

**THE ROLE OF THE ACTUARY IN AN
INSURANCE BROKERAGE FIRM**

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BY EDGAR W. DAVENPORT

BIOGRAPHY:

Mr. Davenport is Vice President and Consulting Actuary in Advanced Risk Management Services of Willis Corroon in Nashville, Tennessee. Prior to joining Willis Corroon, Mr. Davenport was Assistant Secretary with Selective Insurance. He received a Bachelor of Science degree in mathematics from The State University of New York at Albany. In 1990 Mr. Davenport became an Associate of the Casualty Actuarial Society. He is also a Member of the American Academy of Actuaries.

ABSTRACT:

The 1992 Casualty Actuarial Society Yearbook has nineteen members who list their employer as brokers. This paper will discuss some of the many roles that a casualty actuary plays in an insurance brokerage firm, beginning with the role of the actuary with medium and large size accounts and examining the differences in the roles. This paper will investigate the extremely important role of the actuary as technical communicator and briefly discuss the role of the casualty actuary in new account solicitation and as a resource of actuarial information to the brokerage offices. As the market hardens, the role of the casualty actuary in an insurance brokerage firm takes on even greater significance. As the premiums increase, the client will need to examine increasing its loss retention limit. If the specific coverage is no longer available then the client will need to consider self-insuring. Both of these "hard market" issues could require extensive actuarial work.

This paper is based upon my experiences as an actuary in the brokerage industry. The majority of this paper is generic to insurance brokerage firms and as such should give the reader insight into the role of the casualty actuary in an insurance brokerage firm.

In fulfilling the role the actuary is just one member of an insurance brokerage team that may include engineers, loss control specialists and insurance coverage specialists, all lead by the account executive or broker.

THE ROLE OF THE ACTUARY WITH MEDIUM SIZE ACCOUNTS

For medium sized accounts the primary focus of the actuary's role is assisting the broker in structuring an insurance program for the client. The broker is the individual responsible for the solicitation of actuarial work from clients and initiates the request to prepare an actuarial study for the client.

Communication With The Broker

The communication between the broker and actuary is crucial in the preliminary stage. The actuary needs to clearly identify how the client or broker is going to use the study. Is the primary reason for the study's preparation the projection of losses for the upcoming period or the calculation of required reserves for prior policy periods? What loss retention (deductible) is being considered for the client? Is there enough data to produce meaningful results? What coverages are to be included in the study? Who is the audience for the report; client (risk manager, CFO, CEO, auditor), underwriters, broker, etc.? When is the report needed? Has a report been completed previously by another actuary? If so, can the actuary have a copy of the previous report? The availability of a prior study may save significant time and cost if loss and claim count development triangles have already been prepared.

The actuary needs a clear understanding of the client's business. The client's stockholders annual statement is a good source of information. If the client is not a publicly traded corporation, then any client promotional information can be used. After gathering all needed information, the actuary should send a confirmation memo to the broker outlining the project and including the expected cost and anticipated completion date.

Preparing a Loss Projection

The ability of the actuary to analyze the client's data is a critical role. The broker has considerable experience with insurance coverages and structuring an insurance program, but does not have the experience of the actuary in analyzing data. The process begins with the actuary analyzing the most recent evaluation of detailed data for the client. For many accounts this can be the hardest part of the analysis. The actuary needs to ascertain whether or not allocated loss adjustment expenses are included and whether the losses are limited to some amount or unlimited.

The analysis begins by segmenting the most recent evaluation of incurred losses into ranges (\$1-\$100, \$100-\$250, etc.) The actuary examines this data to see if the losses fit the pattern that the actuary would anticipate for this type of client. This part of the analysis is important because if the pattern of the data does not seem correct, then some of the data could be missing; a change in reserving philosophy has occurred; the reporting pattern has changed; or the actuary does not totally understand all of the operations of the client. If the study has been prepared in the past, then the actuary can compare policy periods at like periods of development. This is extremely important for analyzing the most current period and any possible changes in the initial reserving philosophy. The actuary's experience can be used to analyze the loss distribution to determine whether the claim reporting pattern, percentage of claims, and size and number of open claims seem reasonable. This is information that can be very important to the client and broker, especially when a client changes claims adjustment organizations.

The data may need to be adjusted to eliminate a divested unit, depending upon the type and size of the operation being divested. The historical loss development for the client may no longer be appropriate due to acquisitions or changes in claim adjusters.

The determination of appropriate loss development factors can be very difficult and uses all the experience of the actuary. For medium sized accounts, quite often the client's data is not fully credible to project losses or to calculate required reserves. The actuary must then augment the client's data with appropriate industry data. Again, the experience of the actuary becomes very important in determining what industry data to use and what weight to apply to the industry data. The use of industry data is a critical issue for medium sized accounts.

With all the work that goes into structuring an insurance program, the broker usually welcomes the thoughts of another professional who is looking at the process from a different angle. The actuary can assist the broker by asking specific questions, based on the actuary's experience, that the broker may not have considered. The answers to these questions could have a material impact on the projected losses. Has the client laid off any employees or shut down any operations? Has the client moved any operations or automated any part of their operation?

