



SOCIETY OF ACTUARIES

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Questions from Hong Kong Abound on New PD Systems

by Patrick Cichy
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Will the SOA offer more seminars in Asia that will qualify for professional development credit? What if I cannot fulfill the PD plan within the specified two-year period? These were just some of the questions answered at the SOA Professional Development Requirements meeting held in Hong Kong on April 14, 1999.

Former founding member of the China Region Committee and current member of the Professional Development Committee, August Chow, answered questions on the new PD system from over 70 students and members including FSAs planning to be advisors. Marta Holmberg, SOA

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A Social Security System for the 21st Century—Part One

by Chiu-Cheng Chang & Geraldine Chen

Editor's Note: The rest of this paper will be published in the next issue of "International Section News."

The financing of social security programs has been the subject of many studies in the social security literature. Much of the debate has focused on the relative advantages and drawbacks of pay-as-you-go and full funding, on the viability of public and/or occupational pensions as compared with personal saving schemes. In advocating one method of funding over another, many have based their arguments on past experience and projected demographic changes. No system, however, exists in a vacuum, and insufficient attention has been given to the broader international, social, political, cultural and economic trends that will govern the viability and sustainability of a social security system in the 21st century.

Section II of this paper reviews the major trends of the 21st century. Section III will focus on the drawbacks of the pay-as-you-go system of social security funding, particularly in the light of these trends. In Section IV, the key characteristics of the ideal social security system in the 21st century will be discussed. The Singapore social security system will be used as an example, as it has many of the attributes of the ideal

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system. Section V will present some concluding remarks.

Major Trends of the 21st Century

Changing population structure

Changes in the population structure are determined by changes in fertility, mortality and international migration that manifest themselves through increases in longevity. According to the United Nations, the Gross Reproductive Rate for the world as a whole was 2.44 between 1950 and 1955, 1.67 for the period 1985-1990 and is projected to decline to 1.15 in 2020-2025. Fertility is projected to fall at a faster rate in the less developed areas, with the GRR declining by more than 60% over the period while that for the more developed regions is expected to fall by only 33%. Mortality rates have also declined. Life expectancy at birth in the developed countries increased from 66.0 years in 1950 to 73.7 years in 1990, while the corresponding increase was from 40.7 to 60.7 years for the less developed regions.

The impact of reduced fertility and mortality is reflected in the changing share of the aged population. In 1950, 5.1% of the world's population was aged 65 and over. This proportion is expected to increase to 9.7% in the year 2025. While the more developed regions currently exhibit a more severe case of population aging, the less developed countries are projected to have a higher rate of aging. Between 1950 and 1980, the share of the elderly in the total population in the more developed regions rose by 53% and is expected to increase a further 53% by the year 2025. However, in the less developed regions, while the share of the elderly grew by only 18% between 1950 and 1980, it is projected to rise by a staggering 78% between 1980 and 2025. The majority of the world's population will be residing in the less developed countries in the 21st century. The rapid rate of population aging has also raised the elderly dependency ratio, which is the ratio of the number of elderly persons to the number of persons in the working age group. The ratios for all the major

regions of the world are projected to increase: Asia will have the largest projected increase of 77.1% in the 1990-2025 period and Africa, the smallest of 16.1%.

At the same time, the growth of the share of the working population for all major regions is projected to decrease, with the exception of Africa. For Europe, North America and the former USSR, the proportion of the working age group is expected to shrink in absolute numbers by the end of the century. Europe is estimated to experience a working age population decline of 4.6% and North America, 3.5%. In addition, the labor force participation rates of men above and below the normal retirement age have fallen sharply over the last decade. Not only will there be a large population of the elderly, there will also be a smaller working population to support it.

These demographic changes will constrain the ability of economies to finance social expenditure. The shares of social security and health expenditures for many industrialized countries show sharp upward trends. In 1992/93, the expenditure shares ranged from 11.0% for the United States to 27.9% for the Netherlands. With annual growth rates averaging only about 1%, it is highly unlikely that these economies will be able to sustain social programs financed by the taxes and contributions of the working population.

It is true that female labor force participation rates have risen significantly in recent decades, especially in the OECD countries. However, given the average gender earnings differentials and the concentration of women in part-time employment, women's earnings are considerably lower than those of men. Therefore, while the number of women entering the labor force would more than counterbalance the number of older men withdrawing, this growth will not be able to provide a one-to-one offset for the decline in male participation in terms of the tax base for social expenditure contributions (OECD, 1988), implying a shrinking of the tax base.

