



Office of the Superintendent of
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A COMPARATIVE STUDY OF DEMOGRAPHIC AND ECONOMIC ASSUMPTIONS USED FOR ACTUARIAL VALUATIONS OF SOCIAL SECURITY SCHEMES

Finland, France, Italy, Japan, Québec, Sweden,
Switzerland, United Kingdom, United States

Régie des rentes

Québec



*Presentation to the World Social Security Forum
29th ISSA General Assembly, Moscow, Russia*



OSFI
BSIF

12 September 2007

Canada

Presentation Background

- Prepared by Charles Cossette, François Boulanger and Gilbert Ouellet of the Québec Pensions Board
- Originally presented at International Conference of Social Security Actuaries and Statisticians, ISSA in Helsinki, Finland on 23 May 2007
- Presenter: Jean-Claude Ménard, OSFI, Canada



CONTEXT OF THE STUDY

★ Population aging

- Falling birthrate
- Increased life expectancy

★ Subject of the study

- Interdependence between the demographic environment and the labour market
- Additional reference for choice of assumptions



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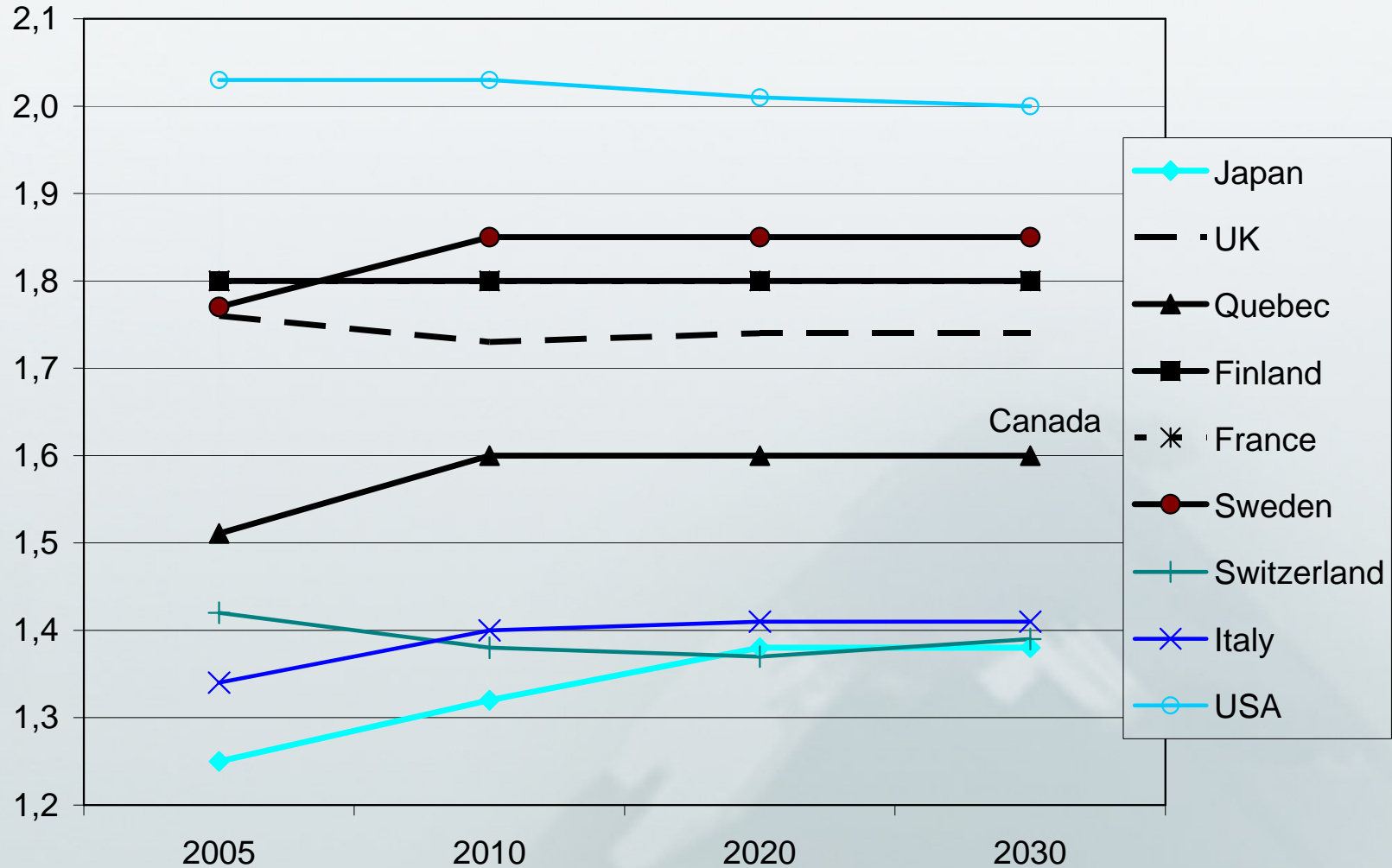
OUTLINE

- ★ Demographic environment
- ★ Participation in labour market
- ★ Other economic variables



