

# Understanding and Projecting Increases in SSDI Enrollment

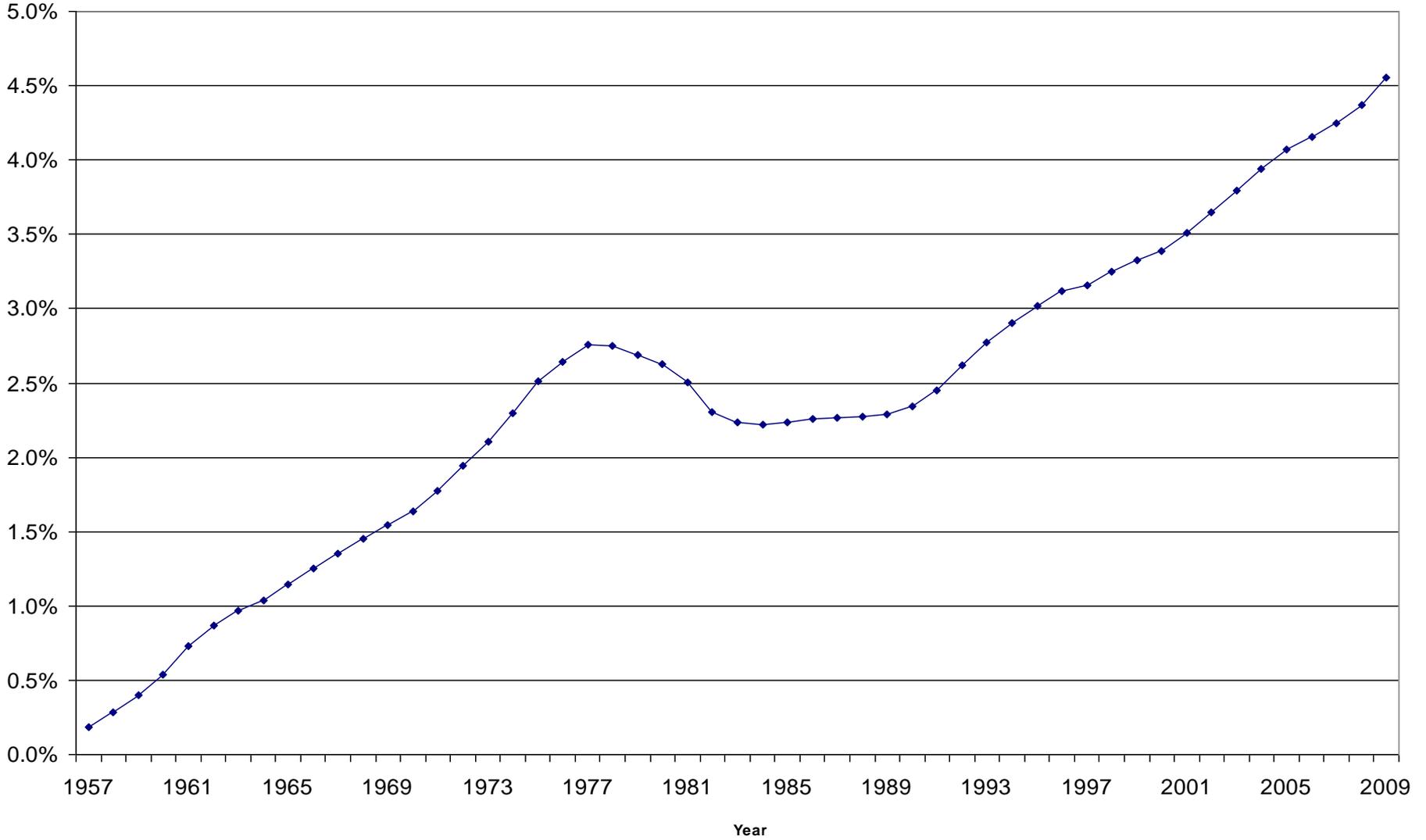
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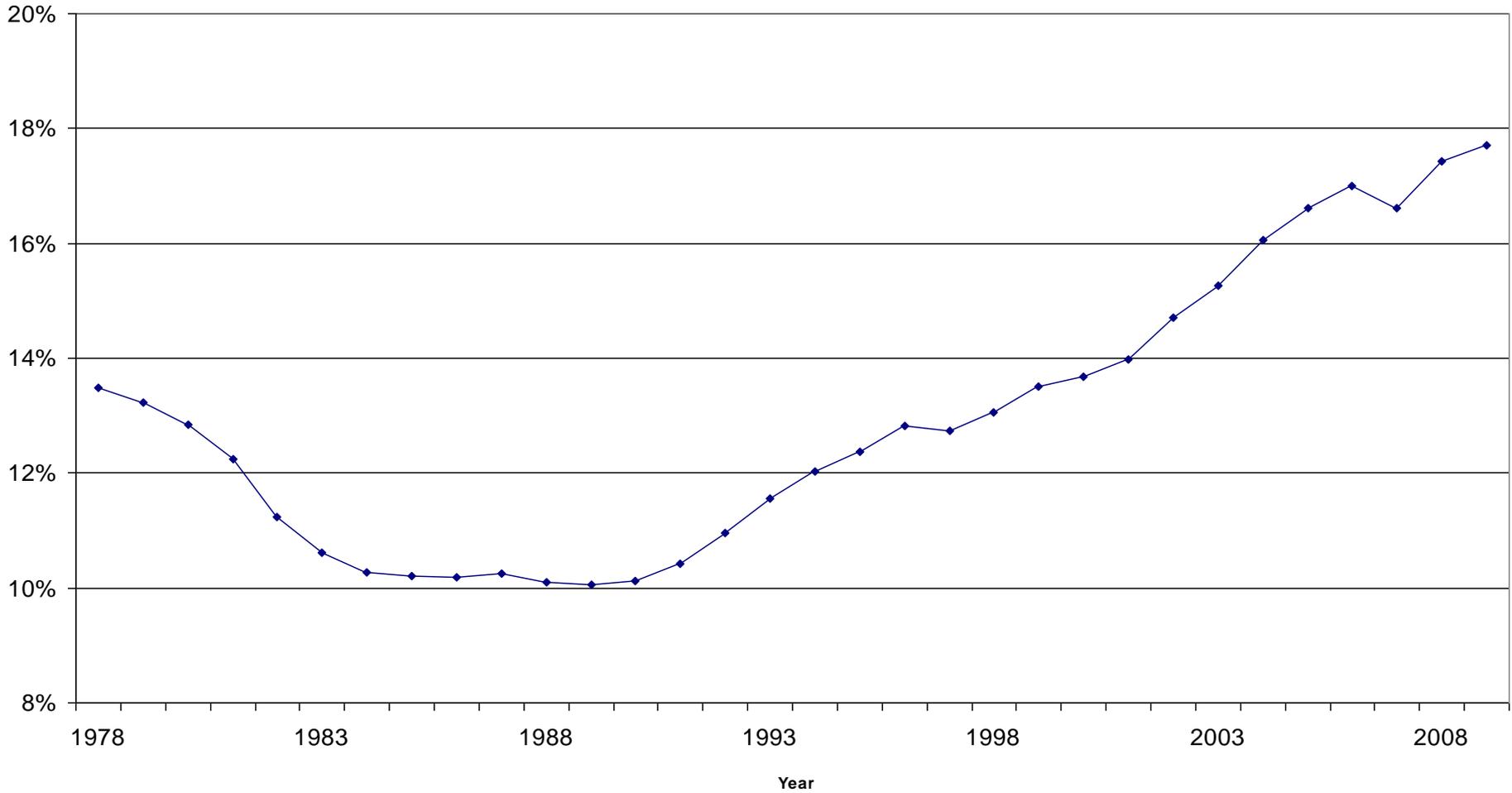
# The Rise in SSDI Enrollment – Key Trends

- 1989-2009: increase from 2.3 to 4.6 percent in fraction of 25-64 year old adults receiving SSDI benefits
  - Current entry and exit rates suggest trend will continue
  - Rise in enrollment much greater among women at all ages
- 1985-2009: increase from 10 to 18 percent in fraction of OASDI spending accounted for by SSDI
  - About one-tenth of this explained by mechanical impact of the increase in the full retirement age
  - Additional increases in SSDI tax rate will soon be necessary
  - Ratio of 2009 revenues to spending 1.24 for OASI vs. 0.90 for SSDI
- Average duration on the program has approximately doubled
  - Driven by differential growth in low-mortality diagnoses

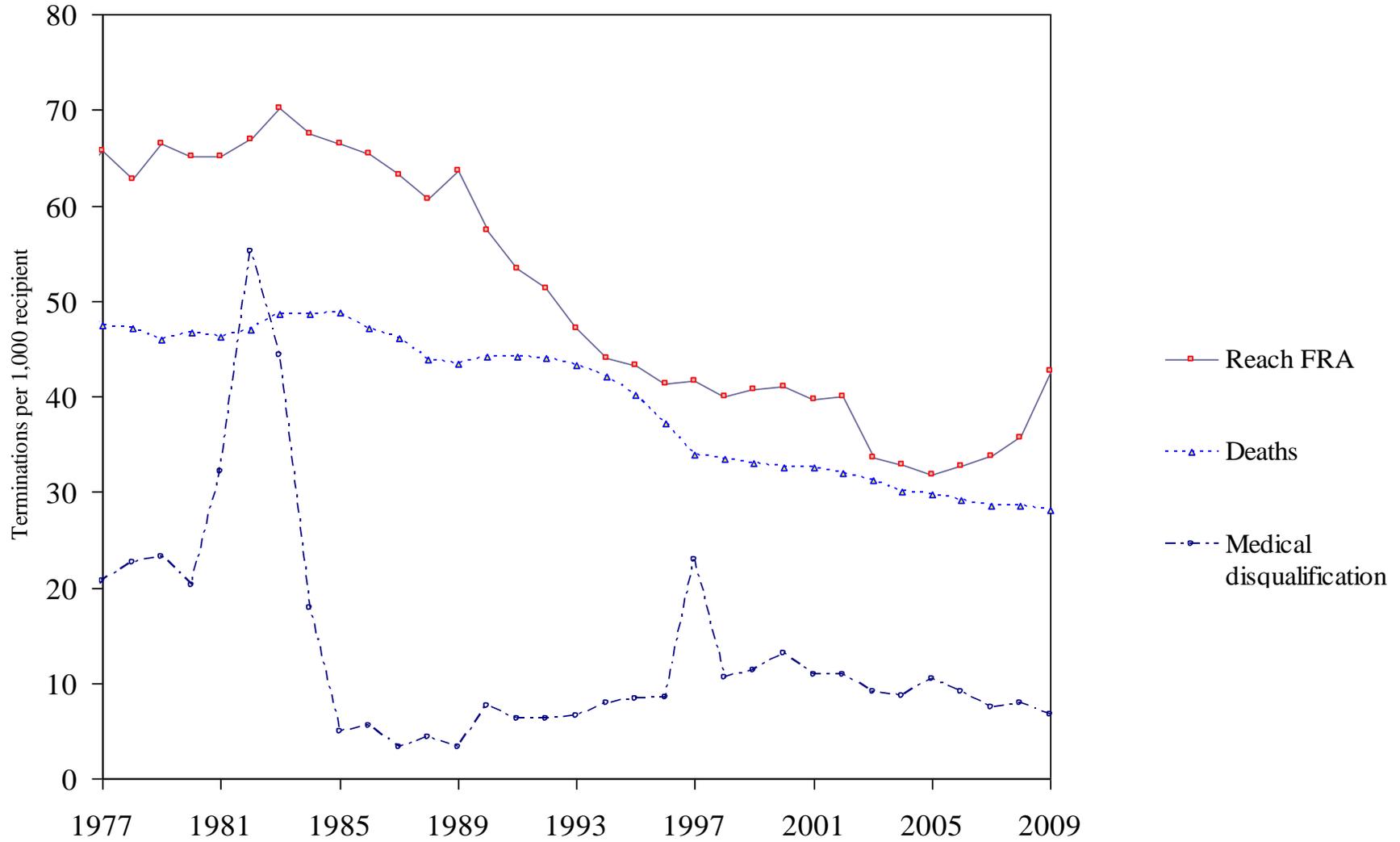
**Figure 1: % of Individuals Aged 25-64 Receiving SSDI: 1957-2009**



