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An Overview of Health Care Privatisation in Latin America

by Dominique Hierro & Peter Wrede

The privatisation of social security systems is an exciting experience for a country's insurance industry. Not only does it almost always increase the industry's growth potential by a significant degree, but it also changes the regulatory environment, customer needs, and the market place in general. The intent of this article is to show the diversity of results brought about by partial privatisation of social security health care systems in four major Latin American insurance markets.

Mexico

The Mexican Social Security Institute (IMSS) was created in 1943 and was operated by the state. Benefits were financed by contributions made by

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International Opportunities for Stable Value

by Paul J. Donahue

Stable Value and Its Foundations

Stable value is among the defined-contribution plan options most popular with participants. In 1998, despite the dilution caused by six years of booming equity values, stable value options contained 11.7% of corporate defined-contribution plan assets.[1]

Key to the popularity of stable value is its offer of a guarantee of principal with higher returns than those available in money market funds. What makes a guarantee of principal possible for stable value, as for money market funds, is accounting for assets at amortized cost and accrued interest ("book value"). Credited interest is determined in a way that reduces return volatility, which is another characteristic investors find highly desirable. The foundation for book value accounting for defined-contribution plan assets is compliance with the American Institute of Certified Public Accountants Statement of Position 94-4 ("AICPA SOP 94-4").[2]

Characteristics of the Market Demand for Stable Value

Stable value is an option popular both with conservative investors and with investors who want to moderate the overall volatility of the return of their portfolios.[3] This fits the return profile of investors outside the United States far better than it does domestic investors, especially since the equity boom of the middle and late '90s has dramatically increased the degree of comfort individual investors have investing in equities.

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In This Issue

Editor's Note

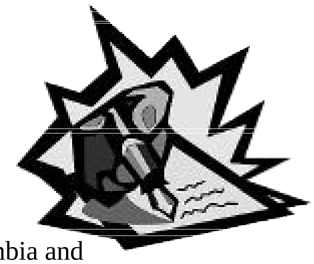
by Kevin M. Law

As this issue marks the end of my second stint as editor of *International Section News*, I would like to express my appreciation for the substantial amount of support and assistance received from the International Section Council, both current and prior members, plus the two assistant editors, Randy Makin and Chiu-Cheng Chang. These individuals not only consistently helped to identify topics and authors for the publication, but several also contributed articles themselves.

After serving as assistant editor for the past two years, Randy Makin will assume the editor's role beginning with the next issue. Randy's interest and enthusiasm bode well for the future of this Section's newsletter.

In this issue, Paul Donahue presents in the lead article an overview of Stable Value options for defined-contribution pension plans. He describes the attributes of these programs that are attractive to investors and contrasts the environment and issues concerning these plans in the U.S. with the situation in other countries.

Beginning with Chile in 1981, a number of Latin American countries have implemented major changes in their social security systems. According to my observations, most of the attention has been focused on the overhauls made to the pension component of the social security programs. In this issue, however, "An Overview of Health Care Privatization in Latin America" contains a summary of the modifications made to the health care portions of social security in four Latin countries: Mexico, Chile, Colombia and Brazil.



Rod Mangrum's article "Ley Cien (Law One Hundred) in Colombia" presents additional information on the health care aspects of the 1993 Colombian legislation that reformatted social security in that country. Rod includes supplementary background information and specifically addresses the opportunities for the insurance industry that were created by this reform.

"Life in China" on page 10 contains a comprehensive description of the life insurance industry in mainland China, which has experienced an exceptionally high growth rate during the 1990s. In this

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article, which will be continued in the next newsletter edition, several different aspects of the Chinese insurance industry are addressed: industry growth, products, distribution and management issues.

The second part of Chiu-Cheng Chang's and Geraldine Chen's article "A Social Security System for the 21st Century," appears in this issue. The authors first review summarized significant secular trends that will continue into the next century, which was covered in depth in the June 1999 *International Section News.* Then they proceed to document the drawbacks of pay-as-you-go social security systems in the context of these trends and describe the essential characteristics of social security programs well suited for the 21st century.

The final topic to be addressed in this column is not a new one. I would like to take advantage of one last opportunity to encourage Section members to contribute material to be published in the newsletter. My discussions over the years with actuaries involved in the international arena have convinced me that many Section members have expertise and experiences that would be of great interest and value to readers of this publication. As stated in the last edition, while we frequently have a significant amount of very good material, we never have an excess of articles for the newsletter. Please consider submitting an article to *International Section News.*

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An Overview of Health Care Privatisation

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employers, employees and the government, and it was designed to cover health, maternity, short and long term disability, old age pensions, etc.

Although the IMSS law originally provided for employers to opt out of the system in favor of a private organization-sponsored program, only a few companies took advantage of this provision. The most notable exception was commercial banks that gained this concession in 1957. Other companies opted out of the IMSS either because they already had an organized health care service program for their employees prior to the appearance of the IMSS (e.g. the state oil company PEMEX), or because they operated in remote areas where the IMSS had no facilities (e.g. mining companies). Entities that emerged after the creation of IMSS and that offer health services to well-defined sectors included ISSSTE (for government employees) and ISSFAM (Military Forces). People with the lowest incomes who were not affiliated with any of the organizations above could approach public health institutions such as SSA (Secretaría de Salubridad y Asistencia), the Red Cross, or INI (for indigenous people).

In 1996 the social security law was reformed. As a result, some of the contributions collected for pensions are now administered by private sector AFORES (Retirement Funds Administrators), where every member has a personal account for retirement. This reform has increased the financial strain on the IMSS administration since funding for health services is insufficient and had been subsidized by retirement funds. Furthermore, due to the lack of cost control measures, inflation in drug, medical equipment, and hospital costs continues to increase in Mexico at a rate of 15% or more per year.

New measures are necessary to improve the quality of health care services available to all citizens of Mexico. Patients and providers lack confidence and trust in the health care system. Although theoretically every citizen is covered by public health services, an important percentage of the total population has no access.

In April 1999, the Mexican government developed legislation that (1) describes how qualified organizations should establish themselves as insurance companies in order to offer comprehensive health coverage, and (2) stipulates which authorities will regulate their management. By the middle of 2001, these companies must be working as independent entities that offer health services. This proposed legislation has been approved by the House of Representatives, but not yet by the Senate. Even so, in early 1999, one of the health insurance market leaders had already set up an independent company offering comprehensive health insurance coverage on an individual and group basis. Once this law is approved, the Mexican government, in coordination with the IMSS, will establish rules to regulate the exit of individuals or groups from the IMSS health care program, a process referred to as "subrogation of services with fee reversal" ("reversión de cuotas"). This could take place after the presidential elections in 2000.

It is difficult to predict the extent to which privatisation of Mexico's health care system will fuel the market for private health care plans, health care insurance products, and reinsurance coverages. However, as the number of private major medical expense policyholders now represents less than 3% of the total population of Mexico, health care privatisation is likely to bring enormous opportunities to industries involved in health care.

Currently, the market for major medical expense insurance on an individual basis has 522,466 lives insured, with US$200 million in premiums, which is an average annual premium of about US$400 per member. On a group basis there are approximately 1.8 million lives insured, producing US$270 million in

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International Opportunities for Stable Value
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According to the Federal Reserve Bank, in the United States as of the end of 1998 households and nonprofit organizations had only 13.6% of their financial assets in currency, bank deposits and mutual fund money market fund shares. They had 31.2% in life insurance and pension reserves, while they held 20.8% in direct equity investments and 8.25% in mutual funds other than money market funds.[4] According to the Bank of Japan, in that country, households held 55% of their wealth in currency and bank deposits, 27% in life insurance and pension reserves, and only 14.4% in shares and securities.[5]

Contribution to the Efficiency of Financial Markets

Stable vcan make an important contribution to improving the efficiency of financial markets abroad, both for institutions and for individuals. For individuals with a low tolerance for risk, stable value will increase wealth by providing the principal guarantee they value while increasing return relative to other guaranteed principal products. Under conditions permitted by defined contribution pension plans, stable value is absolutely superior not only to money market investments but to many intermediate bond funds as well. Further, stable value's markedly lower volatility leads many investors to prefer it to more volatile investments with greater returns.

For such individuals, in addition to making available an additional asset class better suited to their risk preferences, and thus enhancing market completeness, stable value can assist individuals in making a transition from the mentality of saving to the mentality of investing. Stable value has played this role in the United States.

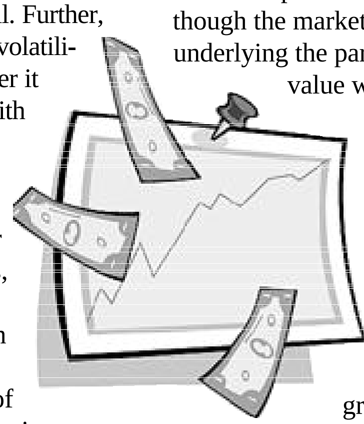
Stable value adds to the completeness and thus to the efficiency of the financial markets for institutions as well. Stable Value funds are important direct and indirect [6] investors in a wide variety of fixed-income instruments, including Treasuries, intermediate tranches of asset-backed securities and commercial mortgage-backed securities, collateralized loan obligations and corporate bonds. This increases the market for such assets, improving liquidity and, frequently, increasing the availability of non-bank financing.

"Stable value can assist individuals in making a transition from the mentality of saving to the mentality of investing."

Accounting and Regulatory Challenges to the Export of Stable Value

Despite its very evident advantages, there are significant obstacles that could delay or rule out altogether the growth of stable value in different foreign markets.

