

研究指導(中嶋ゼミ)

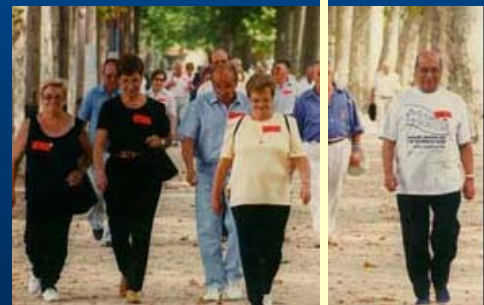
火曜4限・学部・4.0単位

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2011年4月19日 (Lecture 2)
神戶外大・104教室

The Challenge of Global Aging

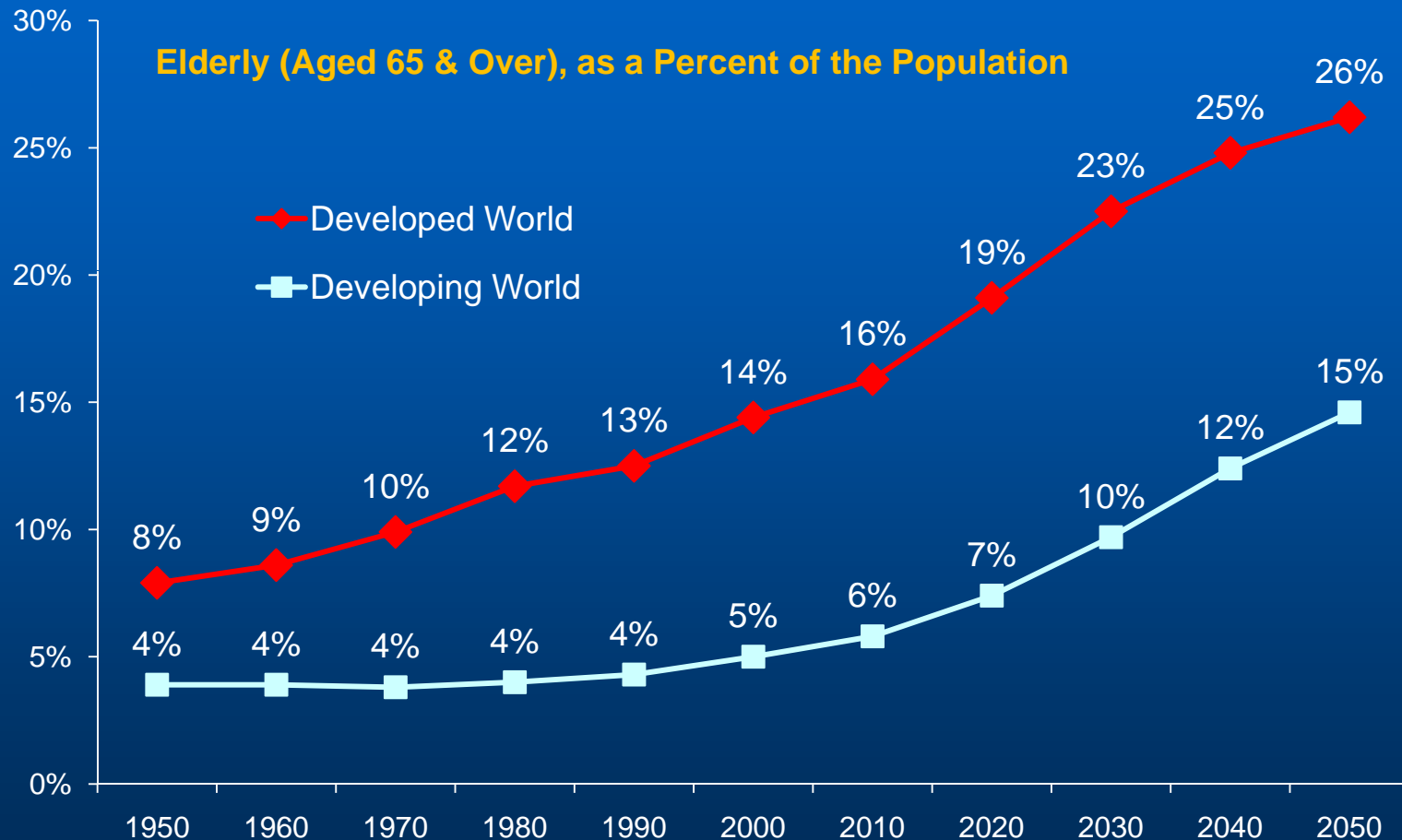
*how demography will transform
the world in the 21st century*



Part 1

The Demographic Transformation

The whole world is aging—and the developed countries are leading the way.



Source: UN (2009)

Behind the developed-world age wave: Falling fertility and rising longevity.

Total Fertility Rate and Life Expectancy: Developed World

	Total Fertility Rate			Life Expectancy at Birth		
	1960-65	1980-85	2005-10	1960-65	1980-85	2005-10
Canada	3.7	1.6	1.6	71.4	75.9	80.7
France	2.9	1.9	1.9	70.7	74.7	81.2
Germany	2.5	1.5	1.3	70.3	73.8	79.9
Italy	2.5	1.5	1.4	69.6	74.7	81.2
Japan	2.0	1.8	1.3	68.9	76.9	82.7
UK	2.8	1.8	1.8	70.8	74.0	79.4
US	3.3	1.8	2.1	70.0	74.3	79.2

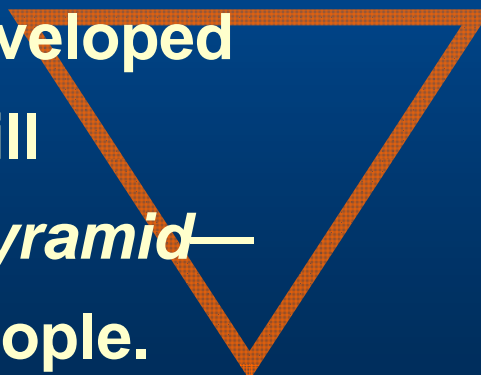
Source: UN (2009)

A historic transformation approaches—the “inversion” of the age pyramid.

Populations throughout history have all shown a steep *pyramid-shaped* age distribution—with more young than old people.

