



The Graying of Europe: How Aging European Populations will Threaten Living Standards and Prosperity

| April 2005

The Graying of Europe: How Aging European Populations will Threaten Living Standards and Prosperity

McKinsey Global Institute

April 2005

McKinsey Global Institute

The McKinsey Global Institute (MGI) was established in 1990 as an independent economics think tank within McKinsey & Company to conduct original research on important global issues. MGI investigations are conducted with the goal of improving business performance and competitiveness while establishing a fact base for sound national and international public policy making.

MGI's staff members are drawn primarily from McKinsey's consultants. Under MGI's Director Diana Farrell, they serve 6- to 12-month assignments and then return to client work. MGI also commissions leading academics to participate in its research.

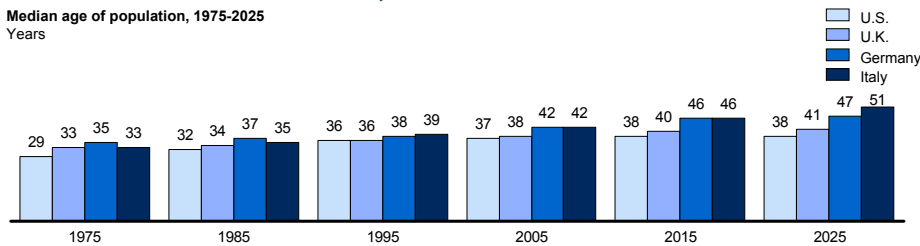
The Graying of Europe

Europe is getting older. By 2025, one in five Europeans will be over 65 years old, up from 16 percent today.¹ The median age will increase from 42 to 51 in Italy and from 42 to 47 in Germany. Across the continent, working-age populations will stagnate or shrink, while the number of retirees will explode (Exhibit 1).

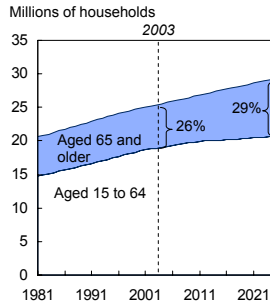
Exhibit 1

POPULATION AGING TRENDS, 1975-2024

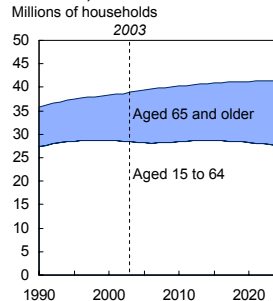
Median age of population, 1975-2025
Years



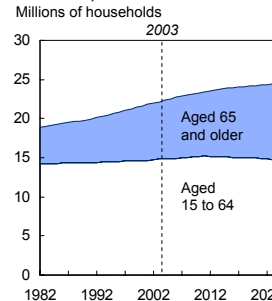
Age of head of U.K. household, 1981-2024
Millions of households



Age of head of German household, 1990-2024
Millions of households



Age of head of Italian household, 1982-2024
Millions of households



Source: ONS; Government Actuary, ODPM; Scottish Executive; MGI estimates; Statistisches Bundesamt; UN World Population Prospects; McKinsey Global Institute Household Financial Wealth Model; ISTAT; EUROSTAT; UN World Population Prospects; McKinsey Global Institute Household Financial Wealth Model

European policy makers have started grappling with how to pay for the soaring health care and pension costs that their older societies will require. Most people are focused on how these trends will affect government finances, but another challenge looms that is potentially just as daunting: aging will dry up the flow of household savings, sapping business expansion and slowing the rise in living standards.

New research by the McKinsey Global Institute shows that the steady, healthy growth in household financial wealth experienced for decades will slow dramatically over the next 20 years. We looked in detail at the demographic

¹ United Nations Population Division, "World Population Prospects: The 2002 Revision," Population Database, <http://esa.un.org/unpp/>.

trends under way in three of Europe's biggest economies: the UK, Germany, and Italy. In all three, the growth in household financial wealth will slow precipitously, leaving households with \$4 trillion less than they would have accumulated had historical growth rates persisted.² The reason for this is simply that people save less after they retire, and some households start spending their savings.

