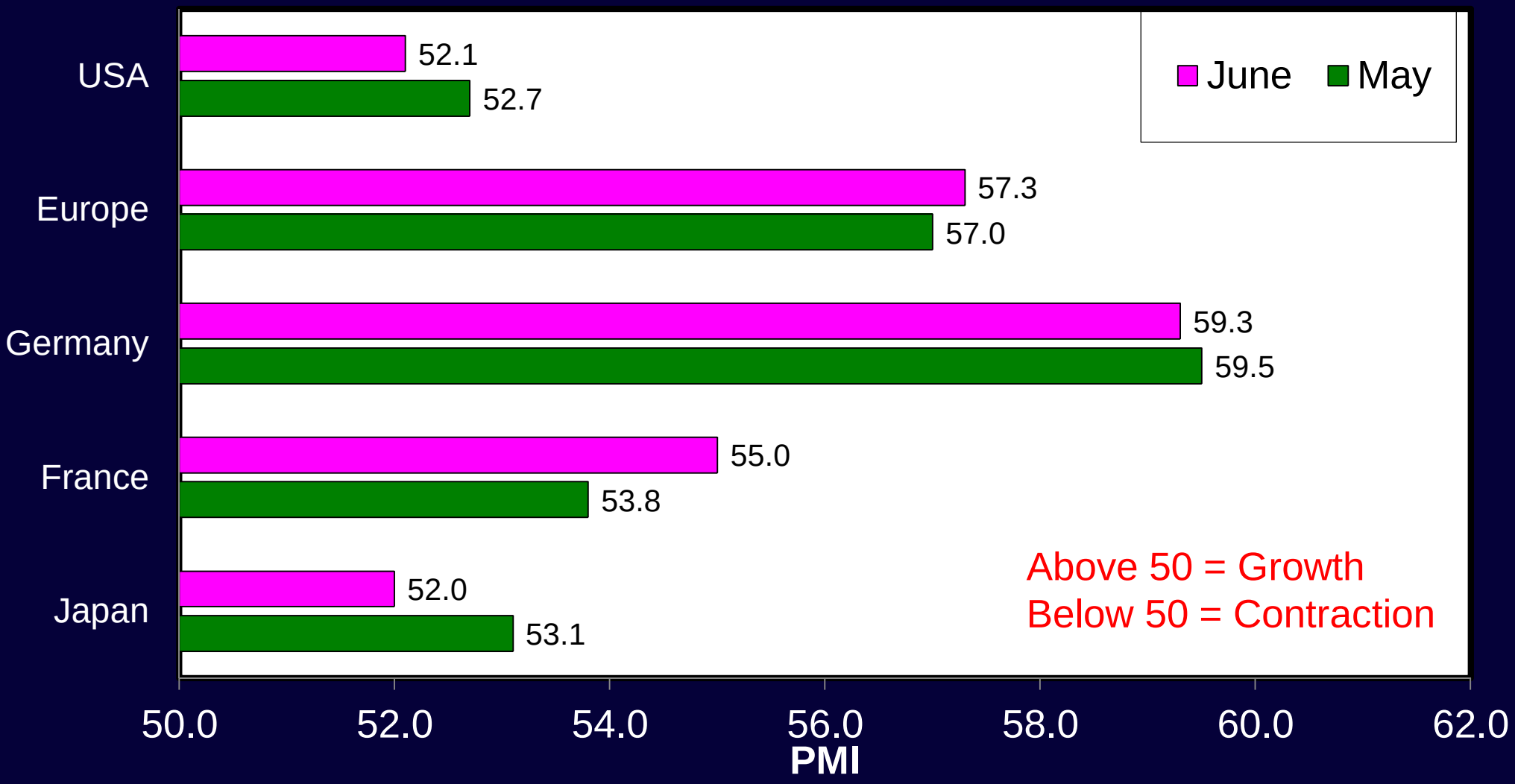
Chart 1

# Purchasing Managers' Indices (flash)
# June vs. May 2017

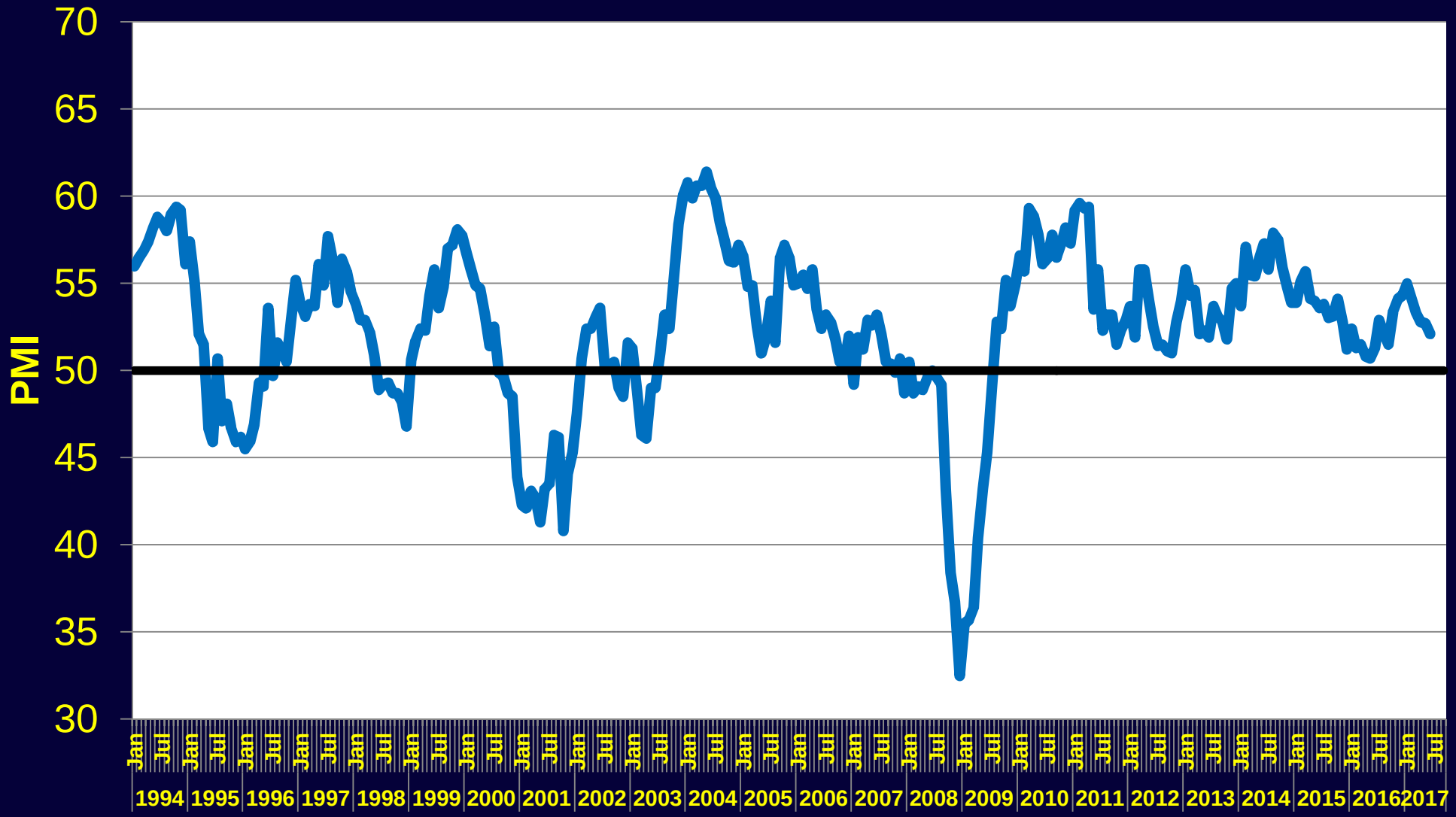



Markit Economics

Chart 2

# U.S "Purchasing Managers" Index
# Markit Economics

## Diffusion Index, >50 = Growth

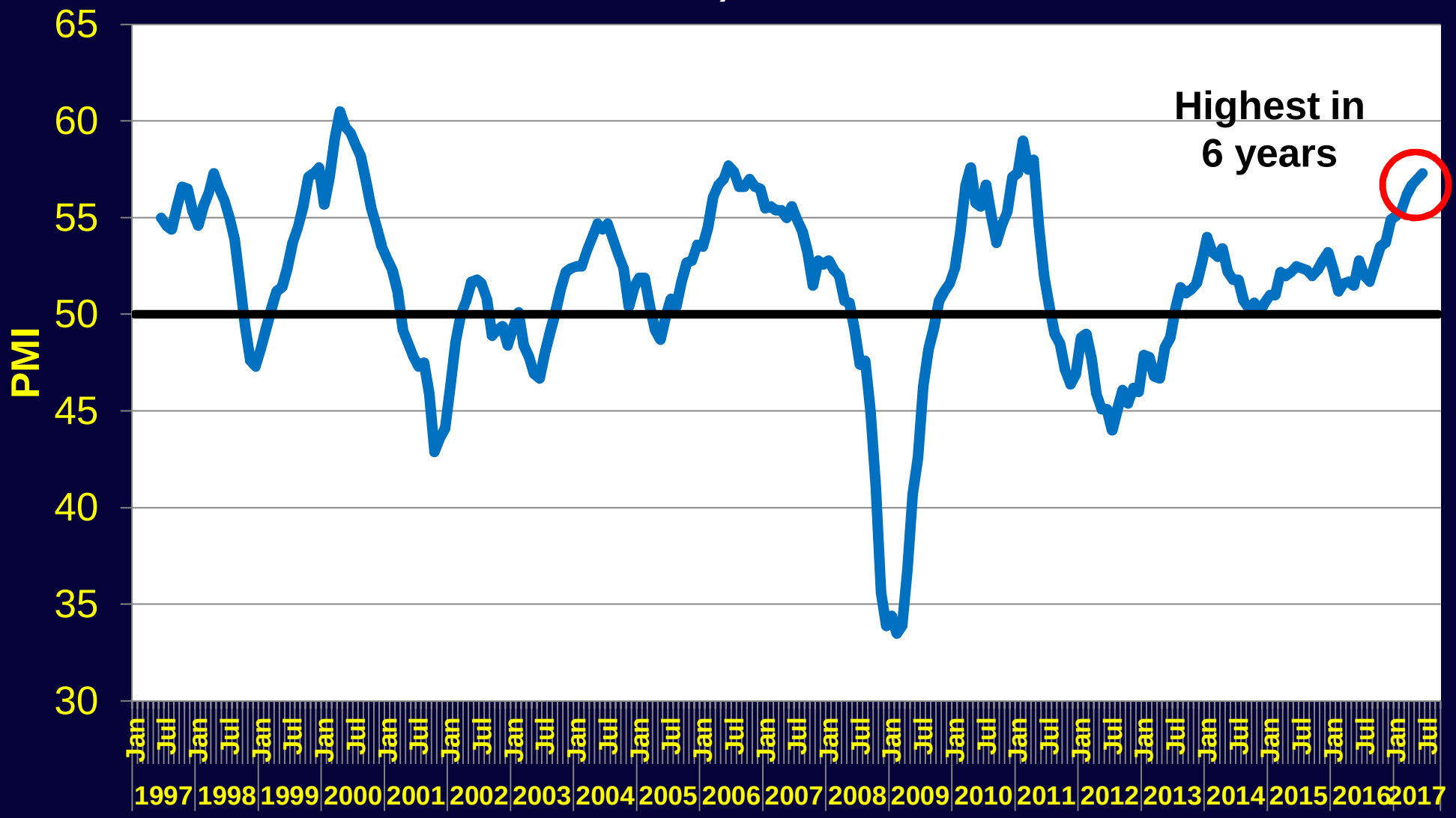



