BATTLING VOLATILITY AND SEQUENCE OF RETURN RISK:

USING ONGOING POLICY MANAGEMENT TO CHAMPION BEST INTERESTS OF POLICYHOLDERS

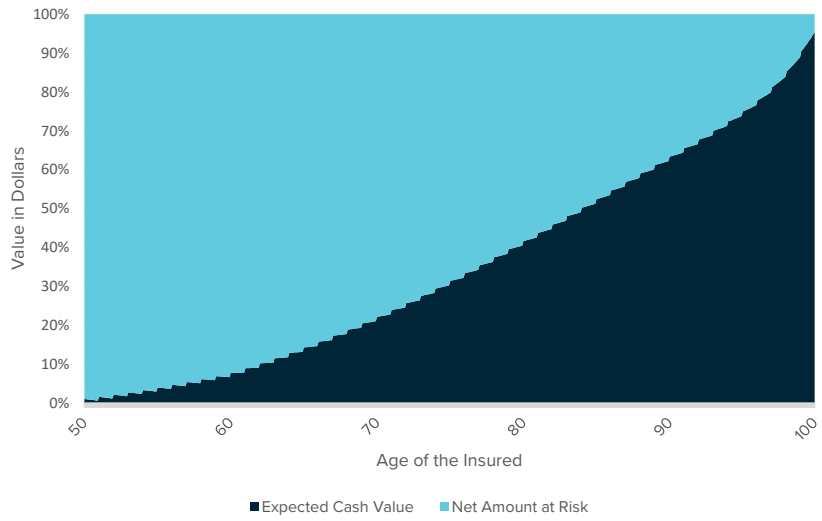
BY: CLAYTON KNOKE, CRPC®, ALMI

Variable Universal Life Insurance (VUL) is designed to offer higher potential returns than other life insurance products. However, volatility and the sequence of returns are significant risks to these products. The impact of a fluctuating return can be a threat to policy cash value. This risk needs to be understood and managed properly. Without proper care and due diligence, a policy can experience permanent losses and create a vicious cycle where policy deductions become unsustainable. By recognizing the deteriorating impact of these risks and managing the policy on a consistent basis, clients and agents can increase the odds policies will perform as intended.

HOW POLICY COSTS ARE DETERMINED

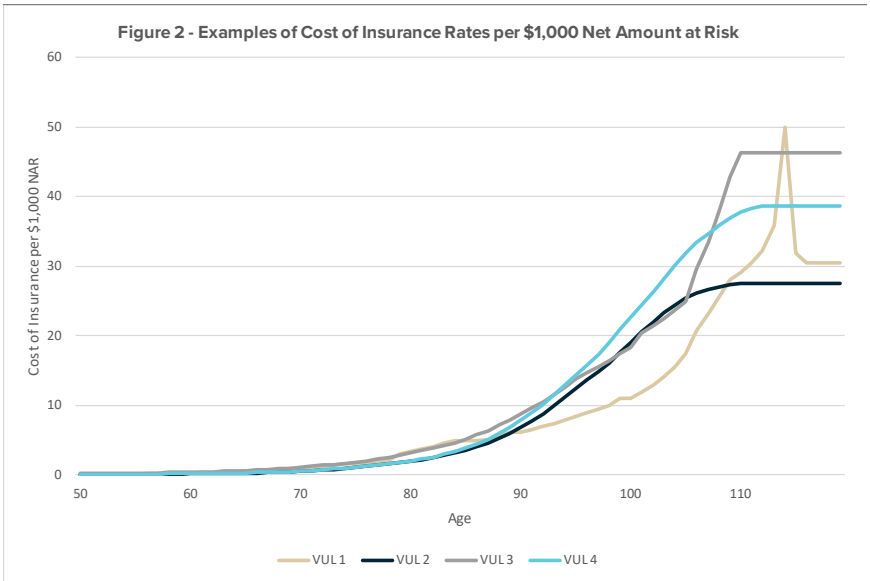
In order to fully understand the potential problems with VUL, a primer on policy mechanics is necessary. When premium is paid into the policy, the premium load is deducted. The remainder is deposited into the cash value and allocated to subaccounts which invest in stocks, bonds and other securities. Cash value is the lifeblood of the policy; if there is none, the policy will lapse. The one caveat is that certain VUL policies have a secondary guarantee that can keep a policy in force, assuming certain requirements are met. This will be discussed later. From the cash value, the cost of insurance (COI) charges are deducted, along with the Mortality and Expense (M&E) and Administrative Charges. The aggregate COI charge is generally the largest expense over the life of the policy and will have the largest impact on the cash value. This will be our focus. The cost of insurance charge is deducted on a monthly basis and is calculated based on the difference between the death benefit and the cash value, known as the Net Amount at Risk (NAR), shown in Figure 1.

