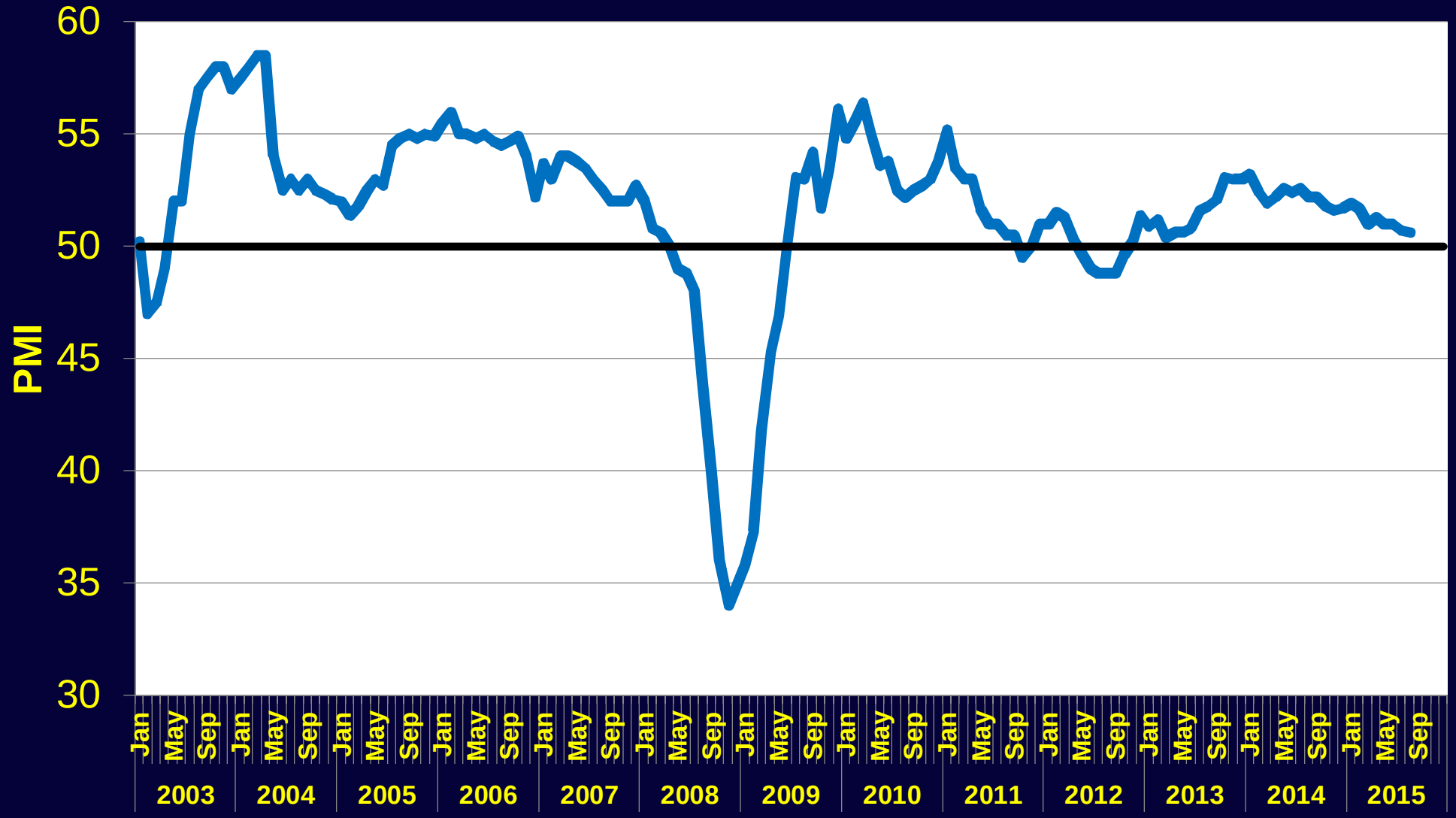
Chart 1

Global "Purchasing Managers" Index

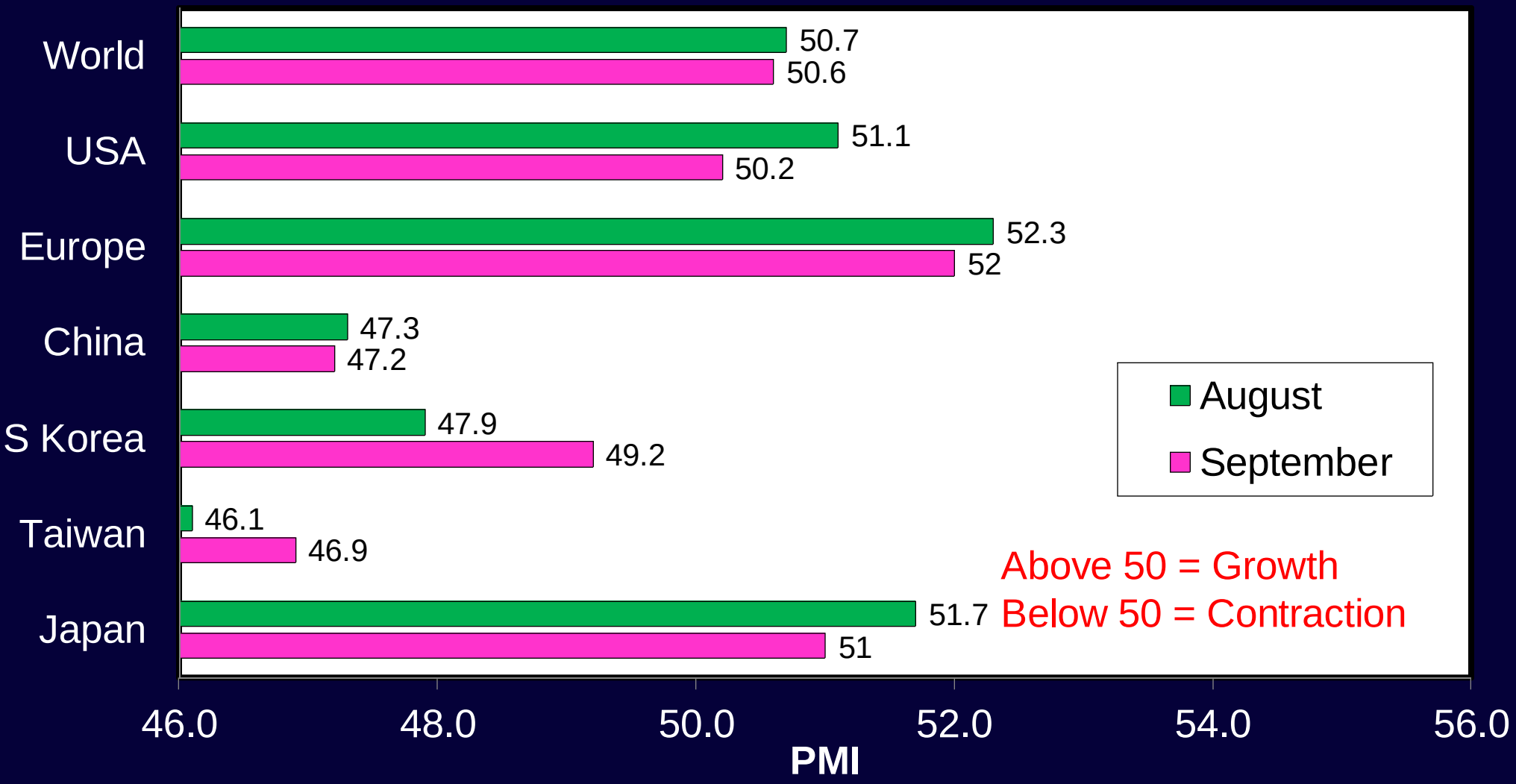
Diffusion Index, >50 = Growth



Markit Economics

Chart 2

Purchasing Managers' Indices
August vs. September 2015

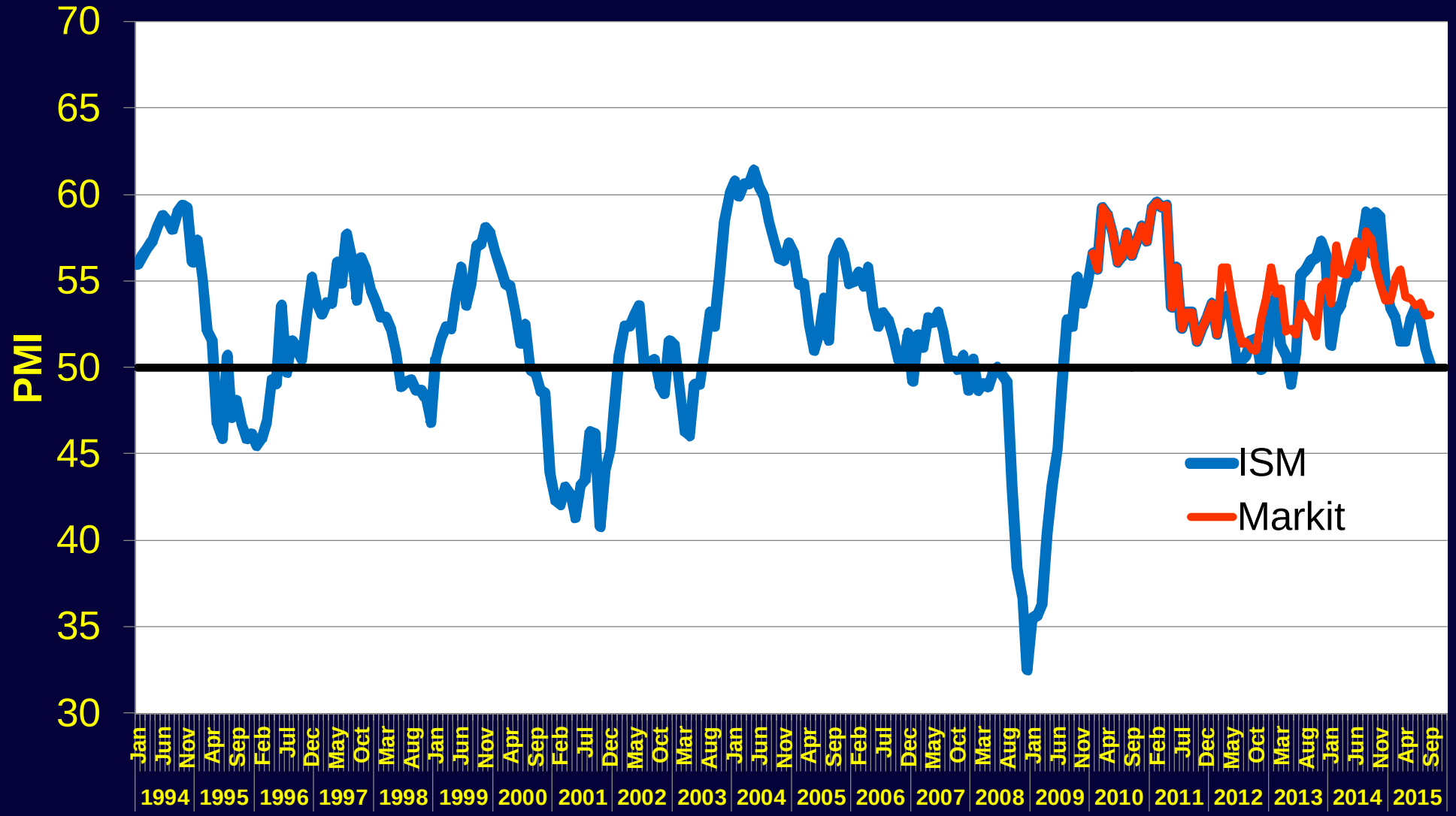


Markit Economics, JPMorgan and ISM

Chart 3

U.S "Purchasing Managers" Indices
ISM vs. Markit Economics

Diffusion Index, >50 = Growth

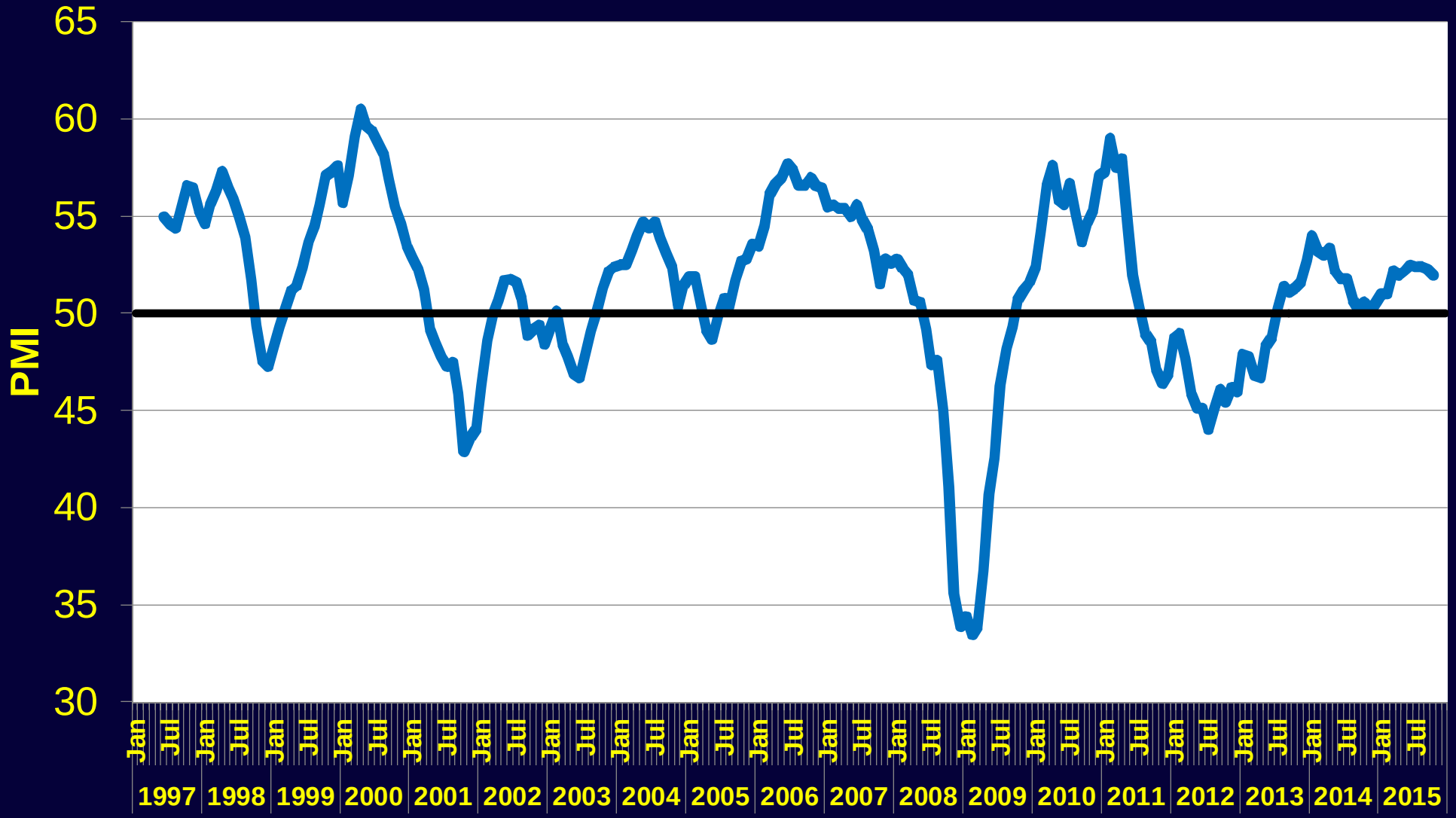


Markit Economics & ISM

Chart 4

