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The Actuary and Health Insurance Mergers and Acquisitions

by James T. O'Connor

Over the past several years, there has been a flurry of mergers, acquisitions, IPOs, and corporate consolidation in almost every industry. The financial industry and, in particular, the health insurance sector has been no exception. The transactions that have involved health insurance companies have ranged from relatively small to very substantial blocks of business. They have included medical (HMO, PPO, and indemnity), medicare supplement, disability, and long-term care business. This activity is likely to continue in the future.

This article focuses on the actuarial appraisal for health insurance business and the role of the actuary within the merger and acquisition process.

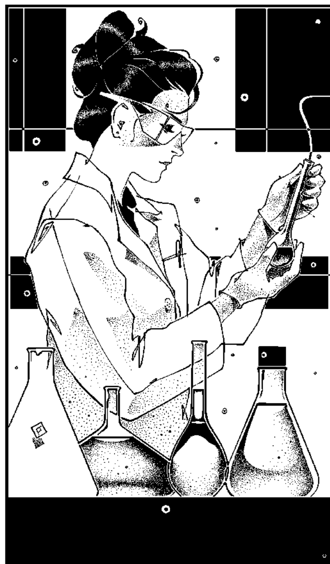
The Sales and Purchase Process

Any merger and acquisition transaction begins with the owner's decision to sell the business and other companies looking to buy additional business. The actuary can and often does play a key role in the decision to sell or buy a company or a block of business. Usually, the decision comes as a result of considering various options brought to light through a strategic planning process. The actuary who understands all the inter-dynamics of the health insurance operation should seek to play a key role in the strategic planning process.

Seller/Buyer Fit

Various sales situations dictate the type of fit that a seller and buyer must have to close the transaction. Some of the circumstances that lead to a proper fit are the following:

- The business is truly profitable, but is non-core to the seller and is likely to be a core block for the buyer.
- The block of business is good intrinsically (e.g. profitable loss ratios), but the seller's administrative and marketing costs are too high for the block to meet its profit targets. The buyer believes that he can administer the business at lower costs or may have lower profit objectives than the seller.
- The block has poor operating results due primarily to poor management of the business by the seller. Often the seller discovers that adequate rate increases have not been filed for and implemented on a timely basis, or the seller has not kept up with the latest in cost containment practices, provider discount negotiations, contract language, etc. It may also be that the seller has kept certain benefit options out in the market too long and has been a victim of adverse selection. The interested buyer believes that he can implement the proper corrective actions and restore the block to adequate profitability.
- The reputation of the seller prevents effective corrective actions. Typically, this occurs in a situation in which the business is non-core, and the seller needs to protect its reputation in order to keep its core business healthy. The corrective actions may include the implementation of higher than average rate increases or selective termination action.
- For some types of business, a win-win transaction can occur due to a reserve lock-in situation in which the seller has conservative active life reserves established for the block and cannot or chooses not to destrengthen the reserves. The buyer is willing to pay a fair price for the business and has the opportunity to establish its own reserves on the block, which need to be adequate but not as excessively conservative as those of the seller. By means of the sale, the seller gets the benefit of the reserve release, and the buyer purchases a profitable block of business.



- Sometimes regulatory fire sales occur. Usually, but not always, the business is in need of substantial corrective action. Buying this type of business can be risky, but the buyer's negotiation leverage can often be very good.

Other elements related to the type of sale have to do with what else is included in the sale and the type of transaction involved. Often just the business itself is being sold without a company infrastructure or distribution system included. Other sales also include the company, but may or may not include the employees, the real estate, the computer systems and hardware, furniture, and other assets. Sometimes, in addition to the insurance company, other affiliated companies such as a marketing company or managed care company may be part of the sale. The situation will influence the approach to and the items needing to be considered in valuing the business that the actuary will take.

The Sales Documents

There are a number of key documents and information packets that are needed in the sales process.

- The Offering Memorandum
- The Actuarial Appraisal
- The "Data Room"
- The Data Request
- Supplemental Information and Sensitivity Analyses

- The Purchase Agreement
- Regulatory Requests
- Reinsurance and Administrative Agreements
- The Closing Documents

The actuary can be involved in either using or creating most of this information.