If left unchecked, this impending slowdown in savings and wealth could depress investment and economic growth in Europe's wealthiest countries; living standards will rise at a much slower pace than Europeans currently enjoy. There are, however, important differences among countries. The effects of aging on wealth will be mildest in the UK, due to its healthier demographics. The impact in Germany is somewhere in the middle of the three we studied and is moderated by its higher savings rate. Italy will experience a relatively large decline in the rate at which its wealth is growing, owing to its significantly aging population.

Unfortunately, the policy prescriptions now being offered to cope with this problem—such as raising the retirement age, limiting immigration, or encouraging families to have more children—will offset only a small portion of the coming shortfall in savings. The only meaningful way to blunt the impact of aging populations is to raise the savings rates of households and governments and increase the returns earned on those savings. The problems of aging societies are daunting, but tough choices made today can ease the pain tomorrow.

THE WEALTH OF EUROPE DECLINES

In 1998, 21 percent of Europeans were aged 65 or older. By 2025, this proportion will have grown to 33 percent; by 2050, it will be 47 percent.³ With fewer working-age citizens, who create most savings, and more retired citizens, who tend to spend their savings, the absolute level of savings will plunge across most of Europe.

² The full report, *The Demographic Deficit: How Aging Populations Will Reduce Global Saving*, also studied the impact of the aging trend in the United States and Japan, in addition to the UK, Germany, and Italy. It is available for free at www.mckinsey.com/mgi.

³ UN World Population Monitoring 1999.

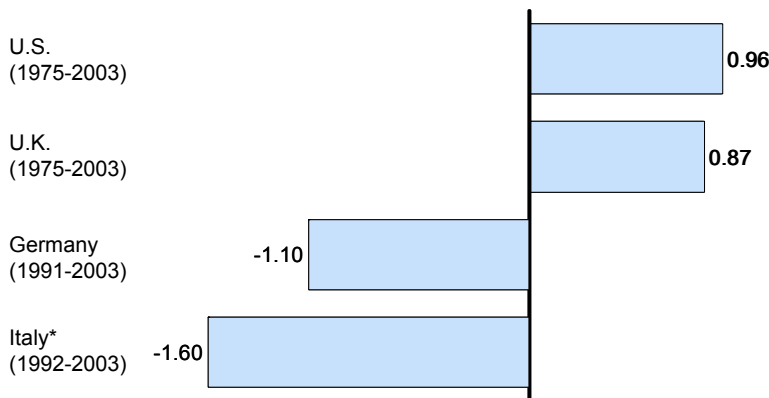
This process is already under way. The flow of new savings from German households has fallen 2 percent per year since reunification in 1991. In Italy, the flow of new savings has declined by 5.2 percent per year over the last two decades. (In the UK, savings flows are actually increasing slowly; we discuss this later.)

Households accumulate financial wealth either by saving money out of their income or by generating an increase in the value of their savings. The UK has a relatively low savings rate but has created more wealth through robust asset appreciation than its European neighbors. It has enjoyed positive returns comparable with the strong performance of the US (Exhibit 2). In contrast, Italy and Germany have relied more on strong savings behavior rather than on healthy rates of asset appreciation. In fact, Germany and Italy have experienced *negative* average rates of financial asset appreciation, when taking inflation into account.⁴

Exhibit 2

RATE OF FINANCIAL ASSET APPRECIATION IN THE DEVELOPED WORLD

Percent



* Data inconsistency in 1986 necessitated an assumption (used 1985 value)
Source: McKinsey Global Institute Household Financial Wealth Model

⁴ In this article, the terms *financial asset appreciation* and *returns* refer to the unrealized capital gains on financial assets, not interest and dividends paid. By convention and according to the European System of Accounts 1995 (ESA95), interest and dividends are treated as household income, a portion of which may be saved. See the full report for more technical details.

