IMMEDIATE ATTENTION

EBAP/87/52

March 16, 1987

To: Members of the Executive Board

From: The Secretary

Subject: Funding of the Staff Retirement Plan

Attached for the consideration of the Executive Board is a report from the Chairman of the Pension Committee proposing a change in the nature of funding the Staff Retirement Plan, and an amendment of the Staff Retirement Plan to reflect the change in the funding method.

In the absence of a request from an Executive Director by the close of business on Friday, March 20, 1987, that the matter be placed on the agenda for a meeting of the Executive Board, this report and its proposal will be deemed approved and it will be so recorded in the minutes of the next subsequent meeting.

Mr. Cutler (ext. 8207) or Mr. Hogan (ext. 8223) is available to respond to questions.

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MANAGING DIRECTOR

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MEMORANDUM

March 16, 1987

To: Members of the Executive Board

From: Chairman, Pension Committee

Subject: Method of Funding the Staff Retirement Plan

For some time, in close consultation with the Consulting Actuary (Buck Consultants), the Administration Committee of the Staff Retirement Plan has been studying the possibility of a change in the method by which the Fund pays its contributions to the Plan. At present, the funding method is regulated by Section 6.2 and 4.11 of the Plan and Executive Board Decision No. 5184-(76/127) adopted August 23, 1986. The present method involves three forms of payment by the Fund:

(i) The Fund makes "regular" contributions to the Plan, in parallel with the payment of salaries and the deductions of participants' contributions, at a rate equivalent to a fixed percentage (at present 14 percent) of gross pensionable remuneration.

(ii) So-called "experience gains" or "experience losses" that result from the annual actuarial valuations are amortized by the Fund over a 15-year period. Because the Plan has experienced losses, additional lump-sum payments have been made annually over a period of years.

(iii) The Fund makes annual lump-sum payments to fund cost-of-living increases in pensions in excess of 2 percent, which has been the actuarial assumption on the rate of inflation.

A more detailed explanation of the principal features of the present funding method is set out in Attachment I.

The study of the funding method was undertaken in conjunction with a review of the actuarial assumptions, on which are based the annual calculations of the financial status of the Plan (see Attachment II). In 1986, the Administration Committee recommended to the Pension Committee the adoption of revised actuarial assumptions. It also recommended that the Pension Committee endorse a new method of funding proposed by the Consulting Actuary (the "aggregate method") and that this method be implemented with effect from May 1, 1987. This method of funding has been used for a number of years by the retirement plan of the World Bank.

On July 15, 1986, after discussion of the Report of the Administration Committee and the Actuary's Report (see RP/CP/86/5), the Pension Committee adopted revised actuarial assumptions for the Plan, and agreed that these assumptions should be reviewed at regular five-yearly intervals. The Pension Committee also endorsed the proposal to adopt the aggregate funding method, subject to the clarification of an accounting question that has subsequently been resolved. 1/ Because this proposal involves an amendment to the Plan, its adoption requires a decision by the Executive Board of the Fund.

The rationale and background for the proposed new funding method, and its method of implementation in connection with the annual actuarial valuations, were set out in a report by the Administration Committee to the Pension Committee (RP/CP/86/5). The main reason for proposing this change is that the present method of funding has given rise to unduly large fluctuations from year to year in the Fund's payments, and these fluctuations are likely to be greater in the future as the assets of the Plan grow. The new funding method, which will involve a single form of payment on an ongoing basis in parallel with the payment of salaries, will provide greater stability in the amounts of the Fund's annual payments. In addition, the Actuary considered that the amortization of experience losses over 15 years, and the maturity funding of cost-of-living increases in excess of 2 percent, represent a very "conservative" method of funding the Plan in the sense that the Fund is putting into the Plan more resources over a shorter period than is reasonably necessary; although this was a prudent method at a time when the Plan was relatively poorly funded, over recent years the funded status of the Plan had improved markedly.

