

**Variable Universal Life: Worth Buying Now?
And Other Types of Life Insurance**
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I. Current Tax Laws Disfavor Variable Universal Life.

The writer has been pleased to hear from several of his Rate of Return Service (www.evaluatelifeinsurance.org) customers that his 2003 paper, Variable Universal Life Insurance: Is it Worth it?, has been useful. One intrepid medical doctor allowed that he had read all 22 pages! Others were kind enough gently to remark in passing that it was not easy reading. Is there a lesson here: If you are not willing to learn how these complex financial instruments work, should you buy one? (Whether you should hold one you've already bought is a different matter, the answers ranging from definitely to definitely not, with most clustering around the middle of that range.) It may be instructive to ask: Why are there so many life insurance companies in the U.S. compared to, say, auto manufacturers? The answer is that these hundreds of life insurers operate in a market where the buyers have no means of comparing prices or costs for cash value life insurance policies – whole life (WL), universal life (UL) and variable universal life (VUL) -- as they do when, for example, they buy gas for their cars. (Universal life is technically flexible premium whole life.) By contrast, the market for term life insurance is highly competitive, and relative price comparisons are quite easily made. Inefficient insurers selling cash value life insurance continue to sell their inefficient policies. This inefficiency is perhaps best illustrated by the contrast between Northwestern Mutual Life, which is crediting a remarkable 7.5% to its WL cash value policies in 2008 while dozens (hundreds?) of UL companies remain in the market crediting less than 5%.

This document is provided as a supplement to the 2003 paper; the reader who wishes to learn the ins and outs of variable life insurance needs to consult the earlier work. In the last year or so, we have noticed somewhat lower charges by some of the VUL life insurers; the reductions have been largely in the Mortality & Expense (M&E) asset charges, or profit charges. One reason could be that with more assets under management (mostly from continued premiums on older policies), these insurers have reached a scale that does not require the prior levels of M&E.

Prospective purchasers of VULs who are given pause by what follows are encouraged to hedge their bets by buying a term policy from TIAA – either one-year renewable or 10-year term – that may later be converted to a VUL without evidence of insurability should tax laws change and VULs become more attractive. We believe, based on our evaluations of hundreds of VULs, that TIAA's Intelligent Life VUL is the low cost leader. TIAA (tiaa-cref.org or 800-223-1200) is also unsurpassed in financial strength.

In our 2003 paper on variable universal life (VUL), we ended with ten guidelines, most of which remain sound in late-2007 followed by a conclusion that we now wish to alter. (There are forms of and descriptions of variable life insurance such as: variable appreciable life, variable adjustable life, variable complife, and variable whole life; the VUL remarks herein generally apply to them as well.) We said then that purchase of a VUL could be worth it “if one takes the time to understand how the policy works and is confident of his or her ability to hold the policy until death.” Later in 2003, federal tax laws were changed to make “qualified dividends” and long-term capital gains taxed at a maximum rate of 15%. (For those whose marginal tax bracket – the rate at which one's last dollars of income is taxed – is 15% or 10%, the tax rate applied to these items is just 5%.) If you are subject to the Alternative Minimum Tax or phase-outs of deductions and exemptions by reason of high income, which themselves are being phased out, the effective tax rate can exceed 20%. The net effect of any state income tax must be factored into the mix. Virtually all corporate dividends and dividends from equity mutual funds, including international equity funds, are “qualified.” Dividends from Real Estate Investment Trusts, or REITs, and bond and mortgage mutual funds are not qualified. The 2003 law was scheduled to terminate after 2006, but the 2006 Congress extended it through 2010. The advent of this law made VULs less attractive relative to direct investments in mutual funds. Studies we have performed suggest that for as long as these tax breaks remain in effect, it makes financial sense to buy VULs only in limited circumstances, as explained in the Appendix.

The rationale for buying a VUL is the hope that one's selection of common stock investment accounts within a VUL will provide better results over time than are likely to be obtained from whole life or universal life cash value

policies, whose investment portfolios are predominantly in corporate bonds and mortgages. To make this work, one must allocate a large percentage of one's account values to stock investment accounts. The illustrations of existing policies we see suggest that this is what virtually all buyers do. But our studies – those in the Appendix and others of the same kind -- show that under the 2003 law it is generally better to shop for low cost term life insurance and invest in equities externally, whether in mutual funds or directly. The costs in typical VULs are so high that paying taxes on qualified dividends and any capital gains is less costly. This is especially so if one chooses low cost Vanguard mutual funds. Any reader who is funding a VUL and not maximizing contributions to available, tax-reducing retirement accounts or Roth IRAs should rethink his priorities and demand a demonstration that a VUL is a better choice. We will examine any such demonstration without charge.

VUL life insurers point out (1) that within a VUL one may change allocations among accounts without current taxation, which is not possible in mutual funds that have gains, and (2) that one may manage a changing mix between bonds and stocks, or have the insurer manage such changes, without tax implications. These are important advantages, to be sure, but each may imply market timing, which is often thought to be a “no-no” by investment gurus; also, losses in a VUL account are not tax deductions, unlike losses in a mutual fund. And there are substantial costs to such management. Regarding the second point, one planning a substantial life insurance investment could have a high-yielding whole life policy and a VUL policy, if the latter made sense otherwise. In other words, if one feels that his investments should be allocated between equities and fixed income investments, should not the fixed income part be within a non-VUL life policy, where the income is not taxed annually as it would be in direct investments in corporate bonds and mortgages, and the equity part be directly invested in mutual funds or in one's brokerage account? It seems likely that if the favorable tax breaks noted above are altered, it will be the treatment of qualified dividends that is reduced or withdrawn. At virtually all times in the last fifty years, capital gains have received favorable tax treatment.

Given current investment alternatives, we think the costs built into VULs too often exceed the tax advantages. We urge readers to avoid them. One possible exception comes to mind. As noted above, REITs do not receive qualified dividend tax treatment, so a buyer, preferably one in a high tax bracket, wishing a high percentage of his VUL assets in REITs, could find the VUL costs worth incurring. The same might be said for high-yield corporate bonds (so-called “junk bonds”), although the writer's 20-years' experience with such a mutual fund – Vanguard's high quality junk! -- is that the excess yield (over investment grade bond yields) gets offset by defaults. As a result, the net asset value falls, and within a VUL the “taxable loss” has no value when the intention is to hold the VUL until death.

It should be remembered that while VULs have tax advantages, including the right to take tax-free withdrawals for college expenses or for retirement years, it is necessary for most buyers to hold the policies until death to avoid taxable gains on prior surrender, gains that are taxed at ordinary tax rates, not capital gains rates. The most frequent reason for buying a VUL that we observe is the right to take tax-free distributions in retirement, generally by withdrawals up to tax basis (often total premiums paid) and thereafter by loans (often no-net-cost loans – the loan rate is the same as the rate credited to the asset backing loan). This sales point is persuasive, but those who buy into it may be focussing on an advantage decades in the future that may or may not have worth then, and it surely has a low present value. Is it the “sizzle, not the steak?”

In summary, stay away from VULs until the tax laws referred to – not to speak of estate tax laws -- are clarified. (Although not the focus of this update, VULs are disproportionately expensive for low premium commitments, under \$200 a month, say.) If you must buy one, limit the costs by choosing a no-agents-commission VUL from TIAA (800-223-1200 or tiaa-cref.org). Ameritas (800-552-3553 or ameritasdirect.com) also sells an attractive VUL. Fans of Fidelity Investments mutual funds may wish to explore its VUL; we have not had requests to evaluate it.

