RECORD, Volume 24, No. 3*

New York Annual Meeting
October 18–21, 1998

Session 93PD
Once in a Hundred Years

Track: Education and Research
Key Words: Education/Research

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Summary: The recent problems with the Asian banking systems, as well as the problems with S&Ls in the United States during the 1980s, demonstrate that a capitalistic economic system cannot function without healthy banks and insurance companies. Not only must the banks and insurance companies be profitable and solvent, but they also must be perceived by the public as being absolutely safe for deposits of funds.

The panelists discuss the following three levels of protection available to bank depositors and insurance purchasers in the United States: (1) risk-based capital of the individual financial institution, (2) FDIC and other federal guaranty corporations, and (3) the eagerness with which general federal funds can be used to bail out S&Ls or Asian banks. While the various mechanisms are already in existence, it is not clear that there is any rational basis for their relationships.

Mr. Irwin T. Vanderhoof: Within the U.S. and Canadian economies, financial intermediaries function so well that they are almost invisible. In financial theory we start by assuming that transaction costs are zero and that there are default-free securities.

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In the last few months we have seen how important intermediaries are. Faith in financial institutions and currency are an essential underpinning in a modern, complex economy. The economies of several great countries have demonstrated how important these requirements are; they have failed to provide them, and the economies have collapsed.

Despite the critical importance of intermediaries and the various guarantees provided by governmental and quasi-governmental organizations, there has been little discussion about what their explicit role in the guarantees should be or how they should operate. They just grew.

The assurance of the workings of these institutions has been a subject of considerable efforts, though those efforts seem to have been undertaken independently of each other. The role of risk-based capital (RBC) has not been integrated with the operations of the guaranty corporations. The rationale behind the FDIC, and the Security Investor Protector Corporation (SIPC), and the guaranty corporations seems to differ. Perhaps these entities should remain separate. Nevertheless, a discussion of how each of them is intended to operate might allow each of these systems to function better. Also, it might be possible to ensure that a weakness in one of the systems would not result in the failure of the others—or a failure of the whole economy. It might also be possible to better understand what might have to be done if the economy experiences a shock greater than the "once in a hundred years" event that RBC and the various guaranty organizations are designed to protect against.

When does the federal government have to act to save the system? The problems abroad make this a good time to start the discussion. And let's not kid around. In 1907, it was J.P. Morgan who called together the various banks and investment bankers to prevent a collapse of the economy. During the past month, Alan Greenspan essentially told people it was time to pay for their participation in the system by putting up enough hundreds of millions of dollars to keep long-term capital from screwing up the entire economy.

We are fortunate today to have with us a panel of experts who can actually shed light on this important, neglected subject.

The first level of defense of the integrity of the intermediaries is their own capital. Therefore, the rationale of the RBC system, the level and kind of risk this is supposed to guard against, is our first topic. Bob Wilcox, who was involved in the development of this discipline, will be the presenter.

The second level of protection for the insurance part of the system is guaranty corporations. The rationale of the current operations and objectives of the National Organization of Life and Health Guaranty Association (NOLHGA) will be discussed by its actuary, Willis B. Howard Jr.

The FDIC is the federal system designed to protect the integrity of banks. George Pennacchi of the University of Illinois will discuss the levels and kinds of risks the federal government addresses and how it compares with NOLHGA.

Finally, Allan Brender will discuss the operation of the Canadian system and some of the work he has done for SPIC.

Mr. Robert E. Wilcox: There has been a lot of discussion over the years about whether or not we should preclude failures of insurance companies. What is an acceptable number of failures of insurance companies? My perspective as a former regulator may give you a different view than you might have had previously.

I begin with this proposition with regard to capitalism and insurance: The right to succeed includes the right to fail. There is no way you can have one side of that equation without the other side. It just leads to illogical conclusions.

Look at insurance regulation in that context. Please understand that the responsibility of the insurance regulator is not to prevent failure. Many people within our own industry have perhaps misunderstood this concept. Regulators do not have a responsibility to prevent failure. The role of the insurance regulator is to protect policyholders and the public, and then general creditors, if possible. Protecting policyholders is different from protecting equityholders, and it is equityholders who have the right to fail.

Let's talk about protecting policyholders and look at the responsibility of the insurance regulator not to prevent failure, but to intercede in that failure process before policyholders are injured. There are myriad grounds for a regulator to intercede and a few statutory bases for the receivership of an insurance company. At the top of the list is the most expected circumstance, statutory insolvency. Illegal conduct is next because, in terms of numbers, perhaps more failures have involved illegal conduct than have not.

The very first insurance company failure I became intimately involved with was a company that was sold to an individual. That individual immediately took every security that could be transported, moved it to a brokerage in Baton Rouge, Louisiana, and sold it. He ended up celebrating his experience in a federal

penitentiary. Illegal conduct is certainly grounds for stepping into that failure process. It's one of the reasons why sometimes it is so difficult to intercede in time.

The man who bought the company and sold its securities at a level that made it statutorily insolvent did so in about five days. That isn't something you would detect in the normal process. But faulty books and records or inaccurate, late reports are grounds for putting a company into receivership, including liquidation.