Markit Economics + ISM historical data

Chart 3

# Eurozone Manufacturing "Purchasing Managers" Index

## Diffusion Index, >50 = Growth

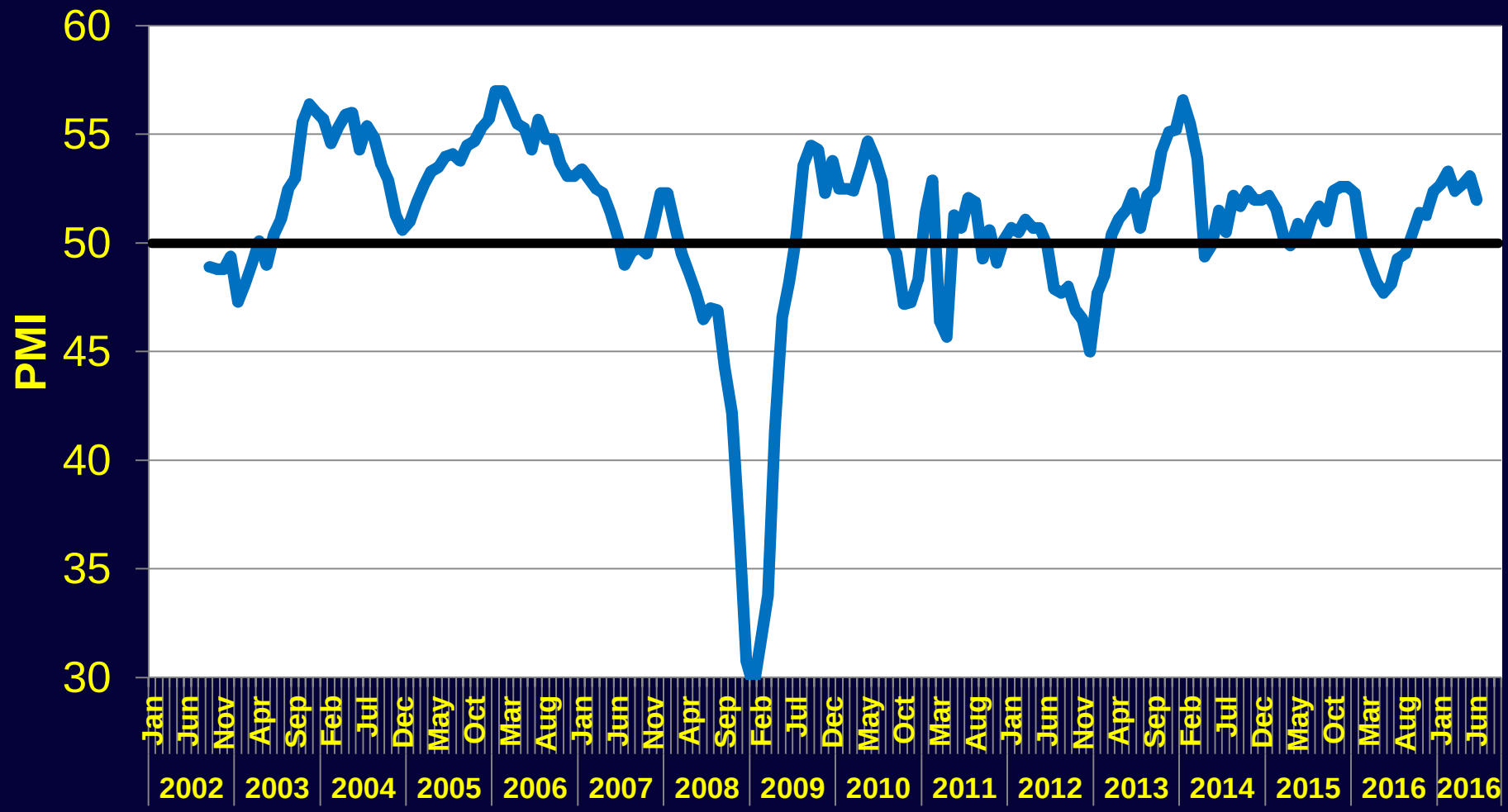



Markit Economics

Chart 4

# Japan "Purchasing Managers" Index

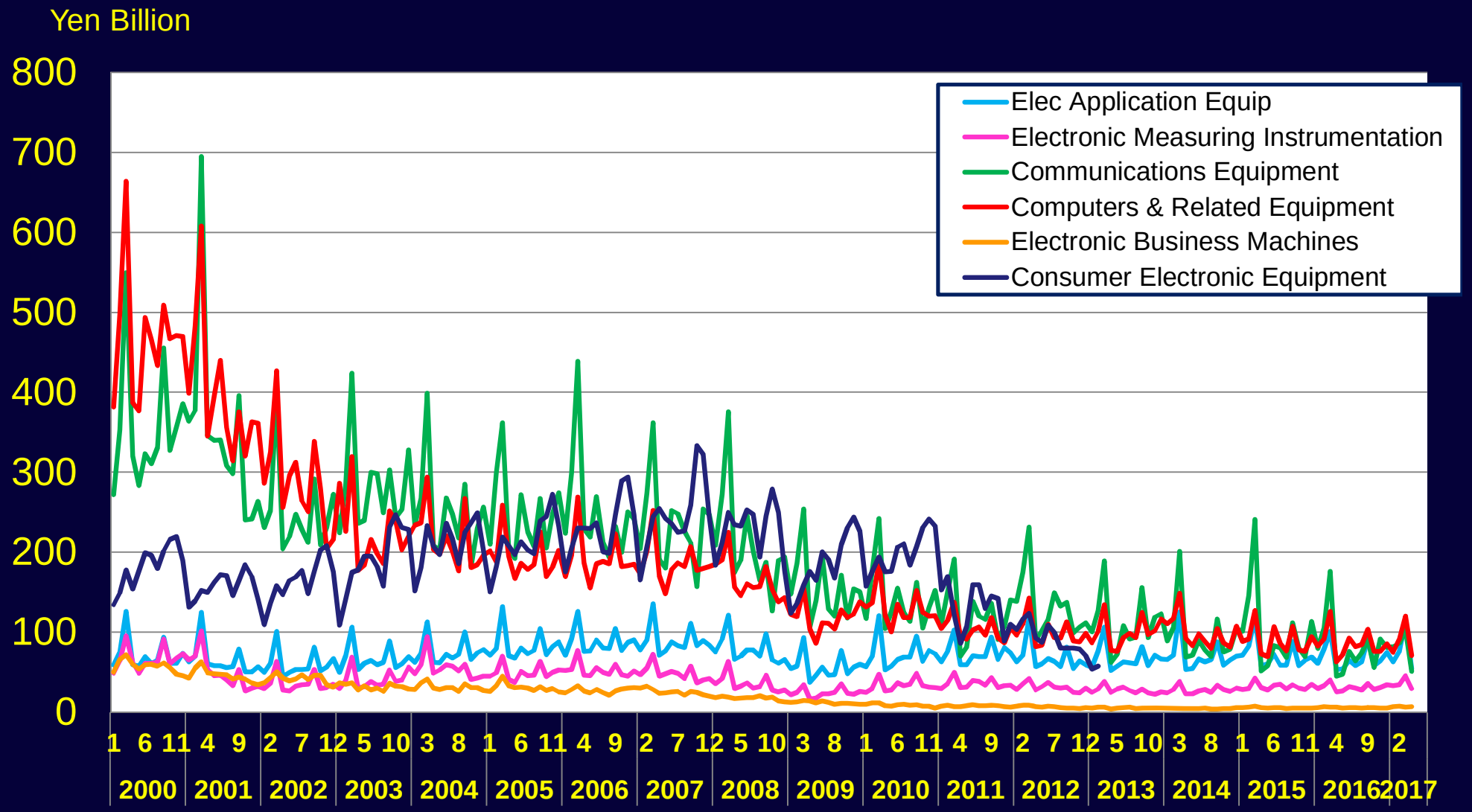
