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Technical Aspects in Evaluating Cash Value Life Insurance Policies
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After graduating from Middlebury College with a major in mathematics and doing graduate work in statistics at the London School of Economics, I realized I wasn't competent to be a mathematician. The natural conclusion was to combine math and business, and I recalled the notice at Middlebury about actuarial science, a rather dreary sounding profession dealing in death data. But returning from London I was up against a career choice, and I recall thinking how life insurance must be a noble business, dedicating itself to the relief of widows and orphans. Little did I realize at the time how misplaced this thought was.

Some of you remember the Woody Allen movie in which a miscreant was sentenced by the authorities to spend three days in a hole in the ground with a life insurance salesman. That was a funny line, but in much of what I have seen in more than 15 years reviewing cash value life insurance policies, the results have not been so amusing. I suppose the issue most bedeviling life insurers in the last ten years was premiums that didn't vanish, but this was, in my mind, a minor issue that got blown way out of proportion simply because the lawyers and clients could understand it. There is much that goes on of a more subtle nature. It doesn't take long in the work I do, and I presume in the work you do, to realize that hardly any policyholders understand how a cash value policy works. Frequently, consulting an expert can save thousands of dollars. Glenn Daily, who maintains a useful website about life insurance at www.glenndaily.com, is a fee-only insurance planner in NYC. He often laments that life insurance buyers routinely pay thousands, even tens of thousands of dollars, in undisclosed commissions yet will gripe about paying him a small fraction of that fee, which he can earn back ten times over. But as financial planners, you know all this. My job today is to educate you on ways you can help your clients do the right thing with their policies.

Is Life Insurance a Good Investment? One is reminded of the old joke: Q. How's your wife? A. Compared to what? (Women in the audience: please substitute "husband.") Cash value life insurance is probably looking a lot better to many of you today than it did a couple of years ago because the major alternative, stock mutual funds, has been so bad. I hope none of you persuaded clients to dump their quality cash value policies in favor of equities at the top of the market. My favorite client was a Dr. C whose agent wanted to transfer his 8-year old, \$5 million Massachusetts Mutual (MML) second-to-die policy with a cash value of \$183,000 to a variable universal life (VUL) policy. The annual premium was \$26,000, so the total investment in the new policy was \$209,000. Assuming 10% market growth, his first year surrender value would have been \$153,000. But his MML would have grown without market risk at nearly 8% after, say, a 5% premium load, so had he stayed at MML his cash value would have been about \$222,000. The replacement alone would have left him nearly \$70,000 in the hole hoping to catch up in future years. But the S&P 500 was down about 24% from the time this was being considered to the close before the World Trade Center bombings. This would have reduced his account value by \$50,000 more for a total loss of \$120,000. What is the moral of this story? Was it simply the luck of the market that in the long run may reverse this picture? I think not. There were two reasons why I struggled against Dr. C's inclination. The first was that I noted his existing policy's returns in years 9 and 10 were higher than normal. This is not unusual; insurers often boost 10th and 20th year cash values because performance comparisons have traditionally been made at these durations. The second was the risk that MML would demutualize. Ideally, all fee-only financial planners should be equipped to give clients an indication of prospective returns on their existing policies. Practically, this is difficult, and of course the life insurers, who could do this, will be no help. Dr. C's choice was either (a) to retain an existing policy with a prospective return of nearly 8% in the next two years, 6.8% over the next 20 years based, on the 2000 dividend scale, or (b) shift to a VUL with a large negative return in the next two years, 7.1% over the next 20 years in the new company **if** the separate accounts earn 10%. What would each of you have done?

(Let me digress a moment to voice a pet peeve. We've all been exposed to tons of information in recent years about historical market returns, much of it by so-called experts on TV and in print media. Much of this the financial writer, Jane Bryant Quinn, calls "financial pornography." Has any of you ever seen any studies of historical returns

from market tops, defined as historically high P/E earnings ratios? Of course, the stock market has never seen P/E ratios as high as we experienced in 1999 and 2000. Yet such a study from prior market peaks could have put a chill on proposals such as Dr. C was presented.)

Coming back to my question, in large part due to the significant income tax advantage the business enjoys, life insurance can be an excellent investment when bought carefully from a quality life insurer and held indefinitely. But until one has maximized all one's 401-K's and the like, as well as tax-deductible and Roth IRA's, good advice is to stay away from cash value policies. I expect you agree with this. With this background then, let me turn to my assignment, helping you help your current and future clients who come to you with life insurance policies among their assets.