**Figure 3: SSDI \$ as % of Total OASDI \$: 1979-2009**

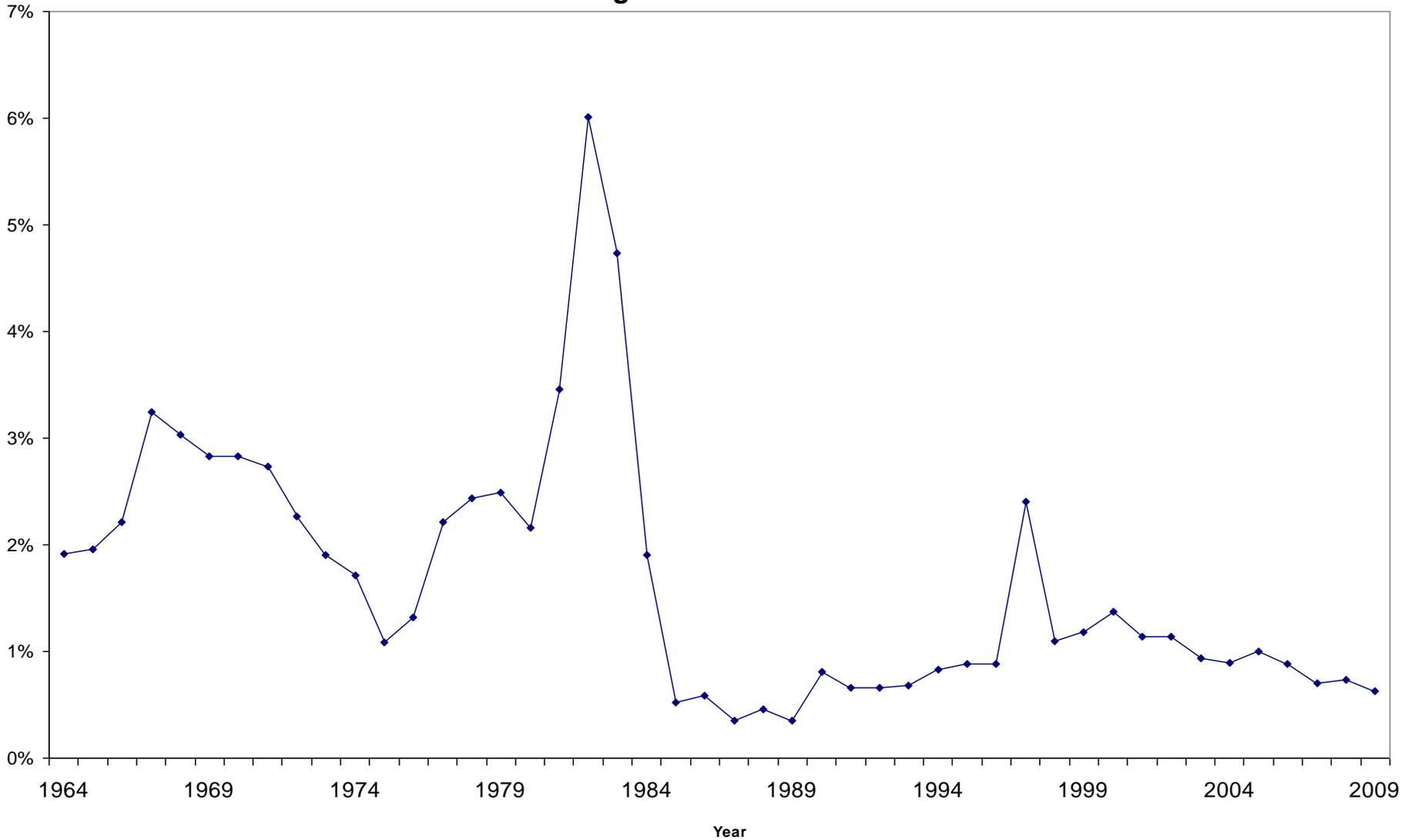


**Figure 2. DI Termination Rates per 1,000 by Reason, 1977-2009**



Source: Social Security Bulletin: Annual Statistical Supplement (various years)

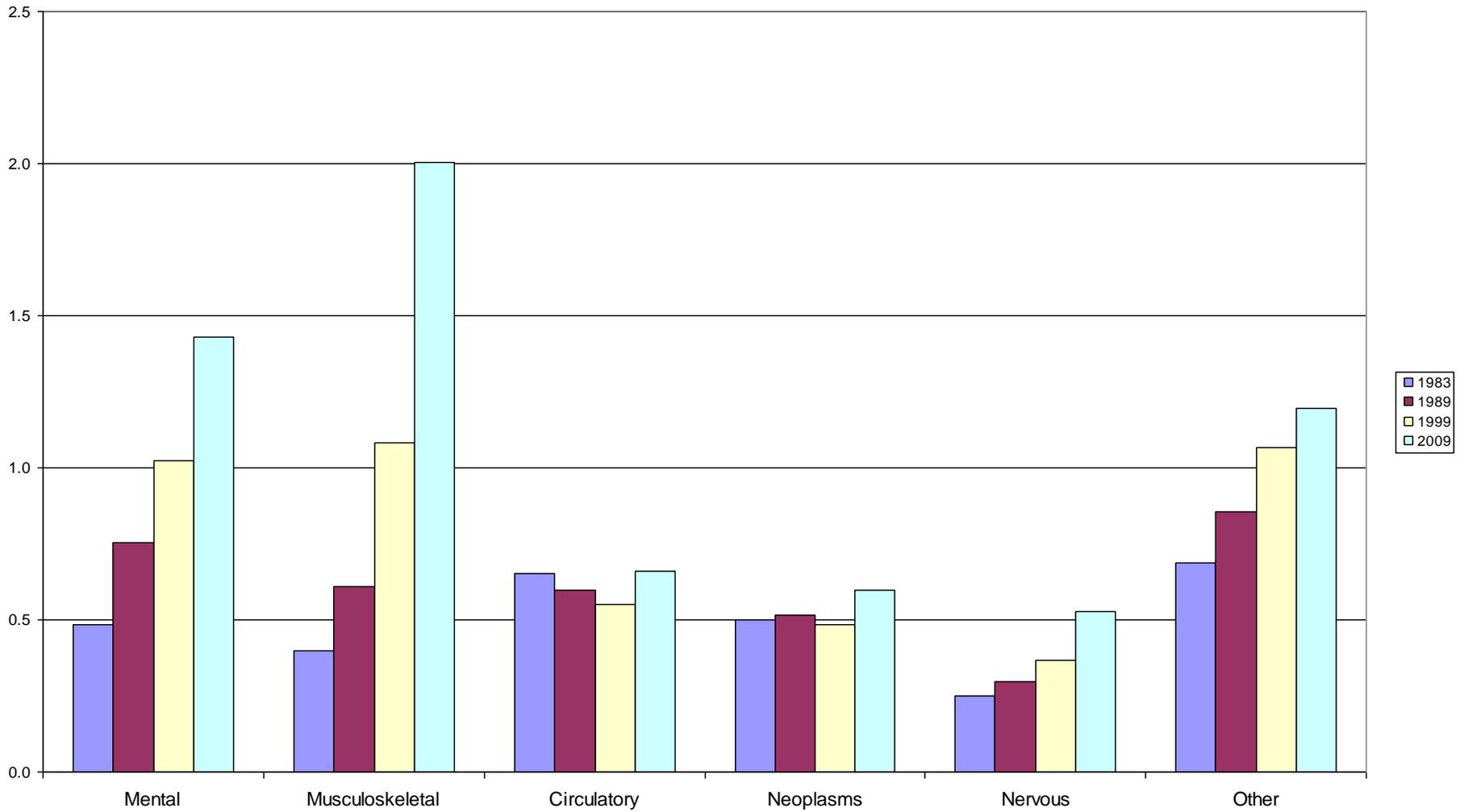
### % of SSDI Recipients Leaving Program for not meeting Medical Criteria: 1964-2009



# Why Has SSDI Enrollment Increased?

1. *Less stringent medical eligibility criteria introduced in 1984*
  - *Shift from cancer / heart attacks to mental disorders / back pain*
  - *This has increased average duration – from 8 to 14 years*
2. Rising replacement rates due to declining wages among less skilled
  - Progressive benefit formula indexed to average wage growth
  - Increase even greater because of rising value of HI through Medicare
3. Increase in female labor force attachment has made more eligible
  - Plus more years of work history increases potential benefits
4. Increase in the full retirement age
  - SSDI was 25 percent more generous than early retirement at 62
  - Once FRA increase is fully phased in will be 43 percent more generous
5. Aging of the population – baby boom now in 50s and early 60s
6. Program becoming more sensitive to economic conditions

### SSDI Awards per 1,000 Insured by Diagnosis Category: 1983, 1989, 1999, 2009



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# Understanding the Rise in Replacement Rates

- AIME calculated from highest years of indexed earnings
- Five lowest years after age 21 excluded for most SSDI applicants
- AIME determines Primary Insurance Amount (PIA)
  - 90-32-15 formula with bend points indexed to average wage growth
- Bracket effect – bend points growing more rapidly than wages for low-income workers
- Earnings history effect – earlier years with higher indexed earnings than current years
- Value of health insurance growing more rapidly than wages

**Figure 4. Illustration of the Impact of Earnings Inequality and Indexation on Disability Insurance Benefits in 1980 and 2000**

