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The Four Pillars | Dr. Johannes Lorper | 4 December 2012

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<u>1st Pillar</u>	<u>2nd Pillar</u>	<u>3rd Pillar</u>
	Mainly OB pension schemes, quasi-mandatory	
Combination of rising longevity and failing fertility leads to rapidly rising old-age dependency ratio	 Unanticipated increases in longevity lead to higher pension plan liabilities 	
Because of PAYG- financing, upward pressure on pension contribution rate	 Higher pension liabilities put funding ratio of pension funds and solvency ratio of life insurers under pressure 	 Higher liabilities put solvency ratio of life institers under pressure

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2. Three ways to manage longevity risk

- 1. Hold capital for longevity risk
- 2. Transfer longevity risk
- 3. Link pensions to life expectancy

Longevity risk transfer

- Three basic types of transactions .
 - 1. Pension buy-outs

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- 2. Pension buy-ins
- 3. Longevity swaps and swap-like contracts
- Vast potential, yet market for longevity risk transfer is still small
- · Joint Forum currently studying longevity risk transfer market and its risk implications





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Pension system	Typical form of paymer	it Other features
 National Pensio 	o whole life annuity	-
2 Employees' Pension Insurance	whole life annuity	survivor's pension
③ Corporate Pension	lump-sum retirement allowance or fixed-term annuity	some companies provide whole life annuities with a guaranteed term
4) Self-Private Pension	fixed-term annuity	options for whole life annuity with guaranteed term and lump-sum are available







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The Four Pillars Newsletter

Research on Insurance, Retirement and Social Security

Special Contribution / SC01 November 2012

25th Anniversary Seminar of The Geneva Association's Four Pillars Trogramme

Ne Four Pillars: The Next 25 Years *Venue:* 3-4 December 2012, Hotel Intercontinental, Geneva, Switzerland The seminar is a special meeting to celebrate the 25th anniversary of The Geneva Association's Four Pillars Programme. The seminar will bring together public policy decision-makers and experts as well as insurance industry experts and academics with a close interest in retirement policy and the global ageing challenge. The style of the seminar is to facilitate an exchange of views and experiences on a number of retirement policy and retirement systems issues of global importance.

Recent publications from the programme include: The Geneva Report N° 6— Adressing the Challenge of Global Jeing—Funding Issues and Insurance Solutions and The Four Pillars Newsletter N° 51, September 2011.

The Geneva Association is the leading international insurance think tank for strategically important insurance and risk management issues. Its membership comprises a statutory maximum of 90 CEOs from the world's top insurance and reinsurance companies. It organises international expert networks and manages global discussion platforms. being the leading voice for insurers with policymakers, regulators and multilateral organisations. The Geneva Association's annual General Assembly is the most prestigious gathering of leading insurance CEOs worldwide.

Ageing of the European Population and Its Effects on Financial Markets

by Bruno Pfister*

The European economy is currently experiencing some challenging times marked by excessive sovereign debt, low economic activity and (in some areas) extremely worrying unemployment levels. Faced with such pressing issues, Europe's policymakers have more than enough to deal with in trying to restore confidence in the economy. However, the continent's economic challenges are by no means restricted to these immediate problems. On the contrary, there is a proverbial elephant in the room that may well turn out to be the biggest challenge of them all: an ageing population.

The European baby boom happened in the mid-1950s. The proportion of retired people relative to the working population is therefore set to rise sharply in the near future. This will inevitably involve a degree of change within society as senior citizens make their presence felt. The most widely-publicised of these changes is raising pension and healthcare costs and their resulting economic burden. However, the influence of pensioners goes beyond the cost of funding their retirement: pensioners are a dynamic group, who consume and make investment decisions. As the impact of these decisions grows there will be a knock-on effect for the wider economy. This article examines how the third generation can influence the financial markets and aims to identify some challenges this influence may pose to European policymakers over the mid to long-term.

The situation in the U.S. sets an interesting precedent as their baby boom occurred ten years earlier than in Europe. The chart herewith compares the actual S&P500 P/E trailing ratio until the end of 2011 to a demographic-based P/E progression. It is striking how the two lines

is striking how the two lines almost mirror each other. This proves, for the past 50



1960 1970 1980 1990 2000 2010 2020 2030 2040 2050

Source: U.S.Census Bureau, 2010 and Bloomberg, 2012.

years at least, that U.S. equity markets have developed more or less in tandem with demographic trends. The chart also shows a future demographic-based projection of the P/E ratio, which indicates a prolonged trend of very low equity valuations.

