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LIFETIME VALUE/LIFETIME MARKETING

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- Description and calculation of lifetime customer values. Its use, appropriateness and lifetime/life-cycle marketing.
- Database marketing.

MR. H. MICHAEL SHUMRAK: More and more these days companies talk about becoming more market driven and customer focused so they can better realize customer value. The three objectives of our discussion are (1) define the concept and describe the strategic basis for using it; (2) overview some of the practical aspects of computing customer value in terms of both product pricing and financial reporting; and (3) illustrate how it can be used through a practical example.

Erich Sippel manages his own consulting practice. He specializes in identifying paradigm shifts and formulating strategies to help companies reposition themselves to take advantage of fundamental changes in how the business works. Erich is going to characterize the current state of our business. He will share his thoughts about the paradigm shift taking place in it and how customer value can be used strategically to take advantage of changes in how business will be conducted in the future.

MR. ERICH SIPPEL: I would like to discuss the general environmental picture that makes lifetime customer value important, give an overview of the concept, and make introduction to the concept.

What really makes the concept of lifetime customer value important is that we're operating in an environment in which demand for our traditional products and service is very soggy and sluggish. The numbers are consistent. Let me give you a few examples.

Regarding the change in the number of new policies or annualized new premium since 1984 in the life insurance industry, 1984 substantial replacement activity was triggered by the introduction and rapid growth of the new interest-sensitive life products. There was an increase of 15% in both 1984 and 1985. Since that time, the numbers for 1986-92 are 1%, 9%, -2%, -4%, 4%, -4%, and 4%. It looks like 1993 is going to come in with another modest plus number, but not a very spectacular one.

There was a change in the number of new policies issued during the last decade. Millions of baby boomers were entering the prime-insurance-buying years of life. Therefore, we should have had an increase in the number of new policies issued. Instead, we saw a 0% change in 1984. Since then we have seen -3%, -2%, -3%, -4%, -6%, -4%, and -3% or so.

- * Mr. Sippel, not a member of the Society, is President of Erich Sippel & Company in Wayne, Pennsylvania.

For the first time since the end of World War II (1945), the industry actually suffered a decrease in the face amount of new life insurance sold in 1991. As I say, all of these numbers say the same thing -- the growth in life-insurance-protection and in-force product sales is stagnant.

What about the savings side of life insurance? The assets held by the life insurance industry as a percentage of assets held by all financial intermediaries have also been declining. In 1960, compared with the amount of assets held by securities firms, banks, thrifts, and other types of financial intermediaries, the life insurance industry held somewhat more than 20%. This percentage had dropped to 16% by 1970. It was down to 12% by 1980. It was down to 10% in 1990. The rate of decline has recently slowed down a little due to the growth in annuities, but we see a long-term decline.

On the surface, the percentage of personal savings held by the life insurance industry looks more optimistic, until you dig a little deeper into the facts. There was a steady decline in our industry's share occurring over a long period of time until the mid-1980s when there was an uptick. The uptick, however, was due entirely to the annuity boom, and if you sort it out, that's what you actually see. Much of this money came out of the troubled savings and loan (S&L) accounts, formerly invested CDs, and other deposit vehicles. At its peak, this outflow was running about \$7 billion per month. We were sitting under the tree, many apples just fell into our laps and many dollars found their way into annuities sold by life insurance companies. More recently, new dollars for annuity sales have dried up, leaving us with only the tax advantage being the major engine driving annuity sales. And in the current environment, that is more valuable than it has been before. But I don't have a pipeline into Washington. The Clinton administration and Congress will probably not allow annuities to retain that tax advantage indefinitely. In fact, I would guess that it probably doesn't have a lot longer to run. So, if that's the case, we're back to this unfavorable underlying trend in that measure, as well as in the others that I've already presented on life insurance sales and insurance in force.

All the numbers say the same thing: we're facing far from robust demand for the products and services traditionally sold by the life insurance industry. Now why is this? It's due to a few factors. Separate the life insurance policy into its two traditional components: the savings element and the protection element. There have been significant changes in both. Regarding the savings element, there are many alternative places to put long-term savings that simply didn't exist 10, 15, or 20 years ago. Maybe the easiest way to make the point is to say that all the dollars in 401(k) plans with Fidelity and Vanguard are dollars that aren't being saved for the long term in a life insurance policy cash value. Similarly, all the dollars in money market mutual funds are dollars that are not being dumped into a universal life cash value.

The first adult conversation I had about financial matters was in the late 1950s with my aunt. We talked about sophisticated ideas such as the time value of money. I remember her saying one thing that really stayed with me. She and her husband, who was a lawyer, had virtually all of their long-term savings in life insurance because they strongly believed that was a good place to put it. It was safe and stable, yet they could get at it if they had to have it. Basically they could let the cash values grow for a long time, knowing the money would be there when they needed it. I

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suspect that was a common belief among middle- and upper-class society in the 1950s. It would be difficult today to find anybody who has virtually all of his/her long-term savings in life insurance cash values. The reason for this is that there are many attractive, alternative places to put money, many of which didn't exist 20 years ago.

