

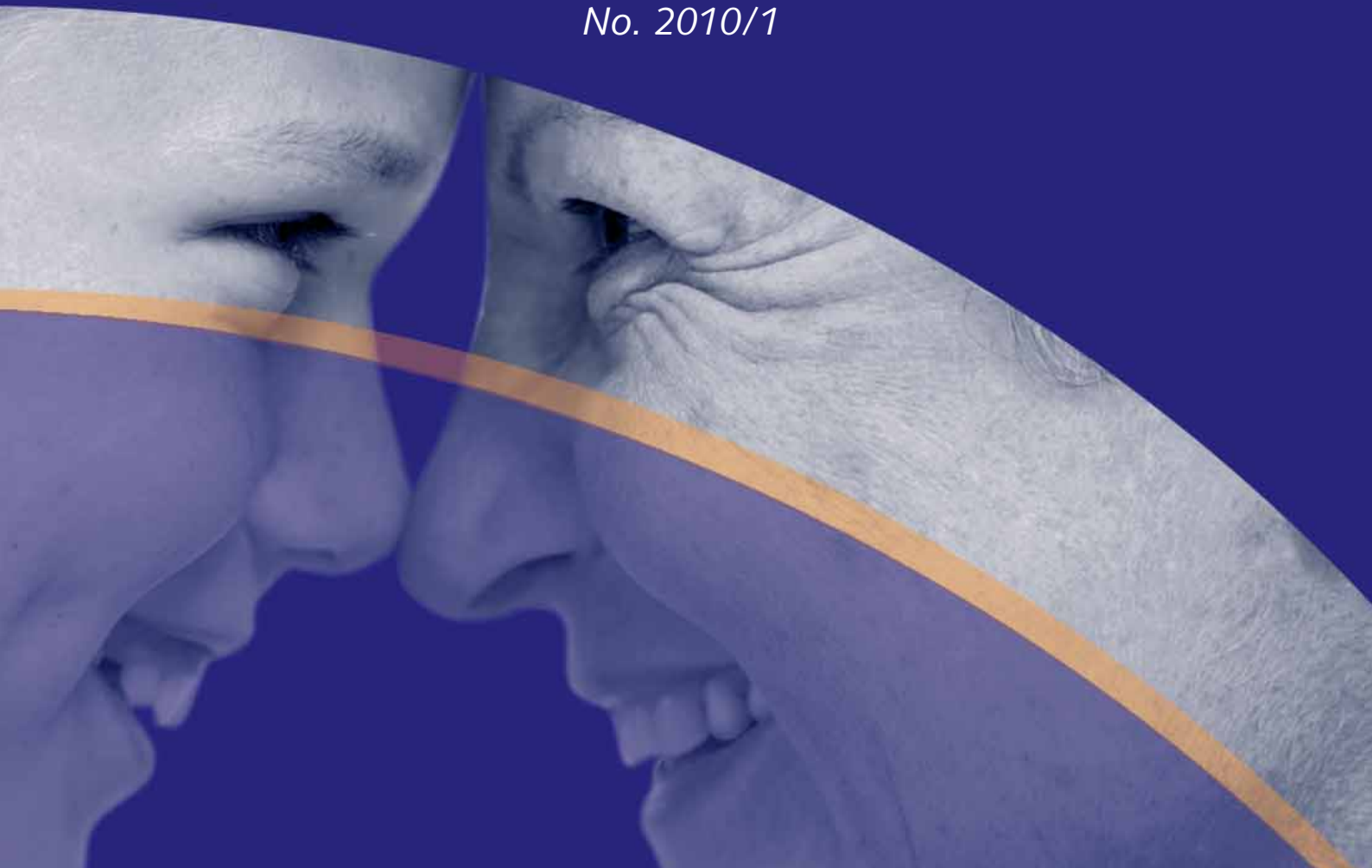


The WDA – HSG Letters

on Demographic Issues

Demography and
Public Debt:
Time for a “Demographic
Stress Test” for the
Western Economies.
What does it mean for
Switzerland?

by Nicholas Eberstadt and Hans Groth
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Demography and Public Debt:

Time for a “Demographic Stress Test” for the Western Economies

What does it mean for Switzerland?

