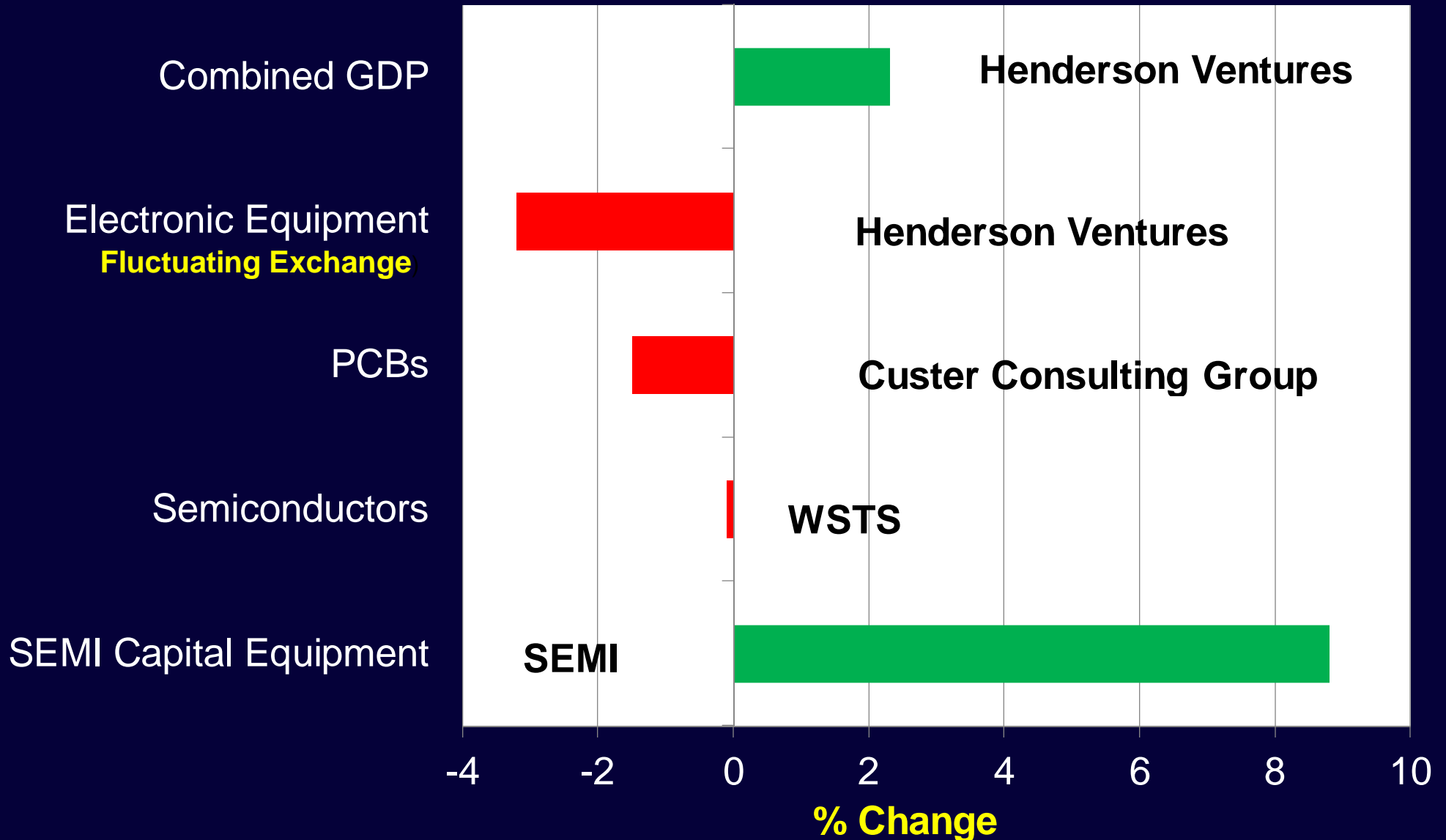


# Global Electronic Supply Chain Forecast

## 2016 vs. 2015



# Global Electronic Supply Chain Forecast

## 2017 vs. 2016

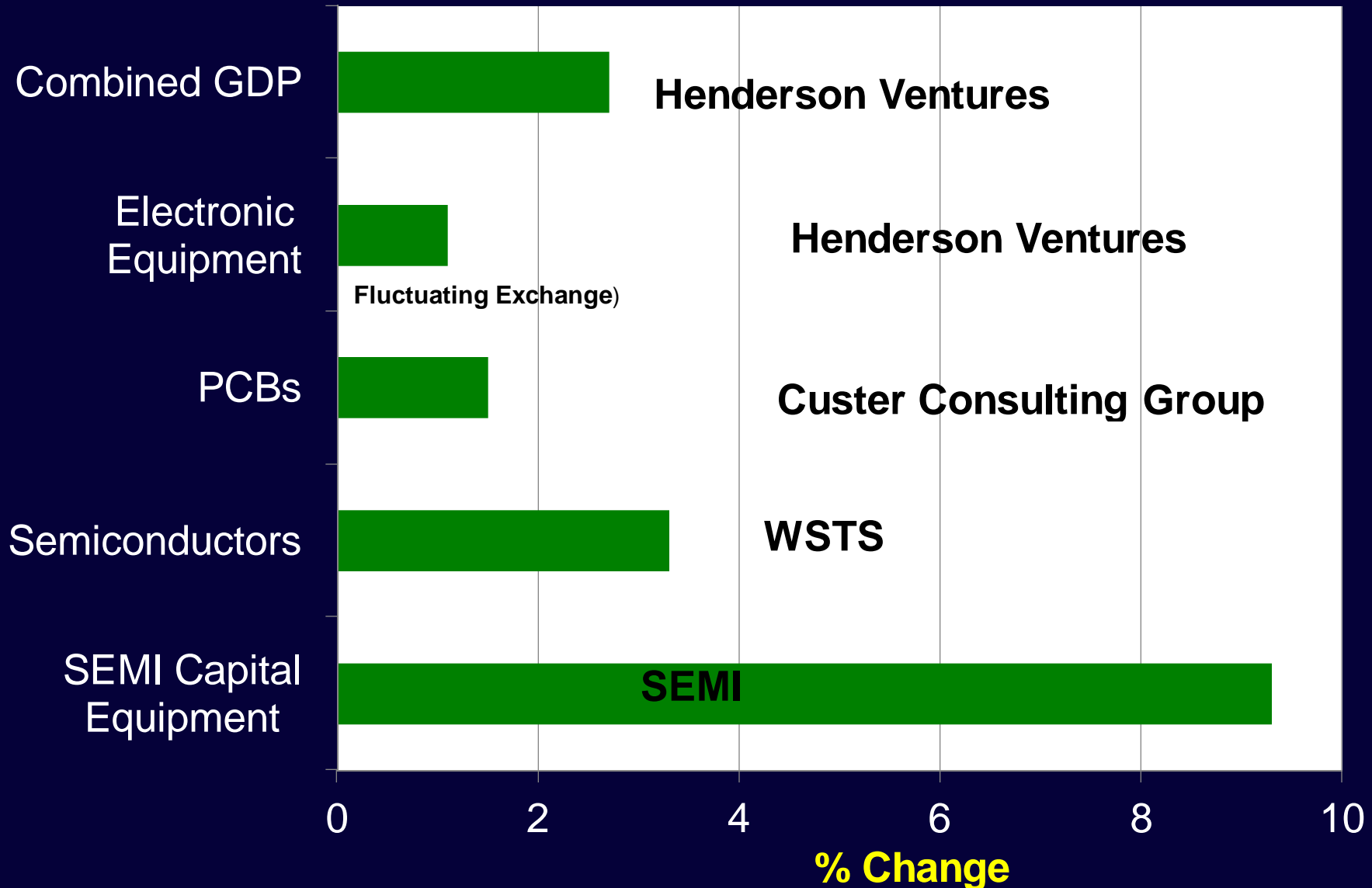


Chart 3

# Monthly Semiconductor Shipments \$ Billions (3-month avg in US\$)

	<u>11/15</u>	<u>11/16</u>	<u>% CH</u>
Americas	6.07	6.26	3.2%
Europe	2.93	2.89	- 1.6%
Japan	2.68	2.90	+ 8.2%
China	8.67	10.04	+ 15.8%
Asia Pacific / All Other	8.53	8.94	+ 4.8%
Total	28.88	31.03	+ 7.4%

Chart 4 **Total Semiconductor Shipments to an Area**  
**Monthly Shipments - Reporting Firms**

