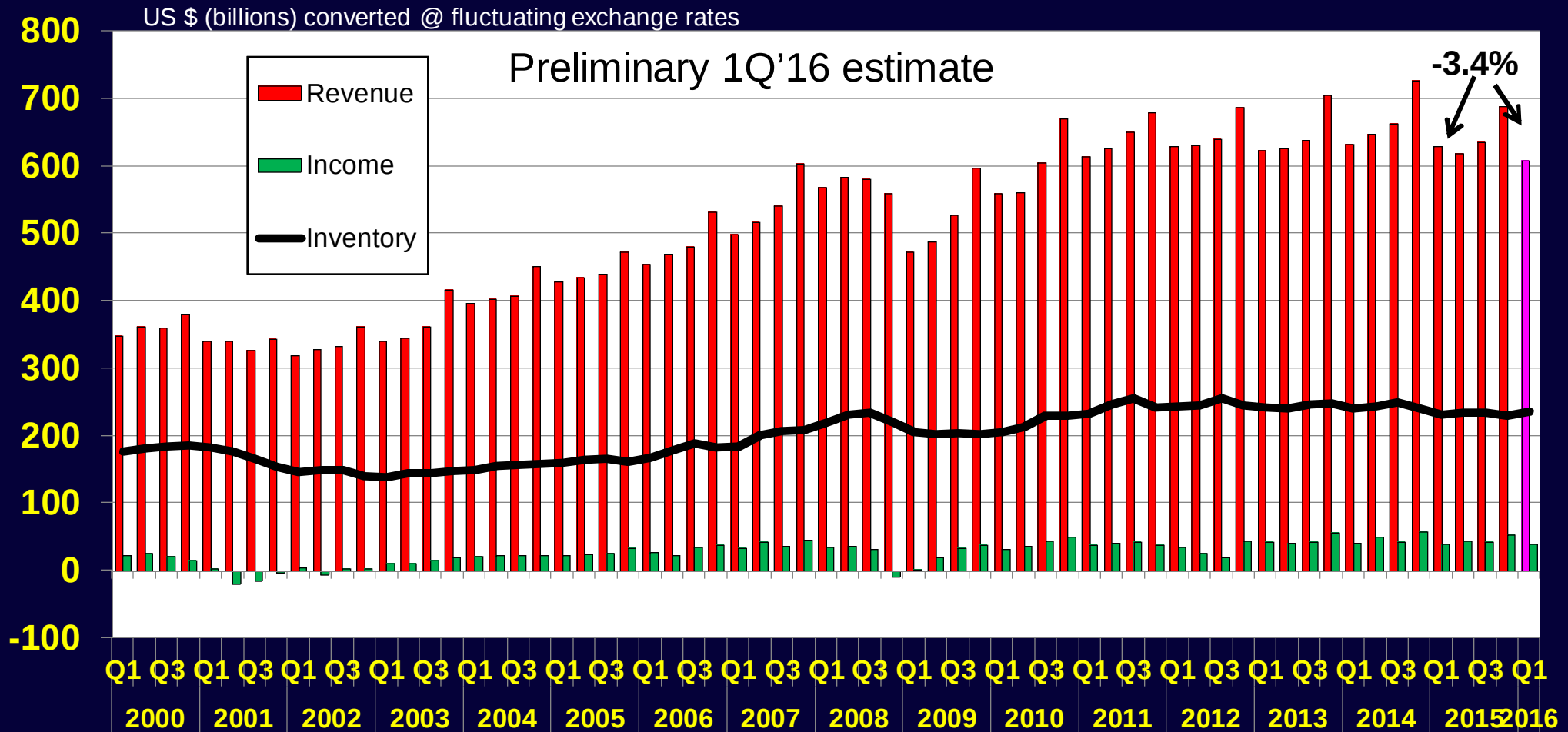


Electronic Equipment Suppliers

Composite of 213 Public Companies

Revenue, Net Income & Inventory

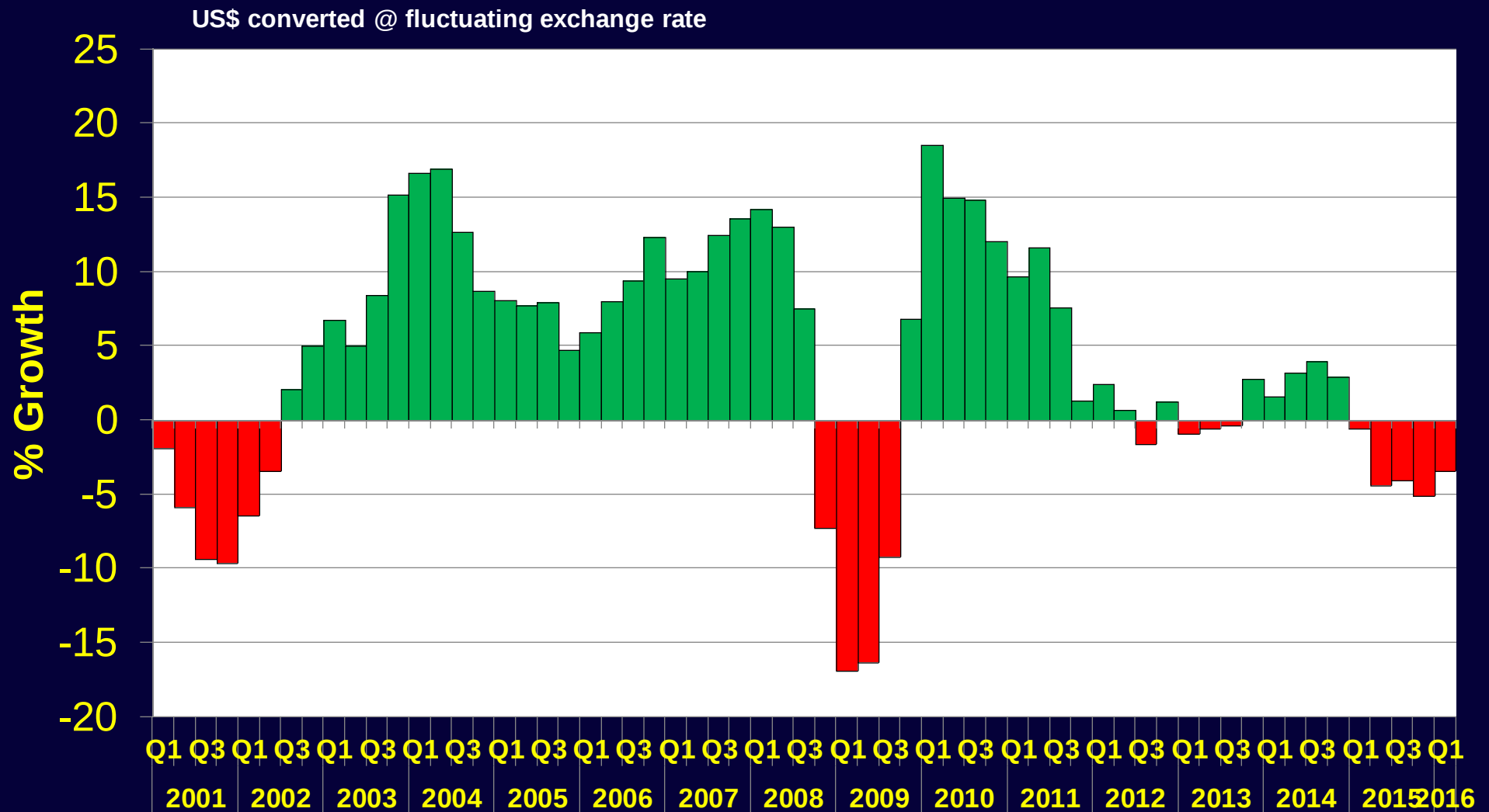


Computer 13, Internet 13, Storage 17, Communication 30, SEMI 40, Medical 21, Instruments 16, Military 21, Business & Office 6, Consumer 21, Automotive 15

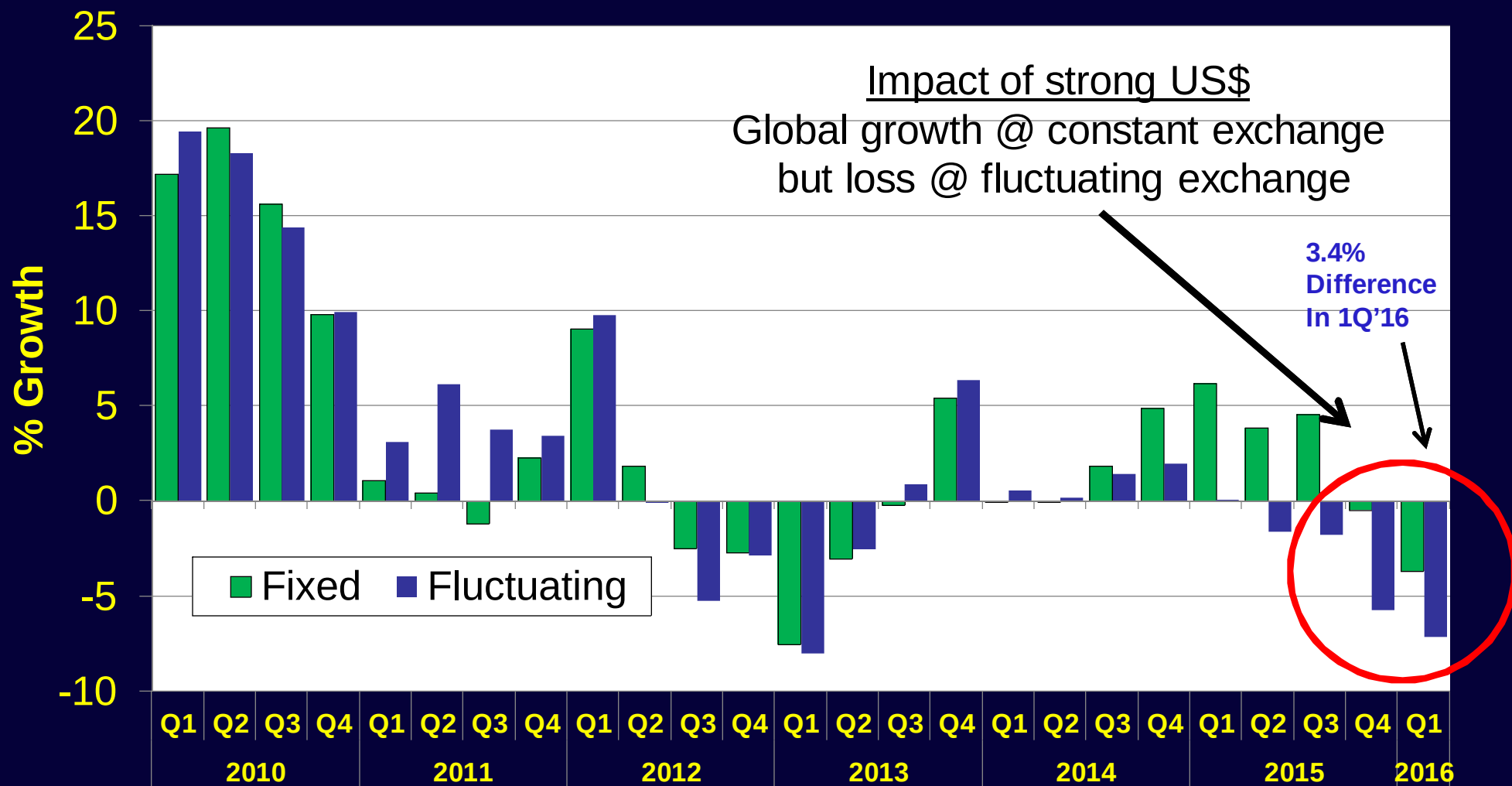
Electronic Equipment Suppliers

Composite of 213 Public Companies

Quarterly Revenue Growth

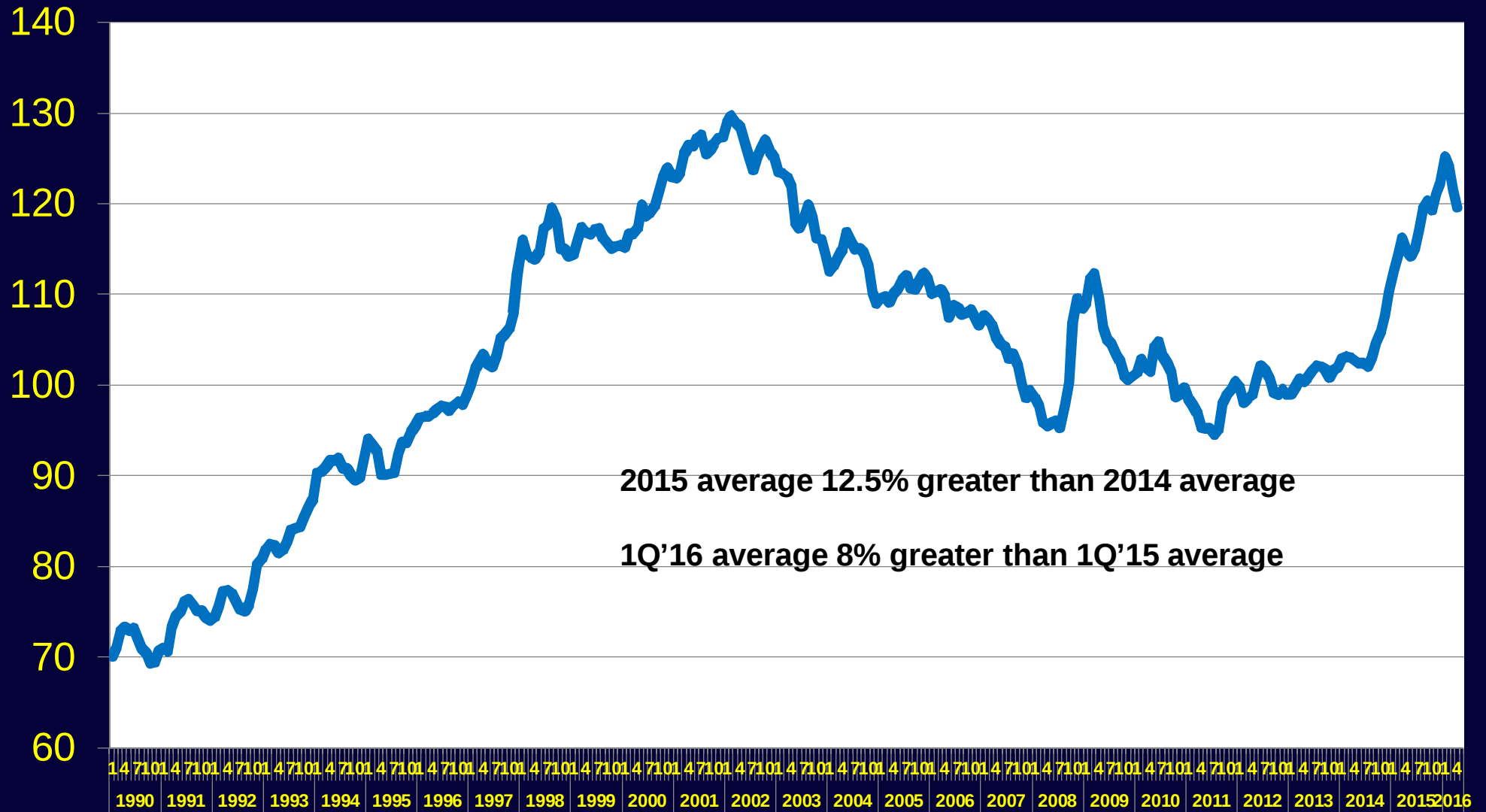


**Exchange Rate Impact on
US\$ Denominated Consolidated World Electronic Equipment Sales**
Quarterly Revenue Growth Converted to US\$
@ Fixed 2015 vs Fluctuating Exchange