## >50 = Growth




Nomura/JMMA

Chart 5

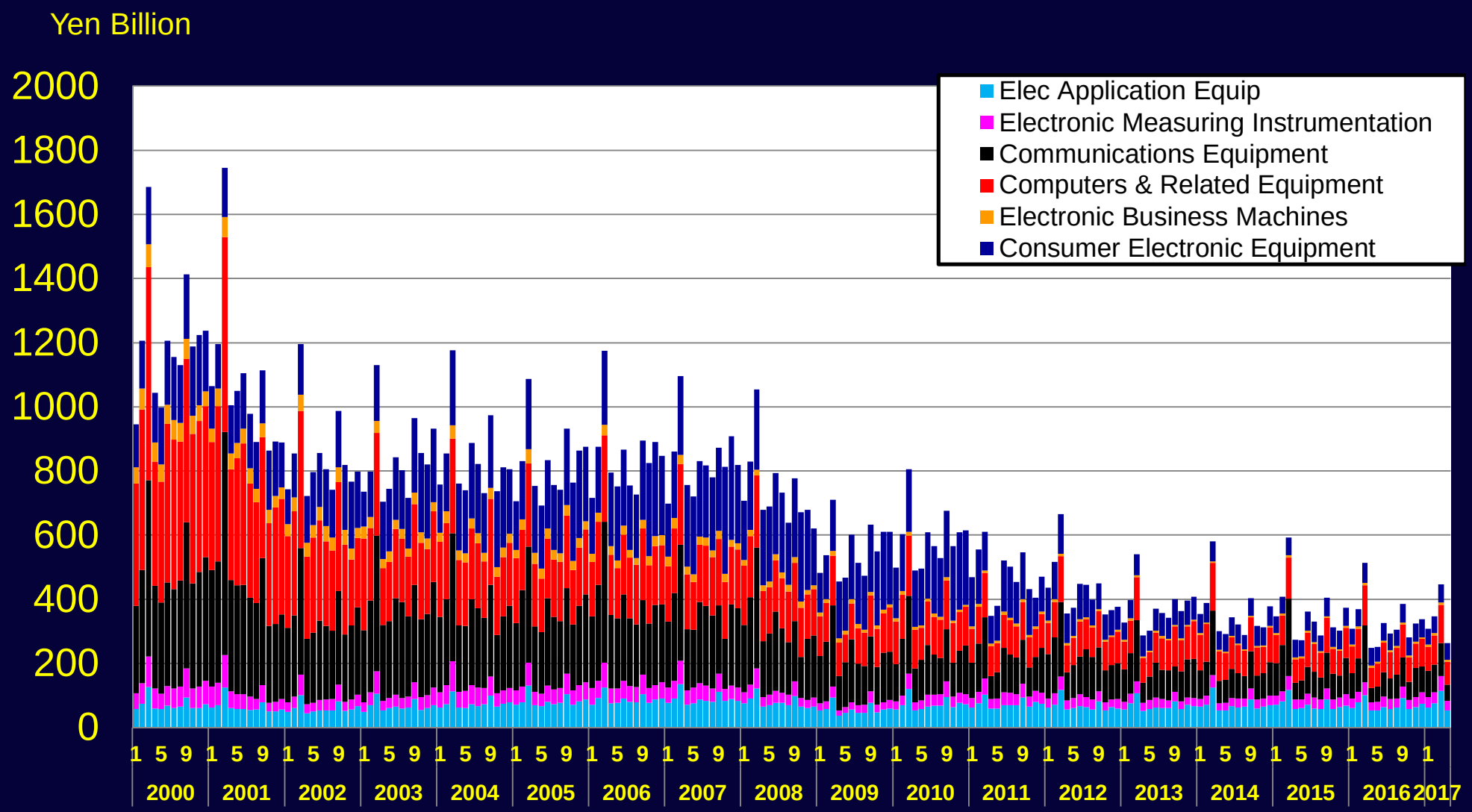
# Japan Electronic Equipment Production by Month 2000 to Present




JEITA www.jeita.or.jp/

Chart 6

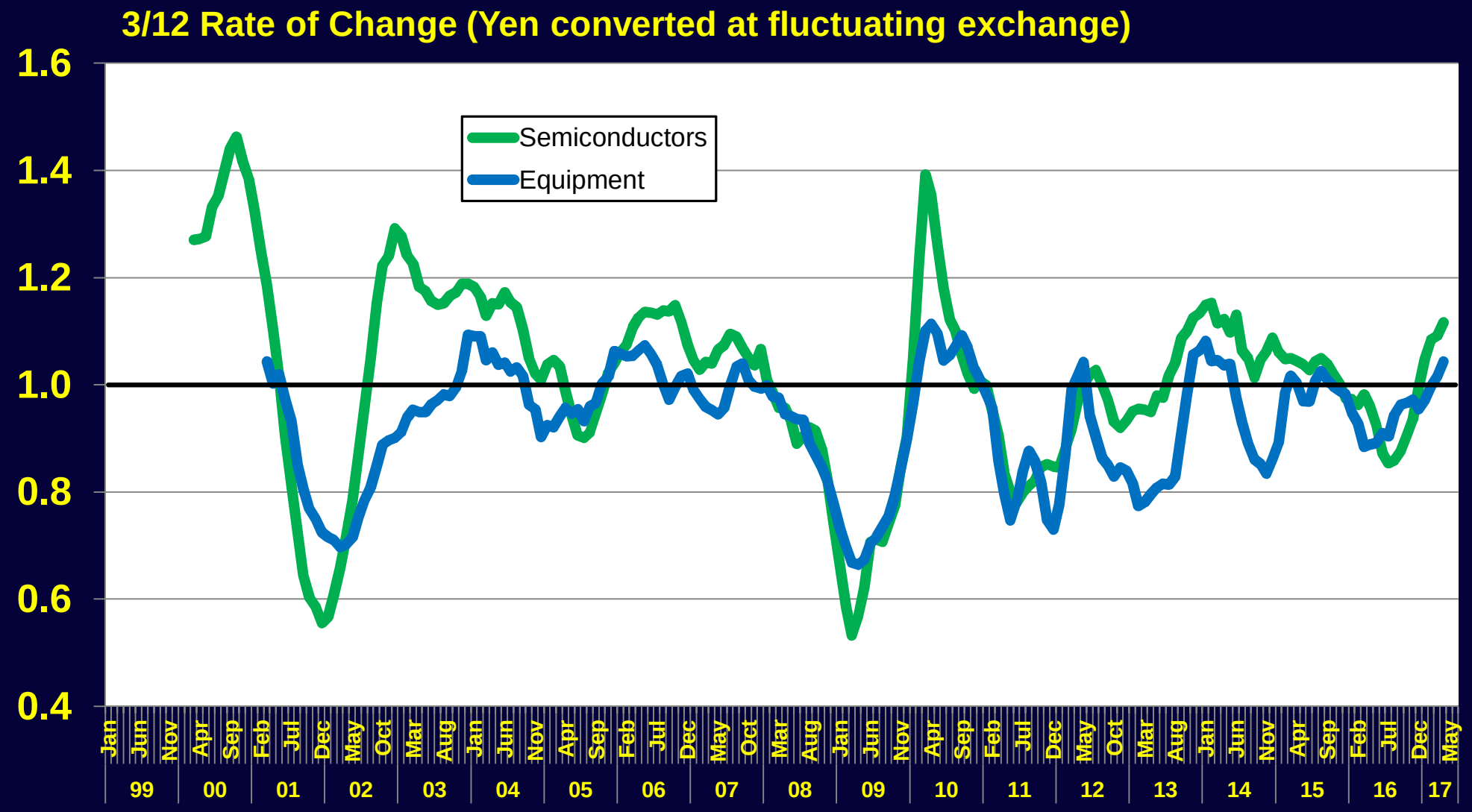
# Japan Electronic Equipment Production by Month 2000 to Present




