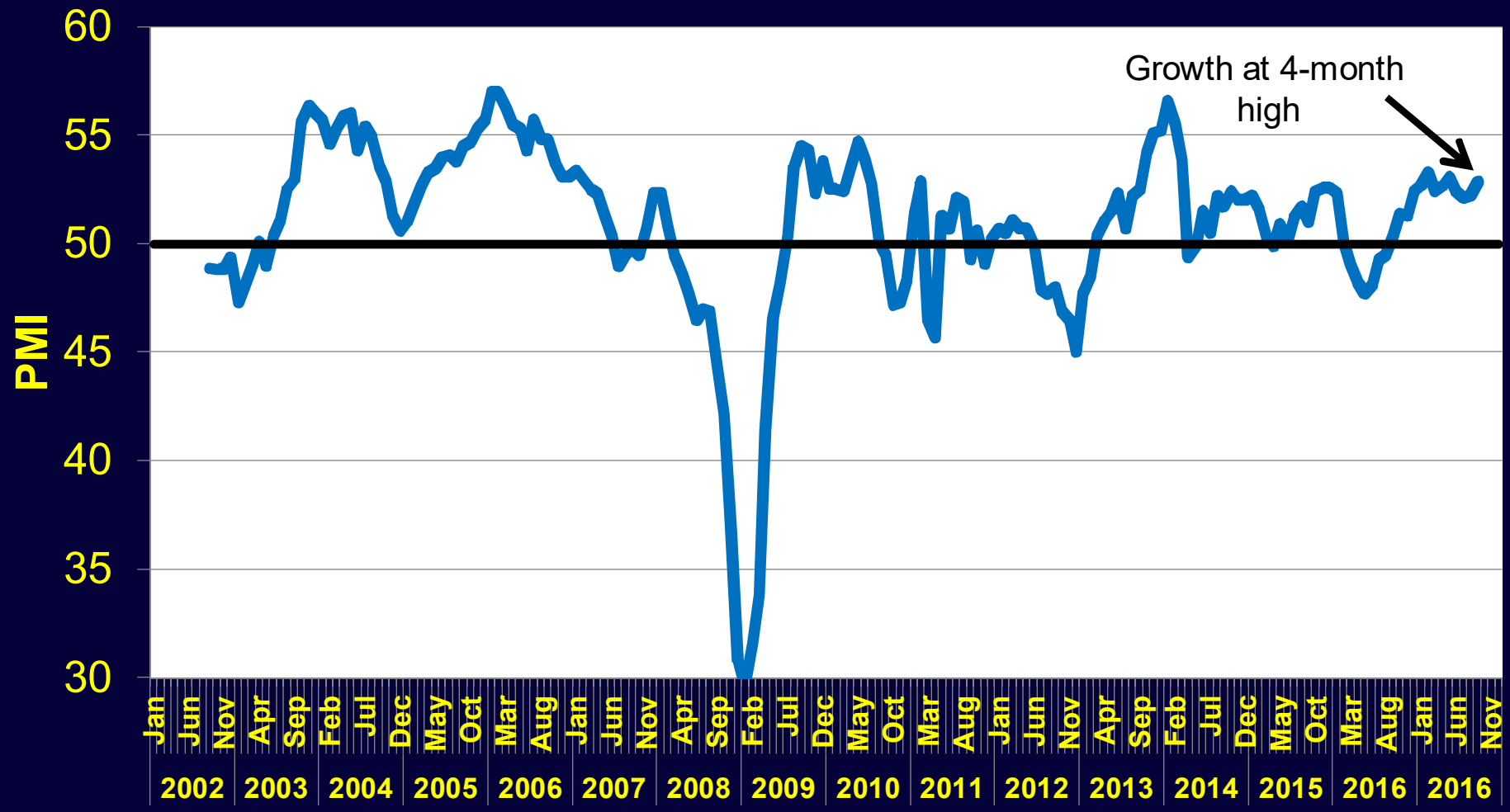
Chart 1

Japan "Purchasing Managers" Index

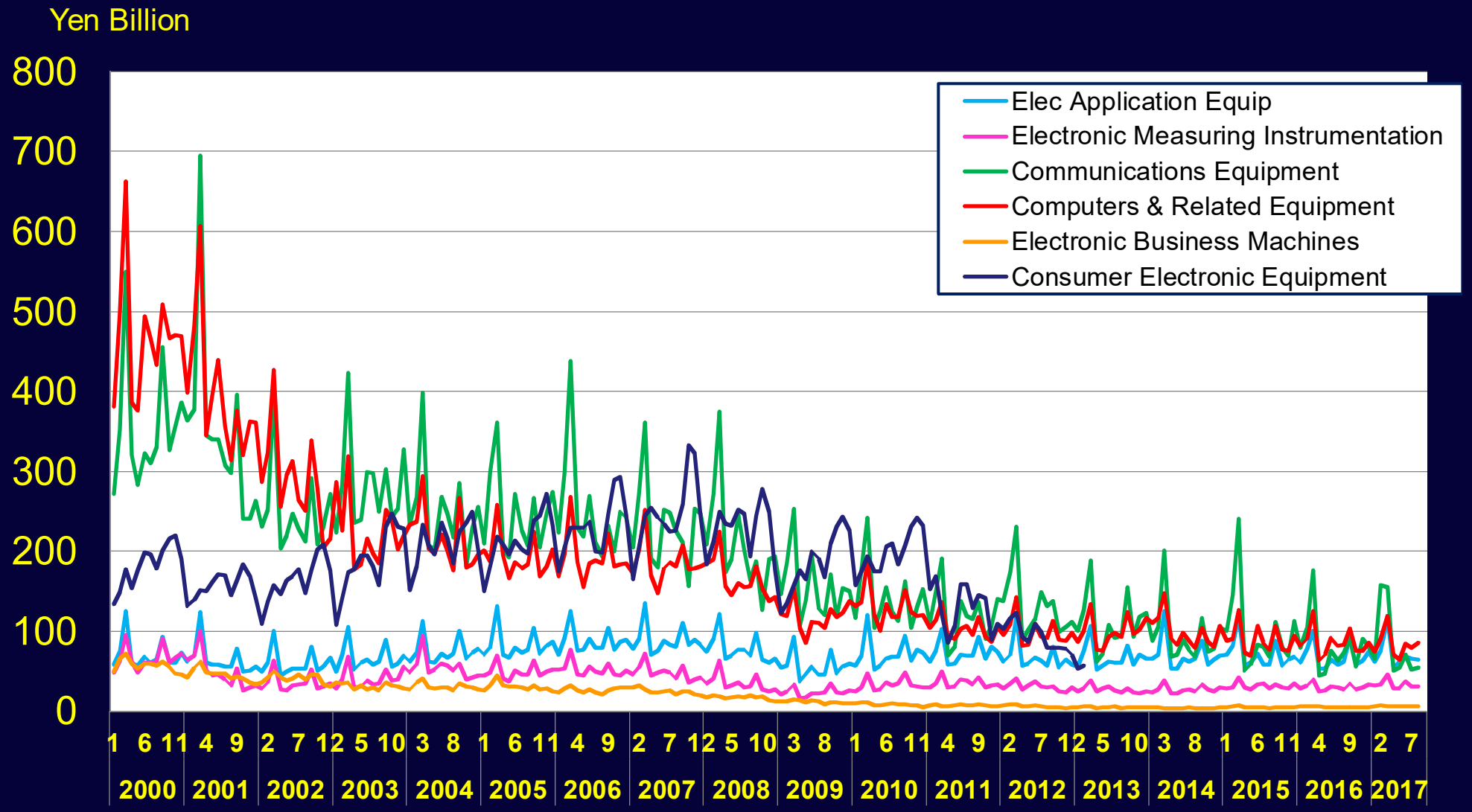
>50 = Growth



Nomura/JMMA

Chart 2

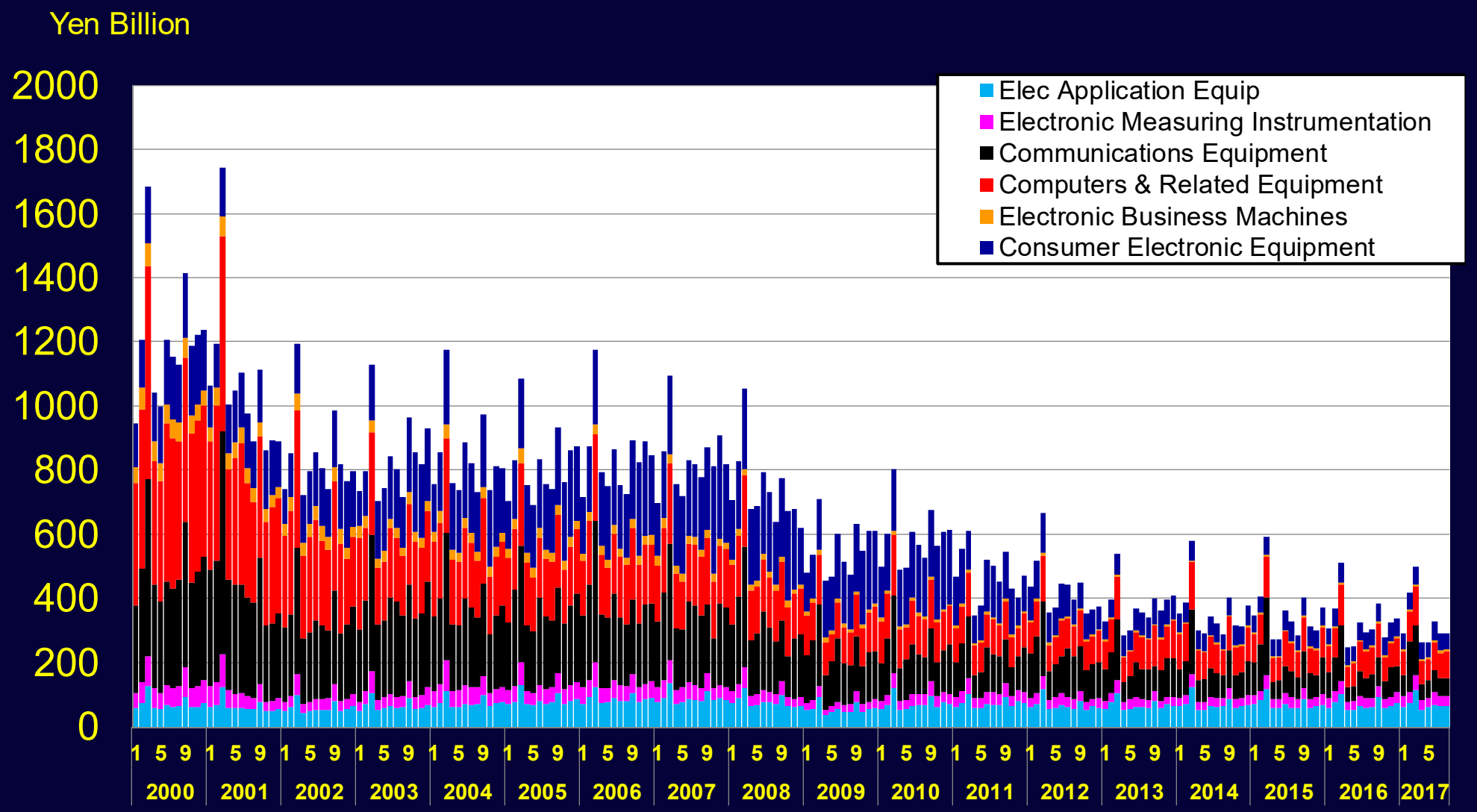
