



The Global Aging Preparedness Index

2nd Edition

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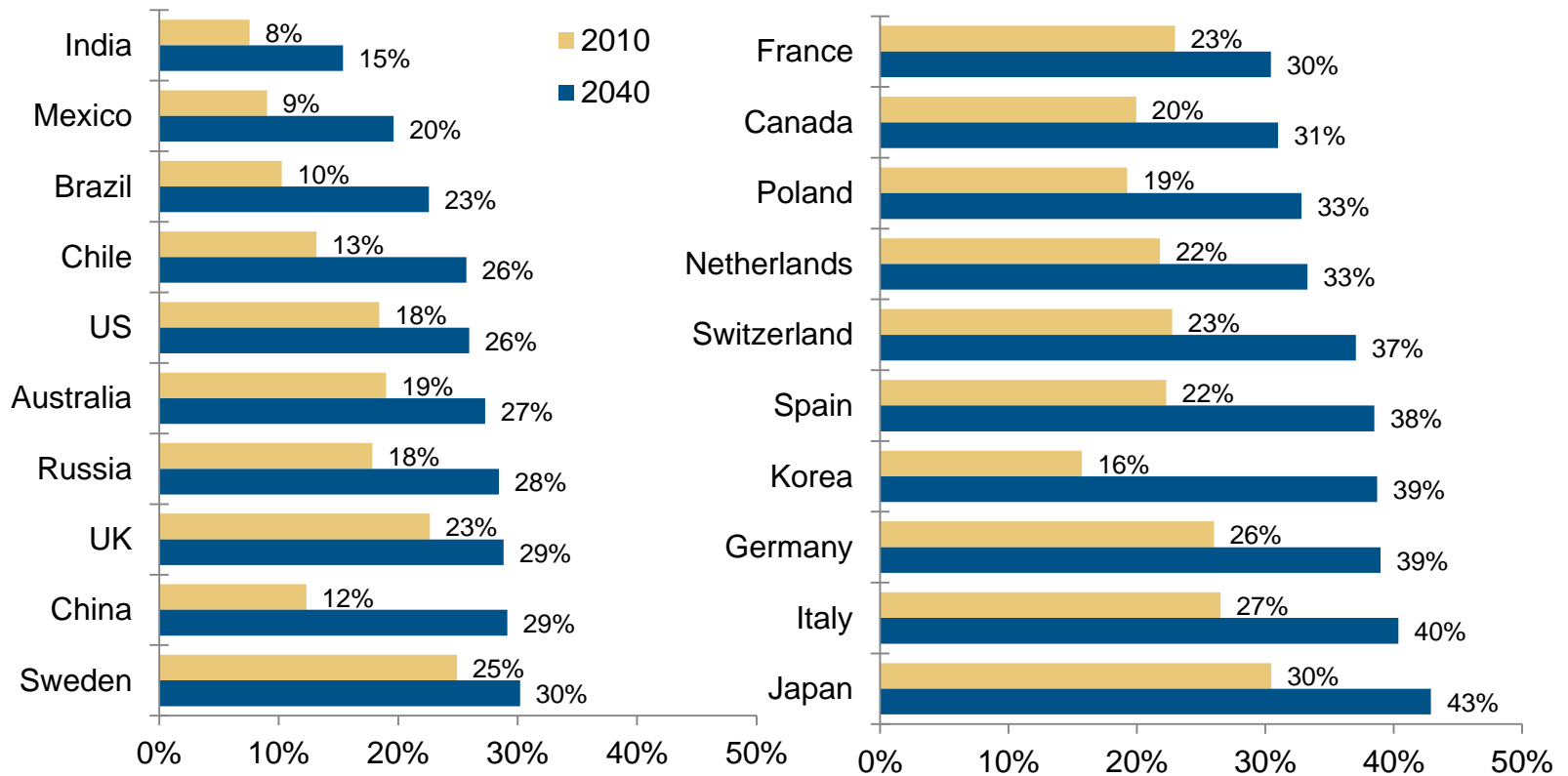
International Longevity Centre Roundtable

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GAPINDEX.CSIS.ORG

The Global Age Wave

Elderly (Aged 60 and Over), as a Percent of the Population in 2010 and 2040



The GAP Index

- ▣ The GAP Index provides a unique new quantitative assessment of the progress that countries worldwide are making in preparing for the global aging challenge.
- ▣ The GAP Index projections extend through the year 2040 in order to capture the full impact of the demographic transformation now sweeping the world.
- ▣ The GAP Index covers twenty countries, including both developed economies and emerging markets.
- ▣ The GAP Index consists of two subindices—the fiscal sustainability index and the income adequacy index.

GAP Index Countries

Australia
Brazil
Canada
Chile
China
France
Germany
India
Italy
Japan
Korea
Mexico
Netherlands
Poland
Russia
Spain
Sweden
Switzerland
UK
US

GAP FISCAL SUSTAINABILITY INDEX

PUBLIC BURDEN CATEGORY

Measures the magnitude of each country's projected public old-age dependency burden

BENEFIT LEVEL INDICATOR

Total public benefits to the elderly in 2040 as a percent of GDP

BENEFIT GROWTH INDICATOR

Growth in total public benefits to the elderly from 2010 to 2040 as a percent of GDP

FISCAL ROOM CATEGORY

Measures each country's ability to accommodate the growth in its public old-age dependency burden by raising taxes, cutting other spending, or borrowing

TAX ROOM INDICATOR

Total government revenue in 2040 as a percent of GDP, assuming taxes are raised to pay for all growth in public benefits

BUDGET ROOM INDICATOR

Total public benefits to the elderly in 2040 as a percent of government outlays, assuming cuts in other spending pay for all growth in public benefits

BORROWING ROOM INDICATOR

Net public debt in 2040 as a percent of GDP, assuming borrowing pays for all growth in public benefits

BENEFIT DEPENDENCE CATEGORY

Measures how dependent the elderly in each country are on public benefits, and thus how politically difficult it may be to reduce those benefits

BENEFIT SHARE INDICATOR

Public benefits as a percent of the cash income of the median-income elderly: Average for 2010 to 2040

BENEFIT CUT INDICATOR

Percent of elderly households that would be pushed into poverty by an immediate 10 percent cut in public benefits