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⁺Group CEO, Swiss Life SA.

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The correlation between demographics and the trailing ratio reflects the changing attitudes of the baby boomers as they stop work and sell off their acquired assets, especially the risky ones, to finance their retirement. Indeed, it is uncontested that older investors are less risk-tolerant than their younger counterparts. Furthermore, Europe is ageing faster than America as its population growth is slowing at the same time as it is getting older. The population of the U.S. grew nine times as much as in Europe during the last 20 years (22.5 per cent vs. 2.5 per cent). According to United Nations projections, Europe's total population will peak in 2020.

This combination of an ageing population and declining workforce will have a dampening effect on growth. As mentioned above, pensioners tend to avoid risk and, as they grow as an investor segment, market participants will anticipate that equities will perform poorly, which will hamper stock market performance. In addition, an ageing population leads to relative scarcity of labour, dampening productivity rates and the return on capital, which also reduces asset values.

This effect of Europe's top heavy population structure will add weight to the economic problems already facing the European economy, which are also steering investors towards what they perceive to be secure investment solutions. Furthermore, new regulations such as Basel III, Solvency II and consumer protection laws are supporting and even accelerating this trend. Regulators are forcing banks, pension funds and especially insurance companies to invest mainly in low-risk assets. The outcome of this investment behaviour is an asymmetric investment pattern, which basically overlooks the private sector in favour of government bonds.

This trend is already apparent at an institutional level. The corporate sector has built up liquidity reserves. In addition, investors have in many cases already reduced the risk component of their asset portfolios: European insurers and pension funds are mostly invested in fixed income instruments with small to very small equity allocations. Real estate has gained in importance as an asset class, although the investment spectrum is limited, especially in small markets. Finally, most company pension schemes in Europe and the U.S. are underfunded. This is far from an ideal state of affairs as it pushes down the returns from low-risk assets, thus preventing investors from achieving their targeted returns. In this context, a leading Swiss consulting firm recently stated that bonds issued by the Swiss Confederation were extremely unlikely to generate 2 per cent annual yields over the next ten years.

This type of economic environment can induce a credit crunch in the economy. If the private sector lacks funds to invest, economic activity becomes sluggish and depresses the rate of GDP growth, as is currently happening in a number of European countries. Admittedly, this would probably trigger some sort of reaction, for example the corporate sector refinancing through bonds as opposed to equities, or investors turning elsewhere for higher yields. Nevertheless, these reactions would still be outweighed by the more forceful risk-averse behaviour.

A credit crunch causes central banks to lower interest rates in an attempt to inject some life back into the economy. This tactic does bring some benefits as it encourages investment and keeps mortgage repayments and refinancing costs down. However, it can prove problematic over the longer term as market forces are not necessarily reflected in prices, which can lead to investment bubbles. This scenario has also recently been seen in Europe, notably in the form of the real estate boom followed by a bust in the U.K., Ireland and Spain.

So to recap, Europe is currently going through a tough time economically due to excessive debt levels and subdued economic activity. The imminent ageing of its population, supported by stringent regulatory requirements, is set to challenge the continent's economic vitality even more as it entails a "flight to safety" on the financial markets and reduces productivity rates as the proportion of those in employment falls relative to the proportion of pensioners. The immediate response to this situation would seem to involve keeping interest rates down; however this is not sustainable over the long term. The other option (inflation) is equally, or possibly even more unsustainable as it increases the cost of debt unacceptable given the current state of public finances in many countries and, in any case, would be incompatible with the inflation targets of European central banks.

This state of affairs also has a precedent within the global economy. This time it is Japan, which began to experience an ageing population in a low interest rate environment following its stunning success during the 1980s. That period of prosperity was followed by a financial crisis when the real estate and equity market bubble burst at the beginning of the 1990s, signalling the start of a long spell of stagnation. Annual GDP growth fell from 4.6 per cent in the 20 years before 1990 to a mere 0.9 per

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cent over the next 20 years. 1990 was also when Japan's proportion of pensioners compared to the working population reached its lowest point. The working age population continued to slowly grow for a couple more years, but by the middle of the 1990s, it began a steady decline that is projected to continue for several decades to come.