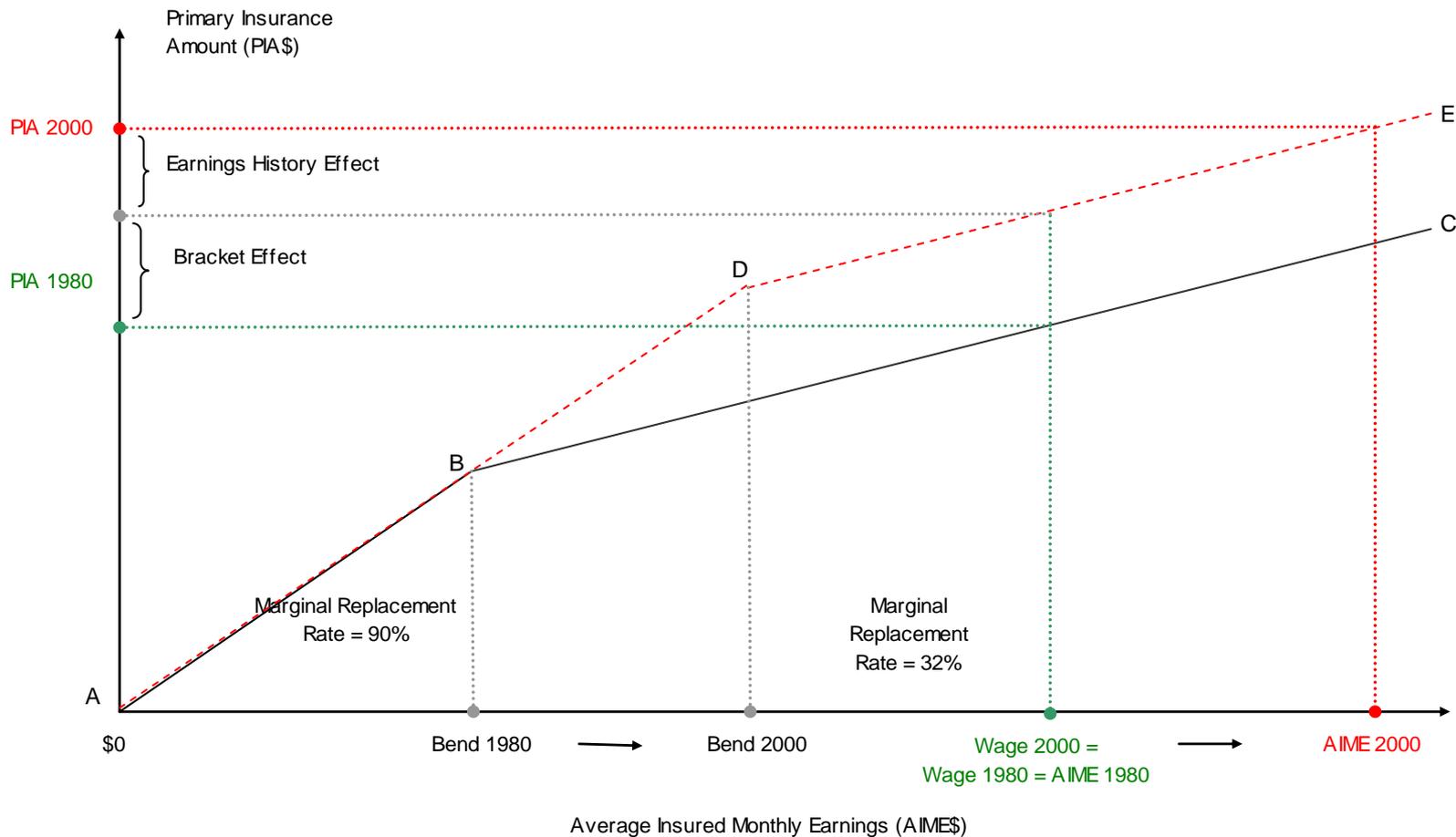


Table 2. Estimated Changes in SSDI Earnings Replacement Rates for Males  
Ages 30 to 61 by Earnings Percentile, 1984 to 2002

	Wage Replacement Rate		Adding Fringe Benefits, Medicare	
	1984	2002	1984	2002
<u>Males 30 - 39</u>				
10th	48.4%	59.4%	60.6%	85.7%
50th	36.2%	41.9%	35.4%	44.4%
90th	24.1%	26.1%	22.5%	24.7%
<u>Males 40 - 49</u>				
10th	51.1%	55.1%	62.7%	76.9%
50th	33.5%	43.3%	32.7%	44.4%
90th	19.4%	24.8%	18.4%	23.3%
<u>Males 50 - 61</u>				
10th	55.2%	64.0%	67.8%	86.0%
50th	34.7%	45.9%	34.1%	46.4%
90th	19.0%	23.7%	18.2%	22.4%

Source: Authors' calculations from March Annual Demographic Supplement of the CPS 1964 - 2002.

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## % of Women Ages 50-64 Who Are DI-Insured

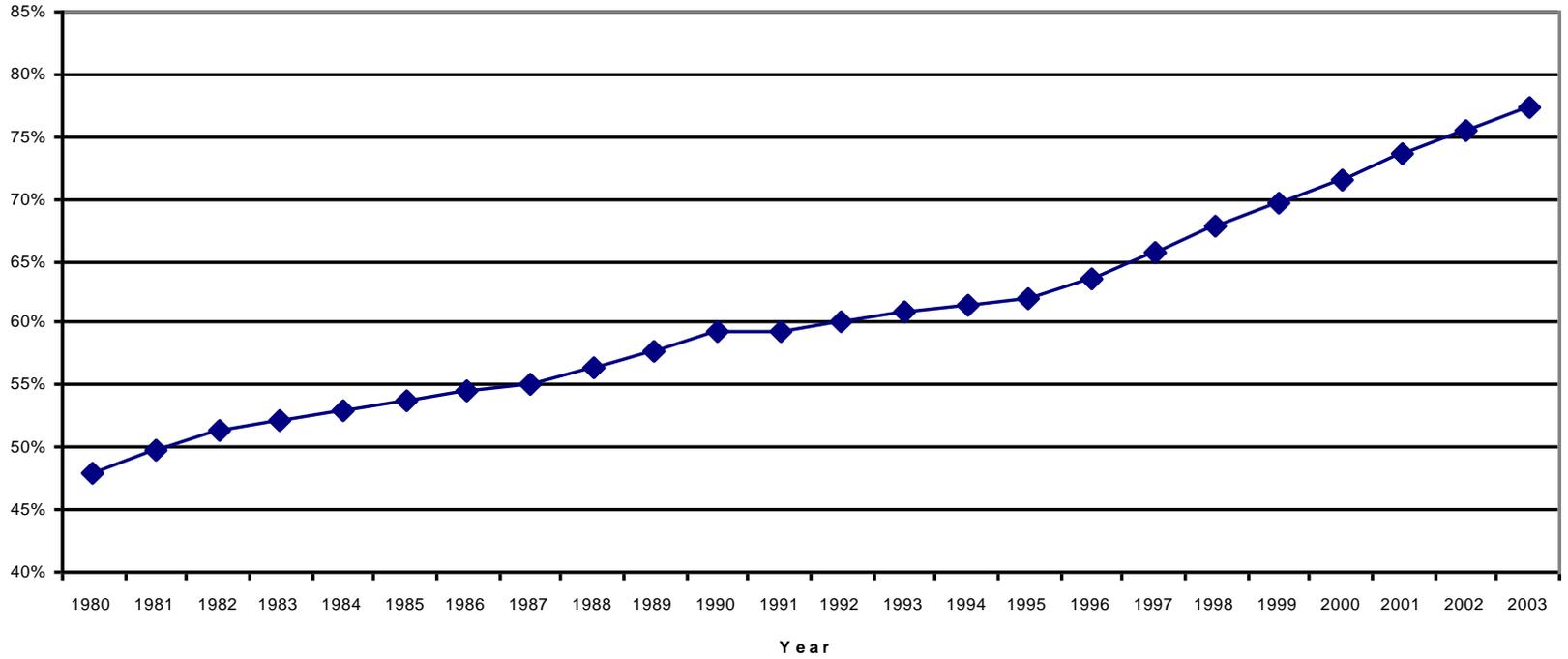
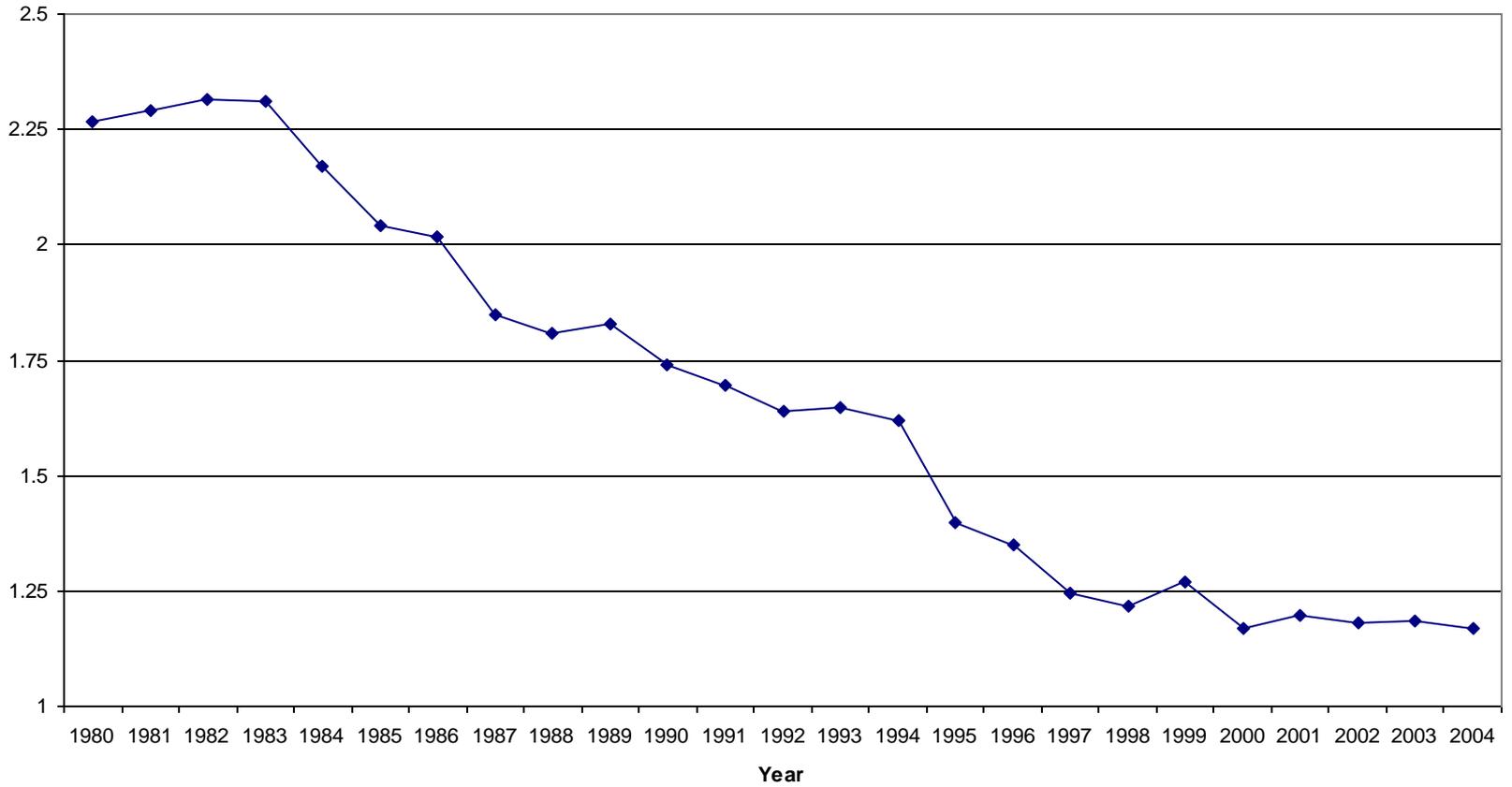


Figure 5: Ratio of Male to Female SSDI Awards: 1980-2004



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Figure 1: Social Security Retired Worker Benefit Generosity by Year-of-Birth