On the protection side, the explanation for the sluggish demand for the life insurance product element has to do with changes in culture and lifestyle. When life insurance was faced with a robust demand for its product, the industry was meeting a social need. This was helping people who were left behind by the death of a male breadwinner. The norm at that time comprised a male breadwinner, a nonworking spouse, and a large family. In the late 19th century, the beginning of the life insurance industry, there was a serious threat that the male breadwinner would suffer a sudden, premature demise – getting kicked in the head by a mule or being killed accidentally while operating machinery in a factory. Who would take financial responsibility for the large number of orphans and widows who were left behind and who were unable to financially support themselves?

Traditionally, in small-town and rural America, the community pulled together and helped the family of the deceased get back on its feet. Neighbors would become an extended family; they would raise the children and try to help out the widow. But as people began migrating to the cities, those social circles were much smaller. People were living in areas where they simply didn't have that kind of social support. This was exacerbated by the influx of immigrants into large cities, where they didn't have any roots at all in the community. So life insurance stepped forward as the perfect solution to a social need. Our industry had the product that could help solve this problem, and that connected us to the society and to the environment and gave us a tremendously important need to meet. That fueled tremendous growth of the industry for a very long time.

Today, we simply don't live in that kind of society. We live in a society with two-career households. More people feel immortal because they jog in the morning and eat granola. We have low birth rates and much more serial monogamy, in which marriages start, stop, and start again – two or more times for many of us. In this kind of a society, the perceived need on the part of many people for pure protection simply isn't as compelling as it once was.

Somebody might say, "Why do I need life insurance? This is the third relationship I've been in, and who knows how much longer it's going to last. My partner already makes more money than I do, and we don't have any kids anyway, so why do I need to buy life insurance?" Or, in my case, I fly around the country all the time. If my plane went down, I think my wife and kids would probably be sad when they got the news. However, my wife is well educated, and she could resume her career and support the kids in the event of my premature demise. This logic makes it quite easy to rationalize that I don't really need much life insurance. I don't think I am too different from other people. All of this helps reinforce the stagnant industry protection and savings figures.

In summary, there are two reasons for this stagnation in cash-value life insurance sales. One is competition from banks, mutual funds, and other financial institutions

for the savings element. The other is changes in culture and lifestyle in the eyes of people who have reduced their perceived need for life insurance protection. So if you put these two factors together, you see lower demand and increased competitive pressure.

There was a shift in the demand curve from the days when my aunt believed life insurance was the vehicle of preference for protection and long-term savings to today's environment of decreased demand. The innovation of these substitute savings vehicles, such as mutual funds plus the changes in culture and lifestyle I've been talking about, have shifted that demand curve from a relatively inelastic position to one with much more price sensitivity relative to the size of the total market, which is smaller than it used to be. This shifts the demand curve.

Now let's consider the supply side. At the same time that demand is decreasing, changes are taking place here. In the life insurance business, the entry barriers are very low and the exit barriers are high. All it takes to get into the life business is a checkbook and a willingness to comply with regulatory requirements. As a result, many people are getting into the business, especially European entrants. Insurance companies are regulated to stay in the game instead of go out of business when they no longer compete, as is the case in unregulated businesses. Being a mutual insurer in and of itself is an exit barrier. It's very hard to envision how Prudential could go out of the life insurance business and start selling tires or can openers or something. Finally, an exit barrier that's subtle, but real, is the management skills that are required to run one of these companies. The skills are fairly unique and are not easily transferrable to some other line of business.

Supply in the life insurance business or in any other area of financial services can be defined as the capital base of the industry multiplied by whatever the regulators will let you use as a leverage ratio. Given low entry barriers and high exit barriers, supply is growing due to the low entry barriers and high exit barriers. The result is many players competing based on price (premiums and/or sales commissions) over a decreasing market size. The result is declining sales and profitability.

The only real solution to this is to reduce industry capacity to bring supply back into reasonable balance with the new, reduced level of demand for the industry's products and services. This is really what we read about every week in *The National Underwriter* or *The Wall Street Journal* regarding the expected consolidation of the industry into fewer companies.

Supply is capital multiplied by leverage. The regulators are doing many things to reduce leverage (decrease supply). Also, the large company failures are shrinking the capital base of the industry. The question is how to compete in this kind of environment. An important element of the solution depends upon the concept of customer value. When demand is sluggish, as I've been describing, it's obvious that there are significant problems. Many distributors and distribution channels are not going to be very productive by definition. They're pushing on a string trying to get people to buy a product that there's not robust demand for. So unproductive distribution channels are, obviously, a problem. They raise costs. At the same time, it's also a problem when there are productive distribution channels; these become more valuable as they become scarcer under this kind of a scenario. They're able to

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exert a significant amount of bargaining leverage, vis-à-vis the company, and we end up, in some cases, with the distribution system more or less running the company.