Japan Electronic Equipment Production by Month 2000 to Present



JEITA www.jeita.or.jp/

Chart 3

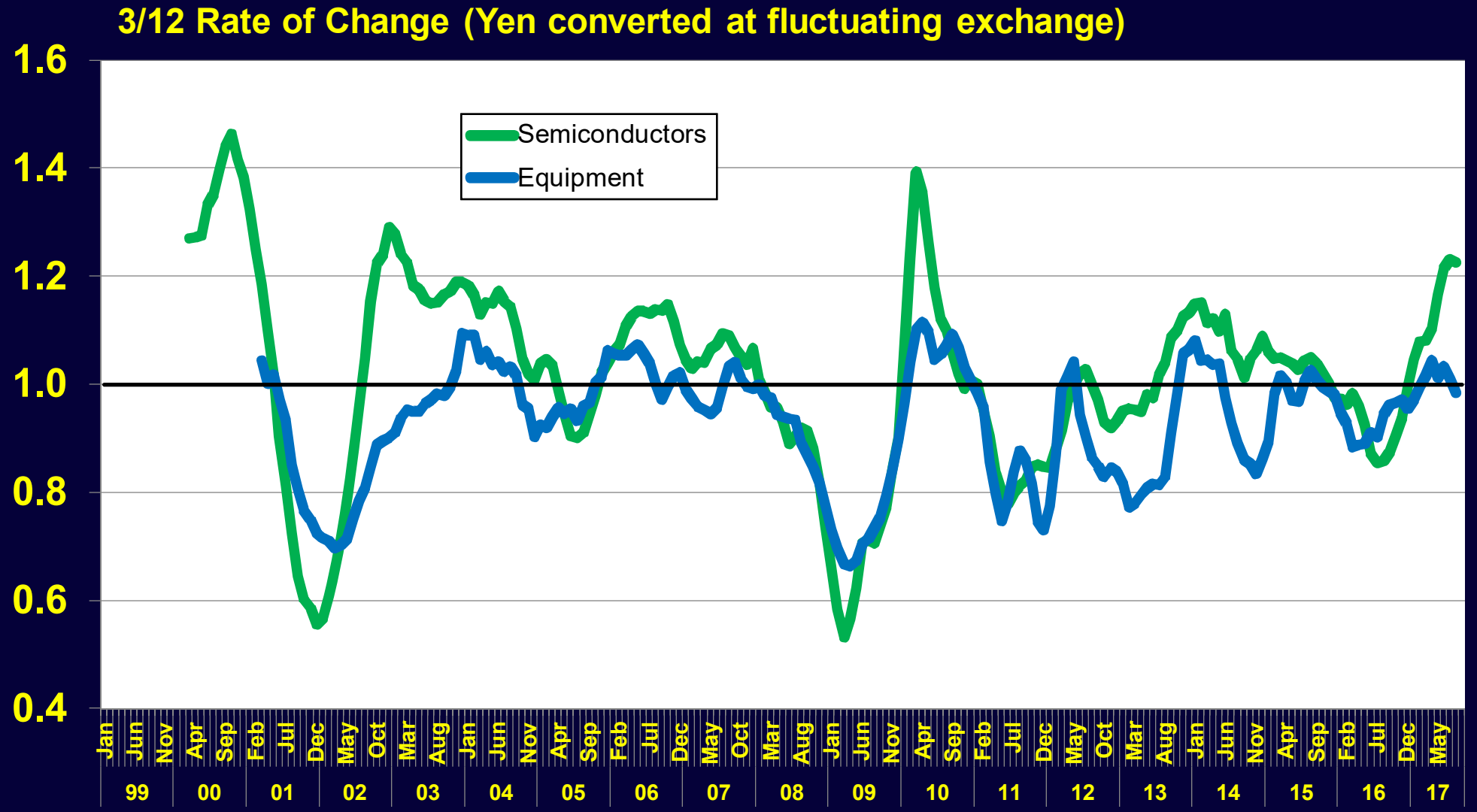
Japan Electronic Equipment Production by Month 2000 to Present



