Miscellaneous Observations on Life Insurance Including an Update to 2007 Paper on Variable Universal Life James H. Hunt, F.S.A January 2011

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I. What Kind of Term Life Insurance Should I Buy?

This simple question does not have a simple answer. About 1985, the author had the assignment of developing new term rates for Massachusetts Savings Bank Life Insurance (Mass SBLI), which remains an excellent source of term life insurance if available in your state: www.sbli.com. Virtually all term life sold then was Annual (or Yearly) Renewable Term – ART or YRT – in which the premium increases each year with age. ART is renewable automatically each year without evidence of insurability; in the early 1980s it was generally renewable to age 65 or 70. Since then the last renewal age for most insurers has increased to at least age 80 and often to age 95, not that you would want to renew that long. ART policies are almost always convertible without evidence of insurability to (much higher) level premium cash value policies – whole life, universal life and variable universal life – before some limiting age that varies widely, from age 65 to age 85. ART premium schedules are not guaranteed; insurers reserve the

right to increase future premiums, but not higher than contract maximums. ART buyers can reasonably assume that rate schedules will not be increased because: (1) life insurance mortality keeps improving; and, (2) increasing the premium more than the expected amount encourages those in best health to move to another insurer, leaving the original insurer with a worse, perhaps losing, block of business. The author in 25 years has not heard of any ART insurer that raised its rate schedules, but this does not mean none has taken place.

Since the early 1980's the term market has shifted almost entirely to guaranteed level premium policies for terms (usually) ranging from 10 years to 30 years, most often in five-year steps: 10 years, 15 years, etc. The shift was accelerated by the emergence of "quote services" that market term policies (and often non-life insurance) by toll-free telephone. Most ART is now sold by traditional whole life companies, their agents hoping to convert the policies to whole life's far higher commissions long before the last age for conversion. Quote services live off commissions as well and the higher the premium, the higher the dollars of commissions. This leads them to try to sell customers coverage for the longest period possible; of course, the same is true of any individual agent or broker.

It is easy to see the preference for "Txx" policies: level, guaranteed premiums for terms of xx years. The word "guaranteed" is enough to explain much of the popularity of Txx policies: buyers know they can afford what they are buying, and they know costs will not rise. It's simple enough to judge, for example, that if the kids are 4 and 5, 20-year term, T20, should get them through the critical period. The author two decades ago began to say to inquiring financial reporters that he had given up tilting against the windmill of Txx policies. Yet, here he is again, arguing that an ART/YRT policy might be better. At the least, what follows illustrates what every Txx buyer ought to factor into his or her purchasing decision.

We will compare a T20 policy to an ART policy. The reader can extend the implications of the analysis to other term periods. We will use the term rates of TIAA (tiaa-cref.org), a highly rated life insurer that is part of the giant company administering pensions for most higher education institutions and many non-profits in the United States. TIAA's ART rates are very low over 20 years or more, and we use them frequently in evaluating the risk portion of cash value policies – generally the excess of the death benefit over the cash value. We'll use the T20 rates of Banner Life, a major and competitive term life seller. What is clear is that over the selected term period for comparison, Txx will be significantly less costly. In the example in the table below, a \$250,000 ART policy for a male nonsmoker age 47 in best health, the T20 is 27% less expensive; the cost savings have a present value of \$2,136, when the present value of the ART premiums (not shown) is \$7,860. The important proviso in this comparison is the need to keep the T20 for the full term to achieve its full potential.

The main downside of a Txx policy is the risk of a significant medical problem arising during the term of the coverage. Most buyers will probably shrug their shoulders at this likelihood, feeling that life insurance will no longer be needed after the selected term. But to dramatize the risk, suppose our T20 buyer in the last year of coverage becomes seriously ill, perhaps fatally ill. Substantial medical expenses loom, perhaps institutional care not covered in full by health insurance and/or Medicare/Medicaid. Such needs, thought to be nil when the policy was bought, are no longer so; more commercially, there's a chance to make big money. The cost to renew the T20 policy soars from \$405 to \$12,025 in year 21, \$13,603 in year 22, and so forth. These costs could prove difficult to meet if death does not occur early in the illness. If our T20 buyer was careful enough to check to see that the T20 contract included the right to convert to a cash value policy without evidence of insurability *for the full term* of the T20 contract, costs to continue can be far lower, \$5,340 a year in the example.

In a sample of 25 T20 policies for issue age 50, 23 were convertible for the full 20 years. But in the same sample for issue age 51, 3 were convertible for 20 years; 18 were convertible to age 70 (19 years, not 20); 4 were convertible to age 69 or lower – 65 in the case of a Prudential T20. The message is: If buying a

Txx policy, make sure the policy is convertible for the whole term, and if it is not be sure you make a mental note, or better, of the terminating conversion date.

There is another downside to Txx. Note in Col. (5) in the table below that it takes 13 years, if money is worth 4%, for T20 to become less costly than ART. A lot can happen in that time. Perhaps, most likely, you might be persuaded to convert to a cash value policy. Divorce or death of a spouse might eliminate the need for coverage. You could lose your job shortly after buying a T20. These risks are likely low probability events, but worth keeping in mind when purchasing term life. On the other hand, T10's initial premiums are so close to ART premiums that one might ignore these risks.

Preferred Nonsmoker (2nd best)							
	(1)	(2) Donn or	(3)	(4)	(5)	(6) Dree) (el	
		Banner	Conver-		COI. (4)	Pres vai	
	ARI	120	sion Prem	less	Accum.	COI. (5)	
Year	Premium	Premium	at 67	Col. (2)	at 4%	at 4%	
1	279	405		126	131	126	
2	298	405		107	248	229	
3	318	405		87	348	309	
4	340	405		65	429	367	
5	358	405		47	496	407	
6	377	405		28	544	430	
7	397	405		8	575	437	
8	418	405		-13	584	427	
9	440	405		-35	571	401	
10	484	405		-79	512	346	
11	533	405		-128	399	259	
12	586	405		-181	227	142	
13	645	405		-240	-14	-8	
14	710	405		-305	-332	-191	
15	786	405		-381	-741	-411	
16	871	405		-466	-1255	-670	
17	965	405		-560	-1888	-969	
18	1069	405		-664	-2654	-1310	
19	1184	405		-779	-3570	-1695	
20	1334	405		-929	-4679	-2136	
21	1504	12025	5340	3836	-877	-385	
22	1695	13603	5340	3645	2879	1215	
23	1911	15785	5340	3429	6560	2662	

\$250,000 policy for Male Age 47 Preferred Nonsmoker (2nd best)

(1) T20 advantage at 67, \$4,679, discounted at 4% to Issue Date: \$2,136.

(2) T20 advantage at 68 if converted at 67, \$877, discounted at 4%: \$385.

(3) T20 disadvantage at 69 if converted at 67, \$2,879, discounted at 4%: \$1,215.

(4) T20 disadvantage at 70 if converted at 67, \$6,650, discounted at 4%: \$2,662.

The conversion premium of \$5,340 for year 21 and after is an uncertain estimate. It is Banner Life's lowest current, guaranteed level premium for lifetime coverage. Such a premium will change in future with changes in mortality and interest rates; no life insurer will guarantee such a premium 20 years in advance, of course. Premiums for coverage for periods shorter than a lifetime could be lower.

Just after compiling the above, the author was asked to evaluate a proposed conversion of a portion of an \$800,000 term life policy to a whole life policy. The client's term life policy was a 20-year guaranteed, level premium term, T20. We agreed that it might have been preferable to have bought an ART policy since he had overpaid for eight years. Moreover, in discussing the remainder of the existing T20, it turned out that if he could qualify in the same nonsmoker health class that his T20 has been issued in, he could buy T15 for a slightly lower premium that provided three additional years of coverage.

