

# Capital 2012

# Spending

## SURVEY & FORECAST

METALCUTTING


METAL FORMING

ASSEMBLY

GAGING

MATERIAL HANDLING

FINISHING

 Gardner  
Research





# World Economic News

- Europe
  - Sovereign debt crisis
  - Sustainability of the EU
- China
  - Massive real estate bubble
  - Significant inflation



# World Economic News

- Banks are still in trouble
  - Overnight lending rates are increasing
  - More money on deposit at central banks
  - Banks don't trust each other because they know their balance sheets are lies
- Currency War > Trade War > War

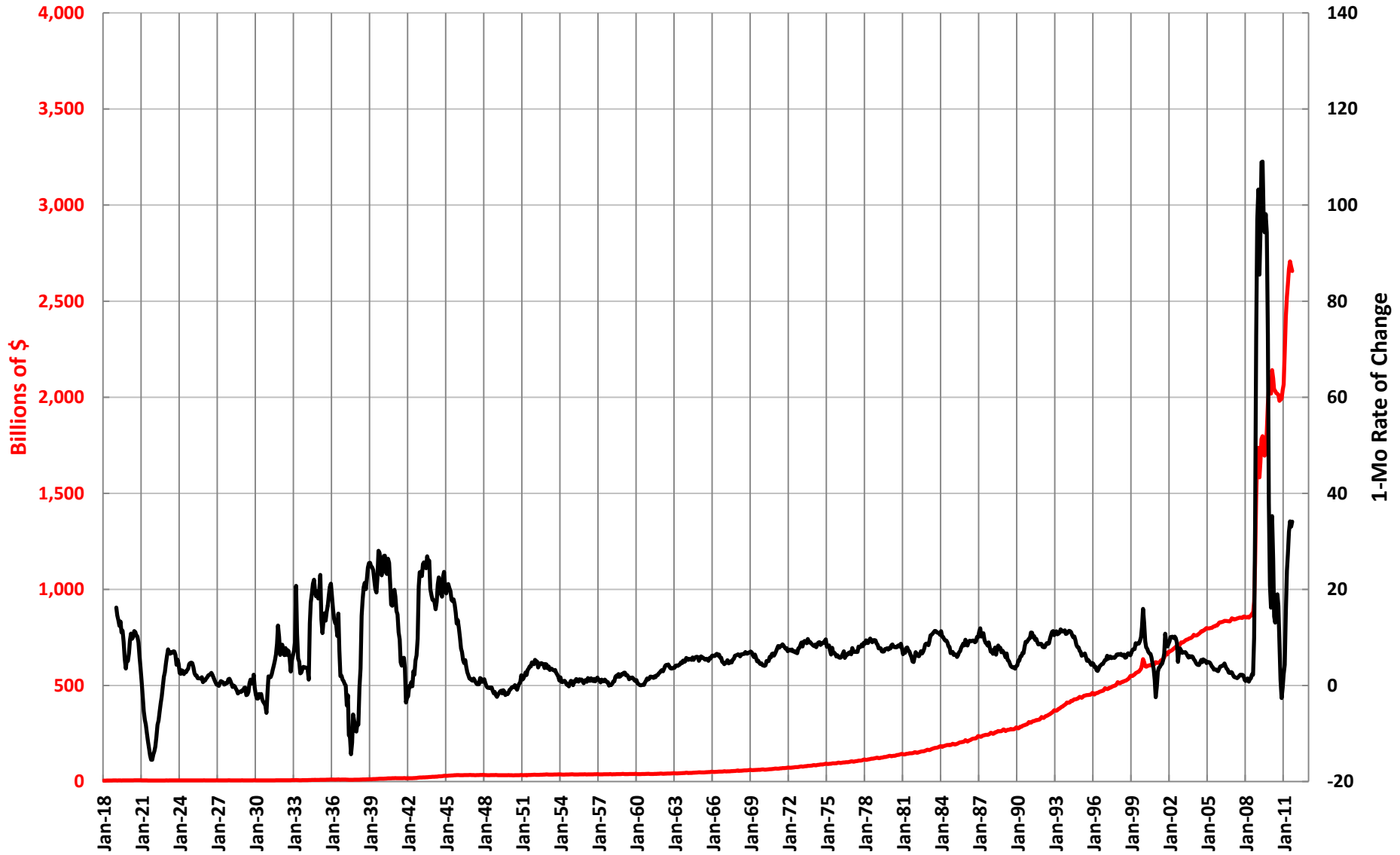


# U.S. Economic News

- Because we are running the printing presses full speed



## St. Louis Adjusted Monetary Base



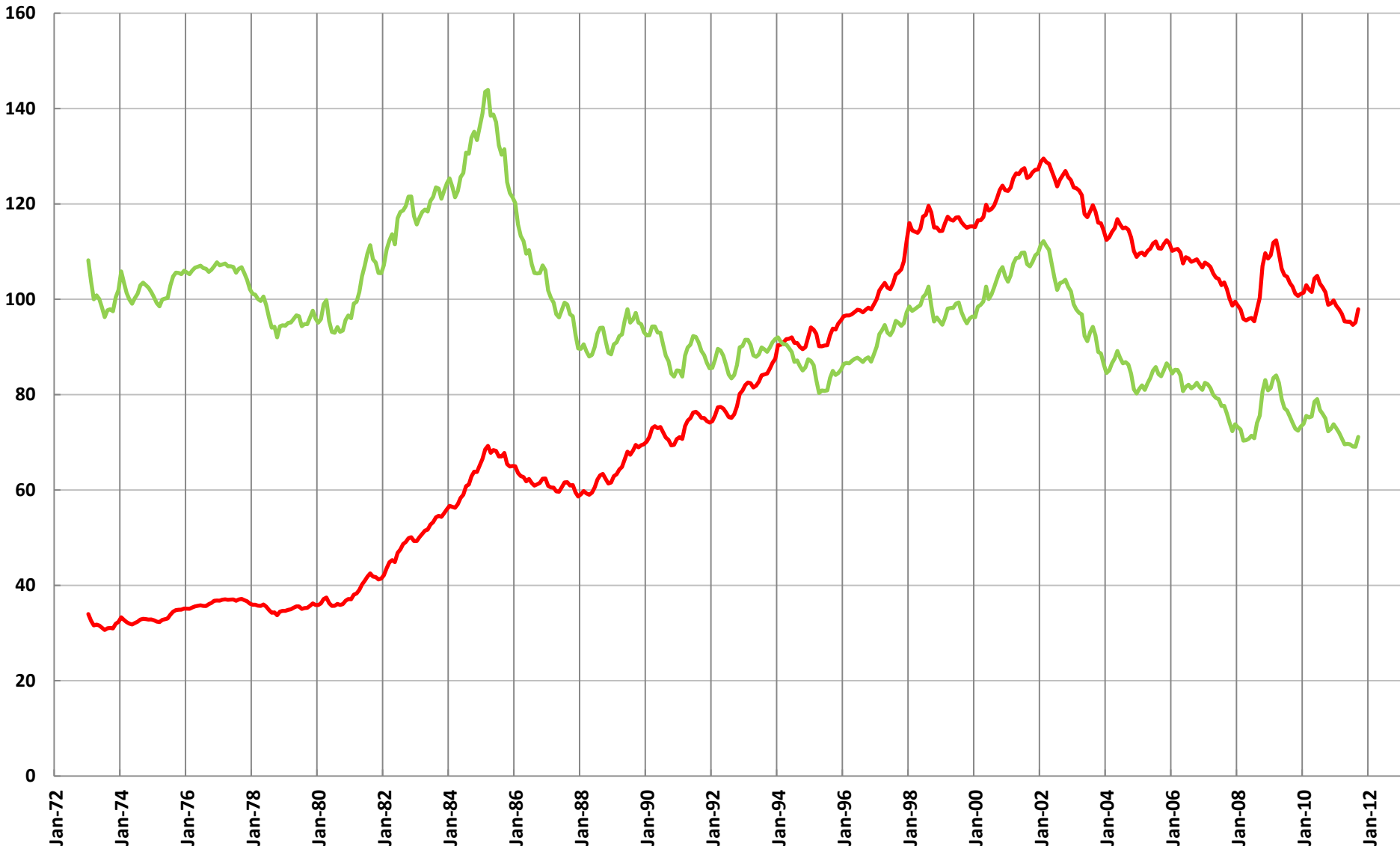


# U.S. Economic News

- Because we are running the printing presses full speed
- We are winning the currency war



## Major and Broad Trade-Weighted Exchange Indices

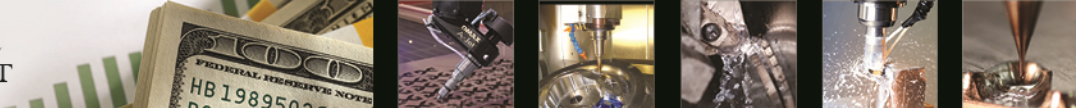




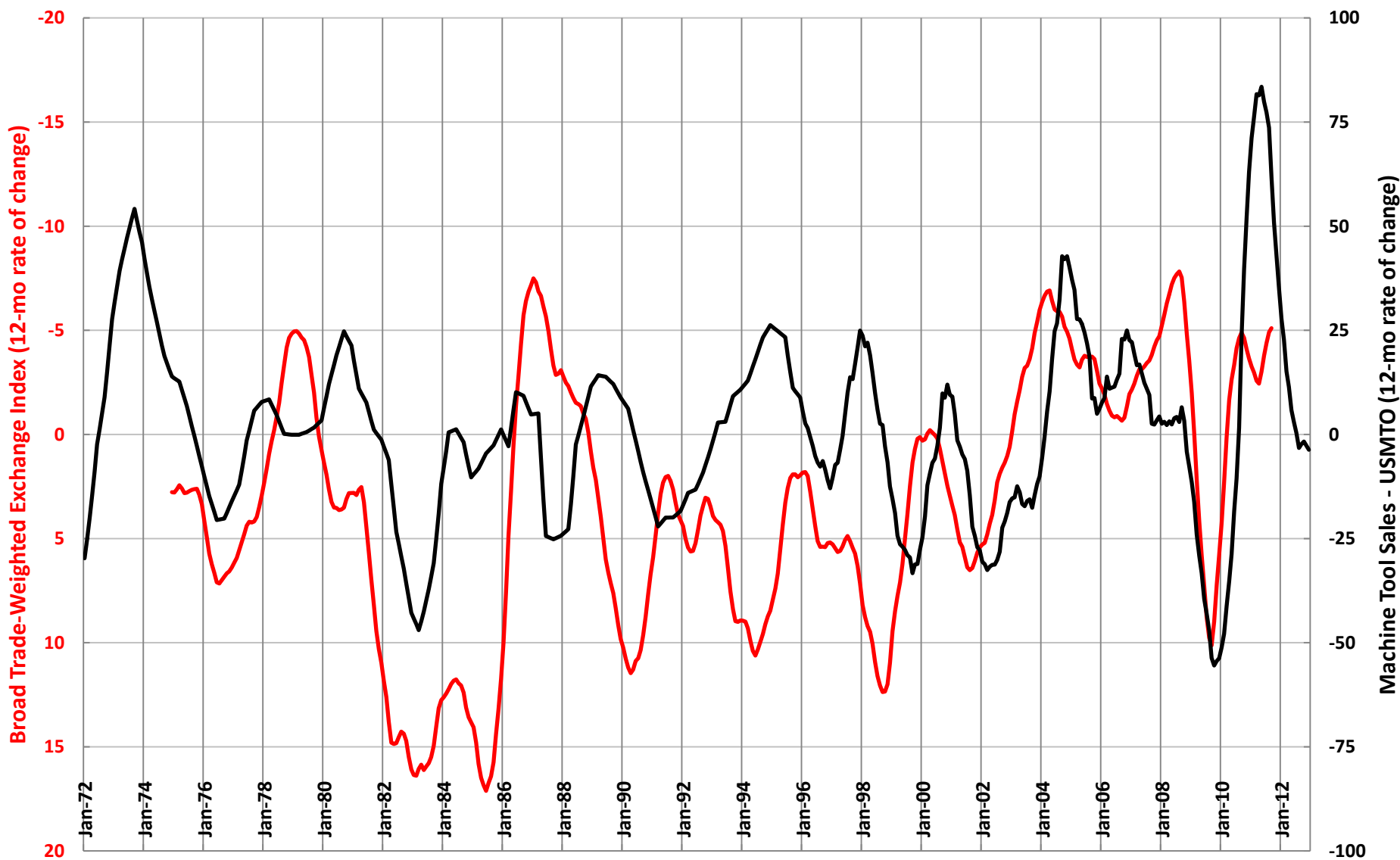
# U.S. Economic News

- Because we are running the printing presses full speed
- We are winning the currency war
- Which is helping machine tool sales





## Broad Trade-Weighted Exchange Rate Leads Machine Tool Sales



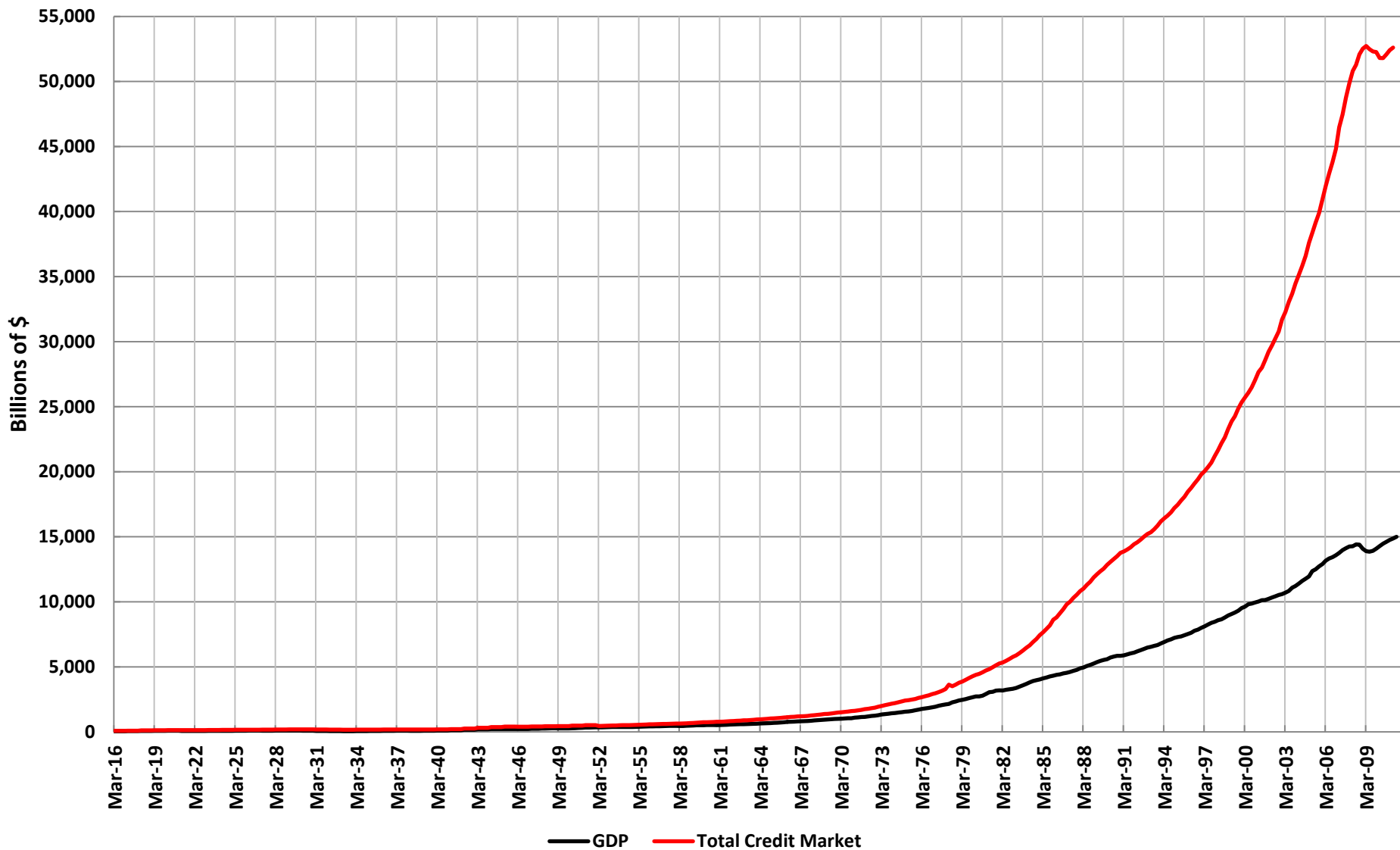


# U.S. Economic News

- Because we are running the printing presses full speed
- We are winning the currency war
- Which is helping machine tool sales
- But it is not sustainable