Dishonest or untrustworthy officers or controlling parties, willful violation of the company's own articles and bylaws, or of any law, not just the laws of the state of domicile but the laws of any state or the federal government, also are grounds for shutting down the company and putting it into receivership. So is the general category of hazardous behavior, financially or otherwise, to policyholders, creditors, or the public. So, there's a wide range of ways in which the insurance regulator can take action to protect the policyholders and the public from the failure of the enterprise.

How do we go about this primary task of detecting insolvency? These are concepts with which probably everyone in the room is very familiar. Annual and quarterly statements are filed. RBC requirements, a relatively new entry on the stage in terms of detecting insolvency, now becomes a critical element of the definition of insolvency. Accounting firms perform independent audits. Financial analyses by insurance regulators, the Insurance Regulatory Information System, the A. M. Best ratios, etc., plus the statutory examinations, are all tools for detecting statutory insolvency.

I read about a recent study that examined whether RBC requirements or Best ratios were better predictors of company failure. The conclusion was that the Best ratios were slightly better than RBC requirements in predicting failure, but the two combined were better than either one by itself.

Are these tools perfect? No, they're not. RBC requirements depend on having the proper foundation; they depend on the reserves having been established at the expected level. That expected level is the easiest one to pick on, because we have this system of defining the statutory liabilities based on prescribed methods and assumptions. And those prescribed methods and assumptions are used regardless of the way you underwrite or manage the business. In setting reserves, we take a mortality rate and an interest rate that we know have redundancies, ignore lapses and expenses, and, at the end of the day, still think we have some redundancy left. We don't know how much, and sometimes we may have none at all.

That is the foundation on which we build the RBC, which is another layer of prescribed formulas. These formulas had some very good, solid thought going into them, but no real indication to the regulator, the purchaser of the insurance, or the public in general of how much credibility is created through the RBC ratios. It has worked far better than not having RBC ratios, but we need to be careful because it is likely creating an illusion of more security than there is.

The regulator has to use other tools to detect hazardous companies because, there are probably more companies that have failed from illegal behavior than just simply dumb management.

We have organizational requirements, and a number of hoops that an insurance company has to go through to be formed, that far exceed those of a normal corporation. We have the Model Holding Company Act that gives the regulator a lot of responsibility and authority to look carefully at the people who own a company, their backgrounds, and their prior business experience. If their managements don't have insurance experience, they are not going to be permitted to form the insurance company.

Trustworthiness is a critical element. It's now virtually a necessity for the insurance regulators to do criminal checks on controlling parties of insurance companies. Because of federal requirements, the insurance commissioner is responsible to make sure that no convicted felon, when the felony involved is a financial breach, is permitted into the insurance business. Therefore, criminal checks take place at all levels.

Rate and policy form reviews are another element of control. We think of those as primarily protecting the public from abusive rates, but perhaps a more important role is to protect the company from all of the things that can produce inadequate rates and eventual failure of the company.

Market conduct examinations are a tremendous clue to detecting the hazardous company. If the company is going to cheat the policyholder ultimately through its financial failure, it will probably have few qualms about cheating the policyholder in day-to-day transactions, including the sale of the contract. Fraud investigations become an important detection element available to the insurance regulator in this process.

When intercession is deemed necessary, what does the insurance regulator do? He or she marshals the assets, notifies policyholders and creditors of the opportunity to file claims, and adjudicates the claims. Policyholders and creditors eventually get paid, but only if the intercession is timely and occurs before policyholders are

damaged. Even so, policyholders are damaged because of that word "eventually." They are not currently protected in a timely fashion, which is a big failure of the current system that produces very adverse consequences.

Bank depositors have more protection. Virtually everyone one of us knows that up to $100,000 is guaranteed by the FDIC. If your bank fails today, it may take them a day to get their act together, but by the day after tomorrow you can show up at the bank and get your money, guaranteed, no questions asked. The money's available and you can get it. How many policyholders know what protections they have under the guaranty fund system for their insurance policy? Very, very few. I would venture to guess that many people in this room still don't know what's protected, particularly when you get into high-amount, corporate policies and the less traditional policies.

The fact that we don't know what we're promised leads to adverse consequences. What happened when Mutual Benefit got some news that its investments might have problems? People immediately showed up on its doorstep wanting their money. This led very quickly to the company asking the New Jersey Department for help because couldn't survive the "run on the bank" it was experiencing. If policyholders had known that the problem wasn't going to have any effect on their liabilities, perhaps their action would have been different.

Let's talk about what happens when intercession comes too late, because this is where the guaranty fund comes in. First of all, the same steps apply. We marshal the assets, notify the policyholders and creditors that they have an opportunity to file claims, and adjudicate the claims that are filed. We notify the guaranty fund of the shortfall, and the guaranty fund assesses the companies. These assessments are offset by premium taxes, so the public ultimately pays for it in most jurisdictions. The policyholders eventually get paid something. And until the policyholders get everything they're supposed to get, not necessarily in a timely manner, the creditors don't get anything.

You can see the flaw we have in the system, with respect to public perception. If the insurer fails, most have no idea what will happen. A few understand that they might get something some day, so they want to take their money out at the first sign of trouble. The result is that company weakness automatically results in failure.

