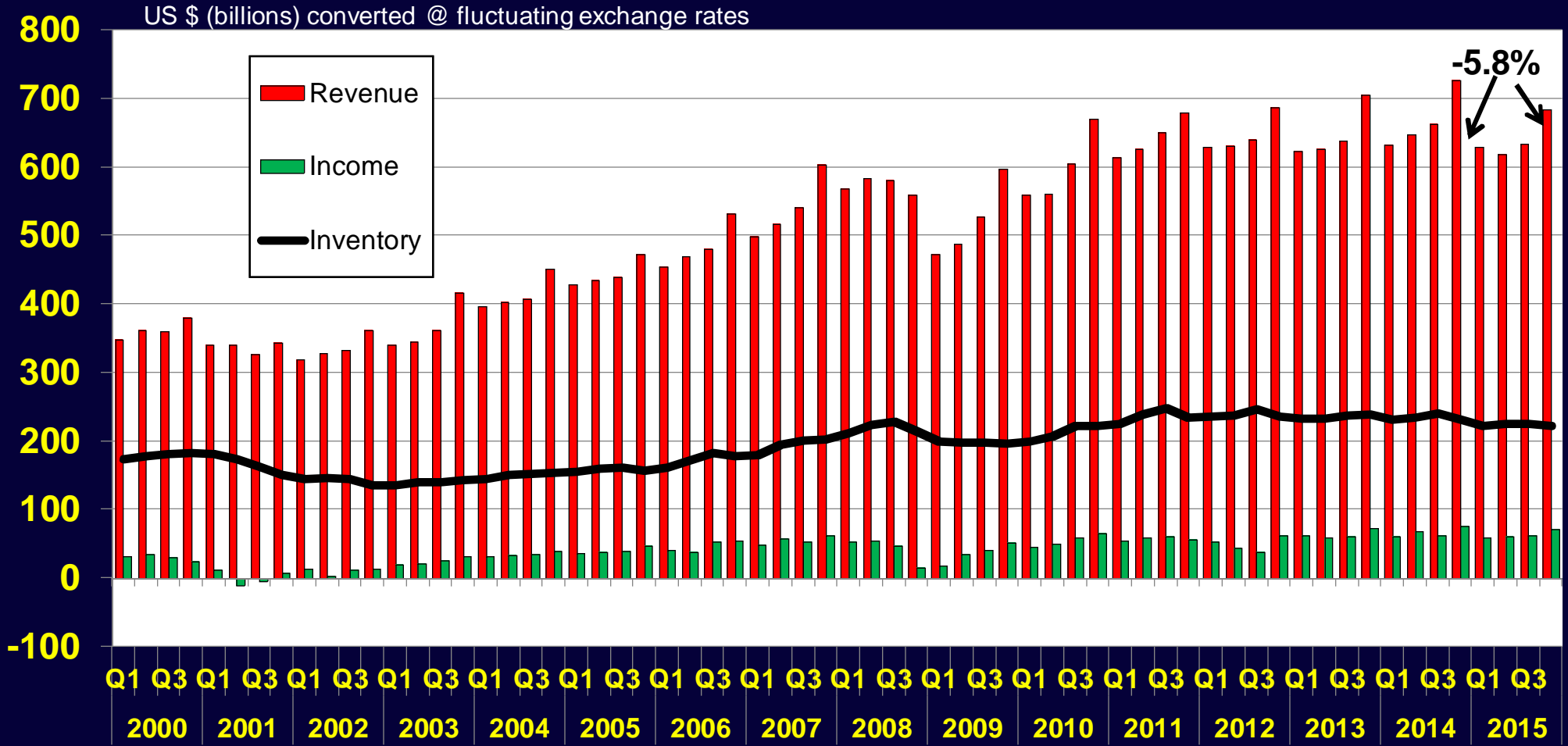


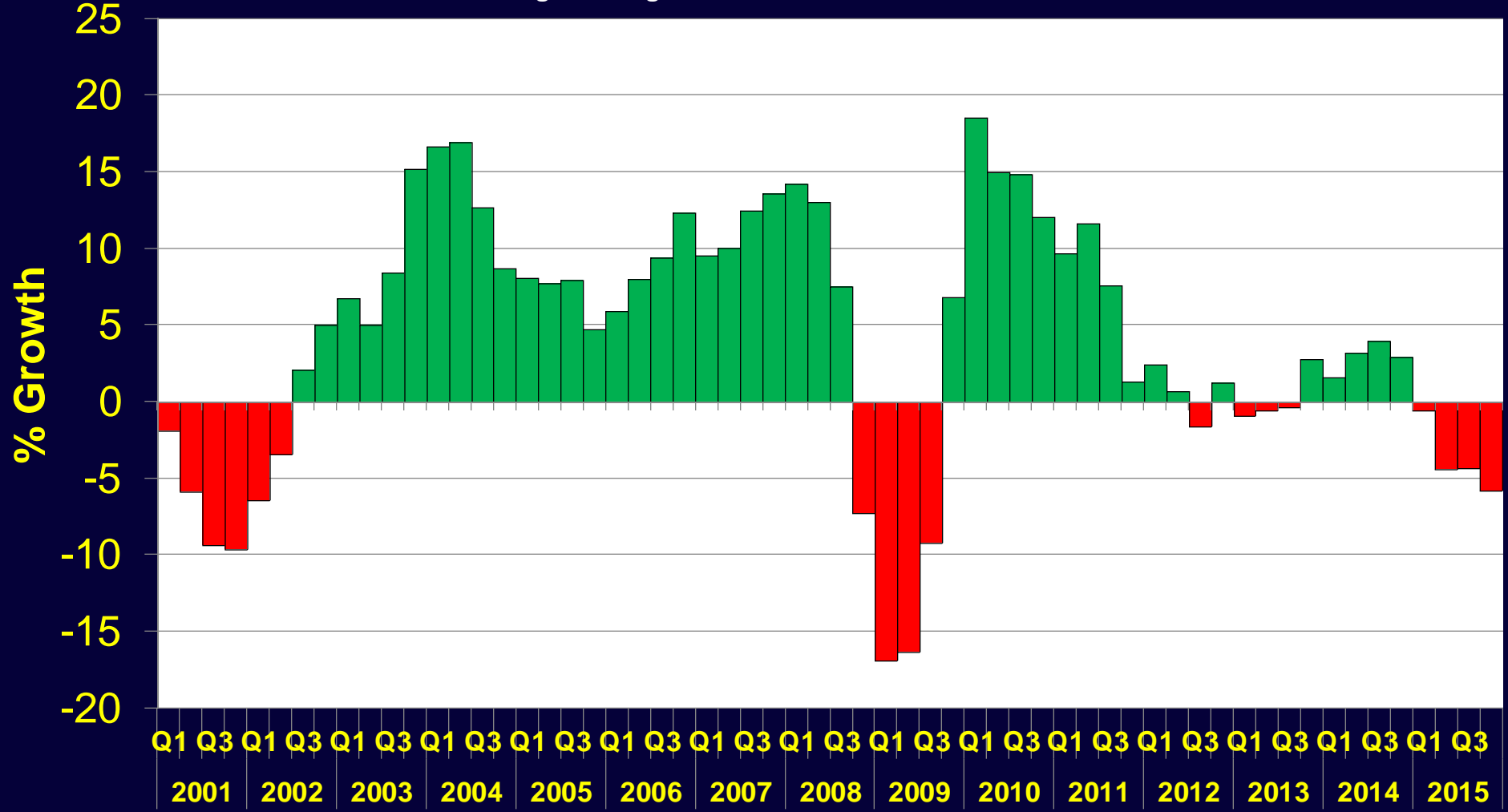
# Electronic Equipment Suppliers Composite of 213 Public Companies Revenue, Net Income & Inventory



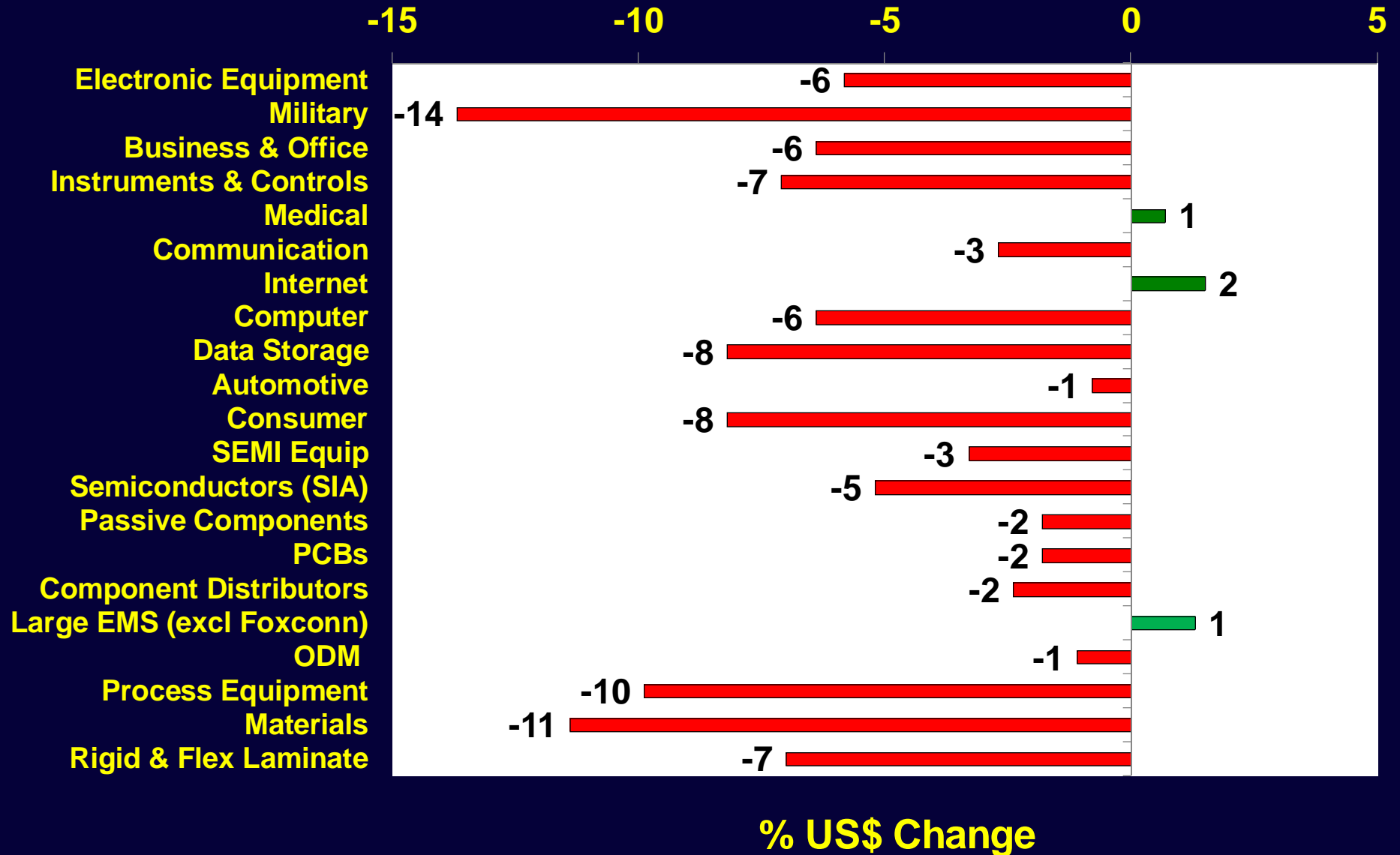
Computer 13, Internet 13, Storage 17, Communication 30, SEMI 40, Medical 21, Instruments 16, Military 21, Business & Office 6, Consumer 21, Automotive 15