TIAA's new Intelligent Life VUL has some attractive features, the combination of which is not found elsewhere to our knowledge: (1) the premium load (deduction) is keyed to the state premium tax rate, which should be around 2% -- an illustration from Texas was 1.75% -- a load that is very low compared to the typical 5% rate; (2) cost of insurance rates equal to TIAA's low cost, one-year renewable (YRT) monthly rates; (3) no monthly administrative charge; (4) the availability of TIAA-CREF own investment accounts that have very low investment management charges, including the Stock Index Fund at just 0.06% per year, the lowest we know of. That's the very good news; the less good news lies in TIAA's Mortality & Expense (M&E) charge of 0.95% per year for years 1-20, the highest we have seen. The M&E charge is essentially any VUL insurer's profit charge, which in the case of non-profit TIAA would cover certain expenses (including some from the investment accounts) and safety margins, that is,

contributions to surplus held on behalf of policyowners. But if the total invested VUL assets reach \$100,000, the M&E charge decreases to 0.65%, even on the amounts below \$100,000; at \$500,000, the M&E charge drops to 0.35%, again on all assets. The reader should be warned that many VUL insurers have manipulated their VUL designs to make their policies more competitive, usually after ten or more years and usually by M&E reductions, but the price is usually substantially higher initial charges and/or other charges.

We do not have TIAA software, and to date we have seen only a limited number of TIAA VUL illustrations based on the new design, so it is difficult to say if one should buy a TIAA VUL now. For someone with an initial \$100,000 to invest, or whose total invested assets would quickly reach \$100,000, the spreadsheet analyses in the Appendix suggest that a TIAA VUL would not work very well, due to the favorable tax laws that apply to owning common stocks that generate qualified dividends, unless one is sure that he or she will take tax-free distributions later and, preferably, that the qualified dividends tax break is removed. But a VUL will work only *if the policy is held until death*.

We have analyzed hundreds of existing VULs in recent years, and the terms of TIAA's new product suggest that many VUL policyholders would do well to transfer to TIAA, even in some cases where they face a surrender charge. But this is almost always a difficult decision, and it needs careful analysis.

II. Updates to the Original VUL Study.

A rereading of the earlier VUL document (which took its author quite a while!) showed that it holds up pretty well four years later. The corrections, additions and comments that follow may have limited utility for readers who have better things to do than become "experts" about variable life insurance.

I. Introduction

The second paragraph indicated that VUL sales (including its competitors with similar names) had tumbled in the wake of the stock market "crash" that began in late 2000. Sales in 2002 were off 35% from sales in 2000, but were predicted by a major actuarial consulting firm to recover by 2005. That has not happened. The source we are looking at now indicates that variable life's market share, measured by new premiums, peaked at nearly 40% in early 2001; toward the end of 2005, that share had fallen to 14%. Data into 2006 suggest a pickup in market share by premiums but a continued decline in number of variable policies sold. The S&P index bottomed out toward the end of 2003 at about 800; since that time, it has risen to more than 1400, an increase of more than 75% off the bottom. Conditions have been favorable for a robust recovery in VUL sales, but it hasn't happened. A lot of this business appears to have moved to sales of universal life with secondary guarantees, meaning guaranteed premium policies that carry to age 100, often to age 120, as long as premiums are paid faithfully. We'll comment on these later.

A recent study of lapse rates (annual policy termination rates) by the Society of Actuaries and LIMRA, a research arm of life insurers, showed that in the years 2001 and 2002, lapse rates of VULs were so high that if they continued at that pace less than 40% of contracts would be in force after ten years. That period was of course a time of stock market turmoil. The comparable figure for 1994-1996, a favorable period for VULs, showed that 60% of contracts would still be on the books after ten years. One guesses that current VUL lapse rates are somewhere in between. It's not hard to see how much can be gained in pricing VULs over the long term by high front-end charges in excess of costs in the early years that can be improved with interest earnings and spread out over the maybe 50% of owners who carry their contracts at least 20 years.

VULs are securities, sold only with prospectuses. While all charges are spelled out in the prospectus (except current cost of insurance charges, which are given in ranges rather than particularized to the reader's age and classification), it is not easy to read these thick documents. Some illustrations we see include a supplemental exhibit that breaks down the array of charges year by year. That supplement is worth seeking when thinking about buying a VUL, but it usually takes some learning to evaluate in the context of what is typical. Earlier, we referred to manipulation of VUL designs to favor long-term policyholders. We would have less trouble with this sort of manipulation if the prospectus had a prominent warning on its face that said something like: *This*

contract has high extra charges in the first ten years; do not buy it unless you are 100% sure of keeping the policy indefinitely.

III. How a Variable Universal Life Policy Works

The sixth bullet implies that surrender charges always apply except, as noted at top of page 4, in the case of low-load VULs. Some full-commission VUL contracts – Minnesota Life’s, for example – have high premium loads -- in the first year, especially -- but no explicit surrender charge.

VI. Choice of Investment Accounts

Toward the bottom of page 1 in our original paper we noted that VULs typically have “ten to twenty choices” of investment accounts. The record so far in what we have seen is 84 at John Hancock. What is a life insurance buyer to do with so many choices? A recent article in the Wall Street Journal was entitled, “Limited Menu: Choose Only 3.” It recommended a U.S. stock index fund, an international stock index fund, and a U.S. bond index fund. John Bogle, founder of the Vanguard Group, was quoted as saying, “There may be better investment strategies but the number of strategies that is worse is infinite.” Within a VUL, stock index accounts have the lowest fees, but they may not be low. The American Express S&P 500 Index account in its VUL has an annual charge of 0.50%, while the similar Vanguard Index 500 mutual fund costs 0.18%, 0.09% if \$100,000 or more. The costs of account management take a large and poorly appreciated toll in VUL performance.

Manipulation of VUL policy designs has increased since we wrote in 2003. Perhaps the most prevalent form is to front load the policy during the first ten years with extra charges – so many dollars per thousand of face amount – in lieu of the M&E charge so that lower M&E charges may apply in later years. A Pacific Life design showed this picture for a 35-year old female with a level \$1.8 million death benefit and annual premiums of \$20,400. During the first ten years, in addition to \$998/year expense charges, a total of \$36,000 would have been collected in Mortality and Expense (M&E) Risk Charges plus cost of insurance charges about double what term life would have cost. What did the \$36,000 buy? The right to nominal M&E charges after ten years, starting at \$225 and rising thereafter. As the illustration was run at 10%, let’s say that money is worth 6% after taxes. In the first ten years our client would have paid \$285,022 in accumulated premiums for death protection with an accumulated value of \$10,540 in life insurance protection and a surrender value (no surrender charge after ten years in this example) of \$235,849. She would have been more than \$38,000 behind. And that’s at the modest rate of 6% in the context of her investments earning 10% before charges. The reality is that to earn 10% one has to invest in stocks, and with the 2003 tax breaks the effective tax rate would have been far lower than 40% -- 10% reduced to 6% in this example.

IX. What to do With an Unwanted VUL

On page 10 we indicated that we “always” compare existing VULs to Ameritas’s VUL to see if a tax-free transfer would be in order. Given the new TIAA VUL, for which we do not have software, circumstances may make it plain that the comparison should be with that insurer.

Toward the middle of page 10 we discussed transferring one’s tax loss in a VUL – typically the excess of premiums paid (ex riders not supplying more life insurance on the insured person) over the surrender value – to an annuity with the result that future annuity gains up to the loss transferred are income tax-free. Life insurance tax losses are not deductible on one’s tax return. We failed to make the following important observation. When one transfers his surrender value during the surrender charge period, the amount invested in the annuity is net of the VUL surrender charge, but if the VUL is held the amount invested is the higher Account Value (or whatever name). A transfer in a rising market could be a mistake, and vice versa. Gains within the VUL are also tax-free up to tax basis, so it may be prudent to stay with the VUL. We try to assess these choices in our reports to Rate-of-Return clients, but it is not an easy judgment to make – Flip a coin is not an unheard-of comment by us.