Here is a proposal for possible ways to fix this situation. First of all, provide improved information on risks. I'll refer you to some work that's being done by a task force of the American Academy of Actuaries that has come up with something called the Unified Valuation System, a possible solution that may help. An ability to respond immediately to failures is necessary—not a deferred ability but an

immediate ability. Also, we need public awareness of the protections. Policyholders need to know what coverage they have, what limits on that coverage exist, and when it's available. This is contrary to our current approach to guaranty funds and the whole mechanism surrounding guaranty funds. We can't keep these a secret from policyholders. We have to advertise it and embed it in their minds so that they understand what their limits on protection are, just like we all know that the FDIC guarantees $100,000 of our bank deposits.

We get there through funded guaranty funds. The funds have to respond immediately to losses. Premiums for the funded guaranty fund can be based on the risk; risk-based premiums discourage mismanagement of risk. Mismanaging your risk would carry an additional penalty on top of RBC. If you don't manage your risk under RBC, your RBC goes higher, that is, you have to carry more capital to support that risk. If you have to pay a premium, it's money out of your pocket that won't eventually come back.

A result of this would be a reduced need for public funding. (Who pays for the failure of an insurance company is another misperception.) If you are in a state that has a premium tax offset to the guaranty fund assessments, ask your legislators individually if they know who pays for the failure of an insurance company and the assessments that are made for the guaranty fund. You'll find that very few of them understand that it is paid out of the public coffers. Most think it's paid for by the industry. Except for a few states, that's simply not true.

Some problems are created by a funded guaranty fund. Anyone who has been in the business of establishing any sort of public pool of funds knows that the biggest risk is greedy legislators who can't keep their hands out of it. So, if you encounter this on a state-by-state basis, you have a real problem. Virtually every state has some fund that has been tapped for purposes other than that for which was intended.

Create an interstate compact to avoid this. It's the only way I've come up with so far to create a state-based, funded guaranty fund that protects the funding. Also, there are side benefits associated with an interstate compact in addition to preventing government raids on the funds. It provides more uniform treatment of policyholders, more fairness to insurers, and greater financial strength of the system overall. This involves a number of ideas that need further development before they're ready to implement. But I think that these steps require serious consideration. This is the first line of defense. The capital of the individual insurer and the insurance industry as a whole will provide the level of protection it is capable of providing and that it needs to provide for that "once in a century" event.

Mr. Willis B. Howard Jr.: Before I describe the NOLHGA as it now exists in the U.S., I'd like to mention two things. One, in keeping with the long, actuarial tradition, there will be a quiz at the end of my presentation. I should also tell you that any opinions expressed in his presentation are my own and do not necessarily reflect those of NOLHGA or any of its 52-member guaranty associations.

The following scenario will be the basis for the quiz. Looking ahead to 2003, five global companies dominate financial services. Suddenly one of them—a $400-billion international bank/insurance conglomerate with subsidiaries in the U.S.—collapses. It has $150 billion of insurance and annuity obligations in the United States alone. The estimated shortfall is more than $12 billion. The company excelled in the marketing of life and annuity business to baby boomers and was also a significant player in structured settlements and other payout annuity contracts.

What issues and uncertainties, some of which Bob Wilcox mentioned, would the guaranty associations and the insurance industry face in the new financial and regulatory arena? First I'll tell you about how the current system works, and at the end of my remarks ask you for suggestions on what we should do to fix it.

The guaranty association laws in most states are based on the 1997 NAIC Life and Health Insurance Guaranty Association Model Act, or perhaps on the 1994 act from which it differs very slightly.

The purpose of the act is to protect persons against failure in the performance of contractual obligations under life and health insurance policies and annuity contracts because of the impairment or insolvency of the member insurer that issued the policies or contracts. For the most part, a "person" means a natural person, but there are some exceptions to that. To provide this protection, an association of insurers is created to pay benefits and continue coverages. Members are assessed to provide funds to carry out the purposes of the act.

Unlike the property and casualty lines of business, life and annuity contracts are long-term arrangements for security. An insured may have impaired health or be in an advanced age and, thus, unable to obtain new coverages. The payment of cash values alone would not adequately compensate his or her losses. In such cases, continuation of coverage is essential. Similarly, a health insured may be unhealthy and, thus, unable to get health insurance.

Each guaranty association covers residents of its state if the failed insurer was ever licensed in that state. The guaranty association of the state of domicile covers residents of states where the insurer was never licensed. Beneficiaries, assignees, or payees of covered persons are protected regardless of where they live. Who is not

covered? Anybody who resides outside of the United States, the District of Columbia, or Puerto Rico.

Direct, nongroup, life, health, or annuity policies or contracts are covered, along with supplemental contracts, certificates under direct group policies and contracts, and unallocated annuity contracts, except as limited by this act. Only about half the states cover unallocated annuities.

Under Section 3(b)(2) of the model act, a number of specific things are not covered:

- Any portion of a policy or contract not guaranteed by the insurer (for example, a dividend provision)

- A policy or contract of reinsurance, unless assumption certificates have been issued pursuant to the reinsurance policy or contract

- A portion of a policy or contract based on excessive interest rates (This is the so-called interest rate rollback provision that most states have. It was thought unreasonable for insurance companies to be assessed to pay for outrageous benefits sold by their competitors. The interest rate limitation is calculated as follows: Take the Moody's bond rate averaged over the four years prior to the insolvency and subtract 2% from that. That's the maximum interest rate that the guaranty associations will cover.)

