Auto incentives and consumer spending on vehicles

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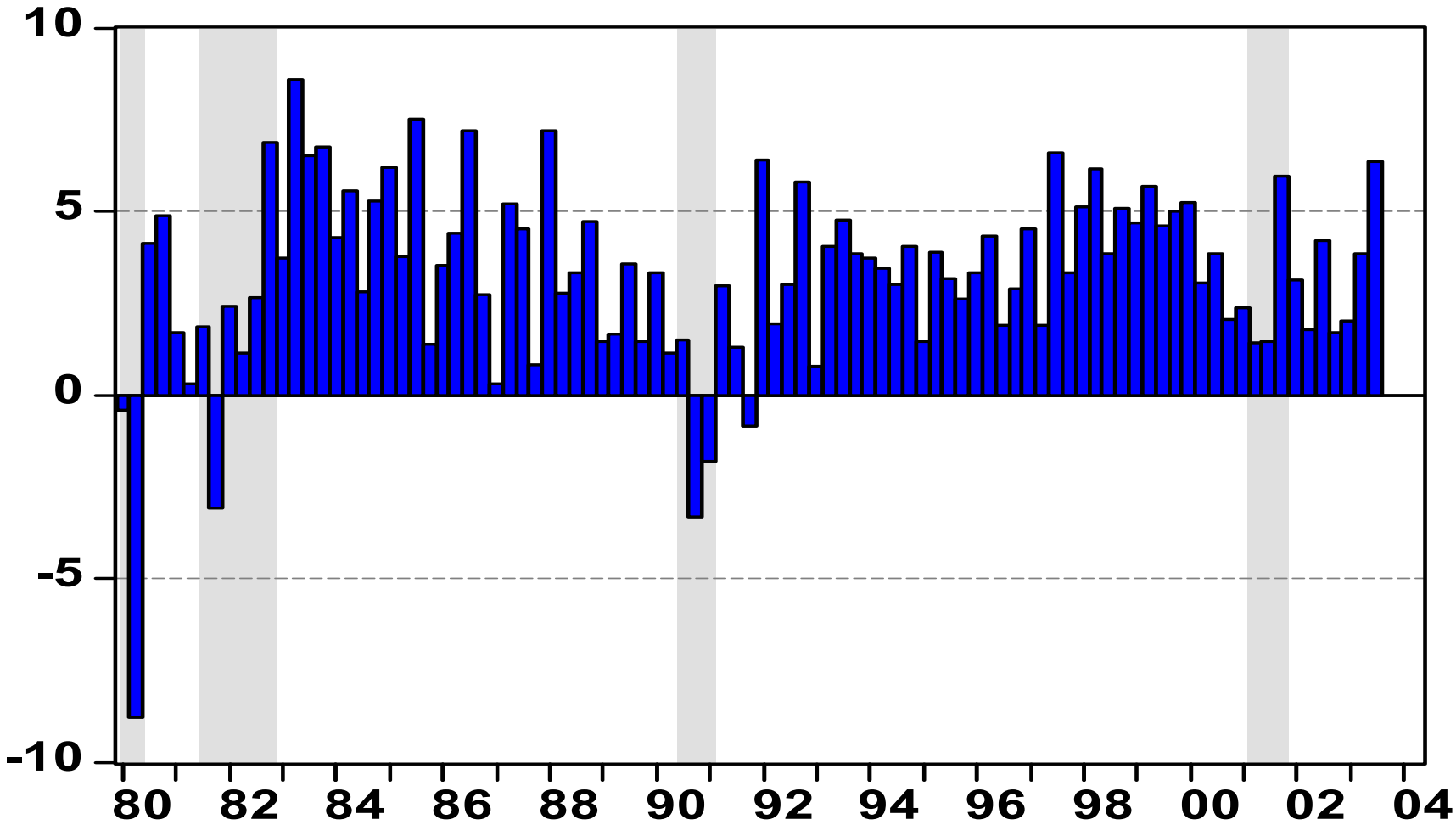
Agenda

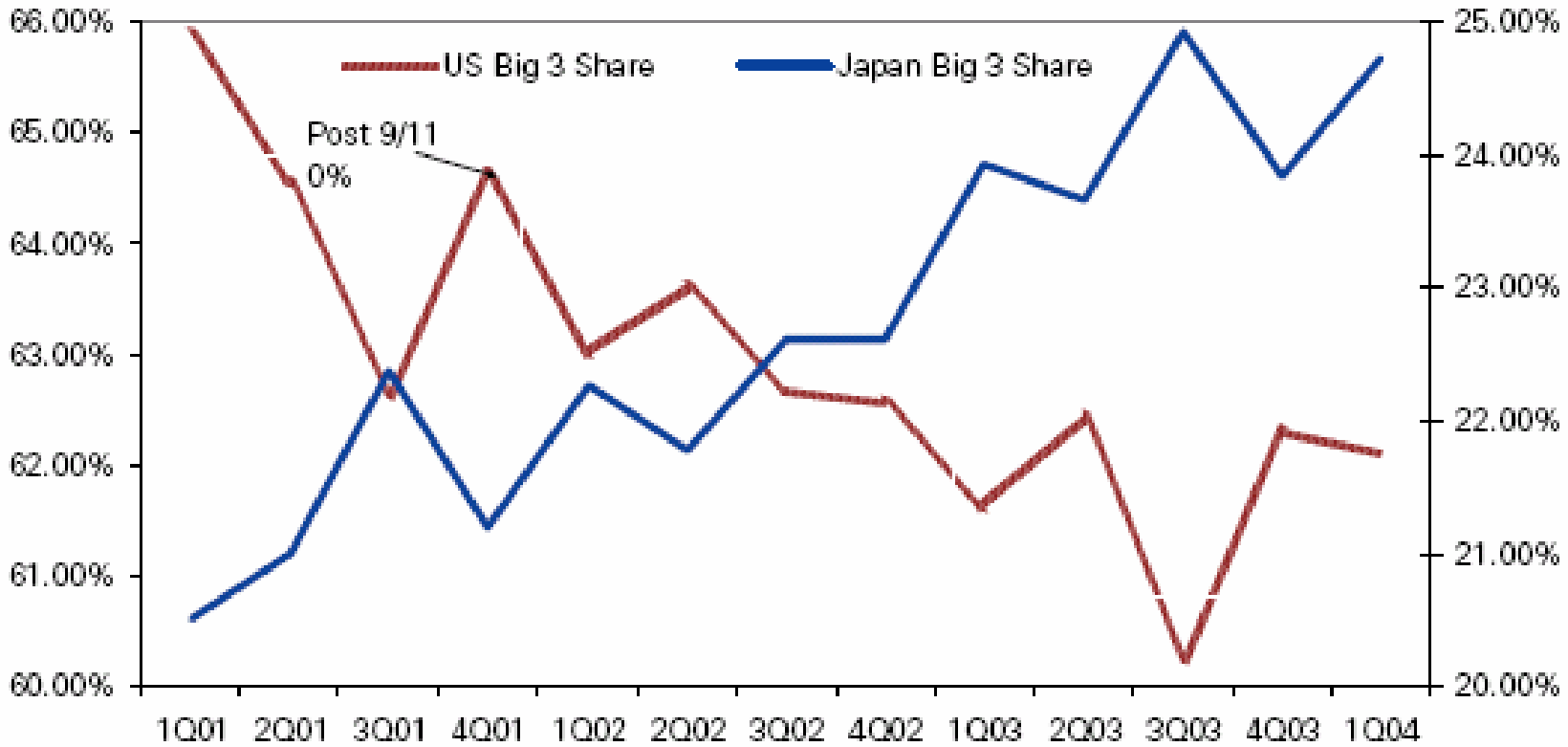
- Incentive pressures and consumer affordability
- Dept of Commerce Bureau of Economic Analysis (BEA) vehicle revenue revisions
- US auto industry revenue projections

Incentives were not a reaction to changes in total private consumption expenditures

Quarterly Percentage Change at Annual Rate, Chained 1996$

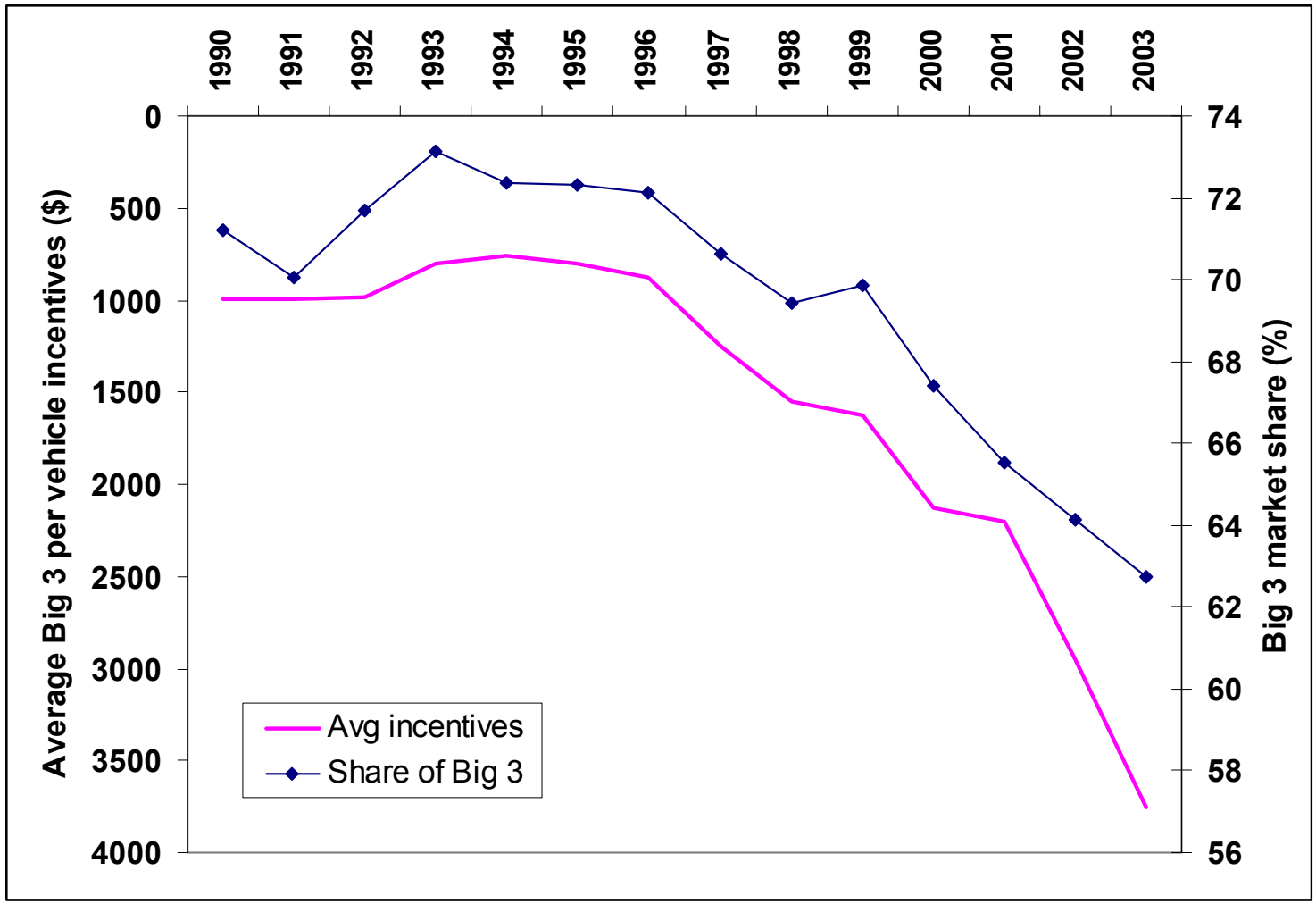


Main driver of incentives: Intensified competition



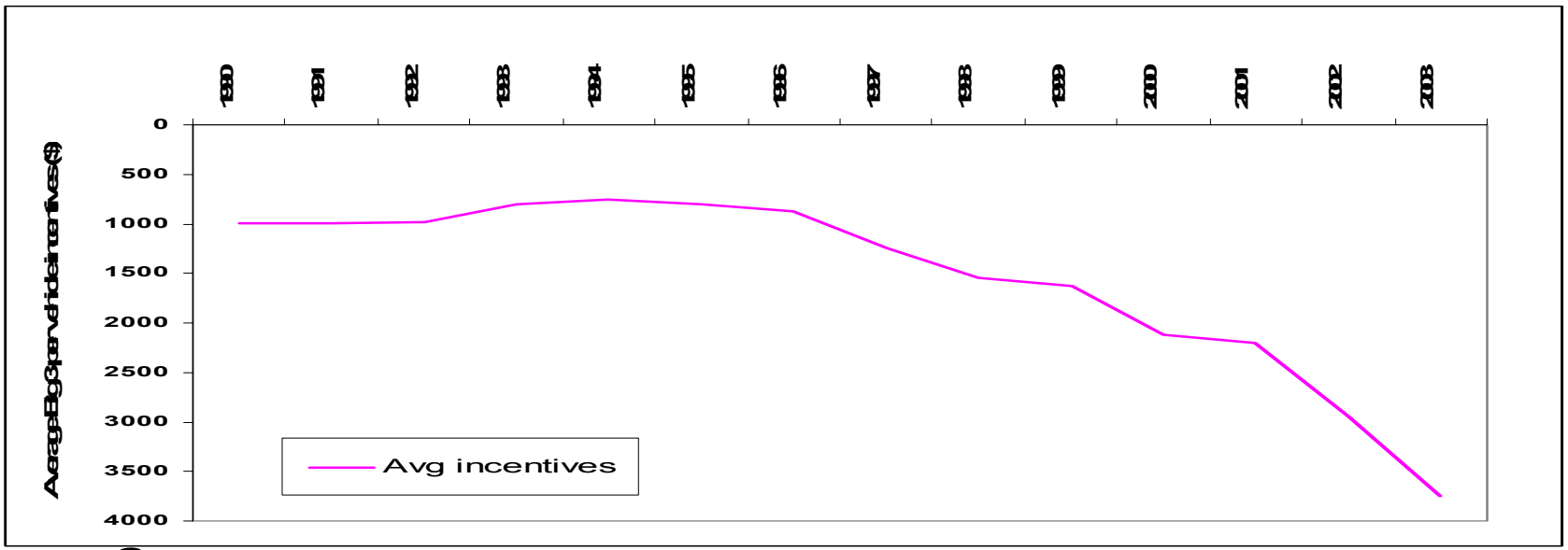
Source: Ward's , Deutsche Bank estimates