The Actuary's Report and the Report of the Administration Committee make it clear that the intention is to establish the rate of the Fund's contributions (i.e., the percentage of gross pensionable remuneration) as the outcome of the annual actuarial valuation, and to put the new rate into effect at the start of the subsequent financial year. In accordance with this recommendation, the first payments under the proposed method would begin on May 1, 1987, at a rate of 12.14 percent of gross remuneration, as compared with the 14 percent presently in effect. This new rate of 12.14 percent is based on the valuation made as of April 30, 1986, which employed the new actuarial assumptions. On May 1, 1988 a new

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1/ The question was whether the Fund should follow Statement No. 87 recently issued by the U.S. Financial Accounting Standards Board, which would have required a manner of expensing the cost of the Staff Retirement Plan that differs from the proposed funding method. The Treasurer has concluded that continuation of the present expensing method based on International Accounting Standard No. 19 is both consistent with generally accepted accounting practices and preferable for the Fund in avoiding sharp year-to-year variations in the Fund's pension plan costs.

"aggregate" rate would be put into effect, based on the outcome of the actuarial valuation of April 30, 1987, and so on in subsequent financial years.

It is proposed that, in accordance with the recommendation of the Pension Committee, the Executive Board adopt the decision set out below. It should be noted that the amendments in Section 4.11 of the Plan, which deals with cost-of-living increases, involve only the deletion of references to separate funding for these increases. Under the new method of funding, the Fund's payments on account of these increases will be incorporated into the single aggregate contribution rate. However, there is no substantive change in the determination of the increases themselves. 1/

Proposed Decision

1. The Executive Board approves the adoption and implementation of the changes in the method of funding the Staff Retirement Plan as recommended in Pages 9 through 11 of the Report by the Chairman of the Administration Committee on the Review of the Actuarial Assumptions and the Method of Funding the Staff Retirement Plan (RP/CP/86/5).

2. The Staff Retirement Plan is amended to reflect the modification of the funding method as follows:

Subsections (a) and (b) of Section 4.11 are amended to read:

4.11 Pension Supplements

(a) Whenever the cost-of-living for a fiscal year beginning after April 30, 1977 increases, pensions shall be augmented by a pension supplement which, expressed in percentage terms, shall be equal to the increase in the cost-of-living for the fiscal year.

(b) The Employer, for good cause, shall have the right, not later than the commencement of the fiscal year in which the additional supplement is payable, to reduce prospectively the additional supplement to not less than 3 percent. In the case of an additional supplement calculated on the basis of (d)(ii) below, any such reduction shall be made applicable through uniform rules adopted by the Employer upon the recommendation of the Administration Committee.

1/ Attachment III shows how the present provisions would be changed by the proposed amendments.

Subsection (a) of Section 6.2 is amended to read:

6.2 Contributions by the Employer

(a) The Employer shall, notwithstanding any other provisions hereof, contribute such part of the cost and expenses of the Plan as shall not be provided by the contributions of participants. Whenever an actuarial valuation of the assets and liabilities of the Plan shall disclose that the present value of all benefits to be provided by the Plan on account of participants and retired participants then covered under the Plan is in excess of the sum of the Retirement Fund and the present value of future contributions by such participants, the Employer shall make up the difference by periodic payments. Such payments shall be made for each pay period at such percentage rate of the gross remuneration of all participants as the Employer shall determine, from time to time, upon the recommendation of the Pension Committee.

3. This decision supersedes Executive Board Decision No. 5184-(76/127), adopted August 23, 1976.

4. For pay periods commencing on or after May 1, 1987, the Fund's rate of contribution shall be 12.14 percent of gross pensionable remuneration.

5. This decision shall enter into effect on May 1, 1987.

Attachments

The Method of Funding the Staff Retirement Plan

The present funding method

At present, the Fund makes payments in three ways to fund the Staff Retirement Plan (SRP):

(i) The participants in the Plan and the Fund make their regular contributions of 7 percent and 14 percent, respectively, of gross pensionable remuneration on an ongoing basis in parallel with the payment of salaries.

