SOCIETY OF ACTUARIES

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Measuring the Rate of Retirement
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The distribution at age 55 was similar to what we have already seen in Table 1. Above age 55, there was some concentration of retirements in the early months of age. At age 60 and above, the observations were too scattered to show any pattern. Combining all ages over 55, 12% of retirements occurred in the first month of age, 34% occurred in the first three months of age, and 62% occurred in the first six months of age. Of course, the number of retirements in the earlier months of age would be greater than the number in the later months if the force of retirement is constant over the interval.

I also tabulated retirements for a plan that allows early retirement after 30 years of credited service regardless of age. During the same four-year period, 48% of the retirements at 30 years occurred in the first month of eligibility, 66% in the first three months and 78% in the first six months.

Summary

An employee must satisfy certain requirements set forth in the plan in order to retire or to qualify for enhanced benefits. This can lead to a concentration of retirements at or immediately after age and/or service combinations at which eligibility requirements change. The heaping within the interval of age or service may invalidate the assumptions underlying some of the commonly used exposure formulas. Constructing rates based on months measured from each eligibility change point provides an unbiased estimate of the retirement rate. Using scheduled exposure appears to work better if the observation period extends from anniversary to anniversary than if it is defined in terms of calendar years. Using exact exposure requires an assumption for the distribution of retirements over the interval that is reasonably related to the experience.

William H. Blake Jr., FSA, is an actuary at Watson Wyatt & Company in Washington, D.C.

Randolph's Bonanza Bigger than Expected

by M.D. Drysdale

Editor's Note: *The following article originally appeared in* The Herald of Randolph *(Vermont) on August 21, 1997 and is reprinted here with permission.*

The Vermont State Retirement Board, meeting today, is expected to vote to reimburse the town of Randolph $431,145 for years of overpayments into the state retirement system.

The repayment is even more than Randolph officials hoped in May, when the Retirement Board agreed in principle that Randolph was owed the money.

At that time, estimates were that Randolph would receive $232,000 to $400,000. The passage of another fiscal year and some other findings brought the amount owed even higher, according to Town Manager Gwen Hallsmith.

"They topped our highest estimate," she declared. It was Hallsmith who discovered the systematic overpayments. Hiring an actuary on behalf of the town, she was able to convince skeptical state officials that Randolph was owed substantial payment.

The payments will come in the form of credits of $44,000 a year for 20 years. That totals $880,000, a figure which includes interest for the subsequent years.

In addition, Randolph will see a huge difference in the rate it pays in the future for being part of the state retirement plan. Last year, Hallsmith said, Randolph had to pay a whopping 14.5% of payroll into the retirement plan. Next year the town will pay only 8.2%.

With the first of the $44,000 credits, retirement payments will be only about $10,000 to $15,000, compared to the $111,728 that was paid last year, she estimated.

Bethel, Too

In Bethel, Town Manager Del Cloud said an actuary has just completed a study of that town's retirement payments over the years.

Bethel has been charged even a higher rate—15.34%—than Randolph, and the state has acknowledged that it too should get some money back.

Bethel's total retirement payments were about $30,000 last year. That annual rate should be cut almost in half if Bethel is allowed to use the state's rate of 8.2%.

Now that he's got the numbers, he is ready to "broach the subject" with the Retirement Board, Cloud said. "It shouldn't take too long. Randolph has established the methodology."

30-Year History

The state has been requiring Randolph and Bethel to pay a separate rate for retirement benefits ever since the two towns joined the retirement system in 1968. Only three towns are part of the state system.

Research by Hallsmith, however, indicated that since 1975 the state had performed no separate actuarial studies that would justify the towns paying a higher rate.

The state was at first reluctant to admit a mistake had been made, but after Randolph hired both an attorney and an actuary, the treasurer's office began to see the light.

Employee to Benefit

In a related matter Tuesday night, selectmen voted health benefits to the former town employee whose plight brought the entire retirement snafu to light.

Larry Haraden took early retirement last year from the town crew because of a health problem, relying on assurances from the state retirement policy that he would receive health insurance that would take care of some serious health problems, Hallsmith explained.

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After Haraden retired, however, the retirement system informed Hallsmith that municipal employees did not have— and never had—retirement health insurance under the plan.