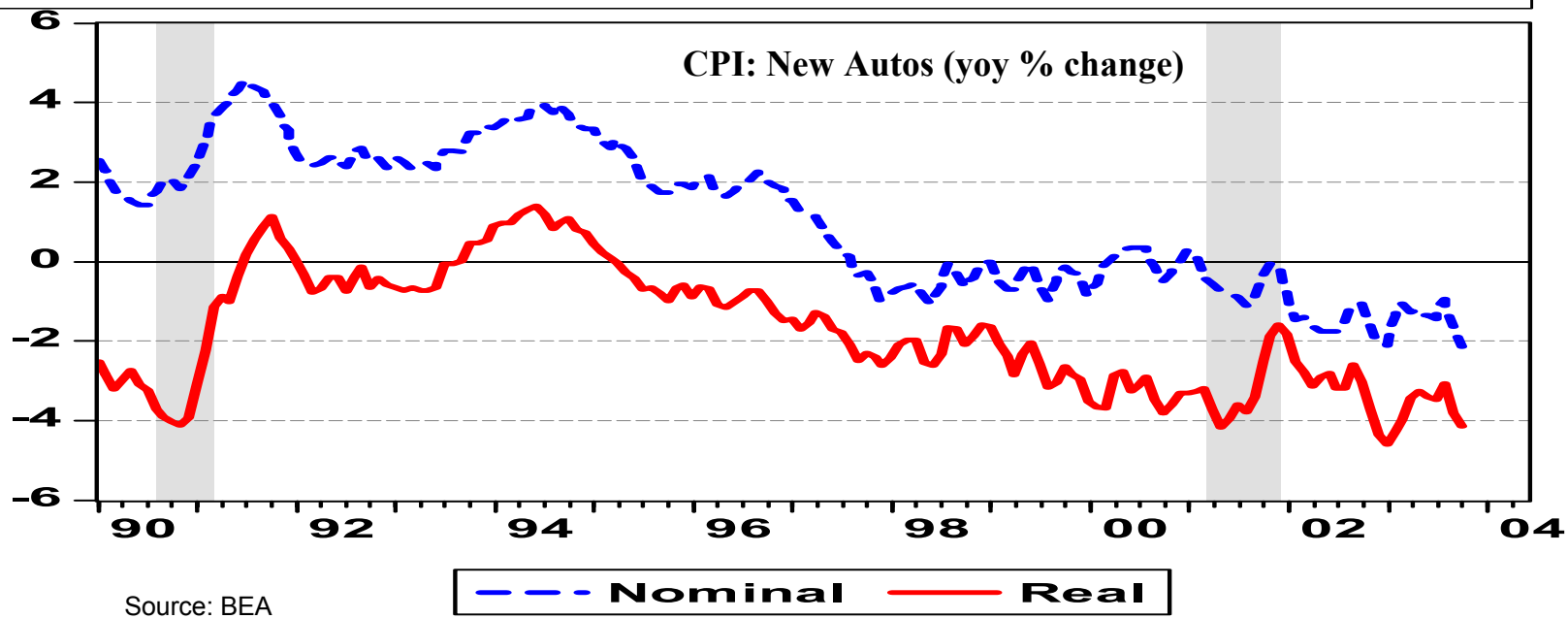
Incentives and market share: chicken and egg?



Source: Ward's

Incentives have driven down new vehicle CPI





Source: BEA

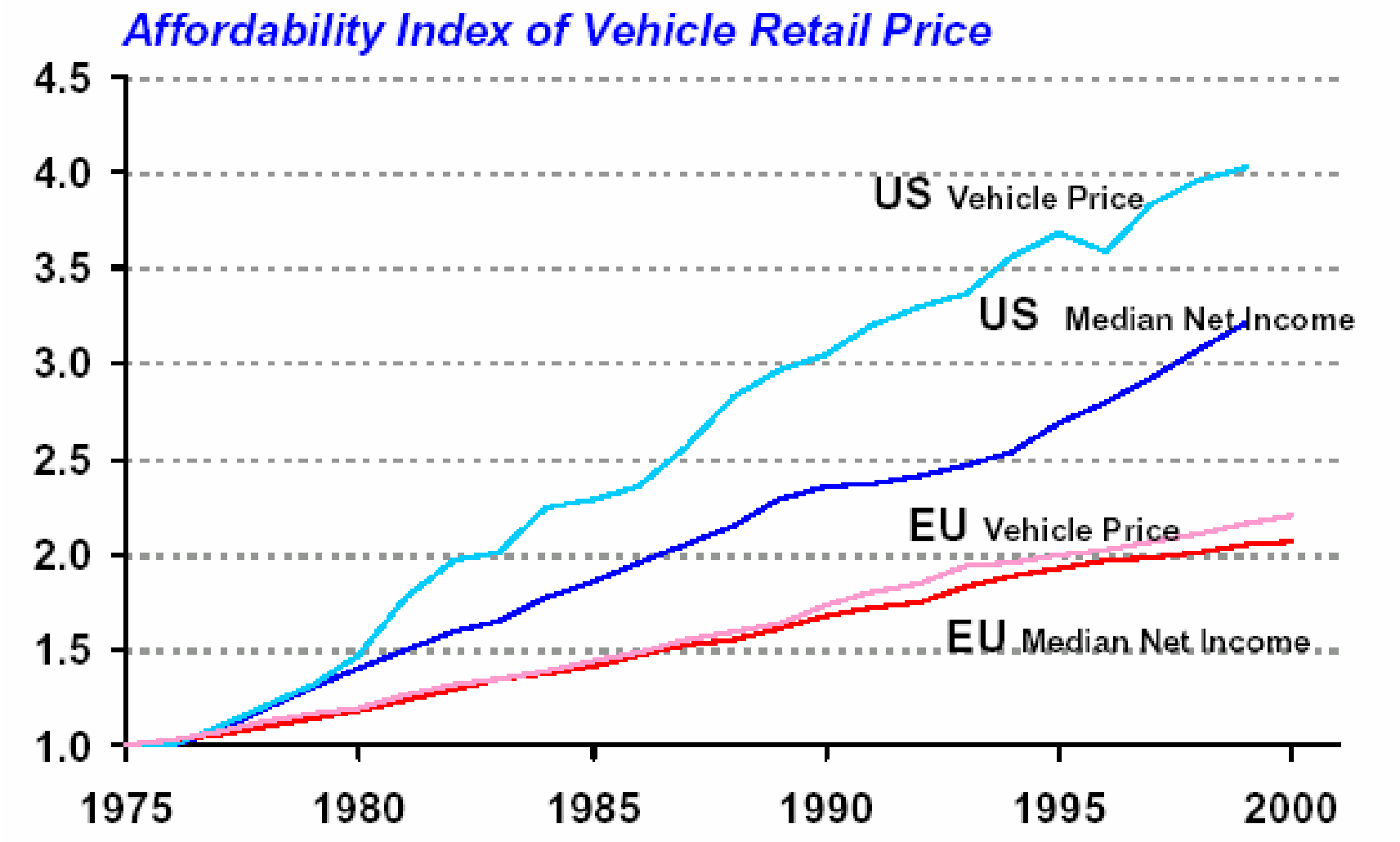
Consumer's perception may be different from CPI One reason KAR was so effective: cars were believed to be overpriced

Question: Which do you feel are fairly priced, and which are overpriced in the US today (Feb 2001)?

	% saying "overpriced"
New car prices	80
Credit card interest charges	76
Doctor fees	71
Brokerage commissions	47
Mutual fund fees	33
Mortgage rates	33

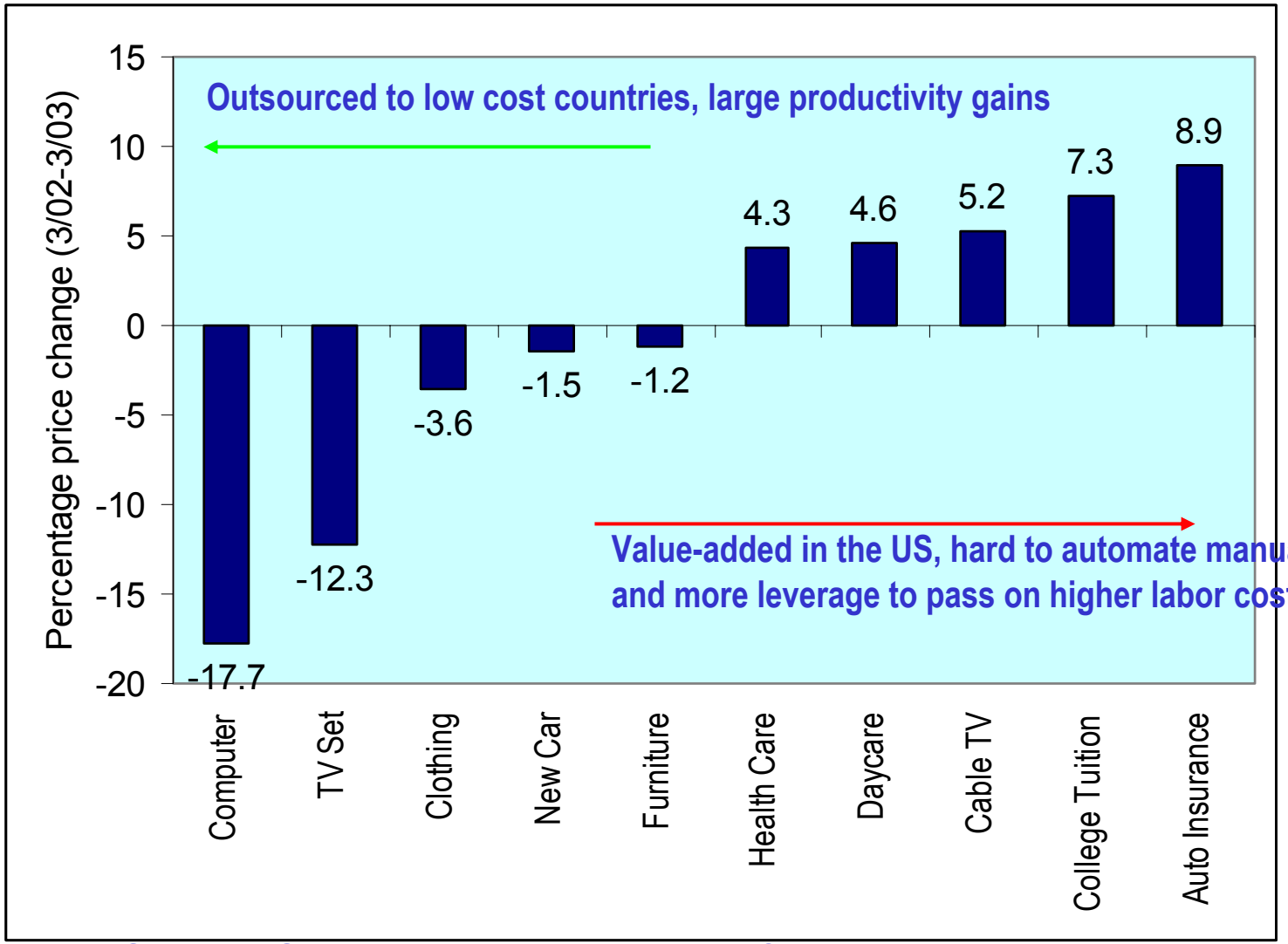
Source: DYG SCAN, Money Magazine national survey

