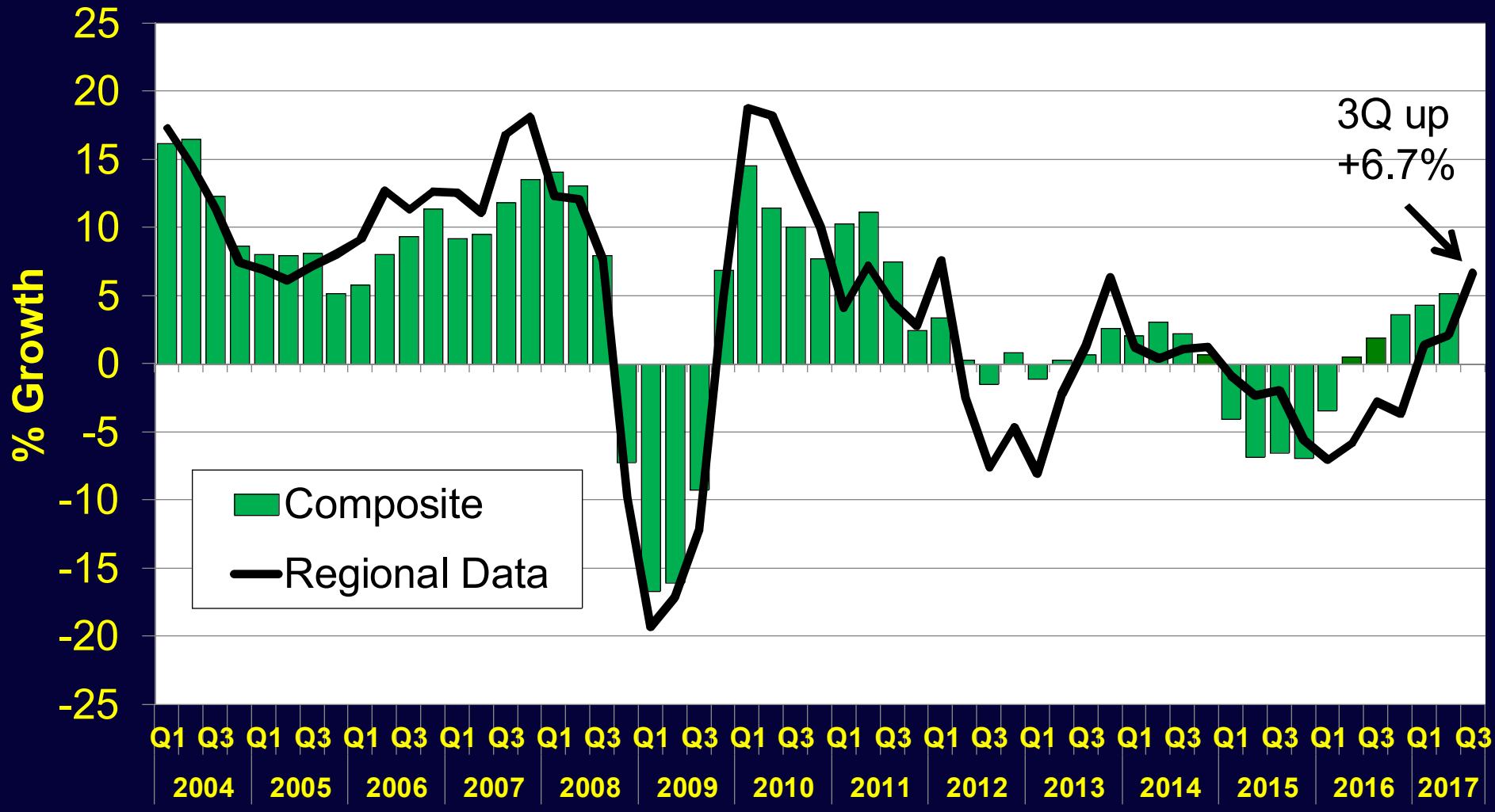
Chart 1

Electronic Equipment Sales

Company Composite vs. Regional Model @ Fluctuating Exchange

Quarterly Revenue Growth

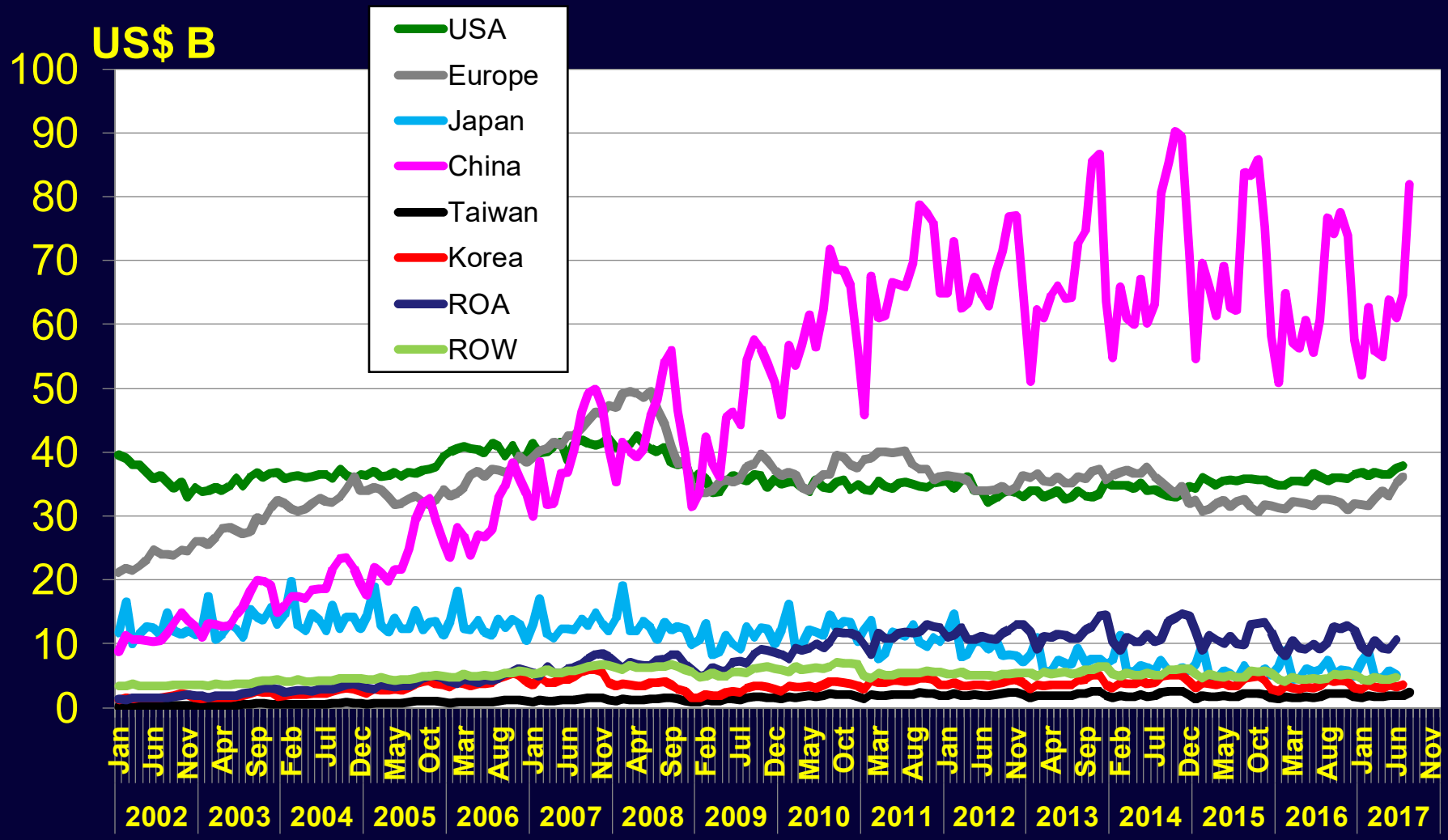


213 OEM company sales composite vs. Regional electronic equipment shipment model

Chart 2

World Electronic Equipment Monthly Shipments

Converted @ Fluctuating Exchange Rates



Source: Custer Consulting Group

Chart 3

World Electronic Equipment Monthly Shipments

Converted @ Fluctuating Exchange Rates

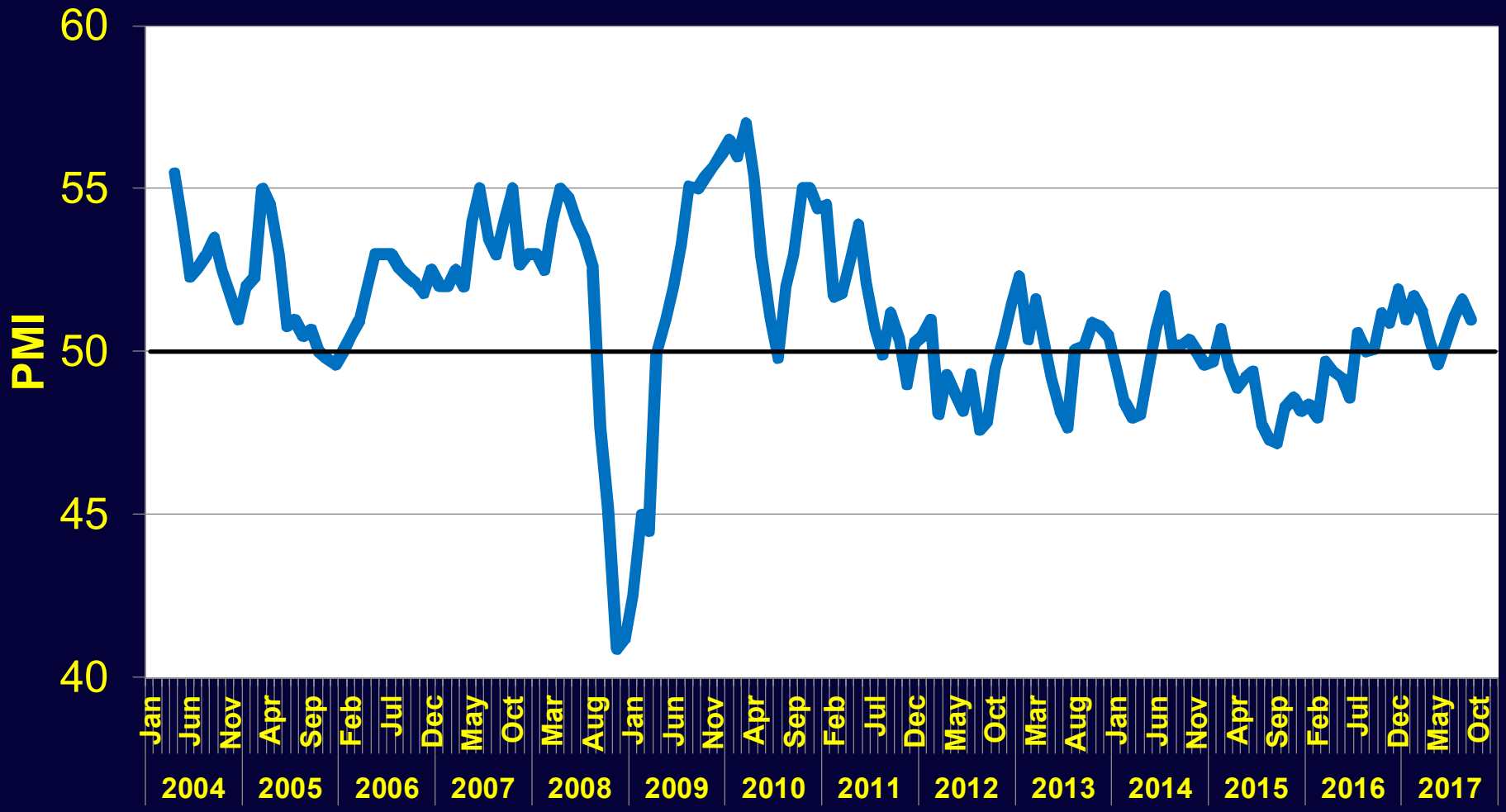


Source: Custer Consulting Group

Chart 4

China "Purchasing Managers" Index

>50 = Growth

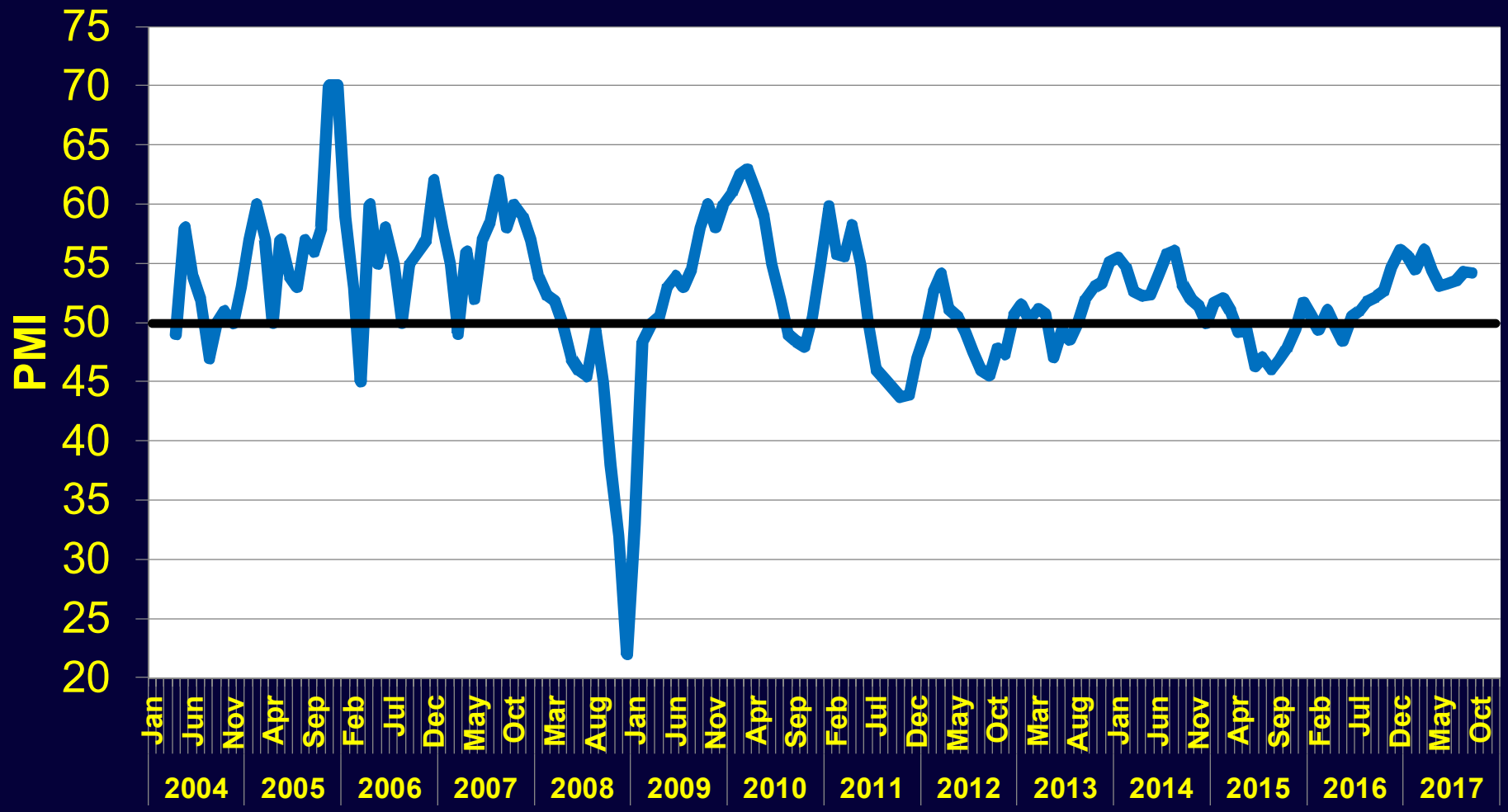