I. Mutuality -- I bank at a mutual savings bank, own a mutual life insurer's cash value policy, and have substantial assets at Vanguard, the only *mutual* mutual fund sponsor. But I buy gas and McDonald's breakfasts and lots of other things from shareholder-owned companies. Thinking especially of life insurance, why is mutuality so important to me and why should it be important to you? The reason is that, except for term life insurance policies, agents who sell cash value policies and insurers who provide them do not operate in competitive markets. This leaves policyowners at the mercy of their insurers both to raise commissions and other compensation and to maximize returns for stockholders. While mutual insurers are not known for low commissions, they do pass through their current earnings to policyowners, not shareholders. There is at least one academic study showing that universal life (UL) policies, mainly sold by shareholder-owned insurers, outperformed whole life (WL) policies, mainly sold by mutuals. But this study looked at only the first ten policy years of policies sold more than 10 years ago, when UL policies offered relatively high interest rates. In my opinion, interest rates most of these insurers credited for a few years were higher than they knew they could pay in the long, and they have fallen more than market interest rates have. I have looked at thousands of both kinds of policies prospectively; when the study is extended to 20 years the picture will change dramatically.

While not every mutual whole life policy is a good one, those from the household names like PRU and MET and John Hancock, even after demutualization for policies in the closed blocks, are usually better to hold than those from UL insurers. I have seen many UL policies that are horrible. So, if you believe what I say, you will steer your clients who want whole life to those mutual insurers who remain in the market. I would have nothing to do with demutualized insurers for new cash value policies, but existing policies in the closed blocks of demutualized insurers are in general worth keeping. (We should include in the world of mutuals stock subsidiaries of mutuals such as USAA and State Farm Life, as well as mutual holding companies.) It of course follows that any policyowner with a mutual insurance policy must be warned about the risk of missing a substantial windfall if the policy is dropped and the insurer demutualizes.

More specifically, two observations about mutual insurers stick with me that you may want to commit to memory. The first is a limited comment: New York Life (NYL) WL policies issued in the late 1980's and early 1990's were designed to provide disproportionately high returns in policy years 11-20. If a client has a NYL WL policy that's been in force a few years, best advice is probably to keep it through policy year 20, then reevaluate if in good health. (I do *not* include NYL's UL subsidiary.) The second observation is this: If you find a client with an existing Northwestern Mutual Life (NML) policy, simply insist on retention of that policy. NML is, by quite a margin, the best. So it was in 1955 when I went into the business. So it will likely be long after I'm dead.

II. Participating Policy Dividends -- Whole Life policies are usually "participating," meaning that policyowners participate in the earnings of the insurer. This participation is in the form of annual dividends, which as you know are to be distinguished from dividends on common stock, though in some ways they are the similar. A whole life policy in its classic form -- today there are many hybrids -- features guaranteed premiums and guaranteed cash values. Guaranteed premiums and cash values are calculated using a minimum interest rate, typically 4% in modern contracts, and maximum mortality costs, the 1980 CSO Table, for example. In practice, the insurer earns after investment expenses significantly more than 4% and experiences mortality costs far lower than the 1980 CSO Table. It passes these savings through to policyowners after adding some of the margins to surplus. There is a third element in the "three-factor" dividend formula used by most companies -- policy expenses. This element may be positive or negative; it is usually insignificant compared to the investment and mortality elements. The pass-through of mortality savings is a bit complex, so let's look at the pass-through of what we call excess earnings. Suppose the insurer earns 7.5% after investment expenses on its portfolio amassed over many years, which is roughly the average of the better mutuals in 2001. If it guaranteed 4% in calculating cash values, then it can pass through 3.5% of the policy reserve as the excess interest component of the dividend formula. We call the 7.5% the "dividend interest rate." It is analogous to the "current interest rate" on UL policies, now frequently under 5%. The highest dividend

interest rate I know in 2001 is Northwestern Mutual's 8.8%, which is quite remarkable. Here are some guidelines about dividends:

- (1) The best dividend option is Paid-up Additional Insurance (PUA), which allows the purchase of pieces of paid-up whole life at net rates. PUA's themselves pay dividends, usually based on the same formula as the policy itself.
- (2) Many life insurers have substantial liabilities for Dividend Accumulations (DA's), in which dividends are placed in an interest-bearing account. Prudential, last I looked, pays 4% on DA's while at the same time paying 7%, approximately, on PUA's, plus the owner gets a 1099-INT on the DA's and no annual taxable amount on PUA's. If a client of yours has DA's, consider switching future dividends to PUA's. The existing DA's are like a bank account, either good or not so good, depending on the rate, normally low.
- (3) Dividends may be paid in cash or used to reduce premiums, but those who do so are forgoing an excellent, tax-advantaged investment in PUA's in many life insurers. Consider a switch to PUA's.
- (4) Dividends and interest on DA's are credited only on the policy anniversary. Make all changes on or shortly after the anniversary. A 4% rate becomes 8% for the balance of a year when one is six months into a policy year. Last March, a client sent me a proposal to replace his substantial policy. I told him that if he did that before mid-June he'd lose a \$5,000 dividend.
- (5) It follows of course that any WL policy surrender should await the next anniversary if, say, less than 10 months away.
- (6) From the best to the worst, there is a very wide range of dividend performance. Among the name companies the range of interest rates in dividend formulas is narrower, perhaps 6.5% to 8.8% in 2001. The higher rates are likely to drop for 2002.
- (7) A few companies, such as Mass Mutual, pay "terminal dividends." These begin typically begin about year 15 and grade up to a maximum at the 20th year. They can make holding the policy through these years attractive. The theory of terminal dividends is that when one buys a mutual policy with high acquisition costs one is subsidized, if you will, by existing policyowners at that time. Twenty years later, the policy has repaid that subsidy and made sufficient contributions to surplus so that the excess surplus contributions may be returned in addition to the surrender value or death benefit.

III. Policy Loan Subtleties -- In the 1950's when I entered the business, the policy loan rate was 5%. I remember one could take his policy to the bank and, using it as collateral, borrow at less than 5%, as low as 4% for larger deals. That loan rate changed to 6% in the late 60's, then to 8% in the late 70's. During that time, loans were what they seemed to be -- a true interest rate with no prepayment penalties. But with the spike in interest rates around 1980, there was much "disintermediation" -- borrow at 5%, 6% or even 8% and reinvest at a higher rate. Northwestern Mutual Life (NML) was, I believe, the first insurer to seek and receive permission from regulators to vary dividends according to loan activity to counter this phenomenon. This is called "Direct Recognition," and it converts the loan rate from whatever it is to something closer to a market loan rate. NML offered a contract amendment to existing policyowners to trade their low rate loan provision for a higher rate loan plus higher dividends. Some of the better mutuals, but not MET and PRU, made similar offers. Of course, those with loans who received the amendment offer often chose to keep the low loan rate, a mistake in my opinion.

Let me explain direct recognition using NML. If you have, say, a post-1980's contract it is likely to have an 8% loan rate, but if you borrow your dividend is reduced. Obviously it costs more than 8% to borrow; in fact, the cost in 2001 is NML's dividend interest rate of 8.8% mentioned above plus a spread of, I believe, .7% to cover the administrative and other costs of the loan. The total loan rate is therefore 9.5% in 2001, still competitive with anything except, I suppose, home equity loans. Direct recognition will increase policy dividends when the dividend interest rate is less than the nominal rate less the spread.

Universal life started about 1980; its loan provisions operate differently. UL has flexible premiums, and the flexibility includes zero premiums (if enough money is in the policy to cover monthly deductions). E.g., the loan rate might be 6%, but if you borrow only 4% is credited to the portion of the cash value borrowed against. The true net cost of the loan is a 2% spread. I've seen the spread as high as 4% -- 8% loan rate, but only 4% credited to the portion borrowed. If the current interest rate is 5.5%, the nominal loan rate 8% and the rate applied to loaned values 4%, the effective loan rate is 9.5%. Here are some rules.