EU vehicle prices had been more in line with income over last 25 years



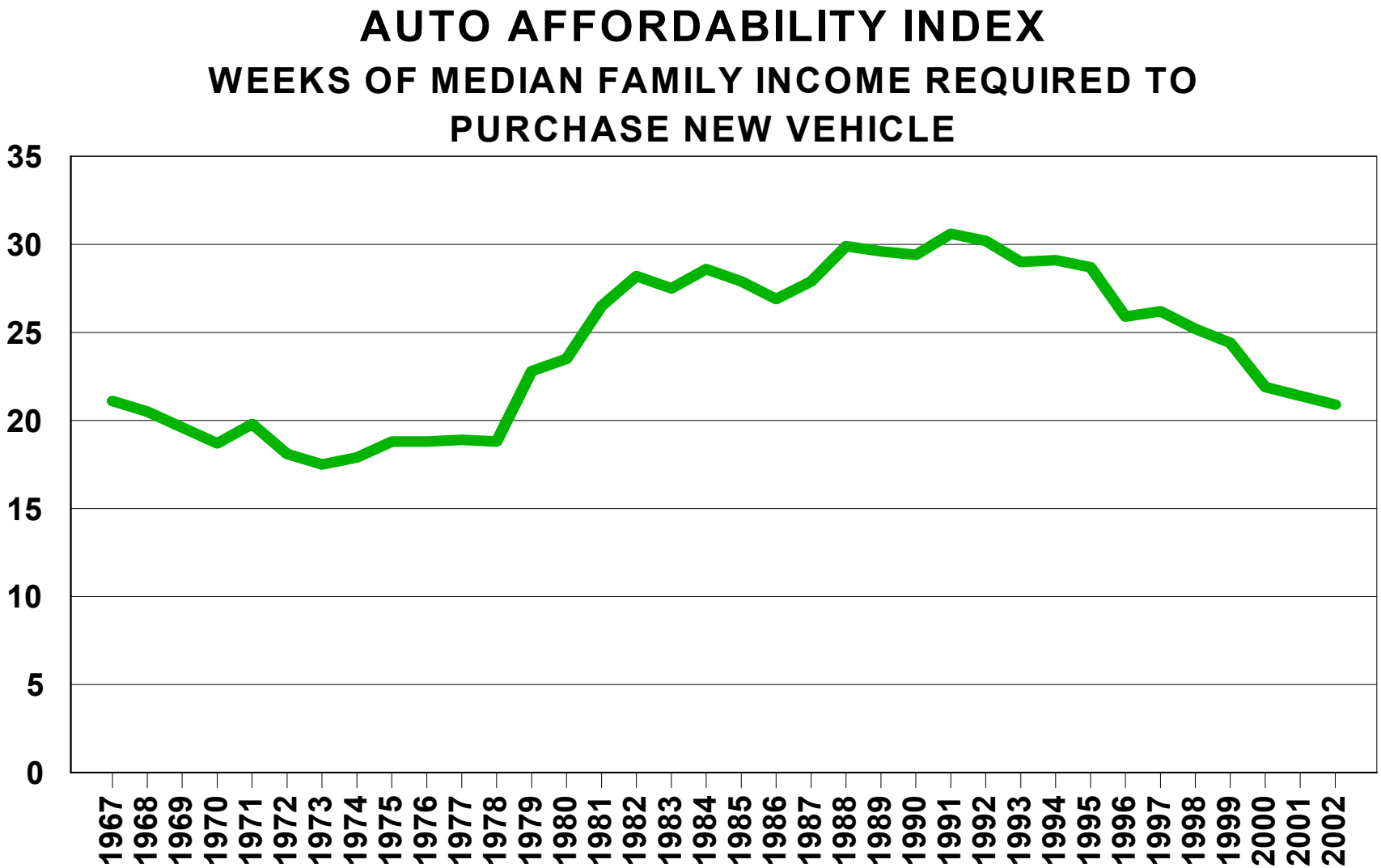
Source: MartecGroup.com, 4/2002 fuel econ

US auto deflation is very mild compared with other manufacturing sectors even after KAR



Source: US Labor Dept. Business Week, *Cheap to Buy, Pricey to Own,* 3/19/2003

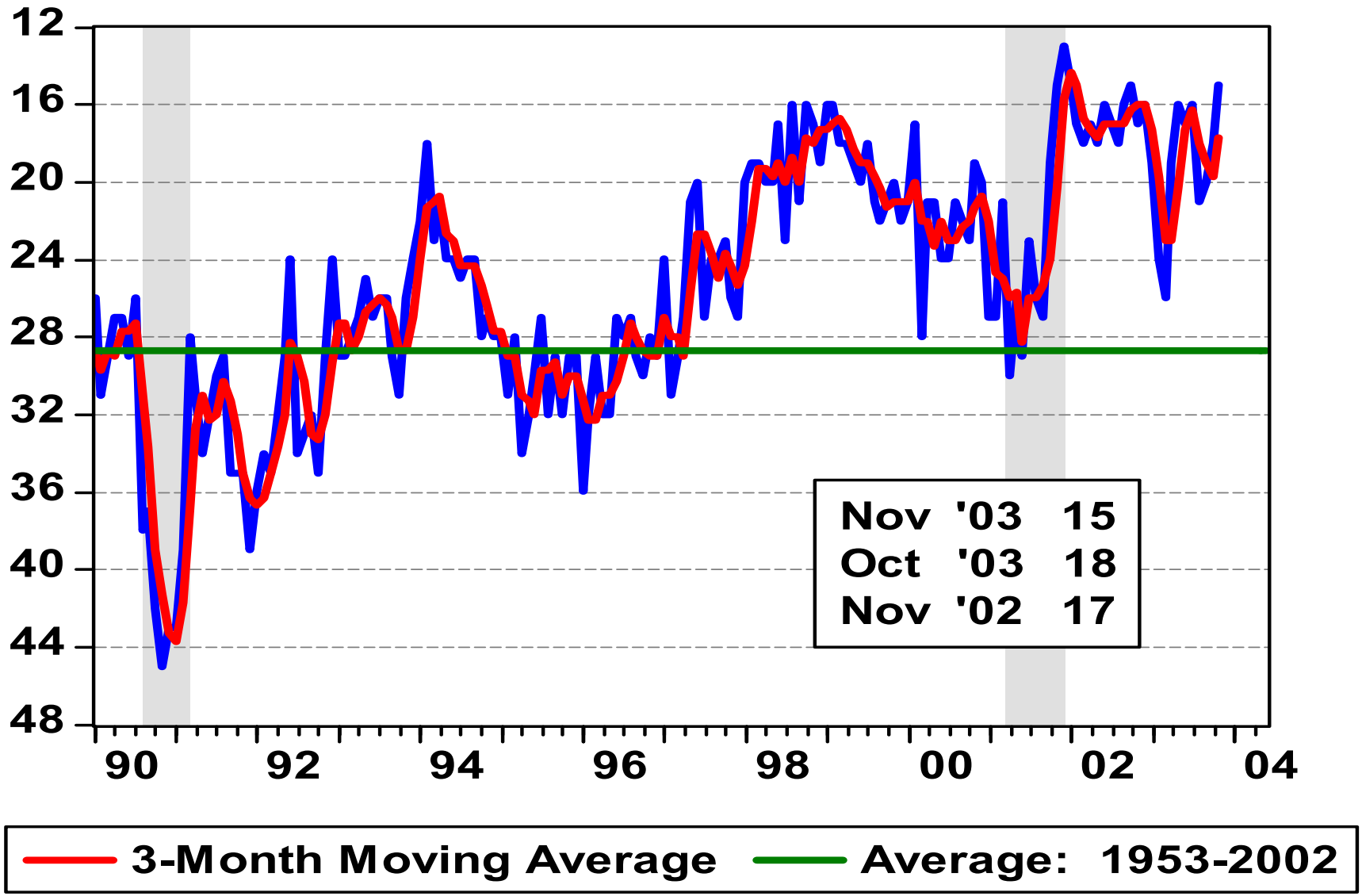
Incentives have improved affordability



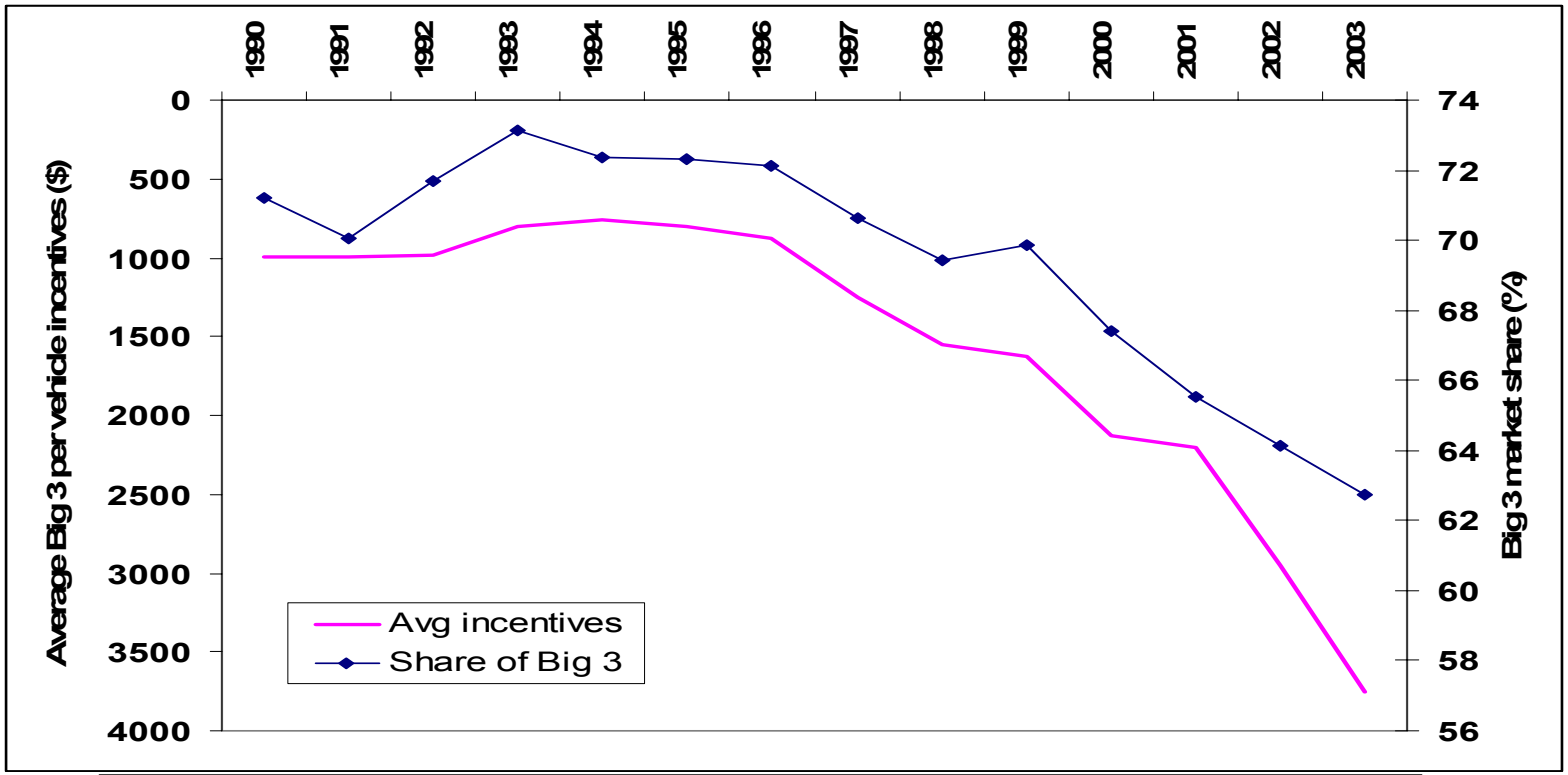
Source: Comerica Bank

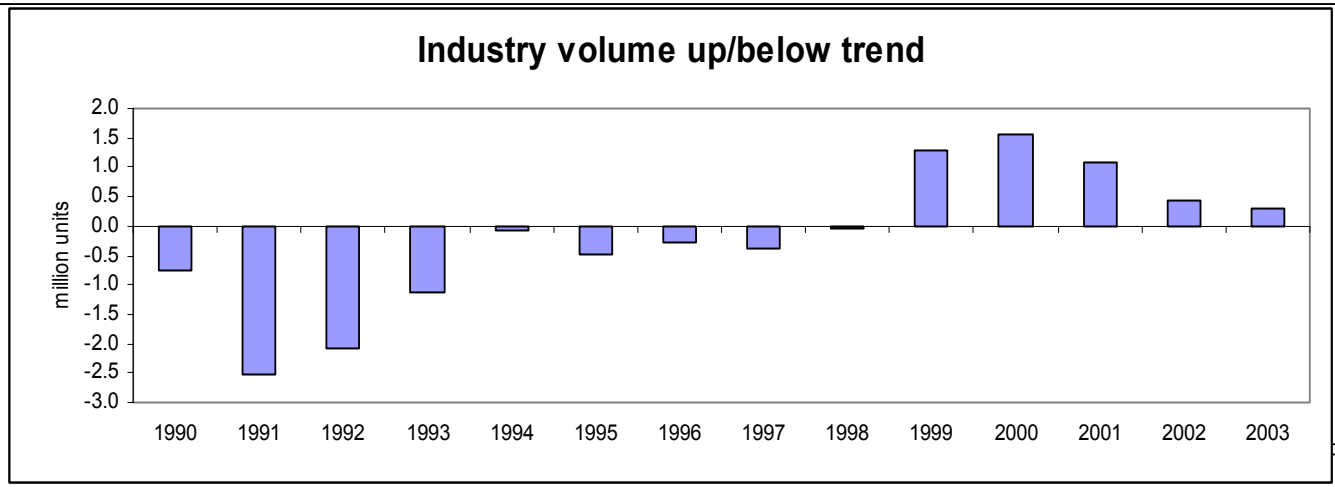
Bad Time to Buy Car/Truck (inverted scale)