By

Nicholas Eberstadt and Hans Groth

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The latest phase of the continuing world economic crisis is the financial turmoil now convulsing the Euro-zone, and possibly threatening the fragile global economic recovery currently underway. The Euro-zone's present panic, of course, was triggered by mounting concerns about public sector indebtedness: more specifically, the ability of Greece (with its very un-Maastricht ratio of gross government debt to GDP of 129%) to honor its sovereign obligations. But the public debt situation is also worrisome for Ireland and three other Mediterranean EU-members (Spain, Portugal and Italy). Interest payments on this public debt, according to OECD estimates should approach 6% of GDP this year in Greece, and are approaching 5% of GDP for Italy (in contrast to 2.8% for the Euro area overall, and 2.1% for the entire OECD grouping). In all, the "PIIGS" governments owe a total of roughly 1.2 trillion Euros today – an overall average of over 100% of GDP - and are on a trajectory to accumulate much more debt in the years immediately ahead, given their existing budgetary imbalances.

There is every reason, unfortunately, to expect levels of public indebtedness in the rich Western countries to rise in the years just ahead - and sharply. The current global economic crisis is at heart a banking crisis (originating with bad debts in the US mortgage sector) - and historically banking crises end up being very expensive for modern Western taxpayers. According to an important new study by economists Carmen M. Reinhart and Kenneth Rogoff¹, major banking crises typically take about 4 or 5 years to work out - and end up raising government debt levels by about 80% (fourth fifths) over pre-existing levels. All other things being entirely equal, in other words, we would expect anemic growth for the major Western economies through 2012 or 2013 - with major run-ups in public debt.

Some years from now - just how many we cannot yet be sure - the current global financial crisis will be over. And the Western economies will generally be saddled with much higher levels of public debt than they held in, say, 2007. But greater - and unrelenting - pressures on Western budgets and public debt levels lie immediately beyond the current crisis. These will be driven by the inexorable demographic forces that are transforming the OECD countries into a "gray zone".

¹ Carmen M. Reinhart and Kenneth Rogoff, *This Time Is Different: Eight Centuries of Financial Folly*, (Princeton, NJ: Princeton University Press, 2009).

Unlike financial and economic prognostications - which, as we may painfully recall, did not accurately forecast today's international economic crises - demographic projections tend to be rather reliable in envisioning Western countries' population profiles 10 or 20 years hence.

Demographic projections today depict a radically different Western world just on the horizon: one with stagnating or shrinking workforces (thanks mainly to persistent sub-replacement fertility rates), increasing pension-age populations (thanks partly to unprecedented improvements in overall health), and ballooning implicit social spending commitments.