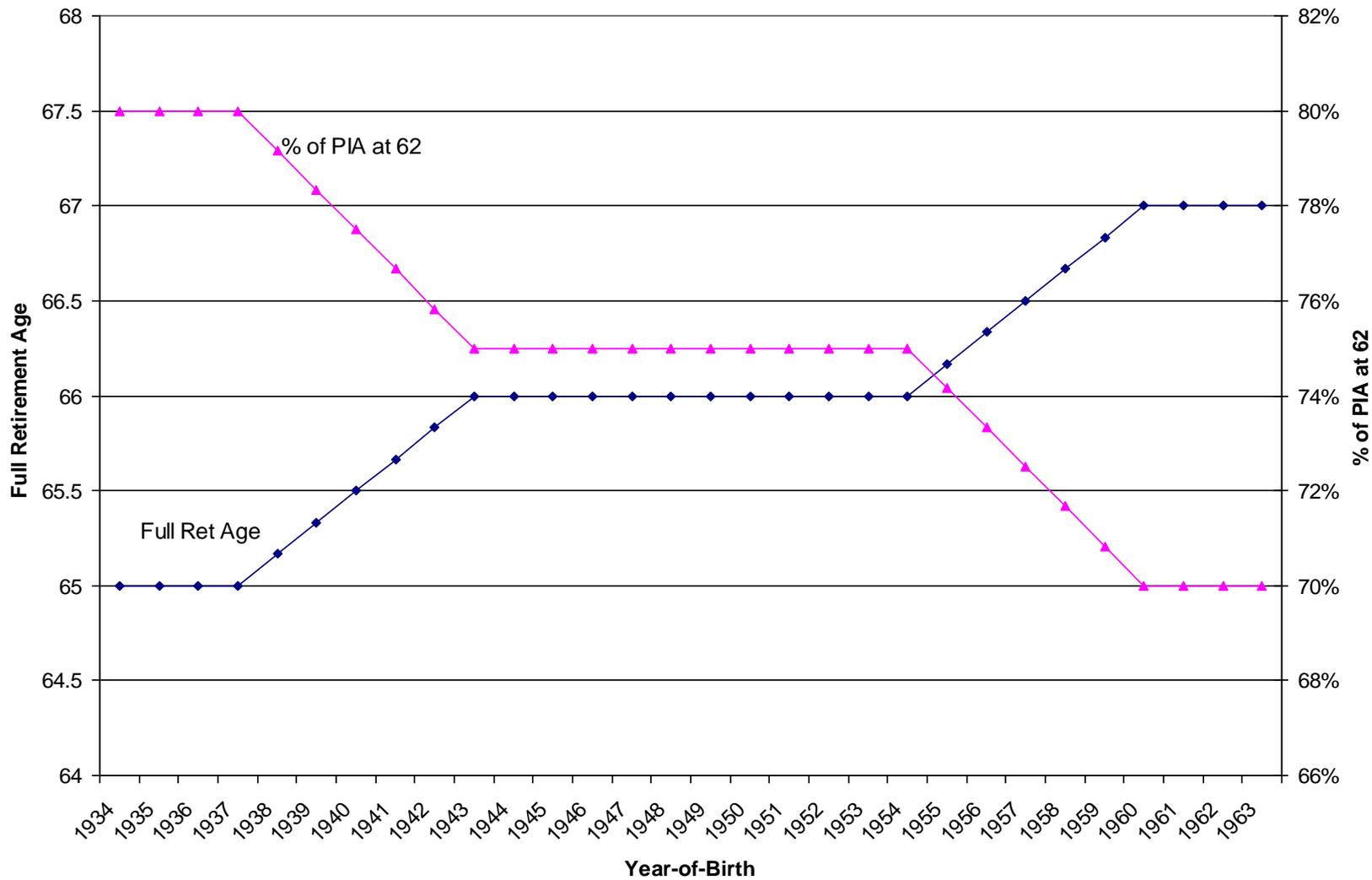
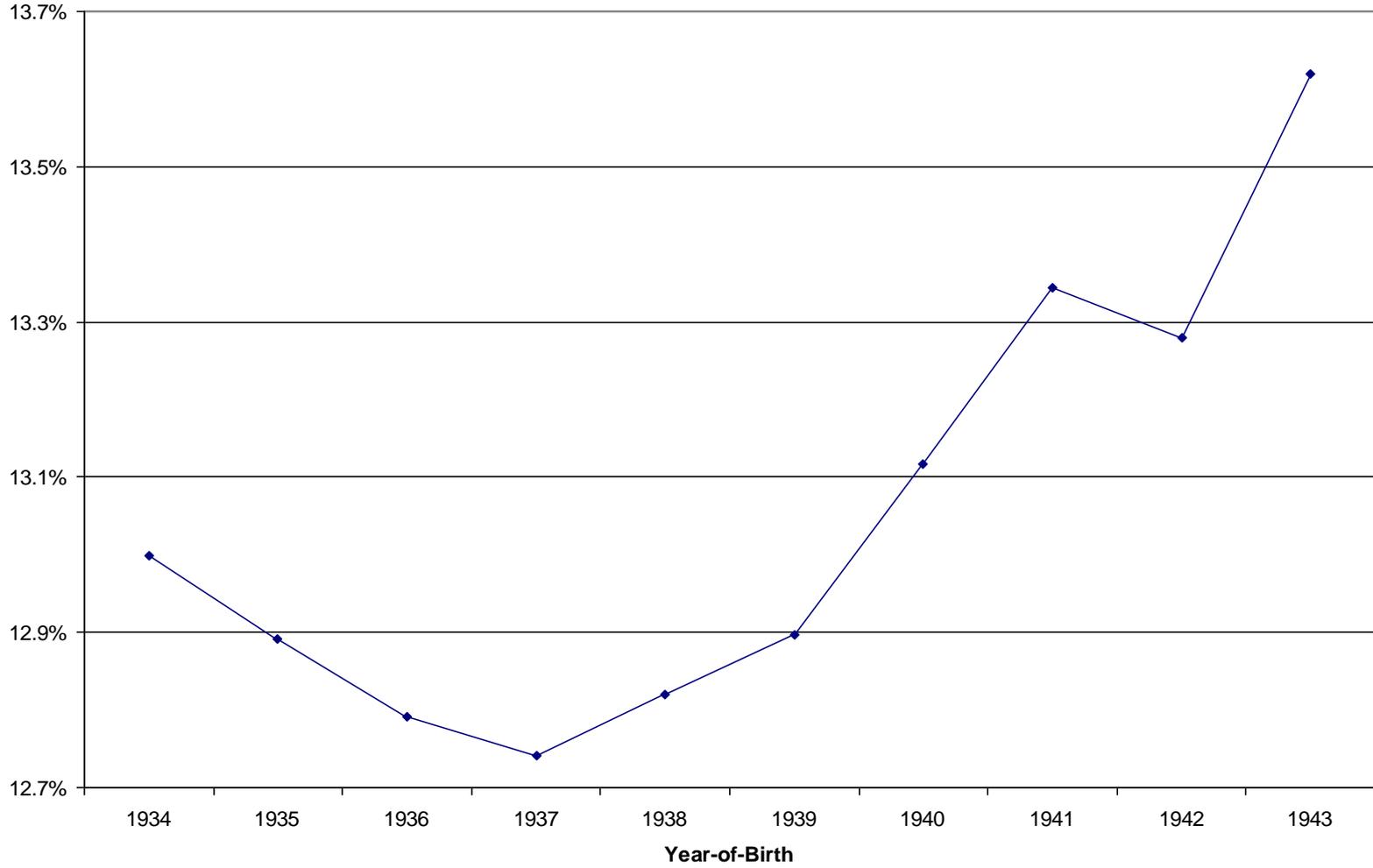


Figure 5A: Percent of Men Age 62 Receiving SSDI by Year-of-Birth



**Table 5: Implied Effect of Change in Present Value of Retired Worker Benefits on SSDI Enrollment**

Dec-05		Men				Women			
Age	YOB	PV Δ	FRA Impact	Actual Δ	Long-Run	PV Δ	FRA Impact	Actual Δ	Long-Run
45	1960	\$9,432	0.73%	1.55%	0.73%	\$7,104	1.16%	2.21%	1.16%
46	1959	\$8,940	0.70%	1.69%	0.76%	\$6,722	1.10%	2.42%	1.20%
47	1958	\$8,406	0.65%	1.82%	0.79%	\$6,310	1.03%	2.53%	1.24%
48	1957	\$7,828	0.61%	1.68%	0.81%	\$5,865	0.96%	2.60%	1.28%
49	1956	\$7,202	0.56%	1.87%	0.84%	\$5,385	0.88%	2.81%	1.32%
50	1955	\$6,525	0.51%	1.84%	0.87%	\$4,868	0.80%	2.93%	1.37%
51	1954	\$5,794	0.45%	1.58%	0.90%	\$4,311	0.71%	3.04%	1.41%
52	1953	\$6,004	0.47%	1.73%	0.93%	\$4,456	0.73%	3.20%	1.46%
53	1952	\$6,225	0.48%	1.87%	0.97%	\$4,607	0.76%	3.45%	1.51%
54	1951	\$6,457	0.50%	2.25%	1.01%	\$4,765	0.78%	3.63%	1.56%
55	1950	\$6,701	0.52%	1.77%	1.04%	\$4,930	0.81%	3.54%	1.62%
56	1949	\$6,959	0.54%	1.87%	1.08%	\$5,103	0.84%	3.78%	1.67%
57	1948	\$7,231	0.56%	2.01%	1.13%	\$5,284	0.87%	4.14%	1.73%
58	1947	\$7,519	0.59%	1.54%	1.17%	\$5,475	0.90%	3.99%	1.79%
59	1946	\$7,826	0.61%	1.54%	1.22%	\$5,675	0.93%	4.26%	1.86%
60	1945	\$8,153	0.63%	1.47%	1.27%	\$5,887	0.96%	4.44%	1.93%
61	1944	\$8,503	0.66%	1.29%	1.32%	\$6,111	1.00%	4.60%	2.00%
62	1943	\$8,878	0.69%	0.90%	1.38%	\$6,348	1.04%	4.61%	2.08%
63	1942	\$7,181	0.56%	0.84%	1.34%	\$5,150	0.84%	4.35%	2.03%
64	1941	\$5,570	0.43%	0.56%	1.30%	\$4,006	0.66%	4.23%	1.97%
All 45-64	1941-60	\$7,391	0.58%	1.64%	1.00%	\$5,448	0.89%	3.41%	1.56%

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Figure 3A: Percent of Men Receiving SSDI by Age in 1983 and 2005