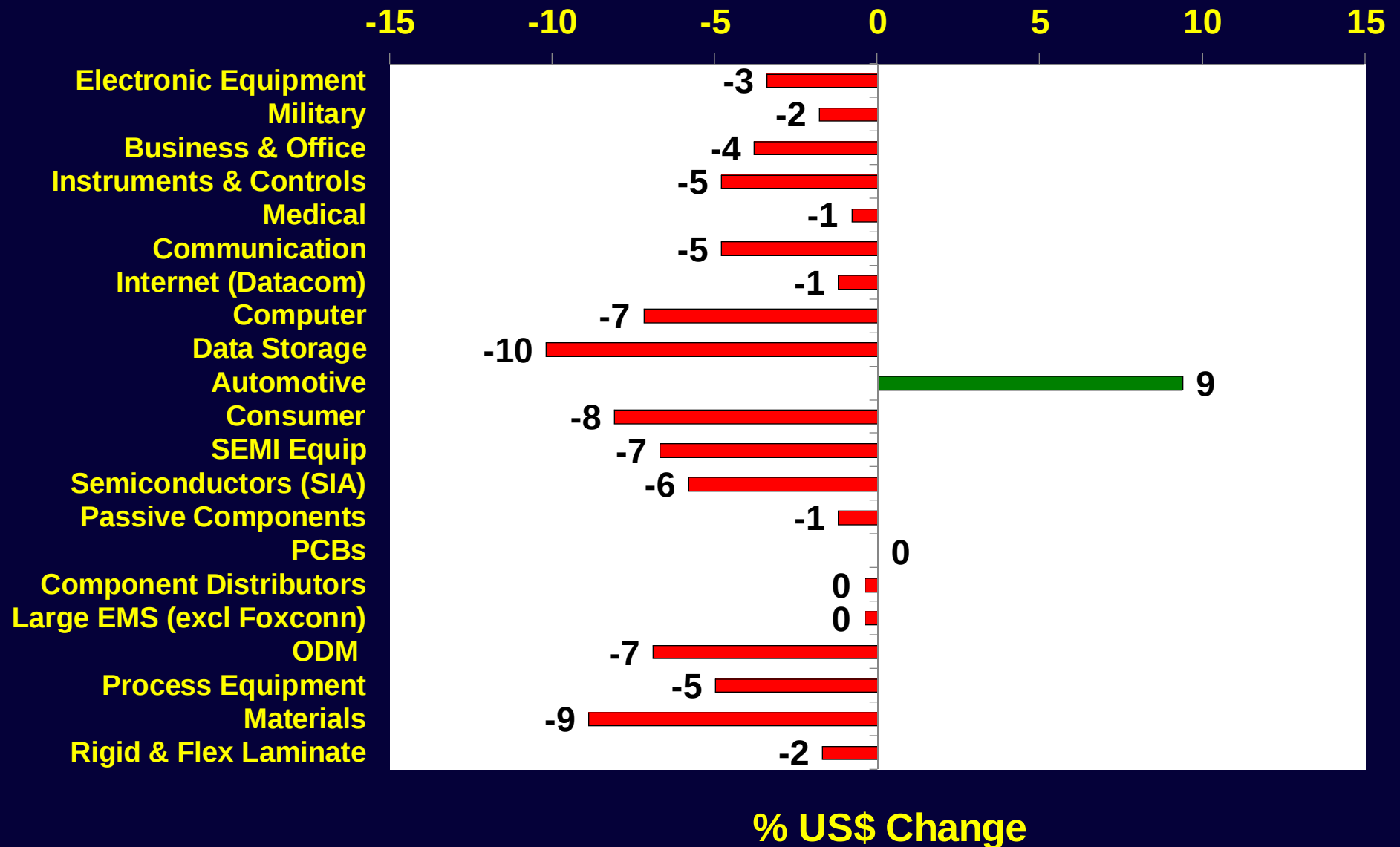


Global model based on regional shipment indices

Trade-Weighted Exchange Value of U.S. Dollar Broad Index (January 1997=100)



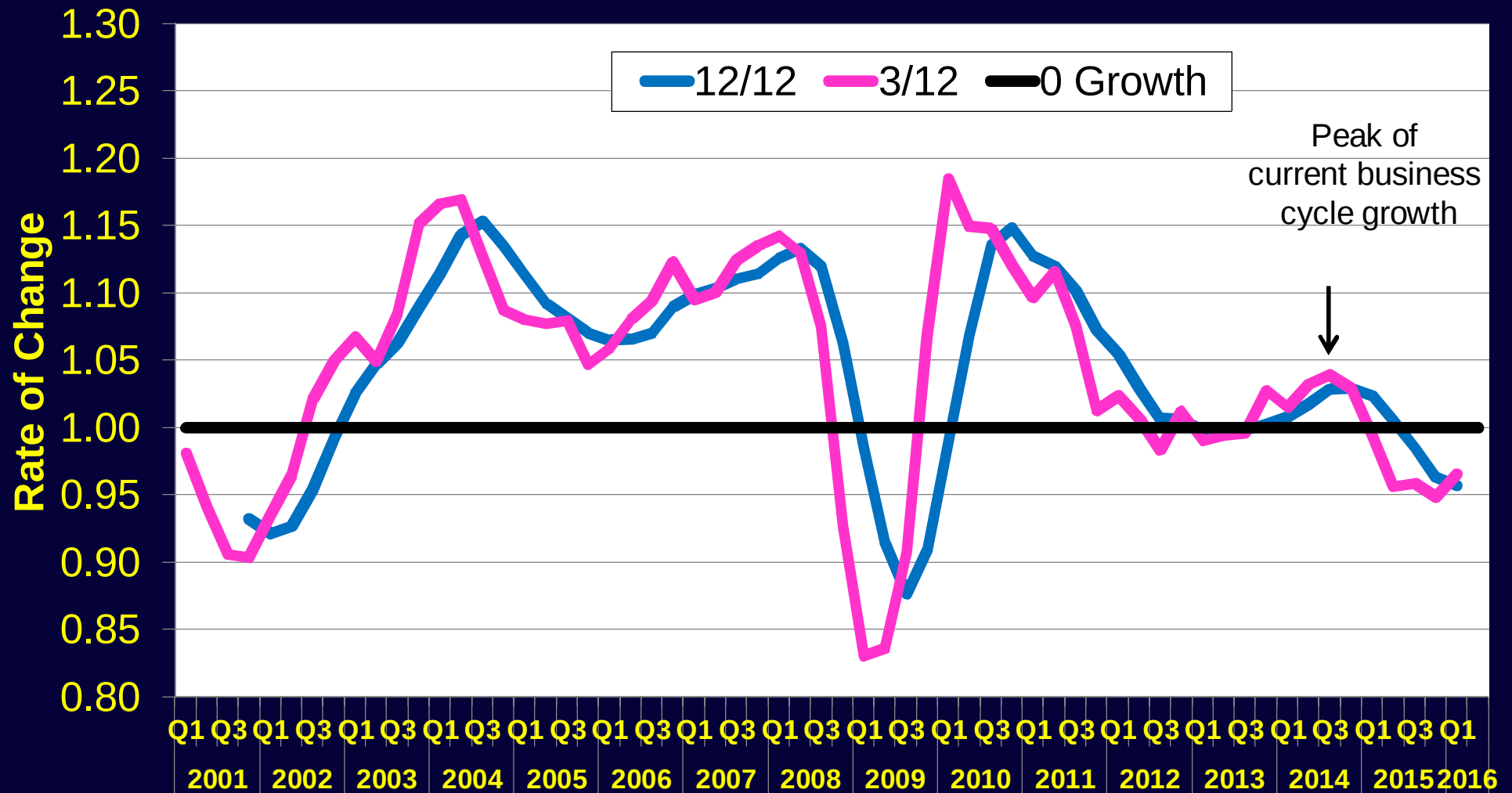
Global Electronic Supply Chain Growth 1Q'16 vs. 1Q'15 (preliminary)



US\$ equivalent at fluctuating exchange; based upon industry composites including acquisitions

Global Electronic Equipment Shipment Growth

12/12 & 3/12 Rate of Change



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

	<u>3/15</u>	<u>3/16</u>	<u>% CH</u>
Americas	5.81	4.89	- 15.8%
Europe	2.96	2.67	- 9.8%
Japan	2.55	2.59	+ 1.8%
China	7.83	7.89	+ 1.3%
Asia Pacific / All Other	8.57	8.01	- 6.4%
Total	27.70	26.09	- 5.8%