Figure 1 - Relationship Between the Cash Value and Net Amount at Risk for a $1M Policy



Author's Note: *Although this article focuses on volatility and sequence of return risk in VUL policies, it's important to note that Indexed Universal Life (IUL) is extremely sensitive to volatility and sequence of risk. Given the predominance of IULs sold with some sort of policy distribution design, they won't be addressed in this article given the article's focus on policies used for death benefit protection without distributions. The Society of Actuaries has published some articles[1] on the risks of sequence of return in IULs showing 91% lapse rates in a popular type of design (even without the most aggressive features used today). The following quote from the articles emphasizes the inadequacy of the IUL illustration: "To assess the income streams realistically requires calculations not in AG49 compliant illustrations." The features of IULs sold today often materially increase their sensitivity to sequence of return and volatility. Couple this with misleading maximum illustration return assumptions that are based on a materially flawed calculation methodology (being revisited by regulators at the time of publishing of this article) and an assumed 45% annual profit on carrier derivatives used for the products, the buyer of an IUL with policy distributions may actually be in product that is more sensitive than a VUL. Caveat Emptor.*

The NAR is the amount of money the insurance company is going to have to pull from reserves in order to pay the death benefit at any given time if the insured were to die. For this reason, it makes sense that this is what policy charges would be based on. At issue, a specific rate per $1,000 of net amount at risk is given to each age, which generally increases each year and is shown in Figure 2. The monthly cost of insurance charges will be greater if the insured is 80 years old, than if they are 50 years old. This is because as a person ages, the risk the death benefit will need to be paid to the beneficiary increases, making the act of insuring their life more expensive. Additionally, because the actual COI charge each month is directly related to the NAR, volatility in the subaccounts can have large impacts on the cash value. While this may all seem obvious, the implications to policies are not.



- Cost of Insurance (COI) rates generally increase as the insured ages.
- The increase in the rate accelerates as the insured approaches life expectancy and beyond.
- The actual COI charges to a policy are directly related to the Net Amount at Risk (NAR).
- NAR is the difference between the death benefit and cash value.

PROBLEMS WITH VOLATILITY

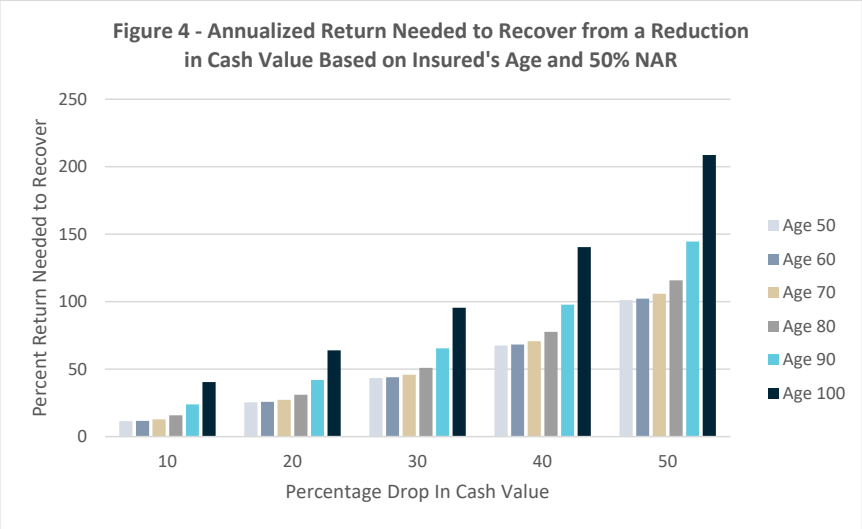
The age of the insured, the starting NAR, and the percentage of any reduction in the subaccounts are the three factors that will largely determine the impact of volatility on a policy.

