

**AFRICAN DEVELOPMENT BANK**

**STAFF RETIREMENT PLAN**

**FINANCIAL SUSTAINABILITY OF THE SRP**

*December 2009*

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Acronyms and abbreviations

ADB	African Development Bank
ALM	Asset Liability Management
AsDB	Asia Development Bank
AUM	Assets under Management
COLA	Cost of living adjustment
DB	Defined Benefit
DBO	Defined Benefit Obligations
DC	Defined Contributions
EBRD	European Bank for Reconstruction and Development
EIB	European Investment Bank
FSP	Final Salary Plan
IADB	Inter-American Development Bank
IMF	International Monetary Fund
LDI	Liability Driven Investment
MDB	Multilateral Development Bank
MPP	Money Purchase Plan
SAA	Strategic Asset Allocation
SRP	Staff Retirement Plan
UA	Unit of Account
UNJSPF	United Nations Joint Staff Pensions Fund
WB	World Bank

## **Executive Summary**

The Staff Retirement Plan (SRP or the Plan) of the Bank operates a defined benefit system that is financed through joint pension contributions from members of the Plan and the Bank. Members of the Plan contribute 9% of their basic salaries while the Bank contributes the actuarial balance required to cover the cost of the Plan. Additional incomes are generated to the fund from investments returns of the assets of the Plan.

The actuarial valuation results of the SRP as at 31 December 2008 indicate that the Plan was in an actuarial funding deficit of UA 38.3 million, a significant increase of deficits when compared with the actuarial surplus of UA 6.5 million, as valued on 31 December 2007. The main reason for the emergence of this deficit in 2008 was the decline in the market values of the assets of the Plan which was mainly caused by the global financial market crisis of the year. As sponsor of the Plan, the Bank financed this actuarial deficit in 2009. The financing of such actuarial deficits of the SRP, however, have become a concern to the Bank.

In order to address these financial concerns and maintain the Plan's long term financial viability, the Steering Committee of the SRP commissioned a study on the financial sustainability of the SRP with a view of designing alternative benefit models. Of the proposed alternative benefit designs, the Committee favored the maintenance of the defined benefit plan structure with an element of risk sharing component by members of the Plan through the applications of a variable accrual rate plan.

The management of past accrued liabilities of the Plan could be adequately handled through a proper investment strategy of the assets. The investment target should be based upon a Strategic Asset Allocation (SAA) approach that would focus on Liability Driven Investments (LDI).

Other additional proposals were also forwarded as possible measures that could improve the financial positions of the Plan. One of these proposals focused on increasing the current retirement age of the Bank. Such measure would reduce the defined benefit obligations (DBO) of the Plan through the lowering of the actuarial liabilities.

After examinations and assessments of the implications of the various pension benefit models, the Steering Committee of the SRP hereby submits the following recommendations for considerations and approval by the Board of Directors:

## **Recommendations**

### **1. Benefit model**

The long-term financial sustainability of the Plan needs to be supported through the additional participation of members of the Plan in the risk sharing process, under the existing defined benefit (DB) environment.

## **2. Contributions and accrual rate**

When the Plan is in a fully funded position or is in surplus, the total contribution to be paid to the Plan would be a fixed rate of 27% of basic salary: 9% by members and 18% by the Bank. The benefit accrual rate remains to be 2.5% of final average salary per year of service.

## **3. Deficit financing**

When the Plan is in an actuarial deficit position, the deficits should be recovered under the following processes:

- 3.1 All deficits of the plan that will have been accrued up to 31 December 2010 would be fully financed by the Bank.**
- 3.2 Subject to item 3.3 below, the deficits that accrue after 31 December 2010 would be shared between the members of the Plan and the Bank on the basis of the following arrangement:**
  - a) To the extent possible within the parameters set out in b) below, the recognized deficit would be shared between the members of the Plan and the Bank in a 1:2 ratio (1/3 would be covered by members while the 2/3 would be covered by the Bank).**
  - b) Members' participation in the financing of deficits would be implemented through a variable accrual rate plan with a minimum accrual rate of 2% and the normal accrual rate of 2.5% as a ceiling.**
  - c) The Bank pays its share of financing of the deficits through additional contributions in the form of either lump sum payments or additional rates of contribution.**
  - d) The financing of these deficits by members and the Bank should be accounted for in an amortization period of five years.**
- 3.3 The Steering Committee decides the minimum level of deficits that will justify the application of item 3.2 above and develops further procedures on the application of the variable accruable rate plan.**

## **4. Increase of the retirement age**

The increase of the retirement age of the Bank from the current level of sixty to a higher age would bring a significant positive financial contribution to the Plan. Management is requested to undertake further studies and submit recommendations to the Board on possible increment of the age of retirement.