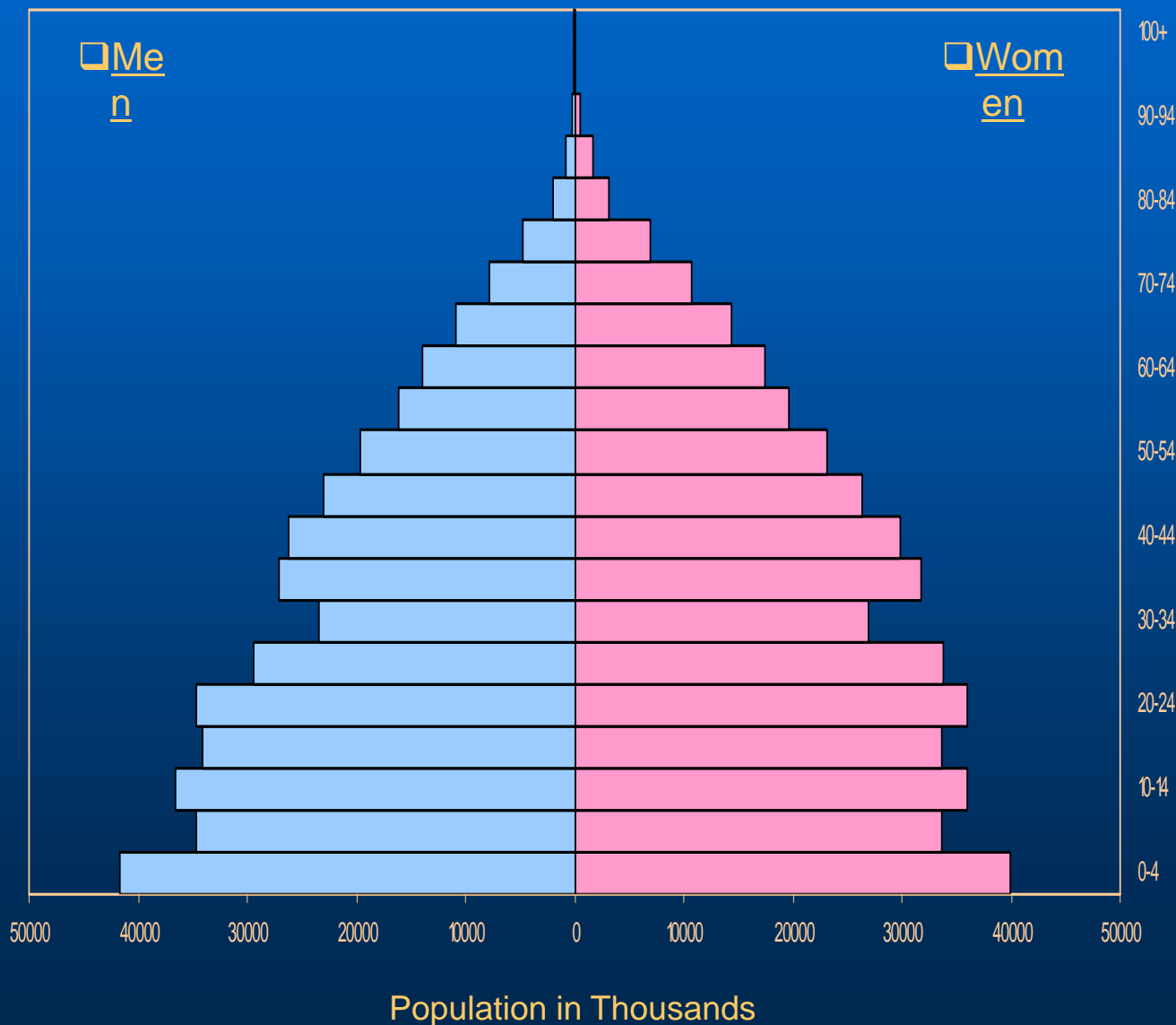


In the near future, starting with developed countries, the distribution will transform into an *inverted pyramid*—with more old than young people.



Pyramid inversion in the developed world—1950 to 2050.

More Developed Regions: UN Constant Fertility Scenario



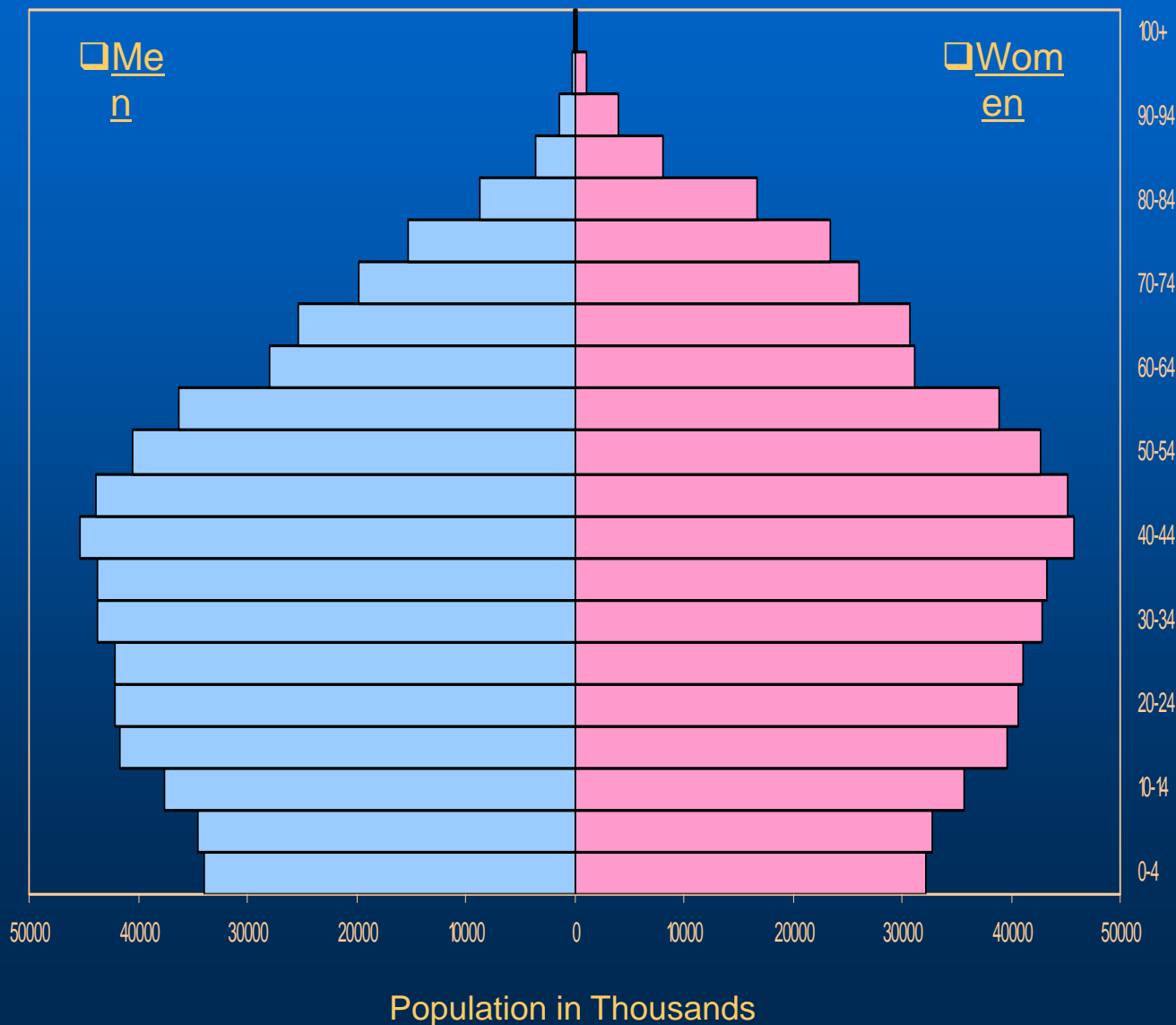
year
1950

median age
28.6

**THIS IS
WHERE WE
WERE IN 1950**

Pyramid inversion in the developed world—1950 to 2050.