II. How to Negotiate a Better Cash Value Policy – Blending

For many years we have talked with financial reporters about the pros and cons of buying life insurance other than term life insurance. Our comments usually followed this style:

The default option for protecting one's family with life insurance ought to be term insurance because it's a competitive market that one can shop around in. Cash value policies are impossible for laypersons to penetrate – some call them "black boxes"- they are subject to high acquisition fees, and they can cost those who drop out, or "lapse," substantial losses. Based on the latest data found at soa.org, 26% of whole life policies are terminated in the first three policy years, 45% in the first 10 years, and 58% in the first 20 years. Drop-outs in the first three years lose virtually all the premiums paid with the loss of interest on those premiums sometimes more than what term life would have cost. Those who drop out after 10 years may get back the excess of total premiums over term costs, but without interest, which we define as a loss. One needs to keep a cash value policy at least 20 years to amortize the acquisition costs and produce a decent investment. Younger buyers – under 45 or so – will find that after 20 years their policies have developed taxable gains on surrender if they have been lucky enough to find a high-performing life insurer; accordingly, they will have to keep their policies until death to escape income taxation. In short, it's best to think of a cash value life insurance policy as a lifetime investment.

(The higher the policy size, the lower the lapse rates. For policy sizes \$200,000 to \$499,999, the data above show lapse rates of 18% for years 1-3, 37% for years 1-10, and 55% for years 1-20. At \$500,000 and up, lapse rates are about 10% lower than these.)

If willing to make such a lifetime commitment, we suggest that one should first maximize contributions to any tax-reducing retirement plan, such as 401-k, 403-b, and similar plans. (Roth IRAs are a close call because they do not reduce current federal and state income taxes and because a high-yielding whole life policy, if bought carefully, may pay higher interest than one's retirement options that are safe, i.e., have no market risk.) If these tax-reducing retirement accounts are maximized, the next step is to consider a long-term disability income (LTD) policy if not covered at work or otherwise. LTD is very much an upscale market, however, most of us relying on the disability benefits under Social Security that, like Social Security survivor benefits, can be substantial for those with young children.

Finally, for those who have taken care of tax-favored retirement accounts and considered LTD, cash value life insurance can make good sense. We further suggest this, however:

When buying a cash value policy, make sure that (a) the end of first year *surrender* value is at least half of (b) the first year's premium(s). Use the gap between (a) and (b) as a measure of the reasonableness of what you're willing to pay for the agent's services. Keep in mind that the agent (and his boss, the general agent or manager, will often make almost as much again in renewal commissions that often run through year ten.

It should be obvious that the 50% "rule" is rough; if one is paying \$100 a month, one can't expect the agent to reduce his income significantly; if one is paying \$1,000 a month or more, it's quite a different matter.

Blending can be very effective for a proposed buyer of a cash value policy. Most conventional whole life sales illustrations show a zero or near-zero first year surrender value. (Universal Life and Variable Universal Life operate with explicit surrender charges while Whole Life has implicit surrender charges. Thus with WL one sees a zero cash value in the illustration but UL and VUL show two columns of cash values, one with several names, depending on the life insurer's choice of terminology: Cash Value, Account Value, or Policy Value. Each of these is before application of any surrender charge; each represents the cash value that is invested. The column with the lower values, whatever its name, is the surrender value. The two columns converge in the year when surrender charge is zero.) If WL, you are probably looking at a unitary contract: one premium and one policy form, say a \$500,000 face amount with \$20,000 premiums. Commissions and sales charges on a garden variety WL like this might consume up to 85% of the first year's premium and up to 7.5% of premiums for years 2 to 10, and, of course, the life insurer has its own costs of the medical evaluation and other administrative expenses. Note that, roughly speaking, in year one, this WL insurer's "amount at risk" is not \$500,000 but \$500,000 less some fraction of the first premium that's left over, perhaps zero. (Note also that with reinvestment of dividends in paid-up additional insurance (PUAs), death benefits will rise in future.) If a cash value develops in year two, the insurer's amount at risk will be reduced by the cash value, and so forth in subsequent policy years. We could, if we wished, call these reducing amounts at risk "term insurance."

Using the \$500,000 example, there are normally three components of a blended policy, which the author refers to as a WL hybrid: (a) a base WL policy of, say, \$100,000, paying full commissions; (b) a one-year term (OYT) rider with different names for \$400,000, also producing full commissions but on the much lower dollar component of the total premium; and (c) a paid-up additions (PUA) rider in a premium amount that can be \$20,000 less the premium for (a) less that for (b). The PUA rider goes into the policy at a premium deduction of, say, 8%, with commissions of a bit less than half that to the agent; the savings come from component (c). For purposes of comparing the resulting *blended* or hybrid illustration to the original illustration, the premium should be kept the same, \$20,000; one matches the premium, then compares resulting death benefits and cash surrender values. Normally, this hybrid produces a level death benefit while a conventional WL proposal shows a rising benefit from PUAs; in this event, we suggest increasing the OYT rider such that the total death benefit is higher than the rising death benefit for about 12 or 13 years, roughly matching the full commission policy's death benefits over 20 years.

(The author has always raised questions as to why anyone needs a rising death benefit, the result of a level premium, dividend-paying conventional WL policy. One response would be to accommodate anticipated salary increases and/or inflation. But most everyone buying larger policies to protect a family ought to anticipate those events and buy more coverage now. Or, life insurance is needed with a present value sufficient, if death occurs shortly after purchase, to substitute for the lost future income; with each passing year, the remaining number of years until retirement is diminishing, and the future needed protection is either diminishing or at least not increasing, providing salary increases have been reasonably accounted for. If you don't buy this argument, the agent can probably arrange to allocate some of the PUA component to a rising death benefit.)

Blending with UL or VUL policies is perhaps simpler: simply reduce the base policy and add a one-year term rider. Again, keep the premiums the same. UL and VUL policies generally have a "target premium" for the base component up to which full commissions are paid; the commission percentage over that level can be low.

III. Policy Loans and the Interaction with Dividends

Much cash value life insurance is and has been sold with long-term projections showing substantial "taxfree withdrawals," usually in retirement, sometimes for college expenses for children. Apart from the question whether buyers who do not appreciate the power of compound interest are seduced by the possibility of large withdrawals out 20 and 30 years, little understanding may be conveyed in the sales process of how those withdrawals work. In universal life (UL) and variable universal life (VUL), illustrations generally assume that, first, withdrawals are taken up to tax basis (normally total premiums paid) followed by loans. (The fee for the withdrawal is usually a nominal \$25.) In whole life (WL), withdrawals can come from surrender of prior dividend purchases of paid-up additions (PUAs) or loans or both. Generally, one may not restore funds withdrawn from WL, so loans might come first for those who intend later on to repay them; also, PUAs, which are bought without any fee, can be the best part of a WL contract. It's the loan part that can be quite complex.

In WL, loans can be fixed rate (FLR), variable rate (VLR), or Direct Recognition (DR), sometimes called Conditional Recognition. With FLRs, which many existing WL policies in MetLife, Prudential and John Hancock carry, what you see is what you get. You might pay 5% or 6% or 8%, depending on the generation of the block of business (the older the block, the lower the rate). Borrowing on FLR policies has no effect on the policy values. (Sometimes the loan rate is stated as a lower percentage, such as 7.4%, but it must be paid in advance; 7.4% in advance is the arithmetic equivalent of 8.0% in arrears.)

Below we will discuss the notion of a "loan spread," which is the difference in percentage points between the loan rate and the "dividend interest rate," or DIR, the rate buried in a WL insurer's dividend formula that dictates how large or small the interest portion of the dividend will be. Mortality savings constitute the other major part of any WL dividend. If a WL insurer's guaranteed cash values are based on 4%, as many are, and it can pass through to policyholders investment earnings (after investment expenses) of 6%, its DIR, the interest portion of the dividend, will be 2% applied to the (roughly) cash value. (You can see the effect of steadily reducing DIRs among all WL insurers; a drop to 5.5% cuts the interest portion of the dividend by 25%.) The mortality portion is the difference between the mortality rate in the regulator's tables used for reserves, which is conservatively high, and the mortality rate being experienced currently, such difference applied to the "amount at risk" during the year, which is (roughly) the death benefit less the cash value. Because mortality has been constantly reducing, the mortality portion of dividends has been steady and improving. Not so, with the interest portion. E.g., in 1987, when I transferred an existing WL policy to a Northwestern Mutual Life (NML) policy, NML added 11.0% interest to cash values, its DIR for that year. (NML's highest DIR ever, and for only one year, was 11.25% in 1986.) NML's DIR rate for 2011 is 6.0%, so the dividend factor for interest since then has decreased from 7.0% in 1987 (11.0 - 4.0) to 2.0, a decrease of 71%. Still, 6% is far better than the bank downtown pays, is free of market risks, and is not taxable if the policy is held until death, which it will be. As noted below, since 1991 NML has improved the mortality portion of its dividend formulas five times.

