



Whither Goes PVP?

Howard L. Rosen

Few events have changed the nature of the work necessary to support the life insurance industry more than the advent of generally accepted accounting principles (GAAP) in 1972. For it was in December of that year that the Accounting Principles Board (APB) authorized the American Institute of Certified Public Accountants (AICPA) to publish *Audits of Stock Life Insurance Companies*, the first comprehensive reference on GAAP for stock life insurance companies.

Even from GAAP's infancy and continuing to the present time, practice has varied in the treatment of the actuarial aspects of mergers and acquisitions of insurance companies. There is no better proving ground for the actuarial considerations of purchase accounting than the old saying, "Ask ten actuaries and you'll get ten different answers." There have been many areas of variation over the years. Industry practice has varied in the establishment of GAAP benefit reserves. To a certain extent, this has been fostered by actuarial literature: *Actuarial Standards of Practice Interpretation 1-D*, "Purchase Accounting," describes two different methods for the development of reserves. These two methods are the defined initial reserve method and the defined valuation premium method.

Industry practice has varied in the establishment of the present value of profits (PVP) asset, which is intended to represent the fair market value of the business in force on the acquisition date. Some companies established the PVP as the present value of profits on a "new issue" profit margin basis (for example, 5–15 percent of premium for a traditional insurance product) discounted at a new money rate of return (for example, 8 percent). Others calculated the PVP as the present value of profits ignoring the amortization of DAC (for example, 40–60 percent of premium for a traditional insurance product) discounted at a risk rate (for example, 18 percent). Certainly practice varied in the way

that PVP assets were subjected to tests of recoverability. After the appearance of *FAS 97*, practice diverged even more.

In the late 1980s and early 1990s, as insurance company acquisition activity increased, the SEC began looking more carefully at purchase accounting adjustments and particularly at the apparent discontinuity in GAAP profits emerging before and after some acquisitions. In 1992, the SEC looked specifically at the methodology used by many companies to amortize PVP and took exception to it. The SEC raised several issues on the amortization of PVP and referred those issues to the Emerging Issues Task Force (EITF) of the Financial Accounting Standards Board (FASB) for research and conclusion. The specific issues examined by the EITF were:

- Is it appropriate to accrete interest to the unamortized balance of PVP?
- If interest accretion is deemed appropriate, what discount rate should be used?
- How should changes in estimates of future gross profits be reflected in the amortization of PVP?
- How should recoverability of the PVP asset be assessed?

After months of research and open meetings with industry, consultants and other concerned individuals, the EITF reached a conclusion on each of these questions, which were summarized in *EITF Issue #92-9*. The EITF noted at its July 23, 1992 meeting that it was industry practice to accrete interest to the unamortized balance of PVP and, further, that this practice was similar to that used to amortize DAC. By the end of its November 19, 1992 meeting, the Task Force had reached a consensus on the other issues as well.

It concluded that the interest rate to be used to amortize PVP should be the liability or contract rate, that is, the rate currently credited to the GAAP reserves, for all

products. For contracts accounted for pursuant to *FAS 97*, changes in estimates of future profits related to a PVP asset should be accounted for by means of a cumulative catch-up adjustment just as for DAC; for contracts accounted for pursuant to *FAS 60*, such changes involving new estimates of future premiums would be accounted for prospectively only. For these latter products, it is not necessary to adjust for changes in estimates of other elements of income unless considerations of loss recognition are involved. The EITF concluded that PVP assets should be subject to the same tests of recoverability as required for DAC by *FAS 60* and *FAS 97*, and that such tests should be applied to all PVP assets in reporting periods after November 19, 1992. A complete analogy was drawn between the treatment of DAC and PVP for all products. The other provisions became effective for acquisitions after November 19, 1992, the date of the consensus.

Although not all companies had previously tested the recoverability of PVP, many did. A notable exception to the DAC/PVP analogy involves a practice some companies used to reflect adverse results of recoverability tests: in situations in which recoverability tests indicated that the present value of projected profits discounted at the original discount rate was less than the balance sheet PVP, the discount rate going forward was reduced until the PVP became recoverable. Depending upon future changes in estimate, the PVP discount rate could therefore vary from a low of 0 percent to a high of the initial discount rate. *EITF Issue #92-9* indicates that for acquisitions occurring on or before November 19, 1992, PVP discount rates for those companies that have adjusted them as just described may not be reduced below the then-current liability or contract rate.

EITF Issue #92-9 now constitutes the definitive guidance for PVP amortization for transactions occurring after November 19, 1992. The changes in accounting can have a material impact on the recognition of GAAP profit after an acquisition, as compared to recognition of profit under methods of accounting previously used. As of the acquisition date, the new methodology can be summarized in the following steps:

1. Calculate the PVP (by line of business) by discounting projected GAAP profits at the rate the acquiring company would use in absence of *EITF Issue #92-9*.
2. Calculate the PVP (by line of business) by discounting projected GAAP profits at the appropriate con-

tract or liability rate. The profits are the same as those used in step 1.