How do we solve this distribution problem? A significant part of the answer is managing customer information strategically. For example, we spend a lot of money to get peoples' addresses. They come to us on application forms. This information was expensive. We had to develop the prospects and get them to apply for our product. However, when they move, we get this information at no incremental cost at all. They tell us. It happens in the ordinary course of servicing the account. The change in the address is valuable information and is much more important than the address was in the first place. Because the change of address is an indication that something in that policyholder's life has changed. People buy financial products and services when something in their lives change. It's now time to go in and make sure that their insurance and overall financial program make sense in light of whatever has changed their circumstances. Very few things in the world become more valuable as they become cheaper, but information in this business is one of those. The economic effects of that are potentially very powerful.

To say the same thing another way, proprietary customer databases are critical in managing in the this new environment of decreased demand and increased supply. A helpful model that helped me think about customer information came from a book titled *Information and Organizations* by Max Boisot. Boisot says that you can think of information along two dimensions. One is how codified it is, how much it's written down and exists in customer databases, and how accessible it is to other people. The second dimension is how diffused it is. That is, how many people know about it? We can start out thinking about information that is uncoded and undiffused. For example, if I'm the only one who has certain information and no one else has this information, this may be somewhat helpful to me, but to really realize any strategic advantage, I have to make it accessible to other people. We start with personal knowledge, which is uncoded, undiffused information. There are strong incentives to codify it and put it in procedure manuals and databases and make it available to other people in the organization. Eventually, however, what always happens is that information finds its way out elsewhere into the world. Employees leave and they take some of that knowledge with them, or one way or another it always gets out. People ask, "What is that company doing that makes it so successful?" They try to find out and they copy it.

Proprietary information is difficult to keep proprietary. So after a while, many people know about it. It is at this point that you would find the kind of information in a textbook or in the materials for a Society of Actuaries exam. So it's codified and fairly widely diffused. After a period of time, people have trouble envisioning that it could be any other way. At that point, it's widely diffused and really uncoded. It's just the way things are. It's the way the business works. It's just common sense.

The things we know about our customers is a critical, strategic advantage when we're facing sluggish demand. So if we can create databases in which we can hold and use proprietary information as long as possible, we retain the competitive advantage of knowing these customers better than anybody else does, indicating to us who is ready to buy what and when.

How specifically do we use that information? Use it proactively or reactively. Reactive use of information is the type of thing that I was talking about when referring to the address change. We react to information that we gain through the normal process of servicing customer accounts. So if there's an address change, we react to that. We realize that that's an opportunity to sell a financial product or service to that particular customer. We also can manage these customer accounts proactively, which means identifying something in the environment, calling it to our customers' attention, and making suggestions about what they should do about it.

As an example, assume we have customers whom we know have all had address changes within the last period of time. We can surmise that many of those people have mortgages, that they may be thinking about refinancing in the current, low-interest-rate environment. A proactive customer management strategy would be to contact all those customers, tell them that interest rates are down, tell them what the implications are, given they have a mortgage in force at a higher rate, and suggest refinancing. Tell these customers how you can help them make this decision by providing mortgage amortization schedules based on their current mortgages. You could show them that they might be able to get mortgages elsewhere under various terms if the customers provide you with information about who their mortgage is with, how much it is for, what the monthly payment is, what time of the month it is paid, and so on and so forth. Through this information-gathering process, you are creating a new kind of transaction with the customer, one that's mutually valuable, but it doesn't involve an exchange of dollars. It involves an exchange of information. You are giving information to your customers that's valuable to them in exchange for information that's valuable to your company.

Through proactive and reactive customer management, we can deepen the relationship with the customer over time to make it more valuable. Our goal is to initiate a relationship with the customer that can lead to a variety of future relationships. So we make an initial sale.

This type of approach to customer relationship and strategic use of information should have several advantages in helping you cope with the environment that I described to you. In the first place, it should help make the distribution and sales effort much more efficient and effective. This will help you achieve lower costs and have a more efficient and effective distribution. Also, when managing our customer relationships based upon the value of the total relationship rather than just pedaling the product, we should be able to achieve another kind of economic advantage which is more valuable customer accounts. At the same time, we should be able to defend our customers against those who want to take them away. One of the ways to compete when there's not a robust demand is to try to take customers away from others. We have seen a lot of that in our business during the last decade or so. All those studies show that if customers have multiple relationships with a financial services firm, they are more immune to that kind of enticement to move the account to a competitor than are those who only have a single relationship.