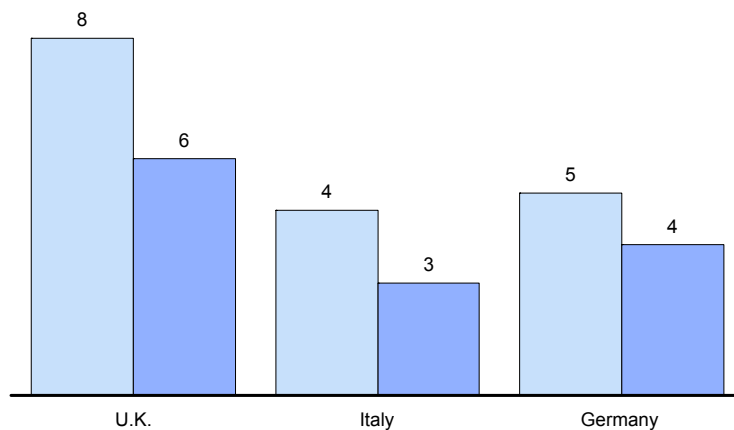
Even as overall growth in assets is slowing, liabilities will increase moderately in all the countries studied, often tracking rising real estate values. Driven by these twin forces, financial wealth in the UK, Germany, and Italy in 20 years' time is likely to be significantly less than it would have been had historical growth rates persisted. We estimate that financial wealth will be lower by £1.9 trillion in the UK, €1.2 trillion in Germany, and €1.8 trillion in Italy (Exhibit 3).

Exhibit 3

THE SHORTFALL IN HOUSEHOLD WEALTH

Household financial wealth
\$ Trillions

Extrapolation of historical growth*
2003-2024 projection based on demographic trends



Projected shortfall (%)	U.K.	Italy	Germany
	-34	-39	-25

* U.S., 1975-2003; U.K., 1975-2003; Italy, 1986-2003; Germany, 1991-2003
Source: McKinsey Global Institute Household Financial Wealth Model; xe.com exchange rates

For households, financial wealth accumulation is a good proxy for economic well-being. A slower rate of accumulation means that Europe's living standards, which have risen rapidly in the postwar era, will grow much more slowly. There will be less household savings to support a fast-growing retiree population, and it will become more difficult to support domestic investment and sustain strong economic growth.

THE SPECTRUM OF AGING

In each of the three countries we studied, demographic forces will have a different impact on household saving and wealth. According to our analysis,

the UK will experience the mildest impacts, Germany will see moderate effects, and Italy will face the most severe challenges.

The UK is aging in moderation

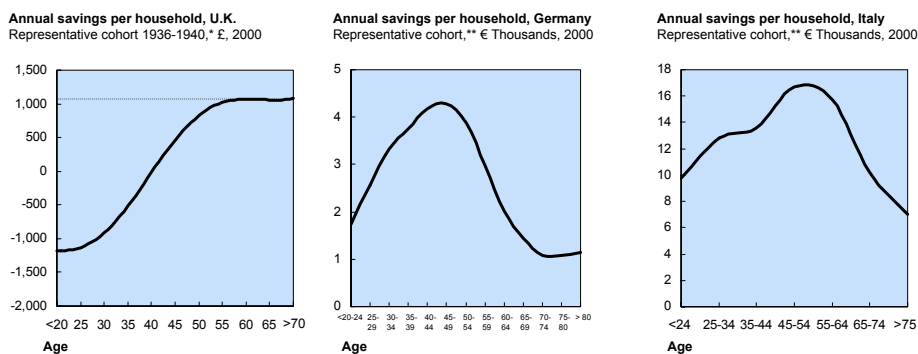
The effects of aging will be the least severe in the UK, partly because it has a higher birth rate than in Germany and Italy. The median age in the UK will rise to 41 by 2025, only three years higher than it was in 2005. The share of over-65 households also will rise slowly, from 26 percent in 2003 to 29 percent by 2025.

Contrary to the experience in most developed countries, where flows of new savings will slow down or even decline, aging is expected to have a slightly positive impact on savings in the UK. Even though the savings rate is relatively low—at about 6 percent of disposable income—we expect the flows of new savings to increase at an annual rate of 2.3 percent, averaging £56 billion a year until 2024, up from £42 billion in the past.

Exhibit 4

LIFE-CYCLE SAVINGS CURVE

ESTIMATE



* Data available for 1936-40 cohort aged 37-57; life-cycle curve estimates based on 1974-1995 data for 13 5-year cohorts born between 1906-1970
 ** Not calibrated to the national account levels
 Source: Banks and Rohwedder (2003), MGI analysis; Börsch-Supan; McKinsey Global Institute Household Financial Wealth Model; Baldini, Mazzaferro (2003); McKinsey Global Institute Household Financial Wealth Model

The main reason for this counterintuitive result is the peculiar shape of the UK's life cycle savings curve, which increases with age. This curve shows the difference between income and consumption over a person's lifetime. In the UK, saving peaks at age 55 and remains at the same level into retirement. This behavior is unlike that of most other developed countries (Exhibit 4).