3. Calculate ratios by line of business of PVP assets as calculated in step 1 to those as calculated in step 2. The ratios should be calculated as of the acquisition date only, that is, only one ratio for each line of business.
4. Apply the ratios as determined in step 3 to the projected profits used in step 1.
5. The amortization of PVP pursuant to *EITF Issue #92-9* is determined by starting with the initial PVP as determined in step 1, accreting interest each year at the discount rates used in step 2, and reducing the balance each year by the adjusted profits as determined in step 4.

The examples below demonstrate the impact of *EITF Issue #92-9* on profits after the acquisition of a block of business using three patterns of profits. Assume for purposes of these examples that future experience matches assumptions; that is, no cumulative catch-up adjustments will be required. A 30-year amortization period and a liability rate of 6 percent are also assumed. The term "traditional PVP" is meant to denote PVP calculated by discounting a projected profit stream at a risk rate of return such as, in the examples below, 17 percent.

Table 1 shows the impact of *EITF Issue #92-9* on a block of business whose undiscounted preamortization profits decline over time. In the early years, the EITF methodology has a negative impact on earnings, initially 2.02 percent lower than those under a traditional method. The negative impact declines briefly before reaching its most negative point, 3.00 percent lower in year 12. Ultimately, because total amortization is the same in both cases, the EITF method has a positive impact in later years, first becoming positive in year 21 and reaching its maximum positive difference (relatively) in year 30.

Table 2 shows the impact of *EITF Issue #92-9* on a block of business with level projected preamortization profits.

The impact of this example is relatively more negative in the early years. Income under the EITF method is less than under the traditional method by 6.53 percent in year 1. The relative profits continue to worsen, until they are 9.45 percent lower in year 14. Ultimately, of course, profits turn around. The impact of the new methodology first becomes positive in year 23 and

reaches its maximum in year 30 when profits are 313.27 percent of those under traditional PVP accounting.

In Table 3 on page 19, profits increase over time. Table 3, while unrealistic, points out that the impact of the EITF method appears to be more severe as the run-off of undiscounted preamortization profits slows down.

In this example, the initial impact is the most severe of all (at -9.38 percent in year 1), worsens to -12.86 percent in year 13, and first becomes positive in year 23. The impact is the most positive in year 30, at a level of 339.46 percent of income from the traditional method.

**TABLE 1
DECLINING PROFITS**

Year	Gross Profit	BOY Traditional PVP	BOY EITF PVP	Income Impact	% Income Impact
1	\$21,400,000	\$86,844,008	\$86,844,008	\$ -297,582	-2.02%
2	20,300,000	80,207,489	79,909,907	-61,157	-0.45
5	15,700,000	61,810,688	61,336,075	-37,579	-0.36
10	10,100,000	40,771,977	39,607,965	186,622	-2.69
15	6,900,000	26,876,477	24,918,528	-89,717	1.96
20	4,500,000	16,747,676	14,417,063	-35,882	-1.26
25	3,000,000	9,062,321	6,885,731	170,015	11.04
30	2,000,000	1,709,402	1,070,776	638,626	219.76

**TABLE 2
LEVEL PROFITS**

Year	Gross Profit	BOY Traditional PVP	BOY EITF PVP	Income Impact	% Income Impact
1	\$21,400,000	\$124,748,938	\$128,748,938	\$-1,385,258	-6.53%
2	21,400,000	124,556,258	123,171,000	-1,447,178	-6.83
5	21,400,000	123,758,461	117,846,064	-1,631,049	-7.75
10	21,400,000	121,225,830	106,616,351	-1,874,285	-9.09
15	21,400,000	115,673,168	91,588,461	-1,832,005	-9.32
20	21,400,000	103,499,246	71,477,755	-969,081	-5.51
25	21,400,000	76,808,554	44,565,093	1,953,577	14.96
30	21,400,000	18,290,598	8,549,882	9,740,717	313.27

TABLE 3
INCREASING PROFITS

Year	Gross Profit	BOY Traditional PVP	BOY EITF PVP	Income Impact	% Income Impact
1	\$21,400,000	\$140,339,905	\$140,339,905	\$-2,236,926	-9.38%
2	21,828,000	142,797,689	140,560,763	-2,377,489	-9.79
5	23,164,048	150,066,900	140,268,799	-2,806,639	-11.00
10	25,574,981	160,940,607	135,757,835	-3,438,657	-12.57
15	28,236,846	167,287,442	124,313,790	-3,562,307	-12.53
20	31,175,759	161,888,640	103,028,916	-2,108,751	-7.66
25	34,420,557	128,727,934	67,953,415	3,425,573	15.65
30	38,003,076	32,481,262	13,736,890	18,744,372	339.46

In most cases the impact of *EITF Issue #92-9* is negative in the years immediately after. Therefore, earnings will be affected negatively in those years. It is not clear whether the new methodology will slow the pace of acquisition activity, but it will be a consideration. If nothing else, all insurance companies doing acquisitions will be placed on a more level playing field than in the past. With respect to PVP amortization, then, maybe it will no longer be true that if you ask ten actuaries...!

