Longevity FINANCIAL CONSULTING

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LONG-TERM CARELESS?

An analysis of long-term care insurance policies with the goal of finding a better value-for-money solution

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1. The Problem with Long-Term Care

"It's not what you don't know that'll hurt you it's what you do know, that just ain't so!" - *Mark Twain*

When you check out long-term care insurance, there are three things that you get to "know" pretty quickly.

1. The majority of people are likely to need long-term care
2. The cost is already high and will likely go higher
3. And so everyone should have a long-term care policy…and the sooner the better

Based on our analysis, Mark Twain would have a field day on this one! We'll concede the first two items, but we think the conclusion that a long-term care ("LTC") policy solves the problem for everyone….just "ain't so". We will show that for a significant proportion of the population, LTC policies may not be the best solution. In some cases they may actually be poor value for money and still leave the policyholder on-the-hook for significant financial risk. Even worse, what people "do know" (in the Mark Twain context) is that they're paying a lot of money for their LTC policy and so they assume they are covered for all likely expenses and can safely tuck the policy away and turn their attention elsewhere. We challenge the view that the conventional LTC policy is the right approach across the board. It may be suitable and appropriate for many people. But our goal is to explain other solutions for LTC needs, examine where you get the best value-for-money, and show how you can figure out which solution may work best for you.

Often the reason many people end up with the wrong answer is that they start with the wrong question! In our opinion, the right starting point for long-term care is "What's the coverage I need?" before jumping into detailed (or maybe not-so-detailed) analysis of which is the best policy.

"Standard LTC policies are generally not good value for money"

Our analysis focuses on three key questions:

1. What coverage is needed and which types of policy meet those needs?
2. How to figure out the value-for-money for any specific policy?
3. How does your personal longevity impact the answers to those first two questions?

The analysis behind the answers is complex. Our belief is that not only customers but also many independent advisors lack essential tools to compare different types of policy, or even different policies of the same type. We hope that our research can provide a useful step in the right direction.

2. What Coverage Do You Need?

The ideal policy from the client perspective would provide a benefit as soon as you become disabled or in need of care. It would cover the entire amount of the cost, and then provide coverage for as long as you need it, possibly for your entire lifetime. And all of this at a reasonable price! In reality, this entire package could be very expensive, and in practice no insurer offers this level of cover. So the logical next step is to look at what you might actually need. We believe there are three risks to consider.

First, what's your financial exposure if your coverage period ends but you still need the benefit. About 20% of claims for people in their early 60s and 10% of those in their early 80s would run past six years if the policy benefits continued that long. And up to half of those typically might run at least another four years. So any policy that limits benefits to a maximum of four or six years leaves a significant potential financial liability with the client. As an example, we estimate that for coverage that pays out a maximum of (say) $300,000 over a four year period for a 60-year-old, there's about a 5% chance that the disability/assistance need will still exist ten years after the policy benefits have run out. That implies an additional financial cost of $750,000 over that extra decade. Yes, it's a low probability, but that is one of the main reasons to have insurance: to make sure that low probability but high impact financial costs don't bankrupt you.

Second, what's the appropriate level of coverage? This is the main focus of most LTC sales literature and commentary, and is certainly a key issue for any client. The level of premium is generally proportional to the benefits (the more you pay, the more you get) so the question of what is the appropriate level of coverage is for each individual to decide. We don't claim to add value to that personal decision, but later in this research we do aim to throw some light on whether the premiums paid represent good value for money.

Third, what hoops do you have to jump through (at least figuratively) before receiving any benefits? Most standard policies have waiting periods before any benefits can be claimed, and generally list conditions that have to be certified by a medical professional before payments commence. While these are reasonable provisions from the viewpoint of the insurer to keep costs down and reduce the impact of fraudulent or marginal claims, for the buyer they introduce an extra level of complexity and uncertainty.

3. Are There Policy Alternatives?

The LTC policy provides the industry "standard" approach, but the goal of this research is to identify and analyze some other approaches that may meet some of these goals better, and with better value than the standard approach. At the outset, we stress that there's no "silver bullet" approach that is best for everyone. But we believe that many people may be much better off by considering alternatives that meet their financial needs.
So what are these alternatives?

One is a variation on the LTC theme: the hybrid that is primarily a life insurance policy with an LTC benefit linked to it (there are also annuity policy variations of this concept). If you need LTC care the coverage is typically much higher in dollar terms than the death benefit. But if you never claim the LTC benefits, your heirs will eventually get the death benefit. Hybrid policies have some advocates, generally because the policyholder (or heirs) will eventually get some payments, which is not the case for standard LTC coverage. But anecdotally, they are not popular among those who advocate "pure" LTC policies as more closely meeting client needs and as better value for money. We'll test that claim later!

The second is longevity insurance. This is an annuity that begins payment at an advanced age (known as “vesting age, typically 80 or 85), and then pays the annuity for the remainder of your life. The only condition you need to meet is actually achieving that advanced age. If you die before then, then no payments are made. Longevity insurance is a relatively recent development in the U.S., and hardly offered elsewhere in the world. Its biggest strength is also linked to its biggest weakness: for those who make it to the vesting age the payout should be very significant compared to the original premium, but for those who don’t, there is no payout. It is true insurance on the financial risk of a long life.

We compare selected examples of these three types of coverage. First we’ll look at how well they each meet the ideal coverage needs as outlined above, and in the subsequent section, we’ll see how each policy stacks up in terms of value for money. With the assistance of Kiplinger’s Retirement Report, we selected representative policies for each of the three types from leading providers, and requested quotes for a 60-year-old male in normal health. For ease of reference, let’s just call him Charlie.

Exhibit 1: Summary of Key Policy Elements

	LTC	Hybrid LTC/Life	Longevity insurance
Premium	Annual, may increase	One-time, up front	One-time, up-front
Underwriting needed	Yes	Yes	No
Waiting period before benefits	Yes	Yes	No
Payments start	After waiting period, regardless of age	After waiting period, regardless of age	At vesting age, 85 in this example
Payments continue for	Claim period, up to maximum benefit	Claim period, up to maximum benefit	Lifetime
Is some payout guaranteed?	No (pays only if you have a claim)	Yes (death benefit will pay, even if no LTC claim)	No (pays only if you reach vesting age)
Is payout generally tax-free?	Yes	Yes	No
If surrendered, do you get any money back?	No	Yes (the death benefit has a surrender value)	No

Source: Longevity Financial Consulting LLC, 2012.   Note: waiting periods typically apply to facility care, not home care.