- Any uninsured or self-funded plan such as the Multiple Employer Welfare Association, minimum premium group insurance plans, stop-loss group insurance plans, or ASO contracts

- Any portion of a policy or contract to the extent that it provides dividends, voting rights, or payment of any fees or allowances in connection with the service or administration of the policy

- A policy issued by a member insurer when it was not licensed or had no certificate of authority (Those are the crooks that Bob referred to.)

- An unallocated annuity protected by the PBGC

- Any portion of an unallocated annuity contract not issued to a specific employee, union, association of natural persons, or a government lottery

- Any portion of a policy or contract to the extent that the assessments required by Section 9 of the act, with respect to the policy, are preempted by federal or state law

- Any obligation that does not arise out of the contract itself, including claims based on marketing materials and side letters, misrepresentation regarding policy benefits, any extra contractual claims, or a claim for penalties or consequential or incidental damages

The limitations on the benefits vary by state. These are for an insured life regardless of the number of contracts.

Several players would be involved in our insolvency scenario. Since this is a combination bank and insurance company failure, the FDIC would be involved. The state regulators and the guaranty associations would be involved. And I ask you to think ahead to see who else might be involved.

I want to talk about some of the limitations on coverage. Then we'll discuss significant state variations, who bears the cost, and the cost of some recent major insolvencies.

In the model act, death benefits are covered up to $300,000 per life, regardless of the number of contracts. Life cash surrender values under the model act are protected up to $100,000, annuity benefits are protected up to $100,000, and health insurance benefits, including disability income benefits, are protected up to $100,000. In the 1997 model act, disability income benefits were covered up to $300,000. A number of states have a $300,000 limit on life insurance, annuity cash surrender values, disability income, and health insurance benefits. A few others have higher limits.

There are significant variations by states. California has a 20% coinsurance on life and annuity benefits. California also has an indexed health insurance coverage limit that started at $200,000 and is graded by the CPI. This year it's about $275,000. New Jersey, in contrast, has no limit on accident and health benefits, but it provides that health insurance benefits paid directly to providers receive an automatic 20% haircut. This same provision is found in the Utah law. The interest rate rollback provision is found in many states. For unallocated annuities, the general limitation is $5 million in the states where they're covered.

The assessments to pay for these vary by state as well. There are assessments not only for benefits, but also for the administrative expenses of the guaranty associations. One of those administrative expenses is the expense of maintaining

NOLHGA. The limitations in the model act are 2% of average premiums for the three years before the year of the insolvency. Some states provide less than 2%, such as 1%. There's a carryover provision whereby, if the maximum assessment, together with the other assets of the association, does not provide in one year an amount sufficient to carry out the responsibilities of the association, necessary additional funds may be assessed as soon as permitted thereafter.

NOLHGA has put together estimates on the assessment capacity in the U.S. for 1994, 1995, and 1996. It's probably more than $4 billion but less than $6 billion. If you took 2% of the average premium—life, health, and annuity—in the United States for the most recent three years available from the ACLI, you'd get about $6 billion. But that does not recognize some states permit only a 1% assessment. Also, a number of states do not cover unallocated annuities, so those are not in the assessment base. There are a number of other adjustments, so simply using gross premiums is not a good estimate.

In the early 1990s, there were a number of large insolvencies. Mutual Benefit has been mentioned. Executive Life was another one. There were some other insolvencies, not quite as large as those two, but certainly over $100 million in policyholder obligations. We were concerned that if we had to fund all of these at one time, we would exceed the assessment capacity of the industry. The capacity is quite large, but not unlimited.

This led to creative solutions to some of the major insolvencies, such as establishing the Guaranty Reassurance Corporation, which was formed to take over the assets and liabilities of the insolvent Guaranty Security Life. In this plan, there was a 25% moratorium surrender charge assessed against policyholders who wished to surrender. These graded off over a five-year period. The funding of the guaranty associations' obligations for Guaranty Re was also spread over a five-year period. They funded them, in effect, with notes at the beginning of the 1993 Reassurance Plan. As many of you know, the funding for Executive Life was also spread out over a number of years.

Who bears the cost? This is a social insurance program, not an equitable plan. It is an adequate plan. As in any social insurance program, the cost is ultimately borne by society. In most states, this is by means of the premium tax offset, usually providing for a 20% offset per year for the five years following the year of assessment. This means that the companies recover all except the time value of money on their assessments. The other cost is passed on either to policyholders in the form of higher premiums, or to stockholders in the form of lower margins. Some states provide a slower amortization. At the present time, I believe there are only four states that have no provision at all for premium tax offset.

To determine the cost of recent insolvencies, and how long has it taken to resolve them, let's define a major insolvency as one that has policyholder obligations of more than $100 million. There have been 14 of these in the last 10 years, including three big ones: Confederation Life, Executive Life, and Mutual Benefit. Total policyholder obligations were $28 billion as of the date of the liquidation order. In Mutual Benefit, a number of the policyholder obligations had been transferred before the liquidation order. The big three accounted for $24 billion of the $28 billion. Guaranty association-covered obligations totaled $17 billion, of which the big three accounted for $14 billion.