## **1. Introduction**

1.1 The Staff Retirement Plan (SRP or the Plan) of the African Development Bank was established by Resolution No. 05/89 of the Board of Governors on 31 May 1989. The Plan started its operations as from 1<sup>st</sup> January 1990 replacing the previous Staff Provident Fund system. The main objective of the SRP is to provide income security to members of the Plan after their termination of service with the Bank or benefit payments to survivors at time of death of members.

The main benefits provided under the Plan include the following:

- Normal retirement pension,
- Early retirement pension,
- Death benefits to spouses or designated beneficiaries,
- Disability pension,
- Child benefit and
- Withdrawal settlement.

Regular pension benefits and lump sum payments are denominated in the Units of Account (UA) and paid to pension beneficiaries in the currencies of their choices. All regular pension benefits are annually increased for cost-of-living adjustments (COLA).

1.2 Pension benefits of members are determined on the basis of final average salary and years of membership with the Plan. The accrual rate varies on the period of years of service rendered by the member. For services rendered prior to 31 December 2004, the accrual rate was 2% of the final average pensionable salary and for services after 1 January 2005, the annual accrual rate is 2.5% of average basic salary.

Death benefits are also payable to spouses amounting to 50% of what the member would have got at time of death or were in-force at time of retirement. If there are no spouse(s), then one-time lump sum death benefits are paid to designated beneficiaries. Members are also entitled to disability pension in case of permanent disability as defined by medical practitioners.

1.3 The financial sources of the Plan are:

- Regular contributions by members (9%)
- Regular and technical contributions by the Bank
- Incomes generated from investment of the assets

The SRP administration manages a fund to which all contributions are credited and pension benefit payments are paid from. Any asset amount in the fund beyond the liquidity requirements are transferred for investment in the international financial market. The investment process is managed by an external asset manager that operates under the Investment Guidelines provided by the Investment Committee of the SRP.

The financial status of the fund is regularly valued by an appointed scheme actuary. The results and recommendations of these actuarial valuations are presented to the Steering and

Investment Committees for adoptions and implementations as necessary. The financial operations are also annually audited by an external auditor.

1.4 The administration of the Plan is vested in three main entities: the Steering Committee, the Investment Committee and the Plan Administrator.

- a) The Steering Committee has the responsibility of:
- formulating the strategies and major policies of the Plan;
  - supervising the administration of the benefits provided under the plan
  - reviewing and following up the periodic actuarial valuation of the Plan;
  - monitoring the activities of the Staff Retirement Plan Investment Committee;
- b) The Investment Committee is responsible for the assessment of the global management of the SRP asset portfolios, payments made, and the review of the sustainability of the Plan and has the overall responsibilities for the financial management of the Plan.
- c) The Plan Administrator is responsible for the day-to-day operational and financial business of the Plan and, subject to the other provisions of the Plan, acts as the official representative of the Plan. He is also the Secretary of both committees.

1.5 The Plan has undertaken some changes in the last couple of years. The main changes and reforms approved by the Board of Directors include the following:

- On 14 November 2004, the Board approved the SRP reform which clarified the role of the Bank as sponsor of the defined benefit plan of the SRP. It also brought some transparency in the application of the SRP legal text.
- In 2007, some changes to the text were made that enabled local employees at field offices to be members of the SRP.
- In 2008, another SRP reform brought changes in death benefit payments to spouses and the lowering of early retirement reduction rates.

1.6 The objective of the paper

The SRP reform of 2004 brought a clear definition of a defined benefit (DB) pension plan to provide retirement and related benefits to employees of the Bank. Members' contributions were fixed at 9% of basic salaries while the Bank's contributions were to variable rates dependant on the actuarial balance of cost of the fund.