Since the 2003 tax laws became effective, we have included this paragraph in our reports:

When federal tax laws changed to make qualified dividends and long-term capital gains taxed at a 15% maximum rate, VULs became less attractive. (If you are subject to the Alternative Minimum

Tax or phase-outs of deductions and exemptions by reason of high income, the effective tax rate can exceed 20%. These tax breaks have been extended through 2010. Any net state income tax must be factored in.) E.g., one can invest in a Vanguard 500 stock index fund at an annual asset charge of 0.18% 0.09% if \$100,000 or more). Qualified dividends can be as low as 1.75% at present, so the annual tax cost could be 0.26% or, say, 0.30% if there is a 5% state tax deductible on the federal tax. The total annual cost as a percentage of invested assets could be 0.50% per year or less. (There are lower cost Vanguard choices.)

Quite frequently, that paragraph includes this: "If this were my policy, I'd stop premiums and use them to set up a Vanguard index fund. If the 2003 tax breaks are withdrawn, the fund could be liquidated, any capital gains taxes paid, and the money put back in the policy if that then makes sense." The reason this can work is (a) that stock index fund dividends are low – often less than 2% -- and taxed at a low 15% maximum rate and (b) Vanguard's asset charges are very low compared to VUL asset charges. We have made such calculations.

An associated strategy for those who definitely want out of their policies but must keep them to recover the surrender charge is to take a partial withdrawal of a portion of the *surrender value*, leaving enough in the policy to carry it to the end of the surrender charge period. The policy death benefit will go down by the amount withdrawn, but if it is reinvested the total "death benefit" – policy + investment -- remains unchanged. A collateral advantage should be lower asset charges on the reinvested proceeds, much lower if a Vanguard fund is selected. Another way to view the strategy is that by a withdrawal one may collect the same dollar amount of surrender charge in future years at a lower investment – the remaining cash surrender value. One must be careful not to withdraw more than the tax basis; also, if later it becomes necessary to make premium payments to keep the policy from terminating, perhaps because of a drop in the market, such payments will be subject to a premium load, typically about 5%. If there is a gain in the contract, make sure there is no tax implication if the policy is surrendered shortly after the withdrawal.

A few VUL insurers – American Express (Riversource) is one – allow one to reduce the face amount during the surrender charge period without a pro rata surrender charge being assessed. This is rare and subject to rules. A \$1 million policy might permit a reduction to \$750,000 after 1 year and to \$500,000 after 5 years. Doing so can make the policy more efficient because it removes risk amounts to which cost of insurance rates apply that can often far exceed term life rates. Combining this strategy with premium cessation can make an unwanted VUL a mandatory "keeper."

An associated point in thinking about transferring a costly VUL to an annuity after the surrender charge becomes zero is that if you definitely intend to switch later and your health worsens, a new policy may have become prohibitively expensive. One hedge: buy a 10-year term policy from either Ameritas or TIAA that can be converted to a VUL without evidence of insurability within the 10 years – at issue ages over 55, check the convertibility period.

Due to its very low costs, Vanguard is our recommended source of variable annuities. It will no longer allow a transferor to supplement a below \$5,000 transfer with cash unless that cash is sitting in a Vanguard account. The workaround is to establish a Vanguard money market account before the transfer.

XI. How to Buy a VUL Efficiently

USAA no longer sells life insurance to those outside its military family and their relations. Call if uncertain. USAA's whole life policy performance has disappointed in recent years.

The second bullet mentions switching to Option A in policy year 8; we should have said policy year 8 or later, as soon as possible, because the switch is dependent on complex rules and may not be available in year 8.

On page 13 in discussing MECs we said, "There is a higher premium limit for MECs that defines what qualifies [for the favorable withdrawal advantages of life insurance]." We should have said something like: For a given face amount, premiums can be higher for a MEC than for a non-MEC. That is, if you don't care about withdrawing money later, you can salt away more money in a MEC. It should be understood that money may

be withdrawn from a MEC without taxation if there is no taxable gain in the contract. This can happen, particularly at higher issues ages or for smokers or those rated up for health impairments, because expense charges, including cost of insurance risk charges, may amount to more than net (after asset charges) investment earnings credited to the policy.

XII. CFA's Rate of Return Program

It may be self-evident, but we should have labeled the table, Average Annual Rates of Return.

On page 15, we observed that MET Life's VUL had lower-than-average charges. Based on the most recent one we've seen, we'd now have to figure out whether we would say average (i.e., relatively high) or higher-than-average. In transitioning from a mutual life insurer that serves its policyowners to a shareholder-owned insurer serving its shareholders, one is not surprised to see higher costs.

XIII. Case Studies

Item 16. The "\$28,000 invested in stocks . . ." should have been \$21,000.

XIV. Conclusion and Recommendations

Bullet 4 stating that "when held for life . . . a VUL can be a successful investment" is now "iffier" advice.

Bullet 6 unfortunately omitted "stock index" between "especially" and "funds."

Bullet 7 saying "a VUL that is more than one year old is usually worth keeping" may err in the word "usually." Perhaps we should have used "often."

Bullet 8 should read, "A VUL *held until death* should be better than term life insurance plus a variable annuity."

III. Equity-indexed Universal Life Policies

EIULs are relatively new vehicles; they are often sold by life insurers we prefer to avoid. The "universal life" aspect works like a VUL, with premium flexibility and an annual accounting of monthly activity. Internal investment earnings, however, are linked to (usually) the S&P 500 stock index with a guarantee that the account value (before surrender charge) will earn at least a minimum guaranteed minimum rate, which has been either 1% or 2% in what we have seen. The reader can sense the powerful sales pitch: the benefits of stock market gains but not losses – you can eat your cake and have it as well. There are hedging costs for this protection that are not identified in the half dozen or so illustrations that have been sent to us for review. EIULs aren't quite as complex as Equity-indexed Annuities, referred to below, at least the EIULs we have seen, but we may not fully understand them. They also escape securities regulation, leaving you at the mercy of state insurance regulators, who are permitted by the life insurance industry only to issue regulations that the business agrees with and generally writes.

With a normal UL contract, interest at the current contract rate, perhaps typically 4.75% in late 2007, is credited monthly on the policy values (before surrender charge). An EIUL allows one to select a percentage that will receive the current (fixed) rate and its complement (100% is often illustrated) that will be indexed, subject to the minimum guaranteed rate. A sort of bonus is added once every 12 to 60 months, depending on complex choices, if the index has increased more than the guaranteed rate. But that increment is often capped at some fairly high level; thus if the index moves up 20%, the increment will be capped at, say, 12%, less the guarantee. The cap is usually set each year by the insurer, at its discretion as far as we can tell, leaving one to infer that if the insurer has not achieved its targeted profit, it can lower the cap. One would not wish to leave anything this critical to the discretion of EIUL sellers.

EIUL sales illustrations look just like UL illustrations, but most do not explain adequately exactly how the indexing works, including examples. The illustrations use optimistic past performance histories of the S&P 500 to illustrate future values, and the exclusion of corporate dividends from the S&P 500 index is only mentioned in passing.