DEMOGRAPHIC ENVIRONMENT

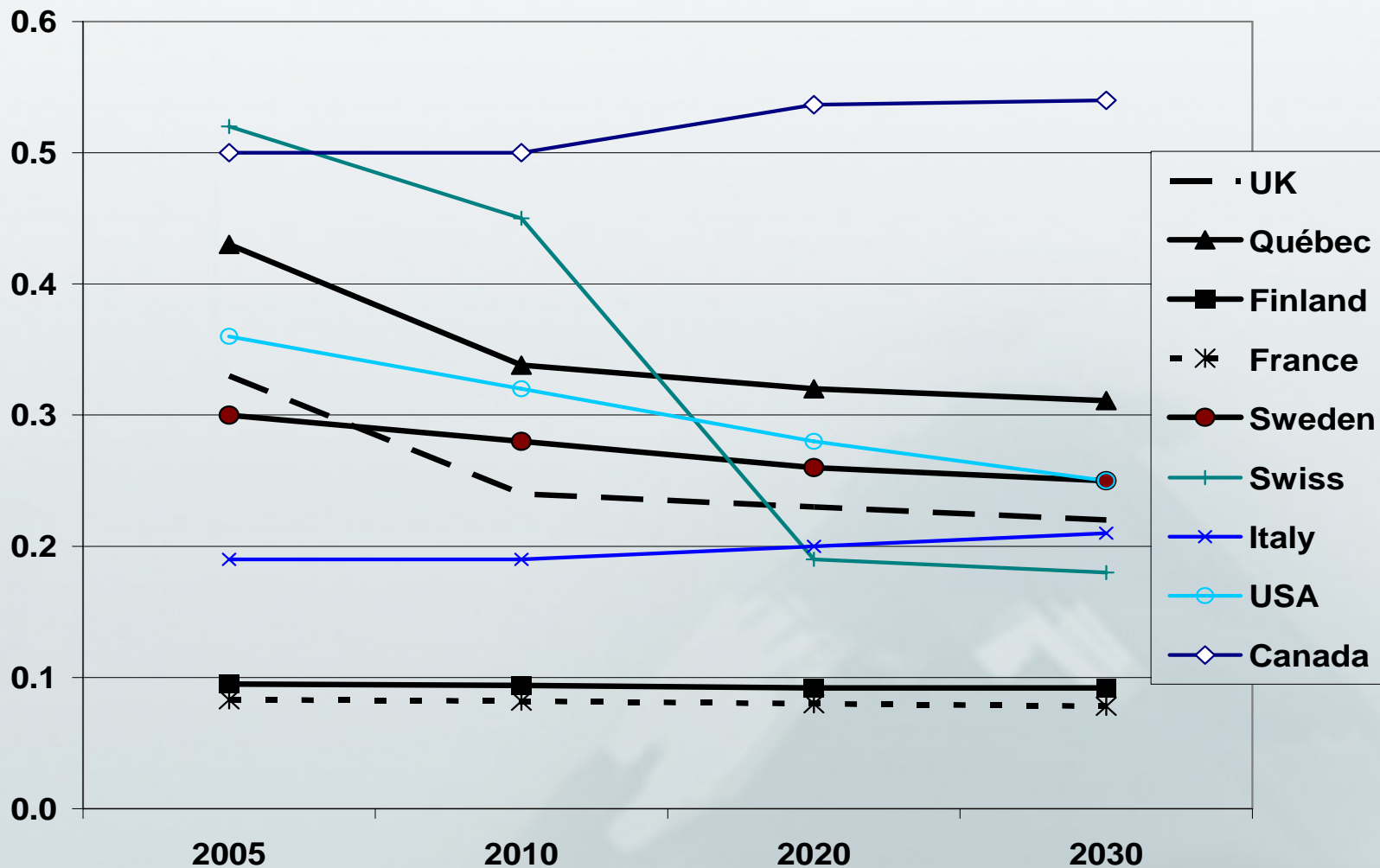
Total fertility rate projections, 2005-2030



Note: Data for Finland and France are the same.