More Developed Regions: UN Constant Fertility Scenario



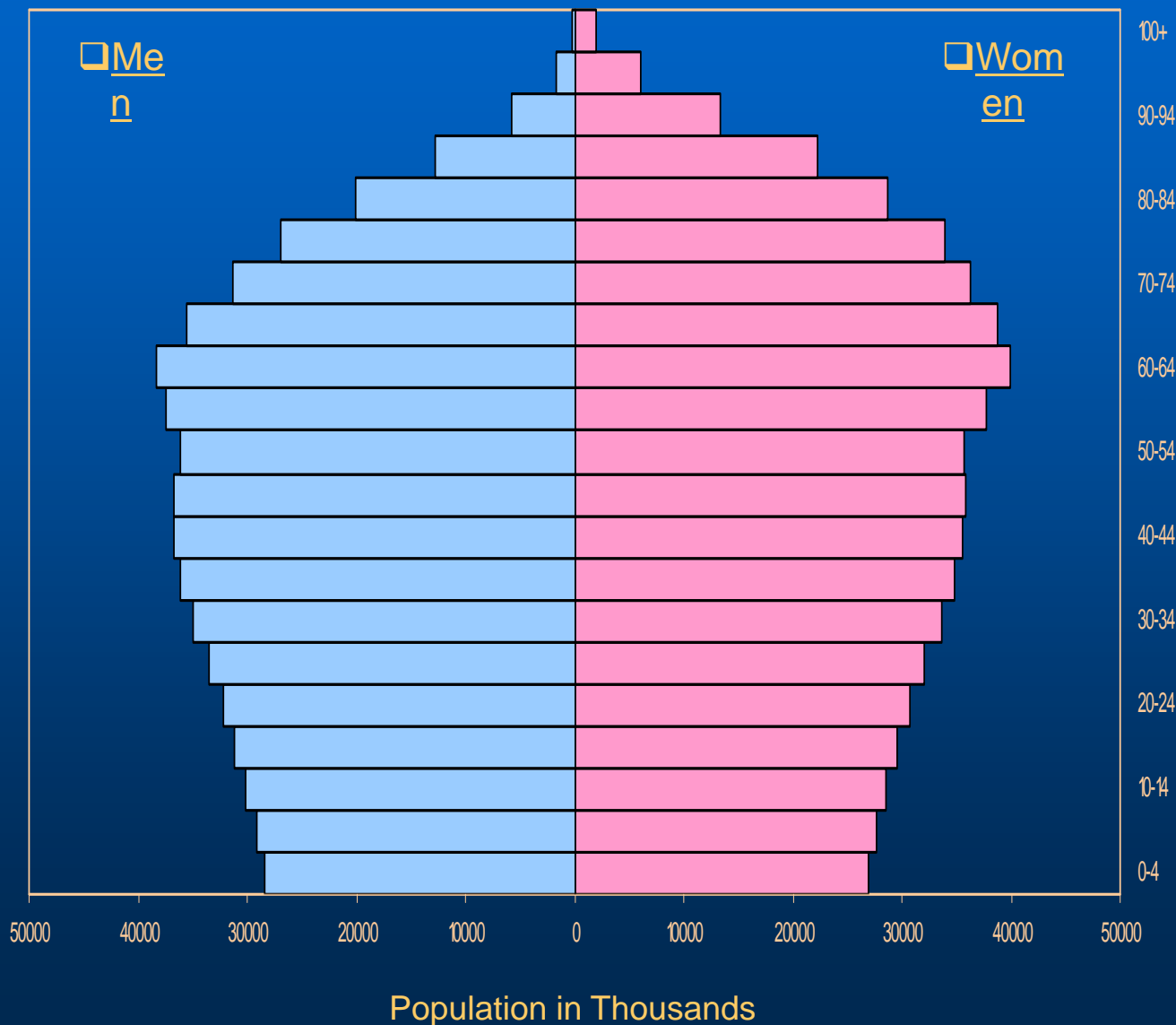
year
2005

median age
38.7

**THIS IS
WHERE WE
ARE TODAY**

Pyramid inversion in the developed world—1950 to 2050.