By 2010 Japan's working age population was more than 5 per cent smaller than in 1990, while the population of 65 years and over more than doubled from 17 to 37 million over the same period. Admittedly, this is a marked change in population structure. At the same time, given growing life expectancies and current demographic trends, the population structure within Europe may change just as much, or even more. The chart herewith, which depicts the old-age dependency ratio for Germany illustrates this point. This ratio compares the population aged 65 or over with the population between 15 and 64 (those potentially in

Ratio of German population aged 65+ per 100 population 15-84



employment). The chart shows a massive projected Source: UN Population Division, 2011.

increase in this ratio after 2020 as the number of new retirees grows much faster than the number of new workers.

The combined impact of demographics and regulatory requirements is threatening to lead Europe down the slippery slope to the economic malaise currently affecting Japan. Consider the following:

- A long period of ultra-low benchmark rates set by the central bank.
- Banks carrying too much debt, resulting in a large number of zombie banks which are just surviving by purchasing government bonds and hoping for a better future instead of doing their real job.
- No growth impulses from the government sector.
- A credit crunch in the private sector.
- Dampened growth perspectives threatening a prolonged disinflationary/deflationary environment.

It's a rather bleak scenario, but is it avoidable? Demographically speaking it obviously is not: ageing is baked in the cake and there is a wealth of evidence to confirm that. However, on the investment front, the superior growth prospects of the emerging markets could provide the tonic the Western world needs. The requirement of tomorrow's retirees in the ageing world for high investment returns and the hunger for capital in the emerging nations could be satisfied through the developed world's pension assets. In this context, the emerging economies can also counter the developed world's demographic deficit as they are relatively young and will likely continue to add population.

However, it's not that simple, not yet at least. For a start the emerging markets would need to relax their capital controls. In addition, regulatory constraints binding pension funds prevent them from taking any significant stake in global diversification. It's also important not to place all the eggs in one basket, as it could cause the emerging markets to overheat given a potentially massive inflow of funds.

Nevertheless, the impact of ageing is too big to ignore and policymakers will have to take it into account as they look to the future, especially in the current situation of unsustainable sovereign debt and underfunded pension liabilities. The accentuating impact of new regulation only adds weight to this somewhat sombre outlook. Add central banks and political agendas to the mix and a potent concoction of trends and short-term interests emerges, all of them weighing on the markets. Something will have to give.

In fact there are some changes already in evidence. For example, some countries are introducing labour market reforms to reflect growing life expectancy. In 2010, the labour force participation rate of the 55-64 age group in Europe was close to 50 per cent. Switzerland was one of the leading countries with substantially over 80 per cent. Furthermore, many countries have now lifted the statutory retirement age as a reaction to widening gaps in financing pension schemes. And more may follow.

In addition, the dynamism of the ageing population referred to earlier will also impact consumption patterns, boosting demand in a range of areas, such as leisure or healthcare. At the same time, if pensioners are to be able to afford these services, they will still need adequate pension provision. This

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again highlights the need for action both by pensioners themselves and at an institutional and national level.

To conclude therefore, an ageing population clearly affects the financial markets in a way which, particularly in view of the current situation in Europe, is not conducive to economic growth. Tinkering at the edges of the problem by increasing spending or lowering interest rates is not a sustainable option over the long term. More fundamental changes are required.

Economics is admittedly not a precise science and it is notoriously difficult to predict. People will retire later on in life and more flexible forms of employment will increase. In fact this is already happening. The structure of economic activity will continue to change as it has always done. However, that is no excuse to adopt a wait-and-see approach to global ageing. This issue goes beyond pure economics; it is a fundamental social certainty that governments are going to have to face up to, possibly by introducing measures that initially appear radical. If the traditionally secure investments (bonds, real estate) start to lose their appeal, where will investors turn? Will the regulatory regime allow them to truly embrace the promise of globalisation?

Time will tell; however the evidence does suggest that when dealing with the issue of global ageing, fortune will favour the brave.

