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APPRAISALS OF BLOCKS OF HEALTH BUSINESS

Instructor: JOHN D. LADLEY

- Issues to consider
- Building a model
- Setting assumptions
- ASB requirements

MR. JOHN D. LADLEY: I will begin this session by asking a question: Have your companies (or companies you've looked at) recognized the current devaluation that I think has taken place in many A&H lines of business? I believe companies that have been involved in an appraisal process recently, or have an ongoing appraisal process, understand this decline in value comment more. It's been fairly clear, for a year or more now, that both state regulatory initiatives (especially in the small-group and the Medicare supplement business), and now the uncertainty surrounding the federal level activity has, in effect, created something of a devaluation of many health lines of business. I think this has some importance, whether you're actively involved in the merger/acquisition market or if you simply have a health insurance line. This is a significant issue for just about anybody who is in the health insurance business, and that includes supplemental lines as well as basic group lines.

GENERAL CONSIDERATIONS

Let's remember that there's quite a wide range of health coverages to be covered. Thus, some of my comments will be aimed at particular lines of business, such as long-term care and individual disability income (IDI), and others will have relevance to such lines as stop loss. Group accident and health is virtually always segmented into several types by size: baby group, small-group, medium-group, and large-group being the most typical size segments. Managed care enters into the picture, and there are all sorts of related coverages, including coverages that would be more voluntary in nature. Not all my comments will apply to every health line of business. Of necessity, I'll be switching examples, from line to line, especially when I talk about considerations in assumption setting.

Some of you may come from a single-company environment. You're not in consulting, or you haven't been exposed to more than one company, but I can assure you that there is a wide variety of policy provisions, even within a single line, that exist in the market. When you are doing an appraisal, this is a critical issue in the early going. You cannot assume, for instance, that every group coverage is similar to the type you're familiar with. For example, there are various extensions of benefits, special-premium classes, provisions, benefit guarantees, and similar variations. In fact, I'd say it's more the rule that you'll find something unique in each health insurance line's contract provisions.

Distribution systems are an important consideration. Some of my comments will be oriented to a particular distribution system. In health insurance distribution, approaches vary from direct response to brokerage. Distribution considerations have a great deal to do with developing your appraisal and selecting assumptions.

It's worthwhile to spend some time discussing the term *actuarial appraisal*. I think that this term is something of a misnomer. An appraisal is usually thought of as a process used to assign value to a block of business; or, for example, a piece of real estate. You will find, if you carefully read well-done appraisal write-ups, that the scope and limitations sections of the appraisal document are in reality telling you that this is a set of actuarial projections. In fact, actuarial projections is a much better name for what we're discussing here. I'm not going to switch our terminology during this session, but I think there's a very important distinction between the two. Projections provide views of the future, which may be discounted, which may show a possible incidence of earnings, or which may be used for similar analyses. An appraisal implies a process that assigns value.

An actuarial appraisal is typically statutory based. It uses a set of explicit assumptions, assumptions that should be obvious or made obvious to the user. Numerous factors can affect the dependability of the assumptions made in projections concerned with potential future results. These factors include policies of future operating management, administration of the business, marketing strategies, and external environmental factors. These may have a lot to do with whether the appraisal assumptions are realized.

I therefore suggest that some of the actuarial appraisal language be drafted and read carefully and taken seriously. I'd also like to distinguish between an actuarial appraisal and what I call a forecast. Forecasting, as typically performed for health insurance, utilizes simplified ratios and similar estimation shortcuts. Its horizon is effectively one or two years. An appraisal, however, uses a longer-term horizon and more detailed projection procedures. Typically, for group lines, appraisals are performed for 5-10 years; for lines such as long-term care, they are performed for 30 years or more. Assumptions are more detailed and methodology is more refined.

BLOCK VERSUS COMPANY APPRAISALS

This session focuses on appraisals of health blocks of business. There are some important differences between a health company appraisal and a block-of-business appraisal. Usually, a block-of-business appraisal is an easier, more straightforward task. For a company appraisal, you must cope with allocated items such as tax, investment income, and expenses. Investment income issues draw in allocation or asset-segmentation issues; for instance, even for health insurance. Even in a single-line health insurance company, the assets that support the capital and surplus are often an issue for either debate or negotiation, and it is an actuarial exercise to identify them and establish their earnings power and their behavior patterns. It is fairly typical, for example, to see lower earnings, and perhaps sometimes lower-quality assets attributed to the surplus and capital surplus of the company. It's also common to see a significant level of nonearning assets supporting the capital and surplus accounts. These are not generally issues for block-of-business appraisals. Expenses would present similar issues. There are usually difficult issues in dealing with company-level expenses; for example, the commonplace overrun situation. That would be generally the difference between the allowable factors that are built into the appraisal and the actual experience of the company. Of course, in this case, there is some concern when you look at even a block of business as to whether the expense provisions have been adequate. But the effort is greater appraising at the company level.