Figure 3 below shows a commonly referenced concept that negative returns are more punitive than positive returns are beneficial. It details the amount of positive return needed to get an account back to even after a negative return. So, if an investment drops in value by 20%, 25% is needed the following year to recover the value lost. This assumes no additional investment, withdrawals, or charges.

FIGURE 3 - Percentage of return needed to recover assuming no contributions, withdrawals, or charges.

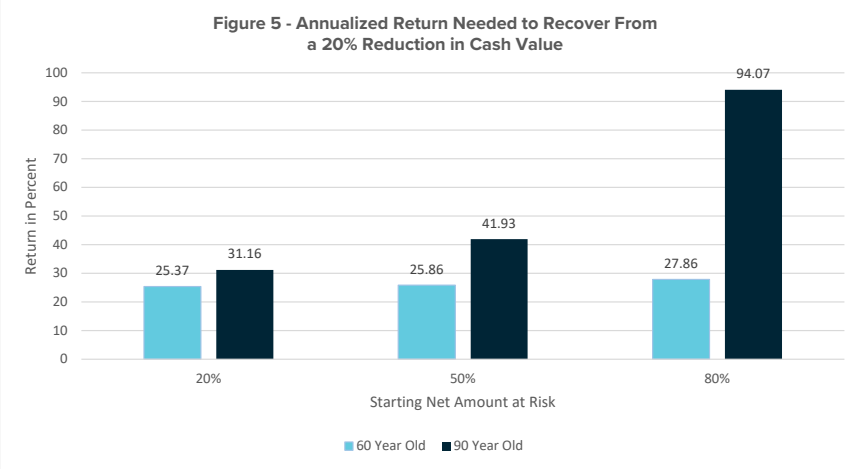
Percentage Decrease	10%	20%	30%	40%	50%
Return needed to get back to even	11%	25%	43%	67%	100%

How this relates to variable life insurance is that the age of the insured, at any given time, can have significant consequences on the cash value for the same amount of return received. For example, assuming a 50% NAR and a 20% decline in cash value, a 90-year-old would need a positive return of 41.86% to recover, while a 50-year-old would need 25.44% to accomplish the same goal. Figure 4 illustrates this, showing the amount of annualized return needed to recover various percent decreases of cash value based on the insured's age. These percentages are based on specific COI rates.As seen in Figure 2, different products will have different COI rates. The differences in these rates will increase or decrease the percent needed to recover.



Positive returns in the underlying subaccounts will reduce the net amount at risk and thus reduce the cost of insurance charges. However, the unpredictability of markets brings our focus to the risk policies face. An important takeaway here is that the older the insured and the greater the decrease in cash value, the greater the need for increasingly higher positive returns to get back to even.

Figure 5 illustrates how the starting net amount at risk at the time of a decline in value adds an additional layer to the impact of volatility. The lighter blue bars represent the return needed for a 60-year-old to recover from a 20% reduction in cash value based on the starting net amount at risk. The darker blue bars represent the same scenarios, but for a 90-year-old. The impact on the cash value due to differences in the NAR is very closely tied to the current age of the insured. Figure 5 shows that for a 60-year-old, the net amount at risk has much less influence on the cash value as the return needed increases modestly as the net amount at risk increases. However, the impact for a 90-year-old is much greater. A policy with a net amount at risk of 50% needs a positive return twice as large as the reduction to recover. This is even more pronounced at 80% NAR, where the positive return needed to recover is more than four times that of the 20% reduction. This illustrates that the net amount at risk and the age of the insured at the time of a decline in cash value has a significant impact on the ability for the policy to recover.