Meanwhile, we project the UK's annual growth in liabilities to decline from a rate of 6.1 percent over the last three decades to 3 percent through 2024. If we combine these trends in savings and liabilities, we can produce a measure of household financial wealth. With increasing savings and declining liabilities, we expect the UK's rate of wealth accumulation to decline from an impressive 5.1 percent over the period 1975 to 2003, settling to a still-healthy 3.2 percent between 2003 and 2024.

Over the next 20 years, this slower growth rate will cause total UK household financial wealth to be 34 percent, or £1.9 trillion, below what it would have been had historic growth rates persisted.⁵ While this slowdown is not insignificant to the UK, it is much milder than in the other countries we have analyzed. Indeed, our 3.2 percent estimate for the annual growth rate of UK household wealth is twice as high as in the US for the same period.

Storm clouds gather over Germany

Aging will be more dramatic in Germany. With a median age of 42 today, the German population is already significantly older than those of the UK or US. In 2024, the median age will be 47. At the same time, the number of individuals in Germany aged 65 and older will rise from 18 percent in 2003 to 23 percent by 2024.

Falling birth rates will cause the German population to actually start declining in 2015. With fewer people, overall savings are expected to grow slowly up to 2015 and to fall steadily thereafter. Still, at around 11 percent of income, the savings rate is much higher than in the US and the UK.

Germany has a traditional "hump-shaped" life cycle savings curve, with savings rising to a peak in the middle years and falling off later—a pattern that is quite different from that of other countries. Savings rise steeply to a peak

⁵ Unless otherwise noted, all growth rates are quoted in real terms, and values are in 2,000 constant pounds or euros.

for persons in their late 40s, slope markedly down in the late 50s, and then plateau at a low level into retirement (see Exhibit 4). Relative to other countries, savings start tailing off at an early age, and this magnifies the impact of aging.

The Germans' high savings rate declined following reunification and the absorption of the former East German economy, and flows fell, too. Over the next two decades, Germany's savings will be static. On the other side of the wealth equation, overall liabilities are projected to grow at 1.8 percent over the same period, down from 3.4 percent between 1991 and 2003.

Over the next 20 years, these shifts will cause the rate of financial wealth accumulation to slip to 2.4 percent a year from an annual 3.8 percent experienced between 1991 and 2003. German household wealth will be 25 percent, or €1.2 trillion, below what it would have been had historic growth rates continued. Were it not for Germans' high savings rate, this effect would be even more pronounced.

Italy feels the most pain

Of the major European economies we studied, the one that will experience the most severe impact from aging is Italy, a country that has seen massive demographic change over the last two decades. The number of households aged 65 and older increased by a staggering 55 percent between 1986 and 2003. By 2024, there will be over *1 million* people in Italy over the age of 90, and the median age will be 51, by far the highest of the countries we have analyzed.

Falling birth rates have led to an overall decline in Italy's population growth rate. After 2012, the absolute number of Italians will start to fall. Total household savings will be lower because there will be progressively fewer households in their peak saving years. Overall, savings will slowly decline over the next two decades.

This is despite the fact that Italians are by no means low savers: even as the population growth rate has fallen, they still saved nearly 10.5 percent of their disposable income in 2002. But the late 1980s and 1990s saw a drop in the flow of new savings of 5.2 percent per year. This falling trend will continue, albeit at a slower rate; we project a 1.7 percent drop over the next two decades.

The situation could have been much worse—with *falling* living standards such as we expect to see in Japan—if it hadn't been for the mitigating effect of Italians' unique savings behavior. The Italian life cycle savings curve is also hump-shaped with higher savings in the middle years (Exhibit 4). However, in contrast to countries such as the US and Japan where, during certain periods of their lives, people spend more than they earn, Italians continuously save at a high level. Therefore, changes in average household savings over an Italian's lifetime are mild, and the impact of aging on savings is reduced.