Tax is also an important allocated item. Tax attributes can follow a company. Tax may vary greatly, depending upon appraiser strategy, and can greatly influence appraisal results. This is one reason why most actuarial appraisals are presented on a pretax basis. It doesn't mean that values are eventually evaluated on a pretax basis.

TYPICAL SELL-BUY APPRAISAL PROCESS

A typical use of an actuarial appraisal is in a sale-motivated process, which starts with what I call a seller's actuarial appraisal. There's normally considerable accompanying information, the most important being a write-up either by an investment banker or by company management. This would include various statutory and (if available) GAAP financials. The seller's actuarial appraisal, however, has shown itself to be the most critical document in this stream of information that assists in a sale. I think this seems doubly true now that there are more noninsurance players involved in the merger/acquisition market than ever before. The ability to look at various streams of statutory earnings, which are the typical by-products of the appraisal, has become critical.

Once this actuarial appraisal and its accompanying documents are produced, there's typically a review by other parties, assisted by qualified professionals, including actuaries. They would first tend to look at the appraisal on a feasibility basis, to see what kind of assumption changes might be necessary and how those assumption changes might impact results. Limited testing, but not a full reappraisal, is common at this point. A preliminary offer or indication of an offer range might be made. This could lead to substantive analysis, and possibly full reappraisal, if the preliminary offer is acceptable and if a more thorough investigation turns up new facts. The reappraisal is even more common when some sort of value adjustments or earn-out is negotiated. Rarely is the seller's appraisal accepted as is. It's common to make significant adjustments.

The fact-finding or due-diligence phase is particularly important for health insurance. For example, for a company that you know nothing or very little about, it may be important to evaluate procedures at the level of paying claims, or to evaluate the consistency of administration with the various policy provisions, or to evaluate the development of management information in evaluating what the actuaries used to establish experience levels or reserves. But, this can actually lead you into having to know more about that block of business than people who have worked with it for a better part of their careers. So, there's a scope issue in due diligence, but it is, nevertheless, an important area.

Underwriting and rating activity are important due-diligence topics as well. Consistency with manual procedures, or whatever systems exist, often turns up important issues.

The due-diligence process can proceed to a high level of detail for a health insurance block if the time and the budget and the scope are there, and it often does produce some valuable adjustments or insights. I can recollect at least three separate disability income (DI) lines where significant value reductions were effected through these kinds of due-diligence reviews. In these situations, an actuary was about the only one who could identify some of these concerns. Surprisingly, such issues were never looked at by an actuary prior to the appraisal process.

OTHER APPRAISAL USES

More broadly, considering methodology and assumption choices, there are other nonsale uses of actuarial appraisals. One might withdraw from the line of business. It's typical to do some sort of an appraisal on an "exit strategy," showing oftentimes how significant your losses might be as opposed to how sizable your profits will be. Expert witness activity might be an appraisal use: placing a value on a stolen, canceled, or lost block of business. Finally, there are financial reporting requirements, such as GAAP recoverability demonstrations or gross-premium valuations.

These examples of other uses also emphasize the importance of the appraisal's use and scope in evaluating the assumptions made. That does not mean that there's any assumption manipulation implied, although I think a nonactuary could perhaps look at it that way. A nonactuary might wonder how there could be different sets of assumptions for the same block of business, just depending on the appraisal's purpose. But, for a gross-premium valuation, for example, we're usually talking about a point estimate on a most likely basis, with additional scenario (or sensitivity) testing as necessary. A seller's appraisal would usually take a "highest and best" assumption and result approach, while a buyer's actuarial appraisal will often use some conservatism.

Every company that has a significant health block of business should have the capability to appraise that block. For example, many of you have experienced the intense interest of the rating services now, in what amounts to actuarial appraisals and projections. Having your appraisal readily available may be critical because the time frames are usually short. Available appraisals also may help with business planning or reinsurance negotiation.