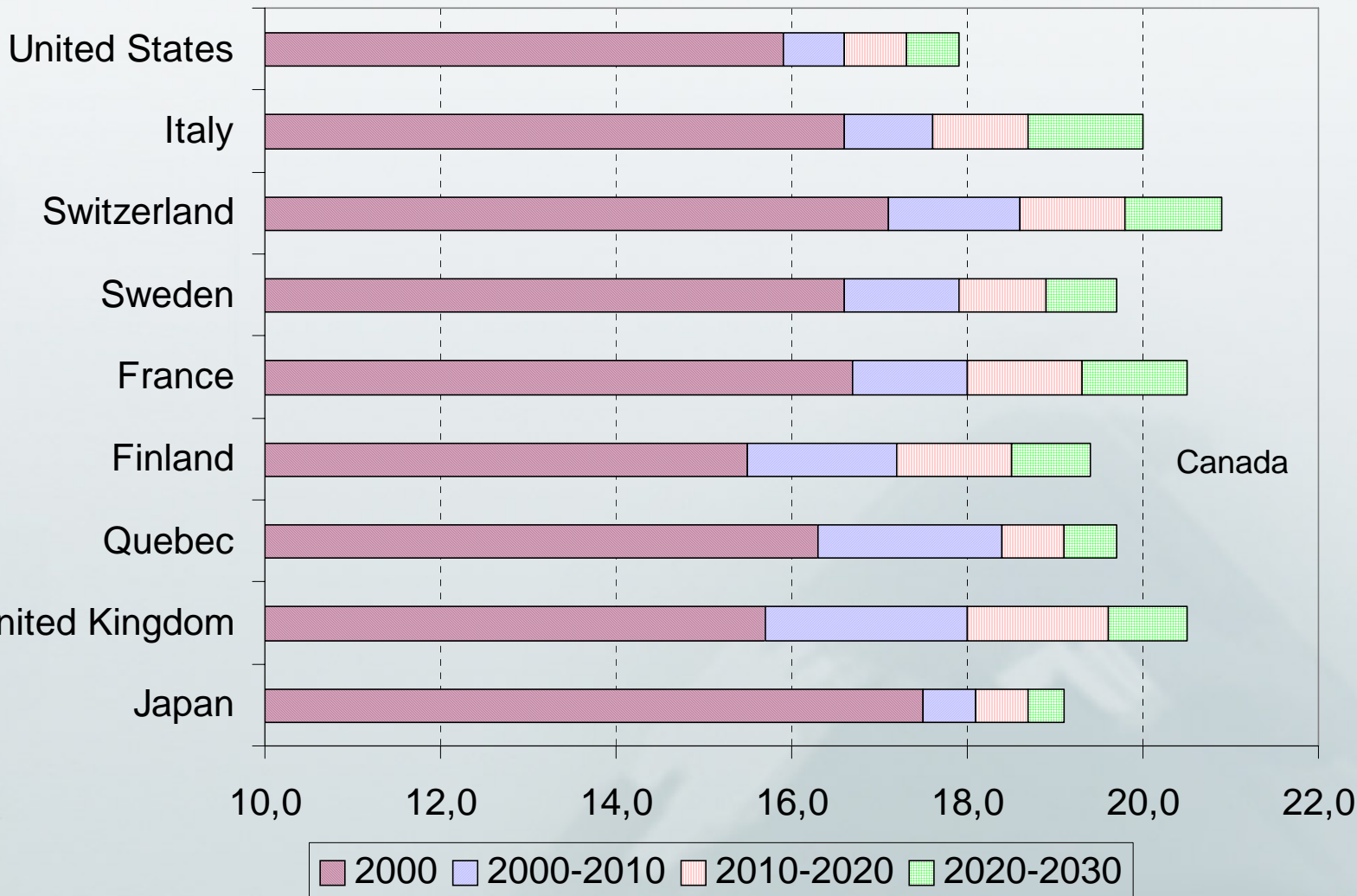
DEMOGRAPHIC ENVIRONMENT

Projected net migration as a percentage of the population, 2005-2030



DEMOGRAPHIC ENVIRONMENT

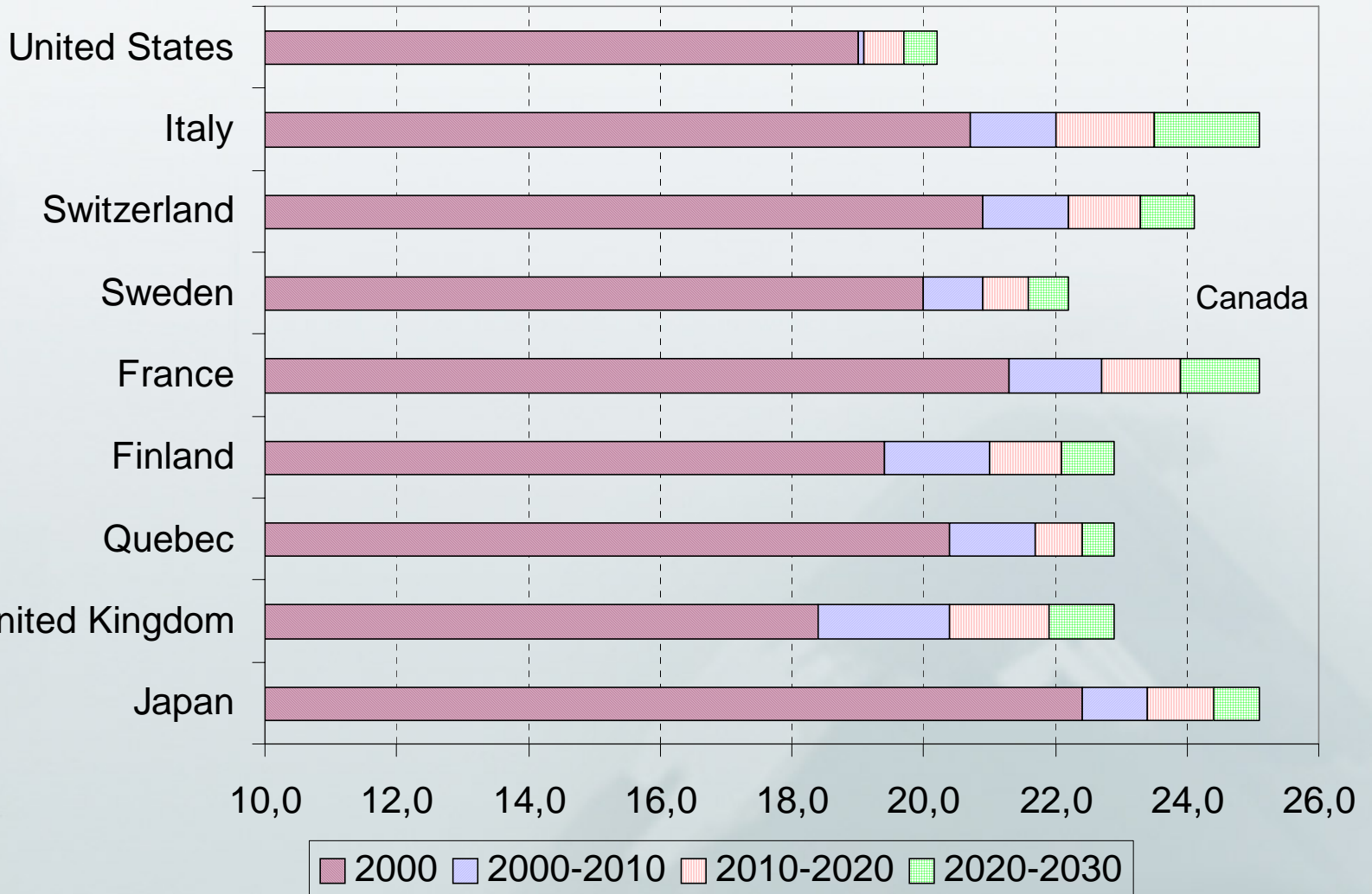
Projection of life expectancy at age 65 for men, 2000-2030



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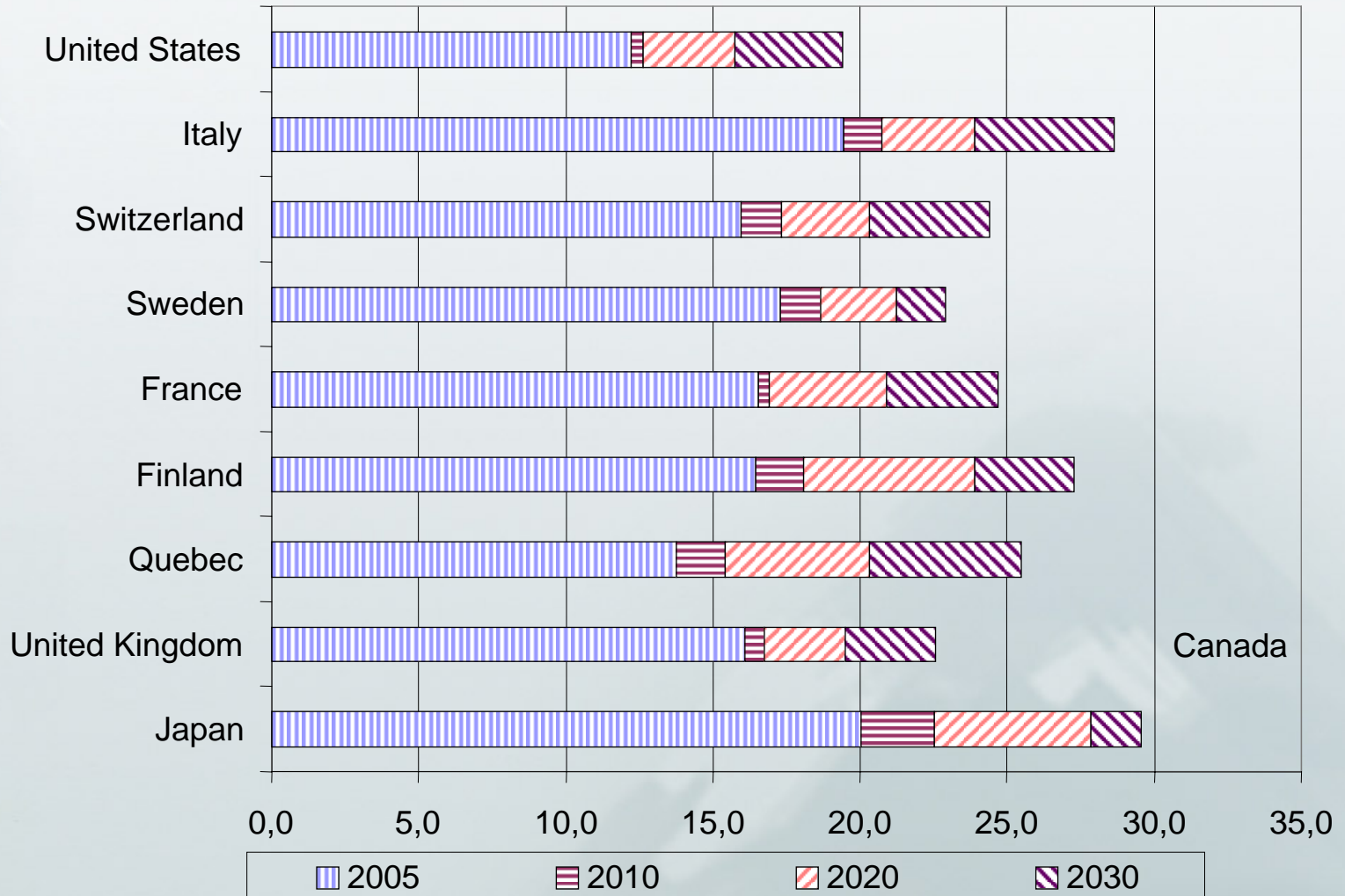
DEMOGRAPHIC ENVIRONMENT