Taking note of the financial risks that may incur upon the Bank and considering the need to maintain the long term sustainability of the Plan, the Steering Committee of the SRP commissioned a study to make further financial assessments on:

- implications on the financial responsibilities of the Bank.
- the future financial sustainability of the SRP and
- alternative options of new benefit designs that involve risk sharing mechanisms.

In order to assess these implications and develop possible alternative benefit designs that would mitigate the risks attached with the Plan, the Steering Committee of the SRP commissioned the Advising Actuary of the Plan, Hewitt Associates, to review and report the financial risks to the Bank of operating the SRP.

This paper highlights the findings and recommendations of this study report, as summarized in the following four sections:

1. Current and projected financial positions of the SRP (Section 2)
2. Managing financial risks and range of potential benefit designs (Section 3)
3. Global trends and benefit designs of some comparator institutions (Section 4)
4. Conclusions and recommendations (Section 5)

## **2. Current and projected financial status of the SRP**

### **2.1 Funding positions of the Plan in 2007 and 2008**

The SRP Reforms adopted in November 2004 clearly defined the financial obligations of the Bank towards the Plan. This resulted in the Plan to be a defined benefit (DB) plan based on a “balance of cost” approach. In this scheme, the Bank’s pension contributions would depend on the actuarial surpluses or deficits of the fund. The rates of these pension contributions are determined from the regular actuarial valuations, as recommended by the Actuary. For example, the current level of Bank’s contribution (21%) was set after an actuarial valuation carried out on 31 December 2005.

The following table shows the actuarial valuation results of the Plan on a funding basis for 2007 and 2008.

Funding levels of the SRP in 2007 and 2008.

	31 Dec. 07	31 Dec. 08
Assets (A)*	255	210.3
Liabilities (L)*	248.5	248.6
Surplus/(Deficits) (A-L)	6.5	(38.3)
Funding level (A/L)	103%	85%

*\*Amounts in million of UA*

The results of the 2007 actuarial valuation showed that the Plan was having a total past service liabilities of UA 248.5 million while the end of year market value of the assets was found to be UA 255 million. The fund was then in a surplus of UA 6.5 million with a funding level of 103%. On the other hand, the 2008 actuarial valuation of the Plan reported a total past service liabilities of UA 248.6 million with a corresponding market value of total assets amounting to UA 210.3 million. This latest valuation showed the emergence of an actuarial deficit of UA 38.3 million, resulting in a funding level of 85%. Some of the changes in the benefit designs of 2008 and higher contribution rates maintained the level of the liability at the same amount.

On the basis of the financial assumptions considered in the 2007 valuation, the Plan should have been in surplus of about UA 5.4 million. However, the global financial market crisis of 2008 brought a significant decline in the values of the assets (value of the assets went down from UA 255 million to UA 210 million) thereby resulting in a funding deficit of UA 38.3 million. In April 2009, the Bank



transferred the full amount of the funding deficit to the SRP, bringing the Plan into a full funding position.

It has also been realized that the financial markets have been showing gradual stabilizations in the last couple of months and the trend seems to continue for some time. The consultant's update as at 30 June 2009 shows that the assets and the estimated liabilities of the Plan are both close to UA 260 million, indicating that the Plan is currently in a fully funded position. The total asset size of the Plan as at 30<sup>th</sup> November 2009 amounted to about UA 290 million, recording an increase of UA 80 million from that of 31 December 2008. Of this increase, UA 50 million was transferred from the SRP fund while the remaining UA 30 million was accounted as the result of the improvement in the market values of the assets. It is expected that the end of year funding position of the Plan would improve if market conditions continue to behave normally.

## **2.2 Financial implications and projections of the current Plan**

The SRP is a defined benefit (DB) plan where members of the Plan have benefit guarantees calculated on the basis of their average salaries and accrued service years. The amounts of these benefits are defined in advance (in terms of final salary and service) and employees know what proportion of their salaries they will receive on retirement or early separation.

However, the costs of these benefits could not be known in advance, the main reasons being:

- Salaries at time of retirement are not known in advance
- Investment returns and incomes of assets may not be correctly forecasted
- Benefit payments may start sooner than expected because of early departures from the Plan or death of members.
- Pension beneficiaries may live longer than expected number of years due to factors of longevity.