If, say, your mature MetLife policy has an 8% fixed rate loan (FLR), and it is passing through a dividend interest rate (DIR) of 6%, your loan "spread" is 2%. If you have multiple policies, try to use the spread to determine which one to borrow from. But a low (or no) spread does not mean it's better to borrow from the policy rather than from say, a Home Equity Line. One would expect a FLR insurer's DIR to be a bit higher for an 8% loan rate than for a 6% loan rate, others things equal, because a portion of the 6%

block's assets would have been invested in below-market loans when corporate bonds were paying, say, 8%.

In the case of WL loans other than FLRs, some life insurers use variable loan rates (VLRs) and others Direct Recognition (DR) Loans. For example, Massachusetts Mutual Life (MML), an excellent life insurer, uses VLRs in what we have seen, which we can compare to NML's DR loans as a means of elucidating the differences. VLRs are indexed to Corporate Bond Averages (CBAs), originally called Moody's, now found in a monthly publication of Mergent's. This index is of current, long-term corporate bond yields to maturity averaged across the four major investment-grade-rated categories – no "junk bonds." In early 1982, that index topped out at 16.13%, it has since decreased to 5.05% in August, the latest reading being 5.15%. Laws governing VLRs provide that VLR loan rates may change on a policy's anniversary if the index would cause the prior year's loan rate to change more than 0.50%. That this system of a reference rate can provide a rather volatile loan rate can be seen in those who have MML February anniversaries: the rate in 2008 was 5.78%, 7.65% in 2009, and 5.68% in 2010. Chances look 50/50 at this writing for a decrease to about 5.15% in 2011.

MML is now paying via its 2009 dividend formula something on the order of 6.3%; we have to guess. This translates to a negative, or highly favorable, loan spread at the moment. (One who cannot pay the premium for 2010 might have judged that it's a winning move to borrow it rather than use dividends to pay the premium. An external source of borrowing could be better, however.) For much of the last 25 years, MML's loan rate has been lower than its dividend rate (DIR), which has meant favorable terms for policyholders who have borrowed. Will this relationship – DIR higher than VLR or even about the same – last indefinitely? It seems unlikely. Since the 1980s, interest rates on new, long-term corporate bonds and mortgages life that insurers invest in have been declining. But WL insurers usually pay dividends based on the aggregate income from their whole portfolios, built up over many years, and for most of this time the "new money rate" has been lower than the portfolio rate. A visual metaphor may help. If you're climbing a mountain with your backpack on a long rope behind you, the backpack will be lower than you are until you get over the top and head down the other side for a while. So it is likely to be with VLRs and MML; sooner or later the VLR rate will exceed the portfolio rate of income; it's difficult to invest safely for yields higher than CBA rates because a company has investment expenses and it has to set aside some of its investment income in surplus, for the future safety of its policyholders.

Northwestern Mutual Life (NML) pioneered Direct Recognition in the early 1980s when interest rates spiked. Policyholders were borrowing at 5% or 6% or 8% and reinvesting in short-term instruments yielding more, sometimes much more, than the loan cost. NML and others had to invest at, say, 6% in a policy loan rather than at, say, 15% in a corporate bond, obviously hurting all policyholders who did not wise up to the game. It received regulatory approval to offer policyholders a choice of higher dividends for switching to a DR loan, and virtually all of its non-loaned policyholders accepted. If in 1990 one who switched wanted to borrow, the effective loan rate would have been 10.0%, the DIR in that year, plus a spread of (the author does not recall) 0.75%, say, or an effective loan rate of 10.75%. Thus, that policyholder would have earned 10% on the portion of his cash value not borrowed and 9.25% on the portion borrowed. Over the years, NML has lowered the spread to 0.55%. In its dividend declaration for 2011, NML says that the dividend interest rate for unborrowed funds will be 6.00% (reduced from 6.15% in 2010) while the interest rate credited to borrowed funds will be whatever the loan rate is less 0.55%. Thus, if one has an 8% loan rate at NML, the interest rate credited to borrowed funds will be 7.45%; the dividend will be higher than if no loan had occurred. In this example, money borrowed costs the give-up rate of 6.0% plus 0.55%, or 6.55%.

It is obvious that NML's rate has a significant advantage for NML policyholders generally; it will never lend money at a rate less than it is paying out. (It may lend at a rate lower than it could get in the market, but that market rate will come with default risk and market risk; a policy loan is 100% free of risk.) The

MML borrower is favored now but will he or she still be favored twenty years down the road if or when CBA averages have risen? Another Direct Recognition advantage for borrowers is that one is cushioned against loan rate volatility resulting from interest rate spikes; a WL insurer's DIR will rise slowly toward any higher plateau of interest rates not only due to the lag in portfolio interest rates but also because life insurers try to change dividend schedules as infrequently as possible.

One can speak favorably of the net rates to borrow, i.e., the spreads. An NML policyholder who needs to borrow \$100,000, say, will pay a net loan cost of just \$550 a year, less than \$50 a month. One should not jump to the conclusion, however, that one could reinvest a net-cost loan of 0.55% at 1% and make money. There's some subtlety to this point; that borrower is giving up \$6,000 of income a year had the money been left unborrowed.

One of our amusing moments this past year came when a client explained that a Hartford Life agent trying to (impolitely) rip off his Guardian policy had argued that Hartford's VUL allowed borrowing at a rate of 0.25% when Guardian charged 8%. Of course this is not at all amusing if this person had talked others into giving up a high-yielding WL policy for a high cost VUL.

Turning now to UL and VUL borrowing, there are similarities to NML's DR practice. In general, most UL and VUL insurers are shareholder-owned, and have an incentive not to pass through to existing policyholders improvement in the terms of an existing contract. We would be surprised to find a 20-year old UL policy with an 8% borrowing rate, reasonable when UL insurers were illustrating their policies, with a comparable rate, now reduced to a lower rate when the insurer is paying just 4% on cash values, its minimum probably. That's a highly unfavorable 4% spread. It's probably the case, however, that more UL policies operate on a 2% spread. Thus, if the loan rate is 6% and the current interest rate is 4.5% on unborrowed funds, the rate credited to the borrowed part of the cash value would 4%.

Variable Universal Life (VUL) loans operate similarly to UL loans. Critical, however, is to realize that if your investment account is earning 10% and you borrow, the insurer liquidates enough of your investment account to cover the loan and transfers it to the Fixed Account. The Fixed Account earns what ever it earns, and the spread becomes the difference between the loan rate and the Fixed Account rate. It is common and a major sales point with VULs to offer low cost loans after a certain period of time, such as ten years, or sometimes to limit such loans to the excess of the cash value over total premiums paid – the latter are sometimes called "preferred loans." Many VUL insurers offer "wash loans" or "no net-cost loans" after, say, ten years: the loan rate is offset by the same earnings rate being credited to the Fixed Account. We have never seen "no-net-cost loans" guaranteed due to a worry that the I.R.S. might deem such loans sham transactions. Since managing loans has certain costs, one might assume that life insurers offering no-net cost loans will cover their costs in expense charges allocated to all policies. Even though no company we know of guarantees wash loans, it is probably reasonable to assume they will be available when later one wishes to borrow; otherwise, litigation will be invited.

TIAA's VUL that we favor – see the 2007 paper and comments below --does not feature no-net-cost loans; instead, in the first ten policy years the loan spread is 0.65%; after ten years, it reduces to 0.20%.

Whether no-net-cost or low-net-cost loans are a feature of your VUL, the right to borrow income-tax-free at such low costs is unarguably an attractive feature. But income-tax-free means that for most buyers the policy must be held until death to avoid incurring taxable gains, taxable at ordinary income rates, not capital gains rates, if the policy is surrendered or allowed to lapse. The basic tax rule is that if the surrender value (before deducting any loan) exceeds total premiums paid (less any withdrawals or less any dividends not used to buy more life insurance), the excess is taxable income. Older buyers may never reach a taxable gain situation if policy expense charges and mortality charges exceed investment returns.