None of these three has all the characteristics of the ideal policy we mentioned earlier: adequate coverage, limited waiting period or conditions, and lifetime payout. But as we’ll show, some individuals may be significantly better off staying away from the standard LTC approach, while for others LTC may be a suitable choice.

4. Do You REALLY Need Long Term Care Insurance?

Often cited in sales literature or the press is that there is a good chance that retirees will need long-term care at some point in their lives. The government's clearinghouse for long-term care information notes that about 70 percent of people over age 65 will require some type of long-term care services during their lifetime. Research by Conning & Company estimates that number at 60%. Our own estimates are consistent with this: we'd estimate that our 60 year-old Charlie has about a 2/3 chance of needing long-term care benefits at some time in his life.

But before Charlie makes a decision on his LTC coverage, here are some other numbers hiding "inside" that 2/3 chance.

The probability of needing LTC benefits before age 70 is relatively low; we estimate the chance that Charlie will need LTC benefits before age 70 is under 5%. After age 70, his chance of needing that care start to go up sharply. The peak "claiming period" is the twenty years from age 72 till 92. The probability that Charlie will need to claim benefits in that timeframe is about 50%, accounting for most of the 2/3 chance we noted earlier that Charlie would need LTC.

One item that doesn't always figure prominently in LTC sales literature is that the most likely reason Charlie would not need LTC is that he dies first. This is best illustrated by looking at Charlie's chance of needing LTC in his 90s. We estimate the chance he'll make his first LTC claim after age 92 to be only about 10%. That's not because he'll be super-healthy then, it's just that the chance of 60 year-old Charlie being alive on his 93rd birthday is under 15%. Note also that the length of any claim that Charlie does make during his 90s is likely to be materially shorter than one made in his 70s or 80s as there's a high chance at that age of his dying relatively soon after the claim starts. So other than getting our readers depressed (there's a reason actuaries call these "morbidity tables"!) what can we learn from these numbers about the coverage needs for LTC?

There are three quite distinct "insurable events" buried inside Charlie's LTC needs. And not all of them are met effectively by standard LTC coverage.

A. <u>Pre-retirement</u> (which we'll stretch a bit to the late 60s). Charlie has a very low chance of needing benefits, but if he does, then his claim period needs may be quite long and the risk of financial ruin is material if his needs extend past a standard four or six year LTC maximum.

B. <u>Mid-retirement</u> (let's call this the 70s and 80s). Charlie has a high chance of needing benefits: we mentioned above the 50% probability of claiming in this peak period. The average length of a claim in this age range is about eighteen months, but there may be a 10 to 20% chance that the claim goes much longer than the typical maximum benefit period (four or six years). So there's still some risk of financial ruin.

C. <u>Late-retirement</u> (90s and above). Charlie has a low chance of needing benefits as the odds are against him getting to those ages. Claims are less likely to be extended due to the mortality risk. So the risk of financial ruin is still present but is relatively low.

So we'd say Charlie has two different types of LTC risk he needs to consider. The first is how to protect against the high-probability event of needing some coverage in mid and late retirement, and the second is how to protect against the low probability but financially dangerous chance of needing extended coverage after his LTC policy would max out. For the first question, the key issue is whether LTC policies deliver good value for money. For the second, the issues are how to get the coverage at all, and if that's possible, is this good value for money? We will answer these questions in later sections.

5. How Do The Three Policy Approaches Measure Up?

The LTC policy certainly covers the high-probability event that Charlie makes a claim, probably in his 70s or 80s. The average claim, lasting typically 18 months, is well within the typical maximum benefit period. But Charlie is still exposed to the low-probability but financially dangerous risk of having a claim that goes well beyond the capped benefit period.

The Hybrid LTC/life policy has the same characteristics with its LTC component: coverage of the average need, but exposure to financial ruin for an extended disability. But it has two additional pluses in its favor. First, with its upfront premium, Charlie isn't exposed to the risk of escalating annual premiums. Second, the death benefit means that there will be a payout at some point on this policy, unlike the LTC policy where there's no such assurance.

The Longevity Insurance policy can provide the payments needed for an extended claim; once the annuity starts paying, it keeps going for the rest of Charlie's life. And there's no requirement to meet any medical conditions regarding disability. The negative is that Charlie has to reach the vesting age (85 in our example) or he gets nothing.

So he's totally exposed to the risk that he may have a LTC need before age 85. Lastly, longevity insurance does not have the same tax advantages as the other policies. While LTC and death benefits are generally tax-free, most of the payment amount for the longevity insurance annuities is taxed as income. The proportion of the payment deemed to be repayment of principal is tax-free, and that proportion depends on age, but is typically under 20%. So the story so far is that none of these policies solve Charlie's problems on its own. But Charlie should not give up. In the next section we'll analyze the value-for-money of each one, and then show how there are practical solutions that can fill the gaps in his needs.

6. Value for Money Analysis (Money Worth Ratio)

It's not easy comparing the various benefits and costs even across similar policies from different insurance companies. It gets even more complex when trying to assess one type of policy against another. But there is a simple answer to this complex problem. It's called the Money Worth Ratio ("MWR"). Used in academic and actuarial studies, the MWR calculates the present value of the future benefits of a policy, and then divides this number by the present value of all the premiums you pay. So Money Worth Ratio is just "benefits/cost". If the MWR is 1 then benefits are worth the same as cost, so you could say theoretically this represents fair value. MWR lower than 1 means the benefits are lower than cost, and the policy is less of a good deal for the client, and likewise getting an MWR above 1 represents a better deal.

In practice, insurance companies build in their fees and costs into the premiums and this will lower the MWR. So typical MWRs of fairly priced policies may end up in the range of 0.80 to 0.95. Effectively, there's a 5 to 20% built-in margin for issuers to cover commissions and other costs.

The drawback for Charlie (and for most clients and advisors) is that working out the MWR is not as simple as sitting down with your pencil and calculator and poring over the policy quote. The MWR calculation of present values must include probability estimates of mortality and morbidity (in English, the probability you may die or get sick at any given age) as well as interest rate discount factors. Sellers of these policies do not include MWR information in their literature, which you may decide is not surprising after you look at our conclusions.

While Charlie may not be able to calculate MWR, we can. In this analysis we have used current mortality tables and have developed our own morbidity statistics based on available information from industry sources. We stress that this analysis includes both estimates and assumptions and should be seen as subject to margins of error. However, we believe it passes tests of reasonableness and practicality. In particular, because we use the same assumptions for mortality, morbidity and discount rates across all policies tested, the MWR provides a consistent approach to the value-for-money when comparing values relative to each other.