Surveys of Consumers, University of Michigan

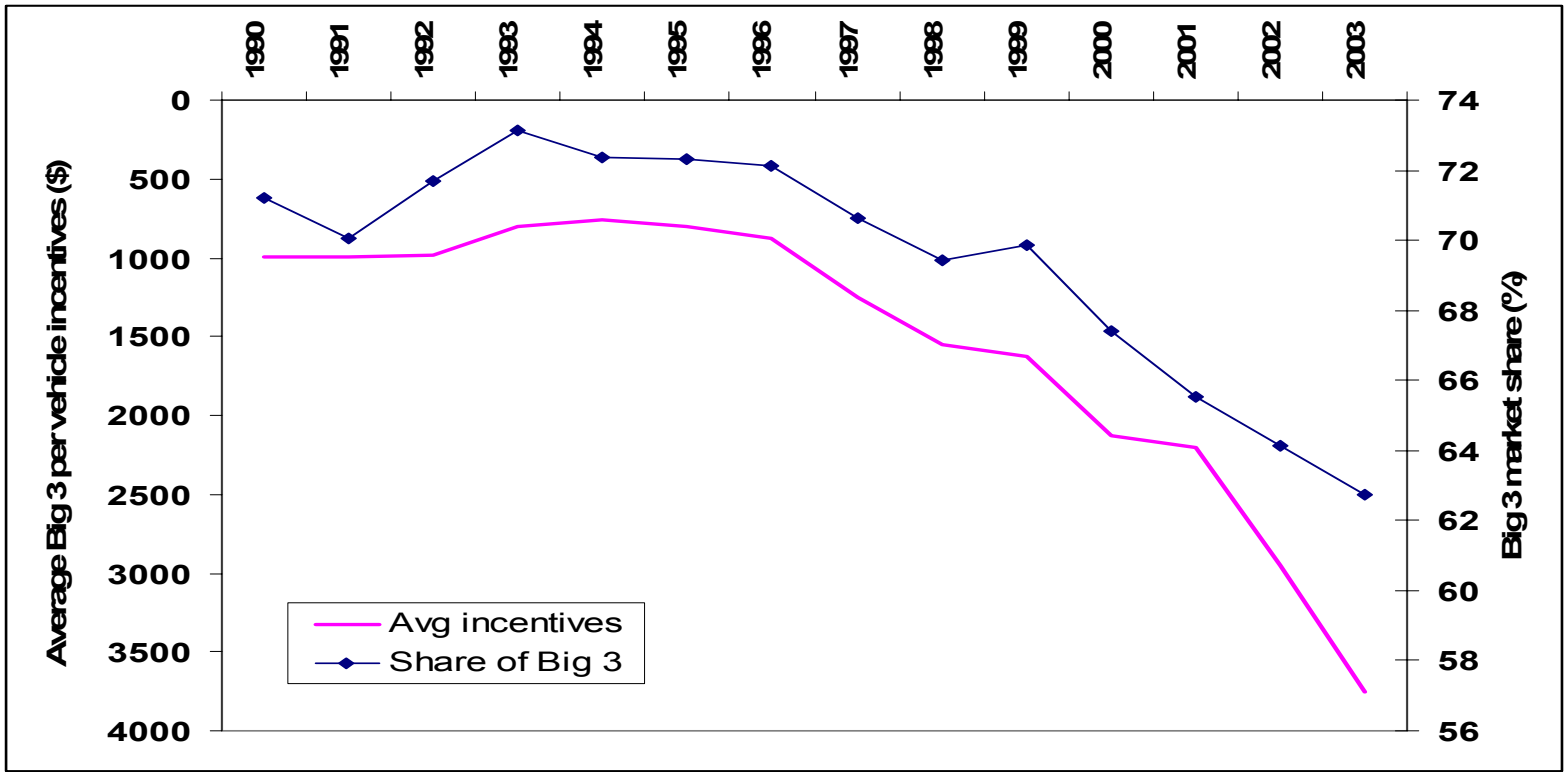


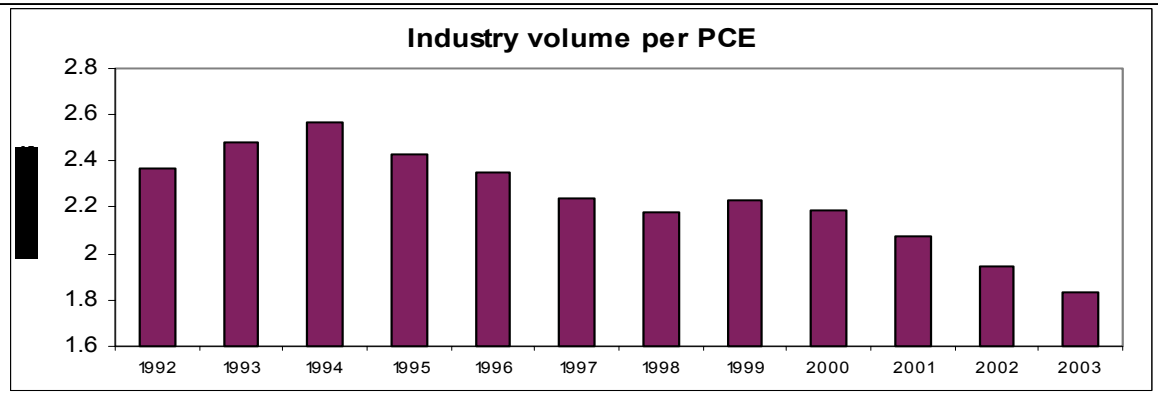
Incentives and total industry volume: hardly related





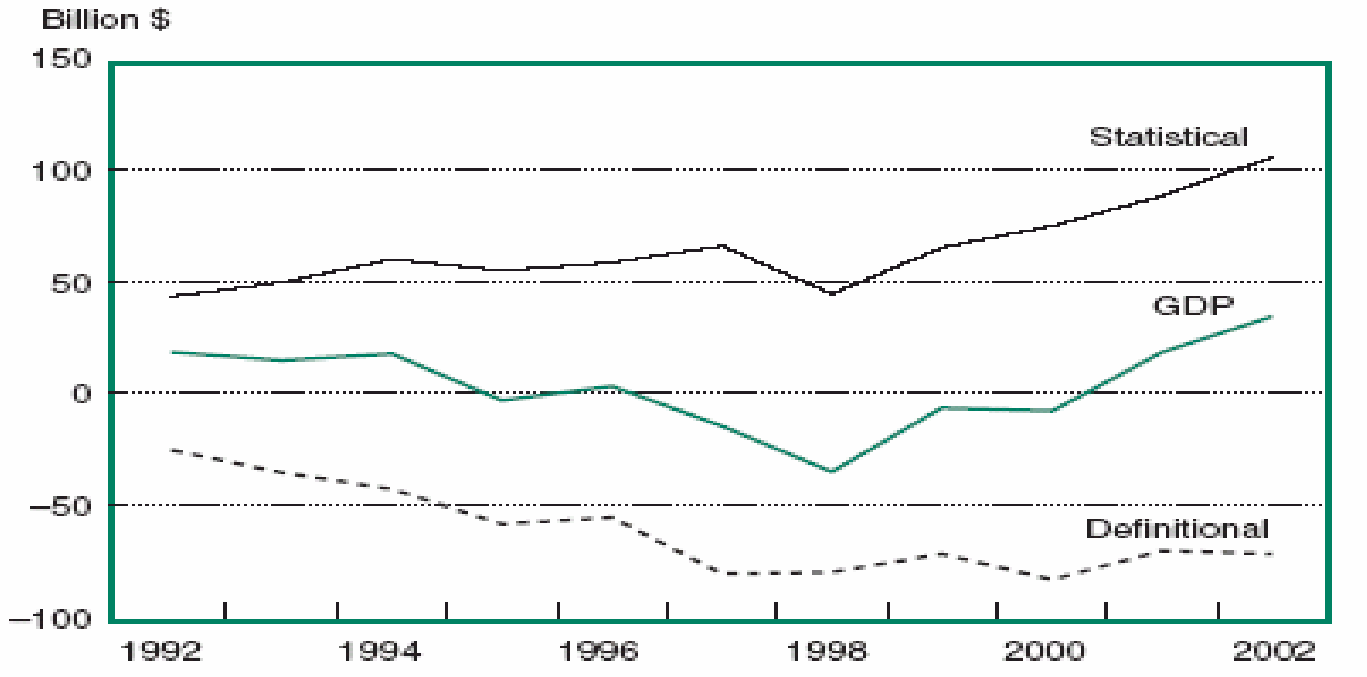
Incentives have reduced volume/PCE*





* PCE: personal consumption expenditure.

Notable Changes in BEA GDP Data



Direction of Revisions to Current-Dollar GDP

Downward	Upward
1959–1974	1975–1976
1977–1982	1983–1986
1987–1990	1991–1994
1995	1996
1997–2000	2001–2002

Source: www.bea.gov/bea/ARTICLES/2003/12December/1203NIPARev03.pdf

Notable Changes in BEA Auto Data

- The biggest change was in used truck spending (max 39% chg)
  - Method is now consistent with used car accounting
  - Still no direct measures
  - Estimates of dealer margins and net transaction prices (from corp, government, etc.) were refined
- New auto spending adjustment mostly after 1996 (max 14% chg)
  - New benchmark to 1997 input/output estimates
  - International trade and transportation costs were refined
- No changes to auto lease estimates
- No adjustments to subsidized loans
  - Only cash rebates have been incorporated with BLS data
  - May overestimate PCE since late 2001

Notable Changes in BEA Data

(current – previous data)

	GDP		DPI		Total PCE		Auto PCE		New Auto		Used veh	
	(bn US$)	% chg	(bn US$)	% chg	(bn US$)	% chg	(bn US$)	% chg	(bn US$)	% chg	(bn US$)	% chg
1990	0	0%	-8	-0.2%	8	0.2%	6	4%	0	0%	6	15%
1991	10	0.2%	-11	-0.2%	15	0.4%	11	6%	0	0%	11	24%
1992	19	0.3%	-3	-0.1%	26	0.6%	13	7%	0	0%	13	26%
1993	15	0.2%	-23	-0.5%	23	0.5%	11	6%	1.5	1.1%	10	18%
1994	18	0.3%	-14	-0.3%	27	0.6%	17	7%	1.6	1.1%	16	24%
1995	-3	0.0%	-14	-0.3%	7	0.1%	17	7%	0.8	0.5%	16	22%
1996	4	0.0%	11	0.2%	19	0.4%	27	10%	2.9	1.9%	25	30%
1997	-14	-0.2%	21	0.3%	18	0.3%	39	13%	6.6	4.1%	32	35%
1998	-35	-0.4%	40	0.6%	23	0.4%	45	14%	5.6	3.1%	39	39%
1999	-6	-0.1%	68	1.0%	36	0.6%	49	14%	6.0	3.0%	43	39%
2000	-8	-0.1%	74	1.0%	56	0.8%	47	13%	6.1	2.8%	41	37%
2001	19	0.2%	76	1.0%	58	0.8%	45	12%	7.0	3.0%	38	34%
2002	39	0.4%	27	0.3%	84	1.2%	41	10%	8.0	3.2%	34	31%