More Developed Regions: UN Constant Fertility Scenario

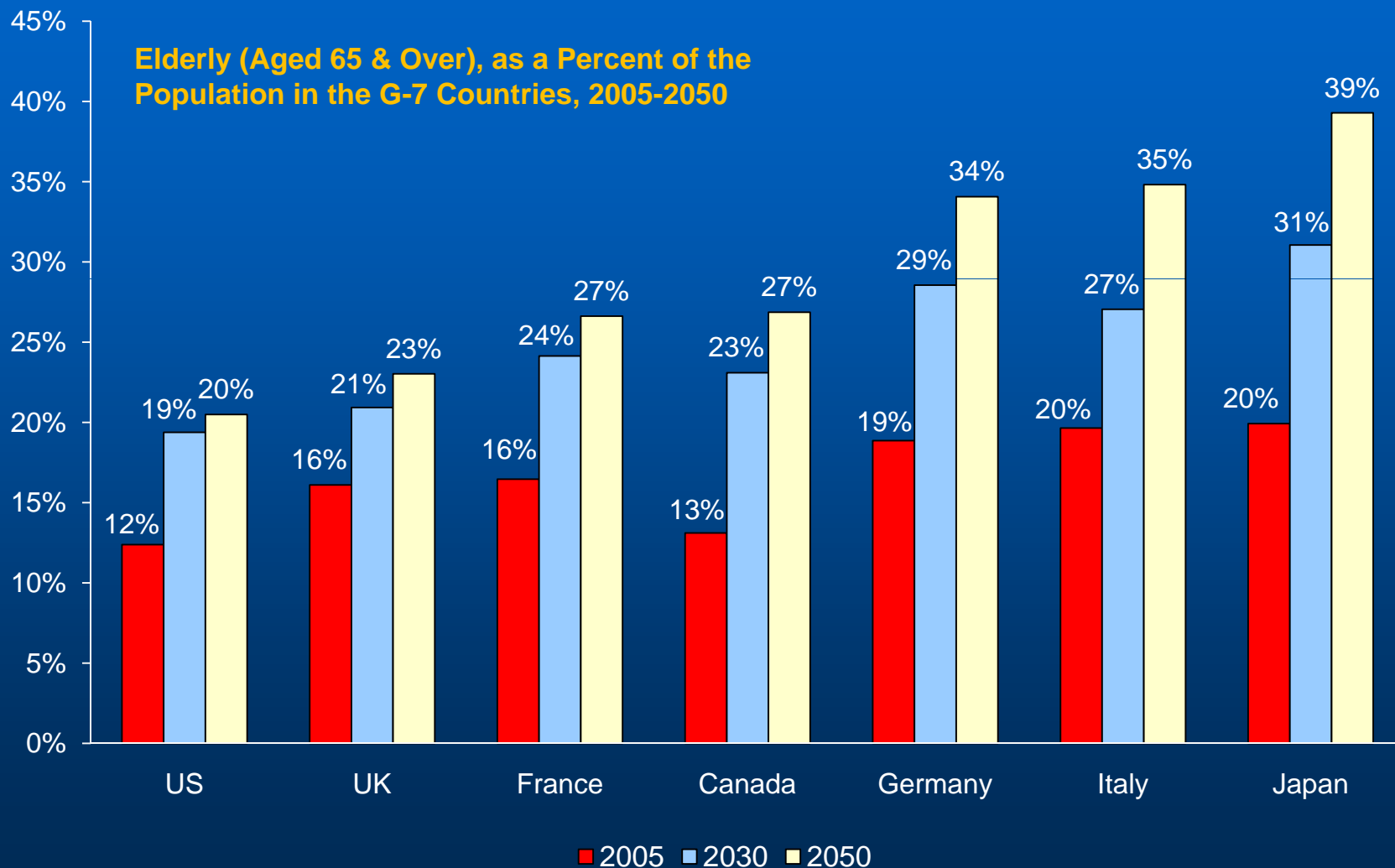


year
2050

median age
46.4

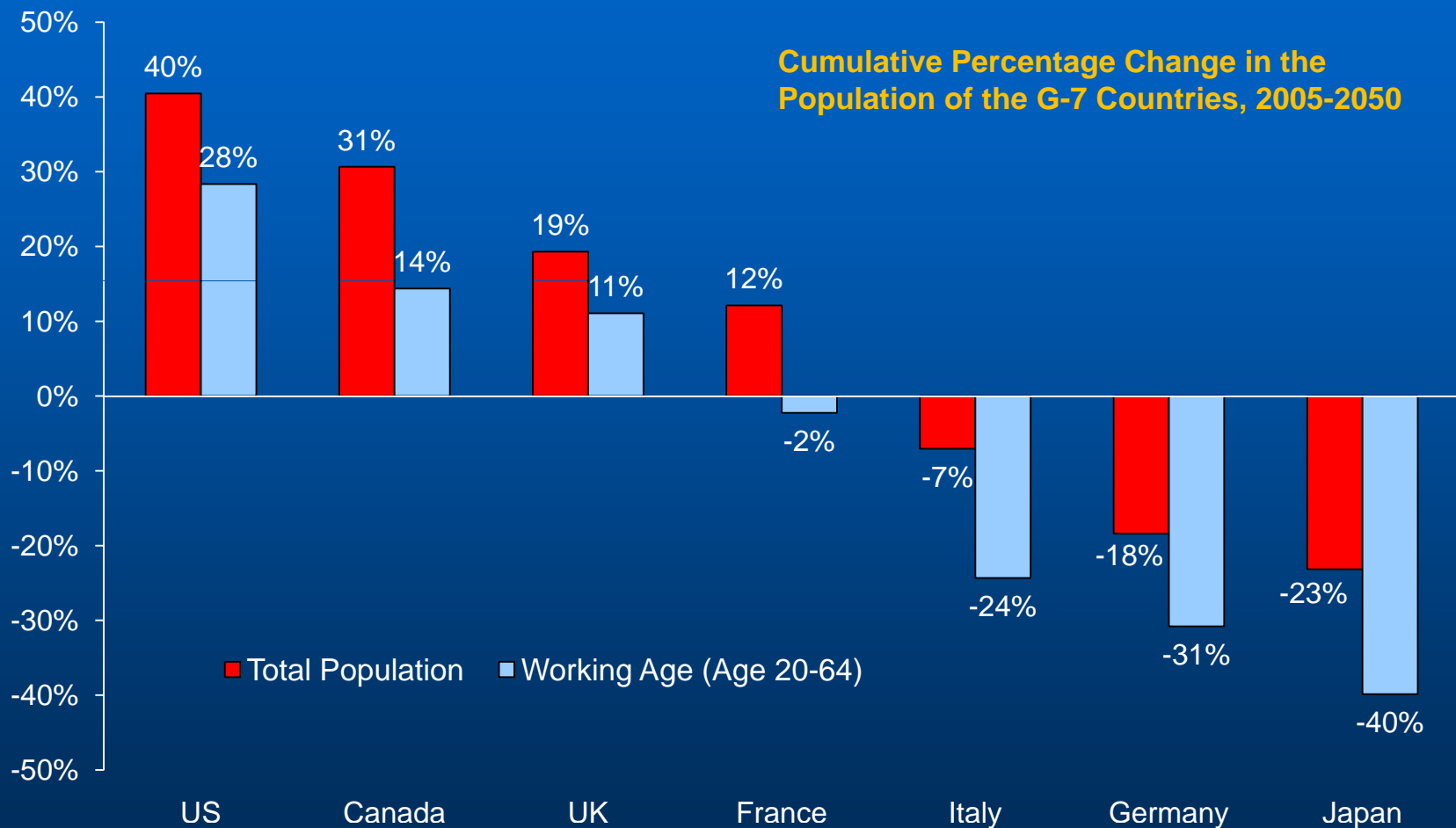
**THIS IS
WHERE WE
WILL BE IN
2050**

The developed countries are entering an unprecedented era of "hyperaging."



Source: UN (2009)

Along with aging populations, most developed countries will have stagnant or contracting ones.



Source: UN (2009)

The certainty of demographic aging.

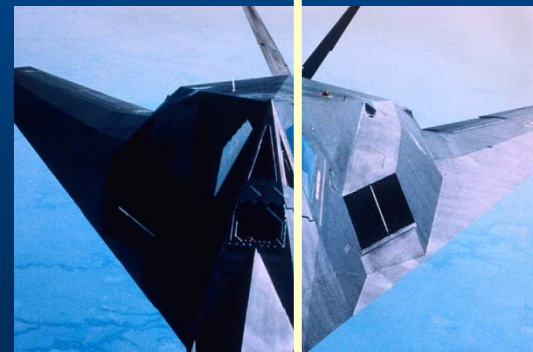
- ❑ **Fertility?** Even a sharp rise in fertility rates would have no appreciable impact on old-age dependency ratios or the size of the workforce for a quarter century.
- ❑ **Life expectancy?** Longer life spans are desirable—and in any case the risk is that future improvements will be greater than projected.
- ❑ **Immigration?** Large and destabilizing waves would be required to slow—much less reverse—the aging of the population.

Part 2

Challenges for the Developed World

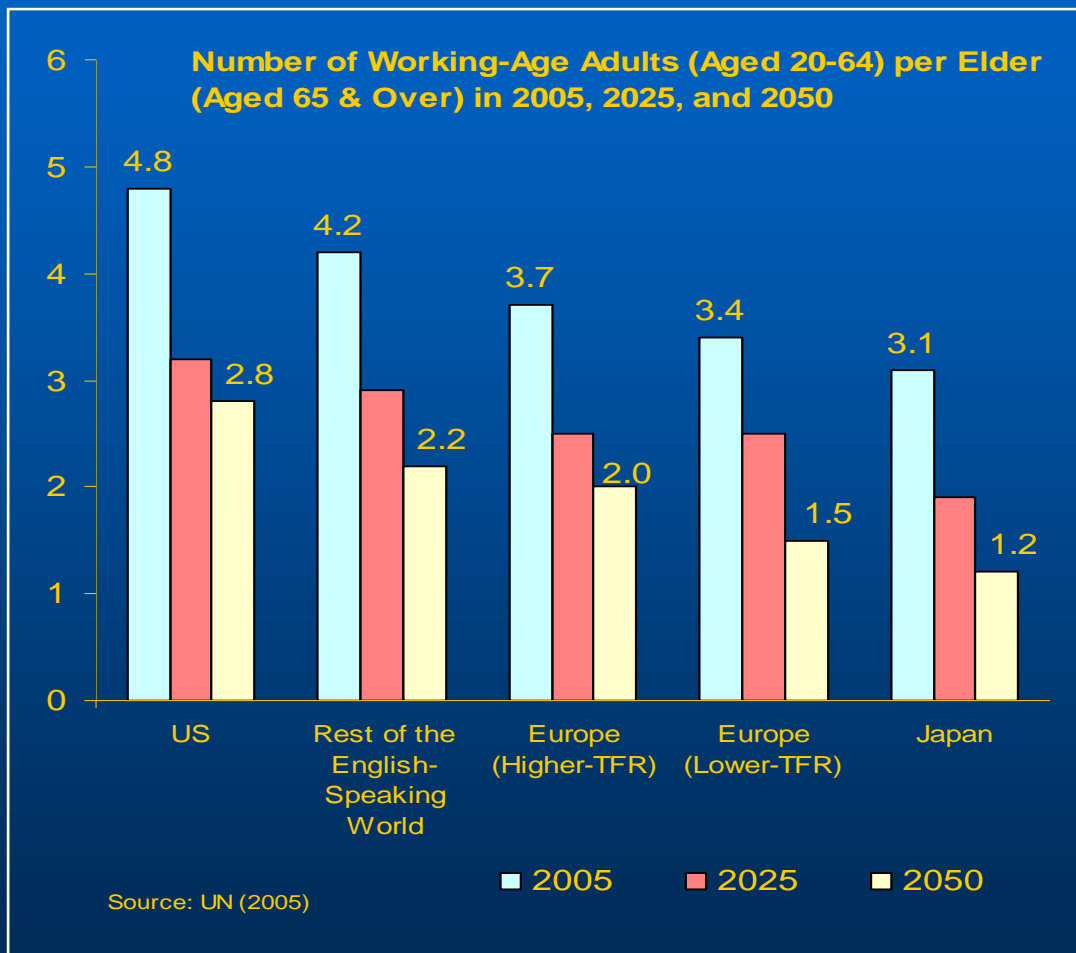
Five challenges.

