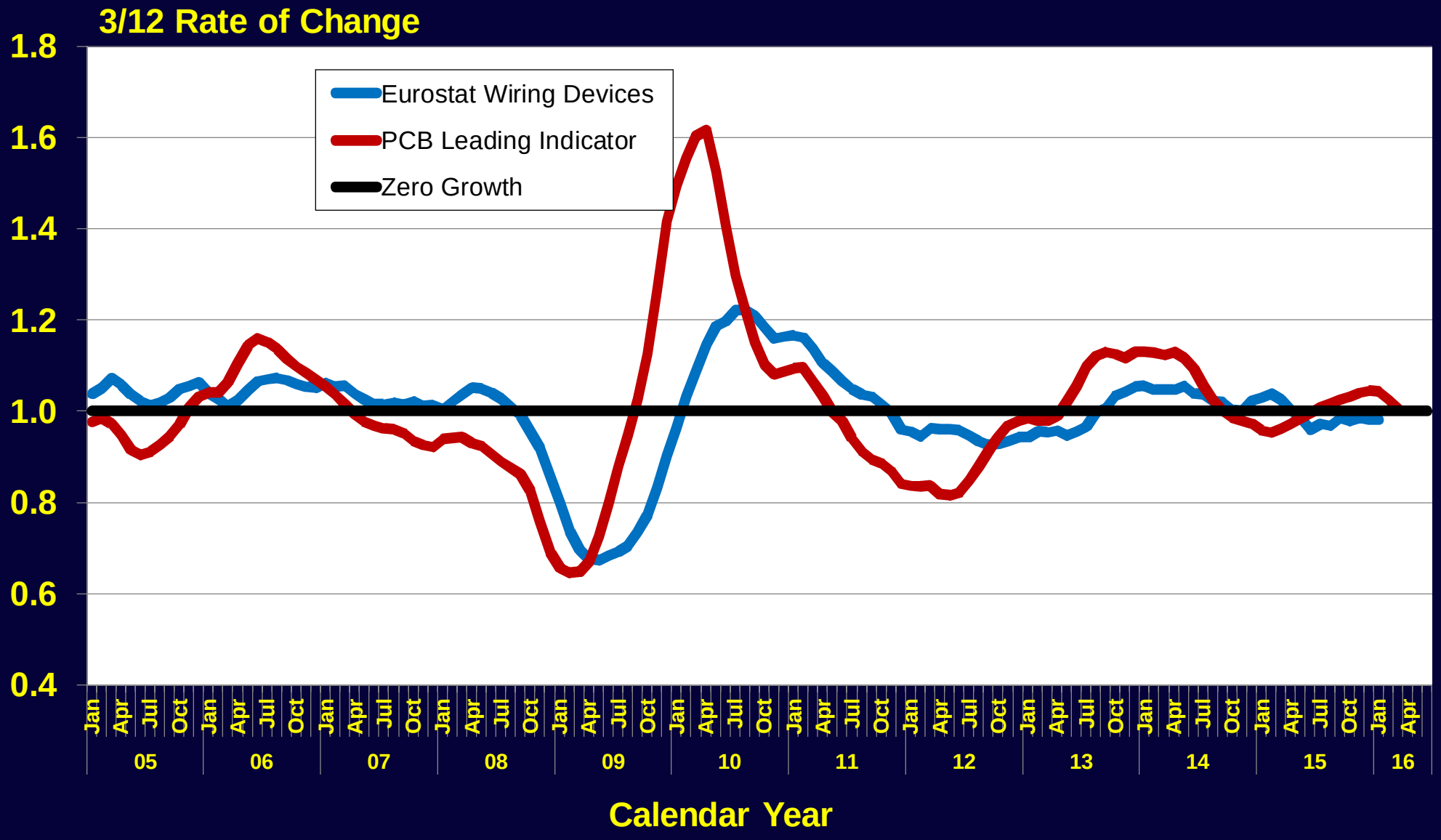
European Electronic Wiring Devices



Eurostat

Chart 22

Europe PMI Leading Indicator vs. Europe Wiring Devices



Source: Custer Consulting Group

Chart 23

Present Growth Rates (%)
European Electronics Industry

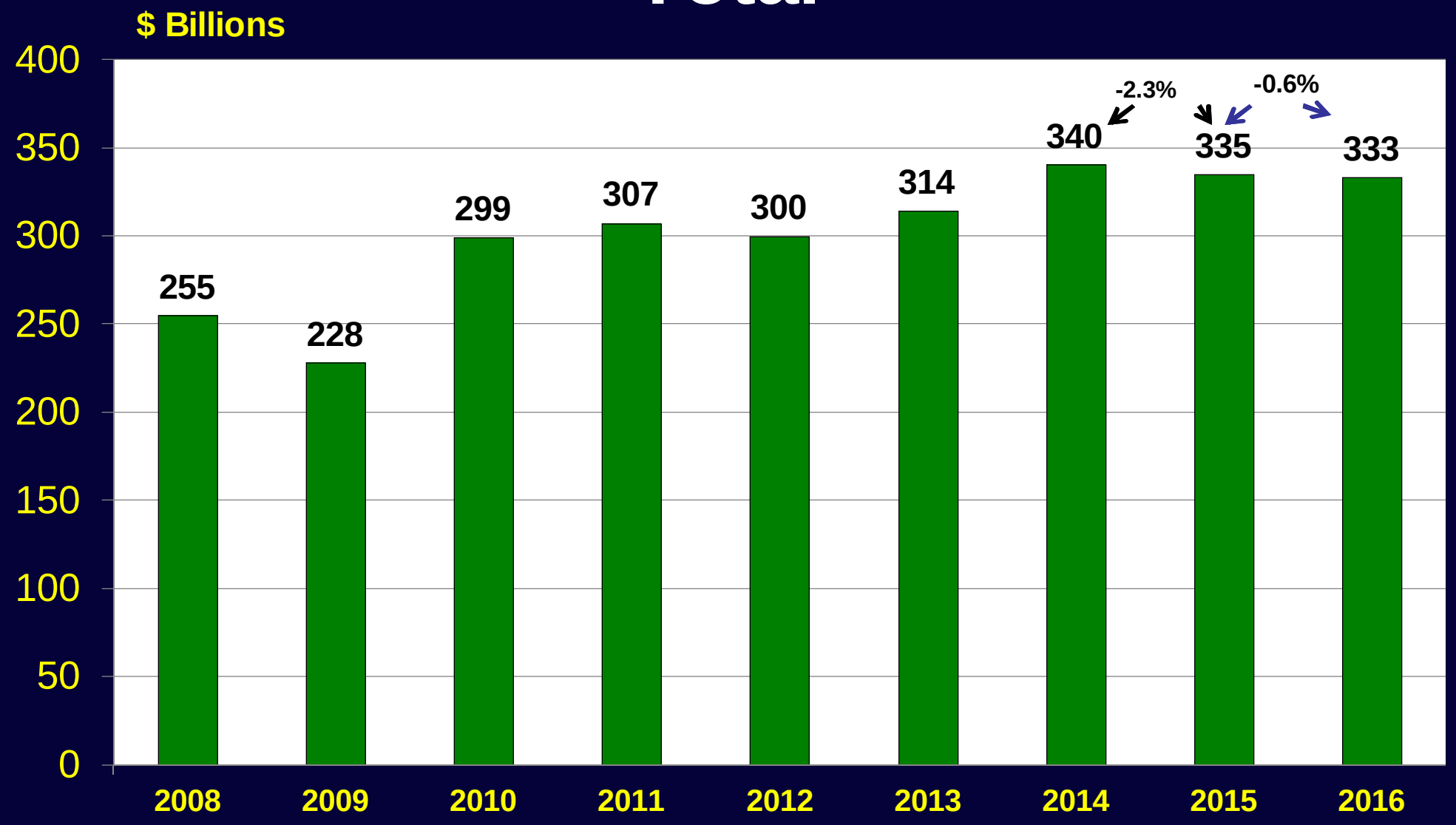
	Latest Month	Annual Growth Rate	3-Month Growth Rate
ELECTRONIC EQUIPMENT SHIPMENTS (Index CY 2010 =100)			
Computer, Electronic & Optical Products	2/16	104.6	103.3
Components & Boards	2/16	101.0	103.2
Components	2/16	101.7	105.2
Wiring Devices	2/16	98.3	99.0
Loaded Electronic Boards	2/16	86.3	99.4
Office Equipment	2/16	83.9	95.7
Consumer Electronics	2/16	94.7	92.7
Electric Domestic Appliances	2/16	101.7	101.5
Electronic Instruments	2/16	103.7	101.8
Medical Electronics	2/16	108.6	99.2
Motor Vehicles	2/16	106.6	105.4
Air & Space Aircraft	2/16	103.8	103.2
Semiconductor Shipments (Eur) to Europe	2/16	106.9	100.8
Industrial Production	2/16	101.9	101.4