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Chart 5

Taiwan "Purchasing Managers" Index

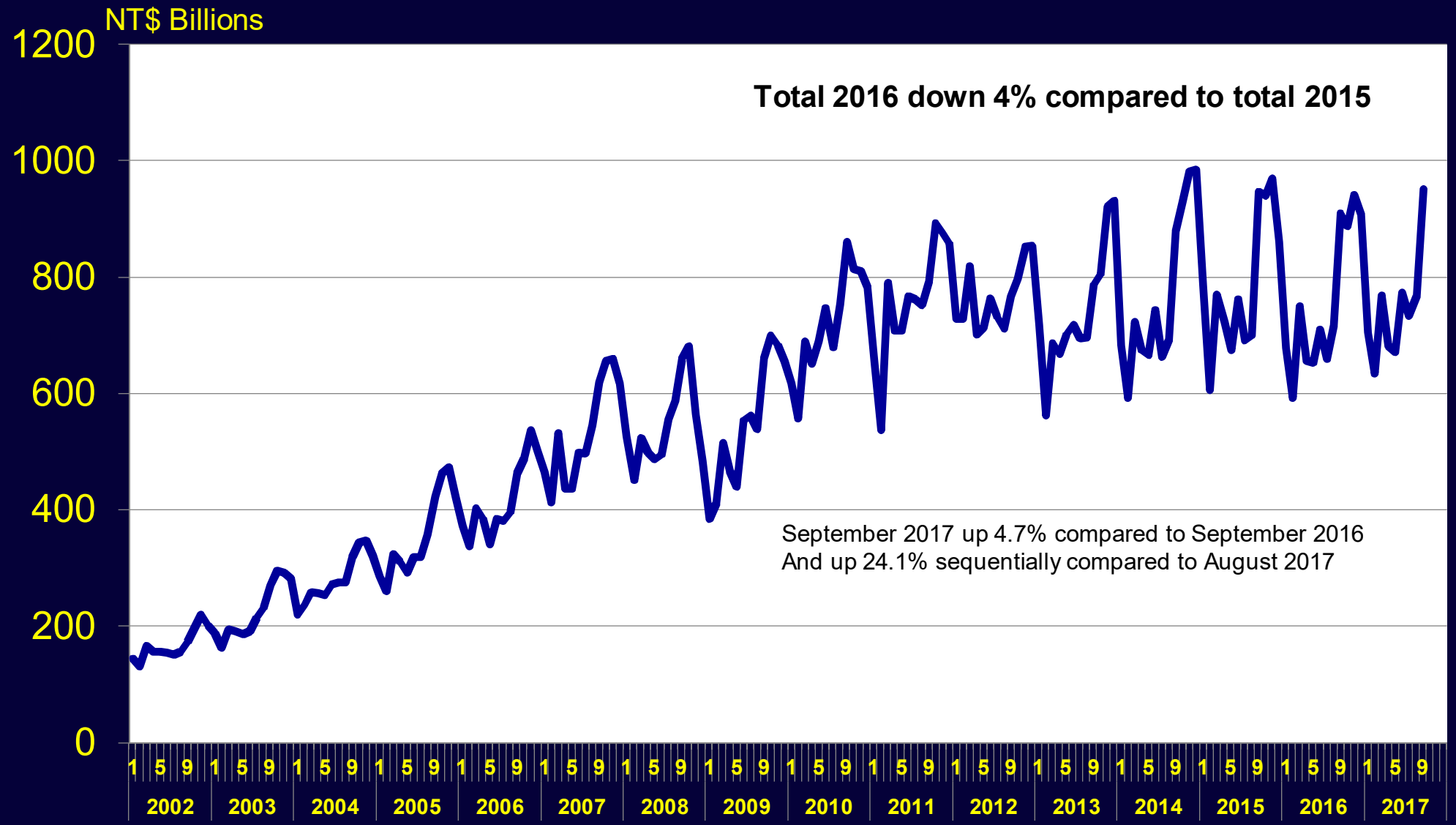
>50 = Growth



Markit Economics

Chart 6

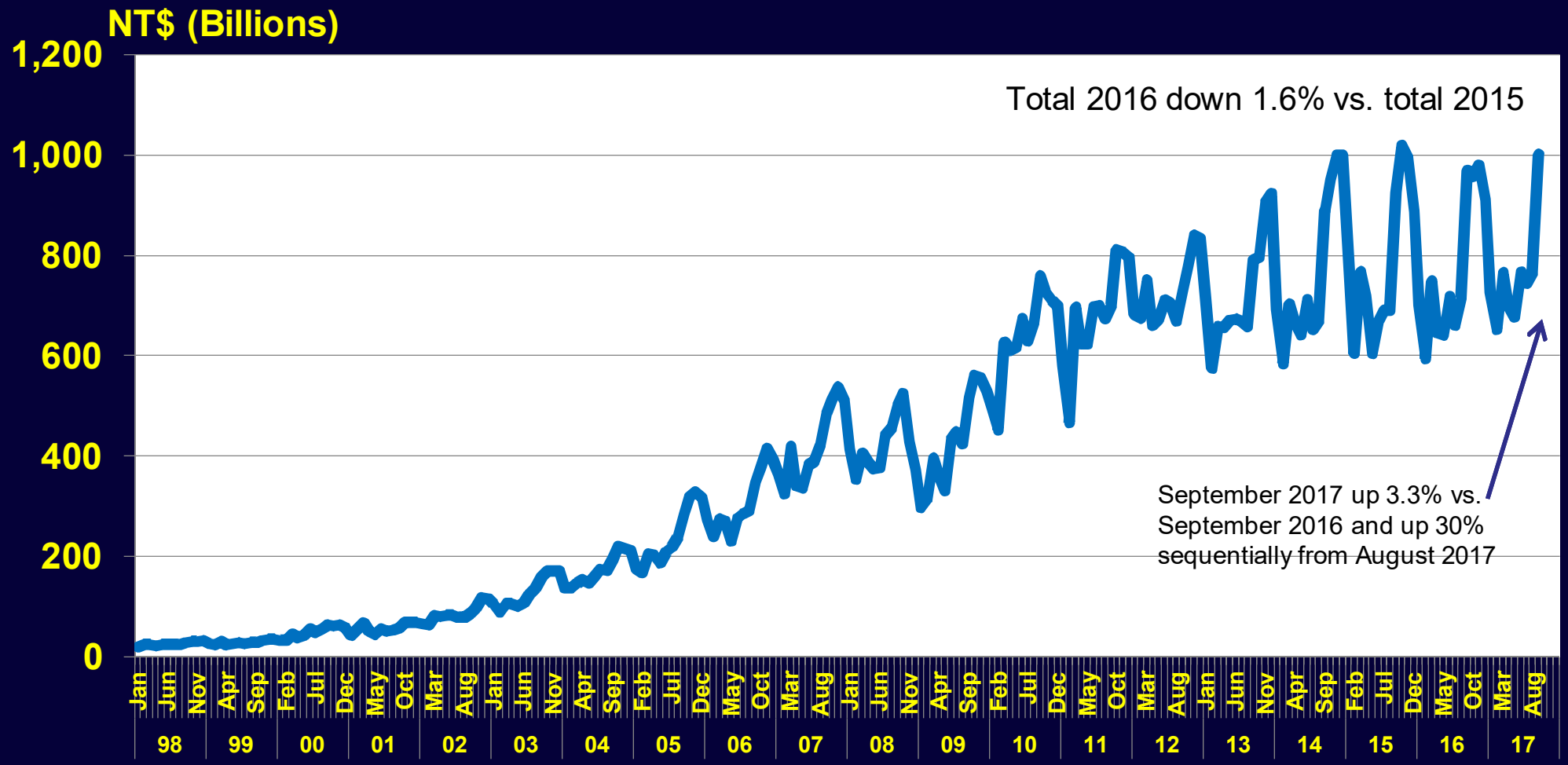
Taiwan/China Electronic Equipment Producers
Composite of 101 Manufacturers
Consolidated Revenue



Taiwan listed companies, often with significant manufacturing in China

Chart 7

Taiwan ODM Companies
Composite Sales of 11 Large Manufacturers

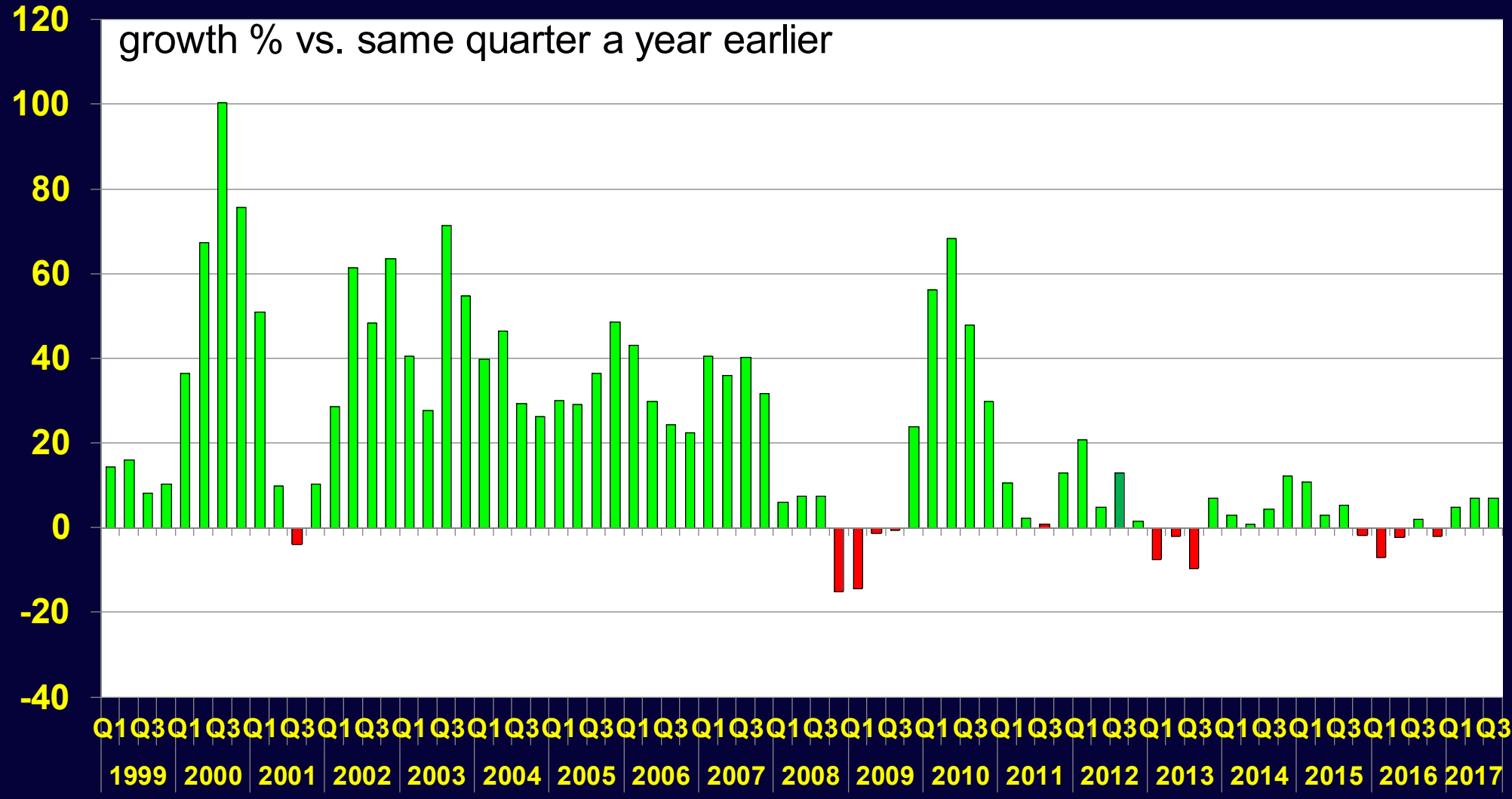


Company Financial Releases

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 8

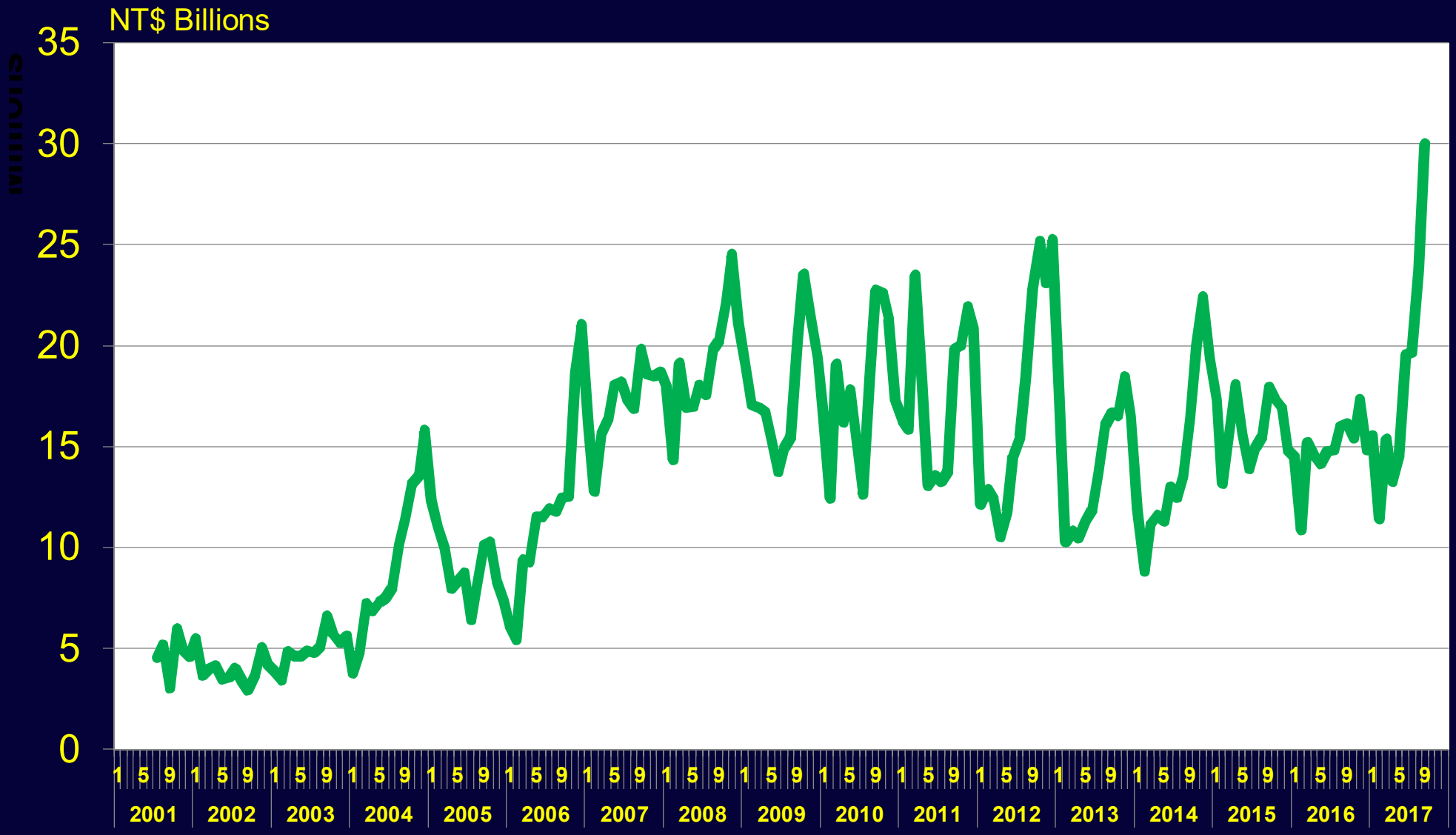
Large ODM Companies
Composite of 11 Taiwan-listed Manufacturers
Quarterly Revenue Growth in NT$