# Electronic Equipment Suppliers Composite of 213 Public Companies Quarterly Revenue Growth

US\$ converted @ fluctuating exchange rate



# Global Electronic Supply Chain Growth 4Q'15 vs. 4Q'14

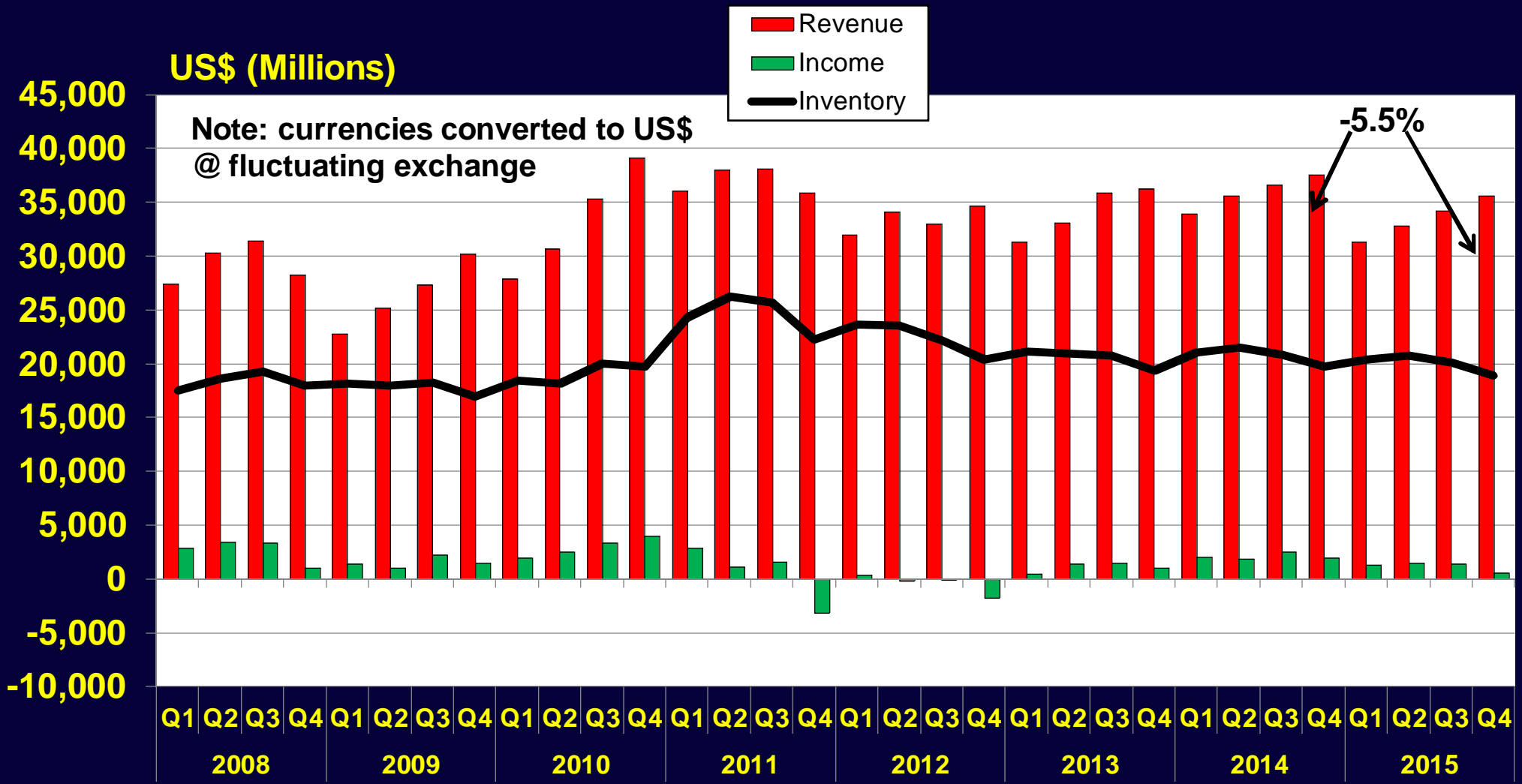


US\$ equivalent at fluctuating exchange; based upon industry composites including acquisitions

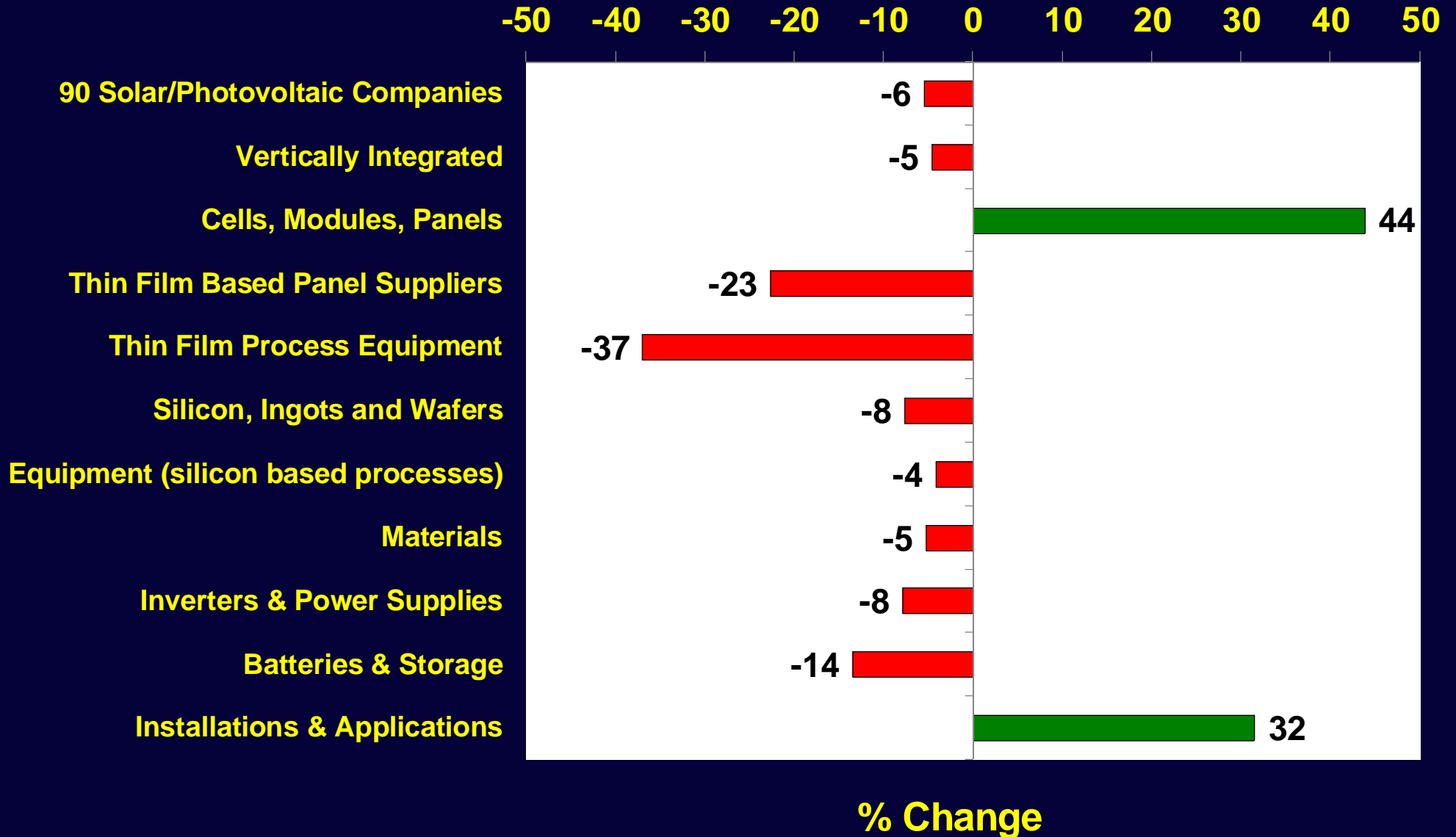
# Solar/Photovoltaic Financials

## Composite of 90 Public Global Companies

### Revenue, Net Income & Inventory



# Photovoltaic Supply Chain Growth 4Q'15 vs. 4Q'14



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

Chart 6

# 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)	2/16	101.8	98.3
Rigid & Flex PCB Shipments (N Amer)	2/16	101.1	101.8
Electronic Component Orders	2/16	127.7	127.0
Electronic Component Shipments	2/16	128.0	127.2
Semiconductor Shipments to N America	2/16	94.6	80.7
<b>U.S. Electronic Equipment Orders \$</b>			
Computer & Related	2/16	91.4	90.7
Communication	2/16	97.0	88.8
Medical, Measurement & Control	2/16	106.3	105.7
Search & Navigation	2/16	104.2	116.1
Defense Capital Goods	2/16	102.7	118.3
Military Electronics	2/16	101.7	115.9
Total Electronic Equipment	2/16	102.2	102.5
<b>U.S. Industrial Production</b>	2/16	100.5	98.8