(ii) The Fund's SRP is a "defined benefit" plan, and this means that the Employer has accepted the obligation to make any additional payments required to fund any liability. Each year the liabilities and assets of the Plan are valued, using the actuarial assumptions. The liabilities of the Plan are computed as of the valuation date for pensioners, beneficiaries, and active participants, and the experience losses and gains are determined for each assumption. If the composite result is a net actuarial loss, that loss is amortized by annual payments over 15 years. If the overall result is an actuarial gain, this gain is similarly amortized over 15 years, thereby reducing any annual payment toward previous losses.

(iii) An annual lump-sum payment is made by the Fund to provide the maturity funding of the portion of pensions that arises from increases in the cost-of-living in excess of the assumed 2 percent increase in any one year.

Developments in the outstanding unfunded liability of the SRP since 1977 are shown in the following table. Throughout almost all that period, the result of the actuarial valuation of the SRP has been an actuarial liability that has given rise to amounts to be amortized by the Fund over fifteen years from the date the liability was calculated, and the Fund has been making lump-sum payments each year to amortize the liability. Since

Table 1. Outstanding Unfunded Liability: 1977 - 1986

(In millions of U.S. dollars)

Valuation as of April 30	Outstanding Liability	Change from Prior Year
1977	31.7	-
1978	35.2	+ 3.5
1979	50.3	+ 15.1
1980	60.1	+ 9.8
1981	77.8	+ 17.7
1982	66.6	- 11.2
1983	67.0	+ 0.4
1984	60.7	- 6.3
1985	34.6	- 26.1
1986	(8.8) overall gain	- 43.4

1983, however, the liability has been substantially reduced, and the result of the valuation made on April 30, 1986 was an overall gain of $8.8 million. These results over the years have been heavily influenced by inflation and by investment performance. The recent rapid reduction in the unfunded liability has resulted mainly from investment performance.

The Actuary recommended changing the present funding method because, in his view, that method results in "too volatile a level of contributions (by the Fund)," and he has also expressed his concern that under the present method these fluctuations are likely to get larger as the ratio of the Plan's assets to total payroll increases. In addition, the Actuary recommended that, with the adoption by the Pension Committee of the new economic assumptions, there should be no separate funding for cost-of-living increases.

The Administration Committee's study reviewed two main aspects of the present funding method that the Actuary considered argued in favor of change:

(a) The present funding method, and in particular the maturity funding of cost-of-living increases, is a very "conservative" way of funding the Plan in the sense that the Fund is putting into the Plan more resources over a shorter period than is reasonably necessary. This is mainly because the Fund has chosen an amortization period (15 years) that is relatively short compared with the maturity structure of the Plan's liabilities. The decision on the amortization period was taken at a time when the Plan was relatively poorly funded after a period marked by high inflation and low returns on investment, and the intention was to remedy that situation. In recent years, however, the funded status of the Plan has improved dramatically.

(b) The present funding method, which involves three forms of payment, produces too volatile a contribution pattern for the Fund. In this respect, the Actuary cited the fluctuations in the historical contribution requirements. In the period since 1978, as a result of the amortization of liabilities and the annual funding of cost-of-living increases in pensions, the Fund's total annual contribution has ranged from a high point of 33.4 percent of gross pensionable remuneration to a low of 22.4 percent, and the fluctuations from year to year have shown changes of up to 6 percent of gross remuneration. The average variation from year to year was about 3.5 percent of gross remuneration.

The Administration Committee examined these questions in detail, and there were differing views on how much weight should be given to them. Nevertheless, it was agreed that the adoption of the aggregate method would give greater stability to contributions by the Fund without any significant weakening in the funded status of the Plan. The Committee recommended, therefore, that the Pension Committee adopt the change in the funding method proposed by the Actuary, namely the "aggregate" method of funding, and discontinue the separate maturity funding of cost-of-living increases.

The aggregate method of funding

Under the aggregate method, the amount required to be paid in by the Fund would be expressed in terms of a single aggregate rate, determined at the time of each actuarial valuation. The rate would be expressed as a percentage of the gross pensionable remuneration of participants. 1/ For example, under the aggregate method and using the new assumptions adopted by the Pension Committee in July 1986, the actuarial valuation as of April 30, 1986 indicated that the required aggregate rate of contributions by the Fund would be 12.14 percent of gross pensionable remuneration.