- ❑ *the FISCAL challenge*
rising retirement and health-care costs
- ❑ *the GROWTH challenge*
stagnant or declining markets
- ❑ *the FINANCIAL challenge*
asset devaluation and capital flow swings
- ❑ *the SOCIAL & POLITICAL challenge*
smaller families and aging electorates
- ❑ *the GEOPOLITICAL challenge*
demographic power shifts and tight defense budgets



The number of working-age adults available to support each elder will fall sharply.

- ☐ Declining support ratio of workers to retirees
- ☐ Rising cost of pay-as-you-go retirement benefits
- ☐ Large tax hikes, large benefit cuts, or an exploding public debt
- ☐ Growing political paralysis over unpopular budget choices



Today's public "retirement deal" will place a growing burden on government budgets.

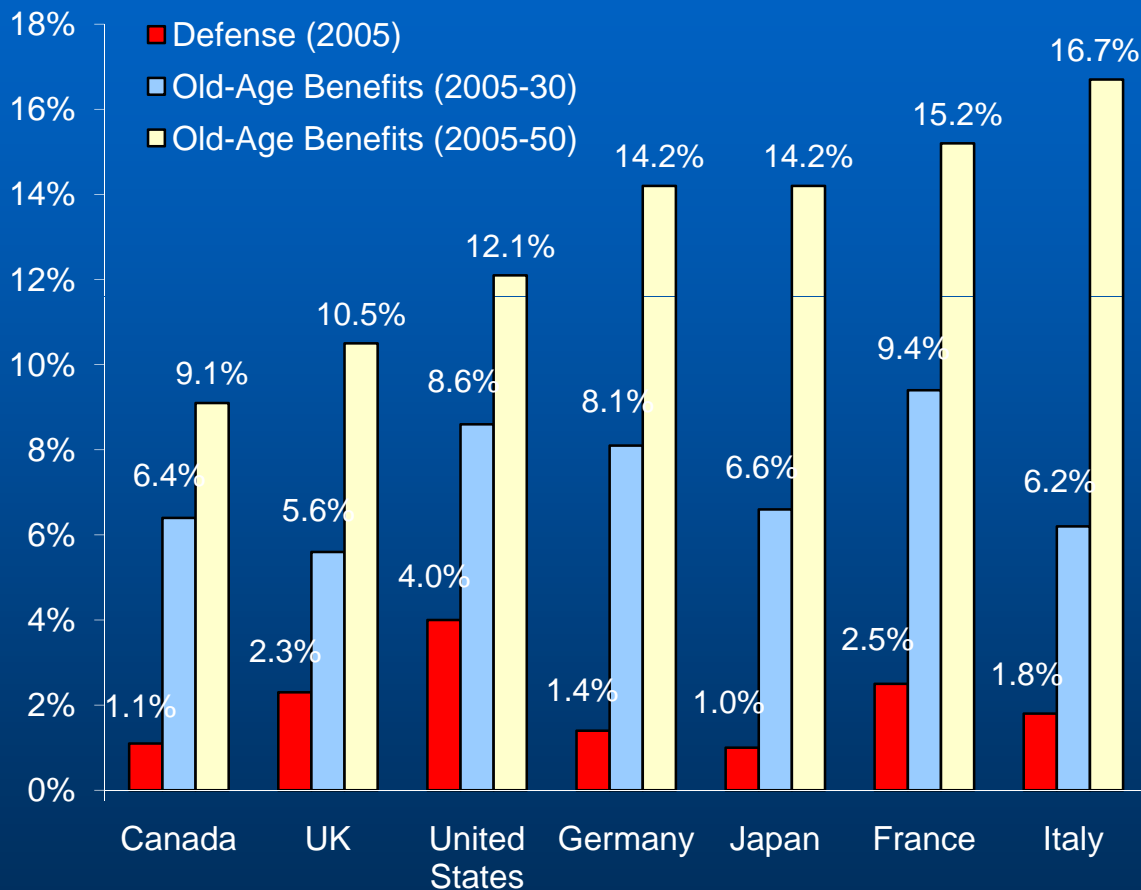
"Current Deal" Projection: Government Old-Age Benefits, as a Percent of GDP, 2005–2050

	Public Pensions			Health Benefits			Total		
	2005	2030	2050	2005	2030	2050	2005	2030	2050
United States	6.1%	10.4%	11.0%	3.2%	7.6%	10.4%	9.3%	17.9%	21.4%
Canada	4.4%	8.3%	9.7%	3.1%	5.6%	6.9%	7.5%	13.9%	16.6%
UK	6.6%	9.4%	11.2%	2.7%	5.5%	8.7%	9.3%	14.9%	19.9%
France	12.8%	19.0%	22.1%	3.5%	6.6%	9.4%	16.3%	25.7%	31.5%
Germany	11.7%	18.4%	22.6%	3.4%	4.8%	6.8%	15.1%	23.2%	29.3%
Italy	14.2%	19.3%	27.6%	2.8%	4.0%	6.0%	17.0%	23.2%	33.6%
Japan	8.7%	14.3%	20.2%	3.4%	4.4%	6.0%	12.0%	18.6%	26.2%
Developed World	7.7%	12.4%	15.1%	3.1%	6.0%	8.5%	10.9%	18.4%	23.6%

Note: Projections assume retirement ages remain unchanged and benefits continue to replace the same share of wages they do today.
Source: CSIS projections

Spending on National Defense in the G-7 Countries in 2005, as a Percent of GDP, Compared with Projected Growth in Government Old-Age Benefits*, 2005-2050