Sources: Eurostat & SIA

Chart 24

World Semiconductor Sales

Total



Gartner 4/16

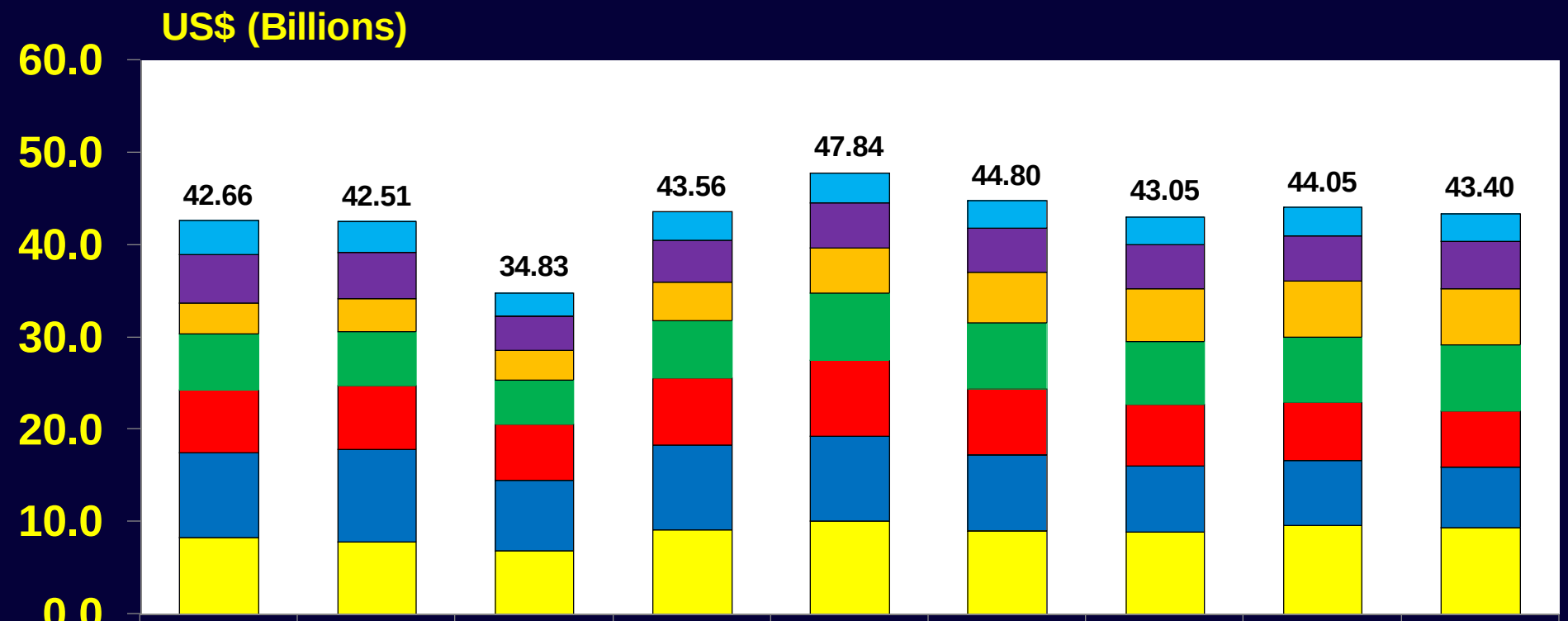
Chart 25

Top 10 2015 IC Foundries

Rank	Maker	2015	2014	1H'15/1H'14
1	TSMC	26,566	25,175	5.5%
2	Globalfoundries	4,673	4,400	6.2%
3	UMC	4,561	4,621	-1.3%
4	Samsung	2,607	2,412	8.1%
5	SMIC	2,229	1,970	13.1%
6	Powerchip	985	917	7.4%
7	TowerJazz	961	828	16.1%
8	Fujitsu Semiconductor	845	653	29.4%
8	Vanguard	736	790	-6.9%
9	Shanghai Huahong Grace	651	665	-2.0%
	Total Top 10 for 2015	44,814	42,431	5.6%
	Other Foundry	4,077	4,281	-7.0%
	Total Market	48,891	46,812	4.4%