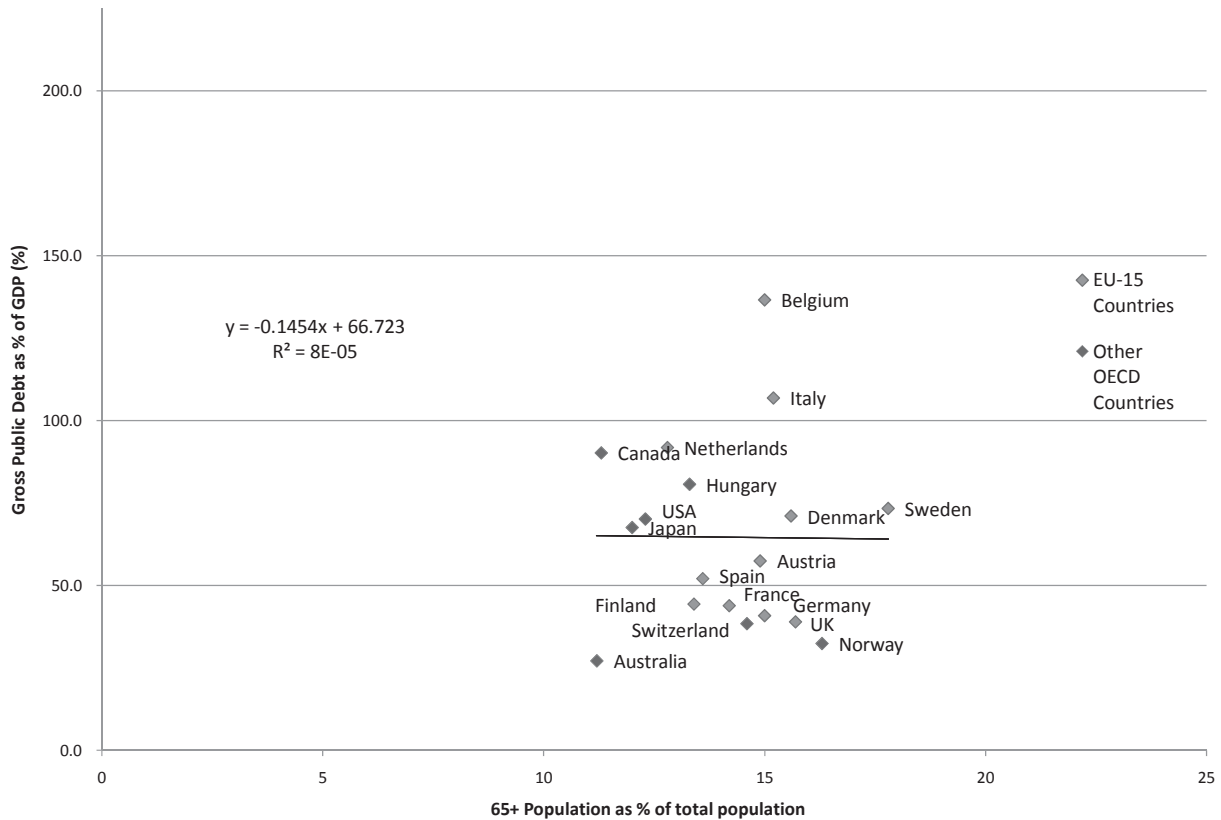
These trends portend ominous change in economic prospects: major increases in public debt burdens, and slower economic growth. Yet curiously, despite the relative predictability of these impending demographic trends, neither policy-makers, business leaders nor financial markets seem as yet to have factored the demographic factor into their assessments of the longer-term outlook for the world's leading economies—much less the measures that must be taken if prosperity and financial stability are to be maintained over the coming generation.

The demographic problem facing the OECD economies today are highlighted in the three figures below: visions, with apologies to Charles Dickens, that we might call “Christmas past”, “Christmas present and “Christmas future”².

In “Christmas past” - just 20 years ago - there was no obvious relationship whatever between the “age profile” and the public debt burden of affluent OECD countries. But this earlier world was also a more youthful one. Over the past two decades, median age in the world's more developed countries has jumped by over 5 years, and the numbers of senior citizens (who tend to be heavy claimants of public benefits) have risen faster than total population in every Western society—often, much faster. Along with this phenomenon of pervasive population aging, a correspondence between a country's degree of “graying” and its level of public debt has begun to emerge in the affluent West.

² In *A Christmas Carol*, Dickens' famous Nineteenth Century tale, Ebenezer Scrooge is chastened by a late-night encounter with three ghosts—“Christmas Past”, Christmas Present”, and “Christmas Future”—who show him what will come to pass if he does not mend his ways.

“Christmas Past”: Gross Public Debt as % of GDP (c. 1990) vs .65+ Population as % of Total Population (1990) in selected OECD Countries