Public Burden Category

Benefit Level Indicator

Total Public Benefits to the Elderly, as a Percent of GDP, 2010–2040

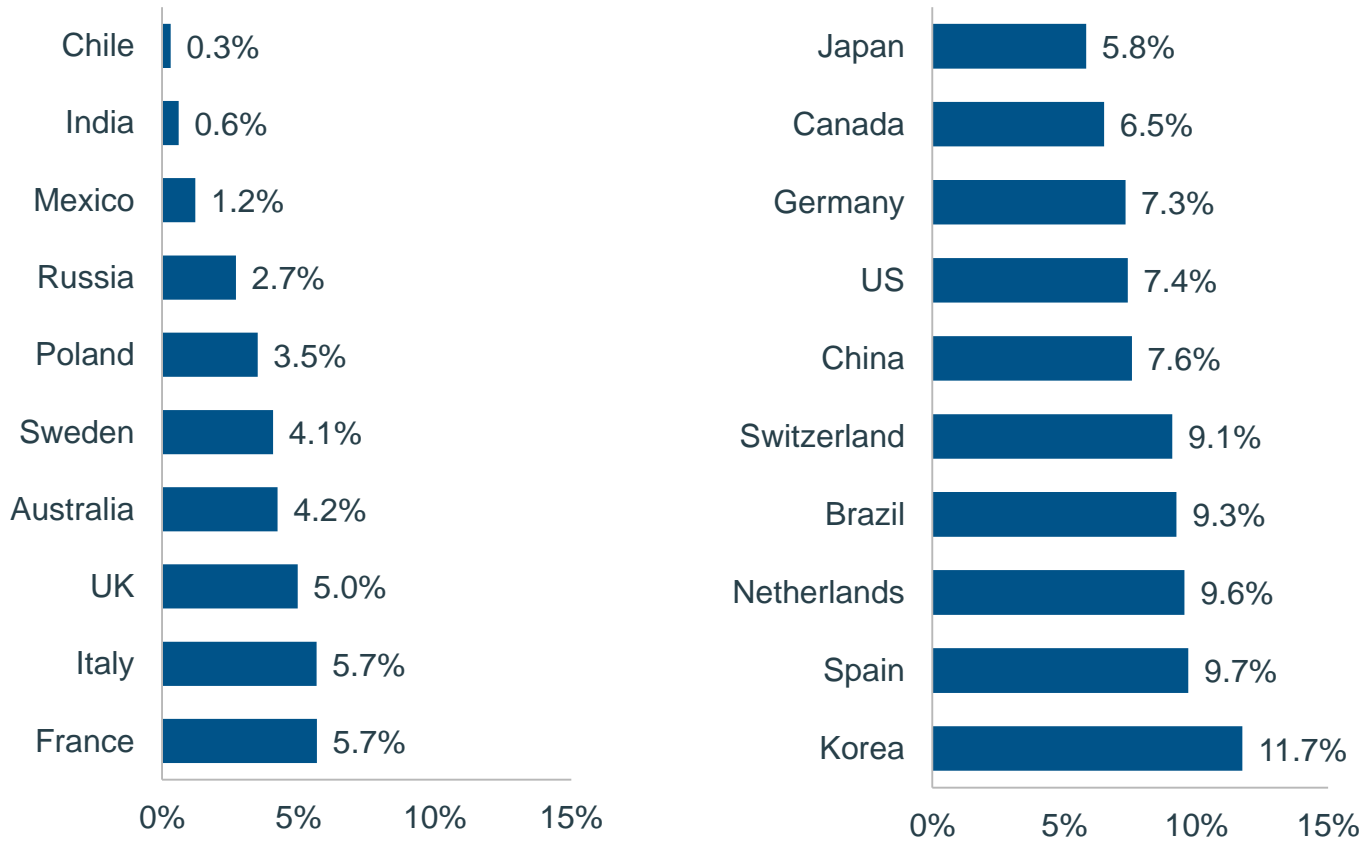
	2010	2020	2030	2040		2010	2020	2030	2040
1 India	1.9	2.4	2.5	2.5	11 UK	13.9	14.6	17.0	18.9
2 Mexico	2.9	3.5	4.1	4.1	12 Brazil	10.0	11.5	14.6	19.3
3 Chile	6.9	6.6	6.7	7.2	13 Sweden	15.2	16.7	18.4	19.3
4 Russia	8.2	9.3	10.1	10.9	14 Switzerland	10.4	12.4	15.9	19.5
5 China	3.4	5.5	8.0	11.0	15 Netherlands	10.2	12.9	17.0	19.8
6 Australia	9.1	10.3	12.0	13.4	16 Japan	15.1	16.6	17.9	20.9
7 Poland	11.7	13.5	14.7	15.2	17 Spain	13.9	16.1	18.9	23.6
8 Canada	9.3	11.8	14.2	15.8	18 Germany	17.0	18.4	21.9	24.3
9 Korea	4.5	7.8	12.2	16.2	19 France	18.6	20.3	22.6	24.3
10 US	11.1	13.6	16.7	18.5	20 Italy	20.0	20.5	22.5	25.7

Note: Countries are ranked from best to worst according to the projection results for 2040.

Public Burden Category

Benefit Growth Indicator

**Growth in Total Public Benefits to the Elderly from 2010 to 2040
as a Percent of GDP**



Note: Countries are ranked from best to worst.

Fiscal Room Category

Tax Room Indicator

Total Government Revenue as a Percent of GDP, Assuming Taxes Are Raised to Pay for All Growth in Public Benefits, 2010–2040*

	2010	2020	2030	2040		2010	2020	2030	2040
1 India	18.8	19.2	20.2	20.5	11 Japan	32.4	37.3	38.5	41.5
2 Mexico	22.8	20.6	20.9	20.8	12 Canada	37.8	39.0	41.3	42.9
3 Chile	23.5	23.1	22.8	23.1	13 UK	40.1	38.9	41.4	43.4
4 China	21.3	22.9	25.4	28.7	14 Brazil	37.2	36.6	39.5	44.2
5 Russia	34.6	32.6	32.9	33.6	15 Spain	36.6	39.2	41.7	45.6
6 Australia	31.8	35.0	36.2	37.5	16 Germany	43.6	44.7	47.6	49.8
7 Poland	37.6	38.8	40.1	40.4	17 Sweden	52.3	49.1	50.3	51.1
8 Korea	31.4	32.4	36.7	40.6	18 Italy	46.1	48.4	50.0	52.7
9 Switzerland	34.0	33.9	37.2	40.7	19 Netherlands	45.6	46.9	50.7	53.7
10 US	31.2	35.4	38.9	41.1	20 France	49.5	51.6	53.9	55.6

