



Lloyd Miller

## The demographic deficit: **How aging will reduce global wealth**

*To fill the coming gap in global savings and financial wealth, households and governments will need to increase their savings rates and earn higher returns on the assets they already have.*

**Article at a glance:** As people in Japan, the United States, and the countries of Western Europe grow older, bank accounts in these nations, where most of the world's wealth is created and held, are likely to stop growing. Because people save less after they retire, and younger generations in their prime earning years are proving less frugal than their predecessors, savings rates are set to fall dramatically—with dire consequences for living standards in wealthy and poor nations alike.

**The take-away:** If no action is taken, the coming slowdown in global savings and the decline in projected financial wealth could depress investment and slow economic growth. A concerted effort to boost savings rates, shrink government deficits, and increase returns on financial assets can help avert this outcome.

## The demographic deficit: **How aging will reduce global wealth**

**Diana Farrell, Sacha Ghai, and Tim Shavers**

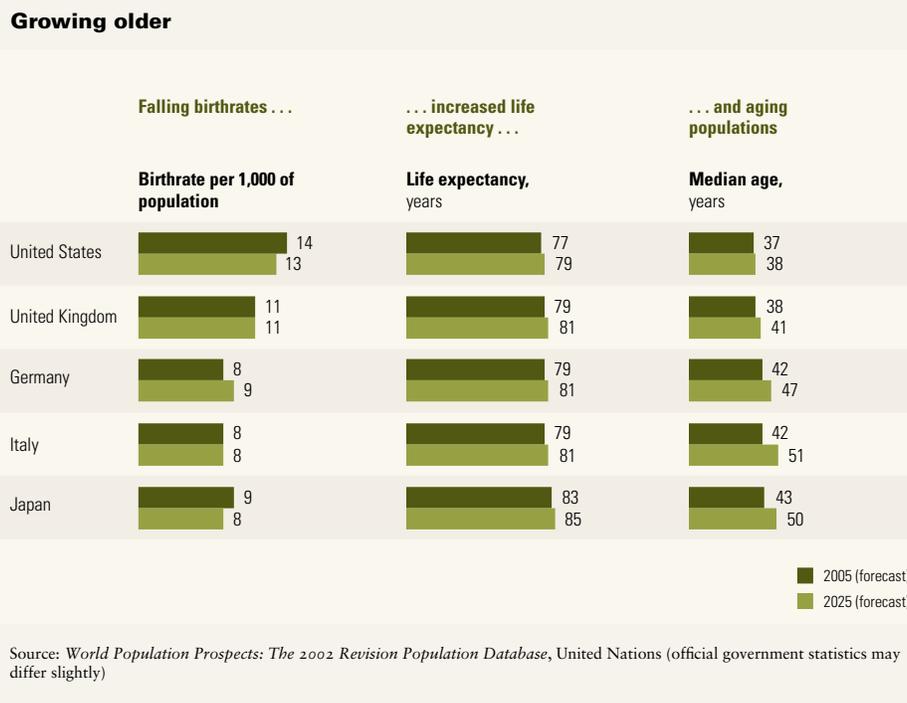
**The world's population is aging**, and as it gets even grayer, bank balances will stop growing and living standards, which have improved steadily since the industrial revolution, could stagnate. The reason is that the populations of Japan, the United States, and Western Europe, where the vast majority of the world's wealth is created and held, are aging rapidly (Exhibit 1). During the next two decades, the median age in Italy will rise to 51, from 42, and in Japan to 50, from 43. Since people save less after they retire and younger generations in their prime earning years are less frugal than their elders were, savings rates are set to fall dramatically.

In just 20 years, household financial wealth in the world's major economies will be roughly \$31 trillion<sup>1</sup> less than it would have been if historical trends had persisted, according to new research by the McKinsey Global Institute (Exhibit 2).<sup>2</sup> If left unchecked, the slowdown in global-savings rates will reduce the amount of capital available for investment and impede economic growth.

No country will be immune. For the United States—with its relatively young population, higher birthrates, and steady influx of immigrants—the aging trend will be relatively less severe. Still, its savings rate is already dismally low, even before the baby boomers have started to retire. To finance its massive current-account deficit, the United States relies on capital flows from Europe and Japan, but they too face rapidly aging populations. Even fast-growing developing countries such as China will not be able to generate enough savings to make up the difference.