Under the aggregate method, the Fund would make its contributions on an ongoing basis at the rate of 12.14 percent of gross pensionable remuneration, and would maintain that contribution rate until the next annual actuarial valuation gave rise to a new aggregate rate of contribution. No lump-sum payments would be made, either to amortize actuarial liabilities or to fund cost-of-living increases in pensions.

The aggregate method spreads any actuarial loss or gain over an appreciably longer period than the 15 years used under the present method, and this will contribute to greater stability in the Fund's contributions from year to year. In addition, the aggregate method will preclude the need for separate funding of cost-of-living increases, and these annual payments have been a significant element in the volatility of the Fund's total contributions over the years. The greater stability of the aggregate method has been demonstrated in the Actuary's Report by hypothetical calculations that compared the actual contribution rate since 1978 with the approximate contribution rate that would have been required under the aggregate method. (See RP/CP/86/5.) These calculations showed that the average variation from year to year would have been about 1.3 percent of gross remuneration as compared with 3.5 percent under the existing system.

Timing of change in method

Actuarial valuations are made annually, as of April 30 each year. The results of these valuations are not normally available until August or September in each year, and the Actuary has suggested that the aggregate rate of contribution resulting from each valuation should apply from May 1 of the following financial year. The rate of contribution could then be taken into account in the preparation of the administrative budget for that year. The Pension Committee recommended that this timetable be followed, and that the aggregate rate established by the 1986 valuation be put into effect on May 1, 1987. If, therefore, the Executive Board adopts the aggregate method, the Fund will start contributing at the rate of 12.14 percent of gross pensionable remuneration from May 1, 1987. For the financial year beginning on May 1, 1988, the contribution would be based on the rate calculated as of April 30, 1987 and so on in subsequent years.

1/ A detailed description of the method is provided on pages 56 through 59 of the Actuary's Report.

Actuarial Assumptions

Introduction

The Pension Committee is obliged by Article 7, Section 7.1(f), as amended, of the Staff Retirement Plan to take decisions from time to time on the actuarial assumptions used in the annual valuation of the Staff Retirement Plan. Last year, the Administration Committee of the Plan considered a Report by the Fund's Consulting Actuary (Buck Consultants), which reviewed, in addition to the funding method, the assumptions that had been in use for a number of years, and recommended the adoption of a revised and updated set of assumptions. The Administration Committee endorsed the Actuary's recommendations, and submitted them to the Pension Committee for its consideration. On July 15, 1986, the Pension Committee adopted revised assumptions substantially as recommended by the Actuary, with certain modifications that are noted below. The Pension Committee also agreed that, in future, the actuarial assumptions should be reviewed at regular five-yearly intervals.

Nature of Actuarial Assumptions

Actuarial assumptions represent estimates of future events that will have an impact on the costs of a retirement plan. Deviations between these actuarial assumptions and the actual experience of a retirement plan result in actuarial gains or losses. As the Actuary's Report pointed out:

> "It is important, therefore, that the assumptions be selected so as to represent, at least in the aggregate, the experience that may be expected to develop in future years. In this manner, the cost of the Plan will not be overstated or understated, and benefit changes will not be adopted without the most up-to-date indication of their impact on the cost of the Plan."

The adoption of new assumptions, therefore, should be seen as the means of bringing the annual actuarial valuations of the SRP more into line with the reality of experience and with more reasonable expectations about the future. Thus, the probable cost of the Plan will be more accurately reflected on an ongoing basis, and any proposed changes can be assessed on the basis of the most realistic indications of their financial impact.

The Actuary's Report provided the Administration and Pension Committees with full details on the nature of the actuarial assumptions and the role they play in the Plan. It dealt with the assumptions in two categories--(i) the so-called non-economic assumptions, which encompass such matters as rate of withdrawal from the Plan, rate of mortality for both active staff and pensioners, and a number of other assumptions of a demographic nature; and (ii) the economic assumptions, which cover the expected return on investment, rates of inflation, and rates of future salary increases. The Actuary also included under the economic assumptions the method of determining the value assigned to existing assets for valuation purposes.