The most significant of these obstacles is establishing the acceptability of the amortized cost accounting treatment that is the *sine qua non* of stable value. AICPA SOP 94-4 makes it possible to transact on behalf of participants at amortized cost plus accrued interest even though the market value of the assets underlying the participant's account value will nearly always differ from the account value. Without this feature, it would not be possible to offer the guarantee of principal that distinguishes stable value from assets offering comparable or greater returns.



The conclusions about accounting that AICPA SOP 94-4 reaches are sound and well reasoned, but unfortunately that does not guarantee their acceptance elsewhere. The United States is fortunate that the accounting profession is solidly established, autonomous and self-governing. There can be little doubt that the Financial Accounting Standards Board is the most important non governmental source of financial regulation in the world. In the United States, it is easy to determine where to turn for resolution of accounting issues, and relatively easy to determine relative roles where there are other than accounting questions. Where, for example, the Department of Labor, in discharging the duties assigned to it by ERISA, imposes regulations that impinge on accounting, the boundary between the regulation and the underlying accounting treatment is generally relatively easy to determine.

It is often not so outside the United States. In Japan, the Business Accounting Deliberation Council, a division of the Ministry of Finance, establishes Financial Accounting Standards for business enterprises. In striking contrast to the United States, the accounting profession, as represented by the Japanese Institute of Certified Public Accountants, has little role in setting accounting standards; its role is to provide guidance on the implementation of standards. The Japanese cultural preference for consensus, an acceptance of limited disclosure, and general conservatism can impose significant barriers to innovation.[7] When pensions are at issue, the Ministries of Health and Welfare, Industry and Trade, and Labor can also be involved.[8]

Many of us find dealing with government bureaucracy a challenge even in the Unites States, where governmental institutions are "quick-turnaround" specialists by international standards. The burden of establishing a firm accounting and regulatory foundation for a product that does not fit easily within the established framework is a formidable task, and will not prove possible everywhere.

By way of contrast, accountants in the

United Kingdom have as individuals even more flexibility than their American counterparts. Further, where an accounting treatment has no solid United Kingdom precedents, looking to American best practice is an acceptable way of resolving an issue.[9] Establishing the required accounting and regulatory foundations should prove much easier in the United Kingdom than in Japan.

Investment Challenges

As noted above, the key to the attractiveness of stable value as an investment class is its guarantee of principal while offering a return superior to that of money market funds. In the United States, a normally shaped yield curve and modestly priced contracts that provide principal guarantees are the usual financial market inputs, as opposed to accounting and regulatory inputs, to a successful stable value product. At the moment, both in the United Kingdom and in Japan, yield curves are more compressed than in the United States.

Further, the costs of the contracts to guarantee principal are likely to be significantly higher, at least initially. Issuers will need to recover development costs, and risk charges will, rationally, need to be higher, if for no other reason than the absence of an experience base from which to develop a pricing model. The combination of the two leaves open the question whether or not a stable value product with market appeal is possible in either of these two markets using traditional investment inputs. Success in these countries may require investment innovation, at least until the yield curve environment becomes more favorable.

Conclusion

Stable value has the potential to contribute to the development both of individual welfare and capital market completeness in economies outside the United States. Promoting the development of Stable Value abroad offers an opportunity for growth in a product segment that has matured in the United States, with margins potentially much larger than those available domestically, where Stable Value, like other mature product segments, has become a price sensitive, low margin business. However, in order to reap the potential profits, developers of stable value abroad will have to surmount an array of accounting, regulatory and investment challenges.

Paul J. Donahue, FSA, is director of Product Development at PRIMCO Capital Management in Louisville, KY.

Footnotes

1) This figure comes from a table prepared by John Hancock and forwarded to me attached to an email dated August 5, 1999, by Klaus Shigley, FSA, Senior Vice President.

2) My article discussing in far greater detail stable value market demand, accounting, contract and investment issues is forthcoming in *Benefits Quarterly.*

3) The essence of the operation of stable value is the amortization of any difference between the book and market values of a portfolio over a future period. The industry standard for the length of the period is the duration of the portfolio. This effectively smoothes credited interest rates and so reduces return volatility.

4) Flow of Funds Accounts of the United States, Flows and Outstandings First Quarter 1999, Board of Governors of the Federal Reserve System, Washington, DC, June 11, 1999.

5) Flow of funds of Japan, Fiscal 1998, Bank of Japan, Research and Statistics Department, July 1, 1999, *http://www.boj.or.jp/en/siryo/siryo_f.htm.*

6) Stable value funds are indirect investors when they invest in insurance company general account and pooled separate account products.

7) *See* Accounting in Japan, Lisa Gao, Devin Williams, and Mo Xie, msm.byu.edu/c&i/cim/account/Japan.htm.

8) Email dated August 30, 1999, from Toshiyuki Kanaya to the author.

9) Conference call with Graeme Proudfoot and Rodney Smythe, Invesco, London, June 23, 1999.

Newly-Elected Members Of The International Section Council

1) **Lisa S. Kuklinski-Ramirez,** *Metropolitan Life,* New York, NY

2) **Hubert B. Mueller,** *Tillinghast-Towers Perrin,* Cologne, Germany

3) **Hans J. Wagner,** *National Mutual Holdings,* Melbourne Australia

* *All were elected to three-year terms.*

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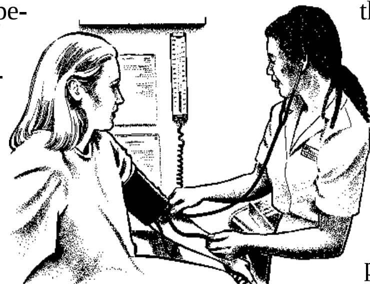
premiums, at an average annual premium of about US$160 each. Employees who have the IMSS coverage often also receive a private group major medical expense policy from their companies, and instead of using the IMSS facilities, prefer to pay for their own private elementary care not covered by the group policy. This indicates that these persons are likely to be favored by the health privatisation initiative that will give them comprehensive medical care coverage at a level more in line with their socio-economic situation. Obviously, this can be expected to have an impact on the market for group medical expense insurance.

Since 1995 the main insurance companies in Mexico and the newly created health care network administrators have offered comprehensive health coverages similar to U.S. health maintenance organisations (HMOs) to banking institutions which formerly managed their own health plans and networks. One of the purposes of this activity was to gain experience and expertise before subrogation of the IMSS services. Insurance companies not yet involved in comprehensive health care programs will undoubtedly consider participation, and foreign enterprises are finding attractive new opportunities for investments in Mexico.



Chile

Chile is well known for early privatization of the state pension system, as it inspired many other countries in Latin America to do likewise. Chile was the first Latin American country to privatize the public health system in 1981. It created a system which, unlike the pensions model, has not been copied anywhere, possibly because of some very unique features.

Chile's health system has not been completely privatized. Rather, it allows individuals to opt out of the social security public health system FONASA (Fondo Nacional de Salud) if they contract private cover with a so-called ISAPRE (Institución de Salud Previsional), without the public system being abolished. The advantages of private cover include freedom of choice, better hospitalization standards, and no waiting lists.

Both FONASA and ISAPRE require individuals to make the same contribution, namely, 7% of their salaries, with an upper limit. Whereas FONASA is a typical pay-as-you-go system, the same amount of contribution is used to fund actuarially calculated individual premiums with the ISAPREs. This is what makes Chile's private system unique: while contributions are based on salary, premiums are calculated according to risk factors like age and sex. The scope of cover becomes the only variable parameter if the premium is pre-determined, i.e., if 7% of a person's salary is not enough to buy fully comprehensive cover because of, for instance, advanced age or number of children, then the cover obtained for this fixed contribution is reduced accordingly. This has compelled the 36 operating ISAPREs to offer thousands of rates in a country with a total population of less than 15 million, which differ according to the scope of cover, age, sex, dependents, and state of health. As can be expected, this diversity has an impact on the product administration of the providers and on the degree of information required by buyers.

The extent of cover differs mainly with regard to the inclusion of dental or psychiatric cover, the maximum number of hospital or intensive care unit (ICU) days paid for, percentage of co-payment, etc. Therefore, if a contribution does not allow for a very comprehensive plan, the contributor can be left with a significant share of the cost in case of a serious illness. Moreover, if the contributor's income does not increase in line with the annual risk premium, health benefits will reduce over the years, and cover that was once comprehensive may become insufficient.

The unique Chilean model has not entailed major inconveniences for the covered population for a number of reasons:

- People are free to make additional contributions, subject to underwriting, if they feel that 7% of their salary will not buy adequate cover.
- Access to FONASA is not always strictly supervised. This allowed individuals with less than comprehensive private cover to receive treatment without having paid for it from the public system, which has a good reputation for treatment of serious diseases.
- People can switch back to social security on retirement, as their risk premiums increase more steeply with age or they cease to be eligible for a group scheme (which tends to have a greater degree of "solidarity" than individual plans).

Furthermore, the situation has created a market for supplementary insurance aimed at covering gaps in individuals' ISAPRE cover. However, the existence of supplementary insurance to cover co-insurance payments under the ISAPRE plan negates the desired influence on customer behavior that was the intent of this cost-sharing element of product design. Thus, ISAPREs are not always happy with this interference. These covers, which are obviously difficult to price due to the wide variety of ISAPRE plans, are generally offered by insurance companies, usually include significant deductibles and co-insurance over and above that which is paid for by the ISAPRE, and are rather inexpensive.