Finding solutions won't be easy. Raising the retirement age, easing restrictions on immigration, or encouraging families to have more children will have little impact. Boosting economic growth alone is not a solution, nor is the next productivity revolution or technological breakthrough. To fill the coming gap in global savings and financial wealth, households and governments will need to increase their savings rates and to earn higher returns on the assets they already have. These changes involve hard choices but can offer a brighter future.

EXHIBIT I



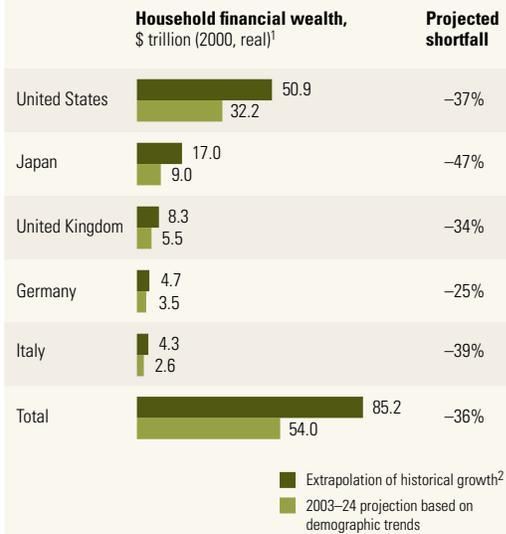
<sup>1</sup> All figures given in this article are valued in 2000 US dollars, and all growth rates indicate real terms.

<sup>2</sup> This study examined the impact of demographic trends on household savings and wealth in Germany, Italy, Japan, the United Kingdom, and the United States. The full report, *The Coming Demographic Deficit: How Aging Populations Will Reduce Global Saving*, is available for free at [www.mckinsey.com/mgi/publications/demographics/index.asp](http://www.mckinsey.com/mgi/publications/demographics/index.asp).

## The demographic deficit: **How aging will reduce global wealth**

### EXHIBIT 2

#### A savings slowdown



<sup>1</sup>Figures do not sum to total, because of rounding.

<sup>2</sup>For Germany, 1991–2003; Italy, 1986–2003; Japan, 1989–2003; United Kingdom and United States, 1975–2003.

Source: xe.com; McKinsey Global Institute household-financial-wealth model; McKinsey analysis

#### Growing older, saving less

In just two decades, the proportion of people aged 80 and above will be more than 2.5 times higher than it is today, because women are having fewer children and people are living longer. In about a third of the world's countries, and in the vast majority of developed nations, the fertility rate is at, or below, the level needed to maintain the population. Women in Italy now average just 1.2 children. In the United Kingdom, the figure is 1.6; in Germany, 1.4; and in Japan, 1.3. Meanwhile, thanks to improvements in health care and living conditions,<sup>3</sup> average life expectancy has increased from 46 years in 1950 to 66 years today.

As the elderly come to make up a larger share of the population, the total amount of savings available for investment and wealth accumulation will dwindle. The prime earning years for the average worker are roughly from age 30 to 50; thereafter, the savings rate falls. With the onset of retirement, households save even less and, in some cases, begin to spend accumulated assets.

The result is a decline in the prime savers ratio—the number of households in their prime saving years divided by the number of elderly households. This ratio has been falling in Japan and Italy for many years. In Japan, it dropped below one in the mid-1980s, meaning that elderly households now outnumber those in their highest earning and saving years. Japan is often thought to be a frugal nation of supersavers, but its savings rate actually has already fallen from nearly 25 percent in 1975 to less than 5 percent today. That figure is projected to hit 0.2 percent in 2024. In 2000, the prime savers ratios of Germany, the United Kingdom, and the United States either joined the declining trend or stabilized at very low levels. This unprecedented confluence of demographic patterns will have significant ramifications for global savings and wealth accumulation.