- Use of historical S&P 500 growth is of course appropriate, but to use the last 20 to 30 years, the greatest bull market in U.S. history, is inappropriate without qualification. How about using an average of, say, 20-year histories measured every ten years from commencement of the S&P 500? Or, more informative and conservative, growth rates of the S&P 500 measured from starting points when price/earnings ratios were as high as they are now, which is above historical averages.
- It is not the exclusion of dividends (that in recent years are rising as a percentage of corporate earnings) that is inappropriate but rather the failure to discuss the implications. The public may have heard that returns from stock investments have averaged 10%, say, over history, but these anecdotal comments normally include reinvestment of dividends. If you buy a stock index mutual fund, you get the benefit of reinvested dividends, but that is not the case with an EIUL. In one typical illustration, the only reference to the dividend exclusion is found in the 7th paragraph of small text on page 9: “The term ‘S&P 500 Index’ refers to Standard & Poor’s 500 Composite Stock Price Index (which excludes dividends).”

The following table may illustrate the points made above.

Standard & Poors 500 Stock Index Period of Years	Annual Rates of Return Rates of Return
1950 to 2005	7.76 %
1955 to 2005	6.85
1960 to 2005	7.05
1965 to 2005	6.72
1970 to 2005	7.64
1975 to 2005	9.15
1980 to 2005	9.28
1985 to 2005	9.28
1990 to 2005	9.05
1995 to 2005	7.32
2000 to 2005	-1.12

Dividends during the 55 years shown as a percentage of the S&P 500 index averaged 3% or so through the early ‘70s, close to 5% through 1974, then drifted down from about 3.7% in the mid-80s to a low of 1.14% in 1999, when the market was sky-high. The ratio has risen from 1.60% in 2004 to about 1.75% in mid-November, 2007, despite a nearly 23% rise in the index during that 3-year period.

Sales illustration regulations governing whole life and universal life haven’t caught up with EIULs. Recently we evaluated an EIUL illustration from Indianapolis Life (owned by Aviva, a large British life insurer) for a 61-year old. It showed five annual premiums of \$40,000 followed by annual withdrawals of \$33,781 beginning in year 11 and continuing potentially until age 115, at which time the cash value had grown to \$2.94 million. The illustration assumed S&P growth of 8% with a bonus of 0.5% after year 10. If the reader thinks such growth is impossible, he will join the writer in his initial impression. After close scrutiny, it turns out that the withdrawals are loans from the start despite the usual VUL illustration practice of taking tax-free partial withdrawals up to the tax basis (total premiums paid typically), then starting loans. The loan rate is given on page 5 of 17 as “5.5% in advance,” which is equivalent to 5.82% in arrears; it is a variable rate (VLR), one that tracks a long term corporate bond index. It is abnormally low at the moment, having been forced down by the very low interest rates following the 2001-2002 stock market “crash.” The illustration assumes that one can borrow indefinitely at 5.82% while earning 8.5% indefinitely, thus creating a leverage effect that increases exponentially the more that’s borrowed. There is nothing in 11 pages of text that alerts the recipient to what is going on; it has to be ferreted out by studying the numbers. Trial attorneys, start your engines.

As with fully-commissioned cash value policies – WL, VUL and UL -- front-end charges in EIULs range from high to sky-high. A 38-year old male nonsmoker in best health buying a EIUL with an 8.4% assumed earnings rate, paying premiums of \$377.50 per month, would have been more than \$14,000 “in the hole” after 4 years: premiums

accumulated at 6.3% (8.4% reduced by a 25% tax rate) less the 4th surrender value less the value of the death protection accumulated at 6.3%. A \$3.3 million face amount illustration in a different life insurer with premiums of \$133,000 for three years would have found the owner \$100,000 out-of-pocket after 3 years. In either case, surrender charge reductions in subsequent years would have limited the damage; typically, however, such reductions are partially or wholly offset by cost of insurance charges that are often much higher than market term rates.

We recommend consumers stay away from EIULs. Low-cost term life insurance plus low-cost mutual funds should work out better, especially if tax laws continue to favor direct investments in stock mutual funds. Another concern is that UL life insurers in general in the early days of universal life in the 1980s illustrated high UL current interest rates longer than was justified by the market in order to gain business; since they had few UL assets under management, higher credited rates cost less than their view of the profitability of new business. Current interest rates actually credited in subsequent years dropped faster than market rates as time passed. Today many UL insurers are crediting less than 5% while the whole life insurers that pay dividends are at 5.5% to 6.5% generally, with the best life insurer, Northwestern Mutual Life, at 7.5% for 2007 and 2008. Also, dividend-paying whole life insurers, at least the mutual companies, pass through improvements in mortality, which have been steady, in higher dividends. UL companies, in the experience of the writer, have not done this. The performance history of EIULs remains to be written.

IV. Secondary Guaranteed Universal Life (SGUL)

It is likely that a portion of the shrinking market for VULs has been caused by the popularity of these relatively new policies. An SGUL, also known as no-lapse UL, is a garden variety UL with an implicit or explicit rider that guarantees the death benefit to a high age if a certain level of quite low premiums is paid. Years ago, that age tended to be an inadequate 95, but in recent years the guarantee has become complete, “ironclad” we like to call it, if age 120 is complete. We digress a moment:

In 1965, Jeanne Calment, age 90 with no living heirs, sold her Paris condominium to a French lawyer, age 47, reserving the right to the apartment as long as she lived. The lawyer made monthly payments to her in a kind of reverse mortgage. More than thirty years later, about one year after the lawyer had died at age 77, Jeanne Calment died at age 122. The value of the apartment was worth about ten years of payments at the time of the transaction; the lawyer’s widow had to continue payments after his death. Jeanne Calment is the only undisputed person to have lived at least 120 years.

The new actuarial tables underlying all life insurance stop at 120. Should you make sure the current guarantees don’t? More to the point, be cautious about banking on any guarantees that stop at age 100.

SGULs could be called Term Life to Death, but unlike term life insurance there are cash surrender values. The major selling point is of course the guarantee, which is a lot easier to understand than the “black box” of other cash value policies. And, the sales pitch fits well with those doing estate planning who believe they will never need to cash in the policies or borrow from them. Often, SGULs cover husband and wife, the death benefit payable on the last death.

Premium patterns are more or less infinite. Level premiums to age 100 may be most common, but it is possible to pay one premium that will guarantee coverage until death, or most any combination of premiums in between. We understand that one life insurer may have the lowest rates for Pattern A, say, but another would be lowest for pattern B, the later perhaps involving a large sum transferred from another life insurer. You can imagine the field day that life agents are having persuading owners of policies they don’t understand very well, which is everything but term life, to move to guaranteed policies. This is a bit like a shell game, however: there are three components in a cash value life policy – death benefits, cash values and premiums. The shell game analogy occurs when guaranteed death benefits and premiums are proposed with the cash value “disappearing.” It is very difficult for policyowners to know if the cash value policies they hold are good, bad or indifferent.

SGULs are designed with extremely large front-end charges, a significant portion of which is not paid out in commissions and other startup expenses. That excess is invested at much higher rates than the SGUL is credited with –3.95% on a recent one – and the “shadow account” created is used to subsidize the long-term guarantee of

lower-than-normal UL premiums. While no buyer intends to cancel his SGUL, some of course do – things change. That the shadow account needs to be paid to fewer policyowners than originally started is a substantial source of subsidy. If just 2% drop out each year, for example, after 20 years only 2/3rds remain, fewer if deaths are removed. Here is a paragraph we wrote to a client recently; he and his wife were in their mid-sixties:

The AXA proposal would involve a premium, mainly from transfers from Northwestern Mutual, Guardian and Mass Mutual . . . of \$982,551 in the first year; at the year end, the cash surrender value would be \$676,825. Not counting loss of interest, you'd be out of pocket \$305,726. This is not an investment I'd make; indeed it's not an investment, it's a gamble that the last of you would die in time to make a decent return of your nearly million dollar investment. And you must be 100% sure you'd never drop the policy.