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

Chart 9

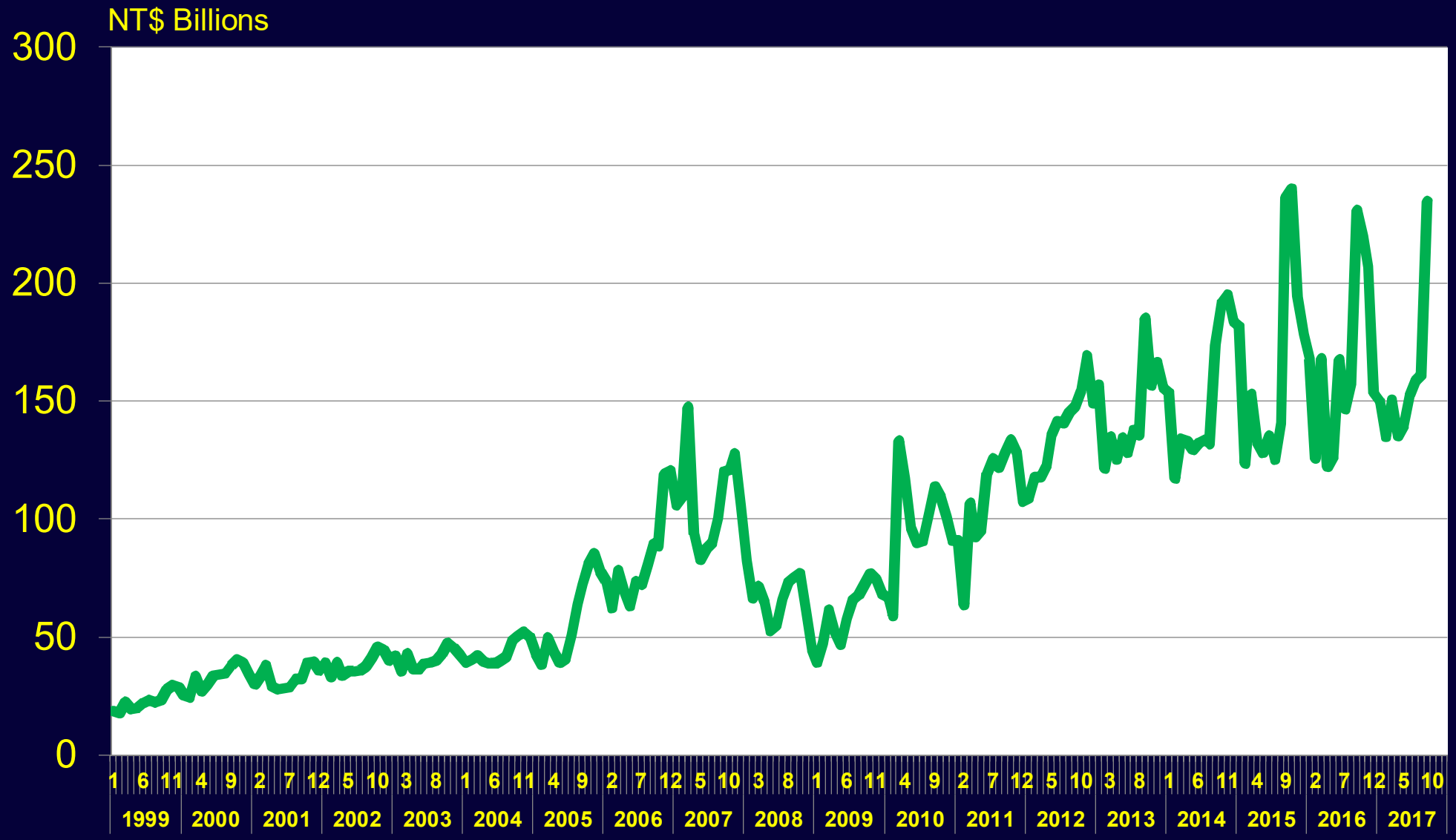
Taiwan Industrial Computer Producers
Composite of 13 Manufacturers



Taiwan listed companies, often with significant manufacturing in China

Chart 10

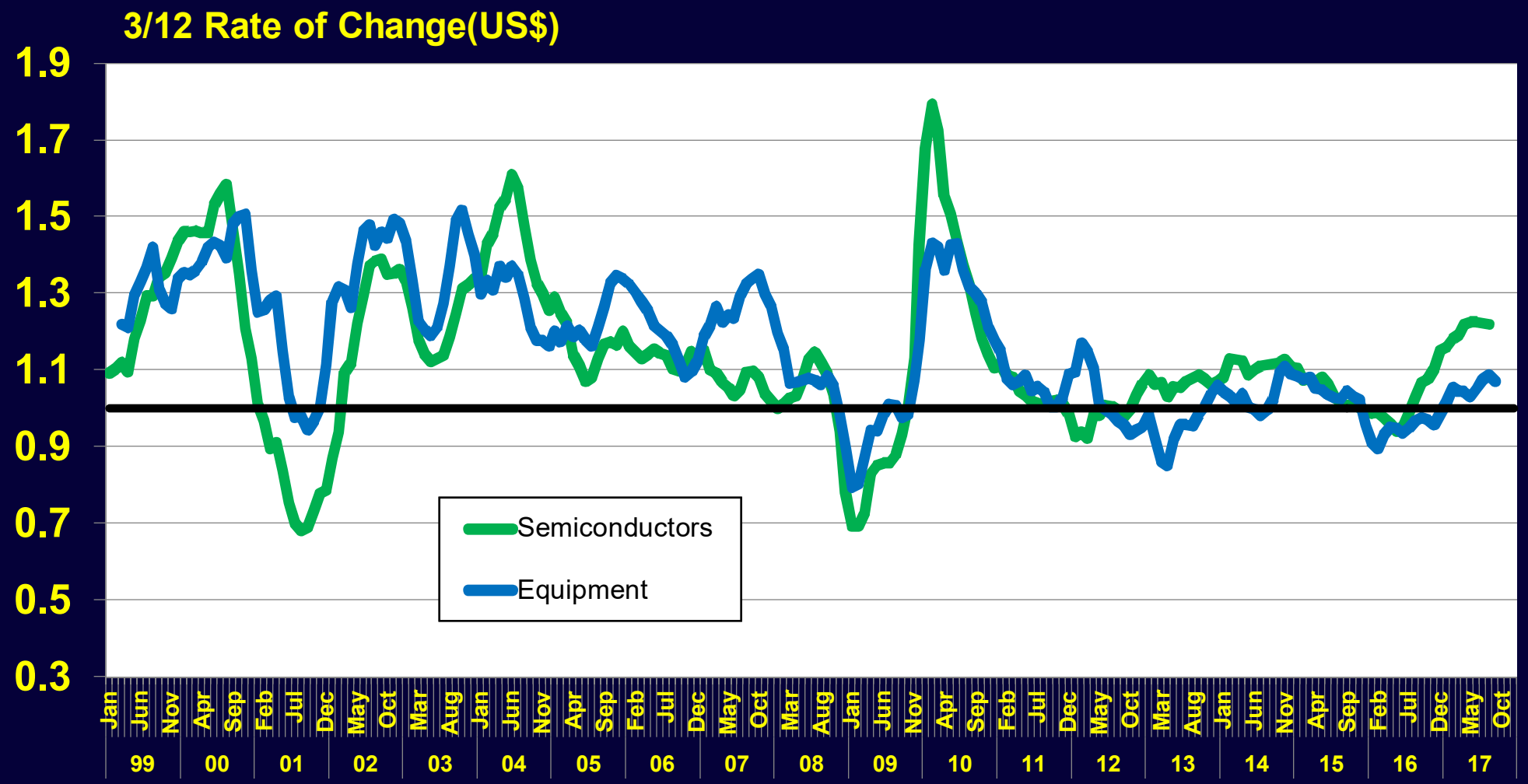
Taiwan/China Motherboard Vendor Sales
Composite of 22 Manufacturers



Taiwan listed companies, often with significant manufacturing in China

Chart 11

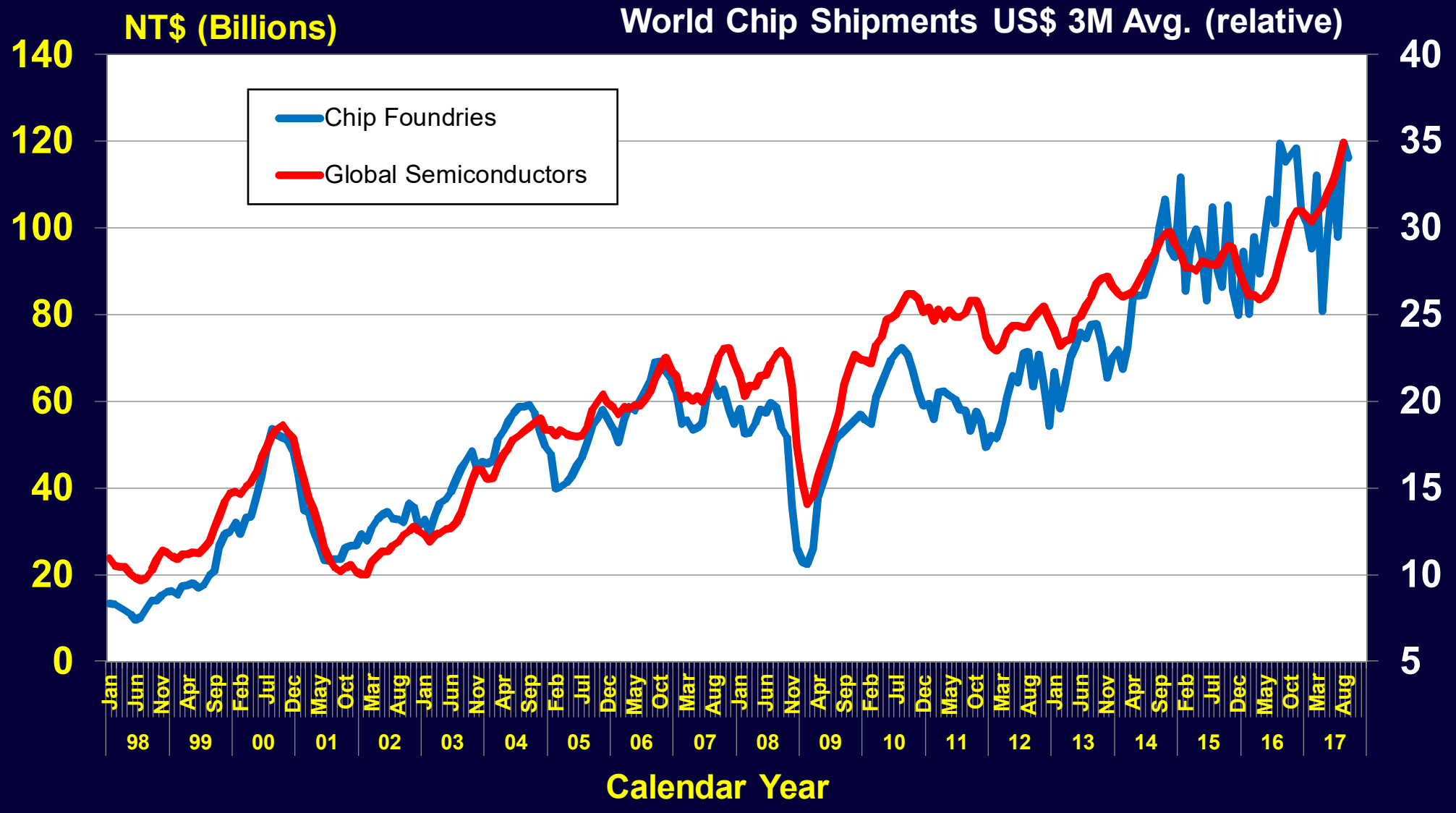
Semiconductor Shipments to Asia/Pacific vs. Taiwan/China Electronic Equipment Production



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

Chart 12

Taiwan Wafer Foundry Composite vs. Global Semiconductor Revenues



14 Taiwan Company Financial Releases & SIA

Chart 13

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 14

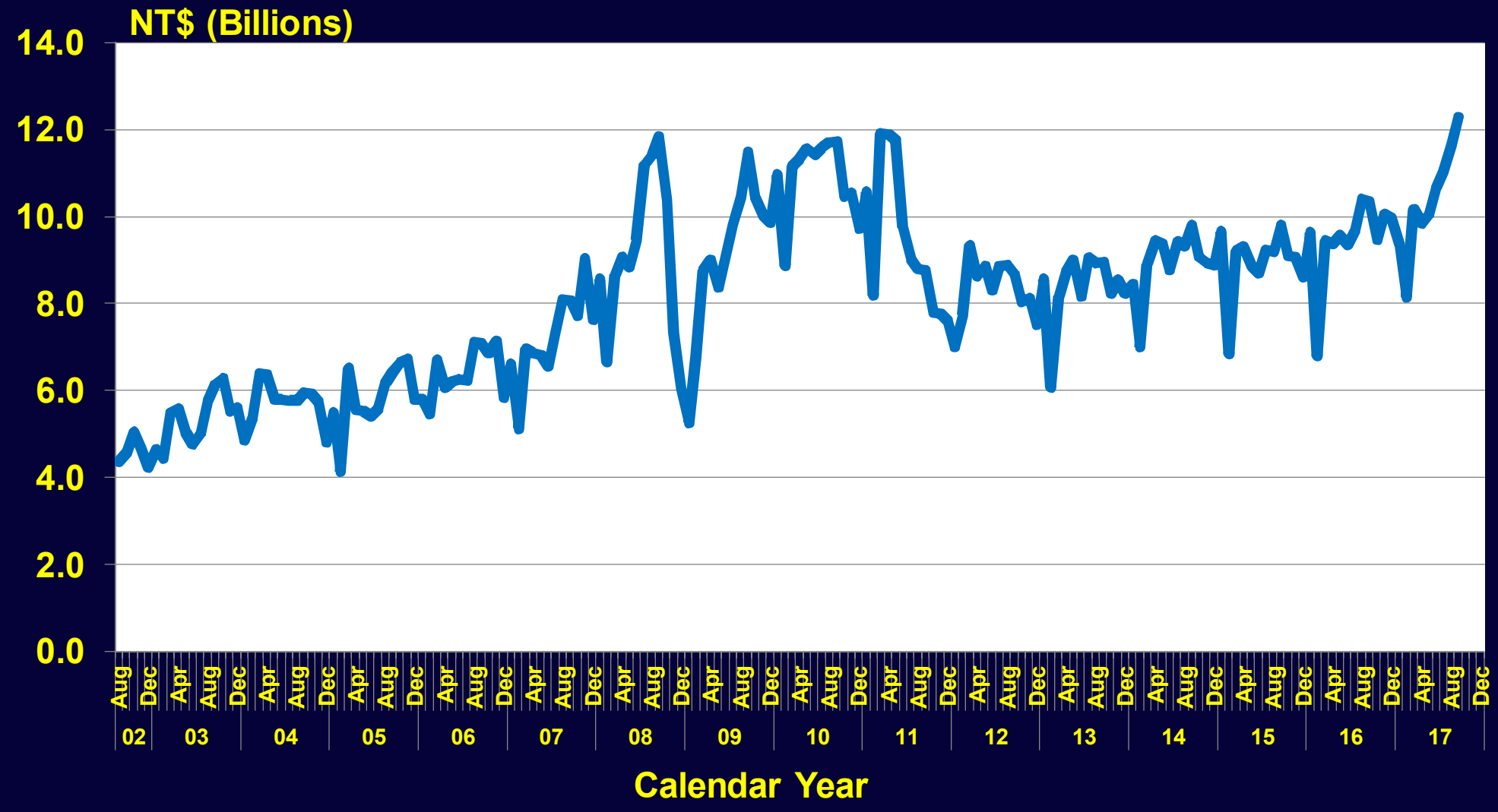
Taiwan Memory Companies
Composite of 7 Manufacturers