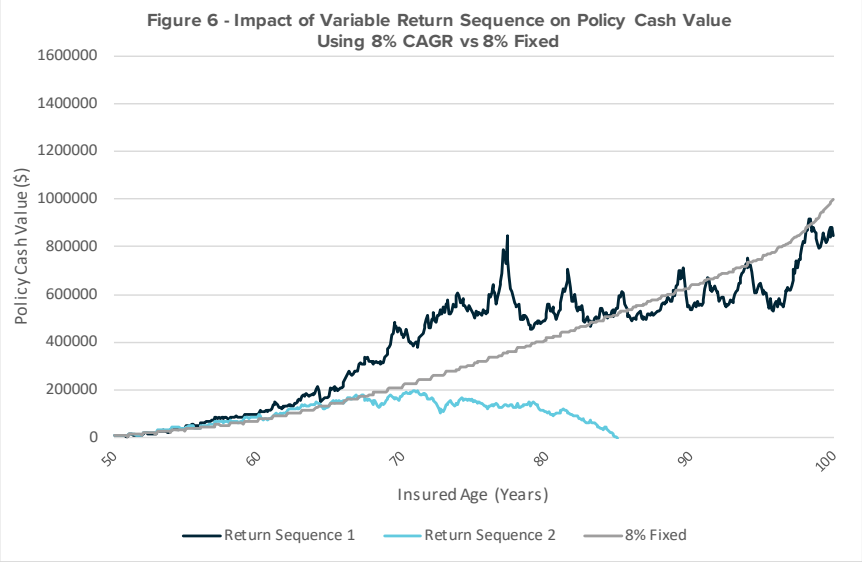
- Subaccount return, age of the insured, and the current net amount at risk will have a significant impact on policy cash value.
- Assuming the same return and the same starting net amount at risk, volatility will have a greater impact the older the insured is.
- As the insured ages, the net amount at risk will have an increased influence on cash value.

PROBLEMS WITH SEQUENCE OF RETURNS

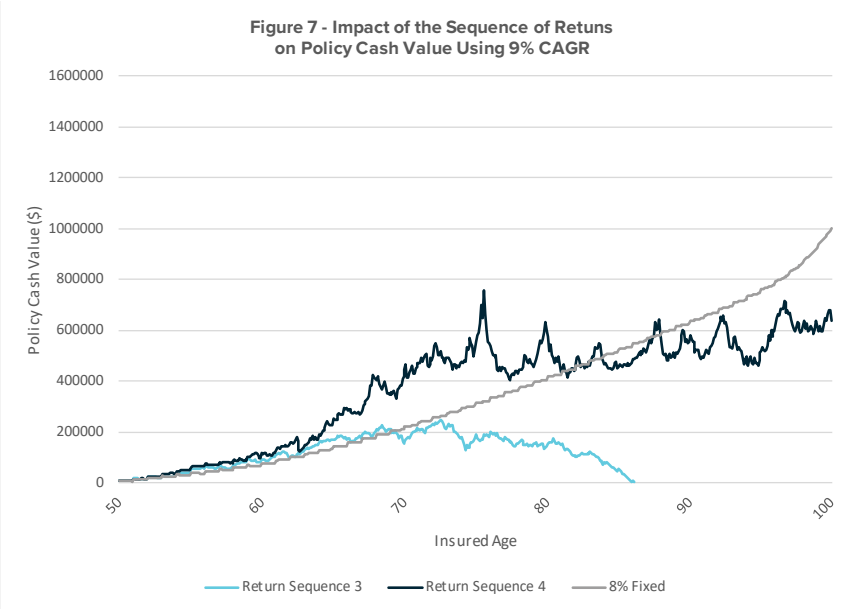
Illustrations are one of the most widely used life insurance sales and service tools. Many insurance producers rely on them almost exclusively as evidence of what the policy owner can expect in the future. However, illustrations are meant to show how a policy works, not to predict values. All illustrations disclose (in fine print) that they do not represent performance expectations, however, there are many people that perceive them this way. This is a serious problem as illustrations are inherently flawed, showing only a single potential return path based on a fixed rate of return, often misinterpreted as an average return.

