Pacific Life Insurance Company
Indexed Universal Life Insurance: Frequently Asked Questions

THE GROWTH CAP, PARTICIPATION RATE, AND FLOOR RATE

1. What accounts for the gap in indexed cap rates from one life insurance product to another?

A company looking to establish a presence in the indexed universal life (IUL) market can make an immediate impact if they appear to offer a higher cap/par/floor rate than the average competitor. There are 2 main factors that influence the cap: (1) Interest Yields on the bonds used to back the product, and (2) Options Prices. In order to offer a higher cap, a company could do any of the following:

- Invest in riskier, and hence higher-yielding bonds
- Employ "dynamic hedging[1]" where the index options are not "perfectly" hedged
- Accept lower profits (or spend company surplus) in order to establish market share

In any case, additional risk is being introduced to the indexing strategy that may result in the company lowering the cap rate as soon as any of these additional risks begin to materialize. Products with higher initial cap rates may end up having below average cap rates, leaving the clients stuck with a sub-par product that initially appeared to be ahead of the pack.

2. What would cause the current cap to decrease? Increase?

Our cap rate depends on 2 major factors: (1) the anticipated yield on our general account assets, and (2) the price of the call options in the derivatives market. If either the yield fell and/or the options price rose, the company would potentially need to lower cap rates. If on the other hand yields increased and/or options prices decreased, a company might be able to increase the cap rate.

3. How can Pacific Life support the "floor" and "cap?"

Within an IUL product, the assets that we purchase to back our client's indexed Segments are not invested in the S&P 500® directly. The client's accumulated values are invested in our general account, which consists of mostly fixed-income securities. The investment income earned on the portion of assets allocated to the index accounts are used to purchase a package of call options on the S&P 500. The call options we purchase are specifically designed to match the Segment's index growth rate, guaranteed interest rate, growth cap and participation rate. By hedging the indexed accounts in this manner, Pacific Life does not lose money if returns are below the floor, but it also does not make money if returns are above the cap.

[1] For a specific discussion of dynamic hedging, see question 27 below.

4. Why do we impose a growth cap?

For our 1-Year account option, we currently maintain a cap of 12 percent. 1-Year call options on the S&P 500 with a 0% floor and no cap are currently more expensive than the anticipated yields inside the general account used to back the IUL portfolio. This means that we (the company) have to also *sell* call options to reduce the cost of the options to match the yields that we earn. The strike price at which we sell the call options will effectively set the cap on the indexed account, because Pacific Life will have to pay any index return above the cap rate to the party to whom we sold the index option.

5. What does Pacific Life do with the performance above the cap rate?

As described above, in order to make the 1-Yr option work, Pacific Life has to sell call options at strike prices at the cap rate. Therefore, Pacific Life effectively pays the returns above the cap to the party to whom we sold the call options.

6. Is the current cap rate locked in when a Segment is created or can that be changed?

The current cap rate is locked in for the duration of the Segment. We can change the cap rate anytime for new premiums or reinvested Segments after their maturity.

7. Can the participation rate be higher than 100%?

Yes. If bond yields rise and/or index option prices fall, a company could afford to increase either the cap rate or the participation rate. At no time, however, could our participation rate fall below 100% (or 105% on the Hi-Par 5 Option).

8. Why are indexed annuity cap rates lower than indexed life cap rates?

While both life and annuity products purchase index options from the same "window," the investments used to back the general account of an annuity contract tend to need more liquidity, and hence lower yields result. These lower yields tend to prevent annuity products from having the ability to purchase cap options with rates as high as a comparable indexed life product.

THE INDEXES

9. Why did Pacific Life choose the S&P 500 Index?

The Dow Jones Industrial Average, the Standard & Poor's 500, and the NASDAQ are probably the most recognized measures of the U.S. stock market. These are the indices you see quoted on the news every night. Of these, the S&P500 represents the broadest measure of the overall US stock market.

Over 70% of all index options available in the IUL marketplace are directly tied to the S&P 500. Furthermore, the market for call options on the S&P 500 is broad, liquid and relatively stable compared to other less broadly diversified indices. This enables us to offer more

competitive cap and par rates than if we use a smaller, more volatile index, since the price of call options is influenced by expected future index volatility.

10. Is Pacific Life investing in the S&P 500 Index for this product?

No. We are purchasing (and selling, for the 1-Yr account) call options on the S&P 500. Call options give the buyer the right to purchase the S&P 500 at a fixed price in the future. Any future gain in the S&P 500 is effectively earned by the person who holds the call option. But rarely, if ever, do the parties actually purchase or own the stocks in the index.