Eurozone "Purchasing Managers" Index

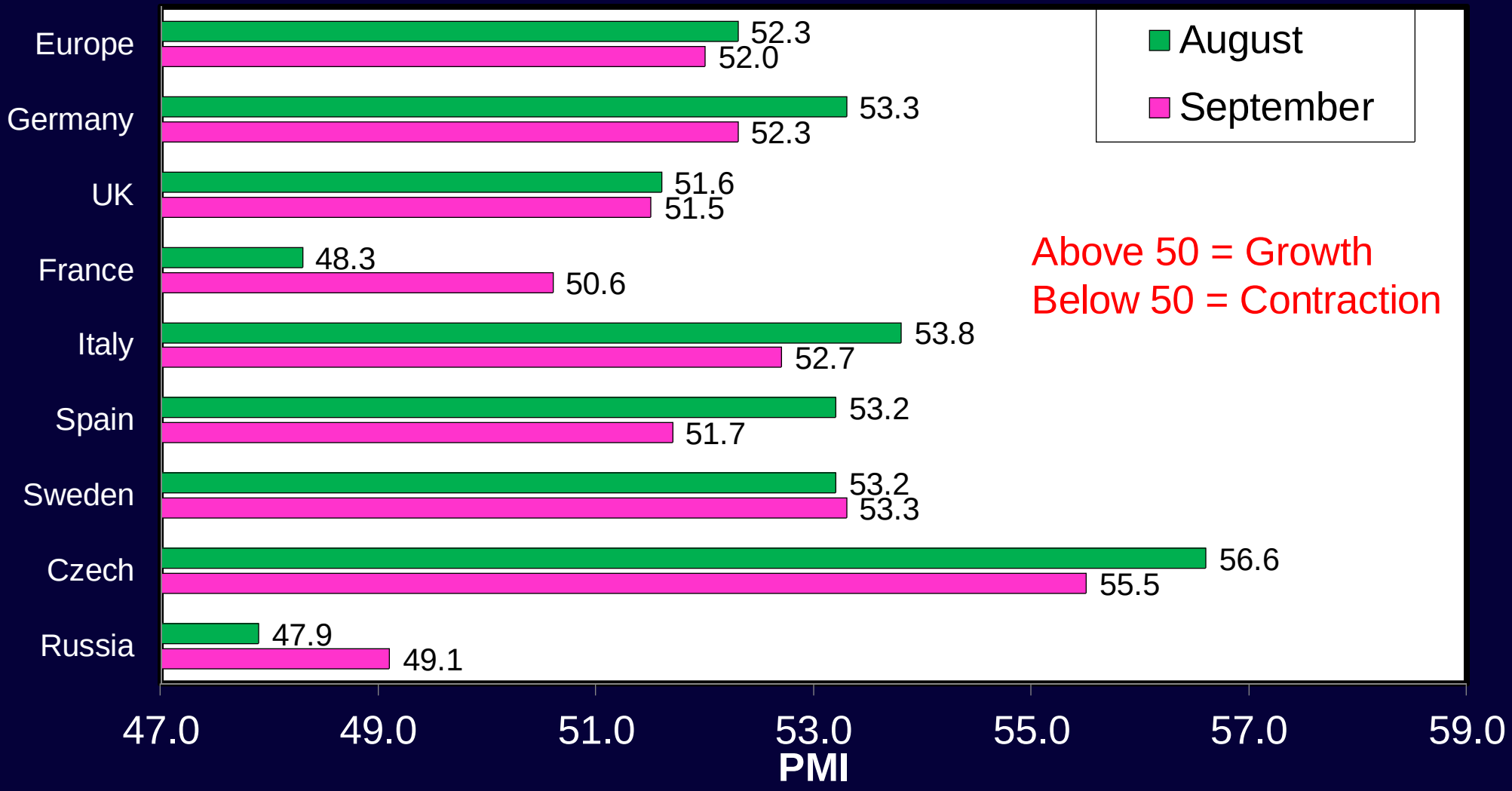
Diffusion Index, >50 = Growth



Markit Economics

Chart 5

European Purchasing Managers' Indices
September vs. August 2015

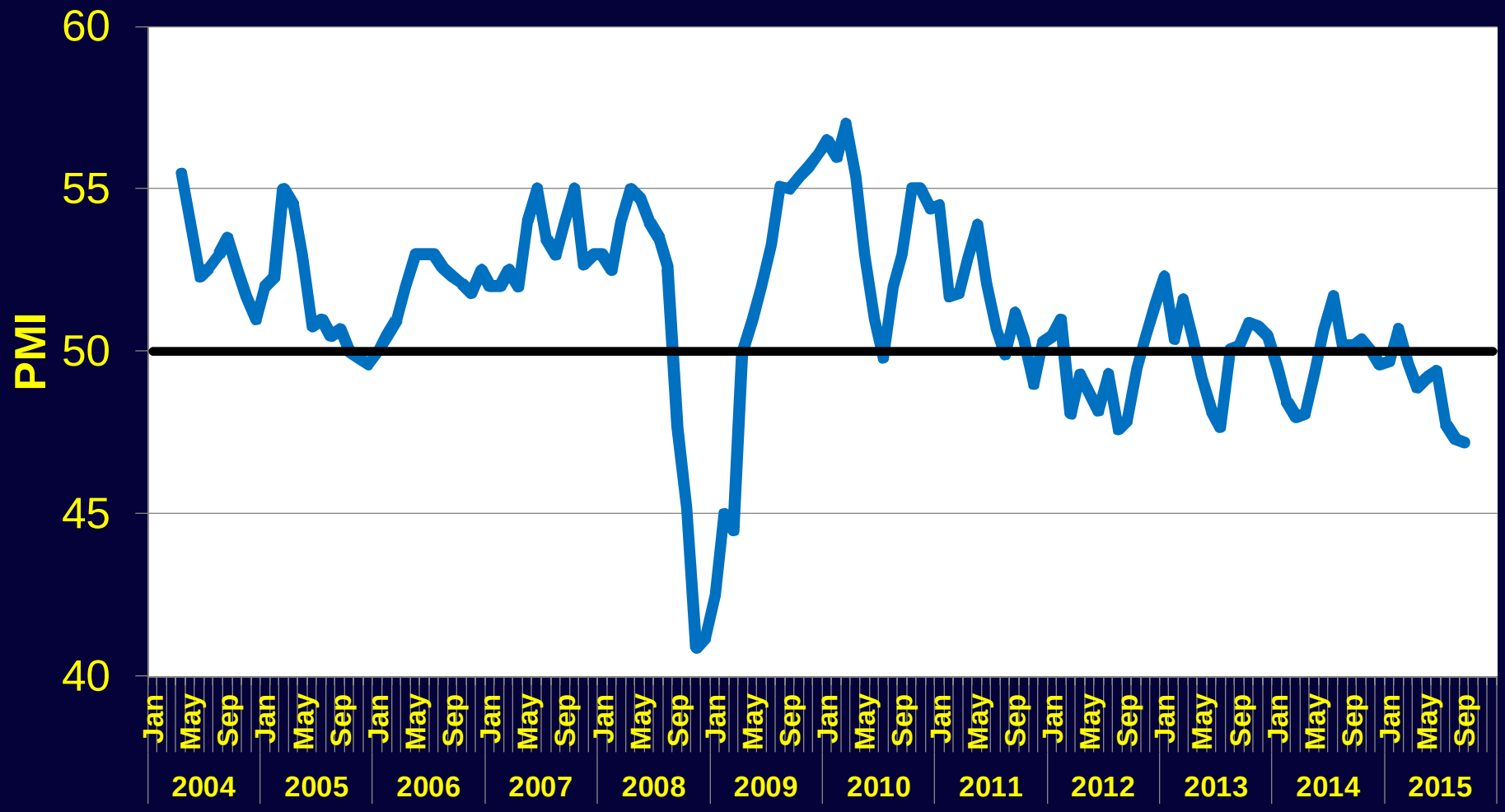


Markit Economics

Chart 6

China "Purchasing Managers" Index

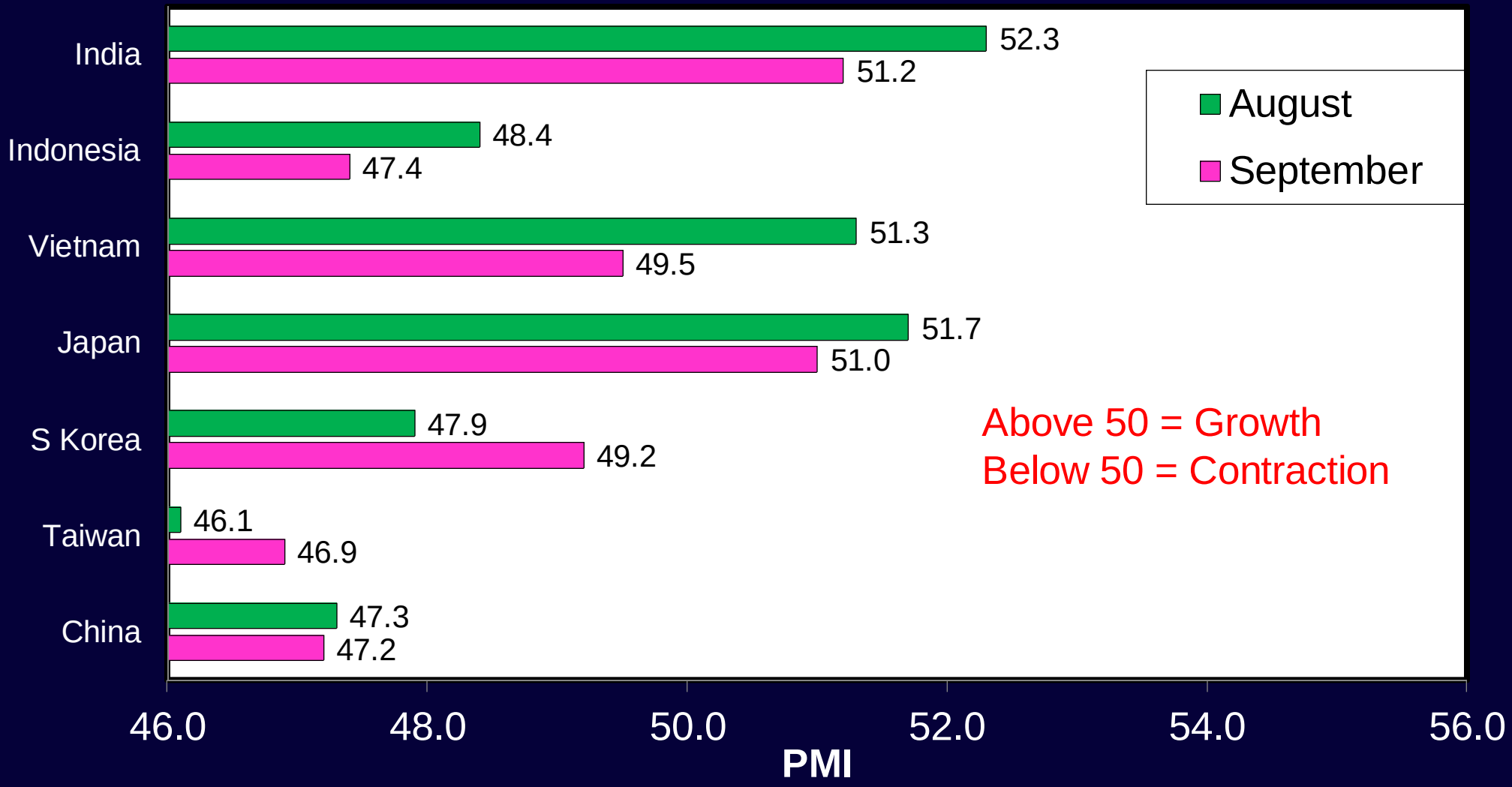
Diffusion Index, >50 = Growth



Markit Economics

Chart 7

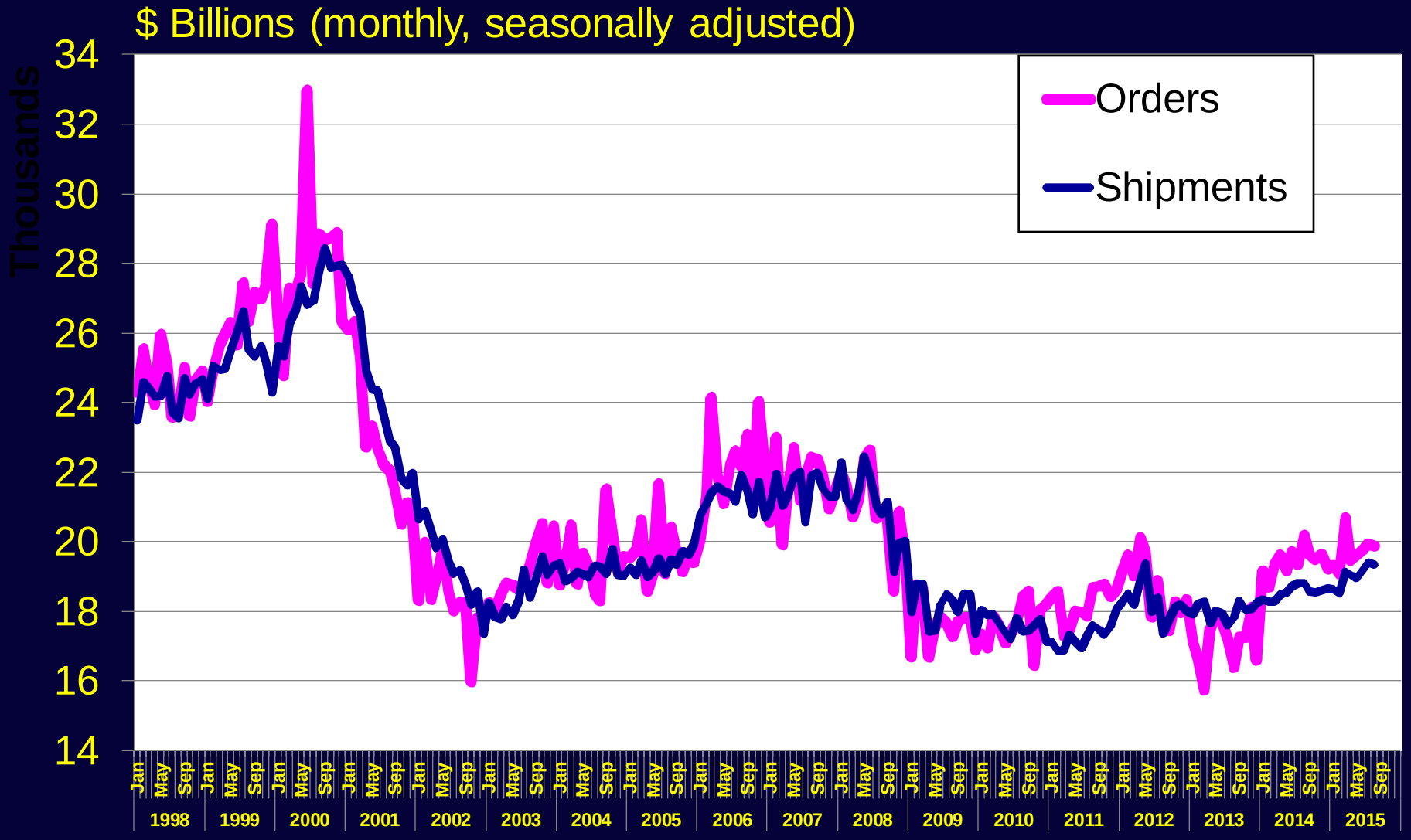
Asian Purchasing Managers' Indices
September vs. August 2015