How the decline in prime savers will affect total savings depends on how these people's savings behavior changes over the course of a household's life. Germany, Japan, and the United States have traditional hump-shaped life cycle savings patterns (Exhibit 3). In these countries, aging populations will cause a dramatic slowdown in household savings and wealth. In contrast, Italy has a flatter savings curve, resulting in part from historical borrowing constraints that forced households led by people in their 20s and 30s to save more. Thus an increase in the share of elderly households will have less impact on the country's financial wealth.

In some countries, the relatively lower savings rates of younger generations in their peak earning years will exacerbate the slowdown in savings and wealth. In the United States and Japan, where we analyzed generation-specific savings data, several factors contribute to this pattern: a tendency to rely more on inheritance than past generations did, the good fortune to avoid the economic hardships that prompted earlier generations to be more frugal, and the availability of consumer credit and mortgages (which, in the case of Japan, have become more socially acceptable).

#### The coming shortfall in household wealth

Most of the public discussion on aging populations has focused on the rapidly escalating cost of pensions and health care. Little attention has been paid to the

<sup>3</sup> *The State of World Population*, 1999 and 2004, United Nations Population Fund.

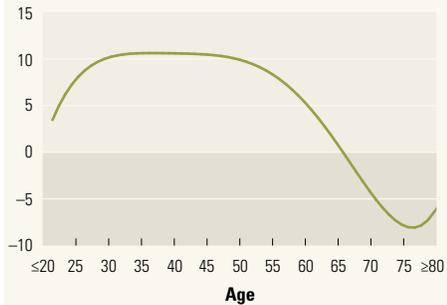
# The demographic deficit: **How aging will reduce global wealth**

## EXHIBIT 3

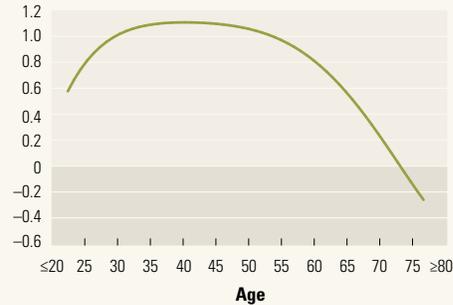
### Savers and spenders

Actual and projected annual savings per household

**United States,<sup>1</sup> \$ thousand (2000, real)**



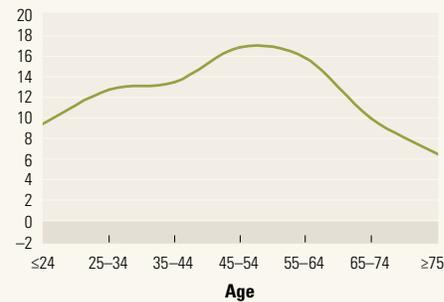
**Japan,<sup>2</sup> ¥ million (2000, real)**



**Germany,<sup>3</sup> € thousand (2000, real)**



**Italy,<sup>3</sup> € thousand (2000, real)**



**United Kingdom,<sup>4</sup> £ thousand (2000, real)**



<sup>1</sup> 1945–54 birth cohort.

<sup>2</sup> 1945–49 birth cohort.

<sup>3</sup> Representative cohort from Banks-Rohwedder study for Germany, from Baldini-Mazzaferro study for Italy.

<sup>4</sup> 1936–40 birth cohort.

Source: Consumer Expenditure Survey, US Bureau of Labor Statistics (BLS); Family Income and Expenditure Survey, Japan Ministry of Internal Affairs and Communications (MIC); James Banks and Susann Rohwedder, "Pensions and life-cycle savings profiles in the UK," in *Life-Cycle Savings and Public Policy: A Cross-National Study of Six Countries*, Axel Börsch-Supan (ed.), New York: Elsevier Academic Press, 2003, pp. 257–313; Massimo Baldini and Carlo Mazzaferro, "The consolidation of the public budget in Italy (1985–2000): An analysis of the re-distributive effects on Italian households," Università di Modena e Reggio Emilia, Dipartimento di Economia Politica working paper, Center for the Analysis of Public Policies (CAPP) series, Number 14, 2003; McKinsey Global Institute household-financial-wealth model; McKinsey analysis

## The demographic deficit: **How aging will reduce global wealth**

potentially far more damaging effect that this demographic phenomenon will have on savings, wealth, and economic well being. As more households retire, the decline in savings will slow the growth in household financial wealth in the five countries we studied by more than two-thirds—to 1.3 percent, from the historical level of 4.5 percent. By 2024, total household financial wealth will be 36 percent lower—a drop of \$31 trillion—than it would have been if the higher historical growth rates had persisted.