Perhaps most importantly, UL and VUL buyers need to know the rule that we have never seen in print in such insurers' illustrations, even when the illustrations include loans:

Never pay a premium when a UL or VUL loan is outstanding. Be sure that any payments are designated as loan repayments.

There are two reasons for this rule. First, almost all UL and VUL contracts have a premium load (deduction from any premium paid) while loan repayments are credited to the investment account 100 cents on the dollar. Second, most loans have a cost, the net cost we've discussed above; reducing the loan reduces this cost. Only in the rare case of a no-net-cost loan and a contract with a zero premium load would it not matter whether one paid a premium or a loan payment, a combination we've never seen.

With a VUL, one needs to think about the effect of paying down an outstanding loan: the repayment frees up funds that could be allocated from the Fixed Account that has been backing the loan to any of the variable accounts. It's worth noting that when a VUL policyholder borrows and funds are transferred from one or more of the variable accounts, the cost of the loan will be what the variable account(s) earns on an annual basis during the time the loan is outstanding plus the net cost of the loan. Conversely, if the market falls, the cost of the loan could be negative, i.e., you saved money by borrowing, assuming you used the borrowed funds wisely.

Another general rule for ULs and VULs follows. The standard sales illustration when showing "tax-free withdrawals," whether for college or for retirement, is withdrawals first, then loans. This makes sense when the loans are permanent or semi-permanent and have a net cost, which normally would exceed the withdrawal fee of \$25. The downside to a withdrawal, which of course reduces both death benefit and cash value, is that if you wish to restore any of the funds withdrawn, you will have to pay a premium load. And, in the case of a level death benefit UL or VUL, paying the premium does not restore the death benefit, as would be the case with a loan repayment.

Policy loan interest is for federal income tax purposes personal interest, like interest on credit cards and auto loans, and it is not tax-deductible for those who itemize. Whether policy loan interest can be deductible as Investment Interest if one borrowed from a life policy, directly invested the funds, and kept a paper trail, is a good question we do not know the answer to. This is a tricky tax area; the author had to amend back tax returns when he learned the hard way just how tax rules deal with investment interest, as it interacts with qualified dividends.

Finally, in the present investment climate in late 2010, a Home Equity Loan, tax-deductible on loans of \$100,000 or less if one itemizes, should be less costly than a policy loan, even if no-net-cost.

IV. What Should I Do with My Old Whole Life Policy?

We see many WL illustrations for policies that have been in force for a long time, say for 20 or 30 years. Often our clients ask whether they should keep them or cash them in. Most of these policies, especially if held in mutual life insurers such as Northwestern, Mass Mutual, New York Life, and Guardian (to name some larger ones) or if held in the Closed Blocks of Prudential, MetLife, John Hancock and Axa Equitable (to name some larger ones), have taxable gains on surrender, often large taxable gains. (Closed Blocks arise out of the change in corporate structure from a mutual insurer to a shareholder-owned insurer. Existing policies at date of "demutualization" are walled off in the Closed Block, which is managed by the new company for a fee and which is under regulatory supervision. Most Closed Block policies evaluate quite well.) Accordingly, most of these policies need to be kept until death to avoid income taxes. But as is often the case, one should focus less on the tax situation and more on the nature

of the investment one is dealing with. Life insurance policyholders, however, seem to view their policies' premiums as costs, not investments, and especially in the current investment climate, such a view can be misplaced. It is typically the case in 2010 that from one anniversary to the next, a decent WL policy's cash value and premium will increase at a much faster, income-tax-free rate, without considering the value of the death protection, than will other safe investments. (In order to get a comparable return on a tax-free bond, for example, you must take "market risk." You will have to buy such a bond with a maturity stretching out many years, and you will take a loss if interest rates rise or the municipal market spooks, as is now somewhat the case with the questionable finances of many cities and towns.) Accordingly, the holder of a mature WL policy should view it as an investment, often with returns superior to other safe investments, and decide carefully how to handle it in future.

The general rule with WL policies that are approaching or beyond the 10th policy year, when renewal commissions often end, is that they are good enough to keep. If one is thinking about buying a new WL policy, it could be advantageous to transfer an old WL or UL policy that evaluates in mediocre fashion into the new one, but this strategy needs expert help. Obviously, such a transfer is unlikely to work unless the insured person remains insurable in the same rating class, or better.

Many WL policies have been sold in past years based on illustrations showing that after X years premiums could be paid from policy funds. This sort of sales pitch caters to the notion that one's premiums represent a burden to be limited. The scheme goes by various names: Vanish Premium, Premium Offset, Short Pay. Quite often the term "paid-up" is improperly mentioned, but this term has a particular meaning in whole life insurance. WL policies have cash values, of course, but the traditional term for them is "non-forfeiture values:" if you stop paying premiums, you do not "forfeit" the reserves that have been building up from level premiums for an increasing risk with age. Instead you have three non-forfeiture options: a cash surrender value (CSV), a reduced paid-up policy (RPU), or extended term. Extended term is rarely a good choice: it provides a full benefit for as many years and days as the cash surrender value will support, but the pricing of that option assumes higher mortality. The term "paid-up" should be reserved for the RPU option: a guaranteed lower death benefit for the whole of life. With reinvestment of RPU dividends in paid-up additions, the dividend option of choice in WL generally, both cash values and death benefits will grow in future.

The future policy year at which policy values may be used to pay future premiums is highly sensitive to a WL insurer's rate of return on investments, which as we've seen above has been decreasing for 25 years. A rule of thumb the author has used for years is that for every 1% decrease in a WL insurer's dividend interest rate, two more years of payments are required. Northwestern Mutual Life in 1991 used 10% in its Short Pay illustrations; now it pays 6%, which if the rule remains accurate implies an extra eight years of payments. Premiums that vanished at time of sale have reappeared, like Banquo's ghost, at this later date.

It is understandable that those sold on having a limited number of years to pay will feel cheated when they learn that many more years' payments are required. But the reality is that despite the disappointment, the policy is a far better one now than when it was bought. Not only are the high sales costs in the past, making the policy much more efficient prospectively, but the lowering of interest rates over this long period parallels a reduction in inflation, which means that cash values and death benefits have more buying power now. Had inflation remained high, you might have completed your out-ofpocket payments on the policy, but the face amount and cash values would be worth a lot less in real terms. Whenever the author sees an illustration showing premiums paid from policy values at some future date, he comments as follows:

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 (PUAs), 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 RPU dividends are reinvested in PUAs, the death benefits and cash values will be higher than if policy values are used to pay future premiums -- lower death benefits in the near term must mean higher death benefits in the long term if no more cash payments are made in either case. RPU should be elected only on or just after the policy anniversary when the policy-year dividend is earned and credited.

Implicit in the idea above is that if a WL policy is worth keeping, it may be worth continuing on a premium-paying investment that is likely to be better than other uses of one's money.

V. Dealing with an Old Whole Life Policy That Has a Loan

Although we discussed this situation at some length above, the matter can be revisited here. In general, the reader should ponder this question: Is there a better investment in the world, safety of principal and freedom from annual taxes considered, than paying off one's WL policy loan? Whether 5%, 6%, 8% or variable loan rate, the return on your money is far greater than leaving it in the bank or in money market funds or the like, whose returns are far lower in 2010 and usually generate taxable income. You can always borrow the money back if you need it; the only negative – barring the failure of the life insurer -- is that it may take a few days to get the money.

But some WL policyholders will not be in a position to pay off the loan, and their policies may have substantial taxable gains if surrendered. If in poor health and if the full death benefit is needed to protect family members, there's no good answer. But if in good health and either life insurance is not needed or can be obtained via a low-cost term life policy, placing a high-yielding WL policy on reduced paid-up status (RPU), if handled carefully, can be an excellent idea. The policy's cash value is used to buy a guaranteed paid-up whole life policy for a reduced death benefit. Then, premiums that you have been paying can be applied toward the policy loan interest and principal; eventually the loan may be paid off. Make any change to RPU only on or shortly after the policy anniversary when the dividend is credited.

The strategy noted is, however, not a contractual right; the life insurer must permit the existing loan to be carried over to the RPU policy. If you ask for a loaned WL policy with a taxable gain on surrender to be placed on RPU status, you will incur a taxable gain. On the other hand, you do have the right to pay off the loan, elect RPU, then re-borrow the money. For this reason, we think most WL insurers will accommodate a request to move the loan to the RPU policy. Earlier this year, we helped a policyholder in New York Life make this change, but it was not easy – we had to get a NYL actuary involved. Our client was delighted.