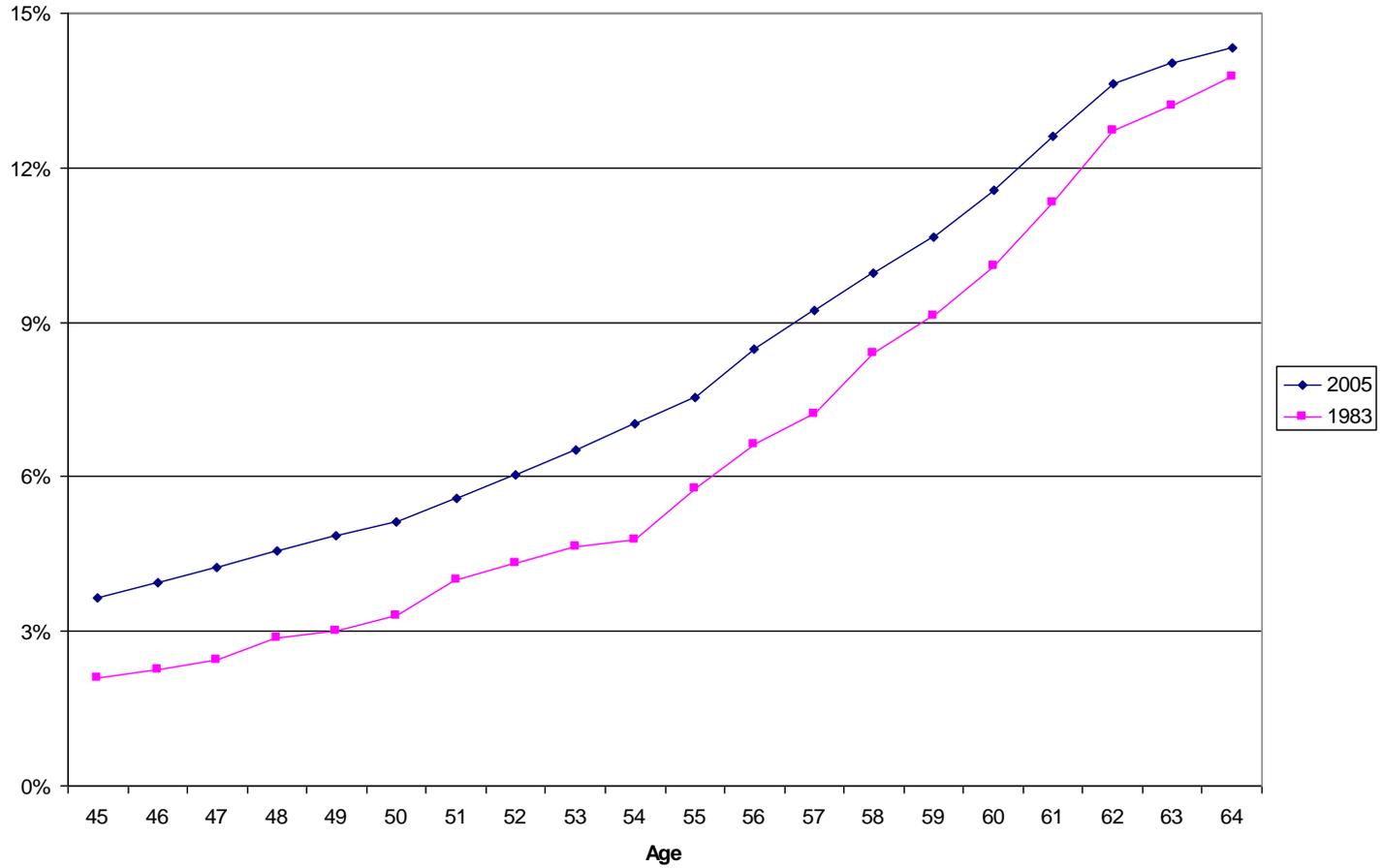
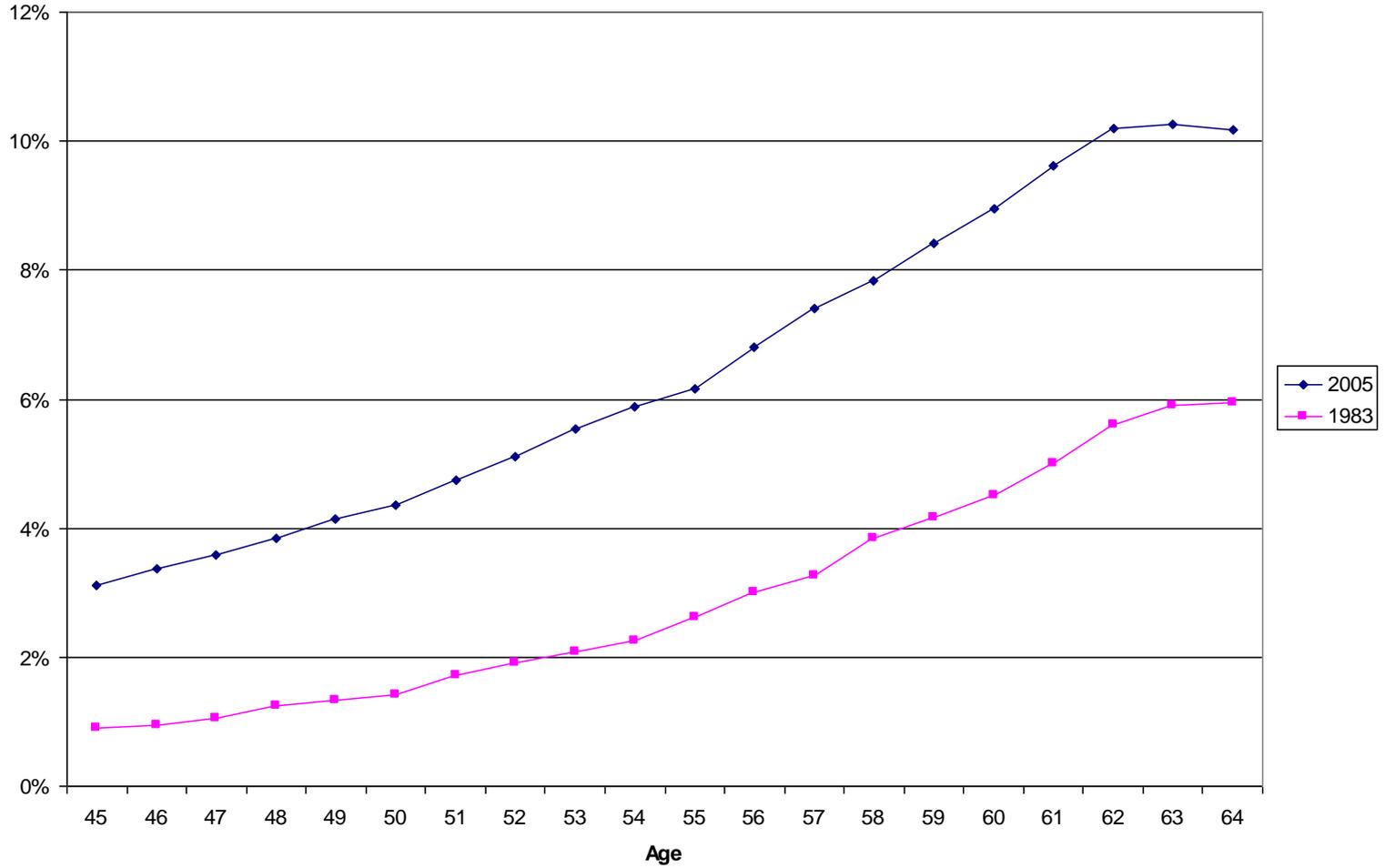


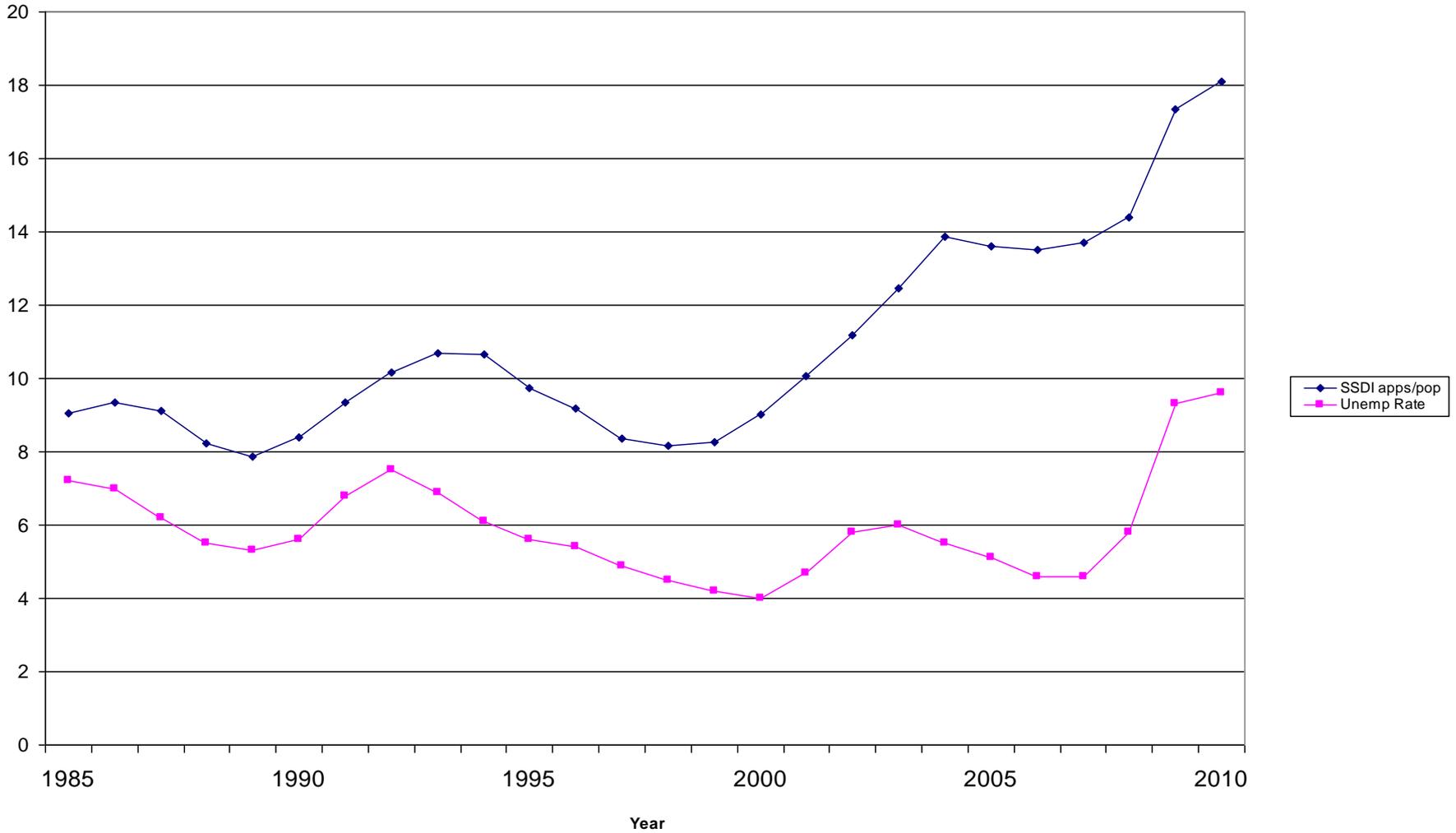
Figure 3B: Percent of Women Receiving SSDI by Age in 1983 and 2005



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### SSDI Applications per Adult 25-64 vs. U.S. Unemployment Rate: 1985-2010