REFERENCES

The list of references in performing an appraisal is almost as long as the entire list of actuarial standards and list of health insurance actuarial literature. I would point out some of the most important references for appraisals: Actuarial Standard of Practice (ASP) 19 addresses actuarial appraisals; ASP 7 and 14 deal with cash-flow testing; the data quality ASP (still in its draft stages); ASP 5, which concerns health claim liabilities; and other ASPs that deal with specific health lines. For example, even the continuing care retirement community (CCRC) ASP could have relevance to an appraisal on such business you may be performing.

Actuarial Standards of Practice have evolved greatly and many have now been codified, but I have had some experience trying to define what a standard of practice was at a particular point in time, going back some years. It may still be somewhat hard to establish what should be done when there is existing draft material, material that's not yet promulgated by all the states, when there are variations by states, or where there are varying (and possibly, even conflicting) comments.

When a Standard of Practice reaches a draft stage, it typically has some weight of an actuarial body behind it. That does not necessarily make it an authoritative piece of literature, and we know that there have been proposed standards of practice that are later withdrawn.

One health insurance example that I could cite right now would be appropriate policy reserves on long-term care coverages. There are recent studies showing a wide variation in the practices of reserving for long-term care insurance; if, in fact, a company establishes policy-type reserves at all. Another health insurance example might be the debate over the possible necessity for active-life-type reserves on small-group coverages where there is a sharp selection curve. Such uncertainties can be matters for some discussion in the appraisal process.

BACKGROUNDING – GETTING STARTED

"Backgrounding" or "scoping" is very important. Spend time establishing the expectations and the purposes of the appraisal. A good appraisal document will establish this if you read it carefully. For example, would the appraisal you've done be appropriate for GAAP recoverability? . . . for a regulatory filing? . . . for rating services? . . . for reinsurance negotiations? Be sure to make this clear.

Most appraisals still focus primarily on present-value numbers. Will yours be reliable even for year-by-year numbers? What should a user expect?

Confirming and supporting environmental changes and strategies related to the appraisal is part of this scoping process. Will there be changes to underwriting and rating practices? . . . claims payment tightening? . . . loss of the distribution system? . . . economic changes?

Establishing your baseline case is very important. For one thing, obtain a time period sufficient to establish behavior through one or more cycles. You can prove or disprove to yourself, for instance, that there's a DI cycle of about ten years that applies to your block, or you may do the same thing with group health or a particular type of Medicare supplement. A sufficient history can also, for example, establish the potential variability in some health lines of business, such as stop-loss or direct response high-limit accident coverages, where a fairly long trend line is necessary to really see how experience is developing or evolving, despite shorter-term fluctuation.

Continuing with establishing your information base, pricing is one area where conflicts with the appraisal process can frequently arise. Line management naturally expects that its pricing assumptions should hold up rather well. Sometimes that is the case, but the appraiser often has a differing objective. I think this is where the actuarial appraiser can provide some real value by taking a fresh look at line performance. Nevertheless, the pressure to conform the appraisal assumptions closely to pricing is usually quite strong. Beware of the seller's appraisal where assumptions are more optimistic than pricing.

The annual statutory statement is, in my view, the best document with which to begin the actuarial appraisal process. It has more readily understandable and comparable information than any other data source. Supporting information is maximized. That also suggests that December 31 is the most typical and best effective date for an appraisal. Often, however, a date is dictated by a specific need; but all else being equal, a calendar-year appraisal is the most desirable choice. It's also easier to reconcile the appraisal with normal financials in the future.

There are typically multiple sources of appraisal data, and the quality has to be assured early on. The appraisal models can be quite large, up to thousands of cells in some cases for the more complex lines of business (like DI). Thus, significant effort is more than worthwhile in assuring that you're getting data quality that's high. You should try, for example, to reconcile from more than one data source. In one example we encountered, in appraising workers' compensation health benefits, poor-quality data (due to management information systems (MIS) issues in extracting the data) resulted in completely revamping the appraisal very late in the game. So in the urge to get the appraisal completed within the tight time frames (which is usually the case), it's still essential to review data quality thoroughly. Related to this, you should be clear, too, on the data reliances that you'll place on other parties, whether it's administrative officers or actuaries. You should also ascertain that they are comfortable with these reliances in advance.