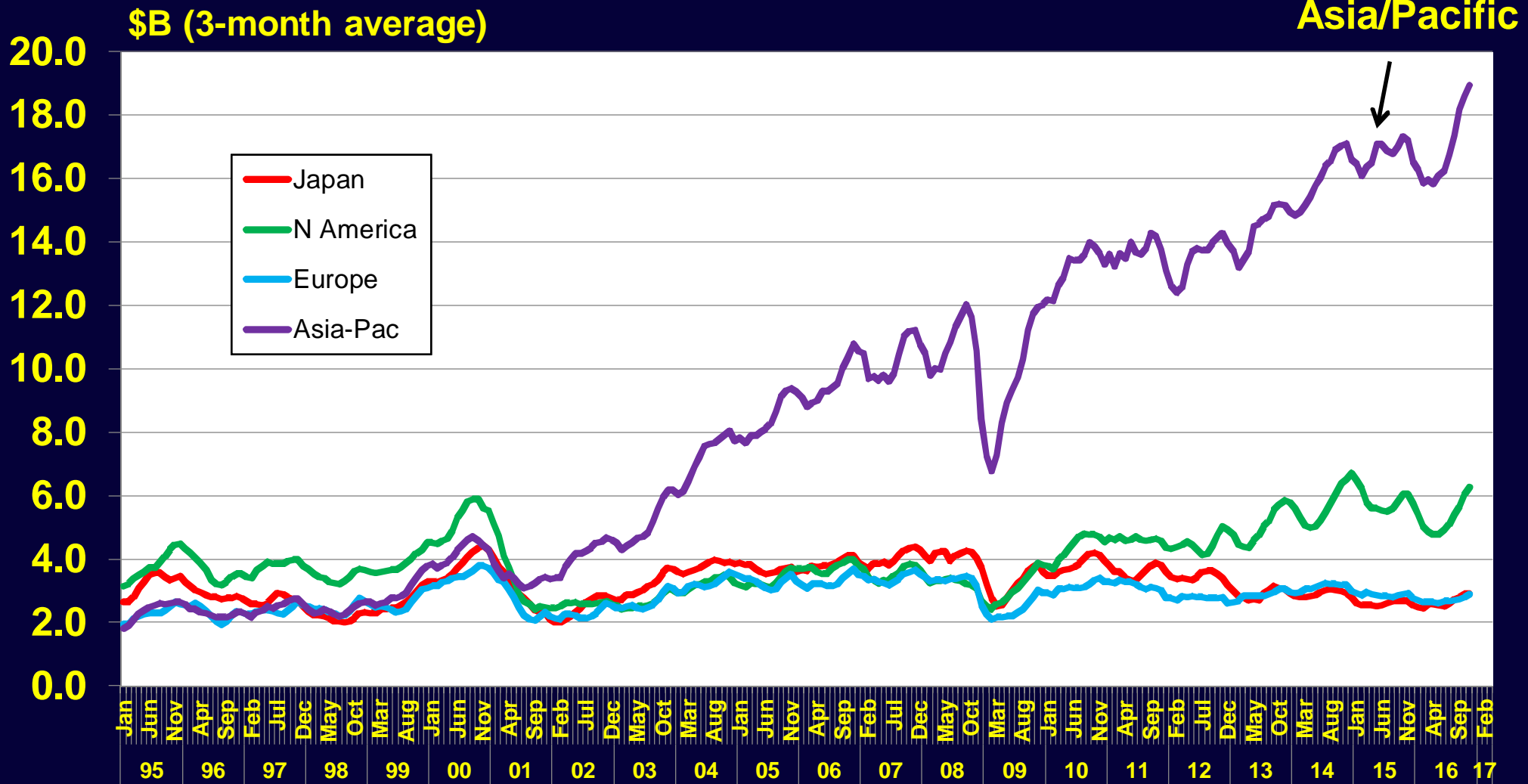
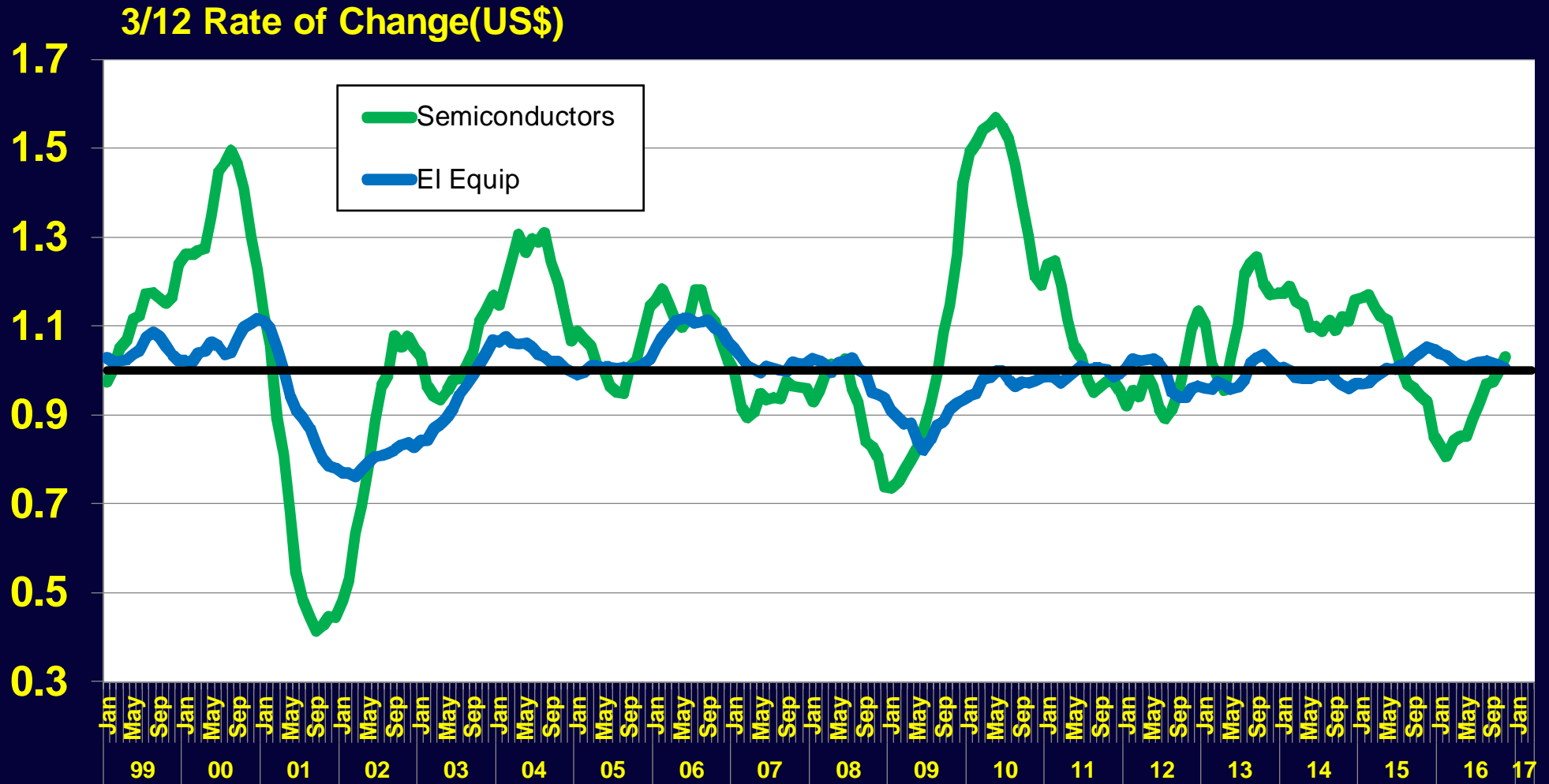


Chart 5

# Semiconductor Shipments to N. America vs. U.S Electronic Equipment Production



Total \$ Semiconductor Shipments from All Countries to N. America [www.sia-online.org/](http://www.sia-online.org/)  
U.S. Electronic Equipment Shipments [www.census.gov/indicator/www/m3/](http://www.census.gov/indicator/www/m3/)

Chart 6

# Global "Purchasing Managers" Index

Diffusion Index, >50 = Growth

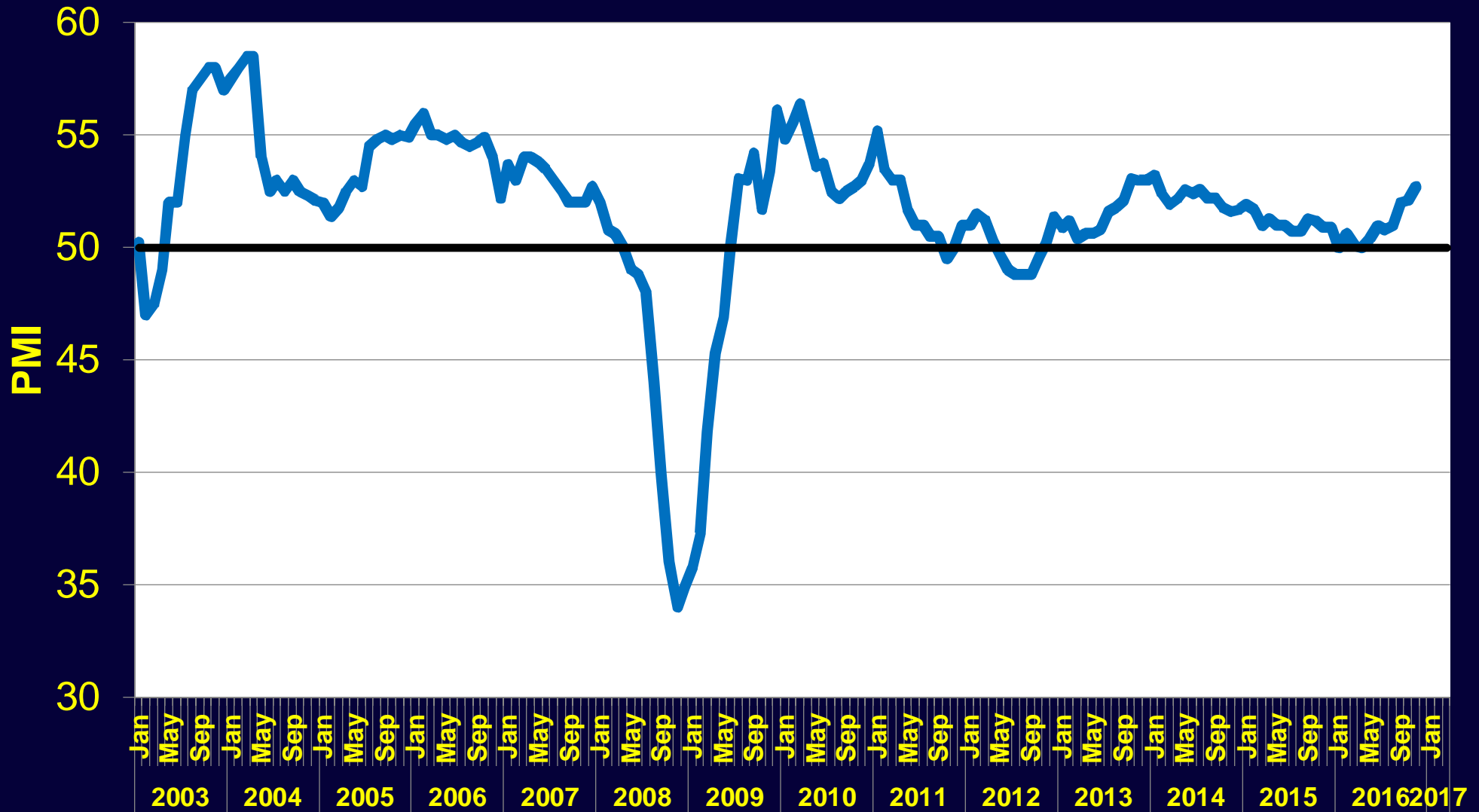
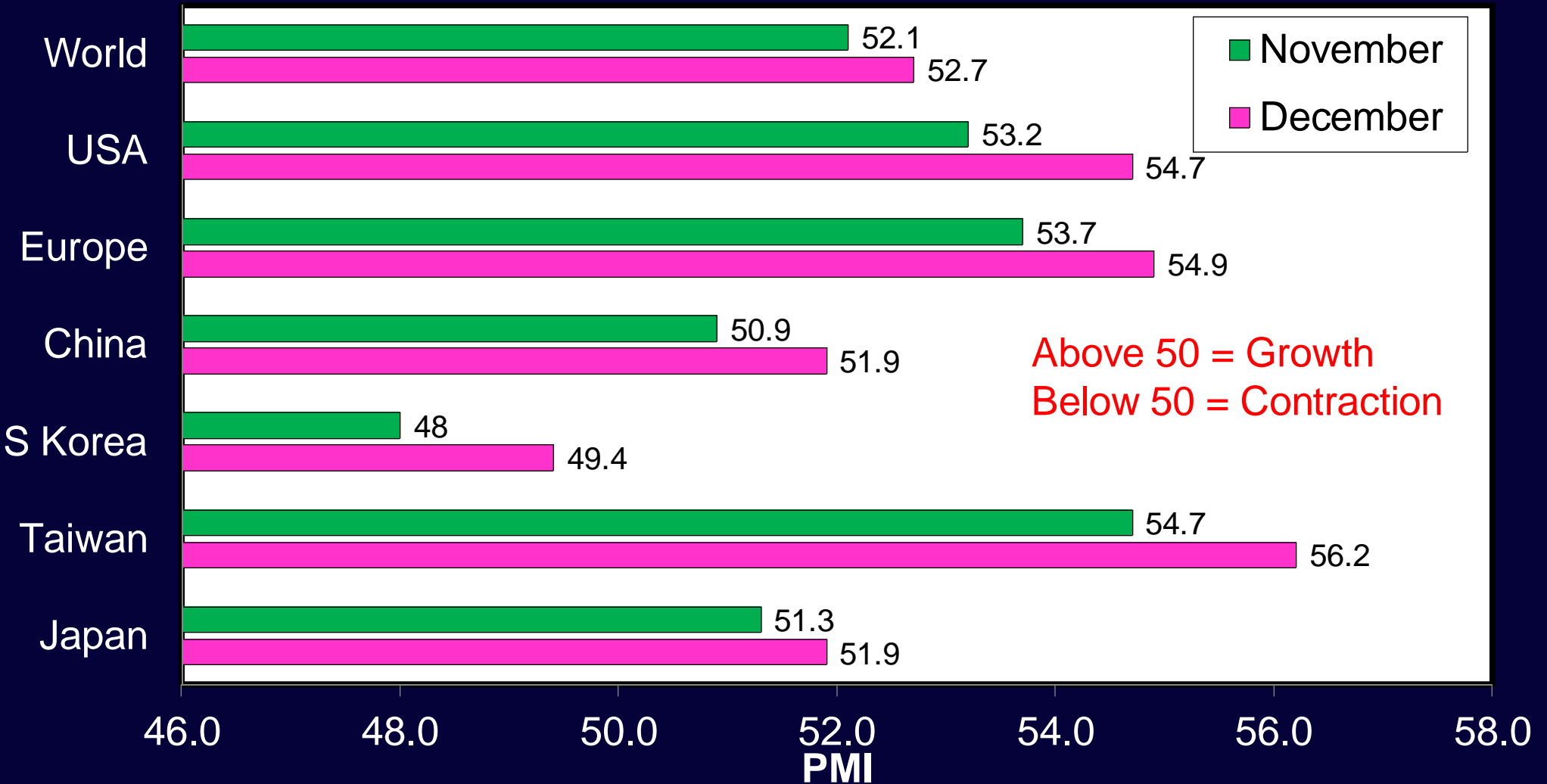