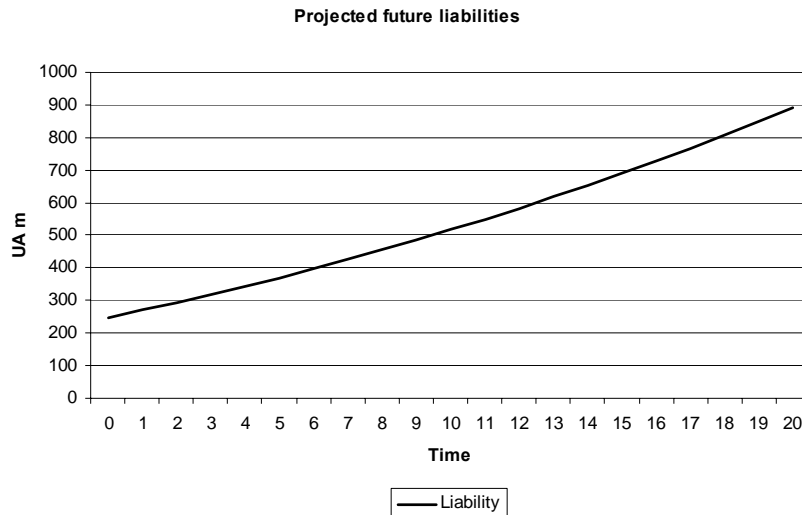
For these and other actuarial reasons, surpluses or deficits emerge because of the imbalances between the assets and liabilities of the Plan. As the members' rate of contributions is a fixed amount (9%), the financing responsibility of any variability between the assets and the liabilities is borne by the Bank. If surpluses emerge, the contributions of the Bank to the fund would decline. On the other hand, if the Plan is in deficits, the Bank would make additional contributions to fully fund the Plan.

The Plan's assets are built up from the accumulation of contributions paid by members and the Bank as well as returns from investment of the assets. The overall financial target is to have a sufficient reserve in the fund that would meet any future benefit payment liabilities of the Plan. The financial projections and forecasts would involve complex financial and demographic assumptions. Due to the variability nature of all these assumptions, differences and variabilities appear between expected and actual values of assets and liabilities.

In order to have an idea of "best estimate" positions of the Plan in the next twenty years, the consultant carried out actuarial projections with the following underlying assumptions:

- Investment returns are in line with the discount rate (6.0% p.a.)
- Inflation and pensionable salary increases are in line with the assumptions (2.5% p.a. and 4.0% p.a. respectively)
- There are no changes to the demographic (e.g. longevity) assumptions
- Current benefit provisions remain unchanged

The chart below sets out how the projections of the liabilities grow as a result of new accruals in the fund over the next 20 years:

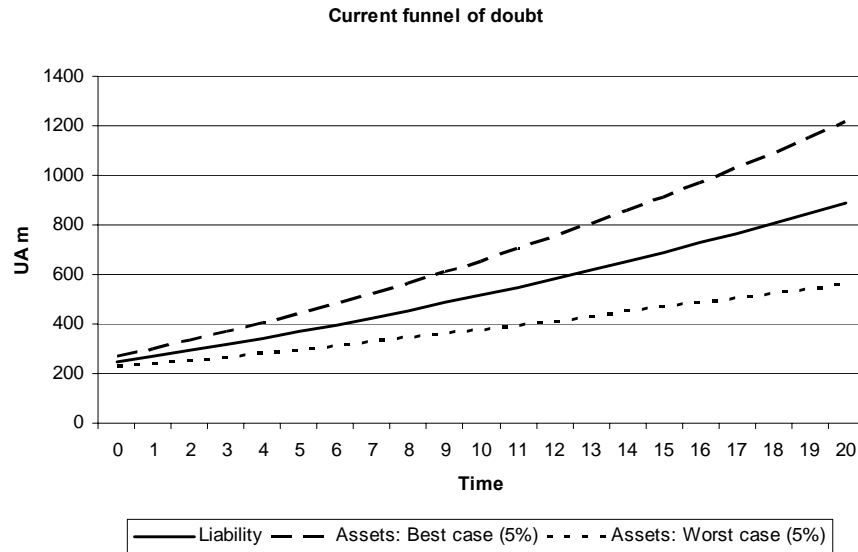


It is estimated that liabilities are expected to grow to about UA 900 million (around 4 times their current level) over the next 20 years if the current benefit provisions of the Plan are left unchanged.