- (1) If a UL policy, immediately cease premium payments and direct all payments to reduce loans. Two reasons: (a) the loan usually has a higher rate than the current interest rate; and, (b) no premium loads are assessed against loan repayments while premium deductions can be as high as 9% with 5% being typical.
- (2) If a WL policy whose dividends don't vary with loan activity, ask if the policy can be amended to Direct Recognition. Then, use the higher loan rate as a high-yielding, tax-free investment opportunity.
- (3) If a WL policy, can low rate Dividend Accumulations that generate taxable interest be used to reduce higher rate loans?
- (4) If a WL policy, can available funds outside the policy be used to pay off the loans. As interest is generally not deductible on personal returns, paying off a loan is like investing at the loan rate free of income taxation with perfect safety of principal. Even a 5% rate is better than CD's, taxes considered, for most folks. Paying off an NML loan at a 9.5% effective rate is probably the best investment in the world if safety is of any concern. (Note, however, that if the policy is later surrendered with a taxable gain that gain will be larger by the extra dividends paid, so the words "tax free" need to be used cautiously.)
- (5) When one borrows against a variable policy, one in effect liquidates shares in one or more separate accounts and transfers the money to the general account, where the loan cost might be a point or so higher than the general account pays. What is the cost to borrow against a variable with 100% in stocks? It is what the account would have earned had the loan not been taken plus the 1% or whatever spread. Lately, those with loans have been doing very well indeed.

IV. Replacements of Existing Policies -- In the mid-1980's, nearly 1 in every 2 sales of cash value policies was a replacement of an existing cash value policy. Agents for UL companies, not to mention agents for what is now Primerica, were ripping off WL policies on the theory that UL was better. Never in the history of life insurance, at least in the last 100 years, was so much harm done. Frequently, the replacements were undertaken despite regulations issued by many states to try to combat them. I have called these regulations How-to-do-it Kits for Replacement Artists. Now that the miserable history of UL has manifested itself, and WL policies have outperformed them, replacements of WL by UL are way down. In the last several years, the favorite replacement vehicle has been variable universal life (VUL). You can imagine the harm that has been done once again, and I would have made this statement even if the terrorist attacks had not occurred.

The first rule in considering a policy replacement is "Do no harm." It is difficult to generalize about replacements because a bad policy in the long run may be terrific in the next few years, and vice versa, but here are some tips.

- (1) Using one of the low-load insurers like Ameritas (800-552-3553) or TIAA (800-223-1200) will improve chances that your client will benefit from a replacement. In general, however, a UL or VUL policy from a low-load insurer is not good enough to replace a good, in-force WL policy.
- (2) In the case of major mutual insurers, and the closed blocks of demutualized insurers, the closer the policy is to ten years old, the better it is prospectively. Some are terrific. The reasons: renewal commissions usually terminate after 10 years; policy designs often concentrate value in years 11-20; and, investment portfolios often contain long-term investments acquired when interest rates were higher than now. Be careful with WL policies in household name insurers.
- (3) If the policy is Northwestern Mutual's, it is usually best to leave it alone, regardless of how old it is. There is a second tier of insurers such as Guardian, Mass Mutual, and New York Life where one must be very careful. Be sure to inquire about amending the policy loan provisions when the policy is old enough to have a 5% or 6% rate.
- (4) A UL policy past the surrender charge period is a clear candidate for replacement if the insured remains in good health. I have recommended replacements of many UL policies within the surrender charge period, but you must understand the pattern of the surrender charge. A policy with a uniformly declining pattern over 20 years, say, is more likely to justify replacement than one whose surrender charge is dropping rapidly in the next few years.
- (5) The older a person in excellent health is, the more likely a replacement will work. This is because he or she enters a new mortality class, which can make a lot of difference.

(6) Older WL contracts with loan rates of 5% or 6% in companies without a loan amendment program in general are not as good as later contracts and often can be replaced successfully. Many of these have small face amounts.

(7) Some UL policies issued more than, say, 5 years ago have bonus arrangements that make them outstanding policies to hold. E.g., an old Philadelphia Life contract now part of Consecro is crediting the minimum interest rate of 4.5%, but the bonus arrangements and extraordinarily low cost of insurance rates make prospective returns very high.

(8) If you contemplate recommending a replacement, get a current illustration and eyeball differences in successive cash values to see if there are jumps in the cash values at any point, especially at the 10th or 15th policy years, that are not a function of changing premiums. Often the notes in these illustrations will mention bonuses.

V. Vanish Premium Contracts -- If you have clients upset that premiums didn't vanish in the number of years illustrated at inception of the contract, chances are you have clients with valuable policies to hold. This phenomenon that the lawyers caught up with was mainly a mutual company one. Many contracts are about ten years old or so at this time, and as noted earlier, prospective returns can be excellent. For those who truly want to stop paying premiums, whose need for insurance is diminished and who remain in good health, consider the reduced paid-up option. Here is a paragraph I use in replying to my clients who are concerned about vanish premiums.