RPU policies, held until death, escape income taxation under long-standing federal law. They can be excellent investments otherwise. For example, the author's Northwestern WL policy, now on RPU status, had a cash value on December 31, 2009 of \$76,049; a year later, the cash value had increased to \$80,025, an increase of 5.22% in a policy year in which NML's dividend interest rate was 6.15%. The policy's death benefit in that year was \$99,752. The author was 77 when that year started. The extra amount that would have been paid on death, the risk amount, cost less than 1% of the 6.15% NML dividend rate. The increase was free of annual tax, tax-free if held until death, and free of market risk.

The author frequently mentions that he holds his NML policy as a partial hedge against the nursing home.

VI. Miscellaneous Topics

A. Choice of Dividend Option

A Whole Life policy usually has four dividend options: Cash, Reduce Premium, Dividend Accumulations (or Dividends held at Interest) and Dividend Additions (paid-up additional insurance, or PUAs). The latter option uses each dividend to buy a guaranteed paid-up increment to the policy's face amount. PUAs themselves pay dividends. Assuming you do not need the dividend to help pay the premium, you should always choose PUAs for at least four reasons: (1) 100% of the dividend is used to buy PUAs, i.e., there is no premium deduction with dividend additions as there is with PUAs bought with rider premiums. Immediately on purchase, 100% of the dividend becomes an available PUA cash value and, of course, there is a layer of additional death protection added. (2) The interest rate in the PUA dividend formula is usually the same as that in the regular dividend formula, and it has in recent decades significantly exceeded that paid on Dividend Accumulations, sometimes by two or three percentage points. (3) Interest on Dividend Accumulations, if more than \$10, is reported as taxable interest. Over the years the PUA choice should give you both a higher cash value than the Dividend Accumulations value plus a layer of higher benefits paid if you die. (4) The PUA's life insurance benefit is priced at standard (or better) rates, even if your health has gotten worse since the policy was issued.

B. Making Changes in Your Whole Life Policy that Affect Values

Dividends on a whole life policy are earned and credited on the policy anniversary, usually the Policy Date. Unless the dividend is trivial, it is wise to make any changes, such as surrender of the policy or election of reduced paid-up, as of or shortly after the anniversary. Similarly, if your dividends are left in an account called Accumulated Dividends or Dividends Held at Interest, the interest is added as of the anniversary.

C. Tax-free Transfers of Life Insurance Policies and Annuities

It is not well-known that life insurance policies and annuity contracts may be transferred tax-free from insurer to insurer. Such transfers are called Section 1035 transfers, referring to the I.R.S. code that authorizes them. They are analogous to like-kind swaps of assets: a 1930 Packard is traded tax-free for a 1920 Buggati with the same value. There are rules of course.

The main rule is that the tax basis in a life policy may be transferred to another life policy or to an annuity, but an annuity may be transferred only to another annuity. And transfers must go from insurer to insurer, and may not pass through your hands (as can a Traditional IRA if reinvested in 60 days). Naturally, in the case of a life policy, you must establish insurability with the new company.

Insurers, as far as we know, will not transfer a zero value. If your UL or VUL policy has run out of money, for example, and you've received a notice that gives you time to send enough money to keep it going, you might wish to do so to preserve the tax basis so that it may be transferred. Make sure in responding to such a notice that you do in fact create an adequate surrender value.

It is routine for us to call the attention of our clients holding (usually) VUL policies with large losses – generally the excess of premiums paid over the surrender value – to the possibility of transferring the loss to an annuity with the result that future annuity earnings up to the loss transferred will become income-tax-free. This is the only way to use a loss in a life policy other than transferring it to another life policy, but in the latter case, the loss will have no effect if the new policy is held until death.

Vanguard at 1-800-522-5555 is the best source of variable annuities, and it should at least be used as a reference point if one is searching for a fixed annuity. Our colleague Glenn Daily (glenndaily.com) long ago enunciated the rule when shopping for fixed annuities:

Never buy a fixed annuity whose surrender charge period exceeds the guarantee period of the interest rate offered.

The reason is that if you are trapped in an annuity with a long surrender charge period, the insurer can stick you with a poor renewal rate after the period of the guarantee. There are all kinds of annuity sellers out there we wouldn't have anything to do with.

In this discussion of fixed annuities we are talking about "bank accounts" run through life insurers for the tax deferral of interest earned, which becomes taxable when the earnings are taken in cash or at death, unlike the tax situation of a life policy at death. All annuities, and the surrender value of life policies, may be annuitized: a periodic income for life or a shorter period, the classic definition of an annuity.

If you ever choose to annuitize any life insurance cash value or annuity value, keep in mind the right to transfer that value to another life insurer. Do not accept whatever your insurer offers without checking the market. Do an internet search on single premium immediate annuities to find a website that can show you how much periodic income you can receive for the sum of money you are thinking of annuitizing.

D. Life Insurance Riders to Avoid

Typical riders cover disability, accidental death, children, and spouses. We encourage buying disability coverage – Waiver of Premium (WP) in the case of WL, Waiver of Monthly Deductions (WMD) in the case of UL and VUL – for buyers who do not have group long-term disability at work or otherwise. The extra premiums run to age 60 or 65, and the benefits usually depend on total and permanent disablement, defined usually as the inability for the first two years of disability to do the usual tasks of one's occupation; thereafter, one must be unable to do any work for which he or she is fitted by training and experience.

Accidental Death Benefit (ADB) riders aren't sold much anymore. In general they are not good value, but if you plan to sky-dive, etc, we will not dissuade you. The risk of accidental death increases with age, so if you've had the rider a long time maybe it's best to keep it.

Children riders (CR) are sold in units of coverage, such as \$5,000 and \$10,000, regardless of the number of children. They pay off in the event of the death of a child, including children born after the policy is issued, typically until the youngest child is age 25; coverage may stop for the parents at age 65. If you are still paying premiums on a CR despite having no qualifying children, better call the company to cancel. We do not favor CRs, but we have found that whether one buys or not, the matter is quite personal, not financial.

Spouse riders, which usually provide term life insurance with costs increasing with age, are almost always more costly than a term policy bought for oneself.

E. Are Guaranteed Values Important?

Whether WL, UL, VUL or a variation on any of them, any cash value policy contains guarantees: a minimum interest rate, a schedule of maximum mortality costs, and either explicitly or implicitly, maximum expense charges. We often hear concerns from clients, particularly with UL and VUL policies, to the effect that based on guaranteed values the policy will terminate in (often) just a few years. This

concern is occasionally expressed by someone buying a new policy. And we respond by saying that columns of guaranteed values are usually meaningless.

WL policies adjust costs of a guaranteed premium and death benefit policy via dividends. The WL expense element of a dividend is usually small; dividends are mainly from two factors: (a) adjustments of the guaranteed interest rate, often 4% in the last few decades, to what the insurers earn and can pass through to policyholders; and, (b) adjustments of the guaranteed mortality charges built into the reserve tables to reflect actual death claims. One does not need to be an actuary or economist to know that a 4% (or even 3%) interest guarantee has meaning when short term interest rates are near-zero. On the other hand, the guaranteed mortality maximums are far above what's normally needed to cover claims; mortality rates have been steadily decreasing over many decades, especially for men since the 1950s. Insurance commissioners from time to time – every 20 years roughly -- reduce mortality rates in the reserve tables, but those changes have no effect on the huge numbers of outstanding policies.

In UL and VUL policies, mortality guarantees are incorporated in the tables of Maximum Cost of Insurance (COI) rates within the contracts. Accordingly, illustrations based on guaranteed values have little meaning for most people. The commissioners have mandated in certain illustrations that three sets of future values be shown: (a) guaranteed values; (b) non-guaranteed values based on the current WL dividend schedule or based on current UL interest rates (often the minimum now) and current COI rates; and, (c) half way between (a) and (b). The problem with (c) is that it implicitly assumes death rates will rise substantially in future when all trends are down. So here is our advice:

If you want a realistic view of the future of your existing policy or of one you're thinking of buying, ask that the illustration be run based on current mortality rates and an interest rate of your choosing, which may be the minimum.