Role of the Actuary

The role of the actuary extends well beyond creating an actuarial appraisal. While the actuarial appraisal is critical to the merger and acquisition process, there are other important aspects of the process in which the actuary is a major contributor. The list may vary somewhat depending upon the actuary's relationship to the seller and buyer, whether he is an in-house actuary or a consultant. These include being an active member of the due diligence review team (before the sale, between the sale and the transaction close, and after the closing), interviewing management, interfacing with regulators, reinsurers, and investors, and acting as a general advisor to management regarding the merger and acquisition process. The remainder of this article focuses on the actuarial appraisal.

A consultant representing the seller often has a responsibility to develop the appraisal value and report. The in-house actuary of the selling company may also have the responsibility to develop an appraisal value, particularly in those cases where an actuarial consultant is not used. He also is oftentimes responsible for working with and reviewing the independent consultant's work before the latter releases a final report.

An actuary (consultant or employee) representing an interested buyer may be charged with developing an independent appraisal of the business, either by using his own models and assumptions, or having the seller's actuary run alternate sets of assumptions through his model.

Professionalism and Avoidance of Conflicts of Interest

Both consulting actuaries and insurance company actuaries become involved in the merger and acquisition process. It is imperative for the actuary to avoid conflicts of interest and even the semblance of such conflicts, and fulfill his responsibility to act with professional integrity and competence. He should be familiar with the Code of Professional Conduct, the Qualification Standards of the American Academy of Actuaries, as well as with Actuarial Standard of Practice (ASOP) No. 19, Actuarial Appraisals, and other related ASOPs.

Mergers, acquisitions, IPOs, and other transactions requiring the need of actuarial appraisals often involve substantial amounts of money, the need for a high level of confidentiality, heightened corporate or client pressures in terms of timing and sometimes results, and exposure to third party and regulatory scrutiny.

Actuaries who have financial or other interests contingent upon the outcome of the transaction must be careful to avoid conflict situations, deceit, and misrepresentation of information. Adherence to confidentiality agreements is paramount to the best interests of the various parties involved in the transaction, irrespective of how much the actuary trusts and respects the people with whom he is communicating.

An actuary should not perform M&A and appraisal services unless all actual and potential conflicts of interests are appropriately addressed. The Code of Professional Conduct lists three criteria that must be met:

- The Actuary's ability to act fairly is unimpaired;
- There has been disclosure of the conflict to all present and known prospective Principals whose interests would be affected by the conflict;
- All such Principals have expressly agreed to the performance of the actuarial services by the Actuary.

A *Principal* is a client or employer of the actuary. For consultants, this means making the client aware of present or prior relationships that the actuary or his firm may have had with third parties interested in the transaction. For an employee, this involves making his employer aware of prior employment or other types of relationships that the actuary may have with interested third parties (e.g. spouse works for an interested buyer or seller, ownership of stock in one of the companies, etc.). Some consulting firms such as Milliman & Robertson are careful to avoid conflict situations through firm requirements regarding internal "need-to-know" conflict notice procedures, certain client relationship disclosures, and prohibitions against contingency-based fee structures, ownership of industry stock, and membership on the boards of directors of industry companies.

The actuary needs to be able to effectively deal with and interact with the many other professionals that can become involved in the transaction.

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The Actuarial Appraisal

A critical component of the sales process is the determination of the purchase price. There are a number of key factors that contribute to this determination, one of which is the actuarial appraisal value. The actuarial appraisal provides a range within which the economic value of the business falls under a specific set of assumptions. It is a measure of the value of the business to a particular user (seller, buyer, reinsurer, investor, etc.)

- ***Variation in Value for Different Users*** The appraisal value can certainly differ between an appraisal done for the seller and those done for specific purchasers because the circumstances, needs, and perspectives vary from one user to another. As such, a set of assumptions that is appropriate for one user may not be

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ideal for another. This is especially true due to the different tax and risk based capital situations in which various carriers are positioned. But differences in assumptions can also be dictated by company size, the other lines of business of the company, its effectiveness in managing administrative expenses, its marketing distribution channels, its ability to negotiate and secure competitive provider reimbursement arrangements, its effectiveness in managing health care and minimizing health care claim costs, its geographical location, its experience in merging purchased blocks of business with its existing operations, and simply the strategic value of purchasing this block of business relative to that assessed by the other potential buyers.

➢ ***Components of an Actuarial Appraisal***
There are four key distinct components of an actuarial appraisal.

