Allianz **Demographic Pulse**

Allianz

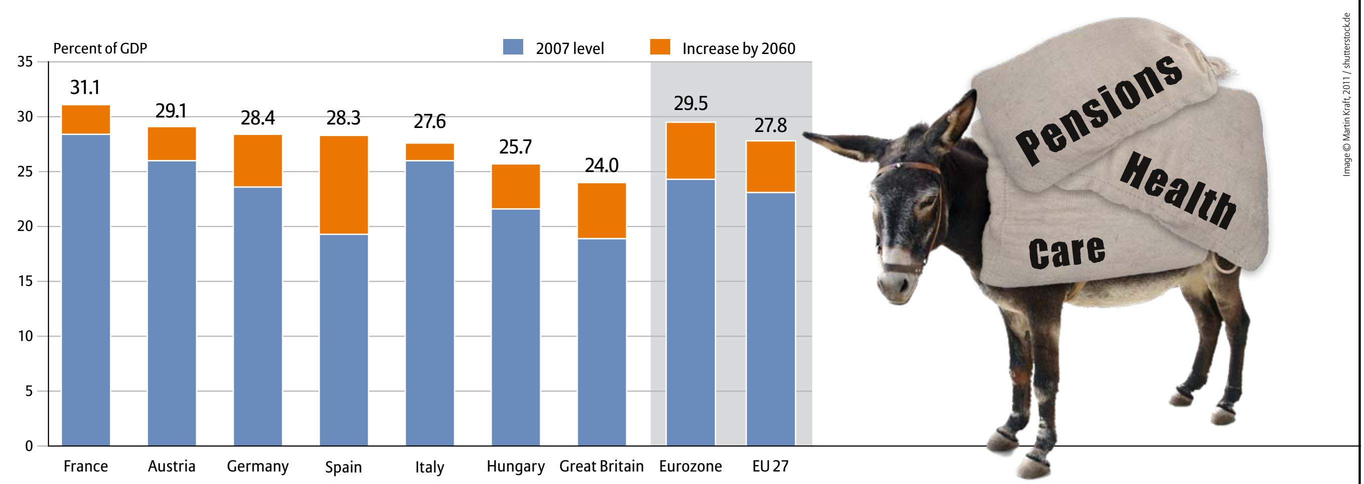
www.allianz.com issue # 5 | March 2011

The Burden of our Long Lives...

It is predicted that age-related government expenditure for **pensions, health and care will consume nearly 30%** of Europe's annual economic output by 2060.

The financial crisis has placed national deficits at the focus of political debate and public awareness. Economic programs, capital injections in the financial sector and falling tax revenues have dyed public finances deep red in countries the world over. The precarious financial standing of Greece, Portugal and Ireland has also shown that national financial crises are no longer restricted to emerging markets but can become a real challenge everywhere.

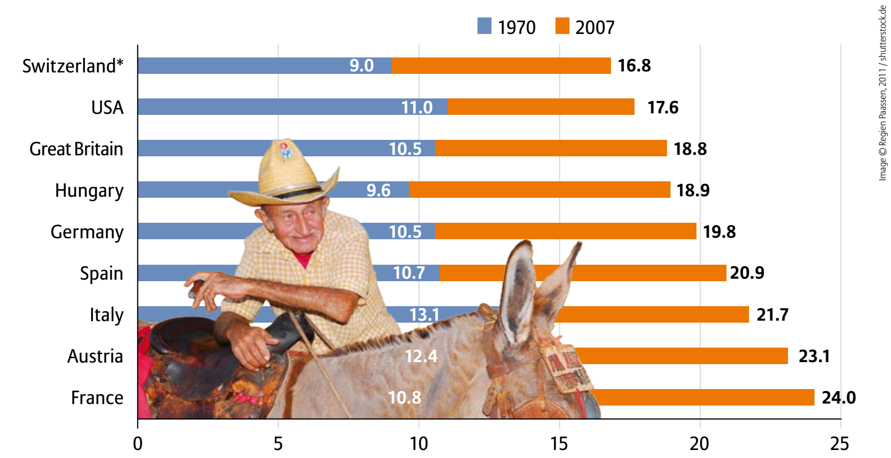
Cost explosion of pension, health and care costs everywhere in Europe



Sources: Allianz/European Commission: The 2009 Ageing Report

Age-related state spending for pensions, health and care in 2007 and prediction for 2060