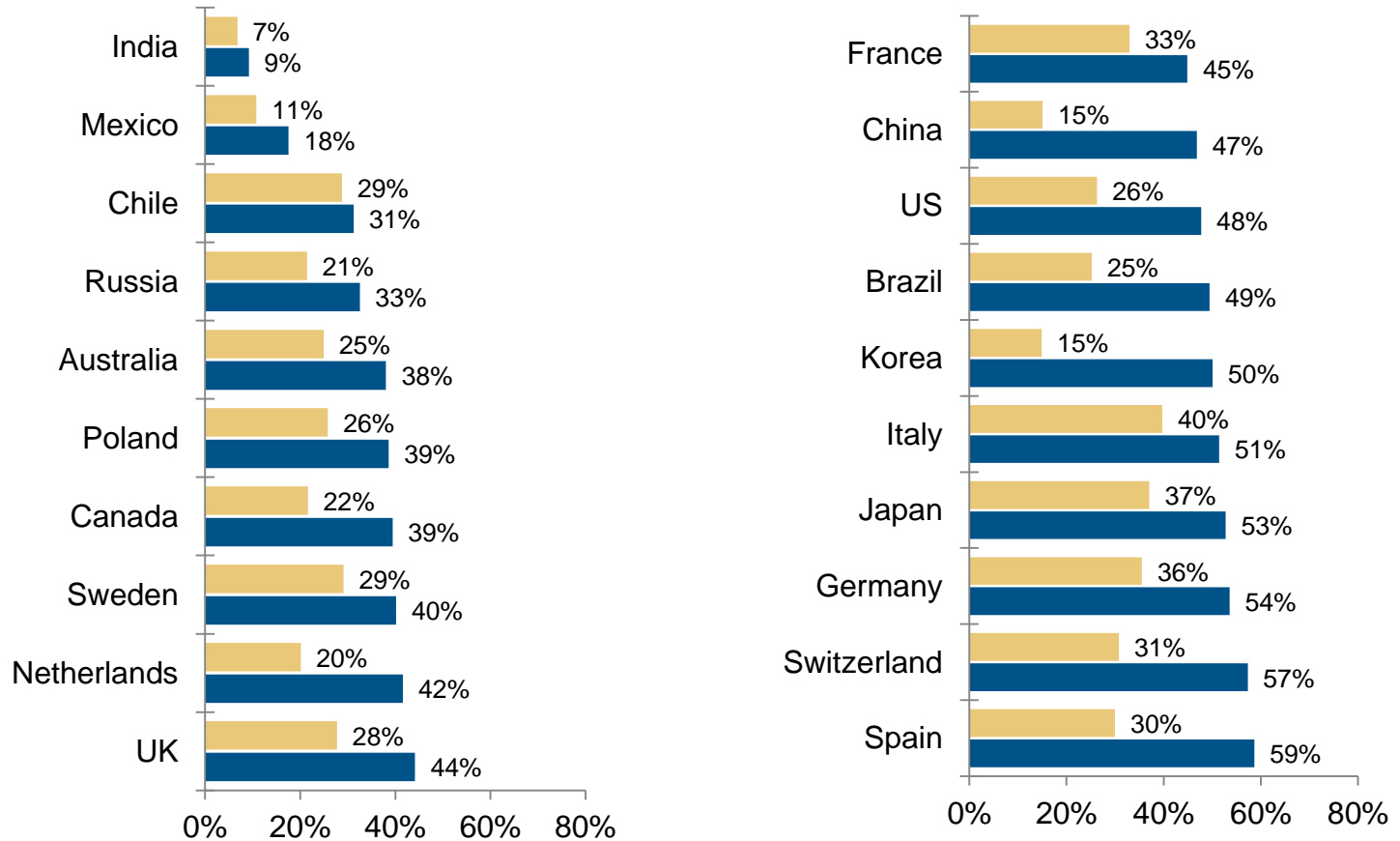
Note: Countries are ranked from best to worst according to the projection results for 2040.

* The projections assume that, beginning in 2019, each country moves to a debt-neutral fiscal balance in its “rest of government” budget.

Fiscal Room Category

Budget Room Indicator

Total Public Benefits to the Elderly as a Percent of Government Outlays in 2010 and 2040, Assuming Cuts in Other Spending Pay for All Growth in Public Benefits*



Note: Countries are ranked from best to worst according to the projection results for 2040.

* The projections assume that, beginning in 2019, each country moves to a debt-neutral fiscal balance in its “rest of government” budget.

Fiscal Room Category

Borrowing Room Indicator

Net Public Debt as a Percent of GDP, Assuming that Borrowing Pays for All Growth in Public Benefits, 2010-2040*

	2010	2020	2030	2040		2010	2020	2030	2040
1 Sweden	-18	-22	-26	-19	11 Switzerland	28	19	26	81
2 Chile	-8	-4	-5	-5	12 France	84	78	68	82
3 Australia	12	3	0	11	13 Poland	27	25	47	82
4 Mexico	38	37	33	33	14 UK	83	82	73	91
5 Russia [†]	11	15	24	38	15 Germany	57	50	58	104
6 China [†]	23	8	7	40	16 Italy	103	100	105	140
7 Korea	32	11	16	68	17 Netherlands	33	46	84	176
8 Brazil	35	26	31	74	18 US	88	87	114	177
9 Canada	35	34	44	76	19 Japan	134	165	218	325
10 India [†]	67	64	67	80	20 Spain	72	107	183	331

Note: Countries are ranked from best to worst according to the projection results for 2040.

* The projections assume that, beginning in 2019, government revenues and expenditures other than benefit spending and net interest remain constant as a share of GDP.

† Data for Russia, China, and India refer to gross debt.

Benefit Dependence Category

Benefit Share Indicator

Public Benefits as a Percent of the Cash Income of the Median-Income Elderly, 2010-2040*

	2010	2020	2030	2040	Average 2010-40		2010	2020	2030	2040	Average 2010-40
1 India	25	25	22	19	23	11 Japan	60	57	54	54	56
2 Mexico	32	30	28	23	29	12 Sweden	63	62	59	58	60
3 Switzerland	33	32	30	32	32	13 UK	66	62	61	62	62
4 Korea	26	30	35	40	33	14 Russia	69	66	63	55	63
5 US	39	35	36	37	37	15 Germany	73	66	60	60	64
6 Chile	55	39	30	26	37	16 Brazil	75	65	62	63	65
7 China	34	37	37	41	37	17 France	73	71	70	71	71
8 Canada	39	39	39	39	39	18 Italy	78	74	70	68	72
9 Netherlands	50	50	50	51	50	19 Spain	79	75	71	71	74
10 Australia	64	56	50	46	54	20 Poland	94	89	85	79	87