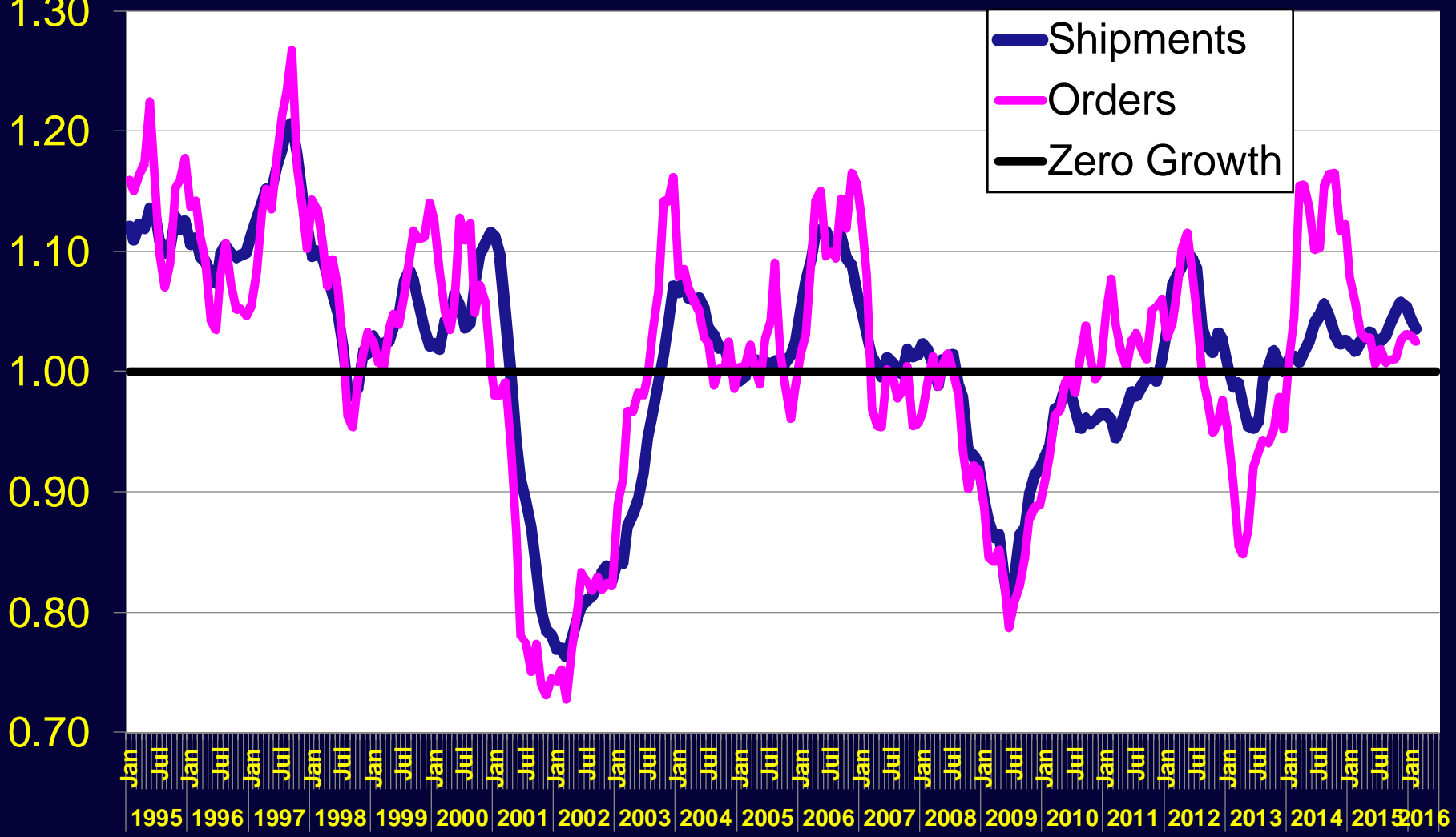
NOTE: 3 month growth rates compare most recent 3 months to same 3 months one year earlier

Chart 7

# U.S. Electronic Equipment Order & Shipment Growth

Computer, Communications, Measurement & Control and Military

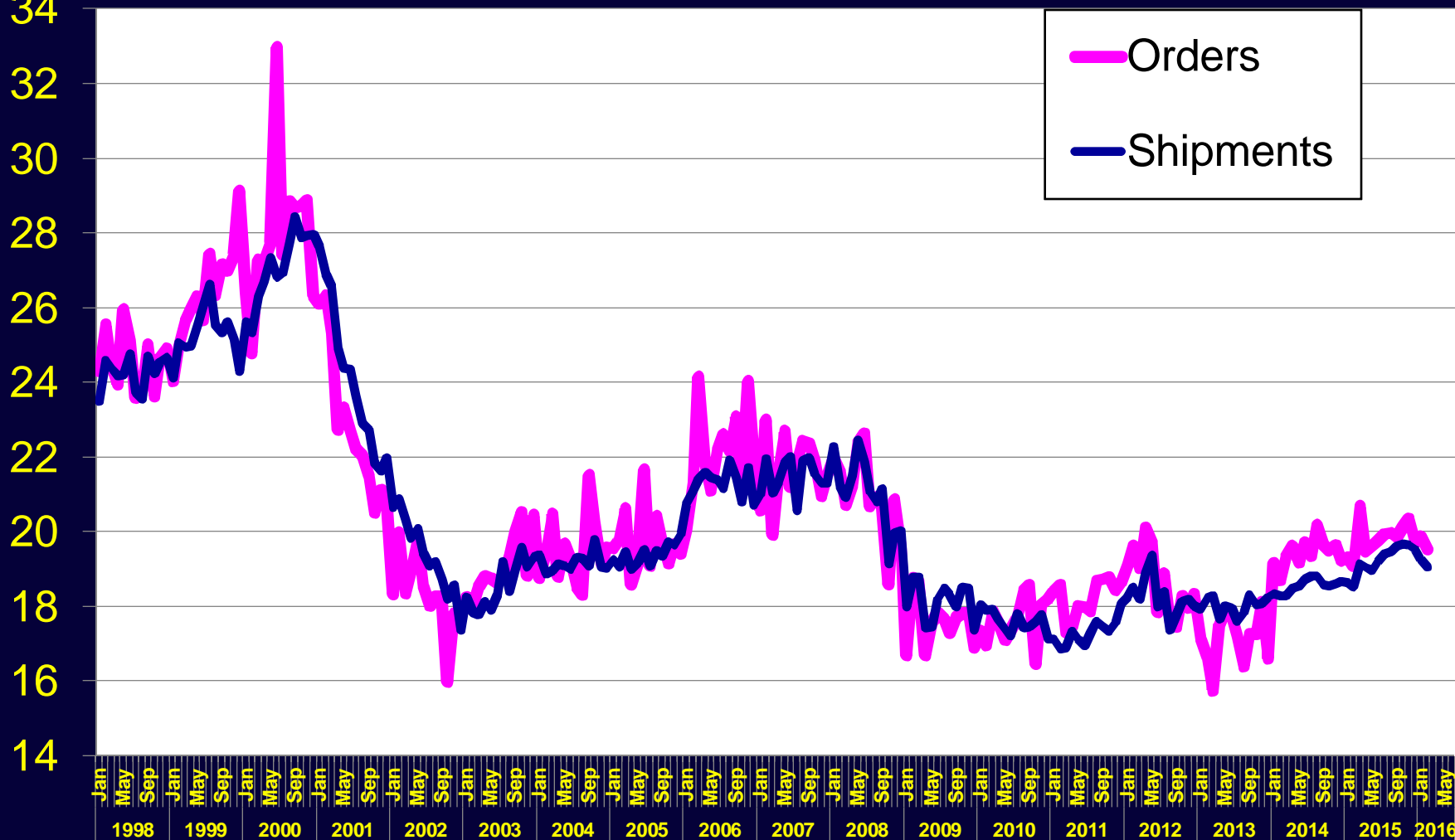
3/12 Rate of Change



# U.S. Electronic Equipment Orders & Shipments

Computer, Communications, Measurement & Control and Military

\$ Billions (monthly, seasonally adjusted)