It's worth noting that even for companies offering LTC there are not yet standardized tables of morbidity; the Society of Actuaries is still working towards that goal. The data available to each company is proprietary, the market and the actual experience of claims tends to change over time, and the likely major claims from LTC are still in the future, given the recent sales growth for these policies and the demographics of our aging population. All these factors reinforce the uncertainty for the insurance companies who write these policies, certainly compared to writing life insurance policies where mortality statistics are well documented and change only slowly.

The logical approach for any company in a market where the eventual profit margins are uncertain is to widen those margins to protect themselves and provide a margin for error. In this case, that would imply reducing the MWR by increasing the cost to customers for a given level of benefit (in English: higher premiums).

So…the envelope please!

We have used the following MWR scale when judging value-for-money for each policy:

- MWR under 0.50: this is a bad deal for the customer
- MWR between 0.5 and 0.65: poor value
- MWR between 0.65 and 0.80: marginal value, but may be acceptable
- MWR between 0.80 and 0.95: this represents fair value including insurance company costs
- MWR between 0.95 and 1.10: this is a good deal
- MWR above 1.10: this is exceptional value

And for Charlie, a 60 year-old man in average health, the MWRs for our selected policies are:

- Hybrid LTC/Life 0.87
- Longevity insurance 0.70
- LTC 0.51

So the standard LTC policy trails the pack, at least in this one example. Why, and what does that mean for all those of us who aren't 60 year-old men in average health?

7. Understanding Money Worth Ratios

Let's start with why the Hybrid LTC/Life policy comes out on top, and in fact is the only one that shows as fair value in this example. One reason lies in the payout probabilities. For the other two policies there's some chance that the policy will never pay back a dime and the probabilities of this effectively reduce the numerator of their MWR. For LTC, Charlie may never qualify for a claim, and for longevity insurance, if Charlie doesn't make it to 85, there's no payout. With the hybrid policy, Charlie (or his estate) will get paid. Even if he never makes a claim on his LTC, eventually the death benefit will pay. That fact pulls up the probability adjusted MWR of a policy including a death benefit.

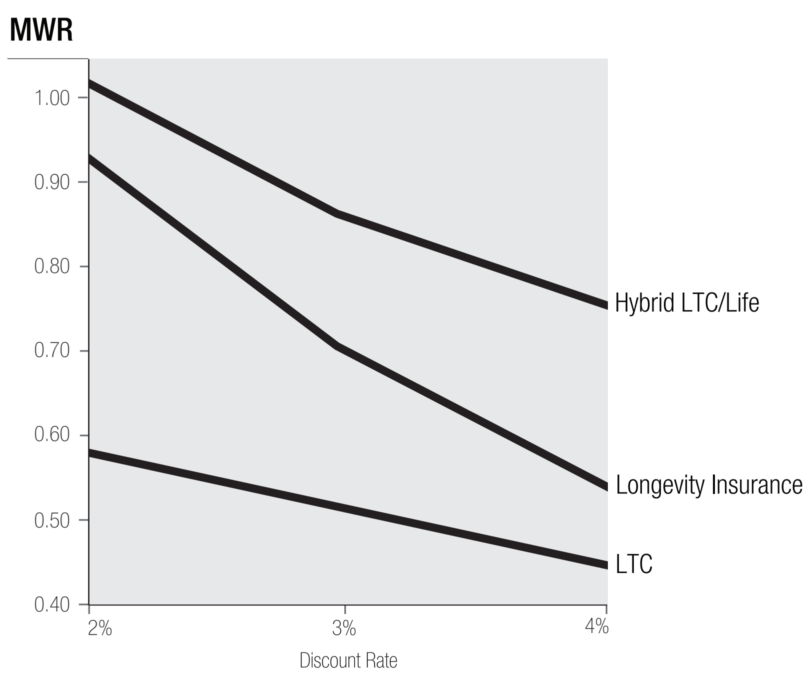
For those still interested in a standard LTC policy, another possibility is a policy with an uncapped lifetime benefit period. Many issuers have stopped selling these policies, probably because the extra premium they have to charge to cover this extended benefit period proves hard to swallow for buyers already suffering from sticker-shock on the annual premium. However, the issuer of the LTC policy we analyzed is one of the few that still offer a lifetime benefit period. Our estimate of the MWR for that "uncapped" policy is 0.52, similar to the 0.51 for the comparable capped benefit policy, and it does cover the risk of really extended claims that can cause financial ruin. You may also be able to find an uncapped lifetime benefit Hybrid LTC/Life policy.

However, according to the American Association for Long Term Care Insurance ("AALTC", the LTC industry association), less than 10% of LTC policies sold have lifetime benefits. Close to 80% have benefit periods capped at five years or less.

What makes the MWR tick? There are three key elements and we've already discussed two (mortality and morbidity). The third element is the interest rate at which future payments are discounted to present values. Because of the lengthy term of these policies and today's low bond yields, these present values and hence the MWRs are quite sensitive to changes in the discount rate assumption. For our calculations, we've used 3%, which is consistent with 30-year U.S. Treasury yields at time of writing. Exhibit 2 shows the impact on MWRs if that discount rate assumption is moved up or down by 1%. Note that it doesn't change the ranking of the three types of policy, but it is clear that the LTC policy is less sensitive to those changes than the other two. Intuitively this makes sense: the most likely future claim period for Charlie for the LTC policy is in 15-25 years' time. But the longevity insurance policy will only start to pay out in 25 years' time, so on average its payout period will be further in the future.

Exhibit 2: MWR Changes Due to Discount Rate Moves

(MWR for 60 year male)



Source: Longevity Financial Consulting LLC, 2012

So what does this mean for all of us who aren't Charlie? That includes those older or younger, women, and those who aren't in average health. We haven't yet completed our analysis on broadening the age or gender categories but preliminary work suggests that while the MWRs change depending on personal specifics, the broad conclusions on relative value for money hold for both men and women in the 50 to 70 year age range. (There's more to come in our future research on this topic).

But what makes a big difference is your longevity expectation: do your health and lifestyle factors suggest you have a materially longer or shorter life expectancy for your age and gender? As you'll see in the section on Longevity Impact, when we say this makes a big difference, we mean it. Not just on the MWR "value-for-money" but on what strategy is right for you. And the good news is that unlike MWR, you can fairly easily estimate this factor yourself. It's your very own "inside information".

8. Longevity Impact

In our opinion, your own longevity (estimated life expectancy) is the most important factor in the decision on what type of coverage you need, and understanding whether or not you're getting a bargain.