This gives a covered obligation ratio varying from a low of 58% for the big three, to 82% for the others. The ratio for most other insolvencies is higher than 90%. The number is skewed by the failure of Pacific Standard Life, a large California company that had about 40% of its obligations in California. Pacific Standard failed before California had a guaranty association.

The guaranty associations' costs have been about $4 billion to date, about $2.8 billion for the big three and about $1.1 billion for the rest of the insolvencies. The percentage cost is significantly lower for the big three than for the others because the big three had substantial amounts of uncovered unallocated annuities.

How long does it take to resolve these situations? The answer is "always longer than we would like" because of a number of issues. These can range from extended litigation over the coverage of unallocated annuities, as occurred in the Executive Life case, to some rather amusing things. For example, with a small company in Georgia, Coastal States Life, we could have had the insolvency resolved in six months had it not been an Olympic year. The Georgia court system took a two-month holiday because it was concerned about traffic in Atlanta.

The time it takes to resolve the guaranty associations' obligations—and, for the most part, this means a life insurance company moving the obligations to a solid company and funding the shortfall—ranges from a little less than two-and-a-half to almost three years. Some of the smaller insolvencies moved much faster. Coastal States Life took nine months. Summit National Life only took six months. And Consolidated National Life took about nine months. Major insolvencies take longer: 1.7 years for Guaranty Security, 2.3 years for Kentucky Central, and 2.1–2.5 years for National Heritage.

Here's the quiz: How long do you think it will take to resolve the insolvency in our scenario? Remember that this is a $400-billion international company. It has $150 billion of life and annuity obligations in the U.S., and a shortfall of $12 billion. How many of you think this can be done in less than a year? One. In two to three

years? A few more hands. I'll skip four years. How many think it can never be resolved? There's one. And more than four years? That would be most everyone. What do you think the cost would be? Does anybody think it can be done for less than $5 billion? No. How about $6–10 billion? A few. How about $11 billion or more? Most of you.

Bob, I believe you said that most companies fail because of illegal activities, rather than dumb management. I can only think of about four of the companies that I've worked on in the last ten years where that was the case.

There are NAIC hardship guidelines that permit liquidators and guaranty associations to send funds to people who can demonstrate a need. Also, the guaranty associations can respond quickly. In a recent insolvency of a health insurance company, Centennial Life was declared insolvent on May 27. On May 15, I had a check for $250,000 from the California guaranty association to pay long-term disability claims for California because the guaranty association administrator knew he was going to be on vacation when the liquidation order was handed down.

Dr. George G. Pennacchi: I'm going to discuss federal deposit insurance. There are some parallels with insurance company liability guarantees, but there are some important differences as well. We can learn quite a bit by attempting to compare federal guarantees on bank deposits to government guarantees on insurance company liabilities.

In response to widespread bank failures during the Great Depression, the FDIC was created by the Banking Act of 1933.

What is the rationale for insuring bank deposits? Two primary reasons are usually cited:

1. Monetary Stability
A typical bank makes illiquid loans financed by demandable deposits. Demand deposits are a liquid payment vehicle (money).

A problem with this bank structure is that deposits may be withdrawn en masse if depositors fear that their bank may fail. Banks could be forced to liquidate loans at "fire sale" prices.

Moreover, a "banking panic" might increase the demand for currency, creating a contraction (deflation, unemployment).

2. Protection of Small Depositors

"Retail" depositors lack the expertise to properly evaluate their bank's credit risk. They would benefit by having access to default-free transactions and savings accounts.

FDIC insurance protects depositors' accounts up to $100,000. It enhances monetary stability by eliminating incentives for panics.

However, deposit insurance can create new problems. This federal "safety net" provides incentives for excessive risk-taking by banks (moral hazard). Bank regulation attempts to restrain these incentives and reduce the FDIC's exposure to losses.

Bank regulation prohibits insured banks from engaging in certain activities. It also attempts to set capital standards based on the risk of a bank's permitted activities. But bank regulation may be costly if its restrictions cause distortions and inefficiencies in financial services.

Deposit insurance might also directly distort a bank's cost of financing if insurance premiums are set incorrectly. A subsidy will exist if a deposit insurance premium is set lower than the competitive default-risk premium that a similar, but uninsured, financial institution (e.g., a finance company) pays on its debt.

How does the FDIC actually set deposit insurance premiums? Premiums are set to target the reserves of the FDIC's insurance funds to equal 1.25% of total insured deposits. For example, Bank Insurance Fund reserves are now above their 1.25% target, and premiums have been cut to zero for over 95% of all commercial banks.

A similar Savings Association Insurance Fund for thrifts is also currently above its 1.25% target, and over 90% of all thrifts pay an insurance premium of zero.

This "fund targeting policy" will typically misprice insurance and create incentives for distortions. Premiums may be set too low when the fund is above target, creating incentives for banks to "over-issue" deposits.

Similarly, premiums may be set too high when the fund is below target, creating incentives for banks to "under-issue" deposits.

Similar incentives and distortions can result from the operation of the states' life and health guaranty associations and property/casualty guaranty funds which protect policyholders' claims. In most states, insurance company guaranty funds set

premiums (assessments) to cover the ex-post losses of insolvent insurance companies.