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Press Release

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Notes to Editors

The Geneva Association is the leading international insurance think tank for strategically important insurance and risk management issues

The Geneva Association identifies fundamental trends and strategic issues where insurance plays a substantial role or which influence the insurance sector. Through the development of research programmes, regular publications and the organisation of international meetings. The Geneva Association serves as a catalyst for progress in the understanding of risk and insurance matters and acts as an information creator and disseminator. It is the leading voice of the largest insurance groups worldwide in the dialogue with international

-titutions in parallel, it advances—in momic and cultural terms—the development and application of risk management and the understanding of uncertainty in the modern economy. The Geneva Association membership comprises a statutory maximum of 90 Chief Executive Officers (CEOs) from the world's top insurance and reinsurance companies. It organises international expert networks and manages discussion platforms for senior insurance executives and specialists as well as policy-makers, regulators and multilateral organisations. The Geneva Association's annual General Assembly is the most prestigious gathering of leading insurance CEOs worldwide. Established in

Established in 1973, The Geneva Association, officially the "International Association for the Study of Insurance Economics", is based in Geneva, Switzerland and is a non-profit organisation funded by its members.

The Fierce Urgency of Now: Global Ageing and Pension Reform

5 December 2012 (Geneva) Italian Minister of Labour, Social Policies and Equal Opportunities, Professor Elsa Fornero, addressed on Monday chief executives, insurance industry figures, academics and policymakers at The Geneva Association's Life and Pensions Conference on the challenge of global ageing and the crisis of pension reform.

In her keynote speech at the "The Four Pillars: The Next 25 Years" conference organised by The Geneva Association, Prof. Fornero focused on the adequacy and sustainability of pension systems and highlighted recent achievements of the Italian government in enacting urgently needed reforms in the face of unsustainable public debt and a rapidly ageing population.

In describing the Italian experience, Prof. Fornero underlined the importance of raising global public awareness about the crisis facing retirement funding for populations living longer and healthier lives.

"In an ongoing environment of stagnant economic growth, pension reform must go hand-in-hand with long-term structural changes to the labour market in order to increase contributions and ensure that people not only understand the need to save for retirement but also have the means to do so," she said, referring in particular to youth unemployment.

Prof. Fornero also addressed the issue of changing mentalities: "The shift to a Defined Contributions system implies less reliance on government provision and more reliance on personal responsibility. However, people have been used to pensions being granted by the state and not entirely earned by their own savings. They often tend to reason in terms of rights without due consideration of who pays for those rights."

The second keynote speaker at The Geneva Association's Life and Pensions Conference, Bruno Pfister, CEO of Swiss Life, analysed the dampening impact of ageing on capital market returns. This, together with the prevailing financial repression, leads to an accelerating funding gap for corporate pensions. The need for pension reforms is hence rising, but politically challenging. "A combination of three unpopular measures—increased contributions, lower benefits and a raise in the number of contribution years—must be phased in, with support provided to those hardest hit," said Bruno Pfister. Paraphrasing the TV show Star Trek, he encouraged governments and insurers alike to "boldly go where no pension reform has gone before to ensure that we continue to live long and prosper."

Amy Kessler, Head of Longevity Reinsurance for Prudential Retirement, drew on the recent buy-in of the General Motors pension fund by Prudential to highlight the extent to which insurance can contribute to pension reform and carry the longevity risk for companies, allowing them to concentrate on their core business. She said: "*Three years ago we asked our clients the question: will you de-risk your pension plan? That is now a reality as more and more companies leave the endowment model behind. Today the question is rather, what path will companies take and how will insurance help."*

On the issue of working beyond retirement, The Geneva Association's Life and Pensions conference focused also yesterday on the essential need to include "silver workers"—healthy and active pensioners who are in a position to provide a valuable and productive contribution to society—as the "fourth pillar" in any pension reform measures.

The Secretary General of The Geneva Association, John H. Fitzpatrick, stressed this point clearly: "There is clearly huge pressure on the public-funded, Pay-As-You-Go first pillar system, while occupational pensions—the second pillar—are suffering from increasing longevity and low interest rates. Low rates also make it less attractive for citizens to save for retirement—the third pillar. This conference has highlighted that much more must be done on the fourth pillar, enabling employment of productive workers who have passed the statutory retirement age. Their continued employment contributes to society and stimulates economies suffering from low growth through consumption. Laws that penalise employment by such individuals from a tax perspective or otherwise should be removed."

For reports, papers and webinar on the challenge of global ageing, and further information on the "Four Pillars", please visit The Geneva Association Life and Pensions Research Programme.

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