Chart 26

Semiconductor Materials Sales by Region

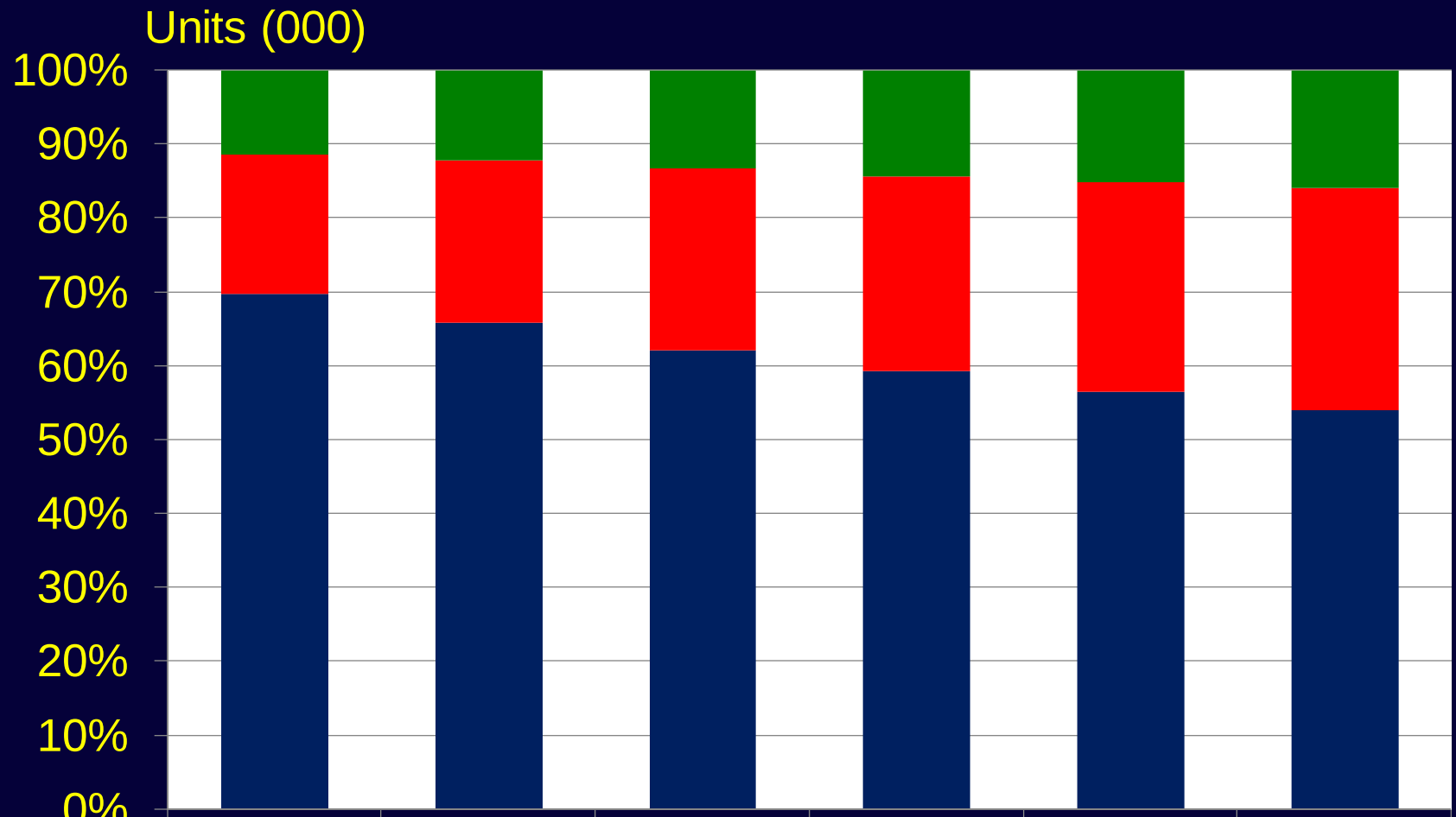


	2007	2008	2009	2010	2011	2012	2013	2014	2015
total	42.66	42.51	34.83	43.56	47.84	44.80	43.05	44.05	43.40
Europe	3.68	3.32	2.51	3.11	3.31	2.95	3.04	3.01	3.05
N America	5.25	4.99	3.74	4.47	4.86	4.75	4.76	5.00	5.04
China	3.31	3.57	3.27	4.15	4.87	5.50	5.66	6.01	6.12
S Korea	6.10	5.90	4.73	6.20	7.27	7.22	6.87	7.03	7.16
ROW	6.79	6.90	6.05	7.32	8.21	7.17	6.64	6.39	6.05
Japan	9.19	9.96	7.66	9.20	9.21	8.24	7.17	7.01	6.57
Taiwan	8.34	7.87	6.87	9.11	10.11	8.97	8.91	9.60	9.41

SEMI 4/16 & prior reports

Chart 27

Worldwide Cloud IT Infrastructure Market Forecast by Deployment Type 2015 - 2020 (shares based on Value)



	2015	2016	2017	2018	2019	2020
Private Cloud	11.33	12.19	13.21	14.27	15.11	15.82
Public Cloud	18.93	21.95	24.72	26.33	28.44	30.17
Traditional DC	69.75	65.86	62.07	59.40	56.46	54.02