The existing policies were in high quality, mutual life insurers; they had been in force long enough to be beyond the typical ten-year commission period. Given the couple's excellent health, it was likely that holding the existing policies would have a higher death benefit at the last death for the same premium payments. And holding their policies posed no risk of financial loss if later they wished to change course.

The nature of the SGUL market is such that life insurers must compete on the guaranteed price, which is a relatively new phenomenon except for the highly competitive term life market. Buyers then should scour the market for the best price. But what if the best price is in an unfamiliar life insurer? How financially sound is that life insurer? Second-to-die contracts can stretch over 30 or 40 years. SGUL insurers not only take on a risk that forecast rates of policy terminations (lapses) won't occur in sufficient numbers but also an interest-rate risk. Consider what we call the "Japan Scenario," persistently low (even negative) interest rates over a long period of time. Major Japanese life companies failed as a result; they couldn't meet 4% guarantees of the 1980s and earlier. It's hard to imagine that happening here, but there have been several failures of major companies in the U.S. due to investment problems, although those did not involve low interest rates.

Buyers of SGULs must be 100% sure they will be able to continue the policy until death or they will take a financial bath. It is for this reason that in our analyses of SGULs we strenuously urge people to stay away from them. If you insist on buying one, however, it would be wise to consult our longtime colleague, Glenn Daily, a fee- only life insurance advisor in New York City – see www.glenndaily.com.

V. Equity-indexed Annuities and Life Settlements

Equity-indexed annuities (EIAs) represent a huge business. They preceded EIULs discussed above, and the many variations on the basic theme – one participates in the upside of the equity markets but is protected from the downside effects – make them highly complex. Our advice echoes that of prominent financial columnists who have ridiculed EIAs for their high costs and complexity. EIAs have also caught the attention of securities regulators who believe these complex financial contracts should be sold as securities with the full disclosure found in VUL prospectuses. Here are some comments by the head of the self-regulatory body, National Association of Securities Dealers (NASD), in November 2005 at the NASD Annual Meeting:

There are . . . equity-indexed annuities which are subject to utterly ambiguous regulation because it isn't entirely clear to anyone whether they're insurance products or securities. Yet all these products look pretty much the same to investors.

EIAs are particularly complex. They are often marketed as risk-free, which they most certainly are not. And they are marketed disproportionately to elderly people, often without suitability analyses having been made. And sales commissions are as high as 10%.

We've proposed a set of rules to put a stop to this sort of irresponsible behavior in the sales of variable annuities . . . But we can't touch all equity-indexed annuities . . . because they aren't registered as securities and are often sold by non-broker-dealers.

Life Settlements occur when someone whose health has worsened sells his (usually) very large policy to a third party for a payment larger than could be obtained by cashing in the policy. There are potential tax traps involved

in doing so and huge fees. It is invariably far better to hold the policy until death if the owner has any regard for the beneficiary. Withdrawal and loan values can be used to access money in the policy; due to the growth of the life settlement business, life insurers are now looking at ways to expand loan values beyond what the cash surrender value provides for those whose health has changed for the worse.

Glenn Daily, referred to just above, has started a new service evaluating both EIAs and Life Settlements. See www.whatsmypolicyworth.com.

VI. A Request for Whole Life Help

Over the last two or three years we have heard from several of Rate-of-Return clients to whom Guardian Life agents had proposed whole life policies. Guardian is one of the better life insurers, but the feature that was common to each proposed buyer was a recommendation that 401-k (or 403-b or 457-b) contributions be suspended and the freed-up premiums be used to fund whole life policies. Evidently the idea is that while 401-k contributions reduce current taxes, a life insurance policy if kept until death can be used in retirement as a source of tax-free distributions in contrast to 401-ks, from which taxable distributions – minimum required distributions -- must be taken after age 70.5.

We don't think this scheme works mathematically, but so far we have struck out in our requests to those whose Guardian illustrations we've reviewed to provide us with demonstrations that our supposition is wrong. The Guardian agents, from what we can gather, keep such demonstrations, if they exist, to themselves. Accordingly, any reader who has been involved in such a sales pitch will do us a great favor by supplying any relevant sales material that purports to show the scheme works. We will comment on it without charge.

VII. Comparing Variable Universal Life to Term Life Insurance and Low-cost Mutual Funds.

The eternal question in life insurance is: Which is better, term or whole life? Or in this case, a VUL. One answer to the question, by the way, is: If you don't know what you're doing, stick to term. A more helpful comment might be to point out all the tax-favored investment choices that may be combined with term life insurance: 401-Ks and the like and tax-deductible IRAs that reduce taxes now, Roth IRAs that when held five years (or until age 59.5 if longer) produce the same tax-free distributions that are a major selling point of cash value life insurance, 529 plans for college savings, and perhaps others. For those who have maximized contributions to such accounts, a carefully bought cash value policy can make be a good investment when held for the long term – until death for most buyers in order to avoid taxable gains at ordinary tax rates on prior surrender.

The Rate-of-Return offered by the writer under the aegis of the Consumer Federation of America (CFA) is a “buy-term-and-invest-the-difference” comparison. See www.evaluatelifeinsurance.org for details. But the span of years studied is usually limited to twenty. That is a long time, forty percent of one's working lifetime. Life insurance actuaries work in present values, and the present value of what happens beyond twenty years isn't much, especially when one factors in the high percentage of cash value buyers who drop their policies. Nonetheless, it is more satisfying to see longer comparisons, and the examples included in the analyses that follow are over a sufficiently longer span of years.

James H Hunt, F.S.A.
November 2007

Appendix

The exhibits that follow represent an attempt to demonstrate the main point on page 1: “. . . that for as long as the tax breaks remain in effect, it makes financial sense to buy VULs only in limited circumstances.” We say “an attempt” because there are a more or less unlimited number of scenarios that one could posit for such studies, and the exhibits are severely limited in number. Accordingly, the reader will treat the results not as gospel but as our method of urging caution in the purchase of VULs.

The exhibits suggest three main principles for investing in a VUL:

- It is largely the right to take tax-free distributions later on in the life of the policy, not so much the tax-free build-up of cash values within a VUL, that can make a VUL a sound investment.
- The shorter the period of time between the funding of the VUL and the distributions, the greater the advantage.
- If the qualified dividends tax law is removed, the higher the marginal tax bracket, the more attractive is a VUL.

Accordingly, if one is uncertain about needing to take distributions, one should be uncertain about buying a VUL

We observe a large fraction of VUL sales that use illustrations showing distributions in retirement. The writer retired nearly ten years ago, and if he had a VUL he would not want to take distributions from it, even if at no net cost. The reason is that his pension income is supplemented by Social Security, including his wife's, by investment income, by minimum required distributions from 401-ks and traditional IRAs, and by modest earnings from the Rate-of-Return service. To add distributions from his whole life policies would create a need to reinvest the money; also, the cash values are being held as a partial hedge against nursing home expenses. The reader may find himself or herself in a similar position later on. Young adults may find that great retirement dreams to spend lots of money enjoying retirement may change when they become old adults. On the other hand, the right to take such distributions is worth something even if they are not taken.

There is also a potential cost to distributions, even if taken as partial withdrawals and no-net-cost loans. (No life insurer we've seen guarantees wash loans, perhaps for fear of drawing IRS attention. TIAA's VUL guarantees a net cost loan of 0.65% and illustrates a non-guaranteed net cost loan after ten years of 0.2%. Those life insurers that illustrate wash loans will recover loan expenses in other ways.) The cost of a loan also includes the forgone earnings on the investment account(s) liquidated to secure the loan. One can borrow only against the fixed account. If, for example, you have \$200,000 in a stock index account (100%) and borrow \$100,000, you have just “sold” \$100,000 of your “mutual fund.” If stocks go down, you gain; if they go up you lose, i.e., have an effective loan cost higher than the loan's interest rate.