World Semiconductor Shipments

Monthly US\$

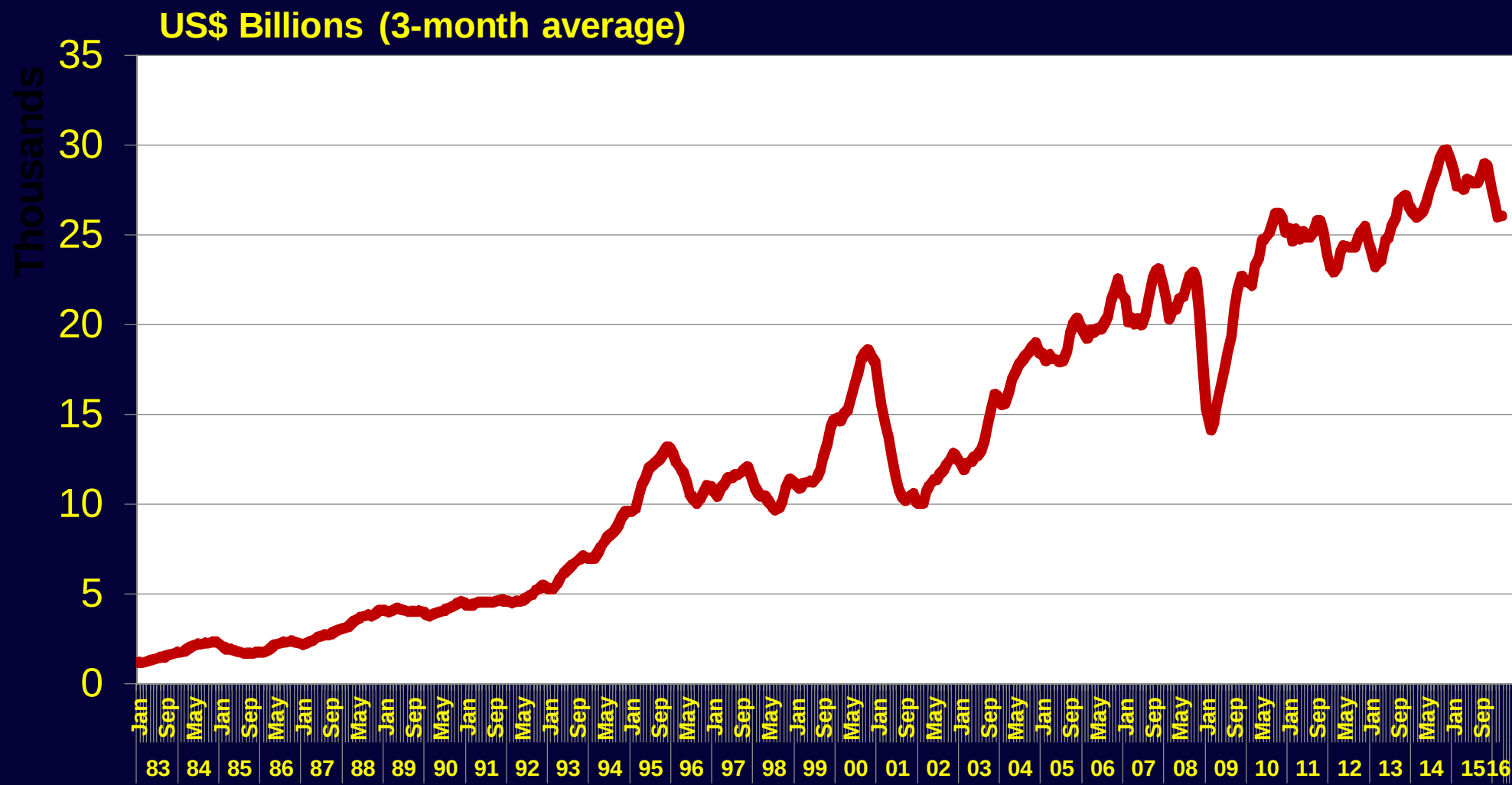
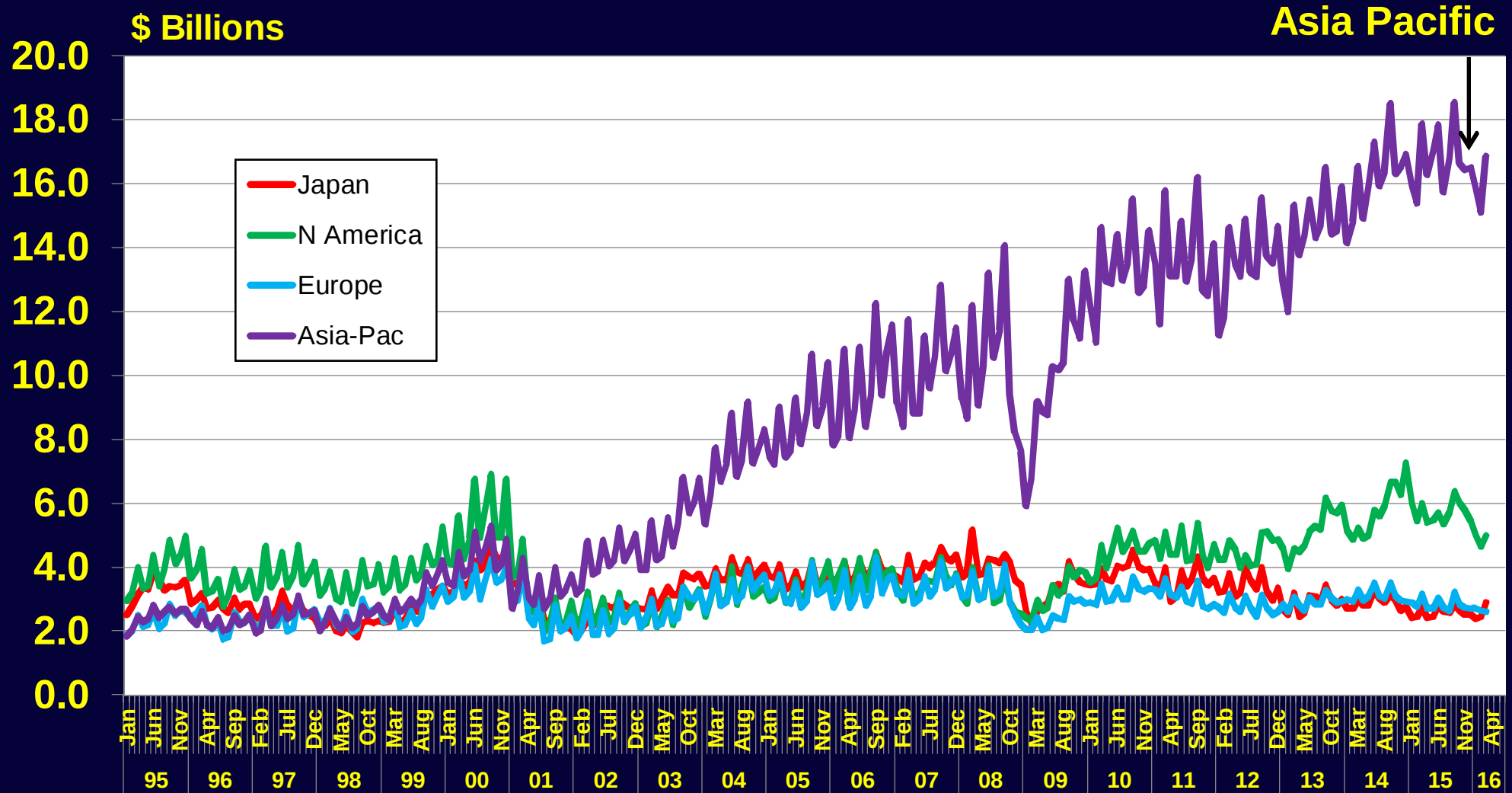