Annual returns of 9%, 14%, 2%, -12%, and 22% equal a compound annual growth rate (CAGR) of 6.35%. Over these 5 periods, the returns can be in any order and the outcome will be the same as earning a flat 6.35% each year, assuming there is no additions or subtractions. Because this scenario does not add or deduct anything, it allows for more reliance on average rates of return. However, life insurance includes subtractions on a monthly basis and may include premium additions on a monthly to annual basis. For this reason, average returns while important, lose much of their ability to predict or explain the performance of a policy.

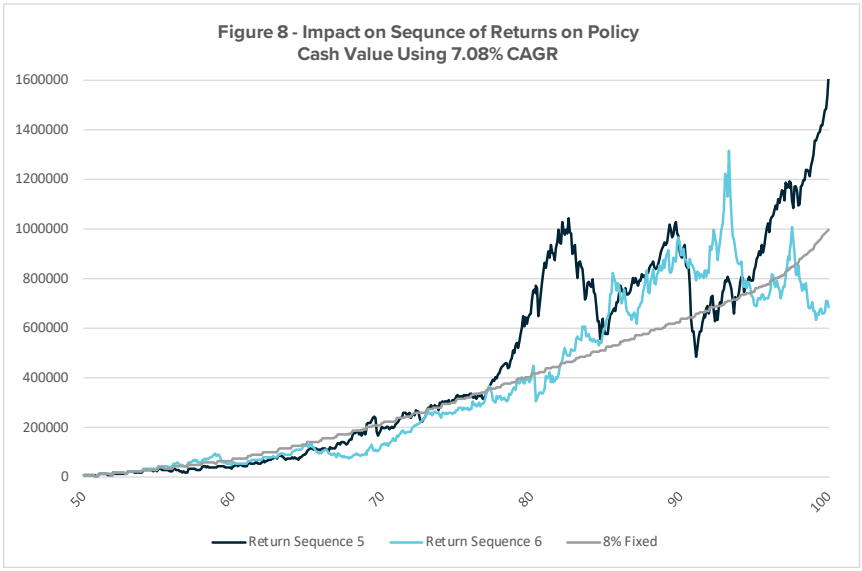
Figure 6 shows an example of a variable life insurance policy. All three lines portray a different sequence of returns, but they all have the same compound annual growth rate of 8% over a 50-year time period. The grey line represents the expected cash value based on a net fixed rate of return of 8%, an annual premium of $11,353, and a death benefit of $1 million. These assumptions create an illustrated policy that is expected to have the cash value equal to the death benefit by the time the insured reaches age 100 and provide lifetime coverage. The dark blue line (Return Sequence 1) represents the cash value of a policy with the same structure but with a variable return averaging 8%. The light blue line (Return Sequence 2) represents the cash value with the same exact returns as Return Sequence 1 but in reverse order. The outcome of this policy is not so fortunate. In this scenario, the cash value is insufficient to keep the policy in force beyond age 84.



In fact, policies can have a higher than expected average rate of return and not meet expectations. Figure 7 shows the same policy structure but with a CAGR of 9.04%, more than a full percentage point higher on average per year than originally assumed for the policy. However, the cash value of Return Sequence 3 is actually less at age 100 than Return Sequence 1 in figure 6. Additionally, Return Sequence 3 only lasts until age 86. This is again because of the sequence of returns and how it, along with policy mechanics, has a significant influence on cash value.