It is common for dividend-paying WL insurers that are passing through interest rates of, say, 6% or more to suggest that policyowners ask for illustrations using an interest rate of, say, 1% lower than is actually being paid. VUL illustrations are based on hypothetical interest rates of your choosing.

The commissioners' "half way between" mandate has always irked the author inasmuch as it has offered little help to the recipients. But the commissioners may have the last word if interest rates keep slipping down toward, then below, guaranteed interest rates. In that event, dividend-paying WL insurers may have to cut the mortality part of dividends. And UL and VUL insurers may have to increase their schedules of current COI rates toward the maximums. Especially for UL and VUL policies, such action could invite litigation. This dire outlook does not appear a current threat.

For the very pessimistic to worry about, major Japanese insurers failed in recent decades when they were unable to earn enough interest to cover their guaranteed interest rates. This was during the "lost decade" there when interest rates were near-zero. (Indeed, there was at least a short period when a corporation wishing to invest funds safely had to pay the Japanese Treasury a fee to hold the money, a negative interest rate.) Life insurance policies can remain in force literally a hundred years or more for a policy written on a new-born child.

F. Settlement Dividends, Manipulated Dividend Schedules and Gimmicky UL Policies

A few WL companies pay Settlement Dividends (SDs), which are payable only on death or surrender. The author has not seen any of these policies among new issues in recent years; presumably they are dying out. SDs generally start to be added to policies after 15 years, reaching a maximum (as a percentage of the cash value) after 20 years. Sun Life Canada, formerly a mutual life insurer, for many

years had an SD that was credited after the 20th year. Obviously, care should be taken in surrendering or transferring any policy with a SD approaching the 20th year.

More conventional WL policies, as noted in the lapse-support discussion above, may manipulate dividend schedules so that within the first 20 years a few years may have above average returns. These can be difficult to detect unless one inspects "first differences" in total cash values (TCVs): e.g., subtract the 17th TCV from the 16th, the 18th TCV from the 17th, and so forth; the pattern of differences should be smooth in the absence of such manipulation; continue at least through the 21st year.

Some older universal life policies were highly manipulated to provide (often) very large guaranteed bonuses for policies kept 20 years, the bonuses starting in year 16 or so sometimes. Conseco seems to keep popping up with such contracts; it acquired life insurers in prior years that had gimmicky polices. The layperson could probably spot these by taking first differences, as above, in a current illustration. A couple of years ago, a fee-only planning firm asked us to review such a Conseco policy with bonuses approaching \$10,000. Conseco at that time was "on the ropes" financially, as were other insurers in 2008 and 2009, so we pointed out the bonanza that awaited the firm's client and made sure it communicated to the client that the risk that Conseco would fail was his. We were advised that he accepted the risk, and Conseco has survived, indeed has secured additional financing within the last year or two.

With UL or VUL policies, the pattern of surrender charges (SCs) can produce very large returns for a short period of years. Perhaps the best example is Riversource (American Express) whose VULs, of which we see a lot, have a ten-year SC period that is level for five years, then drops 20% a year. RS VULs approaching the 5th year, or in the 2^{nd} set of five years, can be well worth holding. We have seen what might be called "cliff" SC patterns, which have modest decreases until the last year of the SC, then drop to zero in one fell swoop in the last year. We know that no one reads his or her contract, but it can pay to make an exception in order to look at the table of SCs.

G. How to Manipulate a Universal Life or Variable Universal Life if in Poor Health

Most ULs and VULs have a choice of two death benefit patterns: Option A (or Option 1), a level death benefit, or Option B (or Option 2) an increasing death benefit; in the latter, the death benefit is the original face amount – called the Specified Amount usually – plus the cash value (before any surrender charge). In the latter case, one is paying for a level amount at risk, the original face amount. If you remain in good health you don't want to continue this option until you're dead at 95; the costs will be painful. If your health fails, however, you'll probably wish to maintain the full Option B coverage.

Option A, however, with a level death benefit and, probably, an increasing cash value from continued premium payments, is a situation that presents itself in which one may manipulate the policy to one's advantage. The easy way to demonstrate this is to point out that if the policyowner stopped paying premiums and banked them, then died, the total death benefit would be the level insurance amount from the policy plus the bank account. The actuarial explanation is that with cash values increasing the "amount at risk is decreasing" with a level death benefit and a rising cash value. Premiums are flexible in UL and VUL, including zero if there is a positive surrender value; stopping premiums will obviously reduce the rate of growth of the cash value or cause it to decrease, expanding the risk amount. If the risk amount has become a bargain due to poor health, one would like to maximize the bargain. Of course, this can be a tricky strategy if one defies the odds and lives too long; premiums may have to be resumed at far higher levels to keep coverage in force.

Several WL insurers, and fuddy-duddy actuaries like the author, have long considered UL and VUL policies to be actuarially unsound. They probably are, but those who buy these forms of coverage seldom

understand how they work. Indeed, the author would have to say that the majority of UL and VUL buyers do not know that their policies will not (usually) lapse if premiums are stopped.

H. Life Insurance for Members of the U.S. Armed Forces

The author has been involved several times on the periphery of investigations into the sale of life insurance to military personnel. Such sales have often been made in conjunction with associations set up ostensibly to help military persons with various administrative matters, particularly when abroad. The author has no knowledge whether these services are worthwhile. But he has reviewed over several years at least a dozen in-force policies resulting from these sales, and with one exception has recommended against continuing them. The exception was an Air Force bomber pilot, still flying, who would be rated up in securing individual life insurance.

There are at least two government-sponsored organizations that help military people and also offer high value life insurance policies: Army and Air Force Mutual Aid Association and Navy Mutual Aid. The few cash value policies we have reviewed seemed to be better than the other excellent source of coverage for some military personnel, USAA Life.

I. Long Term Care Coverage

We are from time to time queried about long term care (LTC) policies. We do not review such policies. For someone seeking such protection, we say, "If I had to buy it, I'd go to Northwestern Mutual Life." Neither the author nor his wife has an LTC policy, however. This is, of course, a bit of a gamble. It is also a gamble to invest substantial amounts in coverage that may never be needed in a market in which insurers do not, indeed cannot, guarantee premiums into one's advanced old age. There was some comfort, possibly misplaced, in having two of us in very good health when the time came to buy as we retired. The author has also been swayed by his knowledge of the problems of the business, principally LTC sellers who, either knowingly or stupidly, were "low-balling" premiums to gain business in the knowledge they could later be raised. Also, we have life insurance policies that can be borrowed against to pay for two or three years of nursing home expenses.

As we write, a life insurance client mentions that she is looking at a big premium increase from MetLife, which just exited the business of selling new LTC policies. Also, we read of premiums increases of up to 40% by another major insurer. It is a difficult market. Insurers have counted on gains from policy terminations – premiums are scheduled to be level, with increasing reserves that are (usually) forfeited on termination – but the "lapse rates" have not been as high as planned on. And the steadily decreasing interest rates have lowered investment returns from LTC reserves.

We read that only Northwestern and New York Life have not raised premiums; of course those companies' premiums were not competitive in the marketplace when the policies were bought, for obviously sound reasons.

The author is not an LTC expert. These remarks are in the "for what it's worth" category.

J. Cigar smokers

Life insurers have routinely distinguished between smokers and nonsmokers since the early 1980s with some insurers beginning earlier than that. Insured mortality data is now replete with observations that smokers have death rates a bit more than double nonsmokers in their 40s and 50s. Long ago life insurers learned that a question on the application was insufficient to identify smokers; testing was needed, and it is now routine. Although cigars are not as lethal, nicotine tests do not distinguish them from cigarettes.

Life insurers have different approaches to dealing with cigar smokers – some smoke them all the time, others occasionally, perhaps only the "celebratory cigar."

We suggest that any cigar smoker thinking of buying life insurance give them up at least a month, preferably longer, before applying for a policy. The same would be true for an insured person rated a smoker at policy issue who has given up cigarettes, but not the occasional cigar, and wants to ask his insurer about switching his policy to nonsmoker status.