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

Chart 15

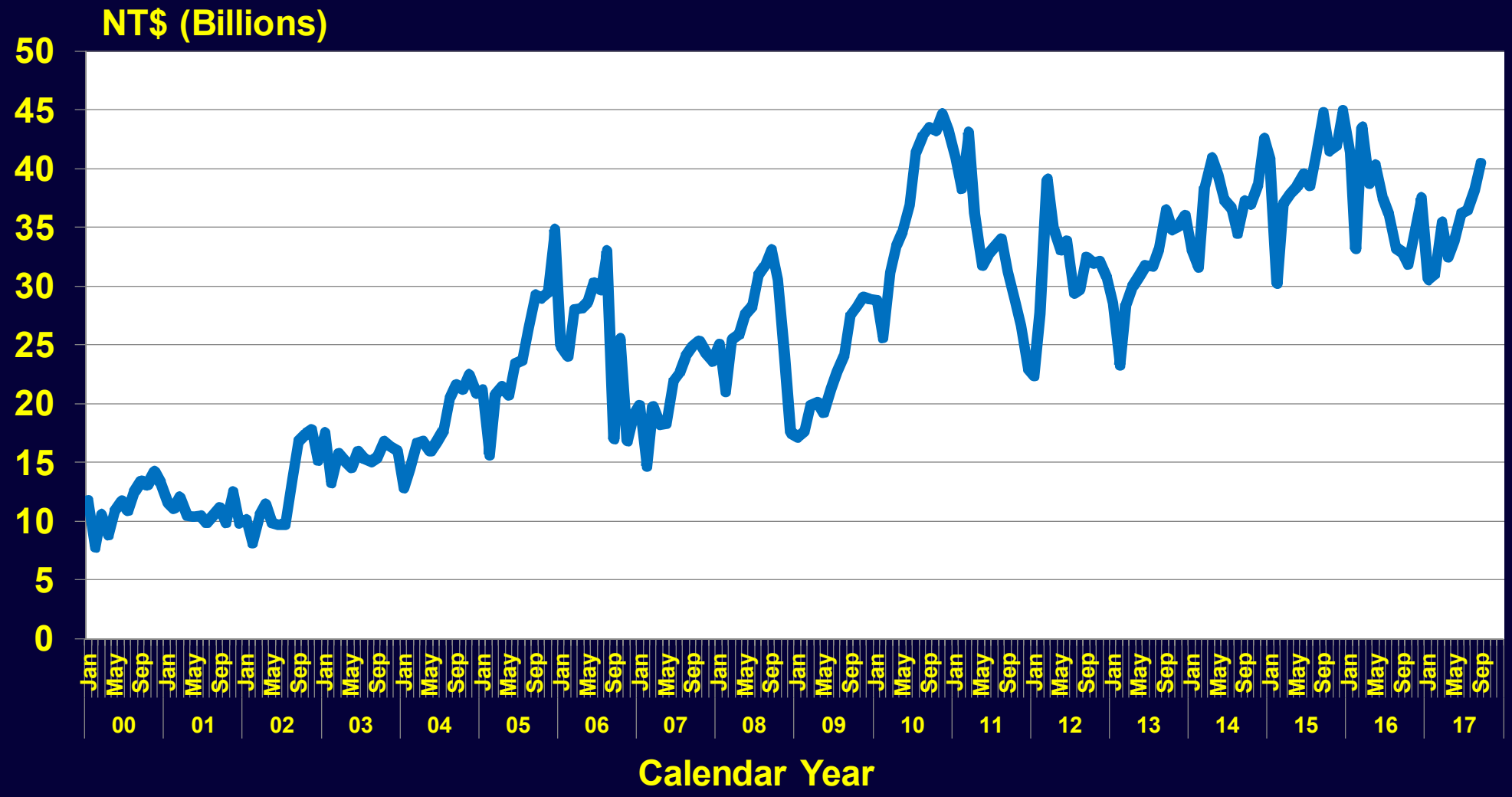
Taiwan Passive Component Companies Composite Sales of 25 Manufacturers



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 16

Taiwan Solar/Photovoltaic Panel Companies
Composite of 27 Manufacturers

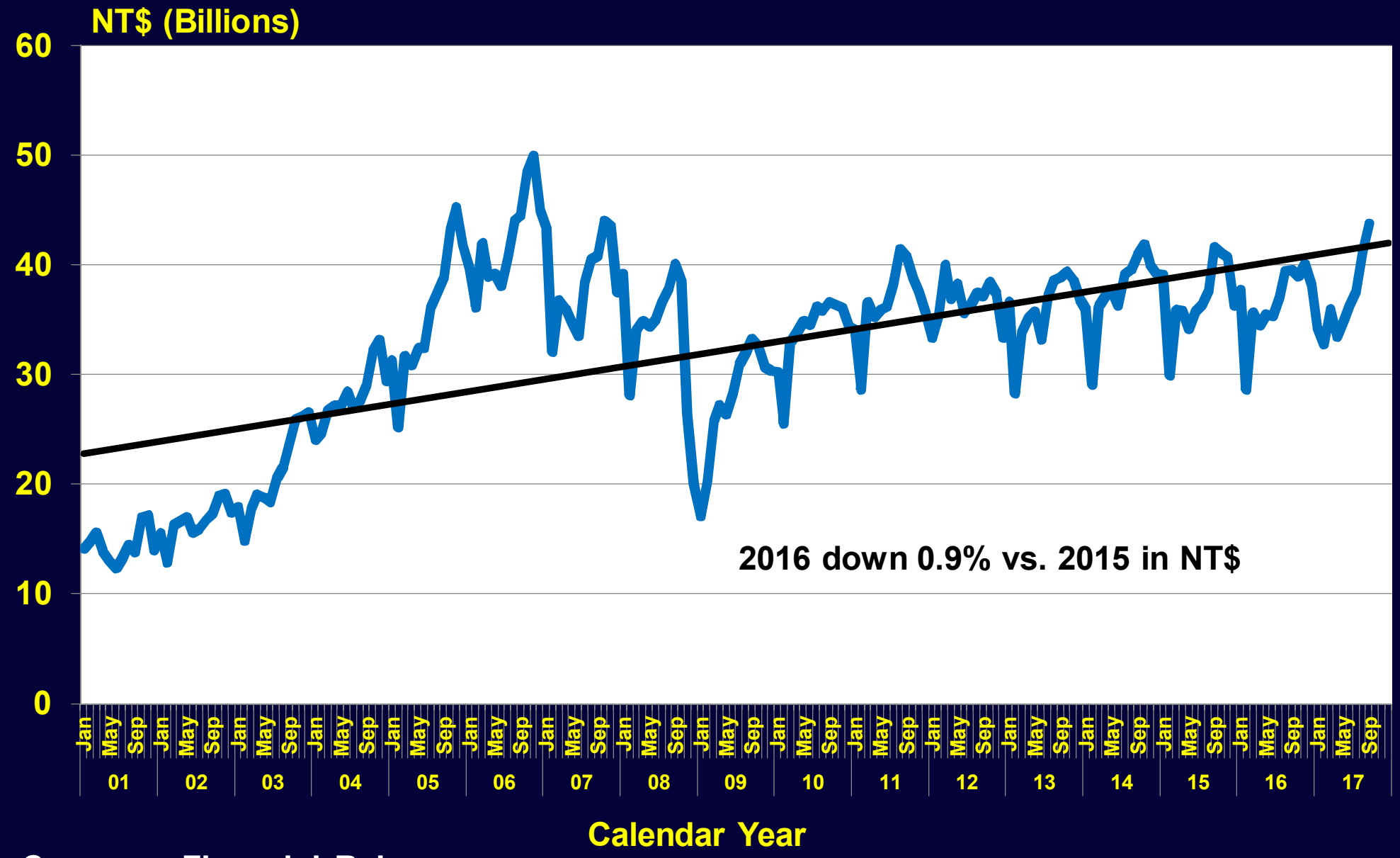


Acter, Big Sun Energy Technology, Chen Full Intl, Danen Technology, Daxon Technology, DelSolar, Delta Electronics, e_TON Solar Tec, Invetec Group, Eversol, Gigasolar materials, Gintech, Green Energy Technology (GET), Higher Way Elec, Kenmec Mechanical, Ligitek, Motech, Neo Solar Power, Phoenixtec Power 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 17

Taiwan Rigid & Flex PCB Shipments

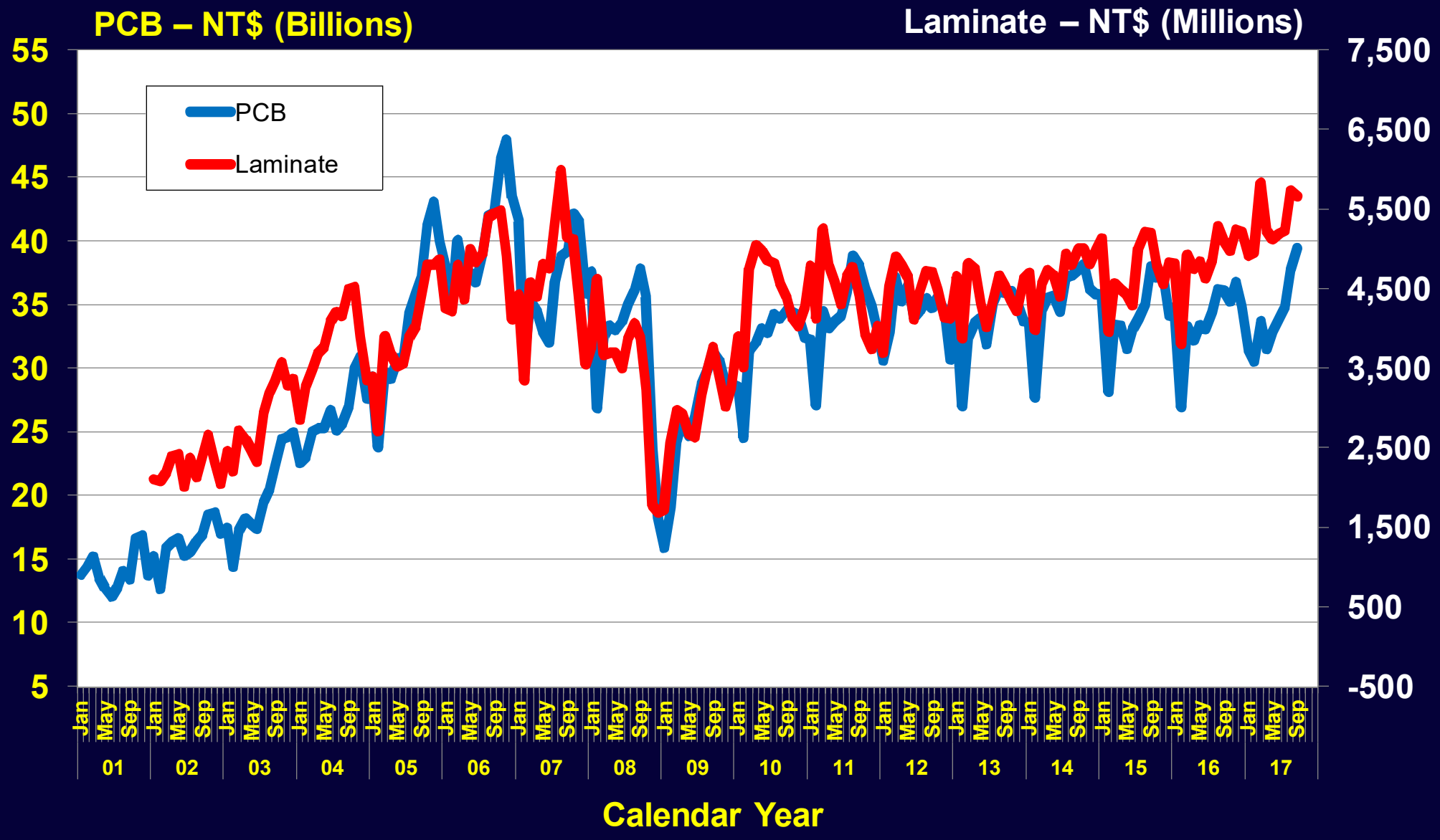
Broad Composite of 46 Taiwan-listed Manufacturers