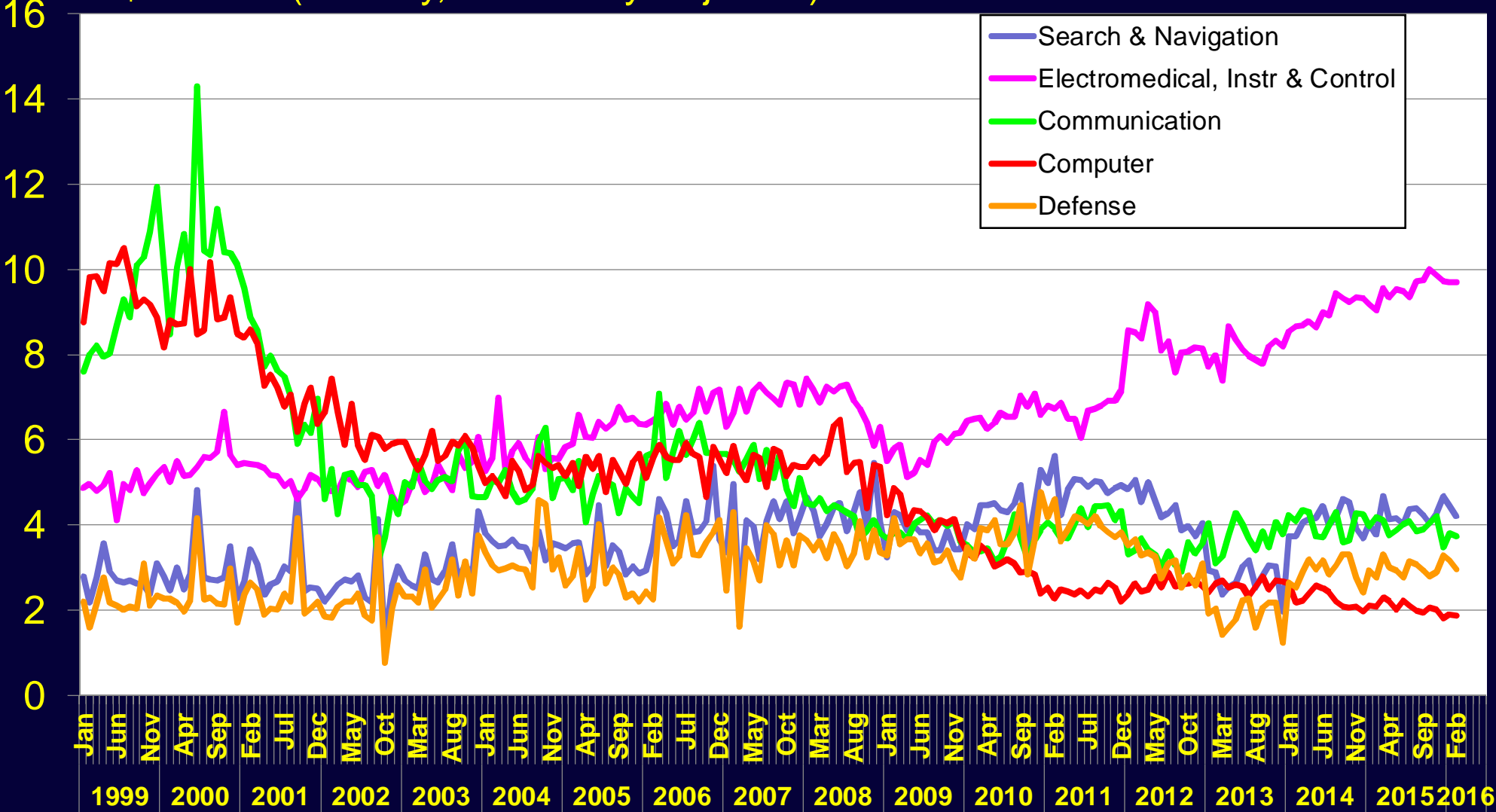




# U.S. Electronic Equipment Orders

## Monthly Data

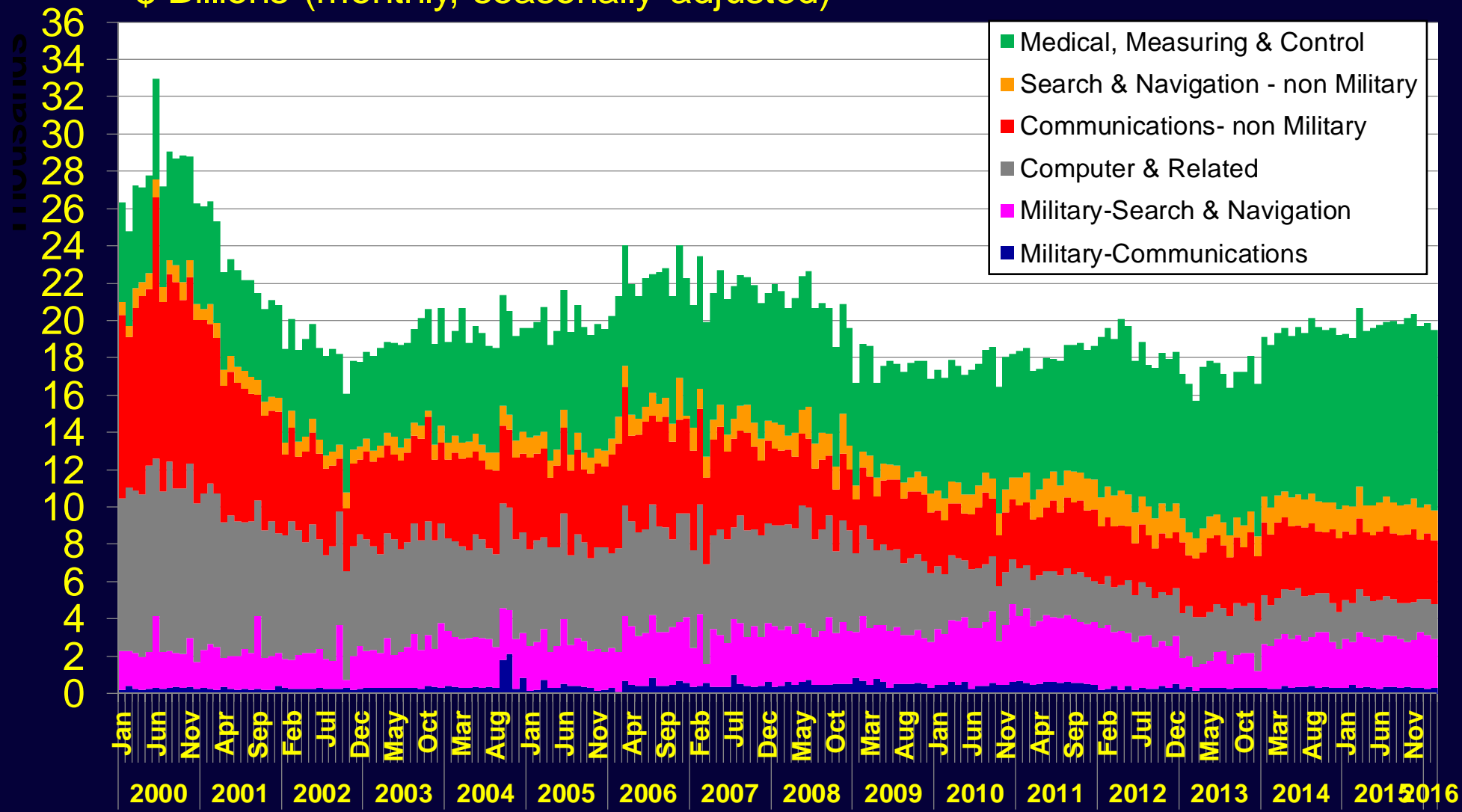
\$ Billions (monthly, seasonally adjusted)



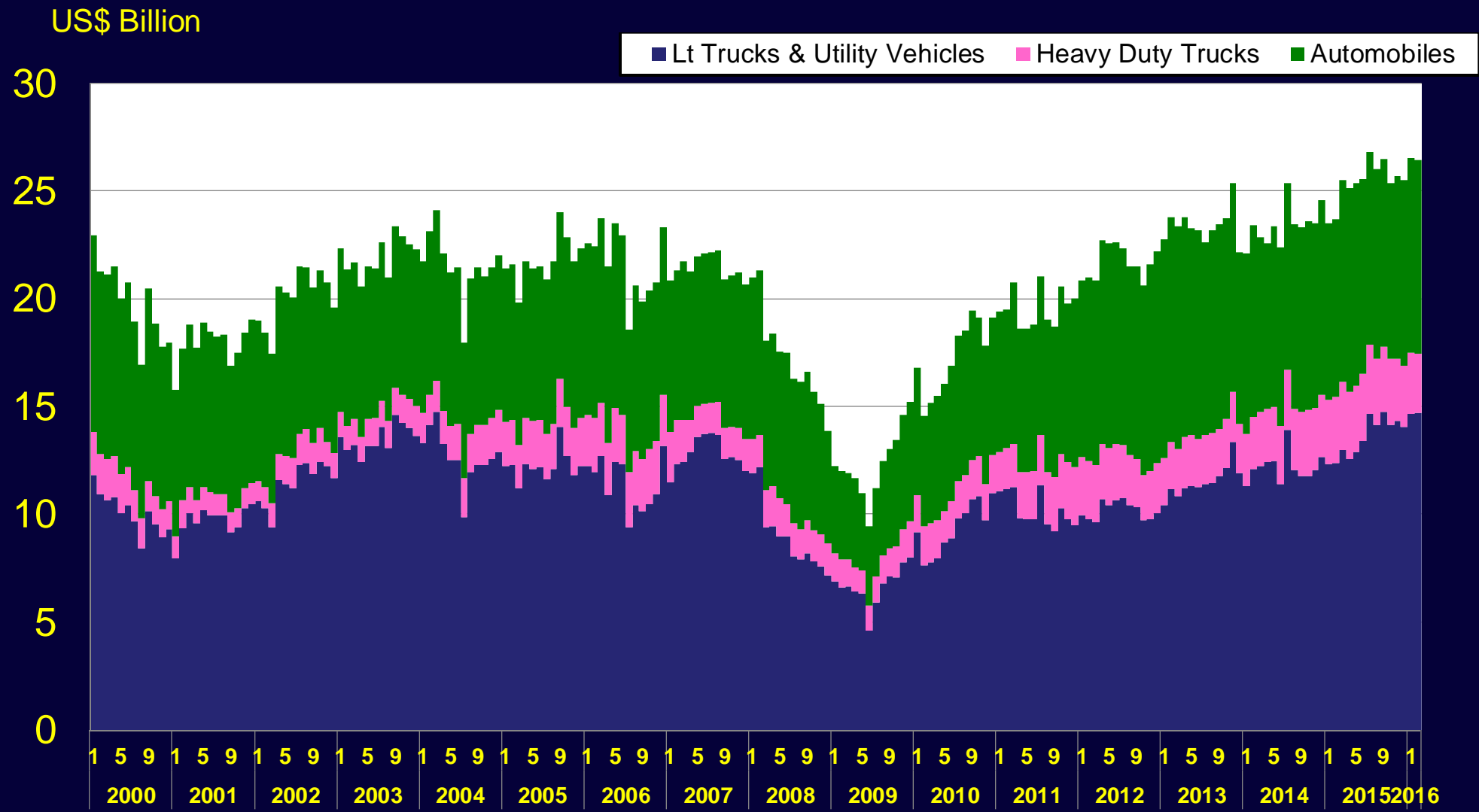
# U.S. Electronic Equipment Orders

## Monthly Data

\$ Billions (monthly, seasonally adjusted)