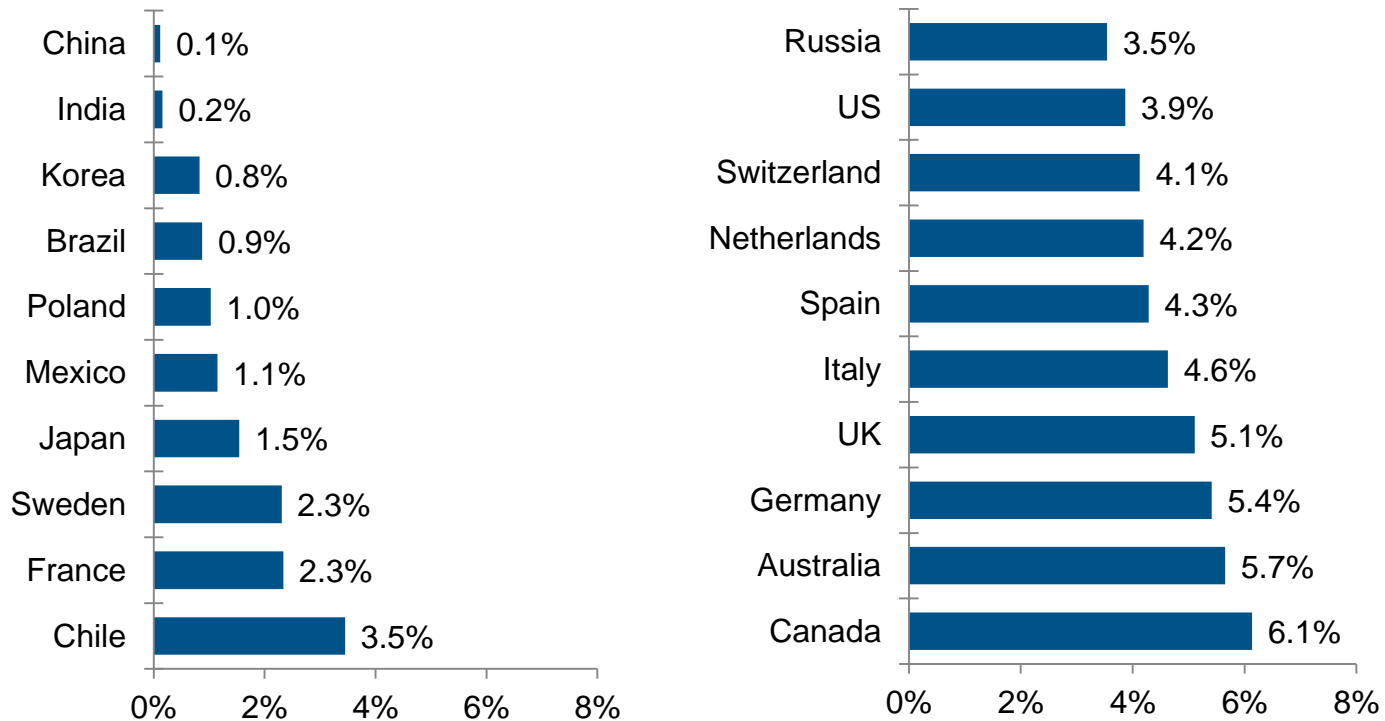
Note: Countries are ranked from best to worst according to the projected averages for 2010 to 2040.

* Data refer to the third quintile of the elderly income distribution.

Benefit Dependence Category

Benefit Cut Indicator

Percent of Elderly Households That Would Be Pushed into Poverty by an Immediate 10 Percent Cut in Public Benefits*



Note: Countries are ranked from best to worst.

* Data refer to 2010 or the most recent available year. Poor households are households with incomes beneath 50 percent of the median income for all households.

GAP INCOME ADEQUACY INDEX

TOTAL INCOME CATEGORY

Measures the overall level of and trend in the income of the elderly relative to the nonelderly in each country

TOTAL INCOME LEVEL INDICATOR

Per capita ratio of average after-tax elderly to nonelderly total income in 2040

TOTAL INCOME TREND INDICATOR

Percentage change in the per capita ratio of average after-tax elderly to nonelderly total income from 2010 to 2040

INCOME VULNERABILITY CATEGORY

Measures income adequacy for “middle -income” elders and the extent of elderly poverty in each country

MEDIAN INCOME LEVEL INDICATOR

Per capita ratio of median after-tax elderly to nonelderly cash income in 2040

MEDIAN INCOME TREND INDICATOR

Percentage change in the per capita ratio of median after-tax elderly to nonelderly cash income from 2010 to 2040

POVERTY LEVEL INDICATOR

Percent of the elderly with incomes beneath 50 percent of the median income for all persons in 2010 or the most recent available year

FAMILY SUPPORT CATEGORY

Measures the strength of family support networks in each country

FAMILY TIES INDICATOR

Percent of the elderly living in households with their adult children in 2010 or the most recent available year

FAMILY SIZE INDICATOR

Change in the average number of surviving children of the elderly from 2010 to 2040

Total Income Category

Total Income Level Indicator

Per Capita Ratio of Average After-Tax Elderly to Nonelderly Total Income, 2010-2040*

	2010	2020	2030	2040		2010	2020	2030	2040
1 US	1.58	1.71	1.75	1.78	11 Sweden	1.12	1.09	1.12	1.12
2 Brazil	1.41	1.35	1.37	1.48	12 Japan	1.03	1.01	0.98	1.02
3 Germany	1.30	1.33	1.44	1.44	13 Switzerland	1.05	1.01	1.02	1.01
4 Netherlands	1.19	1.24	1.33	1.41	14 Spain	0.95	1.02	0.99	0.99
5 Australia	1.22	1.34	1.38	1.40	15 Mexico	1.06	1.06	1.03	0.95
6 France	1.28	1.24	1.24	1.25	16 Korea	0.92	0.88	0.89	0.89
7 Canada	1.26	1.29	1.26	1.24	17 India	0.76	0.79	0.78	0.75
8 UK	1.20	1.16	1.22	1.24	18 Russia	0.83	0.77	0.73	0.74
9 Italy	1.25	1.21	1.19	1.20	19 China	0.57	0.61	0.62	0.65
10 Chile	1.23	1.26	1.22	1.17	20 Poland	0.72	0.63	0.64	0.58