The Information Revolution and the Global Electronic Village

The launch of the Russian "Sputnik" in 1957 marked the beginning of the era of global satellite communications and precipitated the information revolution. As a result, the information float collapsed. As information can now be shared simultaneously among countries, the "national economy" is now and will continue to be subsumed under the "global economy" or in Kenichi Ohmae's words, "The Borderless World."

Shift from Nation State to Business State

The globalization trend is exemplified by the global corporation. This will no longer be the colonial-style multinational company with a headquarter-subsidiary mentality but a network of downsized, outsourced and largely stateless web of cross-border corporate alliances (*Newsweek*, June 26, 1995). In the last decade, the world's 37,000 transnational companies— from 7,000 in the late 1960s— were responsible for more in sales than all the trade exports put together: US\$5.8 trillion in 1992. In the United States, 80% of the dollar goods sold abroad are not exported but sold under the governance of the transnational corporation, either by affiliates, intrafirm trade or through licensing or franchising agreements. These flows have been consolidated with the investment of capital overseas, which has led to the emergence of international production systems. Since 1983, foreign direct investment has grown five times faster than world trade and ten times faster than world output (*The Economist*, June 24, 1995). The production lines of Mitsubishi Motors, for instance, stretch from Thailand to Malaysia to Japan. Production sharing will be the prevailing form of international economic integration.

Business leaders are the politicians of the future. Conversely, politicians will run their governments like a corporation, promoting the country's comparative advantages for business. In the future, the international ties between business leaders and politicians will strengthen.

The power of the transnational corporations has grown to such an extent that governments are handing over tasks that once were under their sole purview. For instance, U.S. Congress has asked multinationals to take up some of the burden of foreign aid. Table 1 shows that foreign private investment outflows have registered much sharper increases than government foreign aid. Corporations have begun to develop their own human rights codes and increase pressure on countries which, in the eyes of the United States, have less than satisfactory human rights records. Many governments in the West have sought to impose their standards on the developing countries with whom they have economic and trade links to little or no avail, generating only hostility and resentment in the process.

Transnational corporations have begun to take over this role. They are adopting "politically correct" profiles and strict codes of business ethics. For example, Levi Strauss, an American clothing company cancels contracts with suppliers if they find that they employ child labor. Chemical companies are more vigilant in policing their industry and computer companies are advocating higher environmental standards. Many are signatories to international agreements such as the International Chamber of Commerce's Business Charter for Sustainable Development. And rightly or wrongly, the transnational companies impose these standards on their host countries. The transnational corporation

has now become and will continue to be the major agent of international integration. The increasing power of the business corporation means that business concerns will override politics. And business issues cut across all national boundaries and will help to build the global business state.

Shift from Fixed to Flexible, Responsive Systems

The strength of the traditional multinational lay in its size and ability to exploit economies of scale. Cost was dominant, and the variable cost of labor was the decisive factor. Now practices such as just-in-time production emphasize responsiveness and flexibility, factors that have downgraded the importance of size.

With increasing automation, the present day global corporation is operating in an increasingly fixed cost environment. Competitiveness and market share are built up and maintained through innovation, knowledge and development of brand consciousness in the consumer, all of which involve high fixed costs. In the old variable cost environment, companies focused on reducing the cost of materials, wages and labor hours. Now, companies will focus on maximizing the marginal contribution to fixed costs, i.e. maximizing sales, which explains the importance of a large market base and the motivation for globalization.

In the present quicksilver world of consumer tastes, companies have had to adapt and become increasingly flexible

and responsive to change. Big, over-staffed companies involving many bureaucratic layers are now anathema. Long hierarchies impede the flow of information, slow down the decision-making process and reduce the ability of the company to respond to changes in the marketplace. This responsiveness is especially visible in the retail sector. In the past, stores operated strictly according to office hours and were almost always closed on Sundays. Now shops, including beauty salons and medical clinics, are beginning to stay open into the night and sometimes are open round the clock. Even British stores, conservatism and Sunday trading laws notwithstanding, have responded to consumer demands by staying open into the early evening and opening their doors on Sundays.

Companies have also tried to adapt to the needs of employees. For instance, job-sharing has taken root in many organizations to accommodate demands of working parents. Shifts in thinking have also permeated social organizations like schools where some have adjusted hours and curricula, allowing students to arrive earlier and stay later, to accommodate their parents' work schedules.

Wage payments are beginning to move from fixed pay scale systems to flexible ones based on productivity that can respond quickly to changing economic circumstances. Benefits systems are also gradually evolving from fixed benefits systems to ones which recognize and accept individual preferences. One way this is manifested is in the increasingly popularity of "cafeteria benefits systems." While these require a greater initial capital outlay and are more demanding in terms of monitoring, firms are starting to tailor systems to suit individuals to maximize productivity and value for money.