JEITA www.jeita.or.jp/

Chart 4

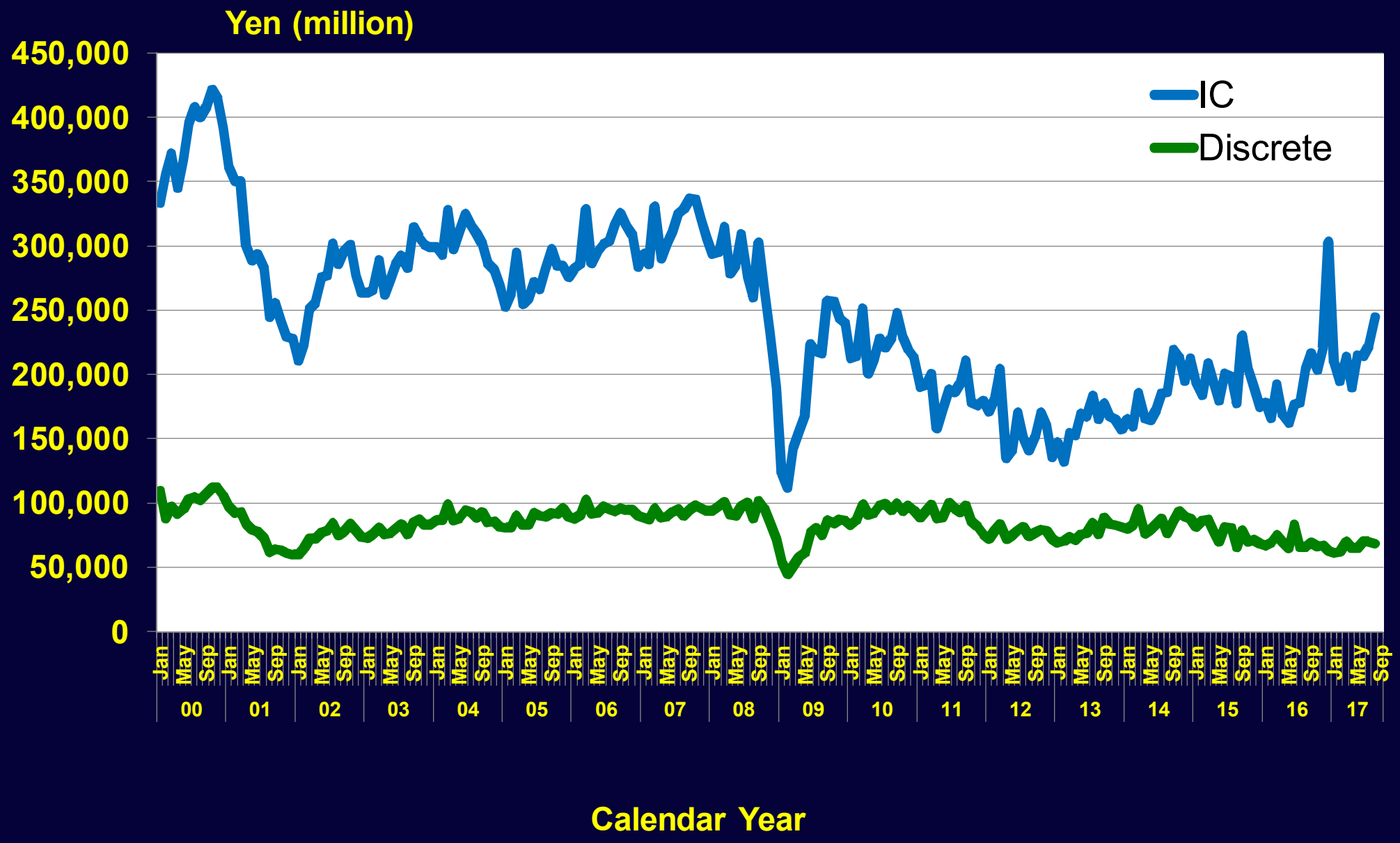
Semiconductor Shipments to Japan vs. Japanese Electronic Equipment Production



Total $ Semiconductor Shipments from All Countries to Japan www.sia-online.org/, JEITA www.jeita.or.jp/

Chart 5

Japan Integrated Circuit & Discrete Semiconductor Domestic Production



http://www.jeita.or.jp/

Chart 6

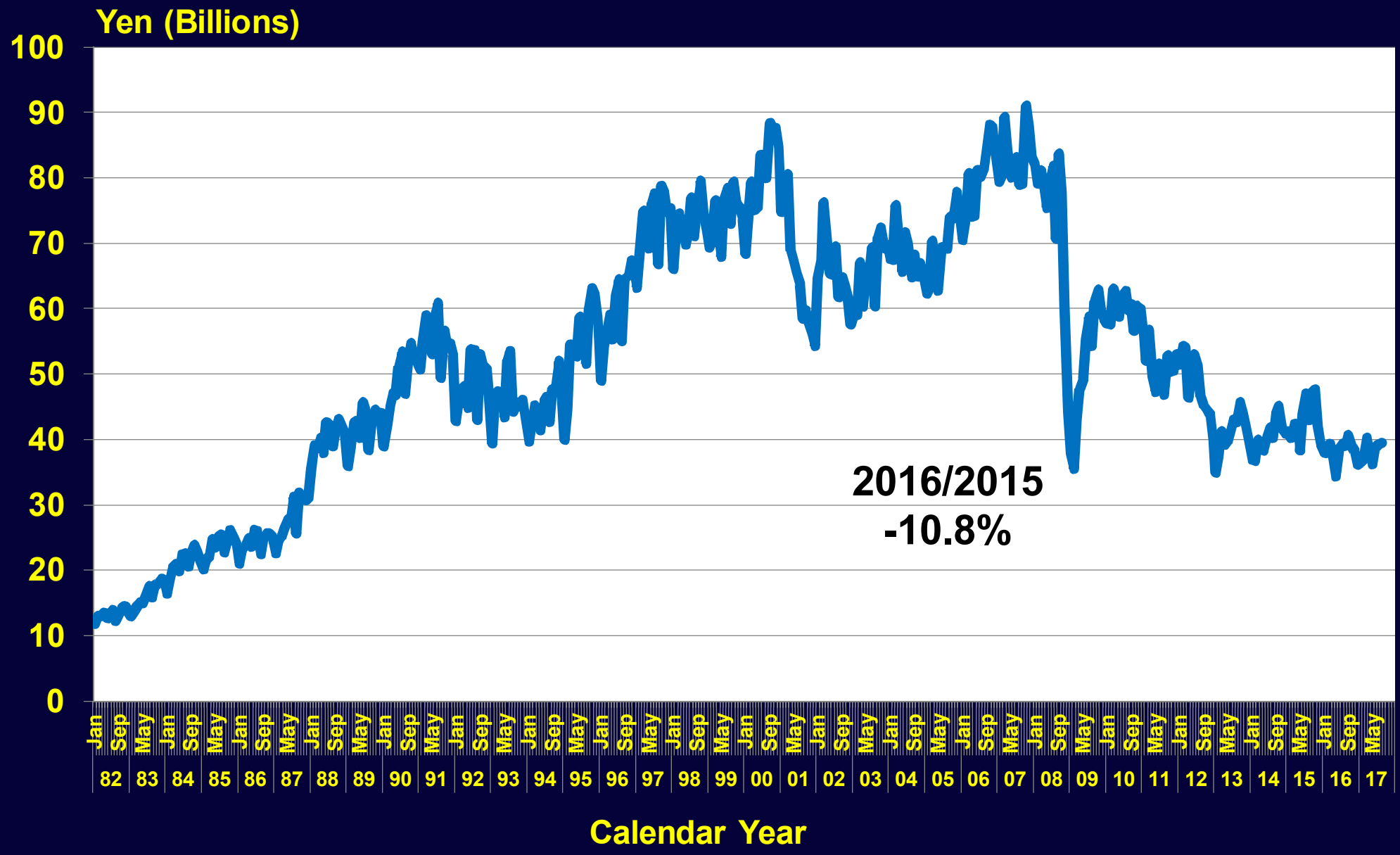
Japan Passive Component Domestic Production