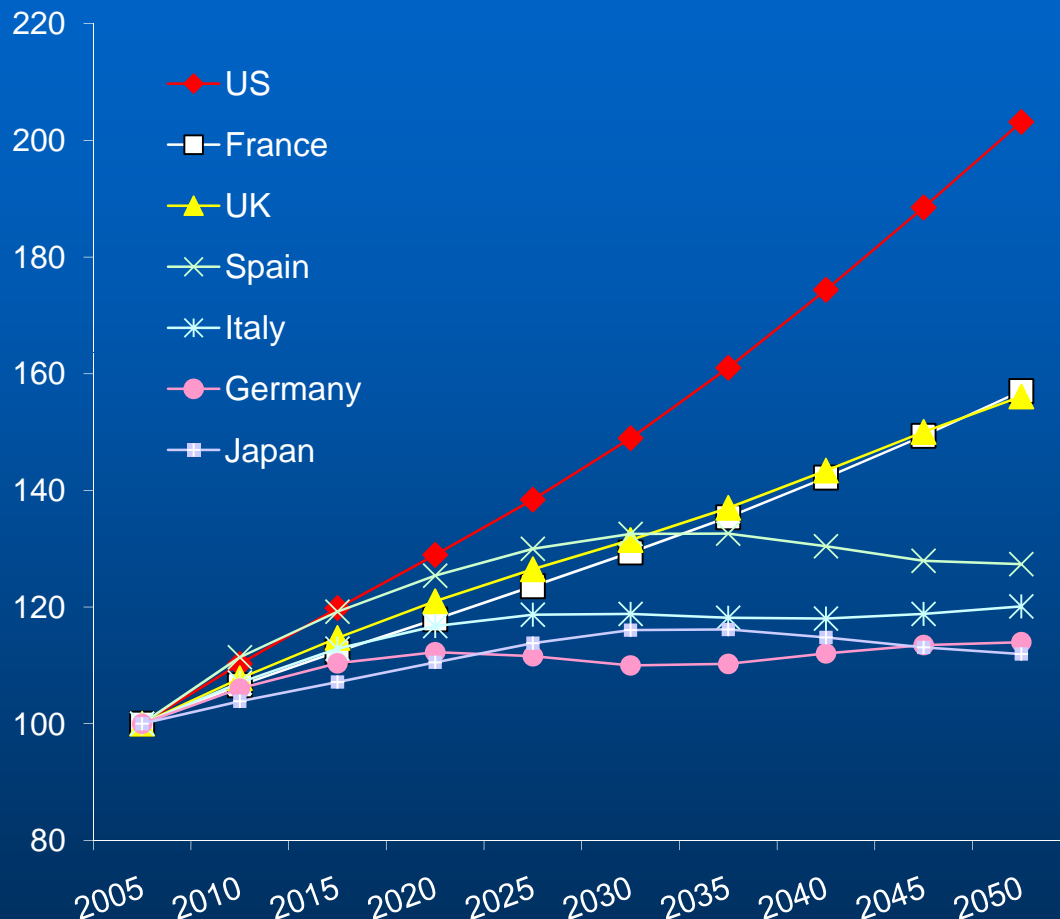
- ❑ Few countries will be able to raise taxes enough to cover more than a fraction of the age wave's cost.
- ❑ Most will have to cut benefits—but the required adjustments are large and likely to meet growing political resistance from aging electorates.
- ❑ The likely result: Rising old-age benefit costs will crowd out other public spending and/or lead to widening fiscal deficits.



*CSIS "current deal" projection assumes that retirement ages remain unchanged and benefits continue to replace the same share of wages they do today.
Source: *The Graying of the Great Powers* (CSIS, 2008)

- ❑ More slowly growing or contracting workforces will translate into slower GDP growth in the developed world.
- ❑ Japan and some fast-aging European countries face a future of “secular stagnation.”
- ❑ The growth in productivity and living standards may also slow due to falling rates of savings and investment and the rising average age of the workforce.

Growth in Real GDP by Country,
Projections for 2005-2050* (Index: 2005=100)



*Assumes constant labor-force participation rates by age and sex and a 1.0 percent annual growth rate in real GDP per worker.
Source: *The Graying of the Great Powers* (CSIS, 2008)

The share of the population in the retirement years will rise.

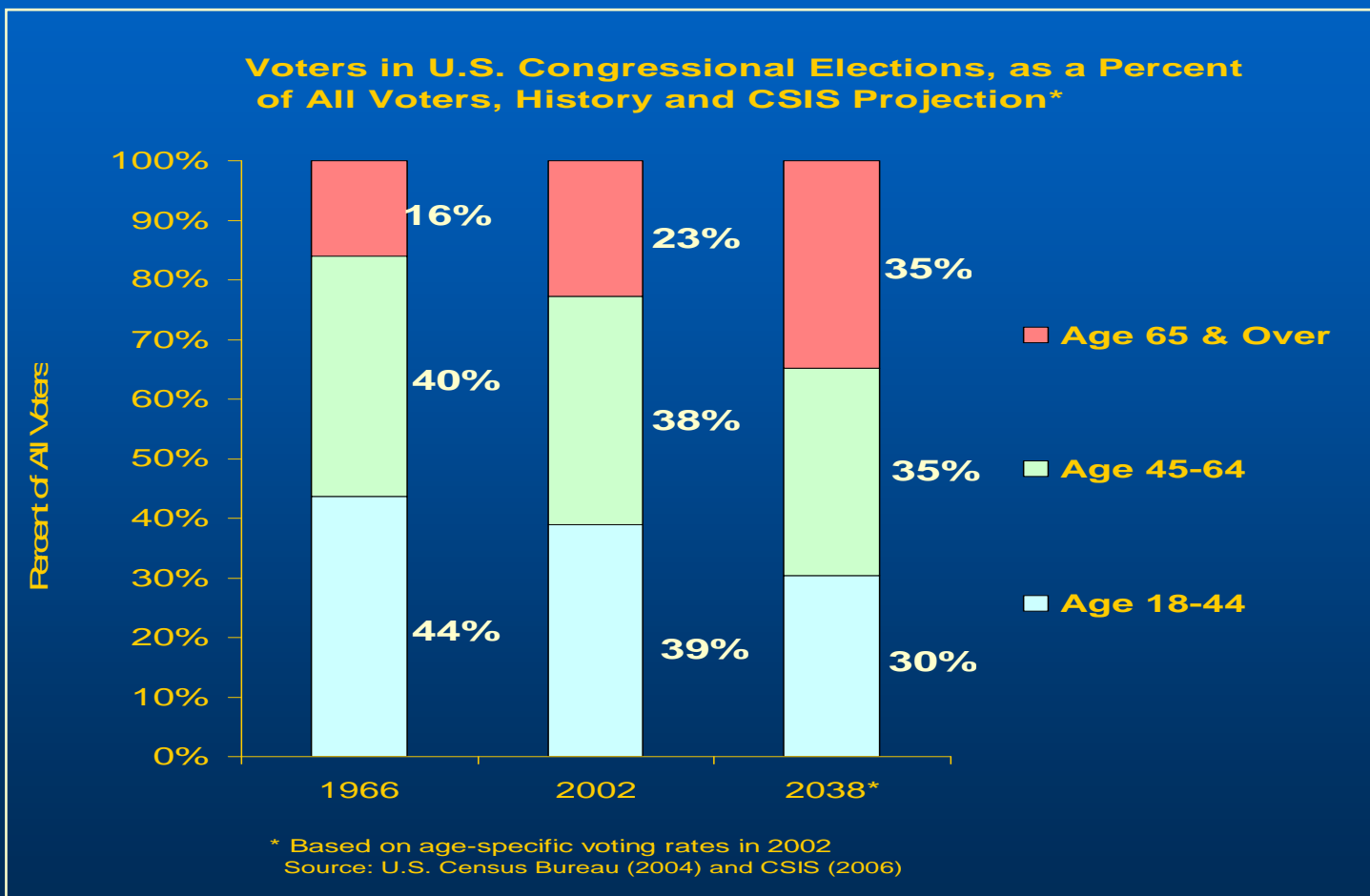
- ❑ Danger of declining private savings rates and “Great Depreciation” in financial markets
- ❑ Danger of unsustainable government borrowing to fund old-age benefits
- ❑ Possible reversal in the direction of global capital flows