As noted several times, a VUL (or most any cash value policy) must be held until death to gain the vaunted tax advantages. We don't see older persons – say, those approaching retirement age -- buying VULs; if they did, and depending on health classification, a VUL might not generate taxable gains on later surrender. Mediocre investment results combined with high costs of insurance, perhaps for a smoker or someone with a medical impairment, might mean later surrender values will never reach the tax basis, usually total premiums paid.

The exhibits that follow compare a TIAA VUL investment to the alternative of buying term life insurance from TIAA and investing the savings in a low-cost mutual fund from Vanguard. (We might have used TIAA's mutual funds with the same effect, but the writer plugs Vanguard whenever he can; it is the low cost mutual fund leader.) We believe, but can't easily demonstrate, that TIAA's VUL is superior to all others that are available in U.S. markets to ordinary buyers. We use TIAA's annual renewable term (ART) life policy as a means of valuing the risk amounts in the VUL; its rates are also very low in cost, especially when discounted future values are compared to others over 20 years or more. (We do not use guaranteed, level premium term policies – twenty-year term, for example – because they, unlike VULs, are not renewable after the term period except at astronomical cost.) In short, we compare the lowest cost VUL to the lowest cost combination of quality term life insurance and mutual funds. Further, we use the lowest cost investment account in each alternative. The conditions imposed should produce reasonably consistent “apples-to-apples” comparisons.

We recognize the limitations of these hypothetical comparisons. Here are some obvious ones:

- One may change allocations to investment accounts within a VUL without transaction costs or capital gains taxes, which is not possible in a mutual fund that has gains. To us, this VUL advantage is more theoretical than real because it implies market timing; the reader may disagree.
- The assumption that 100% of the VUL investment will be allocated to a common stock account indefinitely will not find favor with those who value the right to allocate a portion of their VUL assets to non-equities. Our response that one may instead buy two policies – a whole life and a VUL – may not satisfy the reader.
- One may easily borrow from a VUL (providing there is a cash *surrender* value, which is not a given in early policy years due to high surrender charges typical in agent-sold, commissioned VULs) while using mutual fund shares (unless in a brokerage firm's margin account) as collateral for a bank loan may be more troublesome. The writer has a checkbook from his broker that makes borrowing from his margin account that holds some mutual funds much more convenient and faster than a life insurance loan.

Turning now to the exhibits that follow:

- **Exhibit A** shows a one-time premium payment into a TIAA VUL for a woman age 52 in best health. Please note the important advantage of a no-commission contract: the end-of-first year surrender value exceeds the premium by a significant margin; unlike agent-sold policies with typically large surrender charges, the buyer keeps her options open to change her mind about her investment at little cost. The comparison assumes that both qualified dividends and long-term capital gains will be taxed at the federal maximum rates of 15% indefinitely; an extra 5% is tacked on for any state taxes on these items. The columns are not easy to follow, but what they show – Col. (22) compared to Col. (4) -- is that under these assumptions the advantage to buying term and investing separately is permanent, with the edge expanding at the end of the 30 years studied, which is age 81. It is obvious that if there were no state taxes on income of this kind, the advantages would be greater. Finally, comparing Col. (25) to (26) demonstrates the need never to surrender the VUL. The 40% marginal tax bracket noted at bottom of Exhibit A applies only to the Col. (25) calculation; a 25% tax rate would give \$229,382 for the last year shown.
- **Exhibit B** is the same as Exhibit A except that it assumes the qualified dividends tax break is removed permanently while the capital gains tax remains at 20% (whether just federal or a combination of the two). It may be noted that the federal long term capital gains tax was 20% prior to the 2003 tax reductions. Under these assumptions, the TIAA VUL becomes the better choice but only after 30 years (age 80) and providing it is held until death. If the marginal capital gains tax is increased to 25% (20% federal and net 5% state), the number of years it takes the VUL to catch up is shortened to 28 years (age 78).
- **Exhibit C** is a heavily funded illustration for a 37-year old female in best health. The comparison assumes (a) that there are no state taxes on investment income and capital gains and (b) that the 15% maximum tax rate on both qualified dividends and long term capital gains lasts indefinitely. The 9-year hiatus between last premium and first distribution should maximize the advantages for a VUL over the alternative of term + mutual fund. Still, we find that it takes 37 years, to age 74, for that to happen. The illustration is one that shouldn't be used as is; given the \$30,000 annual distributions without end, the policy terminates under the 8% gross earnings assumption at age 90 with a taxable gain of just under \$2 million, which of course would be taxed in the maximum tax bracket of 35% (or whatever then), generating an increased tax bill approaching \$700,000. Col. (25) is calculated with a 31% tax rate, and the differences with Col. (26) illustrate again the absolute necessity to keep the policy until death.
- **Exhibit D** is the same as Exhibit C except it is assumed taxes on qualified dividends and long term capital gains increase to 20%. This rather modest increase shortens the time needed for the VUL to catch up to the alternative scheme quite dramatically – from 37 years in Exhibit C to 23 years in Exhibit D.

It is obvious that if the tax laws revert back to those prevailing before the 2003 reductions, VULs will once again become attractive to higher tax bracket investors who are certain they will keep their policies for their lifetimes.

A comparison of a variable universal life (VUL) policy with a mutual fund invested 100% in stocks (SMF), adjusted for differences in death benefits.