Shift from Short-term to Long-term

This stress on flexibility has been accompanied by an increasingly long term outlook. The debate over the environment and non-renewable resources has focused attention on the long run sustainability of short-term actions. Many companies and countries, unfortunately, are managed with very short time

Table 1

	Foreign Investment Outflow to Developing Countries		Foreign Aid	
	1990	1993	1990	1993
United States	\$423.2	548.7	11.4	9.7
Japan	310.8	422.6	9.1	11.3
Germany	143.1	178.7	6.3	7.0
France	67.9	140.6	7.2	7.9
Britain	77.2	243.2	2.6	2.9

All figures in billions of US dollars

Source: *Newsweek*, June 26, 1995 p. 31

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horizons—this month, quarter, half year—and the problem is exacerbated by the political process of four or five yearly elections where expedience is the guiding principle.

Long-range strategic visions and planning are beginning to replace short-term goals. Managers and executives must abandon their preoccupation with short-term quantitative measures of performance and profit and give attention to the kinds of investments and behavior that will spur innovation and strengthen the firm and nation's capacity to create wealth.

Formation of Trade Blocs and Harmonization of Standards

While great strides have been made in the last decade to reduce barriers to trade and capital mobility, prospects for global trade liberalization remain guarded at best. If anything, the advent of the European Common Market in 1992 fueled fears that some markets, the lifeblood of companies, would become increasingly closed. The formation of the North American Free Trade Area (NAFTA) and the growing activity with the forum for Asia-Pacific Economic Cooperation (APEC) are seen to be responses to this ominous development and represent efforts to maintain and promote free trade at least within the regions. Many observers agree that the 21st century will see the world economy consisting of three main economic blocs: Europe, the Americas and Asia (however defined), bringing about greater intra-bloc flows of trade, investment and people.

Harmonization of standards within the bloc usually follows the creation of an economic zone. The European Community is at present trying to devise a common set of standards for everything from labor laws and minimum wages (envisaged in the Social Charter) to the beef content of sausages. The setting of common standards, processes and systems across countries reduces uncertainty and minimizes transaction costs, particularly for the global corporation operating in many different countries.

Increasing Labor Mobility

The degree of labor mobility at present differs widely across regions. In North America, labor mobility at least between Canada and the United States, is strongly encouraged and widely practiced. To a much lesser degree, Europeans are beginning to realize that people will have to move with and to a job, and not the other way around. In Asia, residents of Hong Kong and Taiwan with significant foreign investments overseas have long accepted the need for mobility. This trend is beginning to emerge even in Japan, one of the more closed Asian societies. Singapore, actively pushing the regionalization drive, is encouraging its citizens to work abroad. Increased labour mobility between countries and the advantages of a common set of standards will govern the type of social security system that will be workable and acceptable.

Development of a New and Global Lifestyle

Just as national economies will gradually merge into a greater world economy, the growth of transnational corporations will mean that people from vastly different cultures and climates will be eating the same foods, wearing the same kinds of clothes, sharing the same music, movies, magazines and television shows. Satellite technology, international travel and the spread of information will spawn an international culture.

Alongside this globalization of lifestyle, society will become more conservative and liberal at the same time. On the one hand, higher standards will be set for all aspects of business conduct, from adherence to a code of ethics to regulation. On the other hand, topics and issues which were once taboo such as sex, drug addiction, and mental illness will be discussed with greater openness. An alternative lifestyle will evolve. There will be a greater proportion of unmarried people, unmarried couples living together, and couples who may be married but have few or no children.

Shift from Reliance on Institutional Help to Self Help

In the industrial countries, particularly after the Depression, there was a heavy reliance on large institutions to provide for the basic needs, from food to shelter to jobs. Over the past two decades however, people have been moving away from this reliance to new habits of self-care. Many are taking responsibility for their own health by exercising, reducing consumption of less healthful foods and reducing smoking. The concept of health has been redefined from the mere absence of disease to the existence of a positive state of wellness. On another level, self-help will manifest itself by increasing independence from large companies through self-employment and small business entrepreneurship.

Shift from Complacency to Accountability

Alongside this greater self-reliance, there will develop a greater awareness of the need for accountability. The average citizen will demand that both individuals and businesses be accountable for their actions, and this accountability will go beyond criminal and insurance liabilities. Grandparents of children born to unmarried mothers may be held liable for child support. Employers and doctors, stockbrokers and politicians, all who are in any position of duty and obligation, will be expected to take responsibility for not only their own actions, but also the actions of others.

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