Hence, when insurance industry insolvencies and assessments are high (low), there may be a disincentive (incentive) to write policies. These distortions would be mitigated if assessments were made on an ex-ante or "pre-funded" basis and set equal to the present value of potential industry losses.

What does the future hold for banking and deposit insurance? There will still be a need for risk-free demandable accounts for settling payments. Federal insurance of these accounts is likely to continue. However, advances in information technology will continue to generate complex financial instruments and activities whose risks may often be poorly understood by regulators.

Allowing banks to finance these complex investments with government-insured deposits would cause a regulatory nightmare. Instead, regulation should permit financial institutions to invest in many of these new instruments and activities but in separate subsidiaries that are not financed by government-insured funds. Government-insured accounts should be permitted to fund only low-risk or risk-free investments and activities.

In the near-term, insured bank deposits may be restricted to fund only "core" banking activities, such as traditional bank lending. Other financial activities must be carried out in separately capitalized subsidiaries of a financial services holding company.

In the longer-run, insured funds might be restricted to financing only near-risk-free investments, such as money market instruments. Such a "narrow" bank subsidiary would resemble a money market mutual fund. The transparency of these investments would make government insurance practically redundant.

Risky investments, including traditional bank lending, would continue to be funded, but in separate subsidiaries resembling present-day finance companies, insurance companies, or investment banks.

This system would have near risk-free investments backing demandable transactions accounts, thereby protecting the integrity of the payments system and small investor savings. Since more complex and risky activities would be carried out in noninsured subsidiaries, less intrusive regulation is required.
However, as recent foreign and domestic financial crises have shown (e.g. Asia and long-term capital), governments may be needed as a lender of last resort and/or to help coordinate private re-organizations of distressed financial institutions.

Why do we have federal deposit insurance? Recent examples of government intervention include the International Monetary Fund lending to developing countries with liquidity problems, and the Federal Reserve lending to troubled financial institutions through the discount window. The government may also coordinate private reorganization of distressed financial institutions.

Mr. Allan Brender: There is a small group, less than 100 people, that meets every three or four years as the International Conference on Insurance Solvency and Finance. As you might be able to tell from this title, the group is generally composed of two groups: (1) actuaries, both life and P&C, and (2) academics specializing in financial economics and risk and insurance. I recall that at the first meeting in 1985, in the course of a talk early in the meeting, one of the finance people mentioned that perhaps we should expect a certain number of insurance company failures as part of an efficient market and that customers should be aware of the possibility that their carrier could fail. There was an immediate outcry from the actuaries in the audience that this was unacceptable. Insurance companies should never be expected to fail. This was clearly a clash of cultures.

The introduction to this panel discussion in the program states, "Not only must the banks and insurance companies be profitable and solvent, but they must be perceived by the public as being absolutely safe for deposits of their funds." Again, we have an actuarial view that insolvency is not to be contemplated.

When I first became associated with our federal insurance regulators in Canada 15 years ago, they shared this actuarial point of view. In fact, most of the top officials in the Department of Insurance were actuaries who shared our professional culture.

Our regulators do not share this opinion today. In an appearance before the Canadian Institute of Actuaries at its annual meeting last June, John Palmer, the Superintendent of Financial Institutions (OSFI) and our top regulator, said, "…I agree that we can't have a failure-free system. We must allow failures. At the same time, we can't have too many or the fundamental underpinnings of a system that worked very well would be destroyed."

Why has the regulatory view changed? It could be that it is because the Superintendent is, by profession, an accountant and not an actuary. However, I don't think that's a proper explanation. The fact is that, until the early 1980s, we had not experienced any failures. Since that time, our regulators have participated in winding up several P&C insurers, quite a few trust companies (which are similar to S&Ls in the U.S.) and a few life insurers. They know very well that failure is possible and that regulation and supervision cannot always prevent it.

Well, if you can't prevent failures, you try to do the next best thing: protect customers, especially the financially unsophisticated ones, from the consequences of failures of insurers or, more broadly, of financial institutions. That's exactly what the OSFI has established as one of its priorities. There are a number of ways to provide protection for customers:

1. Encourage financial institutions to be solid and solvent.
   This involves an appropriate financial reporting system, capital requirements (preferably risk-based), regular financial condition reporting, adherence to sound business practices and, for insurers, continuing oversight by the appointed actuary.

2. Provide for early warning of impending trouble.
   This can be achieved through monitoring a company's earnings record, capital ratios, and financial condition, and through other regulatory procedures. It requires that regulatory supervisors be well-informed about companies' affairs, and companies have an obligation to keep supervisors informed. In Canada, this last responsibility rests largely with the appointed actuary.

3. Allow for regulatory action before insolvency occurs.
   Authority for regulators to intervene in a company that has a small, positive but insufficient amount of capital has generally only come into being with the introduction of RBC requirements. This is an important aspect of the RBC regime that is frequently overlooked. It allows for an orderly shut-down of companies in difficulty in a way that can preserve customer assets.

4. Provide for the priority of customer claims in the event of insolvency.
   Bankruptcy or windup legislation for financial institutions often provides that all other claims on a company's estate are subordinate to those of the customers, usually in the form of deposit or insurance policy liabilities.