# U.S. Vehicle Shipments



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

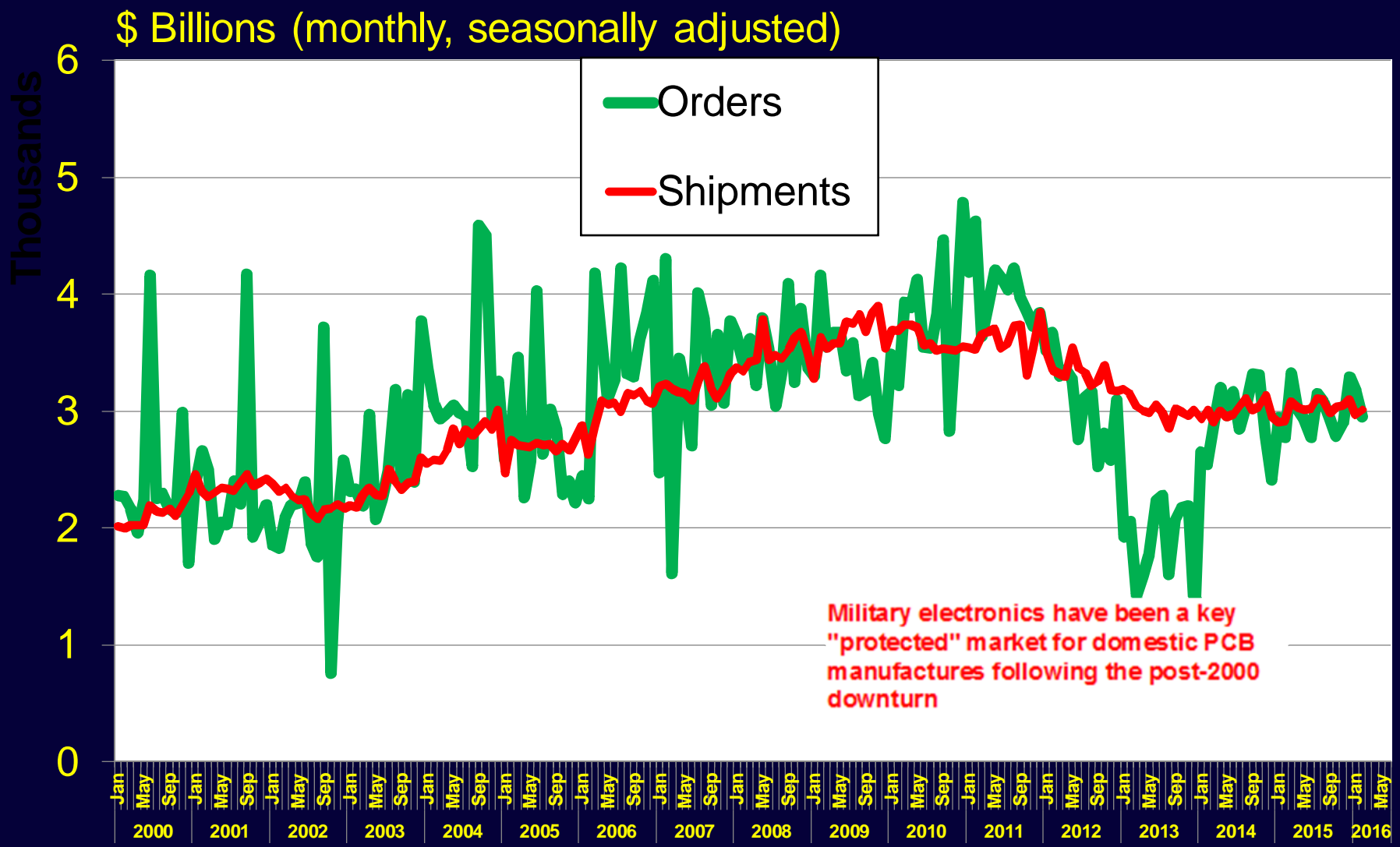
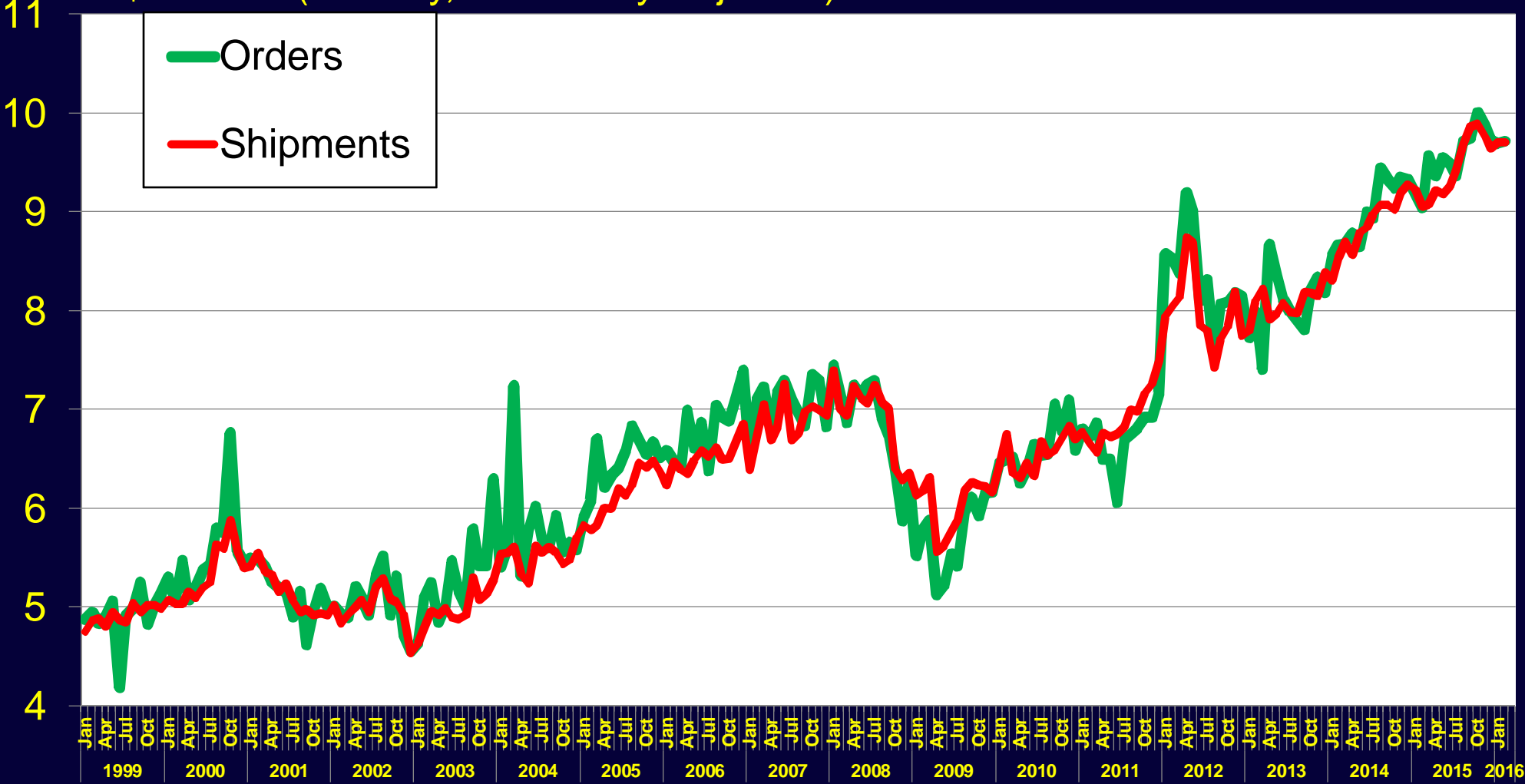


Chart 13

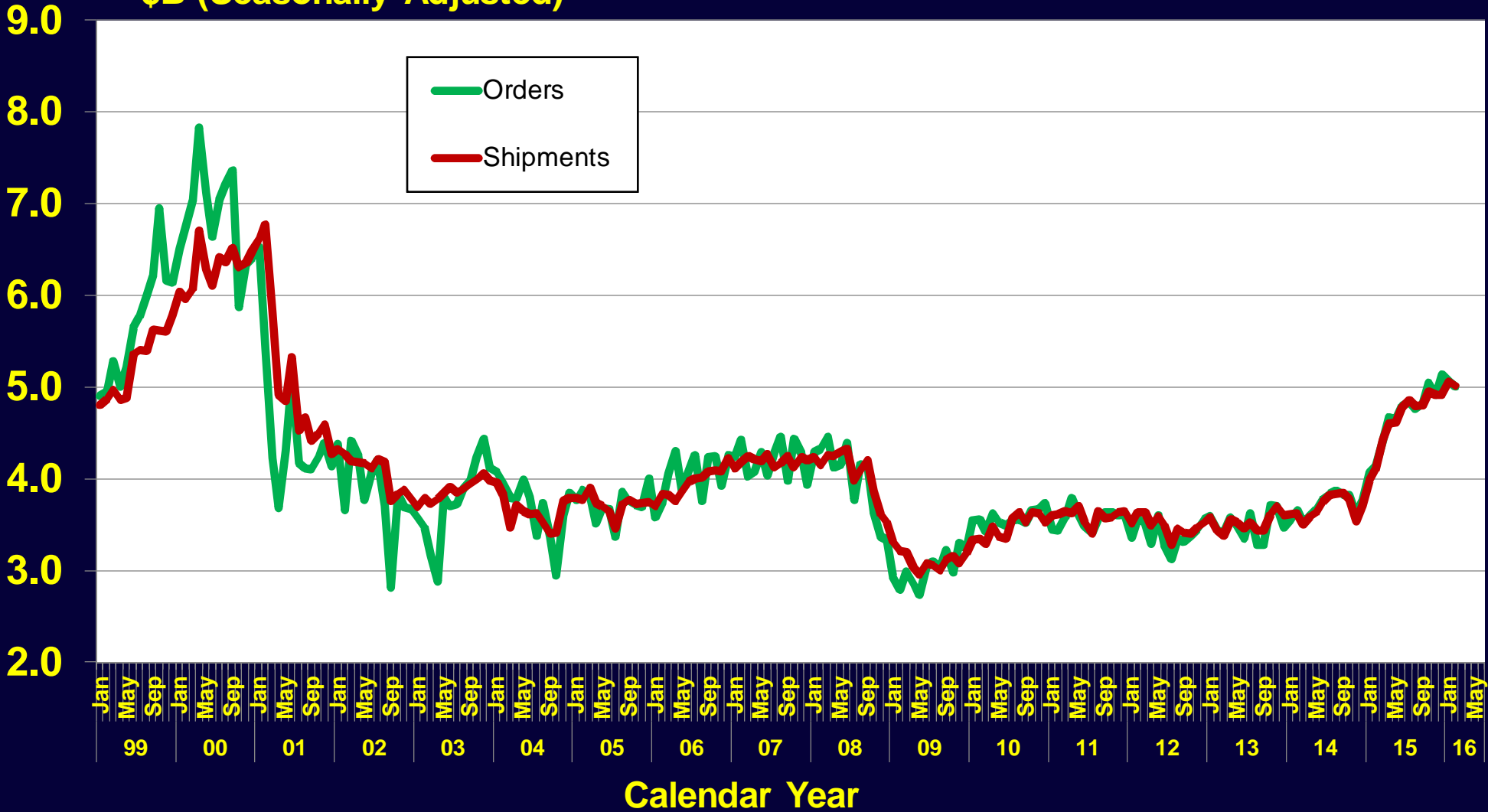
# U.S. Electromedical, Measurement & Control Equipment Orders & Shipments

\$ Billions (monthly, seasonally adjusted)