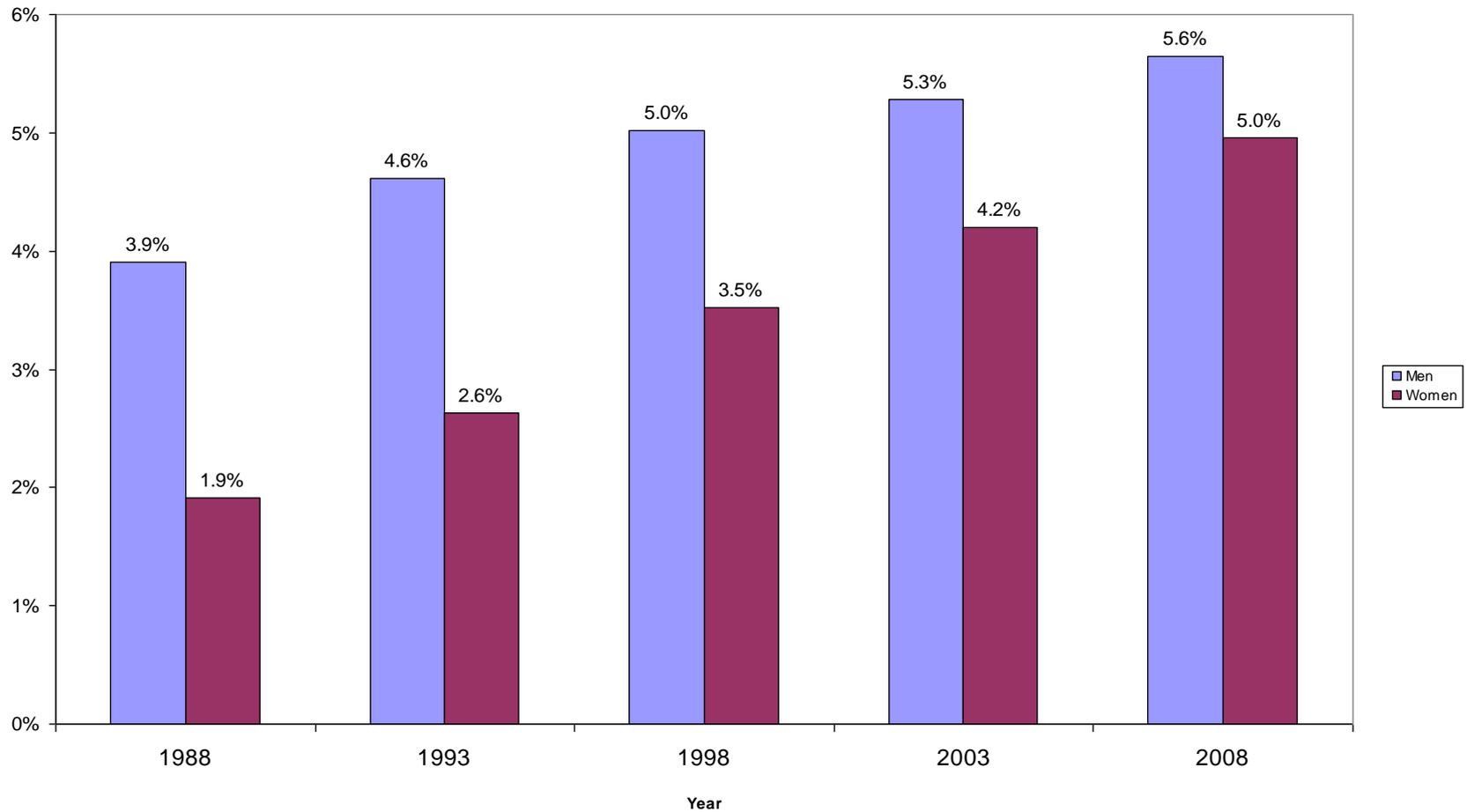


# Will SSDI Enrollment Continue to Increase?

- No sign of a slowdown in the trend in Figure 1
  - Program is a long way from reaching equilibrium size
  - Simple back of the envelope calculation: ~1 million awards/yr and 8% exit rate => 12.5 million (now 8.2 million)
  - Of course this is too simple and thus more to follow below . . .
- Further increases in full retirement age for those born 1955+
  - Increases relative incentive to apply for SSDI
  - Will lead to further increases in SSDI enrollment
- Health reform likely to increase incentive to apply for SSDI
- Other factors, though, suggest the growth may slow
  - Increase in % of women SSDI-insured will slow down
  - Age structure of the population
- Two big questions: will medical eligibility criteria change and will economic conditions / wages for lower-skilled workers improve?

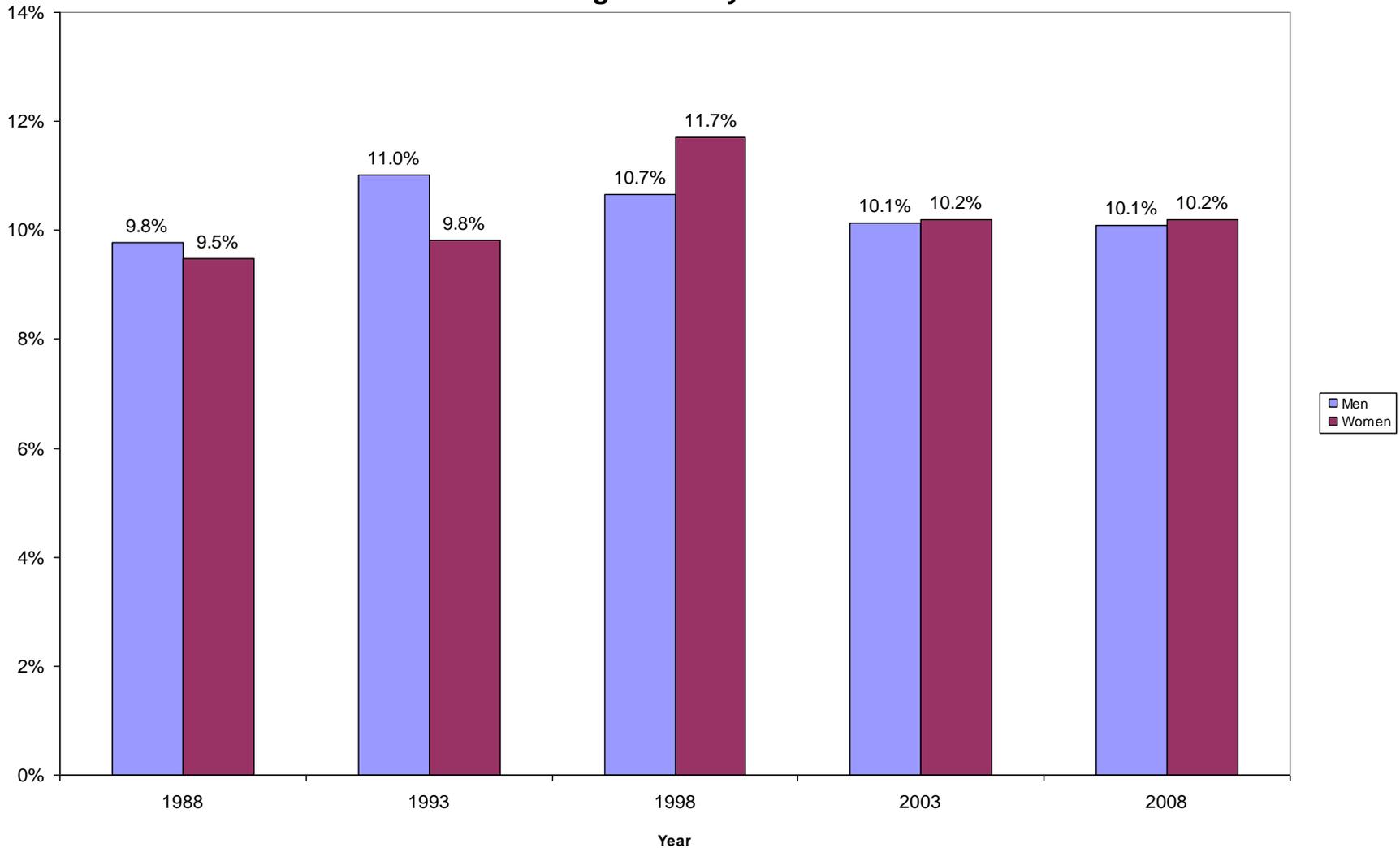
# Are Substantial Further SSDI Enrollment Increases Plausible?