5. Provide backup protection in the event that a failed company's estate is insufficient to meet customer claims.
   With respect to insurance, this is the role of the state guaranty funds; in Canada, this role is played by our single national consumer compensation plan, the Canadian Life and Health Insurance Compensation Corporation (CompCorp). For depositors in banks, protection is provided by the FDIC in the U.S. and the Canada Deposit Insurance Corporation (CDIC) in Canada. Similar protection for customers of stock brokers and dealers is provided in the U.S. by the SIPC, and in Canada by the Canadian Investors Protection Fund.

Financial institutions in each of the banking, insurance, and securities industries have fiduciary responsibilities with respect to assets they hold on behalf of their customers. Each industry has developed a similar approach toward the protection of customer assets. It is illuminating, however, to consider the differences that have emerged between industries and also between countries, particularly the U.S. and Canada.

We've heard from my fellow panelists about the situation in the United States. Let me tell you about the financial services industry in Canada. First, we have what I believe is a great advantage, a central regulator. OSFI regulates all banks (which are relatively few in number) and the great majority of trust companies, credit union centrals, and insurers. Securities broker/dealers are regulated by the provincial securities commissions; the most important of these are in Ontario, Quebec, and British Columbia.

On the banking side, OSFI is moving in concert with banking regulators in other G-10 countries to adopt the regulatory approach developed by the Basle Accord, the BIS rules.

OSFI's regulation of insurers has come to be based on the appointed actuary (AA) system. Under our insurance legislation, the AA has significant responsibilities to report to the Superintendent on a company's expected future financial condition and to give early warning of financial difficulty. OSFI has come to rely on the AA.

With respect to prudential regulation, CDIC has developed a set of standards of good business practice that Canadian banks are expected to follow. OSFI has recently adapted these standards and extended them to insurance companies.

Minimum RBC requirements are in effect for both banks and insurers. The bank requirements follow those of the Basle Committee, which were first introduced in 1986. This includes an evolving minimum capital standard, which is not, as yet, nearly as sophisticated as the standards that apply to life insurers in our two countries. The life company standard, known as the Minimum Continuing Capital and Surplus Requirement (MCCSR), was developed between 1983 and 1987. It is similar to the U.S. RBC requirement and was, in fact, one of the models for RBC.

OSFI has set the minimum acceptable MCCSR ratio at 120%. When one compares the MCCSR and RBC formulas, it works out that a 120% MCCSR ratio is roughly comparable to an RBC ratio of 200%, so we can say that the capital requirements for life insurers in Canada and the U.S. are comparable. Of course, an actual comparison for a particular company will depend on that company's mix of business. OSFI has frozen the MCCSR formula for a three-year period, during which

the entire structure of the MCCSR will be revisited in combination with an analysis of insurance accounting standards. This analysis is an international effort under the auspices of the International Accounting Standards Committee (IASC), with the cooperation of the International Actuarial Association (IAA) and the International Association of Insurance Supervisors (IAIS).

It is dangerous, though, to rely too much on the level of RBC or MCCSR ratios. For example, if asset values are overstated, these ratios will appear to be much better than they really are. However, observing the trends in a particular company's ratio can be quite informative. Probably the most important aspect of the introduction of MCCSR and RBC monitoring has been that it gives regulators the power to force insurers to take remedial action or cease writing business as ratios decline. In this way, customer values can be protected by allowing regulatory action as a company's fortunes decline but before bankruptcy occurs.

Customers of deposit-taking institutions, both banks and trust companies, are protected by the CDIC in a manner similar to that of the FDIC. The CDIC is a Crown corporation. It assesses all Canadian deposit-taking institutions annually to prefund its potential liabilities. In cases of multiple or single large failures, if its funds are insufficient to meet its obligations, CDIC can borrow from the general funds of the government of Canada.

CDIC recently completed repayment to the federal government of $7.6 billion, which it had borrowed, plus $1.7 billion in interest. This loan was needed to cover failures of banks and trust companies in the 1980s. I should note that CDIC only provides coverage for the first $60,000 of individual depositors' accounts, whereas the FDIC covers the first $100,000.

Customers of Canadian life insurance companies who reside in Canada are protected by CompCorp. Life insurance policies are protected up to $200,000 per individual. Cash and deposit-like obligations, such as single premium deferred annuities, are protected up to $60,000, while annuity payments are covered up to $2,000 per month. CompCorp is a private corporation run by the industry. However, it is a condition of licensing that all life companies must be covered. CompCorp raises funds by assessing member companies in Canada. Initially, it was intended that assessments would be made post facto, after a failure had occurred. But now CompCorp is prefunding its future obligations.

Since its founding in about 1990, CompCorp has experienced three insurer failures, including the largest known life company failure, Confederation Life. In two of these three cases, policyholder obligations have been met in full from the companies' estates, with a topping up from CompCorp if necessary. In the third

case, the failure of a relatively small insurer, there was minimal loss of uncovered policyholder benefits. Experience in these cases has turned out to be better than expected. In fact, CompCorp intends to refund to member companies some of the funds it assessed to cover expected costs from the Confederation Life case that CompCorp did not have to bear.