Chart 7

# Purchasing Managers' Indices December 2016 vs. November 2016



Markit Economics, JPMorgan and ISM

# U.S. "Purchasing Managers" Indices

## ISM vs. Markit Economics

Diffusion Index, >50 = Growth

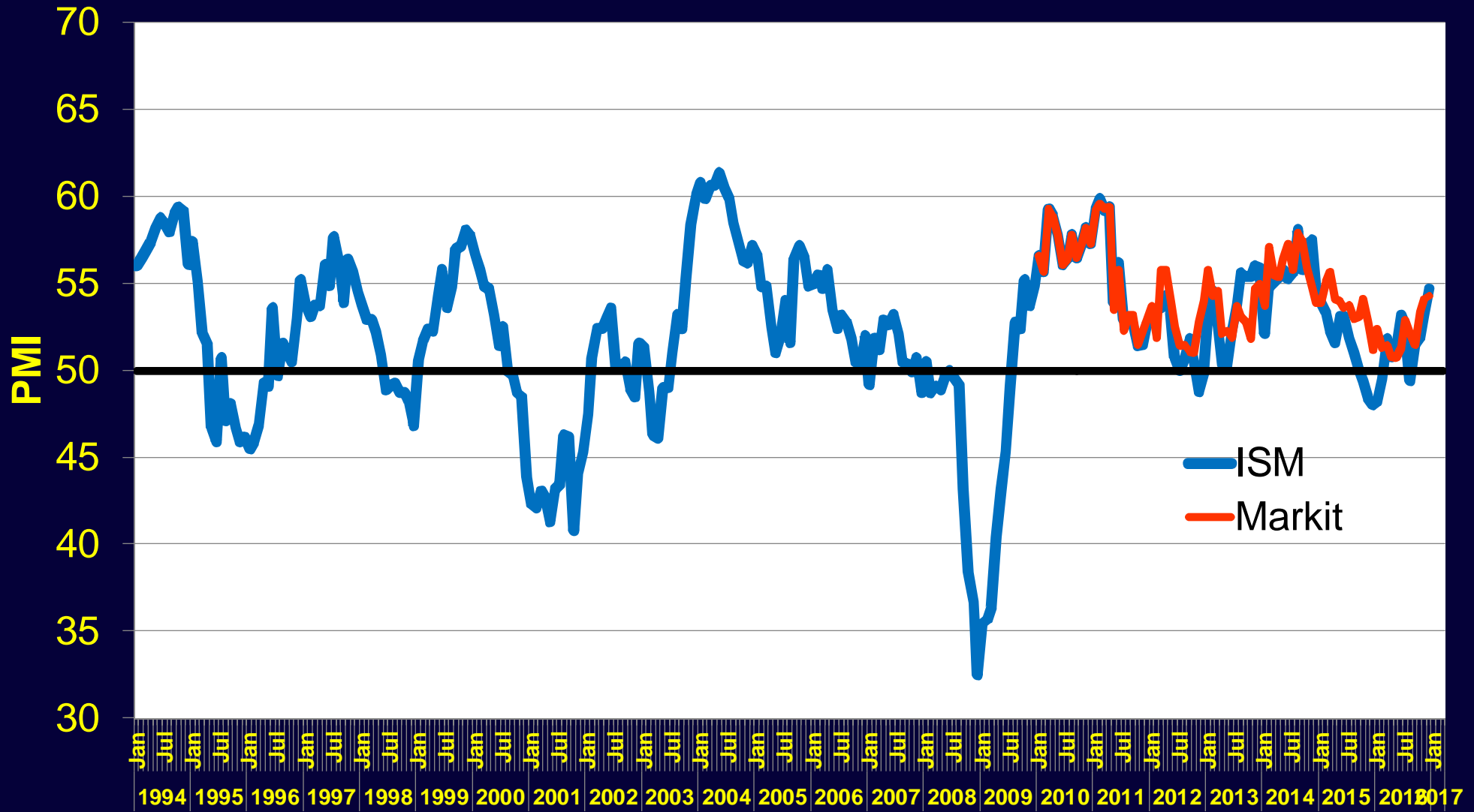




Chart 9

# Eurozone "Purchasing Managers" Index

Diffusion Index, >50 = Growth

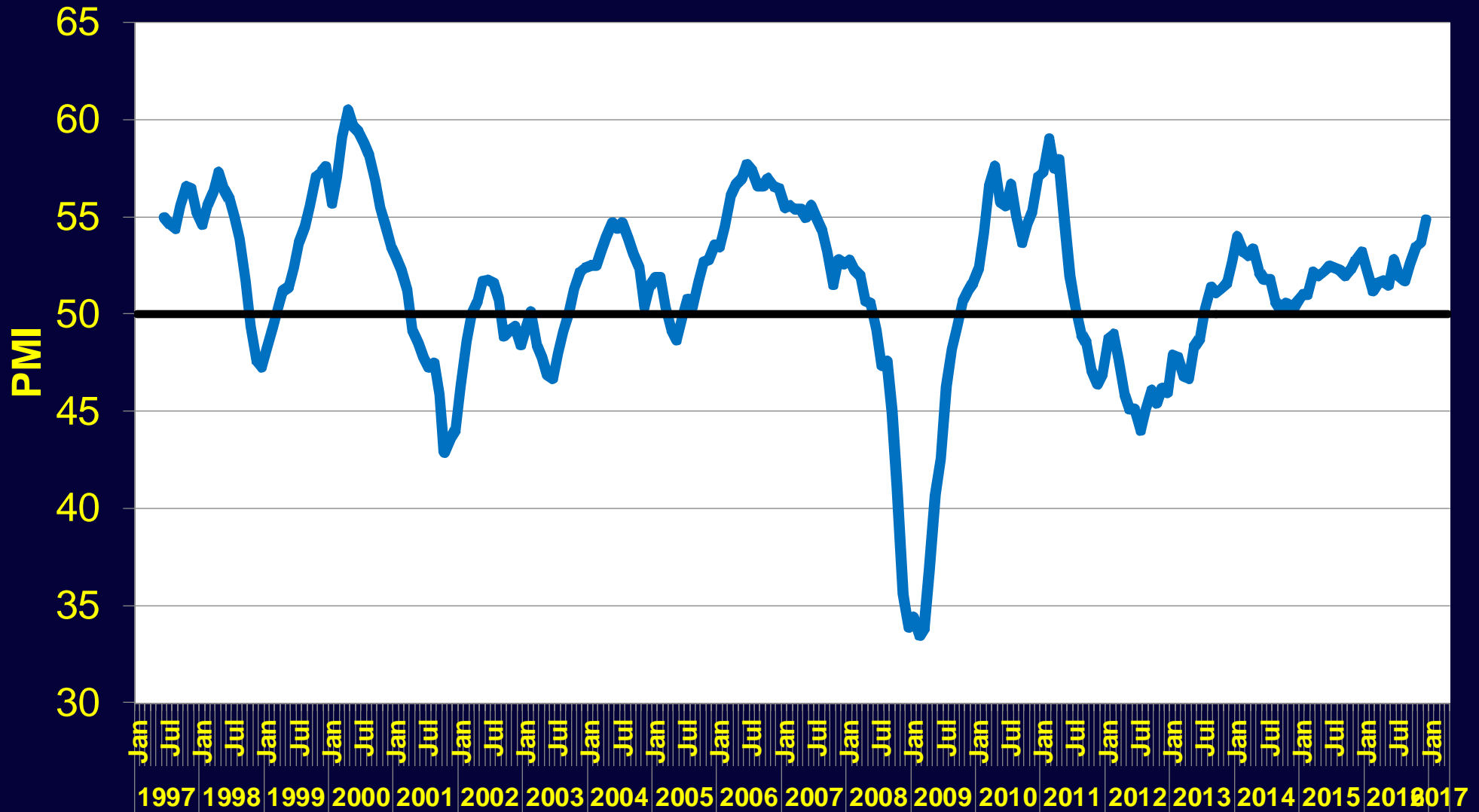


Chart 10

# European Purchasing Managers' Indices December 2016 vs November 2016

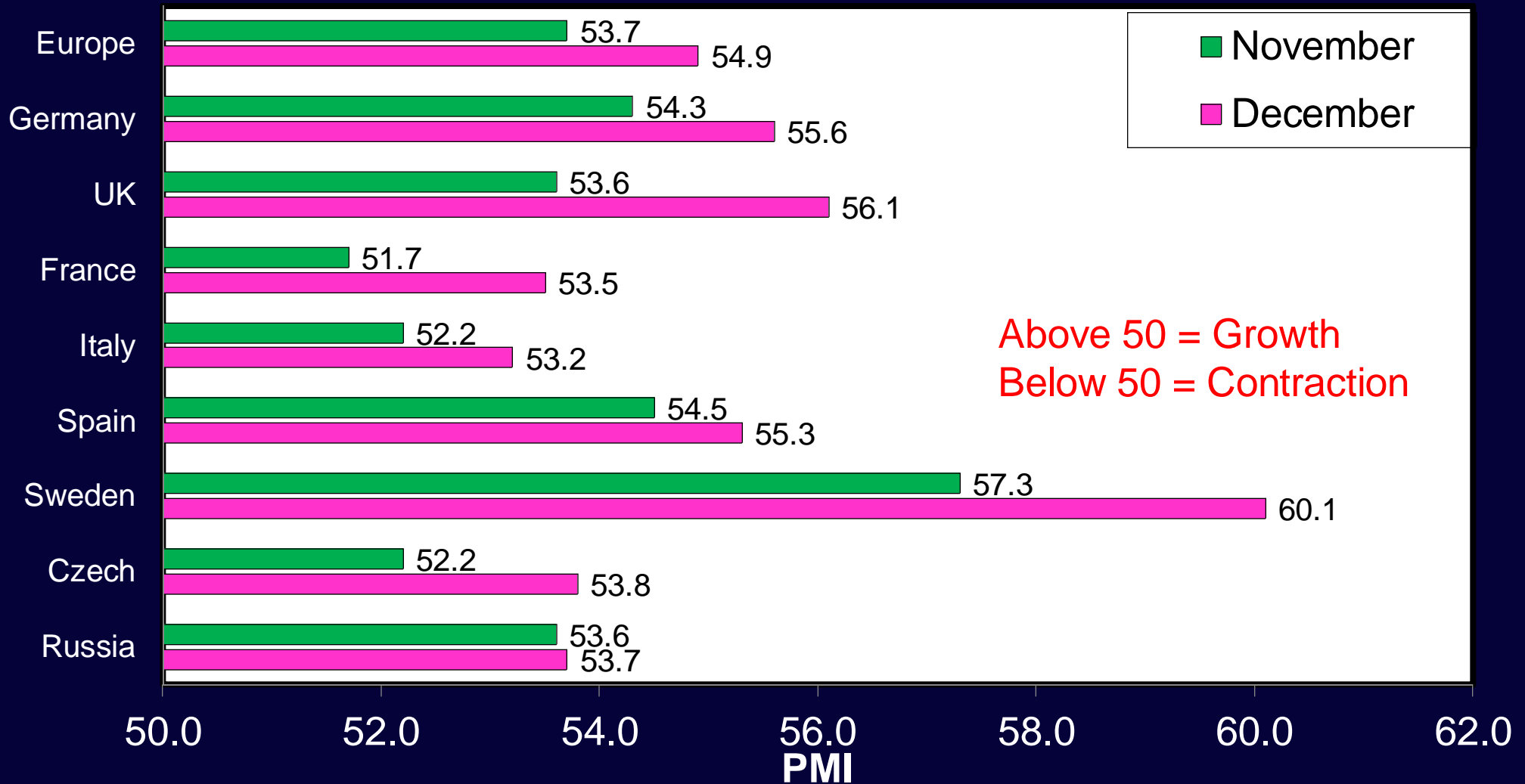


Chart 11

# Asian Purchasing Managers Indices December 2016 vs. November 2016

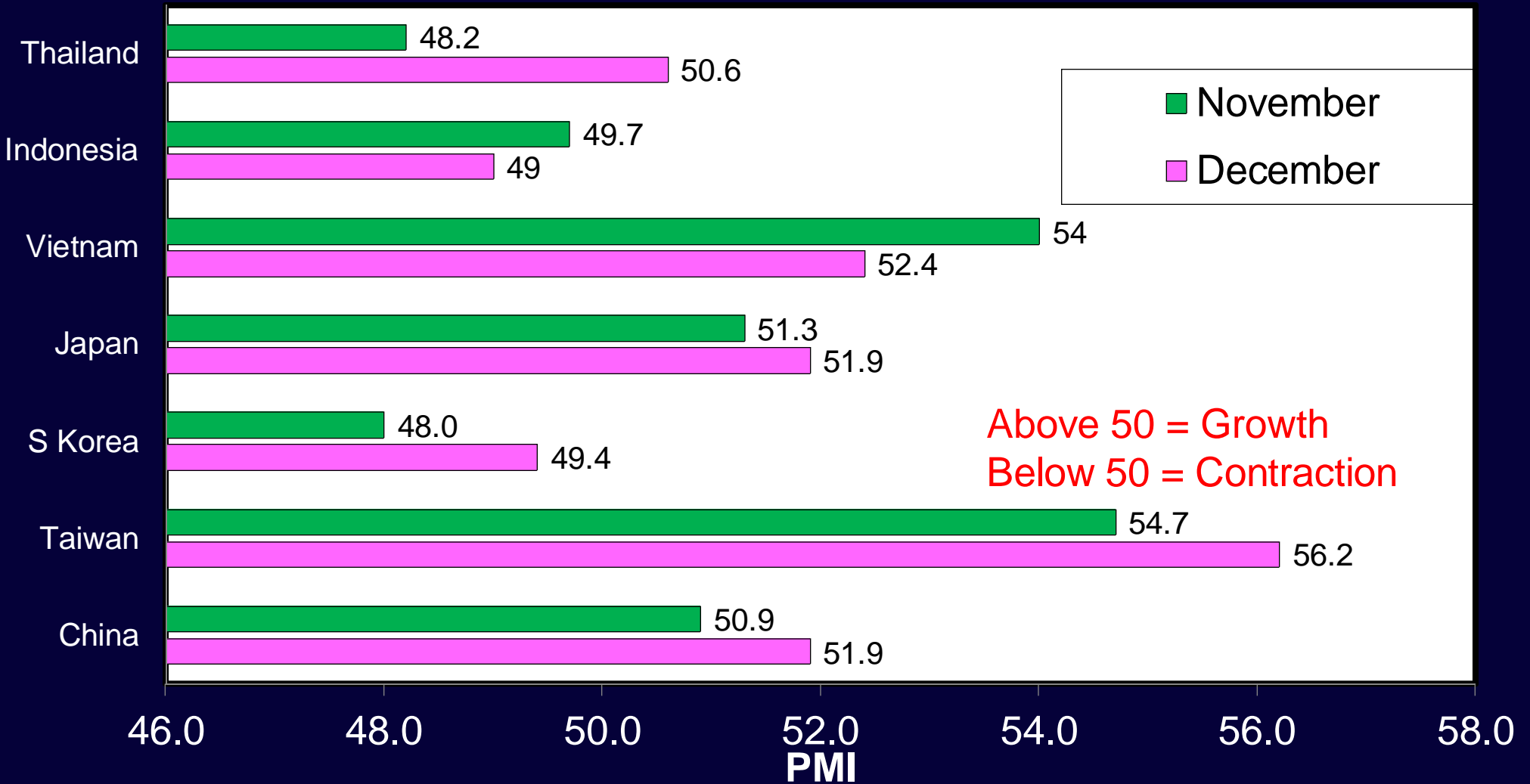