The illustration shows premiums being paid from policy values beginning in year XX. By contract, premiums are payable for life [until age YY]. You should ask yourself if it makes sense to take premiums from a "tax shelter," i.e., your policy, if they could be paid out of other resources generating taxable income, probably at lower rates (considering safety and freedom from market risk). In general, either pay premiums in full in cash, using dividends to buy paid-up additional insurance (PUA's), or, if in good health, consider the reduced paid-up (RPU) option if you definitely want to stop premiums. Under RPU, the death benefit is lowered to what the current cash value will support. In the long run if PUA dividends are reinvested in PUA's, both death benefit cash values will grow to levels higher than before reduction-- lower death benefits in the near term must mean higher ones ultimately if no more cash payments are made.

VI. Seeking Better Value in New Policies -- As may be evident from what I've said so far, a low-load insurer is not necessarily a better buy than a commissioned policy carefully purchased, although I know of no better variable policy than Ameritas's. Here are some tips on getting better value for your clients in non-no-load insurers.

(1) In the case of variable universal life, commissions for a given premium outlay may be minimized by asking for the minimum, increasing death benefit that is not a Modified Endowment Contract. If more death benefit is needed, buy a separate term policy or add a rider if the price is competitive.

(2) Commissions are keyed to face amounts of whole life sold. For a given premium outlay, ask for the smallest amount of whole life possible, to which may be added a One Year Term/Paid-up Additions Rider.

(3) As a general rule, pay attention to the difference between the first year premium and the first year surrender value (policy or account value less surrender charge). That is usually a good measure of the commission costs. Suppose the difference is \$5,000, as it was for a recent client I counseled; does your client consider this reasonable compensation? If not, don't buy that policy. Do not accept any agent's statement that the surrender charge doesn't matter if you hold the policy beyond the surrender charge period. It does; the surrender charge gives the insurer that many years to extract from the policy annually enough to recoup those acquisition charges not recovered in the first year and to pay renewal commissions.

(4) A concomitant of the foregoing is this: Refuse to accept any illustration in which the first year surrender value is not a fairly high percentage of the first premium. Factor in the cost of one-year term life in the amount of the first-year death benefit if the client is older. Often, however, the value of the insurance in the first year is less than the loss of interest on the premium.

VII. Premium frequencies -- UL and VUL policies employ monthly accounting, and one's premiums are credited as they are received. WL uses annual accounting; all values are keyed off the annual premium, and it therefore matters what the extra charge is for paying monthly, quarterly or semi-annually. Sometimes it is very high indeed. The all time record is evidently held by New York SBLI whose monthly premium was (and still may be) 10% of the

annual; this is like an Annual Percentage Rate to "borrow the annual premium" of about 42%. Metropolitan is next in line; its semi-annual rate for certain old policies reaches into the 35% range. MET routinely charges about 17% APR for monthly premiums deducted automatically from one's checking account, as do a number of insurers in recent years. If you have clients paying other than annually, consider changing to annual payments, which is always better than leaving money in the bank or money market fund, taxed of course. Use the following table to gauge reasonableness of charges for paying for WL (and Interest-Sensitive Whole Life) policies.

Ratio*	APR	Ratio*	APR	Ratio*	APR
.087	9.5 %	.2575	8.0 %	.51	8.2 %
.0875	10.8	.26	10.7	.515	12.4
.09	17.2	.2625	13.4	.52	16.6

* Ratio means monthly (quarterly or semi-annual) premium divided by the annual premium.

VIII. Riders -- Term life riders on either the insured or a spouse, especially if the policy is, say, 10 year old or more, can be very expensive. Compare the costs to market term rates. The best source is www.term4sale.com. Remember, however, that a term rider on the insured reduces any future taxable gain on surrender, while a new term policy obviously does not, so be careful.

I care neither for Children riders nor, especially, for cash value policies on children, so I often recommend dropping them, but again one has to be careful with a cash value policy -- it could be worth keeping. I recall many years ago being scolded for recommending against life insurance on children by a mother whose child had died.

Accidental Death Benefit (ADB) riders aren't real insurance, and one can often buy full coverage for not much more and sometimes less than the ADB cost. An insured who sky-dives might wish to retain the rider, however, so you must inquire into avocations. ADB claims rise with age, and the premiums are level, at least with WL policies, so an older person with a rider he or she has had for some time may wish to hold on.