CompCorp is dependent upon the collective credit of the insurance industry. It has a bank line of credit but no access to the general funds of the Federal Government as does the CDIC. This is seen as a disadvantage for the insurance industry in an environment in which it is competing with the banks for deposit-type business.

Now I want to turn to the securities industry. In the U.S., although SEC is the overall regulator, individual broker/dealer firms are supervised by self-regulating organizations such as the stock exchanges and the National Association of Securities Dealers (NASD). NASD has established a separate subsidiary, NASD Regulation Inc., to oversee the firms (more than 5,400 of them) under its supervision. The SEC has in place net capital and customer protection rules that apply to registered brokerage firms. Each firm is required to file with its examining SRO, on a monthly basis, the financial and operational combined uniform single (FOCUS) report detailing the firm's financial health.

Protection for customers who have funds or securities on deposit with broker/dealers is provided by the SIPC. SIPC is incorporated by an act of Congress. It is not an arm of the federal government, although both the Federal Reserve Board and the Department of the Treasury are represented on its board of directors. SIPC guarantees the value of customer accounts in member firms, including up to $100,000 for cash deposits, up to a total of $500,000 in excess of what is distributable from the failed firm's estate. All registered securities firms are members of SIPC. They are assessed annually to maintain SIPC's fund, which is intended to cover the cost of claims. SIPC's current fund is in excess of $1.1 billion; this is more than three times the cost of all past claims paid by SIPC. However, it is much less than the total customer assets held by any one of the ten largest broker/dealers. In addition, SIPC has available to it a bank line of credit of $1 billion, and a call on Treasury funds for an additional $1 billion.

In Canada, most securities dealers are regulated by SROs, which include the major stock exchanges and the Investment Dealers Association of Canada (IDAC). There is a current move to force all remaining dealers into the IDAC.
Turning to consumer protection, the Canadian Investor Protection Fund (CIPF) plays a similar role to SIPC. CIPF is a private-industry-sponsored fund that assesses member companies to prefund its obligations. Customer accounts are protected up to $500,000 in total, with protection for cash balances being limited to $60,000,

which corresponds to the protection offered to bank depositors by CDIC. CIPF claim experience has been extremely favorable (the last claim was in 1992). The current CIPF fund is in excess of $153 million; CIPF also has access to a $40 million line of credit. The CIPF fund is approximately seven times the value of all past claims paid by CIPF.

I want to conclude with a few remarks on where we in Canada are likely to go in the next few years. In 1996, the government of Canada appointed a task force on the future of the Canadian financial services sector. The task force was asked to survey the entire sector in anticipation of an expected revision of all financial services legislation, which is due in 2002. The task force delivered its report just over a month ago, on Sept. 14, 1998. Although its conclusions are only recommendations and not government policy, they are likely to carry great weight with the government and can be regarded as highly indicative of the changes we can expect to see.

The task force explicitly embraces the notion that it is normal for some small number of financial institutions to fail; this is regarded as a consequence of a competitive marketplace. In fact, this notion is explicitly embedded in Canadian legislation. The legislation under which OSFI was created and is governed contains an explicit mandate for OSFI. One of its clauses states:

> *Notwithstanding that the regulation and supervision of financial institutions by the Office of the Superintendent can reduce the risk that financial institutions will fail, regulation and supervision must be carried out having regard to the fact that boards of directors are responsible for the management of financial institutions, financial institutions carry on business in a competitive environment that necessitates the management of risk, and financial institutions can experience financial difficulties that can lead to their failure.*

The task force regards the regulators' mandate as the protection of customers' assets. It suggests dropping from that mandate the duty to also protect a financial institution's general creditors.

A fundamental theme of the report is the convergence of financial services and the need to level the field on which all financial institutions play. In the area of consumer protection plans, it is suggested that the CDIC's responsibilities for oversight of banks be transferred to OSFI, the regulator. Furthermore, it is suggested that the CDIC, a government corporation, should be combined with CompCorp to form a single insurer of depositors and insureds. This is intended to extend to customers of the insurance industry the ultimate security of a call on government funds, which is enjoyed by depositors in Canadian banks and trust companies.

The task force recommends several amendments to OSFI's authority and governance to improve its ability to act. However, it also suggests that "given the importance of effective competition in the Canadian financial services sector and the rapidly changing competitive environment, the OSFI mandate should be revised to make it clear that OSFI has the responsibility to balance competition and innovation considerations with its present statutory obligations in respect of safety and soundness." The stress on competition and the need to encourage entry into the marketplace of new financial institutions results from the very concentrated marketplace in Canadian financial services, with each sector being dominated by a few large national players, as well as the wave of consolidation through mergers and acquisitions currently underway throughout the financial services industry that shows no signs of abating.

The task force seems to be suggesting that it is to the benefit of the country to encourage the emergence of additional financial institutions, even at the cost of an increase in the number of failures. Presumably, strengthened consumer protection plans should be sufficient to protect the unsophisticated customer or investor.

Clearly, we have not heard the last word on these topics in Canada nor, I would venture, in the U.S. The next few years are bound to be interesting times for financial services. This sounds good and adventurous. However, I want to remind you that an ancient Chinese curse says, "May you live in interesting times."