By using information strategically and managing customer relationships over time, we can maximize lifetime customer value. Obviously, the appropriate performance measurement for our success in achieving that is to measure actual versus expected customer value over time.

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MR. SHUMRAK: Brad Smith is the managing principal of Milliman and Robertson's Dallas office. He has a wealth of experience, both in terms of financial measurement as well as background as chief actuary of JCPenney. So he has good blend of marketing background as well as performance measurement, not to mention he's written several interesting papers on the topic.

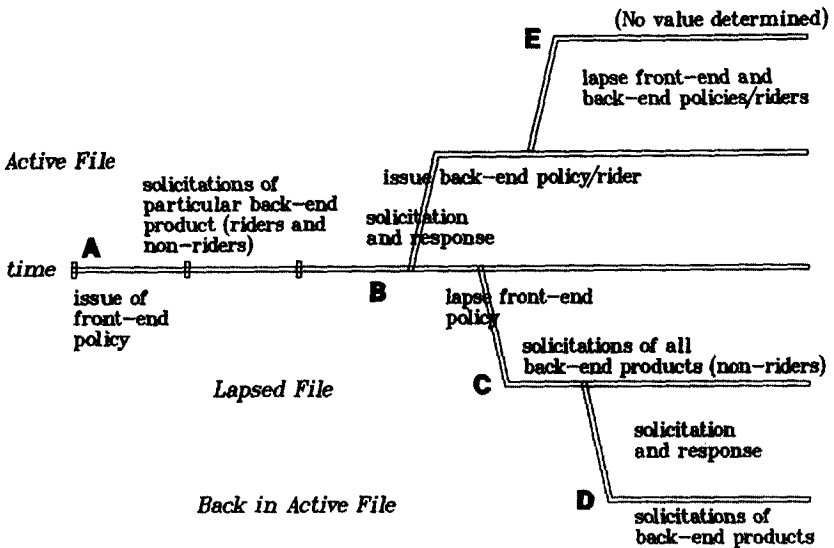
MR. BRADLEY M. SMITH: The purpose of this presentation is to examine the assumptions and methodologies required to quantify the value of an existing policyholder in terms of additional profit potential due to the sale of riders and additional policies to that policyholder. Existing policyholders are more likely to respond to offers made by the company than are members of the general population, because they have shown a propensity to respond to the company's offers already. This fact has led to the separation of the solicitation of policyholders from the solicitation of the general population in most companies offering insurance through direct-response methods. Because you cannot build a policyholder file from which to solicit policyholders without selling that first policy to a potential customer, the question becomes, how low are you willing to drop the profitability of the "front-end" offer (i.e., how deep can you go into a general population list) to build a policyholder list? The first step to answering this question is quantifying the profitability (in terms of the present value of book profits) of back-end solicitations.

First, let's define some of the terminology that was just used. Front-end solicitations are those to never-before responders (i.e., they've never been a policyholder of the company). Back-end solicitations are those to past and present policyholders. The question we wish to address is, "What is the present value of book profits for back-end solicitations of a recent front-end responder?" The value of these back-end solicitations can be the difference between success and failure of a marketing effort, as these solicitations generally comprise anywhere from 30% to 80% of the overall profitability of the front-end and back-end marketing effort combined. In fact, for direct-response products offered through television, it is not unusual for the front-end effort to create a loss, with the policyholder solicitation program being counted on to make up the loss and contribute to the entire profitability of the overall marketing effort. Thus, the back-end comprises in excess of 100% of the profitability of the effort.

Let's examine the components of the profit potential for a marketing effort: The profit potential of a front-end, paid policy consists of the following: (1) the present value of profits of the front-end product itself; (2) the present value of profits of back-end products associated with the front-end product; and (3) the present value of profits of solicitations of lapsed, front-end products.

You will notice an inherent assumption in the diagram in Chart 1 in that there is no appreciable profit from policies that lapse after they have reentered the active file from the lapsed file. This is a conservative assumption. Additionally, this analysis will not determine a value of soliciting the lapsed file for those front-end policies that have added a back-end policy and subsequently lapse both policies (Point E on the diagram). These assumptions should not have any significant effect on our results.

CHART 1



Some of the input that is needed to analyze the profit potential of back-end solicitations includes the response rate to back-end solicitations as a function of the time that has elapsed since the issue of the original front-end policy, the number of back-end solicitations subsequently offered, and the product that is being offered. It is reasonable to expect that response rates will decrease as the time from issue of the original policy increases and as the number of offers made since the original issue of the front-end policy increases. The fall-off of response by duration varies but can be expected to be around 50% for the first two or three back-end solicitations after the first, followed by a 25-40% drop-off for the next few durations, after which response rates to back-end solicitations should level off (at a level that may or may not make them incrementally profitable). That is, if the first offer after issue of a front-end policy draws an initial response rate, the second solicitation will draw a response of approximately 50% of the initial response rate. The third solicitation will draw a response of approximately 25% of the initial response rate. The fourth solicitation will draw a response of approximately 15% of the initial response rate, and the response rate for subsequent back-end solicitations should level off at 10-12% of the response to the initial back-end solicitation.