Of course, changes in savings behavior by households and governments or increases in the average rate of return earned on those savings could alter this outcome. Without such changes, however, our analysis indicates that the aging populations in the world's richest nations will exert severe downward pressure on global savings and financial wealth during the next two decades. The United States will experience the largest shortfall in household financial wealth in absolute terms—\$19 trillion by 2024—because of the size of its economy. The growth rate of the country's household financial wealth will decline to 1.6 percent, from 3.8 percent. Since the aging trend is less severe in the United States, reduced savings rates among younger generations are responsible for a large part of the decline.

In Japan, the situation is much more serious. Household financial wealth will actually start declining during the next 20 years: by 2024 it will be \$9 trillion—47 percent lower than it would have been if historical growth rates had persisted. Japan's demographic trends are severe: the median age will increase to 50, from 43 (for the US population, it will rise to 38, from 37), and the savings of elderly households fall off at a faster rate in Japan than in the United States. Even more important, household financial wealth in Japan is almost exclusively the result of new savings from income rather than of asset appreciation; therefore, the falloff in savings causes a bigger decline in wealth.

The outlook for Europe varies by country. Italy will experience a large decline in the growth rate of its financial wealth—to just 0.9 percent, from 3.4 percent—because of the rapid aging of its population. Its relatively flat life cycle savings curve will mitigate the impact, however, resulting in an absolute shortfall of about

\$1 trillion, or 39 percent. The projected decline in the growth rate of financial wealth in other countries will be less dramatic: to 2.4 percent, from 3.8 percent, in Germany (because of its higher savings rates) and to a still-healthy 3.2 percent, from 5.1 percent, in the United Kingdom (because of its stronger demographics).

### **Global ripple effects**

This slowdown in household savings will have major implications for all countries. In recent years the United States has absorbed more than half of the world's capital flows while running a current-account deficit approaching 6 percent of GDP. Japan has historically enjoyed a huge current-account surplus, which has allowed it to be a major exporter of capital to other countries, notably the United States. The expected drop in Japan's household savings will make this arrangement increasingly untenable.

In all likelihood, the United States also won't be able to rely on European nations, with their aging populations, to increase capital flows. Nor can it expect rapidly industrializing nations, such as China, to fill the gap. Even if China's economy continued to grow at its current breakneck pace, it would need approximately 15 years to reach Japan's current GDP. In any case, if China is to sustain this growth, the United States must continue consuming at its current level—something it cannot do if capital flows from abroad decrease. Even if China did have savings to export, it would have to confront the obstacles posed by its current exchange rate and capital controls regime.

Although an increase in global interest rates and the cost of capital may seem inevitable, it is not. On the one hand, as global savings fall markets can adjust through changes in asset prices and demand; which of these will predominate is unclear. Some economists forecast less demand for capital: fewer households will be taking out mortgages and borrowing for college, governments will invest less in infrastructure to keep pace with population growth, and businesses won't have to add as much capital equipment to accommodate a labor force that will no longer be growing. On the other hand, the demand for capital is likely to remain strong if emerging markets and rich countries seek to boost their GDP and productivity growth by increasing

## The demographic deficit: **How aging will reduce global wealth**

the amount of capital per worker. Likewise, while a drop in global savings could drive up asset prices, opposing forces will also be at work, as retirees begin selling their financial assets.<sup>4</sup>

One thing is certain: as household savings rates decline and the pool of available capital dwindles, persistent government budget deficits will likely push interest rates higher and crowd out private investment. The rising cost of caring for an aging population in the years to come will force national governments to exercise better fiscal discipline.

### No easy solutions

Many policy changes suggested today, such as increasing immigration, raising the retirement age, encouraging households to have more children, and boosting economic growth, will do little to mitigate the coming shortfall in global financial wealth (Exhibit 4).