The first thing to understand is that the impact of longevity works in 180 degree opposite directions when considering LTC against Longevity Insurance. If you are in great shape due to health and lifestyle, with a life expectancy way above average, then your chance of enjoying many annuity payments on a longevity insurance policy is high.

In effect, the MWR of your policy increases substantially because embedded in the numerator of that MWR calculation is the probability of you receiving each annuity payment. But for the LTC policy, your MWR goes down, for similar reasons: the chance of you making a claim is lower due to your good health. Similarly, for those in poor health, the MWR of longevity insurance drops, while that of LTC increases.

This is why insurance companies typically ask for plenty of medical and lifestyle details before issuing an LTC policy. If they don't, they're at risk of selling a policy to someone who knows or suspects they may be highly likely to be sick or disabled in the near future. On the other hand the only criterion for taking out a longevity insurance policy is the ability to write a check for the premium. The less healthy you are, the better the insurance company likes it!

The second thing to know is that you can make a practical estimate of how far your life expectancy may differ from the average for your age and gender, and that piece of "inside information" gives you a real edge in evaluating different coverage approaches. That personalized estimate of your variance from average life expectancy can be used to adjust your chronological age to estimate what we call your LongevitAge℠. You'll find a more detailed description of this concept on our website at http://www.longevityfc.com/LONGEVITAGE.html, along with the LongevitAge test, a short and anonymous online quiz that can give you a reasonable estimate of that inside information.

9. Policy Comparisons Using the MWR and LongevitAge Ratio

Selecting representative policies to evaluate in each of the three categories is not a simple task. We are indebted to the editorial team at Kiplinger's Retirement Report who provided selection criteria and obtained quotes as part of their own research on the topic. Acknowledging that there are a variety of strong competitors for each type of policy, the selection criteria were that the policies should be from companies that were among the market leaders (in both sales and ratings strength) and whose quotes were at least competitive with the market (as of April 2012, the date of the analysis). We also sought policy features that were representative of those offered in that type of policy, and in the case of LTC, also offered a lifetime benefit option.

Readers should also be aware that premium rates for competing policies in each segment can vary widely. The AALTC cautions that the highest premium for LTC policies can be as much as 80% above the lowest premium for a substantially identical policy from another company. This clearly makes a big difference when comparing specific policies for possible purchase, but for the goal of this research, we aimed to identify leading representative and market-competitive policies of each type, and we are satisfied that we have achieved that. The specifics of the representative policies are outlined in Appendix 1.

10. LongevitAge Combined with Money Worth Ratio: a Very Powerful Tool

Combining LongevitAge with the MWR provides you with a single, straight-forward way of evaluating whether any of these policies provides you with good value. Recall that the MWR is a way to test the value-for-money of a policy for someone of average health for that age and gender. Adjusting that for your own “inside information” allows you to assess the MWR based on your own longevity.

The concept is simple: instead of using your chronological age in the calculation (as you would to get the MWR), use your LongevitAge. This gives what we’ll call your LongevitAge Ratio, which works exactly like the MWR: a ratio over one provides good value, and as the ratio declines further below one, there is less and less value in that policy for you.

One striking aspect of the LongevitAge Ratio is how it immediately reveals two important aspects of these policies that you might otherwise overlook.

First, longevity insurance and LTC policies work in diametrically opposite directions with regard to longevity. The healthier you are (lower LongevitAge relative to chronological age) the better the value in a longevity insurance policy, as you are more likely to live to receive those advanced age payouts. But that same good health reduces the value to you of a standard LTC policy, as you are less likely to make a claim until much later in life.

Second, the change in value for a longevity insurance policy is significantly greater than for an LTC policy for the same adjustment in LongevitAge. If your LongevitAge is five years younger than your chronological age, then the odds of you collecting at least a few of those substantial longevity insurance payments in old age jump significantly. But that extra longevity doesn’t have anything like the same impact on the LTC calculations. While the extra “good health factors” may tend to push back the date that LTC benefits may be needed, they don’t change materially the amounts that will be paid on those claims.

So, not only do changes in your LongevitAge impact longevity insurance and LTC in different directions, they do so in quite different amounts. This information can be critical, and we will now illustrate in more detail how to use it effectively.