I rarely recommend getting rid of a disability rider -- too dangerous. The one exception is at Prudential, whose "variable appreciable life," or VAL, policies have disability riders with extraordinarily high rates. Paid-up Additions (PUA) riders are almost always keepers.

IX. Taxable Gains and Losses -- A cash value policy when surrendered has a taxable gain or loss. Generally, a taxable gain occurs when the surrender value exceeds total premiums paid, excluding from such premiums rider costs that don't provide insurance on the insured. You know not to overlook any taxable gains, but do you know about taxable losses? In my experience, insurers when queried may say there's no taxable gain without giving the taxable loss, so be persistent. Taxable gains are taxed at ordinary income rates; taxable losses are not tax-deductible.

Either taxable gains or losses on surrender may be transferred tax-free to a new life policy or to an annuity, variable or otherwise. It is not well known that a loss in a life policy may be transferred to an annuity with the result that future annuity earnings up to the loss transferred will be free of income taxes. Unlike IRA transfers, the money must go from insurer to insurer. There are other rules to be followed that the acquiring insurer knows. If a life policy has a loss but no cash value to transfer, a transfer may not be possible; if the surrender charge exceeds the account value by a small amount, consider paying more premiums. I recommend only two sources of low-cost variable annuities -- Vanguard (800-522-5555) and TIAA-CREF (800-223-1200). Check with each for the current minimum amounts. At Vanguard, a transfer of less than the minimum may be made if the owner has a Vanguard mutual fund that can supply the difference. Transfer of a loss in a life policy to an annuity can be a very important matter in larger policies. Of course, one has to be careful that prospective returns on the life policy are low enough to warrant giving up the policy, since future gains on the policy will be free of income tax for some time as well. In some cases a poor UL or VUL policy with high cost of insurance charges can be rescued by reducing the face amount to the minimum allowed. Usually, but not always, such a reduction will trigger a pro rata surrender charge, however. Within the surrender charge period of a VUL or UL, premiums can be stopped and the policy held until the surrender charge is zero; in the right circumstances, this can boost prospective returns substantially on the existing surrender value.

X. Figuring Rates of Return -- For 15 years, I've run an evaluation service under the auspices of a consumer organization. You can see what I do at www.evaluatelifeinsurance.org. Some of you may wonder how I can do this for \$50 and make a living wage. The answer is I can't. Until I retired from a real job in 1998, I did this because I liked to and because it supplemented my income. If I may say so, a person hearing about what I do would be crazy

not to take advantage of the service, but few of those who hear about it act. I have the impression that planners such as yourselves dislike ceding control over any aspect of your services, so I hear from only a few of you; disabuse me of this impression if I am wrong.

I analyze cash value policies using an old actuarial technique called the Linton Yield. Albert Linton was president of Provident Mutual back in the 1930's when he worked out the technique, which is a buy-term-and-invest-the-difference comparison. It is a trial-and-error process extending over at least 20 years, and in the 1930's he had to do the iterative calculations by longhand. I am not going to explain the technique, but in what follows I show how a layperson can figure policy returns year-by-year, so-called One-year ROR's. The starting point is the next policy anniversary; the numbers come from a current illustration that can be routinely obtained from virtually all life insurers. Conceptually, it is helpful to think about the problem this way. Assume that a person surrenders his or her policy for the year-end surrender value (not the account value before surrender charge), then changes his or her mind and asks to reinstate immediately. The cost to reinstate is the surrender value plus the next annual premium. (If premiums are paid other than annually, using the reasonable factors under premium frequencies above, convert to an annual equivalent. Rider costs not providing insurance on the insured must be excluded, as well.) Here is an annual Rate of Return (ROR) calculation for policy year t . You may wish to do several future years to see any trends.

DB_t = Death Benefit, policy year t . Use the average death benefit during year if changing.

P_t = Annual premium for year t ; divide by appropriate factors from VII above to convert non-annual premiums to annual premiums.

CSV_t = Cash surrender value end of year t , including cash value of any paid-up additional insurance (PUA's). (If dividends are held at interest, exclude them from the calculation; but in this case add the year-end dividend, but not interest, to CSV_t . If the dividend option is cash or reduce premium, do not use the prior year dividend; be sure the year-end dividend for policy year t is included in CSV_t .)

TC_t = Term Cost for risk amount in year t ; TR_t = assumed market term rate for alternative policy; PF_t = any annual term policy fee.