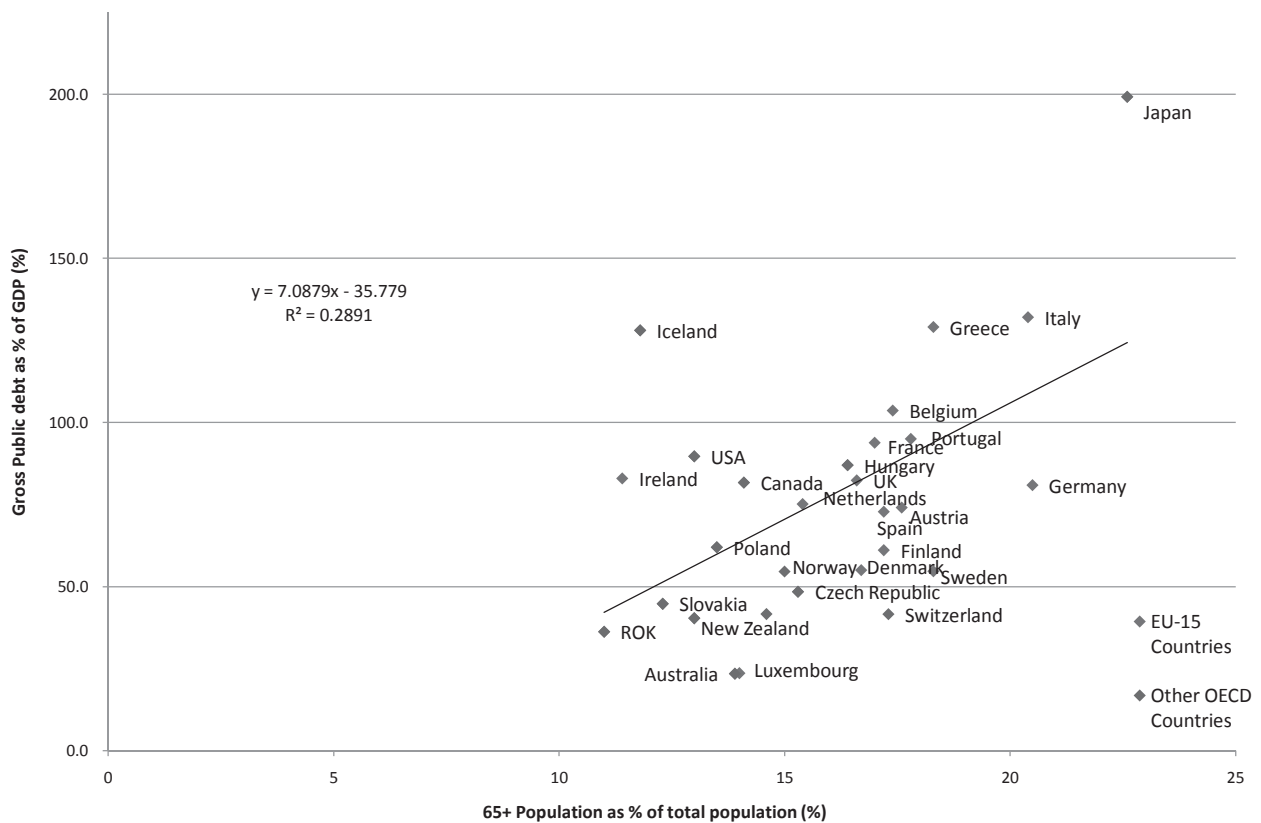


Sources: United Nations Population Division. *World Population Prospects: The 2008 Revision Population Database*. Accessed electronically at <http://esa.un.org/unpp/index.asp>; Organisation for Economic Co-operation and Development. *OECD Economic Outlook No. 87 Annex Tables*. Accessed electronically at <http://www.oecd.org/dataoecd/5/51/2483816.xls>. Note: Public debt data are for 1992.

Indeed: as we see in “Christmas present”, there is a clear relationship today within the OECD between a country’s level of public debt and its proportion of population aged 65 or older. The relationship, to be sure, is not tight and mechanistic: many other factors besides the health care, long-term care, and public pension outlays for senior citizens affect the run-up of public debt in affluent Western societies today. Even so: we can see that in general, every percentage point increase in a country’s 65+ share of total population is associated with about a 7 percentage point increase in the ratio of gross public debt to GDP.

Between 1990 and 2010, according to estimates by a recent Bank for International Settlements (BIS) study³, the ratio of gross public debt to GDP rose by about 40 points for the 21 leading Western economies. Over that same period, according to estimates by the United Nations Population Division (UNPD), the 65+ group’s share of total population rose by over 3 points. To go by this admittedly crude arithmetic, population aging might be seen as accounting for something like half of the increased public debt burden that affluent Western societies have assumed over the past two decades.