They are:

☞ Adjusted net worth of the business as of the valuation date;
☞ Value of the business in force;
☞ Value of future business capacity;
☞ Adjustment for the future cost of capital retained to support the business.

Oftentimes, the present values of earnings are presented on both a pre-tax and after-tax basis. The cost of capital may also be split between the in-force and new business components to derive a present value of distributable earnings for each. From this perspective, the actuarial value can be categorized into three basic components instead of four.

➢ ***Adjusted net worth of the business***
Most actuarial appraisals are presented on a statutory accounting basis, primarily because statutory accounting determines the earnings and capital available for distribution. The statutory net worth of the business is, however, adjusted to recognize certain elements that have capital and surplus value, but are not allowed under statutory accounting or are intrinsically surplus items categorized as a statutory liability. The adjusted net worth of the business is typically comprised of the following:

☞ Statutory capital and surplus;

☞ Statutory liabilities that are intrinsically allocations of surplus, such as the Asset Valuation Reserve (AVR);

☞ Statutory non-admitted assets that have realizable value such as a certain amount of the Agent Debit Balance;

☞ Reduction of surplus items that represent an obligation to another party;

☞ An adjustment to reflect the difference between the market value of the invested assets and the statutory carrying value included in the statutory capital and surplus (mark-to-market adjustment);

☞ Adjustment (usually a reduction) in the value of certain admitted assets that the user values differently than the reported statutory value;

☞ Adjustment in the value of certain liabilities that the user values differently than the reported statutory value, such as the claim liability or policy reserves;

☞ Adjustment for any tax assets or liabilities that may not be transferable in the transaction.

It is important that the adjusted net worth items to be included are consistent and complementary with the items used in the projection of future earnings. This includes the treatment of such items as claim liabilities and policy reserves. The projection will almost always reflect the release of these liabilities over the projection period. If it does not (e.g., the projection is presented on a paid claim basis, not on an incurred claims basis), then the net worth value needs to be adjusted to include these types of liabilities.

It is critical to note that the net worth is only as reliable as the adequacy of the assets and liabilities from which it is calculated. It is not unusual for sellers and buyers to have different perspectives about estimates for claim liabilities. The reported policy reserves may be more conservative than what a buyer may need to establish. The actuary should review the adequacy of these liabilities, discuss the amounts to reflect in the calculation of the adjusted net worth value with his management or client, and determine that the projection is made on a basis consistent with the reporting of the components of adjusted net worth.

➢ ***Value of the Business In Force***
The value of the business in force is calculated as the present value of future earnings over a projection period on the business in force as of the valuation date. This requires that the actuary develop a projection model, determine starting in-force values, create a specific set of assumptions that reflects reasonable expectations for the business, and process these through his projection system.

➢ ***Projection Model***
The detail of the projection model should be appropriate for the business being modeled, the data that will be available, the time frame in which the projection must be done, and the budget within which the actuary must operate. Models might be categorized into three types: windshield apprai-sal models, intermediate detail models, and full-blown appraisal models.

The windshield appraisal fits a situation in which time is very limited, data is quite scarce with perhaps only public information available, and the purpose of the appraisal is to simply determine whether the user should pursue a more detailed investigation of the business.

Intermediate detail models most often result from a lack of detailed data. The company may not have systems adequate enough to produce the type of detailed data that is desirable. As such, the model cannot be as sophisticated as the actuary might want it to be, but the information is adequate enough for producing a reasonable projection and estimate of value.

A full-blown projection model fits the situation in which detailed data is available with adequate time to create a sophisticated model. This, of course, is the preferred model to estimate a final appraisal value upon which a purchase price would be negotiated.

The model also needs to reflect the complexity of the business. A single product line can have a much simpler model than a multi-product and multi-line company.

Also, certain types of business are more complex than others. Long-term care business generally needs to use a much more sophisticated model than a traditional indemnity comprehensive medical block of business.

This is not to say that the analysis required to determine assumptions is any more or less complicated, but that the projection system should be more sophisticated. Often-times, a spreadsheet projection system can be quite adequate for a comprehensive medical block of business, where a more complex pro-grammed system might be more appropriate to project long-term duration products that carry policy reserves and have multiple decrement situations to model.

Another aspect of model development is related to the evaluation of risks that need to be done within the projection. Product benefit or rating variations may need to be modeled into separate projection cells. Model cells may need to also differentiate the business based upon underwriting differences with adherence to identifying the durational sensitivity of the business or may need to be segregated by managed care features or provider networks.