An appraisal does not usually involve an exercise in setting reserves. Yet, you should verify reserves for reasonability. To establish reserve reliability, there are a number of procedures you can use. You can review the historical data exhibit and Schedule H, which provide some adequacy tests. A Schedule O review can provide some useful information on claims development. There may also be available a State Department of Insurance exam that's reasonably current and provides reserve comfort. There might be special reserve analyses by the company or third parties, such as auditors. You should certainly ask about those and review them. Specialized incidence or severity studies may have been done, also. Special studies of particular benefits, riders or features may also be available and should be pursued.

The anticipated future environment influences assumption-setting for most health blocks of business. It's difficult to set an ideally integrated set of assumptions in advance, but an economic and environmental scenario framework enables you to get an excellent start on your assumption set. Practically, the appraiser almost always doubles back to test the realism of the scenario and related assumptions.

A set of assumptions are commonly linked to the future environment envisioned (particularly the economy); these include interest earnings rates, discount rates, asset behavior, claim trends, and unemployment.

An important environmental issue for many health blocks is regulatory initiatives, including prospects for national health insurance. To date, there have been significant developments in federal and state Medicare supplement regulations and in the state small-group-reform regulations. Companies have reacted, for example, by withdrawing from some lines of health business; also insurers have seen tighter control of their rates and profit levels. These regulatory matters are often critical to appraisal outcomes.

Thus, an appraisal that might have provided a dependable set of projections and present values just, say, two years ago, now, I think, might be subject to much more uncertainty. Outsiders to the health insurance industry find the environmental uncertainty especially bewildering. There are ways to cope with this, however. There's some helpful information that monitors developments, even to the point of providing several likely future environmental scenarios. If there is not certainty as to which way these initiatives will evolve, scenarios will at least indicate some of the

level of uncertainty that exists. Another tact could be to consider higher risk-adjusted discount rates to develop present values. Projection truncation or diminution is another option.

Clinton initiatives could significantly affect many health lines, including stop-loss, traditional group coverages, long-term care and at-home care, and even supplemental benefits. I would urge an appraiser to carefully evaluate and communicate the potential impact of Clinton's initiatives and other environmental changes in the write-up, if not the projections.

Cycles occur, in varying degrees by health line, yet there are not always good company data on them. I think there's enough published industry information for most lines of business and how they're affected by the cycles. There seem to be cycles applying to the disability lines as well as to the medical-coverage lines.

New business inclusion and value attribution is fairly common for group health appraisals. Sometimes it's included with in-force business; depending on the appraisal purpose, new business may also be separated (for example, to support earn-out calculations or monitoring). It is less common to allow new business value attribution for most of the other health lines of business (even though a seller's appraisals may present it). I think it should be viewed in the same way that it is for a life insurance or annuity appraisal. It's much more related to the solidness of the distribution system and its demonstrable track record than it is to management-produced marketing plans and sales projections. So, to attribute any serious value to future business, it's important to look at the support and history for this value.

Health (and even life) appraisals have traditionally not addressed cash-flow testing. They are starting to now, but it's clear that some cash-flow testing or recognition of the performance of the assets backing health blocks of business would, in a number of cases, have a material affect on the value of the line. This includes lines such as IDI, where there are usually sizeable long-term obligations and reserves, and even group lines. I have seen a number of mismatched health lines; for example, Medicare supplement lines backed by collateralized mortgage obligations (CMOs). Cash-flow testing should not be bypassed for these blocks.

The low-rate environment we're in currently also implies that most lines of business are looking at a declining portfolio interest rate, and exactly how fast that declines and to what extent is an issue. Even absent any other serious cash-flow testing and earnings issues, declining rates may require some work to assess their impact on value. The incentive for buying or holding longer investments is high currently (even though long assets may not be most appropriate to back, say, claim liabilities). Such assets are rolling over into much lower yields now. On the other hand, rates could rise and this scenario could be looked at as well.

Cost of capital has been traditionally ignored in most sellers' appraisals. I don't think it can be ignored, however, in the end evaluation. I doubt that most of you ignore it in your pricing activity or when you look at your company's projected results as a whole. Certainly regulators and rating services do not.

MR. EDWARD P. MOHORIC: For the most part, we've been ignoring cost of capital with the idea being that the buyer will always look at it. But with company appraisals, including the cost of capital under state capital levels includes basically everything. So, it's a matter of whether you're doing the whole company or just a block.

With respect to cash-flow analysis and assets, lately I'm finding most often that if the block is half or less of the company, assets aren't often being transferred anyway. So, the assumption that we're using is a new-money-rate assumption, and the deal-negotiated assets are transferred. Thus, whether the existing assets are appropriate really becomes moot.