“Christmas Present”: Gross Public Debt as % of GDP (2010) vs 65+ Population as % of Total Population (2010), Selected OECD Countries

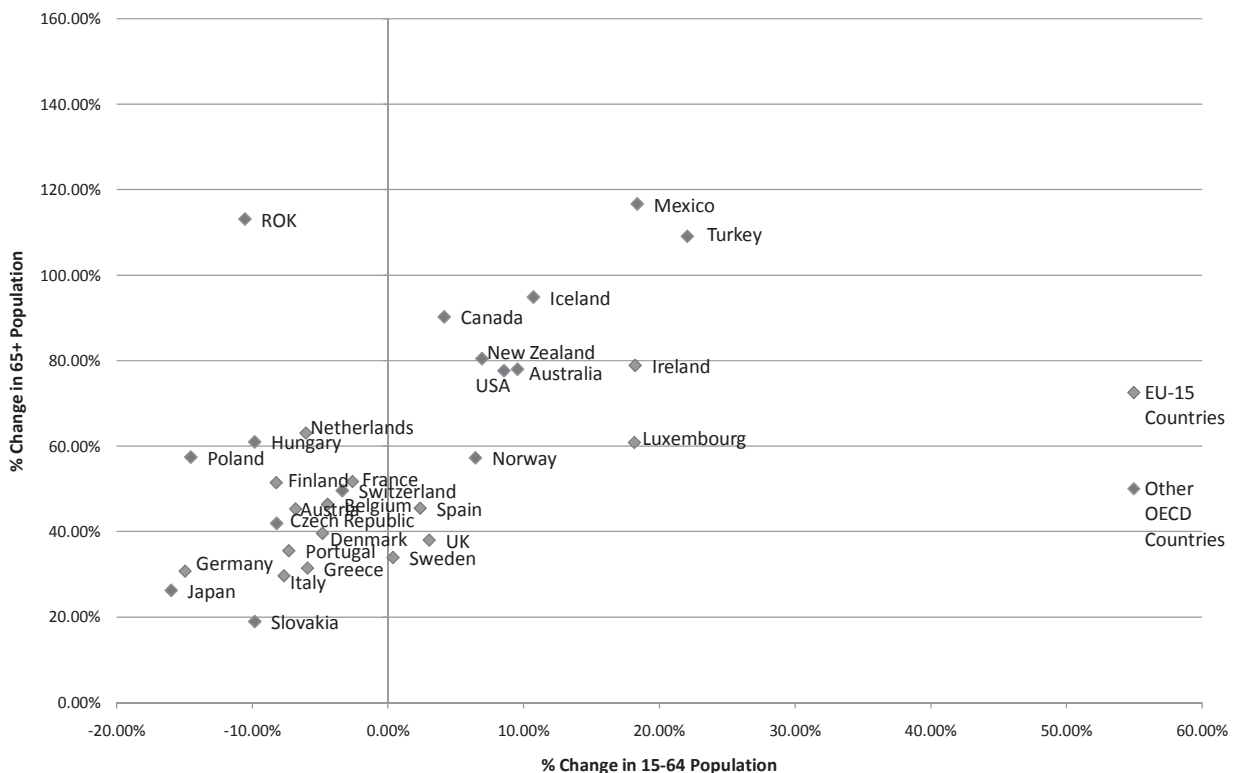


Sources: United Nations Population Division. *World Population Prospects: The 2008 Revision Population Database*. Accessed electronically at <http://esa.un.org/unpp/index.asp>; Organisation for Economic Co-operation and Development. *OECD Economic Outlook No. 87 Annex Tables*. Accessed electronically at <http://www.oecd.org/dataoecd/5/51/2483816.xls>. Note: This graphic is for affluent “Western” OECD members only.

³ Stephen G Cecchetti, M S Mahoney and Fabrizio Zampoli, *The Future of public debt: prospects and implications*, *BIS Working Papers* no. 300 (March 2010).