JEITA www.jeita.or.jp/

Chart 7

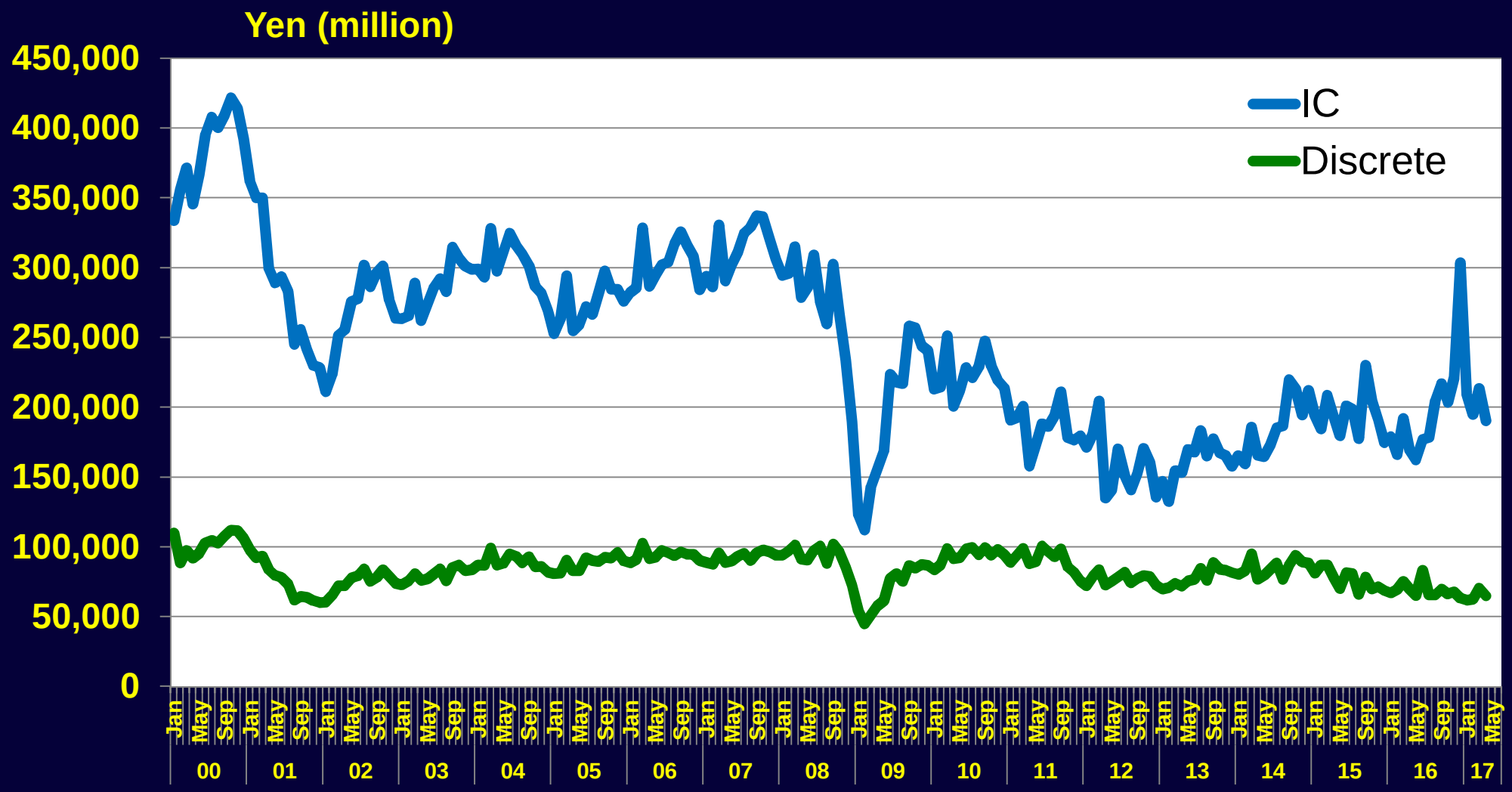
# Semiconductor Shipments to Japan vs. Japanese Electronic Equipment Production




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

Chart 8

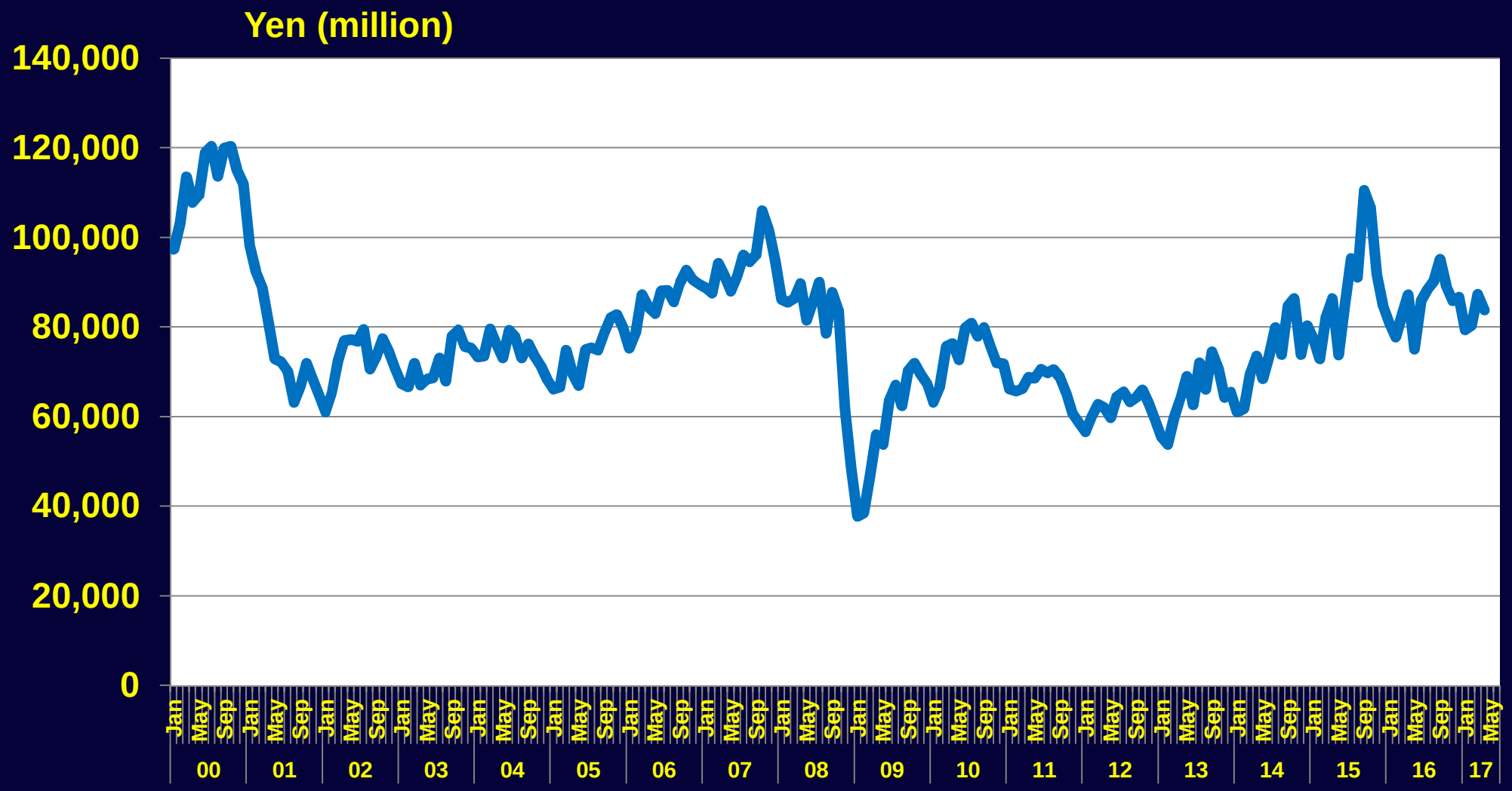
# Japan Integrated Circuit & Discrete Semiconductor Domestic Production