Chart 12

# Japan "Purchasing Managers" Index

>50 = Growth

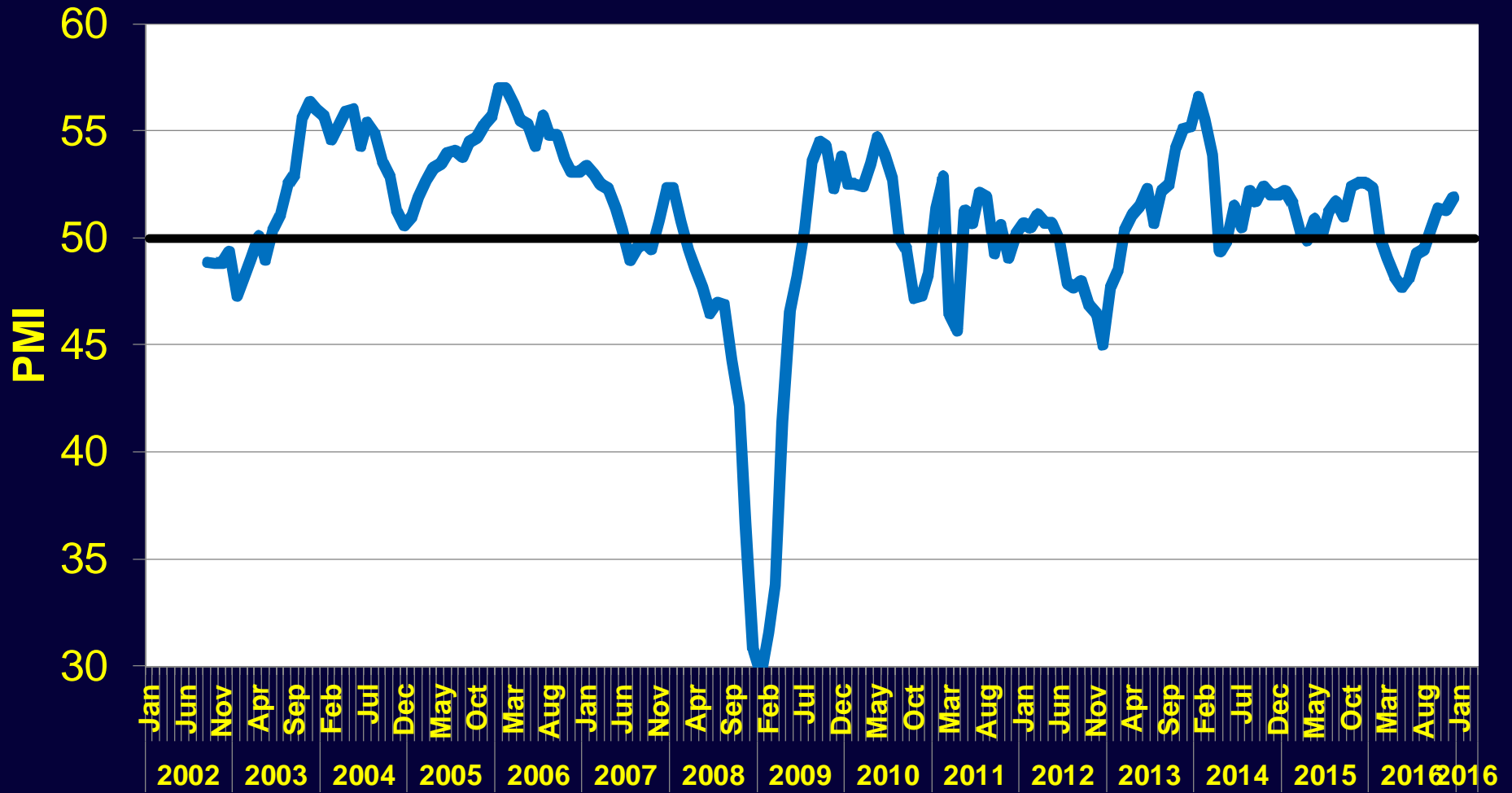


Chart 13

# Taiwan "Purchasing Managers" Index

>50 = Growth

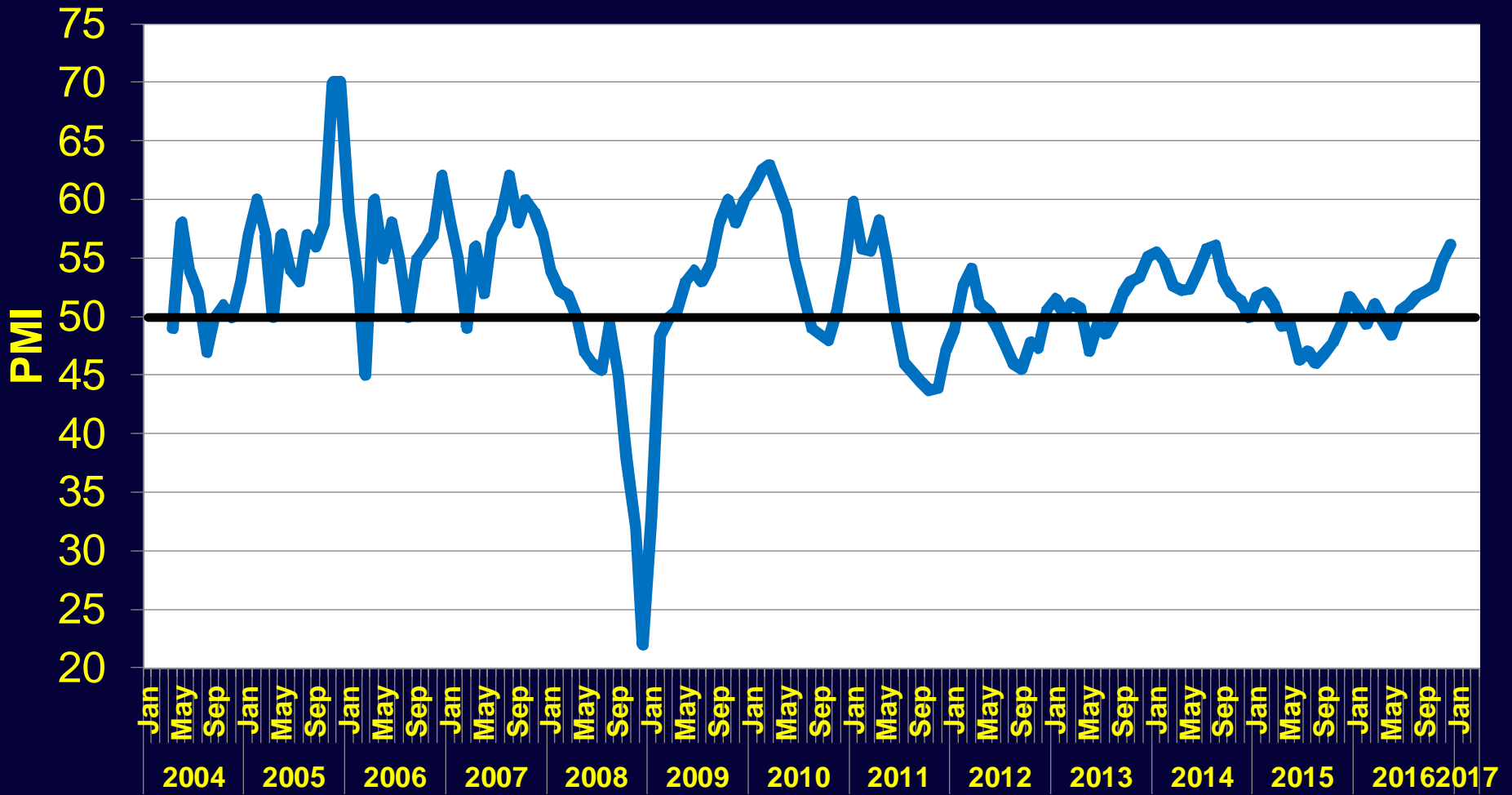


Chart 14

# China "Purchasing Managers" Index

>50 = Growth

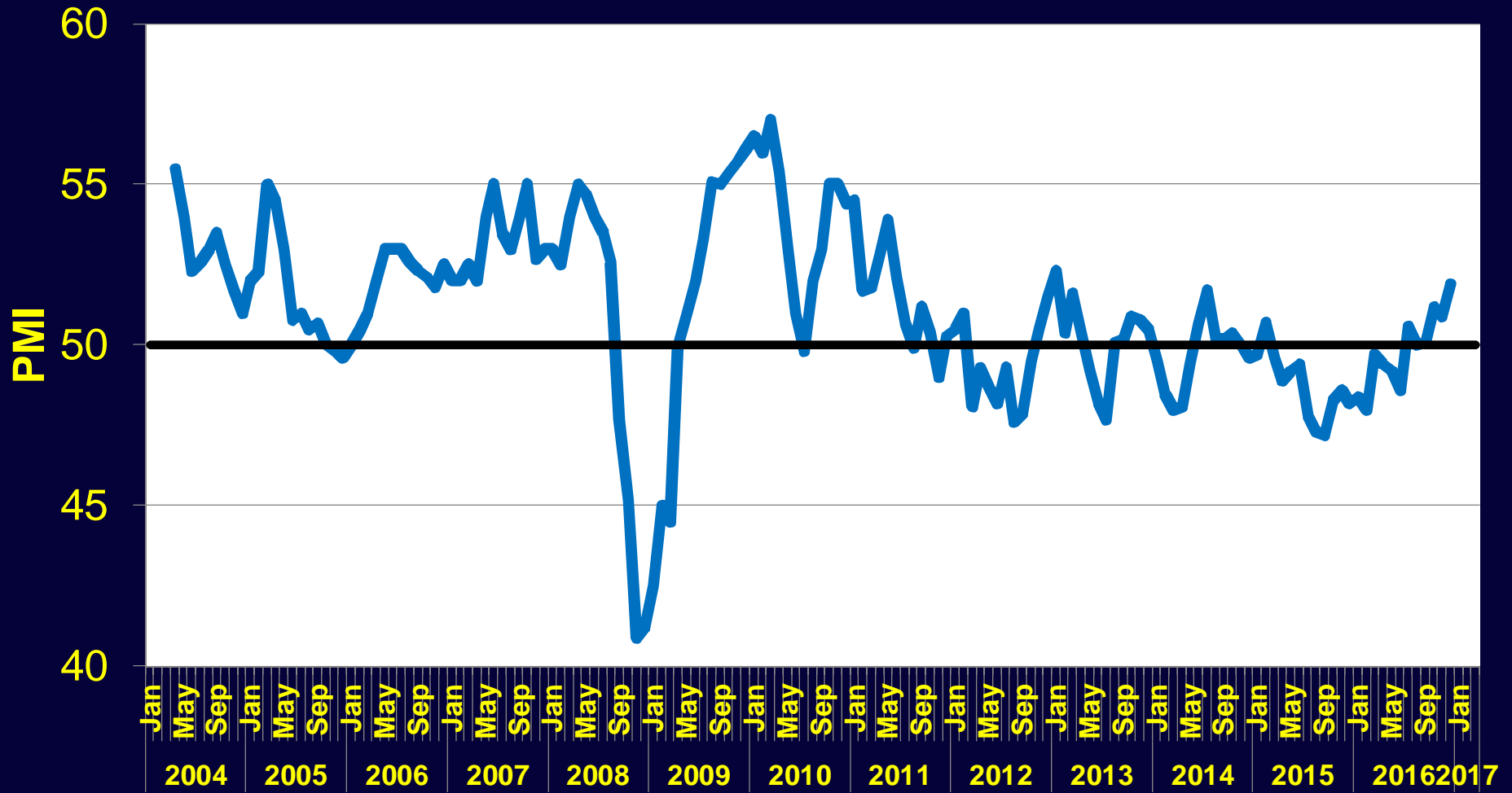


Chart 15

# S Korea "Purchasing Managers" Index

>50 = Growth

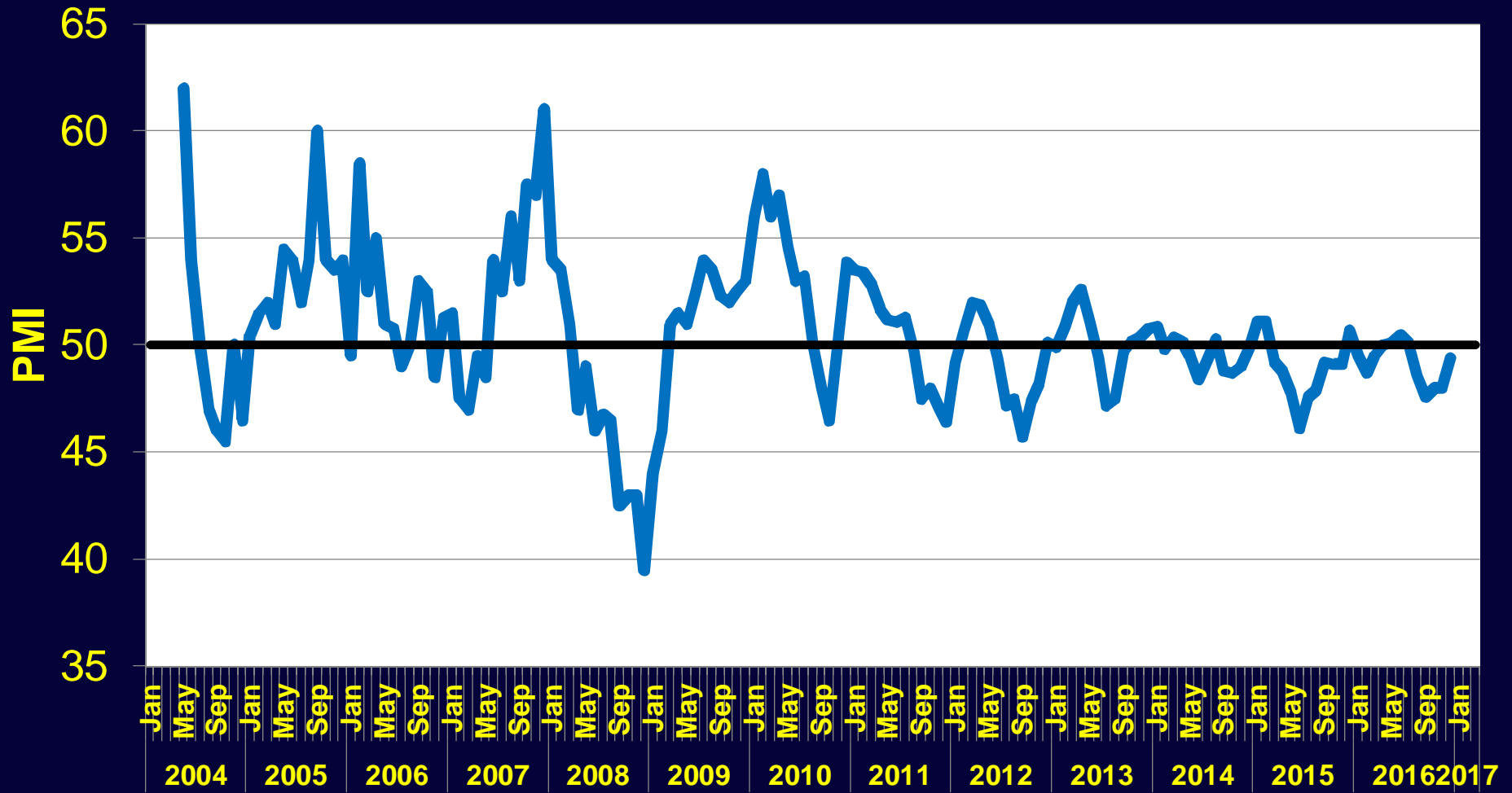


Chart 16

# Present Growth Rates (%)

## U.S. Economy & Electronics Industry

	Latest Month	Annual Growth	3-Month Growth
<b>Electronic Component \$</b>			
Rigid & Flex PCB Orders (N Amer)	11/16	98.7	99.8
Rigid & Flex PCB Shipments (N Amer)	11/16	102.2	98.3
Electronic Component Orders	11/16	112.2	108.6
Electronic Component Shipments	11/16	112.5	108.8
Semiconductor Shipments to N America	11/16	91.5	103.2
<b>U.S. Electronic Equipment Orders \$</b>			
Computer & Related	11/16	85.7	84.8
Communication	11/16	96.5	93.6
Medical, Measurement & Control	11/16	105.1	105.3
Search & Navigation	11/16	104.9	99.1
Defense Capital Goods	11/16	120.2	124.0
Military Electronics	11/16	106.4	99.1
Total Electronic Equipment	11/16	101.1	99.3
<b>U.S. Industrial Production</b>	11/16	98.8	99.2