This is “Christmas present”: but what about “Christmas future”? According to those same UNPD projections, population aging will not only continue over the next two decades, but by some measures will even accelerate: the fraction of 65+ population in the more developed regions is slated to jump by over 6 percentage points over the next 20 years, roughly twice as big a rise as over the past two decades. On average, the 65+ population in OECD countries is set to surge by over 50% between now and 2030. Moreover, over the next two decades most OECD countries face a fall-off in the absolute size of their working-age population (conventionally, if not always accurately, defined by demographers as the 15-64 group). And these UNPD projections, we should note, posit continuing net migration flows into the OECD: if the inflow of new workers should slump - or be restricted by policy - the shrinkage of working-age manpower would be even sharper than our “Christmas future” chart suggests.

“Christmas Future”: Change in 15-64 population vs. change in 65+ population, OECD Countries, 2010-2030 (projected, medium variant, in percent)



Source: United Nations Population Division. *World Population Prospects: The 2008 Revision Population Database*. Accessed electronically at <http://esa.un.org/unpp/index.asp>.

For a Swiss audience, the economic and financial implications of impending demographic changes in 5 OECD countries - Germany, France, Italy, the USA and Japan - will be especially important. These five countries account for more than half of Switzerland's total trade turnover today; furthermore, Germany, America and Japan are the key players in the world's three major reserve currencies (the Euro, the Dollar, and the Yen). Let us examine each of their prospects in turn:

Germany: For almost 40 years, Germany has been a “net mortality” society, regularly registering more deaths than births due to its low fertility rates (today roughly 35% below the level needed for population replacement). Germany is also a “shrinking society”: its population commenced what looks to be an indefinite decline seven years ago, in 2003 - the only question now is how fast and how far its depopulation will progress over the next two decades. Germany is set to experience an extraordinary bout of population aging over the next two decades: by 2030, the country's “median age” (the cutoff point that divides the society into two groups of equal size) could be as high as 50 years. Despite the pending depopulation, Germany's 65+ generation is set to grow by about 30% between 2010 and 2030; its 80+ population, by almost 50%. Big increases in pension, health care, and long-term care needs for Germany are thus in the offing.

Yet at the same time, Germany's pool of working age manpower (15-64 years of age) - the group responsible for financing these needs - shrinks by about 15% over those same years in “medium variant” UNPD projections (and without continuing in-migration, to go by Eurostat's reckoning, the drop-off would be far greater, about 22%).

In any case, Germany's workforce will be aging, too. Germans have been famously diligent savers over the postwar era, but these looming demographic changes will put big downward pressures on household savings rates (given the “life-cycle” phenomenon) and budgetary balances. In 2007 - before the current global crisis - Germany gross public debt amounted to 65% of GDP - well below the OECD's then-average of 73%. But the previously noted BIS study suggests Germany is on track for a massive accumulation of public debt over the coming two decades, absent some major adjustments in fiscal policies and public policy commitments. By that study's “baseline” projections, Germany's ratio of public debt to GDP could exceed 200% by 2030 - with service on this debt approaching 10% of GDP - nearly twice Greece's current debt service burden!

In such a world, Germany might be hard pressed to remain the ultimate guarantor of the Euro. But even if it could still manage this feat, the impact of demographic change on Germany's future economic performance could be consequential.

Italy: Like Germany, Italy is set to shrink and age over the next 20 years, with projected median age in 2030 reaching the 50 years mark. Despite depopulation, the ranks of Italy's senior citizens will be swelling. By 2030, over a quarter of Italy's population would be 65 or older, and nearly 9% would be over 80: that is to say, almost every eleventh Italian.

On the other hand, UNPD projects Italy's working age manpower to fall by about 8% between 2010 and 2030 (and Eurostat indicates the drop would be more like 20% without the continuing immigration that is being assumed.) Currently Italy's public debt exceeds 100% of GDP, and OECD estimates the country is currently running a deficit on the order of 5% of GDP. The BIS study's "baseline" projections envision a gross public debt burden of 200% for Italy by 2030, with public debt service in the vicinity of 10% of GDP per year. Clearly, the *dolce vita* is under threat from these unavoidable demographic and public finance pressures.