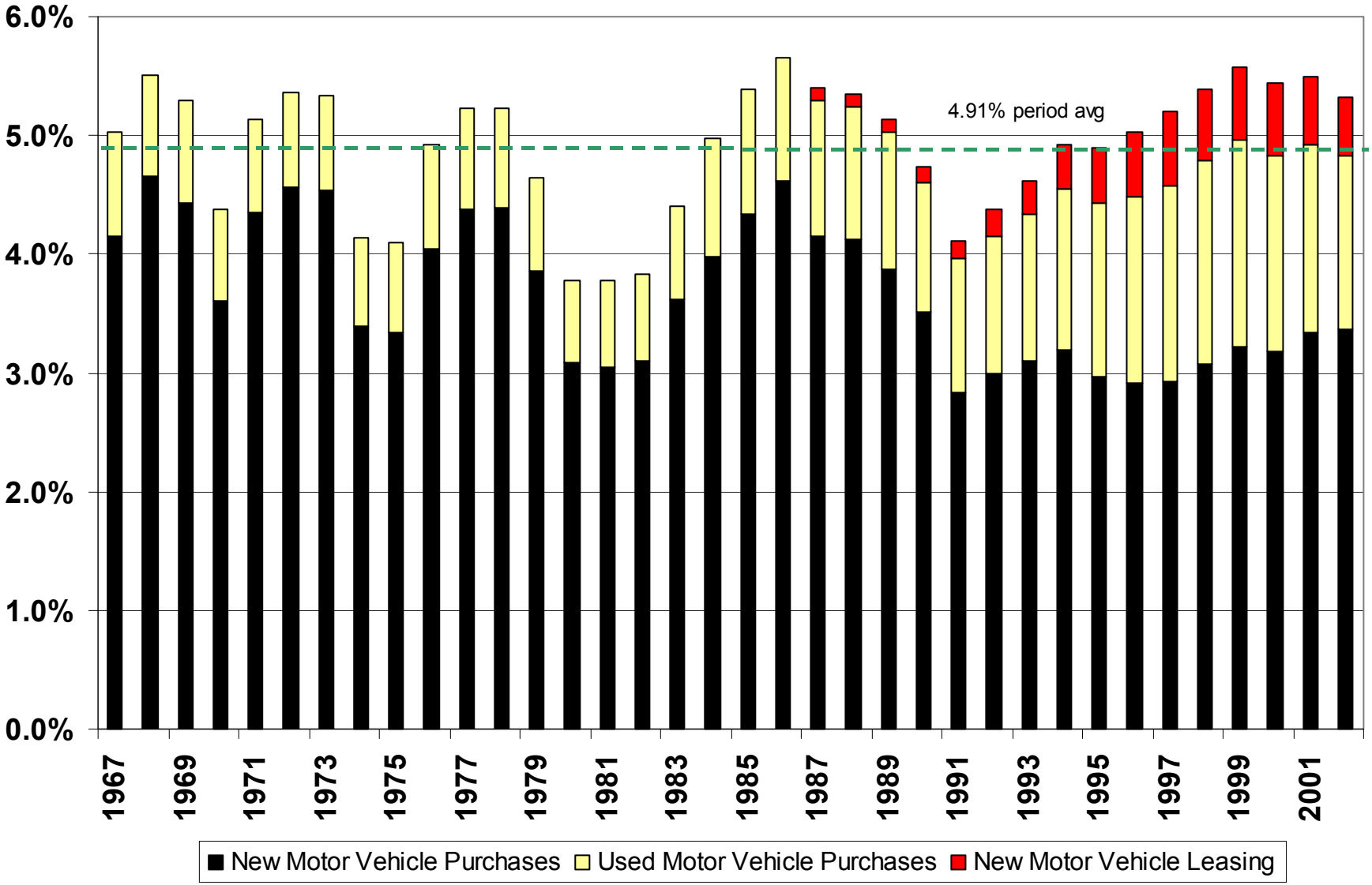
Note: There is no change in new auto leasing data except for 2002 (-0.6 bn$, -1.7% change.)
Source: BEA

Implications of BEA Data Change:
Consumer spending on autos has been significantly above historical average since mid 90s
(but data may have overestimated spending over the last few years)

	PCE auto share		DPI auto share	
	Before	After revision	Before	After revision
1990	4.6%	4.7%	4.1%	4.2%
1991	3.9%	4.1%	3.4%	3.7%
1992	4.1%	4.4%	3.6%	3.9%
1993	4.4%	4.6%	4.0%	4.2%
1994	4.6%	4.9%	4.2%	4.5%
1995	4.6%	4.9%	4.2%	4.5%
1996	4.5%	5.0%	4.2%	4.6%
1997	4.5%	5.2%	4.2%	4.8%
1998	4.6%	5.4%	4.3%	4.9%
1999	4.8%	5.6%	4.6%	5.2%
2000	4.8%	5.4%	4.5%	5.1%
2001	4.9%	5.5%	4.6%	5.2%
2002	4.8%	5.3%	4.5%	5.0%

Changes bump up historical averages by about 0.2 percentage point.
Source: BEA

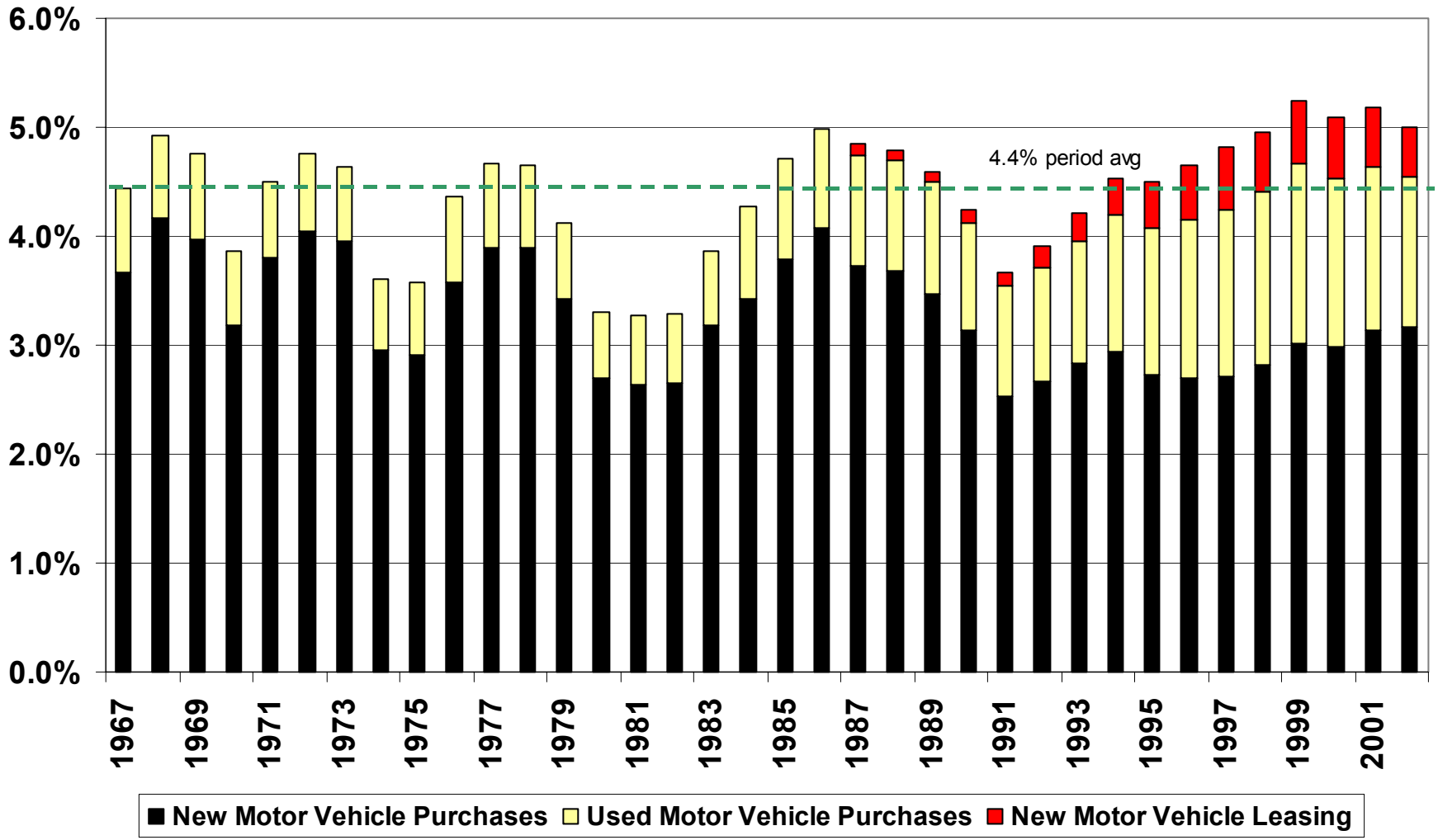
US Vehicle Expenditures as a Share of PCE