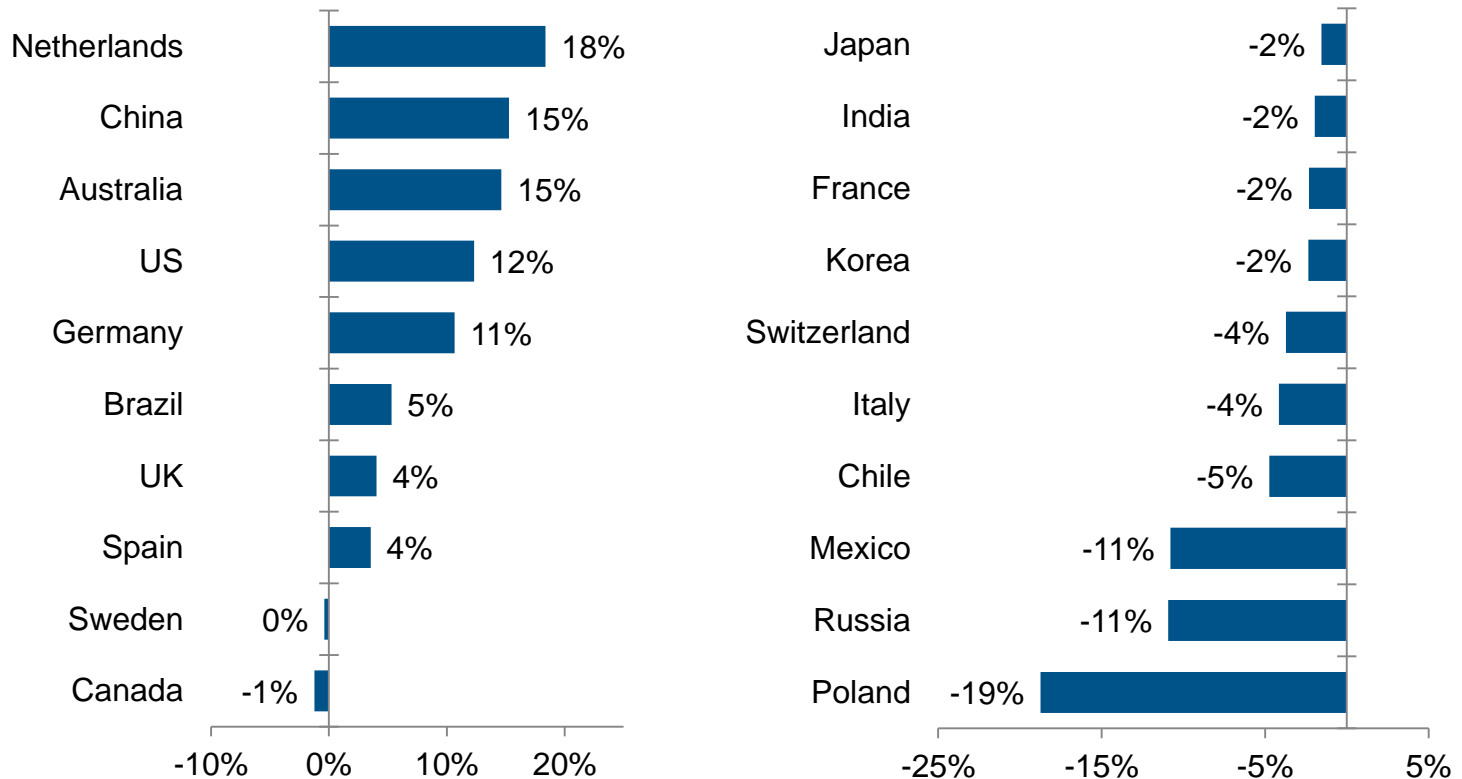
Note: Countries are ranked from best to worst according to the projection results for 2040.

* Total income includes government health benefits.

Total Income Category

Total Income Trend Indicator

Percentage Change in the Per Capita Ratio of Average After-Tax Elderly to Nonelderly Total Income from 2010 to 2040*



Note: Countries are ranked from best to worst.
 * Total income includes government health benefits.

Income Vulnerability Category

Median Income Level Indicator

Per Capita Ratio of Median After-Tax Elderly to Nonelderly Cash Income, 2010-2040*

	2010	2020	2030	2040		2010	2020	2030	2040
1 Brazil	1.29	1.25	1.28	1.40	11 France	0.93	0.85	0.82	0.81
2 US	1.34	1.40	1.41	1.39	12 Sweden	0.78	0.80	0.80	0.79
3 Australia	0.97	1.06	1.17	1.28	13 Switzerland	0.86	0.80	0.79	0.78
4 Chile	1.40	1.37	1.29	1.25	14 Japan	0.88	0.82	0.75	0.78
5 Germany	1.08	1.08	1.15	1.18	15 Spain	0.79	0.80	0.74	0.72
6 Netherlands	0.96	0.97	1.07	1.15	16 India	0.73	0.73	0.72	0.70
7 UK	1.08	0.98	1.00	1.01	17 Korea	0.74	0.59	0.58	0.65
8 Italy	1.12	1.05	0.97	0.96	18 Russia	0.83	0.71	0.65	0.65
9 Canada	1.06	1.06	1.00	0.94	19 Poland	0.75	0.63	0.64	0.56
10 Mexico	0.94	0.93	0.92	0.85	20 China	0.50	0.51	0.50	0.50

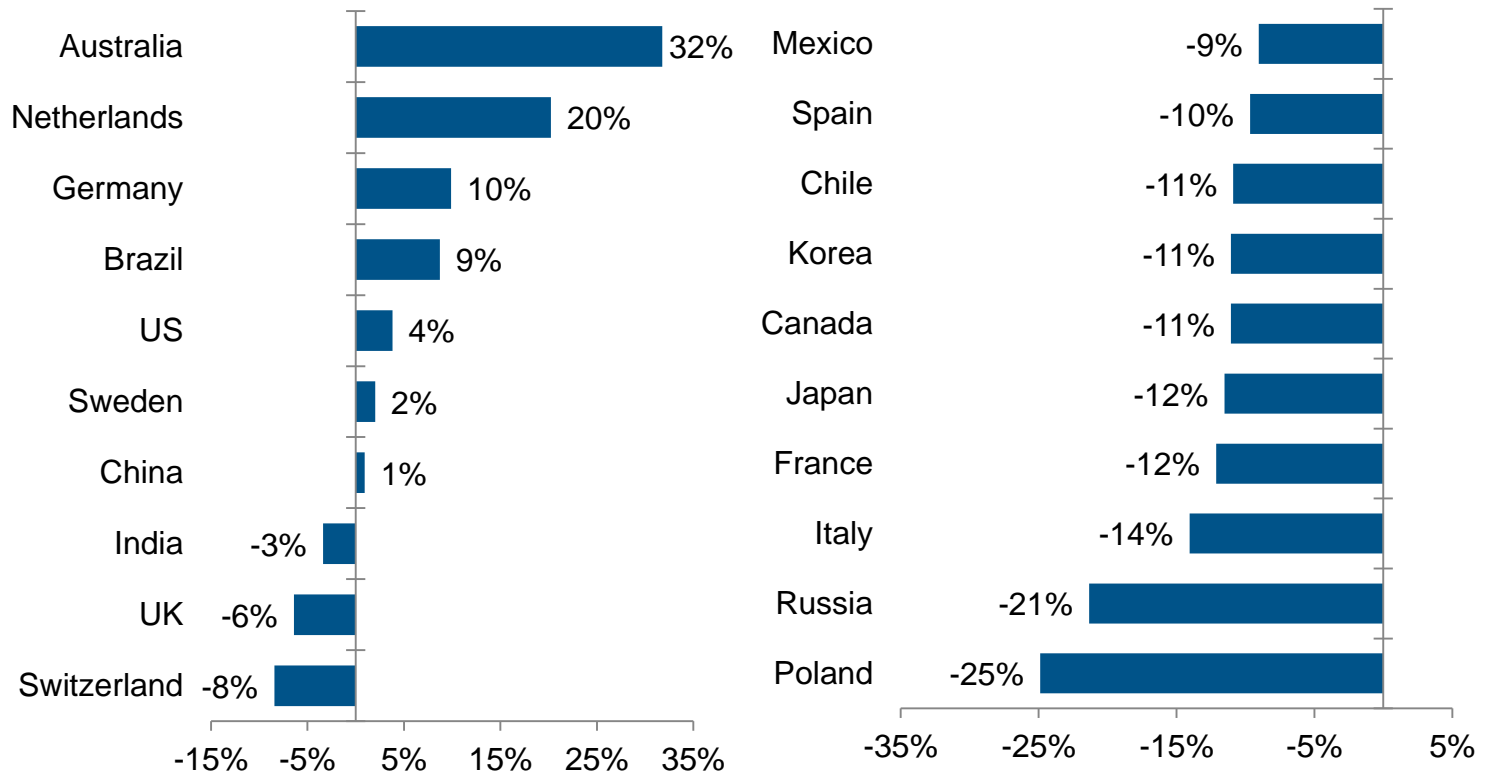
Note: Countries are ranked from best to worst according to the projection results for 2040.