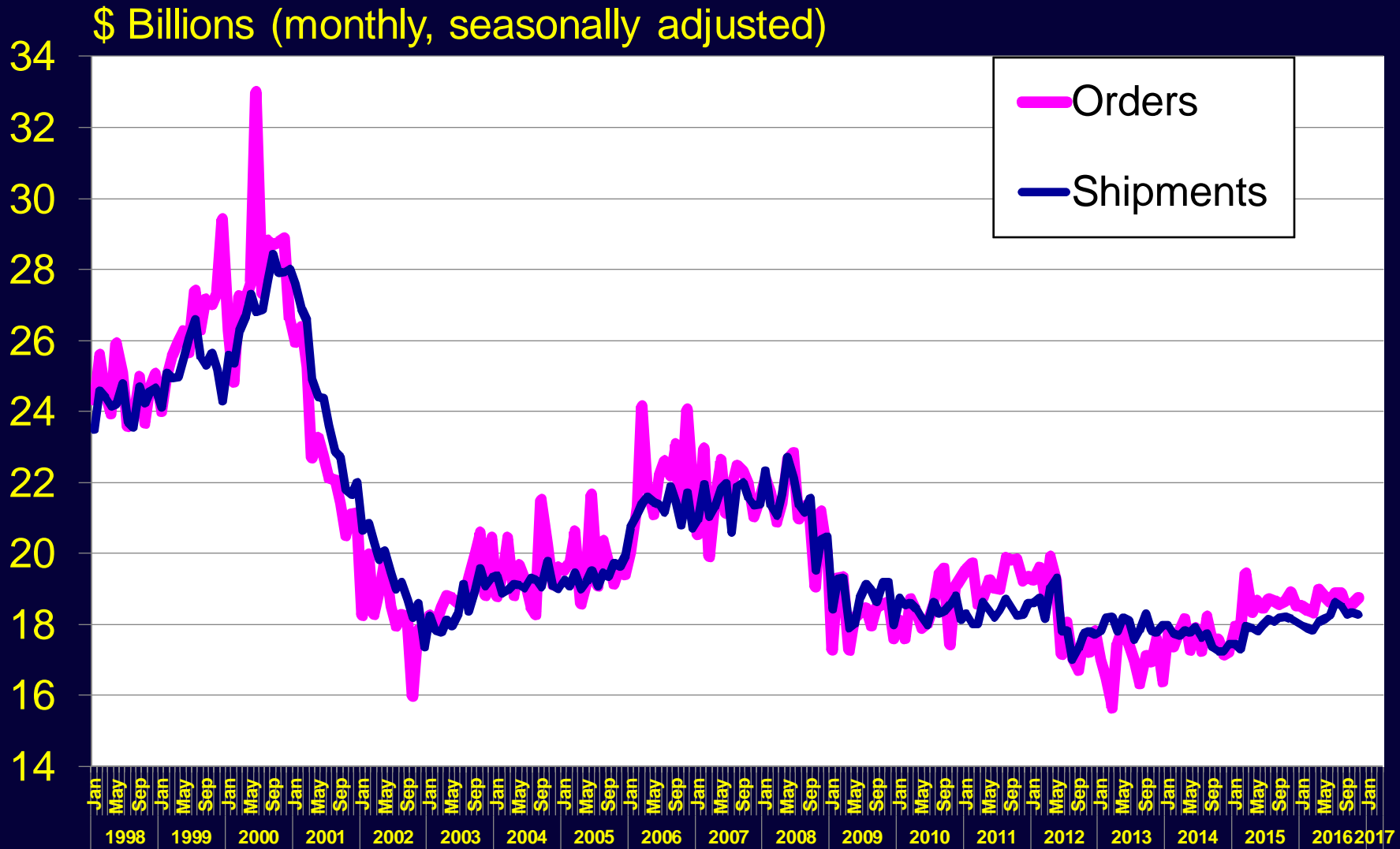
NOTE: 3 month growth rates compare most recent 3 months to same 3 months one year earlier



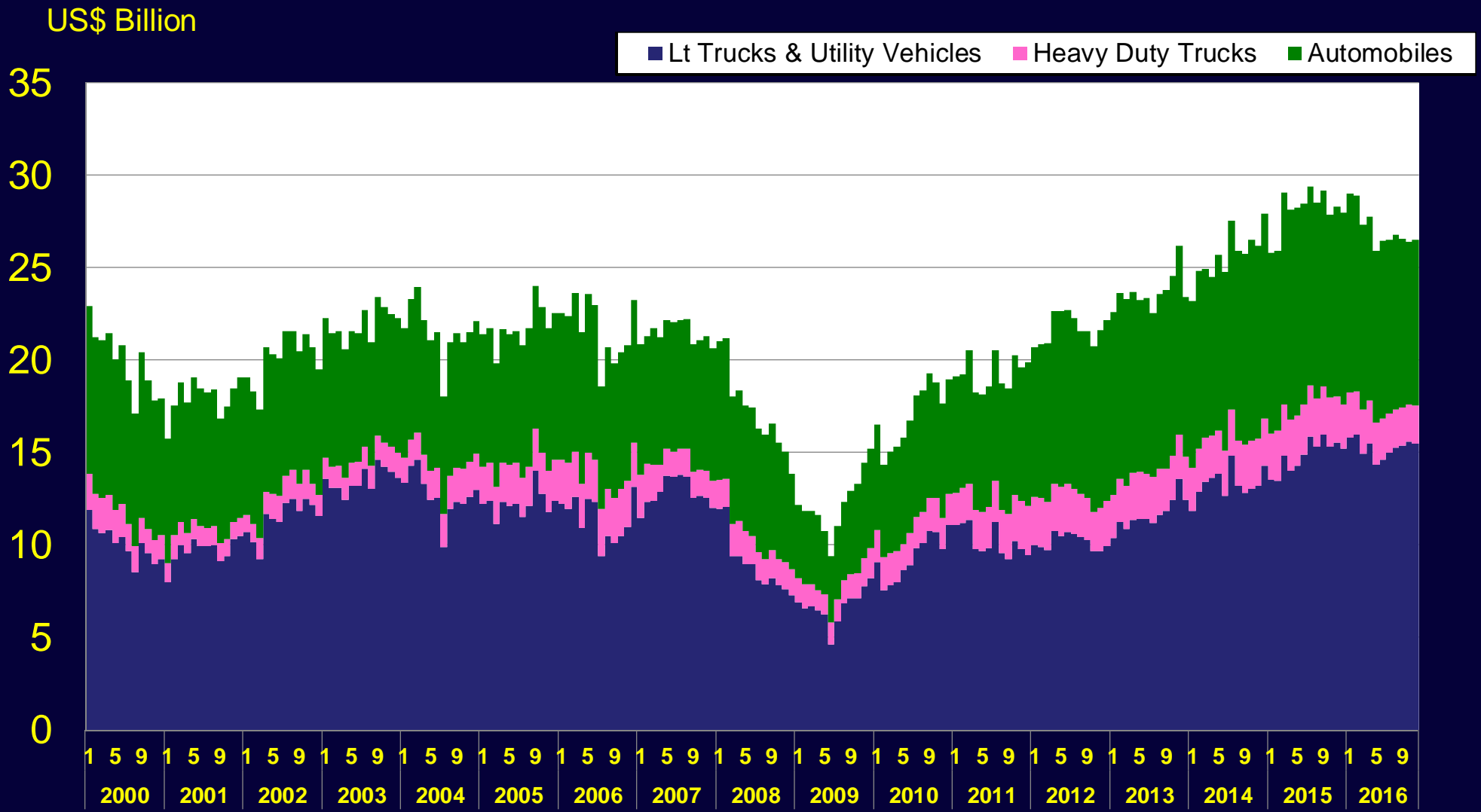
Chart 17

# U.S. Electronic Equipment Orders & Shipments

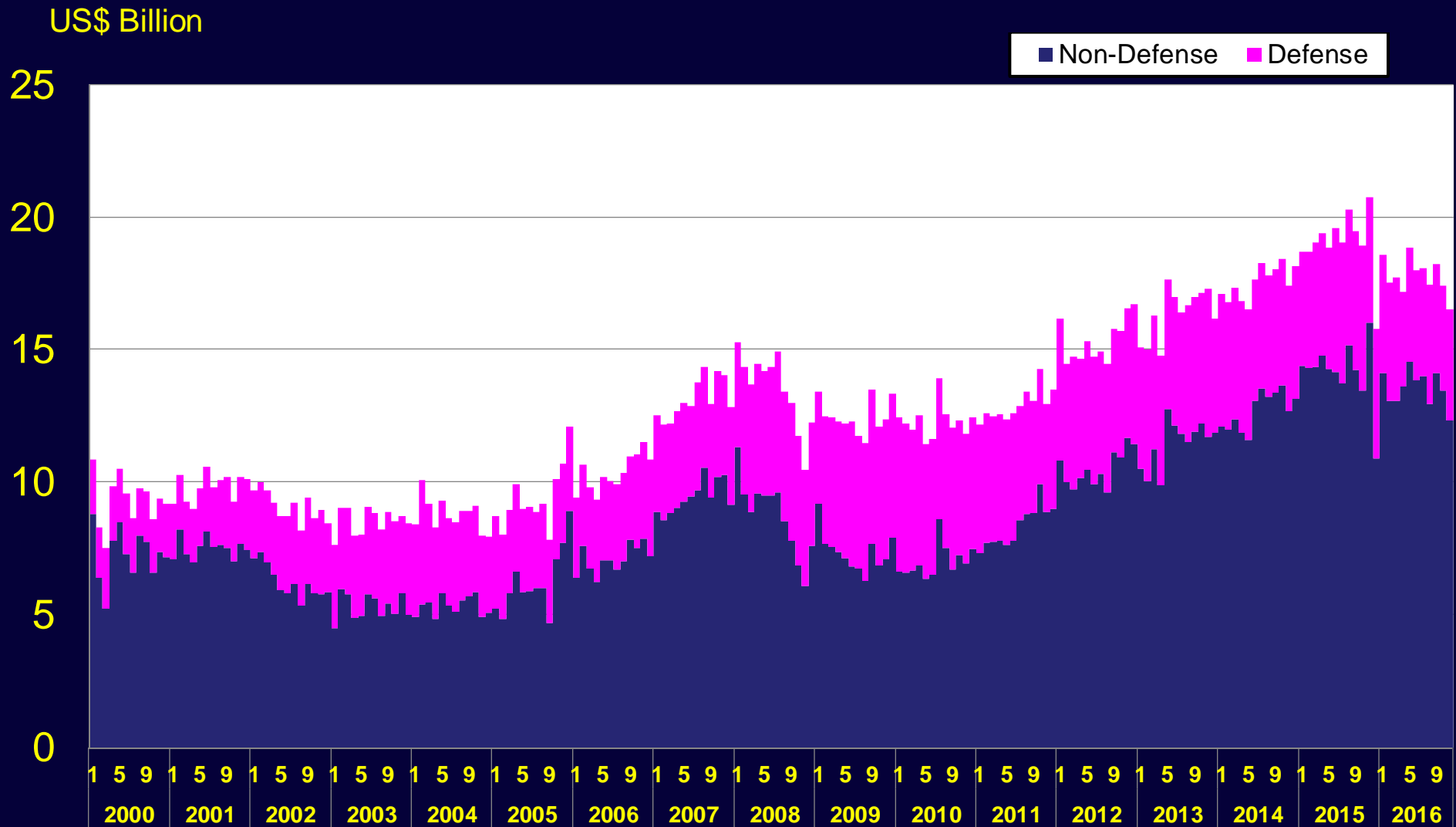
Computer, Communications, Measurement & Control and Military