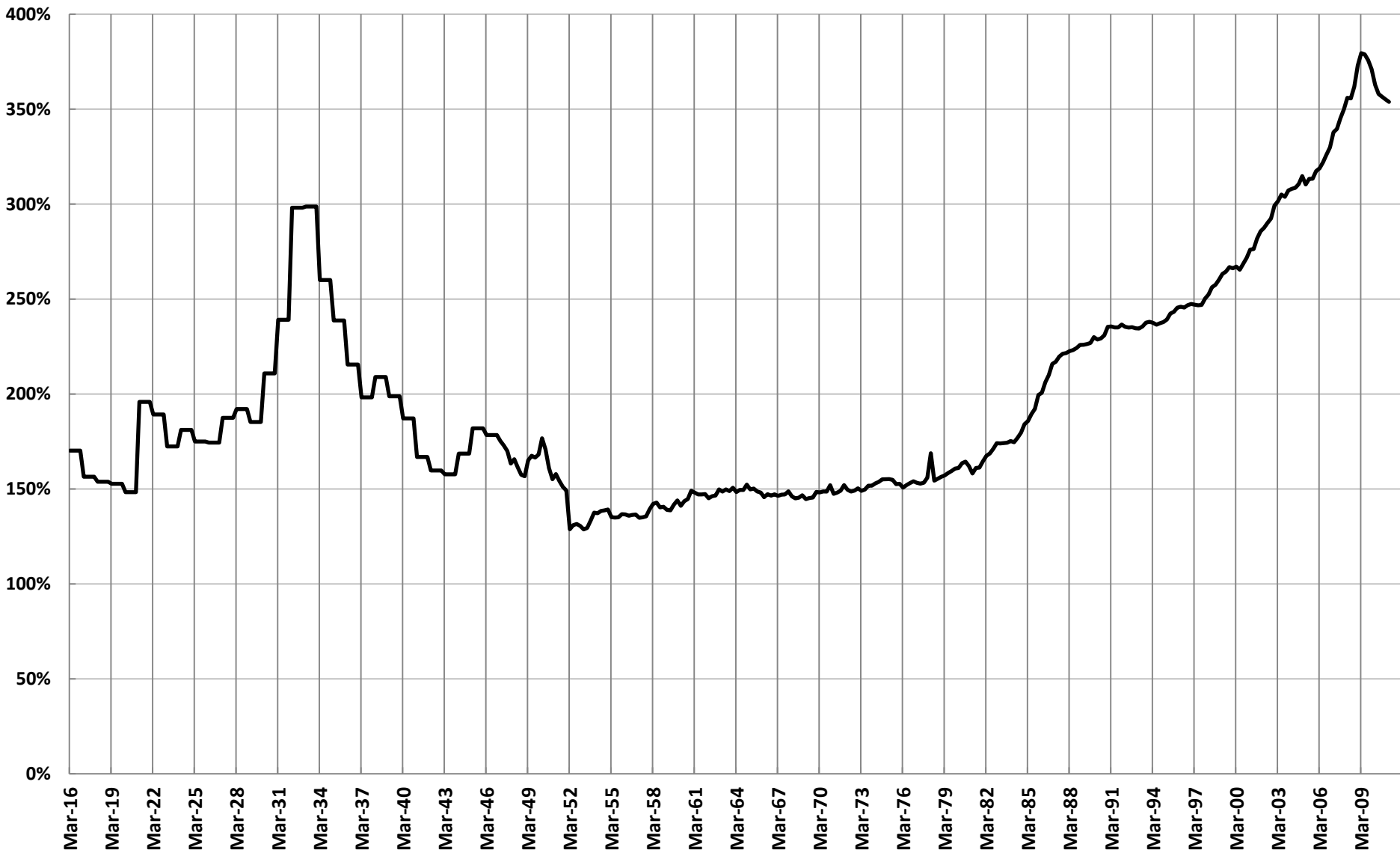


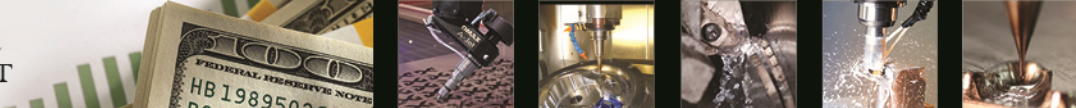
## Total Credit Market Debt and GDP





## Total Credit Market Debt as a % of GDP



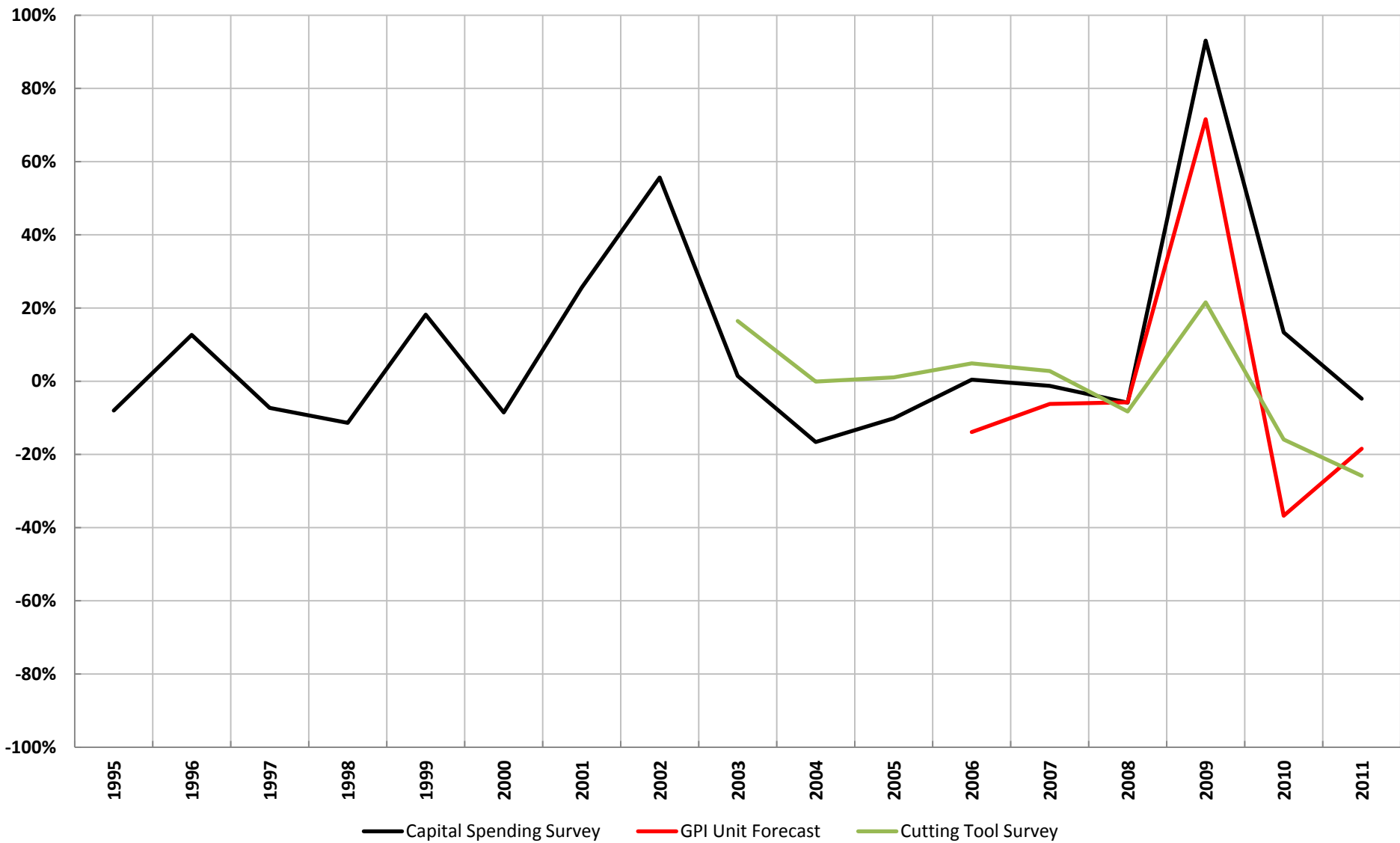


# Forecast (billions of real \$)

	2008	2009	2010	2011	2012
<b>Metalcutting</b>	\$5.80 (+6%)	\$2.63 (-55%)	\$2.82 (+7%)	\$4.03 (+43%)	\$4.32 (+7%)
<b>Metal Forming</b>	\$1.25 (-2%)	\$0.66 (-47%)	\$0.64 (-3%)	\$0.74 (+17%)	\$0.84 (+14%)
<b>Total</b>	\$7.05 (+7%)	\$3.29 (-53%)	\$3.47 (+5%)	\$4.77 (+38%)	\$5.16 (+8%)
<b>Metalcutting Units</b>	23,130 (-8%)	10,694 (-54%)	17,434 (+63%)	23,140 (+34%)	22,700 (-3%)
<b>Cutting Tools</b>	\$3.40 (+17%)	\$2.36 (-31%)	\$2.94 (+24%)	\$3.58 (+22%)	\$3.72 (+4%)