* Data for both the elderly and nonelderly refer to the third quintile of the income distribution.

Income Vulnerability Category

Median Income Trend Indicator

Percentage Change in the Per Capita Ratio of Median After-Tax Elderly to Nonelderly Cash Income from 2010 to 2040*



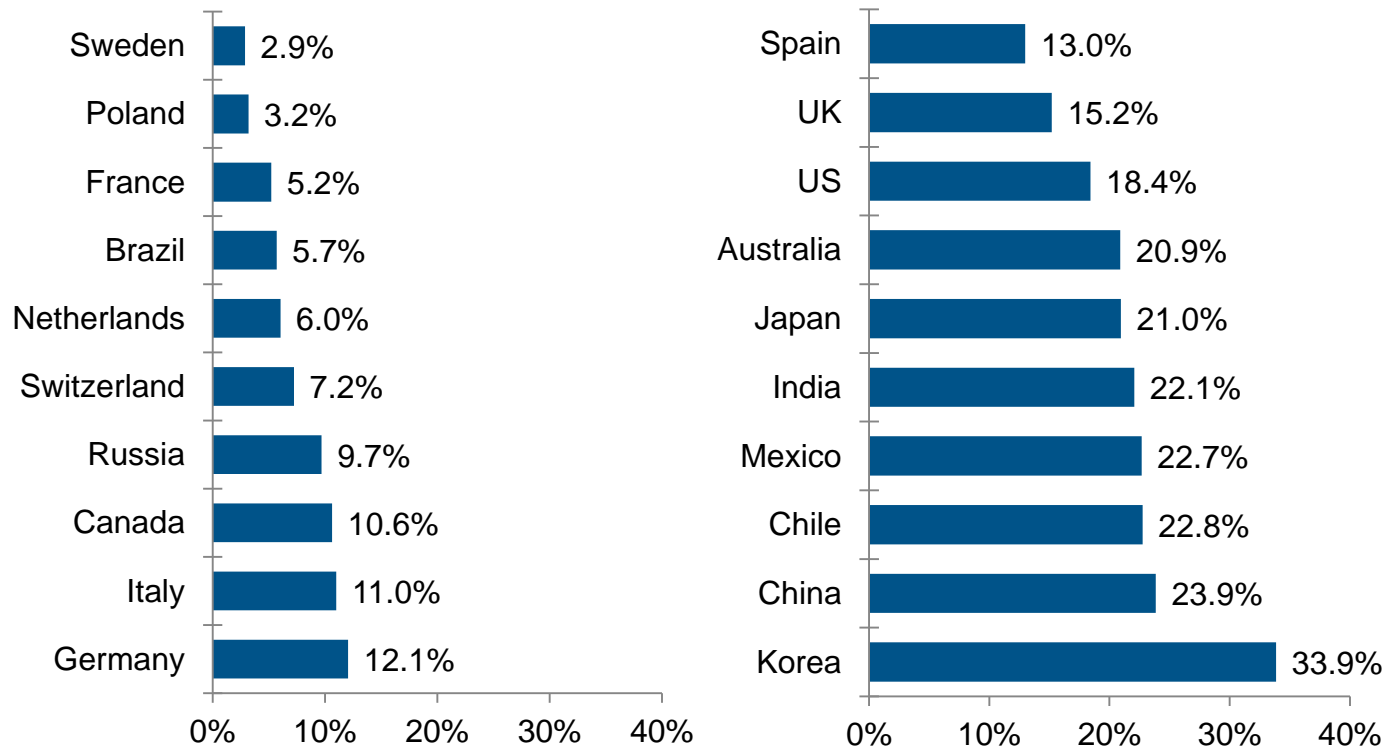
Note: Countries are ranked from best to worst.

* Data for both the elderly and nonelderly refer to the third quintile of the income distribution.

Income Vulnerability Category

Poverty Level Indicator

Percent of the Elderly with Incomes beneath 50 Percent of the Median Income for All Persons in 2010 or the Most Recent Available Year