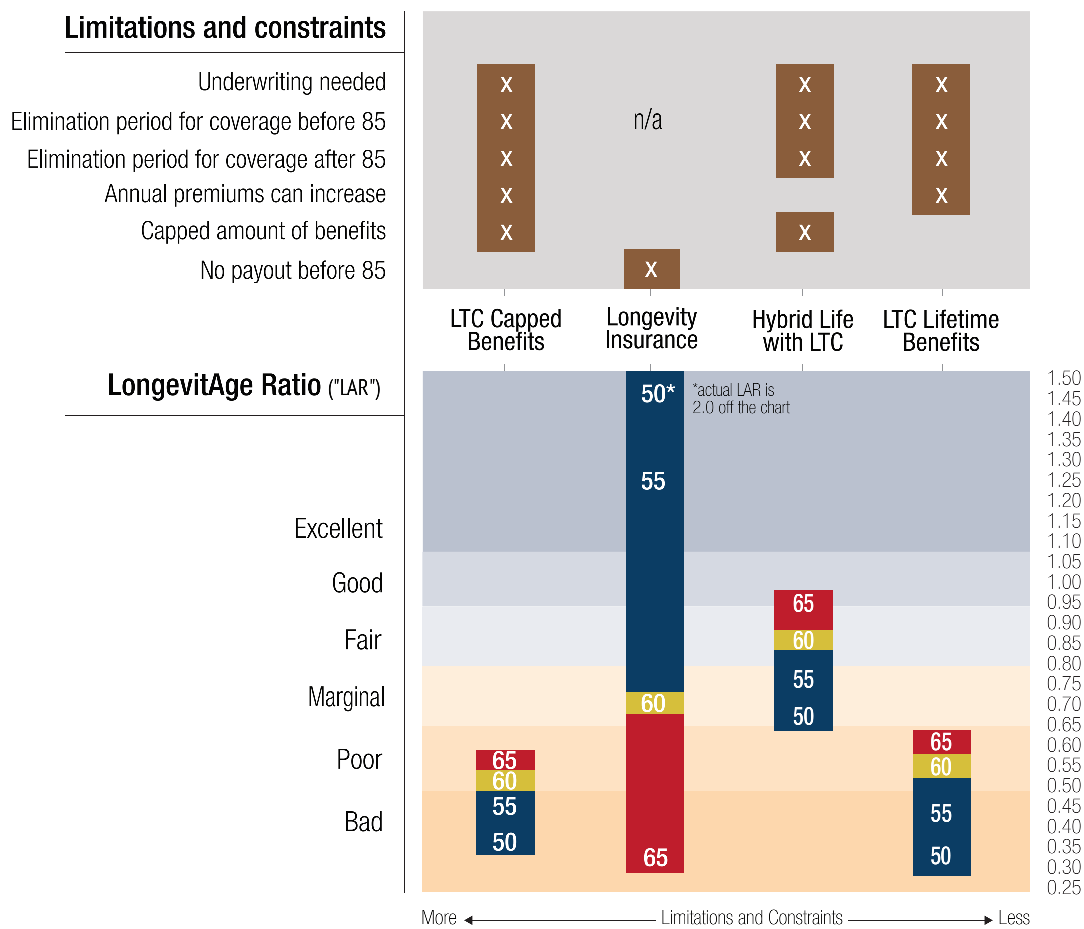
11. Evaluating the Policy Approaches

Exhibit 3 compares four different policy approaches to achieve that elusive combination of finding the right coverage but at a price that provides good value for money for your personal longevity. How did we get to four when we’ve been talking about just three types of policy? The standard LTC policy allows two distinct approaches: with and without lifetime coverage. And these two have quite different characteristics in both coverage and value-for-money so we examine them separately.

You’ll see the four approaches along the horizontal axis in Exhibit 3, in order of the level of limitations and constraints on each policy. Those six limitations and constraints are listed on the left axis in the top half of the Exhibit and are the ones explained in section 3 of this paper. We’ve listed these limitations and constraints in our view of the increasing order of seriousness. The first three are more like inconveniences than real drawbacks. For example at the top, the first limitation, having to have your policy underwritten and approved by the insurer, is only a moderate inconvenience for those in good health. The last three are much more serious: they can have painful financial consequences. The ability of insurers to increase annual premiums is a one-way option against you; capped benefits leave you exposed to the risk of extended claims, while the sixth on the list (no payout before vesting age) is a severe limitation as it exposes you to the risk of any claim before that age.

The left-to-right ordering of the policy approaches is designed to suggest how closely each one can get you to the goal of complete coverage. The intent is that the further right you go along the axis, the closer you are coming to that goal. We stress that the left-to-right order is based on our opinion. For example, we'd consider Longevity Insurance more constrained than LTC with Lifetime Benefits because in our view, the lack of any benefit before vesting age outweighs in seriousness the top four constraints combined, all of which apply to the LTC with Lifetime Benefits approach.

EXHIBIT 3: LongevitAge Ratios Compared



Source: Longevity Financial Consulting LLC, 2012

Now let's turn to the data. This example is based on our hypothetical Charlie for whom we got the original policy quotes. Recall that Charlie is a 60 year-old man in average health. The numbers on the right-hand axis are the

LongevitAge Ratio scores, the concept explained in section 10. To make the interpretation easier, we've used color-shaded background and the qualitative list on the left axis to show how these range from "Excellent" down to "Bad" in terms of value-for-money.

Focus first on the gold bar with the white number "60" in each column. The "60" is Charlie's chronological age. For each approach, that gold bar is scored based on the Money Worth Ratio (MWR). The Hybrid Life with LTC approach scores highest, at 0.87. So if Charlie is indeed exactly average in health and lifestyle, then that approach represents a reasonable deal.

But most buyers of these policies are not "exactly average" and by using the LongevitAge Test can estimate how far off the average they may be. Charlie may discover he is modestly older or younger than his chronological age, so we've shown the equivalent LongevitAge Ratios for each approach assuming LongevitAge of 55 (in the blue bars) or 65 (in the red bars) respectively. As a more extreme example, we've also included a LongevitAge of 50 (in the blue bar) in the event that Charlie is in significantly better health than average. We haven't included the other extreme (LongevitAge 70): in that event, Charlie would likely have difficulty passing the underwriting test for any of the LTC approaches.

You'll see how the chart vividly illustrates the policy characteristics that we outlined earlier. Longevity Insurance values move in the opposite direction to the other policy approaches as LongevitAge moves away from chronological age.

It's also notable how much more "longevity leverage" there is in the Longevity Insurance approach, as shown by the length of that column. The difference in the LongevitAge Ratio between 50 and 65 is an astonishing gap from 1.98 (way above "Excellent") and 0.29 ("Bad"). The reason for this leverage is quite simple as noted earlier: if you are in great shape due to health and lifestyle, with a life expectancy way above average, then your chance of enjoying many annuity payments from a longevity insurance policy is high.

Bottom-line for Charlie? If his LongevitAge is low (50 or 55) then the Longevity Insurance policy rises to the top of the rankings. But if it isn't (LongevitAge at or above his chronological age), then he should stick with an LTC approach. The Hybrid Life with LTC Benefit still represents the best value-for-money as measured by the LongevitAge Ratio, even though the LTC Lifetime Benefits policy may have better coverage of those potentially damaging lifetime disability claims.

But our readers are not Charlie! Buyers of LTC coverage include both women and men, and ages vary widely, so how relevant is the "Charlie example"? We believe the information is indeed relevant. Obviously the actual numbers will vary by age and gender, but the conclusions generally will not. We are continuing the process of developing similar models for other ages and for both genders and our preliminary work confirms that the patterns and characteristics in Exhibit 3 hold broadly for buyers of both sexes across the 50 to 70 age range.