VII. Updates to the 2007 Paper Variable Universal Life: Worth Buying Now?

A. Tax Laws for 2011 and Later

As we write in late December, 2010, federal income tax breaks for Qualified Dividends and long-term capital gains will be continued for at least two years. Readers should have a good reason to buy Variable Universal Life (VUL) policies in lieu of term life insurance and low-cost mutual funds or, if you maintain a brokerage account, Exchange Traded Funds (ETFs). The maximum tax rate on either source of income is 15%. It is not well-known that taxpayers in the 15% or lower marginal tax bracket pay 0% on either sort of income. The 15% bracket reaches to about \$42,000 of gross income for single filers, double that for joint filers, higher if dependents or age 65 and over.

The phase-out of income tax deductions and exemptions for higher incomes, referred to on Page 1, is complete.

B. The Decline in Interest Rates and Dividends

Toward the end of the first paragraph on page 1, and later in the paper, we commented on Northwestern Mutual Life's (NML's) 7.5% "dividend interest rate" in its 2008 dividend formula. That rate has decreased to 6.0% for 2011, as interest rates in the economy have continued a 30-year downtrend from the 1981 peak. Life insurers like NML generally have a positive cash flow - incoming premiums on policies sold in decades past plus investment income and maturing corporate bonds exceed death claims and surrenders. Such insurers have therefore the flexibility to invest in long-term bonds and mortgages whose interest rates have remained much higher than short-term, near-zero interest rates we hear about in 2010. (The long-term corporate bond yield on new money, averaged over the four main investment grades in the most recent month published, was 5.15%.) Accordingly, these insurers invest much of their cash flow in long-term investments, and most pass through all the earnings from their huge portfolios, acquired over two or three decades, to their policyholders after setting aside surplus funds (safety funds). It takes but a little imagination to visualize the following: the average interest rate that can be passed through to policyholders will be higher than the rate that this year's cash flow can be invested at when long-term rates are in a downtrend. Accordingly, we expect the NML rate, and those of its competitors, to continue to decline. Eventually, long-term rates will bottom out - won't they? Years later, the dividend rate will bottom out, and if the future trend is rising corporate bond rates, the dividend rate will be a lagging one. This last took place in the 1980s when universal life (UL) companies were able to illustrate their policies with double-digit interest rates; meanwhile, the dividend-paying whole life (WL) companies were bound to their the lagging rates, and huge UL replacements of WL policies took place, all to the great future detriment of those lured into these ill-considered replacements. If memory serves, nearly 50% of new business by premiums in the mid-1980s came from UL replacements at the worst of this sorry episode.

In connection with NML's Nov 1, 2010 announcement of its dividend schedule for 2011, the author, a policyholder, received an NML document, "Dividends Are More Than Just Interest." In three pie charts,

the document makes the point that since 1991, when about 75% of NML's illustrated dividends came from excess interest – the excess of the interest rate in the dividend formula over the rate, 4% often used to calculate guaranteed cash values—the percentage from excess interest has decreased to 40%. The pass-through of excess mortality assumptions in the construction of cash values is now the bigger half of 2011 dividends. But this statistic is somewhat a mathematical truism; what is worth remarking and remembering is the following NML statement:

Although the Dividend Scale Interest Rate has dropped from 9.25% in 1992 to 6.00% in 2011, there have been mortality improvements in the 1994, 1997, 2002, 2006, and 2010 dividend scales. In some cases, these mortality improvements have more than offset Dividend Scale Interest Rate decreases as can be seen in a higher actual total cash value compared to what was originally illustrated.

The example shows a \$2 million, level death benefit policy with a \$23,134 premium issued to a male nonsmoker age 50 in 1992 in best class. Despite the reductions in the dividend interest rate, the 2011 cash value will be \$580,352 compared with \$570,352 illustrated in 1992. Although the example is likely not a typical sale made in 1992, it nonetheless is a dramatic way of making a point, the importance of which can't be overestimated: if you are going to buy a cash value life insurance policy, buy it from a mutual life insurer. If there is a shareholder-owned life insurer out there that has passed through the substantial mortality improvements since 1992 to existing policyholders, we would like to hear about it.

All life insurers are passing through lower investment earnings. Many UL policies that lured buyers in the 1980s and early 1990s with double-digit or near-double-digit interest rates are now paying the guaranteed rate, often 4%, or just above it. Life insurers will be under pressure if the Japan Scenario, as the author has called it many times in certain evaluations, visits the United States. That is a long period of persistently low investment returns – Japan's "lost decade" has stretched on more than a decade – that can result in an inability of life insurers to earn enough on their investments to cover the guaranteed interest rates in their contracts. Several major Japanese insurers had to be taken over by authorities for this reason. In the U.S., this phenomenon is one concomitant of what the Federal Reserve worries about when it is assessing the risk of deflation. There may be peril ahead for U.S. life insurers if the 30-year downtrend in interest rates continues into the future too many years.

Policyholders who bought cash value policies in prior years, particularly whole life policies from mutual life insurers that were sold as self-sustaining after so many years of premiums payments – premiums would be paid from policy values – should be cautious in reacting to messages from their insurers advising them every so often that more years of cash premiums would be required. The high interest rates that allowed these projections at the policy issue dates implied high inflation, while inflation is now much lower. The death benefit in dollars is now more valuable in terms of what it will buy; the high front-end charges in the first year are now paid; the current investment returns, what the author derives in his evaluations, are not only typically much higher than inflation but far above what one can earn in safe investments like money market funds and bank CDs, both of which generate investment income.

C. Mortality & Expense Charges in Variable Universal Life

While it is true that M&E asset charges – insurers like to call them charges for mortality and expense risks, while the author likes to call them profit charges – are lower with some VUL insurers, the manipulation of M&E charges discussed in Item VI on page 4 seems to have increased. Historically, the M&E charge has been a level percentage charge over the years applied to the Invested Accounts (cash values before any surrender charge), often reducing somewhat in later policy durations. If a VUL insurer "telescopes" future M&E charges into the first ten years, as seems to be increasingly popular, leaving nominal dollar or even zero charges for subsequent years, the practice sets up what is called "lapse-

supported pricing," meaning that a portion of the profits in the early years that arise out of the substantially increased M&E charges, augmented often by gains from high surrender charges from those who terminate their policies, can be invested and held for the benefit of those who continue their polices, i.e., don't *lapse* them. Lapse (or termination.) rates in cash value life insurance are high; probably 40% or more of buyers are gone in the first ten policy years. One use of the "lapse fund" not passed on to shareholders is to lower cost of insurance (COI) rates in later policy years below normal COI rates in conventional universal life (UL) and VUL policies. This actuarial gamesmanship can be profitable for both insurer and policyowner, but only if the latter is informed about how it works. Consider the effect of a conspicuous disclosure at time of a sale, however, "You should know that the policy is designed in such a way that very heavy charges in the first ten years can be to your benefit provided you are 100% sure of keeping the policy long enough, usually for life, in order to benefit from the losses that those who can't continue will suffer." Might the buyer wonder how heavy is "very heavy"?

Lapse-supported pricing in a milder form has always been a feature of traditional whole life insurance for many life insurers. It is normally used over the first 20 years to boost 20-year performance studies, but regulations that do not apply to VULs limit its use in whole life and universal life. Perhaps the most unusual example of VUL lapse support during 2010 was a Principal VUL sold to a teacher who, when she sent it to me for review, had suffered through the high first-year sales costs and was well into the 3rd policy year. The policy had a Return of Cost of Insurance (COI) rider that gave back in years 19-23 all the COI charges of earlier years. Despite that potential gain in those years, the policy evaluated poorly – the illustration was run at a hypothetical earnings rate of 4%, and the ROR for the following 20 years was under 1%, a spread of more than 3%, which is too much for someone who remains insurable in the same classification. She was shown how much better she'd be if she transferred to a TIAA VUL.

D. Should I Buy Whole Life or Variable Universal Life?

We are frequently asked this question by those considering an *investment* in life insurance. After inquiring if the questioner has taken full advantage of tax-reducing retirement accounts available at work or otherwise, such as 401-ks and the like, we reply in the following way. Most folks probably have a vague notion that a portion of investible assets should be in equities (stocks, mainly) and the remainder in safer places. Because federal income tax laws give tax breaks to direct investment in most equities, as noted in A. above, it makes sense to have one's equity allocation in low-cost mutual funds and one's non-equity allocation (corporate bonds and real estate, e.g.) in whole life (WL) insurance. Not only is bond fund income taxable each year in full, as is income from bank CDs, but bond funds, other than very short-term funds, are subject to market risk: if interest rates rise, bond fund asset values will fall. WL insurers generally invest long-term for higher returns yet guarantee your cash values will be available 100 cents on the dollar, i.e., are free of market risk. (The choice between term insurance and municipal bond funds that are income-tax-free federally, but not necessarily at the state level, is a close one.)