Markit Economics

U.S. Electronic Equipment Orders & Shipments

Computer, Communications, Measurement & Control and Military

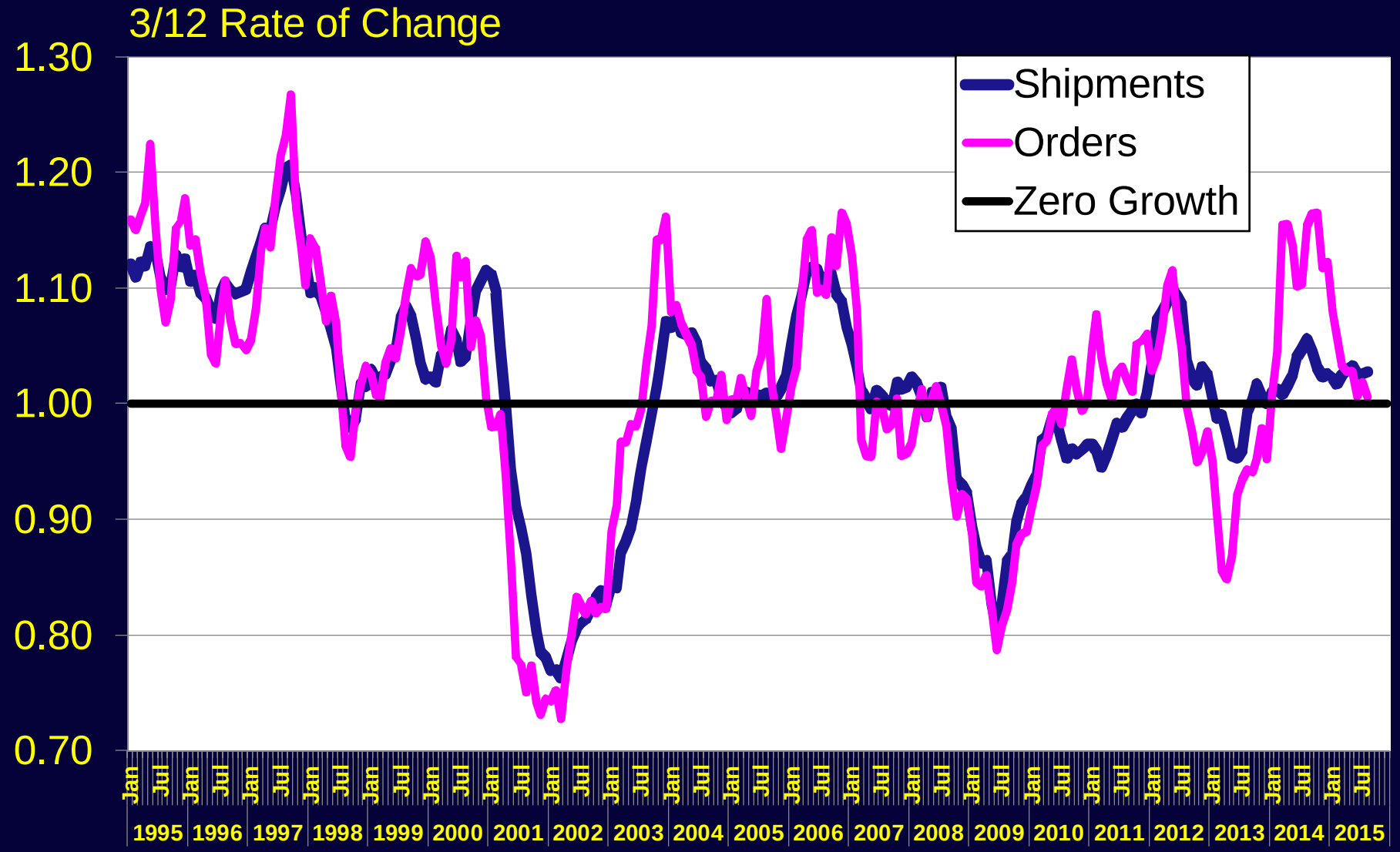


www.census.gov/indicator/www/m3/

Chart 9

U.S. Electronic Equipment Order & Shipment Growth

Computer, Communications, Measurement & Control and Military

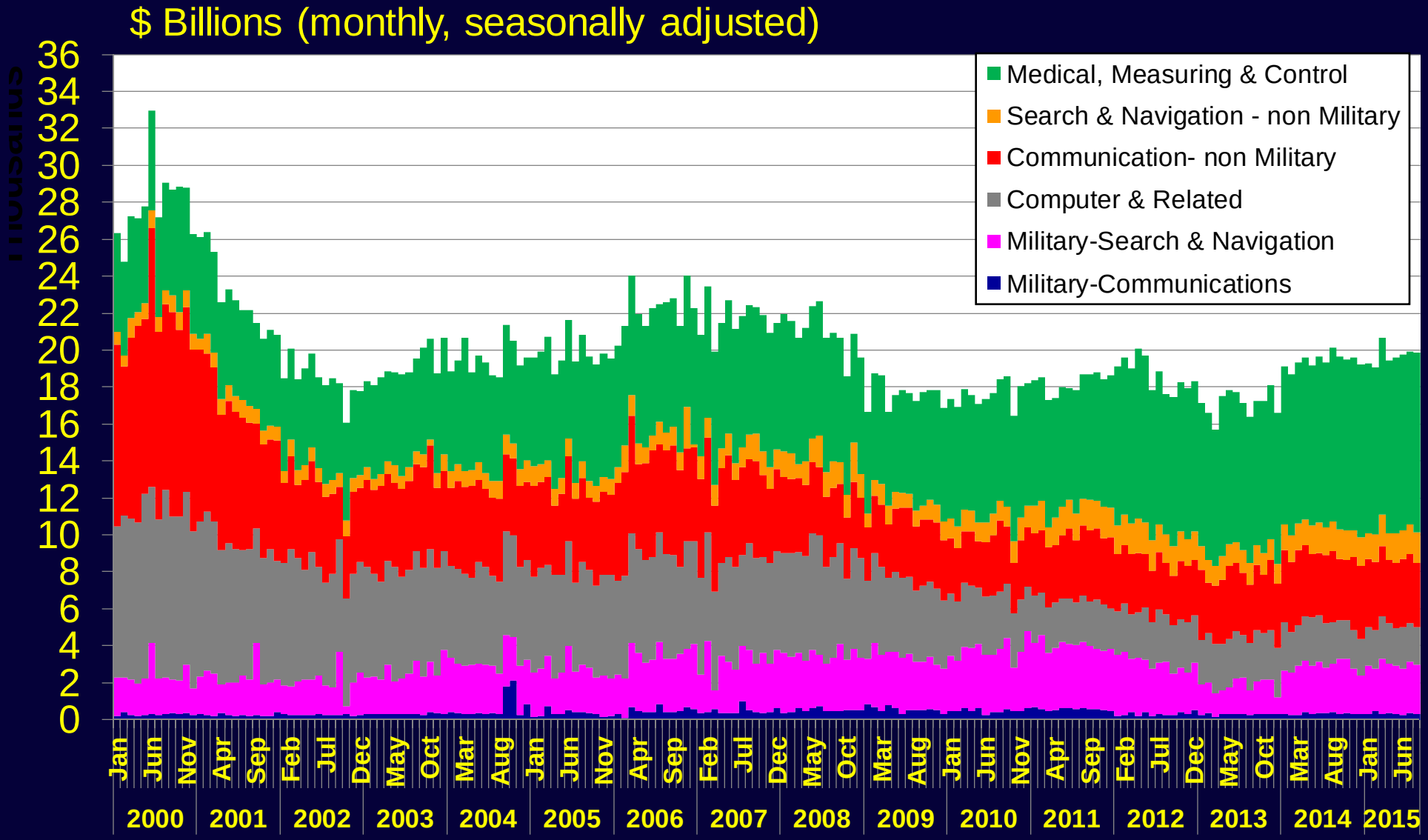


www.census.gov/indicator/www/m3/

Chart 10

U.S. Electronic Equipment Orders

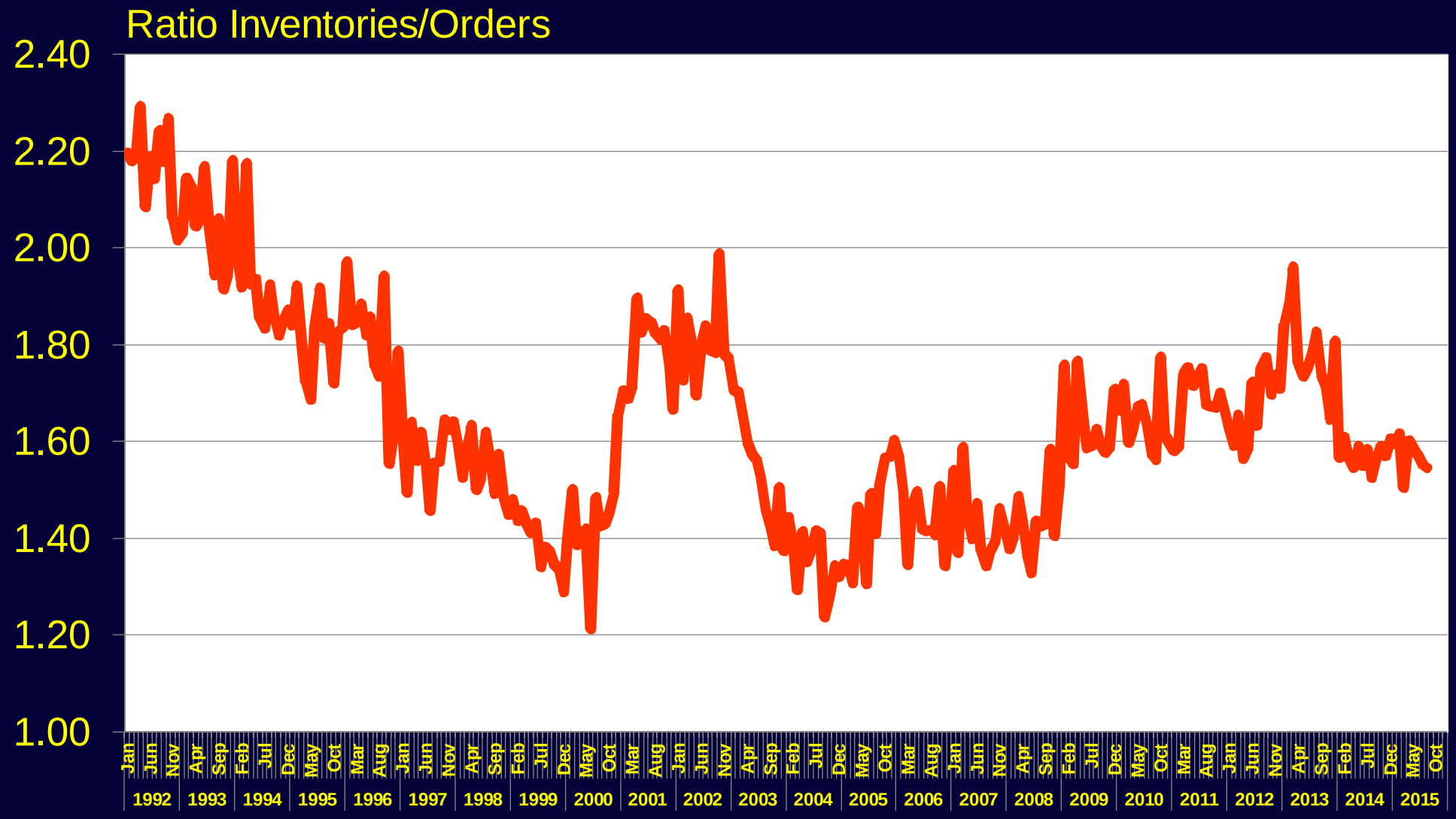
Monthly Data



www.census.gov/indicator/www/m3/

Chart 11

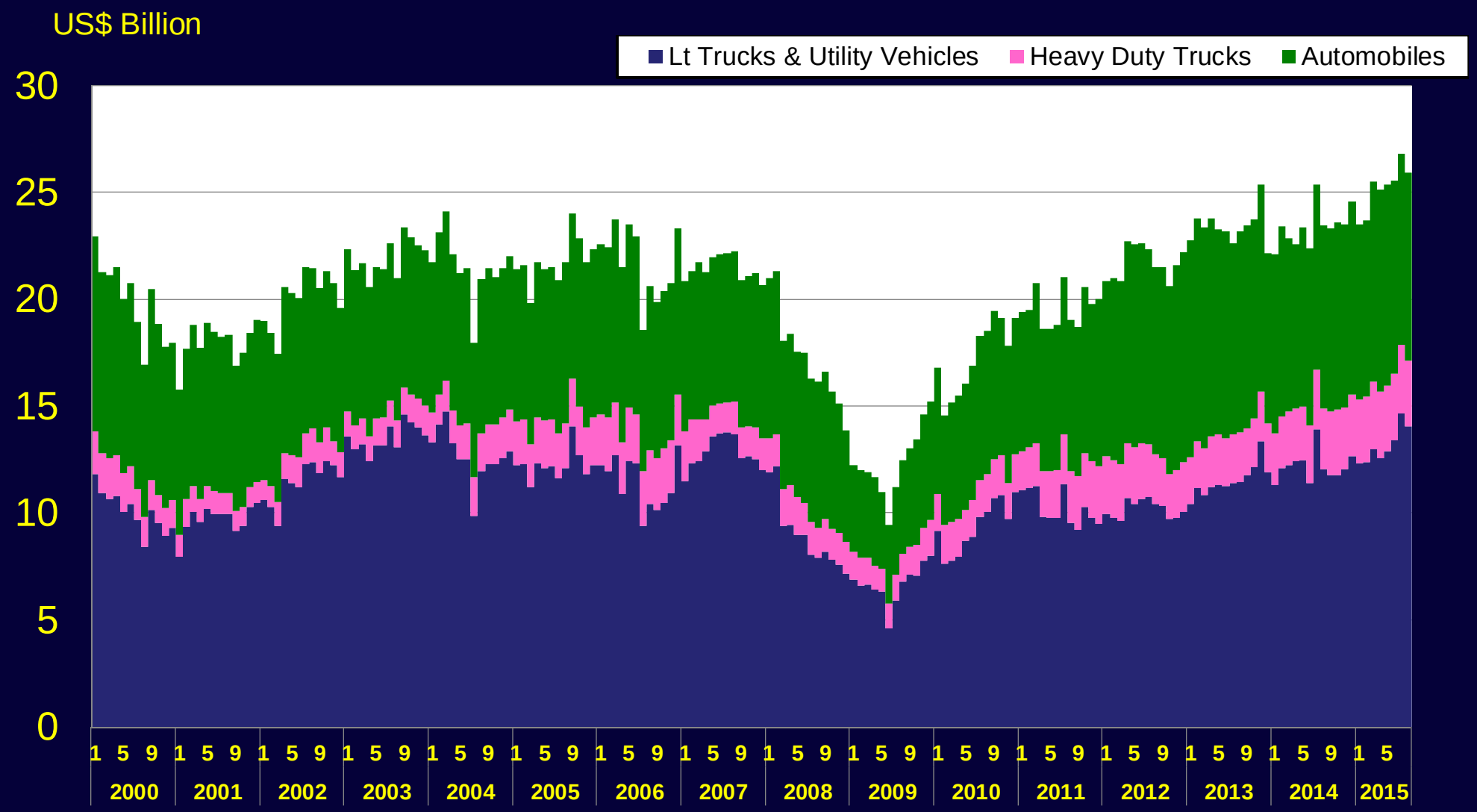
U.S. Electronic Equipment Inventories vs. Orders