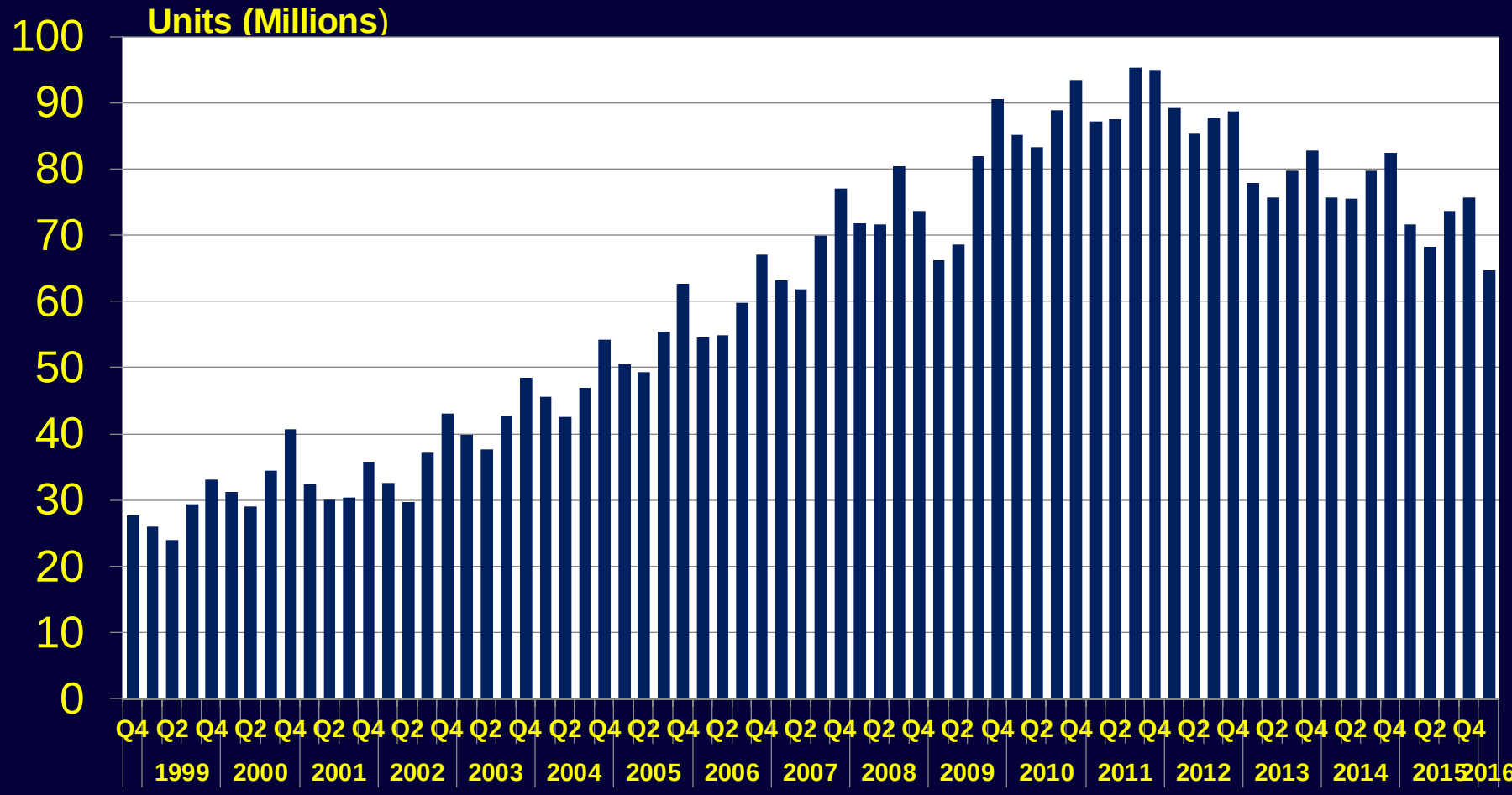
IDC 4/16

Chart 28

Personal Computer Unit Shipments

World