Adults Aged 20 & Over by Age Group, as a Percent of All Adults

		2005	2010	2020	2030	2040
US	Age 20-34	28%	28%	28%	26%	26%
	Age 35-59	48%	47%	42%	41%	41%
	Age 60 & Over	23%	25%	30%	33%	33%
EU15	Age 20-34	25%	24%	22%	20%	19%
	Age 35-59	46%	46%	44%	40%	38%
	Age 60 & Over	29%	31%	34%	40%	43%
Japan	Age 20-34	25%	22%	18%	18%	16%
	Age 35-59	42%	41%	41%	38%	34%
	Age 60 & Over	33%	37%	41%	45%	50%

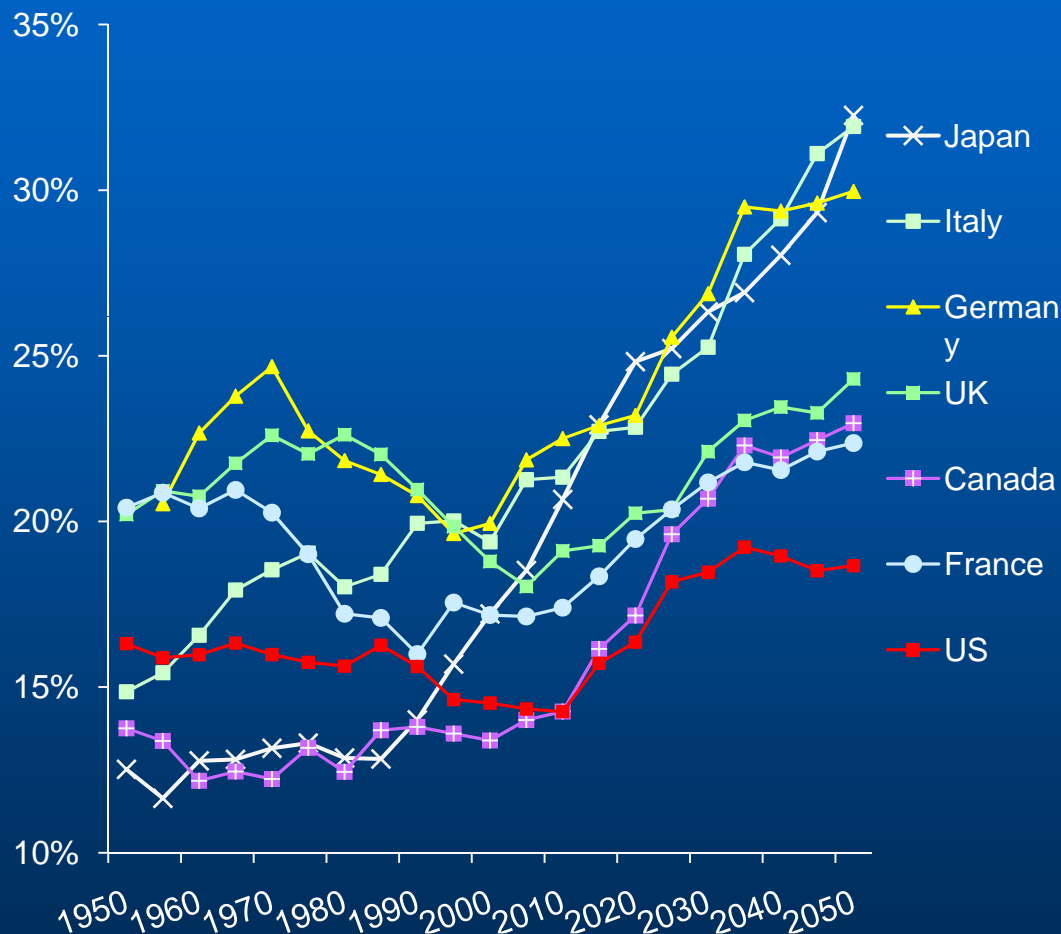
Source: UN (2005)

The elderly will be a growing share of the electorate.



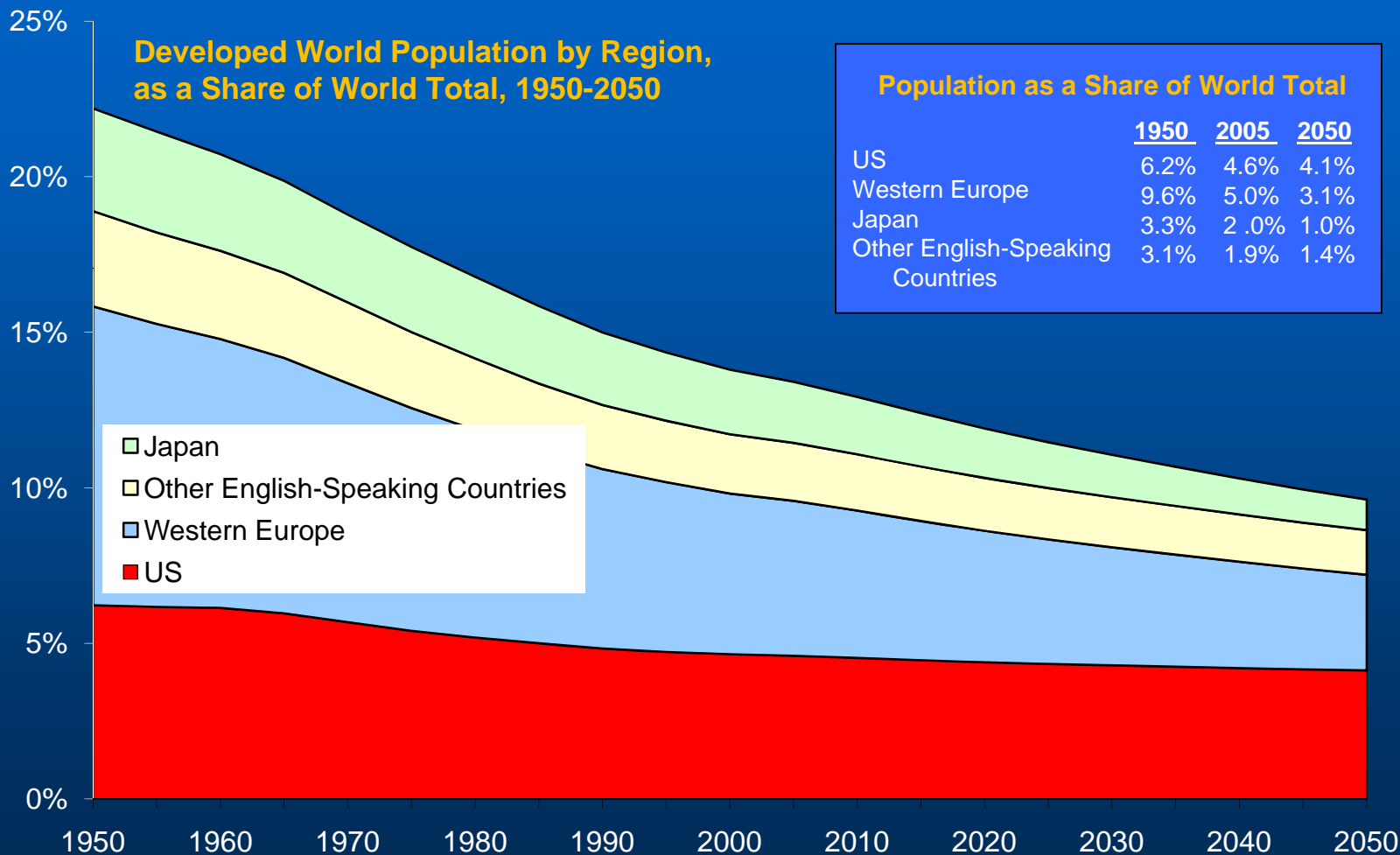
Share of Population with Less than 20 Years of Life Remaining, by Country, 1950-2050

- ☐ Will aging societies be less willing to undertake decisive actions or make investments with long-term payoffs?
- ☐ Will smaller families be less able to socialize children and care for the old—and less willing to risk scarce youth in war?
- ☐ Will the aging of the electorate create an unstoppable political power that pits the interests of old against young?