How the Broker Uses the Loss Projection

The two main outputs from the loss projection are the expected losses and the potential variation in the expected losses. The broker uses the expected projected losses to evaluate competitive quotations that are received for the client's insurance program. The broker may request that the projections be calculated at various loss limitations, so the broker can determine which loss limitation is appropriate for the client. The broker can match the potential variation in the projected losses to the client's philosophy regarding risk. A risk adverse client may opt for a lower loss retention with a corresponding smaller variation, even though the actual cost of the total program may be slightly higher than a program with a higher loss retention. Conversely a risk taker may opt for a higher loss retention for

a lower total cost, even though there is a higher potential for variation in the projected losses. The combination of the competitive quotations, projected losses, and potential loss variation allows the broker to develop an insurance program for the client.

Additional Areas of Actuarial Involvement

Additionally some medium sized accounts want to investigate limiting their exposure to adverse (upward) variation in aggregate losses and are interested in purchasing an aggregate stop-loss cover. The actuary can prepare an analysis for the broker and client which displays the probability of aggregate losses exceeding different amounts. The broker and client can use this information in evaluating various aggregate stop-loss insurance quotations for the client.

Another area where the actuary has an important role is assisting the broker in determining letters of credit (LOC) necessary for insurance. The actuary can calculate required reserves by policy period based on the client's retention for that policy period. The broker can use this information to analyze LOC requirements for prior policy periods. Additionally, the actuary can produce anticipated payout patterns which can be used to discount required reserves or to determine the needed cash flow to fund the losses in each fiscal period.

Because the actuary sees data from many clients and claims adjusting organizations, the actuary can assist the client and broker in identifying trends in the data. Possibly the client is having an increase in frequency for a specific type of claim, ie. cumulative trauma, or a deterioration of experience in a specific state or class. The broker can rely on the experience of the actuary to determine whether this phenomenon is related specifically to the client or is more of an industry problem. This type of information can be very important to the broker and the client. If the trend is specific to the client, then the client can investigate what approach can be taken to mitigate this trend. Conversely, the actuary may save the broker and the client considerable time and cost in investigating the cause of the trend by informing them that the cause of the trend is endemic to the industry.

Another role the actuary plays in the renewal process is in discussing the differences between the carrier's projected losses and the projected losses prepared by the actuary. This is commonly referred to as "dueling actuaries", where the carrier's actuary and the broker's actuary can discuss the different projections. If there is still a difference in the numbers after the discussion, the broker's actuary can explain to the broker and the client the various reasons for the difference. This can be vital information for the broker in the renewal process.

THE ROLE OF THE ACTUARY WITH LARGE ACCOUNTS

The analysis for large accounts for a loss projection is basically the same as the analysis previously discussed for medium sized accounts. One difference is the actuary has more direct contact with the client. Another difference is instead of performing the analysis on the entire coverage, as is performed for a medium sized account, the analysis would be performed on a division or single segment of the account.

Communications With The Client

With the large amount of data available, more emphasis can be placed on the client's data and less on the industry data. Due to the large number of claims, it is possible for the actuary to do more analysis that reflects the unique experience of the client. Because of the emphasis on the client's data, the actuary may have substantial direct contact with the client.

An important use of the actuarial study is the calculation of the appropriate accruals for the projected period and the required reserves for prior periods. Determining appropriate accruals and required reserves is extremely important for large accounts. Since there is more emphasis on the accruals of the client, there is more interaction directly with the client and the client's financial department.

Because of the increased interaction with the client on large accounts, the actuary can play a major role in solidifying the account with the broker. In some instances the actuary may have more contact with the client's financial department than any other individual in the brokerage firm.

Another function that an actuary may be asked to perform is to present the findings of the study to the client's auditors. This may be a very important role for the actuary, because the amount of the required reserve and loss projection can be material to the client and to the auditor's evaluation of the client's financial balance sheet.

Communications with the Broker

The actuary and the broker must have good communications between them, from the initial request to the delivery of the final study. The actuarial work is quite often included in the brokerage fee of the client. The actuary must have a clear understanding of what actuarial work is included in the fee and how the fee is structured. As there is an extensive amount of direct discussion with the client by the actuary, it is imperative that the actuary keep the broker advised of these discussions and the status of the work. The client views the actuary and the broker as being one and the same, as they both work for the same brokerage firm; when in reality the broker and actuary might never have met and work in offices on either coast of the United States. The broker needs to be kept "in the loop" regarding the findings of the study.

Analyzing Losses By Division or Segment

Large accounts often have varied operations within the corporation. The client might have a service division, a manufacturing division, and a retail division. Within each division there may be a wide range of products or services. It is important that the actuary identify the various product types to better project the losses. Also large accounts are more apt to have numerous and significant acquisitions and divestitures. The actuary must be aware that a relatively small acquisition or divestiture, in relationship to the total corporation, can have a major impact on the loss projection. The actuary must take these

acquisitions and divestitures into account when making the projections.