Another important aspect of any policyholder solicitation program is the products to be offered to existing policyholders as well as the sequence in which they are to be offered. Testing will shed some light on this. However, until the optimum sequence of offers can be determined through testing, logic should prevail. That is, add-ons that are natural extensions of the original product, such as an increased amount of the existing coverage, elimination of deductibles and waiting periods, and family/spouse coverages, should be offered. These can generally be added as riders, which usually comprise about 30% of the back-end profit potential. Cross solicitations of additional products comprise the remaining 70% or so. Birthday life cross solicitations are

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usually very successful. Obviously, the relative importance of the rider program versus the cross solicitation program is dependent upon the emphasis that a particular company places on each program.

ACCOUNTING

The GAAP accounting treatment of front-end and back-end solicitations can be unclear. The statutory accounting treatment is very straightforward as solicitation costs and expenses are incurred. However, recoverability and deferral of acquisition costs become an issue in GAAP. Can the profitability of future solicitations to a new policyholder be used to offset the recoverability of front-end solicitation, or must there be an investment of GAAP income in a year when a policyholder base is being built upon which to offer back-end solicitations? I believe that acquisition costs on a front-end solicitation should be deferred to a level in which the block is recoverable on its own.

Profitability of future policies/riders to be sold to the policyholder should not be used to defer acquisition costs of the original issue. However, this can create a GAAP income drain.

Conceptually, it can be argued that the creation of a list is creating future profits and adding to the value of a company and thus should be reflected positively in the GAAP income statement. Many companies get around this recoverability issue by overallocating fixed costs to the back-end programs, thus allowing the front-end program to show a profit.

MR. SHUMRAK: The life insurance industry has experienced unprecedented change and upheaval since the early 1980s. Forces from both outside and within the industry have contributed to a rapidly changing business environment with which many insurance company managements are struggling to keep pace.

BACKGROUND

External forces include:

- Merger and consolidation of related financial-services industries
- Increased consumer sophistication and awareness
- Shorter product life cycles
- Shrinking profit margins due to increased competition and unbundling of services
- Turbulence in financial markets
- Frequent and substantive tax-code changes
- More stringent regulatory and rating-agency capital requirements

Internal forces include:

- Inadequate company performance relative to corporate goals
- Pressure to develop distribution systems with lower costs and greater productivity
- Continuous pressure to develop and maintain scale (critical mass) to realize competitive levels of unit-servicing costs and reduce or eliminate expense overruns (defined as actual expenses exceeding product pricing allowances)
- Increased demand for incentive compensation based upon manageable or controllable results analyzed by source of gain or loss

- The need to develop a rational framework for allocating limited capital and human resources to effectively invest in profitable growth while maintaining financial strength

These forces have had a substantial impact on the current financial condition and future prospects of many companies. They have also highlighted the shortcomings of using the two external financial reporting systems – statutory accounting principals and GAAP – as the internal management scorecard. As a result, many insurers are looking to alternative financial reporting systems to more effectively track the financial progress of their companies. One alternative is a value-based financial measurement system.

KEY ELEMENTS OF AN EFFECTIVE FINANCIAL MEASUREMENT SYSTEM

The purpose of an internal financial measurement system is to meet the needs of its users – business-unit managers and top management. Their primary needs include relevant and timely information to assist them in the following areas: assist in making economic decisions; evaluate performance and financial condition; and compare actual versus plan to appraise management performance.

To effectively meet these user objectives, a good, internal, financial measurement system should reflect the economic fundamentals that underlie the business. The organization and presentation of the results should be in a format highlighting the key success drivers of the business, thereby linking strategy to performance measurement. The reporting system's results should be readily communicable and easily understandable to all users.

SHORTFALLS OF STATUTORY ACCOUNTING & GAAP FOR INTERNAL REPORTING

Both of these systems were designed primarily for external reporting purposes. Both are constrained by rules and guidelines revolving around their respective purposes – solvency for statutory accounting and income statement for GAAP. These rules and guidelines do not measure the emerging experience (actual versus expected) or the underlying profitability (true economics) of a product, two key elements of an effective, internal measurement system.

Statutory reserves are calculated by using very conservative methods and assumptions as prescribed by the regulatory authorities. All expenses associated with the production of new business are charged off in the year of issue, with only partial relief offered by the use of modified statutory reserve methods such as the commissioners reserve valuation method. If a company writes large volumes of inherently profitable business, the positive results in terms of statutory earnings will not emerge for several years. If a company experiences higher-than-expected surrenders in a given year, the difference between the reserves and cash-surrender values result in statutory profits. The decreased future profitability of this business from the excess policy surrenders is ignored.