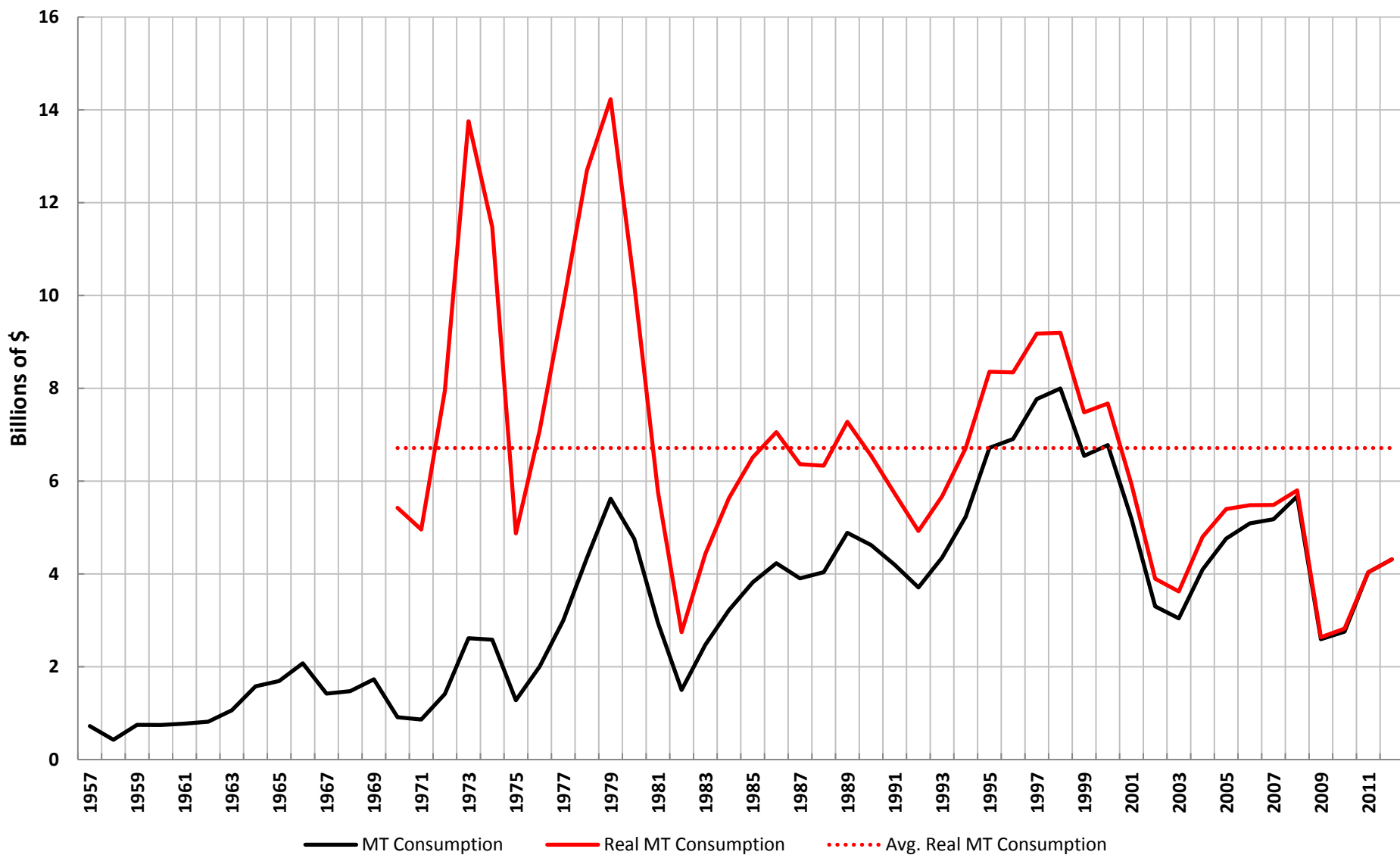


## Forecast Accuracy



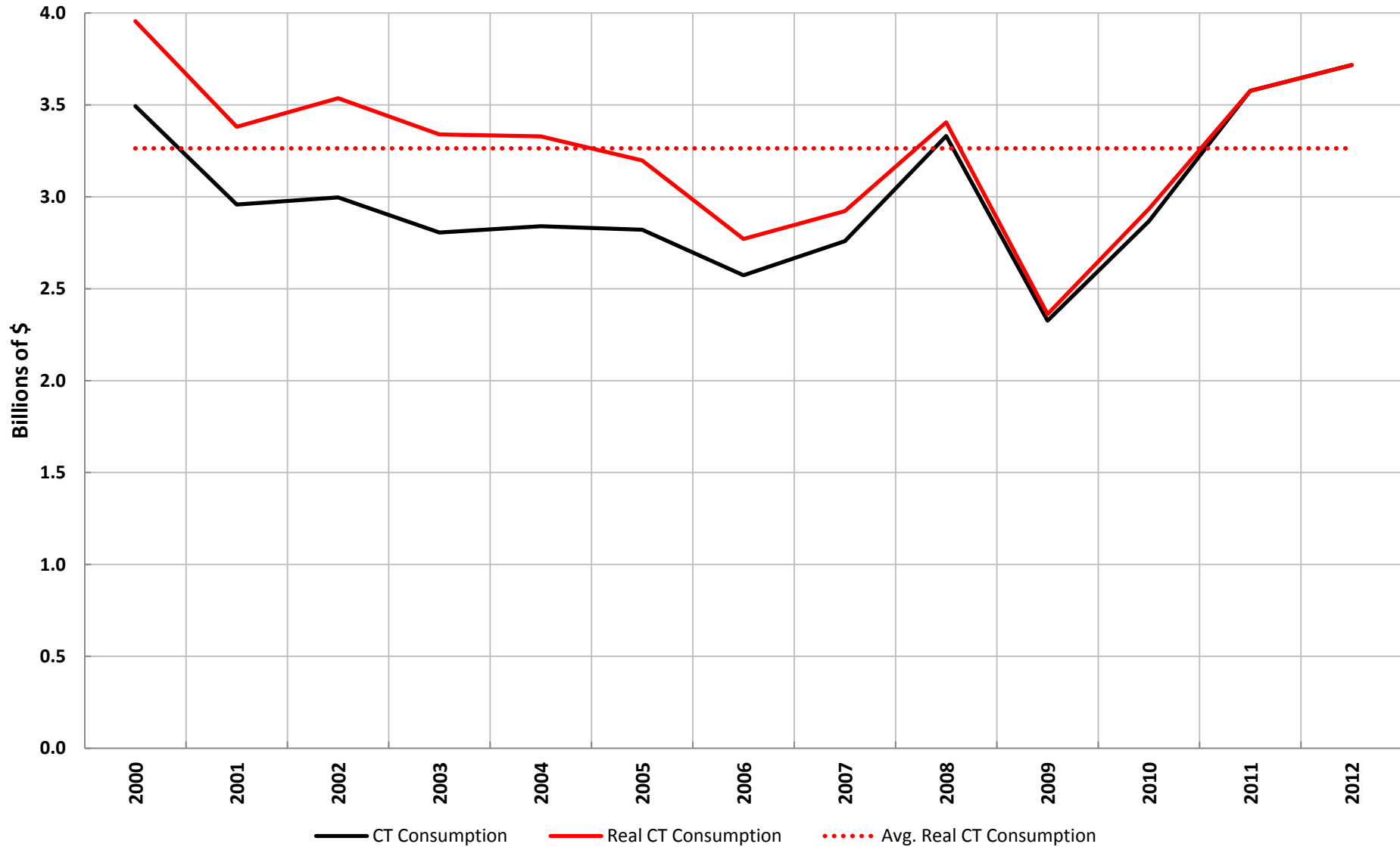


## Historic Machine Tool Consumption





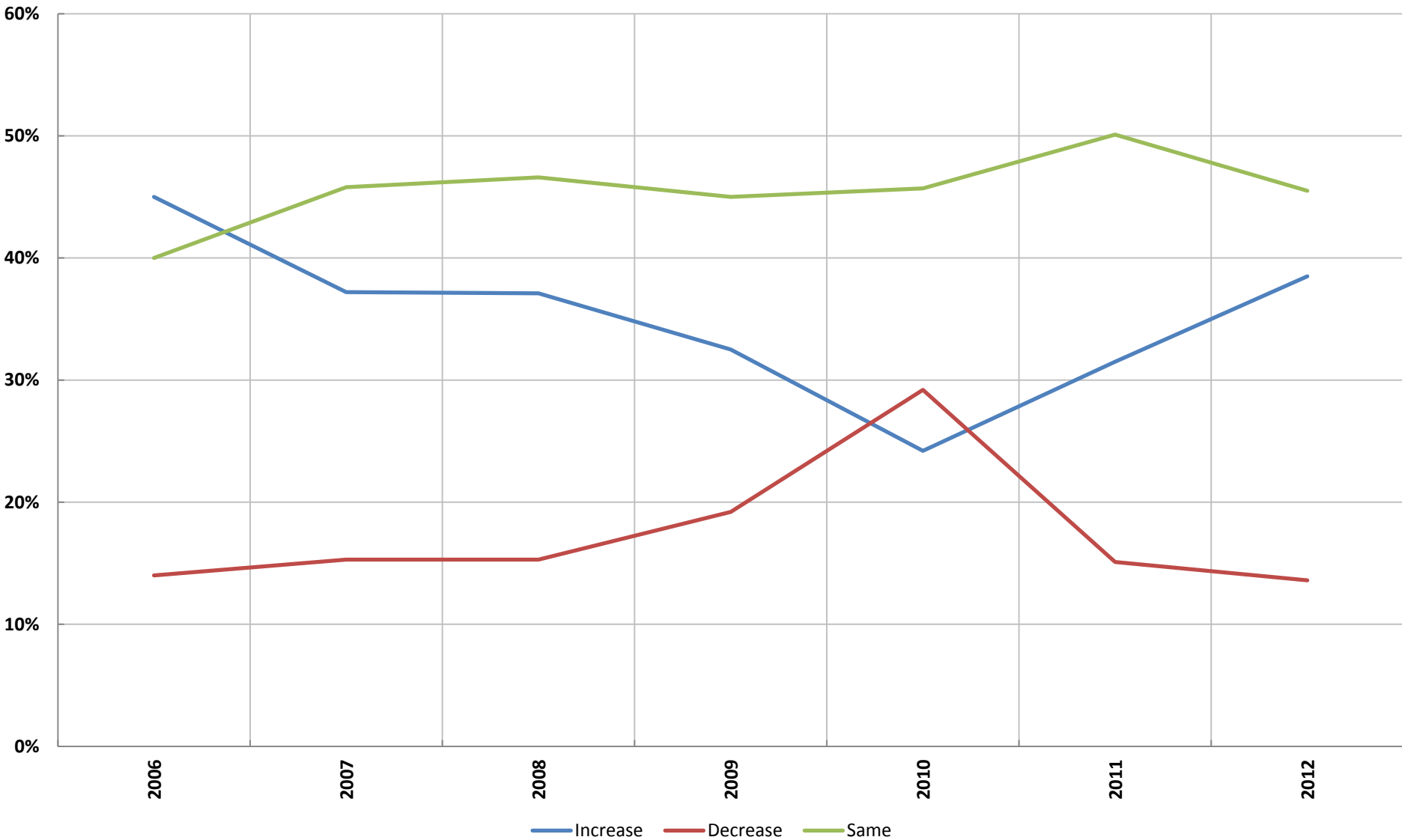
## Historic Cutting Tool Consumption





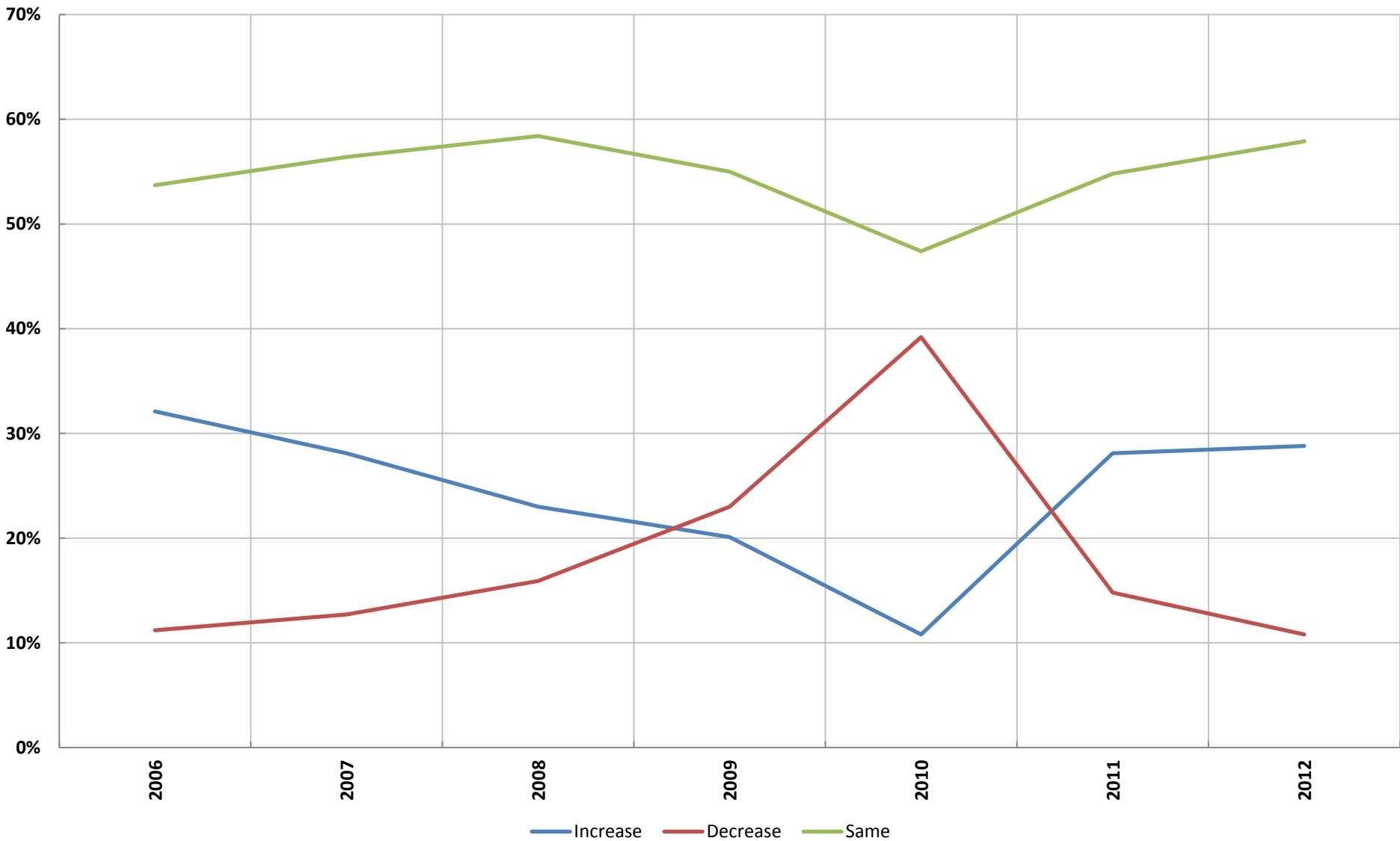


## Will Your Plant's Capital Equipment Spending...



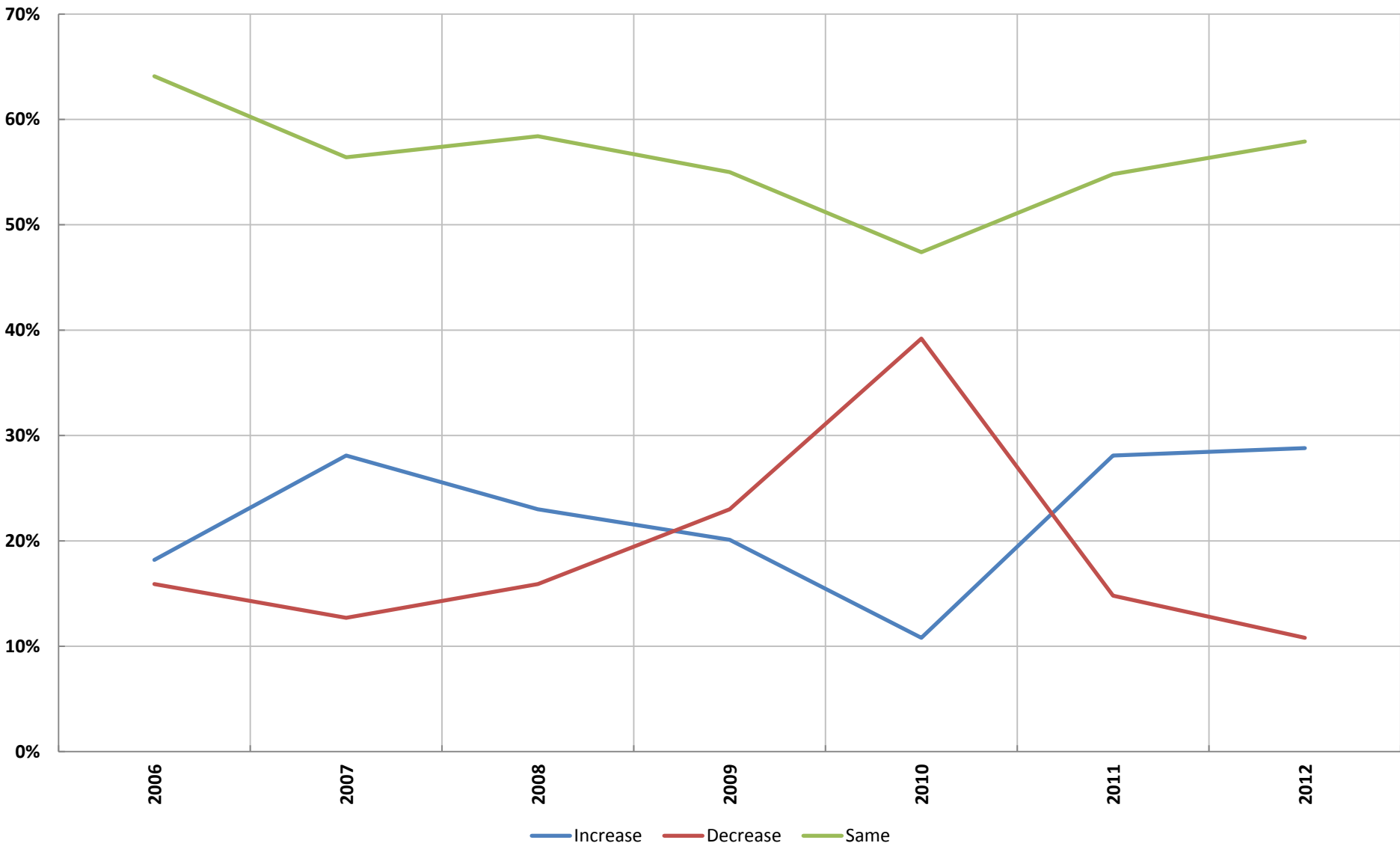


## Will Your Plant's Tooling Spending...



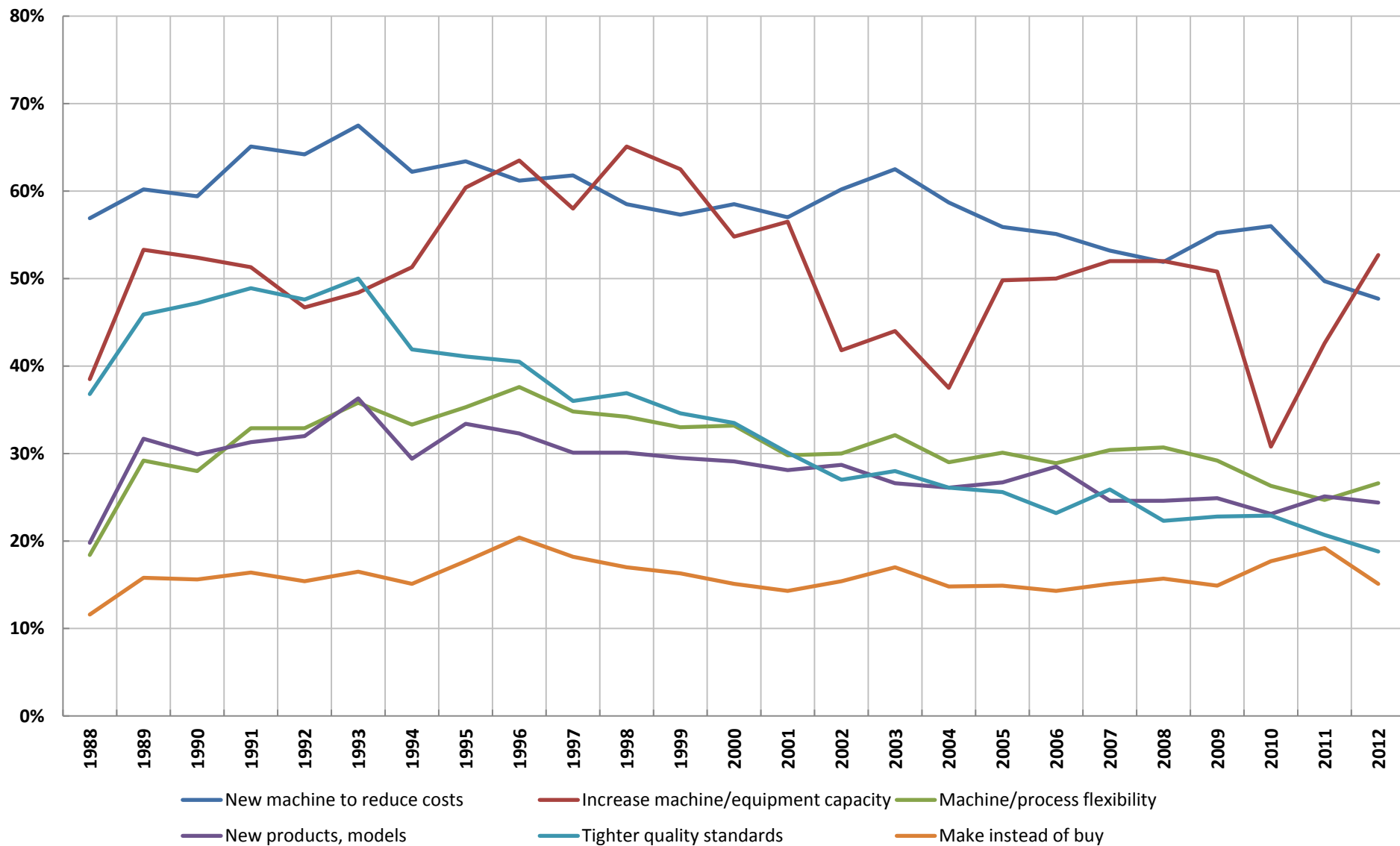