MR. LADLEY: I would agree with you. Taking your second point first, many times if a block represents much less than the full company, and cash is not transferred, you can "cherry-pick," or select those assets that will be transferred to remove any cash-flow-testing doubts. I have seen asset targets set and a portfolio provided that falls within those parameters. If parameters are too loosely defined, that becomes an issue.

With respect to your first point, that cost of capital is not considered on the sellers side, you might want to have a prepared analysis that tells you what this charge is going to be, so that you or your client are not going in thinking that the older and traditional approach of a simple present value of profits is a good value indication. Cost of capital on some health lines can exhibit behavior unlike that of a life insurance line.

A comment may be in order on risk-based capital (in a regulatory sense), too. Most well-rated companies are typically far above risk-based capital levels. Thus, using risk-based capital to calculate the cost of capital may be an understatement of the surplus that's really needed to maintain a viable company.

Another issue with respect to the planning and the cost of capital is the inclusion of new business in the projections. The capital demands of new business are often ignored.

MODELS

The best models for health insurance generally operate by treating business durationally. For longer-term coverages, typically with noncancelable or guaranteed renewal features, that develop active-life-type reserves, a durational model is virtually essential. IDI would certainly be an example.

A typical number of cells used for all the plans that exist in an IDI line of business would number in the hundreds at a minimum; this might include lines of business with only $20, $30, or $40 million of premium. Even for short-term coverages, such as the group life and health business, a durational, cell-based model greatly assists the appraiser in setting assumptions, as it provides clearer distinctions by product groupings.

Many group appraisals that use ratio and other nondurational approaches may work adequately for a short-term forecast exercise, but this doesn't typically work well for a longer-term projection.

Of course, one of the reasons for the many durational cells is the establishment of different behavior patterns by class. Underwriting processes, policy provisions, sales approaches, and other factors that change over time affect behavior, and thus, assumptions.

Frequently, what appears to be a homogeneous line of business may consist of blocks sold by different distribution systems, reunderwritten blocks, or takeover blocks. Those often need to be separately modeled, as they may have different durational characteristics and behavior characteristics. It is worthwhile in appraising a health block to explore the various origins of a line of business.

Structuring a model can be done either manually or by using computer-based techniques. I personally believe a fair amount of "manual" intervention is needed to look closely at behavior differences and where value sensitivities lie. Undoubtedly, the best source of data to structure a model is derived from statutory valuations; however, valuations provide benefit and reserve-level information, but they rarely provide premium data. So, you frequently need other sources of data; consistency should not be assumed. Considerable effort needs to be expended to ensure that the appraisal starts off with accurate base information from all sources.

An alternative is to use aggregate numbers and utilize a simpler, ratio-driven model. Premiums typically would be projected by using growth or scale changes, rates reduced by lapse and other decrements. Expenses and claims would usually be developed by ratio or formula.

One recent situation I can cite involved using a ratio-based model to appraise a block of reinsured health business. The behavior patterns of that block of business appeared to be very smooth. This also looked like the statistically most reliable approach. Upon further investigation, however, the historically smooth patterns were the result of offsetting subline behaviors. In some cases, some of these sublines were scheduled to soon recapture, and some sublines were scheduled to terminate by their terms. The introduction of some new lines of business also kept overall results smooth. Clearly, however, only a durational, cell-based model could adequately portray what would occur in the future with this line of business, and its future behavior patterns were not projected to be so smooth.

For cash-flow testing, since there are rarely nonforfeiture values involved, very few of the health blocks that I've seen require an interactive model (where assets and liabilities are operating together dynamically), such as is used for annuities. Usually, if asset analysis is required, it can be done separately, and that is not usually too complex a model to run. With some of the more exotic assets now, such as CMOs, however, the asset models may not always be simple.

For group-type and many other health coverages, monthly operation for liability-processing is usually important. This enables you to recognize assumptions, such as rate increase activity, shock lapse, and claims seasonality, which change frequently.

Model validation is necessary and there are a number of ways that it can be done. One approach is a point-in-time estimate. Build the model as of a certain date by using a basis such as reserves, and then establish, for example, benefit and premium

reliability. Another approach involves starting in a prior period, such as six or twelve months prior, and then rolling the model forward to the current date. This affords you the opportunity to look not only at the validation of some of the basic values, but also the validity of your assumptions, such as lapse rates in reproducing recent results.