http://www.jeita.or.jp/

Chart 7

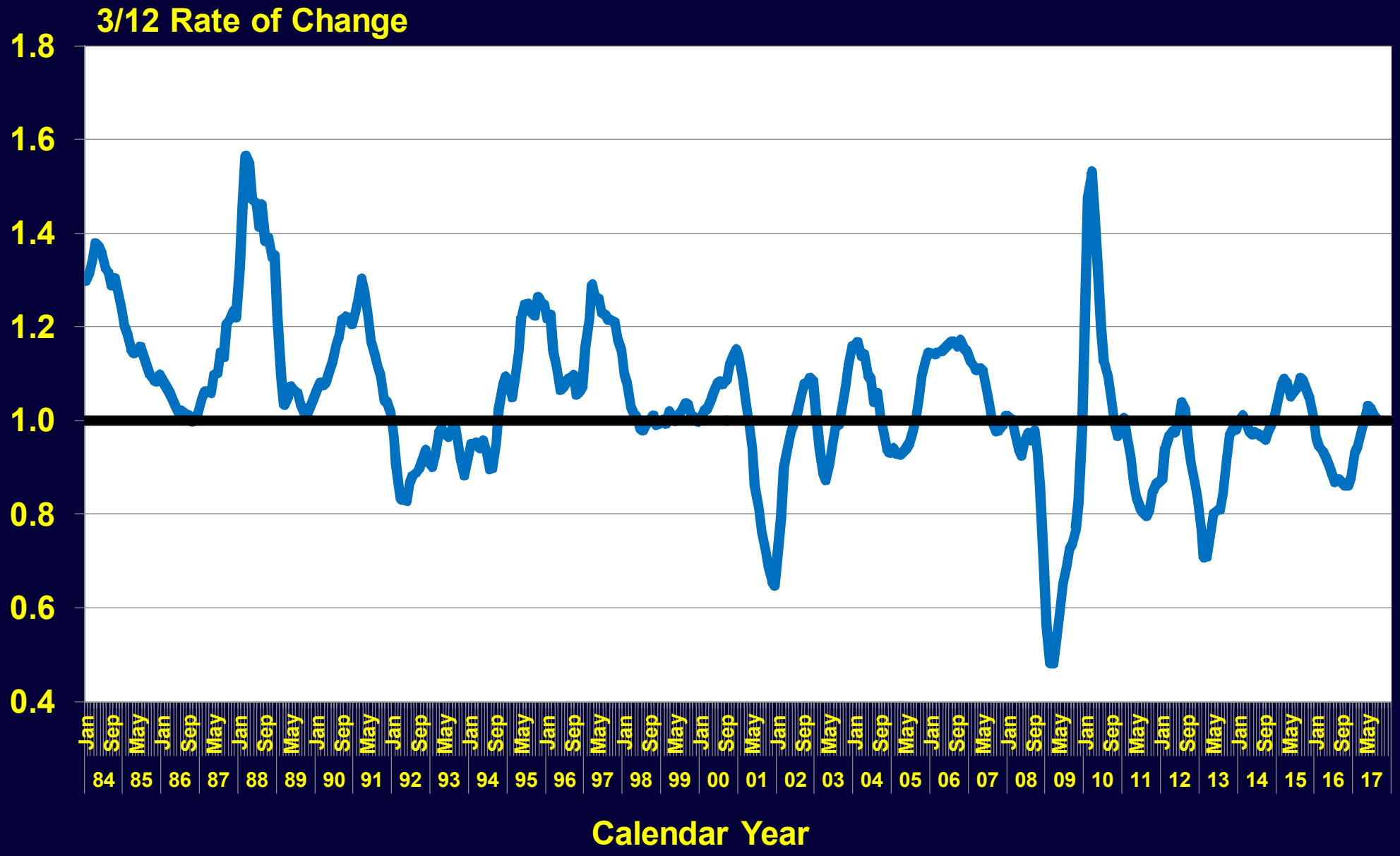
Japan PCB Production



JEITA

Chart 8

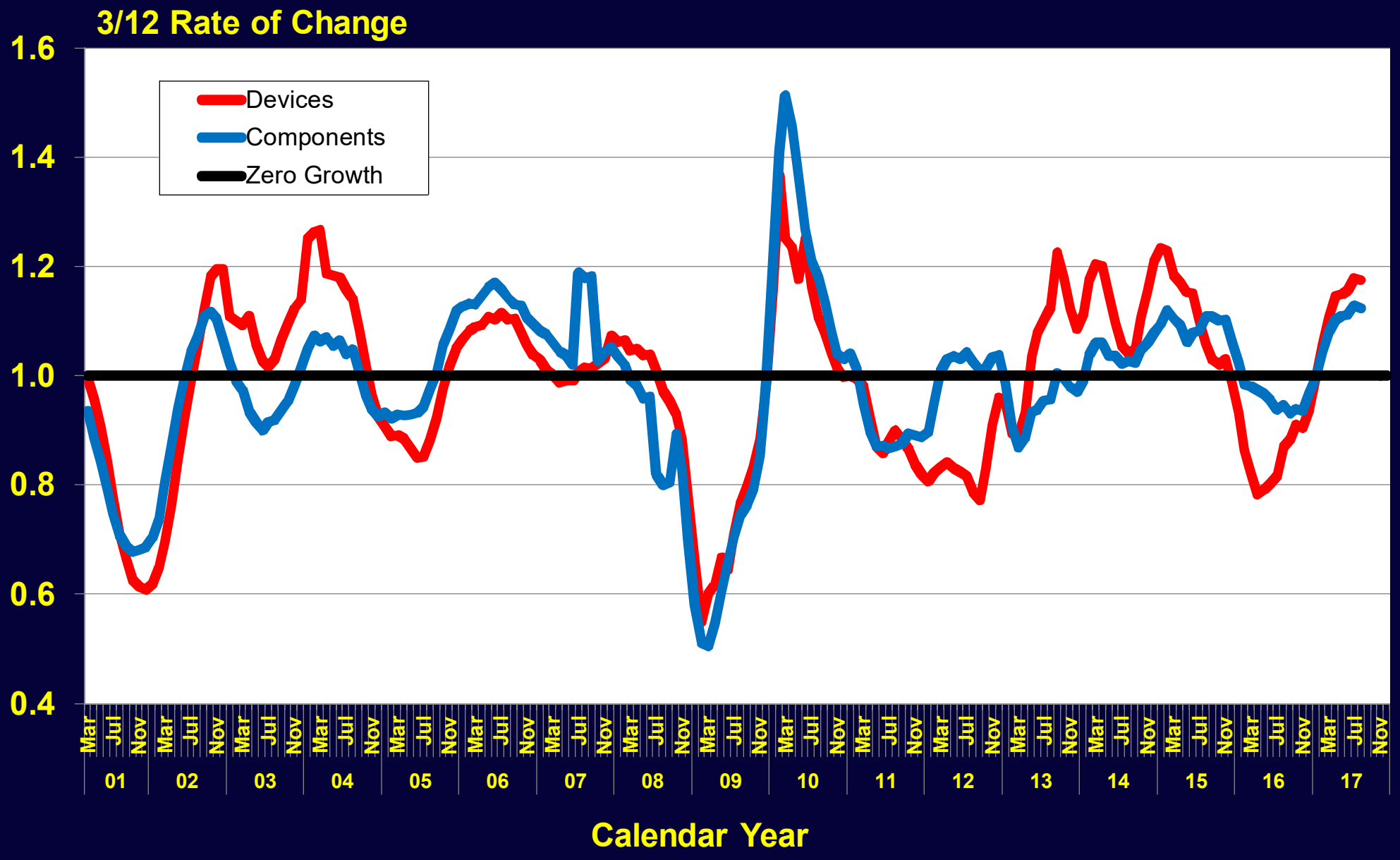
Japan PCB Production



JEITA

Chart 9

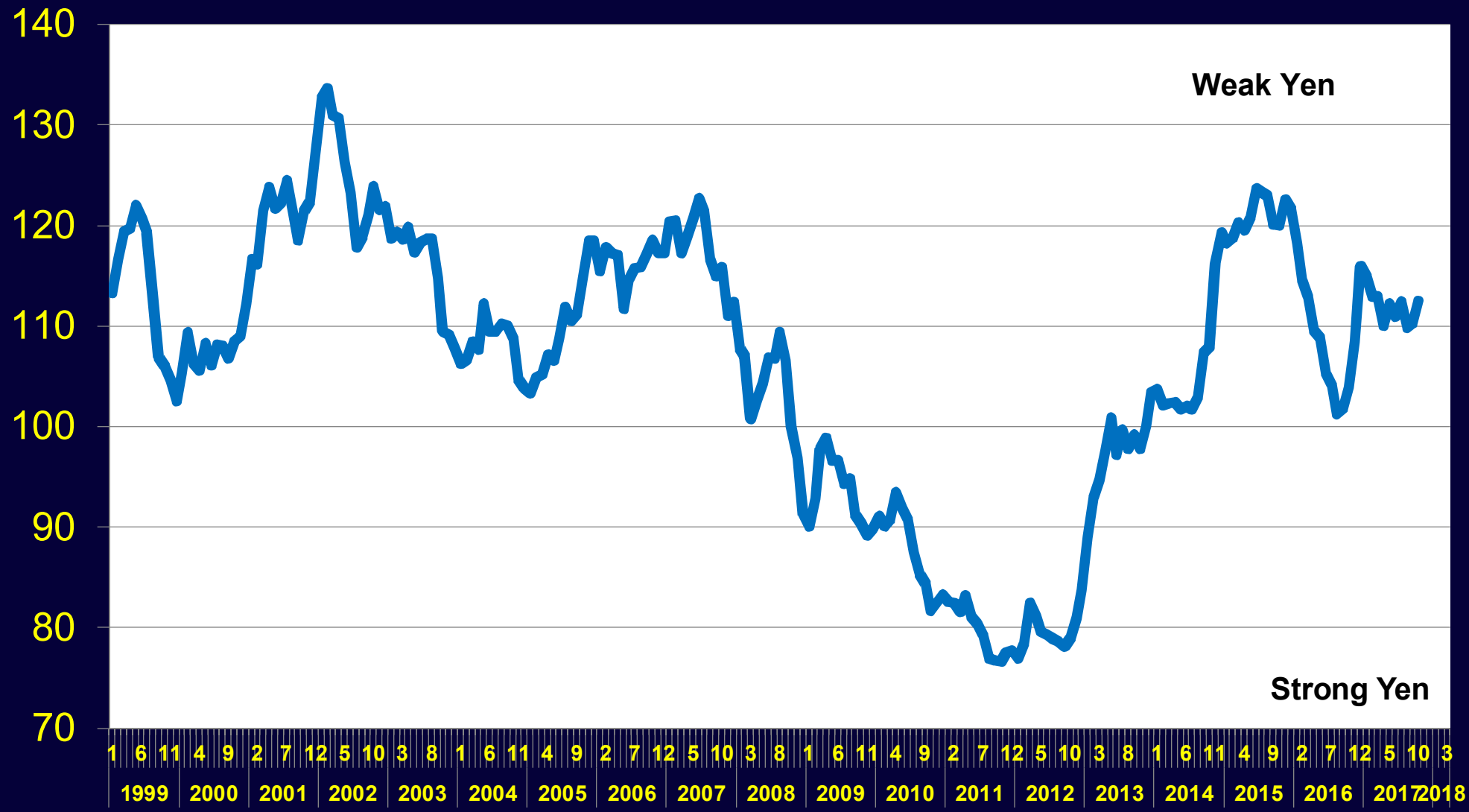
Japanese Electronic Component & Device Production