www.census.gov/indicator/www/m3/

Chart 12

U.S. Vehicle Shipments

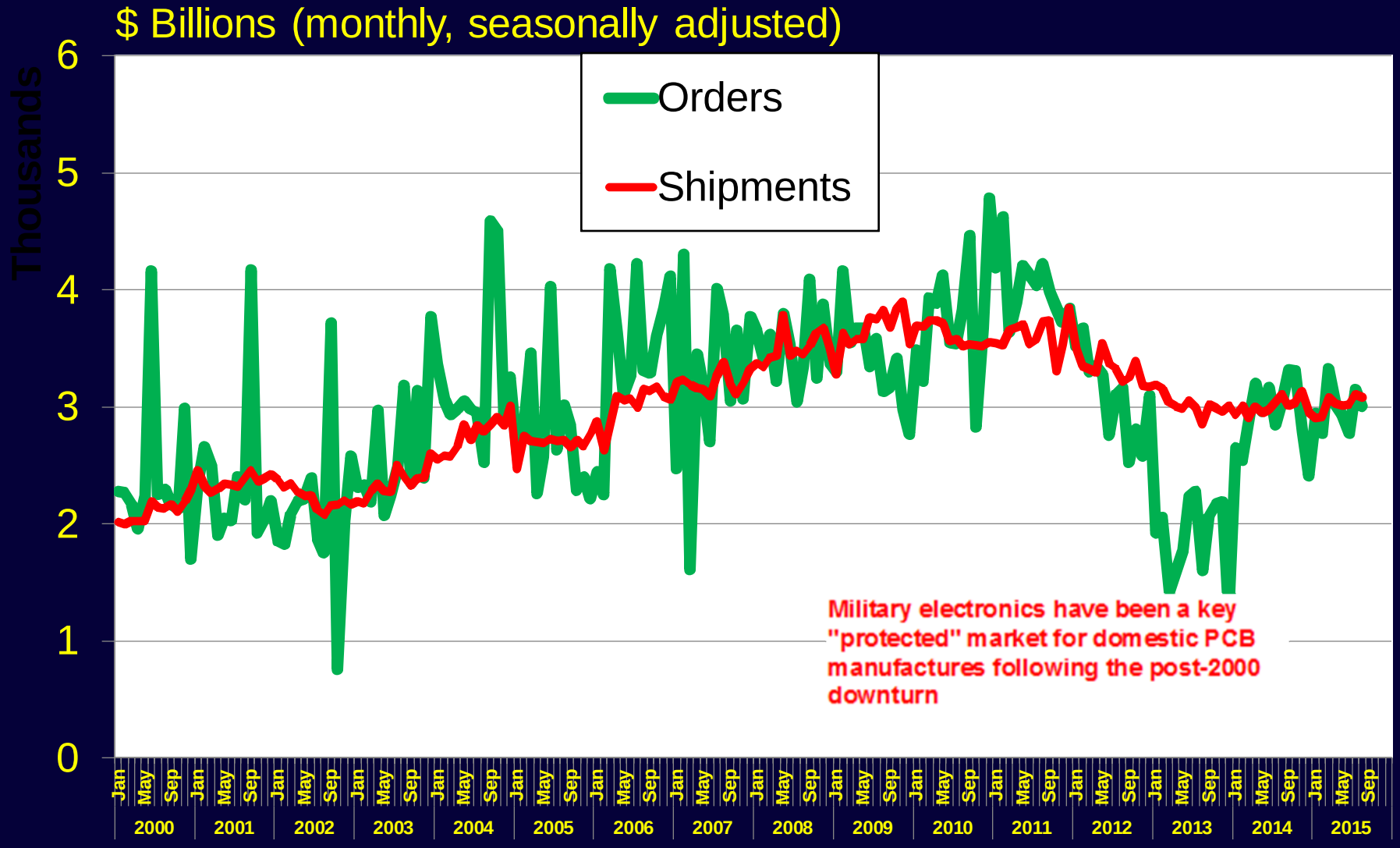


www.census.gov/indicator/www/m3

Chart 13

U.S. Military Electronics Orders & Shipments

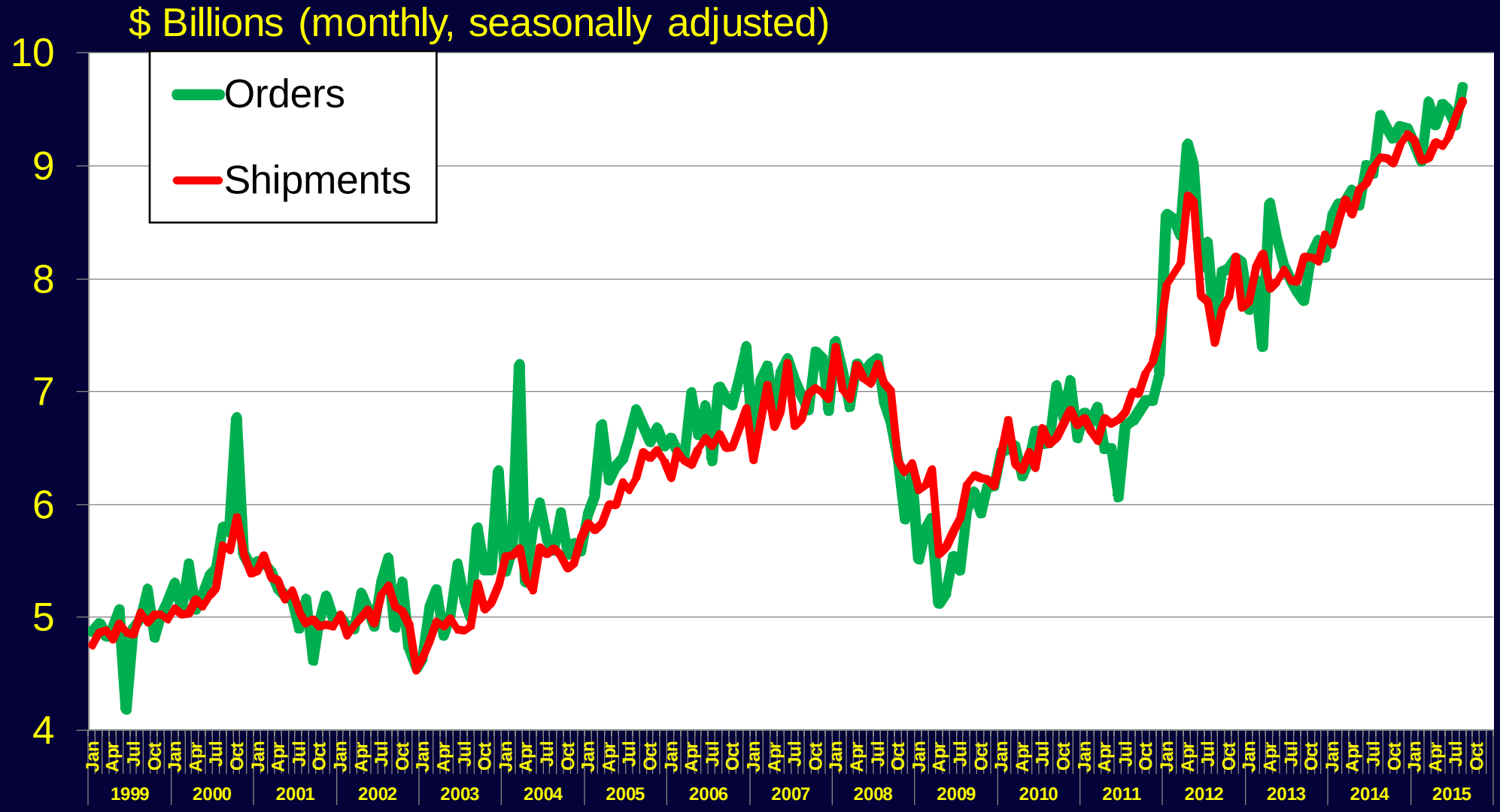
Defense Communication & Search & Navigation Equipment



www.census.gov/indicator/www/m3/

Chart 14

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

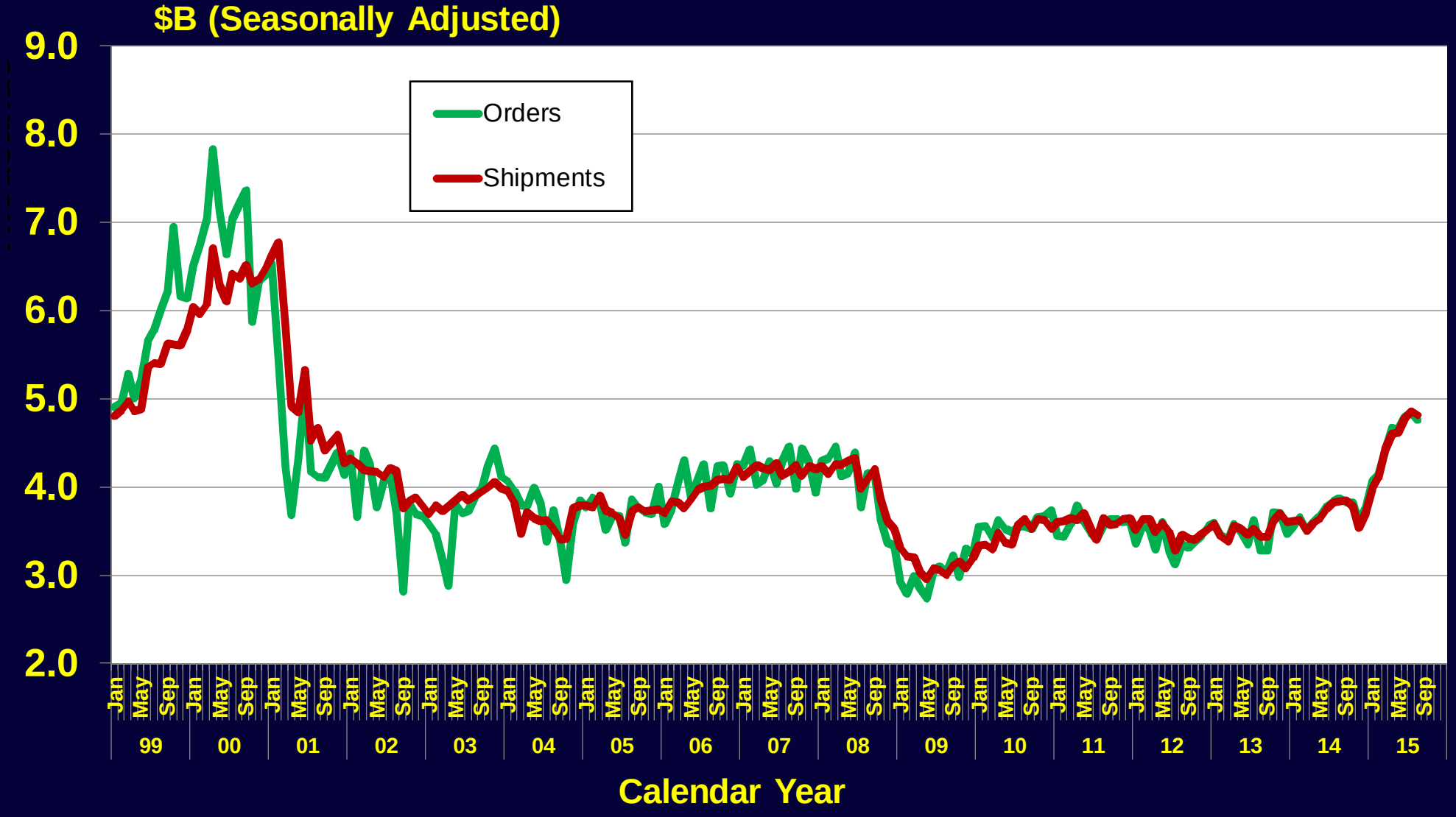


www.census.gov/indicator/www/m3/

Chart 15

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

Orders & Shipments



http://www.census.gov/indicator/www/m3/

Chart 16

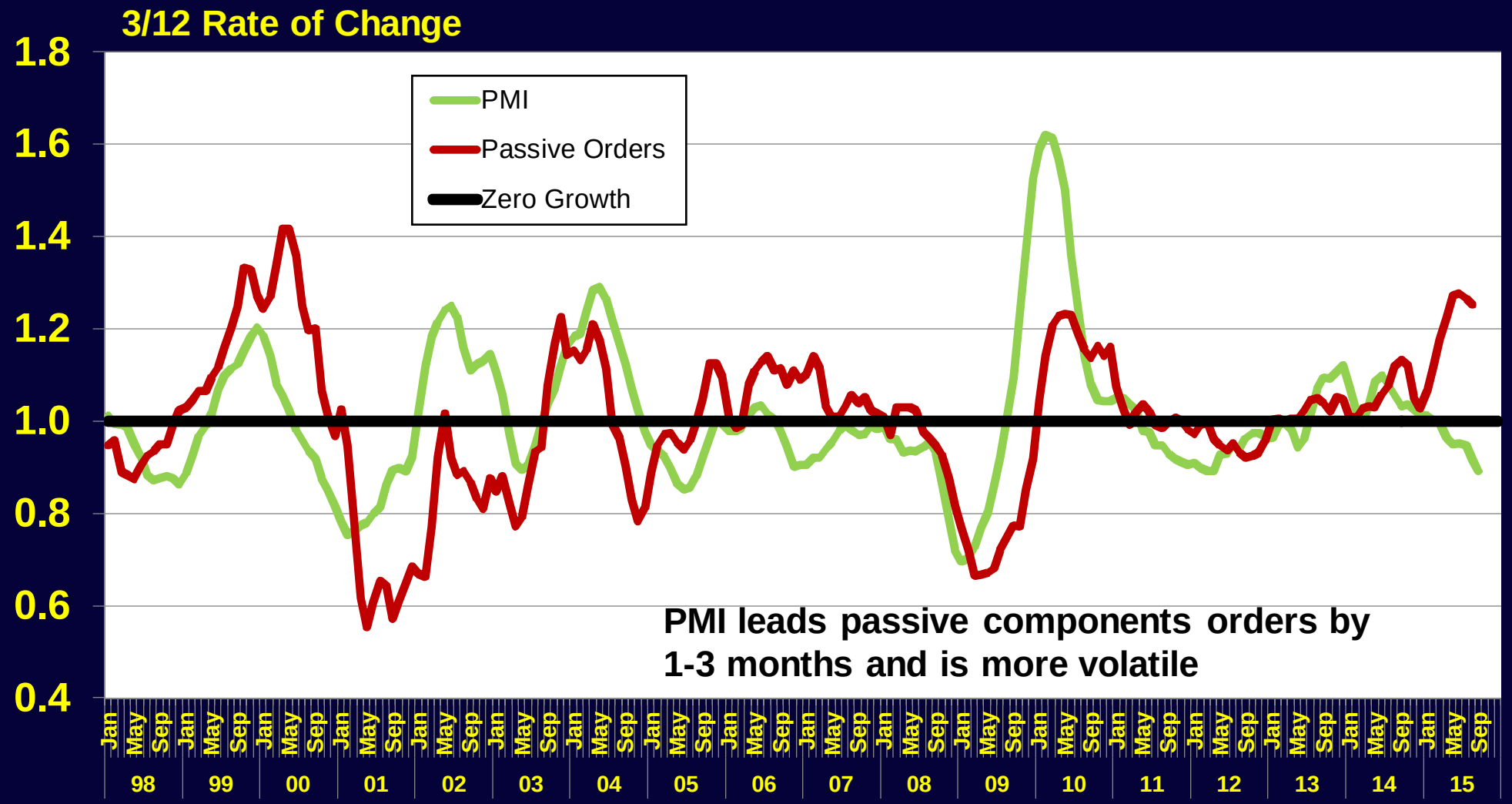
U.S. Passive Component Orders & Shipments



