



SOCIETY OF ACTUARIES

Article from:

International News

May 2014 – Issue 62



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Fluctuation Funds In Annuities and Universal Life Products In Argentina

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INTRODUCTION

Between the end of the 1980s and the 1990s, the annuity and universal life market started to develop in Argentina, intending to supplement state pensions.

The context for the initial implementation of these products comprised the following elements:

- A commercial and regulatory need of offering a minimum guaranteed interest rate.
- Rate of return and quality limitations of long-term government bonds.
- Short-term investment returns higher than the minimum guaranteed rate of return.
- Volatility of the financial market.

Against this scenario, traditional products represented a strong limitation to insurers' financial strategies. The reason was that they prevented the maximization of investment returns because, if temporary financial losses occurred, these would be absorbed by insurers and could not be offset with previous extraordinary gains or gains that would be earned if financial assets would recover their value during a different policy term.

As a consequence, plans with fluctuation funds were developed and proved to be successful. This article provides a general overview of this experience and the innovations made in Argentina on this matter.

FLUCTUATION FUNDS DURING THE ACCUMULATION PERIOD

A plan including a fluctuation fund for the accumulation period is a plan where each individual policy has two associated savings accounts:

- a. The guaranteed savings account, to which premiums and the minimum guaranteed interest rate are credited, and from which account maintenance charges, the insurance cost, and all other charges are debited.
- b. The fluctuation fund, to which excess returns are credited and from which financial losses are debited.¹

Conceptually, two separate accounts are kept for each insured: (1) the guaranteed savings account, and (2) a fluctuating savings account, which credits or debits the same amounts as (1) for transactions like premiums, partial surrenders or expenses, but is credited with the net return on investment, whether positive or negative, instead of the guaranteed interest rate. The fluctuation fund is equivalent to (2) minus (1).

The policy states that the fluctuation fund balance, if positive, is credited to the guaranteed savings account upon the settlement of any such benefit as death, surrender or annuitization. If, at that time, the balance is negative, it will be nullified and, therefore, the loss will be absorbed by the insurer. In this way, the higher value between (1) and (2) is always recognized.

Accounting

The positive balance of a fluctuation fund is recorded as a corporate liability, as well as reserves. If negative, this balance is not entered under assets, as it is in essence an insurer's contingent asset accounting for the right to make up for past losses with the likely future positive results exceeding the guaranteed return. The balance is calculated on a seriatim basis, therefore, what is actually recorded is the addition of the positive balances of the fluctuation funds of all in-force policies.

FLUCTUATION FUNDS DURING THE DISTRIBUTION PHASE

The fluctuation fund for the distribution phase was implemented on the Single Payment Annuities market that emerged in 1994 under the retirement reform. The technical interest rate (maximum 4 percent) and mortality tables were the same for the entire market. Competition then did not develop by price but by the contingent benefits recognized to annuitants associated with investment returns.

The same concept used for the accumulation period was applied to annuities under two different schemes:

1. "Actuarial" fluctuation fund
2. "Financial" fluctuation fund

These names are used in professional jargon and cannot be explicitly found in either agreements or technical notes.

Actuarial Fluctuation Fund Scheme

Under this scheme, an "Excess Return Index" is regularly recorded (on a daily, monthly or annual basis), calculated as the aggregate of the excess return for the previous term index.

$$\text{Excess Return Index}(t) = \text{Excess Return Index}(t-1) \times [1+R(t)] / (1+i)$$

Where:

i = guaranteed interest rate corresponding to the period $t-1$.

$R(t)$ = Net Return on investments at period t .

The payment is adjusted by the formula below:

The maximum of:

$$P(t) = P(0) \times \text{Excess Return Index}(t) / \text{Excess Return Index}(0)$$

Or:

$$P(t) = P(0),$$

Where $P(t)$ is the payment at period t .

The balance of the fluctuation fund at time t will be equal to the difference between the reserve calculated on the payment adjusted by the variation of excess return index and the reserve calculated on $P(0)$ amount. For this purpose $P(t)$ can be lower than $P(0)$ so, if excess returns index variation as from inception of the policy was negative, the fluctuation fund balance would also be negative.

Financial Fluctuation Fund Scheme

Under this scheme, the excess return is credited to the fluctuation fund at the end of each period, as per the formula below:

$$FF(t) = [FF(t-1) - REC(t)] \times [1+R(t)] + \{P \times [APV(x+t-1) - 1]\} \times [R(t) - i]$$

Where:

$FF(t)$ = fluctuation fund balance at the end of period t

$REC(t)$ = recognitions paid during period t

$APV(x+t-1)$: actuarial present value of a due-annuity of 1 at attained age $(x+t-1)$ at the guaranteed interest rate

P = guaranteed payment of the annuity

$R(t)$ = net return on investments at period t .

i = guaranteed interest rate for period t .

The fluctuation fund will essentially be, in this way, a savings account with a nil opening value at the beginning of the distribution phase, to be credited or debited with positive or negative excess returns on reserves. Any negative transactions impacting on this fund will

also be debited from this account, particularly regular payments to the insured taken from the fluctuation fund balance, called “recognitions.”

Therefore, the insured will receive a total payment as the guaranteed amount of the annuity plus the applicable recognition if the fluctuation fund balance is positive at that moment. In the same way, the amount of the benefit will be always limited to the positive balance of the fluctuation fund.