Possibly more surprising is a rate of return less than projected can perform better than expected. The sequence of returns represented in Figure 8, shows the same premium amount in Figures 5 and 6, with the same cost structure but with a CAGR of 7.08%, nearly a full percentage point lower than expected. However, both exhibit cash values that make the policy last through age 100. In fact, Return Sequence 5 shows a cash value that after 50 years is greater than the expected cash value of an 8% fixed rate of return.



What this all means is that we don't know what the future holds. Using average returns to predict the performance of a life insurance policy does not provide an accurate picture of what the client should expect.

- The sequence of returns can have a dramatic impact on policy cash value in a positive and negative way.
- Average rates of return are important but can provide a false sense of security.
- Illustrations are an important tool to determine how a policy works, but are a poor tool for predicting future values or coverage durations.

CONSERVATIVE DESIGN LEADS TO MORE RELIABLE OUTCOMES

There are two general ways that policies can be made more reliable before they are placed in force. Conservative assumptions and policy guarantees can help set realistic expectations for client's and agents. When a VUL policy is issued, an illustration is required. This illustration is used to set a suggested premium amount. The higher the assumed rate of return, the lower the suggested premium and vice versa. This assumption also heavily influences how dependent the policy is on favorable returns. I am not going to define conservative or aggressive, other than to point out the obvious. For the same policy and subaccount allocation, a 6% rate of return is more conservative than 8%, which is more conservative than 12%. The higher the assumed return, the lower the amount of premium that will be illustrated to achieve the same coverage period. This makes a greater percentage of the expected cash value comprised of return and less from premium paid. This means, the higher the assumed rate of return, the greater the policy's dependence on favorable returns. The flip side is the lower the assumed rate, the more the cash value is made up of premium allowing for greater amounts of deviation in return while remaining in line with expected cash value. It's worth noting that longer coverage durations (i.e. 60 years versus 40 years) also rely more on compounding of returns over time.

Some VUL policies allow for the risk of a policy lapsing due to insufficient cash value to be transferred back to the insurance company in the form of a death benefit guarantee. While these are not guaranteeing the cash value, they will keep the policy in force irrespective of actual investment performance assuming certain requirements are met, such as annual premiums of a certain amount by a certain point in time. While many products do offer a lifetime guarantee on the policy, many are limited to a maximum of age 90 or 100 leaving the potential for policies to lapse once the guarantee period has expired.

THE BENEFITS OF ONGOING POLICY MANAGEMENT

As detailed above, VULs can have a wildly different reality than is shown in illustrations. Policy management is designed to keep policies on track based on their original intent and objectives. In order to accomplish this, a defined, repeatable process needs to be performed annually that can identify existing and potential problems. Additionally, it needs to provide actionable recommendations to either correct a faltering policy or reduce the risk of potential future problems.

There are many ways policies can be managed. One way this can be implemented is a process that starts with the original illustration at the time the policy was issued. Although life insurance illustrations are flawed, they are the best currently available tool for estimating what may happen over time on a policy. Illustrations provide the assumptions the policy was originally built on and the illustrated cash value in each policy year resulting from those assumptions. Why this is so beneficial is because it allows for a benchmark to be established and measured against. Inevitably, actual cash value will deviate from the expected value. Because of this, acceptable ranges need to be set.

For example, a 5% deviation in cash value from the original illustration may be considered acceptable, but a 15% may not be. However, when these deviations occur also needs to be accounted for. As previously detailed, the impact of volatility increases with age. So, a deviation of 15% may be considered more acceptable early in the policy when COI charges are less than later in the policy as the COI charges increase. A benefit of reviewing policies annually is small changes can be made earlier in the life of the policy rather than potentially needing larger changes as the insured ages. When policies are allowed to deviate for many years unchecked, they risk the potential need for greater intervention in the form of significant premium increases. Take a policy that is facing a pending lapse of coverage due to diminished cash value. Assuming the insured is 85, the policy may need to increase the premium from the originally planned $12,000 to over $60,000 just to keep it in force for a single year. At age 90, this situation could lead to a necessary increase to over $100,000. While policy management is not a panacea for poor policy performance, these situations could potentially have been prevented by making smaller changes early in the policy.