The main question that follows these liabilities is: Will current and future level of the assets be sufficient to cover these liabilities? As indicated above, due to the additional contribution paid by the Bank and the improvement in the financial market conditions, the Plan is currently in a fully funded position. It is also expected that the assets would grow at the same rate as that of the liabilities (this is because the valuation discount rate is based on the return expected to be achieved by the assets). Our "best estimate" position is therefore that the plan will continue to be fully funded into the future (assumptions remaining constant).

The fund currently invests in a mix of equities, bonds, property and cash. As a result, there is a risk that assets will underperform (or outperform) the liabilities by earning lower (or higher) returns than expected. This could bring a mismatch between future expected values of the liabilities and the assets of the Plan, resulting the emergence of surpluses or deficits. The variability between the future value of assets and liabilities could be estimated with some level of probability, say 5%.

The "funnel of doubt" below sets out how assets may diverge from liabilities (with a 5% probability) in "best case" and "worst case" scenarios:



### 3. Managing financial risks and range of potential benefit designs

The designs of pension benefits can be considered on a "risk scale". At one end of the scale are balances of cost final salary DB plans (such as the SRP) where the employer bears all of the financial risks of providing the benefits. The members of the plan are certain of the amount of benefits they will receive in terms of their accrued services and salaries.

At the opposite end of that scale are defined contribution (DC) plans. In a DC plan, the contributions made by members and the employer are fixed and the benefits depend on, amongst other things, investment returns achieved on the accumulated contributions. With a DC plan, the employer bears little or no risk while the employee bears all of the financial risks that the ultimate benefit will be insufficient.

In the middle of these scales are risk sharing plans, where the employer and employee share the financial risks of providing the benefits. There are many forms of risk sharing plan as highlighted in Annex B. In this section, the three potential benefit designs are explained.

#### 3.1 Defined Benefit (DB) plans

The SRP is currently a final salary defined benefit plan. The principal characteristics of such plan is that it provides a guarantee on the certainty of future benefit payments to members of the plan. The amounts of these guaranteed payments depend on the number of accrued years of services, average basic salaries and the rate of accrual. The employer bears the risk of providing these benefits through the payment of additional contributions. The main risks that could emanate out of such benefit designs include:

- Incomes from investments may be less than expected returns.
- Actual salaries may increase more than expected increases.
- Beneficiaries may live longer than the expected number of years

Because of these potential risks, the fund could be in an actuarial deficit position which would call on additional contributions from the Bank to fully fund the Plan.

On the other hand, if the fund happens to be in an actuarial surplus, the contributions of the Bank could correspondingly be reduced. Such surpluses at times may result in a no-contribution state to the Bank, commonly known as “contribution holidays”.

Once the Bank recognizes the funding deficit of a plan as its obligation, then there are several options of financing these deficits:

**a) An immediate one-off lump sum payment:**

Such immediate financing of deficits would provide a solid capital to the Plan for investment and increase its returns that could ultimately improve the levels of the assets. The Plan’s 2008 actuarial funding deficit of UA 38.3 million was funded by the Bank in one go, thereby bringing the plan into an immediate fully funded level. However, such approach would have to be looked upon the overall liquidity management aspects of the Bank.

**b) Paying deficits in tranches, amortized over a certain period.**

Instead of a one off payments, the Bank could have financed the deficits through a certain period of amortization. For example, if the 2008 deficit was to be paid in an amortized period of five years, then the annual payments would have been UA 8.3 million or additional contributions of 13.4% of basic salaries.

While the DB plan provides full guarantee of accrued benefit payments to members of the plan, it incurs a significant financial risk to the Bank in maintaining the Plan at a fully funded level. The main sources of these risks arise from poor investment returns, unexpected demographic changes and higher than expected salary increases. All these risks would expose the Bank to the rising cost of financing the benefits.

### **3.2 Defined Contribution (DC) plans**

A pure defined contribution (DC) plan transfers the financial and demographic risks from the employer to members of the Plan. The cost to the employer is based on fixed contributions and all risks that emerge in the Plan are borne by members. Members would not know their future retirement incomes with certainty as much of the assets for the benefits depend on the results of the performances of the financial market.