## Will Your Plant's Workholding Spending...



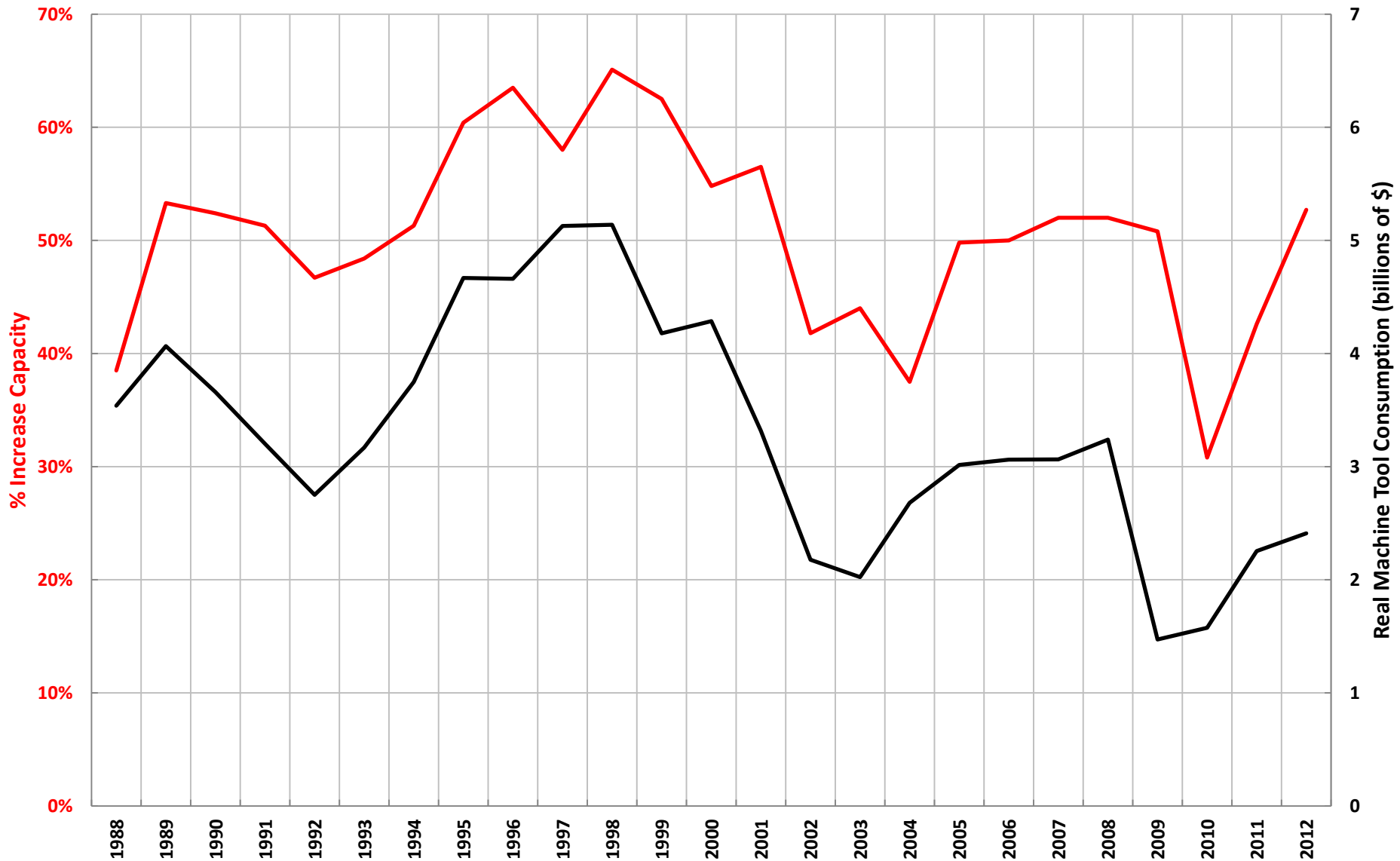


## Motivation to Buy a Machine



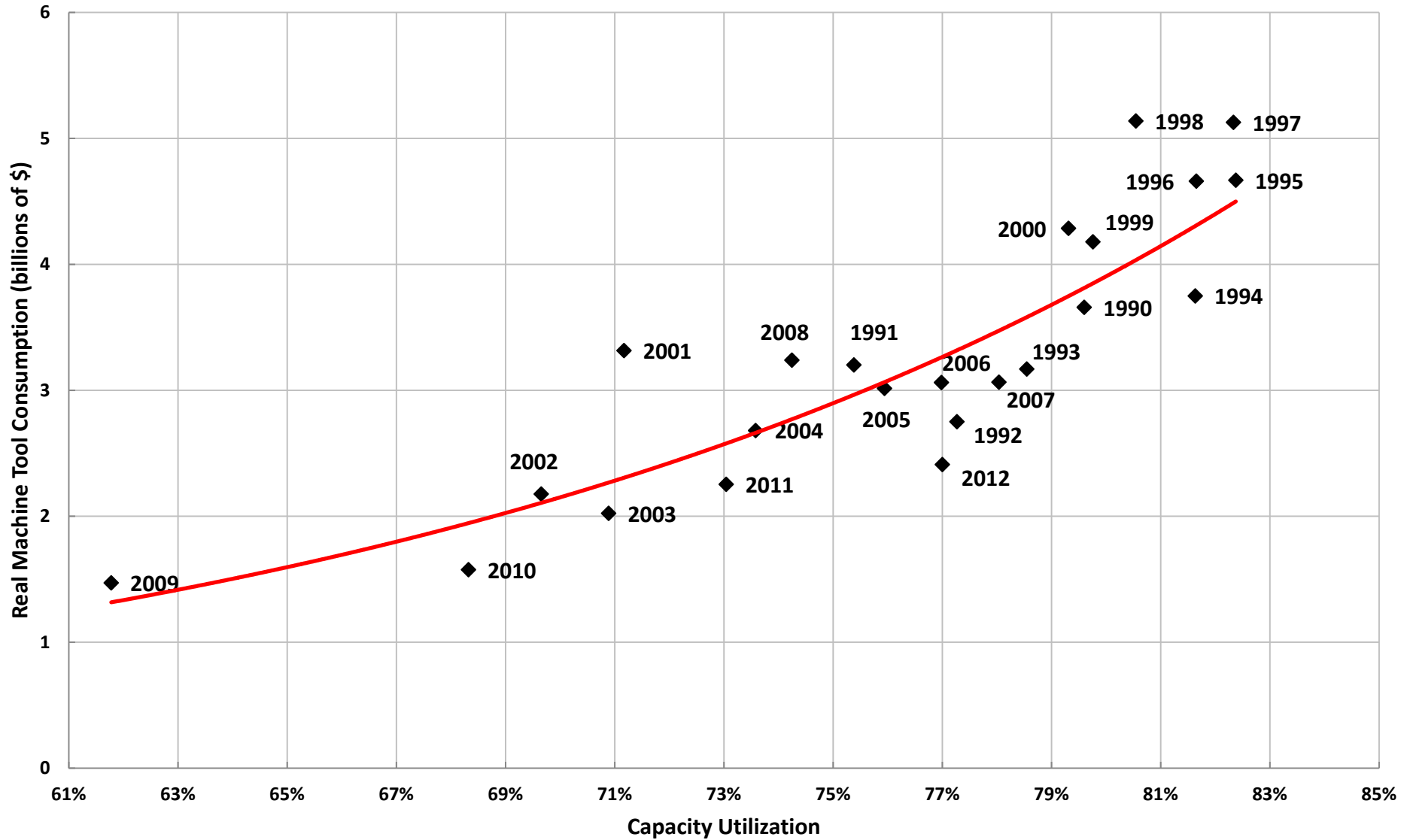


## % Increase Capacity vs. Real Machine Tool Consumption



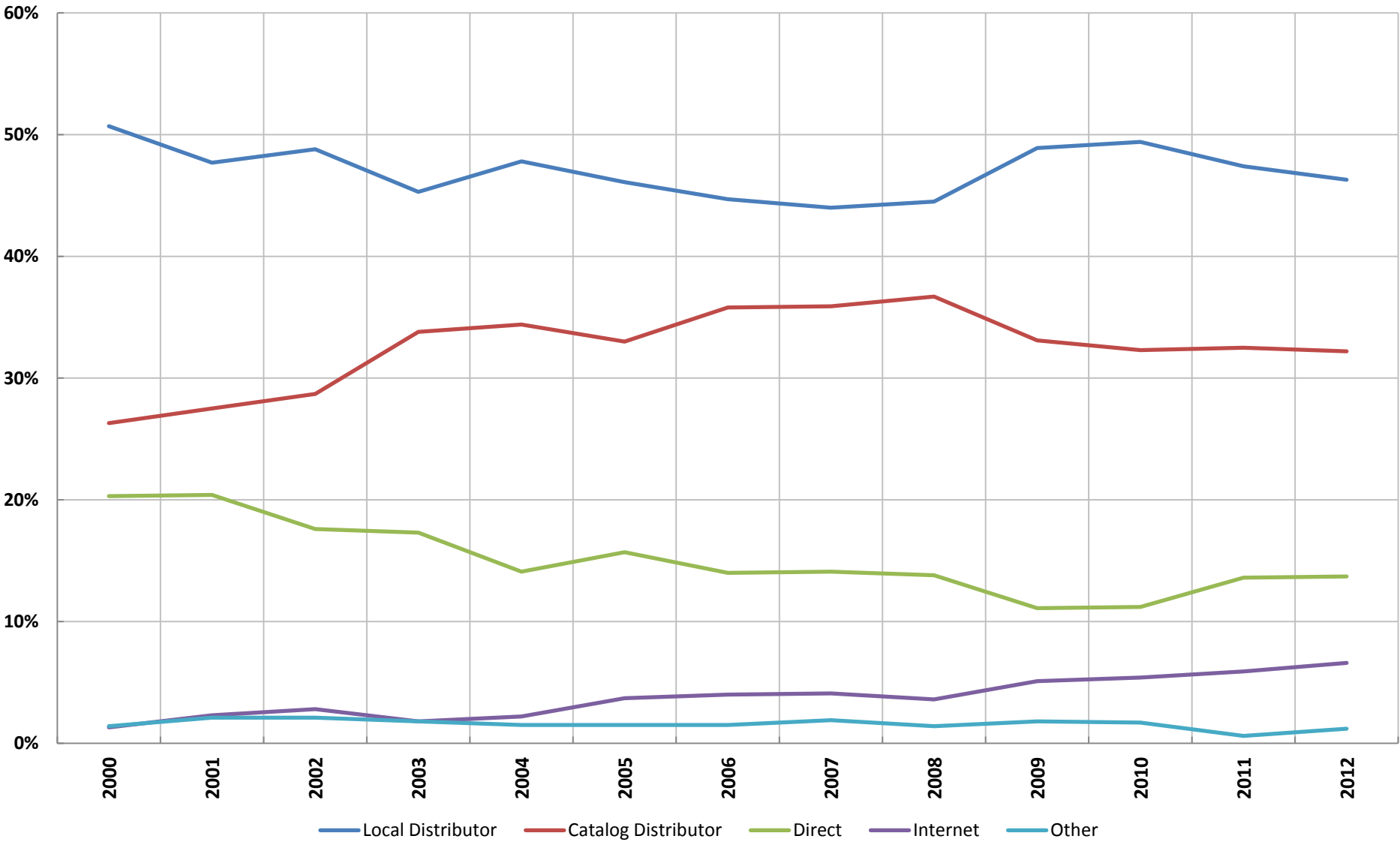


### Machine Tool Demand Curve



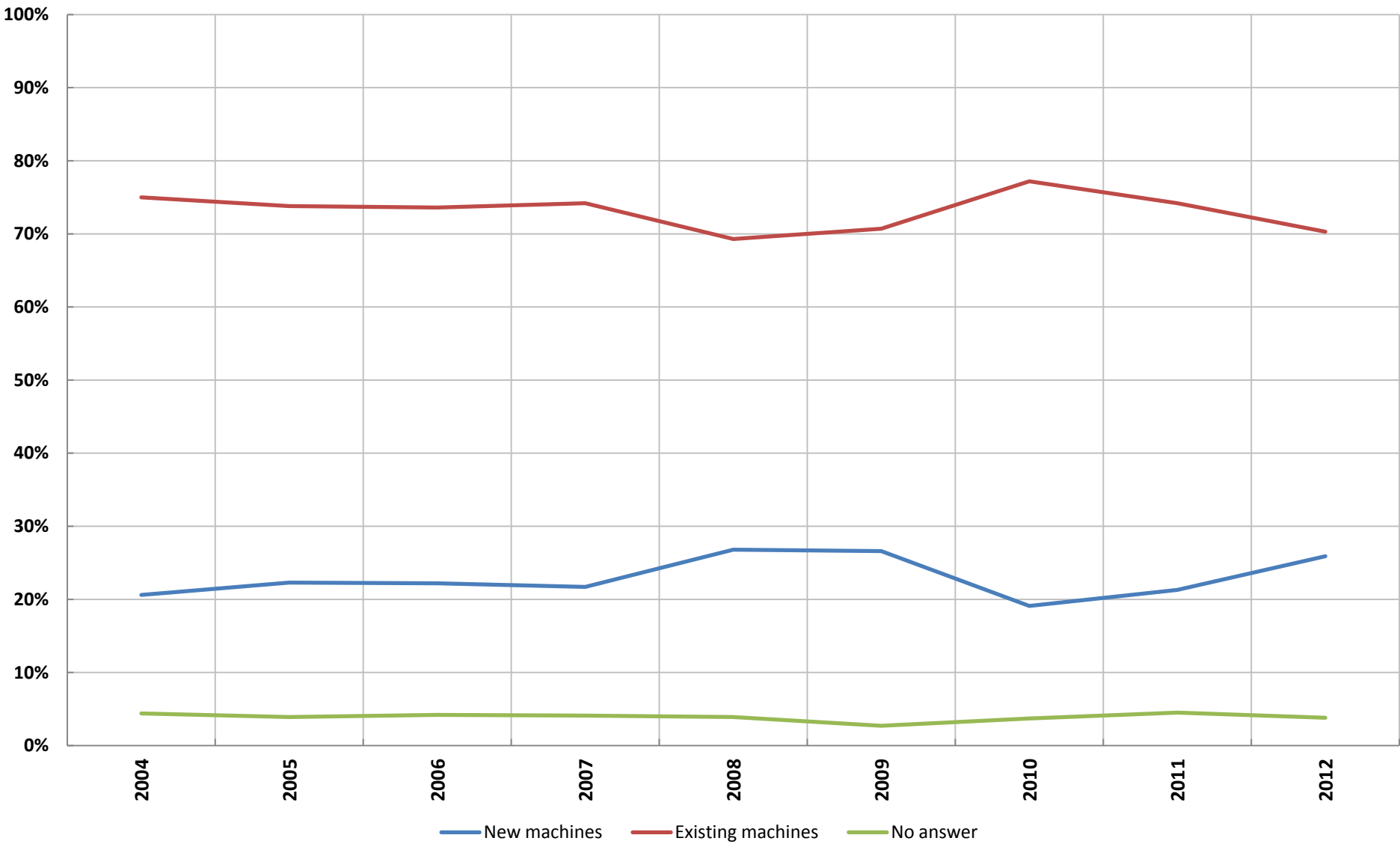


## How Do You Purchase Cutting Tools

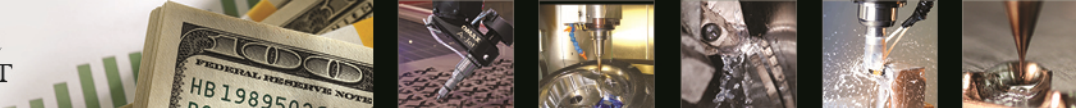




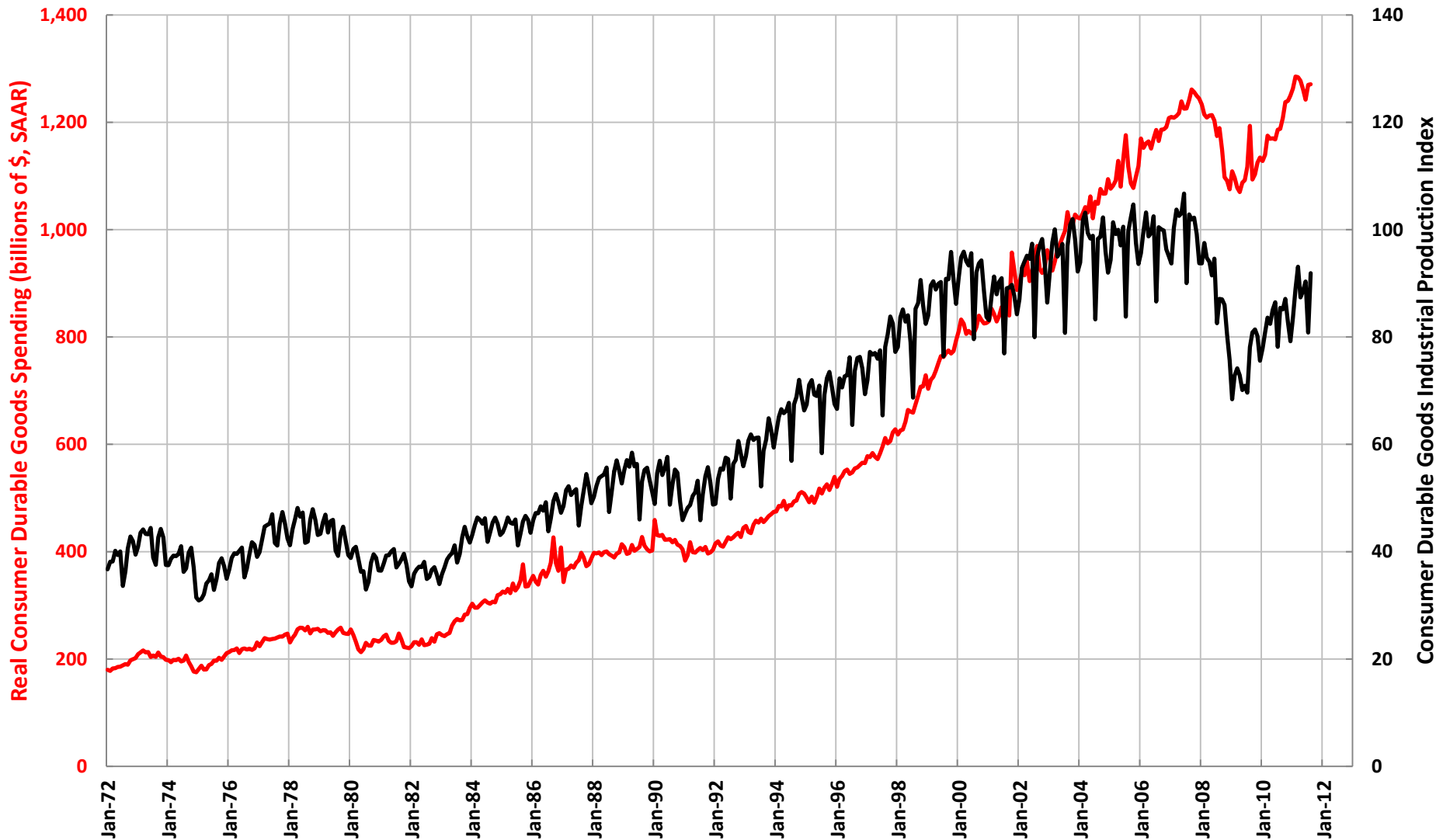
## Percentage of Workholding Purchases for