Longer lives – longer retirement



* Data based on 2008

Sources: Allianz / OECD / Swiss Statistics

The expected time spent in retirement increased significantly everywhere between 1970 and 2007

The financial crisis has placed an enormous burden on state budgets. However, in all probability the shock will pass in time. The same cannot be said of the rapid aging of our societies. **Unlike the financial crisis, this new global challenge is foreseeable. Its effects are long-term and slow to develop, which is why they are quickly forgotten – or do not even become the subject of public debate.**

Nevertheless, aging is a global structural trend with potentially dramatic social and economic consequences, one of which is that state budgets will be dominated by spending on pensions, health and care. The main effects are:

First, the aging of society greatly increases government spending on pensions, health and care. It is predicted that by 2060 these costs will rise by 4.75 percentage points of gross domestic product (GDP) compared to today. **To put this into perspective, the current economic output (586[1] bn Euro) of the Netherlands accounts for the same share of European GDP today!** Thus, age-related state expenditure could make up 28% of GDP in the EU 27. In the Eurozone the increase will be 5.2 percentage points and total spending 29.5% of GDP.

Second, the aging process is a worldwide phenomenon that affects industrialized and emerging countries alike. A combination of increasing life expectancy and falling retirement age until the late 1990s has meant that many people now enjoy a much longer retirement. Whereas rapid population aging in China calls for further development of the state social systems, the main driver of government spending in the USA is the healthcare system.

Third, a comparison of pension systems in terms of their sustainability shows that those with diversified pension income from various pillars are fiscally the most sustainable. For this reason Australia and Sweden lead the pack in the Allianz Pension Sustainability Index.

Aging and public finances

An aging population has repercussions across the board. Pensions, health and care are just the most obvious and most directly affected areas, as these areas account for the lion's share of public expenditure. On the other hand, governments will spend less in other areas of an aging society: lower birth rates mean less is spent on education, and a smaller workforce should reduce unemployment.

According to EU Commission projections, when these effects are taken into account population aging will increase state expenditure by 4.75% of GDP in the EU and by half a percent more in the Eurozone. This increase means that by 2060 around 28% of GDP will be spent in these areas. To put this into context, according to the International Labor Office the fiscal programs imposed in the EU during the recession are on order of 0.3 to 2.8% of GDP[2]. These figures do not imply that the trend will peak by 2060. The time at which public spending peaks differs from country to country, and the pressure on state finances is felt much earlier. In the Eurozone, age-related public spending is expected to swell by 3.2 percentage points by 2035 and by two percentage points in the following 25 years. Generally speaking, the pressure on national budgets is not just a direct consequence of demographic trends but depends to a large extent on the nature of each national system and on policy decisions.

1 Age-related government expenditure in 2060 cannot be assessed in absolute terms. This figure is to provide a sense of proportion by referring to today's Dutch GDP in absolute terms; the Dutch GDP today accounts for 4.75% of the current European GDP.
2 Steffen Ahrens. Fiscal Responses to the Financial Crisis. Kiel Institute for the World Economy Policy Brief No. 11/2009.

Enormous proportions

This is one reason why increases in age-related public spending will vary considerably in the EU and in some countries take on enormous proportions, albeit from very different baselines. In this respect the EU countries can be divided into three groups[3].

- **Countries with expected increases in public spending of more than seven percentage points of GDP by 2060: Greece, Spain, Slovenia, the Netherlands and Ireland.**
- **Countries with expected increases in public spending of four to seven percentage points of GDP: Germany[4], the Czech Republic, Slovakia, Hungary and the UK.**
- **Countries with expected increases in public spending of less than four percentage points of GDP: Austria, France, Denmark, Italy, Bulgaria, Sweden and Poland.**

The increase in age-related public spending is not uniquely a European phenomenon; it is worldwide, although the challenges differ from country to country.

The USA's healthcare problem

The USA can expect a relatively favorable demographic trend, and for the most part Social Security is designed to provide only a basic income. Nevertheless, the USA will be greatly affected. Healthcare is driving up public spending and is particularly affected by an aging society because of its institutional structure. Public spending has risen by 5% per annum since 1970, and if this trend continues will reach 18% of GDP by 2050[5]. This would be much higher than in other industrial countries with less favorable demographic trends. Other analyses have come to similar conclusions. The US Congressional Budget Office has estimated that over the next 25 years US public spending on pensions and healthcare combined will grow from approximately 10% of current GDP to 16% if today's regulations are maintained[6]. The greater part of the increase will be spent on healthcare.