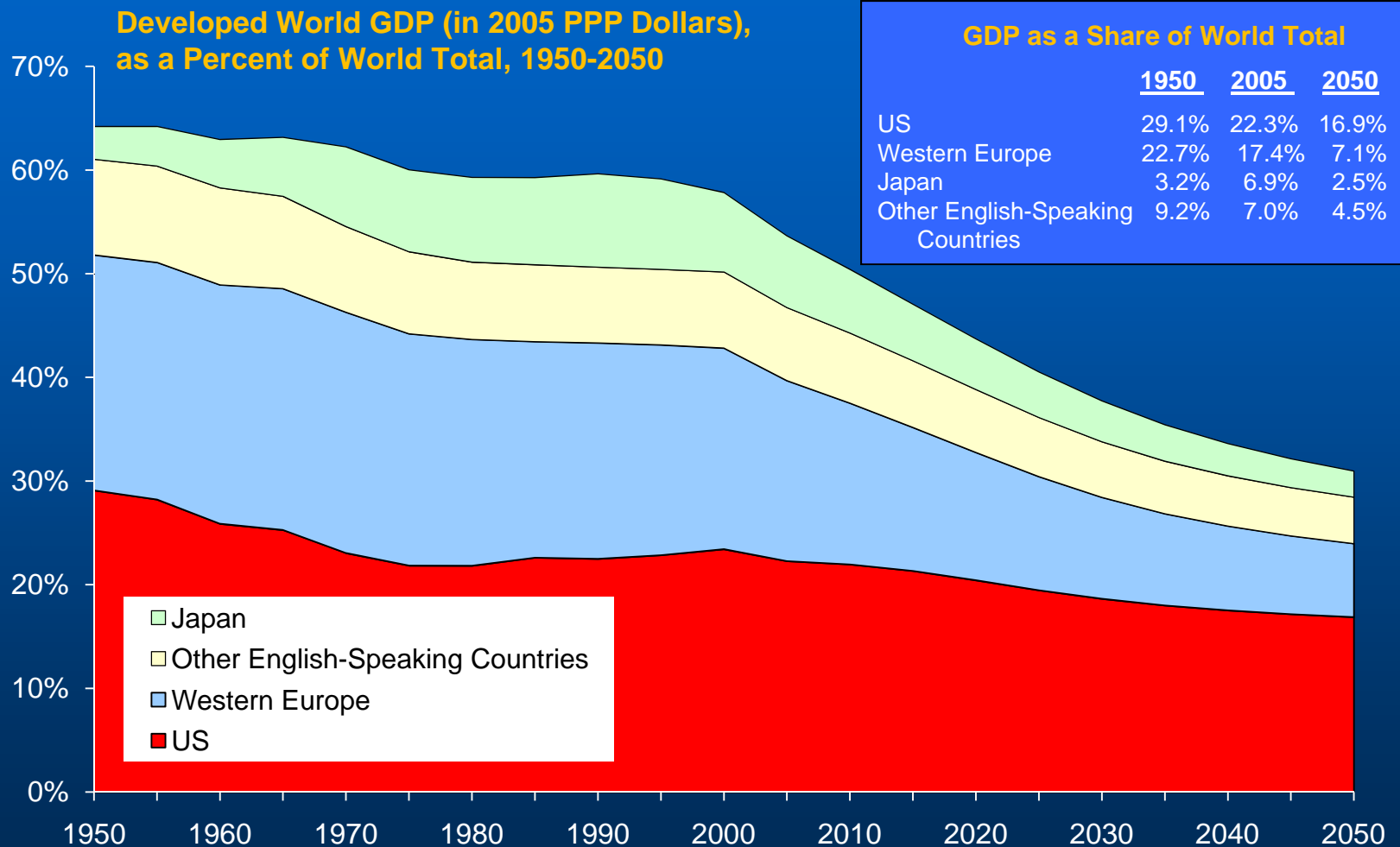
Source: CSIS calculations based on UN (2007) and Human Mortality Database, University of California, Berkeley and Max Planck Institute for Demographic Research

The developed world: A shrinking share of global population.



Source: *The Graying of the Great Powers* (CSIS, 2008)

The developed world: A shrinking share of global GDP.



Source: *The Graying of the Great Powers* (CSIS, 2008)

If demographics is destiny, global power will shift from the “first” to the “third” world.

12 Largest Countries Ranked by Population

Ranking	1950	2005	2050
1	China	China	India
2	India	India	China
3	US	US	US
4	Russian Federation	Indonesia	Pakistan
5	Japan	Brazil	Nigeria
6	Indonesia	Pakistan	Indonesia
7	Germany	Bangladesh	Bangladesh
8	Brazil	Russian Federation	Brazil
9	UK	Nigeria	Ethiopia
10	Italy	Japan	Dem. Rep. Congo
11	Bangladesh	Mexico	Philippines
12	France	Philippines	Egypt
		Germany (14)	Japan (17)
		France (20)	UK (25)
		UK (21)	Germany (26)
		Italy (23)	France (27)
			Italy (32)

□Source: UN (2009)

□Note: Rankings for developed countries that have fallen below 12 are in parentheses.

Part 3

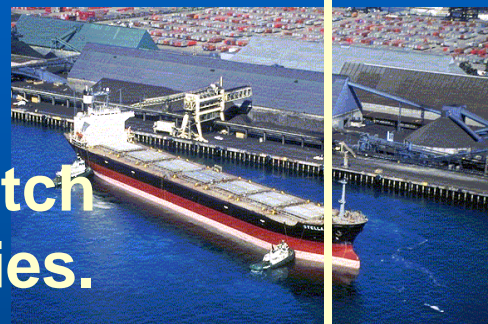
Framework for Policy Responses

National Responses

- ☐ Policies designed to slow the extent of demographic aging itself, such as pronatal incentives and stepped-up immigration
- ☐ Policies designed to reduce the fiscal cost of aging:
 - ▶ Scale back pay-as-you-go programs
 - ▶ Put in place funded alternatives
- ☐ Policies designed to help the economy function better in the face of demographic aging—for instance, by encouraging longer work lives

Global Responses

- ❑ Immigration and outsourcing can help match jobs with workers.
- ❑ Cross-border investment can help match savers with investment opportunities.
- ❑ Bottom line: An open global economy can allow young people to help themselves by helping to support old people across international borders.



**We live in an era defined by many challenges,
from global warming to global terrorism.**

None is as certain as global aging.

**And none is likely to have such a large and
enduring effect on the shape of national
economies and the world order.**