Stock life company GAAP was developed in the early 1970s to overcome the inherent weaknesses of using statutory accounting as an external, financial performance measurement system. GAAP accounting allowed insurers to capitalize policy acquisition costs in relation to the expected earnings stream. Insurers were also able to value their policy liabilities on a more realistic basis. GAAP significantly

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improved external financial reporting for stock companies and has more recently been adopted by many mutual companies.

However, during the past several years, several shortcomings of GAAP for internal performance measurement have emerged:

- Because GAAP was developed at a time of financial stability, GAAP financial reporting does not adapt on a timely basis to fluctuations in interest or lapse rates, which more recently have been more the norm than the exception to the rule.
- GAAP was developed prior to the start of the interest-sensitive-product revolution of the 1980s. The originally prescribed methodologies were not appropriate for these products so new methods were defined. Now there are two different GAAP accounting methodologies in use. Deferred acquisition costs are capitalized in relation to premiums for traditional products and in relation to investment income on assets for interest-sensitive products. This makes it more difficult for companies to effectively utilize GAAP statements for internal financial measurement performance purposes.
- Several mechanical features of GAAP, such as nondeferrable, first-policy-year costs, deferred taxes, margins for adverse deviation and the "lock-in" principle (GAAP assumptions cannot be changed after the year of issue unless the likelihood of future GAAP losses triggers GAAP "loss recognition") all work to distort the real progress of the company. For example, a company could consistently experience significant deviations between actual experience and GAAP assumptions. Because of the "lock-in principle," GAAP earnings would not fully reflect this situation until the experience had deteriorated to a "loss recognition" status. At this time, a large, negative adjustment would be made to GAAP earnings in that year. GAAP accounting does not provide adequate, "early-warning signs."
- To promote consistency between product pricing and financial reporting, many companies have been pricing products based upon return on GAAP equity profitability objectives. Comparison of ROEs between products within a company and for the same product with competitors is very difficult due to the wide variation in the definition of "equity" and the generally observed increasing pattern of ROEs by year of issue.

DESCRIPTION OF VALUE-BASED MEASUREMENT

Value-based financial measurement utilizes concepts and techniques consistent with realistic economic analysis – discounted cash-flow analysis. For insurance products, this method was first defined by Anderson and is often referred to by actuaries as the Anderson pricing method. Value-based measurement, therefore, overcomes one of the major shortcomings of GAAP accounting, the inconsistency between product pricing and reported financial results.

A value-based measurement system reports earnings as the change in economic value of a life insurance company during a specified period of time. Economic value is defined as the present value of expected future "cash flows," discounted at the "hurdle rate." For the life insurance industry, "cash flows" are often defined as statutory earnings less the cost of target surplus. These noncash items are included, because statutory earnings adjusted for the current year's cost of target surplus best

represents the "free cash flows," which can either be paid out as dividends to owners, be reinvested in new business, or be held by the company as retained earnings. Statutory-based earnings reduced by the cost of target surplus cannot be ignored, because it is directly linked to the company's ability to continue operating in the future.

The current year's cost of target surplus is the difference between the increase in target surplus less the investment earnings on target surplus. The difference between statutory earnings and this cost of target surplus represents the current year's "available" surplus, which would be treated as the "free cash flow" in traditional, discounted, cash-flow analysis.

The economic value at the end of each year consists of three elements: the statutory surplus (including target surplus), the value of the business in force, and the value of future new business.

The change in economic value from one year-end to the next year-end is the value-based earnings for the year. In determining the values at two successive year-end points, consistent actuarial assumptions should be used so the change in value is not due to a change in assumptions. A consistent hurdle rate should also be used. A second computation of value can be made at the year-end point to determine the change in value due to changes in the assumptions or the hurdle rate.

The hurdle rate used to discount the future earnings to compute these values should reflect the cost of capital and risk of the venture the capital will be funding.

Value-based earnings consist of three components:

1. Earnings on "available" capital and surplus based upon the after-tax rate supporting it. This rate is normally much less than the hurdle rate, so significant amounts of excess capital and surplus will tend to negatively impact the value-based earnings.
2. Earnings on the business in force at the beginning of the year are equal to the hurdle rate multiplied by the value of the business in force at the beginning of the year. These earnings represent an "unwinding" of the discount process.
3. Earnings on future, new business, which depend upon the relationship between the product pricing hurdle and the value-based reporting earnings rate. If the pricing hurdle is less than the value-based hurdle, these future sales are reducing value. If the hurdle rates are equal, this future business has not affected the company's value. If the pricing hurdle exceeds the hurdle, these sales are expected to increase value.