Projection of life expectancy at age 65 for women, 2000-2030



DEMOGRAPHIC ENVIRONMENT

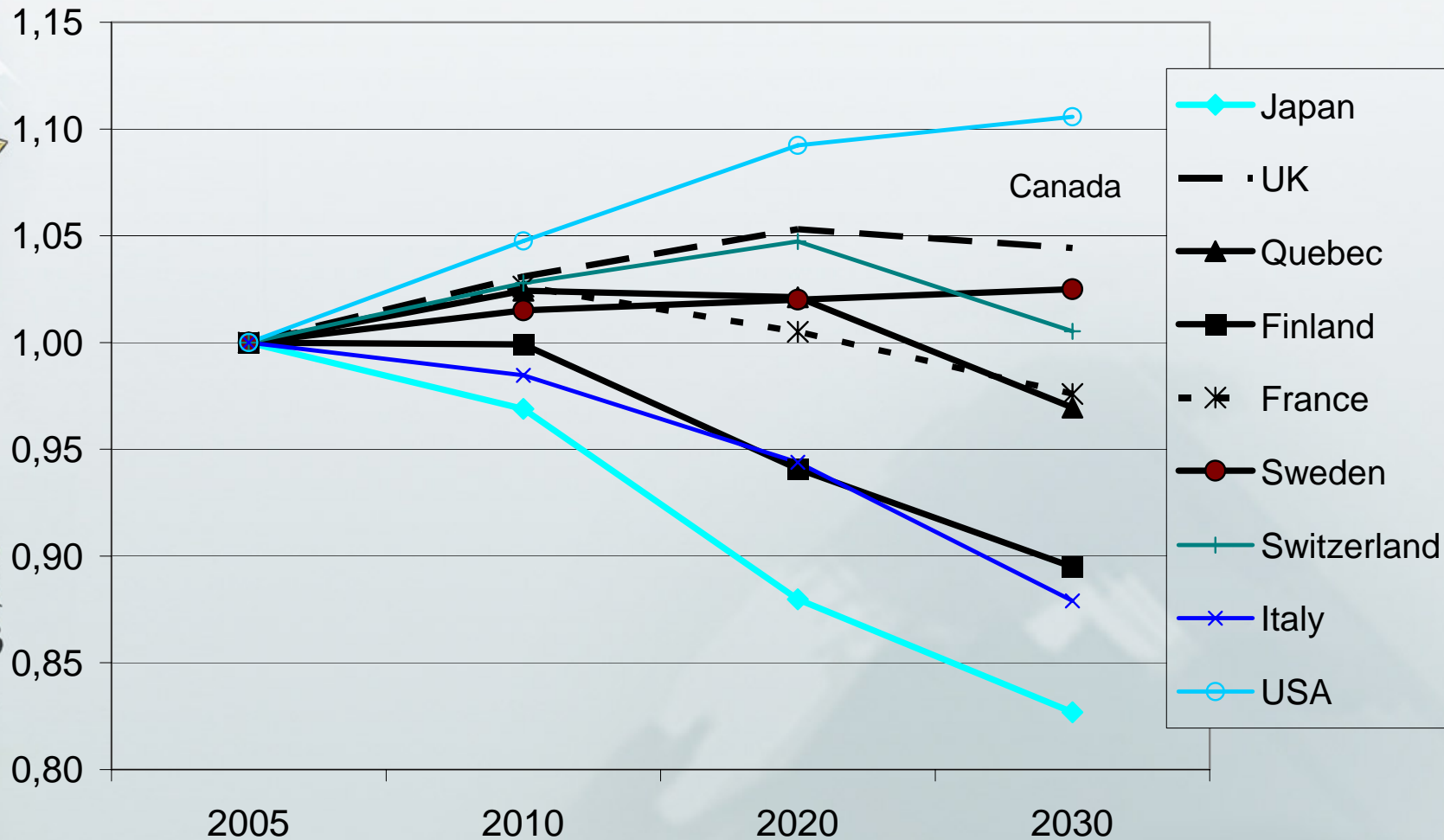
Changes in the proportion of population aged 65 and over (in %)



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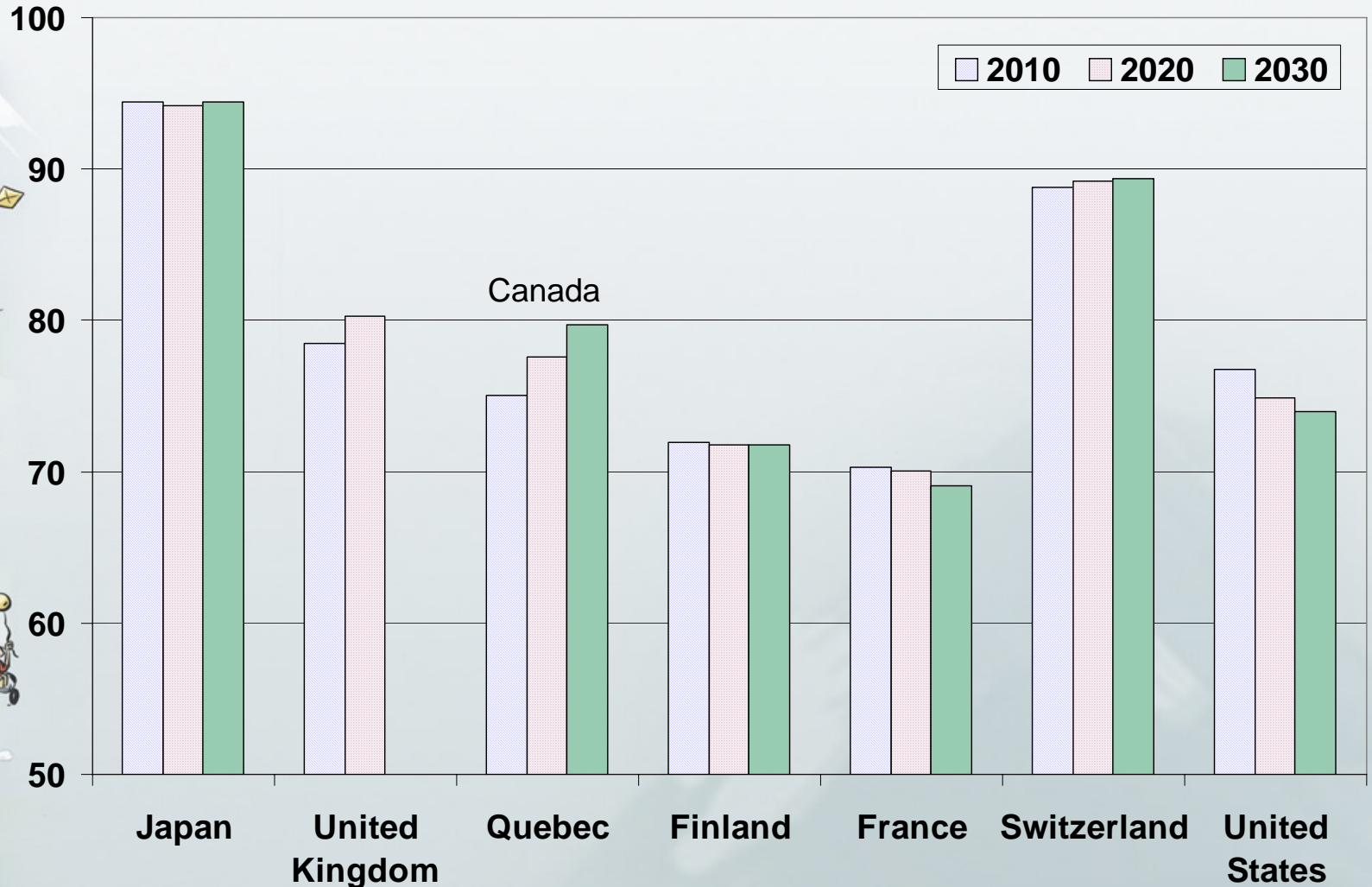
DEMOGRAPHIC ENVIRONMENT