TIAA's VUL, however, which is paying 5% in its Fixed Account as we write and which has not so far reduced the 5% rate as interest rates have declined, allows flexibility to keep one's options open. Suppose you had \$10,000 annually to invest in life insurance and equities. You might invest \$5,000 in equities directly via one or more indexed accounts, now that tax breaks for Qualified Dividends and long-term capital gains have been continued for two years, and invest the other \$5,000 in a TIAA VUL, allocating 100% of the TIAA cash value to the Fixed Account or bond account. If you arrange for enough life insurance to accommodate \$10,000 annual premiums, and if tax laws change to remove or reduce these tax benefits, some or all of the direct equity allocation could be added to subsequent VUL premiums. Perhaps the outside equity accounts could be sold before the tax breaks expire and the money moved into TIAA's VUL in the accounts of your choice. By the way, TIAA's own investment accounts are considerably less costly than its available accounts.

E. Equity-indexed Universal Life (EIUL)

This form of life insurance was the fastest growing in the first six months of 2010, up 45% from the prior year, compared with 23% for whole life, which nonetheless reached its highest market share (by premiums) since 1998. (Life insurance sales dropped off the table in 2009.) VUL sales, by contrast, increased only 2%. EIUL's popularity is self-evident – the "eat your cake and have it as well" sales appeal noted on Page 6 of the 2007 paper. We have no reason to change recommendations given in 2007.

Any EIUL has a cap on the percentage that is added, often yearly, as an increment to the guaranteed rate of 1% or 2%, from the growth of the reference index. The cap is subject to change prospectively by the insurer at its discretion. Since writing in 2007 that "One would not wish to leave [this critical component] to the discretion of EIUL sellers, we have seen two instances when the cap has been lowered, and we have reviewed fewer than a dozen EIULs in the last three years.

More interesting is the lot of those EIUL buyers who had the bad luck to have their indexed increments slashed substantially by the cap when the stock market zoomed from early 2009 to 2010. Between March 2009 and March 2010, to take the most dramatic case, the S&P 500 average increased 51%. A 12% cap would have laid waste to the long-term performance of anyone unfortunate to have had substantial investment values at stake in an EIUL at that time. Such an extreme example is probably unlikely to occur again; nevertheless, the example nicely illustrates the point we made in 2007.

As we move into 2011, the forecast S&P 500 dividend rate that is excluded from the index increment is 1.75% -- see indexarb.com/dividendyieldSortedsp.html. But U.S. corporations are sitting on a lot of cash, so we would expect that percentage to grow in future, although if the S&P 500 average itself grows the dividend portion may remain around 1.75%.

For what it's worth, we can now update the table at page 7; the S&P 500 closed the year at 1257.64.

Standard & Poors 500 Stock Index	Average Annual Rates of Return
Period of Years	Rates of Return
1960 to 2010	6 34 %
1965 to 2010	5.97
1970 to 2010	6.75
1975 to 2010	7.82
1980 to 2010	7.70
1985 to 2010	7.40
1990 to 2010	6.91
1995 to 2010	4.87
2000 to 2010	- 0.49
2005 to 2010	0.15

In the 1990s we saw lots of VUL illustrations run at 12%, the maximum allowed under SEC rules; today we rarely see 10%, and often see 6% or even 4%. Looking at the table above and adding, say, 2% for dividends that in a VUL do get credited to one's cash value, even a 10% VUL illustration rate is a bit on the high side. For EIULs, a 7% hypothetical rate might be fair if it is based on historical experience that takes into account the operation of the cap.

Our long-term colleague, Glenn Daily (glenndaily.com), was asked to review an EIUL sold three years ago to the wife of a Ph.D engineer. The illustration assumed a 75% Participation Rate and a 9% illustration rate, implying that the S&P 500 would have to rise about 14% a year, including dividends, to

match the illustration. The major portion of the damage done did not, however, lie in the fanciful assumptions – the bad results would have occurred anyway -- but in the fact that the couple was persuaded based on phony numbers to transfer the cash value from a high-yielding whole life policy in one of the top mutual life insurers.

F. Choice of VUL Investment Accounts

At page 4 of the 2007 paper, we discussed briefly the multiplicity of VUL investment account choices, suggesting that VUL buyers might help themselves by choosing available *indexed* accounts. In evaluating hundreds of VULs in recent years, we have formed the impression that it is a rare buyer who has a firm understanding of how his cash values are invested. Presumably, these choices are usually made by the selling agents, possibly wielding their "financial planning" credentials. It is common for us to comment that the choices of managed accounts – non-indexed accounts -- look expensive to us. It is quite common for there to be 8 or 10 selected accounts. Although the tone was probably uncalled for, the following comments made to a customer in December 2009 got the desired result – he immediately changed allocations:

And while on this subject, may I indulge myself in asking whose idea it was to invest in 23 investment accounts? That far surpasses my previous record of 15 accounts. I don't advise on such choices except to draw attention to the indexed accounts and to ask in your case: Is it not likely that spreading yourself across so many accounts will produce an average return at a high cost of management? I'd like to see [insurance company] or its agent find some academic support for so recommending. Your idea? I'll send an article, of which there are many, re the wisdom of indexed accounts, or read David Swensen's book – he manages Yale's endowment.

And here's the all-time record sought before typing the above but not found then:

I am astonished to see that your cash values are allocated among about 75 investment accounts, which I would argue assures you an average return at an above average cost. I would be surprised to see any academic research that indicates this to be a good idea. I am not an investment advisor, but articles I read suggest one does best to buy low-cost indexed accounts. Alas, Riversource's S&P 500 index account is not low cost at 0.50% a year, but it's the lowest available.

Vanguard, the low cost mutual fund leader because it is effectively owned by those who do business there, similar to mutual life insurers, has recently lowered the minimum amounts required to qualify for its "Admiral shares," which have significantly lower asset charges. We said in 2007 that Vanguard's Index 500 fund cost 0.18% of funds invested each year, reducing to 0.09% if \$100,000 or more invested. The \$100,000 amount to qualify for Admiral status is now \$10,000 in the Index 500 fund, where the annual asset charge is just 0.07%. (Vanguard has a nautical theme: its main telephone number is 800-662-7447, which translates to "on b[oard] ship.")

With Money Market investment accounts now paying a hair above 0%, those holding portions of their assets in such accounts should consider moving the funds to the Fixed Account, which may pay 4% or more. There are limits, however, on movement of money in and out of the Fixed Account. For example, once money is transferred to the Fixed Account, only a portion may transfer to a variable accounts within a certain time period. It's important to learn the particulars for your own VUL Fixed Account before transferring or investing any money in it. One can understand why by observing that money market accounts, always an investment option, now pay near-zero interest rates. Funds in the Fixed Account must be relatively stable for insurers to take the risk of investing in longer maturities for higher income.

G. Miscellaneous

At page 2, we referred to TIAA's very low stock index variable account costing 0.06%. That is now 0.09%, and TIAA illustrations based on its own variable account asset charges now average 0.52%, up from 0.32% previously. When assets under management dropped precipitously in 2008-2009, the staff expenses of managing such accounts remained steady; i.e., they increased as a percentage of lowered assets managed. The increases were not unexpected. But now that the market has recovered most of its losses, will TIAA's charges go down? Probably not. We might call this the Dunkin' Donuts effect. Decades ago when the author was driving around looking for work, coffee and sugar prices had spiked, and so had Dunkin's prices. When these commodities fell back to normal prices, did Dunkin's prices return to previous levels?

At page 3 we said that we did not have TIAA's software, but that has changed. Accordingly, where frequently relevant, we add to our VUL evaluations a TIAA competitive illustration page, matching premiums and death benefits as closely as possible so that cash surrender values may be compared.

TIAA's VUL for most buyers requires a \$250,000 face amount minimum; we did not realize in 2007 that the minimum reduces to \$100,000 at age 55 and up.