Asia will also be affected

Aging is not limited to industrial countries; it also has an impact on the emerging Asian economic powers such as South Korea, Taiwan, Singapore and China, and this impact is partly even greater, particularly in terms of speed. Although China has a relatively young population at the moment, this will change dramatically in the coming years. For reasons that will be discussed later, the birth rate has fallen from 5.5 children per female in 1960 to just 1.8 today. At the same time life expectancy has risen by an astonishing 28 years.[7] Aging in China has thus set in during a much earlier phase of economic development than in Europe for example. The extent to which this will affect state spending is hard to predict, since both the pension and healthcare systems are in a stage of early development or reform. At the moment China spends 2.7% of its GDP on pension payments.

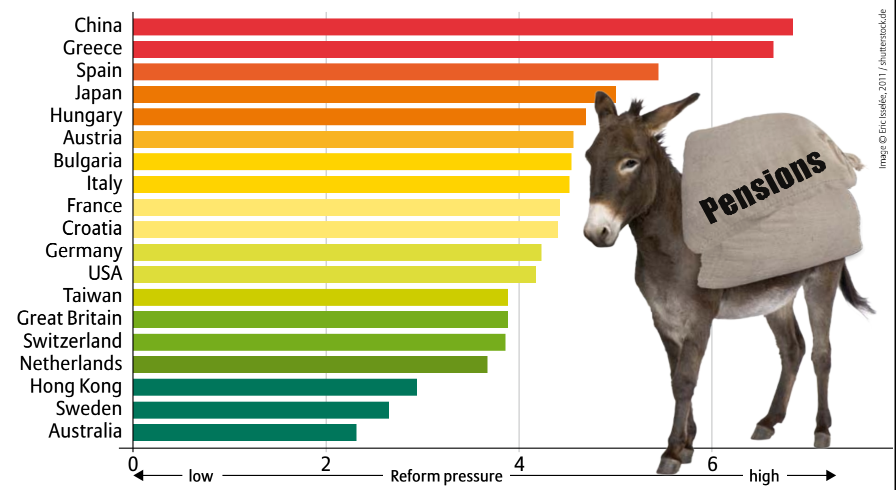
There are two pension systems in China: one designed for employees in cities and the other for rural areas. However, less than half of workers in cities and just 12% of workers in rural areas are covered.[8] Thus, most Chinese are not integrated in the pension system. Nor is the healthcare system by any means available to all Chinese. Reforms of the rural pension system aim to include the entire rural workforce by 2020. Age-dependent state expenditures in China will depend largely on which reforms are introduced and implemented. However, it is already clear that these reforms and their design are among the most daunting social, economic and fiscal challenges facing China today.

Aging societies everywhere

Aging societies are either already a reality or soon will be in many countries. The proportion of the population over age of 60 in the German and Italian populations, which currently stands at around 26%, is set to swell to one third of the population within 15 years and to around 40% by 2050. Countries such as France, Sweden and the USA are aging somewhat slower but at an appreciable rate. In Asia the two countries most affected are Japan and South Korea. Japan is already the oldest society in the world, while South Korea is undergoing rapid aging. In China the process has started somewhat later, but the country will nevertheless age within a generation. The social aging process is driven everywhere by rising life expectancy in combination with decreasing fertility. As a result, the number of elderly in society is growing, while the number of younger people is shrinking. The reasons for this development lie in the interplay between better healthcare, improved nutrition and higher standards of living.

3 European Commission. The 2009 Ageing Report: Economic and budgetary projections for the EU-27 Member States (2008–2060), European Economy 2/2009, p. 27.
4 In the case of Germany, the projected increase means that social security contributions would have to increase from just under 40 to just under 50% to keep public finances sustainable. Deutsche Bundesbank 2009. Monthly Report July, p. 35.
5 George Magnus 2009. The Age of Aging. John Wiley & Sons, p. 131
6 Congress of the United States Congressional Budget Office. The Long-Term Budget Outlook. August 2010 Revision
7 United Nations. Population Division, World Population Prospects: The 2008 Revision Population Database
8 Heikki Oksanen 2010. The Chinese Pension System: First Results on Assessing the Reform Options. European Economy Economic Papers 412, Data relate to 2008.