JEITA www.jeita.or.jp/

Chart 10

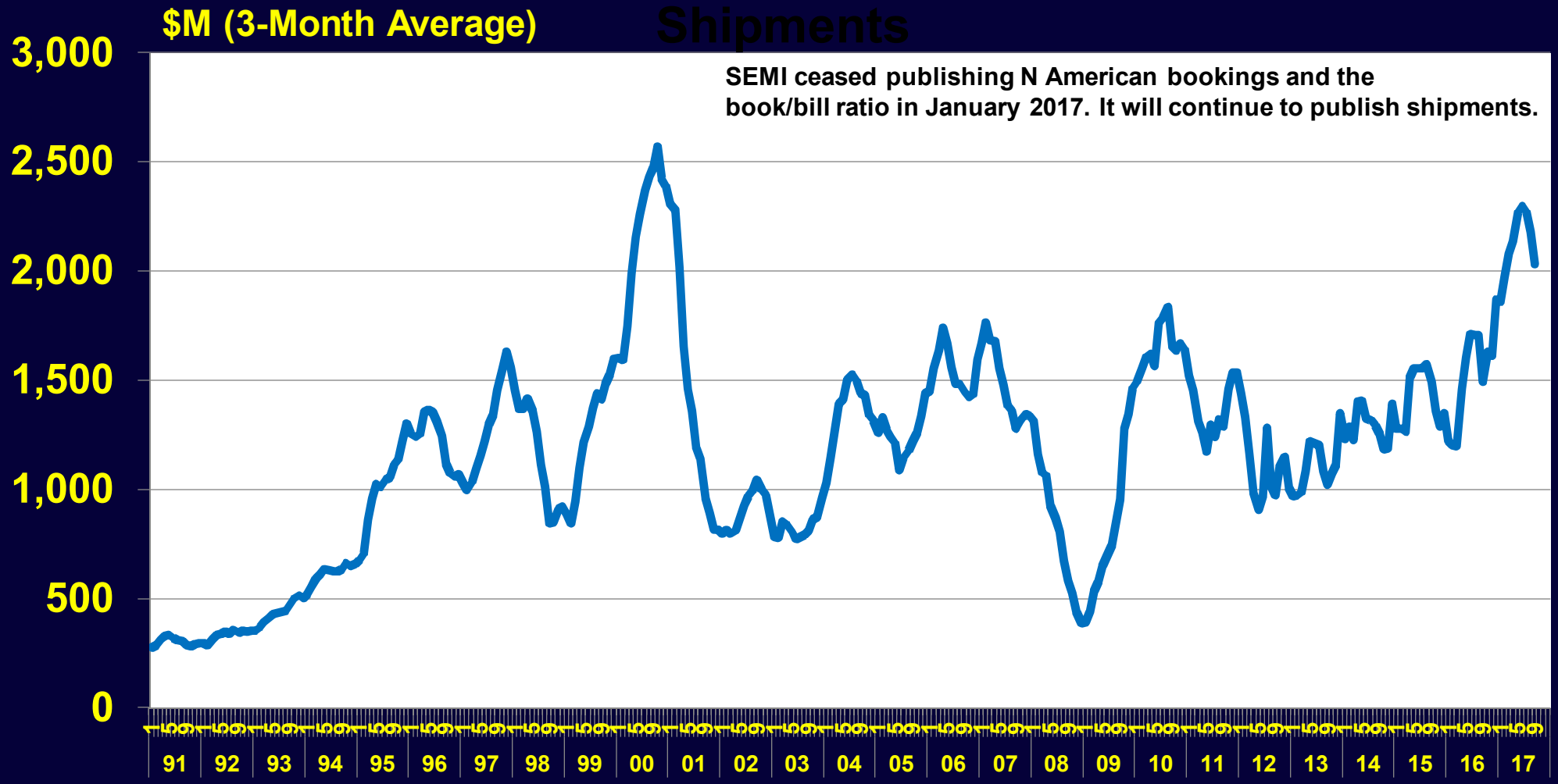
Japanese Yen vs. U.S. Dollar



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

Chart 11

N American Semiconductor Equipment Industry Shipments

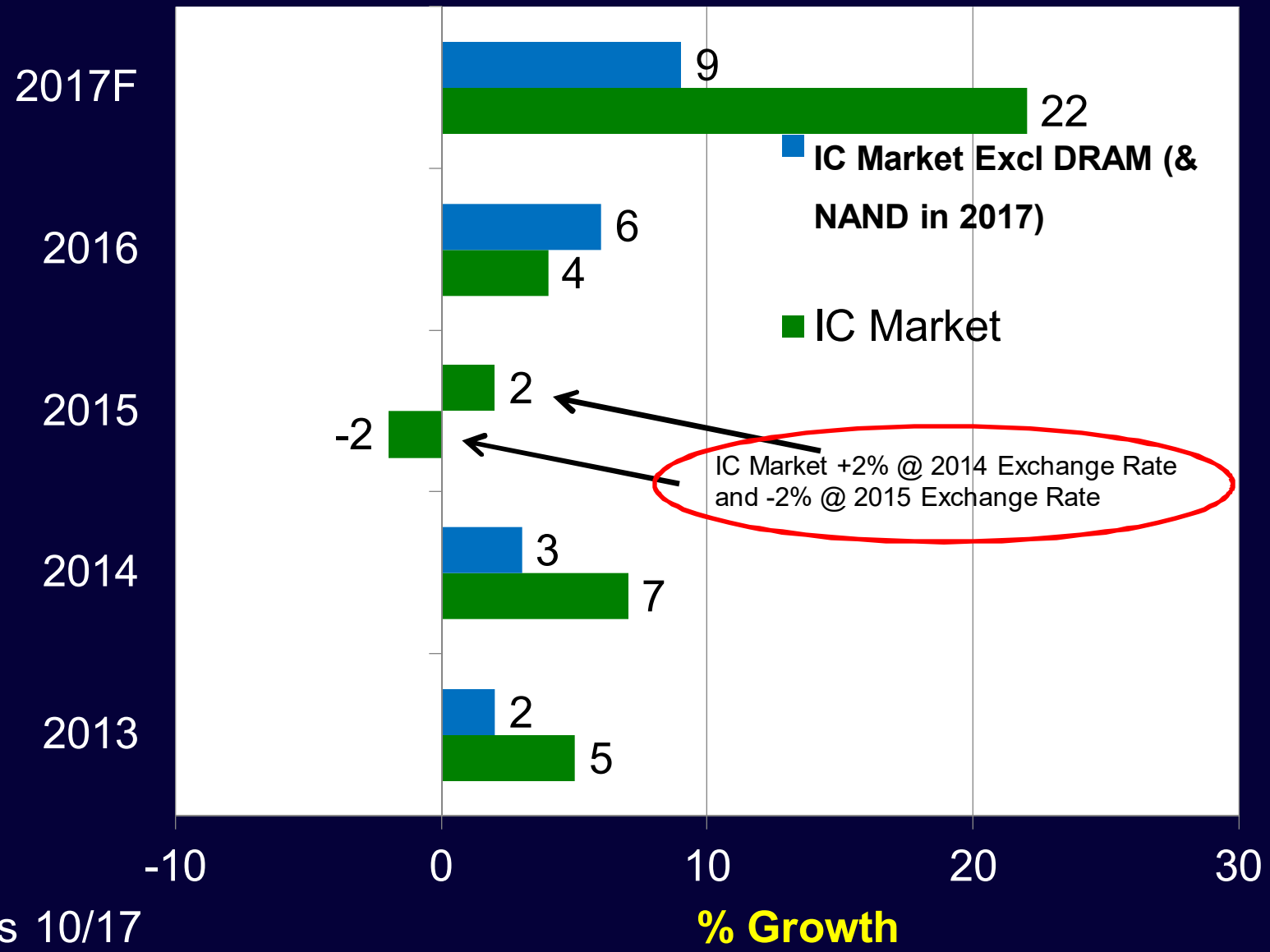


SOURCE Semiconductor Equipment and Materials International
http://www.semi.org

Chart 12

Recent Major Impacts on World IC Market Growth $

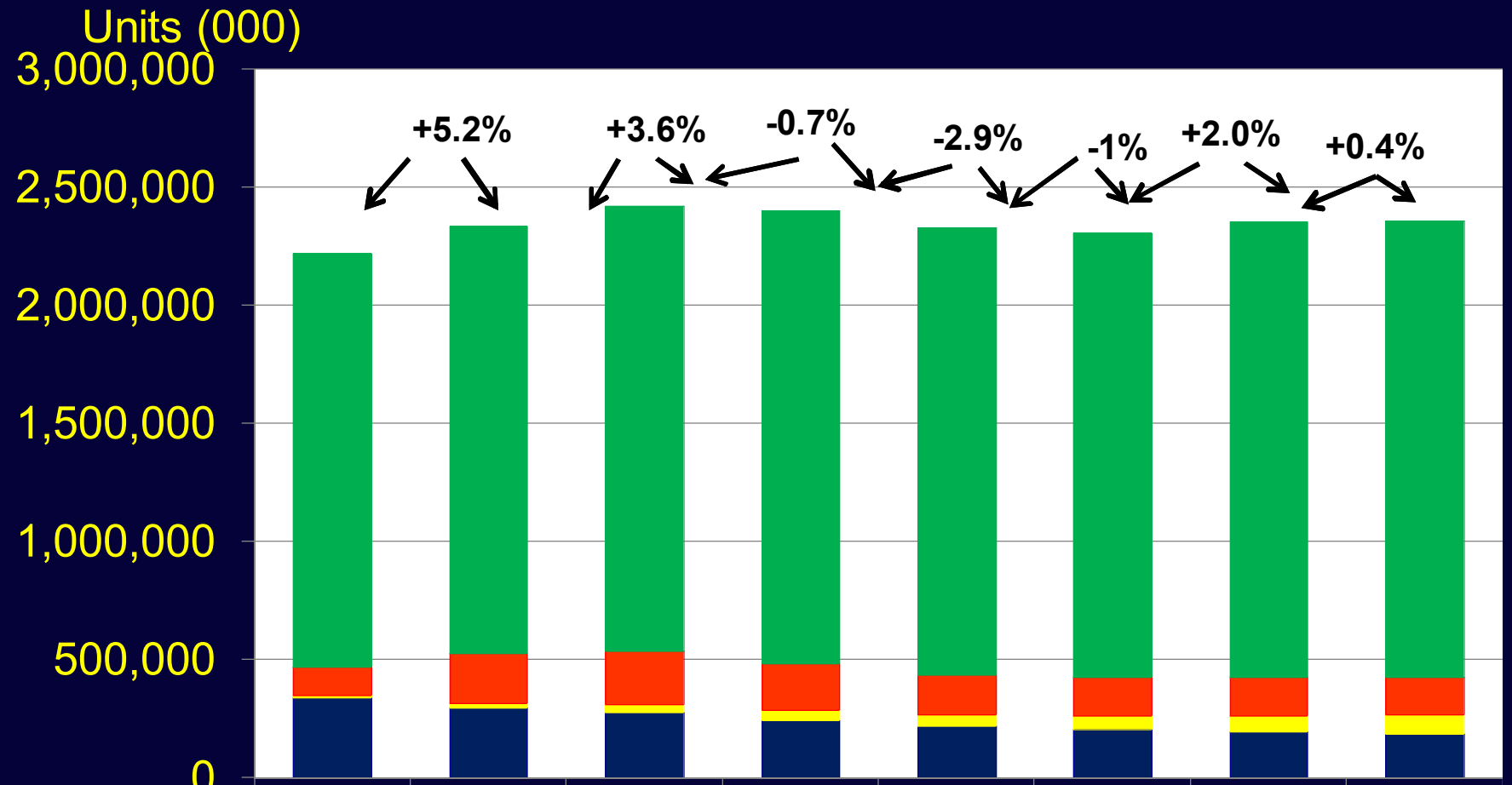
2013 to 2017F



IC Insights 10/17