11. Why aren't dividends included?

Since we do not purchase the stocks of the S&P, we do not receive dividends. A company could theoretically tie index performance to the Total Return S&P, which includes dividends. However this is not as recognized and widely used. More importantly, the cost of options purchased on an index that reflects dividends would be more expensive, which may translate into a lower growth cap.

12. Why hasn't Pacific Life added an international index?

While we're certainly open to the idea, we haven't pursued any index options tied to international markets for a couple of reasons. Prices for options based on international indexes tend to be more volatile—all things being equal—than options on the S&P 500. If we brought an international index to the product, it's very likely that the cap rate would be lower and more volatile than the cap rate for our S&P indexed options. We've also tried to keep our index products as simple as possible, and so far this strategy has worked well for us. There's another consideration that has to do with potential regulations concerning the sale of indexed products. If these products involve numerous index choices they begin to look a lot like registered products in that insurance producers could potentially be seen as giving "investment advice" to IUL clients as to which index they think is best.

THE FIVE-YEAR ACCOUNTS

13. How does "five-year-point-to-final-year-average" work?

In contrast to a pure 5-year-point-to-point measurement, which would compare the index's closing price on the identical trading day five years apart, the point-to-final-year-average simply uses the index's *average closing price* over the last 12 months of the 5-year Segment period as the final "point." The index's starting point is still the S&P's closing price on day one of the 5-year period. But the final point is the average closing price for the 14th of the month (or next trading day if the market is closed) over the last 12 months of the 5-year period. The percentage change between those two points is calculated and credited to the client's indexed account value for that Segment, subject to par rates, growth caps and floors.

14. Why did we average the 5th Year instead of going with a "true" point-to-point for the 5-Year Accounts?

Averaging reduces the risk to the client that a severe correction at the end of the 5th year could wipe out gains over the entire period. A 5-Yr Segment begun on December 15, 2003 measured on a strict point-to-point basis would have shown the index down 18.68%. On the other hand, averaging the final 12 months of the Segment would have produced a gain of 12.81%.

It should be noted that averaging does potentially reduce some gains in a rising market, but we felt that the reduction in volatility was worth it.

15. How can you afford to offer full participation at 100% with no cap for the 5-Year option?

The price for a 5-year call option on the S&P 500 is significantly less expensive on an annual basis than a 1-Yr call option. As a result, the yields that we earn on our portfolio are sufficient to purchase the call options without the need to sell off upside potential and create a cap.

16. How can you offer 110% current participation for the High-Par 5-Year Account?

Since we guarantee an annual floor rate of only zero percent—as opposed to an annual floor of 1% for the 5-Year Account—we have extra money to purchase hedges. Investment banks are able to put together hedge packages that do exactly that—currently guarantee a 5-year return on the 5-Year Point-to-Final-Year-Average of 110 percent.

INDEXED INTEREST RATES

17. How did we arrive at the default illustrated rates in Navigator?

Our default rates in the Navigator software are loosely based on the average return for a hypothetical series of Segments established monthly between 1970 and 1989, then held for 20 years—the last of these hypothetical Segments having matured in December of 2009. We therefore capture 40 years of S&P returns with 20-year compounding.

18. What is a reasonable expectation for long-term interest rates on an IUL product compared to UL and VUL products in similar interest rate/market environments?

It's difficult to make predictions, especially given the short history of indexed UL products. Many factors will influence how these 3 product types will react to varying financial conditions. In general, clients taking on greater investment risk over the long-term should expect higher overall returns. On average, interest rates on an indexed UL product will tend to be modestly higher than a traditional UL product, given the lower guaranteed rates for IUL products versus UL products. In theory, VUL products should produce yields that are higher than IUL over the long-term, reflecting the risk that is being assumed by the client. But there have been, and certainly will be periods where these risk/return relationships will not hold to these patterns.

19. ***How do returns on investments tied to the S&P 500 including dividends compare to the returns for an indexed UL product?***

    It's generally not appropriate to make these kinds of comparisons, given the significant differences between the types of products in question. However, just in terms of what impact the dividend component of the S&P 500 has had on historical rates of return, dividends have increased the S&P's annual return by anywhere from 1% to 4% since 1990.

20. ***Some IUL products include guaranteed persistency credits. Doesn't this give them an inherent advantage over similar products without bonuses?***

    Just because a company is obligated to honor a contractually guaranteed persistency credit does not prevent that same company from changing non-guaranteed policy features to balance the ultimate costs of maintaining a policy. A company that felt the need to include a persistency credit might find it difficult to financially afford the credit without reducing expenses in another area, such as lowering the non-guaranteed current cap rate. If this happens, the client may find himself/herself stuck with a product that paid a bonus, but is now tied to a cap rate that is well below another product's cap rate that didn't include a bonus.