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

Chart 9

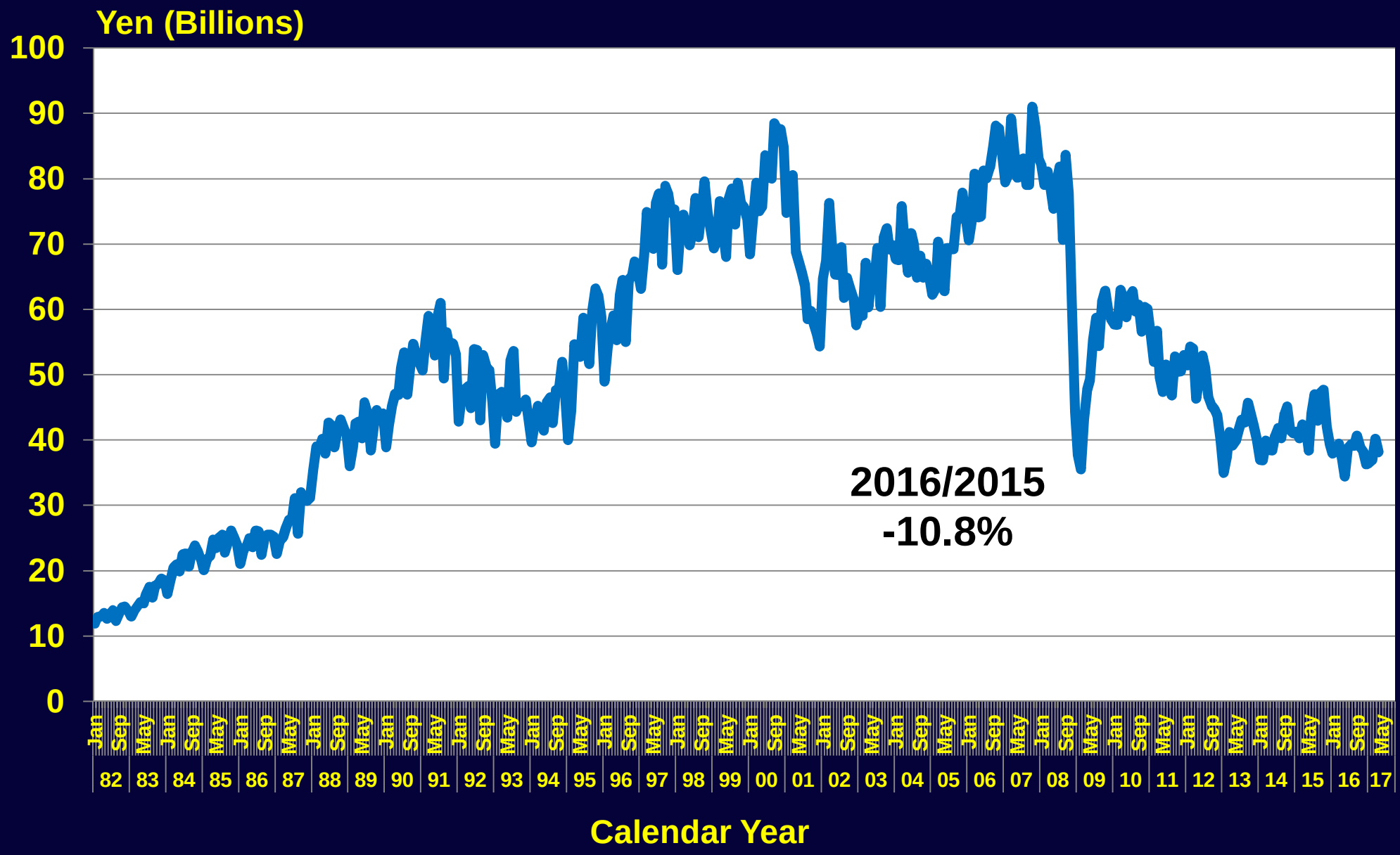
# Japan Passive Component Domestic Production




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

Chart 10

# Japan PCB Production




JEITA

Chart 11

# Japan PCB Production

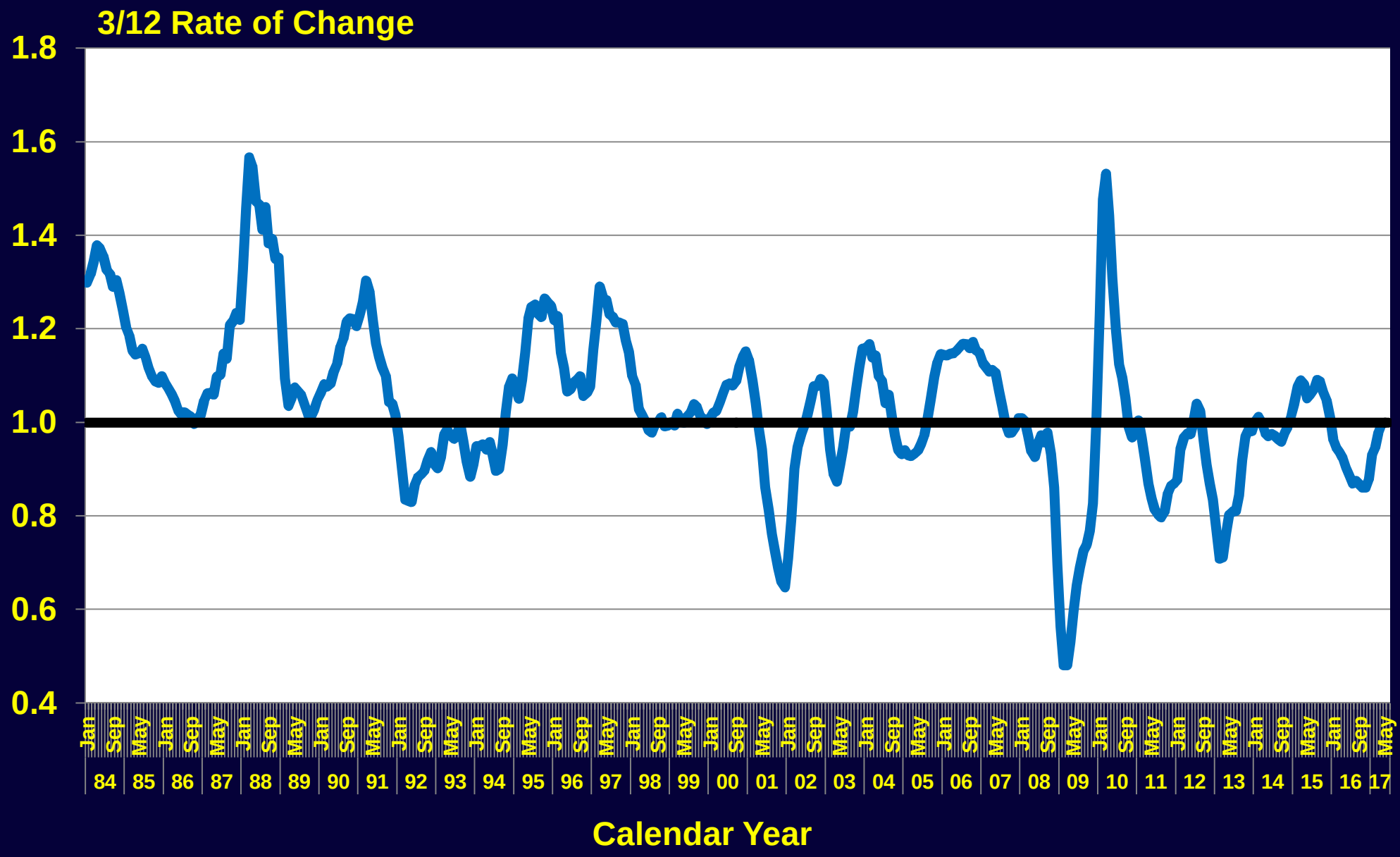
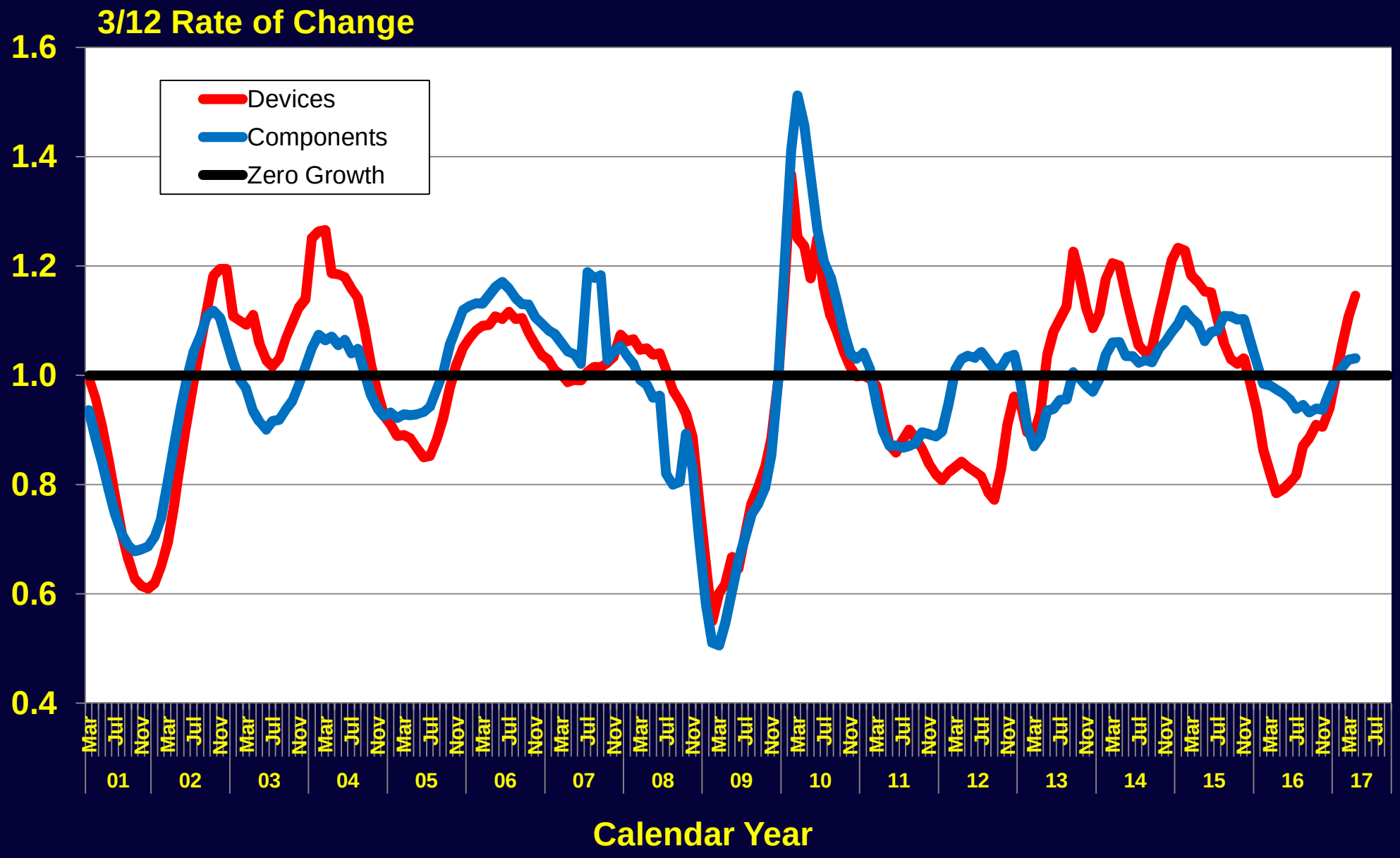