This could be read to imply that ISAPRE cover is generally sufficient. Yet, reported cases of inadequate health coverage can generate spectacular publicity in the media, fueling the population's worries about the adequacy of their protection and a demand for additional insurance. One of the peculiarities of the system is a subsidy to lower income earners, which has made the system available to most socio-economic groups despite the possible incongruence between an individual's actuarially derived premiums and salary-based contributions. Today 3.9 million persons have ISAPRE cover, almost 30% of the population. Therefore, the adequacy of cover is repeatedly questioned and studied by different groups, and several suggestions have been made, such as marketwide jointly financed catastrophe funds, without an indepth reform as yet.

Another aspect which has received attention both by the media and study groups is that ISAPREs do not charge level premiums for a cover supposed to be whole-of-life, but yearly risk premiums instead. These increase steeply with age, endangering the affordability of coverage for the elderly. Studies in 1995 indicated that this is not a serious problem because as they grow older, people have paid up their mortgages and have stopped paying for their children's health insurance and are thus able to afford higher health insurance premiums. However, the system is relatively new and most of its members are young and healthy, as currently, only 4% are above age 60. In addition, investment returns in the privatized pensions system were excellent until the mid-1990s, making Chilean pensioners relatively affluent. These factors will have influenced the result of the studies and it is therefore likely that the level premium approach to health insurance, as in Germany, for example, will receive further attention.

Colombia

The decision to amend Colombia's social security system, which was comparable to Mexico's, was driven by growing discontent, as a large part of the population was not really covered. An indepth restructuring of social security was undertaken in 1993, with the intention of offering adequate health care for everyone.

The core of Colombia's new health system is the Plan Obligatorio de Salud (POS), which intends to provide comprehensive coverage using efficient, although not necessarily leading edge, technology. Use is made of treatment protocols, diagnosis-related groups, generic drugs, and an emphasis on preventive medicine, while excluding experimental and cosmetic treatments.

Adherence to the new system is through either the "regimen contributivo" (contributory subsystem) or the "regimen subsidiado" (subsidized subsystem). Employees, pensioners, and the self-employed are compelled to join the contributory system if their incomes are sufficient. The contribution is 12% of salary, limited to a maximum, 8% of which is paid by the employer. This includes family members who are covered without additional cost. For those without the means to make contributions, the system provides subsidies financed by one percentage point of the contributory system's revenue, through a "solidarity fund," and then by direct transfer from the state. This external funding of the regimen subsidiado aims at granting comprehensive coverage to the whole population by the year 2001.

"Another measure to safeguard EPS stability is the obligation to (re-) insure the cost of treatment in respect of a defined set of serious diseases like cancer or cardiac surgery..."

Two fundamental elements in the organization of health care and maintenance are the EPS (Entidades Promotoras de Salud) and the IPS (Instituciones Prestadoras de Servicios). The IPS is an organization of providers who can have ties with the EPS while maintaining their technical and financial autonomy. EPS companies are the real backbone of the system's organization, as they guarantee to provide their members with health care in exchange for a per-capita payment known as UPC (Unidad de Pago por Capitación). The UPC, including a margin of 15% for EPS administration, amounted to approximately US$130 per person per year in 1999 and is intended to cover the average POS cost. Although the above mentioned contributions are collected by the EPS, they are funded by the UPCs according to their affiliations. If the contributions they collect are more than this amount, the excess has to be transferred to the solidarity fund—from which they would otherwise get the difference—in the event the contributions fall short of the required UPCs.

This element of cross-subsidization shows one paradigm of the system: the user's freedom of choice (between competing EPSs as well as between different IPS providers who have agree-ments with one EPS) which is intended to promote quality through competition. As may be expected in the social security context, EPSs are not allowed to reject applicants, unilaterally cancel affiliations, or apply loadings or other "discriminatory" measures to individuals. There are, however, different co-payments as a means of cost control, and additional funding dependent on the person's salary. There are also waiting periods for some treatments in order to prevent a financial crisis in the still-young EPS system. Another measure to safeguard EPS stability is the obligation to (re-)insure the cost of treatment in respect of a defined set of serious diseases like cancer, cardiac surgery, neurosurgery, major trauma, congenital disease, chronic kidney failure, and others. This has created a vast market for excess of loss insurance and for reinsurance, as local insurers tend to retain little or no risk.

Apart from providing the POS health care, the EPS are responsible for maternity leaves, short term disability, workers' compensation health care, and promotion of health. There are certain areas of health care not covered by EPSs, e.g., vaccination, drug abuse prevention, various traffic accidents, and catastrophes. On the other hand, they are free to sell complementary insurance to cover superior hospitalization services, state-of-the-art diagnostic technology, and treatment abroad, which can only be bought by persons already affiliated with an EPS.

Due to their different backgrounds and history (e.g., pension liabilities), the former social security public hospitals are in

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a unique situation. As these hospitals are expected to compete against other IPSs in the provision of services, the whole public hospital sector is undergoing changes aimed at improving its competitiveness through technical and financial autonomy, and at contributing to a geographically comprehensive supply of services; there is also some subsidization here.

Affiliation to the EPS started in 1995. Since then, 47% of the population of 38 million is said to have joined the system, of which 66% belong to the contributory system. This shows that the Colombian privatisation of health care, a very ambitious and unique project, is still in a state of transition towards complete implementation. Even so, it has brought about a radical change involving not only the (former) social security sector and health care providers, but also the insurance industry.

Brazil

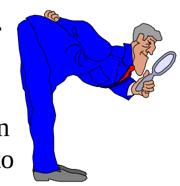
Although not really privatisation as such, the changes to Brazil's health system are worth mentioning. It has not been stipulated that anyone covered by the social security health system can actually opt out of it, but recent political efforts are directed towards relieving the social system by ensuring that the 40 million persons who have (additional) private health care will receive truly comprehensive cover. A motivation for this is the poor funding situation of the public system (SUS, Sistema Unico de Saúde), which has not been noticeably relieved by measures such as a tax on financial transactions introduced several years with the intent of collecting additional revenue for the SUS.

The core of the recent reform package is proper supervision of non-insurance health care providers and an obligation to offer truly comprehensive protection. For historical reasons, service provider associations and other companies offering products comparable to insurer's policies have not been subject to the same degree of supervision; now, similar solvency, reserving and auditing regulations as for insurance companies will apply to all. The augmentation of coverage includes removing upper limits to covers (which used to apply to the duration of hospitalization or intensive care unit stays, among others), as well as the compulsory acceptance of any applicant. Originally, all health care providers were compelled to offer a choice between a two-year exclusion of pre-existing conditions or a loading. This is a measure which exemplifies the political reasoning, although it did not always coincide with the insurance industry's point of view. In fact, as loadings were generally not used in health insurance in Brazil, companies usually did not know which loadings to apply, which led to some insurers charging exaggerated loadings just to prevent customers from choosing that option. As a consequence, the measure has been postponed until next year. Other examples of the impact of political reasoning are the requirements that premiums must be level for ages above 60 (they may increase only through adjustments for inflation, but not for age alone), and that premiums for this most expensive age class may not be more than six times those of the lowest cost age class. Both rules have raised criticism from the industry's actuaries.

The rationale of these measures may be viewed as a way (1) to relieve the social system by motivating those with private cover to avoid using SUS, despite the fact that they continue to contribute to the public system, and (2) to possibly induce more people to rely upon the now well supervised private system.

Obviously, imposition of more generous cover resulted in increased premiums (increases were subject to specific rules), but this increase does not seem to have driven many individuals to cancel their private cover, although new business growth was considerably suppressed. To some extent, cost increases have to be absorbed by the carriers through a narrowing of their margins and the use of more sophisticated cost-containment measures. Generally, the reform has had less impact on insurance companies, who had already been subject to reserving, solvency and pricing supervision rules, and who had generally offered quite comprehensive cover. Large insurers also had easier access to "managed care" cost-containment techniques. For the small to medium carriers, the reform brought about an increased need for risk transfer and assistance, which can be satisfied by insurers and skilled professional reinsurers.

Outlook



Changes in several other markets including Argentina and Peru confirm that privatisation of health systems tends to be specific to each country, but it is still worth studying experience elsewhere when designing a country's approach (as shown by the Colombian influence in Peru). Even countries not considering privatisation continue to reform their health systems (e.g., certain countries in Europe) because the provision of ad-equate health care for all citizens is a major challenge for every government. Therefore, international experience is highly valuable, either to participate in the design or reform of a country's health system, or to anticipate consequences to the insurance industry of any envisaged changes to the system.

Editor's Note: This article was first published in General & Cologne Re's Risk Insight *magazine and has been reprinted with the permission of General Re Corporation.*

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Ley 100 (Law 100) in Colombia

by Rod Mangrum

Ley 100 (Law 100) in Colombia was ratified in 1993 and essentially linked the government pension plan with a radically redesigned government-sponsored and controlled yet, privatized health plan. Until this point, the Seguridad Social (Social Security) served only as a pension plan but with the advent of Ley 100, Seguridad Social en Salud (Social Security in Health) was created and linked with the existing Seguridad Social. They were linked in the sense that they had common auspices and employee/employer contributions would be collected through the same medium. However, the Seguridad Social in Salud would essentially function independently. The Seguridad Social en Salud proceeded to implement the Plan Obligatorio de Salud (Obligatory Health Plan—POS).

Reasons for the creation of the POS:

1) The existing health care system was reaching only 21% of the population.

2) More than 1,000 government sponsored entities for the delivery of health care services were found to be grossly inefficient.

3) A huge deficit had begun to burden the existing system.

Thus it was thought a more efficiently run program to be largely administered by private entities would result in a plan that could touch a larger percentage of the mainstream population and, with individual contributions, would make for a more fiscally responsible plan.