U.S. Dept of Commerce

Chart 17

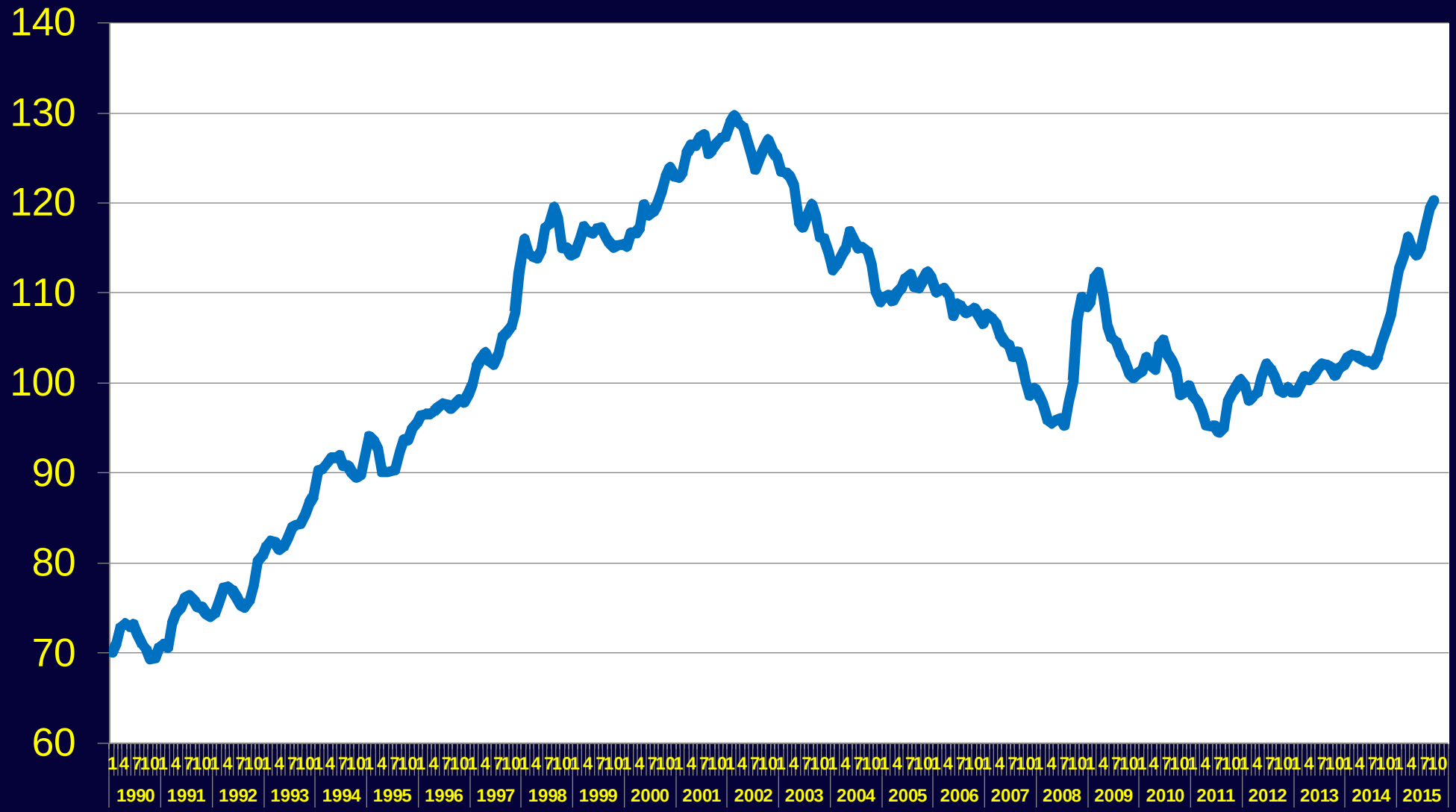
U.S. Passive Component Orders vs. U.S. PMI



Institute for Supply Management www.ism.ws/
U.S. Dept of Commerce

Chart 18

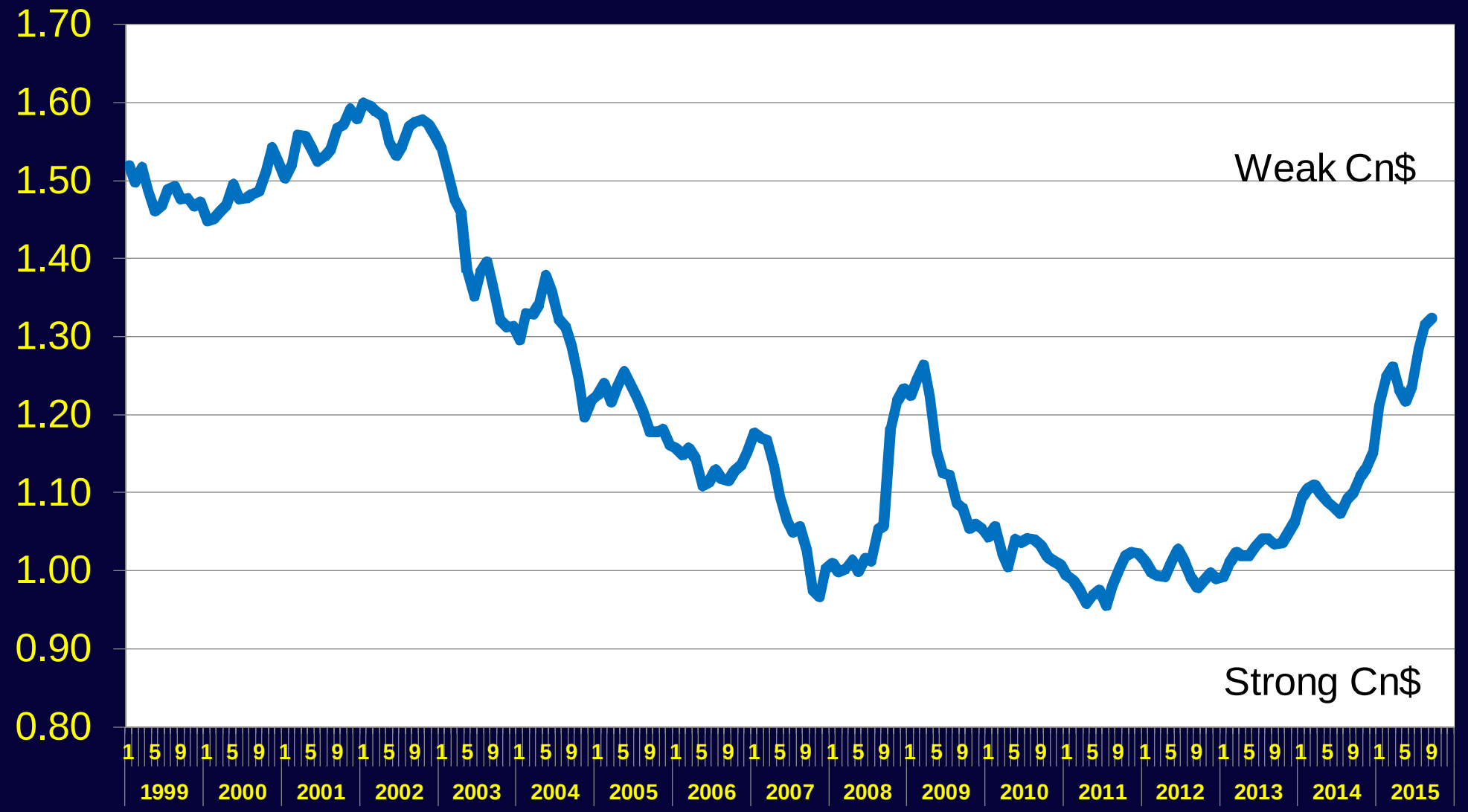
Trade-Weighted Exchange Value of U.S. Dollar Broad Index (January 1997=100)