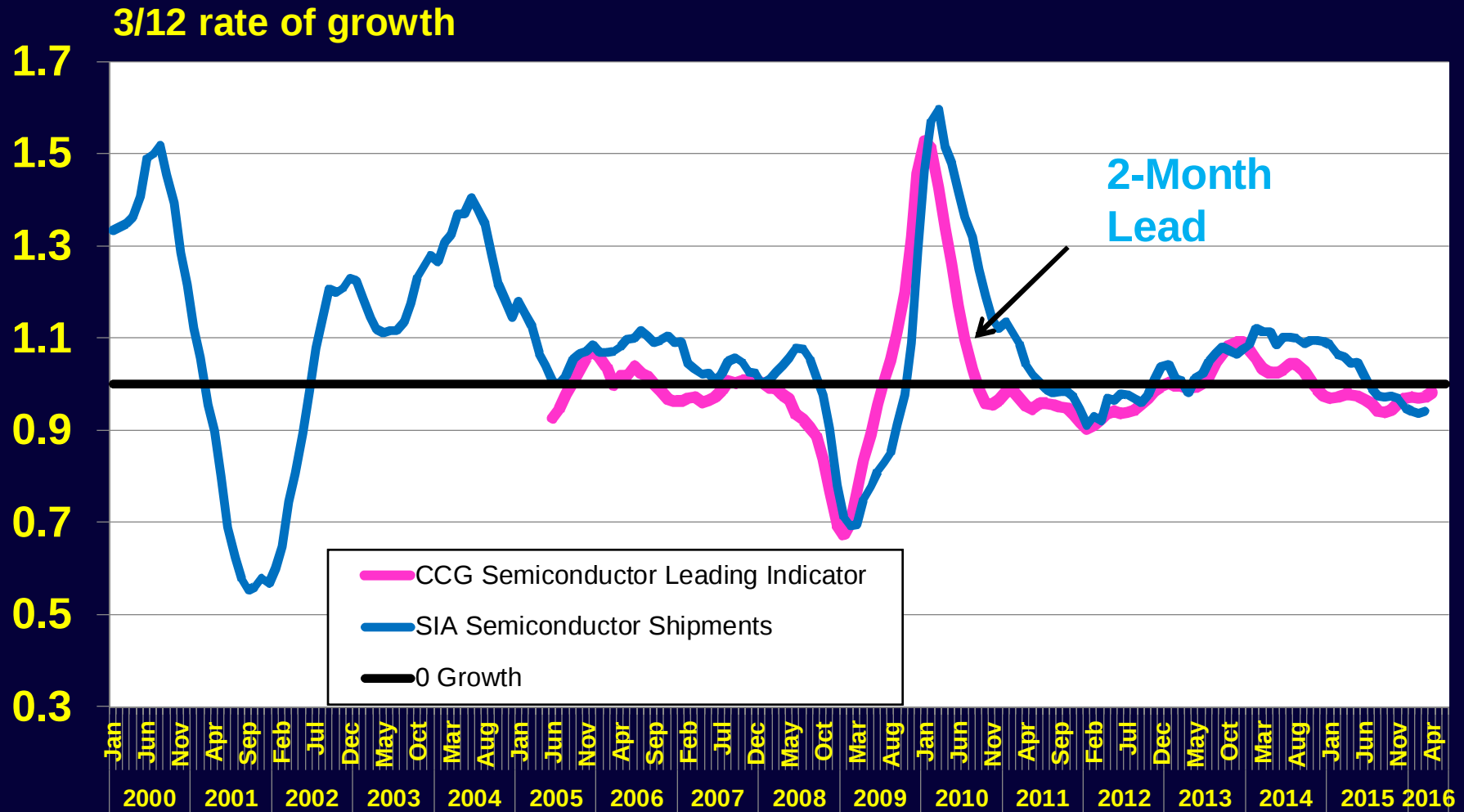
Chart 9

Total Semiconductor Shipments to an Area

Monthly Shipments - Reporting Firms

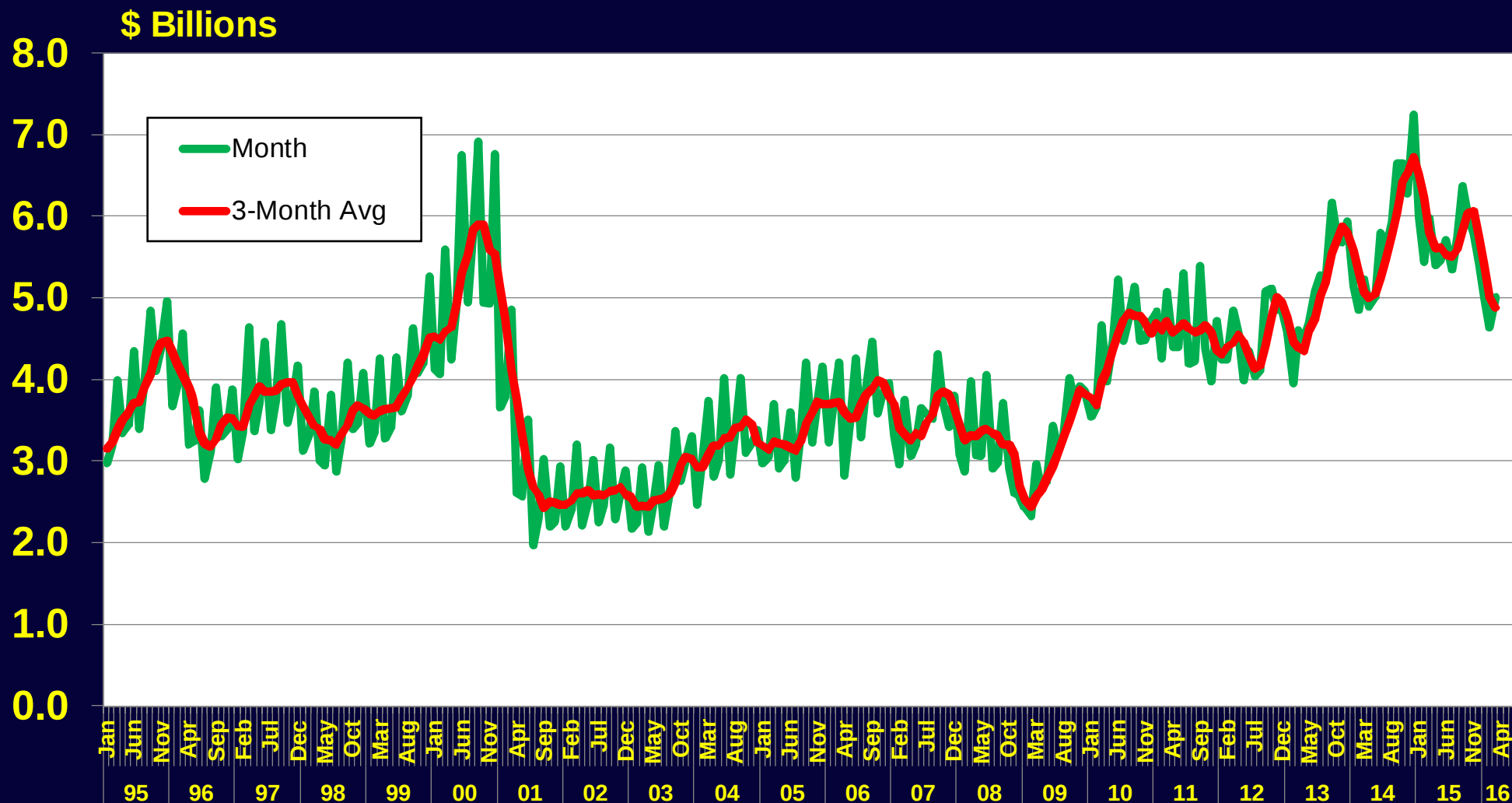


CCG Semiconductor Leading Indicator vs. Global Semiconductor Shipments

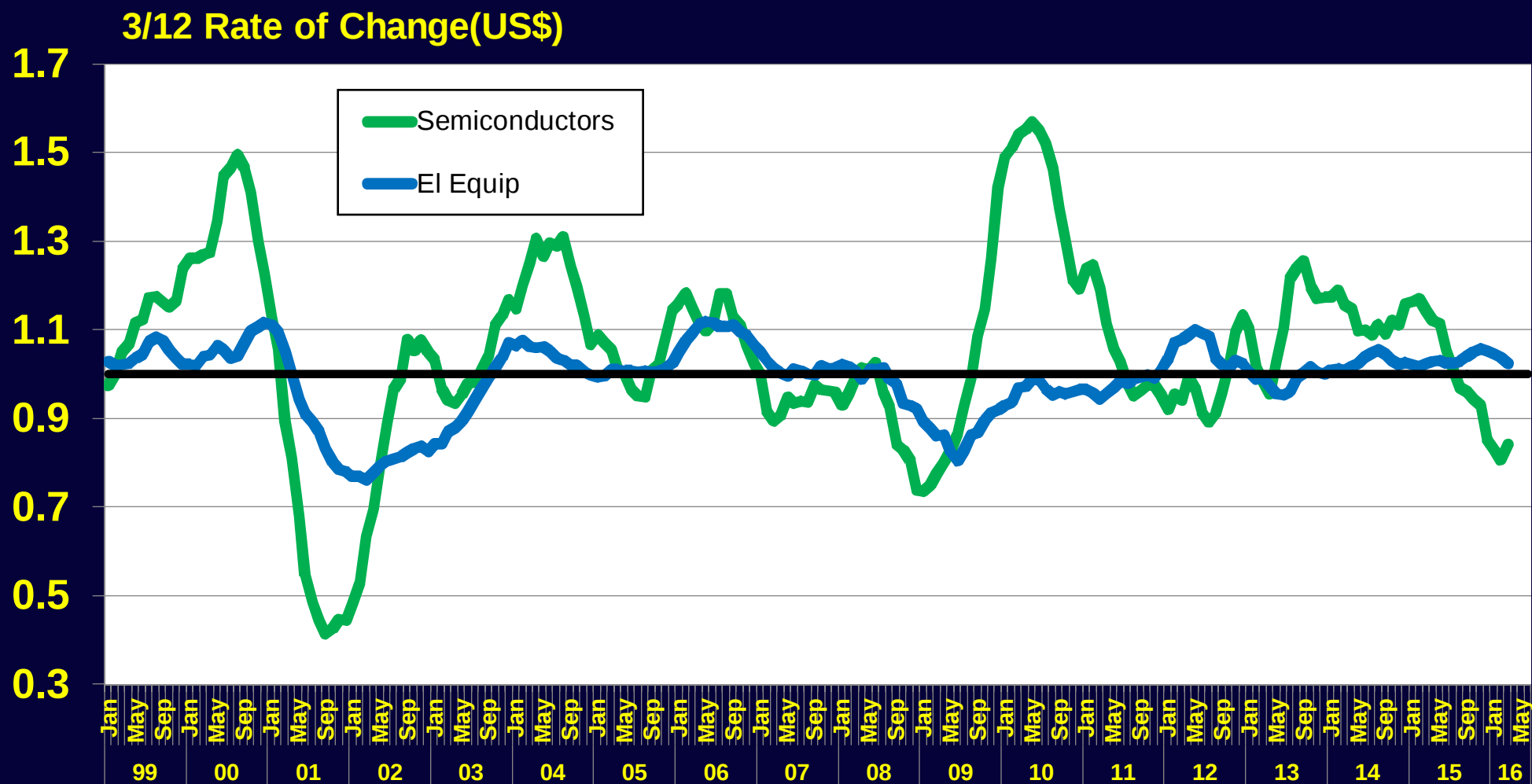


N American Semiconductor Shipments

Monthly & 3-Month Average Shipments



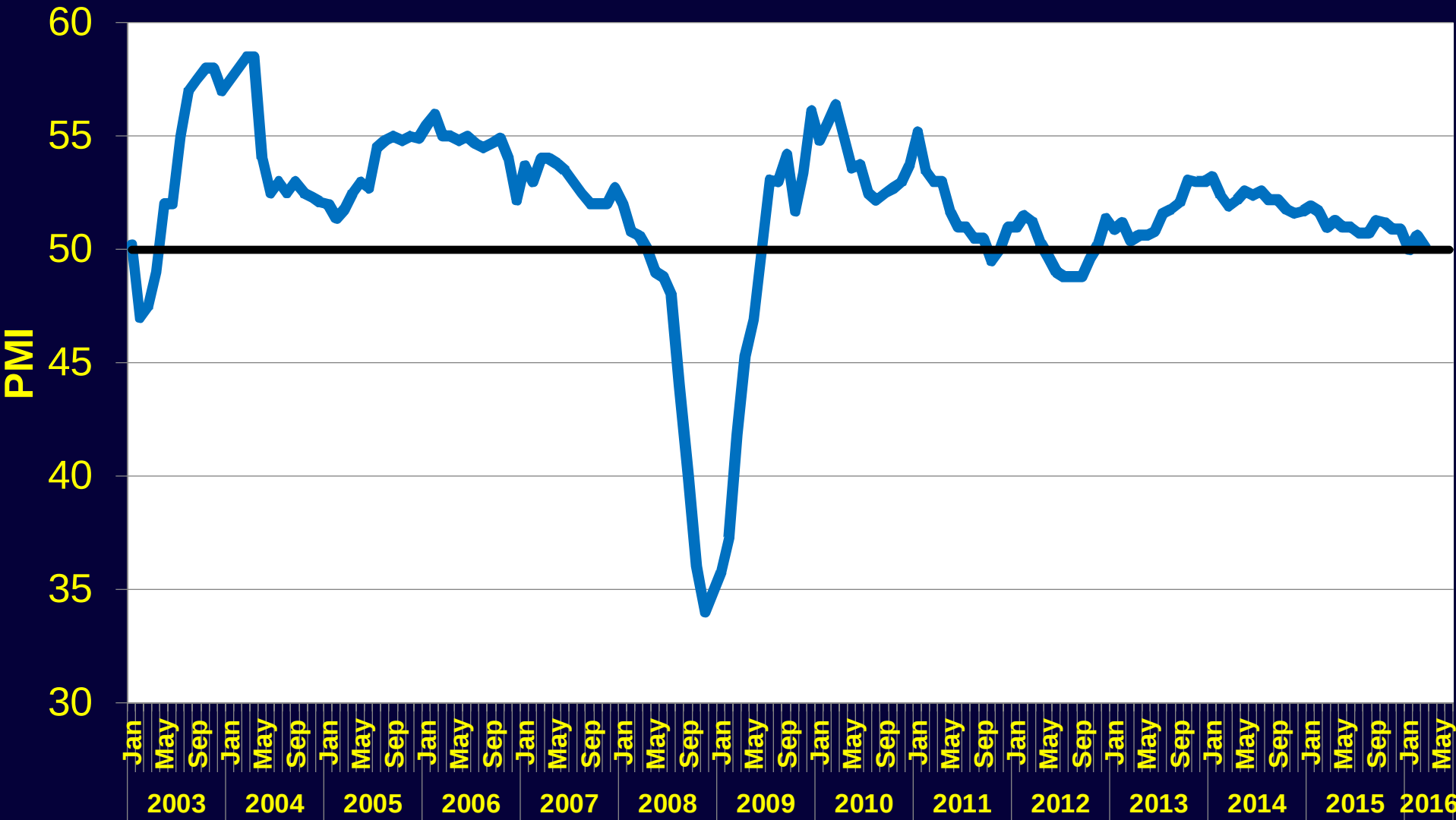
Semiconductor Shipments to N. America vs. U.S Electronic Equipment Production