Source: BEA

Vehicle Expenditures as a Share of Disposable Personal Income

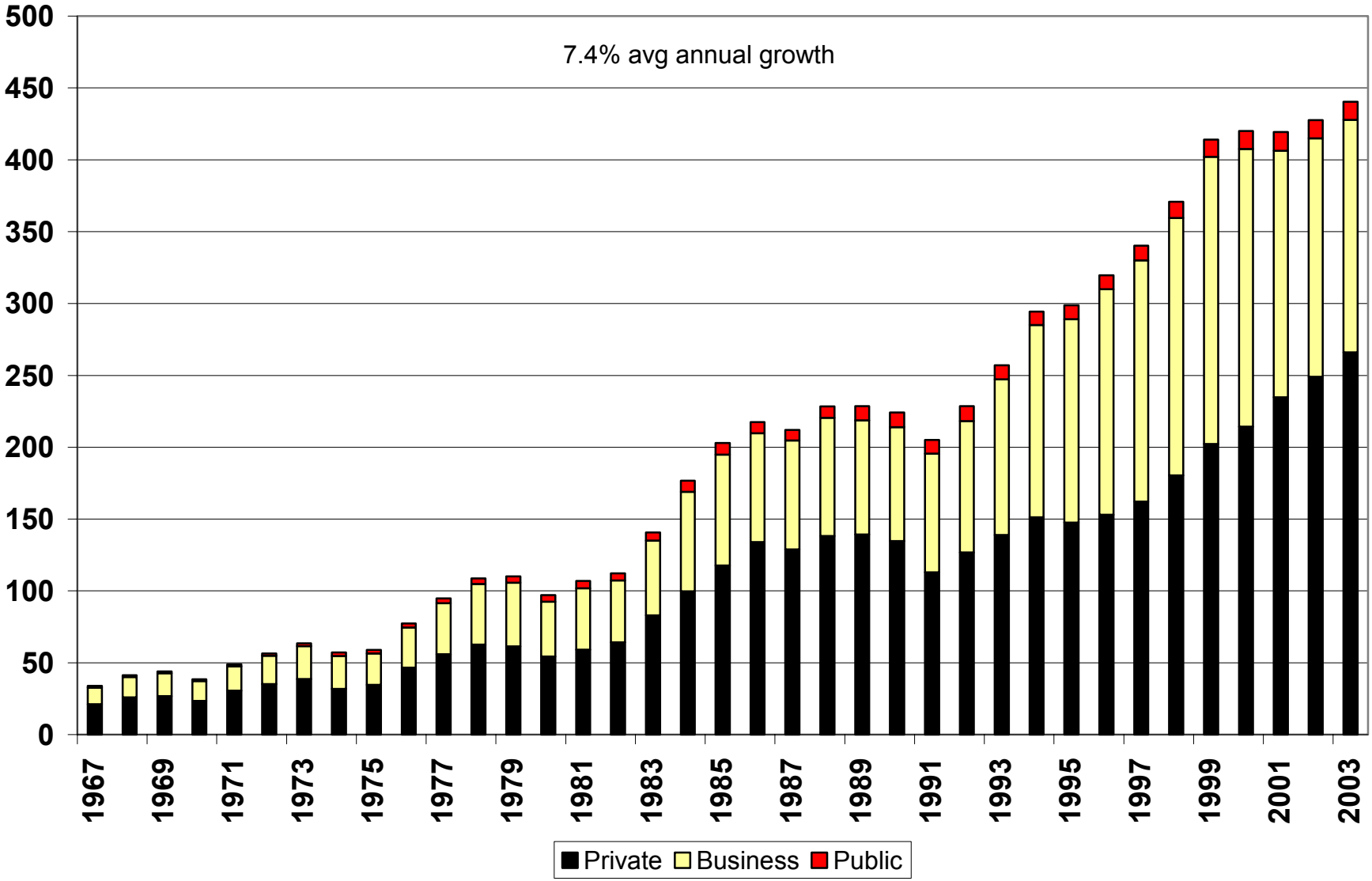
By Type of Vehicle Expenditure



Source: BEA

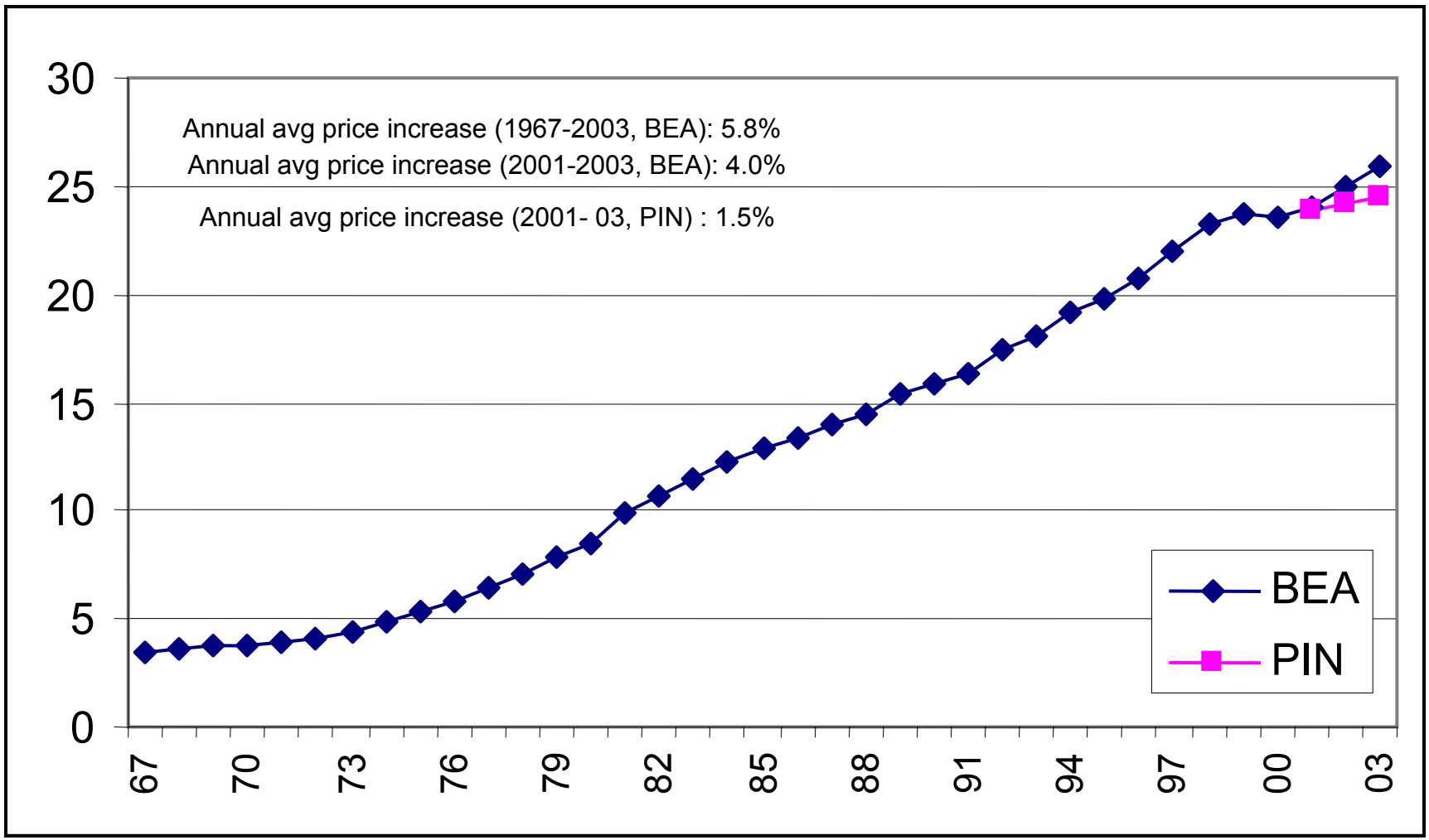
Billion Dollars

US New Vehicle Expenditures by Ownership



Source: BEA

Average Transaction Prices (000)

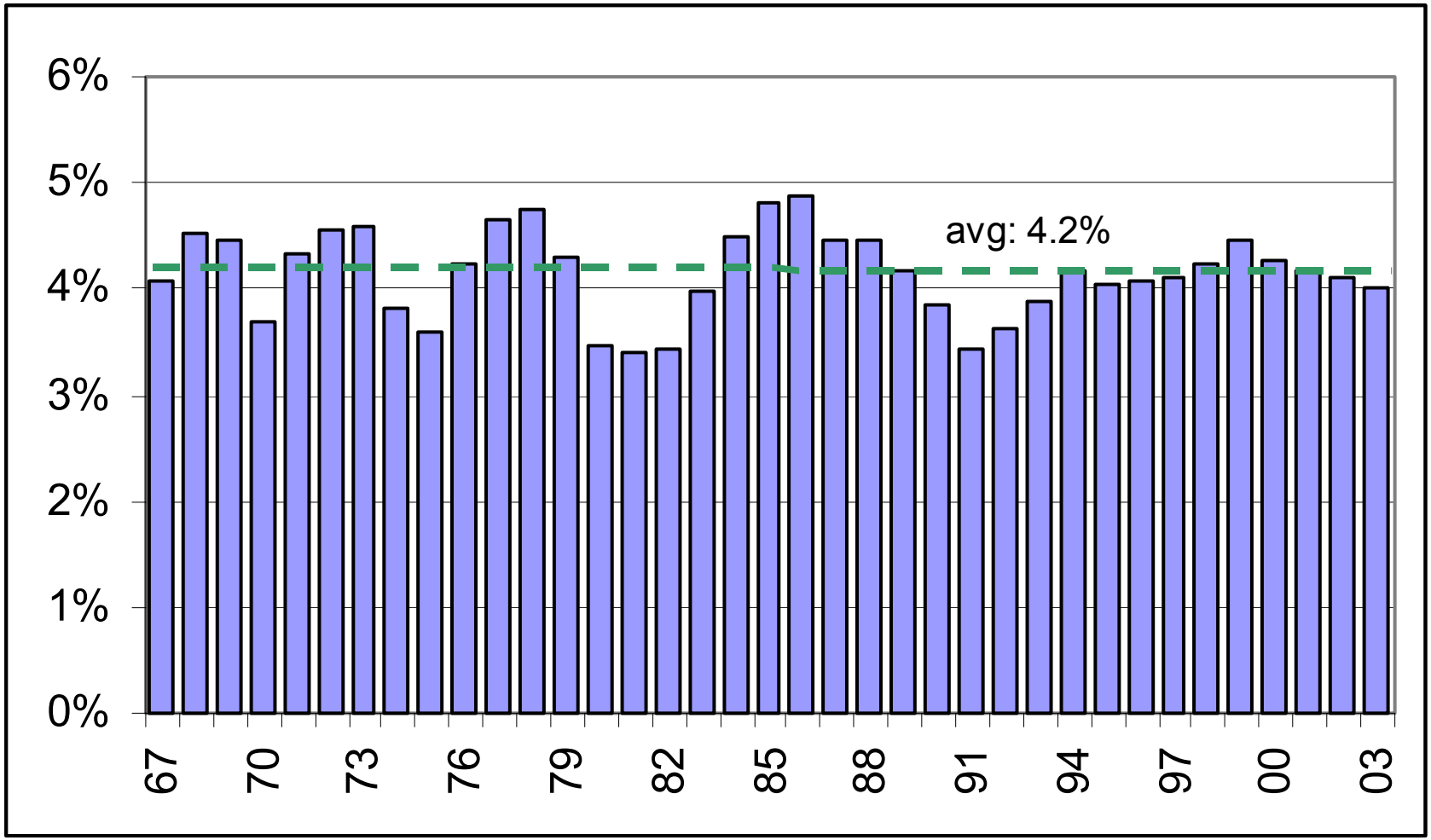


Source: BEA, J.D. Power PIN

Implied spending diff by PIN data:

2001	-2.5
2002	-13.6
2003	-23.6

Total Vehicle Revenue as Share of GDP



Implied share by PIN data: 3.8% in 2003

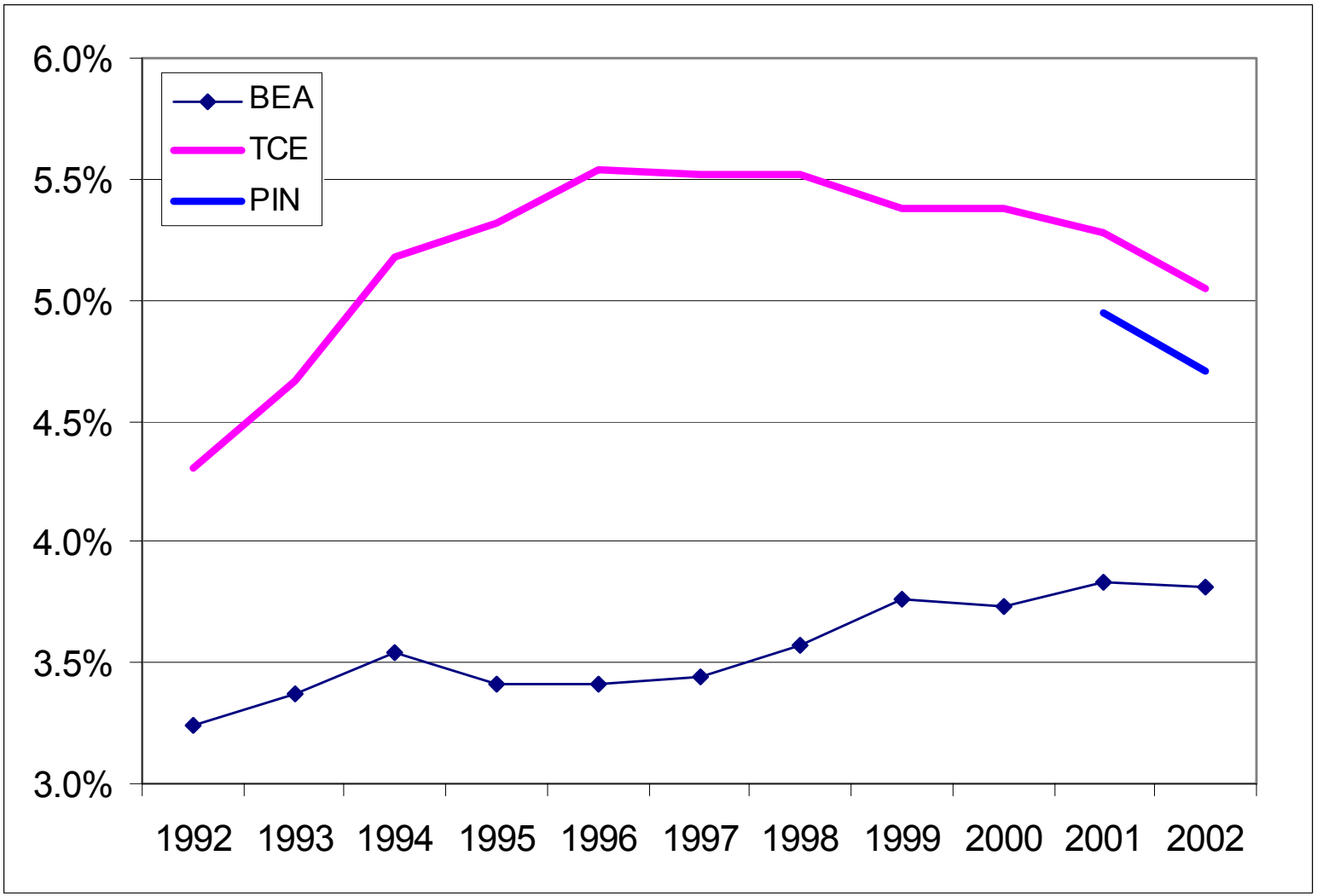
Source: BEA

Updated Historical Data

	GDP ($bn)	PCE ($bn)	DPI ($bn)	Pri Auto ($bn)	Total Auto ($bn)	Ind Vol (000)
1990	5803	3840	4286	135	224	14153
1991	5986	3986	4464	113	205	12544
1992	6319	4235	4751	127	229	13120
1993	6642	4478	4912	139	257	14201
1994	7054	4743	5152	151	294	15413
1995	7401	4976	5408	148	299	15119
1996	7813	5257	5688	153	320	15460
1997	8318	5547	5989	162	340	15501
1998	8782	5879	6396	180	371	15966
1999	9274	6282	6695	202	414	17418
2000	9825	6739	7194	214	420	17814
2001	10082	7045	7469	235	419	17475
2002	10446	7385	7857	249	428	17144
2003	10947	7752	8200	266	440	16966