Our analysis shows that an aggressive effort to increase immigration won't solve the problem, simply because new

arrivals represent only a tiny proportion of any country's population. In Germany, for instance, a 50 percent increase in net immigration (to 100,000 people a year) would raise total financial assets just 0.7 percent by 2024. In Japan, doubling official projections of net immigration would have almost no impact on the number of households or on the country's aggregate savings. The same is true even in the United States, which had the highest historical levels of immigration in our sample.

Since households don't reach their prime saving years until middle age, promoting higher birthrates through policies such as child tax credits, generous maternity-leave policies, and child care subsidies will also have only a negligible effect by 2024. This approach could actually make the situation worse by adding child dependents to a workforce already supporting a larger number of elderly.

Similarly, raising the retirement age won't be particularly effective in most countries. In Japan, efforts to expand the peak earning and saving period by five years (a proxy for raising the retirement age) would close 25 percent

EXHIBIT 4

### Addressing the shortfall

Efficacy of given approach on mitigating coming shortfall in global financial wealth



<sup>1</sup>Estimated by prolonging peak saving years by 5–10 years.

Source: McKinsey Global Institute household-financial-wealth model; McKinsey analysis

<sup>4</sup> Empirical analyses on the impact of demographic changes on financial-asset prices and returns are inconclusive. See Barry P. Bosworth, Ralph C. Bryant, and Gary Burtless, *The Impact of Aging on Financial Markets and the Economy: A Survey*, Brookings Institution, July 2004; and James Poterba, "The impact of population aging on financial markets," National Bureau of Economic Research working paper W10851, October 2004.

## The demographic deficit: **How aging will reduce global wealth**

of the projected wealth shortfall in that country. In Italy, however, this approach would have little impact because households do not greatly reduce their savings in retirement.

After the IT revolution and the jump in US productivity growth during the late 1990s, it may be tempting to think that countries might grow themselves out of the problem. Without changes in the relationship between income and spending, however, an increase in economic growth won't generate enough new savings to close the gap. The simple reason is that as incomes and standards of living rise, so does consumption. For instance, raising average income growth in the United States by one percentage point—a huge increase—would narrow the projected wealth shortfall by only 10 percent.

### **Navigating the demographic transition**

The only meaningful way to counteract the impending demographic pressure on global financial wealth is for governments and households to increase their savings rates and earn higher returns on those savings.

### **Boosting asset appreciation**

Because households vary widely from country to country in the way they invest savings and in the underlying performance of their respective domestic capital markets, rates of return differ significantly.<sup>5</sup> Since 1975, the average rate of financial-asset appreciation in the United Kingdom and the United States has been nearly 1 percent a year, after adjusting for inflation. In contrast, financial assets in Japan have depreciated by a real 1.8 percent annually over the same period (although the ten-year moving average is now near zero). Real rates of asset appreciation have been negative in Germany and Italy as well.

UK and US households compensate for their low savings rates by building wealth through high rates of asset appreciation. Their counterparts in Continental Europe and Japan save at much higher rates but ultimately accumulate less wealth, since these savings

generate low or negative returns. From 1975 to 2003, unrealized capital gains increased the value of the financial assets of US households by almost 30 percent. But in Japan the value of such assets declined. European countries fell somewhere in between.

Raising the rates of return on the \$56 trillion of household savings in the five countries we studied could avert much of the impending wealth shortfall. In Germany, increasing the appreciation of financial assets to 0 percent, from the historical average of -1.1 percent, would completely eliminate the projected wealth shortfall. The opportunity is also large for Italy, since its real rate of asset appreciation has averaged -1.6 percent since 1992; raising returns to the levels in the United Kingdom and the United States would fully close the gap. For the latter two countries, the challenge could be more difficult because their rates of asset appreciation are already high.

Achieving the required rates of return will call for improved financial intermediation so that savings are funneled to the most productive investments. To achieve this goal, policy makers must increase competition and encourage innovation in the financial sector and in the economy as a whole,<sup>6</sup> enhance legal protections for investors and creditors, and end preferential lending by banks to companies with political ties or shareholder relationships.