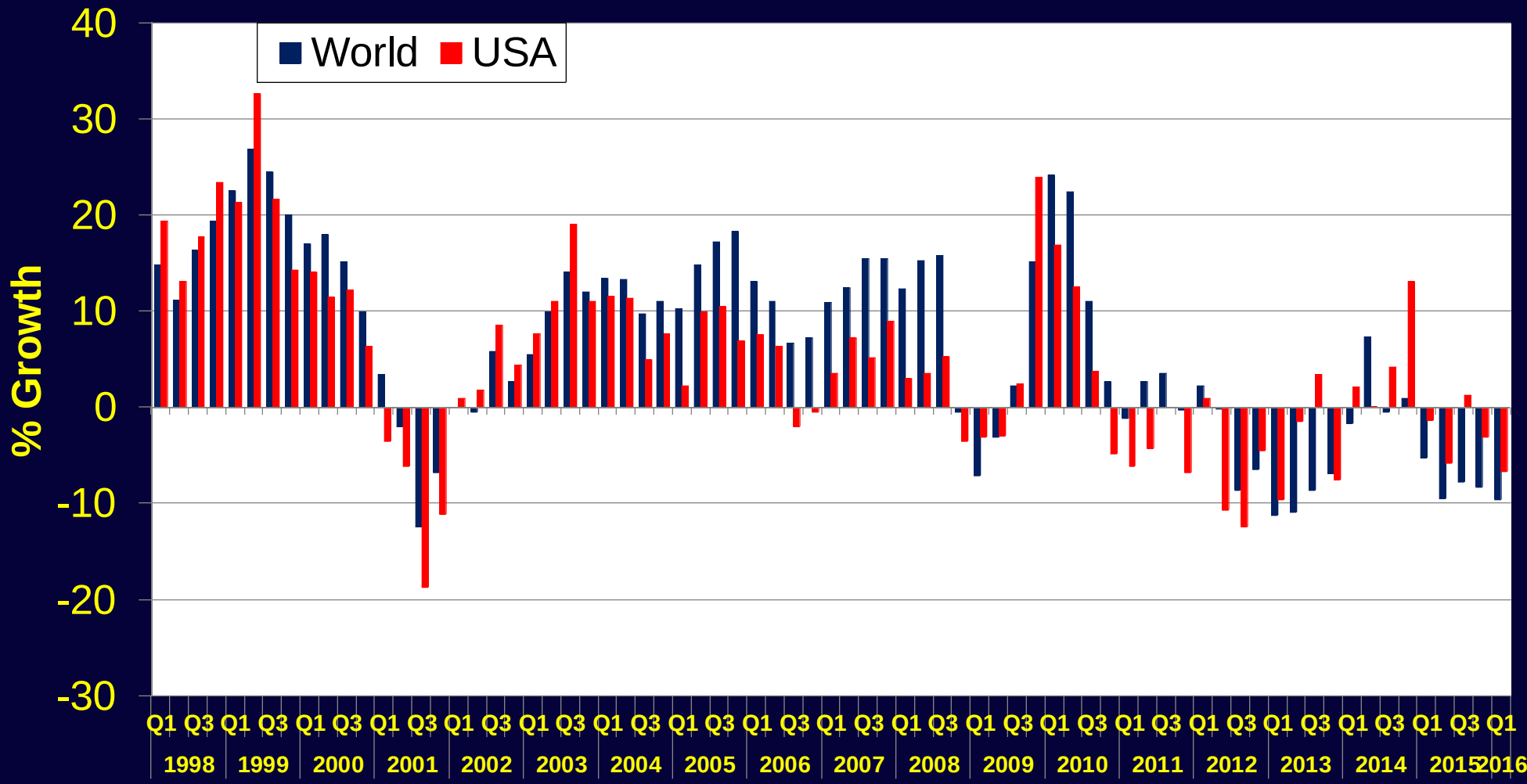
Units



Gartner Dataquest 4/16 & prior reports
Server & Media Tablets not included