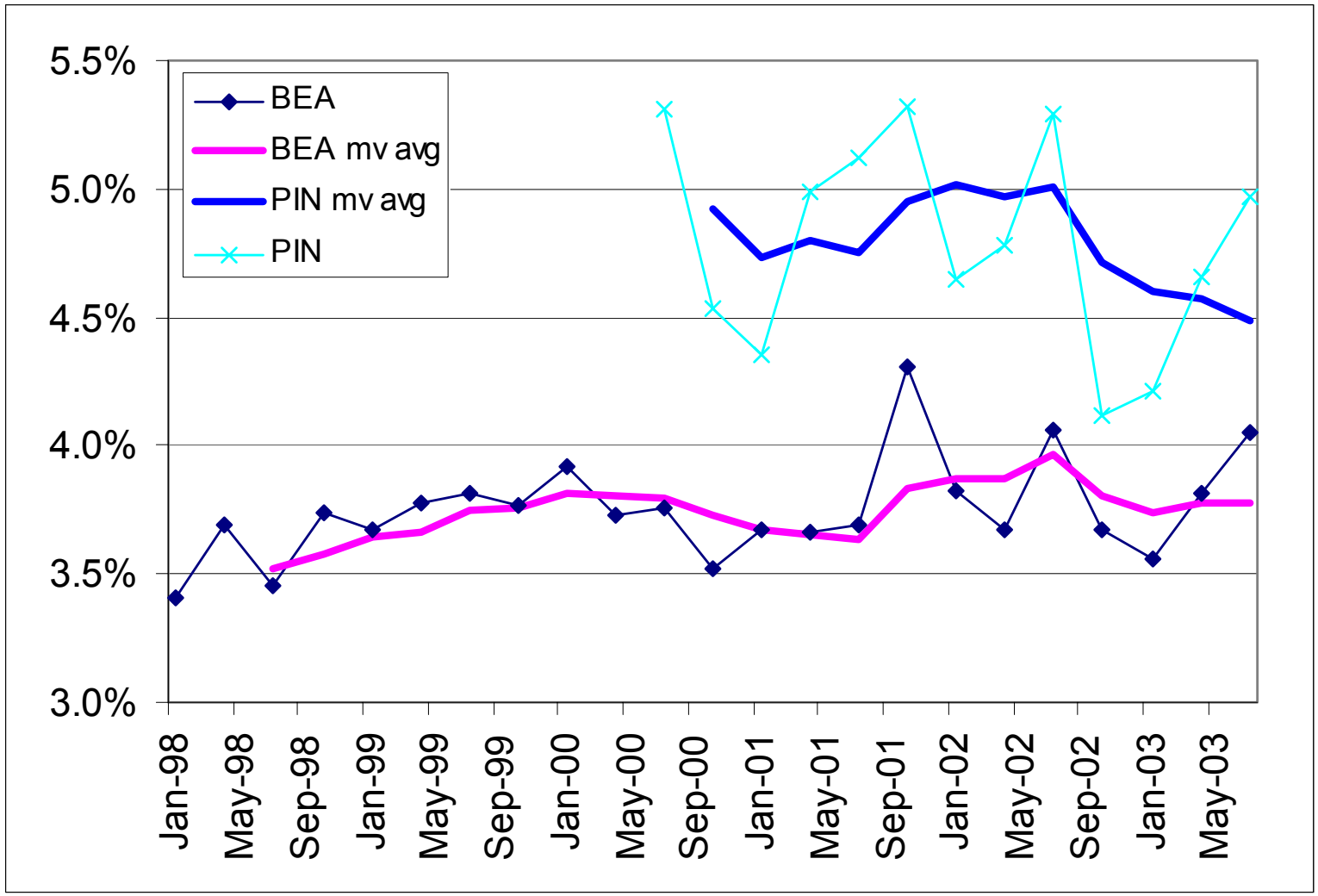
Source: BEA

Spending on new vehicles as share of total PCE



Source: BEA, TCE survey, JD Power

Spending on new vehicles as share of total PCE probably declined in '03



Source: BEA and JD Power

Changes in private inventories of autos (bn $)

	Total	New
1992	-0.3	0.1
1993	2.9	2.0
1994	2.2	1.6
1995	4.1	3.1
1996	-3.4	-5.5
1997	0.6	-0.6
1998	3.2	2.5
1999	1.4	1.2
2000	2.1	1.2
2001	-6.1	-6.7
2002	7.4	7.0

Source: BEA

Annual change in spending

	Total PCE	New Auto PCE BEA	New Auto PCE TCE	PIN
1993	5.8%	10.2%	14.6%	
1994	5.9%	11.1%	17.5%	
1995	5.4%	1.6%	8.2%	
1996	5.4%	5.2%	9.9%	
1997	5.6%	6.7%	5.1%	
1998	5.9%	9.9%	6.0%	
1999	6.7%	12.1%	3.9%	
2000	7.0%	6.2%	7.1%	
2001	4.5%	7.4%	2.4%	
2002	4.5%	3.8%	0.0%	-0.6%

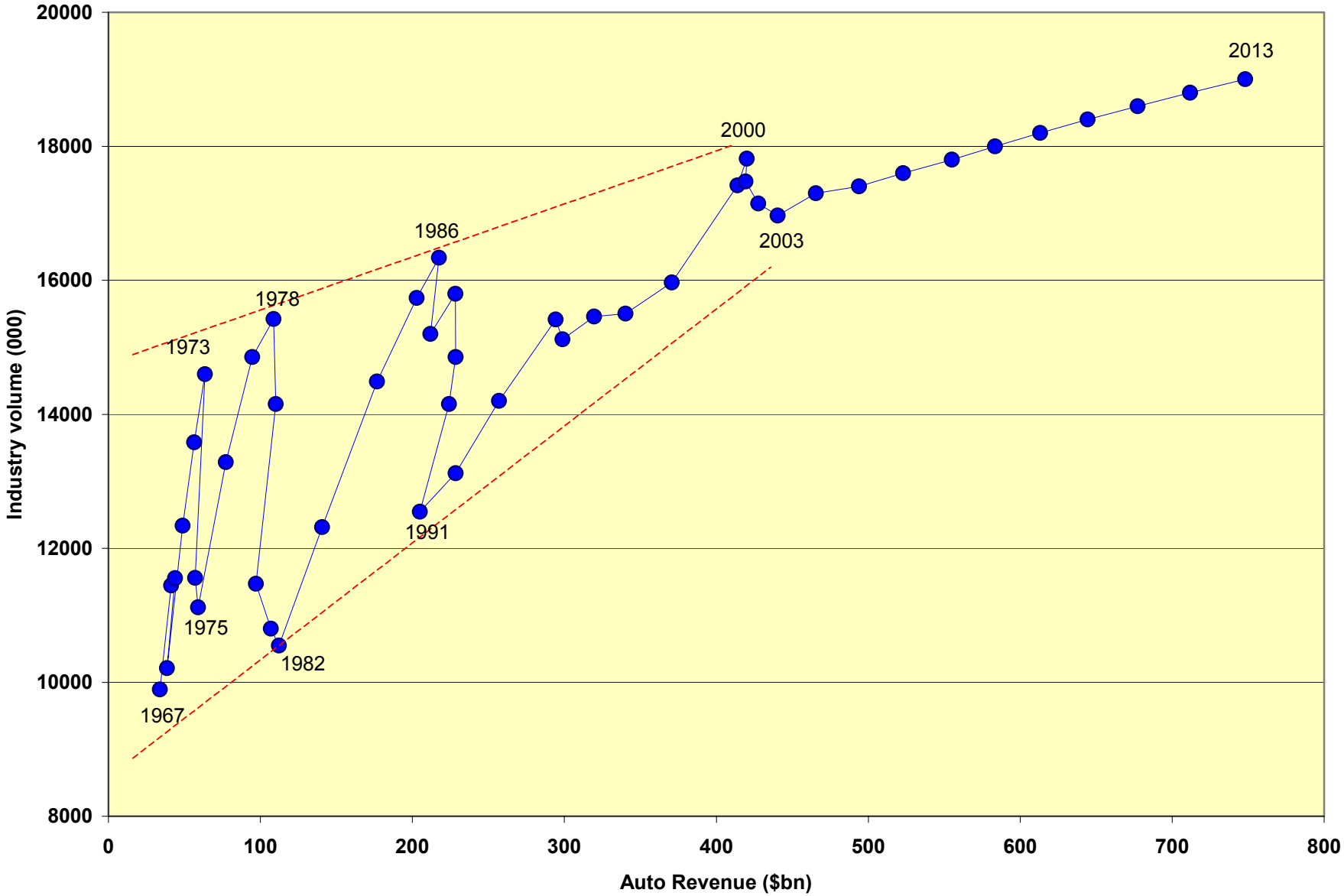
Source: BEA, TCE survey, JD Power

Spending on cars, motorcycles, and other vehicles as share of total consumer spending

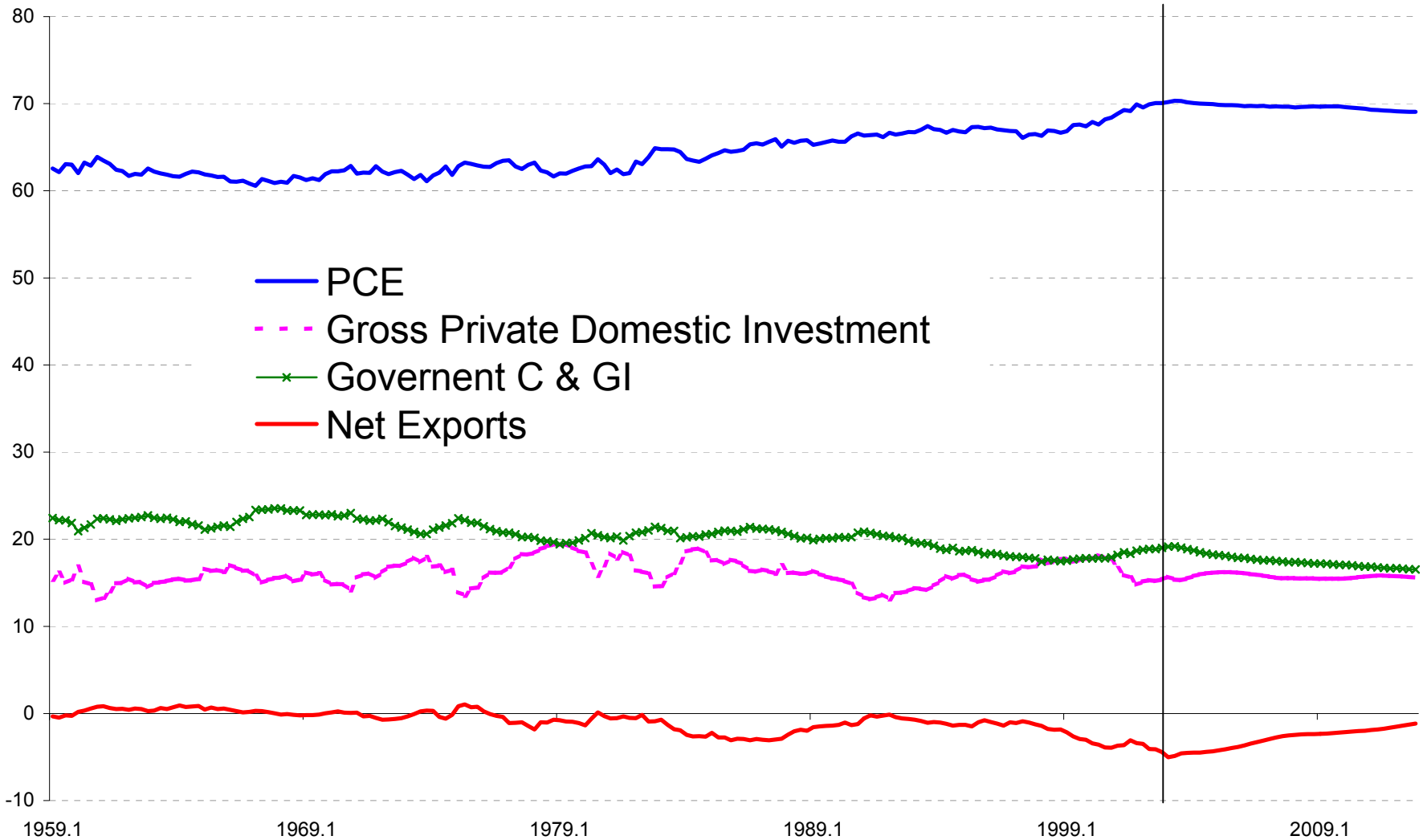
	1997	1998	1999	2000	2001	2002
France	3.5%	3.8%	4.2%	4.2%	4.3%	4.2%
Germany	6.3%	6.7%	6.8%	6.8%	6.9%	6.7%
UK	5.6%	5.6%	5.1%	4.9%	4.8%	4.7%
Canada	7.1%	7.0%	6.6%	6.8%	6.8%	6.8%
Mexico	1.8%	2.2%	1.6%	1.6%	1.7%	1.7%
Japan	2.2%	2.5%	2.2%	2.2%	2.2%	2.3%