Looking at liabilities, household debt levels in Italy are unusually low in comparison with other developed economies, due to restrictive lending policies and consumers' general aversion to debt. As a result, liabilities are not a major driver of changes in wealth, although this situation has been changing with EU-wide regulatory liberalization. Growth in household liabilities will slow from the 7.5 percent annual rate of the past two decades to 2.6 percent annually through 2024.⁶

Combining Italy's declining savings and falling liabilities, its rate of wealth accumulation will fall significantly over the next 20 years, even taking into account Italians' positive savings behavior. By 2024, financial wealth will be 39 percent, or €1.8 trillion, below what it would have been had historic growth rates continued. With the number of working-age households continuing to grow more slowly than elderly households, the demographic structure of Italy will become increasingly less able to support wealth accumulation. As in Germany, slower accumulation of financial wealth is likely to mean weaker growth in future living standards and less household savings to support retirees and fuel economic growth.

The overall damage

For all the countries studied, the impending reduction in financial wealth may pose a number of risks to their economies as a whole. The scenario could look something like this: Lower savings leads to a lower level of capital available to fuel growth. A slowdown in GDP reduces corporate earnings and government

⁶ In projecting future liabilities growth, we therefore assume an Italian liabilities-to-income ratio growing at historic trend levels. With the US benchmark liability-to-income ratio currently at around 1.2, our base case makes for a good initial scenario. Our assumption on growth of liabilities-to-income ratio at historic trend levels will bring this ratio to 0.83 in 2024, still well below the US benchmark.

tax revenues at a time when Europe will be grappling with fast-rising health care costs. Reduced tax revenues exacerbate government budget deficits. And the deficits increase the risk of rising real interest rates crowding out private-sector borrowers, causing investment to decline further. This is a hypothetical picture, but the risk of this scenario unfolding increases significantly with lower levels of savings and financial wealth.

CHANGING COURSE

There are no easy policy solutions for Europe. Frequently mentioned options such as increasing immigration or encouraging families to have more children will have little impact in the next 20 years. This is because new immigration represents only a tiny portion of the European population, and children born today won't enter their prime saving years for several decades.

One sensible step, given the significant increase in average life spans over the last 50 years, would be to raise the retirement age, so prolonging the period in which households typically save the most. In Germany, we found that upping the retirement age by 10 years averted 42 percent of the projected wealth shortfall. In Italy, however, the same policy shift moderated the shortfall by only 2 percent.

To make a real difference, Europe must not only increase savings rates but also boost the returns on those savings by improving the productivity and capital efficiency throughout the economy. The need for these measures varies by country.

Increasing savings

Given the UK's already high rate of financial asset appreciation, it is unrealistic to expect much progress in that area. So the priority must be to boost the UK's already low savings rate. This would improve the situation measurably. However, persuading people to save more is difficult, and tax incentives to increase household savings have yielded mixed results.⁷

⁷ B. D. Bernheim and B. Douglas, "Taxation and savings," in *Handbook of Public Economics*, vol. 3, edited by A. J. Auerbach and M. Feldstein (North Holland, 2002).

A better option is to enroll people in voluntary savings plans automatically and let them opt out if they choose, rather than requiring them to sign up themselves. According to research in behavioral economics, when companies do this, participation rates rise dramatically. 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 larger.⁸ In addition, a substantial fraction of participants in the automatic-enrollment program retained both the default contribution rate and the investment allocation, a combination picked by few employees outside the program.

Boosting rates of asset appreciation

For countries like Germany and Italy, where savings rates are already robust, improving returns will be critical for reversing the coming shortfall in savings and wealth. Boosting the rate of financial asset appreciation⁹ could be particularly effective because it applies to a country's entire stock of financial assets, not just its much smaller annual flow of new savings.

There is ample room for improvement. Between 1991 and 2003, German financial assets *depreciated* in value by an inflation-adjusted annual 1.1 percent. Italian assets declined 1.6 percent annually over a similar period. This compares with the UK's relatively high annual increase of 0.87 percent over the last 30 years or so, second highest among the countries we studied, just behind the US.

In Germany, merely reversing the depreciation trend over the next 20 years—bringing up the average rate of real financial asset appreciation to just 0 percent—would fully offset the coming wealth shortfall. In Italy, raising asset appreciation to 0.9 percent, the same level as in the US and the UK, would fully offset the projected decline in financial wealth.