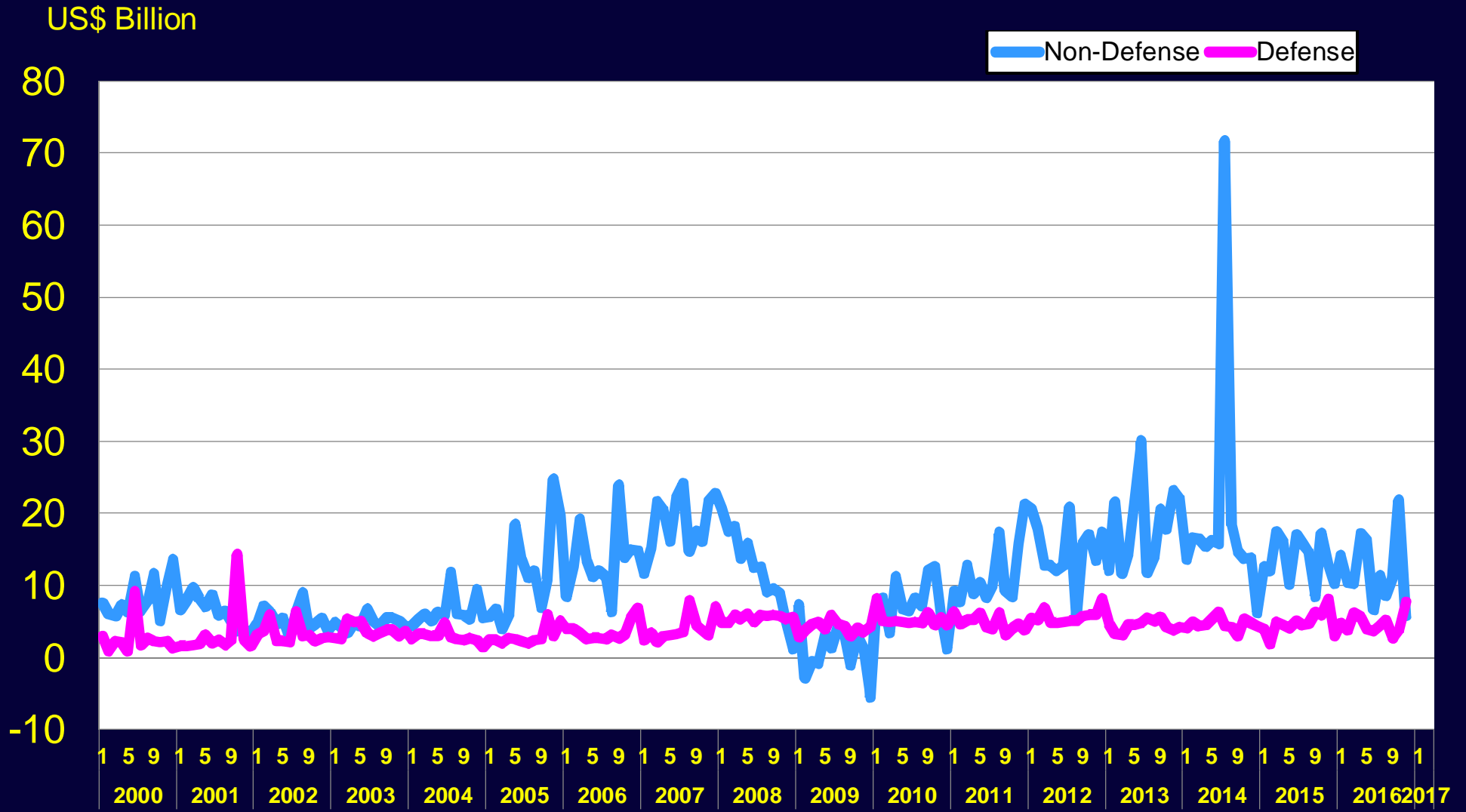
# U.S. Vehicle Shipments



# U.S. Aircraft & Parts Shipments



# U.S. Aircraft & Parts Orders



# U.S. Defense Capital Goods Orders & Shipments

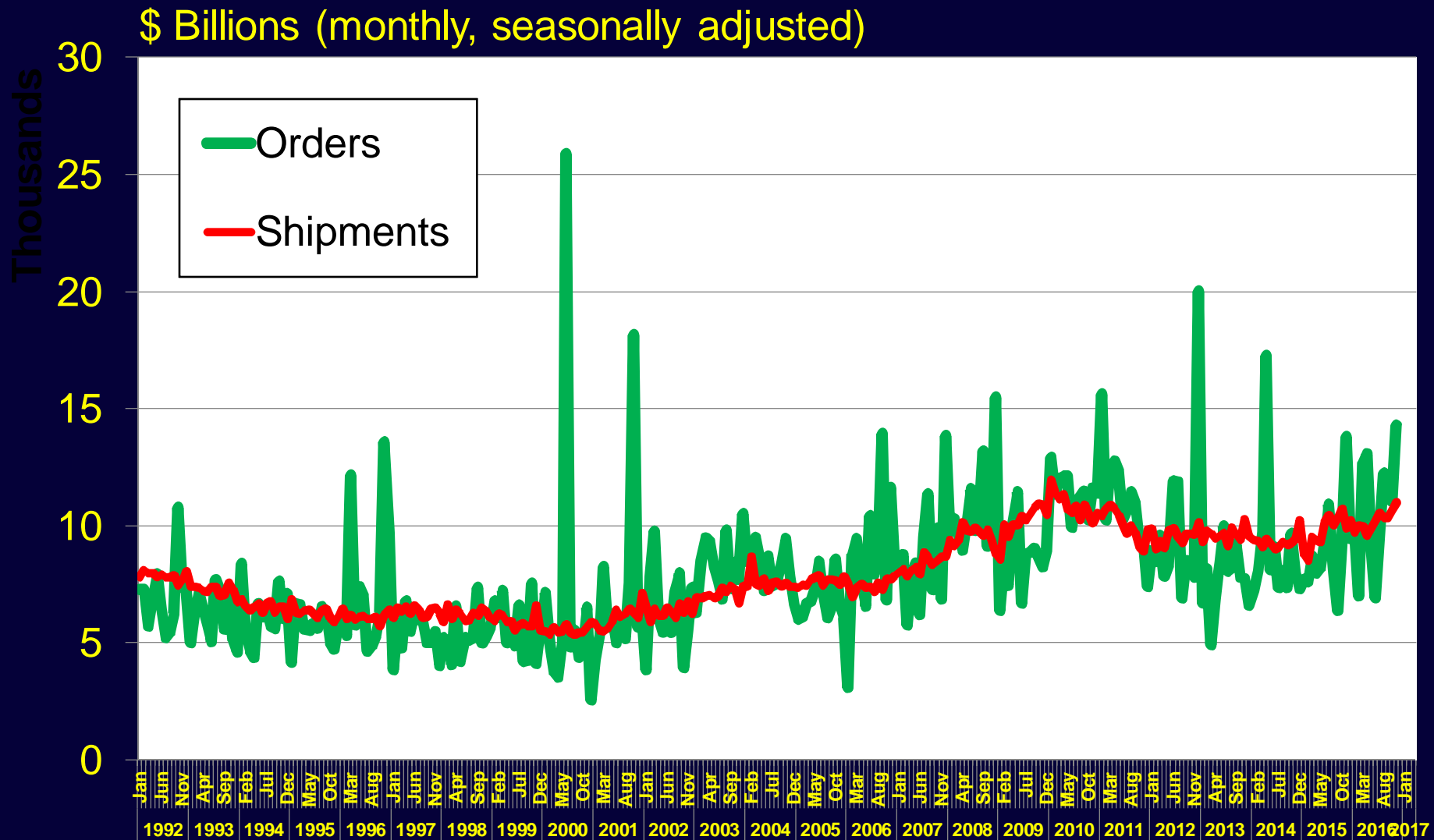


Chart 22

# U.S. Military Electronics Orders & Shipments Defense Communication & Search & Navigation Equipment

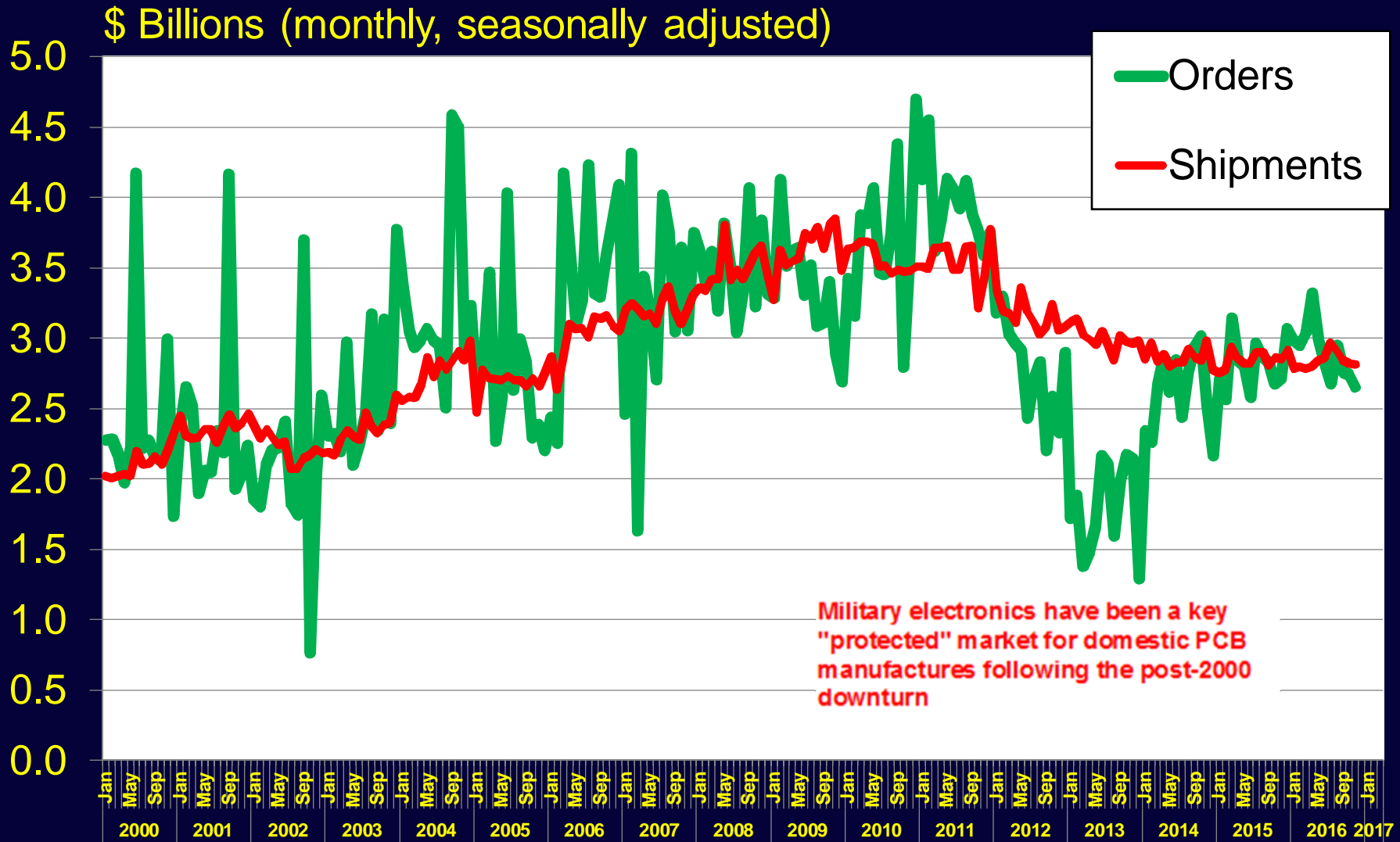


Chart 23