While model cell definitions may not need to be delineated by issue period or duration from issue, the ability of the model to identify the in-force business by duration is important, particularly for individual and small group business in which commissions and expenses might vary by policy duration, policy reserves vary by policy duration, and expected morbidity might also differ by duration.

Most important is that the projection model and system should be flexible enough to easily handle sensitivity testing and manageable enough to produce results that can be explained. The actuary needs to understand the inner workings and intricacies of the system to be able to adequately present the results.

- ***Starting In-Force Values***
  The actuary needs to validate the model to reproduce actual premiums, policy counts, and statutory statement reserves of the business as of the starting valuation date. The results should be within a close tolerance in the aggregate. For business with widely varying types of benefits or case characteristics, it is best to validate within a close tolerance by product category. This is particularly important for business that has morbidity and/or policy reserves that vary by duration.

  One issue related to starting values and initial assumptions is the need to analyze the impact of remedial actions (e.g., rate increases) that have begun to be implemented before the valuation date, but are not fully implemented as yet, or which have only had a partial impact on the experience data being used to set starting values and assumptions. The actuary should be aware of how modal loads, rate increases being implemented, and due and unpaid premiums are reflected in the in-force premiums.

  He also needs to understand what is included in or excluded from the starting claim liabilities and policy reserves, particularly in being aware of any contingency margins or deficiencies present.

  The projection formulas and assumptions should be consistent with the definitions of the starting values.

- ***Assumption Development***
  Most of the actuary's work in determining appraisal values is in the process of assumption development. The assumptions regarding future experience need to be reasonable, take into account actual historical and currently emerging experience of the business, adjusted to reflect known changes being planned or implemented by the company and changes and trends in the competitive environment and industry practices. Oftentimes, the carrier will not have experience studies available to support the development of certain assumptions or the data may not be of sufficient size to be credible. In these cases, the actuary will need to rely on industry experience of similar business, the experience of the interested buyer, and/or his own experience and judgment.

  The assumptions should also be representative of the purpose of the appraisal. The buyer may be interested in the value using expense assumptions or provider network discount assumptions more reflective of its own operations rather than that of the seller's operations. One purpose may be to value the operation as an ongoing concern, while another may be to determine

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its value as a discontinued business concern. These purposes will call for different sets of assumptions, albeit that most of the assumptions may remain the same.

Some assumptions may come per a directive of the company management (buyer or seller). Some assumptions may require an expertise or knowledge that the actuary does not have. The actuary will need to rely upon those people expert in such areas for developing the assumptions. These areas tend to be related to investment income, expense, and new business assumptions.

In all cases, the key assumptions and their sources should be well documented and disclosed in the actuarial appraisal report.Key assumptions include the following:

- Policy decrements (lapse rates including remedial action shock induced lapses and mortality rates)
- Premium: modal distribution and modal loadings (if not implicit in the starting premium); rating structure considerations (e.g. attained age and banded age rates need an average annual age-step increase); family composition considerations (e.g., family policies eventually evolve into insured and spouse or insured only over time).
- Rate increases (amount, timing, downgrades, and applicability)
- Claim costs (aging curve, underwriting selection wear off, claims trend, impact of managed care and provider reimbursement arrangements, benefit downgrades, and claims anti-selection due to reme dial actions)
- Claim reserves and liabilities
- Unearned premium reserves
- Additional active life reserves (policy reserves)
- Commissions
- Administrative expenses
- Federal income taxes
- Investment income
- Reinsurance
- Appraisal discount rates

There are a number of issues and considerations that the actuary must explore in constructing the assumptions for each one of these items. That discussion is beyond the scope of this article.

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The actuary should strive to assure that the assumptions he chooses are a cohesive set that reasonably reflect the future results of the operation that can realistically be achieved relative to the purpose of the projection.

- ***The Projection***
  The projection itself is generated by means of a projection system. The system has programmed formulas that apply the assumptions discussed above to the starting in-force values. The actuary should be familiar with the formulas being used by the system in order to be able to better explain the results. There are several key issues that need to be decided related to the projection:

Valuation Date: a valuation date needs to be set. This is often December 31st of the year just completed, but may also be the most recent quarter-end or month-end. The availability of in-force data and other data can factor into the choice of valuation date. In some cases, the valuation date could be chosen to be a future date such as the next year end or the expected effective transaction close date.