Changes in the working-age population (ages 20-64) compared to 2005
(2005=1.0)



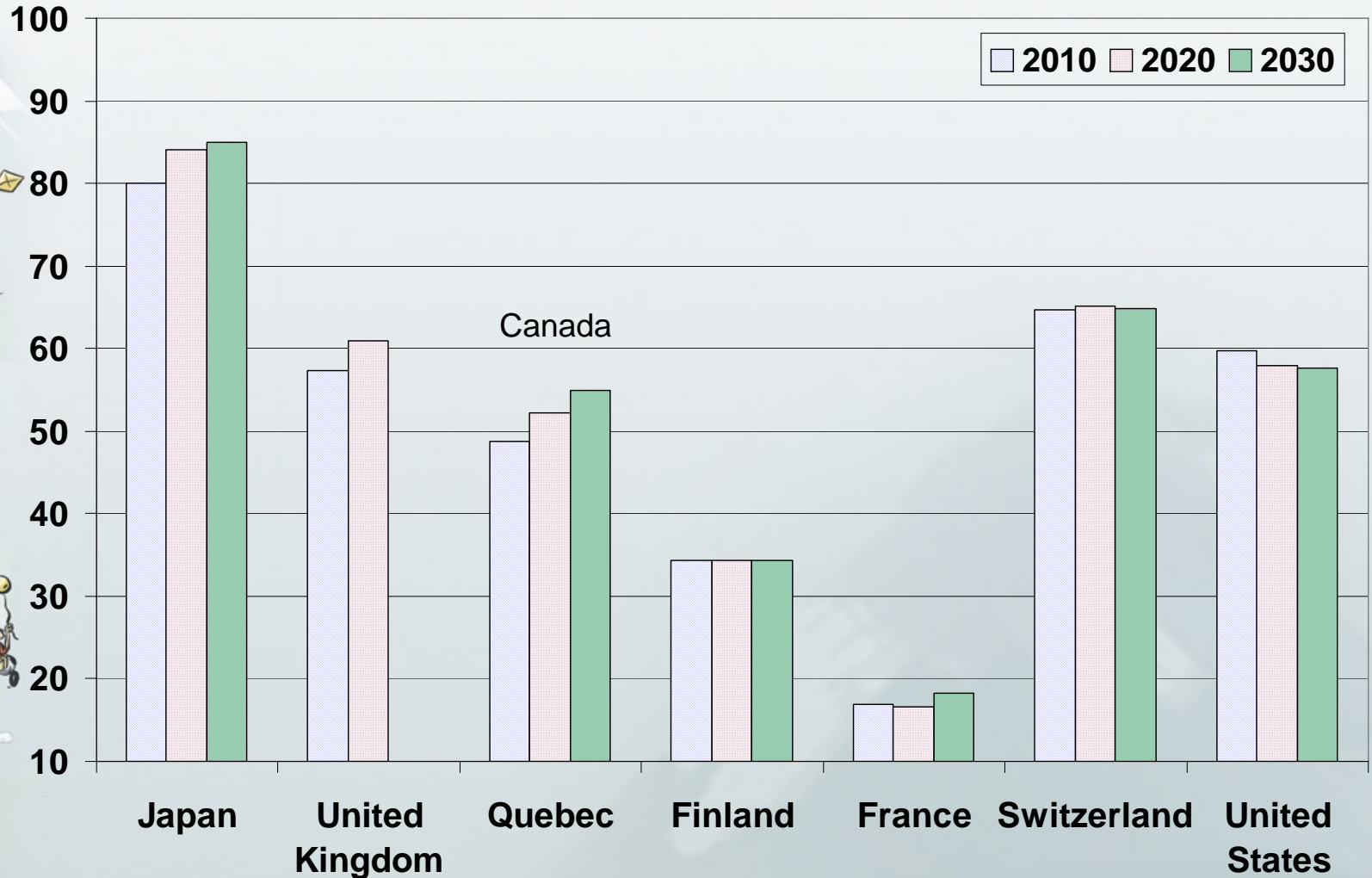
PARTICIPATION IN LABOUR MARKET

Activity rates for men aged 55 to 59 (in percentage)