Structure of the Seguridad Social en Salud:

- Empresas Promotoras de Salud (Promoting Enterprises of Health—EPS)

  The EPSs are essentially the organizational nuclei of the new structure. They, for a "capitated" annual fee, provide a predetermined reimbursement for a given procedure covered under their plan. EPSs in a sense, are similar to HMOs as they assume insurance risk up to a specified retention limit per procedure.
- Instituciones Prestadoras de Servicos (Service Providing Institutions—IPS)

  The IPSs are the actual hospitals, clinics, etc. providing the services to the public, which are later to be reimbursed by the EPSs.

It is interesting to note that the EPSs can freely compete with each other and the IPSs can work with more than one EPS. Further, a given contributor can choose freely among EPSs and/or IPSs.

These features are important given the principles by which the Sistema de Seguridad Social en Salud was founded:

(a) Equality

(b) Obligatory

(c) Integral Protection

(d) Free Choice

(e) Autonomy of the Institutions

(f) Decentralized Administration

(g) Community Participation

(h) Quality

While all of these EPS and IPS entities are from the private sector, they are still under government control. The SuperIntendencia Nacional de Salud (National Health Superintendency) performs the following functions:

- Inspection
- Vigilance and control
- Implementation of mechanisms to monitor the quality of health services performed
- Budget and financial control of participating entities

Meanwhile the Minesterio de Salud (Minister of Health) takes on the role of ensuring that epidemic outbreaks (e.g. leprosy, tuberculosis, malaria) are controlled and do not cause catastrophic financial peril to EPS and IPS organizations.

Two separate plans were effectively created. The first was a contributory plan (the focus of this article) that would service those with the economic means to contribute and the second was a subsidized plan for those who could not contribute to the other plan. The contributory plan would consist of contributions from the individual as well as from the employer. The government would largely run the subsidized plan.

As mentioned earlier, the reimbursement for a given procedure is set from a predetermined list of fees/services that is maintained by the government. Also, the government maintains a list of co-pays/deductibles by group of services performed. These government mandates result in all of the EPS organizations offering identical POS plan designs, and all receive the same contribution per enrollee. In this environment the financial success of an EPS is determined largely by:

a) age, sex and health status characteristics of their covered population

b) IPS network quality and negotiated fee levels

(c) administrative efficiencies

Obviously, a significant opportunity has been created for private entities to

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Ley 100 (Law 100) in Colombia
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serve as EPSs and potentially as a TPA providing services to EPS organizations. However, the traditional insurance company can also seize an opportunity by providing excess coverage to those who would prefer a degree of care beyond that provided by the POS plan design. It is already the case that EPS's are working with insurance carriers in an effort to efficiently coordinate the claim adjudication function when excess coverage is provided. First, the insurance carrier processes the claim as though the coordination with the EPS did not exist. The insured is reimbursed this total amount and the EPS then reimburses the carrier for the portion of the claim that they were responsible for as the primary insurer. A potential drawback is that this higher level of coverage in a contributory plan could never be made to be mandatory by an employer for all of its employees, which could create the age-old problem of anti-selection.

Another control that the government has in place is a type of guarantee fund, which takes 15% of contributions earmarked for the EPSs. This money serves the purpose of re-distributing funds to EPSs that have had adverse experience in an attempt to maintain equality among the various entities.

Since the entire population is not obliged to be part of the POS until the year 2001, the actual size of a potential higher tier market is difficult to measure. But, given Colombia's population of some 38 million (3rd largest in Latin America behind Brazil and Mexico), this could represent a substantial opportunity in the region. This will certainly be a sizeable opportunity should the nation's somewhat turbulent political past improve.

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Life in China: Part One

by Cao Qing Yang, FLMI

Editor's Note: Executives who attended LOMA's 1998 Strategic Issues Conference were given up-to-the-minute briefings on a number of emerging insurance markets in the Asia-Pacific region. Here's what one expert had to say about the People's Republic of China.

This article is reprinted from LOMA Resource *with permission. The second half of the article will appear in the next edition of* International Section News.

This year, mainland China's life insurance industry is half a century old. It has been a very interesting 50 years—especially the most recent 15, which have been characterized by industry reform, open markets and economic development.

Launched in 1949, the life industry thrived in the People's Republic of China (PRC) until 1958, when all operations were suspended. In 1982, they resumed, although life insurance premium income was very low at RMB¥ 1.59 million (approximately US$ .19 million) and the state-owned People's Insurance Company of China (PICC) dominated the market with a 90% + share of business.

Since then, dramatic change has occurred in the PRC's life insurance industry, the evolution of which has occurred in three distinct phases. The result? During the past 10 years, life premium income has grown, on average, 40% per year; in 1997, it grew 82% to RMB¥ 60 billion (US$ 7.3 billion). In addition, more and more Chinese have begun to recognize the importance of life insurance and the industry has become a popular career choice among the young.

The emergence of the PRC's individual life insurance market can be attributed largely to the establishment of Beijing-based PICC in 1949. At that time, PICC's life insurance department was in charge of the company's life operations. In July 1996, PICC was organized, becoming PICC (Group), with RMB¥ 20 billion registered capital, RMB¥ 102.9 billion total assets, and three wholly-owned subsidiaries: PICC (Life), PICC (Property), and PICC (Reinsurance). At the time of the reorganization, PICC (Life) had RMB¥ 1.5 billion registered capital and RMB¥ 74 billion total assets.

PICC (Life) currently has 1,561 branches at or above the county level, an 851-person business department, 40,000 regular employees and 180,000 agents. Its contributions to mainland China's life insurance industry are immense—among them, launching the country's life insurance market, training managerial per- sonnel for the life industry, providing the industry with examples of basic contract provisions, and formulating mainland China's first life insurance mortality table (1990-1993) on the basis of its experience data in 1995.

Another important driver behind the rapid development of the PRC's individual life market has been the agency system for product distribution—a system all domestic life insurance companies have adopted. In 1996, there were only 140,000 life insurance agents, and they generated RMB¥ 5.5 billion of premium income (16.7% of the country's total premium income). The following year, the number of life insurance agents skyrocketed to 350,000 and they generated RMB¥ 21 billion of premium in- come (35% of the PRC's total premium income).

Major Players

At the moment, there are 22 domestic insurance companies in mainland China, of which seven are life insurance companies. The only state-owned life insurer, PICC (Life) operates nationally, as do the shareholding companies Ping An, Pacific, New China, and Tai Kang. AIA, the only foreign company, operates regionally, as does Zhong Hong, which is funded jointly by Chinese and foreign investors. While Ping An has enjoyed the highest growth rate of any life insurance company, PICC (Life) still holds the largest market share with a 65% stake in 1997. Last year both Ping An and Pacific completed business restructuring in order to separate their life and property operations.

New shareholding companies and joint-venture companies will continue to enter mainland China's market; in fact, the People's Bank of China actually encourages foreign companies to enter the life sector by joint venturing with Chinese companies.

Products & Distribution

Today, there are hundreds of life insurance products in the PRC. These fall into three major categories: individual, group, and riders.

Individual life products include juvenile insurance, which basically provides the policyholder with an educational fund and typically has a supplementary option like a deferred annuity; critical illness insurance, in the form of whole life and term life, which covers eight to ten serious illnesses and provides a total permanent disability benefit; whole life insurance, which typically has a premium refund benefit; endowments, which are the most popular products and offer a living payment every three or five years; and deferred annuities, most of which cover death and total permanent disability.

Group life products include group endowment, group accidental and dismemberment, group annuity, industrial insurance, and group medical expense insurance.

Life riders include medical expense insurance, which has a one-year term, a coinsurance provision, and a relatively low face amount (about RMB¥ 20,000); special disease insurance, which has a one-year term and covers specific diseases such as cancer or cardiovascular disease; and hospitalization insurance, which offers a maximum daily benefit of about RMB¥ 100 for a maximum of 90 days.

How have customers responded to these products? First, products with a savings component have been well received and currently hold the largest market share. The traditional products promise a higher rate of interest than that of the banks and all of them are non-participating. Because they lack flexibility, however, these products have not fared as well in the marketplace. With only a critical illness plan and some medical riders available in mainland China, the range of health insurance products is too limited to meet market demands. Most of the products available in the country offer extensive protection against death and total permanent disability as well as a maturity payment; nonetheless, they have not been designed to meet market needs.

"Agents distribution consists of life agents, part-time agencies and career agencies. Life agents are captive—that is, they can sell only one company's products."

Agents, employees, branches, brokers and others sell life products in the PRC.

Agent distribution consists of life agents, part-time agencies and career agencies. Life agents are captive—that is, they can sell only one company's products. AIA introduced life agents to mainland China in 1992; since then, all Chinese companies have adopted this sales channel. There are more than 350,000 life agents in the country today and they are concentrated in major cities and coastal areas such as Beijing, Shanghai, Guangdong and Jiangsu. With 180,000, 100,000 and 48,000 life agents respectively, PICC (Life), Ping An, and Pacific control 93% of the life agents in mainland China. Part-time agencies—which are affiliated with several companies and generate more than one-third of the country's group business and career agencies, which are few in number and focus primarily on property insurance are two additional agent distribution systems employed in the PRC.

Brokers are another sales channel in mainland China. There are very few brokers and they mainly handle property insurance. Most are located in big cities; there are 20 in Shenzhen and three in Beijing, for example. In February 1998, the People's Bank of China issued the "Regulations of Insurance Broker (trial)," which is a sign that the insurance brokerage market will be opened up in the future.

Insurance company employees also sell insurance in the PRC. In each life company, about 5% of the employees are responsible for selling group products; often, they generate two-thirds of a company's group business.

Until 1993, life company branch offices were an important component of PICC distribution. These branches sold group products such as group accidental insurance and annuities. Today, there are more than 1,000 PICC branches throughout the country. However, they are gradually evolving from sales channels to business management centers.