Policy assumptions and the individual subaccounts also need to be managed on a continuous basis. Because the expected returns and the actual returns achieved are so intertwined, they need to be managed in conjunction. Policies that have more aggressive assumptions cannot be allocated entirely to money markets and be expected to perform as designed. For this reason, a review of the subaccounts and their alignment with the return assumptions needs to be performed. This review needs to evaluate the appropriateness of the subaccounts for the return assumptions as well the relative viability of the assumptions themselves.

Because the impact returns will have on policies is unknown, the process for managing them must be well defined and repeatable, but should not be robotic. This is important because while many situations will be very similar in cause and solutions, no two are the same and each must be evaluated independently.

- Policy management requires a repeatable process to identify problems and provide actionable remediation.
- Catching problems early on can prevent small issues from becoming large problems.
- Policies need continuous monitoring and management to ensure policies perform as expected.

CONCLUSION

While we highlighted the sequence of return risk, the benefits of the product remain intact. The unique risks also introduce unique opportunities. The product allows policy owners the choice to allocate policy cash value to a number of options, including fixed income and equities. No other product type offers the same potential cash value gain as VULs offer or provide the same flexible options available for permanent coverage.

However, VULs also introduce unique risks to policyholders. The volatile nature of stock and bond subaccounts combined with the policy mechanics can prove detrimental to long term cash value performance leading to premature lapse. While the risks these products face need to be recognized and understood, policy management can help bridge the gap between expectations and reality and lead to more stable policies and a ten times better client experience.

ABOUT THE AUTHOR

Clayton (Clay) Knoke, CRPC®, ALMI

As an Insurance Analyst with the Policy Management Company (PMC) for Valmark Financial Group, Clay conducts analysis of the individual policies managed by the PMC and works directly with advisors and agents to decipher the technical details relating to each product and situation. Additionally, he is responsible for providing in-depth reviews and analysis of in force life insurance policies. Mr. Knoke holds a BA in Business Management from Saint Mary's University. He also holds a Chartered Retired Planning Counselor (CRPC®) designation, Series 7 and 66 registrations, and Minnesota Life, Accident and Health licenses.

FOOTNOTES

[1] Product Matters!, Issue 111, October 2018, Society of Actuaries. Product Matters!, Issue 112, April 2019, Society of Actuaries

APPENDIX

Figure 1

- Based on a Lincoln VUL ONE 2014 illustration. The illustration was run based on a 50 year old male standard non-smoker underwriting.

Figure 2

- All 4 examples are based on information from the detailed expense page of illustrations run on the following products based on a 50 year old male standard non-smoker underwriting.
- VUL 1 is Prudential VUL Protector 2018
- VUL 2 is Protective Investors Choice
- VUL 3 is Lincoln VUL ONE 2014
- VUL 4 is Protective Strategic Objectives

Figure 3

- Based on an asset decreasing in value and the amount of return needed to recover to the original value prior to the decrease in value.

Figure 4

- Factoring in the annualized COI based on Lincoln VUL ONE 2014 standard male age 50.
- Evaluates the amount of return needed to recover to the original value from a reduction in value based on a starting value of 50% net amount at risk.
- Purpose is to show the amount of return needed to recover based on a set net amount at risk increases with age.

Figure 5

- Factoring in the annualized cost of insurance based on Lincoln VUL ONE 2014 standard male age 50.
- Evaluates the amount of return needed to recover from a 20% reduction in value based on age and a varying net amount at risk.

Figure 6–8

- Using the known policy charges in a Lincoln VUL ONE 2014 standard non-smoker male, evaluates how various sequences of returns would impact the cash value.