Basic Concept: $BV_t * (1 + ROR_t/100) = EV_t$. Solve for ROR $_t$.

where, BV_t = Beginning-of-year policy value = CSV_{t-1} (prior year surrender value) + $P_t - TC_t$;
 EV_t = End-of-year surrender value, including D_t for any dividend not used for PUA's.

$TC_t = (DB_t - BV_t) * TR_t + PF_t$, or $TC_t = (DB_t - (CSV_{t-1} + P_t - TC_t)) * TR_t + PF_t$

or $TC_t = [(DB_t - CSV_{t-1} - P_t) * TR_t + PF_t] / (1 - TR_t)$, from 8th grade algebra.

Finally, $ROR_t = [(EV_t / BV_t) - 1] * 100$.

Example – Suppose you want the 11th policy year ROR for a policy whose 10th year surrender value is \$8,938, whose 11th year surrender value is \$10,538, and whose annual premium is \$1,159. (Dividends buy PUA's.) The death benefit during the next year averages \$107,600. The cost of one-year term insurance for this person in his or her risk class and age is \$1.22 per \$1,000 per year plus \$50. (It is not appropriate, at least not without an “apples to apples” warning, to use 10-year or 20-year term rates because these policies may not be renewed without evidence of insurability.) We have:

$$TC_{11} = [(107,600 - 8,938 - 1,159) * 1.22/1,000 + 50] / (1 - .00122) = 169$$

$$ROR_{11} = [(10,538 / (8,938 + 1,159 - 169)) - 1] * 100 = 6.1\%$$

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Update to October 2006

Page 3. Recently USAA Life decided it would no longer offer new life insurance policies outside the military connection. USAA Life is a part of United Services Automobile Association, which offers auto and homeowners to

eligible members. Eligible members include current and former officers in the armed services, legacy persons such as children of such, active members of the armed services and certain related government groups. We have long recommended USAA's whole life policy, but relative to the best its performance has slipped in recent years. Still, it may be worth keeping one you already own; if still in good health, however, a transfer to another insurer, if done carefully, may work well. The same is true of USAA's Universal Life.

Northwestern Mutual Life has continued its remarkable performance; in 2006, it is paying 7.5% to virtually all of its policies, free of annual taxation and free of market risk. This rate is credited to cash values after charges for expenses, which except for commissions are remarkably low, and for mortality costs. Although lower than the 8.8% rate noted on page 4 for 2001, the 7.5% dividend interest rate is significantly higher than any of its competitors.

Page 4. Life insurers are now phasing in new reserve mortality tables, the 2001 CSO Tables that extend to age 119, far longer than the prior tables that carried to age 100. Also, many guaranteed interest rates are now at 3%, and even lower with some of the *Equity-indexed Universal Life* policies we don't care for.

Page 5. The logic in the discussion about policy loans remains the same but Northwestern Mutual's 8.8% rate is 7.5% in 2006; the loan spread of .7% has been reduced to .6%.

Page 8. TIAA (tiaa-cref.org) has a new VUL that has replaced its prior version. Whether it is better than Ameritas's probably depends on a policy's face amount and premium level.

Page 11. Fees for the rate of return service have increased since 2001. See www.evaluatelifeinsurance.org.

Miscellaneous. Please see the companion paper of Variable Universal Life. Since the tax law changes of 2003, which lowered taxes on qualified dividends and long term capital gains to a maximum of 15%, I have recommended against buying VULs – term life plus a low cost Vanguard stock index fund, say, should work better. The same is true for Equity-indexed Universal Life (EIULs), which offers returns linked (usually) to the S&P 500 index. That index excludes the effect of reinvested corporate dividends, which are on the rise in 2006. EIULs will have significant hedging costs, as well, and they are not sold by insurers I care for.

In recent years, secondary guaranteed universal life (SGUL) policies have become big sellers, especially in estate planning schemes. They provide lifetime (usually) guaranteed death benefits in return for guaranteed premiums, which can be arranged in most any pattern. They have the advantage of being better understood, but have huge charges up front. Accordingly, they become, in effect, irrevocable commitments to stay with the program until death; otherwise, there will be huge losses. I do not recommend them because it is usually possible to arrange a minimized commission whole life hybrid that (a) will keep open options to quit the program without huge loss if circumstances change and (b) offer the possibility of larger death benefits for those living a longer than anticipated life.

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