France: France is Western Europe's poster child for demographic "success"—or at least this is what many French commentators and policymakers seem to believe. France can expect somewhat more moderate population aging than Germany or Italy, thanks largely to its relatively high fertility level (only about 10% below replacement level at present). On the other hand, French authorities remain utterly opaque about the ethnic composition of the nation's birth rate, guarding this information almost as tightly as the old Soviet government used to conceal its true military budget. Even so, all is not well in France's demographic and public finance outlook. By UNPD projections, French working age manpower is expected to decline, slowly but steadily between 2010 and 2030 (and would decline more rapidly if projected immigration assumptions are not actually met).

Given the country's generous public social commitments (largely for elder needs), moreover, public debt is set to soar: currently, according to the BIS study, France is on track for a 300% ratio of gross debt to GDP by 2030. Whether or not such levels, and attendant debt service payments, would be sustainable is of course an open question. Even if they were, demography and debt could presage distinctly slower French growth in the decades ahead than for those just past.

Japan: Japan is the world's most aged society today, and is likely to remain so in 2030, when UNPD projects a Japanese median age of 52 years. By 2030, an amazing 30-plus% of the country could be over 65; no less astonishing, nearly 13% of the Japanese could be 80 or older - more than one in eight. Japan's working age population has been falling since the mid-1990s, and would drop over two decades just ahead by about 16% in UNPD projections (by slightly more under official Japanese projections).

These prospective developments are the consequence of three powerful demographic forces: prolonged and now extreme sub-replacement fertility; an unwillingness or inability to admit immigrants in any appreciable numbers; and highly favorable patterns of health and survival. (Japan is on track to reach a life expectancy at birth of 90 years by 2030.) Today Japan's gross public debt is around 200% of GDP: a result of years of heavy deficit spending in the face of economic stagnation and incipient deflation. On current course, by the BIS "baseline" estimates, Japan's public debt would hit 600% of GDP around 2030. Given Japan's low (near zero) interest rate environment for public borrowing, such a massive debt overhang might not lead to a sovereign debt crisis. But this is not the same as saying such debt levels might not be "toxic".

Remember: over the past two decades, South Korea suffered a sovereign debt crisis, while Japan did not - but 20 years ago South Korea's per capita GDP was around 40% of the Japanese level, while it is 80% of the Japanese level today. Further long-term stagnation would surely be regarded a toxic outcome for Japan; even if the country's public finance system remains technically solvent.

United States: Then there is the United States: the world's largest economy, and biggest market for international goods and services. America is the OECD's great "demographic exception": with relatively high (near-replacement) birth rates and a robust inflow of immigrants (roughly half of them unauthorized, by US Census Bureau estimates), the country can expect to see continuing manpower growth between now and the year 2030. It will also be the most youthful Western society in the decades ahead, with a projected median age in 2030 of less than 40 years. But the US has demographic problems of its own - the most salient of which relate to health and health costs.

Over the postwar era, America's relative health performance, in relation to other Western societies, has been on a slow but gradual decline. Astonishingly enough, for example, Germany's "New Federal States"—the former territory of the Communist GDR—overtook the United States in life expectancy at birth over a decade ago.⁴ US health care costs, for their part, are notoriously high, and presently unfunded liabilities in the American health care system (primarily, guarantees for senior citizens) are on course to skyrocket over the decades ahead.

According to a 2003 study by American researchers, the unfunded liabilities of the US health care system were then roughly ten times as large as for the US social security system⁵ - and those unfunded liabilities have only risen in recent years (not least with the latest round of US "health reform"). At present, the US ratio of gross public debt to GDP is about 90%, and the country is today running annual deficits of around 10% of GDP per year. On this ominous path, the BIS sees American public debt hitting 300% of GDP by 2030. By these same estimates, restoring the American public debt burden to pre-crisis levels would require the US to run a budget surplus of 2.4% of GDP for the next 20 years: a long-term fiscal swing today that would be of the same relative magnitude as the one being urged on Greece under the recent IMF "rescue package".