12. A Better Solution

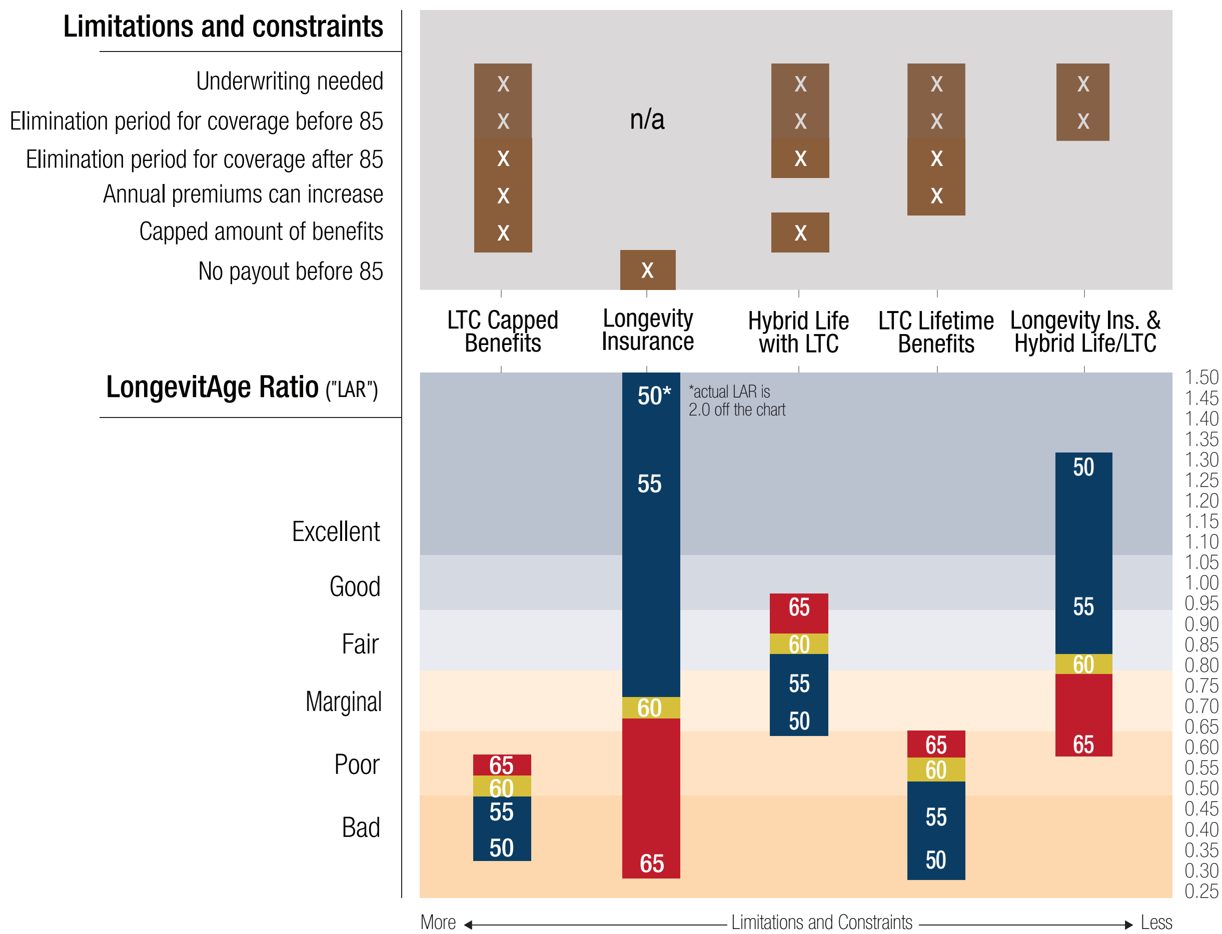
We started this research with the goal of analyzing the existing choices in the LTC marketplace. That analysis leads, at least initially, to some discouraging conclusions. For the buyer in average health, only the Hybrid Life with LTC policy offered at least fair value, and its coverage didn't include the lifetime benefit risk. For buyers with well above average health, Longevity Insurance can be a bargain, but fails to cover the risk of a claim before vesting age.

The good news is that the analysis leads us to a new policy choice. And we think this one gets closer to the solution than anything currently on the market. It's a bit more work for the buyer, as it requires splitting coverage between two policies. But the end-result for a buyer in average health is reasonable value-for-money, plus avoidance of substantially all the significant limitations on the other approaches.

The answer: split the coverage between Longevity Insurance and a Hybrid Life with LTC policy. In our calculations we've assumed a 50:50 split of an upfront premium, but as this is a do-it-yourself for the buyer or advisor, clearly, the mix can be altered to suit the specific needs. To avoid excessively long names, we'll call this the "combo" approach.

Why is this combo a good idea? Look at Exhibit 4, which now includes this combo approach as the new right-hand column. The limitations and constraints on the combo only comprise underwriting and an elimination period prior to age 85 (after age 85, the Longevity Insurance kicks in, and that has no elimination period). For our average health Charlie, the combo provides close to the same LongevitAge Ratio as did the Hybrid Life/LTC. But for any buyer with above average health (i.e. lower LongevitAge), the inclusion of Longevity Insurance makes a dramatic difference. The combo takes on the characteristic of that policy in that for better-than-average health, the LongevitAge Ratio goes up sharply (the blue bar in the right-hand column).

EXHIBIT 4: The "Combo" Solution



Source: Longevity Financial Consulting LLC, 2012

So what does Charlie get if he does purchase the combo of Longevity Insurance and Hybrid Life/LTC, investing $25,000 in each of the two components?

Immediate LTC coverage of up to $18,012 per year tax-free with a capped benefit of six times that amount ($108,126). If Charlie needs LTC benefits early: he's covered. He has immediate LTC coverage in the unlikely event that he needs it early in his retirement. Once he reaches age 79, effectively the cap on benefits is lifted because by the time the six year maximum is reached, he'll be 85 and able to use the longevity insurance income for LTC or other purposes for the rest of his life.

Guaranteed income of $20,016 per year starting at age 85 and continuing for life. If Charlie lives to an advanced age: he's covered. This income is partly taxable, and nets to $16,368 after tax for a 25% rate tax-payer. After age 85, when the likelihood of needing LTC benefits is high, Charlie has guaranteed income from his longevity insurance. He's not exposed to the risk that an LTC benefit will "max out". When he needs that guaranteed income for LTC, it's available. And if he never needs LTC, he has the extra income to boost his spending power.

The combo provides "double pay" after age 85. After Charlie reaches that age, he will get the longevity income of $20,016 per year regardless of his health. If he qualifies for the LTC benefit, he'll receive that benefit plus the guaranteed income from the longevity insurance. This also provides some protection against health care cost inflation in the intervening period.

Death benefit of $36,022 at inception. If Charlie dies early, his estate is covered. A substantial proportion of the original investment is returned (tax-free) to his heirs. If Charlie were to die before reaching age 85, the death benefit will repay over 70% of the initial outlay on the combo policy approach. Note that if Charlie had drawn LTC benefits prior to dying, then the death benefit would be reduced by the amount of LTC already taken…but he or his heirs get that money one way or another.