# U.S. Electromedical, Measurement & Control Equipment Orders & Shipments

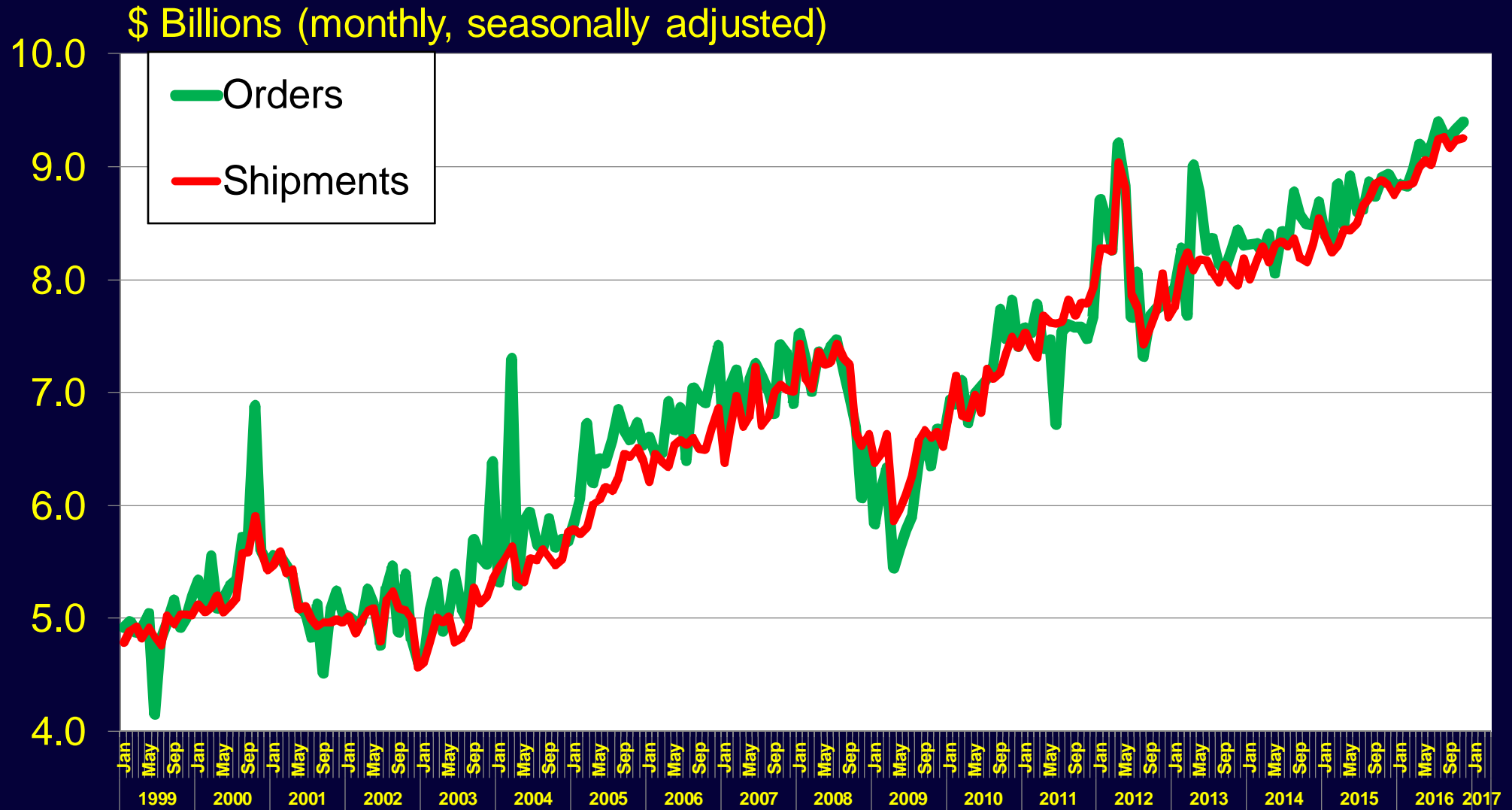
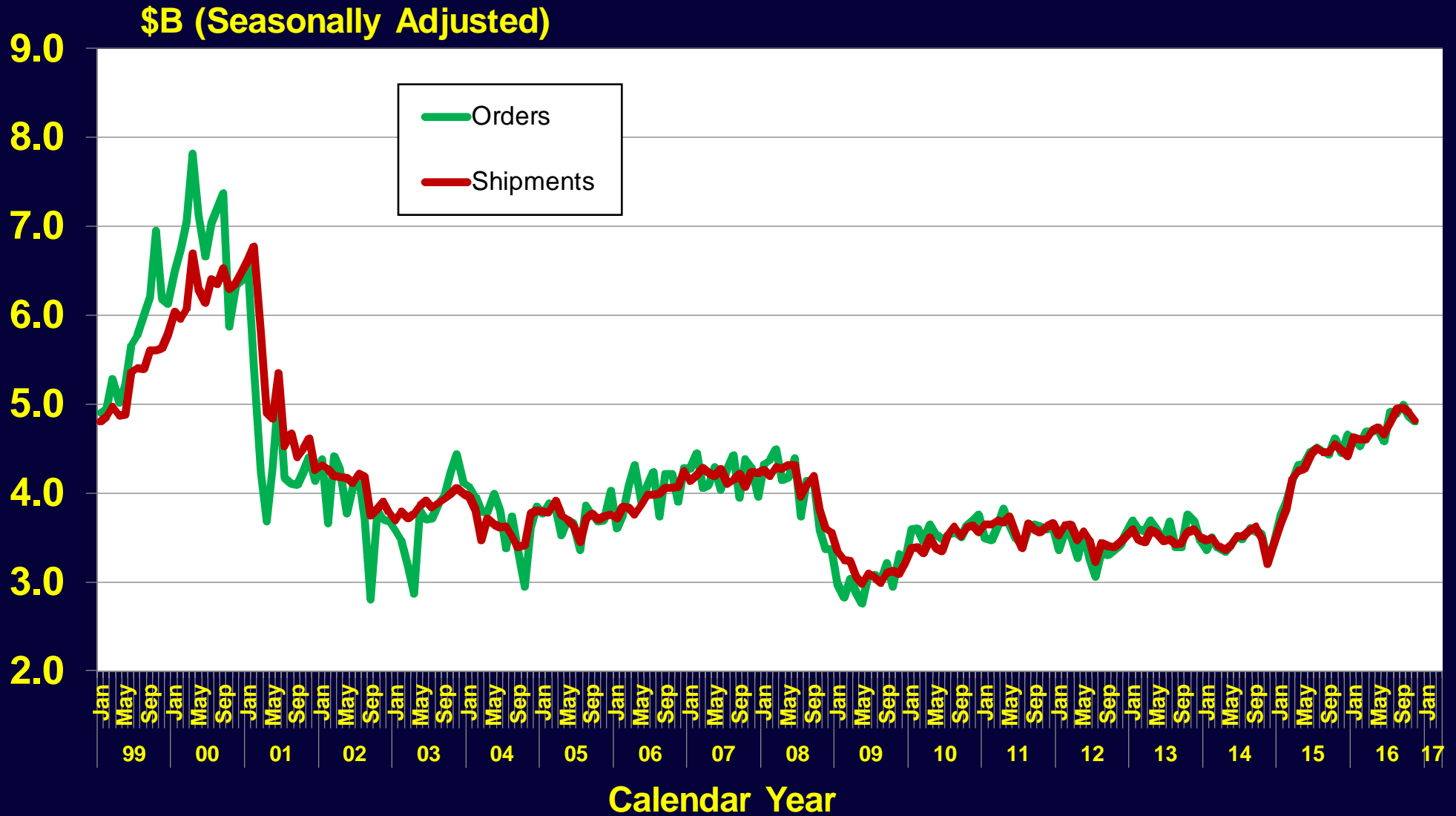
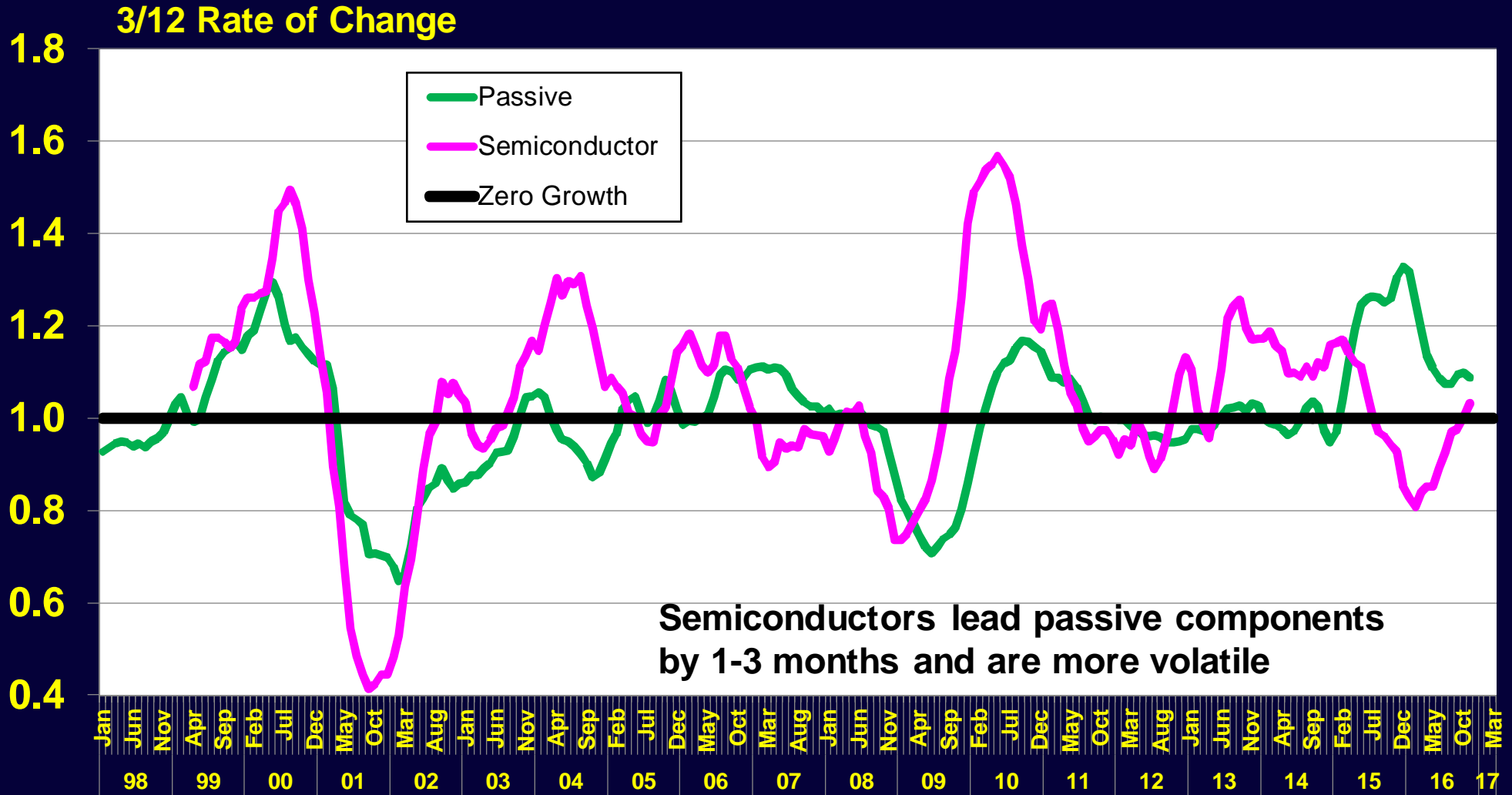


Chart 24 **U.S. Production: "Other" Electronic Components**  
(excludes semiconductors)  
**Orders & Shipments**





# U.S. Passive Components Shipments vs. Semiconductor Shipments to N America



# World Device Shipments by Segment