Chart 13

World Device Shipment Units by Segment

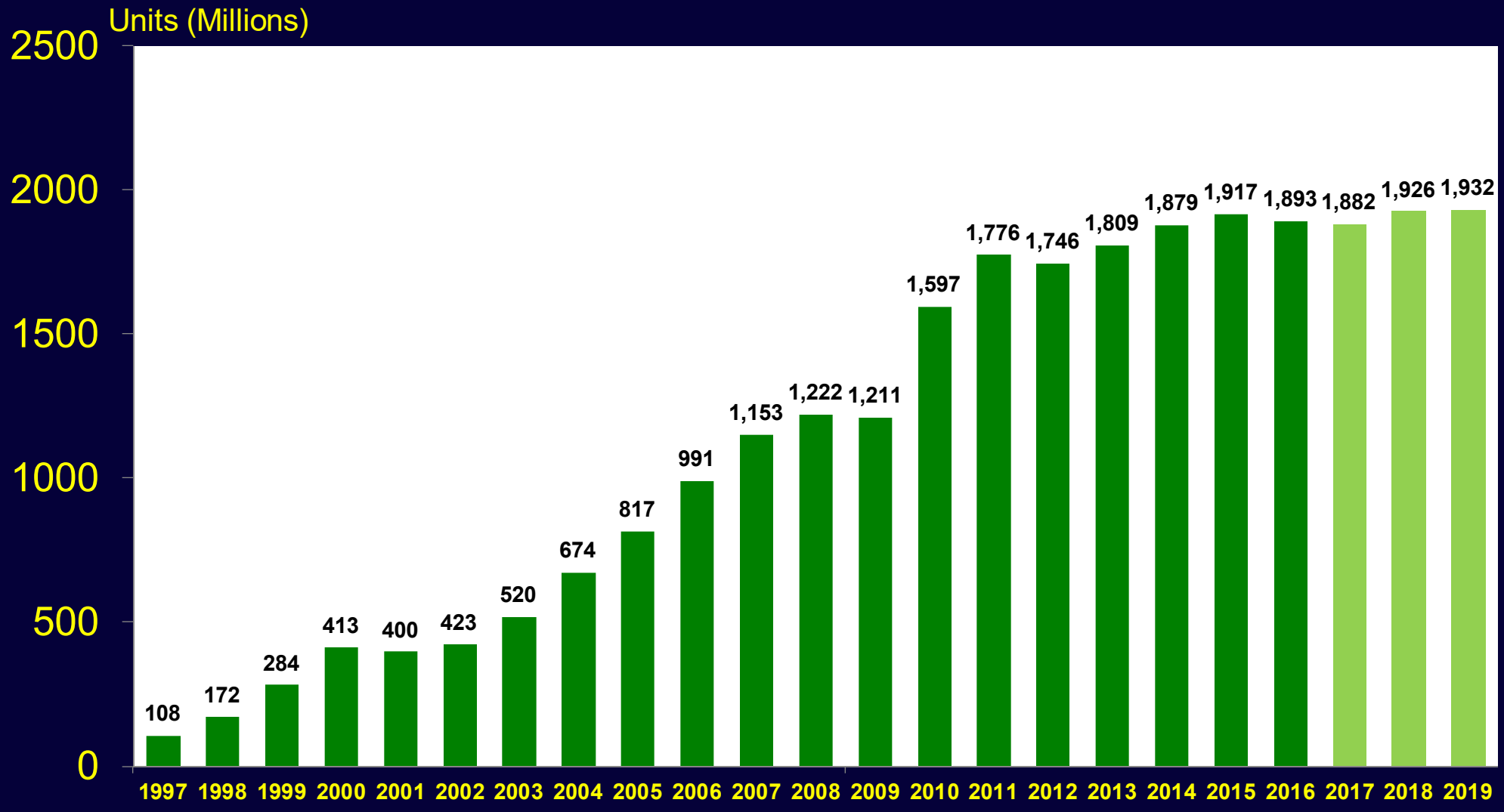


	2012	2013	2014	2015	2016	2017	2018	2019
Mobile Phone	1,746,177	1,806,964	1,879,000	1,917,000	1,893,000	1,882,000	1,926,000	1,932,000
Ultramobiles (Basic & Utility)	120,203	209,788	226,000	196,000	169,000	162,000	161,000	160,000
Ultramobiles (premium)	9,787	21,517	37,000	44,000	50,000	59,000	70,000	81,000
PC (Desk & Notebook)	341,273	296,131	277,000	244,000	220,000	204,000	195,000	188,000