Switzerland: What about Switzerland? By most projections and including the latest 2010-2060 projections of the BfS (Bundesamt für Statistik), the country's population would continue to grow slowly to about 9 million over the next 20 years, despite low fertility (roughly 30% below replacement today), thanks to the country's active and pragmatic policy of attracting foreign workers (including many highly educated workers from neighboring EU countries).

Even so: the UNPD projects Switzerland's working age manpower to drop slightly between 2010 and 2030, and for the country's 65+ and 80+ population to exceed 24% (about 2.2 million vs. 1.3 million today) and 7% (about 630 000 vs. 380 000 today), respectively - much higher relative and absolute proportions than today.

⁴ This according to the "Human Mortality Database", which is maintained conjointly by researchers at the University of California-Berkeley and the Max Planck Institute for Demographic Research in Rostock; available electronically at www.mortality.org

⁵ Jagadeesh Gokhale and Kent Smetters, *Fiscal and Generational Imbalances: New Budget Measures for New Budget Priorities*, (Washington, DC: American Enterprise Institute, 2003), available electronically at http://www.aei.org/docLib/20040217_book426.pdf

Despite relatively favorable national health profiles and comparatively high retirement ages (averaging over 65 for men and 64 for women in 2007), we can expect to see further and significant pressure on the balance sheets of the national social security plans (AHV, IV, ALV etc) and mounting state subsidies to the mandatory national healthcare plan. On current trajectories, Switzerland will thus either have to come up with new sources of tax revenue for these programs, or else finance these new outlays through accumulating public debt. These foreseeable gaps will certainly have an impact on the future competitiveness of the Swiss economy.

At the moment, Switzerland maintains one of the OECD's very lowest public debt ratios - about 45% of GDP - and the country's budget is nearly in balance, despite the current global crisis. That doesn't mean that this country in the middle of continental Europe will remain in "splendid isolation". Switzerland is an export-oriented economy: its total trade turnover exceeds its GDP. Even if the country manages its own domestic demographic and public debt challenges successfully, Swiss economic prospects cannot help but be affected by the conjoint impacts of demography and debt on its major trading partners, and indeed on the global economy.⁶

In sum: looking forward, there is ample reason to be concerned about the interactive impact of demography and debt on the performance of the Western world's economies in the decades just ahead. Without a fundamental and far-reaching re-thinking of current approaches to work and retirement, pension and health care policies, and government budget discipline, maintaining economic growth and avoiding government "debt traps" may become progressively more difficult as each year gives way to the next.

Thanks to the current global economic crisis, concerned citizens and policymakers are by now familiar with the concept of the "financial stress test" used in evaluating the soundness of banks and allied institutions. It is high time for a "demographic stress test" for Western economies: so that Western voters and their elected representatives can assess the scope and scale of the challenges that confront their societies, and deliberate in an informed manner about the most effective and responsible strategies for addressing these.

⁶ Earlier this year, Willem Buiter, chief economist of Citigroup, colorfully likened Switzerland's dilemma from the ongoing Euro-zone crisis to "living next to a great, drunken elephant" that has "fallen over". (*TagesAnzeiger*, 18 May, 2010). Europe's major economies, of course, will eventually resolve their current economic crises—but the magnitude of the dilemmas Switzerland will confront may be far greater as this now-tipsy "elephant" ages in the years ahead.

Financial crises can erupt suddenly - without a day's warning. By contrast, demographic pressures accumulate slowly - far too gradually to notice from one year to the next - yet they can transform the economic and social landscape fundamentally and irreversibly over the course of a generation. These long-term demographic forces, we maintain, may have an even more impact on transforming the economic outlook of Western societies than transient financial crises - no matter how painful and dramatic these appear to be at the time they unfold. We can already know today what the future holds, in broad outline, for population prospects of the Western economies.

In Charles Dicken's famous "Christmas Carol", Ebenezer Scrooge is chastened - and mends his ways - when he is confronted with a vision of the "Christmas future" that will otherwise await him. Will we - the affluent societies of the West - be prepared to do the same, given the demographic vision of the future that is about to confront us?

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