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

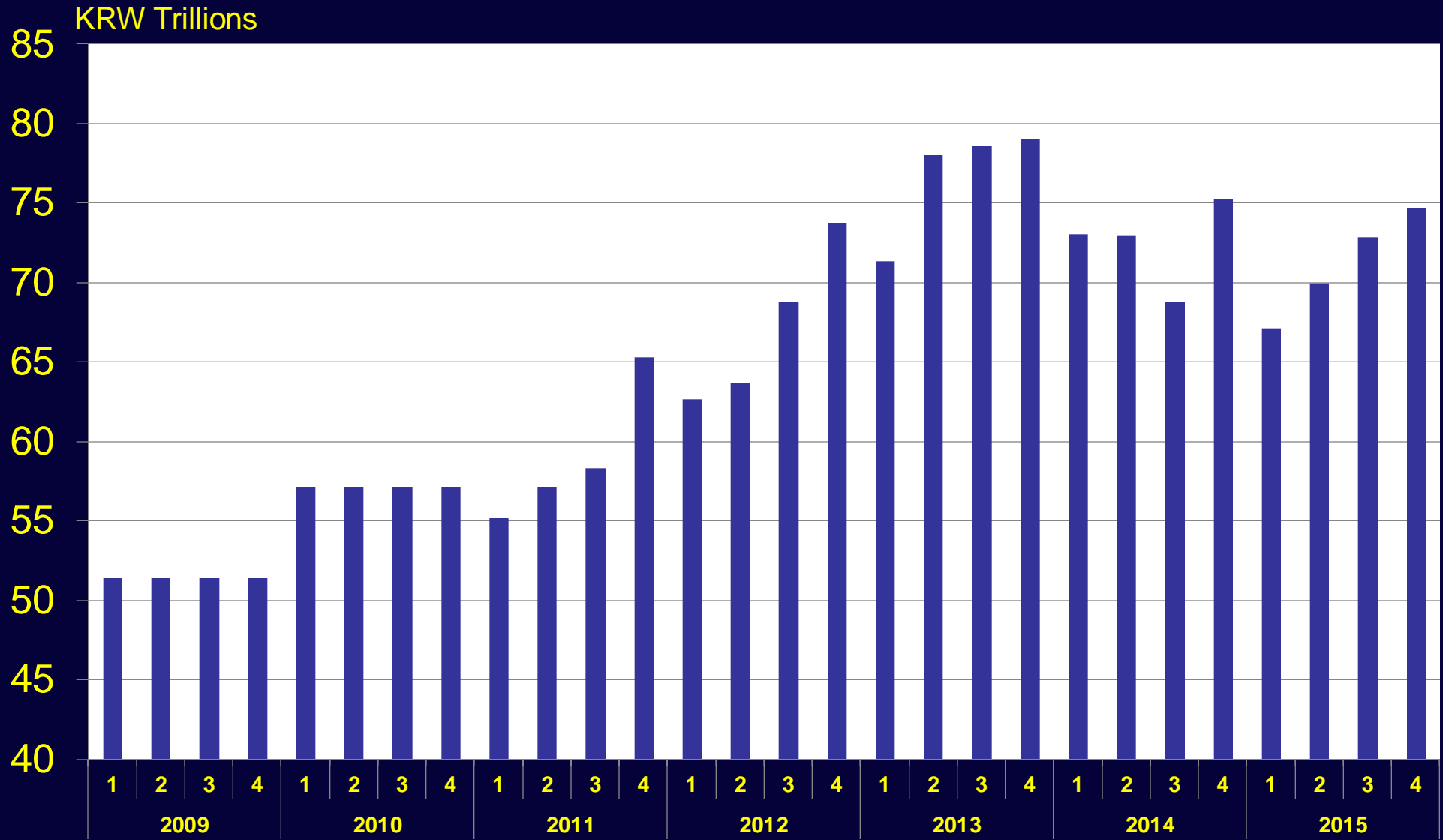
\$B (Seasonally Adjusted)



# U.S. Passive Component Orders & Shipments



# S Korea Electronic Equipment Producers Composite of 7 Manufacturers



Samsung Electronics, LG Electronics, Daewoo Electronic Components, Samsung SDI, Dongbu Hitek, SK Hynix, KEC Corp



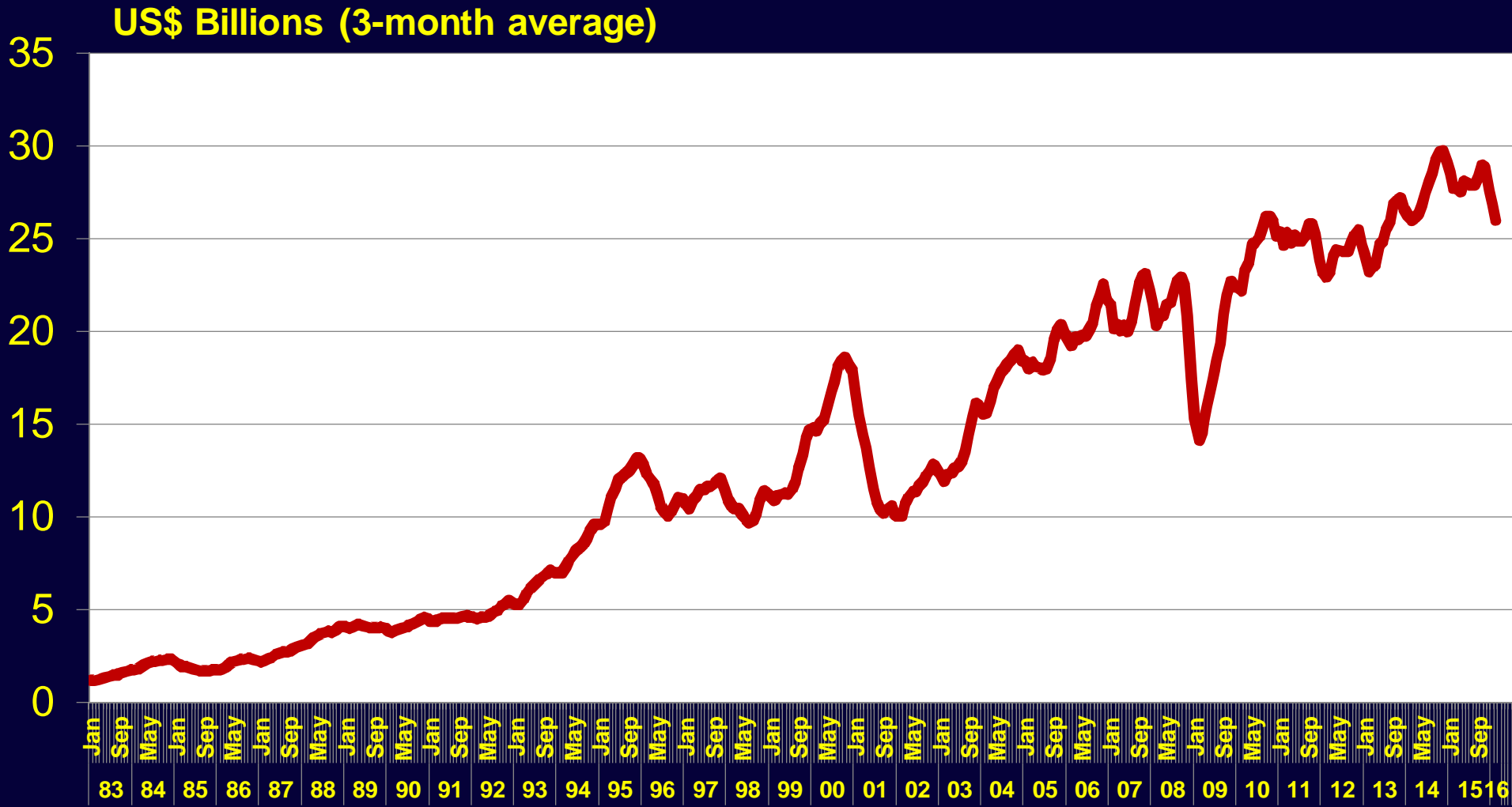
Chart 17

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

	<u>2/15</u>	<u>2/16</u>	<u>% CH</u>
Americas	6.23	5.03	- 19.3%
Europe	2.88	2.70	- 6.3%
Japan	2.55	2.46	- 3.5%
China	7.76	8.03	+ 3.5%
Asia Pacific / All Other	8.32	7.80	- 6.3%
Total	27.74	26.02	- 6.2%