3/12 Rate of Change
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
Jan Sep May Jan Sep May Jan Sep May

Chart 12

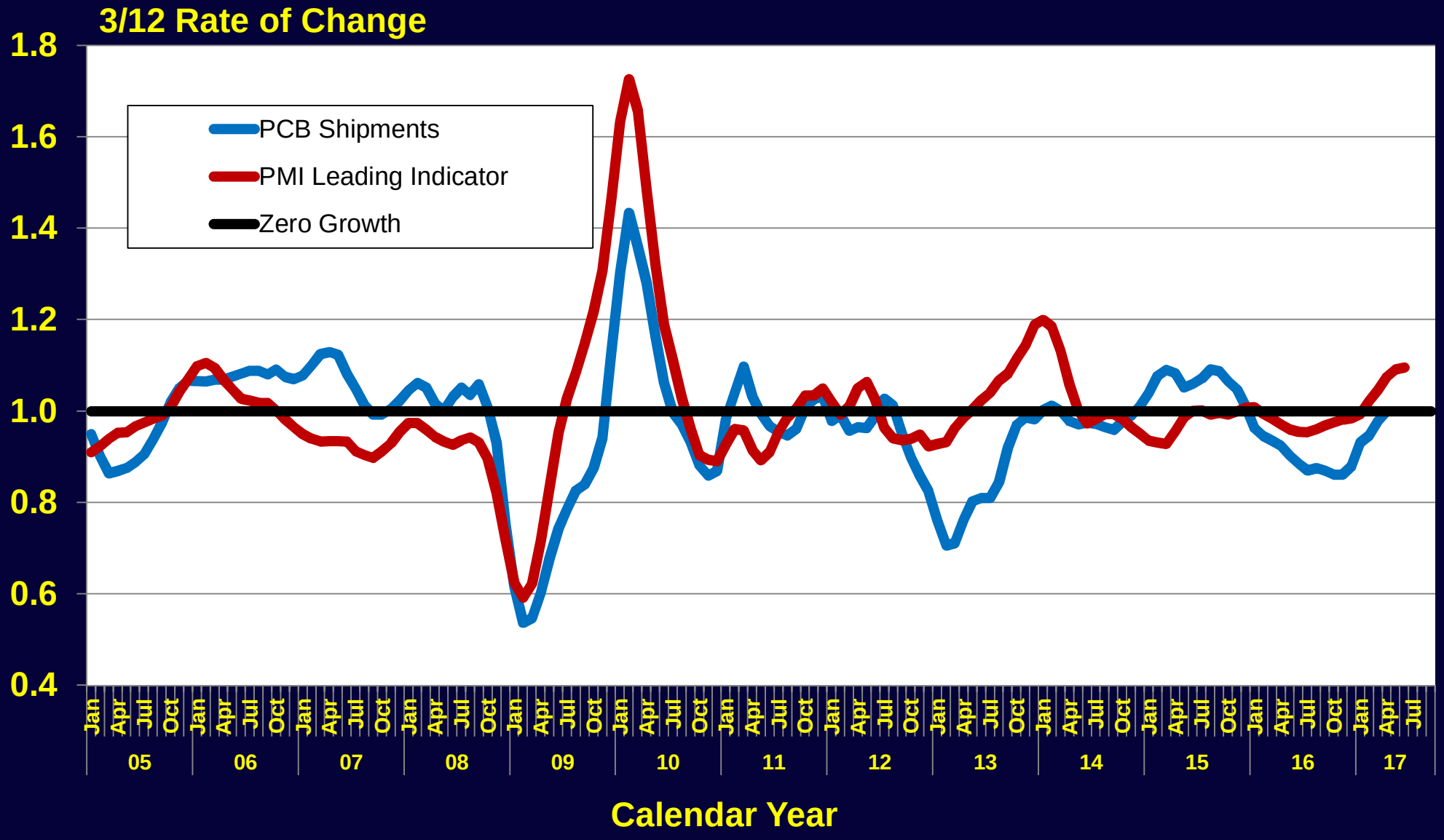
# Japanese Electronic Component & Device Production




JEITA www.jeita.or.jp/

Chart 13

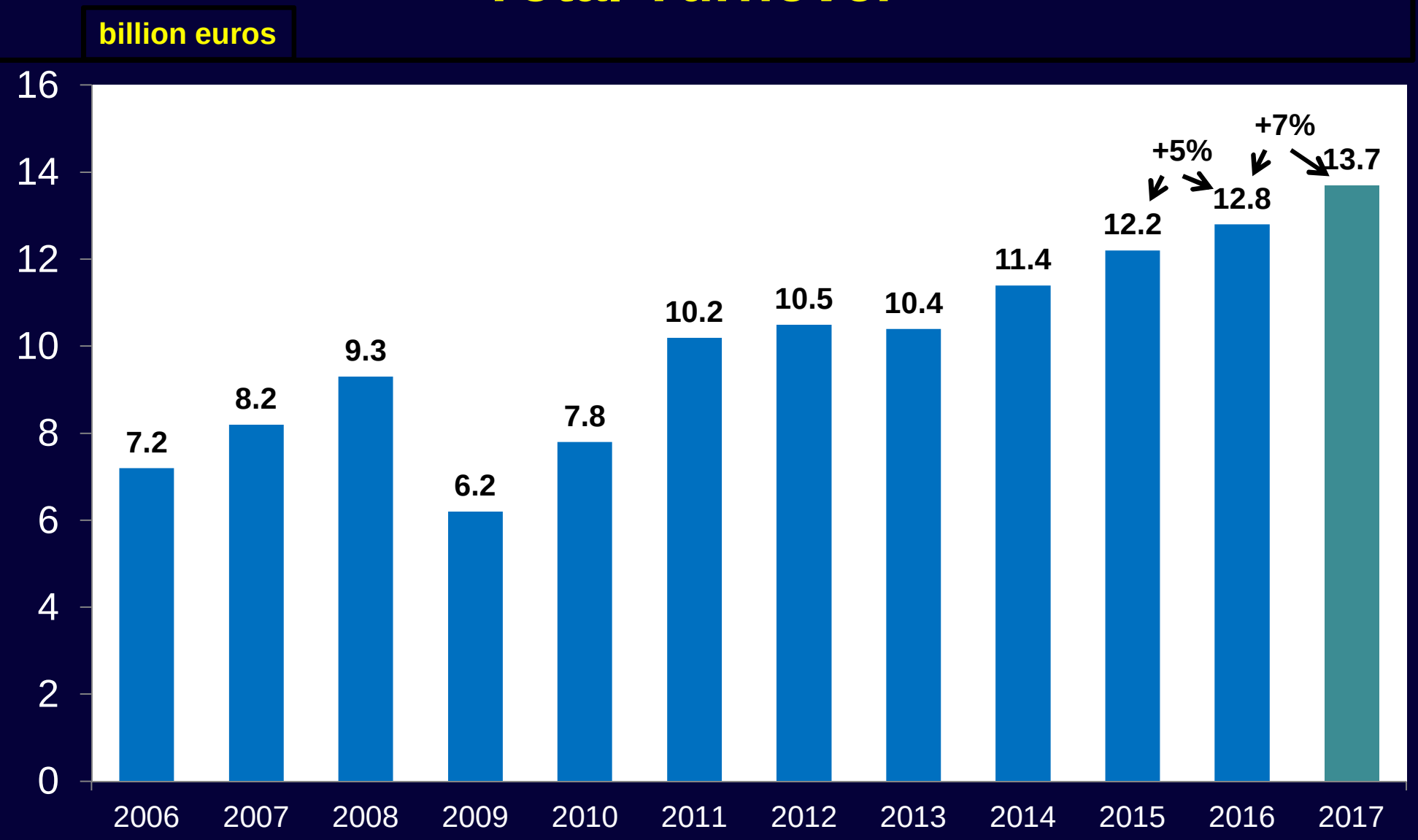
# Japan PMI Leading Indicator vs. Japan PCB Shipments