Fit for the future? Comparing the burden of pension systems



Source: Allianz Global Investors, Pension Sustainability Index 2009

The Pension Sustainability Index measures the sustainability of a pension system based on demographic development, pension system structure and the status of public finances. The countries in red are subject to the greatest reform pressure, while those in green have the most sustainable pension system.

The lower fertility rate is also influenced by higher standards of living as well as urbanization, better educational opportunities and a growing employment rate for women. The consequence is that the average age of populations is increasing. An extreme example is South Korea. In the past 50 years the average number of children per women has fallen from more than six to just over one, while life expectancy has increased by more than 25 years. The average age of the population is therefore expected to increase from just under 30 in the mid-1990s to around 50 by 2013.

This process influences state spending in several respects. With regard to state pensions, more pensions, of course, mean higher pension payments and, because of increasing life expectance, they have to be paid longer. At the same time the number of people in gainful employment paying into and financing the system is dwindling. Moreover, it can be assumed that an aging society will place greater demands on health and care services.

By the end of the 1990s rising life expectancy together with a falling retirement age led to an enormous increase in the time people spend in retirement. The graph on page 2 illustrates the increase in retirement time for men in the period between 1970 and 2007.

More time spent in retirement

In the industrialized countries people spend around 20 years in retirement. Thus, the relationship between retirement age and life expectancy has been reversed since the first statutory pension scheme was introduced in Germany by Bismarck 1889. At the time, the retirement age was 70 while the average life expectancy was just 45. This development has arisen as the result of enormous social, medical and social advances. And although widespread diseases, such as obesity counterbalance rising life expectancy, most experts believe that life expectancy will increase further, continuing a trend in industrialized countries that began in 1840.

Pension Sustainability Index

The greatest increase in state spending is typically accounted for by payments into the state pension system. In recent years nearly all industrialized countries have introduced radical pension reforms. Typical measures include raising the retirement age and applying new assessment criteria, the chief aim being to make the public systems more sustainable and future-proof. However, this also means that pensioners in the future will draw lower pension payments than their predecessors. At the same time, and as a second part of pension reform, capital-funded pension funds have been introduced or expanded.

In order to evaluate the extent to which countries are on the path toward a sustainable pension system, Allianz Global Investors devised the Pension Sustainability Index. This index measures the sustainability of pension systems based on the interplay of demographic development, the current structure of the pension system and the health of public finances in the country under consideration. Various sub-indicators are subsumed in these categories, e.g. current national debt, ongoing reforms, retirement age, strength of capital-funded pension pillars and several other factors. These sub-indicators are weighted and used to derive a figure that expresses the fiscal sustainability of the pension system and thus the residual reform pressure.

Australia and Sweden are sitting pretty as far as pension system sustainability is concerned. China and Greece, by contrast, are under enormous pressure to make their pension systems fit for the future.

Pension systems are highly complex arrangements. However, for all their differences countries with a low reform pressure have one thing in common: they can point to a comparatively favorable demographic development and relatively low national debt, as well as strong capital-funded pillars and thus balanced pension income. This pension design reduces the burden on state finances. It also means that individuals' pension income is derived from various sources. Thus, the overall risk is reduced, since the individual sources are exposed to different risks. This is similar to the diversification principle for capital investments.

Control, but how?

The aging of societies will place a huge burden on state finances, particularly as a consequence of increasing expenditures for pensions, health and care. For this reason the main mechanism for controlling these expenditures is to set up sustainable and financially viable systems in these areas. Many major reforms have already been implemented, though not to the same extent in every country.

An equally important factor is economic growth. The fiscal effects of aging are much easier to shoulder in a growing economy than in a stagnating or shrinking one. However, aging societies also have potential effects on economic growth. Two main factors are at play. First, the number of employees decreases. This means that potentially less can be produced and the economy grows at a slower pace. However, economic policies can counter this development by integrating more people in the work process. The focus here is on elderly workers and women, as reflected in recent heated debates about the retirement age in German and France.

Second, there is the question as to whether aging societies can be as innovative and productive as younger societies. Definitive findings are lacking, but there is at least evidence that elderly workers can be just as productive as their younger counterparts depending on the tasks at hand and the composition of age-mixed teams. As far as innovation is concerned, there is a lack of robust evidence. However, it is conceivable that aging societies will require new kinds of products and services so that entirely new markets develop, and aging societies that prepare for them early will gain competitive advantages.