Other distribution channels in mainland China include banks, which sell group and individual annuity products; post offices—which sell accident products; and automated policy sales machines which offer flight accident insurance to airline passengers. These alternative sales channels generate less than 1% percent of the PRC's total business volume.

The 350,000 life agents have become the country's primary distribution channel. Since 1998, prospective agents have been required by the country's regulatory body to sit for the "National Examination for Agent Certificate." Those who pass

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the exam then take a short training course about the company to which he/she is applying for work. Upon completion of this course, the individual becomes a qualified insurance agent.

In 1997, the number of agents increased rapidly, as did the numbers of regulatory violations. To address this negative trend—and to enhance agent quality and ethics—the People's Bank of China strengthened regulation in 1998. A life agent's commission for 20-year payment products can not exceed 40% of the annual premium and he/she can receive a commission on the product for up to five years. And, insurers now model life agent administration on the methods that prevail in Taiwan and Hong Kong.

Management Issues

Mainland China is facing a grave shortage of insurance professionals, and our training facilities are insufficient to meet the growth of the industry. Although the functions of underwriting, claim administration and customer service have been established and are functioning in the industry, the limited application of computer systems has hampered the standardization of business management.

Companies have established their own underwriting systems by drawing on foreign experience. Because of the country's existing healthcare system, few individuals have complete medical records. Patients' health files are kept only in the hospitals where they have been treated. As a result, they are not available to life insurance underwriters, which greatly affects the accuracy of underwriting decisions. The only insured health information the underwriter can get is the medical check-up results in the hospital designated by the insurance company. Some insurance companies have even set up their own check-up centers. Another underwriting challenge is that Chinese insurers currently do not require smokers to pay higher premiums than non-smokers. Because there are no tax records or accurate income records for most people, another problem is verifying the accuracy of the information supplied by individuals applying for large amounts of coverage.

Most underwriting personnel are doctors who are short on insurance vocational training. In addition, there is a great shortage of experienced underwriting personnel here. Because most life insurance products are endowments or annuities requiring a premium payment of less than RMB¥ 100,000, the shortage and importance of experienced underwriters is felt acutely.

The claim administration situation also is far from perfect. Due to the difficulty insurers have in collecting the necessary data to process a claim, they often overpay. In addition, claimant misstatements and fraud are fairly common. Customers have concerns, as well. According to a 1997 survey of the Beijing insurance market, many policyholders are dissatisfied with life insurance companies, primarily because of their claim settlement decisions.

In life insurance companies here, actuaries are mainly responsible for product design and reserve calculations. We have approximately 20 ASAs in mainland China, though neither the actuarial system nor its examination system are in place. In 1995, the Japanese life table that Chinese in-surers had been using was finally replaced by the PICC-stipulated China life mortality table. We still have no morbidity table, however, and have not acquired enough experience data, which, of course, is critical for health insurance operations. Compared with foreign markets, Chinese life insurers are somewhat more conservative in pricing. Among themselves, there are only negligible differences in premium rates, expense rates and agent commissions.

In 1997, many life insurance companies set up customer service centers. Several factors compelled them to do so, among them a rapid growth in business and inefficient and ineffective business management. Another important reason is problems with the agent distribution channel. Misrepresentation of policy terms and conditions is on the rise. In addition, the agent retention rate is quite low (more than 4% of agents quit during their first year of employment), which has led to an increase in orphan policies. When you combine these distribution problems with customers who are learning about insurance contracts for the first time, customer service becomes increasingly important for insurers wishing to grow their business.

At present, customer service centers typically are responsible for policy renewal, consulting, litigation, and orphan policy management. Because of the limited application of technology and the insufficient training of service staff, however, they are far from perfect. I believe the customer service function will become the focal point of companies looking for a competitive advantage in mainland China's insurance markets.

Another management challenge in the PRC is technology. The systems currently in place simply are unable to accommodate insurers' rapidly expanding business. As a result, most companies are giving high priority to improving their technology infrastructure. Nonetheless, most companies have not yet been able to centralize their functional operations via technology. As a result, head offices frequently can not handle underwriting, reinsurance or claim administration either directly or efficiently.

What's more, the country's banking

system does not accommodate depositing and withdrawing funds at different locations and most people do not use credit cards. The result? Policyholders can make premium payments only in the city in which they originally applied for insurance. This is also true for benefit or claims payments.

During the past two years, the Internet has garnered much public interest, especially in big cities where access has become quite fashionable. Analysts predict that the number of Internet users in mainland China will reach one million in the near future.

This new development has already attracted the interest of life insurance companies. Most of them have established home pages on the Internet, through which they are introducing life insurance products and recruiting agents. In 1997, the China Insurance Information Net—a window through which people can learn more about the insurance industry—was launched. No insurer sells insurance over the Internet, however, because of the constraints of the country's banking system.

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A Social Security System for the 21st Century: Part II

by Chiu-Cheng Chang & Geraldine Chen

Editor's Note: The first half of this article was published in the last issue of International Section News. *The list of 21st century trends immediately below summarizes key points included in the first portion of the paper.*

II. 11 The Trends of the 21st Century: A Summary

1) The population will be aging.
2) The spread of technology and information will engender a world that will be increasingly interdependent. Future technology will be so efficient that most of the time, it will be taken for granted. The indications are already there—for example the increasing use of the "Smart card"—of the move from technological complexity to technological transparency.
3) Politics will take a back seat to economics. The global corporation will become the agent of international economic integration and the catalyst for social and political change in developing countries, taking over some of the roles of governments and international organizations. Decision-making will be increasingly decentralized.
4) The consumer will be sovereign. Firms will seek ways of adapting their operations and management styles to maximize their responsiveness to consumer tastes that will evolve over time and differ across cultures. People and knowledge, brainpower and innovation will be the driving forces of the 21st century and access to markets will be the critical factor determining business success. Countries have responded by carving out their "markets of influence," most visibly through the formation of trade blocs.
5) Employees with innovative drive and the ability to harness and exploit information will expect and demand better remuneration, benefits and pension packages. However, with greater international labor mobility, the traditional pay-as-you-go social security systems will be increasingly anachronistic.
6) The availability of information, multinational production, trade and foreign investment will nurture a new global lifestyle. Present cultural and societal barriers to certain types of behavior and lifestyle patterns will break down.
7) Individuals will become accustomed to looking after themselves and taking responsibility for their actions and their lives.

The next two sections will outline the inadequacies and drawbacks of pay-as-you-go social security systems in the light of these trends and, using the Singapore pension system as an example, develop the essential characteristics of the social security system of the 21st century.

III. The Pay-as-you-go System

The pay-as-you-go defined-benefit system is the norm in the industrialized countries. Workers pay pensions, usually financed through payroll taxes or general revenues, to retirees today, with the expectation that their pensions will be paid by the next generation of workers. A pay-as-you-go pension plan's current revenues are just adequate to cover its current obligations. There is no stock of assets to pay future pensions.

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Pay-as-you-go funding has several advantages. Benefits can be vested immediately and they are fully portable. This is in contrast to occupational pension plans that traditionally have long vesting periods. As contributions immediately become benefit payout, there is no problem with indexing benefits to wages or prices to preserve real purchasing power as is the case with a fully funded scheme. Moreover, administrative costs are relatively low under such a scheme.

III.1 Why not Pay-as-you-go?

What then are the reasons for the pay-as-you-go public pension crisis? Pay-as-you-go systems are usually defined benefit schemes where the pension amount accruing to a person depends on income, number of years of employment and salary levels toward the end of working life. Since benefits are fixed, the contributions of each working adult will depend on the total number of working adults and the number of elderly which have to be supported, which in turn is dependent on mortality, fertility, migration and labor force participation rates. As has been discussed in section II.1, the elderly dependency ratio is rising in both developed and developing countries. A two-year-per-decade increase in life expectancy among retirees could double both the dependency and contribution rates over the lifetime of the working population. Given the current situation, each working cohort will, in all probability, be succeeded by a smaller cohort, making pay-as-you-go systems untenable in the long run.

The increasing incidence of early retirement worsens the system's dependency ratio. The pay-as-you-go system, by breaking the link between benefits and contributions, creates incentives for evasion and reducing the legal retirement age. Moreover, many public pension plans in industrial countries have an earnings test that strongly encourages older people to stop working lest they lose their pensions. In addition they generally have high wage replacement rates that are earnings-related, skewing benefit payouts in favor of high-income workers. Benefits structures under pay-as-you-go systems distort the labor market by reducing the labor supply that is inefficient if the cost of the output foregone is greater than the value of the increased leisure. The same is true under most occupational pension plans under which the value of pension wealth generally stops increasing after the worker reaches a specific age such as 60 and 65, inducing workers to retire. Early retirement is a defacto substitute for layoffs and a way of dealing with the declining productivity of older workers, especially those whose wages rise with tenure. What is not immediately apparent is that early retirement reduces current production costs but raises long-run pension costs. This problem is aggravated by the provision of generous disability benefits.

"Early retirement is a defacto substitute for layoffs and a way of dealing with the declining productivity of older workers..."

Defined-benefit social security programs involve public intergenerational transfers from the young working population to the elderly retirees. Benefits and contributions are intergenerationally dependent. Slow income and productivity increases will reduce the ability of the younger generation to continue to make such transfers. In the years when members of the baby boom generation began entering the labor market, each successive working cohort could be expected to be larger than the last. Thus each cohort's retirement benefits would be paid by the contributions of an even larger cohort. However, given the present and projected trends in fertility and mortality discussed above, this method of financing will not be viable.