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

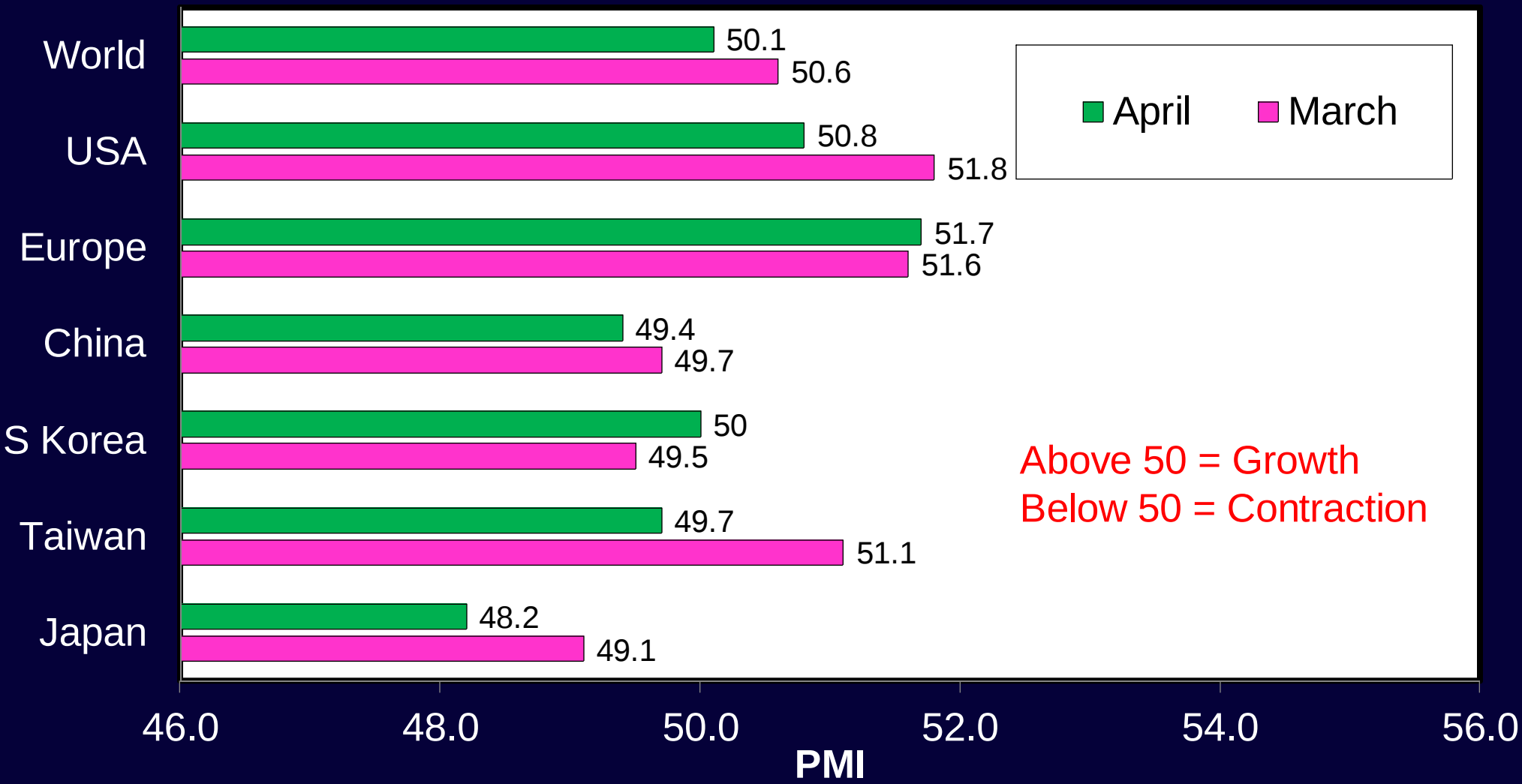
Global "Purchasing Managers" Index

Diffusion Index, >50 = Growth



Purchasing Managers' Indices

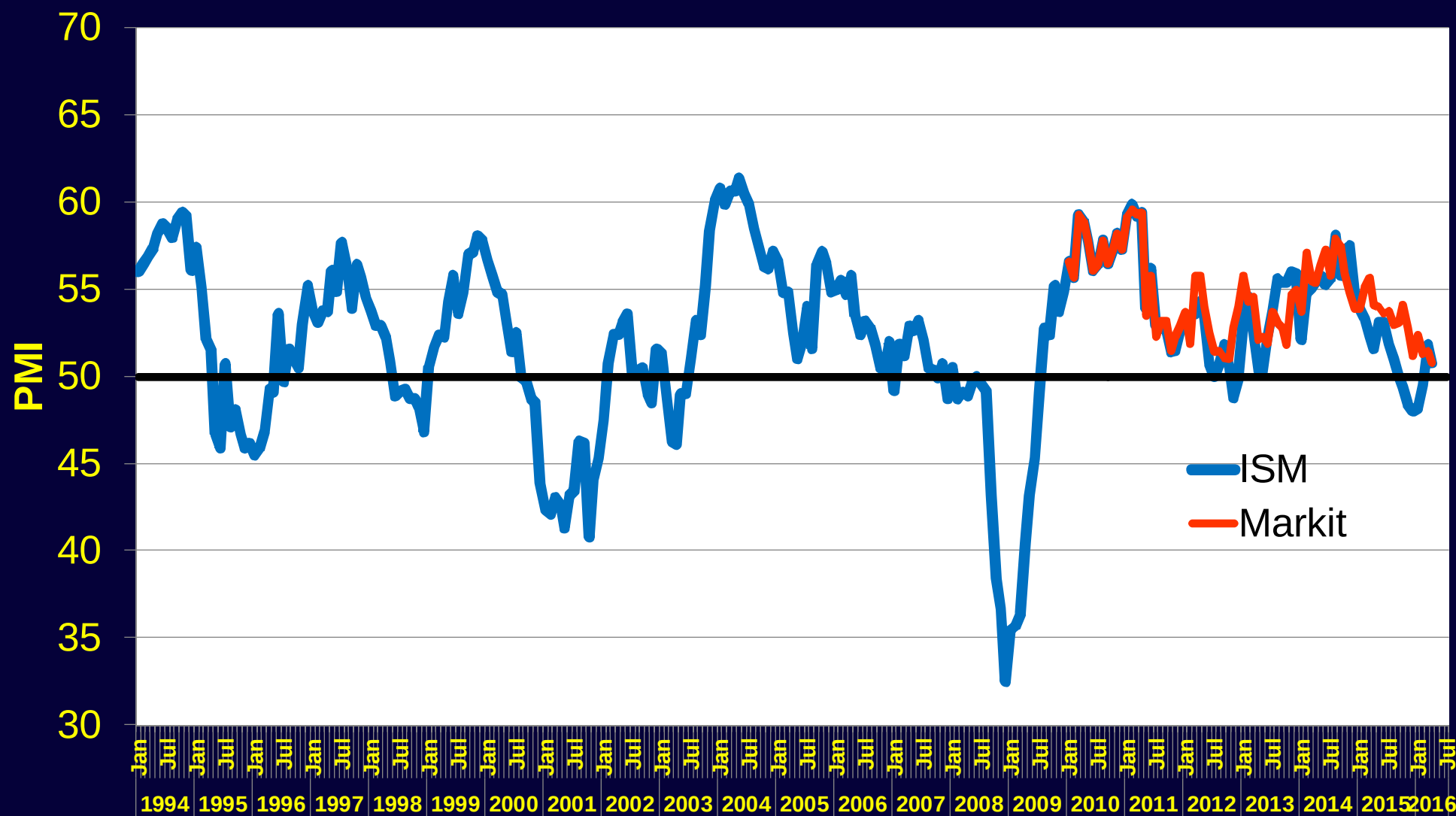
March vs. April 2016



U.S "Purchasing Managers" Indices

ISM vs. Markit Economics

Diffusion Index, >50 = Growth



Eurozone "Purchasing Managers" Index

Diffusion Index, >50 = Growth

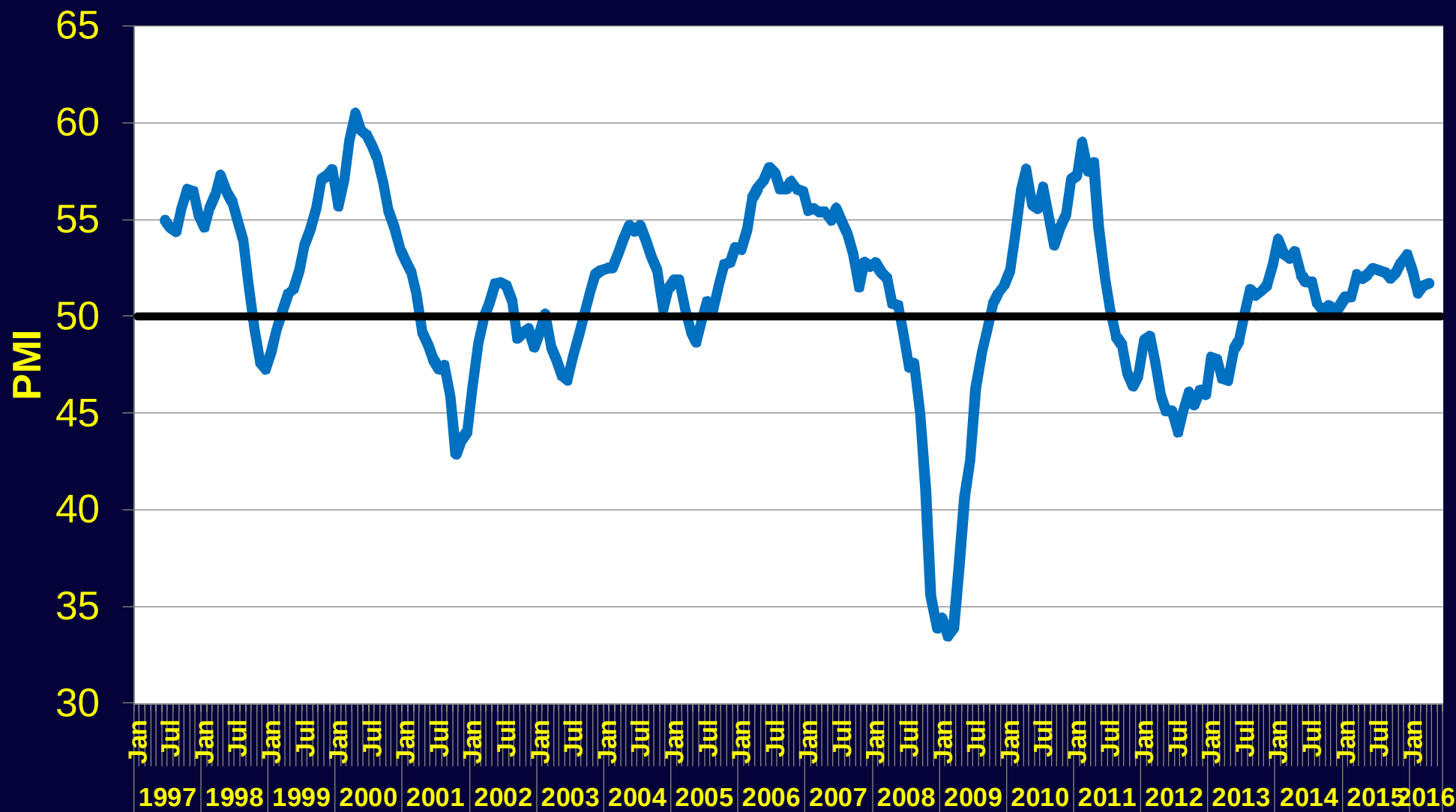
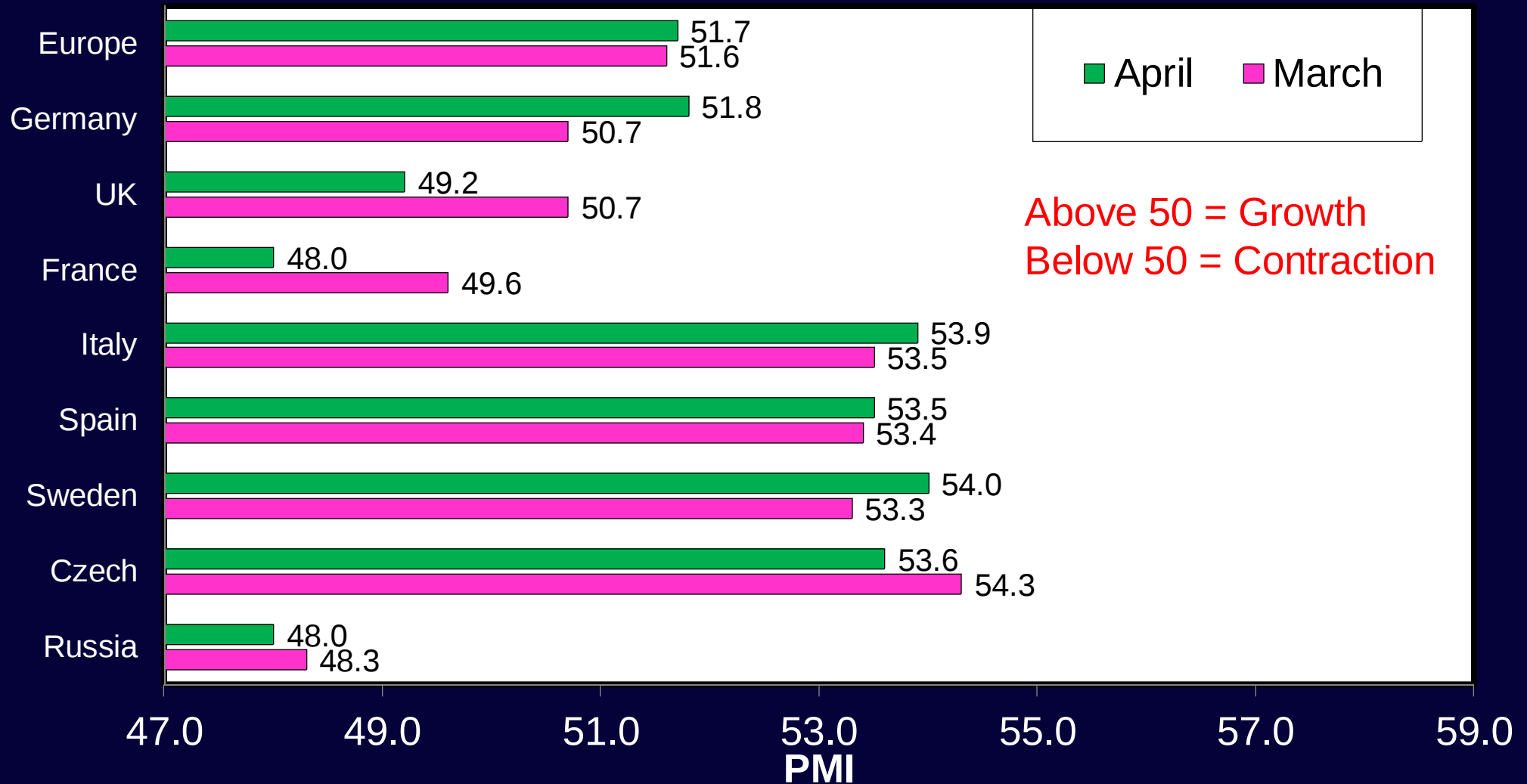