The above description of the three elements of value-based earnings were based upon the assumption that actual experience is equal to assumed (pricing). In reality, actual experience will differ from assumed experience, and the current year's differences would also be reported in the value-based financial reporting system.

For example, if the economic value of the business in force is \$1 million at the beginning of the year and the value-based hurdle rate is 15%, the expected value-based earnings for the year would be \$150,000. Let's say that actual lapse

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experience during the year turned out worse than originally assumed so the year-end value is only \$1.1 million. The actual value-based earnings for the year would be only \$100,000 rather than \$150,000 for a return of only 10% rather than 15% due to adverse lapse experience.

This interrelationship between the pricing and the valuing hurdle rate in the value-based financial measurement system makes it imperative that products be priced and measured by using realistic assumptions. If a company prices new products by using optimistic assumptions, the value-based measurement system will immediately reflect this inconsistency. In fact, in the absence of this type of reconciliation of pricing with financial reporting, many companies not using value-based reporting have been pricing new products optimistically in the hope that distribution or maintenance-cost overruns will go away through expense cutting, new systems, and higher sales volumes.

CALCULATING VALUE

There are two methods commonly used. The first has been described above as computing two successive year-end values and taking the difference to be the value added. A second, more useful method computes components based upon the various sources of value added and value taken.

The following simple example will illustrate the two approaches: Assume the company operates in two markets: A and B. The hurdle rate for Market A is 15% and the hurdle rate for Market B is 12%. Under the first approach, the value added during the year equals distributable earnings plus the net investment income on available (free) surplus plus year-end in-force value less beginning-of-year in-force value.

	<u>Market A</u>	<u>Market B</u>	<u>Free Surplus</u>	<u>Total</u>
Beginning value	\$60	\$50	\$25	\$135
Ending value	<u>76</u>	<u>56</u>	<u>22</u>	<u>154</u>
Increase in value	\$16	\$6	\$(3)	\$19
Distributable earnings	<u>(4)</u>	<u>(1)</u>	<u>5</u>	<u>0</u>
Value added	\$12	\$5	\$2	\$19

The second approach, often referred to as the "by-source" method, defines value added equal to the sum of (1) the beginning-of-year in-force value times the hurdle rate plus (2) the net investment income on free surplus plus (3) the variances between actual and expected experience.

	<u>Market A</u>	<u>Market B</u>	<u>Free Surplus</u>	<u>Total</u>
Beginning value x hurdle rate =	\$9	\$6	\$0	\$15
Investment income on surplus	0	0	2	2
Value of new sales	2	3	0	5
Variances	<u>\$1</u>	<u>\$(4)</u>	<u>\$0</u>	<u>\$(3)</u>
Value added	\$12	\$5	\$2	\$19

The positive variance for Market A is due to better-than-expected experience. The negative variance in Market B not only signifies experience worse than expected, but it also indicates that the value of new sales in this market may be overstated. Further analysis of variances can provide insight into results. To analyze variances, sources of

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gain are calculated on an actual and on an expected basis. The difference between actual and expected sources of gain equal the "sources of variance."

Breaking down variances into these components reveals the underlying causes of the deviations and identifies areas upon which management should focus its attention.

MARKET B: Analysis Of Variance

	<u>Expected</u>	<u>Actual</u>	<u>Variance</u>
Interest gain	\$6	\$4	\$(2)
Mortality gain	4	5	1
Withdrawal gain	3	1	(2)
Expense gain	<u>(2)</u>	<u>(3)</u>	<u>(1)</u>
Total gain	\$11	\$7	\$(4)

Mortality experience has been better than expected but interest, withdrawal, and expenses have been worse. If these variations are considered one-time fluctuations, future valuation assumptions should not change. However, any continuing trends or new "facts" affecting future values should be recognized through updated valuation assumptions.

HOW CHANGES IN VALUATION ASSUMPTIONS ARE AFFECTED

When valuation assumptions are changed, the derived values change accordingly. Changes in assumptions for factors that are under the control of strategic business unit (SBU) management, such as expenses, lapsation, and asset-management strategy, should be included in the value added in the year of the change. However, those changes in assumptions not controllable by management, such as tax-law changes or changes in methodology dictated by senior management, should be considered "midnight" changes and be included in a separately displayed value computation performed after year-end. In so doing, these changes do not affect the current year-end value but do get reflected in the beginning-year value for the next year.

This approach provides a more valuable analytical framework. The portion of the value added based upon the first component (the hurdle rate times the beginning-of-year in-force value) is attributable to management actions in prior years. The value of new sales and the variances are attributable to current-year management actions. Through this analysis management should focus on aspects of the business that are within its span of control.