Start dates deserve some thought. All other things being equal, a calendar-year model is most desirable (even with monthly processing). It's much easier to compare model results with many other detailed sources of data that the company produces. Off-period models are often produced (for example, June-July).

There is some tendency when there's a buyer/seller use for the appraisal to develop basic results as of a specified "as of" date. Then for a later date, such as transaction settlement, some assumptions would be made about how the in-force business has changed, and simple value ratios would be used to update the appraisal results. It's fairly commonplace to update appraisals that way.

I would caution about integrating into an appraisal another model built for other purposes, although many times you run into this for a health line of business. This other model may relate to a minor line that you want to incorporate into your larger model. A company, for example, may have a model already available for the minor line, or another, prior projection available. My experience is that you have to be very cautious about using these models. Many times they have not withstood any test of their reliability or their validity. It is typical in such cases to find that someone has created their own conventions with respect to calculations, even as simple as the discounting of profit streams. There's a great deal to be said for using a model that's standardized, treats lines consistently, and has been tested in a variety of circumstances. Even with more broadly used models, my experience is that there are frequently variations that the model developer never anticipated. In health insurance, with its multiplicity of policy provisions, you should evaluate how the model treats nonstandard behaviors or provisions.

In terms of choosing the number of model cells, I mentioned that a significant consideration is the modeling of reserves, especially active life reserves. Reserves tend to be a sizable item relative, perhaps, to premium income or claims activity. Accurately predicting reserves often dictates a large number of cells.

An appraiser should be aware that often you think you're producing a model for present-value purposes, but someone else is going to want to look at year-by-year results, also. Year-by-year results can be materially affected by too limited a number of cells, even where present values may not.

On the other hand, some balance in model size is important. For example, for IDI, perhaps you've set up a model with 800 direct cells. You start to notice an odd behavior pattern in the projected reserves. Perhaps, in addition to the 800 cells, you also have another 100 reinsurance cells. When you start to track this reserve discontinuity, run times are long, and thus the source may be hard to locate. So, I think there has to be some practical perspective in the choice of the number of cells.

Often health models are set up (and I'm really picking on DI -- I'll do it again) without much regard for the supplemental, rider, or special benefits that exist. A ratio adjustment may be used instead at the end of the process. Sometimes these special provisions aren't even usable, but they still need to be considered in the model planning stage. Reconciliation, early on, against annual statement figures like premium, total reserves, or special nonreserve liabilities usually point out where there's some significant business that has been missed. With DI, for instance, 10% or more of the premium may be tied up in supplementary benefits. Direct-response health may be even higher.

There are often special premium classes, and I mentioned before that homogeneity in a block is something that you in reality rarely see. There's often special attention, too, to be given to the underwriting standards that have been formulated in a block of business over time, as they will frequently change.

ASSUMPTION SETTING

Let's turn the discussion to considerations in setting assumptions. In virtually every case, credible company experience, tempered with some sort of actuarial judgment as to trends, would be the preferred basis for developing assumptions. Often, however, company experience is not available for new blocks of business or blocks that aren't statistically credible in size. Durational behavior is almost always an issue, and there are some important patterns, such as the frequently observed low-high-low lapsation on IDI.

With group, of course, the case dynamics and demographics greatly affect the assumptions, such as lapse rates. You may have to consider availability and movement into and out of managed care. Also, other dynamics affect lapse, like numbers of cases declining, the cases themselves growing. This may require considering a number of factors, and although sometimes you can bypass all that and develop a simple lapse assumption, that might be a little dangerous. For example, in the case of the recent introduction of managed care, lapse of the basic indemnity plan may be undergoing material change.

Rate-increase activity has to be established and assessed when you're looking at the lapse-rate levels. This would include assessing shock-lapse activity. (Unfortunately, there are not a lot of data on shock-lapse activity for different lines of business. I think many companies have some sense of the effect, but there are little data.) There are some reasonability tests you can apply, such as the expectation that the "before" and "after" total premium figures may tend to be the same after rate increases. Another would be that there can be acceleration of the shock-lapse activity by the rate increase level. Of course, shock lapse can also occur due to discontinuity, such as when the business is moved to a new company, when there's a rating change, or when something affects the (writing) agents. This may be relevant in appraisals related to, for example, an exit strategy.