To calculate losses for the projected period, the effect of acquisitions and divestitures can be reasonably quantified. To calculate required reserves for prior periods for either LOC requirements or the client's financial statement, the quantification is not so simple. If a division has been divested and no further claims are expected, the divested unit's data may be excluded from the loss projection. But for calculating required reserves for prior periods the actuary must examine the divested unit to see what effect the divested unit has on loss development history both for the periods prior to the divestiture and after the divestiture.

An important role that the actuary performs in the accrual process is identifying the best method to segment the projected losses. In the case of large accounts the data is credible enough to investigate different methods to allocate the projected losses. The actuary initially investigates segmenting the projected losses by industry or division group. Upon segmenting the projected losses by division, the actuary must discuss with the client if any further breakdowns by profit center are necessary. The actuary will discuss with the client various options that can be used to further allocate losses by profit center, explaining the negatives and positives of each option.

THE ACTUARY AS COMMUNICATOR

Communication of Technical Information

Probably the most important role the actuary plays in a brokerage firm is communicator of technical information. The actuary must communicate with two audiences, the broker and the client. The broker must have a solid understanding of the assumptions and techniques that were employed in the report. The broker uses the study to design the insurance program for the client. If the broker has a thorough understanding of the study, then the broker can better serve the client in the design of an insurance program. This can be vital information in the brokerage process.

The broker depends on the actuary to be able to communicate the results of the study to the client. The level of actuarial sophistication varies dramatically from client to client. The ability of the actuary to communicate the results to a client is extremely important in the retention of an account. If a client *understands the assumptions and methodology in the report, two advantages are gained for the broker.* The first advantage is a better report. Throughout the report process, there is contact with the client, verifying such input as exposures, acquisitions and divestitures. But no matter how good the communication is, some things are not noticed until the final answer is produced. If the client understands the methodology and assumptions used in the report, the actuary, broker, and client can discuss the report and possibly uncover the effect of information that was not initially contemplated in the study. Examples are a change in the reporting of small claims, a change in claims adjusters or claim adjusting office, or the automating of a portion of the operation. Also if the client understands the report, the client will be able to relay important information to the actuary for the upcoming renewal.

Communications and Account Retention

The ability of the actuary to communicate the results of the study to the client is also important in retaining the account. The actuary's ability to have the client understand the report can have a significant impact on solidifying the account with the broker. If the client understands the report, it will make it more difficult for competitors to take the account.

Unfortunately, in the present insurance and economic environment, the results of the loss projection report are often discomfoting from the client's perspective. Even if all of the best loss control techniques are employed, there is no guarantee of good results. This is where the communication skills and experience of the actuary are most important. The actuary's ability to explain adverse results (client perspective) can alleviate potential friction between the client and the broker. The actuary might be able to compare the client's results to that of the industry or attempt to quantify the savings from the loss control program that has been put into place.

If the client does not understand the results and the results are different than the client's expectations, the door is opened for competitors to attempt to take the account from the broker. It is much harder for a competitor to convince a client to switch brokers when the client is informed than when the client is uninformed.

The value of the actuary displaying good communication skills goes beyond explaining the technical details of the report. It also enhances the image of the brokerage firm in the eyes of the client. An actuary who is aware of changes in the client's industry that may effect the client's projection can be a major asset to the account and the broker. Clients like to work with brokers who present quality technical resources that can communicate the results to them and display an understanding of their operations. In contrast, if the actuary displays poor communication skills, the client could become suspect of other technical resources of the broker.

THE ACTUARY AS A RESOURCE FOR BROKERS

The actuary has the responsibility in the brokerage firm to keep the brokers aware of changes in the actuarial environment. The medium to convey the information can range from a phone call to a seminar. Some examples are:

- Preparing various insurance exhibits applicable to their clients, such as loss development factors for a municipality.
- Providing comment on loss data or analysis from other sources submitted by the broker.
- Participating in or leading an internal seminar for the brokers on a specific topic or insurance issue.

THE ROLE OF THE ACTUARY IN NEW ACCOUNT SOLICITATION

In most situations the actuary does not directly participate in the presentation of the proposal to the client. For some clients that are requesting extensive actuarial work, the actuary will play a more direct role in the solicitation process. Minimally the actuary would be consulted on new large account solicitations, since the majority of these accounts require some actuarial work. If a captive feasibility study was requested, the actuary would be heavily involved in calculating projected losses and required reserves for the captive.

Occasionally the actuarial study will be used as a means of soliciting a new prospect. The work of the actuary can be used to show the type of quality professionals and analysis the broker can provide. The actuary in this instance would have a major role in the solicitation of the account. The technical and communication ability of the actuary can have a significant impact on gaining the account for the broker.

SUMMATION

This paper has attempted to describe some of the many roles an actuary plays in an insurance brokerage firm. I believe, as has been shown in this paper, that the actuary plays a very important role in the brokerage firm. As the market hardens (and it will someday) the importance of the role of the actuary will increase. The client will need to examine various loss retention limits as the cost of insurance increases and if a coverage is no longer available, the client may wish to investigate the cost of self-insurance. As the need for actuarial work increases in brokerage firms, the role of actuaries in brokerage firms will also increase.