IV. Criteria for the Social Security System of the 21st Century

Social security schemes, irrespective of how they are funded, are a means of transferring wealth from workers to retirees. The economic function of a pension is to smooth out consumption over time. This is true for an individual and can be true for a society as a whole. Nevertheless the method of funding will have different impacts on labor markets, savings and capital markets and on the structure of society as a whole. For these reasons, we believe that the social security system of the 21st century should have certain features. These are discussed below.

IV.1 Emphasis on saving and personal responsibility

The economics literature abounds with studies on the role of savings in development, the impact of savings on economic growth and the reasons for differential savings across countries. One observation that has been repeatedly made are the savings rates, in excess of 25% of GDP, of the East Asian newly industrializing countries of Hong Kong, Taiwan, South Korea and Singapore which are correlated with strong economic performance over the past two decades, and the comparatively low savings and growth rates of many Latin American countries. The direction of causality has been the subject of much debate: do high economic growth rates imply higher savings or are higher savings causing higher growth by allowing increased investment? A recent study showed that one of the strongest contributory factors to high savings is rapid economic growth, and as countries get richer, they can save more, creating a virtuous cycle of higher growth and higher savings. A greater proportion of people under age 15 and over 65, and a high level of urbanization were found to effectively lower savings rates, as does a relatively underdeveloped financial infrastructure.

Mandatory retirement savings schemes are one way of increasing private savings. Chile has the most successful private pension system in the world as well as the highest savings rate in Latin America. Singapore and Malaysia have relied on their provident fund schemes for the last two decades to help generate their savings rates of around 30% of GDP.

A mandatory savings pension scheme has several positive features:

a) It emphasizes personal responsibility for one's own welfare rather than dependence on others. It helps to overcome the problem of shortsighted individuals who do not save voluntarily when young and become a charge on society when old. This is consistent with a general trend where people are moving away from reliance on public institutions to greater reliance on themselves. Saving for one's own future consumption is but an extension of this trend.
b. It encourages long-term planning rather than short-term expedience. The American Academy of Actuaries has launched a program to encourage American wage earners to prepare for a financially secure retirement by informing themselves of their social security and pension benefits and then beginning a program of personal saving for retirement. As businesses are also moving towards planning for the long term, they will be in a position to help their employees think long term.
c) It facilitates understanding of the cost of living and financing for retirement.
d) As contributions are a function of salary or earnings, this type of scheme creates incentives to take up or remain in employment or to generate earnings through business. This is in direct contrast with public pensions that have built-in disincentives to work.
e) Properly channeled, the accumulated savings can provide resources for economic development

One point to note is that under a mandatory savings scheme, the contribution rates have to be high enough to offset the decline in voluntary saving such that total savings increase.

IV.2 Emphasis on employer responsibility

Pensions have long been part of companies' overall wage and benefits package. A good, solvent pension plan is a means of retiring older employees, attracting new talent and enhancing the reputation of the company. Knowing that their employer takes responsibility for their welfare during and after their active working life helps to raise and preserve employee morale within the company and in so doing, foster good labor-management relations in industry as a whole. The provision of an adequate pension is part of employers' moral obligation.

Pensions are essentially deferred wages, to help employees smooth out income and consumption between the periods of employment and retirement. As such, in the ideal social security system of the future, employers should continue to contribute to their employees' welfare in retirement.

IV.3 Fully funded

Under a mandatory savings scheme, contributions are deposited into personal accounts and the amount available in old age is dependent on contributions plus the investment return. The scheme will be fully funded at any time.

Full funding arises from defined contributions during the active working period, which in turn would depend on the level of salary. To ensure that the total pension is adequate to provide for a minimum level of consumption from retirement to death, the rate of contribution should depend on projections of mortality, disability, termination and the target wage replacement rate. In Singapore, defined contributions are elicited from both the employer as well as the employee and at present, for employees under 55 years of age, employers and employees contribute, subject to a ceiling, 20% of their gross salary into their provident accounts which can be withdrawn upon retirement.

IV.4 Fully vested

Occupational pensions in Europe at the turn of the century, usually with defined benefit formulae, had long vesting periods to encourage employers to provide and workers to undertake on-the-job training. Under limited, partial or staggered vesting, benefits are vested in or owned by the employee only after a qualifying period of employment. If workers quit or are dismissed before vesting, they lose their rights to the pension benefits. Employers also had perverse incentives to fire workers just before vesting, increasing the probability of making them liabilities of the state.

Pensions in the United States also operate with delayed or staggered vesting. Employees are vested after a minimum length of service (usually five years) or are vested in stages. For example, 20% of the pension is vested after three years of service, 40% after four years, 60% after five years and so on. Delayed vesting rules in essence divest the employer of accountability for the employee during the probationary period and hinder labor mobility.

When economic conditions change rapidly, impeding labor mobility reduces efficiency in labor allocation. Pensions should therefore be vested immediately. Employees and companies are also beginning to accept the necessity of training and constant upgrading and in the future, training will be provided and undertaken regardless of incentives. Benefits under the Singapore provident scheme are vested immediately for members without any minimum age or length of service conditions.

IV.5 Fully portable and fully reciprocal across national boundaries

The discussion in section II.7 indicates that labor will be mobile not only between jobs and occupations within national boundaries but more so across national boundaries. Full vesting allows full portability but in the future, pensions will also have to be portable across national boundaries.

Some countries already have a unified social security program administered by one agency, which comprises representatives of employers, employees and governments. Bilateral and multilateral conventions or treaties exist among

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many countries, especially in Europe, which guarantee equal treatment of aliens and citizens, payment of benefits outside the country and the pooling of transfer re-cords to meet qualifying periods.

A "totalization" procedure is sometimes used. The countries agreeing to do this count the earnings record of the individual as part of his earnings record in the given country for purposes of determining benefit eligibility. Pension credits obtained in one country would be handled in such a way so that a movement to a job in another country would be administered like the continuation of work in the given country. Under a fully funded defined contribution scheme, contributions made in all jobs would be credited into the employee's account by any signatory country to the agreement.

IV.6 Intergenerationally independent

One major disadvantage of pay-as-you-go systems is the separation of contributions and benefits. More to the point, the pension costs of this generation are borne by the next: the system is intergenerationally dependent. A long-term steady state solution to a problem cannot exist when costs are deferred to the next generation.

As outlined in the previous section, businesses are beginning to think long term, and the long-term solution to the pension question lies in personal responsibility for one's future pension and consumption.

IV.7 Encourages late or flexible retirement

Many public pension schemes pay out benefits only if the earnings of the individual are below a certain threshold. This encourages individuals to stop working even when they are capable of and wish to continue working. Early and/or mandatory retirement at a fixed age is costly, particularly when the labor force is shrinking, and inefficient when individual utility could be raised by continued employment. A mandatory savings-based pension scheme with salary-based contributions has a labor-supply inducing effect and reduces the incentive to take early retirement.

Many countries have a customary retirement age. In Singapore, this was recently raised by 5 years to age 60, and will be raised in stages to 67 years. To compensate for the perceived lower productivity of older workers, the contribution rate for employees above 55 years is half the norm and declines in stages thereafter. Nonetheless there seems to be some social pressure for older individuals in larger organizations to retire to make way for younger colleagues, and for individuals to withdraw their due pensions at the legal withdrawal age of 55. Any attempt to raise the withdrawal age, at least in Singapore, would probably not be feasible. Still, several corporations have begun to tap older workers in an increasingly tight labor market. A flexible retirement age is logical. Individuals differ greatly in their financial conditions, health status, work attitudes and life philosophy and they should be able to work for as long as they choose.

IV.8 Encourages private intergenerational transfers

One of the criticisms levied against savings schemes is that their redistributional impact between the different income groups in society is minimal. If an individual is in a low-wage job, his contribution (and his employer's contribution) to his pension will be small and he will probably have a retirement income insufficient or barely sufficient to meet his basic needs. The low income\low pension cycle is perpetuated.

Many Asian societies rely on a system of informal support whereby children accept that they have to ensure the welfare of the elderly in their family, notably through sharing of income and provision of basic needs. The provident fund scheme in Singapore has institutionalized this system of private intergenerational transfers by allowing and encouraging children to top-up their parents' provident fund accounts. Income redistribution takes place within the family and some say that this emphasis on care of the elderly will help to reinforce the strength of the family unit.

IV.9 Provides for disability and medical expenses

One of the biggest public expenditure items is health care, particularly for the elderly and infirm. The United States currently spends about 14% of national income on healthcare and this proportion is projected to rise as the population ages. The reasons for the escalation of healthcare expenditures are extensively documented in the literature and will not be repeated here. Suffice to say that pension schemes should require in-dividuals to plan for medical expenses and insure against catastrophic illnesses and disability. In Singapore, premiums for approved medical insurance schemes can be paid with provident funds.

The new lifestyle of the 21st century will involve changes in living habits. Current trends indicate that there will be many more couples with few or no children, many more people remaining single and probably a new class of unmarried couples living together. There is evidence that mortality rates differ significantly according to marital status (Trowbridge, 1994) with unmarried mortality higher. It is highly likely that morbidity rates will also favor marrieds.

Couples with few or no children will have few resources to fall back on in the event of long-term illness or disability, a problem that will be more acute for singles and unmarried couples. These changes will alter the relative importance of life vis-à-vis disability insurance. Life insurance will become relatively less essential for individuals with few or no dependents. What is critical will be the ability to support oneself if one is disabled and cannot be employed. Total and permanent, as well as partial disability that affects employment, will cause individuals without adequate insurance protection to be liabilities for their families and the state.