TRANSFERS, LOANS AND WITHDRAWALS

21. ***Can a client transfer indexed Segment values in the middle of a Segment term?***

    No. Clients can take withdrawals and loans anytime but they cannot *transfer* monies from an indexed Segment to a new Segment or the fixed account until the end of each Segment's term.

22. ***Can a client withdraw/borrow values from a specific Segment?***

    No, distributions from the policy first come from the fixed account, then proportionally across all 1-Year accounts, then all 5-Year accounts.

23. ***Can a client withdraw/borrow values and receive partial indexed credit?***

    Yes. Unlike our first-generation IUL product, our current IUL products provide a pro-rata indexed credit for all policy deductions, fees, and distributions, based on the time the funds were in the indexed Segment. Some competitors do not provide this benefit.

24. ***What is the "lockout" provision and why was it implemented?***

    If a client takes an unplanned distribution (withdrawal or policy loan) a 12-month lockout will apply. This means that the client is prohibited from allocating any new premiums to an indexed Segment for one year after the unplanned distribution. It does not restrict maturing Segments from being reallocated, nor does it apply to scheduled distributions through our Automated Income Option. For most clients, this should not be a concern as

they are unlikely to be paying in new premiums at the same time as taking distributions from the policy.

Pacific Life has to protect itself from policyholders taking advantage of interest rate and equity market fluctuations in the future. Options contracts represent a commitment by 2 parties over a period of time. When clients withdraw funds unexpectedly from indexed Segments, Pacific Life has to cover that shortfall in the options contract out of company surplus. This could impact the future performance of every client's policy, and Pacific Life has to manage the product in such a way so that the actions of a few don't have a damaging effect on the total block of business.

HEDGING

25. From whom does Pacific Life buy their hedges?

Pacific Life buys our hedges from large investment banks. We don't concentrate our purchases in any particular bank, just as we don't concentrate our other investments in any one company, sector, or industry. We continually perform due diligence on our options providers to ensure that our investment risk is minimized.

26. What happens if a hedge provider goes out of business?

From the client's perspective, nothing unusual happens. Pacific Life has the contractual obligation to honor the cap, floor and par rates in the client's policy, no matter what happens to the option seller. This is precisely why it is important for Pacific Life to completely hedge our indexed account options, and to purchase our hedges from well diversified, financially secure institutions. If one of those institutions were to fail, Pacific Life would have to cover the contractual obligations from our company reserves and surplus. We are well-capitalized to do so, should that unlikely event occur.

27. What is meant by "dynamic hedging"?

Dynamic Hedging is a method companies use to replicate the returns on the call options by purchasing a mixture of fixed and equity securities. A company that dynamically hedges its IUL products is taking some additional investment risk that the hedge may not work perfectly and instead take on the risk of having to cover any shortfall out of their company surplus. Pacific Life currently is not using a dynamic hedging method for its IUL product portfolio, in order to perfectly match the returns promised the owner by purchasing call options.

This additional risk may allow a company to offer cap/par/floor rates that are more favorable than the rates that are offered by companies who employ "perfect" hedging. From a client's perspective, these types of hedging strategies introduce the risk that the company might entice the client to buy a product because of a high cap/par/floor rate, only to subsequently drop those rates.

28. How does the hedging process actually work?

Just like any UL product, IUL premiums are assessed a sales load and then are invested in Pacific Life's general account for that product. The premiums stay there for the duration of the indexed Segment. But on the side, Pacific Life purchases a hedge option to support the indexing strategy. How does that work?

Let's walk through a simple example. If the client has requested that 100% of their premium go into our 1-Yr indexed account, we need to purchase a hedge for that net premium. We contact an investment banker and ask for a quote for a package of options that would cover a 0% floor and 12% cap on the S&P 500 for 12 months. That banker will give us a price quote as a percent of the net premium—say, 5%. That means for every $1000 of net premium to be hedged, we'd have to pay the investment banker $50. That $50 needs to be "paid for" by the interest we earn on the client's net premium in our general account. As long as we can earn 5 percent ($50) over the 12 months on the $1000 we invested in the general account, we can afford the 12% cap hedge. The client's premiums remain in the general account; only the anticipated earnings on that premium inside the general account are in play for the hedging transaction.

At the end of the 12 months, the option contract matures and we pass through the return to the client. If the S&P finishes in negative territory, the option expires and the hedge pays nothing. However, if the index is up for the year, the option pays us the S&P return up to the 12% cap. That return is applied to the client's net premium (based on the average balance over the 12 months) as an interest credit.

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