---Variable Life Policy---					-----Buy Term and Invest the Premium Savings in a Mutual Fund-----																				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)
		BOY	EOY	EOY		BOY	BOY	Term	Term	Amt of	Invest.	Total	BOY	BOY	BOY	EOY	EOY	EOY			EOY	EOY	Avg	After-tax	After-tax
Yr	Age	Prem/	Policy	Death	BOY	Tax on	Tax on	Rate/	Ins.	Term	(6) - (7)	Death	Funds	Shares	Shares	BOY	Income	Share	Div'd	EOY	Value	Basis	Share	Surr Val	Surr Val
		(With-	Surr.	Benefit	Cash	Div'd	20%	1000	Cost	Insur	- (10)	Benefit	Sold	Sold	Sold	SMF	1.75%	5.84%	Bought	# Shares	SMF	SMF	Cost	Life	SMF
1	52	44962	46055	250000	44962	0	0	1.21	247	204111	44715	249994	0	0	0	44715	783	10.62	73.68	4,545.19	48270	45498	10.01		
2	53	-38	48824	250000	-38	157	0	1.25	251	200921	-446	249993	446	41.964	420.058	47824	837	11.24	74.46	4,577.68	51454	45889	10.02		
3	54	-37	51784	250000	-37	167	5	1.30	257	197674	-466	249993	466	41.501	416.026	50988	892	11.90	75.00	4,611.18	54858	46315	10.04		
4	55	-37	54950	250000	-37	178	10	1.34	260	194202	-486	249993	486	40.833	410.128	54372	952	12.59	75.57	4,645.92	58499	46780	10.07		
5	56	-36	58336	250000	-36	190	15	1.46	278	190500	-520	249993	520	41.263	415.484	57979	1015	13.33	76.14	4,680.79	62380	47275	10.10		
6	57	-36	61956	250000	-36	203	21	1.58	295	186553	-554	249992	554	41.608	420.233	61825	1082	14.11	76.71	4,715.89	66518	47803	10.14		
7	58	-35	65827	250000	-35	216	27	1.72	314	182345	-592	249992	592	41.962	425.349	65926	1154	14.93	77.28	4,751.21	70930	48365	10.18		
8	59	-34	69967	250000	-34	231	33	1.86	331	177855	-629	249991	629	42.124	428.797	70301	1230	15.80	77.86	4,786.94	75637	48966	10.23		
9	60	-33	74396	250000	-33	246	40	2.02	350	173066	-669	249991	669	42.318	432.880	74968	1312	16.72	78.45	4,823.07	80658	49609	10.29		
10	61	-32	79128	250000	-32	262	47	2.22	373	167959	-714	249990	714	42.720	439.406	79944	1399	17.70	79.04	4,859.40	86011	50294	10.35	65334	78533
11	62	-73	83956	250000	-73	280	55	2.44	397	162558	-804	249990	804	45.449	470.389	85207	1491	18.73	79.60	4,893.54	91674	50981	10.42		
12	63	-90	89073	250000	-90	298	67	2.68	420	156820	-875	249989	875	46.724	486.768	90799	1589	19.83	80.14	4,926.96	97690	51694	10.49		
13	64	0	94496	250000	0	318	78	2.94	443	150608	-838	249988	838	42.279	443.594	96852	1695	20.99	80.77	4,965.44	104203	52551	10.58		
14	65	0	100349	250000	0	339	79	3.23	465	143970	-883	249988	883	42.074	445.280	103320	1808	22.21	81.40	5,004.77	111162	53476	10.69		
15	66	0	106870	250000	0	362	88	3.54	485	136881	-934	249987	934	42.038	449.175	110228	1929	23.53	81.99	5,044.72	118694	54471	10.80	81914	105367
16	67	0	113824	250000	0	386	97	3.88	501	129204	-984	249987	984	41.823	451.588	117710	2060	24.92	82.65	5,085.55	126750	55547	10.92		
17	68	0	121246	250000	0	412	106	4.26	515	120988	-1034	249987	1034	41.482	453.090	125716	2200	26.40	83.33	5,127.40	135371	56713	11.06		
18	69	0	129171	250000	0	440	116	4.68	525	112190	-1081	249986	1081	40.953	452.972	134290	2350	27.97	84.03	5,170.47	144603	57982	11.21		
19	70	0	137639	250000	0	470	126	5.13	527	102759	-1123	249986	1123	40.148	450.222	143481	2511	29.63	84.75	5,215.08	154500	59370	11.38		
20	71	0	146678	250000	0	502	135	5.78	536	92655	-1172	249986	1172	39.569	450.465	153328	2683	31.38	85.50	5,261.01	165103	60881	11.57	105799	143578
21	72	0	156775	250000	0	537	144	6.52	533	81818	-1214	249986	1214	38.699	447.828	163889	2868	33.24	86.27	5,308.59	176475	62535	11.78		
22	73	0	167610	250000	0	574	153	7.35	516	70179	-1243	249987	1243	37.383	440.375	175233	3067	35.21	87.08	5,358.29	188691	64359	12.01		
23	74	0	179253	250000	0	613	160	8.28	477	57654	-1251	249988	1251	35.530	426.749	187439	3280	37.30	87.93	5,410.69	201835	66388	12.27		
24	75	0	191789	250000	0	656	165	9.34	412	44150	-1233	249989	1233	33.061	405.654	200601	3511	39.52	88.84	5,466.47	216008	68665	12.56		
25	76	0	205308	250000	0	702	166	10.60	313	29556	-1181	249992	1181	29.886	375.396	214827	3759	41.86	89.81	5,526.40	231325	71244	12.89	140977	198396
26	77	0	219926	250000	0	752	161	12.00	165	13737	-1078	249996	1078	25.750	331.952	230248	4029	44.34	90.87	5,617.27	249072	74092	13.19		
27	78	0	235782	265585	0	806	149	13.60	152	11141	-1107	265581	1107	24.956	329.171	247966	4339	46.97	92.39	5,683.91	266972	77354	13.61		
28	79	0	252938	268835	0	868	155	15.50	-64	-4122	-959	268837	959	20.427	278.002	266013	4655	49.76	93.56	5,752.52	286217	80902	14.06		
29	80	0	271324	284890	0	931	136	17.60	-138	-7843	-929	284894	929	18.678	262.677	285288	4993	52.71	94.73	5,826.81	307106	84935	14.58		
30	81	0	291015	305566	0	999	133	20.40	-175	-8572	-957	305571	957	18.157	264.667	306149	5358	55.83	95.96	5,904.10	329632	89364	15.14	192401	281578

Cols (3)-(5) are taken from a TIAA-CREF Life VUL illustration based on a hypothetical gross 8% investment return (before asset charges); the illustration included a disability rider whose charges are rem as negative premiums in Col. (1). The question explored in Cols. (6)-(24) is whether an alternative plan of investing in a stock mutual fund (SMF) would be better than buying the policy. To make the alternatives comparable, it is assumed each year that funds are withdrawn from the investment account, Col. (12) and/or Col. (22), and used to buy term life insurance sufficient to supply the difference between the death benefit of the life policy and value of the SMF, whose death benefit (fund value) would also be free of income tax at death. Each year funds are also deducted to pay taxes on dividend income and on long-term capital gains (average cost method) realized on necessary share liquidations at a 20% tax rate (15% federal + 7.7% state, deductible in 35% maximum federal tax bracket, net 5%). TIAA-CREF's illustration includes a 0.29% annual asset charge for investment management and related expenses, but this could be 0.06% with its own stock fund. It is assumed that the mutual fund is invested in a Vanguard index fund with annual asset charges of 0.18% (.09% at \$100,000 and up). To equalize asset charges, 0.29% - 0.06%, or 0.23%, is deducted in Col. (19). The current dividend rate on Vanguard's Index 500 is 1.73%, so 1.75% is used in Col. (18). It is assumed that the capital gains tax on any shares sold is paid one year after sale. The annual renewable term life insurance term co Col. (9) are TIAA's at the \$250,000 level in its preferred plus nonsmoker class, the same class illustrated in Cols. (3) to (5). Col (25) uses a marginal tax rate of 40% for calculating the tax on surrender of the VUL -- 35% federal plus 7.7% state deductible on federal. The rate assumed for surrender of the SMF is 20%, the federal LTCG rate of 15% + 7.25% state income tax deductible on federal tax. At age 71 SMF in Col. (22) has a higher value than the TIAA death benefit, eliminating the need for life insurance; that is why Col. (10) turns negative. Cols. (25) and (26) show the effect of the VUL contingent tax liability; if the life policy is not held until death, the tax at 36% on the gain at surrender, as opposed to cashing in the mutual fund at a capital gains tax rate of 20%, makes the life policy a poor selection.

Exhibit B

Variable Universal Life: Is It Worth It?

A comparison of a variable universal life (VUL) policy with a mutual fund invested 100% in stocks (SMF), adjusted for differences in death benefits.