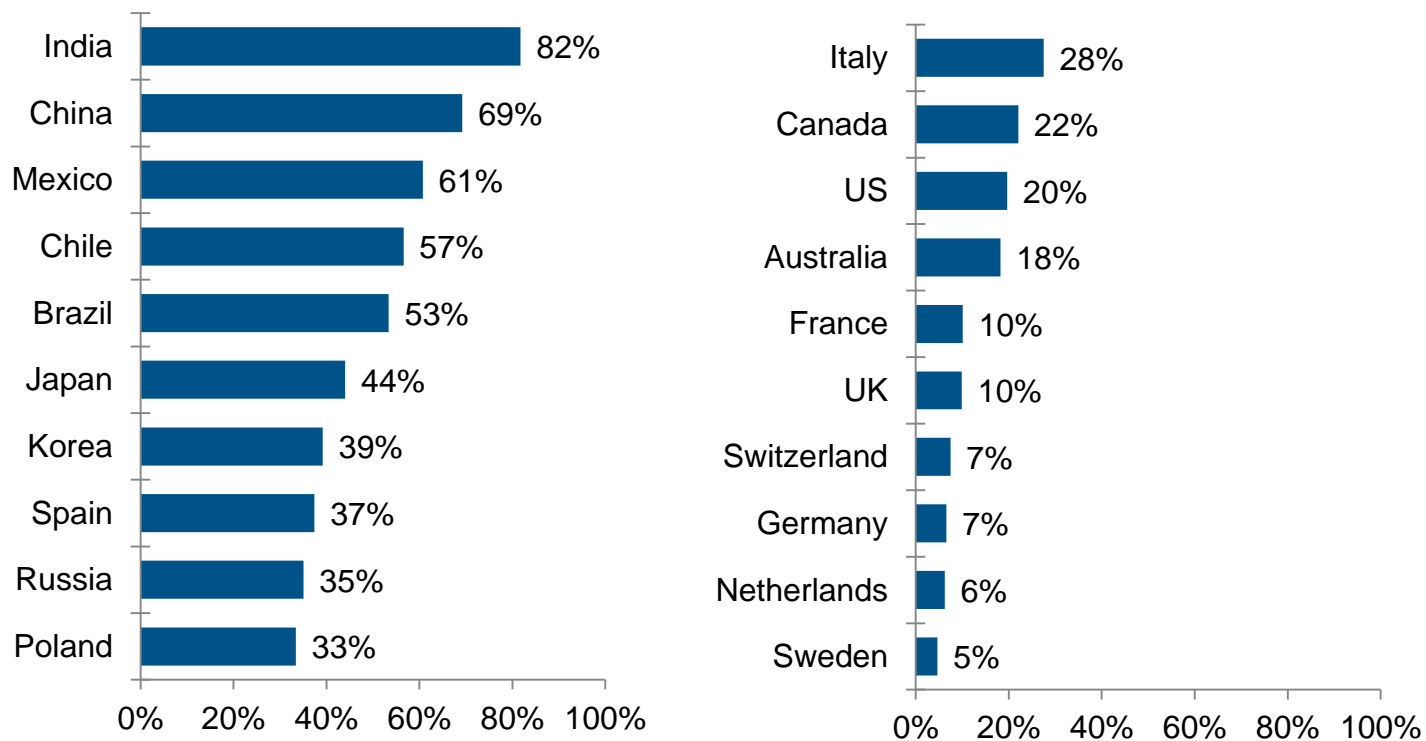


Note: Countries are ranked from best to worst.

Family Support Category

Family Ties Indicator

Percent of the Elderly Living in Households with Their Adult Children in 2010 or the Most Recent Available Year



Note: Countries are ranked from best to worst.

Family Support Category

Family Size Indicator

Average Number of Surviving Children of the Elderly: 2010-2040 and Change from 2010 to 2040

	2010	2020	2030	2040	Change		2010	2020	2030	2040	Change
1 Sweden	2.0	1.7	1.8	2.0	-0.1	11 Australia	2.7	2.1	2.0	2.0	-0.8
2 Poland	2.3	2.3	2.2	2.0	-0.3	12 Italy	2.2	2.1	1.4	1.4	-0.9
3 Russia	1.9	1.7	1.7	1.5	-0.4	13 Canada	2.6	1.8	1.6	1.7	-0.9
4 UK	2.3	1.8	1.8	1.9	-0.4	14 Chile	3.4	2.7	2.5	2.4	-1.0
5 France	2.4	1.9	1.8	1.9	-0.4	15 India	3.8	3.7	3.2	2.6	-1.1
6 Japan	2.0	1.9	1.7	1.5	-0.5	16 Spain	2.7	2.2	1.5	1.4	-1.2
7 Germany	1.9	1.4	1.4	1.4	-0.5	17 Korea	3.6	2.6	1.7	1.8	-1.7
8 Switzerland	2.0	1.6	1.5	1.6	-0.5	18 Brazil	3.9	3.1	2.4	2.1	-1.7
9 US	2.5	1.9	1.8	1.9	-0.6	19 China	4.3	3.3	2.2	2.0	-2.3
10 Netherlands	2.3	1.6	1.6	1.6	-0.6	20 Mexico	5.0	4.1	3.1	2.6	-2.4

Note: Countries are ranked from best to worst according to the projected change from 2010 to 2040.

GAP Index Country Rankings and Change from First Edition Rankings

Fiscal Sustainability Index			Income Adequacy Index		
1	India	-	1	Netherlands	-
2	Mexico	-	2	US	+1
3	Chile	-	3	Brazil	-1
4	China	-	4	Australia	+2
5	Russia	-	5	Germany	-1
6	Australia	+1	6	Sweden	+1
7	Sweden	+3	7	UK	-2
8	Canada	+1	8	Chile	-
9	Poland	-3	9	Canada	+2
10	Korea	+2	10	France	+6
11	US	-	11	Italy	+6
12	Switzerland	+1	12	Spain	-3
13	UK	+2	13	China	+5
14	Brazil	+4	14	Japan	-2
15	Japan	-7	15	India	-5
16	France	+3	16	Switzerland	-2
17	Netherlands	-	17	Mexico	+3
18	Germany	-4	18	Russia	-3
19	Italy	-3	19	Korea	-
20	Spain	-	20	Poland	-7