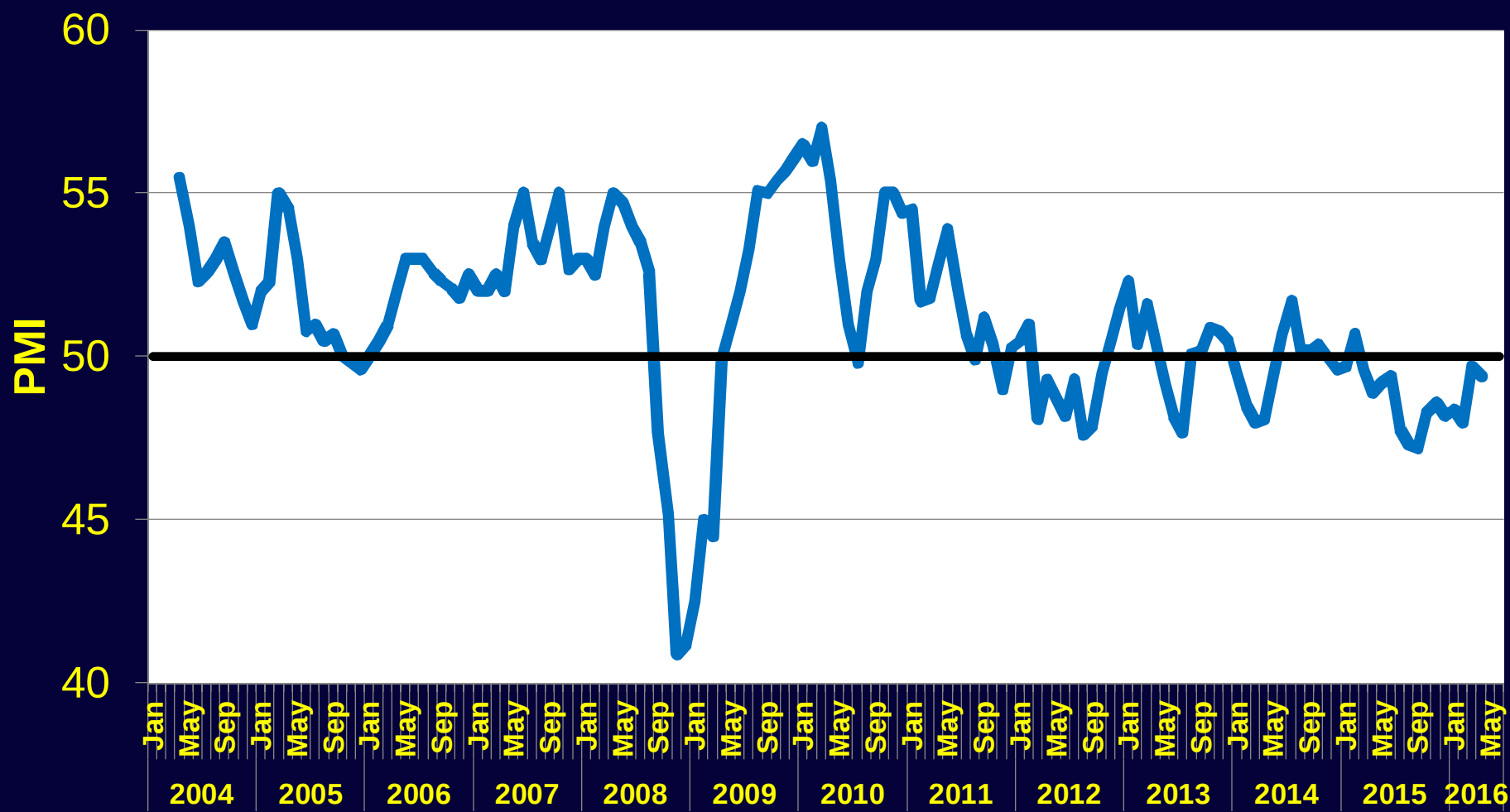
Chart 17

European Purchasing Managers' Indices March vs. April 2016

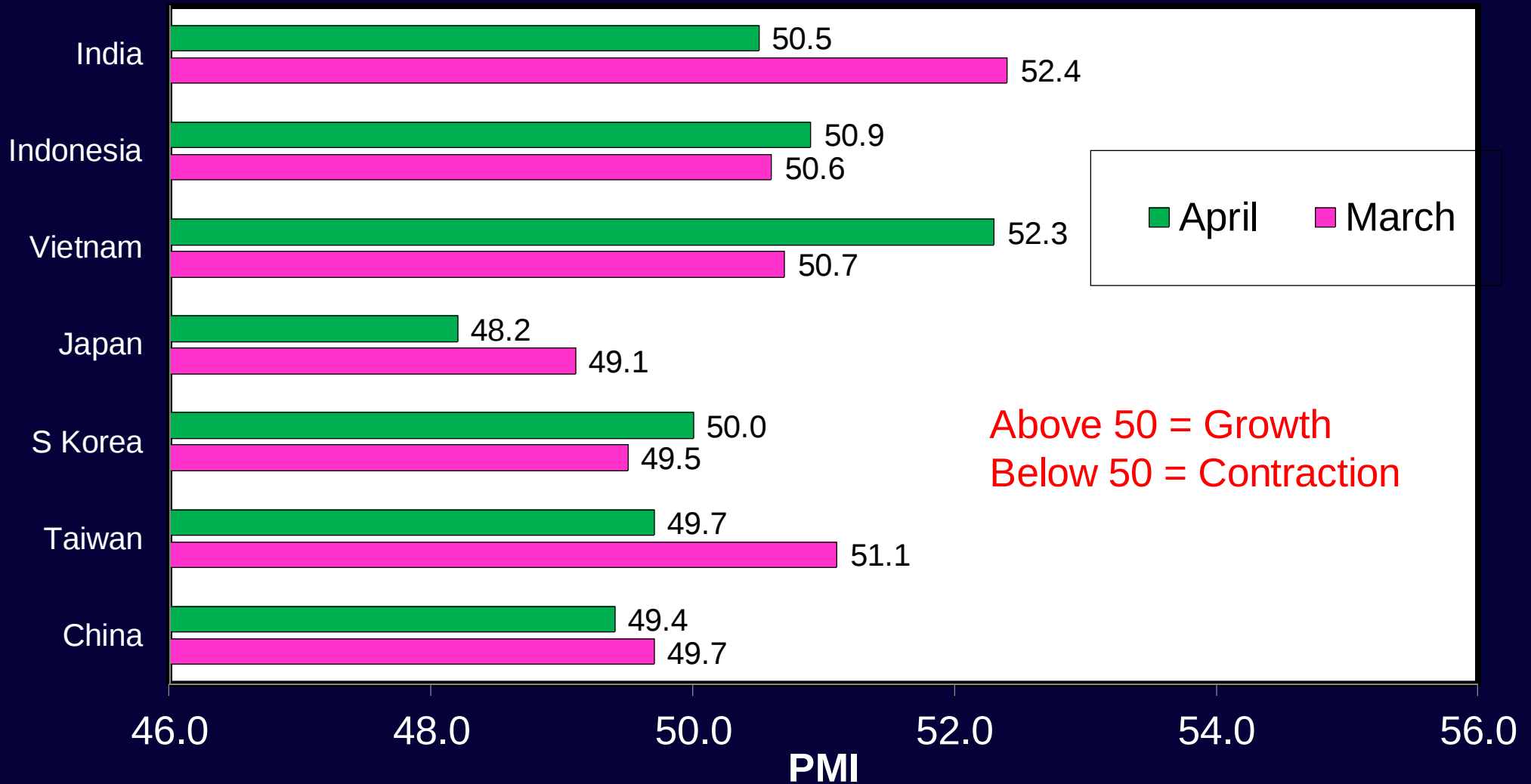


China "Purchasing Managers" Index

Diffusion Index, >50 = Growth

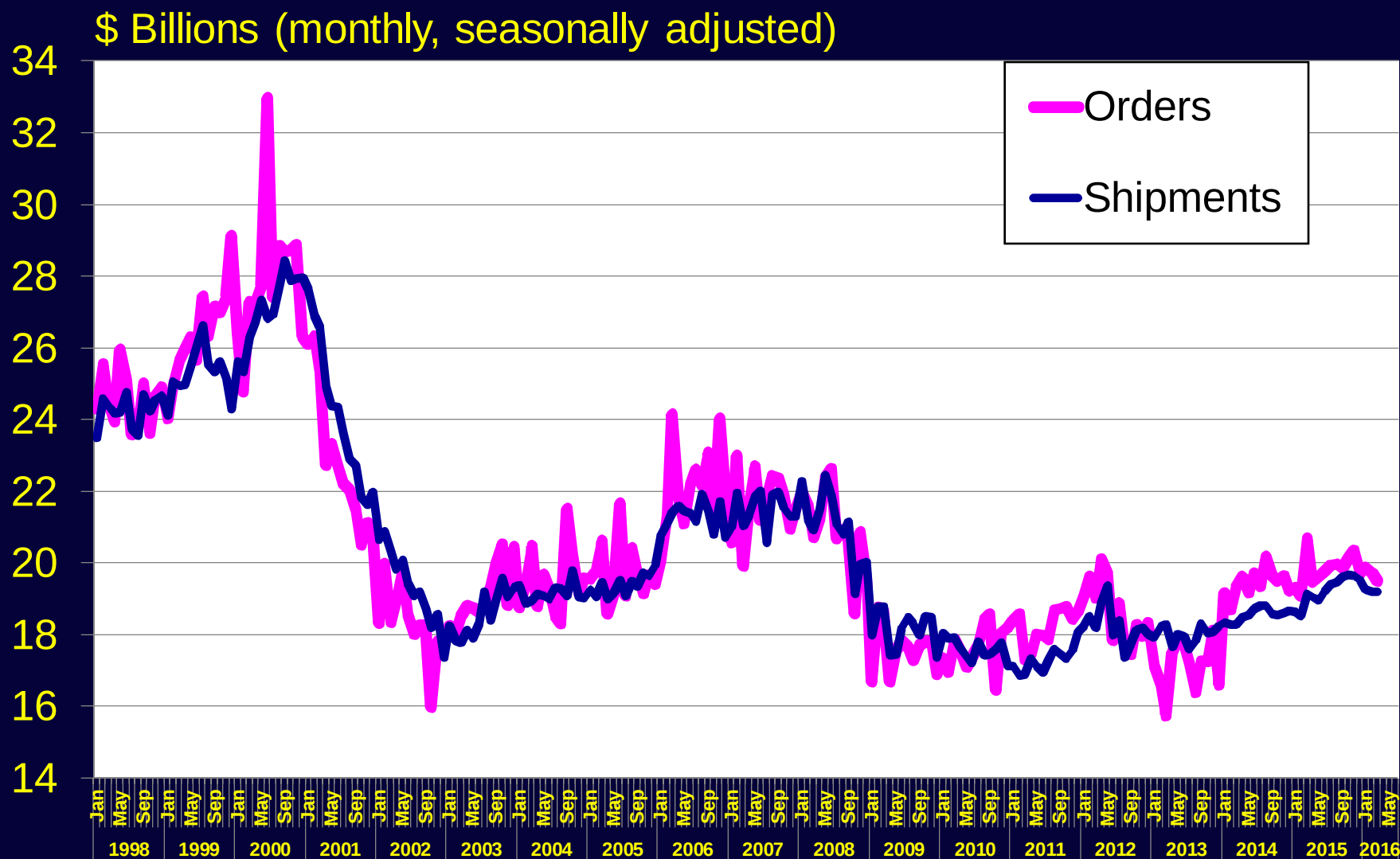


Asian Purchasing Managers' Indices March vs. April 2016



U.S. Electronic Equipment Orders & Shipments

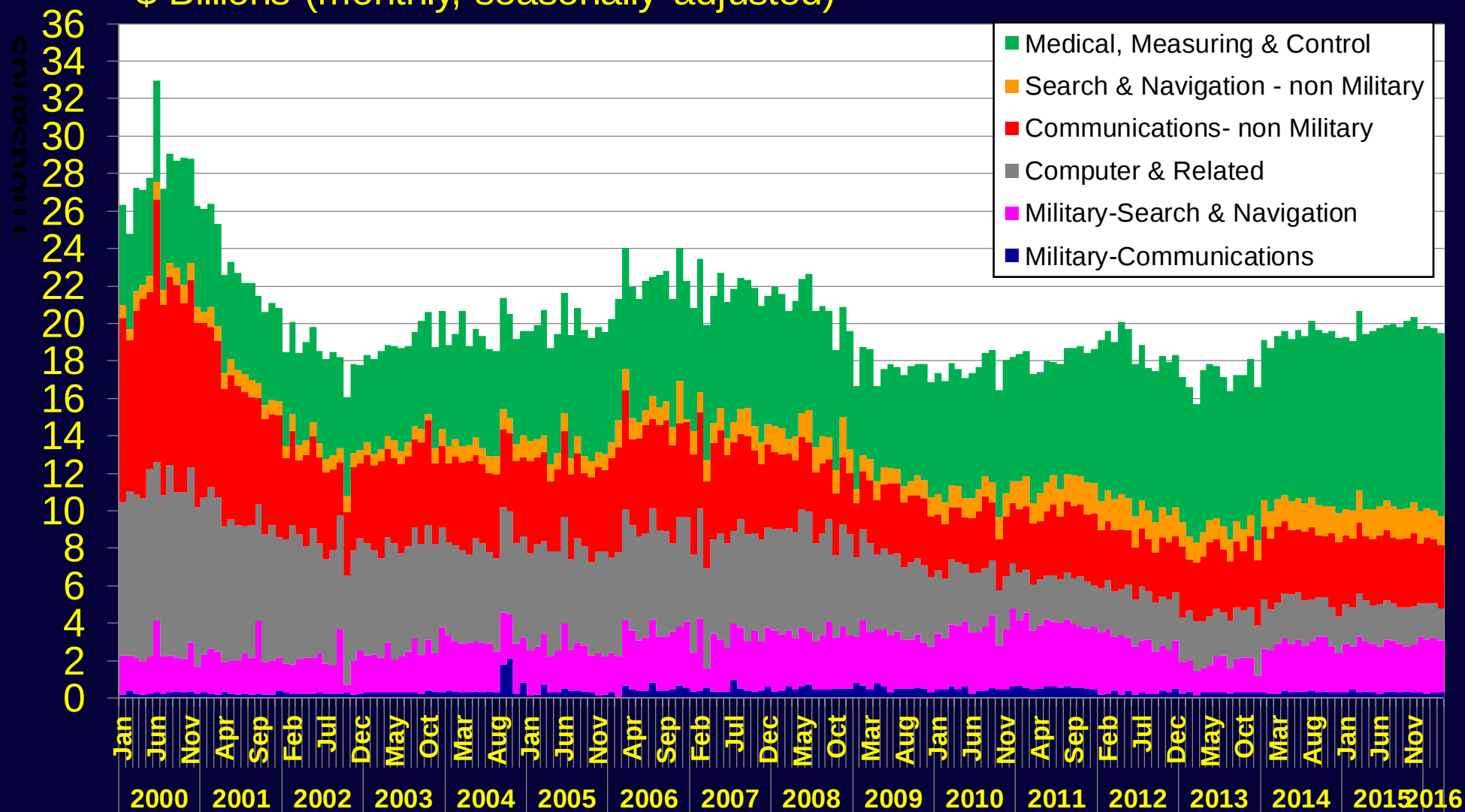
Computer, Communications, Measurement & Control and Military



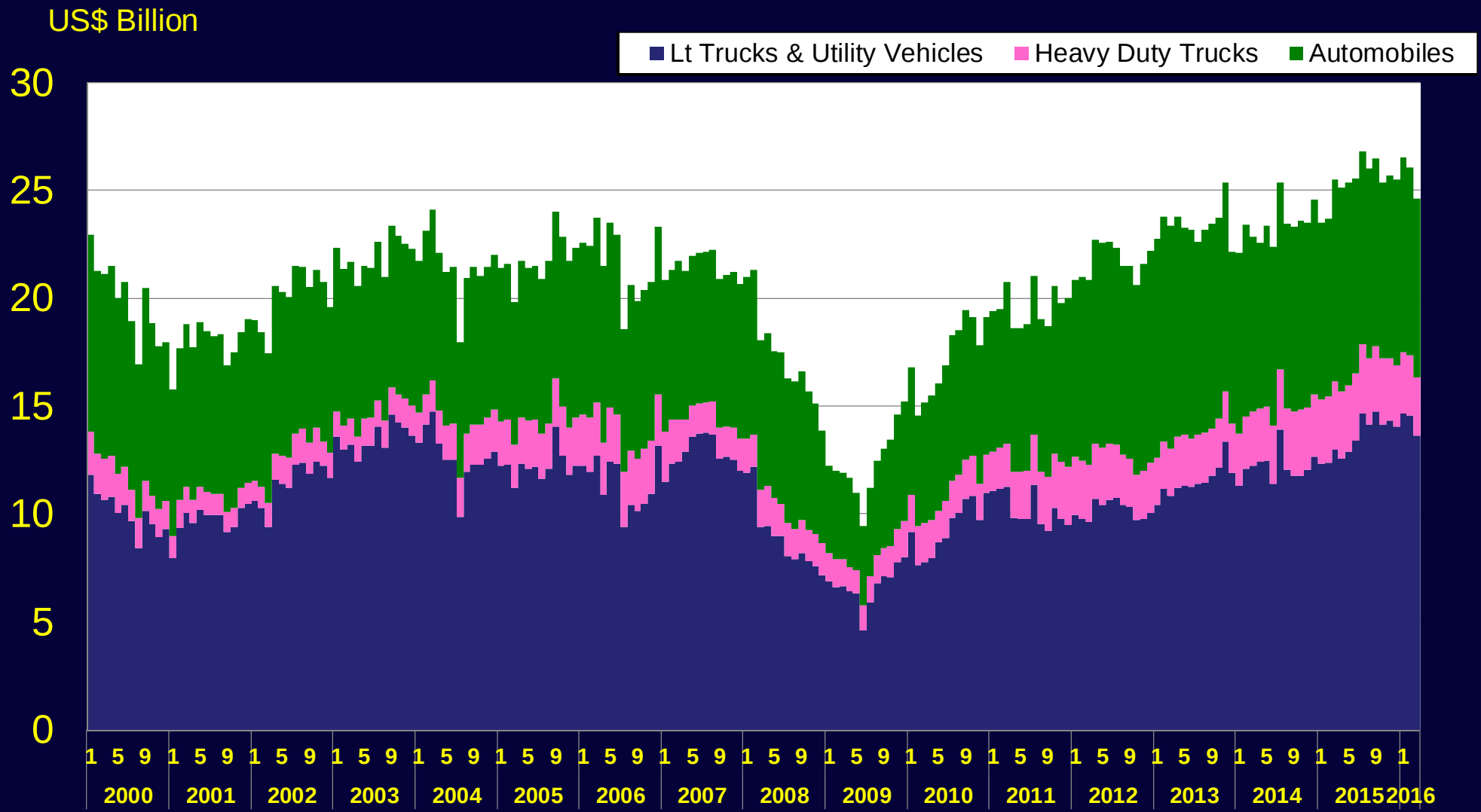
U.S. Electronic Equipment Orders

Monthly Data

\$ Billions (monthly, seasonally adjusted)