Partial Years: if the valuation date is not a year-end date, a partial year needs to be projected, unless rolling 12-month periods from the valuation date rather than calendar years are projected. Certain remedial actions may be implemented within a calendar year, which require special attention to their implementation. Seasonality characteristics of the business need to be considered for partial-year projections.

Projection Period: the length of the projection period also needs to be decided. The length should be set based upon the purpose of the projection, the type of business being projected, the level of lapsation and decrements expected for the business, and other business that is also being projected (e.g., life insurance and annuities). Long duration lines of business such as LTC and DI need longer projection periods (e.g., 20 – 30 years) than short duration business (3 – 10 years). Short duration business can certainly be projected beyond 10 years, but with the typically high lapse rates experienced by medical business, experience beyond 10 years will generally produce only small changes to the actuarial

values. It is important that residual values be determined at the end of the projection period if they are significant (e.g., release of remaining reserves or estimate of remaining profits).

Validation of Results: there are various types of validations. Static validations are used to show that the starting values are consistent with actual values as of the valuation date. Dynamic validations are sometimes performed to validate the predictability of the projection system and assumptions by running the model against an earlier in force (e.g. previous year) and comparing the projected to actual historical operating results. Dynamic validations can be very difficult for many types of health insurance, such as medical business, since there are so many varying forces and remedial action responses at play at any one period of time.

Sensitivity Analysis: The projection system needs to be able to produce sensitivity analyses on various assumptions in order to be able to communicate the potential range of reasonable risk that is being purchased. Typical sensitivity analyses are performed on the lapse rates, morbidity assumptions, expense assumptions, and investment income rates (for long duration health insurance plans). Each party will request tests for items with which it is most concerned.

➢ ***Value of future business capacity***

The value of future business capacity is usually calculated as the present value of projected future after-tax earnings of new business to be issued after the valuation date. This can oftentimes be an estimate significantly differing between sellers and buyers. Usually these differences are related to the amount of business that is projected to be issued, but it is also not uncommon to see differences in the expected profitability of the future business. Sellers will often project with the expectation that corrective actions they have taken will meet with their intentions, while buyers will usually look at the historical experience of the line as an indication of what to also expect in the future, placing less weight on the remedial actions which may be in progress.

Typically, the number of issue years included as new business will range from zero (i.e. give no value to future business capacity or estimate the value by some other means) to 10. Often the buyer is interested in what the projection for a single issue year of business will look like over its lifetime. Other issue years are often projected as just being layered on top of the first year. A single issue year projection helps provide the reader with an idea as to the expected lifetime and annual financial results expected, which provides a basis of comparison with similar product lines in the industry or with that of the buyer. The actuary is usually provided with new business volume assumptions by management. Other assumptions are usually consistent with those used for the existing business, unless there is a justified reason for changing them.

➢ ***Adjustment for the future cost of capital retained to support the business***

The business being sold will need to be supported by capital and surplus. The NAIC has minimum requirements for holding risk based capital. Rating agencies also have formulas to judge capital level held by carriers. The amount of capital that needs to be held is related to the types and volumes of business written by the insurance carrier. Typically, the capital to be held is targeted to be 150% – 250% of NAIC Company Action Level risk based capital.

The cost of capital calculation includes the after-tax net investment income on the capital held, along with the annual changes in required surplus.

The Actuarial Appraisal Report

The actuarial appraisal report is the vehicle the actuary uses to communicate the appraisal values, the projection results, and the underlying assumptions and projection methodology used. ASOP No. 19 delineates various items that the report should disclose at a minimum. These include descriptions of the scope of the assignment and its intended use; any reliances and limitations the actuary has placed on his work product; a description of the business or entity being valued; the actuarial appraisal values; the methodology and assumptions used; the validation techniques and results; adjustments to value net worth and provisions for cost of capital; and how federal income taxes were considered.

The annual projection results showing the expected stream of earnings from which the appraisal values were determined is also usually displayed. In addition, the actuary needs to disclose any deviations from the standard and whether it is an actuarial appraisal.

Summary

As the reader can see, the role of the actuary is very important to the merger and acquisition process. It demands a high level of expertise and dedication to meet the demands of buyers and sellers and simultaneously comply with actuarial standards of practice. It is also very satisfying work that allows the actuary to consider the entire range of actuarial, financial, and operational interactions that comprise the health insurance business.

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