Sustainable pension systems: the example of Sweden

Sweden, alongside Australia, is the country with the most sustainable pension system, a prime example of the diversification of pension income among various pillars. The state pension system tries to establish equivalence between contributions and pension payments and is complemented by capital-funded reserve funds. In addition, part of social security contributions is invested in investment funds that the insured party can choose him/herself. At the same time, the vast majority of employees are covered by company pension funds. This design strikes a balance between the various pillars while ensuring the financial feasibility and sustainability of the system as a whole. The example of Sweden also shows that capital-funded pensions and a developed welfare state are not mutually exclusive and, in fact, can complement each other.

The tools

As we have seen, sustainable social systems and economic growth are the two main tools for controlling the effects of aging on state finances. If the course is set in the right direction in time, the state can maintain its determining role and attention can shift from the challenges of aging societies to the opportunities they offer.

Editor: Dr. Alexander Börsch, Allianz, Senior Economist, International Pensions

Publisher: Allianz SE, Königinstrasse 28, 80802 Munich, Germany | Claudia Mohr-Calliet, claudia.mohr-calliet@allianz.com I http://www.allianz.com

Why does Allianz care about demography?

As a global financial service provider, Allianz believes demographic change to be of crucial importance. Identified as one of the major megatrends, demographic change will hold the key to many upcoming social challenges, whether with regard to health, old-age provision, education, consumption or capital markets.

Why does it matter to journalists and the public?

Demographic change is challenging today's societies in many ways: People are getting older, and this raises the issue e.g. of long-term care and dementia. Furthermore in the future there will be a significant decline in the workforce in all of the world's markets, triggering for example a challenge in pension funding. Only information, awareness and discussion on the topic will help to change attitudes, behavior and situations, so hopefully solve urgent needs and come up with innovative solutions.

What are the benefits of Allianz Demographic Pulse?

Allianz Demographic Pulse is based on the latest research into various aspects of demographic change. Conducted and written by Allianz experts, it highlights current and globally relevant demographic data and provides an insight into their impact on worldwide economies and societies. To ensure up-to-date coverage of major developments in this field, Allianz Demographic Pulse is published on a regular basis, thus providing ongoing and detailed information about a major trend that is shaping the world we live in.

More publications at:

Allianz Group Economic Research & Corporate Development
https://www.allianz.com/en/economic_research/publications/index.html

International Pensions at Allianz Global Investors
http://publications.allianzgi.com/en/PensionResearch/Pages/PensionResearch.aspx

Allianz Knowledge Site
http://knowledge.allianz.com/

Do you have any comments, suggestions or questions? We look forward to your feedback!

Please contact: Claudia Mohr-Calliet, ++49 89 3800 18797
claudia.mohr-calliet@allianz.com

These assessments are, as always, subject to the disclaimer provided below.

Cautionary note regarding forward-looking statements: The statements contained herein may include statements of future expectations and other forward-looking statements that are based on management's current views and assumptions and involve known and unknown risks and uncertain-ties that could cause actual results, performance or events to differ materially from those expressed or implied in such statements. In addition to statements which are forward-looking by reason of context, the words "may", "will", "should", "expects", "plans", "intends", "anticipates", "believes", "estimates", "predicts", "potential", or "continue" and similar expressions identify forward-looking statements. Actual results, performance or events may differ materially from those in such statements due to, without limitation, (i) general economic conditions, including in particular economic conditions in the Allianz Group's core business and core markets, (ii) performance of financial markets, including emerging markets, and including market volatility, liquidity and credit events (iii) the frequency and severity of insured loss events, including from natural catastrophes and including the development of loss expenses, (iv) mortality and morbidity levels and trends, (v) persistency levels, (vi) the extent of credit defaults, (vii) interest rate levels, (viii) currency exchange rates including the Euro/U.S. Dollar exchange rate, (ix) changing levels of competition, (x) changes in laws and regulations, including monetary convergence and the European Monetary Union, (xi) changes in the policies of central banks and/or foreign governments, (xii) the impact of acquisitions, including related integration issues, (xiii) reorganization measures, and (xiv) general competitive factors, in each case on a local, regional, national and/or global basis. Many of these factors may be more likely to occur, or more pronounced, as a result of terrorist activities and their consequences. The company assumes no obligation to update any forward-looking statement.

No duty to update: The company assumes no obligation to update any information contained herein.