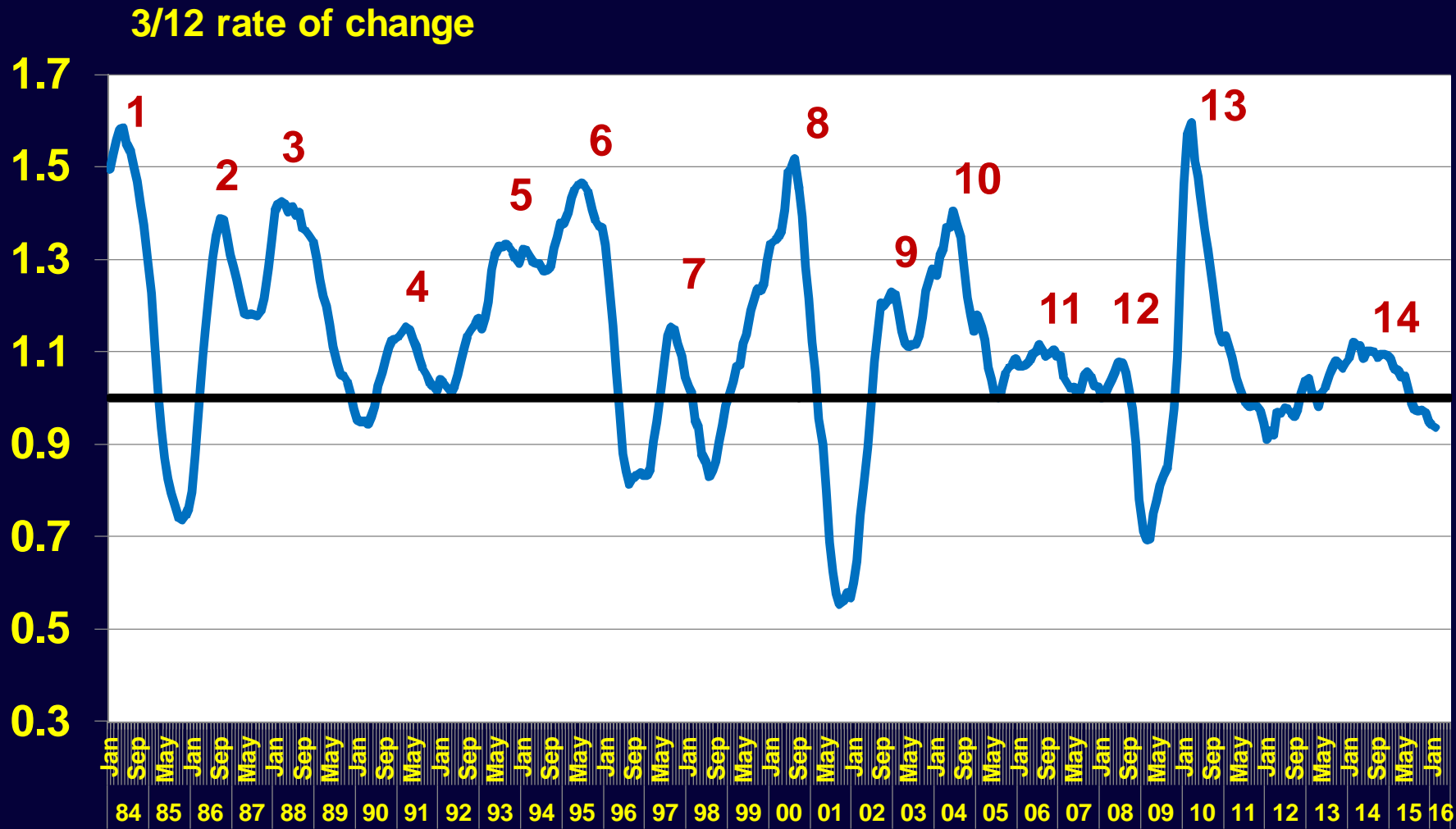
# World Semiconductor Shipments

## Monthly US\$



# Global Semiconductor Shipments

## 3-Month Growth Rates on \$ Basis

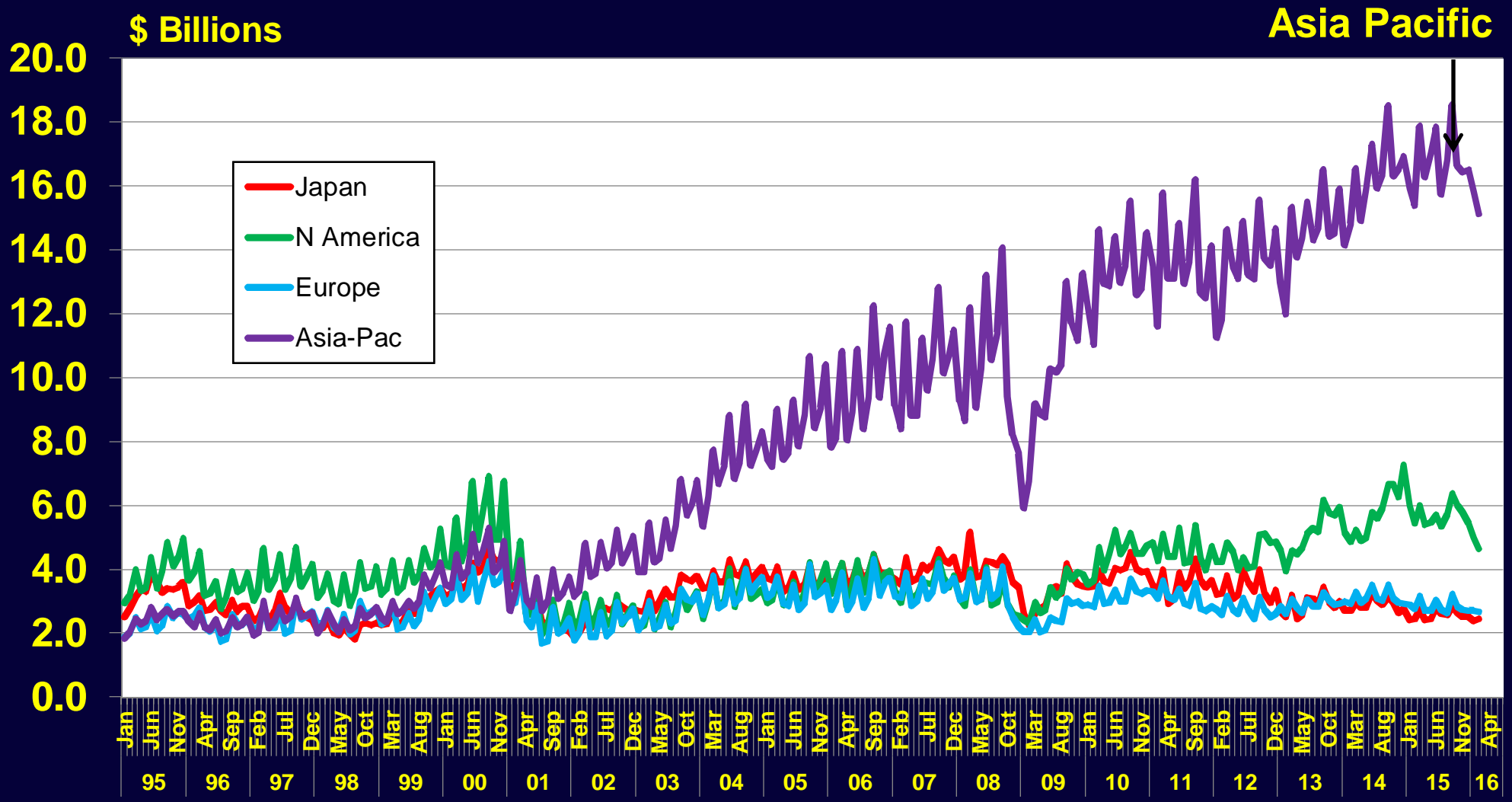


Total \$ Shipments from All Countries to an Area  
SIA website: [www.sia-online.org/](http://www.sia-online.org/)