Gartner 10/17

Chart 14

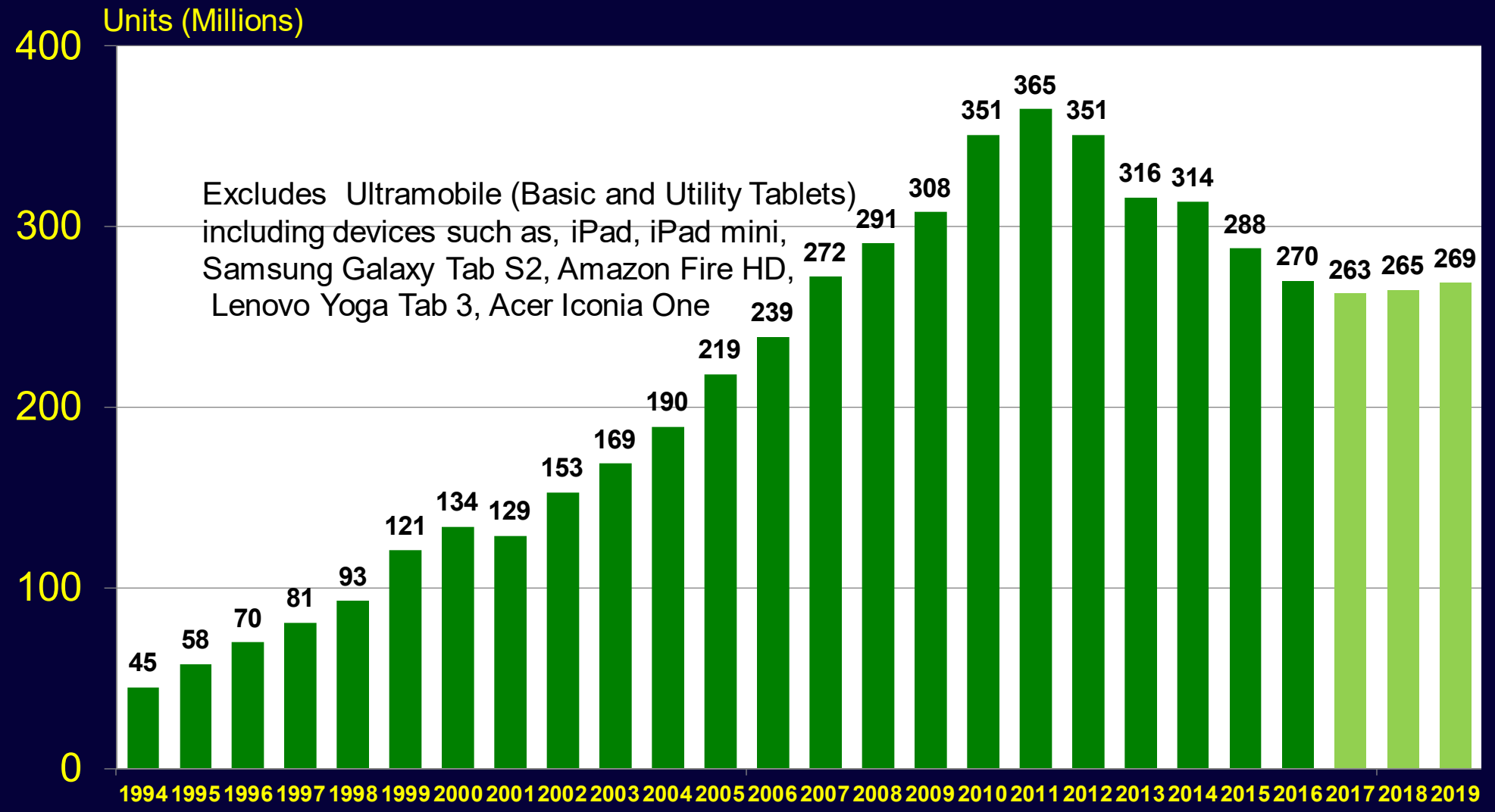
World Mobile Phone Unit Shipments
Total: Analog & Digital



Gartner 10/16 plus prior reports

Chart 15

Personal Computers - Global Shipments
Desk-based, Notebooks & Premium Ultramobiles



Gartner Dataquest 10/17 & historical

Chart 16

Projected Top 10 OSAT Providers by Revenue for 2017
Revenue in US$ Millions

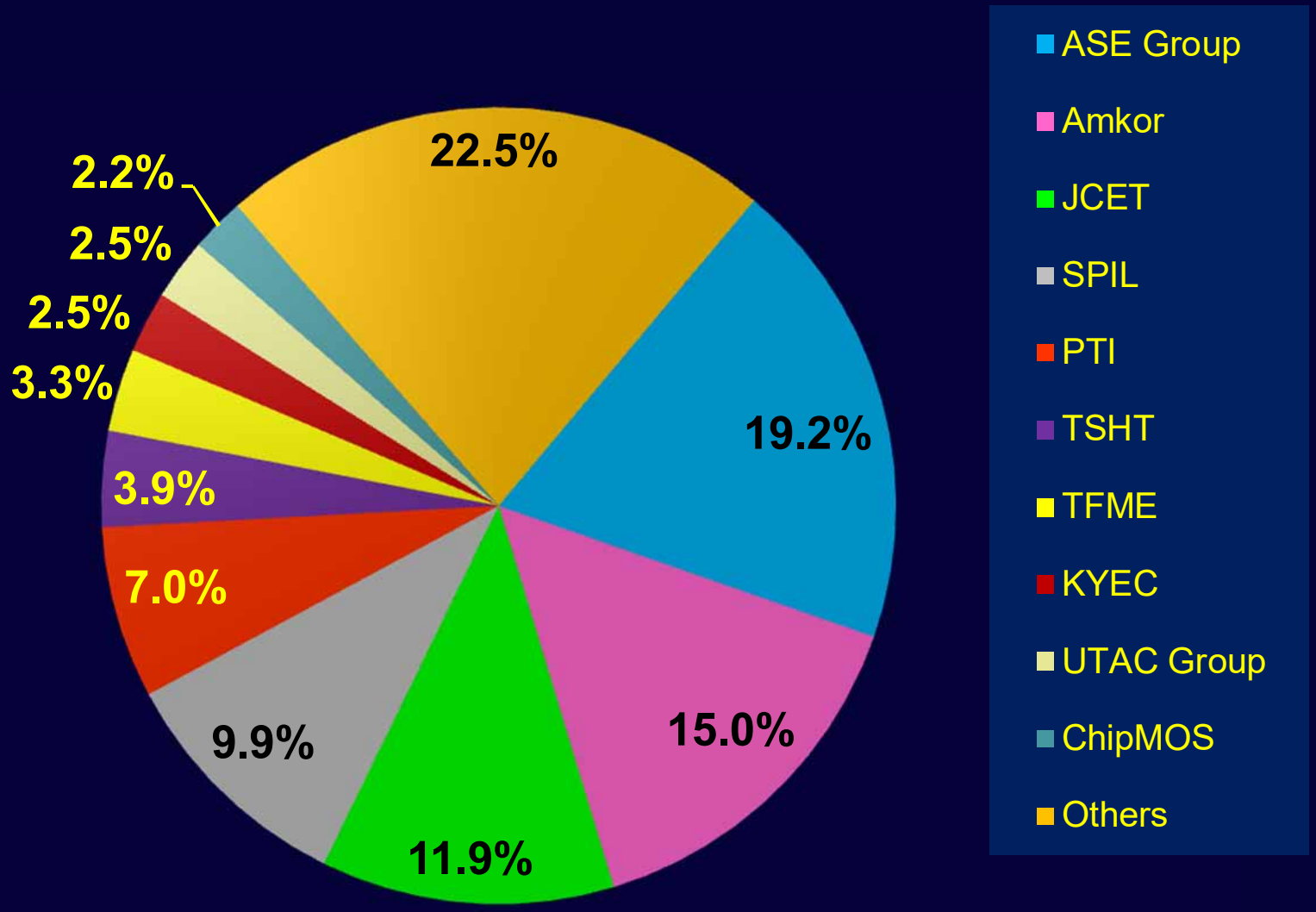
Company	2017 Rev est	2016 Rev est	2017 YoY	2017 OSAT Mkt Share est
ASE Group	5207	4896	6.4%	19.2%
Amkor	4063	3894	4.3%	15.0%
JCET	3233	2874	12.5%	11.9%
SPIL	2684	2626	2.2%	9.9%
PTI	1893	1499	26.3%	7.0%
TSHT	1056	823	28.3%	3.9%
TFME	910	689	32.0%	3.3%
KYEC	675	623	8.3%	2.5%
UTAC Group	674	689	-2.2%	2.5%
ChipMOS	596	568	4.9%	2.2%

Full Names: Advanced Semiconductor Engineering, Amkor Technology, Jiangsu Changjiang Electronics Technology, Silicon Precision Industries, Powertech Technology, Tianshui Huatian Technology, Tongfu Microelectronics, King Yuan Electronics, United Test and Assembly Center, ChipMOS Technologies