---Variable Life Policy---					-----Buy Term and Invest the Premium Savings in a Mutual Fund-----																				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)
Yr	Age	BOY Prams/ (With- drawal)	EOY Policy Surr. Value	EOY Death Benefit	BOY Cash	BOY Div'd 40%	BOY Sale 20%	Term Rate/ 1000	Term Ins. Cost	Term Amt of Insur	Invest. (6) - (7) - (10)	Average Death Benefit	BOY Funds Sold	BOY Shares Sold	BOY Basis on Shares Sold	BOY SMF	EOY Div'd 1.75%	EOY Share Price 5.84%	EOY Div'd Shares Bought	EOY # Shares	EOY Value SMF	EOY Basis SMF	Avg Share Cost	After-tax Surr Val Life Ins	After-tax Surr Val SMF
1	52	44962	46055	250000	44962	0	0	1.21	247	204111	44715	249994	0	0	0	44715	783	10.62	73.68	4,545.19	48270	45498	10.01		
2	53	-38	48824	250000	-38	313	0	1.25	251	201081	-602	249993	602	56.719	567.761	47668	834	11.24	74.21	4,562.68	51285	45729	10.02		
3	54	-37	51784	250000	-37	334	7	1.30	257	198020	-635	249993	635	56.495	566.222	50650	886	11.90	74.51	4,580.69	54495	45981	10.04		
4	55	-37	54950	250000	-37	355	14	1.34	261	194759	-666	249993	666	56.007	562.191	53829	942	12.59	74.81	4,599.50	57914	46256	10.06		
5	56	-36	58336	250000	-36	377	21	1.46	279	191298	-713	249993	713	56.619	569.410	57201	1001	13.33	75.11	4,617.99	61543	46545	10.08	52927	58114
6	57	-36	61956	250000	-36	400	29	1.58	296	187624	-762	249992	762	57.145	575.961	60781	1064	14.11	75.41	4,636.26	65395	46847	10.10		
7	58	-35	65827	250000	-35	425	37	1.72	316	183725	-814	249992	814	57.681	582.834	64581	1130	14.93	75.70	4,654.28	69483	47163	10.13		
8	59	-34	69967	250000	-34	452	46	1.86	334	179583	-866	249991	866	58.025	587.987	68616	1201	15.80	76.00	4,672.25	73824	47498	10.17		
9	60	-33	74396	250000	-33	480	56	2.02	354	175186	-923	249991	923	58.406	593.746	72902	1276	16.72	76.29	4,690.13	78435	47851	10.20		
10	61	-32	79128	250000	-32	510	66	2.22	379	170520	-987	249990	987	59.000	601.947	77448	1355	17.70	76.57	4,707.71	83326	48219	10.24	65334	75686
11	62	-73	83956	250000	-73	542	77	2.44	404	165612	-1096	249989	1096	61.931	634.337	82230	1439	18.73	76.82	4,722.59	88471	48562	10.28		
12	63	-90	89073	250000	-90	576	92	2.68	430	160426	-1188	249989	1188	63.411	652.054	87284	1527	19.83	77.04	4,736.22	93908	48902	10.33		
13	64	0	94496	250000	0	611	107	2.94	455	154832	-1173	249988	1173	59.178	611.017	92735	1623	20.99	77.33	4,754.37	99774	49351	10.38		
14	65	0	100349	250000	0	649	112	3.23	481	148884	-1243	249987	1243	59.208	614.585	98531	1724	22.21	77.63	4,772.80	106010	49833	10.44		
15	66	0	106870	250000	0	690	126	3.54	505	142564	-1320	249987	1320	59.428	620.496	104690	1832	23.53	77.87	4,791.23	112730	50345	10.51	81914	99380
16	67	0	113824	250000	0	733	140	3.88	527	135749	-1399	249986	1399	59.479	624.986	111330	1948	24.92	78.17	4,809.92	119881	50894	10.58		
17	68	0	121246	250000	0	779	155	4.26	547	128496	-1482	249986	1482	59.445	628.994	118399	2072	26.40	78.48	4,828.96	127492	51484	10.66		
18	69	0	129171	250000	0	829	171	4.68	565	120770	-1565	249985	1565	59.258	631.790	125927	2204	27.97	78.80	4,848.50	135599	52124	10.75		
19	70	0	137639	250000	0	881	187	5.13	577	112534	-1645	249985	1645	58.831	632.461	133953	2344	29.63	79.13	4,868.79	144241	52822	10.85		
20	71	0	146678	250000	0	938	203	5.78	600	103763	-1740	249984	1740	58.733	637.204	142501	2494	31.38	79.46	4,889.52	153445	53576	10.96	105799	132253
21	72	0	156775	250000	0	998	221	6.52	616	94414	-1834	249984	1834	58.429	640.228	151611	2653	33.24	79.81	4,910.91	163255	54396	11.08		
22	73	0	167610	250000	0	1061	239	7.35	621	84437	-1921	249984	1921	57.773	639.925	161335	2823	35.21	80.18	4,933.31	173725	55299	11.21		
23	74	0	179253	250000	0	1129	256	8.28	611	73772	-1996	249984	1996	56.689	635.444	171729	3005	37.30	80.56	4,957.18	184918	56307	11.36		
24	75	0	191789	250000	0	1202	272	9.34	582	62350	-2057	249985	2057	55.133	626.241	182861	3200	39.52	80.98	4,983.03	196905	57451	11.53		
25	76	0	205308	250000	0	1280	286	10.60	531	50092	-2097	249986	2097	53.070	611.866	194808	3409	41.86	81.44	5,011.41	209769	58763	11.73	140977	177907
26	77	0	219926	250000	0	1364	297	12.00	443	36901	-2104	249988	2104	50.253	589.261	207665	3634	44.34	81.96	5,093.37	225842	60300	11.84		
27	78	0	235782	265585	0	1454	303	13.60	492	36140	-2248	265572	2248	50.699	600.221	223594	3913	46.97	83.31	5,126.42	240787	62109	12.12		
28	79	0	252938	268835	0	1565	330	15.50	373	24079	-2268	268825	2268	48.285	584.999	238519	4174	49.76	83.89	5,159.61	256717	64036	12.41		
29	80	0	271324	284890	0	1670	337	17.60	422	23950	-2428	284879	2428	48.794	605.576	254290	4450	52.71	84.43	5,195.76	273846	66218	12.74		
30	81	0	291015	305566	0	1780	364	20.40	557	27328	-2702	305551	2702	51.265	653.350	271144	4745	55.83	84.99	5,231.96	292106	68535	13.10	192401	247392

Cols (3)-(5) are taken from a TIAA-CREF Life VUL illustration based on a hypothetical gross 8% investment return (before asset charges); the illustration included a disability rider whose charges are removed as negative premiums in Col. (1). The question explored in Cols. (6)-(24) is whether an alternative plan of investing in a stock mutual fund (SMF) would be better than buying the policy. To make the alternatives comparable, it is assumed each year that funds are withdrawn from the investment account, Col. (12) and/or Col. (22), and used to buy term life insurance sufficient to supply the difference between the death benefit of the life policy and value of the SMF, whose death benefit (fund value) would also be free of income tax at death. Each year funds are also deducted to pay taxes on dividend i and on long-term capital gains (average cost method) realized on necessary share liquidations at a 40% tax rate (35% federal maximum + 7.7% state, deductible in 35% maximum federal tax bracket, net 5%). TIAA-CREF's illustration includes a 0.29% annual asset charge for investment management and related expenses, but this could be 0.06% with its own stock fund. It is assumed that the mutual fund is invested in a Vanguard index fund with annual asset charges of 0.18% (.09% at \$100,000 and up). To equalize asset charges, 0.29% - 0.06%, or 0.23%, is deducted in Col. (19). The current dividend rate Vanguard's Index 500 is 1.73%, so 1.75% is used in Col. (18). It is assumed that the capital gains tax on any shares sold is paid one year after sale. The annual renewable term life insurance term costs in Col. (9) are TIAA's at the \$250,000 level in its preferred plus nonsmoker class, the same class illustrated in Cols. (3) to (5). Col (25) uses a marginal tax rate of 40% for calculating the tax on surrender of the VUL -- 35% federal plus 7.7% state deductible on federal. The rate assumed for surrender of the SMF is 20%, the federal LTCG rate of 15% + 7.25% state income tax deductible on federal tax. At age 82, not shown, the SMF in Col. (22) falls behind the TIAA cash value, indicating that if the qualified dividends maximum tax rate of 15% is removed, the life insurance option becomes better after 31 years. Cols. (25) and (26) show the effect of the VUL contingent tax liability; if the life policy is not held until death, the tax at 40% on the gain at surrender, as opposed to cashing in the mutual fund at a capital gains tax rate of 20%, makes the life policy a poor selection.