Does the Combo Provide High Enough LTC Coverage? Because the combo approach splits the initial premium between two policies each one provides only half the benefits that you'd get if you put all the money in that policy. So are those after-tax benefits enough to meet reasonable expectations? If Charlie claims on the Hybrid Life/LTC policy before age 85, his yearly benefit is $18,012. If the claim is after age 85, he gets $34,380 while his claim lasts and then the longevity insurance amount of $16,368 continues for the rest of his life. The pre-age 85 benefit is below the typical amount needed to cover LTC expenses fully, and while the post-85 number may do the job, it doesn't take into account potential inflation in LTC costs. It's outside the scope of this paper, but if Charlie may want to consider upping his total premium to provide extra coverage for example in the event of a claim before age 85. On the other hand, those in good health may decide they'll accept the risk of lower coverage in those lower-health-risk years prior to age 85.

The combo does substantially meet the three characteristics we set out in section 3 for "ideal" LTC coverage earlier in this paper: adequate coverage, limited waiting period or conditions, and lifetime payout. There are still some gaps (for example there's a chance that LTC coverage could max out before age 85), hence we say "substantially" not "completely" in meeting those ideal characteristics.

The combo approach should be most attractive for buyers who are in well-above average health. In fact, for that segment of the market it's a real game-changer. The reason is that for the combo policy, your LongevitAge Ratio goes up as LongevitAge gets younger. And as we've said, that's the opposite of the situation for standard LTC coverage. The blue bar in the right column in Exhibit 4 (the combo approach) shows that for clients with well above-average health and lifestyle, the combo quickly moves into the Good and then Excellent range in terms of value-for-money, leaving the LTC policies way behind.

13. Conclusion

This has been a long and detailed research paper, but we will make the conclusions concise.

1. **Long-term care policies are generally a bad financial deal….unless you are materially below average health, in which case you risk being rejected for LTC coverage.**

2. **Hybrid Life/LTC policies are generally a better deal if you are close to average health.**

3. **If you are well above average health, then Longevity Insurance may be the best value by far.**

4. **But Longevity Insurance alone own leaves you exposed to the risk of needing LTC benefits at younger ages.**

5. **To make an informed judgment, you need to make an estimate of your LongevitAge, a measure of how your health and lifestyle factors impact your life expectancy.**

6. **For those in above average health, the "combo" of longevity insurance and hybrid life/LTC comes nearest to providing full coverage of risks, at a price that represents good value.**

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Appendix 1: Representative policies used in this comparison (quotes for 60 year-old male)

The representative policies used for this analysis were:
LTC policy: Northwestern Mutual, a mutual insurance company rated A++ by the A.M. Best Rating Agency as of April 2012. Premium $3336 per year, for an LTC tax-free benefit of $3000 per month. Benefit has contractual 5% inflation increase annually prior to a claim. Maximum 6 year benefit payment.

Hybrid Life/LTC: Lincoln Financial Group, the marketing name of Lincoln National Corporation, listed on the NYSE as LNC. (symbol: LNC) company rated A+ by the A.M. Best Rating Agency as of April 2012. MoneyGuard policy. Premium $50,000 up-front, for an LTC tax-free benefit of $3002 per month, with no inflation protection. Maximum 6 year benefit payment. Specified death benefit of $72,045; death benefit is reduced by any LTC benefits paid.

Longevity Insurance: New York Life, a mutual insurance company rated A++ by the A.M. Best Rating Agency as of April 2012. Guaranteed Fixed Income Annuity policy. Premium $50,000 up-front. Annuity of $3,436 per month commences at age 85, payable for remainder of life; $605 per month is deemed return of principal and is tax-free, remainder is taxable as income. In the event of death before 85, no payments are made.

Appendix 2: Other Things Readers Should Know

a. The Inflation Dilemma: Protect or Not?
Inflation is a big unknown in analyzing policies that have such long time horizons. Conventional economic wisdom asserts that a reasonable forecast of long-term inflation can be made by comparing the yields on government bonds to their inflation-protected equivalents. That market-based approach suggests that inflation may stay under 2% for the long-term. But LTC costs have been increasing faster than that in recent years. The reality is that it's highly likely that to provide full LTC benefits for a claim 10, 20, or 30 years in the future, the payouts will need to be higher than they are now: but it's not clear how much higher.

Many policies have inflation increases built-in to their rates, including the LTC policy examined in this paper. The combo approach we propose is another way of increasing payments over time, with the longevity insurance component starting at vesting age. Many longevity insurance and LTC policies allow you to select an inflation rate in future payments. Of course, you're charged more for that! The obvious question is whether the increased premium amount for any specific policy is a good deal in terms of value-for-money, MWR. We have not addressed this question in this paper, but plan to include it in future research.

b. Buy Young?
Most LTC sales literature encourages buyers to take out a policy as young as possible (i.e. right NOW, ……why are we not surprised?) After all, the chance of being rejected for health reasons increases sharply after age 70. Skloff Financial Group notes that almost a quarter of applicants get rejected in the 60-69 age range and this rejection rate accelerates to 45% in the 70s and 80% in the 80s. So yes, if you are average or below in health factors, it may be a risky strategy to wait too long.

But does that mean someone in their 40s or 50s in good health should rush to get coverage? If premiums were guaranteed not to increase, it might (we're being a bit charitable here, because the standard LTC policies generally don't have attractive MWRs even if you assume NO premium increases). But premiums have shown a tendency to increase, and even buying coverage from one of the companies that have never increased LTC premiums is making a big bet on them continuing to resist that temptation over many future decades. That's why we've focused this research on those in or within sight of retirement years.

c. Staying "Select"

If you do determine that your LongevitAge is materially younger than your chronological age, in actuary-speak you are a "select" life: you have materially better expectancy prospects than others of your age and gender. In our analysis, we have assumed that you stay "select". In other words, if your LongevitAge is five years younger than your chronological age today, then we assume that will still be true in ten or twenty years' time. That's quite a big assumption! So let's clarify the issues and suggest how best to incorporate a dose of reality.

Most insurance companies typically build in assumptions that being "select" wears off over time. For example, just because you may be a healthy, non-smoking, non-drinking marathoner today does not rule out you turning into a beer-guzzling couch potato in a few years. Insurers are trained to be cynical about this type of stuff! So even if they give you preferential rates on LTC now, a new policy application in the future will require fresh exams and underwriting to establish you are still "select".

But for the goal of our analysis, we need to estimate the odds that your "selectivity" persists at least into the late 80s. The higher rates of both morbidity and mortality when you reach the 90s, plus the longer period to be discounted to present day, means that "selectivity" has less impact on the calculation at very advanced ages.