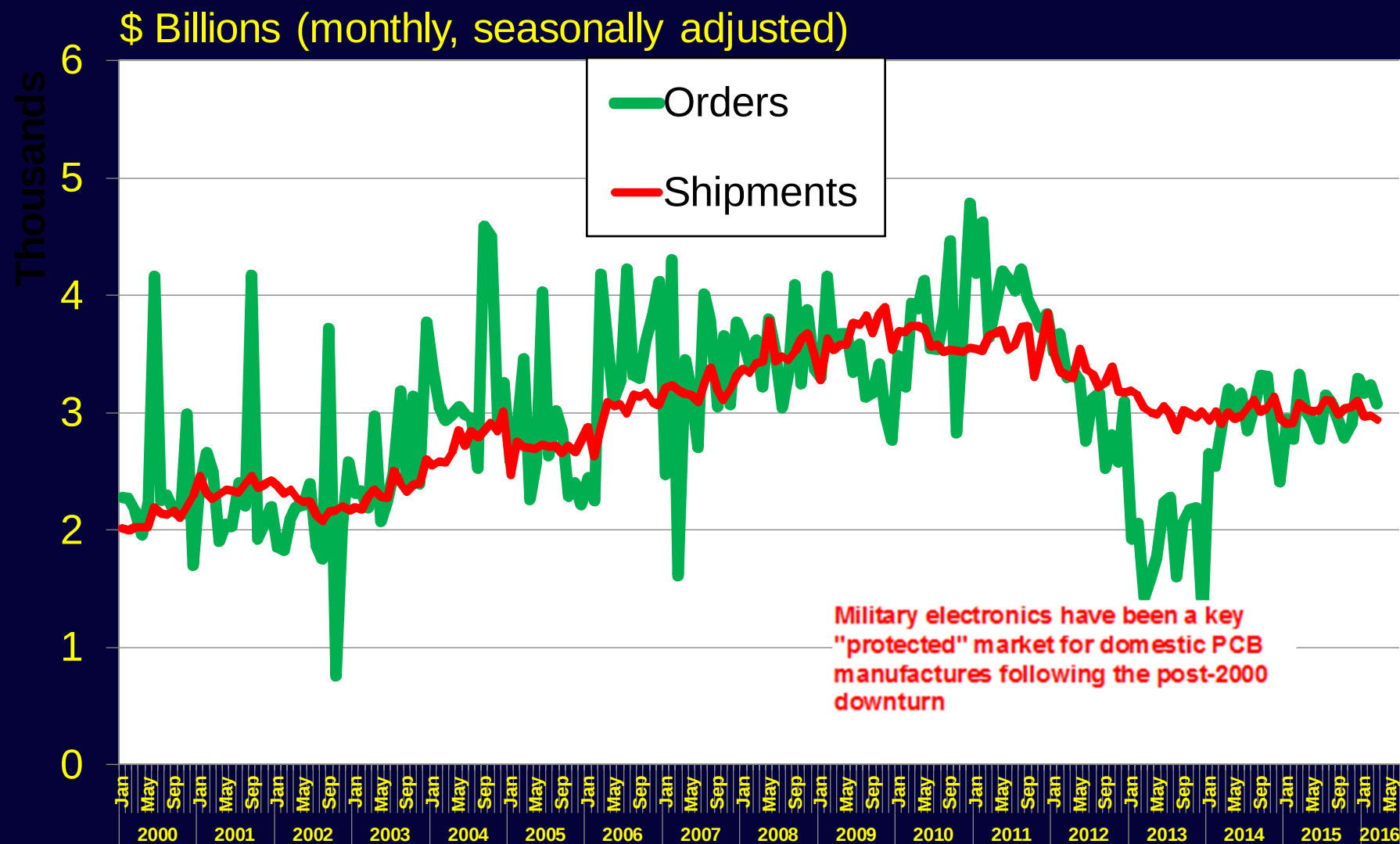


U.S. Vehicle Shipments



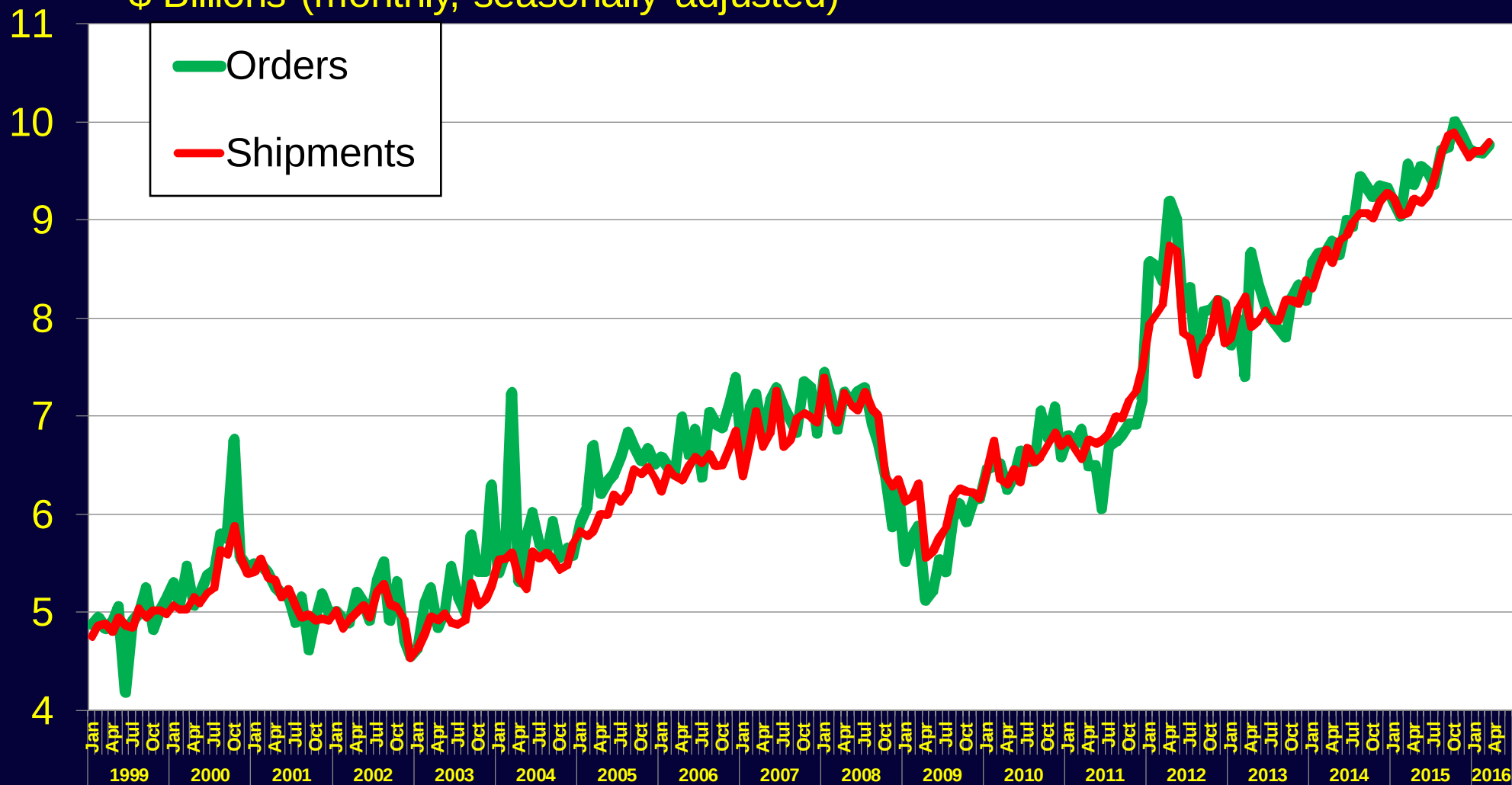
U.S. Military Electronics Orders & Shipments

Defense Communication & Search & Navigation Equipment

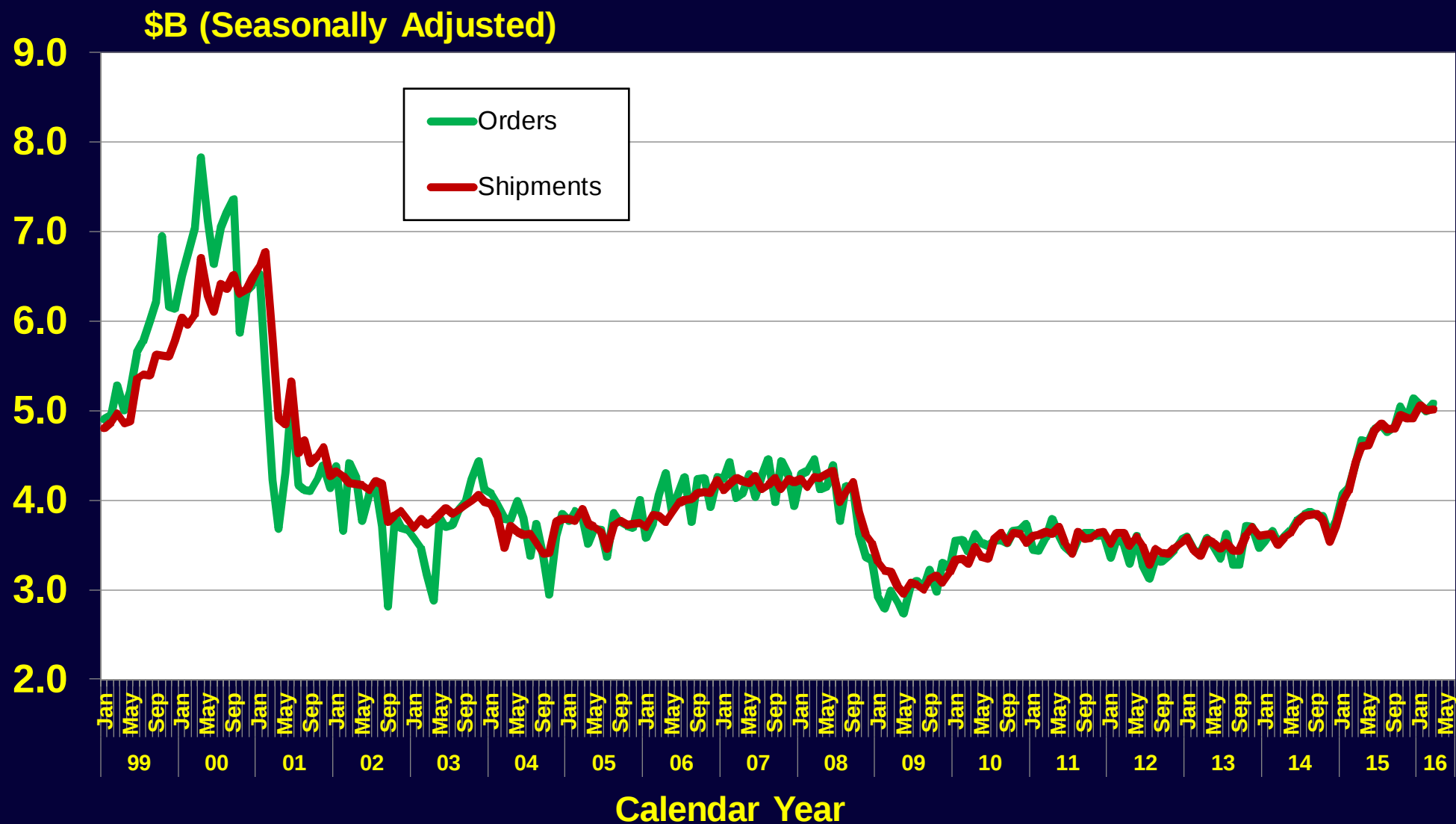


U.S. Electromedical, Measurement & Control Equipment Orders & Shipments

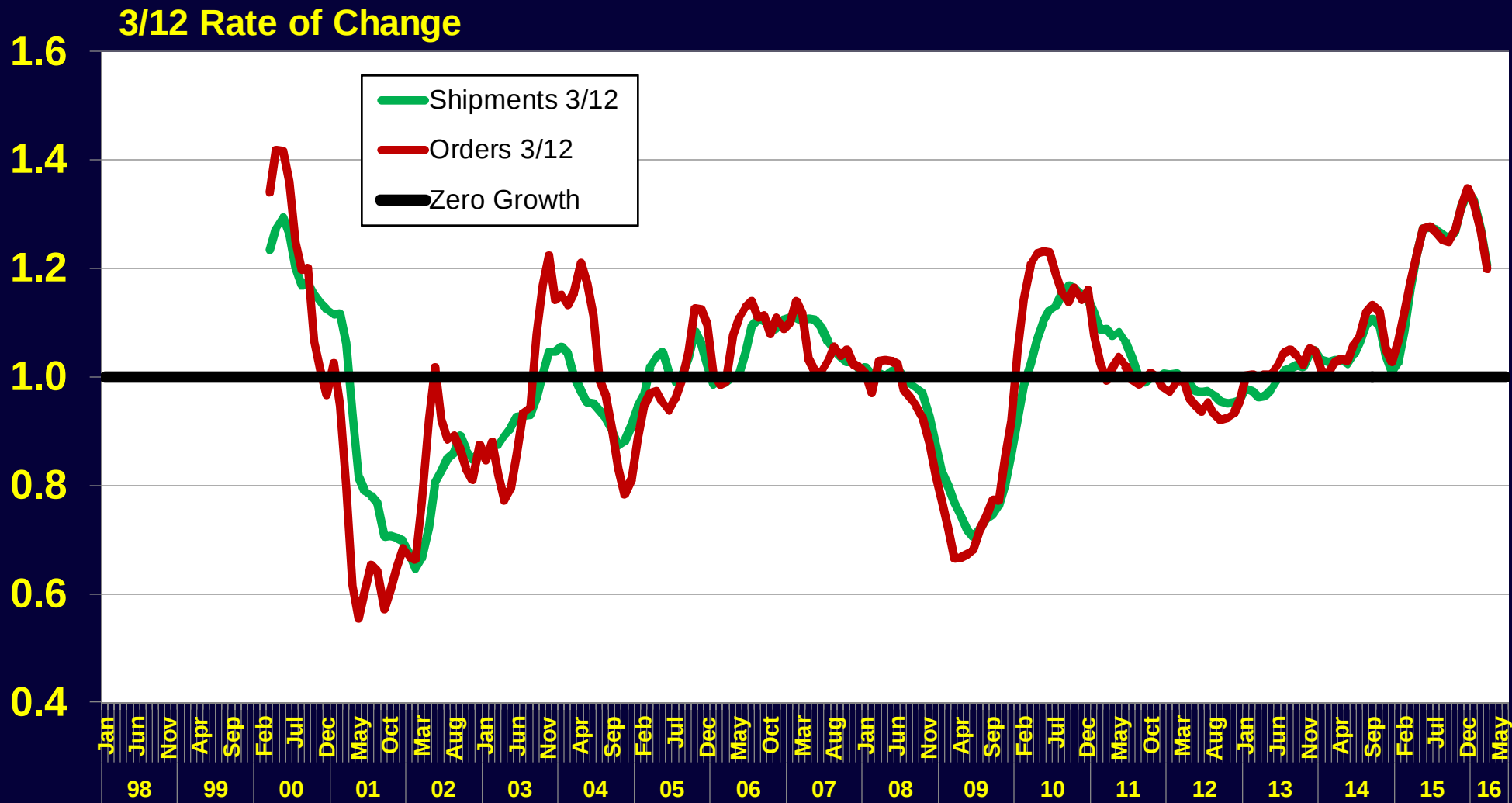
\$ Billions (monthly, seasonally adjusted)