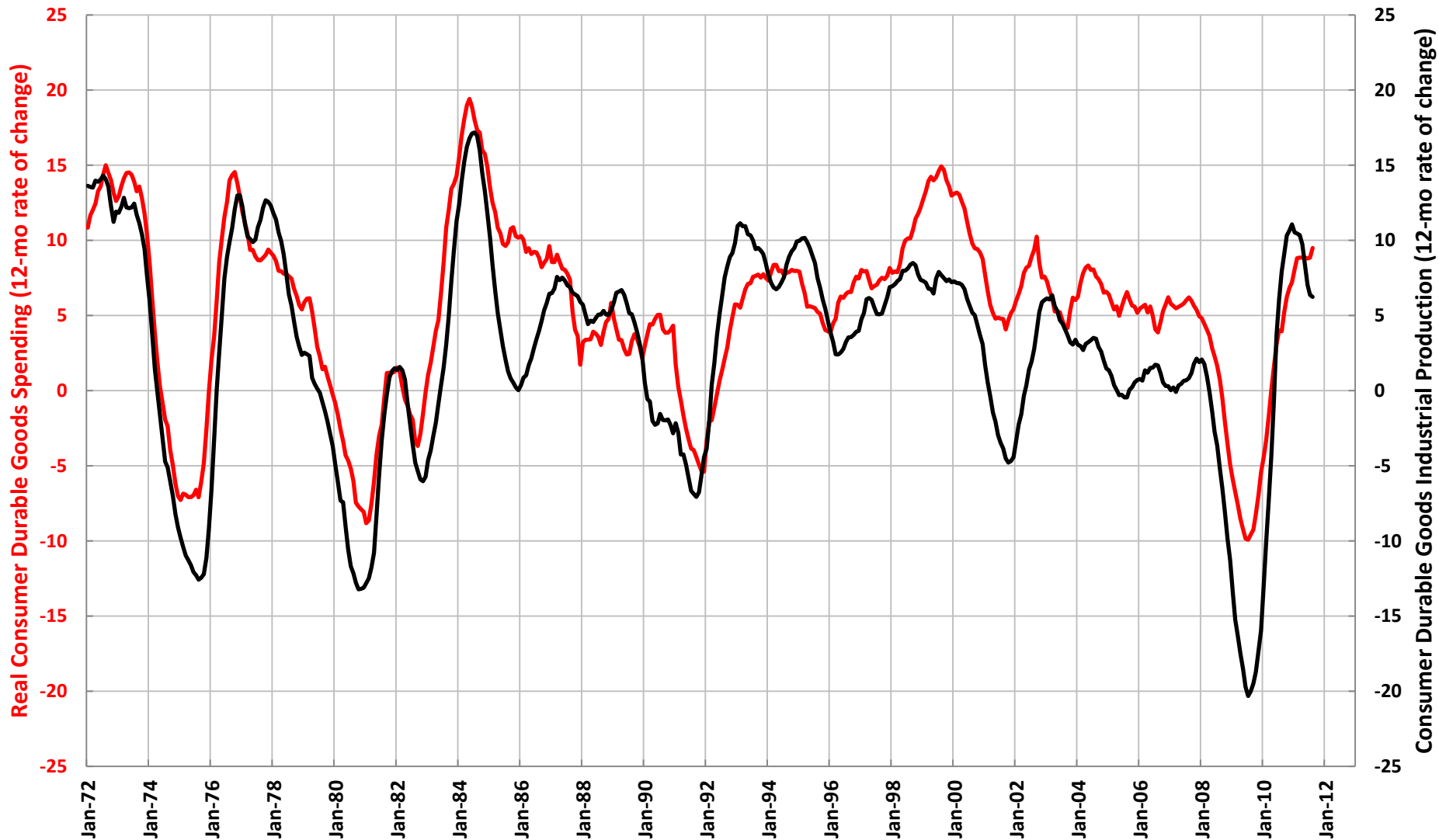


## Real Consumer Durable Goods Spending vs. Consumer Durable Goods Industrial Production



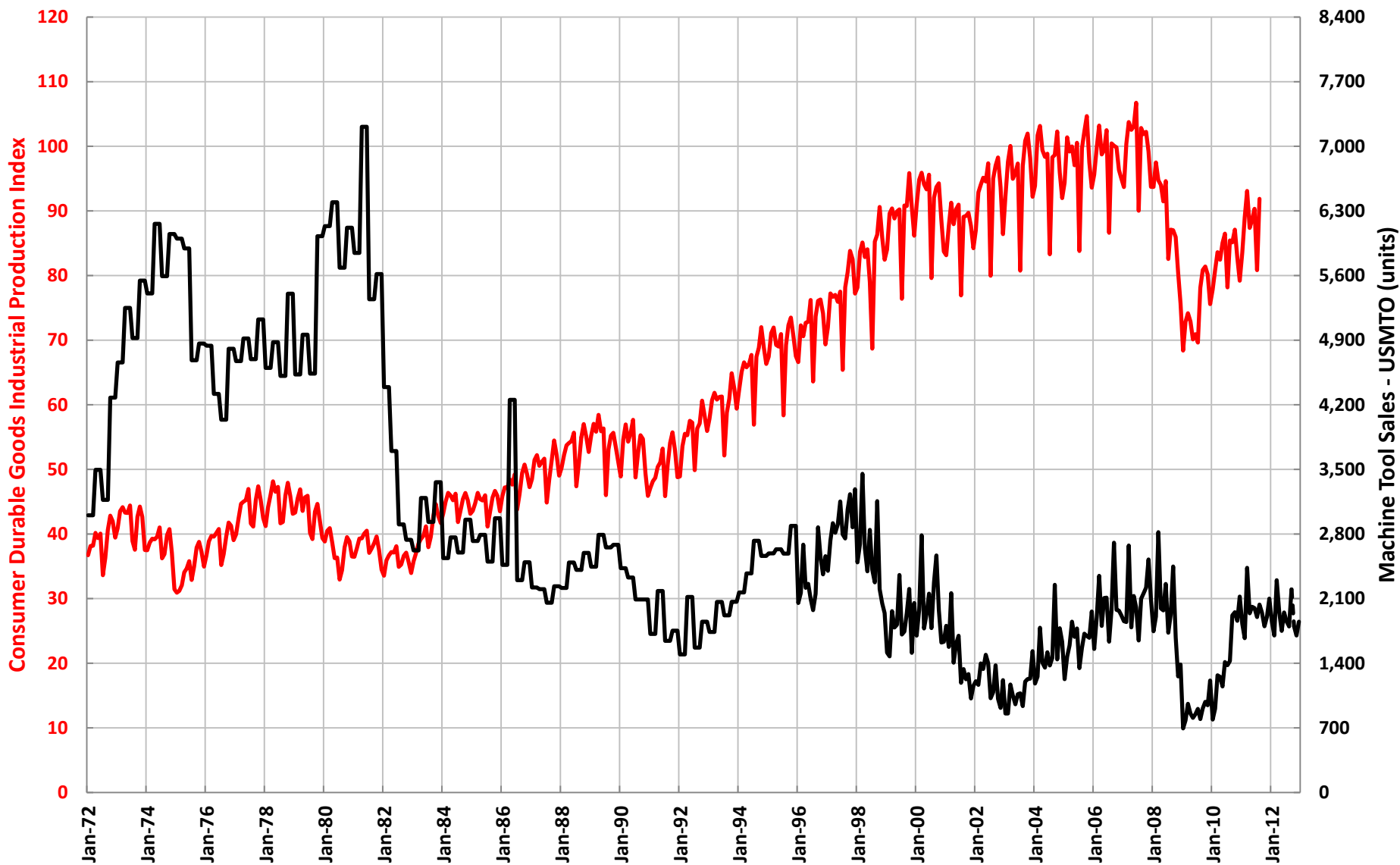


## Real Consumer Durable Goods Spending Leads Consumer Durable Goods Industrial Production



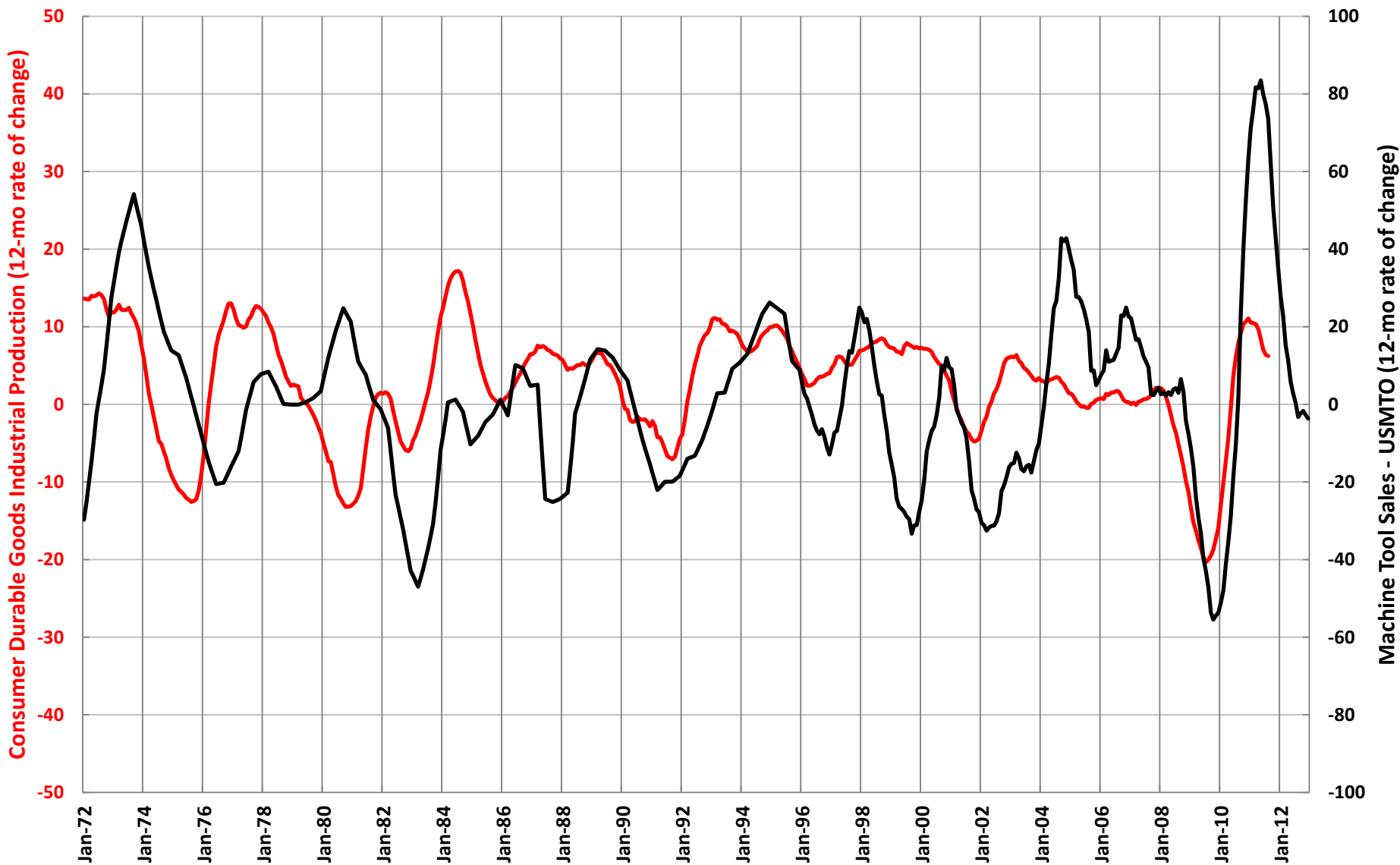


## Consumer Durable Goods Industrial Production vs. Machine Tool Sales



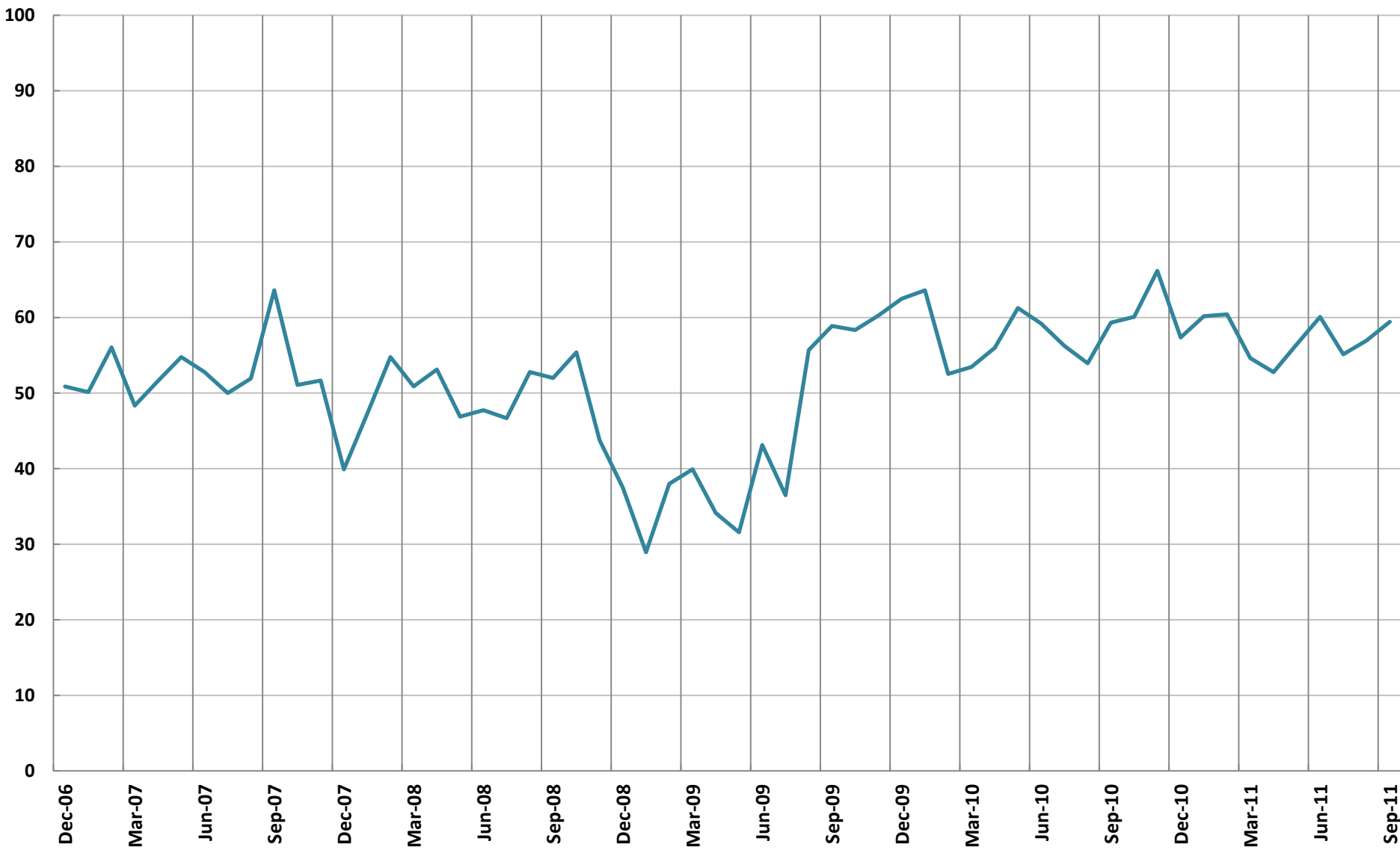


## Consumer Durable Goods Industrial Production Leads Machine Tool Sales



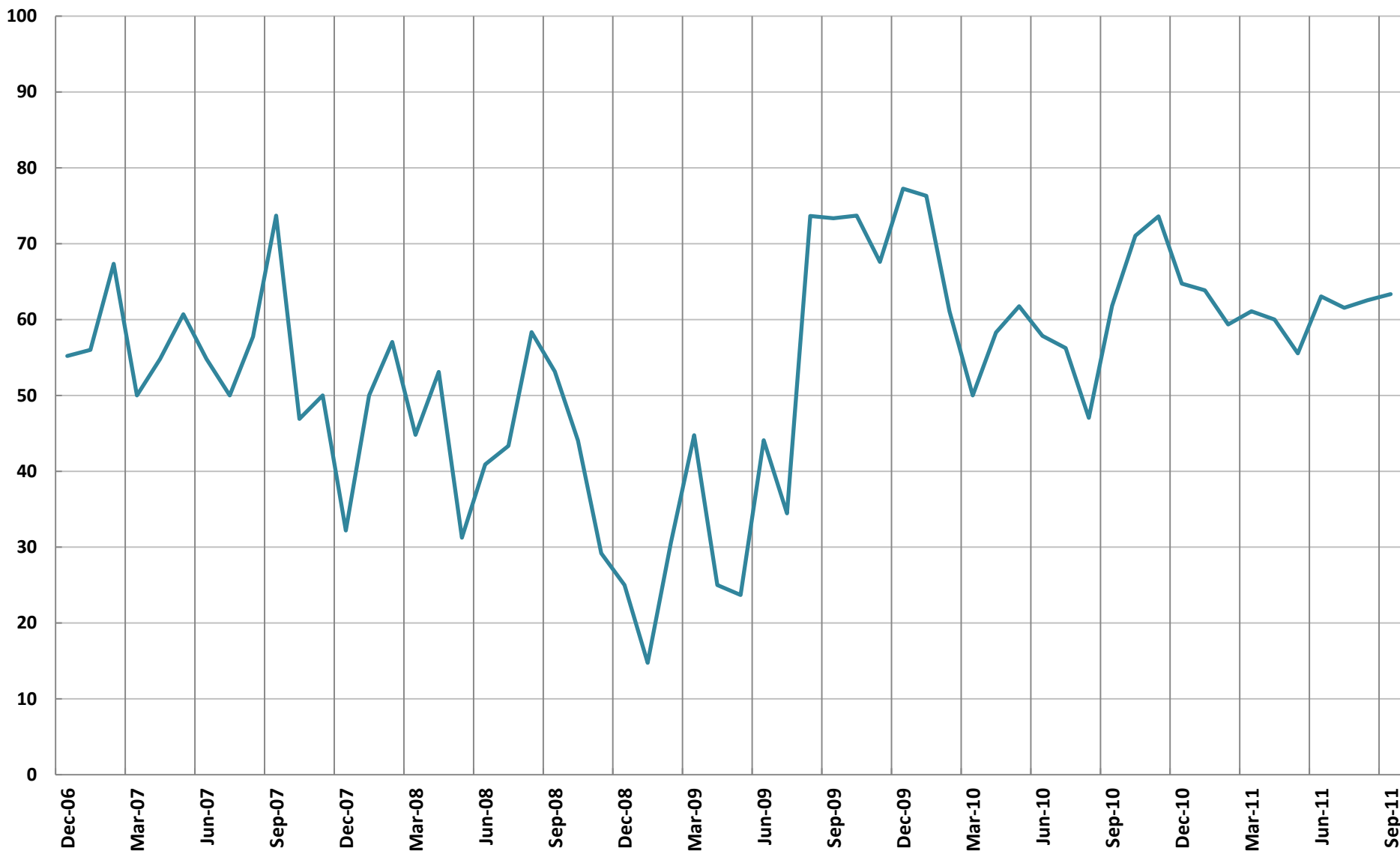


## Metalworking Business Index



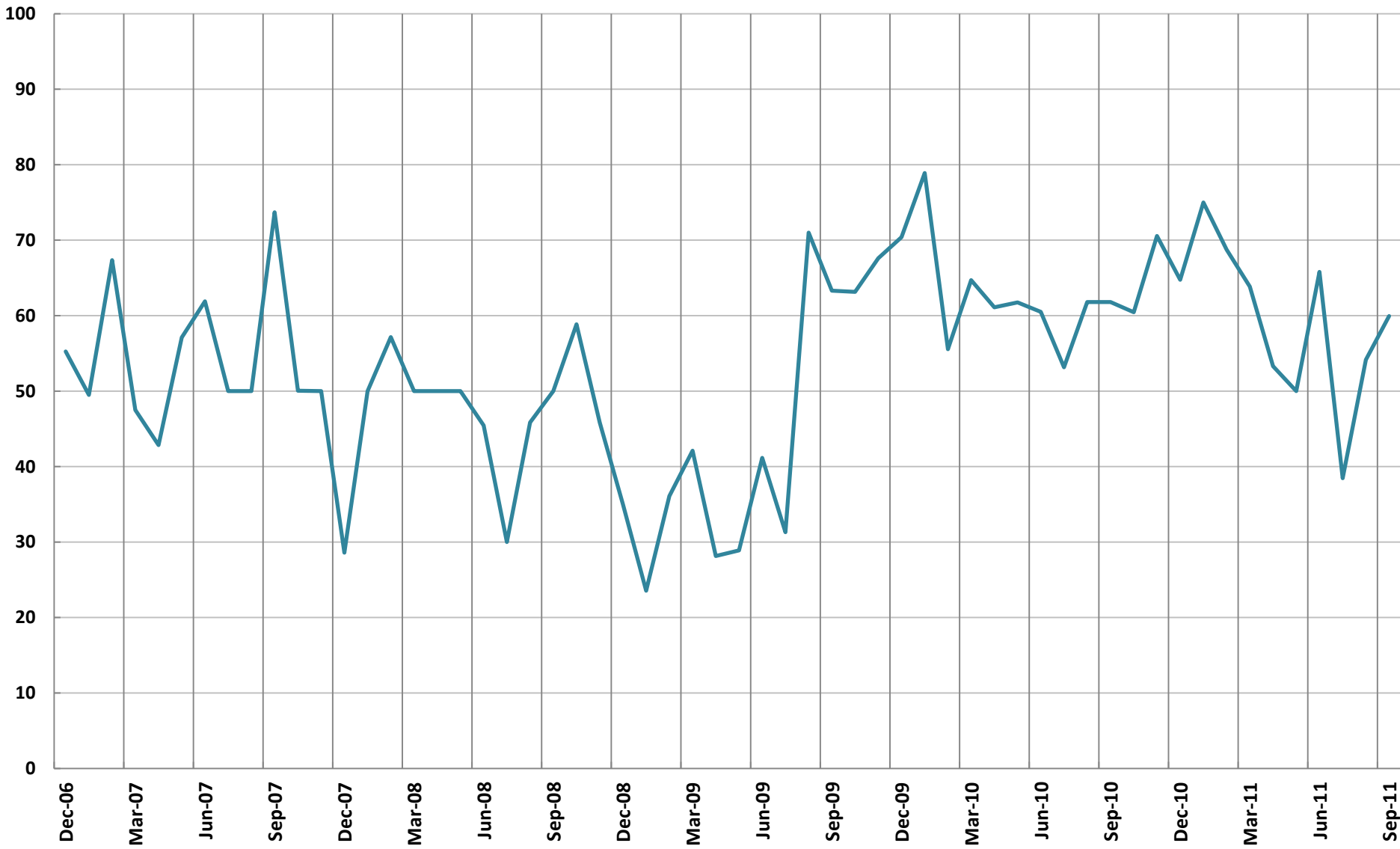


## New Orders

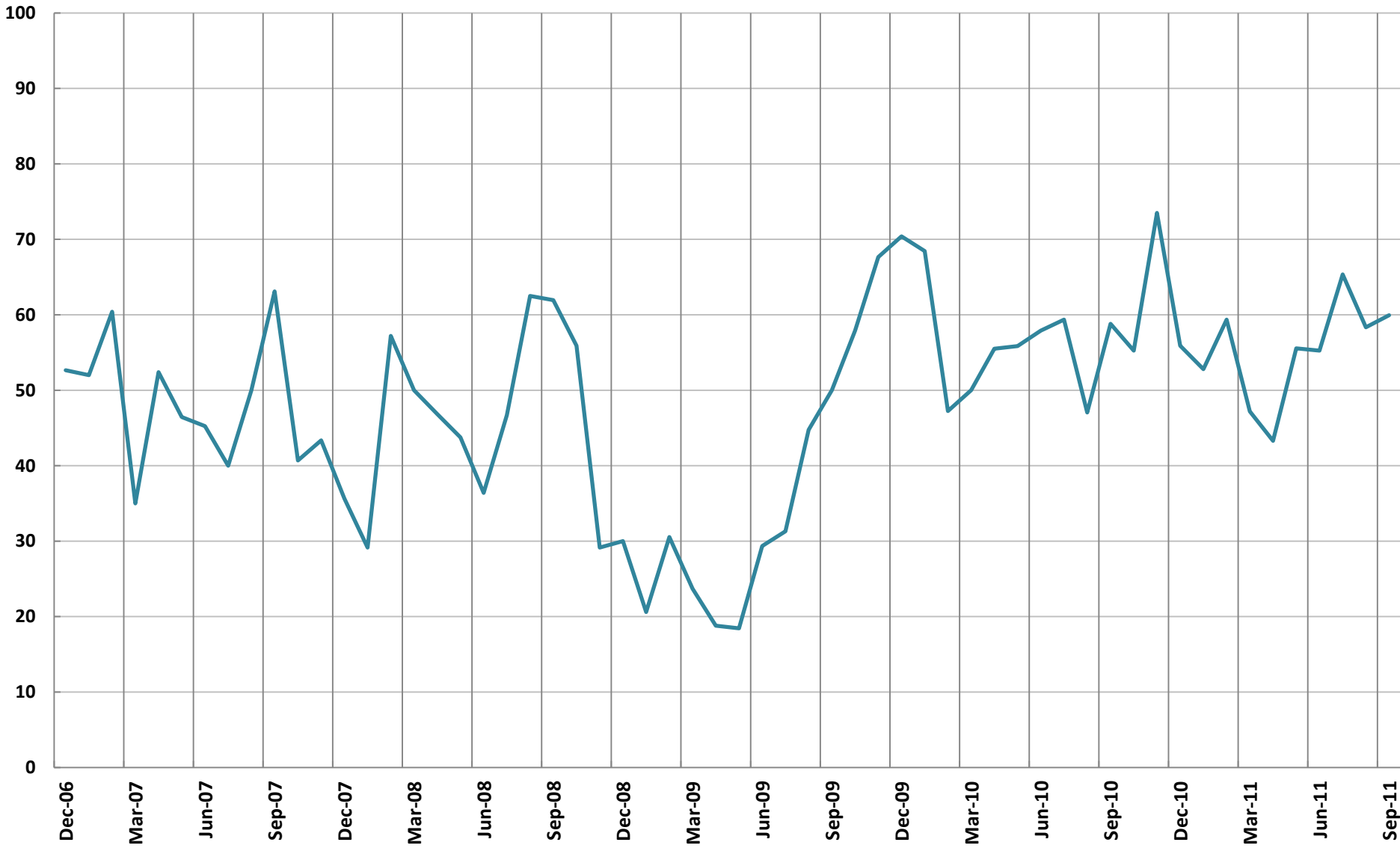




## Production



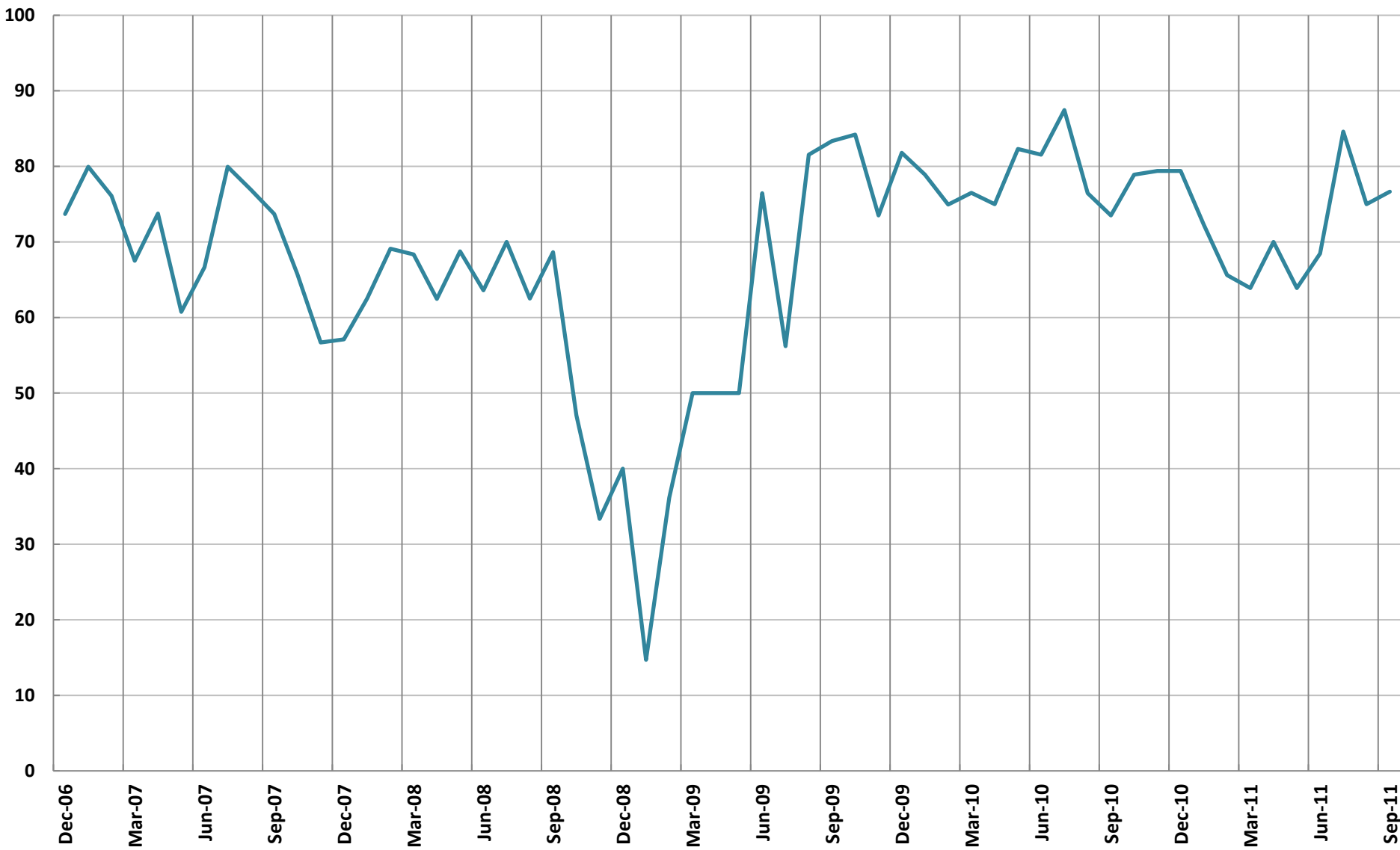
## Backlog





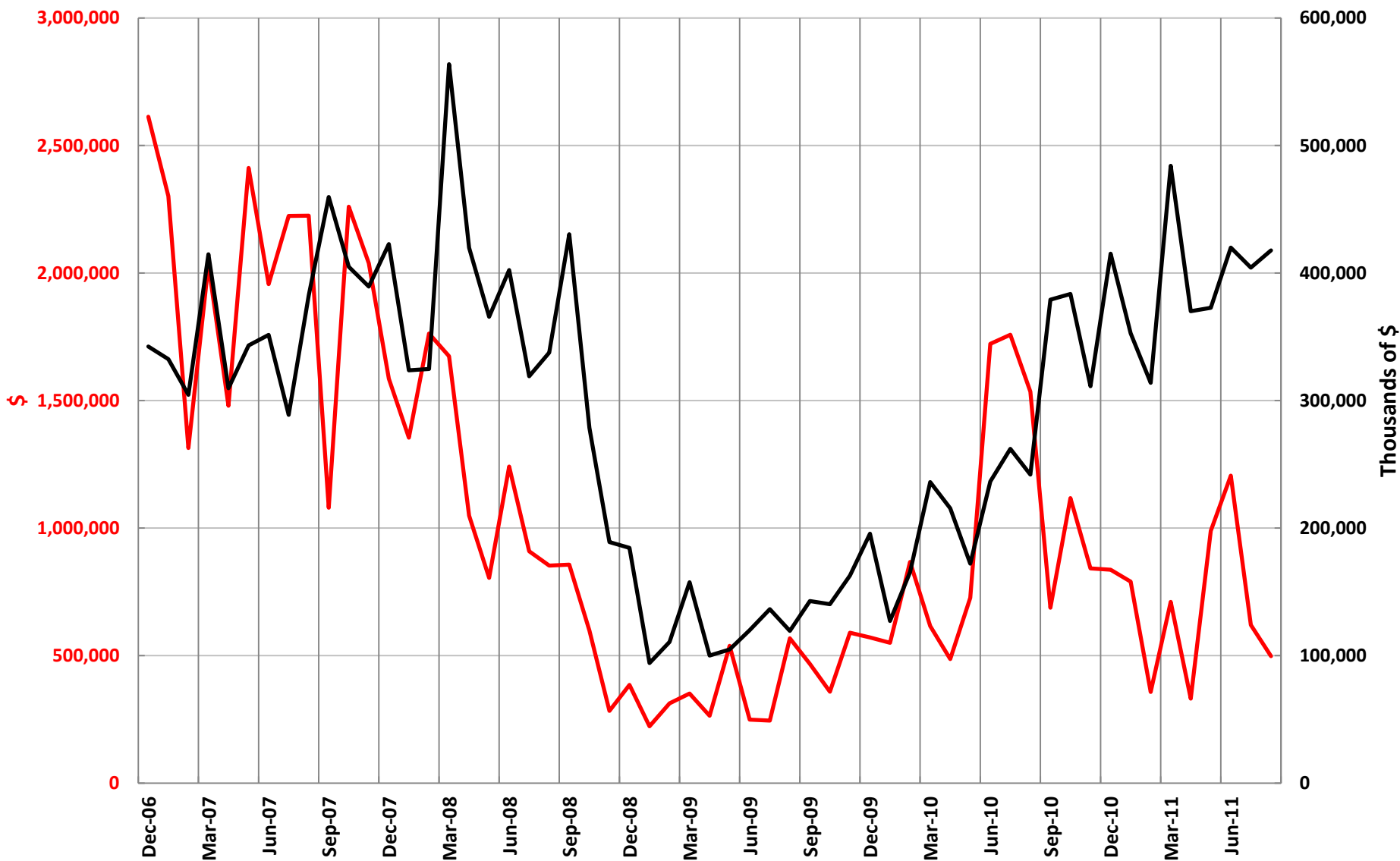


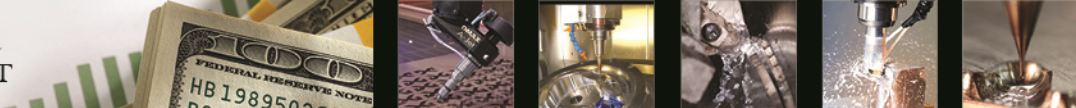
## Future Business Expectations





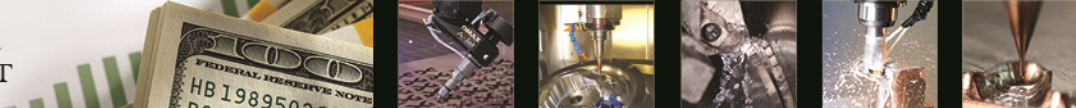
## Real MBI Average Spending per Plant vs. Real USMTO Spending





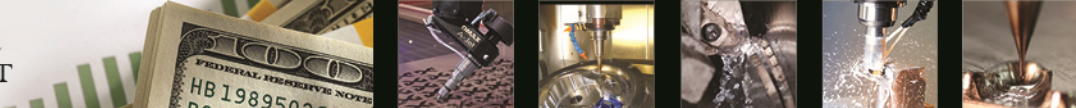
# Spending by Industry (millions of real \$)

	2008	2009	2010	2011	2012	% Δ
Automotive	\$774	\$409	\$541	\$519	\$872	68%
Metalcutting Job Shops	\$1,191	\$546	\$450	\$666	\$619	-7%
Pumps, Valves & Plumbing Products	\$458	\$153	\$471	\$271	\$455	68%
Aerospace	\$423	\$123	\$476	\$423	\$437	3%
Forming & Fabricating (non-auto)	\$164	\$119	\$256	\$239	\$335	40%
Machinery Manufacturing	\$493	\$348	\$227	\$482	\$309	-36%
Electronics, Computers & Telecom	\$190	\$169	\$182	\$175	\$276	57%
Oil & Gas, Mining, Off-Road Construction	\$649	\$145	\$199	\$345	\$219	-37%
Industrial Motors, Hydraulic & Mechanical Comp	\$295	\$162	\$200	\$204	\$167	-18%