Source: Custer Consulting Group

Chart 14

# Robotics & Automation Germany
# Total Turnover




VDMA 6/17

Chart 15

# Worldwide Annual Supply of Industrial Robots

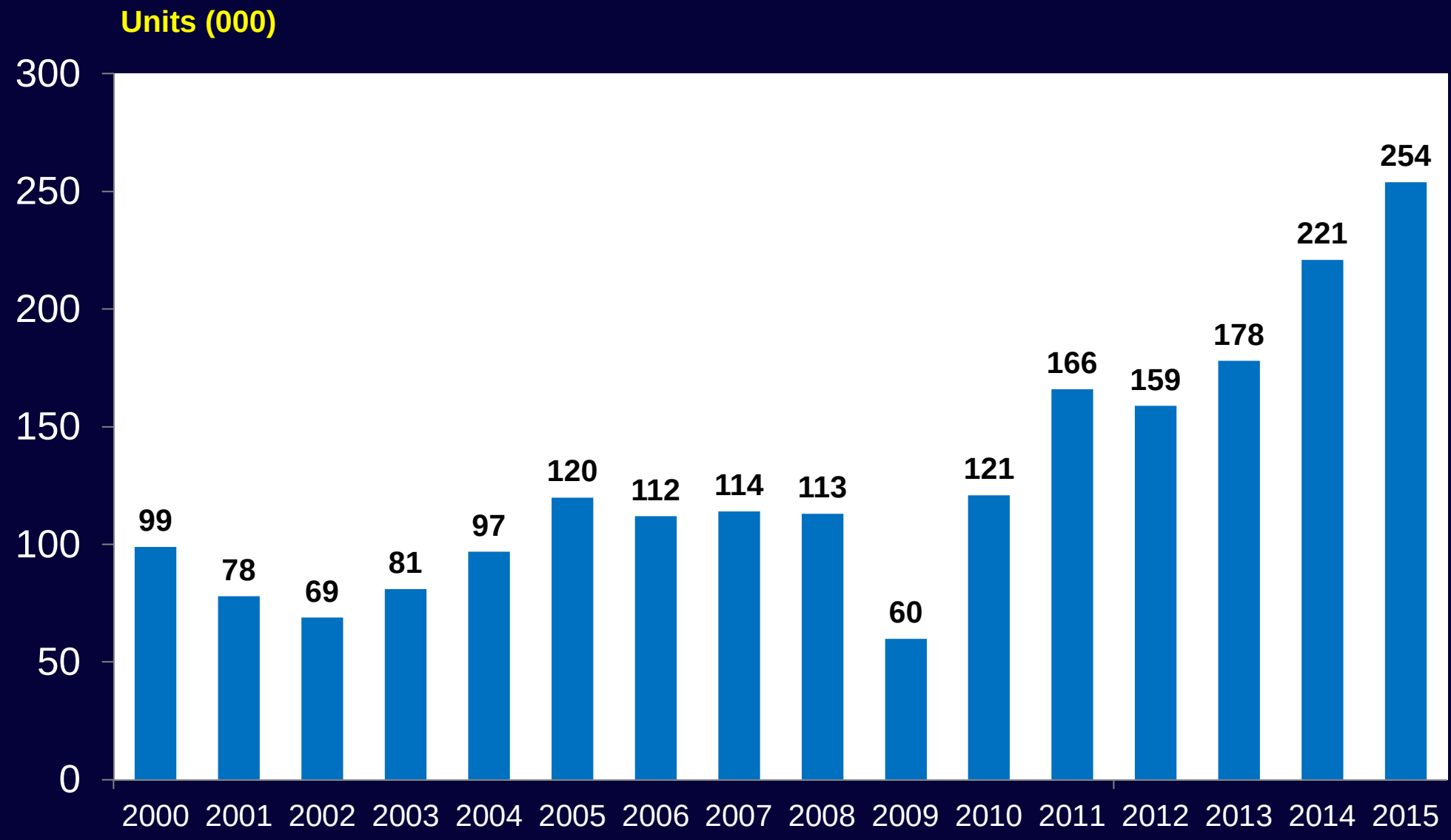
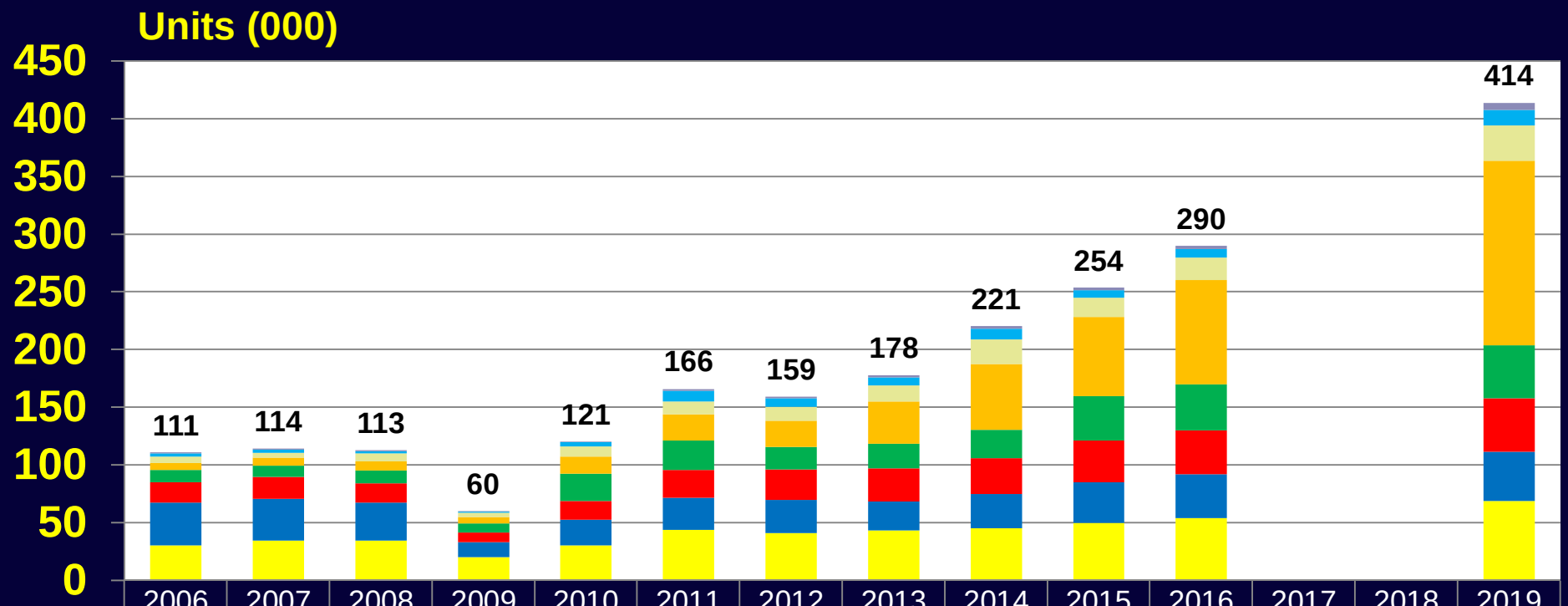