PRACTICAL ASPECTS OF IMPLEMENTING VALUE-BASED REPORTING

Value-added financial reporting requires the capability to develop periodic projections of statutory earnings and target surplus needs for in-force and projected future business. Usually these projections are based upon a "model" of the total business. Each policy and product type is mapped into a smaller number of representative "model" plan "cells." The model's fit is tested in terms of premiums, reserves, policy counts, and other parameters.

For most companies, these modeling or projection capabilities already exist to support statutory projections needed for capital management. The recently passed NAIC

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risk-based capital requirements make such projection capabilities almost universally required during the next few years. Companies with model office-projection capabilities would only have to develop additional report formats to display the value and variance details. Other than model office-projection capabilities and specially formatted reports, no additional bookkeeping should be required. Value-based reporting could be set up as merely an offshoot of the normal financial projection and reporting process.

Defining different SBUs for value-based reporting than those commonly used for statutory accounting and GAAP may be an area in which additional complexities arise. For example, applying value-based market and/or customer-based SBUs will require data organized by market and customer. In the past, most traditional insurance administrative systems have focused on transactional data keyed to product types based upon statutory and GAAP annual statement format requirements. However, a number of these systems have been modified during the past several years in anticipation of the shift from product-driven strategies to market- or customer-driven strategies. The systems technology exists to derive market and customer-based reporting. In fact, the FASB and the AICPA are actively contemplating expanding the scope of market-based public company reporting requirements to better inform investors of the fundamental competitive position of a company in terms of its markets, customers, and product viability.

LINKING STRATEGY, PRICING, AND FINANCIAL REPORTING

The primary advantage of value-based financial reporting is the natural link it creates between these three very critical but often independently determined activities. The present value of distributable earnings is key in all three so that a "common" basis is reflected throughout. Differences between pricing and financial reporting are discouraged. Meaningful analysis of variances between actual and expected results in the key value drivers are identified quickly and clearly in terms of their impact on the reported results. This provides the basis for timely reconsideration of key strategic premises driving the company's pricing. This process defines the control cycle linking and seamlessly integrating all three of these important management functions.

LIFETIME CUSTOMER VALUE

Lifetime customer value (LCV) is a special application of value-based financial reporting. The unit of valuation in LCV is "all sales made to a customer" rather than each sale being viewed independently. For many companies whose realistic expectation is to only sell one product per customer, lifetime customer value is equivalent to policy value. However, for those companies following market-driven, customer-oriented strategies to develop long-term, multiproduct customer relationships, an appropriate scorecard is needed to measure progress on a market-by-market and customer-by-customer basis. These companies view customer acquisition costs as investments rather than costs. LCV measures historical returns on past investments and ranks new opportunities in a manner consistent with the market-driven, customer-oriented paradigm.

Lifetime customer-value analysis quantifies the risk-reward trade-offs between focusing on acquiring new customers and making additional sales to existing customers. The expected value of investment in improved customer service can also be quantified and compared with the benefits of less service with a lower price.

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Investments in new technologies, such as a proprietary customer information marketing database, can be evaluated and later tracked in terms of the incremental value it produces.

MR. THOMAS F. EASON: Brad, you expanded the concepts into the general marketing situation involving agents, and I want to challenge you on that, or at least encourage you to talk a little about the control factor. I see a major difference between what has been presented here by Mike and by Erich, in trying to make some more concepts fly when the agent, in fact, controls the business. Could you talk about that factor and whether it substantially diminishes the benefits of potential back sales?

MR. SMITH: That's a good point. I think the key observation there is the point I made before. We're in the beginning of that evolution there, and some people recognize it and some people don't. Companies that are aggressively pursuing that are actually being led by brokerage companies and specific agents who recognize that value. Whether you read Tom Peters' books or Harvard case studies, they're all saying that most of your opportunities are from existing clients. I think the agents and the major brokerage firms are recognizing that, and they're focusing their efforts on people that they have sold policies to before. Companies are now starting to recognize that value and go on. There's no question that we're at the beginning of what I think is going to be an evolutionary process, very similar to what I think happened in direct response.

FROM THE PANEL: I agree that we're seeing that kind of evolution, but the traditional agent system can only go so far in this direction. I think the way to think about it is like this: if you're an agency company, you say, "here we are today; what do we need to look like in three years, or five years, or whatever? We need to have controlled distribution that uses information strategically to drive across sales and to develop the customer account. We probably want to divide or create specialization in the sales function by both function and product so that we lead generations separated from the actual sale and separated from service. Then the service kind of seamlessly works back into the lead generation, again, and that's what I call reactive customer management. So we can draw this picture of what we need to have in the future. Now is there any way to take us from where we are today to where we need to be at that point in time in the future with the distribution system we have, or is it so different that there's no way to get from here to there? And the way to think about that is we already have certain strategies in place that will create a chain of cause and effect that will have us looking like something in five years. Okay, call that current future.