Chart 29

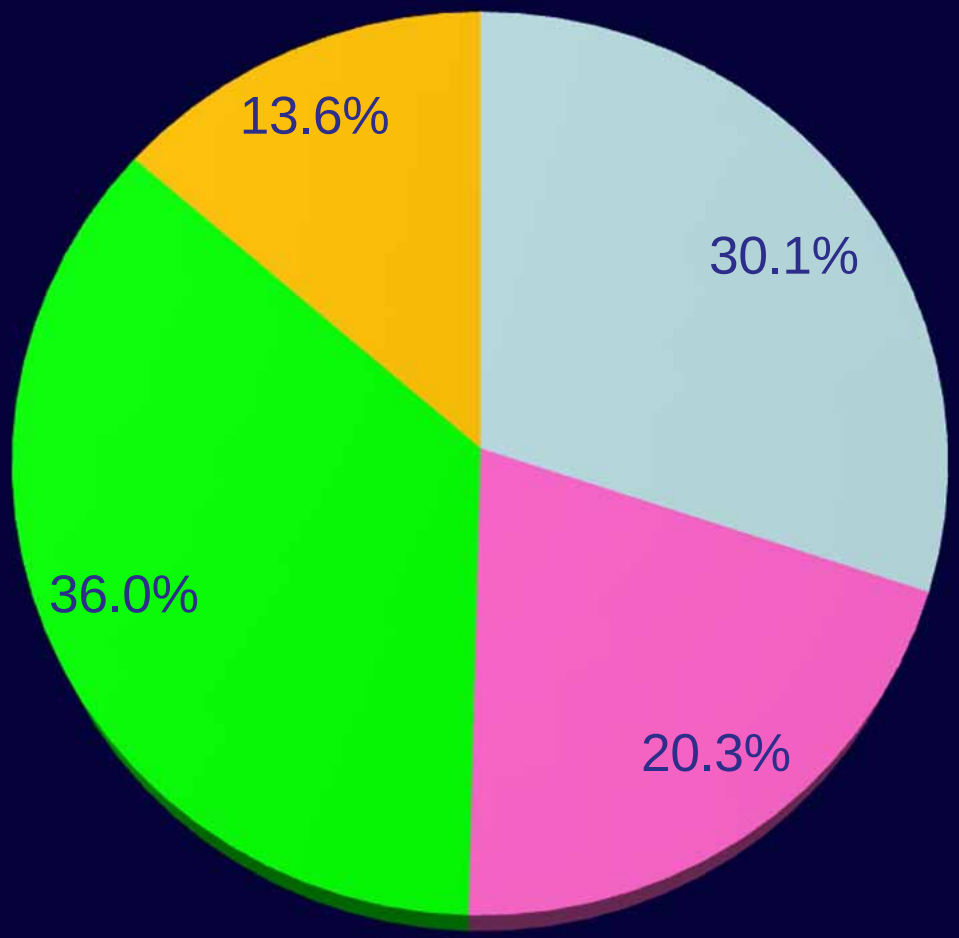
Personal Computer Market Growth
World & USA