TrendForce 10/17

Chart 17

2017 Top OSAT (Outsourced Semiconductor Assembly & Test) Providers by Revenue (estimate)

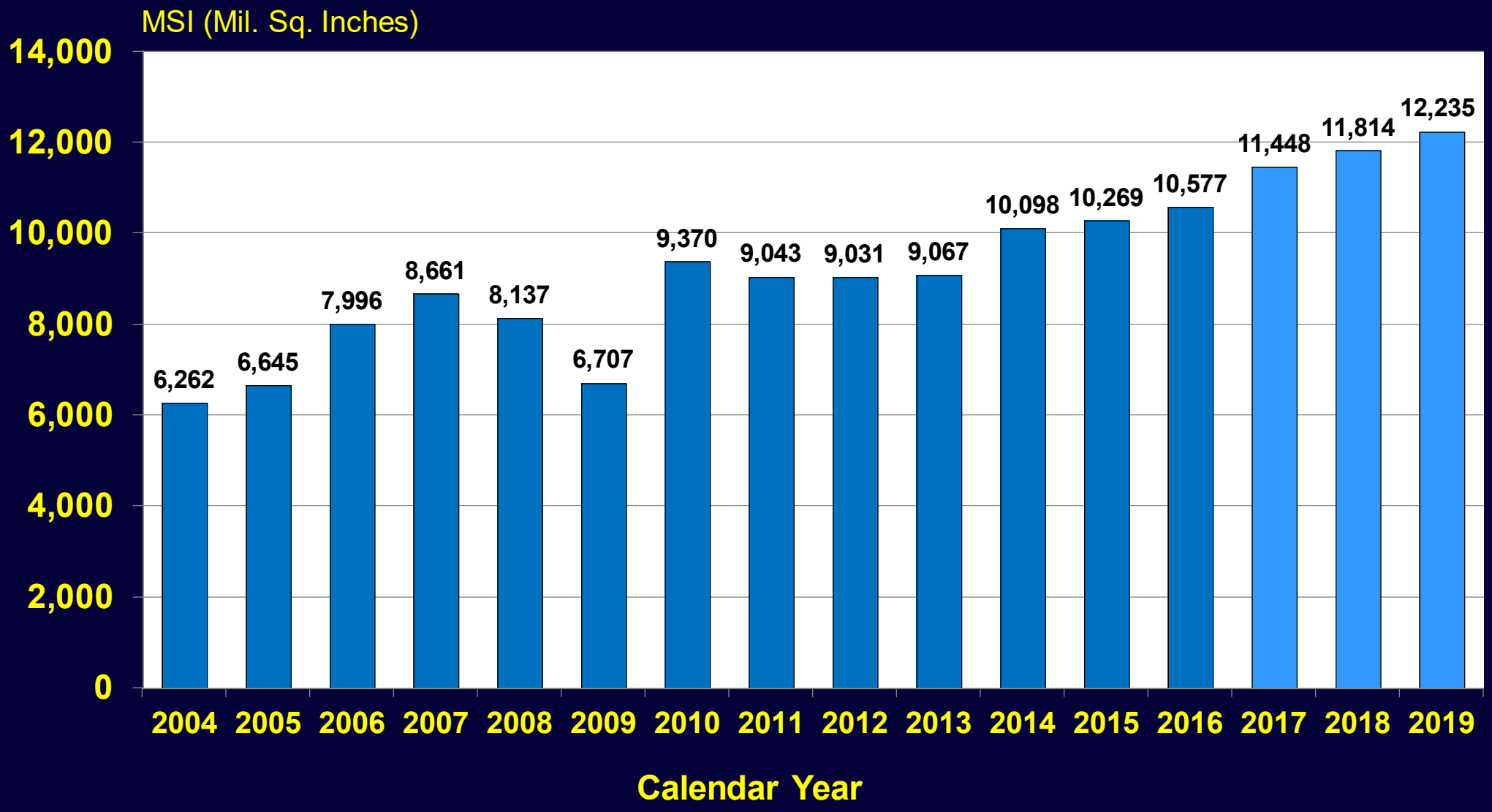


Total 27.1 Billion US$

TrendForce 10/17

Chart 18

Silicon Wafer Shipments Actual & Forecast

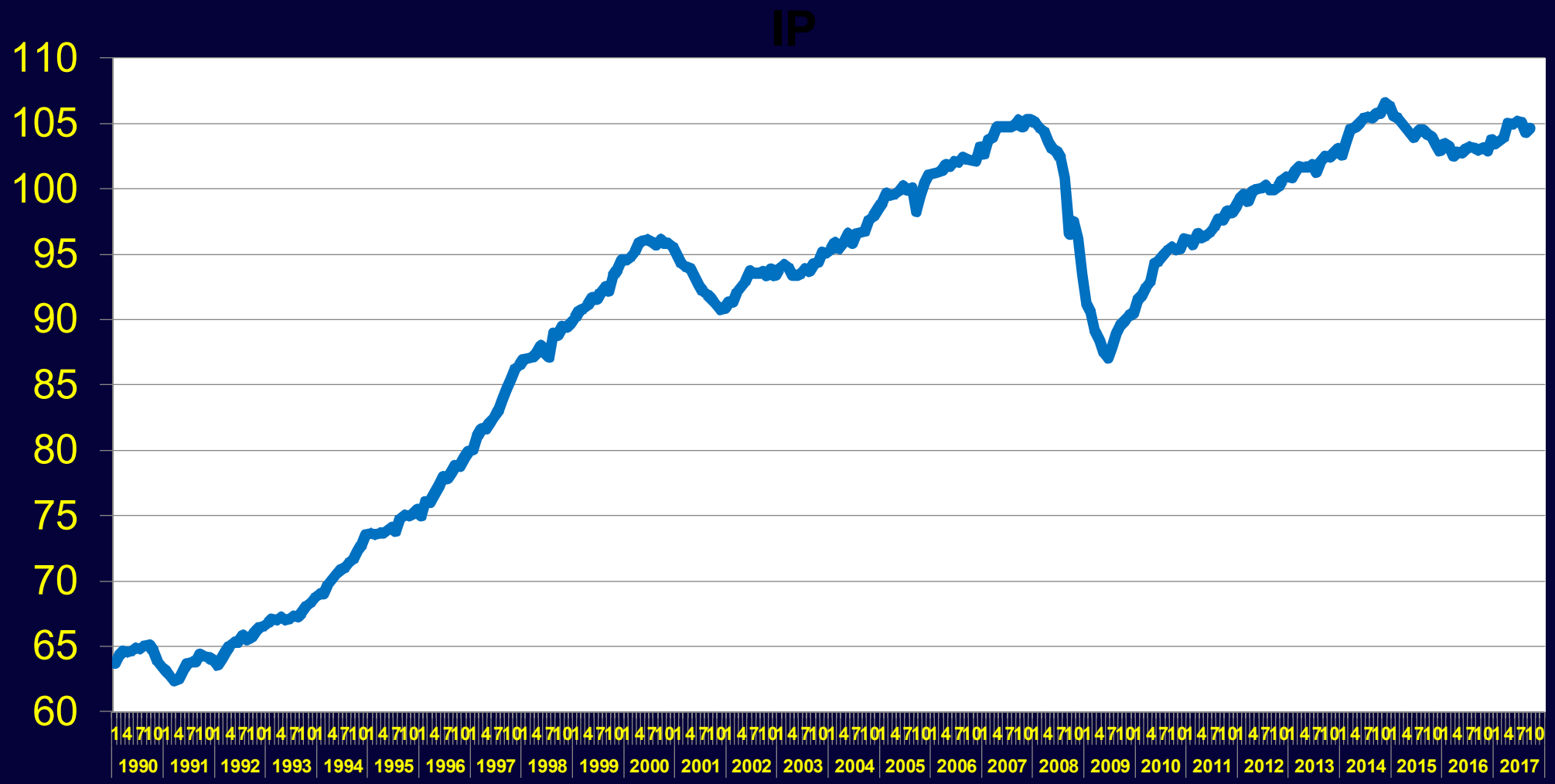


SEMI 10/2017; non-polished wafers not included, semiconductors only, does not include solar applications

Chart 19

U.S. Industrial Production

Index (2012=100)



www.federalreserve.gov/releases/g17/table1_2.htm

Chart 20

Industrial Production – World

% Change vs. One Year Earlier

Britain	+ 3.0 Sep
Czech Republic	+ 5.8 Aug
France	+ 1.1 Aug
Germany	+ 4.5 Aug
Italy	+ 5.7 Aug
Netherlands	+ 3.9 Aug
Russia	+ 1.5 Aug
Spain	+ 2.2 Aug
Euro Area	+ 3.8 Aug
Canada	+ 7.4 Jul
USA	+ 1.6 Sep
China	+ 6.6 Sep
India	+ 4.3 Aug
Malaysia	+ 6.8 Aug
Vietnam	+13.2 Sep
Singapore	+19.1 Aug
S Korea	+ 2.7 Aug
Taiwan	+ 3.2 Aug
Thailand	+ 3.7 Aug
Japan	+ 5.3 Aug

www.economist.com + Eurostat