Other Manufacturing	\$49	\$92	\$55	\$177	\$147	-17%
Medical	\$201	\$101	\$38	\$133	\$145	8%
Power Generation	\$178	\$113	\$65	\$6	\$130	1,977%
<b>Total Spending in Top Industries</b>	<b>\$5,064</b>	<b>\$2,481</b>	<b>\$3,161</b>	<b>\$3,640</b>	<b>\$4,111</b>	<b>13%</b>



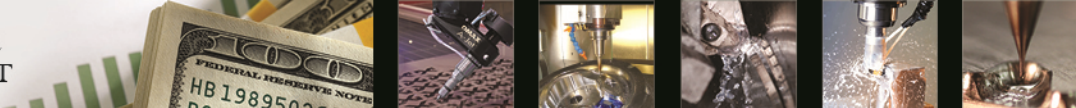
# High Operating Capacity

SIC	Description	Operating Capacity	# of Surveys	Spending (millions of \$)	Avg/Plant
3444	Sheet metal work	89%	7	\$5.7	\$0.81
3613	Switchgear and switchboard	85%	8	\$6.3	\$0.79
3714	Motor vehicle parts and accessories	82%	55	\$116.1	\$2.11
3523	Farm and machinery equipment	82%	9	\$5.2	\$0.58
3531	Construction machinery	82%	12	\$7.8	\$0.65
3545	Machine tool accessories	81%	17	\$13.0	\$0.76
3728	Aircraft parts	79%	22	\$25.2	\$1.15
3562	Ball and roller bearings	78%	9	\$12.9	\$0.21
3679	Electronic components	77%	10	\$4.5	\$0.45
3541	Electric lamps	76%	8	\$3.7	\$0.46
3469	Metal stampings	76%	14	\$4.5	\$0.32
3599	Job shops	76%	136	\$20.2	\$0.15



# Capital Spending - % of Budget

	2007	2008	2009	2010	2011	2012
Turning, Lathes	16.60	16.14	18.79	13.30	21.00	18.30
HMCs	18.11	25.20	20.04	17.80	16.70	17.70
Grinding	9.54	8.86	12.66	9.20	8.90	12.70
Turning, Centers	14.38	11.70	11.28	15.60	15.50	12.30
VMCs	14.34	12.43	12.36	16.30	14.10	9.90
Milling	10.29	10.12	7.89	11.10	9.90	9.40
Transfer Machining	4.51	2.82	3.41	1.90	3.80	7.40
EDM	3.22	3.23	2.97	3.40	2.00	3.60
Screw Machining	3.01	3.82	5.75	4.60	2.90	3.50
Drilling	1.81	2.80	1.72	3.10	1.70	2.00
Sawing	2.29	1.46	1.82	1.60	1.90	1.50
Waterjet	0.79	0.73	0.70	1.40	1.40	1.20
Broaching	1.12	0.68	0.64	0.70	0.50	0.50