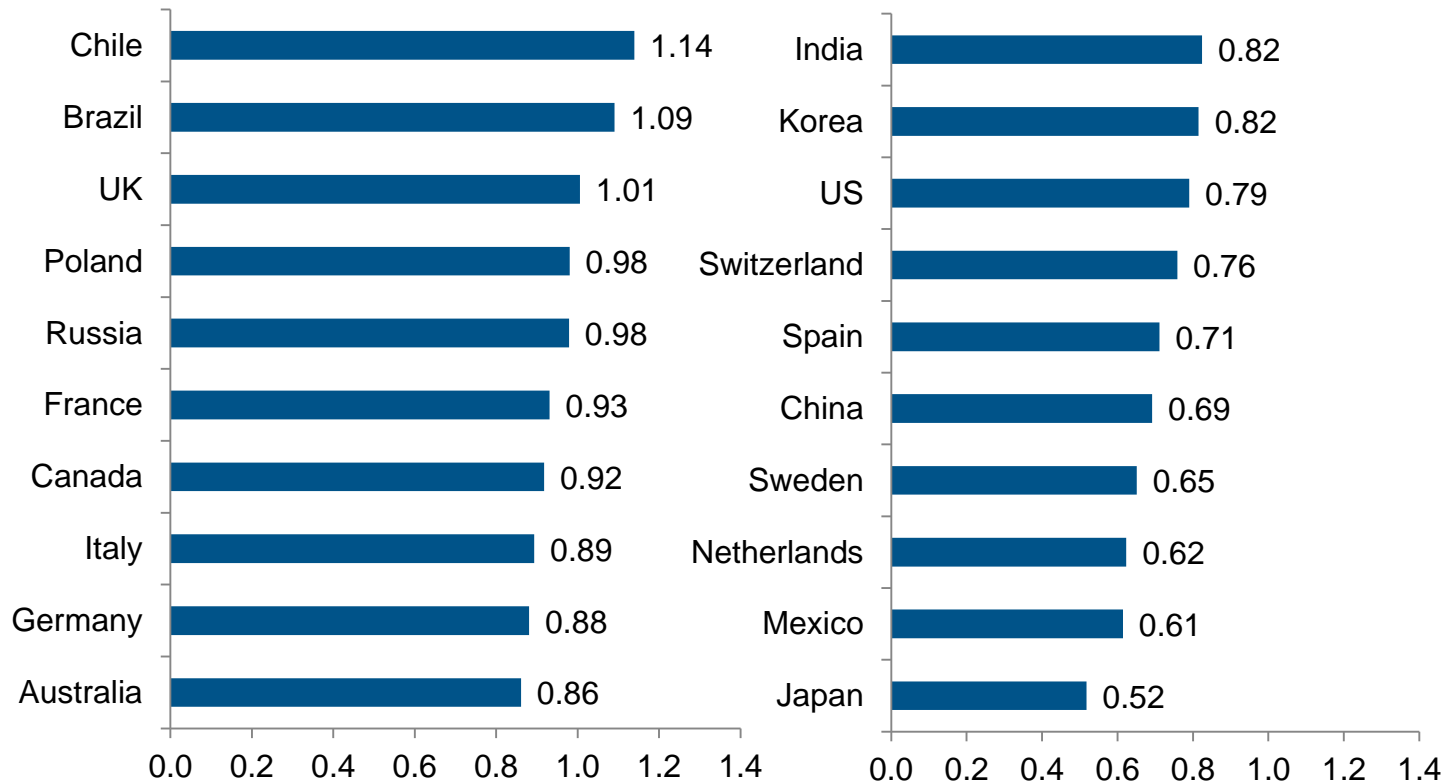
Balancing Adequacy and Sustainability

Policy Imperatives

- Reduce the rising fiscal burden of pay-as-you-go state retirement provision.
- Strengthen old-age safety nets through social pensions and/or means-tested supplements.
- Increase funded retirement provision.
- Promote productive aging and ensure that work spans rise along with life spans and health spans.
- Refashion the overall role of the state in retirement provision so that it serves less as a retirement income floor for all of the elderly and more as a retirement income backstop for the “old elderly.”

Old Elderly versus Young Elderly: Lower Incomes

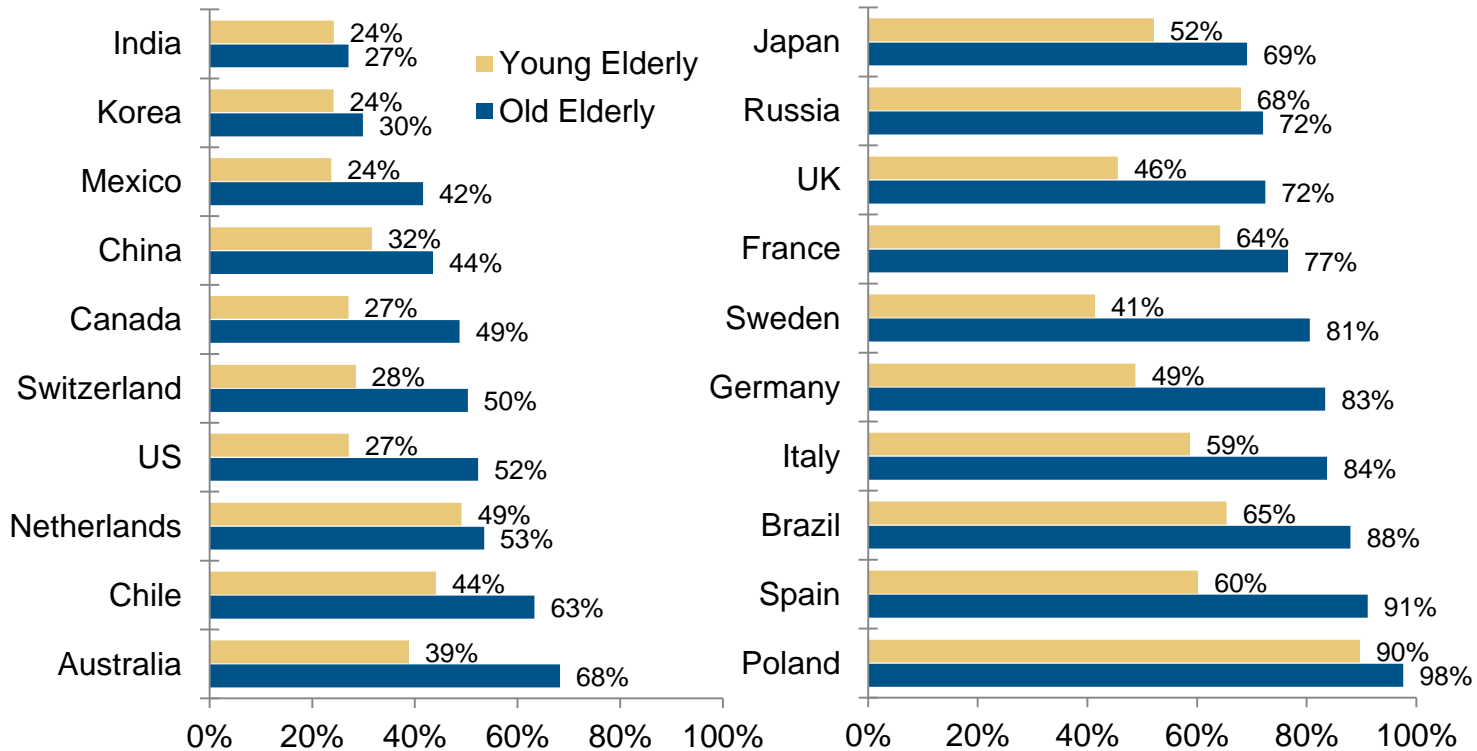
Per Capita Ratio of Average After-Tax Old Elderly (Aged 70 & Over) to Young Elderly (Aged 60-69) Cash Income in 2010



Note: Countries are ranked from best to worst.

Old Elderly versus Young Elderly: Higher Benefit Dependence

Public Benefits as a Percent of the Cash Income of the Median-Income Young Elderly (Aged 60-69) and Median-Income Old Elderly (Aged 70 & Over) in 2010*



Note: Countries are ranked from best to worst according to the public benefit share of the old elderly.

* Data refer to the third quintile of the elderly income distribution.