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

Chart 19

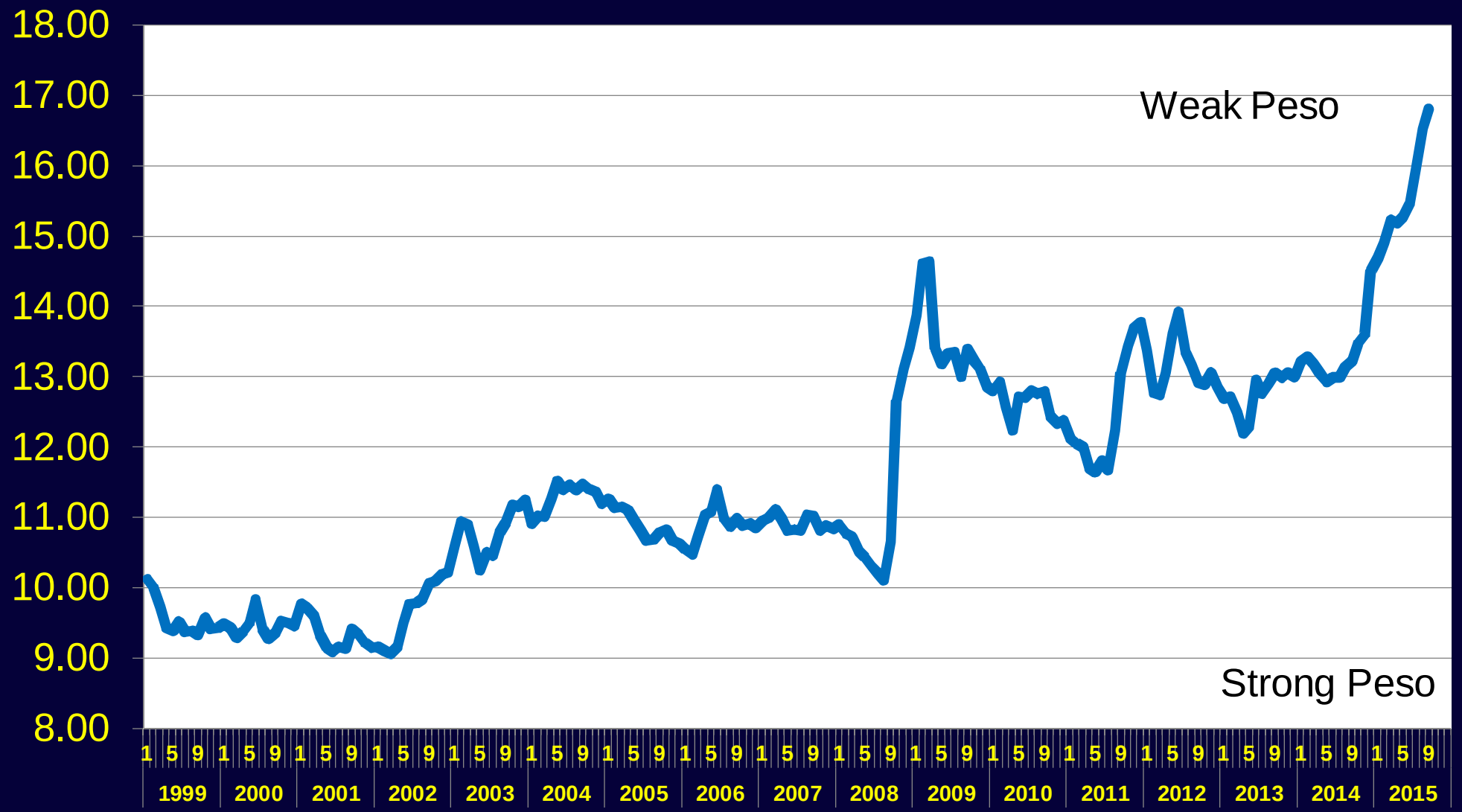
Canada $ vs. U.S. $



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

Chart 20

Mexico Peso vs. U.S. $

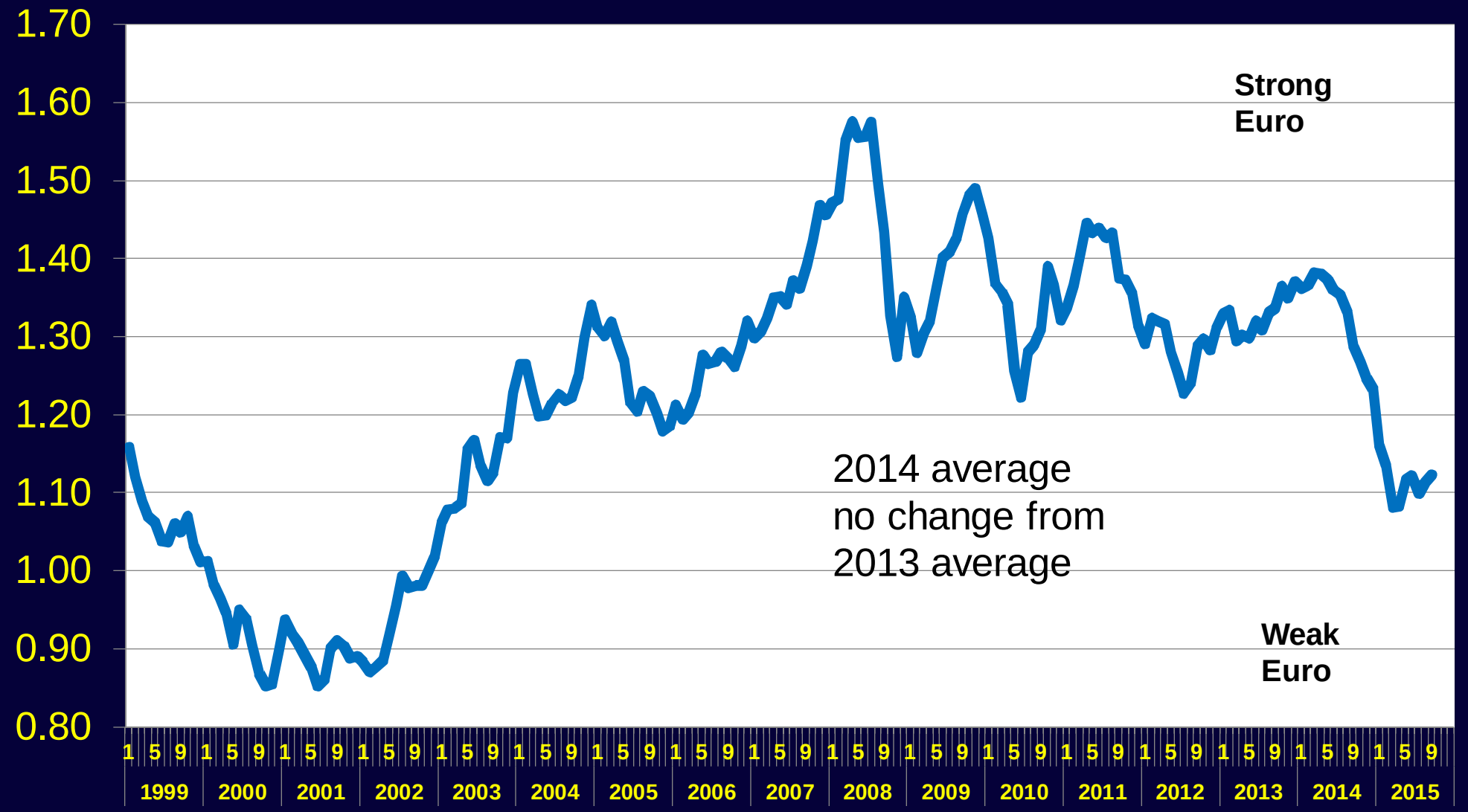


http://research.stlouisfed.org/fred2/series/TWEXBMTH

Chart 21

Euro vs. U.S. Dollar

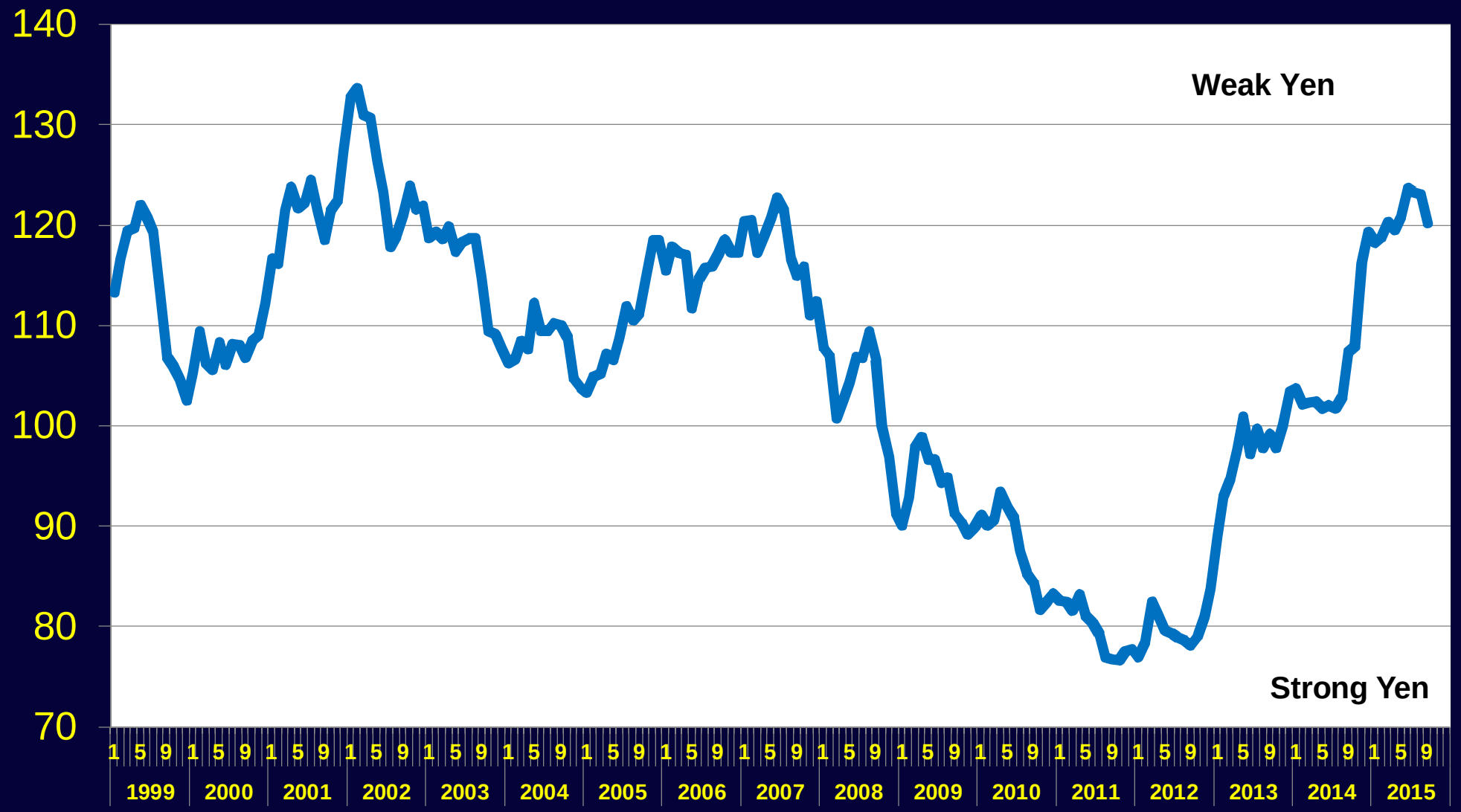
US$/Euro



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

Chart 22

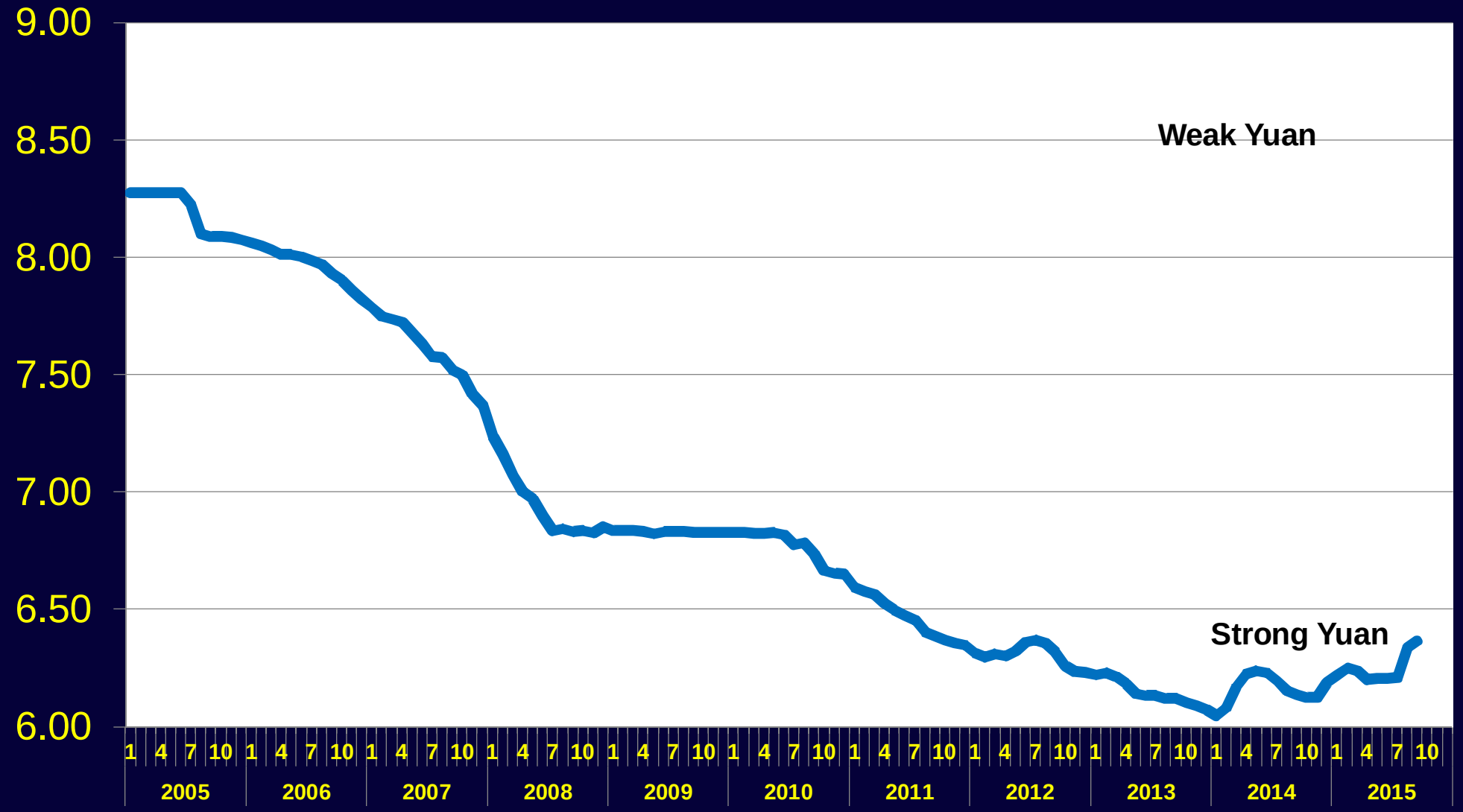
Japanese Yen vs. U.S. Dollar



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

Chart 23

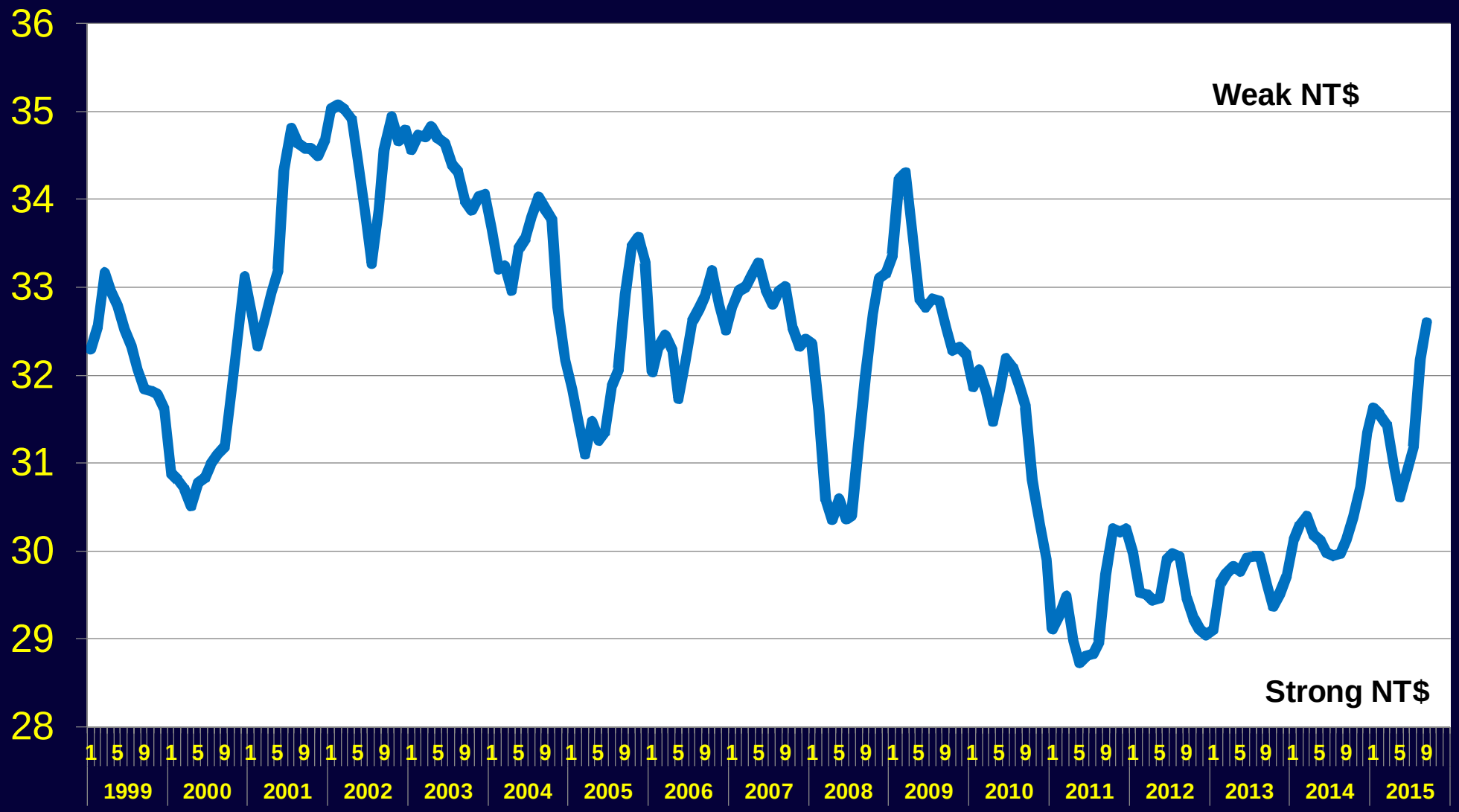
China Yuan vs. U.S. Dollar



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

Chart 24

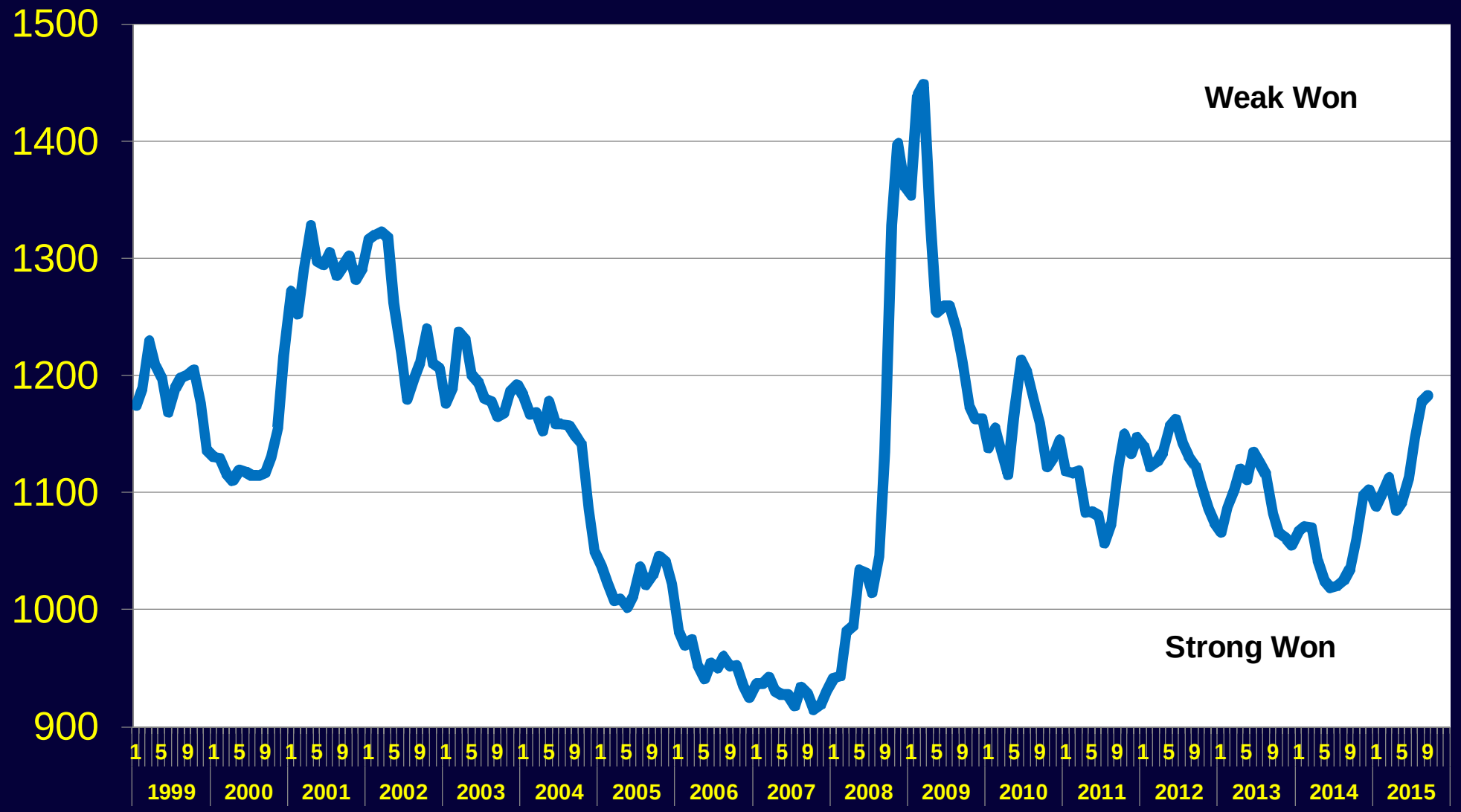
Taiwan vs. U.S. Dollar



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

Chart 25

S. Korean Won vs. U.S. Dollar

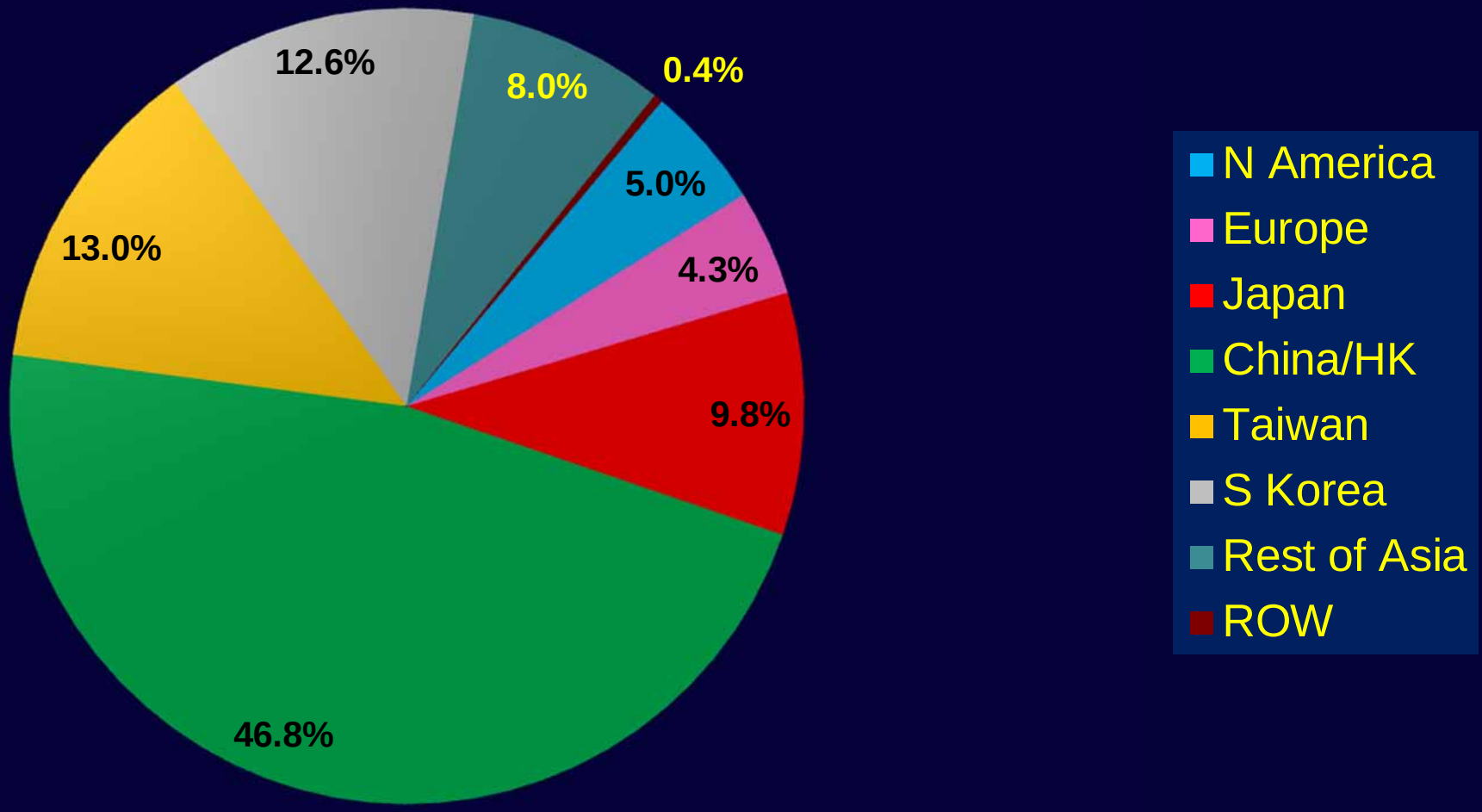


http://research.stlouisfed.org/fred2/series/TWEXBMTH

Chart 26

2014 World Total PCB Production by Geographical Area

(US$ M @ Average 2014 Exchange)



Total: $60.2 Billion

IPC 9/15

Chart 27

World's Top PCB Companies – 2014 1-25

Rank	Company	Nationality	2013	2014	Growth	Brief Comments
1	Nippon Mektron*	Japan	2,209	3,176	43.78%	A big Apple supplier
2	ZDT*	Taiwan	2,106	2,483	17.90%	A big Apple supplier
3	Unimicron	Taiwan	2,009	2,130	6.02%	Building PCB plants in Huangxi
4	SEMCO	S. Korea	1,795	1,562	-12.98%	Building plants in Vietnam
5	Young Poong Grp*	S. Korea	2,100	1,523	-27.48%	Interflex & YPE poor in 2014
6	Ibiden	Japan	1,315	1,493	13.54%	Boosting growth from Malaysia
7	TTM Technologies	USA	1,326	1,422	7.24%	Purchased Viasystems on 5/'15
8	Sumitomo Denko*	Japan	1,121	1,414	26.14%	A big Apple supplier
9	Tripod	Taiwan	1,337	1,391	4.08%	Pushing into automotive PCB
10	Viasystems	USA	1,171	1,204	2.82%	Purchased by TTM 5/31/2015
11	Daeduck Group	S. Korea	1,297	1,159	-10.64%	Careful investment
12	Nanya PCB	Taiwan	1,016	1,146	8.09%	IC substrates seem to grow
13	Compeq	Taiwan	1,013	1,110	9.55%	Chongqing plant contributing
14	PSA PCB Group	Taiwan	957	970	1.36%	NB mortherboards reduced