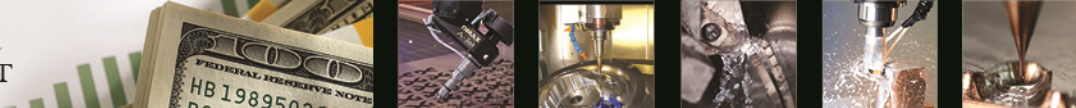
# Capital Spending (millions of real \$)

	2008	2009	2010	2011	2012	% Δ
Turning, Lathes	\$888	\$490	\$434	\$818	\$790	-3.5%
HMCs	\$1,387	\$523	\$580	\$650	\$764	17.4%
Grinding	\$487	\$330	\$300	\$347	\$548	58.1%
Turning, Centers	\$643	\$294	\$509	\$604	\$531	-12.1%
VMCs	\$684	\$322	\$531	\$549	\$427	-22.2%
Milling	\$557	\$206	\$362	\$386	\$406	5.2%
Transfer Machining	\$155	\$89	\$62	\$148	\$319	115.8%
EDM	\$178	\$77	\$111	\$78	\$155	99.4%
Screw Machining	\$210	\$150	\$150	\$113	\$151	33.7%
Drilling	\$154	\$45	\$101	\$66	\$86	30.3%
Sawing	\$80	\$47	\$52	\$74	\$65	-12.5%
Waterjet	\$40	\$18	\$46	\$55	\$52	-5.0%
Broaching	\$38	\$17	\$23	\$19	\$22	10.8%



# Turning, Lathes (millions of real \$)

	2008	2009	2010	2011	2012
Manual Lathes	\$100	\$44	\$52	\$78	\$78
CNC Lathes, Horizontal, <10 in Chuck	\$388	\$175	\$150	\$253	\$285
CNC Lathes, Horizontal, >10 in Chuck	\$337	\$184	\$101	\$191	\$280
CNC Lathes, Vertical	\$84	\$87	\$130	\$296	\$147
Manual Lathes	11%	9%	12%	10%	10%
CNC Lathes, Horizontal, <10 in Chuck	43%	36%	35%	31%	36%
CNC Lathes, Horizontal, >10 in Chuck	37%	38%	23%	23%	36%
CNC Lathes, Vertical	9%	18%	30%	36%	19%



# CNC Lathes, Horizontal, >10 in Chuck (millions of real \$)

	2008	2009	2010	2011	2012
Pumps, Valves & Plumbing Products	\$32.3	\$19.8	\$35.7	\$34.5	\$89.1
Forming & Fabricating (non-auto)	\$7.4	\$5.5	\$3.6	\$5.6	\$45.4
Machinery Manufacturing	\$8.0	\$34.5	\$2.2	\$17.4	\$34.0
Metalcutting Job Shops	\$80.8	\$25.6	\$22.5	\$53.3	\$27.0
Other Manufacturing	\$0.0	\$3.0	\$0.0	\$1.8	\$21.0
Industrial Motors, Hydraulic & Mechanical Comp	\$43.9	\$2.9	\$0.5	\$9.1	\$20.7
Aerospace	\$20.1	\$15.1	\$0.1	\$21.8	\$17.1
Oil & Gas, Mining, Off-Road Construction	\$92.8	\$27.2	\$21.7	\$10.3	\$15.6
Automotive	\$18.0	\$25.3	\$3.9	\$27.7	\$5.9
All Other Industries	\$33.8	\$24.9	\$10.9	\$9.3	\$4.6





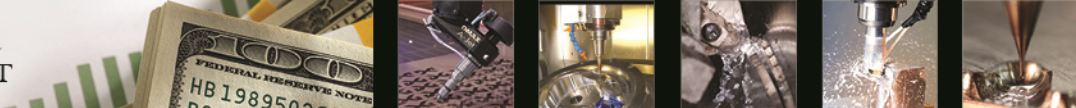
# HMCs (millions of real \$)

	2008	2009	2010	2011	2012
HMCs, <400 mm Pallet	\$340.7	\$213	\$195.6	\$151.9	\$289.1
HMCs, >400 mm Pallet	\$971.3	\$309.5	\$384.8	\$670.5	\$763.6
HMCs, <400 mm Pallet	26%	41%	34%	23%	38%
HMCs, >400 mm Pallet	74%	59%	66%	77%	62%



# HMCs, <400 mm pallet (millions of real \$)

	2008	2009	2010	2011	2012
Automotive	\$42.1	\$52.0	\$34.7	\$7.8	\$99.8
Aerospace	\$25.7	\$13.2	\$21.9	\$31.7	\$34.3
Electronics, Computers & Telecom	\$8.5	\$14.7	\$13.3	\$13.8	\$34.1
Pumps, Valves & Plumbing Products	\$31.7	\$8.3	\$18.6	\$8.2	\$31.0
Metalcutting Job Shops	\$63.4	\$39.0	\$48.2	\$37.0	\$27.3
Industrial Motors, Hydraulic & Mechanical Comp	\$27.5	\$15.7	\$8.2	\$8.2	\$20.6
Forming & Fabricating (non-auto)	\$5.3	\$9.6	\$6.3	\$2.7	\$14.4
Machinery Manufacturing	\$39.3	\$34.8	\$4.1	\$24.4	\$14.4
Hardware	\$2.4	\$10.1	\$0.2	\$0.0	\$3.8
All Other Industries	\$94.7	\$15.5	\$40.1	\$18.0	\$9.4



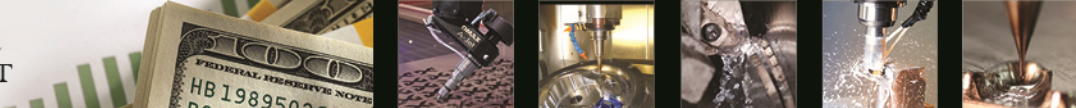
# Grinding (millions of real \$)

	2008	2009	2010	2011	2012
Gearcutting	\$168.3	\$72.0	\$75.0	\$85.7	\$43.2
Flat/Surface	\$98.7	\$68.3	\$32.6	\$97.4	\$86.3
Cylindrical/External	\$68.9	\$43.8	\$42.4	\$27.3	\$94.9
Creep Feed	\$13.6	\$16.7	\$0.0	\$3.9	\$25.9
ID/OD	\$49.1	\$38.9	\$68.5	\$70.1	\$90.6
Internal	\$31.5	\$8.1	\$19.6	\$15.6	\$13.0
Centerless	\$48.4	\$23.2	\$26.1	\$19.5	\$125.1
Other	\$20.4	\$58.4	\$19.6	\$27.3	\$69.1
Gearcutting	34%	22%	26%	25%	8%
Flat/Surface	20%	21%	12%	28%	16%
Cylindrical/External	14%	13%	15%	8%	17%
Creep Feed	3%	5%	0%	1%	5%
ID/OD	10%	12%	24%	20%	17%
Internal	6%	3%	7%	5%	2%
Centerless	10%	7%	9%	6%	23%
Other	4%	18%	7%	8%	13%



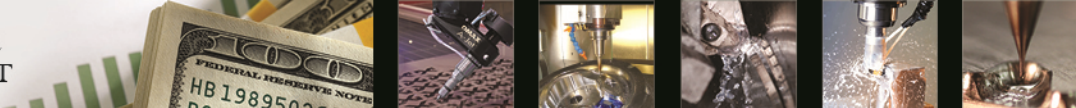
# Grinding, Centerless (millions of real \$)

	2008	2009	2010	2011	2012
Automotive	\$8.1	\$7.0	\$1.1	\$2.8	\$53.2
Other Manufacturing	\$1.4	\$3.2	\$0.1	\$2.8	\$38.3
Metalcutting Job Shops	\$6.3	\$4.5	\$17.2	\$12.9	\$23.9
Non-Manufacturing	\$0.0	\$0.0	\$0.0	\$0.0	\$3.8
Aerospace	\$0.0	\$0.1	\$4.0	\$0.9	\$3.6
Hardware	\$6.9	\$1.3	\$0.0	\$0.0	\$1.5
Petrochemical Processors	\$0.0	\$0.0	\$0.0	\$0.0	\$0.8
Industrial Motors, Hydraulic & Mechanical Comp	\$0.0	\$0.0	\$0.0	\$0.0	\$0.1
Forming & Fabricating (non-auto)	\$0.6	\$0.2	\$2.5	\$0.0	\$0.0
All Other Industries	\$25.0	\$6.9	\$1.2	\$0.0	\$0.0



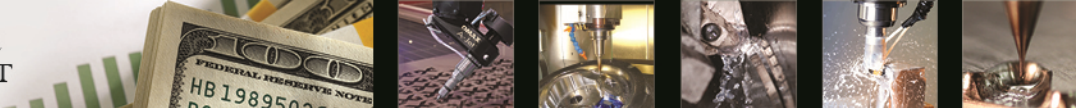
# Turning, Centers (millions of real \$)

	2008	2009	2010	2011	2012
Turning Center, Horizontal, <10 in Chuck	\$290.1	\$134.0	\$241.3	\$303.8	\$215.7
Turning Center, Horizontal, >10 in Chuck	\$312.3	\$95.4	\$182.6	\$214.3	\$258.9
Turning Center, Vertical	\$57.3	\$64.7	\$84.8	\$85.7	\$56.1
Turning Center, Horizontal, <10 in Chuck	44%	46%	47%	50%	41%
Turning Center, Horizontal, >10 in Chuck	47%	32%	36%	36%	49%
Turning Center, Vertical	9%	22%	17%	14%	11%



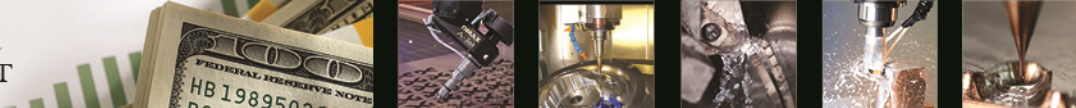
# Turning Center, Horizontal, >10 in Chuck (millions of real \$)

	2008	2009	2010	2011	2012
Power Generation	\$0.0	\$3.7	\$3.3	\$0.0	\$55.8
Automotive	\$31.4	\$15.7	\$6.3	\$51.1	\$44.1
Metalcutting Job Shops	\$59.7	\$27.6	\$24.6	\$48.7	\$38.3
Pumps, Valves & Plumbing Products	\$65.8	\$3.1	\$84.4	\$6.0	\$34.4
Aerospace	\$7.0	\$2.6	\$15.9	\$29.7	\$26.5
Industrial Motors, Hydraulic & Mechanical Comp	\$30.9	\$3.3	\$0.0	\$27.3	\$21.7
Machinery Manufacturing	\$21.9	\$10.5	\$8.2	\$4.6	\$21.5
Other Manufacturing	\$4.2	\$6.3	\$8.9	\$0.4	\$9.6
Non-Manufacturing	\$0.0	\$0.0	\$0.0	\$0.0	\$4.9
All Other Industries	\$91.1	\$22.6	\$30.8	\$46.7	\$2.1



# Tooling Spending - % of Budget

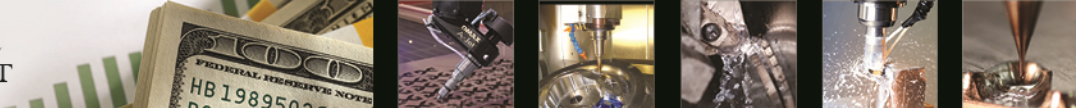
	2008	2009	2010	2011	2012
Inserts (Stationary)	18.7%	19.8%	20.7%	20.9%	22.7%
Inserts (Rotary)	16.1%	17.5%	19.3%	19.6%	18.5%
Milling Tools (ex. Inserts)	11.8%	13.5%	13.4%	14.8%	15.0%
Drills	14.7%	13.6%	12.5%	12.2%	12.6%
Grinding Wheels & Other Abrasives	8.6%	5.7%	6.9%	6.9%	6.5%
Toolholders for Milling	5.8%	8.0%	6.9%	6.6%	6.4%
Turning Tools (ex. Inserts)	6.0%	7.2%	6.7%	5.4%	5.3%
Taps	10.3%	6.5%	5.5%	4.5%	4.8%
Boring Heads & Tools	2.8%	3.0%	2.9%	3.4%	3.2%
Saw Blades	3.0%	2.5%	2.6%	2.2%	2.1%
Broaches	0.5%	0.7%	0.8%	1.0%	1.3%
Gear Cutters	0.6%	1.0%	0.7%	1.3%	0.8%
Other Cutting Tools	1.1%	1.0%	1.1%	1.2%	0.8%



# Tooling Spending (millions of real \$)

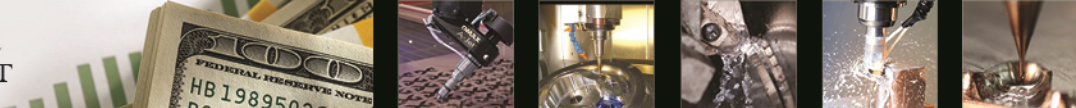
	2008	2009	2010	2011	2012	% Δ
Inserts (Stationary)	\$771	\$539	\$714	\$841	\$1,002	19.2%
Inserts (Rotary)	\$664	\$476	\$666	\$788	\$817	3.6%
Milling Tools (ex. Inserts)	\$487	\$367	\$462	\$595	\$662	11.2%
Drills	\$606	\$370	\$431	\$491	\$556	13.3%
Grinding Wheels & Other Abrasives	\$355	\$155	\$238	\$278	\$287	3.4%
Toolholders for Milling	\$239	\$218	\$238	\$265	\$283	6.4%
Turning Tools (ex. Inserts)	\$247	\$196	\$231	\$217	\$234	7.7%
Taps	\$425	\$177	\$190	\$181	\$212	17.1%
Boring Heads & Tools	\$115	\$82	\$100	\$137	\$141	3.3%
Saw Blades	\$124	\$68	\$90	\$88	\$93	4.8%
Broaches	\$21	\$19	\$28	\$40	\$57	42.7%
Gear Cutters	\$25	\$27	\$24	\$52	\$35	-32.5%
Other Cutting Tools	\$45	\$27	\$38	\$48	\$35	-26.8%





# Inserts – Stationary (millions of real \$)

	2008	2009	2010	2011	2012
<b>Carbide</b>	\$561	\$402	\$543	\$636	\$804
<b>Ceramic</b>	\$44	\$45	\$66	\$71	\$74
<b>Cermet</b>	\$14	\$15	\$31	\$18	\$37
<b>CBN or Diamond Film</b>	\$133	\$60	\$57	\$92	\$71
<b>Other</b>	\$20	\$16	\$16	\$24	\$16
<b>Carbide</b>	73%	75%	76%	76%	80%
<b>Ceramic</b>	6%	8%	9%	9%	7%
<b>Cermet</b>	2%	3%	4%	2%	4%
<b>CBN or Diamond Film</b>	17%	11%	8%	11%	7%
<b>Other</b>	3%	3%	2%	3%	2%



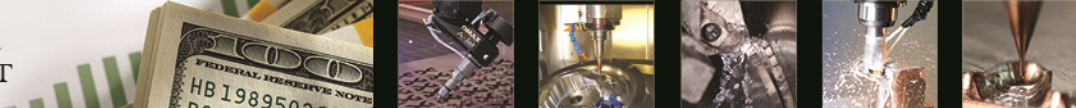
# Carbide Inserts – Stationary (millions of real \$)

	2008	2009	2010	2011	2012
<b>Metalcutting Job Shops</b>	\$66.6	\$80.4	\$149.6	\$108.0	\$190.5
<b>Aerospace</b>	\$15.5	\$22.1	\$32.7	\$102.4	\$157.5
<b>Machinery Manufacturing</b>	\$50.9	\$32.4	\$51.5	\$59.0	\$80.5
<b>Pumps, Valves &amp; Plumbing Products</b>	\$51.9	\$42.9	\$31.8	\$74.2	\$61.6
<b>Automotive</b>	\$184.7	\$59.7	\$48.2	\$70.1	\$45.2
<b>Other Manufacturing</b>	\$29.8	\$21.5	\$30.4	\$45.9	\$44.5
<b>Electronics, Computers &amp; Telecom</b>	\$16.6	\$15.9	\$13.3	\$23.2	\$35.4
<b>Medical</b>	\$7.2	\$3.6	\$25.0	\$5.8	\$27.7
<b>Non-Manufacturing</b>	\$0.0	\$0.0	\$0.0	\$0.0	\$26.1
<b>All Other Industries</b>	\$136.7	\$122.5	\$159.0	\$144.8	\$128.0



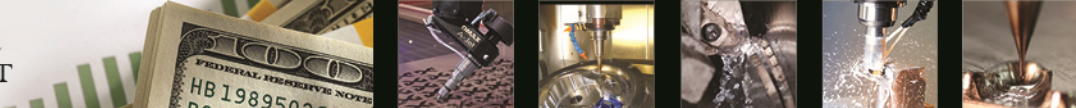
# Inserts – Rotary (millions of real \$)

	2008	2009	2010	2011	2012
<b>Carbide</b>	\$521	\$377	\$547	\$652	\$688
<b>Ceramic</b>	\$37	\$34	\$40	\$27	\$37
<b>Cermet</b>	\$11	\$11	\$16	\$15	\$12
<b>CBN or Diamond Film</b>	\$74	\$38	\$43	\$64	\$57
<b>Other</b>	\$21	\$16	\$21	\$31	\$23
<b>Carbide</b>	79%	79%	82%	83%	84%
<b>Ceramic</b>	6%	7%	6%	3%	5%
<b>Cermet</b>	2%	2%	2%	2%	2%
<b>CBN or Diamond Film</b>	11%	8%	6%	8%	7%
<b>Other</b>	3%	3%	3%	4%	3%