This was a benefit available only to the state workers. However, the brochures distributed to municipal employees had not made clear that they had fewer benefits.

In investigating this problem, Town Manager Hallsmith found that Randolph's payments were higher than the state's and that there was no way to justify the higher payments.

On her recommendation, selectmen agreed to pay Haraden health insurance that will supplement his Medicare coverage. Through the "Freedom Plan" of Blue Cross/Blue Shield, the coverage will be $133 a month. Selectmen also agreed to reimburse Haraden for the months that he has paid the insurance on his own.

They declined, however, to pay the health insurance for Haraden's wife.

Editorial Comment

Stubborn, Smart

This follow-up editorial comment appeared in the August 28, 1997 issue of The Herald of Randolph *(Vermont) and is reprinted here with permission.*

It is hard to explain just how remarkable it is that the State Retirement Board has agreed to return $431,000 to the town of Randolph.

The agreement forged last week with the Board will actually result in savings of close to $100,000 a year over the next 20 years. That's $2 million saved in local tax money. That's not chicken feed.

It took the alert eye and formidable determination of Town Manager Gwen Hallsmith, plus good support from the Select Board, to pry the money loose. Not that the Retirement Board and State Treasurer Jim Douglas were reluctant to do the right thing—when the right thing was pointed out to them. It's just that the thicket of legal, actuarial, and accounting issues was so tangled that it took terrific detective work to point out the right path and discover who was right and who was wrong.

The lead detective in the case was Hallsmith, and she pursued it with an unyielding vigor which first annoyed others in the process, an annoyance which resolved into reluctant admiration when it became clear that she was right.

The first telltale clue in the case came when the manager discovered that health benefits, though they are promised in the state's retirement plan, were not available to the municipalities which were also enrolled. Then Hallsmith noticed other ways in which the towns were being treated differently. Randolph and Bethel, for instance, were paying a much higher rate into the retirement fund—14% and 15% of payroll—than was the state itself.

She asked why.

The Retirement Board had reasons enough. A bureaucracy always has reasons. The reasons were entangled in 30 years of financial history, actuarial tables, and old agreements. The reasons sounded plausible, but the manager went behind the explanations, found the old documents, found the old payment records. She kept calling the Retirement Board, exploring their position and presenting officials with the results of her investigation.

Eventually, she came to a conclusion: the state's reasons were bogus. Randolph had been getting charged extra for no supportable reason at all.

The Retirement Board, naturally enough, didn't agree. Officials were nervous enough, however, to suggest that if Randolph dropped the case, it could get a lower rate on retirement from here on out. Hallsmith was not interested in dropping the case.

The Select Board agreed, and it hired an attorney, and then an actuary. Between them, they delved farther into the complicated historical records. Eventually, they proved beyond a doubt that a great deal more money had been collected from Randolph during the last 20 years than should have been. Presented with this clear information, the Retirement Board and Treasurer Douglas were gracious. They agreed to refund the $431,000 (with interest) in $44,000 payments over 20 years. They also agreed to reduce Randolph's retirement payments from 14.5% of payroll to 8.2% of payroll.

Signing the agreement last week was simple and amicable. But nothing was simple about this situation at the outset. Presented with the complexity of the retirement issues, very few people would have been stubborn enough and smart enough to persevere until it was cleared up. Randolph is lucky that one of those few people was its town manager.

The "Actuary's" Response

by Tracy Braun

The "actuary" referred to in "Randolph's Bonanza Bigger than Expected" is Tracy Braun of National Pension Service, Inc., in Burlington, Vermont. Below are her comments on the article.

When the town manager of a small Vermont town first contacted me regarding their participation in the State Retirement System, I assumed that my role would be to review the actuarial funding method and explain, in layman's terms, how the cost was allocated to the town. What emerged was a very interesting journey into thirty years of history and a remarkable resolution for this local community.

The situation first came to light when the town manager discovered that municipal employees, unlike covered state employees, were not entitled to health insurance coverage after retirement. Investigating this issue, the town manager realized that the town was also treated differently with respect to the contribution rate it paid toward the Retirement System. Its contribution rate was substantially higher than the contribution rate paid for other state employees, even though the retirement benefits offered under the Plan were the same.