Non-economic Assumptions

The recommendations of the Actuary in respect of the non-economic assumptions related, for the most part, to actual experience under the Plan (e.g., rates of withdrawal) or to other aspects of the Plan (e.g., post-retirement mortality) where there is a reasonable body of evidence or data available to justify new assumptions. In some respects, the Actuary's recommendations establish assumptions on aspects of the operation of the Plan that had, hitherto, been ignored; an example is a proposed methodology for dealing with the Fund's procedure for making a cost-of-living adjustment in the year of retirement. Because the Actuary's recommendations were mainly based on experience, the Administration and Pension Committees had no difficulty in accepting them.

The changes that have the largest financial impact on the Plan concern the following:

(i) the rate of retirement--experience shows that staff are retiring earlier than assumed;

(ii) mortality rates after retirement--experience show that post-retirement mortality has been appreciably lower than assumed, that is to say, pensioners have been living longer than expected;

(iii) the initial cost-of-living adjustment--the Actuary recommended adopting a methodology of calculation that takes into account the procedure followed by the Fund in granting a cost-of-living adjustment in the year of retirement. In this respect, the Actuary proposed the change because the present methodology makes no allowance for the procedure followed by the Fund.

Economic Assumptions

The economic assumptions dealt with in the Actuary's Report covered the assumed rate of return on investment, the rate of inflation, and the rate of salary increases.

The economic assumptions that had hitherto been used in the valuation of the Plan consisted of (i) an assumption that cost-of-living increases in pensions will be at the rate of 2 percent per year; (ii) an assumed rate of return on investment of 6 percent; and (iii) a salary increase assumption on gross pensionable remuneration equal to 8 percent per year at ages 22 and below, and decreasing by 0.1 percent for each year of age above 22 down to 3.8 percent at age 64.

These assumptions can be said to incorporate an allowance for inflation of 2 percent per annum in the assumed rate of return of 6 percent, which results in an implicit assumption of a real rate of return of 3.92 percent. 1/ In addition, the salary increase assumption can also be seen as incorporating the same 2 percent per annum allowance for inflation.

The Actuary recommended the adoption of the following:

(i) the allowance for inflation would be increased from 2 percent per annum to 6 percent;

(ii) the rate of return would also be increased by 4 percentage points, from 6 percent to 10 percent per annum--which, in conjunction with (i), actually implies a slight reduction in the real rate of return, from 3.92 percent to 3.77 percent;

(iii) the salary increase assumption would be revised to reflect the new allowance for inflation, and the assumption would be based on net compensation rather than pensionable gross compensation (the proposed assumption is of an overall real rate of increase in the net salaries of individuals of about 3.1 percent per annum: details are provided on pages 6 and 7 and pages 29 through 35 of the Report of the Actuary); and

(iv) the annual cost-of-living increase would be assumed to be equal to the rate of inflation of 6 percent. 2/

1/ The relationship between the rate of return of 6 percent and the inflation rate of 2 percent is multiplicative rather than additive.

2/ It should be stressed that the adoption of this assumption does not affect the provisions of the Plan regarding cost-of-living increases. Section 4.11(b) of the Plan requires the Plan to pay annual cost-of-living increases to pensioners. The Employer has the right to limit each year's cost-of-living increase to 3 percent "for good cause."

Members of both the Administration Committee and the Pension Committee had some difficulties with these recommendations, in particular with the levels of inflation and the rate of return. After the Actuary had made additional calculations that showed there would be little change in the overall impact if the allowance for inflation was set at 5 percent rather than 6 percent and the rate of return set at 9 percent, the Pension Committee decided to adopt the lower figures. The salary increase assumption was adjusted accordingly.