There are some maturities on some of the lines that occur by policy terms, and a mortality decrement which should be recognized. Long-term care is one of the most obvious lines of business that can be significantly affected by mortality.

For morbidity, company experience studies are clearly preferable. Some published data, such as the SOA-sponsored "Variation by Duration in Small Group Medical Insurance Claims" (*1991-92 TSA Reports* pp. 333-380), can prove very useful in setting assumptions. In assessing morbidity, to be considered are provisions such as preexisting conditions, exclusions, rerating, rescission, and reunderwriting. Particular focus on claims administration activity, such as the intensity of questioning claims, denying early claims, or efforts in the conservation of some of the business may be considered. Managed care can have some effect on this in changing the morbidity dynamics of the group that you're looking at over time.

There has been, without question, movement to refine the rating of most health business; for example, IDI rates may now vary by state. Some of the noticeable differentials in morbidity by state initiatives cause this, as might basic experience. Some consideration in setting up your model cell should be given to these variations. Sometimes the same cluster of states come up in many lines of business as exhibiting particular claims problems or trend problems. This is something of a new modeling dimension, I think, that was not really that carefully looked at in the past in terms of appraisals; I think maybe it should be now.

One of the very critical factors in setting a morbidity assumption is not only the starting level, but the future slope of the claims cost curve. It's one thing to assess recent past experience and to be able to pick the starting point for your appraisal. It's quite another to set an experience curve for the future. The actuary can provide useful advice and counsel by showing some of the sensitivities and the possible variations that may exist due to the potential morbidity curves. This lends itself very well to some sort of graphic representation to demonstrate the differences from a single take-off point in the potential future curves of morbidity.

It can be important to separate, in the claims-cost element, paid claims and claim reserves. Health models in this case may look different from a more classic life model.

With respect to expenses, on the commission and field-expense side and also the general-expense side, some fair amount of reconciliation ought to be done against cost data from the company. It's one thing to use some sort of theoretical expense factors; it's another to tie those out with what's really going on operationally in the systems and in the more general administrative area. It's fairly uncommon for a health block of business to see overruns, and it is not very common at all to see them on a group line of business.

Most of the seller's actuarial appraisals are presented pretax. Assessment of tax is left up to the buyers, especially if they are to apply their own particular tax circumstances. With regard to tax reserves, a few approaches might be taken. One is to model them explicitly, but this is not usually done. Many times the detailed tax-reserve information is, frankly, not very good. In this case, some identification of statutory tax reserve differentials is made, and an amortization period and pattern is applied to run off the differences.

There are other tax issues to be dealt with, of course, in looking at an appraisal. Some of these might be the possible deductibility of the value of the block of

business, which may still be available to a buyer. (Incidentally, I would urge you to seek some professional tax counsel when using an appraisal.)

In looking at reserve levels, generally, you should obtain the actuarial opinion and any supporting memoranda, whether they're in draft or final format. This is usually a clear reliance that this must be made. Redundancies is an area that's often subject to considerable contention in discussing health insurance appraisals. This is probably the most discussed item in negotiated health transactions. On the one hand, you have the position that a redundancy is worth its book value, presumably because it's a source of profitability available to be realized. On the other hand, there is the position that, according to the Actuarial Standards of Practice and for other reasons, a redundancy is an absolute necessity in operating most health insurance lines of business and, therefore, it's not different than the base reserve. It's not really removable and certainly not immediately. This is similar to the quandary that's often seen on the life side or on a general company side with respect to liability, such as deficiency reserves or cost of collection. What some might regard as unneeded, others regard as absolutely essential. Those opposing positions are usually bridged in a negotiated fashion, recognizing that neither position is absolutely right or wrong. A run-off period may be used.

On balance, clear reserve redundancies are still mostly regarded as deferred profit elements. Thus, retrospective redundancy settlement provisions in sale agreements are common. Guarantees are often written into a contract of sale with respect to liabilities. If reserve adequacy is guaranteed in whole or part, the redundancy may not be needed at all.

The profit discount rate is intended to adjust for the time value of money, risk levels, tax attributes, and possibly other factors. Discount rates selected are usually closely related to the evaluator's or the appraiser's hurdle rate. Discount rates ought to be impacted, at least in theory, by the reserve and projection conservatism, and by the degree of unknowns for the particular situation. My experience is that pure uncertainty almost always works against the buyer or outside party and is often worth several discount rate points. The playing out of unknowns almost always seem to fall on the downside; this is not surprising. The use of risk-based capital in the appraisal may also impact discount rate selection. In recognizing some of these recent, adverse regulatory initiatives that are devaluing health blocks of business, higher discount rates may be used to recognize the added risk.