Source: Euromonitor International

Auto Revenue and Industry Volume

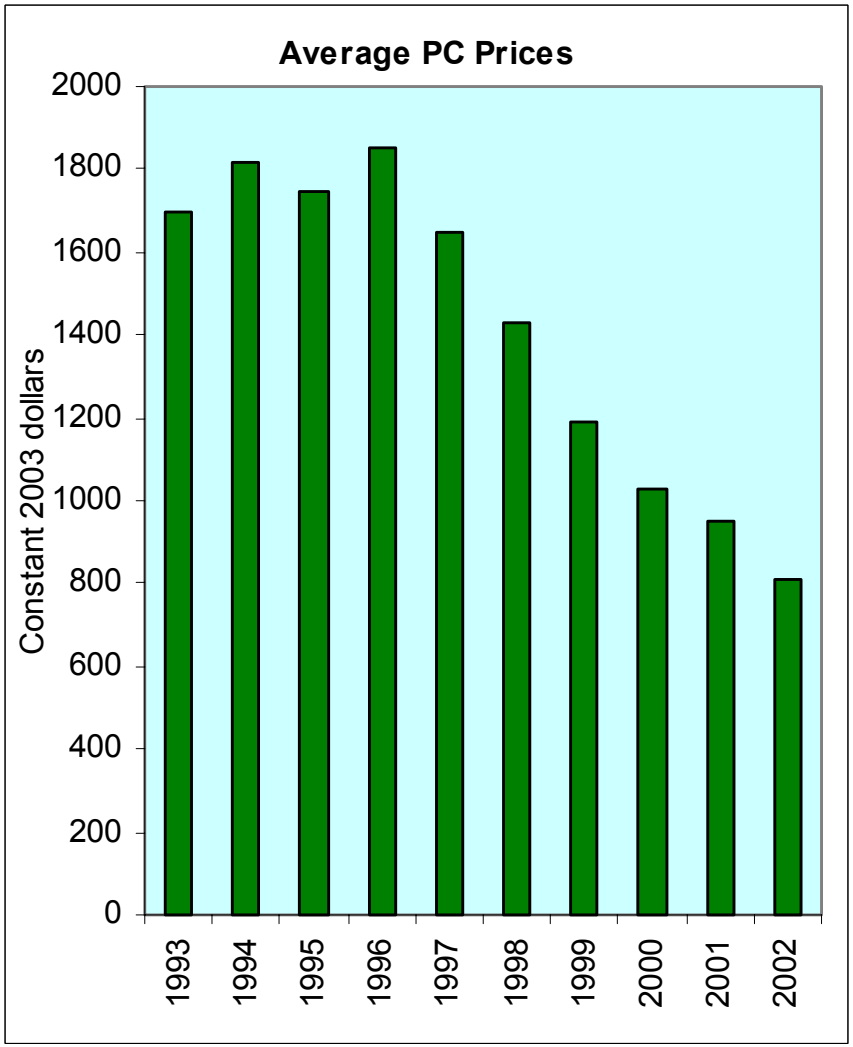


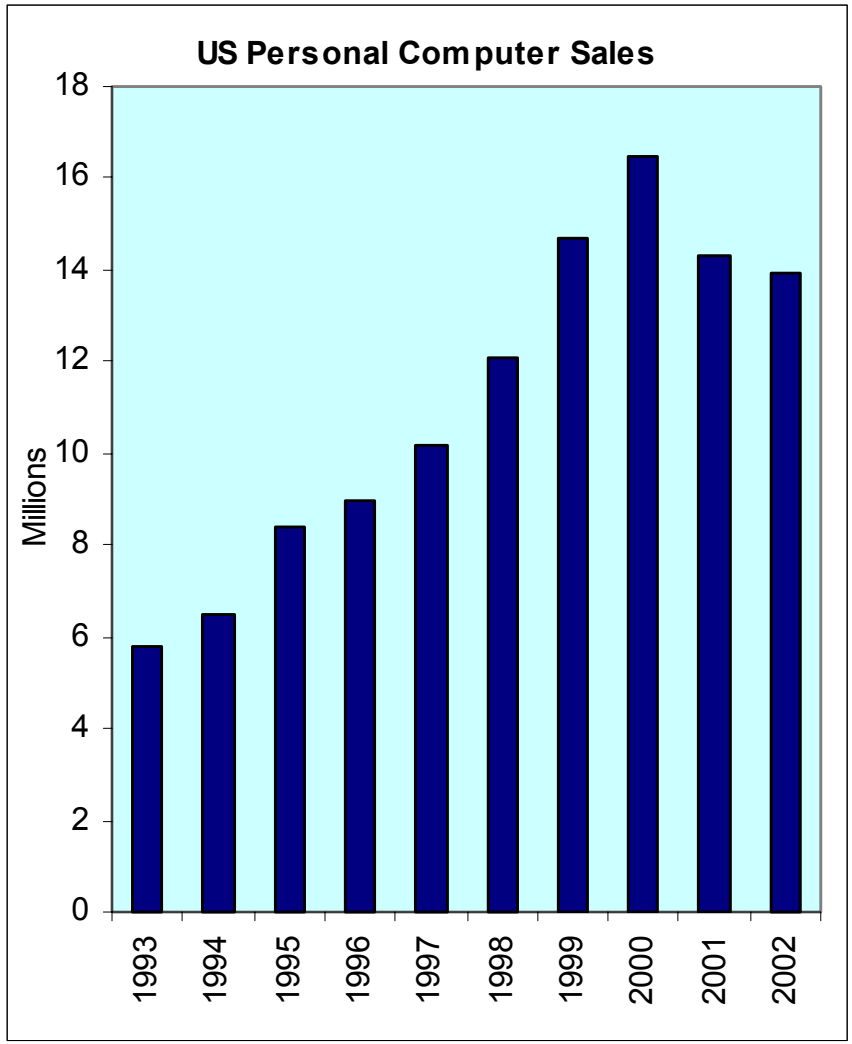
US: Nominal Shares of Major GDP Components



Improving affordability may not lead to higher sales

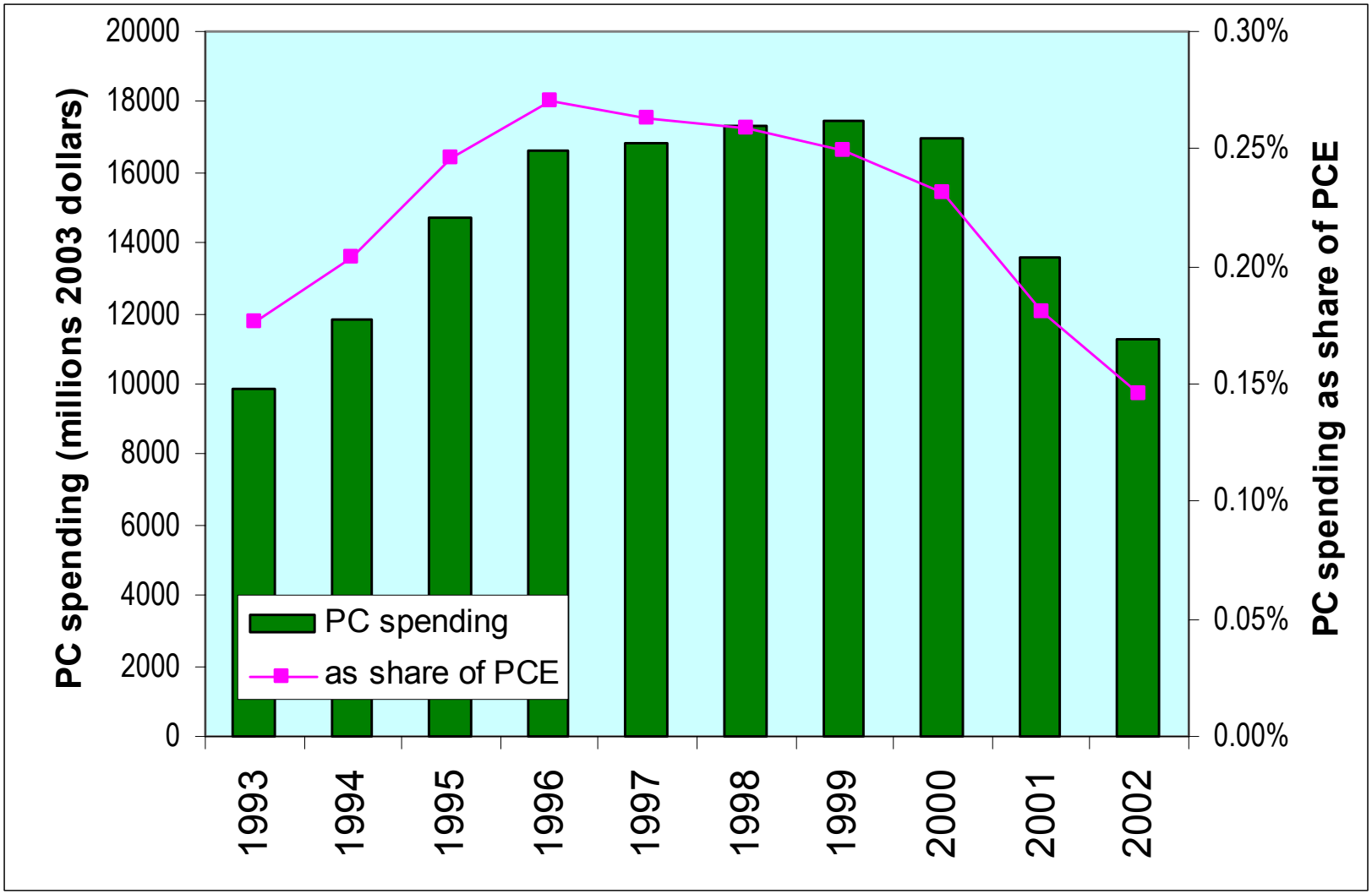
– Ownership saturation and lack of killer apps in PC market





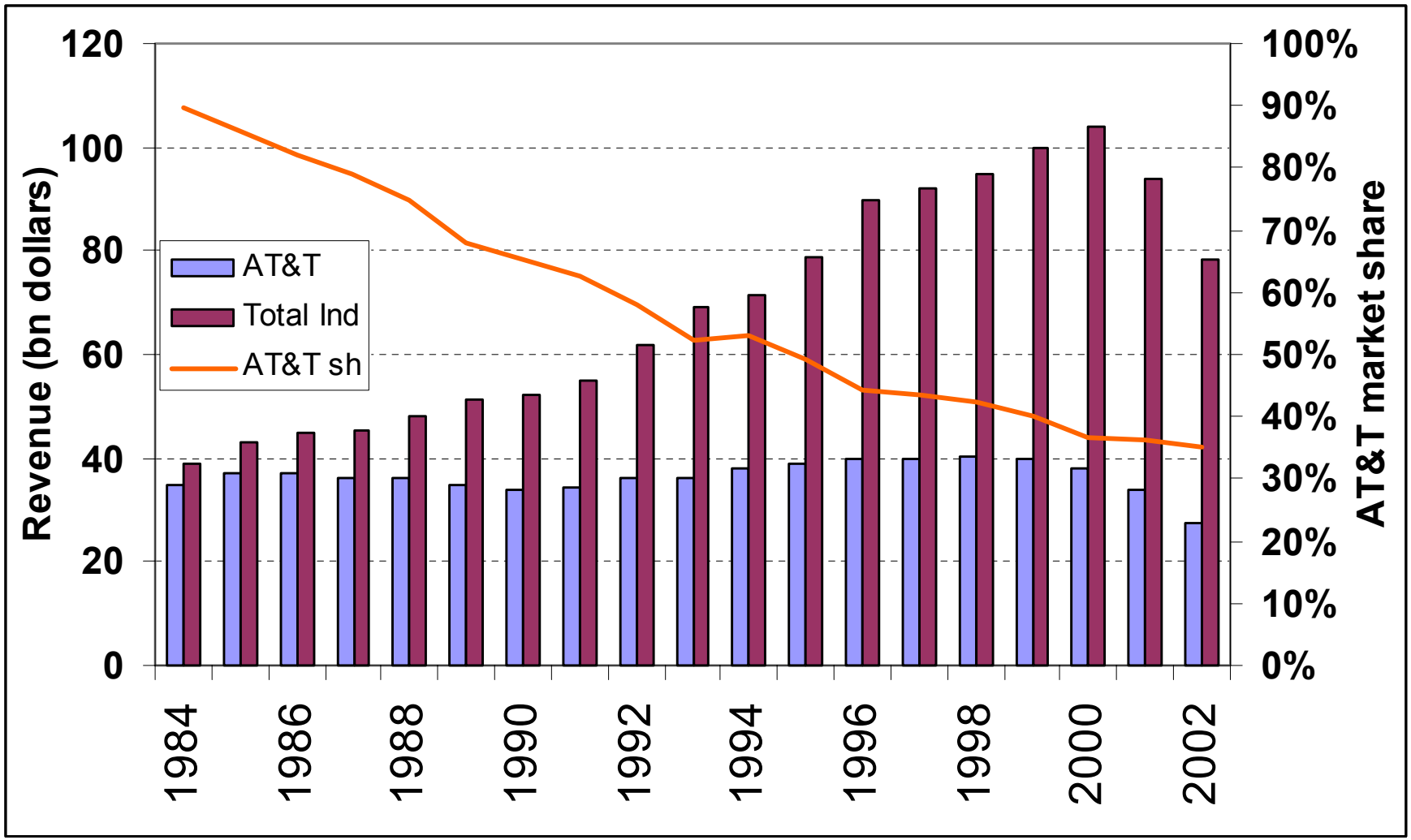
Source: Consumer Electronics Association, NYT 3/6/2003

It may even lead to decline in total spending
– PC's share of PCE peaked in 1996, the year prices peaked



Source: Consumer Electronics Association, NYT 3/6/2003, Haver Analytics

Revenue of US long distance phone market



Source: FCC, NYT 6/1/2004

Concluding Remarks

- Incentives were a response to competitive pressure
  - "Incentives" vs "Everyday low prices"
- Latest BEA data revision on consumer spending on vehicles was significant
  - New data show higher spending
- Evidence so far shows incentives having only a slight negative impact on revenue
  - Comparison with PIN data suggests that BEA data not fully reflective of incentive impacts
  - Incentives induce customers to move up market
  - In the context of manufacturing sector, incentives have only been a relatively mild deflationary shock to demand
  - The value of the dollar and other competitive pressure could be key drivers of incentive levels