Company Financial Releases

Chart 18

Taiwan Shipments
42 Rigid PCB & 8 Laminate Manufacturers

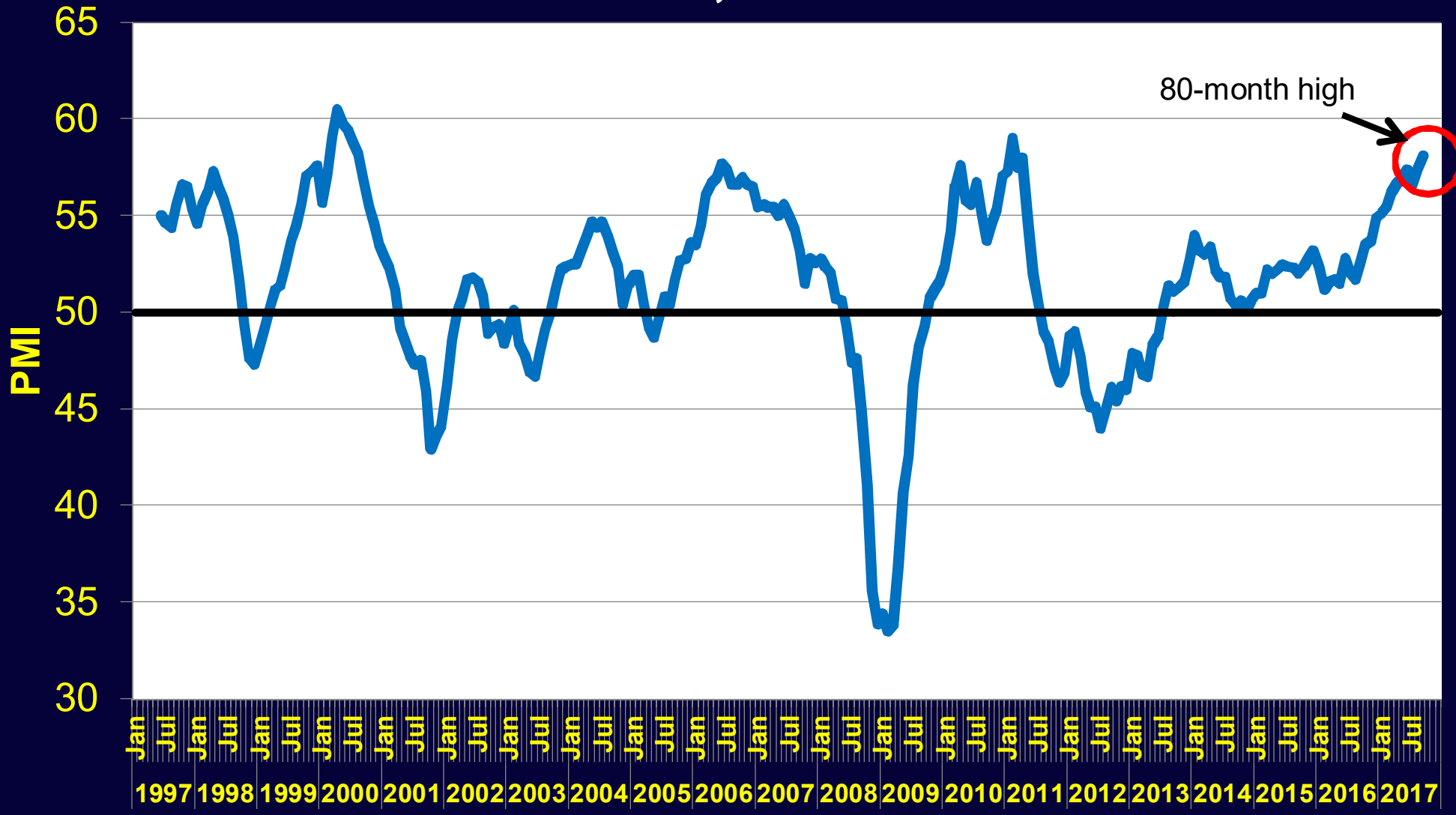


Company Financial Releases

Chart 19

Eurozone Manufacturing "Purchasing Managers" Index

Diffusion Index, >50 = Growth

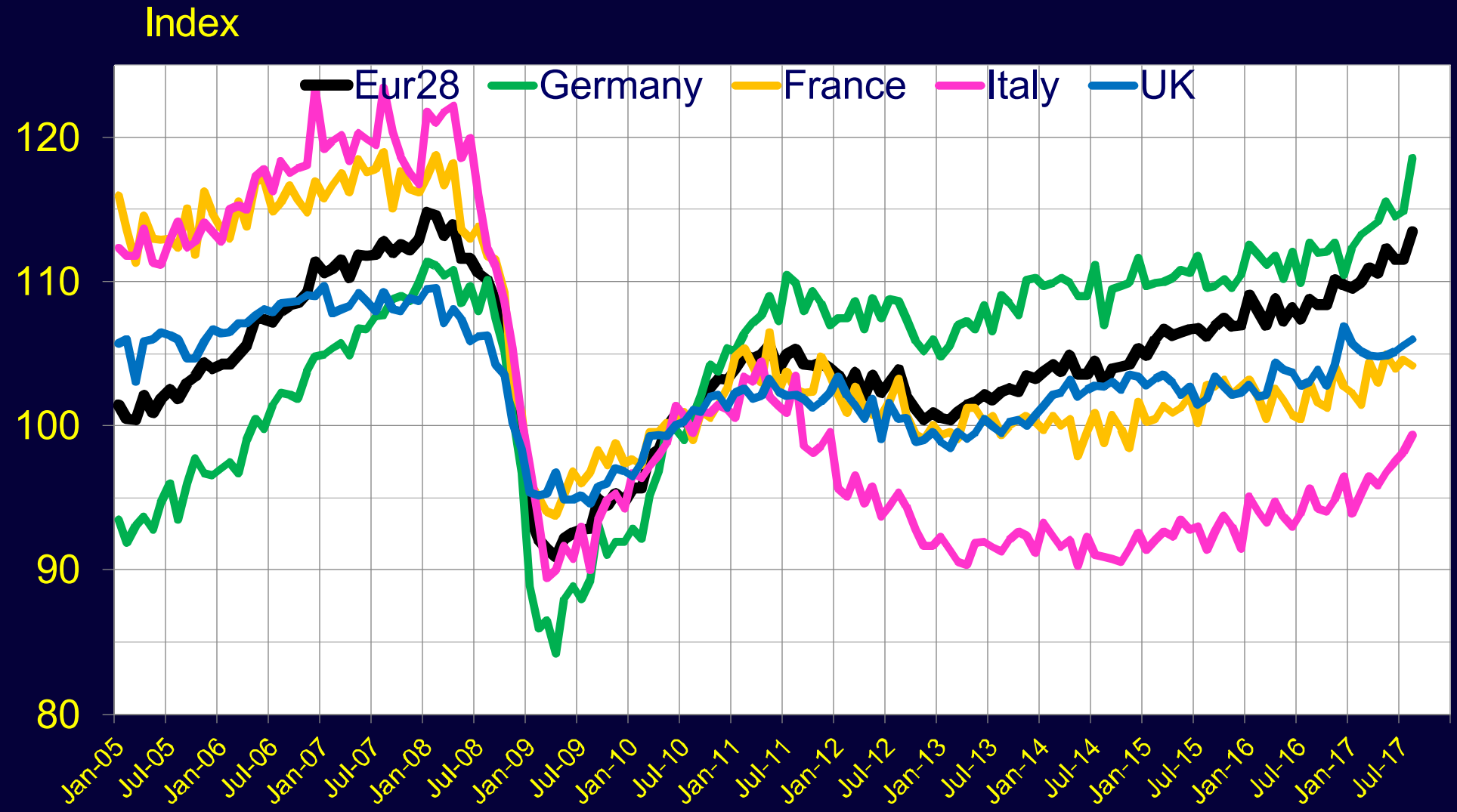


Markit Economics

Chart 20

Industrial Production – Europe Manufacturing

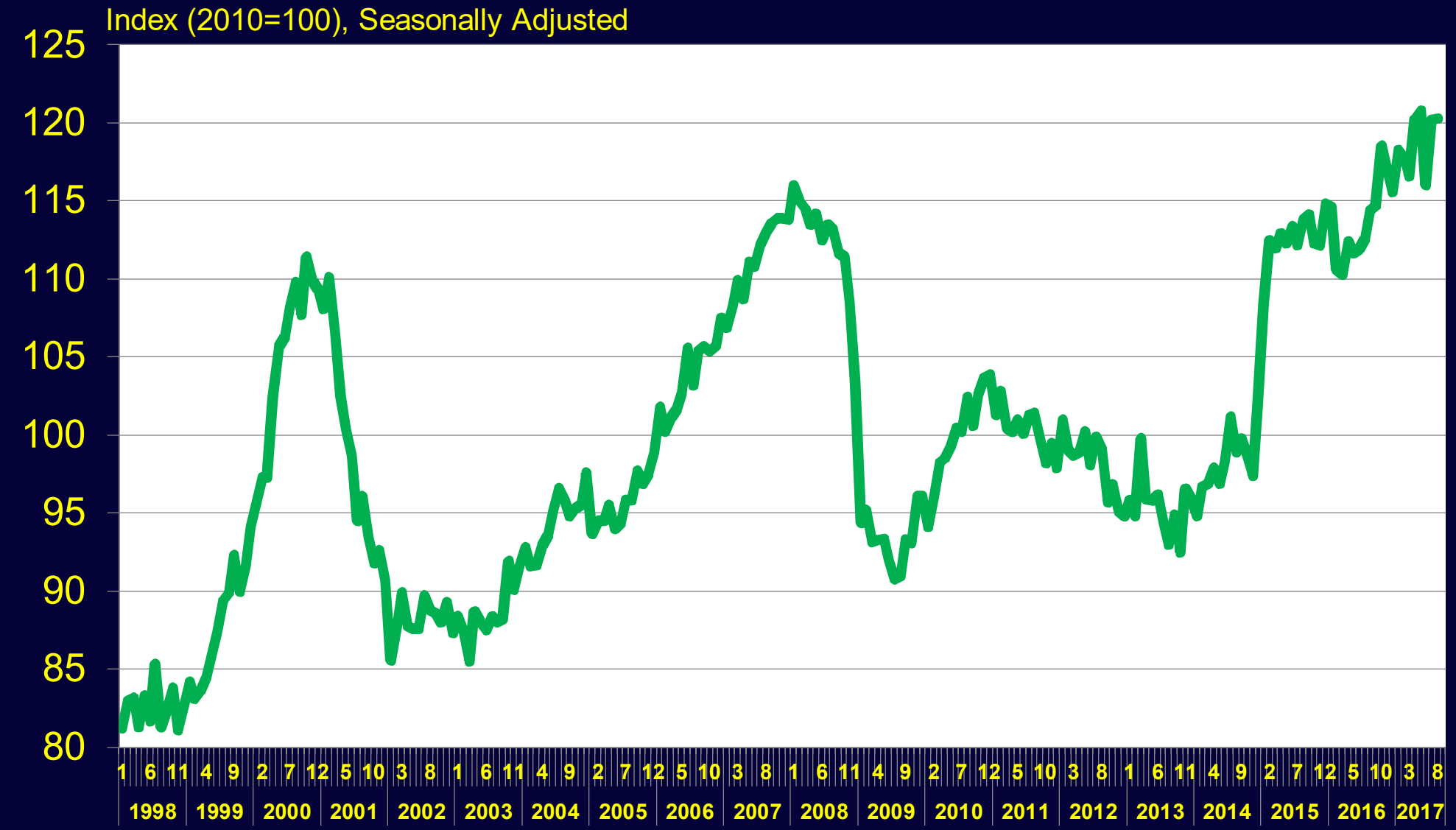
Index (2010 Avg. Month = 100, Seasonally Adjusted)



Eurostat

Chart 21

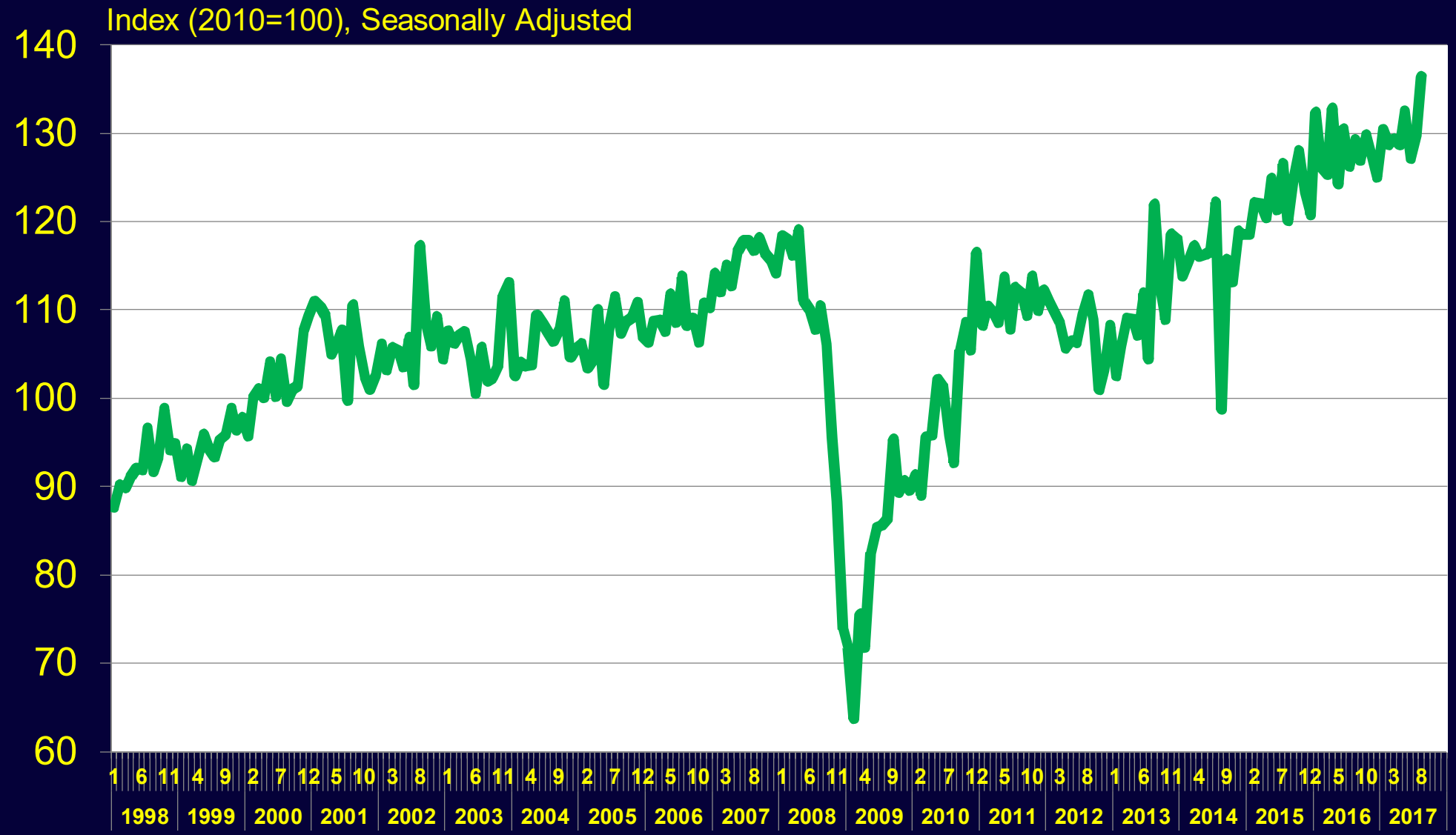
European Computer, Electronic & Optical Products Production