In addition, the Actuary's Report included a recommendation on the method of valuing the Plan's assets. The Plan had used an asset valuation method that values fixed income investments at book value plus unamortized net loss on sale, and stocks on a form of 10-year moving average of market values. The Actuary recommended, and the Administration and Pension Committees accepted, a new method of valuing assets, based on a five-year moving average. The new method is simpler than the very complicated method previously in use.

Review of Actuarial Assumptions

The Actuary's Report also stressed the importance of reviewing the actuarial assumptions at least every five years. It is clear that some rule to this effect is needed, and it also seems necessary to ensure that such a review is not pro forma; otherwise the assumptions might remain unchanged for long periods even when actual experience deviated widely from these assumptions. The Administration Committee proposed that the Pension Committee commit itself to a strict timetable for reviews to be completed every five years. In line with this recommendation, the Pension Committee at its meeting on July 15, 1986 adopted a decision in the following terms:

- "The Pension Committee shall, in accordance with Section 7.1(f) of the SRP, review the actuarial assumptions of the SRP within five years of this decision and every five years thereafter, on the basis of a report of the Administration Committee to be submitted to the Pension Committee not later than six months prior to the data scheduled for the completion of such review."

The way in which the present text has been changed to provide the new text set out in the proposed decision is shown below.

4.11 Pension Supplements

(a) Whenever the cost of living for a fiscal year beginning after April 30, 1977 increases, pensions shall be augmented by a pension supplement which, expressed in percentage terms, shall be equal to ~~the lesser of (i)~~ the increase in the cost of living for the fiscal year. ~~or (ii) two percent.~~

(b) ~~If the increase in the cost of living for a year exceeds two percent, pensions shall be augmented by an additional supplement, to be paid from contributions of the Employer under Section 6.2(a)(ii), equal in percentage terms to the difference between the supplement under subsection (a) above and the increase in the cost of living, provided that~~ T the Employer, for good cause, shall have the right, not later than the commencement of the fiscal year in which the additional supplement is payable, to reduce prospectively the additional supplement to not less than ~~one~~ three percent. In the case of an additional supplement calculated on the basis of (d)(ii) below, any such reduction shall be made applicable through uniform rules adopted by the Employer upon the recommendation of the Administration Committee.

Note: Under the existing provisions, the combined effect of 4.11(a) and (b) is to guarantee a minimum cost-of-living increase of 3 percent, when the actual increase is in excess of that level. The 3 percent comprises 2 percent under 4.11(a) and 1 percent under 4.11(b). This minimum of 3 percent, when the increase exceeds that level, would be incorporated in the proposed 4.11(b). With the proposed adoption of the aggregate funding method, and the abolition of separate payments for increases in excess of 2 percent, the present two-tier arrangement would no longer apply, and the 2 percent mentioned in 4.11(a) would play no role in the funding of the SRP or the determination of cost-of-living increases.

6.2 Contributions by the Employer

(a) The Employer shall, notwithstanding any other provisions hereof, contribute such part of the cost and expenses of the Plan as shall not be provided by the contributions of participants. ~~The contribution of the Employer shall be paid as follows:~~

~~(i) A "regular contribution" shall be paid for each pay period at such percentage rate of the gross remuneration of all participants as the Pension Committee shall from time to time determine.~~

~~(ii) A "supplementary contribution" shall be paid each fiscal year in an amount determined, on the basis of the annual actuarial valuation accepted by the Pension Committee, to be sufficient to meet the estimated total current and future costs of pension supplement under Section 4.11(b).~~

~~(iii)~~ Whenever an ~~the~~ actuarial valuation of the assets and liabilities of the Plan shall disclose that the present value of all benefits to be provided by the Plan on account of participants and retired participants then covered under the Plan is in excess of the sum of the Retirement Fund, and the present value of future contributions by such participants, ~~and the present value of future regular contributions by the Employer,~~ the Employer shall make up the difference by periodic ~~additional payment or~~ payments.

Such ~~payment or~~ payments shall be made for each pay period at such percentage rate of the gross remuneration of all participants as ~~determined by~~ the Employer shall determine, from time to time, upon the recommendation of the Pension Committee.