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In fact there were different contribution rates for other municipalities that were members of the system, some paying more than the State's rate and some paying less.

The town in question had elected to become a member of the State Retirement in 1968, and historically the town's contribution rate had always been higher than the state's rate. The town manager felt that the tiny town should not have been charged a higher rate, and our firm was hired to review the plan and ascertain if the contribution rates were indeed justifiable. In order to do this, we needed to start our investigation back in 1968 when the town originally joined the system, a formidable task in resurrecting records over 30 years. Due to the incredible persistence of the town manager, old records, old agreements, old payroll figures for the years in question were unearthed from the dusty cellar of the town office building, and the following story emerged.

At the time that the municipality joined the System in 1968, a separate valuation was performed for the town's employees. The Retirement System's actuarial funding method provided for a normal cost contribution rate and an accrued liability contribution rate. The normal contribution rate was defined as the contribution attributable to fund the benefits for new employees and the future benefits of current employees. Based on correspondence from the State's actuary, the town would pay the same normal contribution rate as the State; however a separate accrued liability contribution rate would apply based on the accrued liability of the town's eligible employees, when they joined the system. The total accrued liability at that time was $35,339, which translated to an accrued liability contribution rate of 2.32% of payroll. Based on the town's actual accrued liability payments, it appeared that this original liability amount had been paid in full by 1980; however the town continued to be assessed an accrued liability payment for all ensuing years at a rate higher than the state's accrued liability payment rate. Based on the limited information we had, it seemed that the town had overpaid the System by an amount in excess of $900,000, assuming all benefit improvements had been reflected in the normal contribution rate.

In reviewing the treatment of other municipalities in the System, we found inconsistent allocation of contribution rates. For example, one town who paid its total accrued liability amount upon joining the System was never assessed an accrued liability rate in any of the ensuing years, and only paid the State's normal contribution rate. Another town paid an even higher rate than our client.

The next step was meetings with the State Retirement Board to present our findings and to seek additional information from the State's current actuary. The current actuary had just been retained by the state to value the System. Fortunately this actuarial firm was also the same firm that valued the State System from the time the town entered the system until 1975. Much research was done by the State and its actuary to ascertain why the rates were set as they were and what actually transpired after the town joined the systems. What emerged was the fact that separate actuarial valuations for the town were performed from the time the town entered the system until 1975, and the accrued liability and the corresponding accrued liability rates were specific to the town's experience. In 1975, the state retained a different actuarial firm. There was no information to indicate that separate accrued liability rates were calculated past this point. The liability rate for the town appeared to have been adjusted in ensuing years in the same ratio as the State's accrued liability fluctuated.

In view of this and the resulting impact on the town's contributions, several alternatives were considered to more appropriately reflect the town's liability under the System. Since the town's accrued liability was not separately calculated after 1975, the most reasonable approach seemed to be to assume that the town should have then paid the same accrued contribution liability rate as the State, from that point forward, plus the amount of the "excess liability" it owed as of 1975. With the information available, it was possible to ascertain a reasonable estimate of the town's "excess liability" ($18,173) in 1975. With considerable research by the town and the State, the historic salaries and accrued liability rate were provided and the historic "what if" calculation was done. The result was that the amount calculated as a credit to the town was $431,738. It was agreed that this amount would be credited to the town as an annual credit of $44,738 against contributions payable by the town for 1998 through the year 2018. In addition, the town would be paying the same normal contribution and accrued liability rate as the State. With the annual credit and the reduction in the contribution rate, the town's annual contribution in the coming fiscal year reduced by 75%. Needless to say, the astute and persistent town manager was the hero of the day!

From this actuary's perspective this was a very interesting case—we took on the role of a detective—trying to piece together a rather intriguing puzzle. While the town manager and her attorney certainly felt that there was something askew in the contribution rate, the role of the actuary, on both sides, was critical in analyzing the historic information, unraveling the mystery and providing alternatives to solve the problem. The most important aspect of this process was explaining the problem and the solution to both the town selectmen and to the Retirement Board in ways that were understandable to the nonactuary. In my opinion, that is one of our most important roles, and one that is critical in expanding the areas in which our profession can assist the public and private sector.

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