Households must also be encouraged to diversify their assets. For UK and US households, debt and equity securities make up the highest proportion of investments; these carry greater risk and volatility but generate substantially higher rates of return. In contrast, Japanese households keep more than half of their financial assets in cash equivalents. To promote a better allocation of assets, policy makers should remove investment restrictions for households, improve investor education, and create tax incentives for well-diversified portfolios. New research in behavioral economics has shown that offering a balanced, prudent allocation as the default option for investors can

<sup>5</sup>In this article, the terms "financial-asset appreciation" and "returns" refer to the unrealized capital gains on financial assets, not to interest and dividends paid. By convention, interest and dividends are treated as household income, a portion of which may be saved.

<sup>6</sup>For a good synthesis of MGI's research, see William W. Lewis, *The Power of Productivity*, Chicago: University of Chicago Press, 2004.

## The demographic deficit: **How aging will reduce global wealth**

improve returns because they overwhelmingly stick with this option.<sup>7</sup>

### Increasing savings rates

In many countries, today's younger generations earn more and save less than their elders do. This discrepancy is an important driver of the wealth shortfall in the United States and, more surprisingly, in Japan. If younger generations saved as much as their parents did while continuing to earn higher incomes, one-quarter of Japan's wealth shortfall and nearly a third of the US gap would be closed by 2024.

Persuading young people to save more is difficult, however, and tax incentives aimed at increasing household savings have yielded mixed results.<sup>8</sup> Contrary to conventional wisdom, too much borrowing is *not* the culprit in most countries. Although household liabilities have grown significantly faster than assets have across our sample since 1982, keeping consumer borrowing in line with asset growth would close \$2.3 trillion, or just 7.5 percent, of the projected wealth shortfall.

The key to boosting household savings is overcoming inertia. When companies automatically enroll their employees in voluntary savings plans (letting them opt out if they choose) rather than requiring people to sign up actively, participation rates rise dramatically.<sup>9</sup> A study at one US Fortune 500 company that instituted such a program found that enrollment in its 401(k) retirement plan jumped to 80 percent, from 36 percent; the increase among low-income workers was even

greater.<sup>10</sup> In addition, a substantial fraction of the participants in the automatic-enrollment program accepted the default for both the contribution rate and the investment allocation—a combination chosen by few employees outside the program.

Of course, governments can also increase the savings rates of their countries through the one mechanism directly under their control—reducing fiscal budget deficits. Maintaining fiscal discipline now is vital if governments are to cope with the escalating pension and health care costs that aging populations will accrue.

---

If policy makers take no action, the coming slowdown in global savings and the projected decline in financial wealth could depress investment, economic growth, and living standards in the world's largest and wealthiest countries. The future development of poor nations could also be in jeopardy. A concerted, sustained effort by households and governments to increase the returns earned on financial assets, boost savings rates, and close government budget deficits can avert this outcome. **Q**

The authors wish to thank Ezra Greenberg, Piotr Kulczakowicz, Susan Lund, Carlos Ocampo, and Yoav Zeif for their contributions to this article.

**Diana Farrell** is director of the McKinsey Global Institute, where **Tim Shavers** is a consultant; **Sacha Ghai** is a consultant in McKinsey's Toronto office. Copyright © 2005 McKinsey & Company. All rights reserved.

<sup>7</sup>Brigitte C. Madrian and Dennis F. Shea, "The power of suggestion: Inertia in 401(k) participation and savings behavior," *Quarterly Journal of Economics*, November 2001, Volume 116, Number 4, pp. 1149–87.

<sup>8</sup>B. Douglas Bernheim, "Taxation and saving," *Handbook of Public Economics*, Volume 3, Alan J. Auerbach and Martin Feldstein (eds.), New York: Elsevier North-Holland, 2002.

<sup>9</sup>James J. Choi, David Laibson, Brigitte C. Madrian, and Andrew Metrick, "Defined contribution pensions: Plan rules, participant decisions, and the path of least resistance," National Bureau of Economic Research working paper W8655, December 2001.

<sup>10</sup>Brigitte C. Madrian and Dennis F. Shea, "The power of suggestion: Inertia in 401(k) participation and savings behavior," *Quarterly Journal of Economics*, November 2001, Volume 116, Number 4, pp. 1149–87.