Several types of recognition schemes have been created, since this flexibility can originate strong commercial competition and a major creative possibility. Below we will describe the basic supplementary schemes:

1. Monthly Basic Recognition

It is calculated according to the formula below:

$$REC(t) = FF(t) / APV(x+t)$$

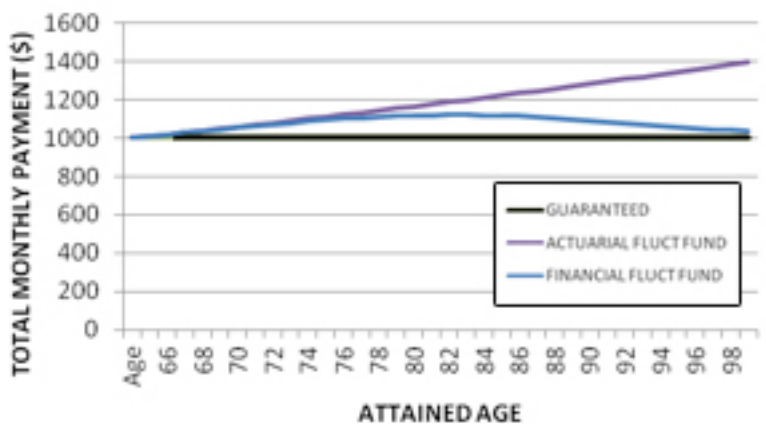
This is called the basic method as it tends to distribute the balance of the fluctuation fund during the average lifespan of the individual at the attained age. The total benefit tends to decrease after several years. The chart to the right shows a comparative evolution of payments under this scheme against the evolution of the payments under an actuarial financial fluctuation fund scheme, under an assumption of a 1 percent excess return per annum in a typical whole life annuity.

2. Regular Bonds

These comprise the recognition of a portion of the fluctuation fund once or twice a year.

The advantage of this scheme is that insureds are presumed not to incorporate the bond value to their monthly consumption. So, if the fluctuation fund is reduced or cancelled, the negative social impact is lighter.

Comparative Evolution of Payments



There have been cases of bonds equitable to:

- A monthly payment once a year (similar to “13th Salary” concept)
- A percentage of the fluctuation fund on an annual or semi-annual basis (which, if high, may provide a significant benefit during the first years of the distribution phase with a high commercial effect)
- A small percentage of the fluctuation fund or a fixed amount at special times (e.g., at the start of the school year for young female pensioners).

3. Supplementary Amount to Reach a Benchmark

This would be equivalent to an amount that, added to the guaranteed payment, would equal an adjustment benchmark, e.g., the inflation adjustment.

4. Benefit for Special Needs

A percentage of the fluctuation fund balance is paid if a need actually exists, as in the case of a medical treatment. This scheme has an interesting effect since it helps offset the defect of the annuity for which no help is provided in these cases, where survival may depend on economic aid, generating more social respectability.

The technical setup of these plans should take care of several major details, as follows:

- These funds should be transferred to heirs or named beneficiaries in case of death.
- A cap may be provided for the fluctuation fund balance as a percentage of the reserve. If this value is exceeded, the difference may be used to buy an additional guaranteed annuity limiting any potential fall.
- If provided for, the use of a portion of the fluctuation fund to buy additional annuities should be either based on contractual provisions or authorized by both sides to avoid an arbitrary risk selection.
- It has also been foreseen in some products that the fluctuation fund balance be used if a change to mortality tables occurs.

HISTORICAL ASPECTS

In 1988 the Fluctuation Fund Scheme was introduced for the accumulation phase, along with the Actuarial Fluctuation Fund Scheme.

Financial fluctuation fund schemes for single payment annuities were introduced in 1995, and they boomed in Argentina due to the huge commercial success of the first company which did business with them. They were adopted by almost all insurance companies on the market and most policies were executed under this scheme, driven by the following advantages:

- Flexibility to put together products matching the needs of different populations.
- Inheritance of the fluctuation fund, which partially offset a certain fear to a total “loss” of the premium in the case of death shortly after the purchase of an annuity.
- The possibility for insurers of offering future agreed product adjustments upon the occurrence

of unstable or inflationary periods, in the case of positive fluctuation funds.

- The possibility for insurers to manage their investments by optimizing long-term returns since short-term variations could be afforded.
- Evidence showed that prospects are more likely to attach greater importance to the product and financial background than to policy guarantees when choosing among competitors.

In our view, this was a successful experience and consideration should be given to localizing this product to other markets requiring a low guaranteed interest rate and where a significant increase of it can be foreseen for the decades to follow.

ACKNOWLEDGEMENTS

- The Fluctuation Fund Scheme for the accumulation phase was introduced in 1988, along with the Actuarial Fluctuation Fund scheme for the Distribution Phase, by actuaries Kern, Arzoumanian and Turró.
- The Financial Fluctuation Fund scheme for the distribution phase was originally proposed in 1995 by the author of this article and developed by a working team which also included the participation of actuaries Bugallo and Arzoumanian, Lic. Bringas, Lic. Sohn and Mr. Terbeck (CPA), and a review carried out by actuary González Galé. At the same time, a similar development was done by actuary Héctor Gueler. □

ENDNOTES

- ¹ It should be noted that an insurer might earn a higher than guaranteed return on investment, but the net return, after deduction of investment administration fees, may be lower than guaranteed. In this case, the insurer may be completing his investment administration fees from the positive balance of the fluctuation fund. For simplicity reasons, we will call “excess return” the comparison between the net rate of return on investment and the guaranteed interest rate, either positive or negative.