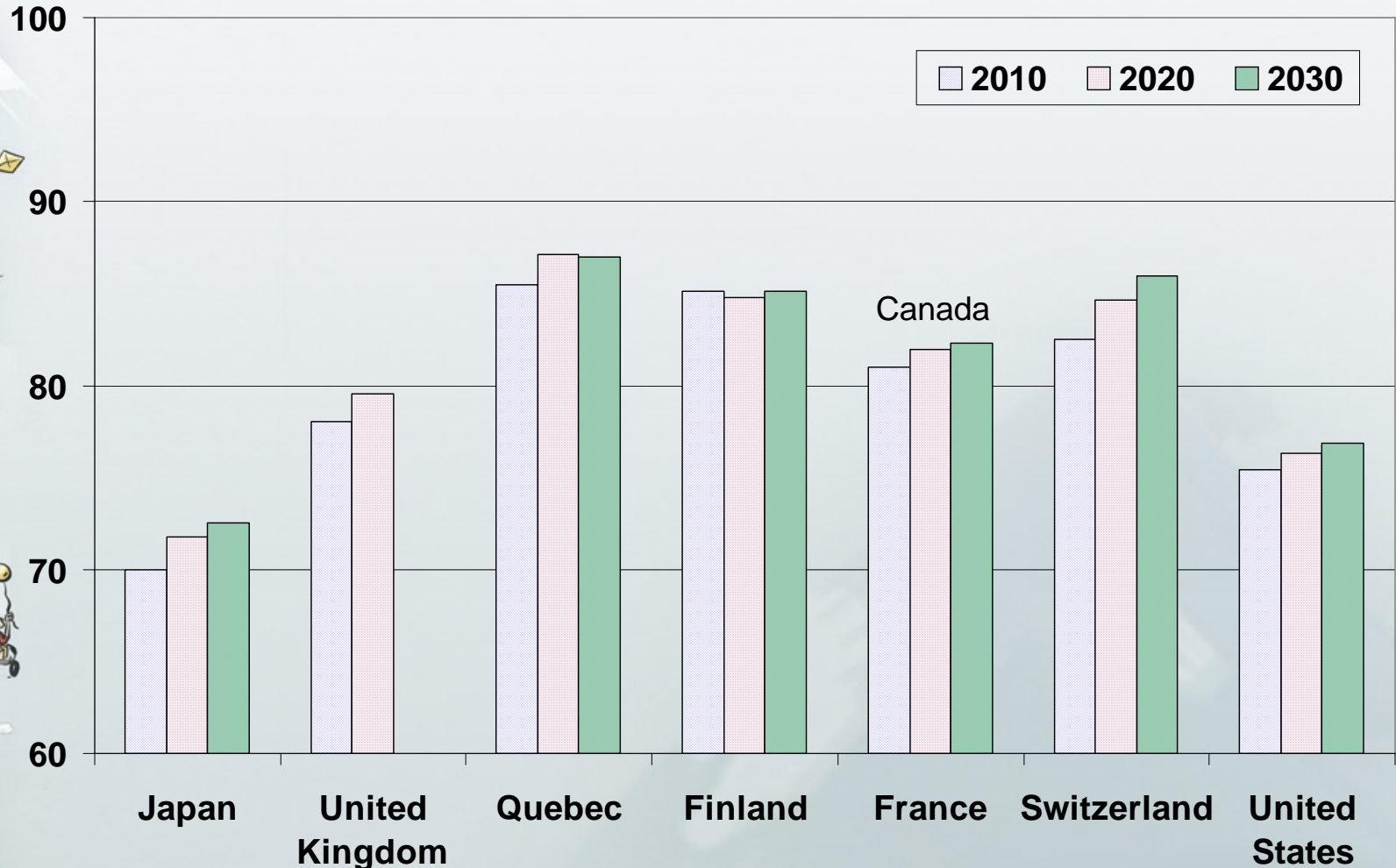
PARTICIPATION IN LABOUR MARKET

Activity rates for men aged 60-64 (in percentage)



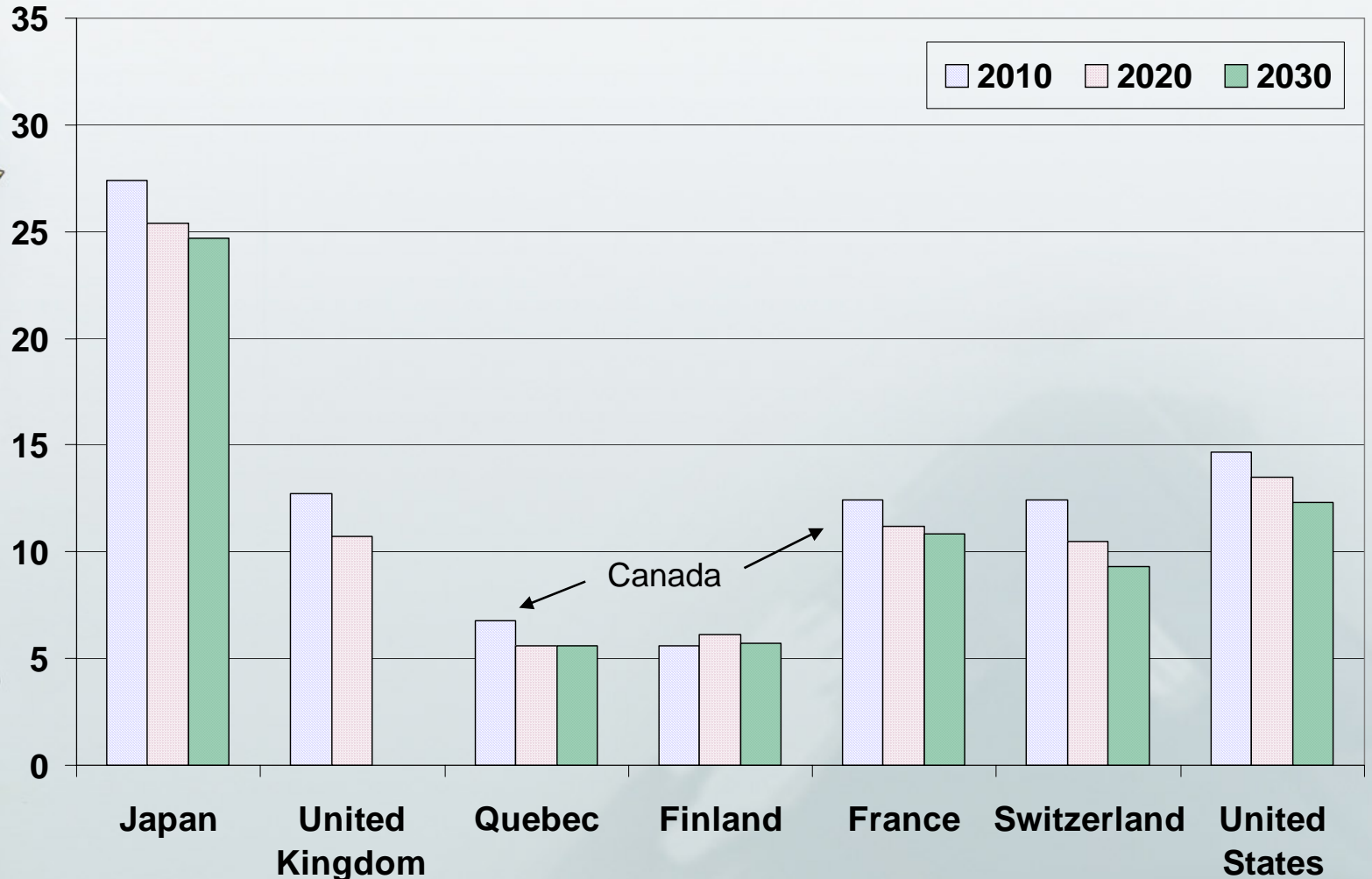
PARTICIPATION IN LABOUR MARKET

Activity rates for women aged 25-54 (in percentage)