15	KG PCB Group	China	922	963	4.45%	Elec& Eltek is the largest
16	AT&S	Austria	784	886	13.01%	CKG plant starts business soon
17	Meiko	Japan	692	850	22.83%	#3 automotive PCB maker
18	Kinsus	Taiwan	757	818	7.97%	Flip-Chip CSP strong
19	LG Innotek	S. Korea	581	791	36.14%	LGE & Qualcomm
20	T.P.T.	Taiwan	684	784	14.60%	NB motherboards increasing
21	Multek	USA	730	750	2.74%	Profitable since Oct 2013
22	WUS Group	Taiwan	658	698	6.08%	Kunshan & Huangxi new plants
23	Chin Poon	Taiwan	634	697	9.93%	#1 automotive PCB maker
24	CMK	Japan	621	689	10.95%	#2 automotive PCB maker
25	Nitto Denko*	Japan	485	684	41.03%	FPC for HDD among others

Chart 28

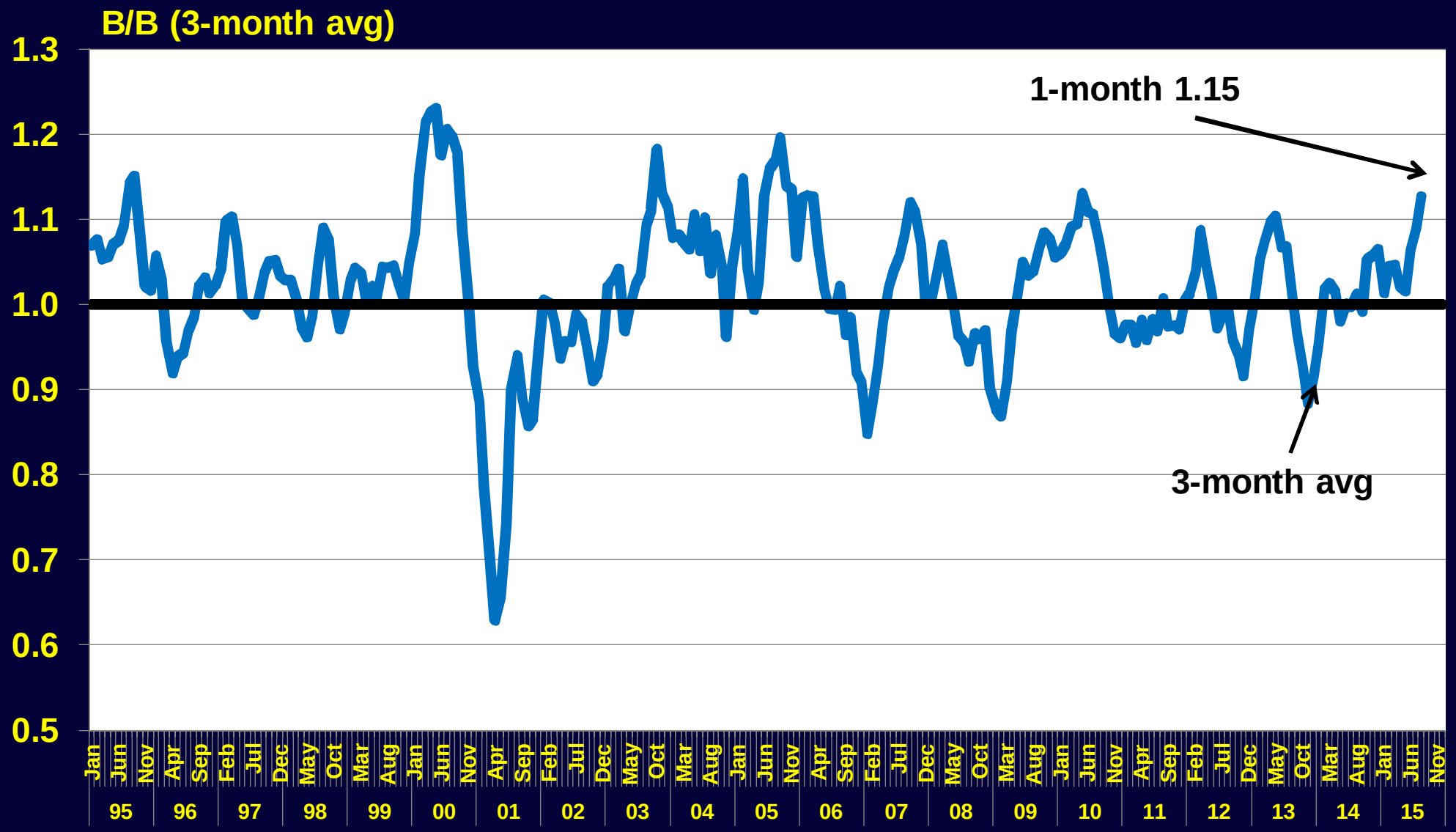
World's Top PCB Companies – 2014
26-50

Rank	Company	Nationality	2013	2014	Growth	Brief Comments
27	Fujikura*	Japan	358	662	80.00%	A big Apple supplier
28	Gold Circuit	Taiwan	593	661	13.35%	Network & Servers
29	Mflex*	USA	788	633	-19.67%	A big Apple supplier
30	Simmtech	S. Korea	513	621	21.05%	Recovered from fire
31	Kyocera CS	Japan	523	570	8.99%	$1.9 billion if ceramic included
32	Career*	Taiwan	443	528	19.33%	A big Apple supplier
33	Isu-Petasys	S. Korea	520	522	0.38%	S.Korea, China & US plants
34	Shennan	China	425	480	12.94%	Wuxi plant inaugurated
35	Ellington	China	450	460	2.22%	Trying hard for automotive
36	Unitech	Taiwan	435	455	4.60%	HDI & automotive
37	Flexium*	Tawian	448	429	-3.92%	A big Apple supplier
38	Founder	China	380	423	11.32%	2nd largest China-based maker
39	SI Flex*	S. Korea	726	419	-42.29%	Poor Samsung business
40	ASE	Tawian	327	360	10.09%	Expanding capacity
41	Kinwong	China	301	374	24.25%	Jinagxi plant contributing
42	Sanmina	USA	360	360	0.00%	US (3), Sinagpore & Wuxi
43	Dynamic	Tawian	331	350	6.01%	Into automotive PCB
44	Kyoden	Japan	280	340	21.43%	Thai plant expanding
45	KCE	Thailand	300	340	13.33%	Huge new plant in Latkrabang
46	Wuzhou	China	298	330	10.74%	Emphasis on HDI & FPC
47	Ichia Technology*	Tawian	203	324	59.60%	Over 90% comes from FPC
48	CCTC	China	302	324	7.28%	HDI is high
49	MGC Group	Japan	247	316	27.93%	JCI & Tai Hong Industry
50	Hitachi Chemical	Japan	288	308	6.94%	Singapore is important