Over a third of the weighted factors that go into your LongevitAge calculation are completely or partially within your ability to influence: diet and exercise, plus lifestyle habits and choices (drinking, smoking, wearing seatbelts, etc.). Another third or so relate to factors that aren't going to change over time: your genetic and family history and any diseases that you have had up to the present. Boomers have generally reached the age when habits are hard to change (the author's wife and family will vouch for that!). So we believe that the biggest influences on any individual becoming "unselect" over time, and reverting back to mean or below in longevity terms, are related to future illnesses and accidents. While unpredictable at the individual level, for the overall population these are implicit in mortality and morbidity statistics. Our working assumption is that selectivity does reduce over time, but relatively modestly during the 60-mid 80 age range. It would be less plausible in our view to assume that someone with a 10-year LongevitAge advantage at age 60 still have the same advantage at 90.

Rather than adjust our statistical tables in an arbitrary way to attempt to build in this decline in selectivity, we believe the most practical solution is to create a margin of safety in your estimate. For "select" individuals, once you have established a good estimate for your LongevitAge, including confirming with a more detailed test as mentioned above, we suggest it's prudent to reduce your margin of selection by around 20%. For example, a 70 year-old with a LongevitAge of 60 could take that 10 year selection effect and trim it to 8 years (i.e. LongevitAge of 62) when making any decisions with financial impact.

d. Paying upfront

Our calculations all assume no increases in the premiums quoted by the insurers. For policies such as the hybrid life/LTC where the payment is a single upfront premium, this is a "done deal", but most LTC policies require annual premiums. While a few companies have a record of low or no premium increases, many have had to adjust their pricing over the years and it's not uncommon that policyholders have had to pay materially higher premiums to retain the same coverage.

There's a behavioral trade-off here. A few years after the LTC policy has been issued, the premium may be materially higher than its initial level, but still below the cost of a new policy for that same individual because premiums on new policies increase with age. With any level annual premium policy, the policyholder is paying an above-market rate in the early years in order to receive a below-market rate at advanced age.

The combination of these two effects provides a disincentive for policyholders to lapse their coverage: the older they are, the more likely they are to need the LTC benefit and the more expensive it will be to find the same coverage.

The low lapse rate in the LTC industry suggests that as long as insurance companies raise LTC premiums by a modest enough percentage to keep the cost below that of a new policy then this practice will continue.
So the messages to buyers are straightforward:

- Be very careful about the policy you buy, as you'll probably end up sticking with it for the long-term.
- If you can afford it and if the policy allows it, paying the whole premium up-front avoids the chance that you'll be hit with premium increases. And if you don't have that amount up-front, some insurers will effectively finance the purchase for you by spreading the payment over five or ten years.
- For annual premium LTC policies, it is prudent to assume some rate of increase in premium payments. And this will reduce the MWR of the policy. As an example, an annual 3% rise in premiums would reduce the MWR of our sample LTC policy by 25%.

e. The Wealth Effect

One of the ironies of LTC is that the people who can best afford it, are the ones who need it least. The wealthier segment of the population has two advantages when it comes to LTC. One is the ability to come up with the up-front premium instead of having to lay out annual premiums that may increase over time (see "Paying Upfront" above). The second is that in general wealthier people have higher life expectancies than the general population of the same age and gender. This is well-known to the insurance companies and named the "wealth effect". Recall Exhibits 3 and 4. The implication for those who are both wealthier and healthier is that the combo of Hybrid Life/LTC policy and Longevity Insurance gets even better value. These buyers should be able to afford the up-front premium and their additional longevity makes the combo an even better deal. Note also that the wealth effect is already an implicit part of the LongevitAge Test on our website. While that test doesn't ask specific details on your finances, it does include factors that do tend to correlate with wealth.

f. The Spousal Benefit

Many LTC policies offer a discount for "spousal benefit". This discount can be as much as a 25-30% reduction in the premium. The rationale is that if you're married then you're less likely to require the LTC benefit than if you were single and living alone with no-one around to care for you if you become sick or disabled. Often there are two elements to this discount. You get a discount "just" for being married for the reason above. You may also get an additional discount if the policy includes both spouses, and that aspect is at least partly for business reasons: insurers offering a discount to sell a larger policy with both spouses included.

So how should we factor this discount into our calculation of MWR? Certainly the discounted premium is lower, which in itself would increase the MWR proportionately. But there's a reason the premium is lower and that's because the risk of claim is lower. Our calculations of morbidity claims are based on the assumption and probabilities that the individual is single. We don't reduce the claim probabilities in the MWR for married individuals. If insurers are pricing approximately the spousal discount at approximately the correct level (and maybe that's a big assumption) then the value-for-money (MWR) is not affected by whether the policyholder is married or not.

g. Elimination or Waiting Periods

Typically LTC policies, including the hybrid life/LTC versions include a waiting period for "facility care" between the first date you become sick or disabled and when the benefits actually start. Often these are three or six months, but could be longer. In many policies though, there is no waiting period for "home care" benefits. Opting for a longer elimination period will generally reduce the premium as this will likely reduce the benefits eventually paid out by the insurer. In our sample policies we have used a fairly standard 3 month elimination period. In our opinion, changing the elimination period results in only a modest change in the MWR, and we have not incorporated this into our calculations.

Appendix 3: The LongevitAge Test

Can a 10-minute online test really give you an information advantage over the combined actuarial experience of the mighty insurance industry? Actually….. yes, we believe it does, at least as a good first step in the right direction.

The key to this type of "inside information" is applying a two-step process. The first step is our LongevitAge test. Its goal is to give you a reasonably reliable indication of whether your health and lifestyle factors provide evidence that supports a longer (or shorter) life expectancy than the average for your age and gender. Although the test does provide an actual number, we recommend using this with some caution given the necessary approximations and assumptions to keep the test short enough to be easily practical for any user. In our view its strength is that it provides a reasonable estimate of whether your life expectancy is just modestly above or below average, or may be significantly above or below.

However if you get to the stage where you are ready to commit some serious capital to a financial strategy based on your longevity, we recommend taking a more detailed test that will delve into other medical and lifestyle factors that may be omitted from the LongevitAge test. After all, if you are considering an investment of multiple thousands of dollars, then taking an extra 30 minute test may be well worthwhile.

For example, one well-known test that we've checked out is www.realage.com. While we have no affiliation with this site or its backers, we note that it goes into considerable depth and will take you some time to complete. If you find its conclusions endorse those of the LongevitAge test, that should be reassuring. If they don't, you may need to reconsider your strategy. Please note that Real Age and most similar detailed tests do require your identification in the form of an email address (our test does not). Generally these sites make their money by marketing or endorsing health and lifestyle-related products and services, so if you don't want to receive those marketing pitches in your email, then take the time to check or uncheck the relevant boxes on their site.