Gartner Dataquest

Chart 30

World Personal Computer Market 1Q'16



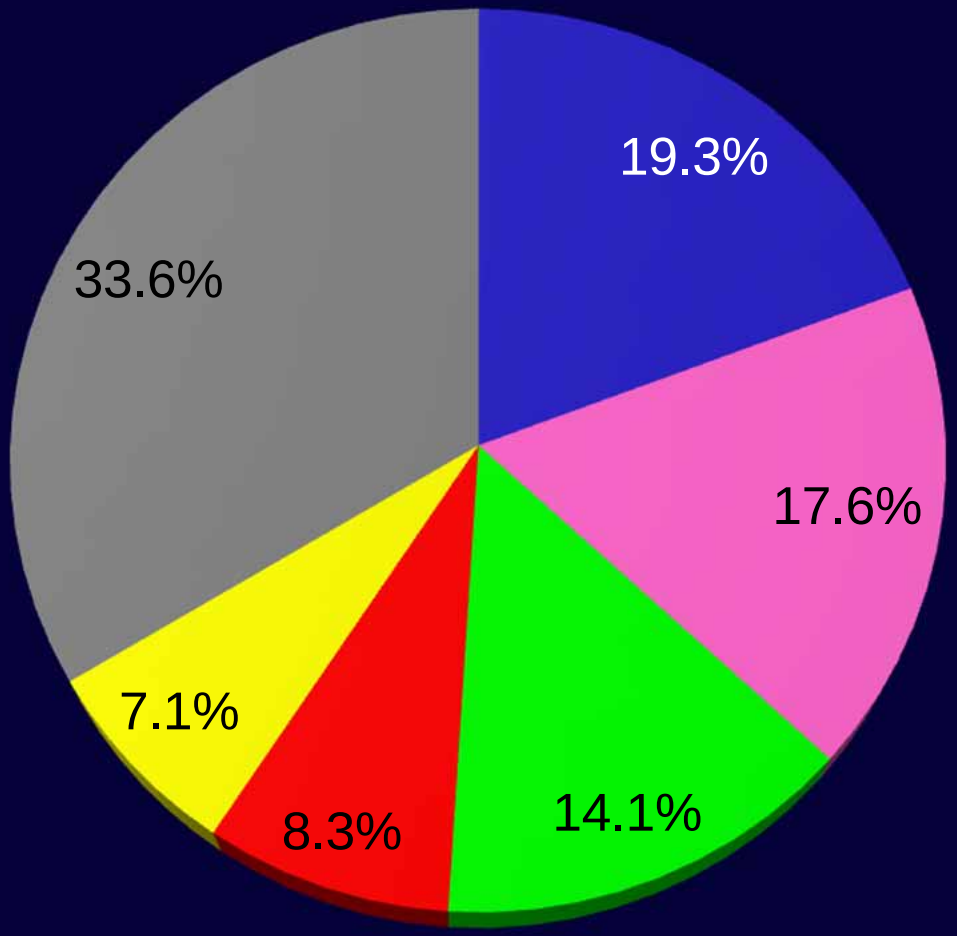
TOTAL: 64.8 Million Units

Includes desk-based PCs, mobile PCs, mini-notebooks but not Media Tablets

Gartner 4/15

Chart 31

World Personal Computer Market 1Q'16



TOTAL: 64.8 Million Units

Includes desk-based PCs, mobile PCs, mini-notebooks but not Media Tablets

Gartner 4/16