PARTICIPATION IN LABOUR MARKET

Difference in the activity rates of men and women (aged 25-54)
(in percentage points)



PARTICIPATION IN LABOUR MARKET

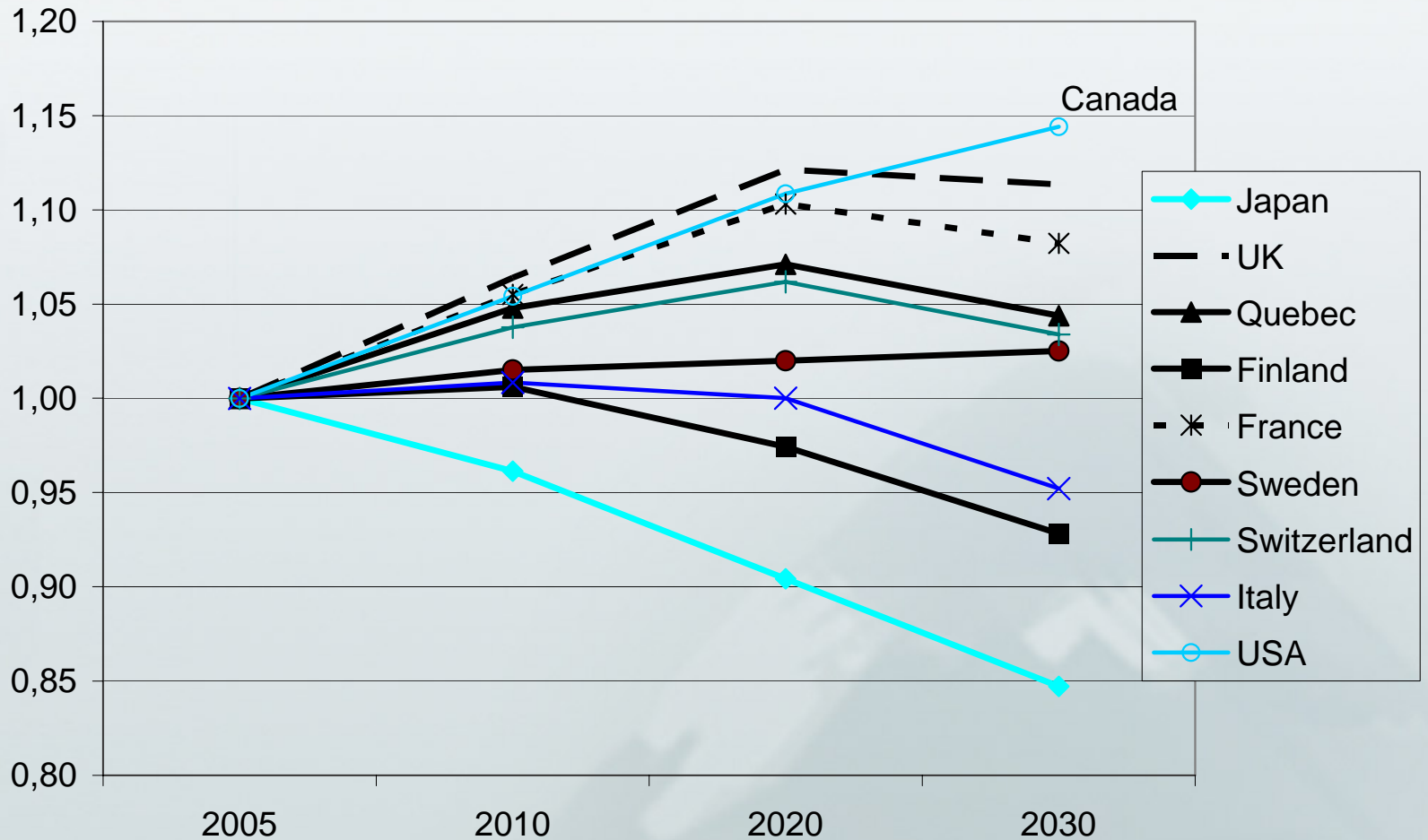
Projection of average annual employment growth



| | 2006-2010 % | 2011-2020 % | 2021-2030 % | 2006-2030 % |
|-----------------------------|----------------|----------------|----------------|----------------|
| Japan | -0,4 | -0,5 | -0,6 | -0,5 |
| United Kingdom | -0,1 | 0,0 | -0,2 | -0,1 |
| Québec | 0,6 | 0,0 | -0,4 | 0,1 |
| France | 0,7 | 0,2 | -0,3 | 0,1 |
| Finland | 0,2 | 0,1 | 0,0 | 0,1 |
| Sweden | 0,5 | 0,0 | 0,0 | 0,2 |
| Italy | 0,6 | n/a | n/a | n/a |
| United States } Canada } | 1,1 | 0,5 | 0,3 | 0,5 |