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



U.S. Passive Component Orders & Shipments



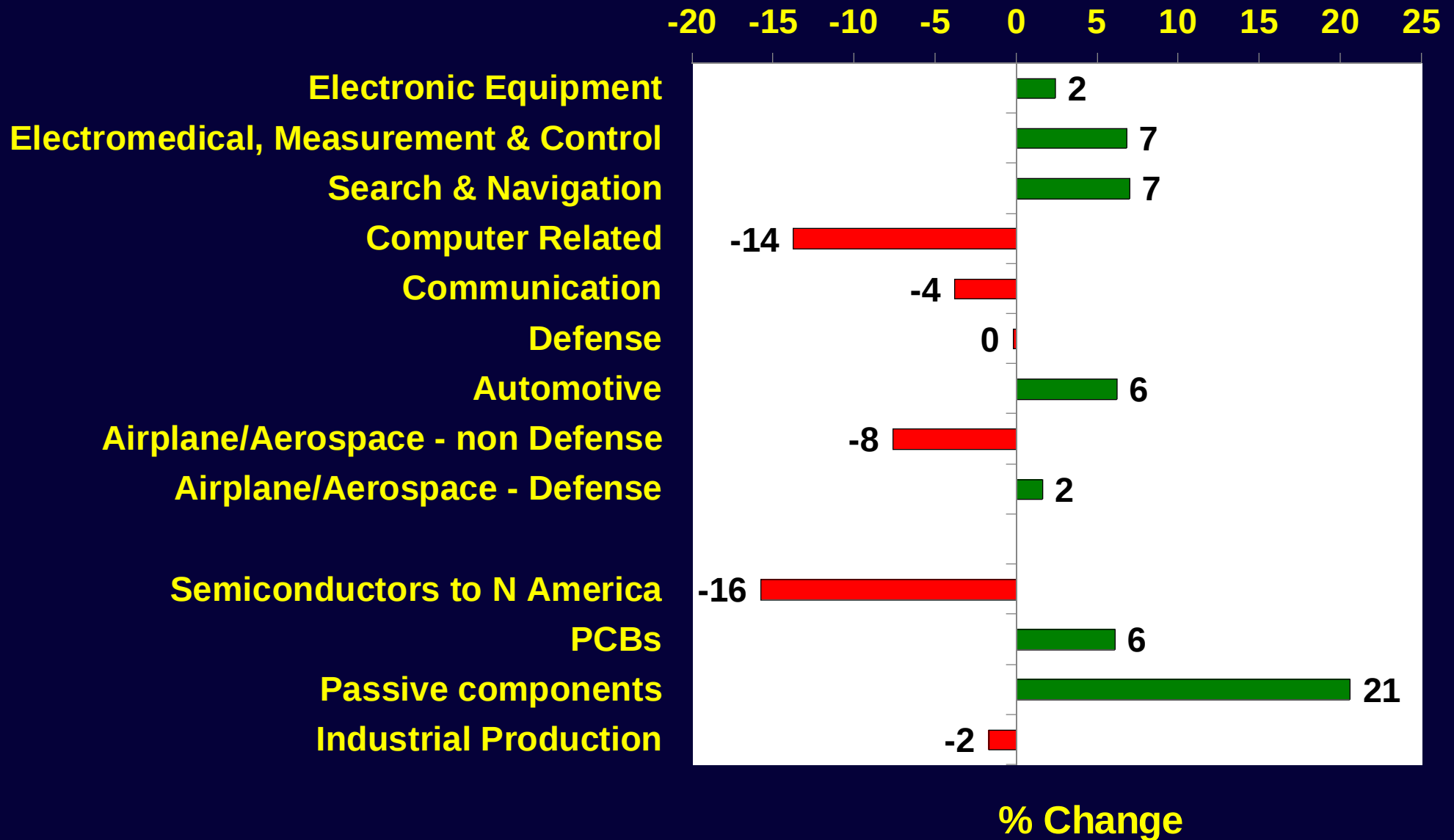
Present Growth Rates (%)

U.S. Economy & Electronics Industry

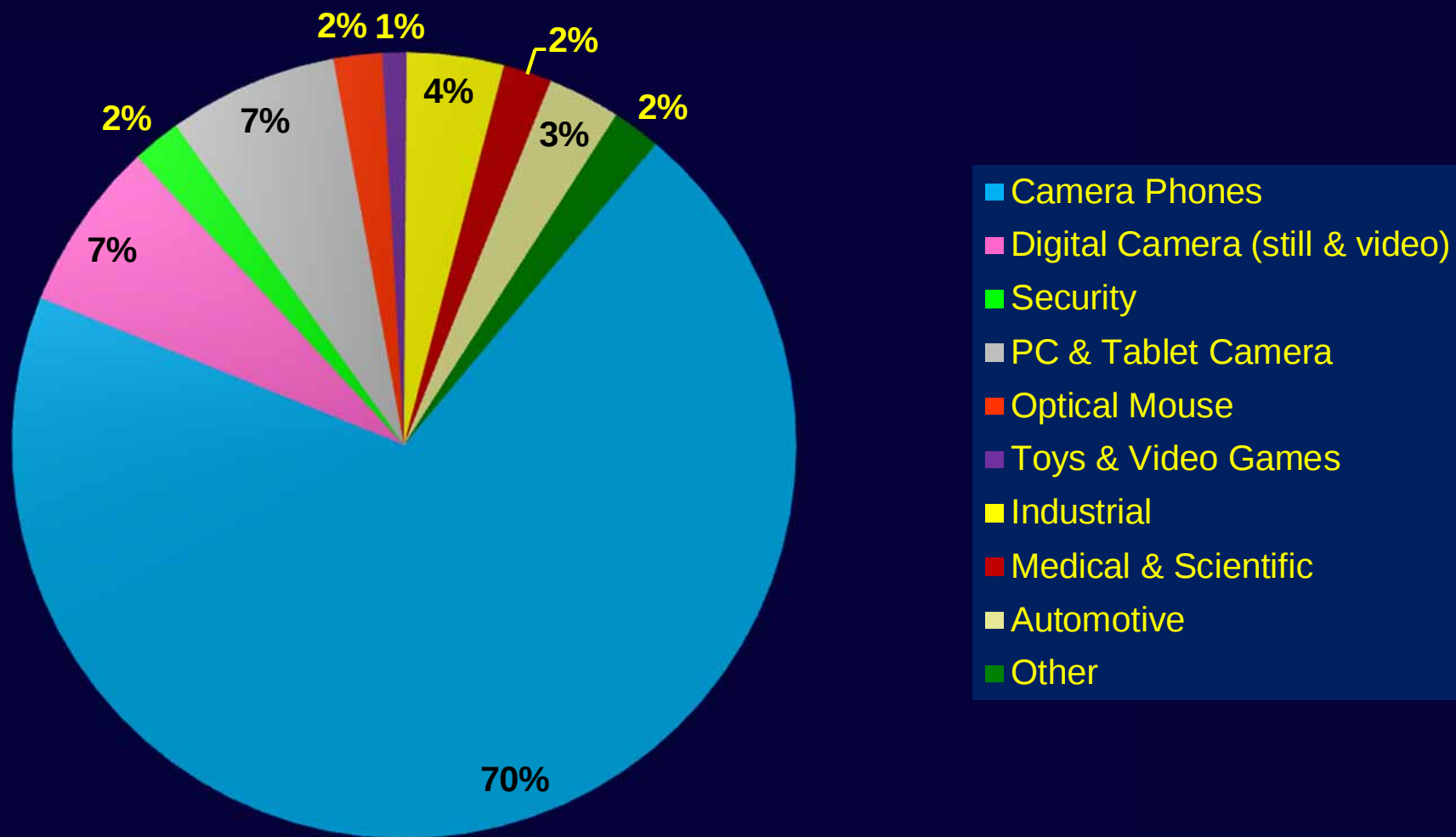
	Latest Month	Annual Growth	3-Month Growth
Electronic Component \$			
Rigid & Flex PCB Orders (N Amer)	3/16	103.1	103.5
Rigid & Flex PCB Shipments (N Amer)	3/16	102.2	106.1
Electronic Component Orders	3/16	126.7	119.9
Electronic Component Shipments	3/16	126.7	120.6
Semiconductor Shipments to N America	3/16	92.3	84.2
U.S. Electronic Equipment Orders \$			
Computer & Related	3/16	89.0	84.6
Communication	3/16	96.6	91.8
Medical, Measurement & Control	3/16	105.6	104.9
Search & Navigation	3/16	102.6	105.5
Defense Capital Goods	3/16	105.8	121.7
Military Electronics	3/16	100.7	104.9
Total Electronic Equipment	3/16	101.2	100.1
U.S. Industrial Production	3/16	99.3	98.3

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

U.S Electronic Supply Chain Shipment Growth 1Q'16 vs. 1Q'15

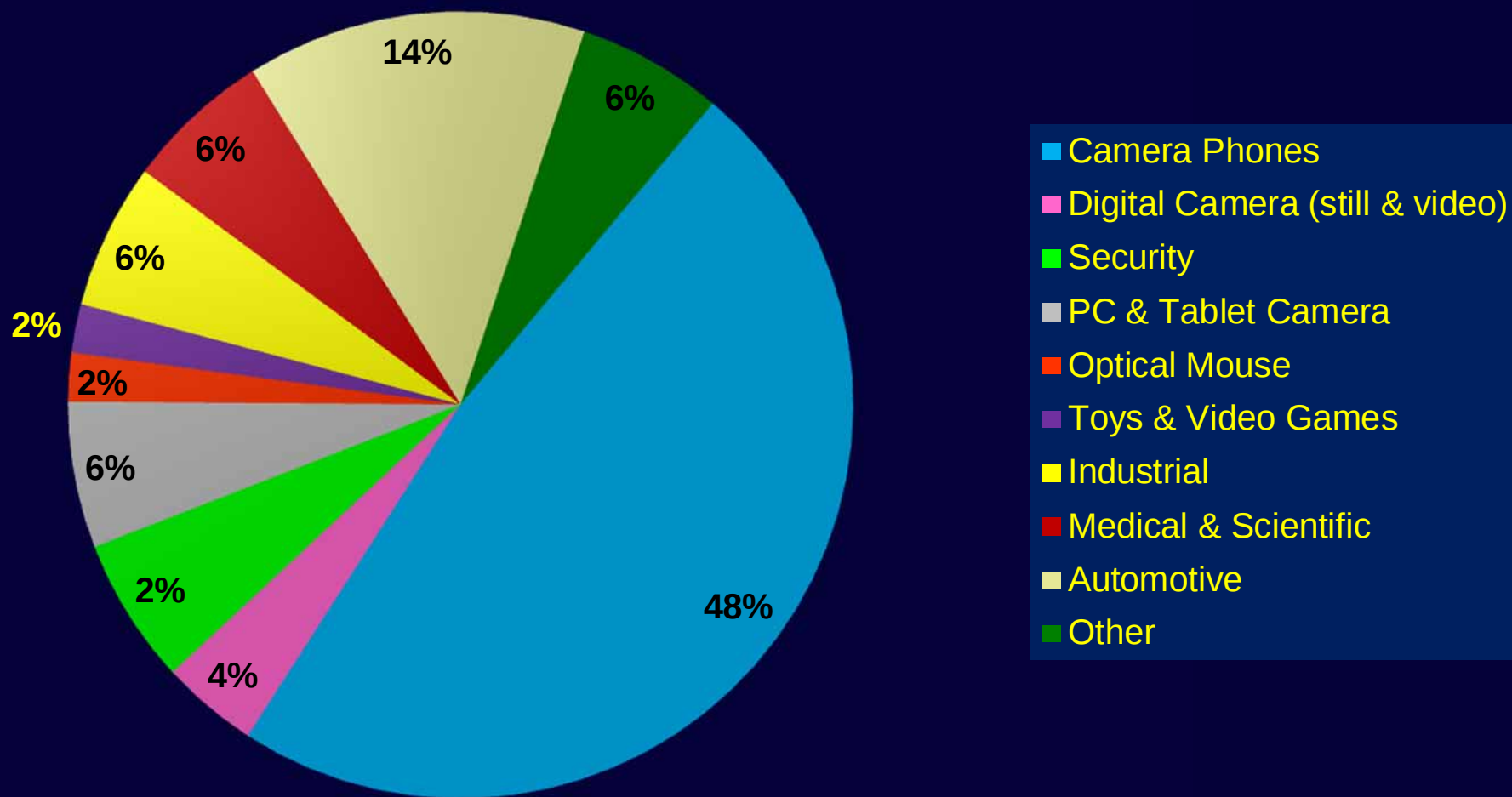


CMOS Image Sensor Market - 2015



\$9.9 Billion

CMOS Image Sensor Market - 2020



\$15.2 Billion Forecast