Chart 29

Rigid & Flexible PCB Book/Bill

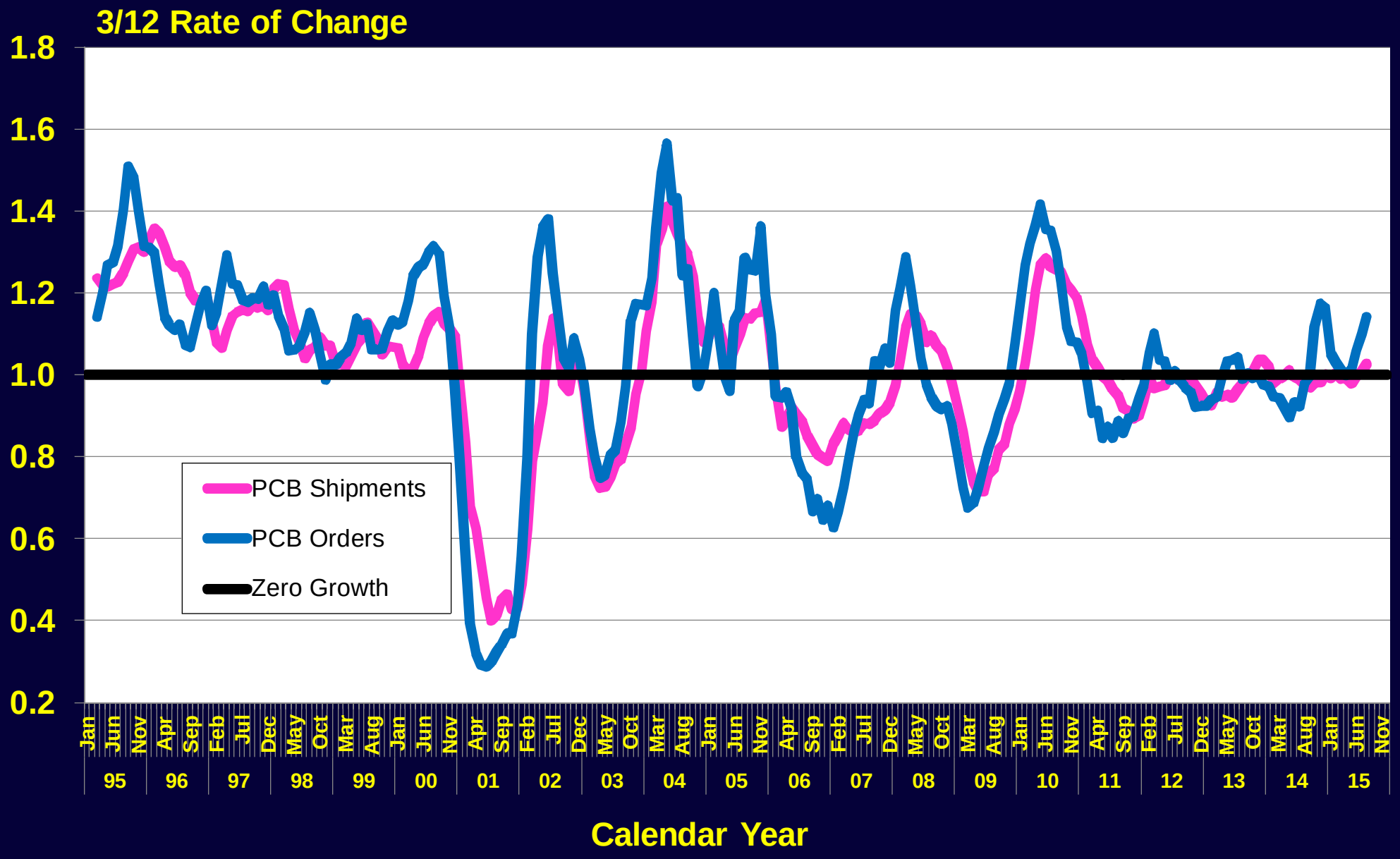
N. America



IPC

Chart 30

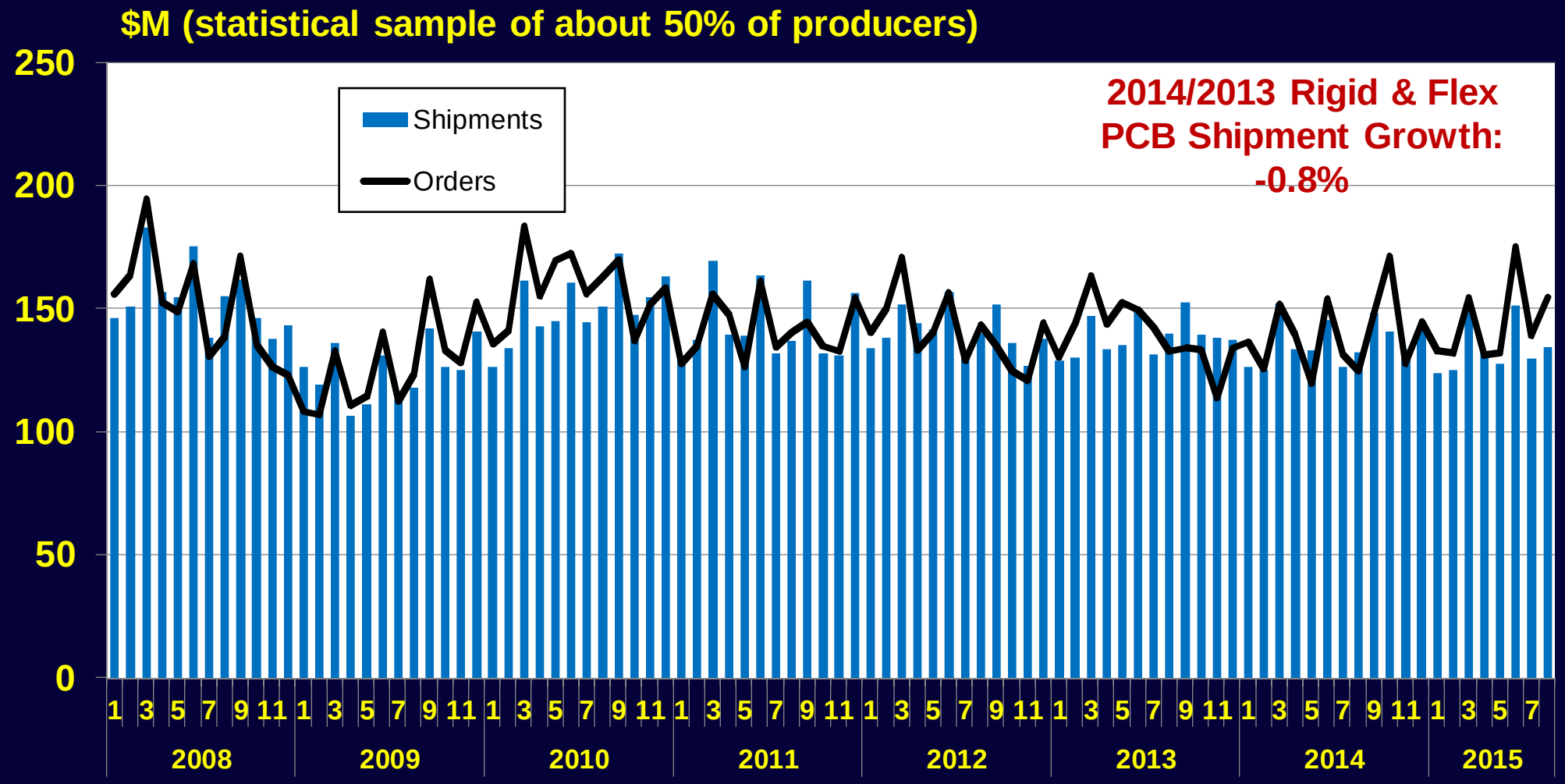
N. America Rigid & Flexible PCB Orders & Shipments



Data: IPC T/MRC & http://www.census.gov/indicator/www/m3/

Chart 31

N American Rigid & Flexible PCB Shipments & Orders



Note: IPC survey captures "market" not domestic production. About 15% of the above represents imported boards resold by N American PCB producers in survey.

IPC

Chart 32

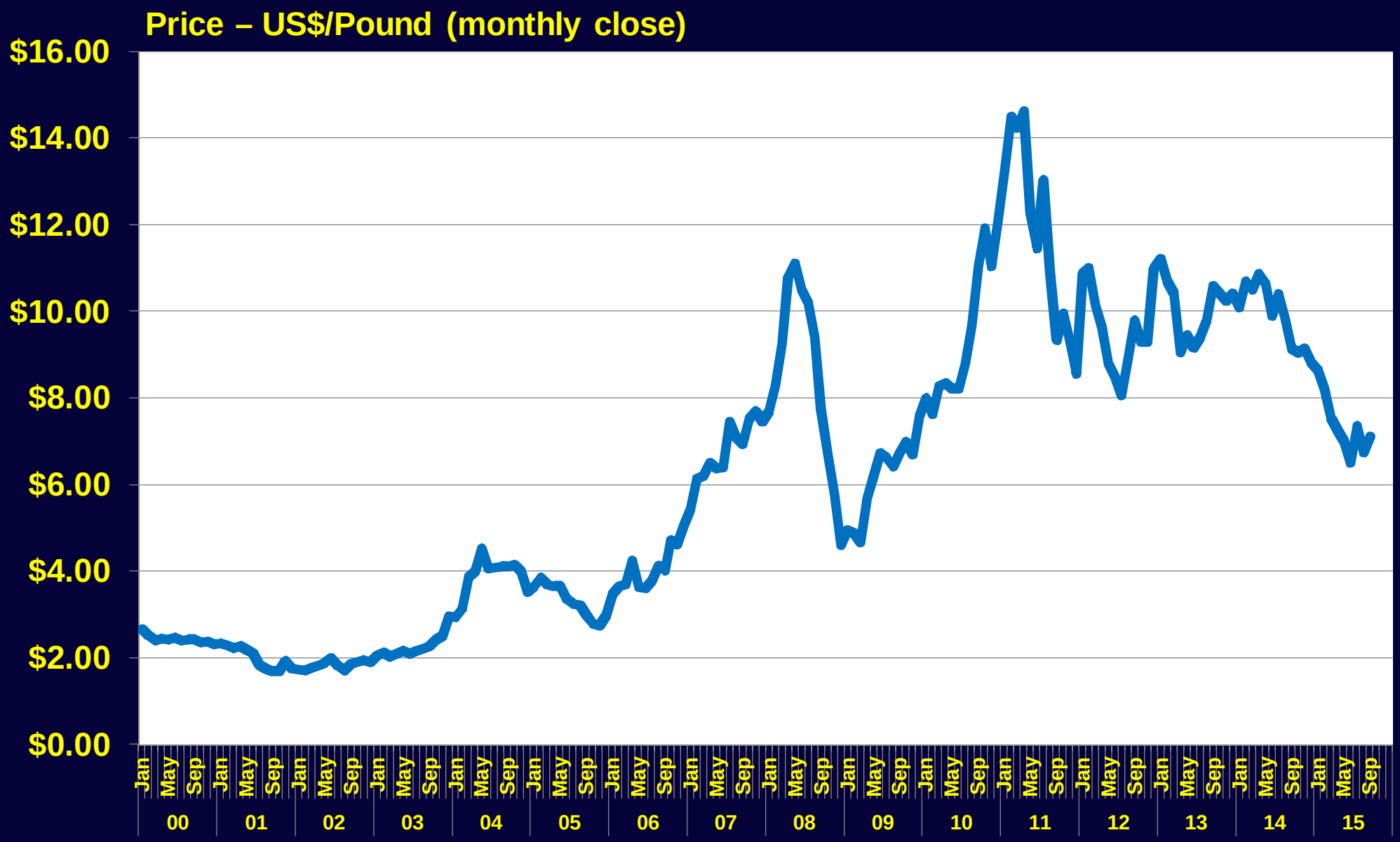
Copper, High Grade (HG, Comex)



http://futures.tradingcharts.com/chart/CP/B9

Chart 33

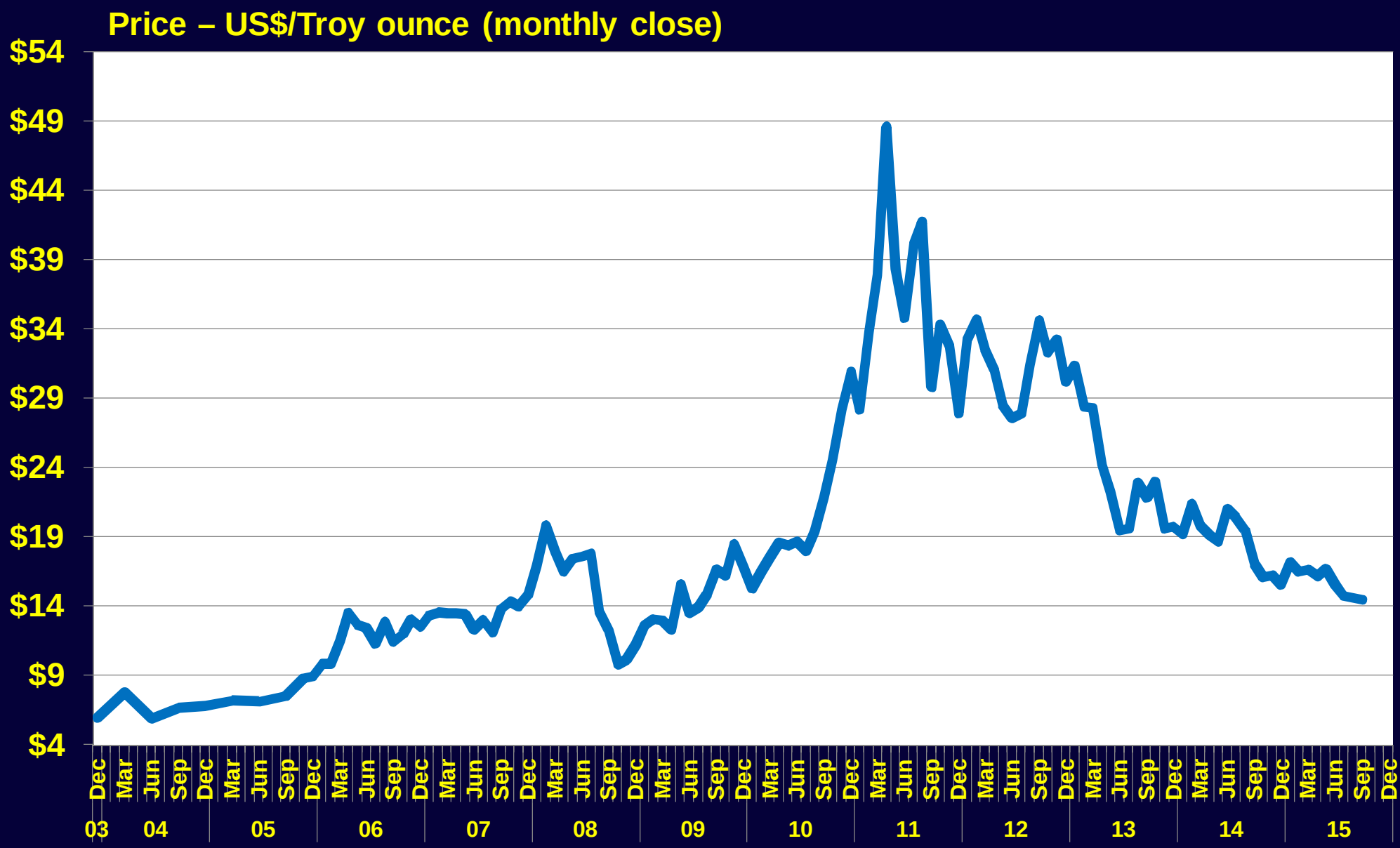
Tin



http://www.infomine.com/investment/metal-prices/tin/

Chart 34

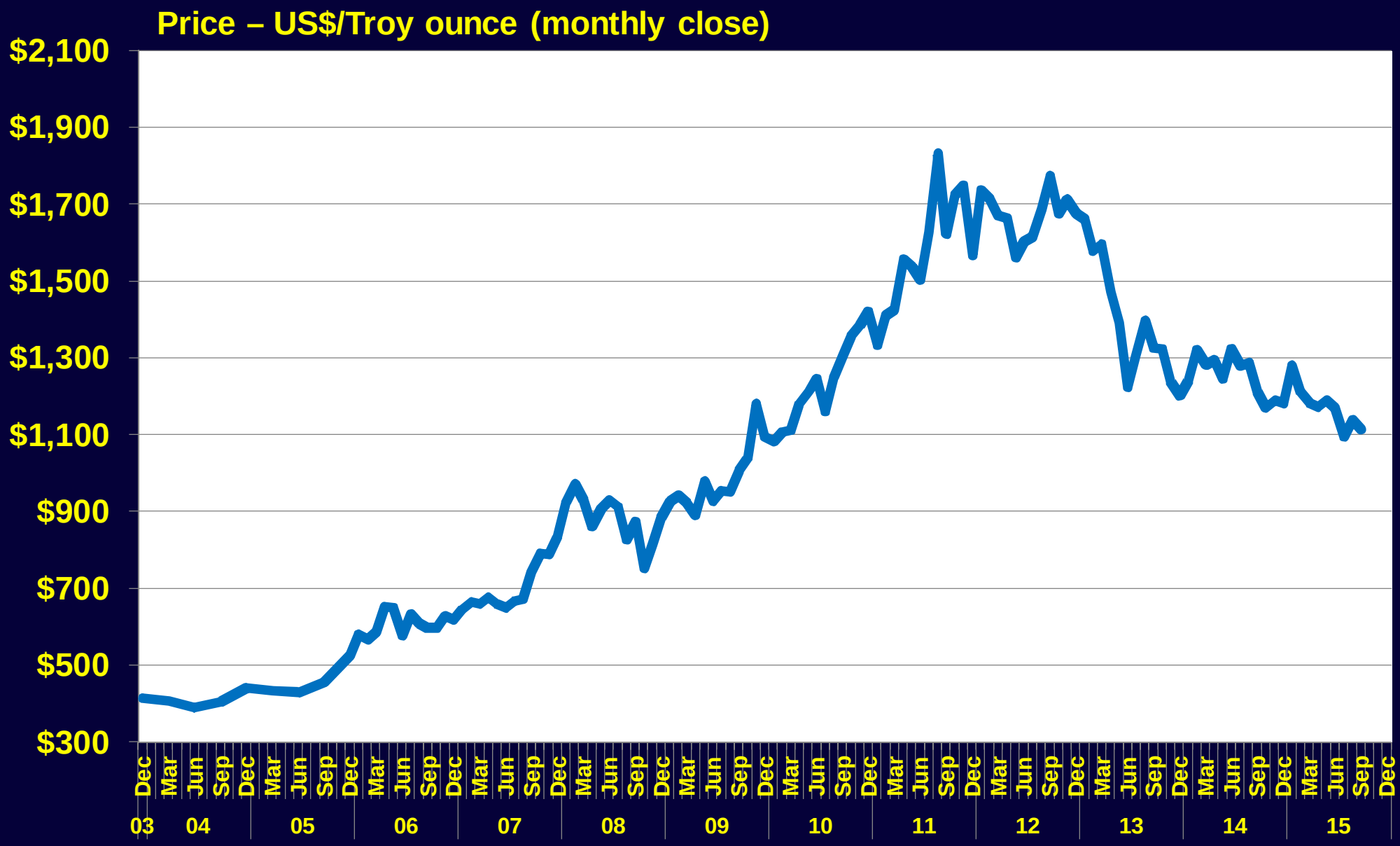
Silver, 5000 oz (Si, Comex)



http://futures.tradingcharts.com/chart/SV/39

Chart 35

Gold, 100 oz (GC, Comex)



http://futures.tradingcharts.com/chart/GD/49