Eurostat, C26 category, EU 28 countries

Chart 22

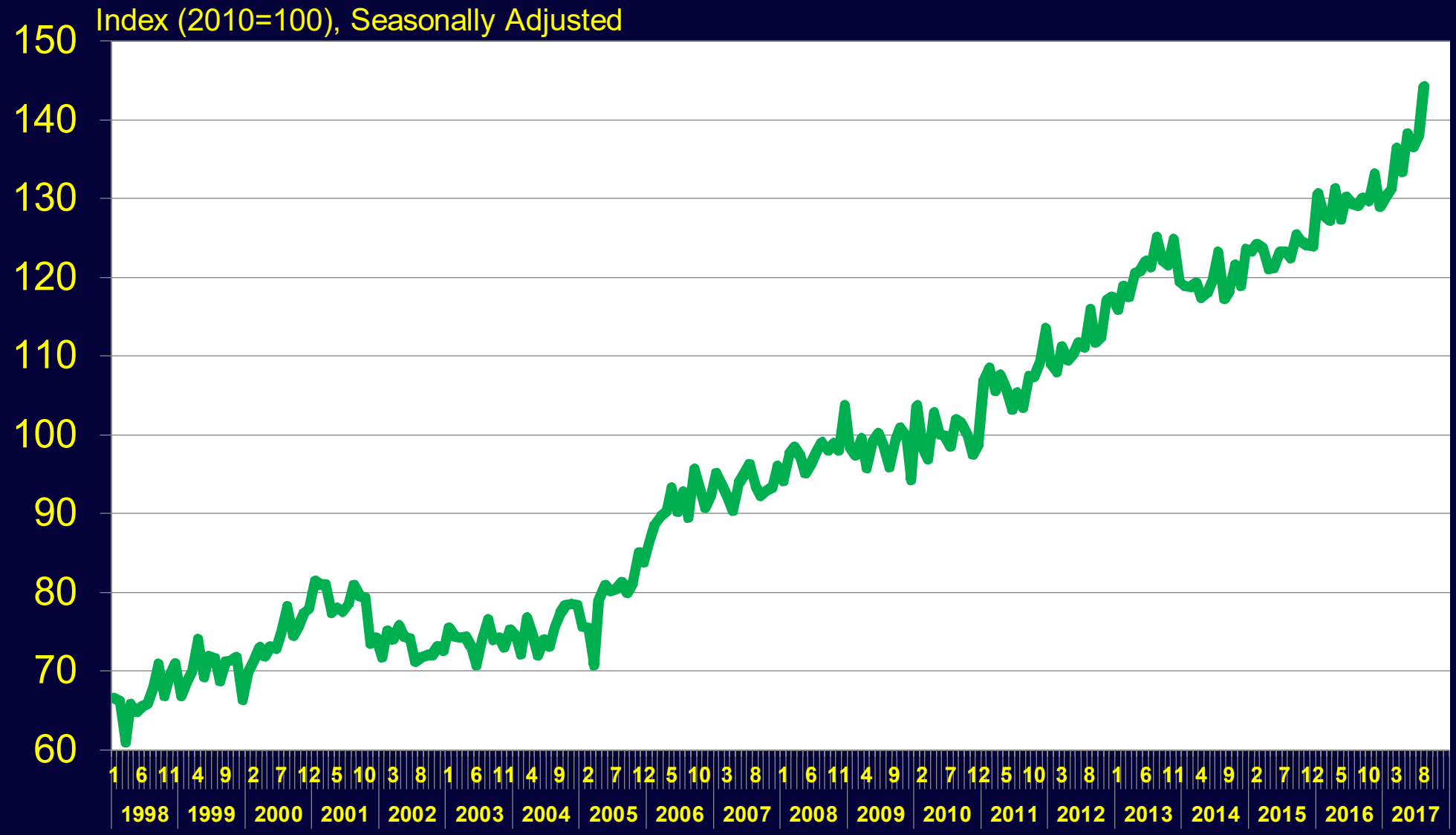
European Motor Vehicle Production



Eurostat, C291 category, EU 27 countries

Chart 23

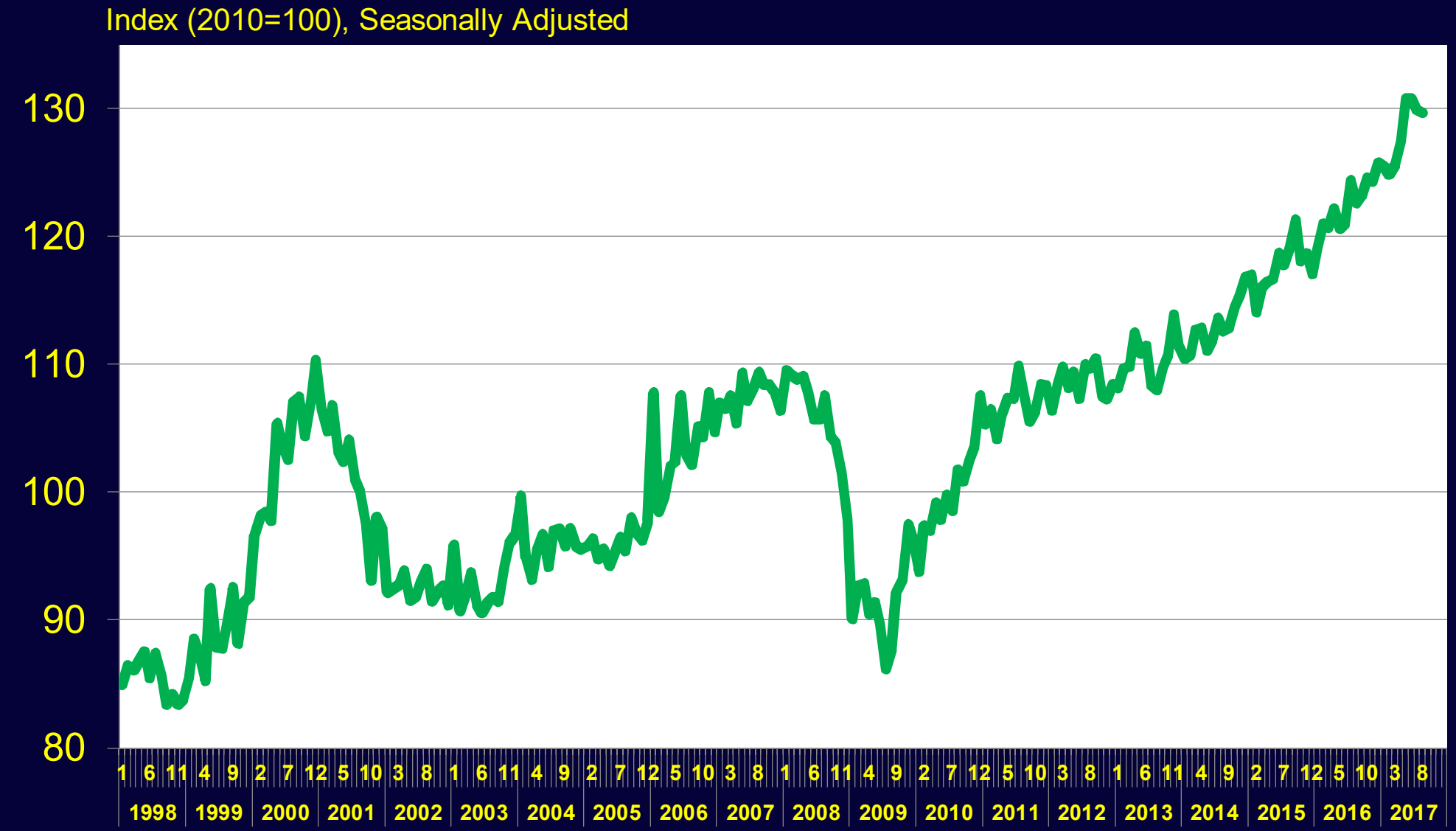
European Production - Aircraft, Spacecraft & Related Equipment



Eurostat, C303 category, EU 27 countries

Chart 24

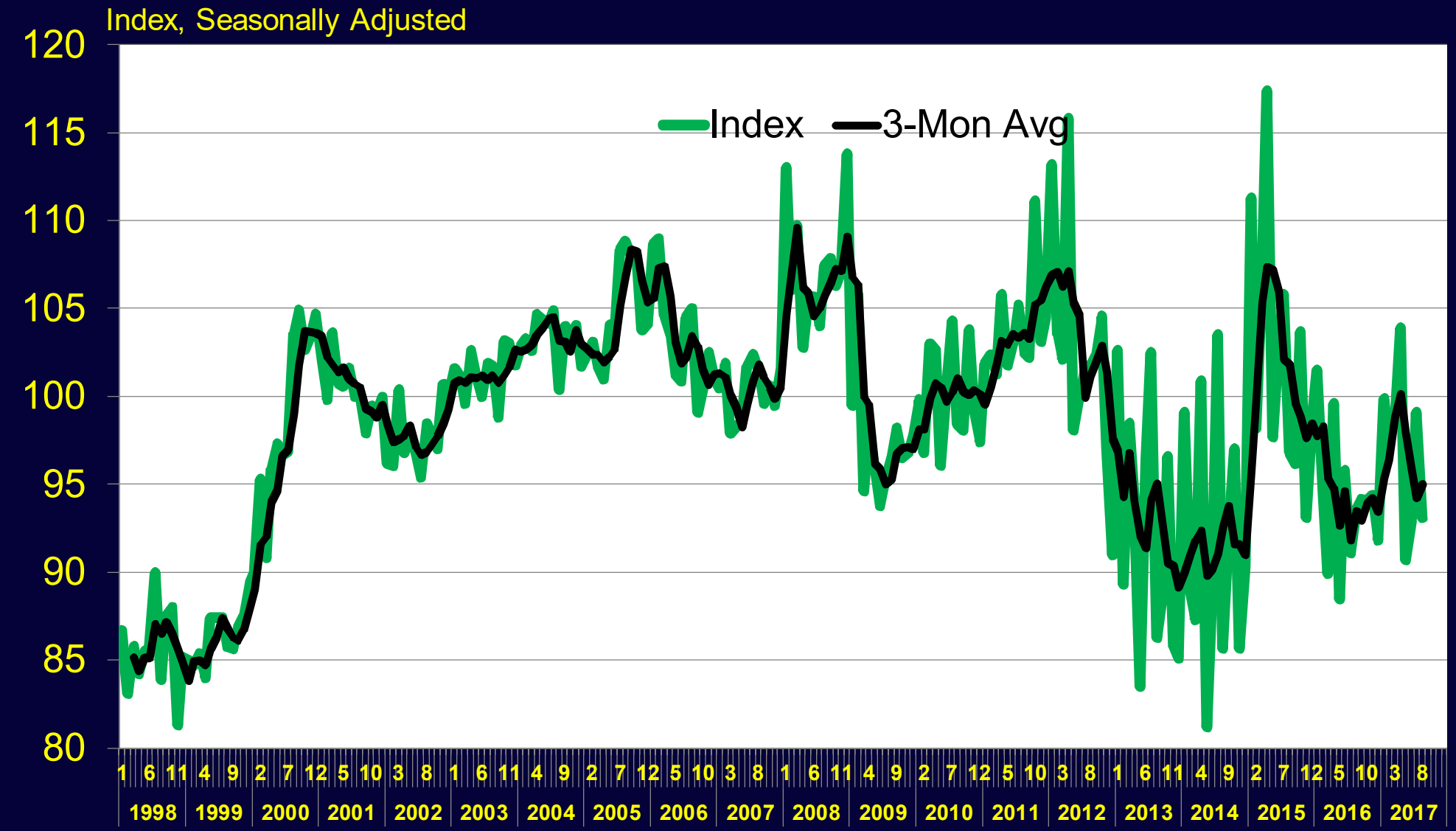
European Production - Instruments & Appliances for Measuring, Testing & Navigation



Eurostat, C2651 category, EU 27 countries

Chart 25

European Production - Irradiation, Electromedical & Electrotherapeutic Equipment



Eurostat, C266 category, EU 27 countries

Chart 26

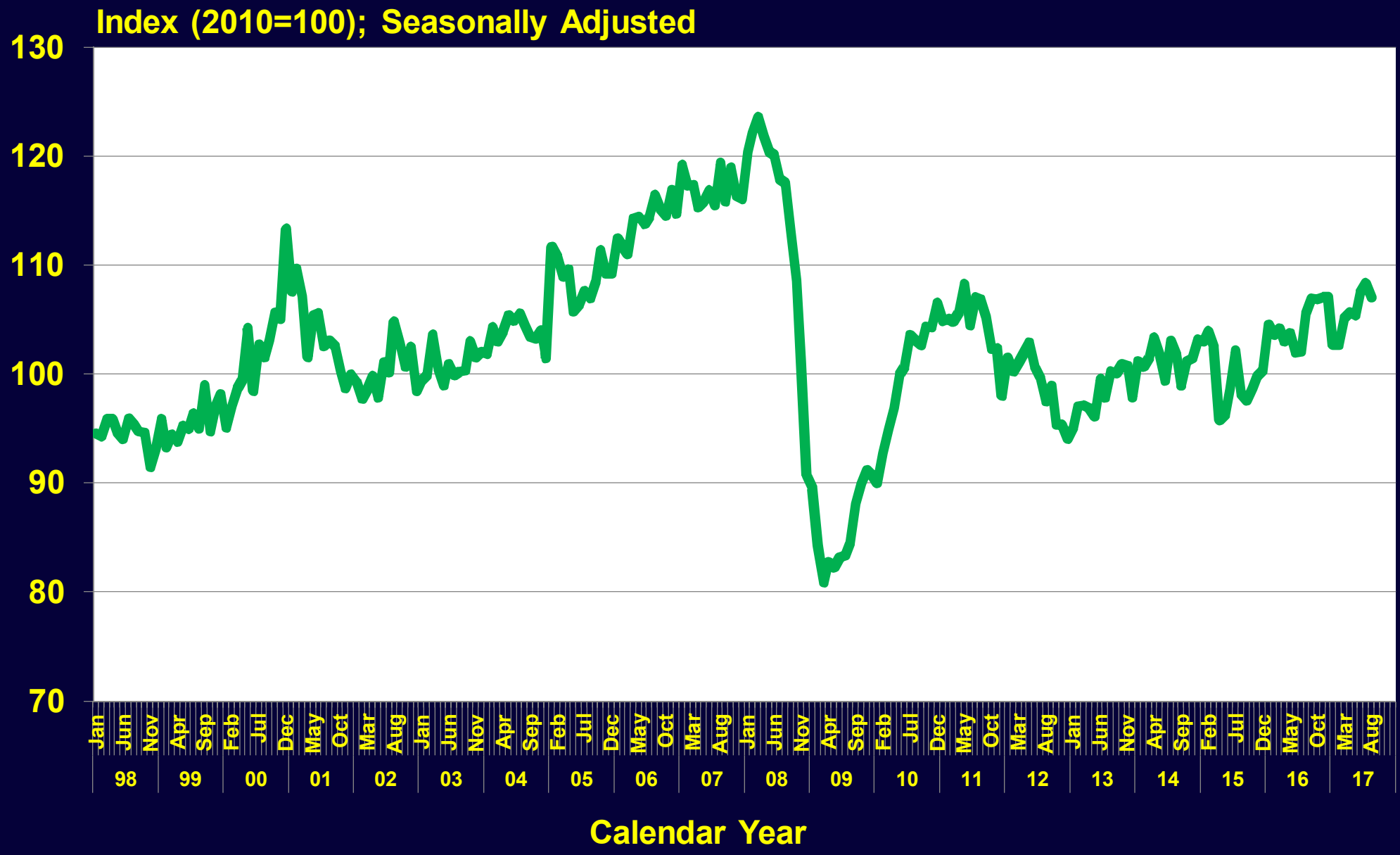
European Loaded Electronic Board Production