One reason why disability insurance benefits have not been widely available in Asia is because the definition of disability may be a source of dispute. If an eye surgeon develops an affliction which results in his being unable to perform operations, but he is otherwise able to undertake other types of employment and activities, is he regarded as disabled? Should an occupation-specific or an all-occupational definition of disability be used?

The recent past has witnessed more and more people, particularly the elderly, refusing treatment in the face of terminal illness. Many wish to save on medical costs. In 1993, the United States spent US$152 billion on Medicare, 28% of which was estimated to have been for patients in their last year of life. Of that, half was spent in the last 30 days of the patients' lives. There is also a growing acceptance that the terminally ill should have the freedom to choose to die earlier instead of being kept alive by machines. More people will be willing to confront the subject of death and make living wills, and the social security system of the 21st century should encourage this practice. Singapore has just recently begun to consider this subject.

V. Concluding Remarks

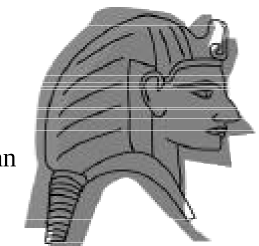
This paper outlines some of the key characteristics of the viable social security system of the 21st century, based on trends that are expected to prevail at the time. Social, political and economic conditions vary and even if all countries adopted these principles, implementation will differ according to circumstances and conditions. Issues such as whether the social security system should be publicly or privately managed, how systems can be unified, whether withdrawals should be phased or lump sum, whether contributions made in one country can be withdrawn in another are best decided by the governments or corporations concerned. Flexibility should be a guiding principle in system as well as implementation.

Chiu-Cheng Chang, Ph.D., FSA, FCIA, FAIRC, FSII, CLU, ChFC, is a professor and director of the business department at Chang Gung University in Tao-Yuan, Taiwan. He is also assistant editor of International Section News.

Geraldine Chen, Ph.D, is a professor at Nanyang Technological University in the Nanyang Business School in Singapore.

The Egyptian SOA

by Mohamed F. Amer



Preamble

The Egyptian Society of Actuaries (ESOA) was established in February 1999. The founders are ten Egyptian professional actuaries:

- Two Fellows of the UK Institute of Actuaries
- Two Fellows of the USA Society of Actuaries
- Four Associates of the UK Institute of Actuaries
- Two Associates of the USA Society of Actuaries
- Twenty five affiliated members who are studying for actuarial examinations

The Main Objectives of the Society

- ✔ Promote and maintain high standards of conduct and competence among its members
- ✔ Issue guidance notes and professional guidance standards
- ✔ Increase awareness of actuarial science
- ✔ Organize meetings and seminars to discuss practical actuarial problems of professional interest so that the affiliated members may acquire skills and information in the areas related to the profession
- ✔ Exchange views and experience with other societies
- ✔ Express views and opinions in all matters related to the actuarial profession
- ✔ Form an actuarial library

Education and Training

In Egypt the shortage of actuarial personnel had become acute. Most of the existing Egyptian actuaries were aging and there were only very few new potential actuaries.

In 1995 an actuarial education program was started at Cairo University for the degree of B.Sc. in actuarial science. Members of the ESOA and professors of the university teach courses in this program, which is a joint effort of Cairo University, City University in London, the Insurance Federation of Egypt and the Institute of Actuaries.

Through the Cairo University program, students are able to obtain exemptions on up to eight of the UK Institute of Actuaries' examinations. Twenty-five students have already graduated, in both 1998 and 1999, and have obtained the degree of B.Sc. in actuarial science. Some of them received the full exemption of eight examinations of the Institute of Actuaries, and they are now affiliate members of the IOA.

A steady stream of new entrants is starting actuarial studies each year at the university.

There are two examination centers in Cairo for examinations of the USA Society of Actuaries and the UK Institute of Actuaries.

The ESOA is not conducting its own exams now and does not plan to do so in the foreseeable future. We will depend upon both the USA Society of Actuaries and the UK Institute of Actuaries.

Membership

For admission to the ESOA, the prospective member should have a good reputation and the board of directors must approve his/her application for membership.

The membership of the Society consists of two classes:

1) **Active members:** Fellows and Associates of the Society of Actuaries or the Institute of Actuaries who are included in the

(continued on page 18, column 1)

The Egyptian Society of Actuaries
continued from page 17

registry of the Egyptian Insurance Supervisory Authority.

2) **Affiliated members:** Those who have a bachelors degree in actuarial science or any other equivalent qualifications from a university or institute, are accepted by the Board of Directors, and who are continuing their studies to qualify to be an active member.

Termination of Membership

Membership will terminate for any of the following reasons:

- Noncompliance with the rules of the Society
- Commitment of an offense causing material or moral damage to the Society
- Exploiting his/her membership in the Society for personal benefits
- Death
- Resignation

The General Assembly

The General Assembly is the supreme authority of the ESOA. It is composed of all members, but voting is limited to active members. The general assembly shall hold its sessions at least once every year.

The general assembly approves the financial accounts and the budget.

Members of the Board of Directors are appointed by the General Assembly.

Contact information

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President:	Fathi M. Ibrahim
Treasurer:	Mohamed F. AMER
Secretary:	Farid A. Metri

Mohamed F. Amer, FSA, is chief actuary at Amer Consulting Actuaries in Cairo, Egypt. He can be reached at nfamer@ link.comeg.

An American Actuary in Shangri-la

by James E. Norris

On a secluded hillock fes-tooned with palm oil trees in the center of one of Asia's most bustling cities, a sinuous Chinese woman approaches the Buddha in her bare feet. The few believers in the tem-ple are young and reverential before the incarnate god. The incense only punctuates the essentially sensate nature of their worship. A metal gong is seen but is not heard as the young woman murmurs her incantations.

This is not the heraldic religion of the Occident, the Christianity born of Frankish blood and Toledo steel. This is not the stern stuff of Rome and Leipzig, the denial of the senses—dare we say it—the denial of the flesh.

As the western man observes the young believers—and, in particular, the young woman—he senses a loosening of his own moorings, a questioning of all that has gone before. He feels himself awash in a riot of images —some profound and some profane. He observes paradox where before there was only rational, western truth.

Malaysia is, after all, an Asian land. Although modern, clean, and progressive, Malaysia is also traditional and atavistic. In its jungles and highlands, one can feel the presence of ancient avatars, who frolic amid gushing, mountain waterfalls and who take their rest in tropical, lowland gardens. Yet, in the largest of its commercial centers, one enjoys the civility of its warm and genteel people—a civility long since gone in the west.

Suddenly the western man is aroused from his reverie by the Islamic call to prayer. In the middle of the week —in the middle of the day—in the middle of the nation's commercial heart—the western man finds himself praying. And, as the days progress, the beautiful minarets of lapis and gold which dot the landscape remind the western man to pray again.

Malaysia is a wondrous land, whose people are genuine, hardworking, receptive to many influences, and conveniently for this western man, well-versed in the English tongue. And Kuala Lumpur is a beautiful, contemporary metropolis, which also conveniently has a need for instructors in actuarial science.

James E. Norris, ASA, EA, MSPA
Actuary
30 August 1999

Seminar: Financial Reporting Issues for International Actuaries

San Francisco, October 20-21, 1999

by Angelica Michail

How can we encourage and facilitate the professional development of our members in international areas of practice? That is the question the International Section Council considers at each meeting. At the October 1998 council meeting, one answer was: SEMINAR. Many SOA special interest Sections have been doing seminars successfully for several years now. With a financial market that is increasingly global in perspective and the sub- sequent increase in the number of actuaries in international practice, a seminar seemed a necessity, not a luxury.

After several months of planning and coordinating, we are proud to announce that the seminar, "Financial Reporting Issues for International Actuaries will be held on Wednesday afternoon and Thursday morning, October 20-21, 1999, immediately following the 1999 Annual Meeting. It is co-sponsored by the Financial Reporting Section, whose experience and expertise in seminars have proved invaluable. This partnership was made possible through Bruce Moore and Shirley Shao, chairpersons of the International Section Council and Financial Reporting Council, respectively.

We will have four sessions:

I. International Financial Reporting—regulatory structure, practices and issues

II. International Accounting and Solvency Standards; Reinsurance

III. Break-out sessions to discuss more specific issues and topics

IV. US GAAP for International Companies—Issues and Practices

The presenters are:

- Laura Benedict-Hay
- Martin Huey
- Daniel Kunesh
- Bruce Moore
- Steven Mahan
- Angelica Michail
- Edward Robbins

- Michael Terne
- James Toole
- Jay Zellner

For more details, please check the SOA website (*www.soa.org*) information on meetings and seminars. Program Coordinators for the seminar are Angelica Michail (International Section) and Ed Robbins (Financial Reporting Section).

Change and Opportunity

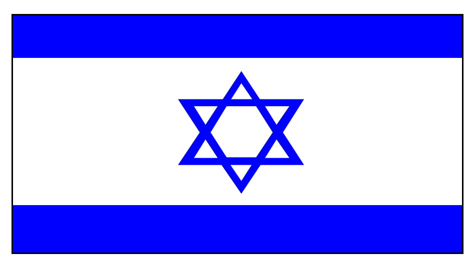
by Dov Raphael

The Israel Association of Actuaries invites delegates to the council and committee meetings of the International Actuarial Association in May 2000 and that to a one-day seminar which will be held on Sunday, May 21, 2000. This is the day immediately preceding the committee meetings.

The topic of the seminar will be "Change and Opportunity." The rapidly changing economic environment, increased consumer sophistication and the demands of regulators for transparency and disclosure are all revolutionizing the world of pensions and insurance. How are actuaries responding to these challenges?

We hope that delegates will be able to extend their stay in Jerusalem to participate in the seminar. Lectures will be in English and Hebrew with simultaneous translation.