Fraction Aged 40-59 on SSDI: 1988-2008

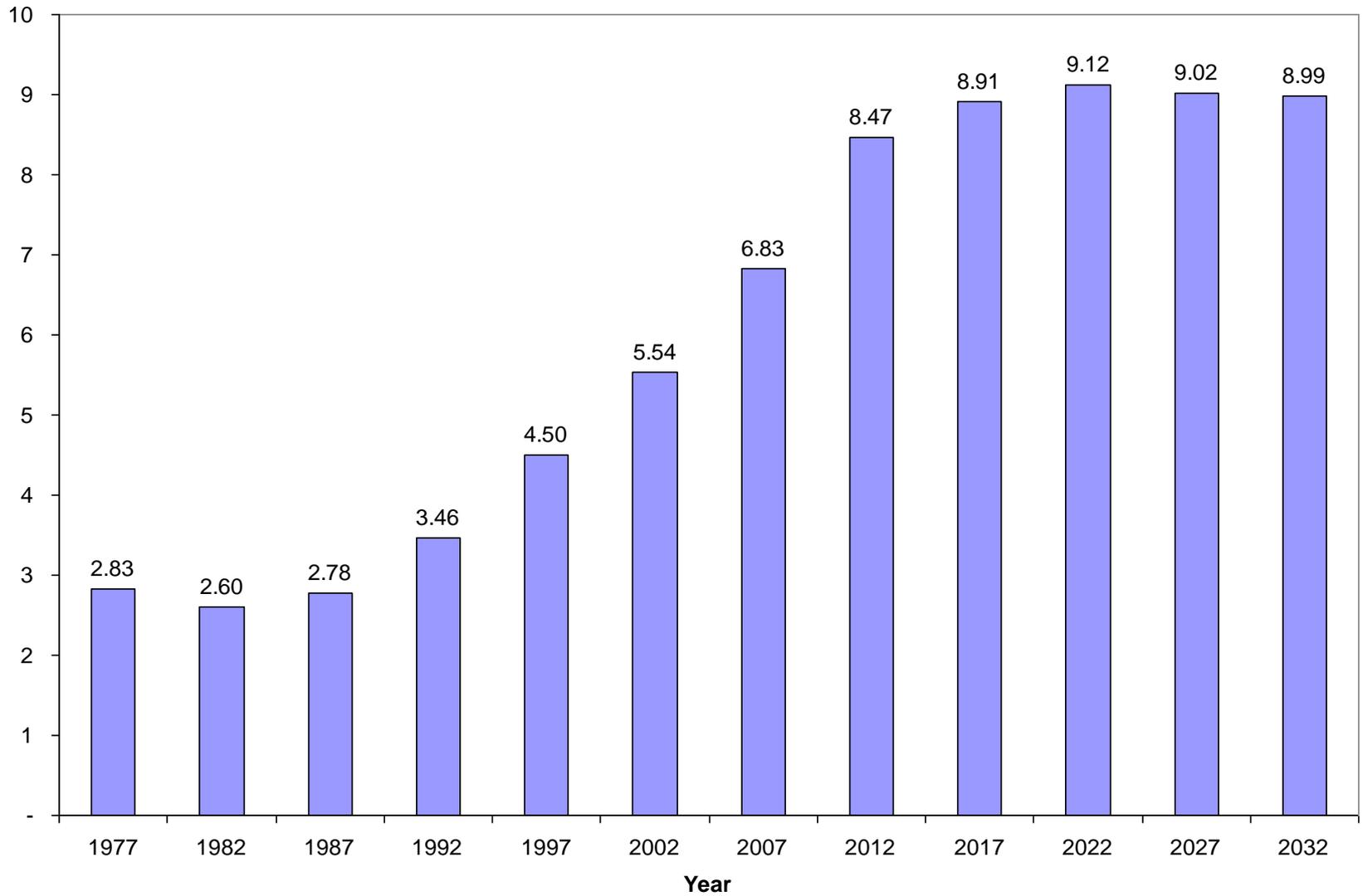


# self-reporting that they have a disability is ~2X greater

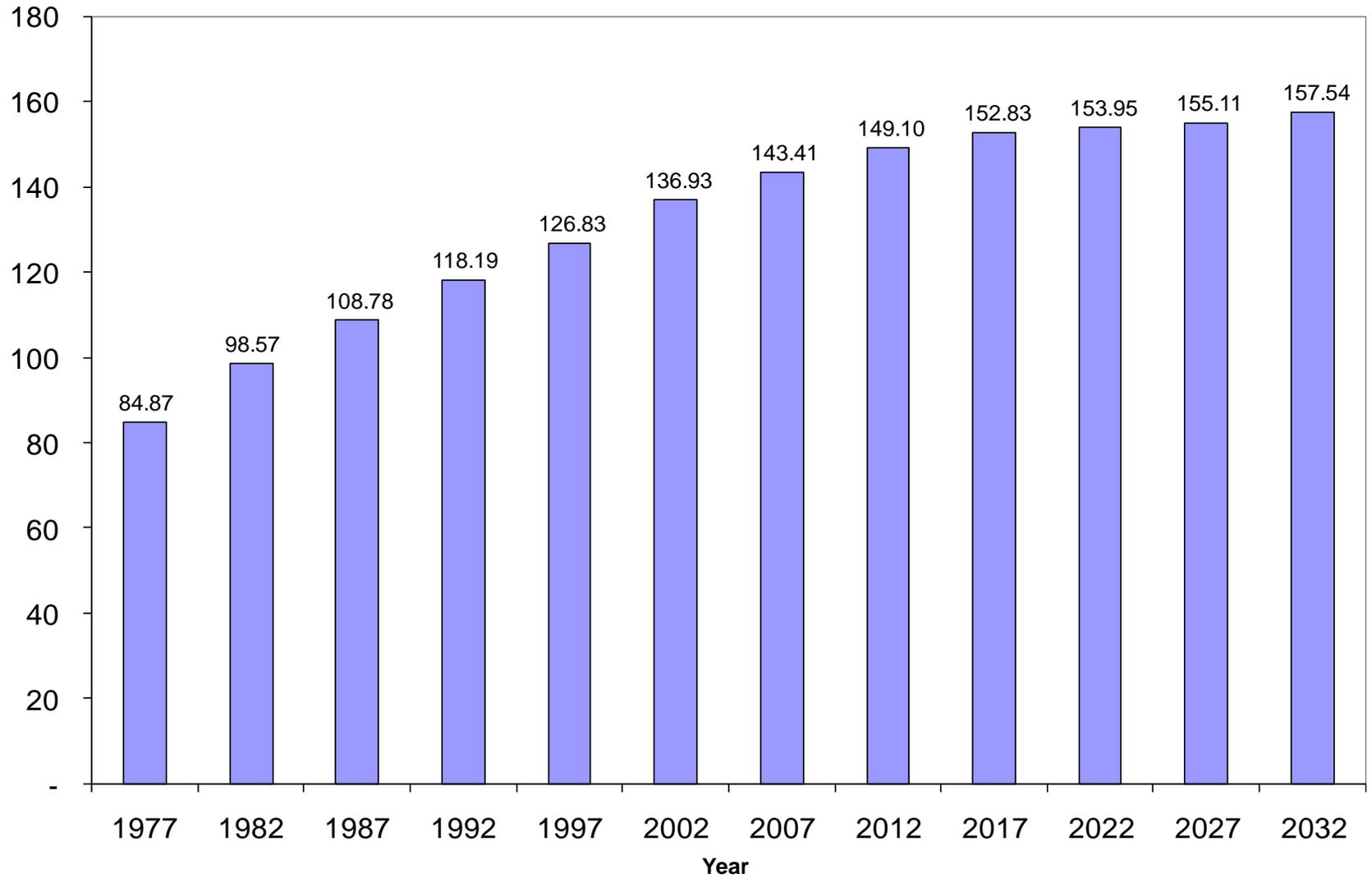
**Figure 4: % of People 40-59 Reporting a Work-Limiting Disability / Health Condition**



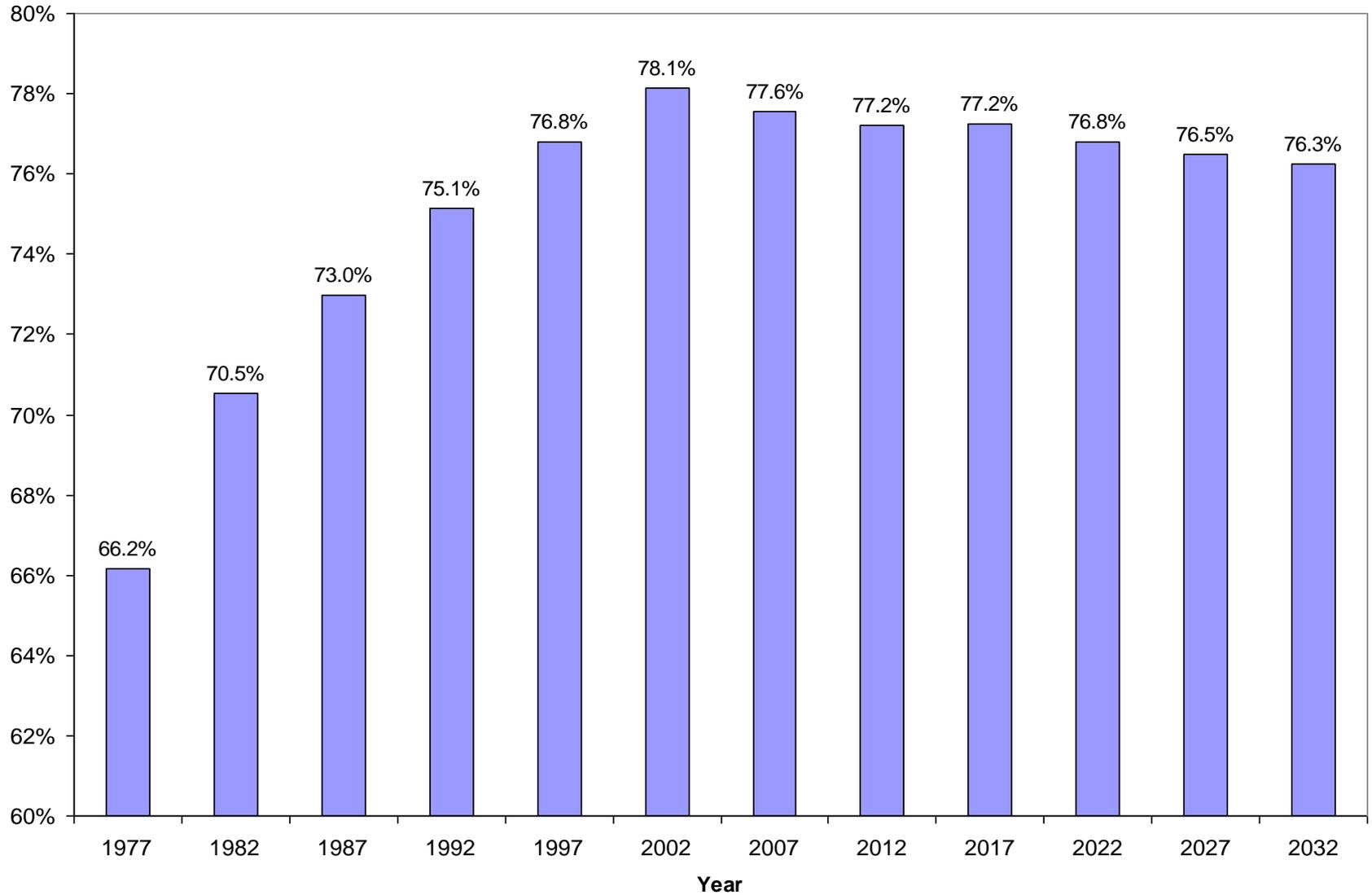
## Millions of SSDI Recips Aged 20-64: 1977-2032



## Millions Aged 20-64 SSDI-Insured: 1977-2032



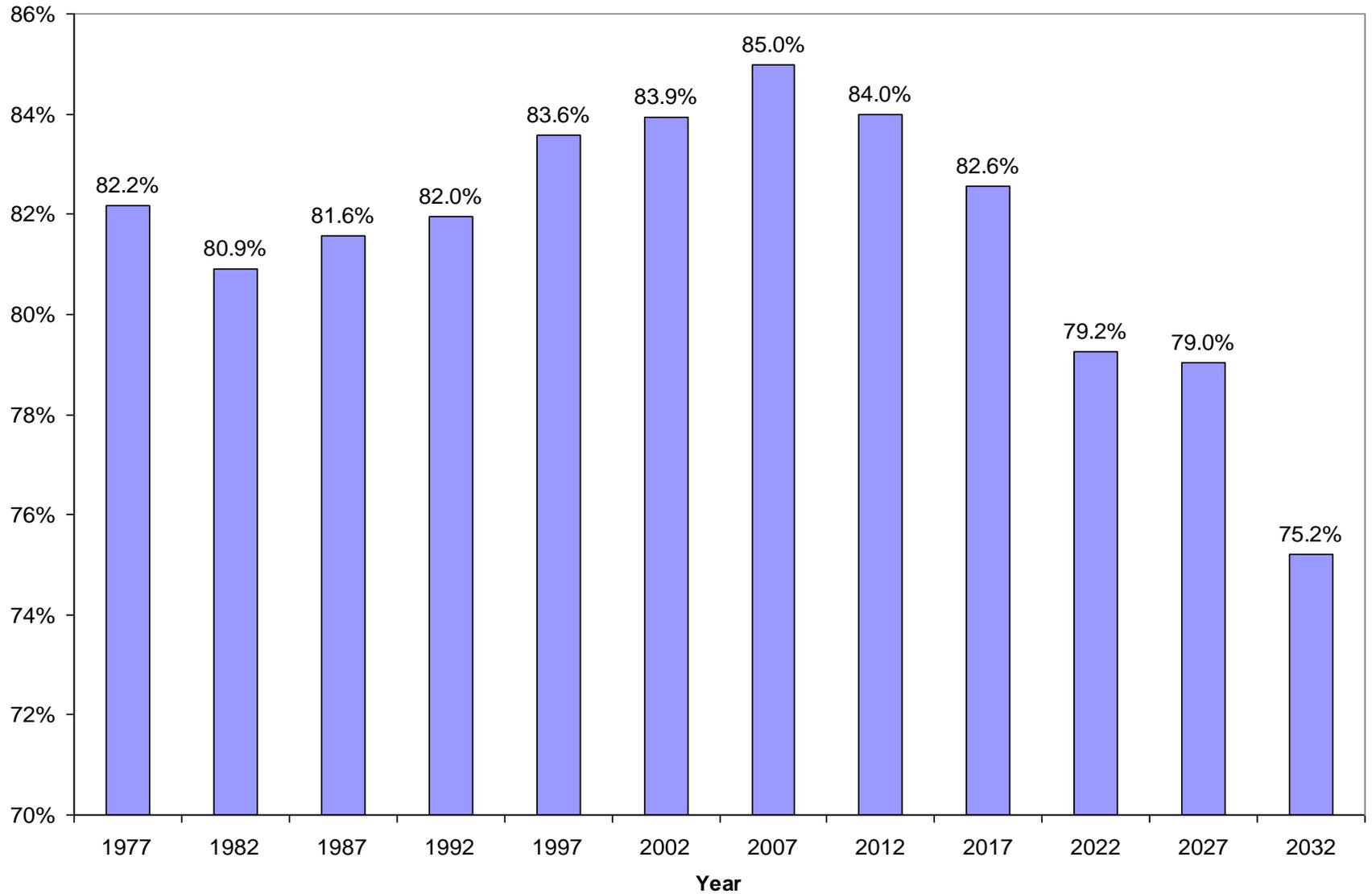
## % Aged 20-64 who are SSDI-Insured: 1977-2032