Eurostat, C2612

Chart 27

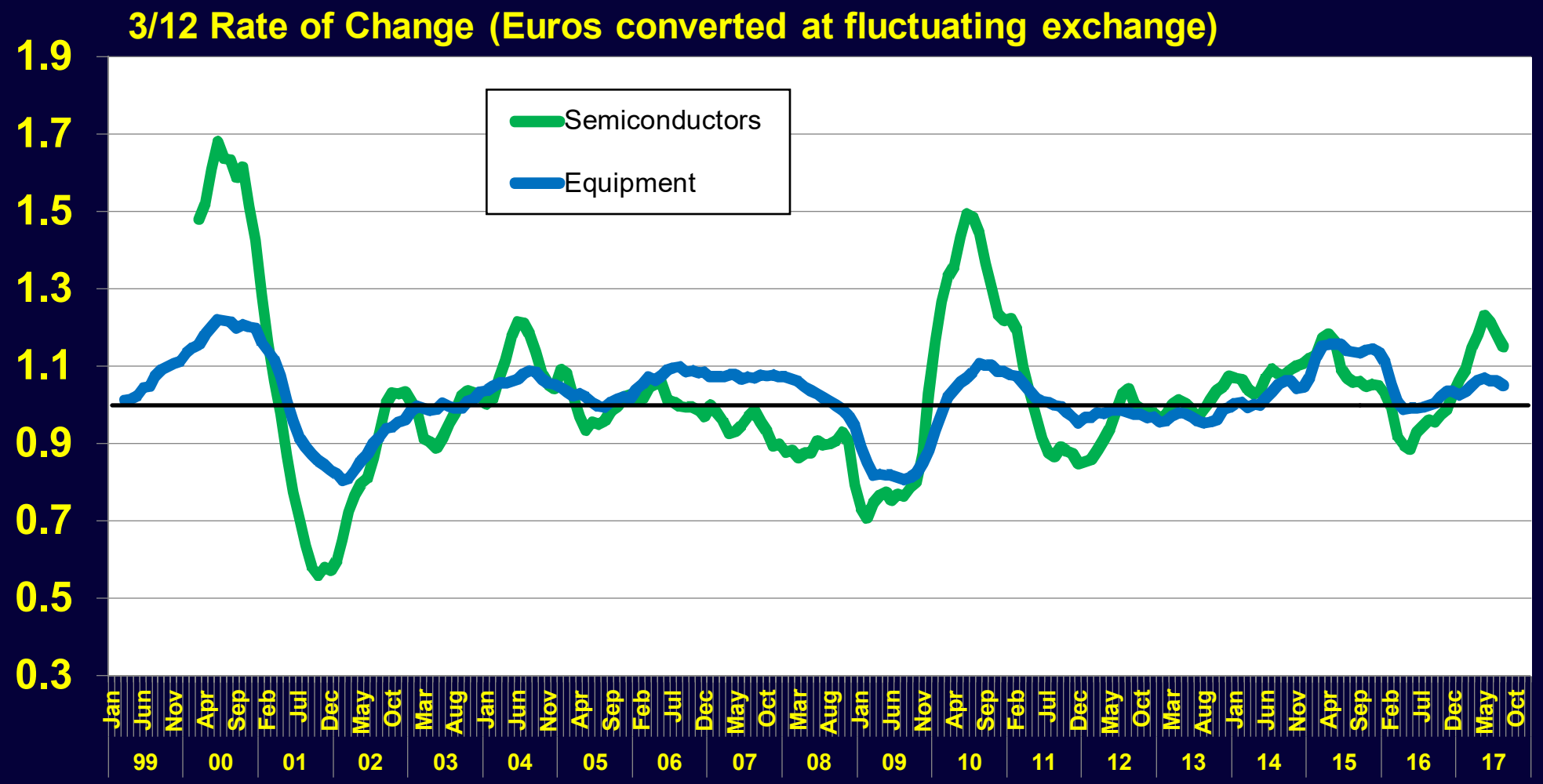
European Electronic Wiring Devices



Eurostat

Chart 28

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 29

Present Growth Rates (%)
European Electronics Industry

	Latest Month	Annualized Growth Rate	3-Month Growth Rate
ELECTRONIC EQUIPMENT SHIPMENTS (Index CY 2010 =100)			
Computer, Electronic & Optical Products	8/17	4.7	5.2
Components & Boards	8/17	5.4	6.1
Components	8/17	6.5	8.3
Wiring Devices	8/17	3.9	4.3
Loaded Electronic Boards	8/17	2.2	-0.1
Office Equipment	8/17	12.3	28.2
Consumer Electronics	8/17	8.2	7.6
Electric Domestic Appliances	8/17	0.7	-0.9
Electronic Instruments	8/17	5.2	6.1
Medical Electronics	8/17	0.4	1.6
Motor Vehicles	8/17	1.8	1.9
Air & Space Aircraft	8/17	5.2	7.8
Semiconductor Shipments (Eur) to Europe	8/17	11.1	15.2
Industrial Production	8/17	2.6	3.7

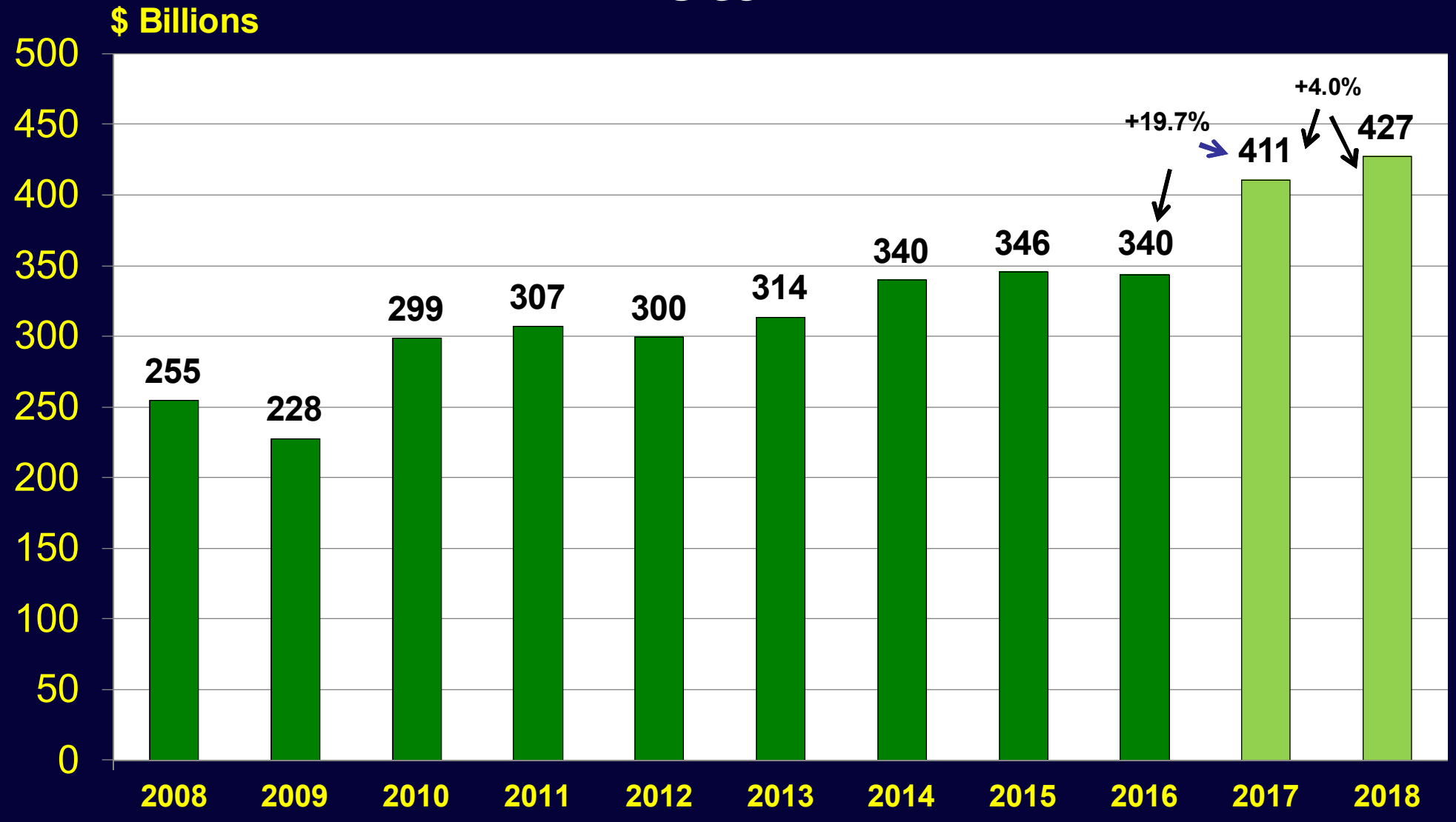
NOTE: 3 month growth rates compare most recent 3 months to same 3 months one year earlier. Also called 3/12 growth