But raising German and Italian rates of return to anywhere near US and UK levels will be difficult. These countries will have to improve the efficiency of their financial systems and boost productivity throughout their economies.

⁸ Brigitte C. Madrian and Dennis F. Shea, "The power of suggestion: Inertia in 401(k) participation and savings behavior," *Quarterly Journal of Economics*, vol. 116, no. 4 (November 2001), pp. 1149-87.

⁹ In this article, the terms "financial-asset appreciation" and "returns" refer to the unrealized capital gains on financial assets, not interest and dividends paid. By convention, interest and dividends are treated as household income, a portion of which may be saved.

Increasing financial-system efficiency

Securing higher rates of return will require more efficient financial intermediation to ensure that savings are channeled to their most productive uses. More transparent and liquid financial systems encourage corporate managers to improve performance by exposing sub-par performers and denying them funding, so catalyzing the natural evolution of an economy. To increase financial-system efficiency, policy makers must increase competition and encourage innovation in the financial sector and the economy as a whole.¹⁰

German banks are an example of an industry in which the lack of intense product market competition, combined with labor market rigidity, has caused productivity to lag behind more efficient banking systems such as those in the US. This is despite strong IT-fueled productivity gains in the late 1990s.¹¹ The German banking industry is highly fragmented. Many institutions, such as the Sparkasse and mutual banks in Germany, were created with the specific role of promoting regional development, not necessarily achieving profitability. Small Landesbanken are given access to favorable mortgage guarantees that protect them from competition with more productive banks.

Policy makers in Germany (and elsewhere in Europe) should work to end preferential bank lending to companies with personal ties or shareholder relationships, as well as bailout guarantees and other protections that shield unprofitable banks from competition. Investor protection regulations also could be reformed. Some regulations—in Belgium and France, for example—may actually be depressing returns because they appear to make banks liable if investors lose money on “unreasonable investments.”

In countries like Germany and Italy, where households keep a large portion of their financial assets in deposit accounts, diversifying the range of assets held by individuals is an important means of increasing the efficiency of capital

¹⁰ For a good synthesis of MGI's research on how to increase competition and innovation in an economy, see William Lewis, *The Power of Productivity* (Chicago: University of Chicago Press, 2004).

¹¹ For an in-depth discussion of productivity in the French and German banking system, see Martin Neil Baily and Jacob Funk Kirkegaard, *Transforming the European Economy* (Washington, DC: Institute for International Economics, 2004), p. 123; and Stephan Kriesel, Peter Leukert, and Tidjane Thiam, “French and German banking: Showing IT's strength,” *The McKinsey Quarterly*, 2003 no. 1.

allocation. High demand for low-risk, low-return assets implies that higher-risk, higher-return assets are being mispriced. Moving households closer to the efficient frontier of risk and return should align pricing more precisely and lead to a more fine-tuned exertion of capital markets discipline. Policy makers can help by removing investment restrictions for households, improving investor education, and creating tax incentives for well-diversified portfolios.

Increasing productivity throughout the economy

Finally, Germany and Italy must increase productivity throughout their economies if they are to achieve higher financial returns. Higher productivity leads to efficiency gains and earnings growth; these, in turn, increase future earnings expectations and allow corporations to pay out higher dividends to shareholders. In sum, increased productivity triggers more economic growth.

Structural reform is necessary. Policy makers will have to do away with regulations and policies that: protect inefficient companies, prop up “local champions,” prevent mergers and acquisitions, and maintain trade barriers with the rest of the world. They will have to: ease zoning and land regulations that prevent large enterprise development, make it easier for new companies to do business, and continue the process of privatizing many state-owned companies. Finally, they will need to make labor policies more flexible and increase incentives to work.¹²

* * *

Europe’s rapidly aging population and the poor investment returns in many countries will cause a shortfall in savings and financial wealth, squeezing the amount of capital needed to fuel growth. Because the rest of the developed world is experiencing similar aging trends, Europe cannot rely on inflows of foreign savings to make up for its domestic savings gap. The challenge varies in different economies, but options are available. Europe needs to start working on them now.

¹² For a detailed discussion of these reforms, see Baily and Kirkegaard, *Transforming the European Economy* (Washington, DC: Institute for International Economics, 2004).