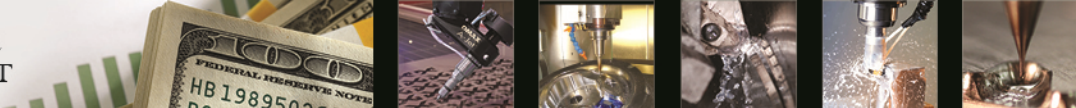
# Carbide Inserts – Rotary (millions of real \$)

	2008	2009	2010	2011	2012
<b>Metalcutting Job Shops</b>	\$118.7	\$101.5	\$195.9	\$123.9	\$159.5
<b>Aerospace</b>	\$16.5	\$18.2	\$35.2	\$94.0	\$92.0
<b>Machinery Manufacturing</b>	\$30.8	\$28.7	\$73.3	\$96.6	\$72.9
<b>Pumps, Valves &amp; Plumbing Products</b>	\$25.1	\$31.9	\$21.7	\$75.5	\$62.8
<b>Automotive</b>	\$173.6	\$56.1	\$36.3	\$51.3	\$43.8
<b>Medical</b>	\$4.1	\$3.2	\$12.2	\$3.5	\$40.3
<b>Electronics, Computers &amp; Telecom</b>	\$9.7	\$15.2	\$14.8	\$22.1	\$36.2
<b>Industrial Motors, Hydraulic &amp; Mechanical Comp</b>	\$10.3	\$15.6	\$18.6	\$27.4	\$26.4
<b>Other Manufacturing</b>	\$12.7	\$7.3	\$19.7	\$29.4	\$25.6
<b>All Other Industries</b>	\$118.4	\$99.5	\$118.3	\$126.6	\$123.6



# Milling Tools (millions of real \$)

	2008	2009	2010	2011	2012
<b>Indexable Cutters</b>	\$158.2	\$119.3	\$136.9	\$192.9	\$180.8
<b>Solid Carbide Cutters</b>	\$253.5	\$173.3	\$226.1	\$269.7	\$318.5
<b>High-Speed Steel Cutters</b>	\$67.2	\$67.6	\$89.7	\$114.3	\$149.0
<b>Other</b>	\$7.8	\$7.0	\$9.7	\$18.5	\$13.9
<b>Indexable Cutters</b>	33%	33%	30%	32%	27%
<b>Solid Carbide Cutters</b>	52%	47%	49%	45%	48%
<b>High-Speed Steel Cutters</b>	14%	18%	19%	19%	23%
<b>Other</b>	2%	2%	2%	3%	2%



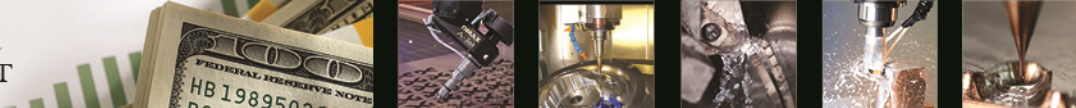
# Solid Carbide Cutters (millions or real \$)

	2008	2009	2010	2011	2012
Metalcutting Job Shops	\$42.5	\$48.5	\$70.2	\$38.4	\$76.9
Aerospace	\$20.6	\$6.5	\$18.9	\$30.3	\$43.4
Machinery Manufacturing	\$14.1	\$20.7	\$17.3	\$16.2	\$39.2
HVAC	\$1.8	\$0.0	\$0.8	\$0.0	\$29.1
Other Manufacturing	\$9.2	\$6.1	\$21.2	\$57.9	\$27.8
Automotive	\$114.2	\$26.3	\$25.0	\$33.0	\$25.4
Medical	\$2.7	\$7.5	\$15.1	\$4.7	\$13.4
Forming & Fabricating (non-auto)	\$9.1	\$7.0	\$5.9	\$6.3	\$9.5
Custom Processors	\$5.5	\$8.4	\$2.4	\$4.5	\$7.9
All Other Industries	\$32.9	\$42.0	\$49.1	\$76.7	\$43.4



# Workholding Spending (millions of real \$)

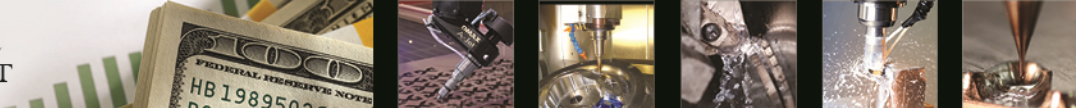
	2008	2009	2010	2011	2012
<b>Milling/Drilling</b>	\$948	\$641	\$772	\$945	\$934
<b>Turning</b>	\$660	\$399	\$441	\$526	\$514
<b>Grinding</b>	\$275	\$166	\$197	\$208	\$221
<b>Other</b>	\$93	\$84	\$153	\$128	\$159
<b>Total</b>	\$1,976	\$1,290	\$1,563	\$1,808	\$1,829
<b>Milling/Drilling</b>	48.0%	49.7%	49.4%	52.3%	51.1%
<b>Turning</b>	33.4%	30.9%	28.2%	29.1%	28.1%
<b>Grinding</b>	13.9%	12.9%	12.6%	11.5%	12.1%
<b>Other</b>	4.7%	6.5%	9.8%	7.1%	8.7%



# Milling/Drilling (millions of real \$)

	2008	2009	2010	2011	2012
Dedicated Fixtures	\$494	\$294	\$386	\$432	\$404
Flexible Fixtures	\$172	\$122	\$134	\$183	\$194
Indexing Devices	\$60	\$60	\$74	\$107	\$99
Automated Systems & Transfer Lines	\$97	\$62	\$63	\$79	\$73
Pallets & Pallet-Handling Devices	\$59	\$51	\$53	\$58	\$50
Other	\$67	\$52	\$62	\$86	\$115





# Dedicated Fixtures (millions of real \$)

	2008	2009	2010	2011	2012
<b>Metalcutting Job Shops</b>	\$83.0	\$60.9	\$82.9	\$88.3	\$121.8
<b>Aerospace</b>	\$25.0	\$11.6	\$52.7	\$61.0	\$87.8
<b>Machinery Manufacturing</b>	\$43.8	\$57.3	\$43.1	\$14.0	\$55.5
<b>Automotive</b>	\$141.6	\$45.0	\$29.1	\$44.8	\$27.7
<b>Industrial Motors, Hydraulic &amp; Mechanical Comp</b>	\$8.3	\$18.5	\$21.0	\$26.2	\$18.0
<b>Pumps, Valves &amp; Plumbing Products</b>	\$25.2	\$20.3	\$9.8	\$23.5	\$12.4
<b>Petrochemical Processors</b>	\$0.0	\$1.2	\$0.9	\$0.0	\$12.2
<b>Medical</b>	\$7.2	\$2.5	\$14.7	\$4.8	\$11.2
<b>Oil &amp; Gas, Mining, Off-Road Construction</b>	\$40.5	\$14.0	\$61.9	\$33.0	\$9.6
<b>All Other Industries</b>	\$115.2	\$61.5	\$68.8	\$133.5	\$46.0



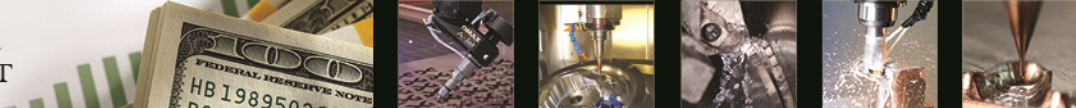
# Flexible Fixtures (millions of real \$)

	2008	2009	2010	2011	2012
<b>Metalcutting Job Shops</b>	\$41.0	\$30.1	\$20.9	\$48.2	\$57.4
<b>Aerospace</b>	\$8.3	\$4.4	\$13.9	\$16.5	\$34.7
<b>Medical</b>	\$1.5	\$1.8	\$12.7	\$1.6	\$26.3
<b>Oil &amp; Gas, Mining, Off-Road Construction</b>	\$13.3	\$0.1	\$1.2	\$11.2	\$17.9
<b>Machinery Manufacturing</b>	\$5.9	\$19.7	\$16.1	\$10.2	\$14.3
<b>Forming &amp; Fabricating (non-auto)</b>	\$10.3	\$10.4	\$2.7	\$8.4	\$6.5
<b>Petrochemical Processors</b>	\$1.1	\$0.8	\$0.7	\$0.0	\$6.4
<b>Automotive</b>	\$41.1	\$17.9	\$8.7	\$9.1	\$5.5
<b>Industrial Motors, Hydraulic &amp; Mechanical Comp</b>	\$6.6	\$3.9	\$9.4	\$8.2	\$4.5
<b>All Other Industries</b>	\$41.0	\$32.4	\$47.9	\$61.2	\$20.2



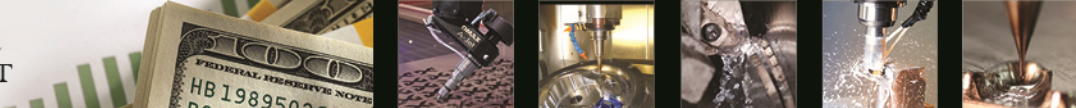
# Turning Processes (millions of real \$)

	2008	2009	2010	2011	2012
<b>Chucks</b>	\$374.1	\$207.7	\$216.0	\$236.1	\$214.3
<b>Other Workholding</b>	\$187.4	\$119.2	\$138.4	\$169.9	\$170.6
<b>Bar Feeds</b>	\$48.2	\$40.7	\$48.5	\$50.5	\$63.2
<b>Other Work Load/Unload Devices</b>	\$50.1	\$31.1	\$37.9	\$69.4	\$65.8



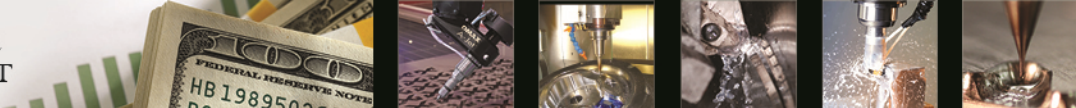
# Bar Feeds (millions of real \$)

	2008	2009	2010	2011	2012
Machinery Manufacturing	\$3.5	\$5.9	\$4.9	\$7.2	\$19.3
Aerospace	\$0.6	\$0.8	\$1.9	\$8.4	\$10.4
Metalcutting Job Shops	\$7.1	\$10.6	\$23.7	\$2.6	\$9.9
Automotive	\$7.2	\$5.6	\$2.1	\$5.8	\$4.3
Medical	\$0.7	\$1.0	\$2.7	\$0.5	\$4.3
Oil & Gas, Mining, Off-Road Construction	\$0.2	\$7.7	\$1.3	\$6.7	\$3.6
Other Manufacturing	\$3.9	\$0.5	\$0.0	\$4.5	\$2.5
Pumps, Valves & Plumbing Products	\$10.4	\$1.6	\$3.1	\$3.6	\$2.4
Industrial Motors, Hydraulic & Mechanical Comp	\$2.2	\$0.4	\$1.5	\$2.4	\$1.7
All Other Industries	\$12.0	\$6.5	\$7.2	\$8.7	\$4.9



# Net Profit Margin

	2007 Median	2007 Average	2010 Median	2010 Average
> \$500k	20.0%	25.9%	20.0%	29.1%
\$500k - \$1m	22.0%	21.7%	15.0%	20.7%
\$1m - \$5m	11.3%	11.2%	10.0%	9.8%
< \$5m	7.3%	9.1%	6.0%	8.7%
Captive Shop	15.0%	11.2%	3.0%	6.6%
Contract Shop	9.7%	15.7%	10.0%	17.8%
Job Shop	12.0%	15.4%	13.0%	15.2%
> 2,500 parts	10.9%	13.4%	13.0%	13.8%
2,500-20,000 parts	12.0%	18.7%	15.0%	20.4%
20,000-200,000 parts	15.0%	19.8%	15.0%	19.5%
< 200,000 parts	10.0%	11.5%	9.7%	11.5%
Top Shops	12.0%	14.5%	13.0%	16.0%
Other Shops	10.6%	15.8%	10.0%	15.7%



# Return on Invested Capital

	2007 Median	2007 Average	2010 Median	2010 Average
> \$500k	22.5%	36.2%	27.5%	42.0%
\$500k - \$1m	10.0%	11.4%	7.5%	16.6%
\$1m - \$5m	11.0%	21.3%	10.0%	24.5%
< \$5m	12.3%	22.1%	18.4%	24.6%
Captive Shop	-	-	-	-
Contract Shop	10.0%	16.4%	13.7%	21.3%
Job Shop	15.0%	29.3%	18.5%	33.3%
> 2,500 parts	10.0%	21.7%	5.0%	22.0%
2,500-20,000 parts	13.5%	21.8%	20.5%	28.6%
20,000-200,000 parts	40.0%	43.7%	29.5%	44.4%
< 200,000 parts	9.5%	15.9%	10.0%	20.3%
Top Shops	17.5%	29.8%	18.5%	36.1%
Other Shops	10.0%	19.2%	10.0%	21.4%



# Gross Sales per Employee

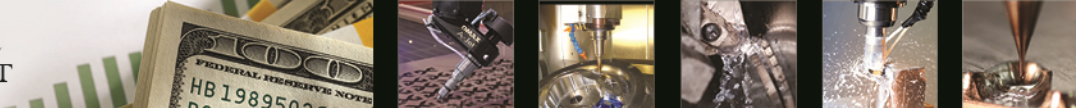
	2009 Median	2009 Average	2010 Median	2010 Average	2011 Median	2011 Average
< \$500k	\$60,000	\$77,243	\$80,000	\$86,080	\$100,000	\$97,852
\$500k - \$1m	\$110,500	\$125,050	\$125,000	\$209,800	\$122,500	\$142,350
\$1m - \$5m	\$115,500	\$121,290	\$125,000	\$158,136	\$130,000	\$141,362
> \$5m	\$137,000	\$145,057	\$142,857	\$151,464	\$139,000	\$155,153
<b>Captive Shop</b>	-	-	-	-	-	-
<b>Contract Shop</b>	\$135,000	\$138,070	\$134,146	\$144,688	\$133,667	\$152,300
<b>Job Shop</b>	\$106,500	\$106,560	\$115,000	\$142,807	\$120,000	\$122,847
< 2,500 parts	\$107,000	\$105,418	\$100,000	\$108,201	\$110,000	\$116,403
2,500-20,000 parts	\$125,000	\$121,618	\$120,000	\$123,758	\$135,667	\$142,801
20,000-200,000 parts	\$112,500	\$114,042	\$120,000	\$190,470	\$115,000	\$128,103
> 200,000 parts	\$128,658	\$135,129	\$132,000	\$151,354	\$133,333	\$148,476
<b>Top Shops</b>	\$112,000	\$105,914	\$127,036	\$170,090	\$125,000	\$126,922
<b>Other Shops</b>	\$125,000	\$128,371	\$118,500	\$130,653	\$130,000	\$140,051



# Gross Sales per CNC Machine

	2009 Median	2009 Average	2010 Median	2010 Average	2011 Median	2011 Average
> \$500k	\$72,500	\$158,251	\$74,500	\$97,028	\$100,000	\$156,028
\$500k - \$1m	\$127,500	\$195,720	\$133,900	\$228,780	\$137,500	\$521,750
\$1m - \$5m	\$157,382	\$213,403	\$175,406	\$227,067	\$197,059	\$252,318
< \$5m	\$289,474	\$562,792	\$348,478	\$596,275	\$365,000	\$608,685
<b>Captive Shop</b>	\$150,000	\$460,500	\$200,000	\$342,500	\$180,000	\$347,600
<b>Contract Shop</b>	\$236,500	\$268,841	\$250,000	\$286,301	\$304,347	\$394,716
<b>Job Shop</b>	\$122,500	\$328,554	\$132,667	\$324,299	\$150,000	\$350,514
> 2,500 parts	\$150,000	\$336,875	\$125,000	\$213,631	\$187,500	\$317,900
2,500-20,000 parts	\$112,500	\$166,038	\$131,667	\$173,144	\$150,000	\$293,804
20,000-200,000 parts	\$125,658	\$536,868	\$146,000	\$535,892	\$139,500	\$520,073
< 200,000 parts	\$233,000	\$281,958	\$274,737	\$347,712	\$300,000	\$368,790
<b>Top Shops</b>	\$205,000	\$245,927	\$201,840	\$285,799	\$225,000	\$319,818
<b>Other Shops</b>	\$150,000	\$342,636	\$150,000	\$321,453	\$180,000	\$391,761





# Investment & Spending as % of Sales

	Cap Ex Med	Cap Ex Avg	Tooling Med	Tooling Avg	People Med	People Avg
> \$500k	2.0%	13.5%	10.0%	11.1%	22.5%	20.7%
\$500k - \$1m	10.0%	7.8%	6.5%	8.5%	25.0%	23.7%
\$1m - \$5m	6.0%	7.7%	5.0%	6.7%	32.0%	31.2%
< \$5m	5.0%	6.6%	4.3%	5.2%	25.0%	24.4%
Captive Shop	-	-	-	-	-	-
Contract Shop	3.0%	6.6%	4.8%	5.6%	25.0%	24.7%
Job Shop	8.0%	10.2%	5.0%	8.2%	30.0%	27.3%
> 2,500 parts	6.5%	9.1%	6.0%	9.0%	32.5%	29.6%
2,500-20,000 parts	9.0%	12.6%	5.0%	7.6%	24.0%	21.3%
20,000-200,000 parts	10.0%	8.0%	5.0%	9.7%	25.0%	22.6%
< 200,000 parts	3.0%	4.8%	4.5%	4.7%	30.3%	28.9%
Top Shops	8.0%	10.1%	5.0%	7.6%	28.5%	25.8%
Other Shops	3.0%	8.1%	5.0%	7.2%	25.0%	25.6%



# Questions