Sources: Eurostat & SIA

Chart 30

World Semiconductor Sales

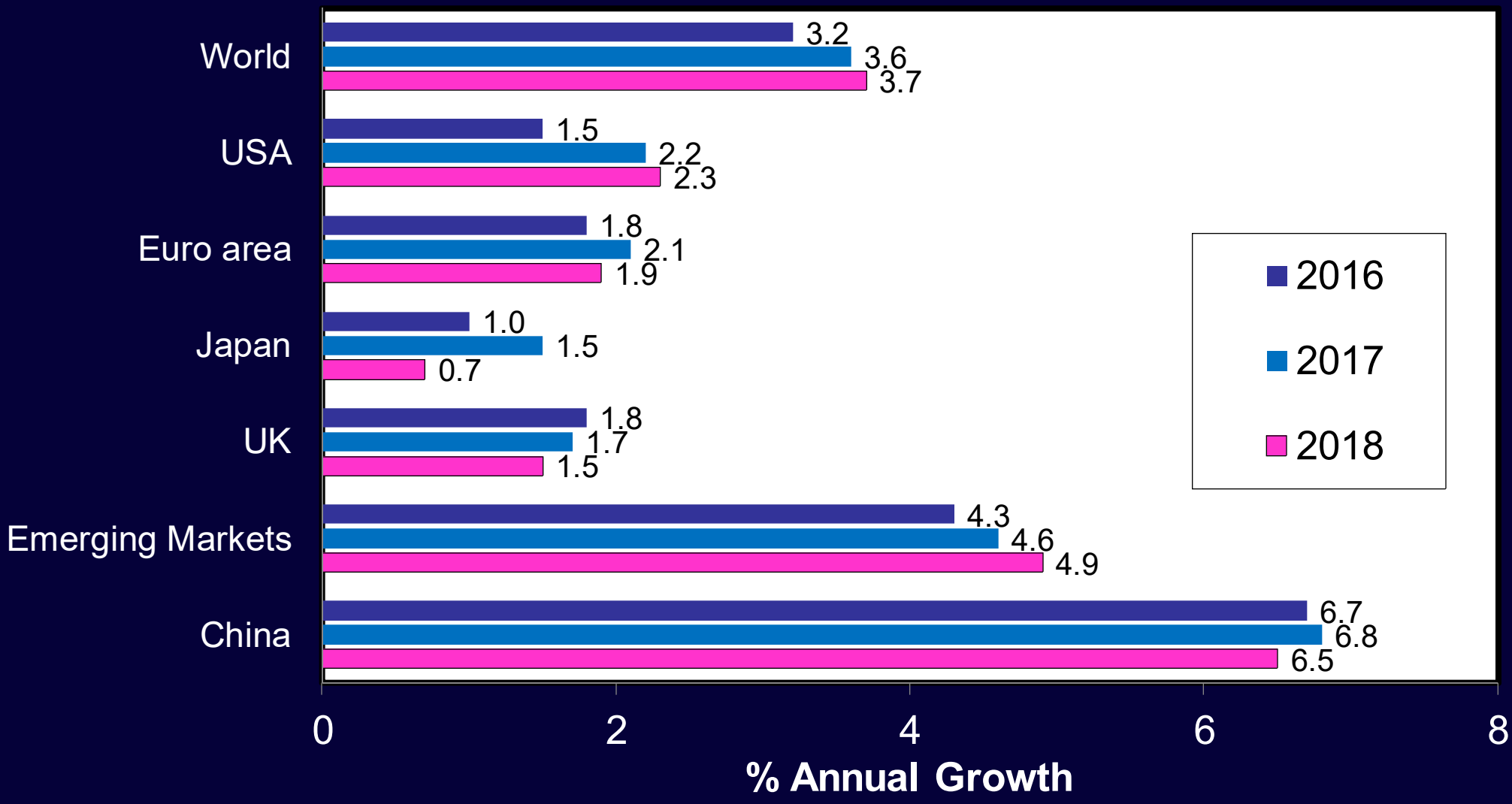
Total



Gartner 7/17 & prior reports

Chart 31

Real GDP Growth



IMF 10/17

Chart 32

Personal Computer Unit Shipments

World

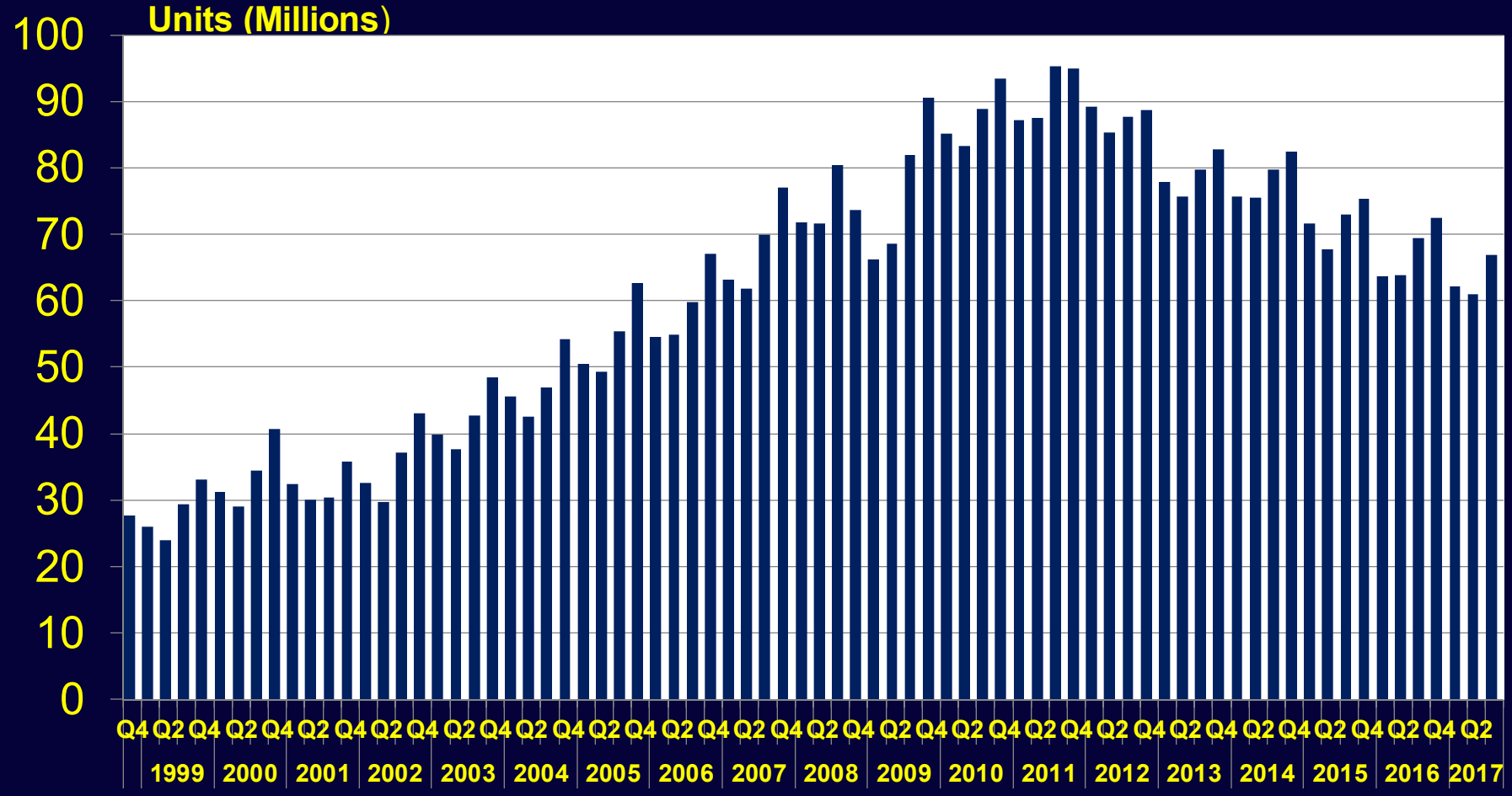

Units (Millions)
100
90
80
70
60
50
40
30
20
10
0
Q4 Q2 Q4 Q2 Q4 Q2

Chart 33

Personal Computer Market Growth
World & USA

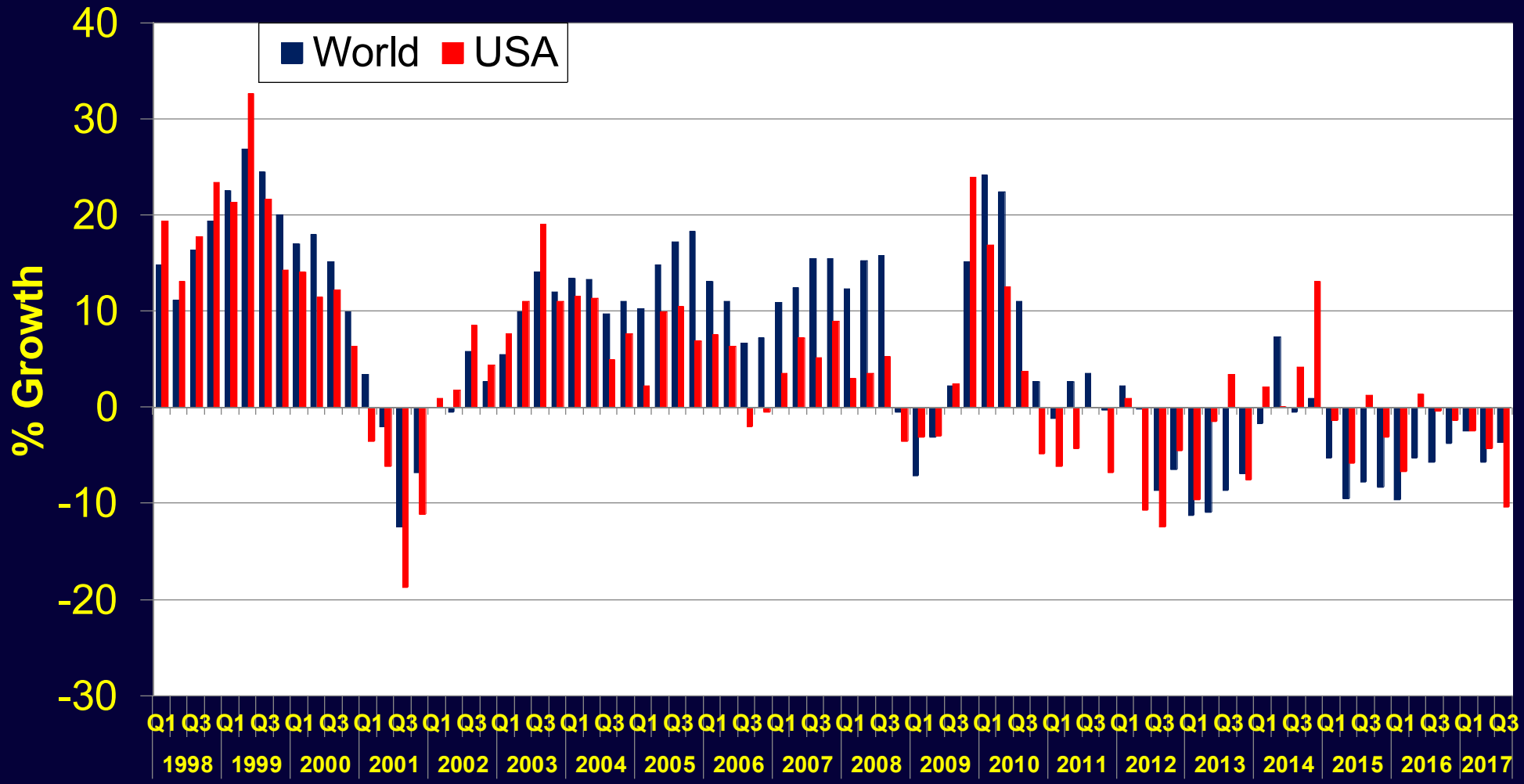
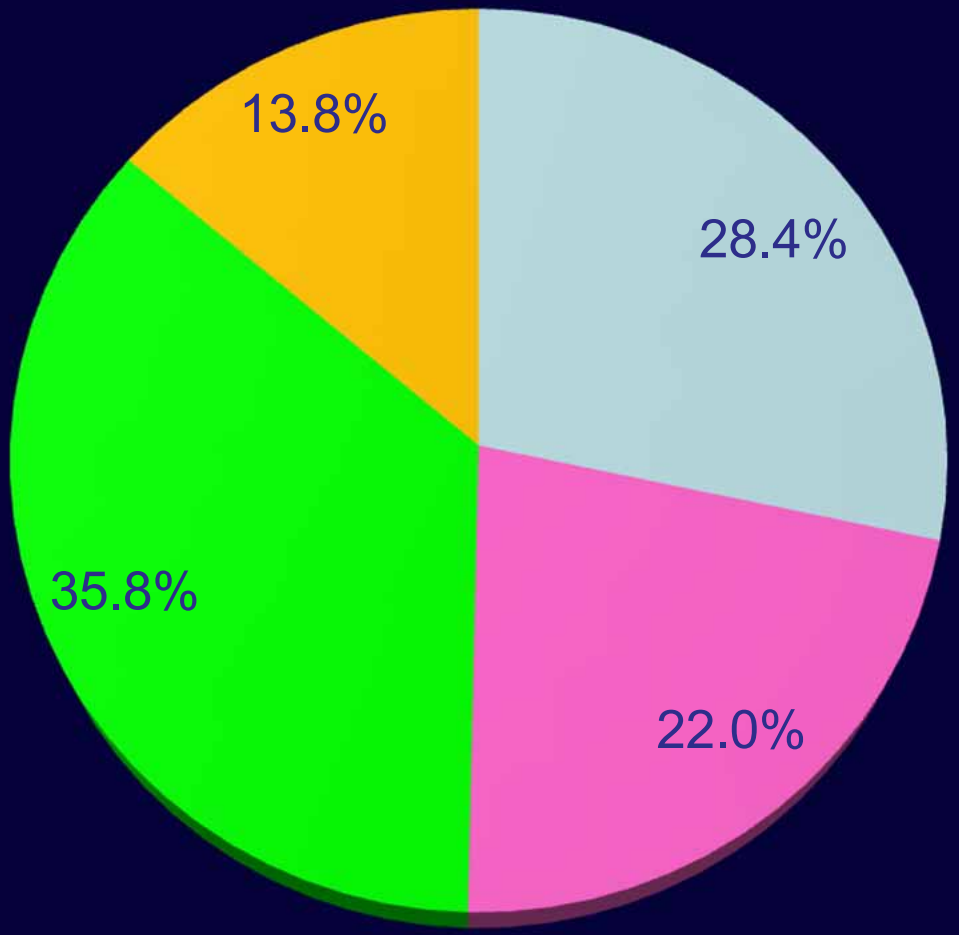

World
USA
% Growth
40
30
20
10
0
-10
-20
-30
Q1 Q3 Q1 Q3 Q1 Q3

Chart 34

World Personal Computer Market 3Q'17



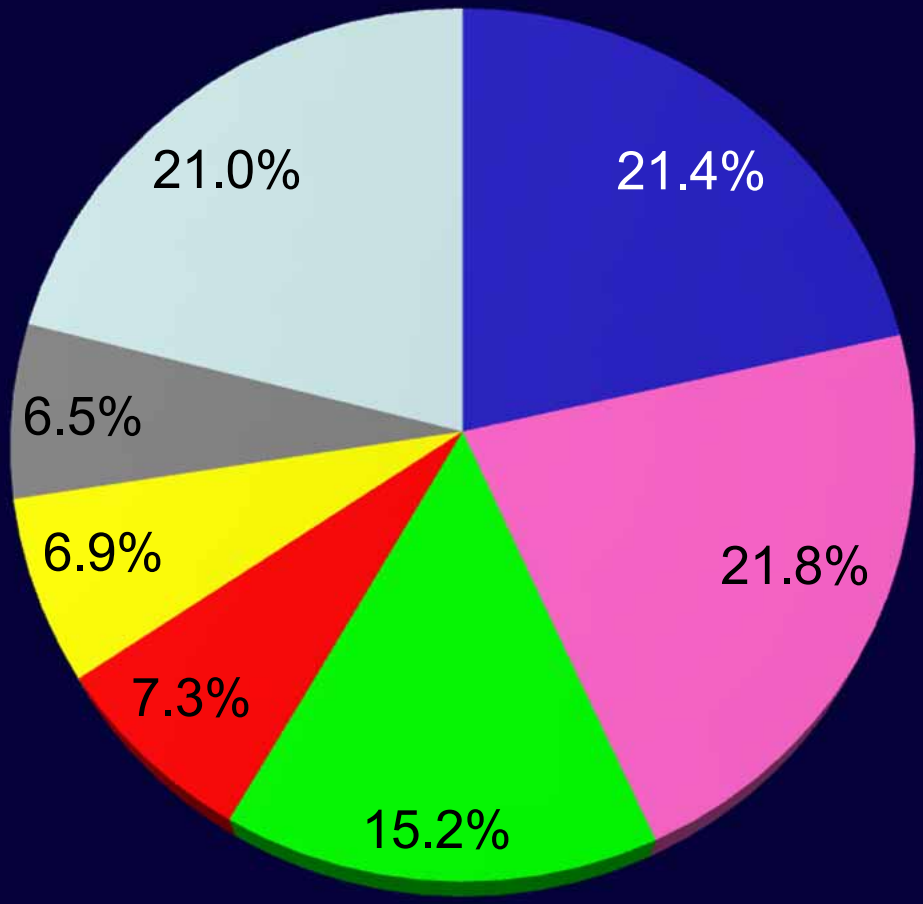
TOTAL: 67.0 Million Units

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

Gartner 10/17

Chart 35

World Personal Computer Market 3Q'17



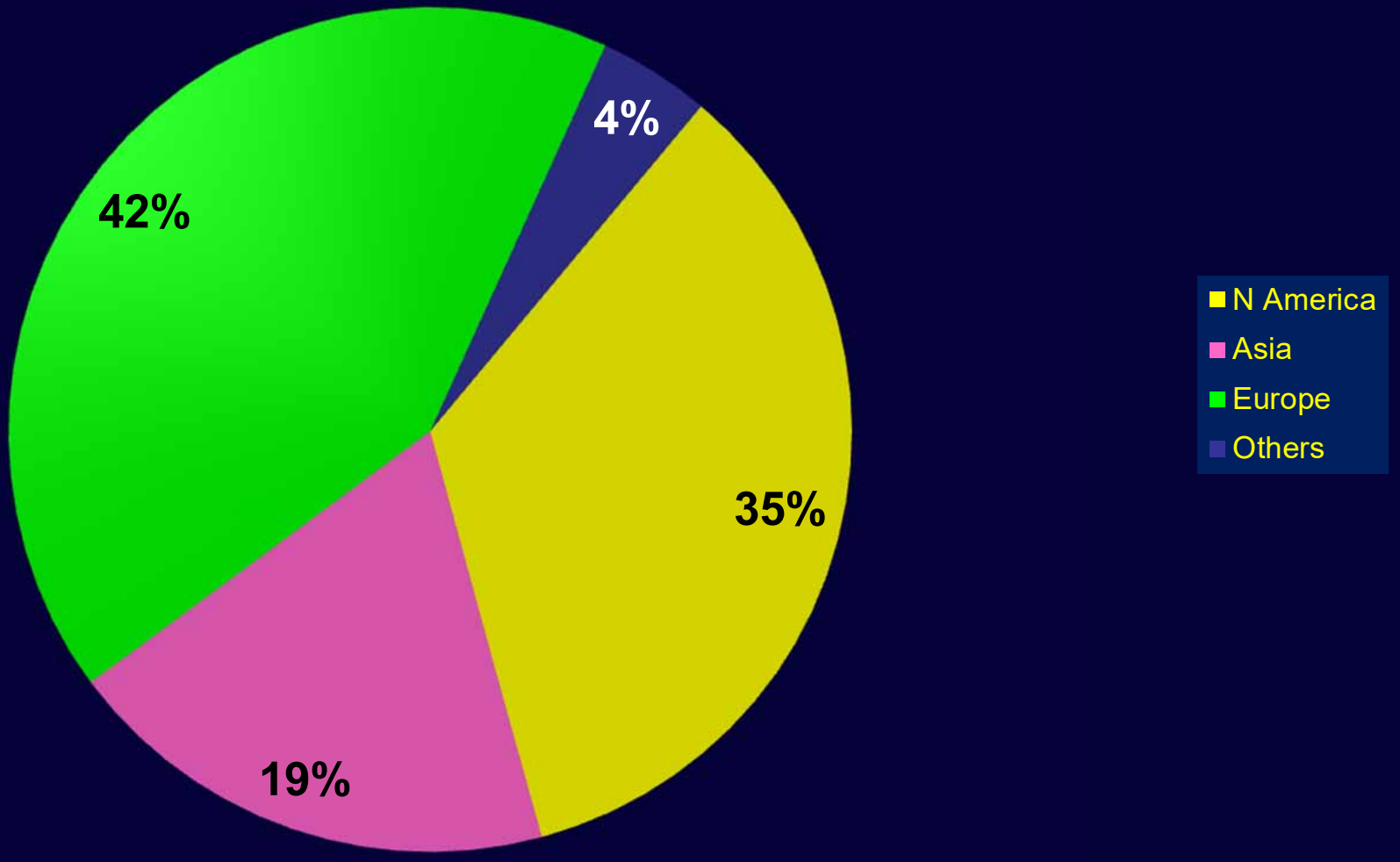
TOTAL: 67.0 Million Units

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

Gartner 10/17

Chart 36

Service Robotics Manufactures of All Types
(professional & personal/domestic use)
by Region of Origin



Total 699