The council meetings and the seminar will be held on the campus of the Hebrew University on Mount Scopus, which commands a magnificent panoramic view of the city holy to three faiths, "beautiful in elevation, the joy of the whole earth" (Psalm 48:3). This will be a unique opportunity to see Jerusalem in the year of the millenium.



Accommodations have been arranged at the Faculty Club of the University and at the nearby Hyatt Hotel. Guided tours for delegates and their partners will be arranged according to demand.

Dov Raphael is president of the Israel Association of Actuaries, the host of the IAAA Council and committee meetings in Jerusalem, Israel. He can be reached at (*dovrapha@trendline.co.il*). Further information can also be obtained from Avi Bar-Or (*avibo@ibm.net*).

IACA Meets, Reduces Dues 55%

Editor's Note: This article previously ran in the June 1999 issue of Pension Section News.

At the April 1998 biennial meeting of the International Association of Consulting Actuaries in Cape Town, South Africa, the organization's committee—its governing board—agreed to reduce annual IACA dues 55%, from US $55 (or its non-US-currency equivalent) to US $25. The reduction reflects the financial health of the IACA treasury and is designed to encourage more consulting actuaries to join the IACA and participate in its conferences.

The committee also approved the next biennial meeting, to be held June 4 - 8, 2000, in Hershey, Pennsylvania.

The Cape Town meeting was attended by consulting actuaries from Australia, Canada, China, Hong Kong, Germany, India, Mexico, Netherlands, Philippines, South Africa, United Kingdom, United States, and Zimbabwe. National reports from each location covered the current status of government, finances, social insurance, pensions, private insurance, and the actuarial profession.

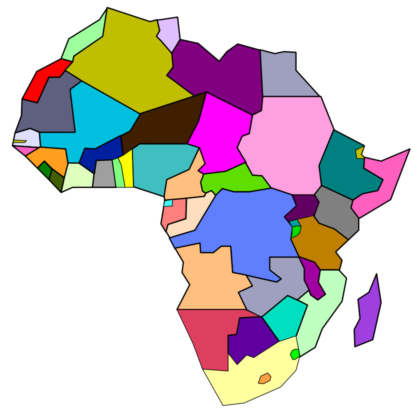
Professional papers were presented on the following subjects:

- Forensic litigation testimony in the UK and Ireland
- Trends in actuarial software
- The death of Confederation Life
- The actuary's role in certifying U.S. life insurance marketplace standards
- A survey of FAS 87 assumptions
- The role of the state in pensions
- Assumptions in local government pension plans
- Utility theory in defined contribution investment selection
- The new international accounting standards for pension plans.

The £500 prize for the best paper was awarded to "Avoiding Disappointment in Investment Manager Selection," by the UK's Roger Urwin.

The social calendar was as full as the professional one. Events included a four-day trip along the Garden Route, from Port Elizabeth to Cape Town, and trips on the "Blue Train," South Africa's equivalent of the Orient Express. Day trips to the Cape of Good Hope and Robben Island (site of Nelson Mandela's 17-year prison ordeal) were equally absorbing. And many of the conferees used the occasion of a visit to southern Africa to view game drives in Botswana, Kruger Park, and Kenya, and to admire Zimbabwe's Victoria Falls.

Back at the meeting, Ron Walker of the U.S., was elected chairman; Rudd Sprenkels of The Netherlands was



elected vice chairman in charge of arranging the 2002 meeting in Europe. Dudley Funnell of the U.S. continues as secretary-treasurer. Newly elected representatives from the U.S. include Jay M. Jaffe, an insurance consultant; and Martha Moeller, a pension consultant. Conrad Siegel, a health and pensions specialist, continues as a U.S. representative.

Help a Future Actuary

Through an agreement with bookseller Amazon.com, readers can purchase books directly through the web site of the American Academy of Actuaries magazine, (*www. contingencies. org*), and help raise money for minority scholarships for students interested in becoming actuaries.

Under this agreement, *Contingencies* receives 15% of the price of books reviewed or recommended in the magazine and 5% of the price of all other books and CDs purchased.

As an investment in the future of the profession, *Contingencies* will contribute 25% of all revenues earned to the work of the CAS/SOA Joint Committee on Minority Recruiting. The program focuses on minorities underrepresented in the actuarial profession: African Americans, Hispanics and Native North Americans.

Simply go to *www. contingencies.org,* click on the "diversity" or "amazon. com" banner, and select a reviewed or recommended book from this "Book Link" page and double-click on it.

This puts you in the amazon.com virtual bookstore, where you can browse or make a purchase right away.

International Section's List of Meeting Sessions

by Bob Lyle

Monday, October 18, 10:30 - 12:00 noon
HAVE FSA WILL TRAVEL

A panel of senior executives discusses worldwide issues and trends in which actuaries may be involved and their implications for the actuarial profession, worldwide. At this session, attendees will gain a better understanding of the opportunities and obstacles that lie ahead for actuaries in the global economy.

Monday, October 18, 2:00 - 3:30 p.m.
EMERGING REINSURANCE MARKETS

Some insurance markets are expanding and reinsurance opportunities are expanding with them. A panel of experts gives an overview of markets in Mexico and South America and the North American offshore market. They touch on market development, growth potential, products, solvency/capital requirements, financial reporting, and regulatory aspects.

Tuesday, October 19, 8:00 - 9:30 a.m.
DEMOGRAPHICS AND LONGEVITY INTO THE NEXT CENTURY

Top experts in medicine, demographics, and actuarial science give their projections on demographic trends and longevity prospects in important countries, going into the next century. They analyze the factors influencing these expected trends and comment on what these trends will mean for financial services industries and the actuarial profession around the world.

Tuesday, October 19, 10:00 - 11:30 a.m.
THE ASIAN FLU - IS ANYONE IMMUNE?

A panel of distinguished speakers explain the financial risks inherent in the Asian financial crisis and other more recent crises and discuss how such risks can affect other countries and regions. They cover such topics as sovereign risk and currency mismatching. They comment on impacts of multinational financial services operations and suggest ways for the industry to prevent or better manage these risks.

Tuesday, 2:30 - 4:00 p.m.
U.S. SOCIAL SECURITY: TO BE OR NOT TO BE?

Drawing on the experiences of other nations which have undergone reform, such as the United Kingdom and Chile, these most knowledgeable and internationally known speakers discuss whether and how to reform the U.S. Social Security system. In this session, attendees gain a better appreciation of the implications of reform for both the state and private sector employees and individuals.

Wednesday, October 19, 7:30 - 9:30 a.m.
— INTERNATIONAL SECTION HOT BREAKFAST

This session includes a roundtable discussion of current international issues, briefings from national Ambassadors and a report and discussion of issues facing the International Section. (Open to Section members only.)

The International Section is also co-sponsoring the following sessions:

Monday, 2:00 - 3:30 p.m.
THE NEW EUROPEAN UNION

Tuesday, 2:30 - 4:00 p.m.
INTERNATIONAL FINANCIAL REPORTING STANDARDS

Bob Lyle, FSA, MAAA, is president of Lyle Associates, LLC in Simsbury, CT. He has been involved in the development of the International sessions at the SOA meetings and can be reached via email at rob_lyle@compuserve.com.

IACA Meeting in Year 2000 Slated for Hershey, PA

Editor's Note: This article previously ran in the June 1999 issue of Pension Section News.

The next biennial meeting of the International Association of Consulting Actuaries will take place June 4 - 8, 2000, at the Hotel Hershey in Hershey, Pennsylvania. The pictur-esque home of the famous choc-olate factory was selected by the U.S. del-egation, headed by Ron Walker (IACA chairman), Dudley Funnell (secretary-treasurer), and council members Jay Jaffe, Martha Moeller, and Conrad Siegel. The last two meetings were held in Gleneagles, Scot-land, and Cape Town, South Africa.

This will be Hershey's first actuarial meeting, and the IACA could not have chosen better. Located amid the rolling farmland of Derry Township, Hershey is an easy day's drive for a significant percentage of all actuaries (U.S. and Canadian). The world-famous Hotel Hershey, which overlooks the choco-late factory, is an ideal meet-ing place. There are five local golf courses, one of which, as well as the hotel tennis courts, is a short walk away. Within an hour's drive are Gettysburg, Amish country, and the beautiful state capi-tol at Harrisburg. There is also extensive discount out-let shopping nearby—an especially attractive proposi-tion, since Pennsylvania has no sales tax on clothing.

Most important, of course, is the professional program, which will be invaluable to insurance and benefit con-sultants and forensic, or expert witness, actuaries. With the globalization of business, even small-firm actuaries must increasingly become aware of the devel-oping international account-ing rules affecting pension and insurance matters. The IACA meeting is the perfect venue for adding to one's knowledge base. And be-cause social events will be priced separately from the professional meetings, attendance need not be costly.

Joining the IACA is inex-pensive as well. Dues are now only US $25 per year, reduced from US $55. Actuaries from the United States must have three years' consulting experience, as well as Fellowship in the Society of Actuaries, the Casualty Actuary Society, the British Institute or Scottish Faculty, or the Conference of Con-sulting Actuaries. And if, as expected, IACA affiliates with the International Actuarial Association, any IAA member may become an IACA mem-ber simply by paying the $25 annual dues.

Joining is easy. Write for an application to:

Dudley Funnell
IACA Secretary-Treasurer
1421 Strada D'Argento
Venice, Florida 34292
USA
Phone: (941) 485-1922
Fax: (941) 486-1191
E-mail: ***funnell@home.com***

And mark June 4 - 8, 2000, on your calendars!

475 North Martingale Road, Suite 800
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