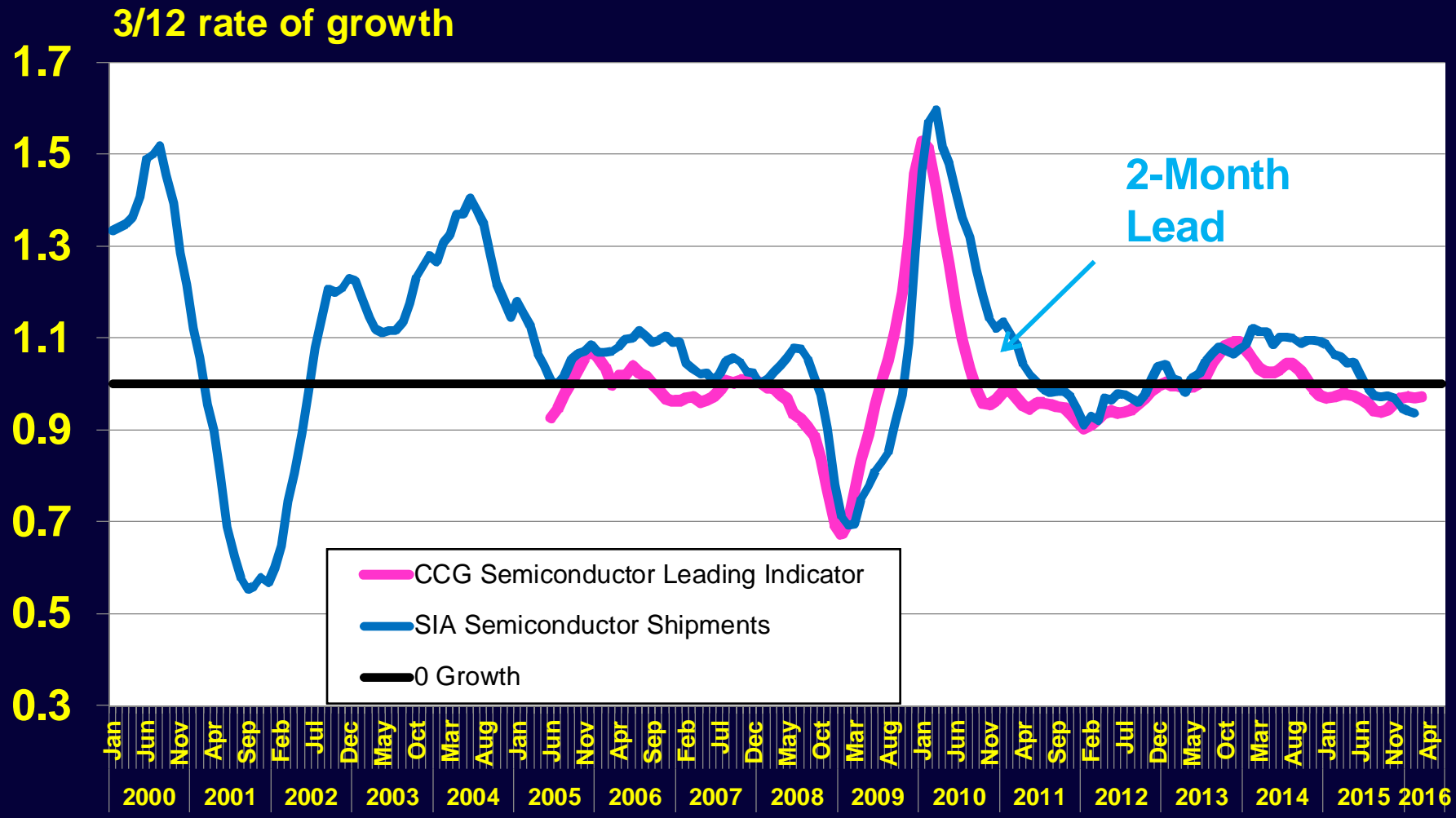
Chart 20

# Total Semiconductor Shipments to an Area

## Monthly Shipments - Reporting Firms

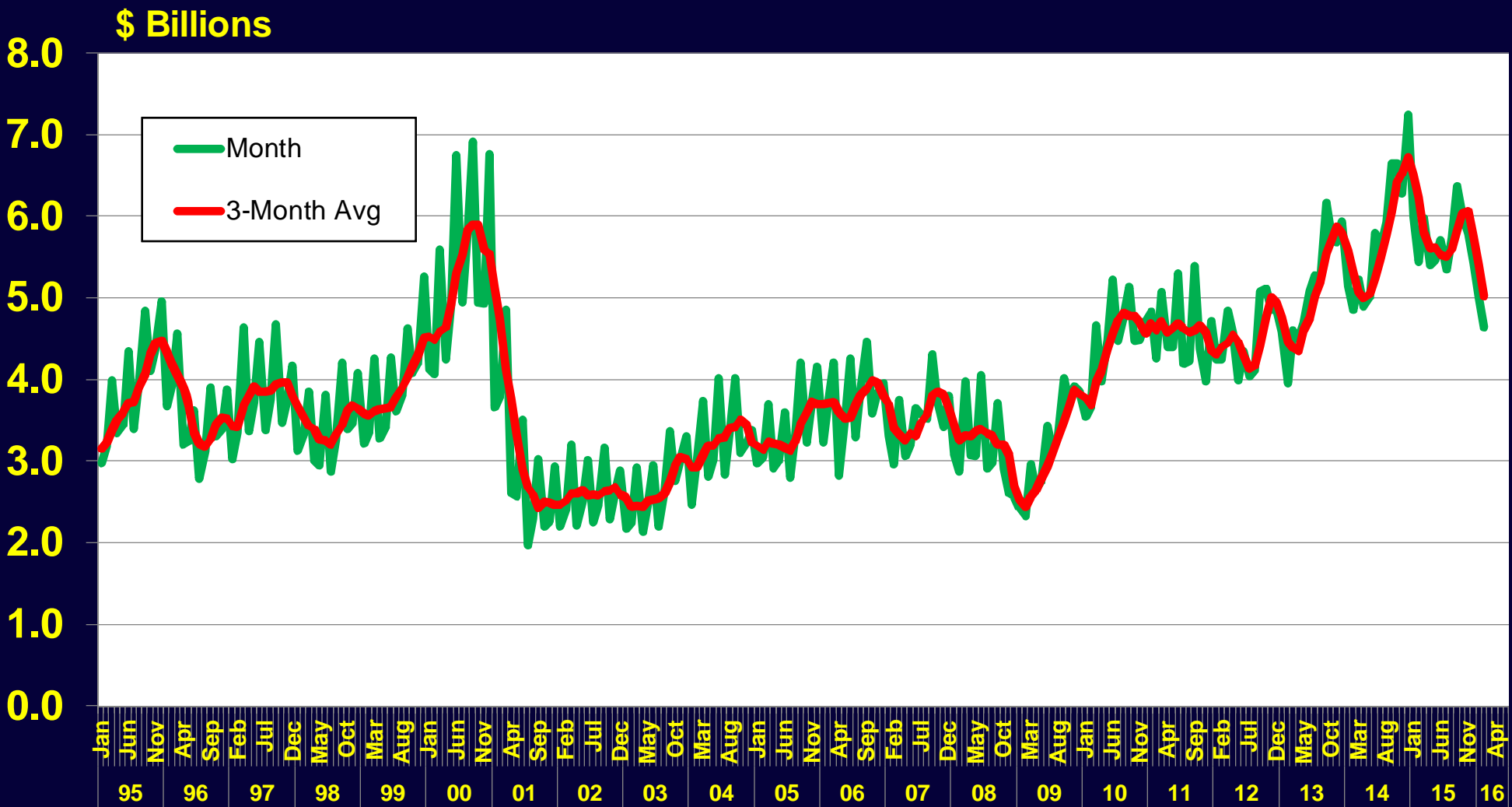


# CCG Semiconductor Leading Indicator vs. Global Semiconductor Shipments

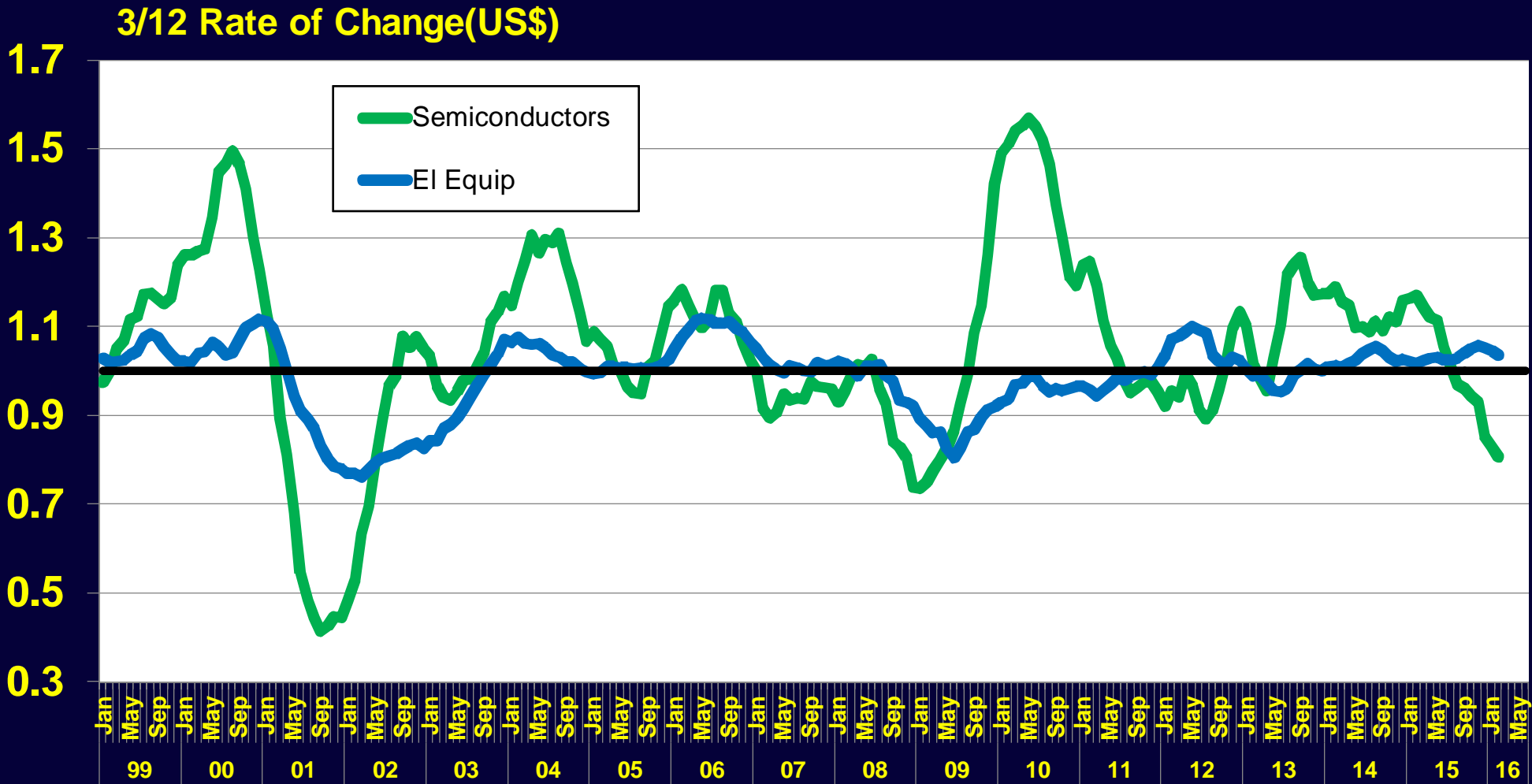


# N American Semiconductor Shipments

## 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/](http://www.sia-online.org/)  
U.S. Electronic Equipment Shipments [www.census.gov/indicator/www/m3/](http://www.census.gov/indicator/www/m3/)

## 2015 Worldwide Semiconductor Vendors Top 10 by Revenue (US\$ millions)

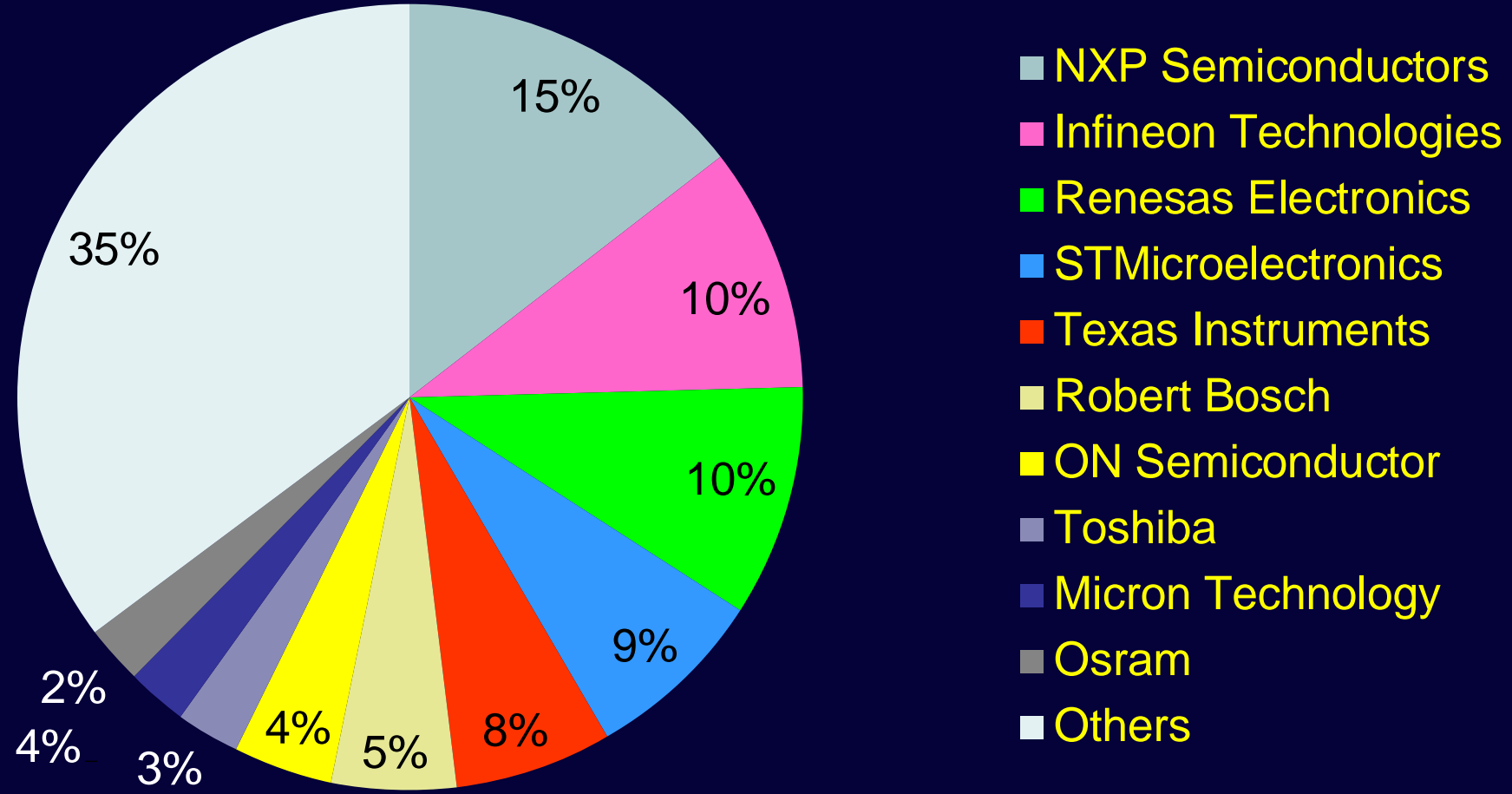
<u>Rank</u>	<u>Maker</u>	<u>2015</u>	<u>2015/2014</u>
1	Intel	51,690	-1.2%
2	Samsung Electronics	37,852	9.0%
3	SK Hynix	16,374	2.4%
4	Qualcomm	16,079	-16.7%
5	Micron Technology	13,816	-15.1%
6	Texas Instruments	11,533	0%
7	Toshiba	9,162	-14.1%
8	Broadcom	8,394	-0.4%
9	Infineon Technologies	6,808	19.6%
10	STMicroelectronics	6,800	-7.8%
	Others	156,260	-2.5%
	<b>Total</b>	<b>334,768</b>	<b>-2.3%</b>



# Top 10 Companies' Revenue From Shipments of Total Wafer-Level Manufacturing Equipment, Worldwide (Millions of U.S. Dollars)

2015	2014		2015	2015	2014	2015/2014
Rank	Rank	Vendor	Rev (\$M)	Mkt Share	Rev (\$M)	Growth %
1	1	Applied Materials	6420.2	19.1	6335.1	1.3
2	4	Lam Research	4808.3	14.3	3857.0	24.7
3	2	ASML	4730.9	14.1	5634.5	-16.0
4	3	Tokyo Electron	4325.0	12.9	4666.7	-7.3
5	5	KLA-Tencor	2043.2	6.1	2129.2	-4.0
6	6	Screen Semiconductor Solutions	971.5	2.9	1128.0	-13.9
7	10	Hitachi High-Technologies	788.3	2.3	937.3	-15.9
8	7	Nikon	724.2	2.2	818.1	-11.5
9	9	Hitachi Kokusai	633.8	1.9	599.3	5.7
10	13	ASM International	582.5	1.7	557.2	4.5
		Others	7576.7	22.5	7271.2	4.2
		Total Market	33604.3	100	33933.6	-1.0

# 2015 OE Automotive Semiconductor Vendor Share



# IT Spending, World