Letter to the Editor

S. Michael McLaughlin

Dear Editor:

In an article in the December 1994 issue of *The Financial Reporter*, "Whither Goes PVP," Howard L. Rosen comments that the economics of company acquisitions have been affected significantly by a recent accounting pronouncement. The Emerging Issues Task Force (EITF) of the Financial Accounting Standards Board (FASB) in abstract 92-9 requires amortization of the purchase GAAP asset at the liability rate of interest, not a risk rate of return as had been the prevailing earlier practice. The purchase GAAP asset is sometimes called the PVP, for present value of future profits. The EITF 92-9 applies to purchases after November 19, 1992.

Mr. Rosen's article serves to bring attention to this significant issue. I would like to add a few points of clarification. First, for lines of business accounted for under *FAS 97*, the lower rate of interest used to accrue interest on the PVP asset does tend to defer profit emergence into the future, relative to the use of a risk rate. Mr. Rosen's description of the method is accurate, but

he does not explicitly mention that the resulting pattern of emergence of future net profits is exactly analogous to the pattern that would arise under *FASB 97* as applied to newly issued business.

In fact, the EITF 92-9 method is equivalent to a "defined gross profits" method in which the PVP asset equals a level proportion of EGP, amortized using the credited interest rate. Net profits will emerge approximately proportional to estimated gross profits (EGP). The proportionality is not exact due to the use of the liability rate (for example, credited interest rate) instead of an earned rate; this is the same situation that applies to amortization of deferred acquisition costs (DAC) on new business. Thus, the EITF establishes parity between the emergence of profits on business acquired through company purchase and new, direct sales. The parity extends to the need for regular evaluation of EGP and for "unlocking" of the amortization schedule when necessary.

Second, the EITF abstract has little or no effect on *FAS 60* lines of business. The most common prior method used for such policies is the defined valuation premium (DVP) method. Under the DVP method, future net profit arises as a percentage of gross premiums. The rate of interest used to amortize the PVP asset is the same as that used in liability valuation; thus EITF 92-9 imposes no change. The EITF abstract makes it clear that the PVP asset should be tested periodically for recoverability. However, this principle was already being applied in most situations; thus the EITF will serve primarily as a clarification rather than a new requirement.

Third, the EITF method does have one theoretical nicety as compared to the DVP method. With *FAS 60* business, the determination of the valuation net premium

(and thus the amount of future profit) was often very subjective. With *FAS 97* business, the amount of future net profit, in effect, is defined by the EITF as equal to the present value of future gross profits at the liability rate, less their present value at the risk rate. As mentioned above, those net profits emerge each year broadly in proportion to the EGP, of course modified by actual emerging experience.

Of course, the choice of the risk rate itself is somewhat subjective. If a relatively high rate is chosen, the PVP will be low, and vice versa. The choice of risk rate therefore tends to affect future net profit emergence. However, future net profit emergence is affected by amortization of both PVP and goodwill. For a given purchase price, lower PVP means higher goodwill. Higher goodwill amortization will partially offset lower PVP amortization, thus desensitizing future results to the choice of risk rate.

Finally, EITF 92-9 is silent on the treatment of participating blocks of business that would be covered under the new AICPA SOP 95-1. While there may not be many such blocks of business in stock companies, the appropriate PVP amortization rate of interest would be the analogous rate used for DAC on similar new business. This analogy would call for use of an expected investment yield rate, not the rate of interest used for reserves. Future GAAP profits would emerge

as a level percentage of expected gross margins after policyholder dividends.

Author's Response

Howard L. Rosen

I would like to thank Mike McLaughlin for his insightful comments on my article entitled "Whither Goes PVP?" He reinforces and expands upon several of the points raised.

I would, however, like to comment on one of the points he makes. Mr. McLaughlin noted that "... EITF 92-9 imposes no change ..." to the PVP amortization method used for *FAS 60* products. While it is true that some companies imputed a liability interest rate to PVP assets as a result of acquisitions prior to the effective date of EITF 92-9, many companies established and amortized their PVP assets for all business acquired—whether *FAS 60* or *FAS 97* products—using a risk rate of return, for example 18 percent. Those companies usually made no distinction between product types—especially prior to the effective date of *FAS 97*. For these companies, EITF 92-9 would certainly make a change to their PVP amortization method for *FAS 60* products just as it makes a change for *FAS 97* products.