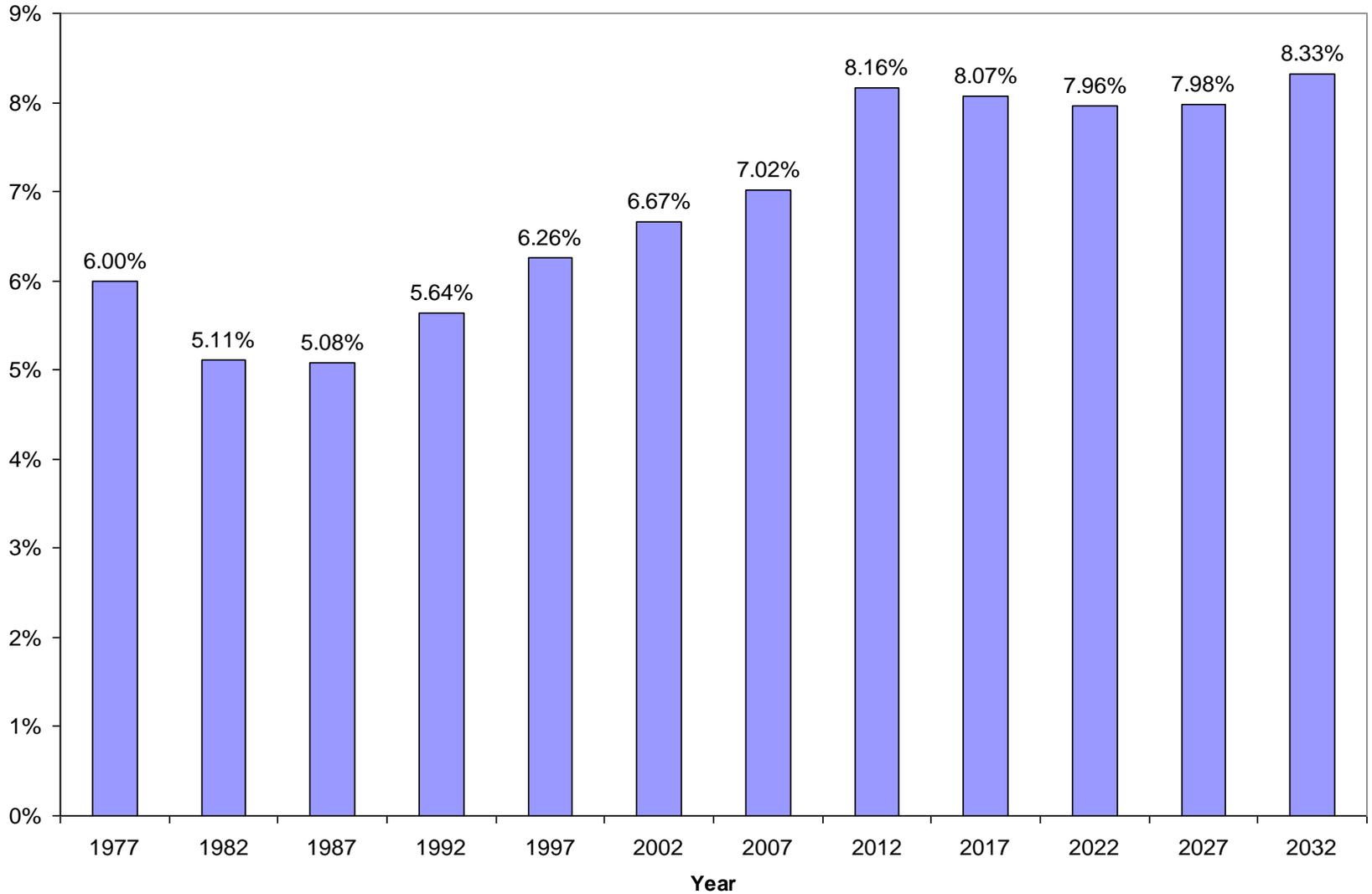
## Projections for SSDI Enrollment beyond 2012

- Given current entry and exit rates, projection seems far too low
  - Given numbers through 12/2010, the 12/2012 projection looks accurate
  - Increase of 5.0 million (3.5 to 8.5 million) from 1992 to 2012
  - Increase of 0.5 million (8.5 to 9.0 million) projected from 2012 to 2032
- Population growth does slow down over this period
  - Increase of 23 percent (157.3 to 193.1 million) from 1992 to 2012
  - Projected at 7 percent (193.1 to 206.6 million) from 2012 to 2032
- Percent DI-insured actually starts to decline gradually due to
  - Little further growth in % of women DI-insured
  - Fall in % of men DI-insured – see below for specific age groups
- Prevalence driven by incidence and termination rate assumptions
  - Taken together, these appear much too optimistic
- Telescope in on some specific age\*gender groups below

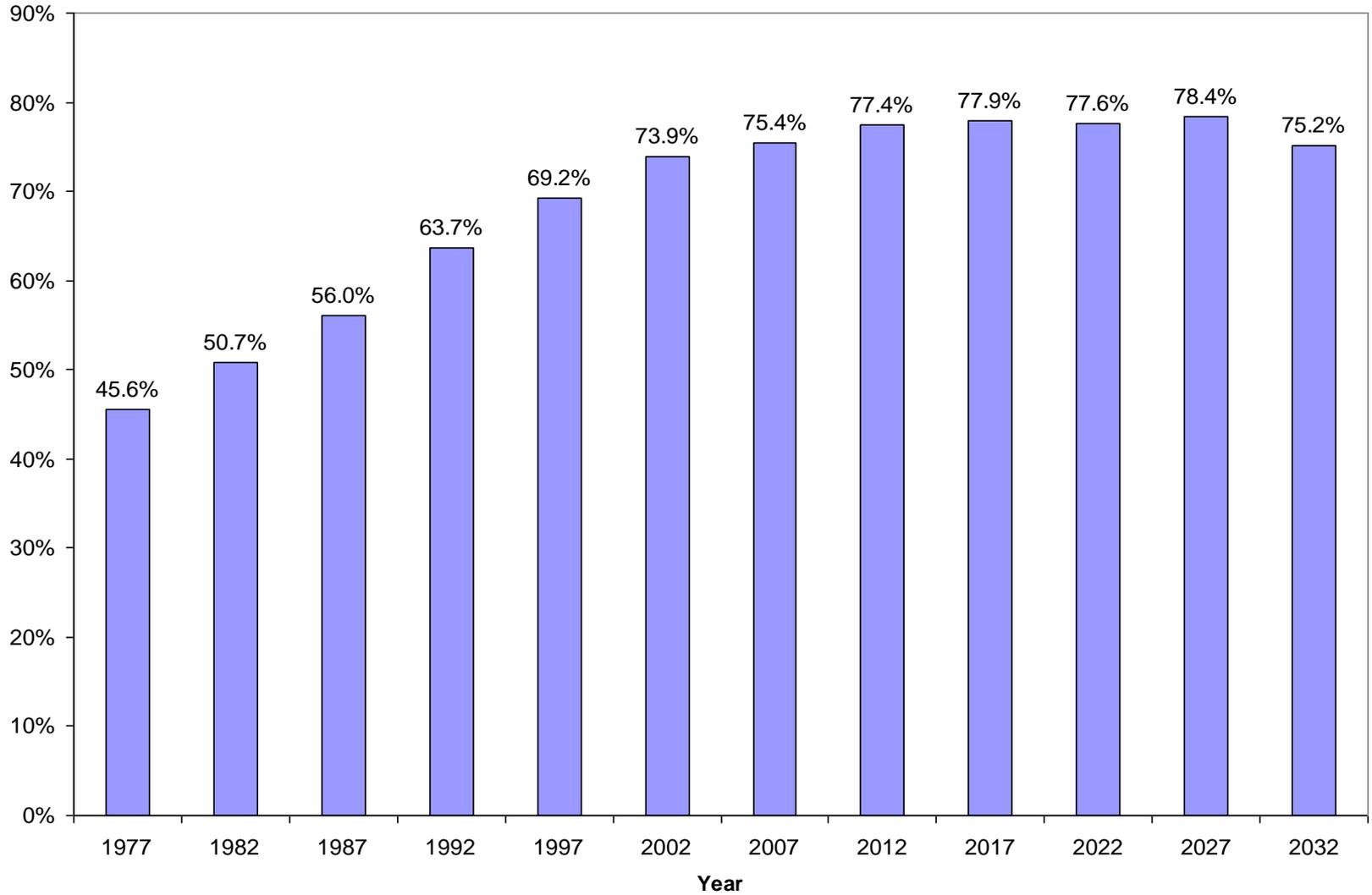
## % Men Ages 50-54 SSDI-Insured: 1977-2032



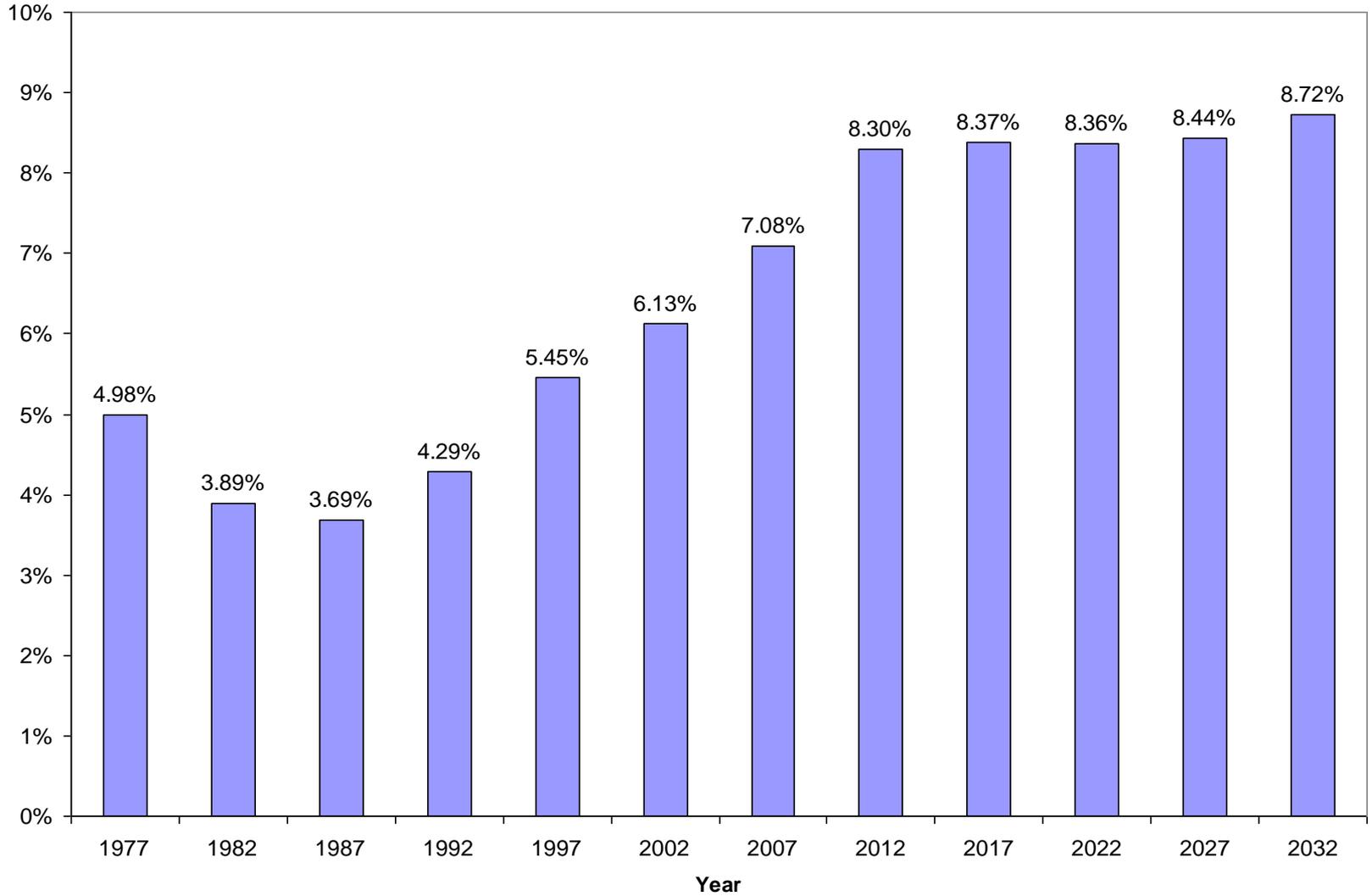
## % of SSDI-Insured Pop on SSDI: Men Ages 50-54



## % of Women Ages 50-54 SSDI-Insured: 1977-2032



## % of SSDI-insured pop on SSDI: Women Aged 50-54



# Summary of Projections for Ages 50-54

- % of Men insured for SSDI projected to fall substantially
  - From 85 percent in 2007 to 75 percent by 2032
- % of SSDI-insured men on SSDI projected to stop increasing
  - 8.2 percent in 2012 rising slightly to 8.3 percent by 2032
- % of Women insured for SSDI projected to stop increasing
  - From 75 percent in 2007 to 75 percent by 2032
  - Thus equal to rate for men by 2032
- % of SSDI-insured women on SSDI projected to stop increasing
  - 8.3 percent in 2012 rising to 8.7 percent by 2032
  - Thus higher for women in 2032
- All four serve to reduce projected SSDI enrollment
  - Reductions in % insured mechanically lowers # on SSDI, all else equal