There's an argument to be made that for the cost of capital calculations, a different discount rate should apply. Cost of capital is usually calculated at the same buyer's hurdle rate as the basic business, on a total-return-on-capital theory.

It's almost essential that you anticipate your appraisal having to present year-by-year values. The pattern of yearly profit results will influence discount rate choice in some cases; for example, later negative profits might suggest conservative, lower discount rates. Year-by-year results are also important in looking at the trending of your results relative to historic data, especially for appraisal profit results. It is somewhat beyond the actuarial appraisal scope, but it's often useful to perform some reality checks by using other approaches, one of which might be looking at a "times-earnings" multiple.

Comparisons of discounted results against GAAP equity is another test. Comparable other health blocks might be considered.

A physical plant can be an alternative means to place a value on health-insurance-writing organizations. For example, a value per transaction, per employee, or per client might provide a good benchmark to gauge the viability of the appraisal. We have done this and found it to be a useful measure.

I've rarely seen stochastic testing for health appraisals; it is utilized mostly in property/casualty appraisals, it seems. Virtually all the health appraisals that are done tend to focus on point values: single values varying only by the discount rate. Defined ranges for assumptions with probabilities attributed to these and interrelationships assigned may be complex, but would be valuable for most health lines. We know the potential variability is there; why not show it? A stochastic-approach result can be hard to communicate, however. I've seen graphic representations that were quite effective in establishing a range of results, which in reality exists, however.

Documentation of your appraisal work is important. Assume that if you're doing an appraisal, someone is going to want to look at your workpapers and worksheets. Be clear on your reliances and be able to demonstrate those. Make clear, whether it's through file memorandum, or if you're writing a formal report, the appraisal scope, the intended use, and the audience. A typical cautionary is to recommend that an actuary be involved in looking at an actuary's work on the appraisal.

FROM THE FLOOR: How much work has been done appraising the various HMOs? Many HMOs are going bankrupt. Have you personally dealt with them as of yet?

MR. LADLEY: I have not done appraisals of HMOs. I think the fundamentals would be the same in terms of identifying and projecting a revenue stream. What assumptions affect that revenue stream? Persistency, added coverages, group and similar dynamics, would be the same. Assessing expenses is a critical issue. Reserve adequacy and redundancy are also open questions. My impression is that HMOs can currently command values quite apart from what an actuarial appraisal might produce, however.

MR. MOHORIC: I haven't done any HMO evaluations either, but in talking with my group people, one of the big issues is their rate and reserve adequacy and how they measure this.

MR. LADLEY: With HMOs, I understand that the nature of the provider contracts is very significant, and subscriber commitments must be reviewed just as for an insurance policy. There's a fairly wide variation in guarantees and proper recognition of them in the financials.

FROM THE FLOOR: Are there any special considerations in moving a block from one company to another within an enterprise that simplifies the process at all?

MR. LADLEY: Perhaps you have a specific situation in mind. In looking at this recently (moving a health block from one related company to another), a fairness opinion had to be developed to ensure equity. Often the relationship is not nearly as

contentious, and the appraisal process may be a little simpler. The appraisal can be jointly sponsored. Special tax issues may apply. Such a related company move still may require a reinsurance contract to be written, unless it's done through an administrative-services-type agreement.

FROM THE FLOOR: I'd issue a word of caution. The bulk of your conversation was about projecting, and I would caution you to use a lot of hindsight as well. This probably doesn't occur as much when you buy a block of business. For example, say you're buying the company for the life business. You might also have a block of individual A&H business that has been very profitable in the past. If you try to get a rate increase, you might find that the insurance department won't let you. It is trying to protect the policyholder, and it sees in the past that it was profitable. It may not grant you a rate increase in the future, and you're stuck with a block of business that really is going to be a millstone.

MR. MOHORIC: I've actually seen that to be even further upstream, where a block of business is considering changing hands, and it was just a little bit ahead of the insurance department for a rate decrease because it had been so profitable in the past.

MR. LADLEY: This has occurred with the Medicare supplement business and is becoming an even larger issue for other lines now. The whole issue of rate increases activity is obviously an important one in performing an appraisal. You also have the statistical significance problem with smaller lines. That's an important issue.