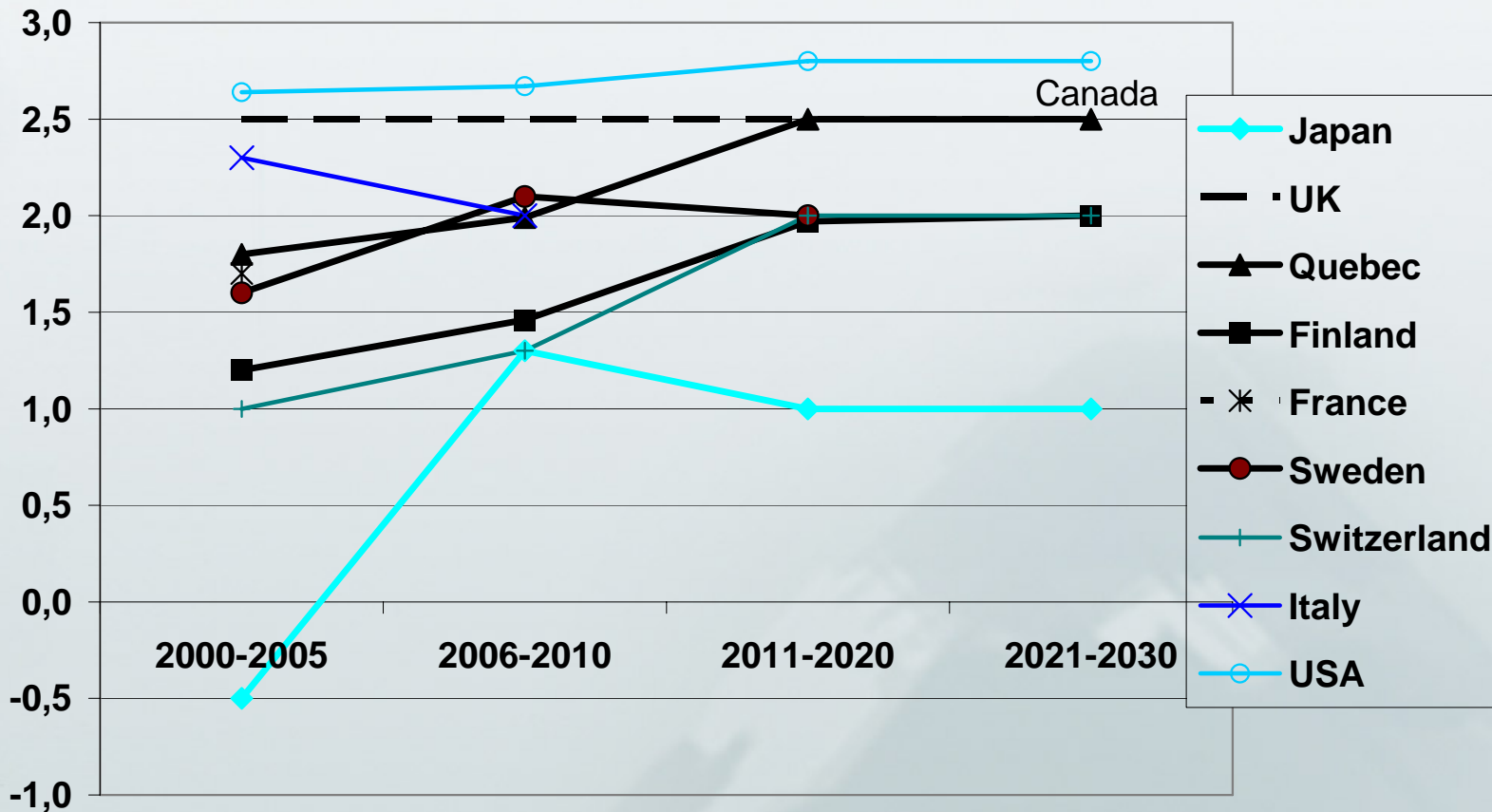
PARTICIPATION IN LABOUR MARKET

Changes in the number of contributors compared to 2005
(2005=1.0)



OTHER ECONOMIC VARIABLES

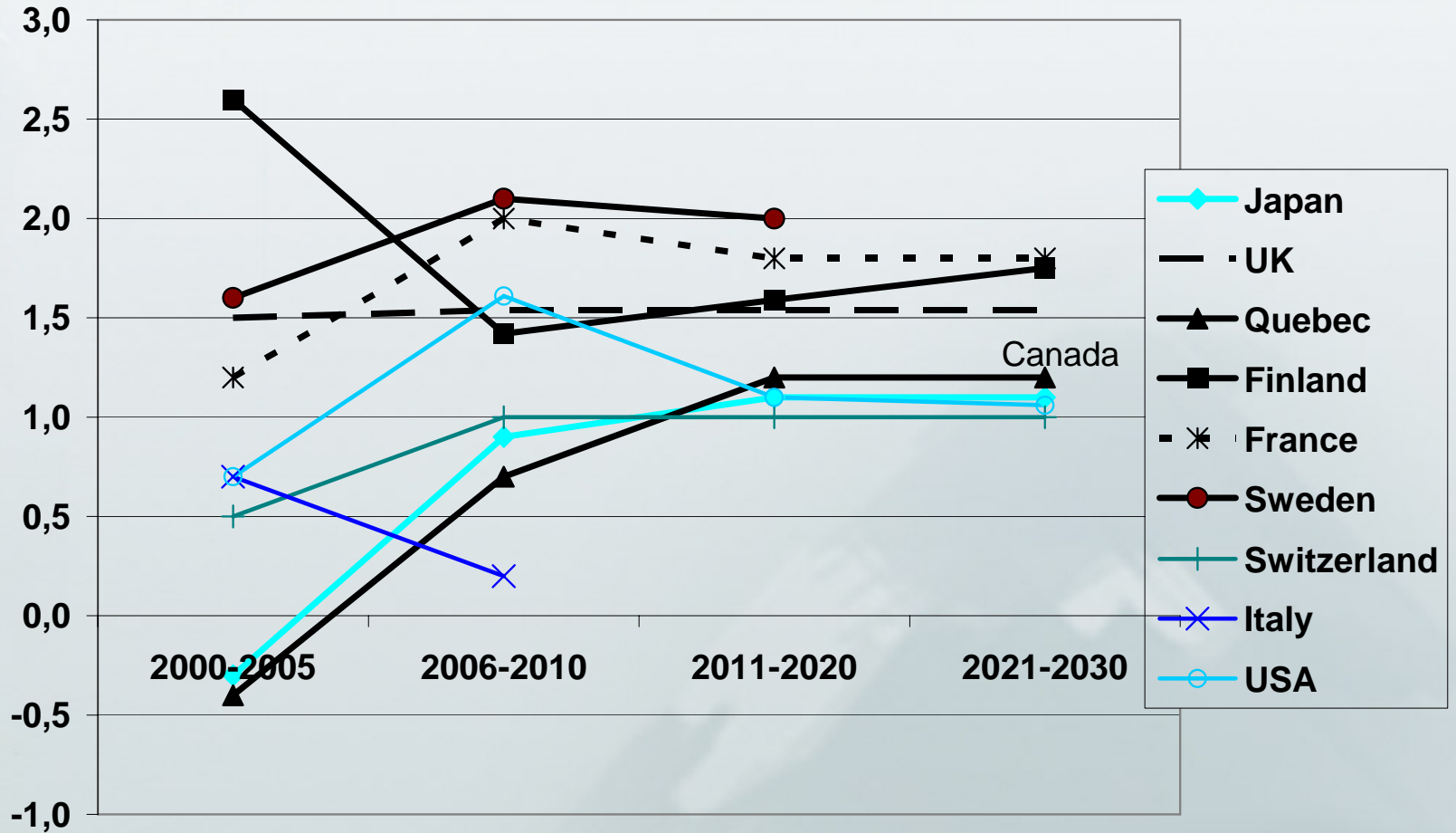
Average inflation rates for the period 2000-2005
and projected inflation rates for 2006-2030



For France, data is only available for 2000-2005.

OTHER ECONOMIC VARIABLES

Average real rate of increase in employment earnings



CONCLUSION

- ★ Significant ageing of the population
- ★ For most of the participants, between now and 2030, a stagnation or reduction in the labour force
- ★ Most project a stability in participation of workers aged 55 to 64
- ★ Difference in participation between men and women will continue to decrease
- ★ Low rates of unemployment and job creation expected
- ★ Low inflation will continue
- ★ Higher real rate of increase in salaries is expected





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Spasibo *спасибо*



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