Chart 16

# Multipurpose Industrial Robots Sales by Region

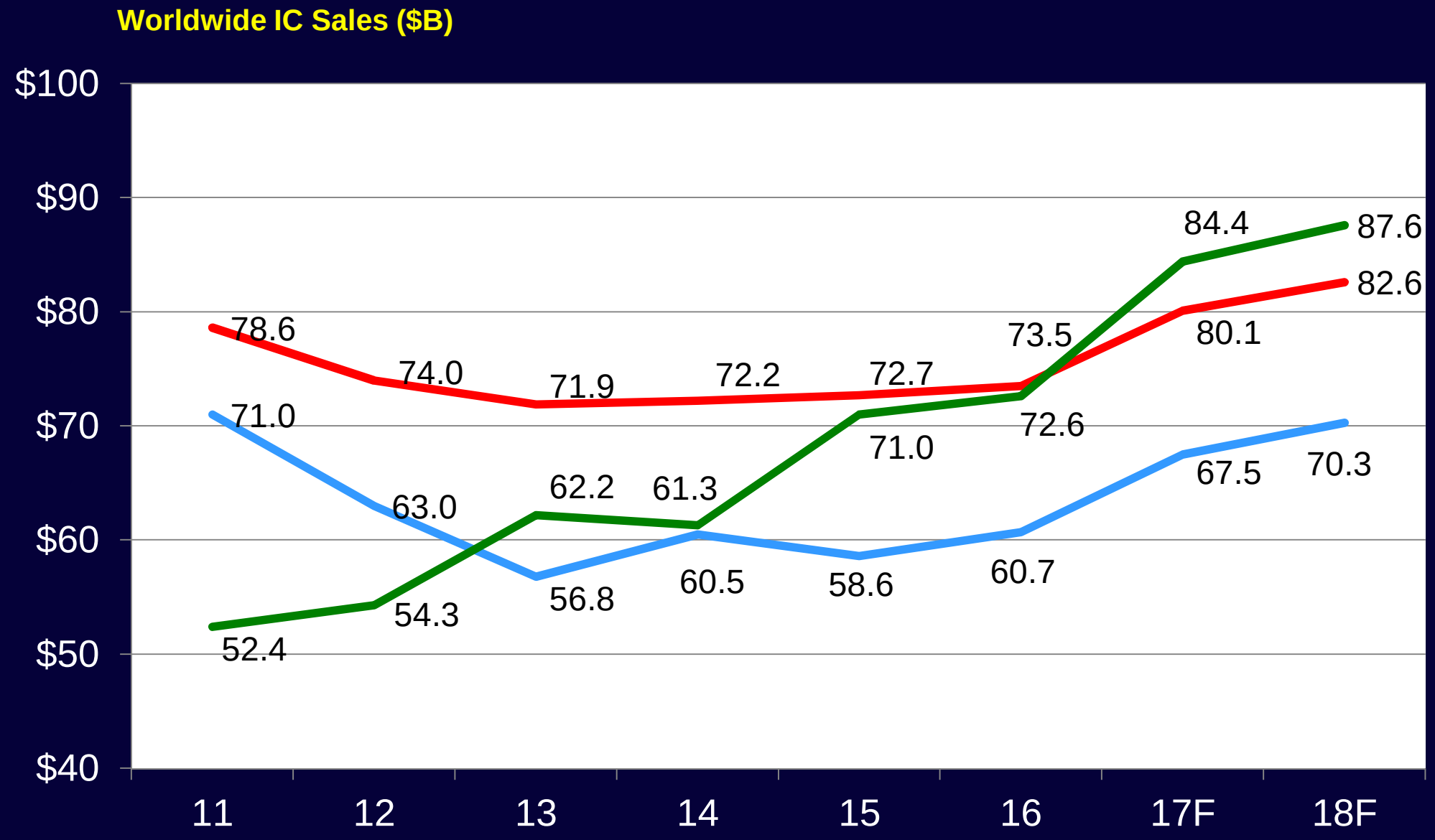



| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | 111.1 | 114.4 | 113.0 | 60.0 | 120.6 | 166.0 | 159.3 | 178.1 | 220.6 | 253.7 | 290.0 | | | 414.0 |
| India | 0.8 | 0.9 | 0.9 | 0.4 | 0.8 | 1.5 | 1.5 | 1.9 | 2.1 | 2.1 | 2.6 | | | 6.0 |
| ROW | 2.6 | 2.8 | 1.7 | 1.0 | 3.7 | 9.2 | 7.2 | 7.3 | 9.5 | 6.7 | 7.6 | | | 13.5 |
| Asia Pacific | 5.9 | 4.3 | 6.8 | 3.6 | 8.7 | 11.1 | 12.0 | 13.9 | 21.2 | 16.6 | 19.6 | | | 30.7 |
| China | 5.8 | 6.6 | 7.9 | 5.5 | 15.0 | 22.6 | 23.0 | 36.6 | 57.1 | 68.6 | 90.0 | | | 160.0 |
| S Korea | 10.8 | 10.1 | 11.6 | 7.8 | 23.5 | 25.5 | 19.4 | 21.3 | 24.7 | 38.3 | 40.0 | | | 46.0 |
| N America | 17.4 | 18.7 | 16.2 | 8.4 | 16.4 | 24.3 | 26.3 | 28.7 | 31.0 | 36.4 | 38.0 | | | 46.0 |
| Japan | 37.4 | 36.1 | 33.1 | 12.8 | 21.9 | 27.9 | 28.7 | 25.1 | 29.3 | 35.0 | 38.0 | | | 43.0 |
| Europe | 30.4 | 34.9 | 34.7 | 20.5 | 30.7 | 43.8 | 41.2 | 43.3 | 45.6 | 50.1 | 54.2 | | | 68.8 |

**IFR 2017 & prior**

Chart 17

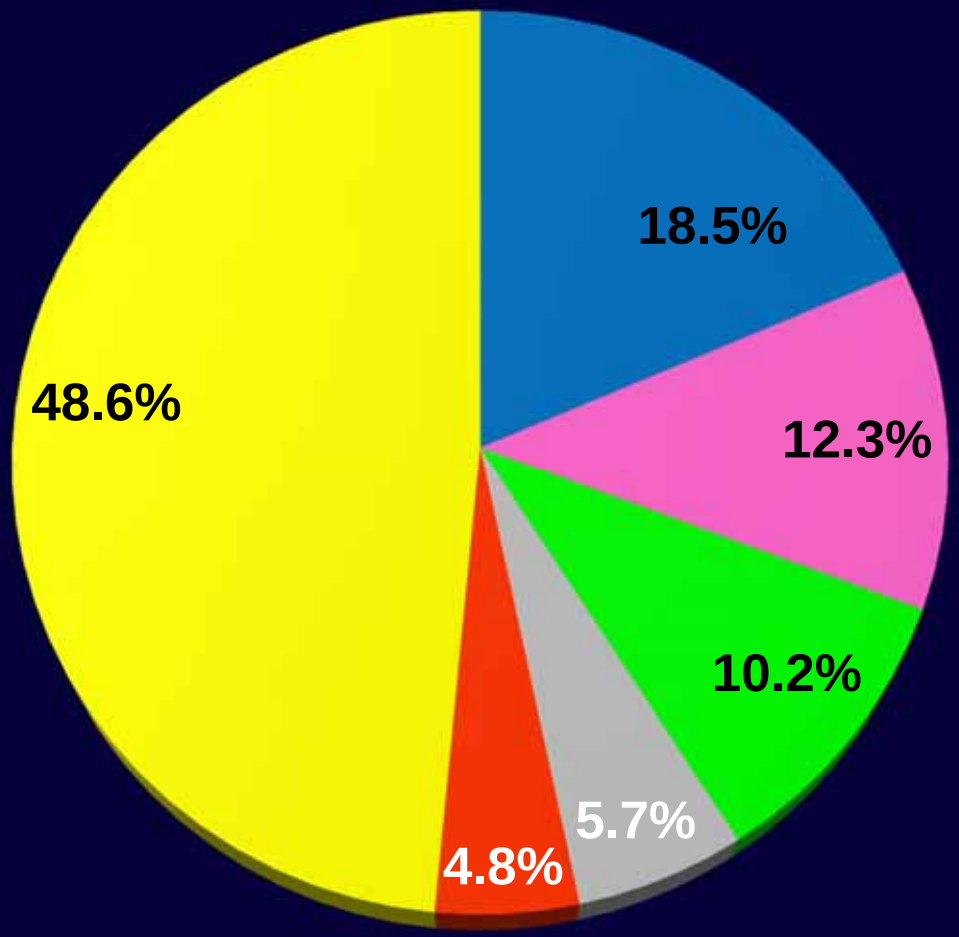
# Cellphone Consumption of ICs Surpasses Personal Computer Systems




IC Insights 6/17

Chart 18

# World Commercial 3D Printer Market Share (Shipment Value) 2H'16




IDC 6/17