The operation of DC plans could be summarized as follows:

- Contributions are made to the plan by the Bank and members.
- These contributions are invested in equities, bonds, cash and other investment classes (usually at the choice of the member) until retirement or withdrawal
- On retirement or withdrawal, the accumulated contributions are returned to the members to provide retirement incomes. The accumulated capital would be paid either in cash payments or used to buy annuity payments from insurances or other providers.
- In most DC plans, the accumulated fund is withdrawn from the Plan at retirement, and used to buy a life annuity from a financial institution such as an insurance company.

Some of the disadvantages of defined contribution plans are:

- Benefits from DC plans are some times unpopular by members as they create insecurity of future retirement incomes. This is more magnified when asset values slide down due to financial markets crisis.
- The administration of defined contribution plans is much more complex than defined benefit plans. DC plan administrations mostly opt to outsource the management and operations of investments and payment processes. Such options could also incur additional costs and risks of governance.
- There needs to be thorough orientations and communications to members of the plan, in particular the investment options and choice of assets for their individual accounts. All financial operations such as contributions, transfers, switches, withdrawals etc have to be recorded and documented in the individual accounts.
- A DC plan is considered to be with less financial incentive and income security than a DB plan and hence could have a negative impact on the recruitment process of qualified employees from the labour market.

In a few DC plans, the accumulated fund remains in the plan, and the plan pays a pension calculated at an agreed age-related proportion of the accumulated fund at retirement.

The advantage of using the annuity approach is that the Plan bears no financial risks; on the other hand, it assumes the ready availability of annuities from insurance companies, which may not be the case in some countries where the ADB operates.

The third option is for the plan simply pays all the cash to the member at retirement. This is the simplest option, but it assumes that the members are responsible enough to arrange their financial affairs so that they have enough to live on during their whole retirement, rather than spending it all in the first few years.

Appendix A provides the detail explanations and implication of DC plans.

### **3.3 Risk sharing plan**

A risk sharing plan creates a scheme whereby members of the plan and employers share the financial risks that emerge in the plan. There are a number of ways of risk sharing mechanisms. This section deals with two principal risk sharing methodologies: Variable accrual rate and hybrid of DB/DC plan.

#### **3.3.1 Variable accrual rate plan**

Accrued benefit risk relates to the benefits already promised to the members based on their past contributory service years and salaries. These risks are administered through the management of the existing assets and liabilities. It is not possible to manage accrued benefit risks through new benefit designs, as it is not possible legally to amend the benefits which have already been earned by members of the plan.

Future deficit risks of a plan could be managed through the application of a variable accrual rate plan. Every time the actuary carries out the regular valuation of the plan, he/she would also calculate what accrual rate could be afforded for a given fixed rate of total pension contribution. This accrual rate would then be applied over the given duration.

This design of benefit structure was recommended by the consultant as the most appropriate solution for the Bank in addressing the issue of cost sharing. After discussing the various options of benefit designs, the Steering Committee came up to the conclusion that the SRP remains as a defined benefit plan with some risk sharing component by members. Whenever the Plan is in significant actuarial deficit level, the risk sharing by members could be implemented through the application of variable accrual rates. It is further suggested that the variability of the accrual rate should range between 2% to 2.5%.

The proposed rate of contributions between members and the Bank would be based on a 1:2 ratio. This implies that if members contribute 9% of basic salary then the Bank would contribute 18%, making a total contribution of 27% of basic salary. **Similarly, the share of the recognized deficit financing between the members of the Plan and the Bank would, to the extent possible, be based on a 1:2 ratio (1/3 to be covered by members and 2/3 to be covered by the Bank).**

Various risk sharing plans are outlined in Appendix B.

### **Illustration of risk sharing benefit design: case of deficits as at 31 December 2008**

Assume the deficits of the Plan as at 31 December 2008 (38.3 million) was to be financed by using the variable accrual rate plan.

#### Basic assumptions

1. Total contributions are to be 27% (employees 9% and the Bank 18%)
2. Accrual rate: Ranging between 2% and 2.5%
3. Amortization period for deficit financing: 5 years
4. Deficit amount as at 31 December 2008: UA 38.3 million

The following table shows the results of the valuations under the three scenarios of deficit risk sharing:

Scenarios for deficit financing	Annual deficit payments/ contributions over 5 years	Benefit accrual rate over 5 year	Bank's contributions over 5 years
1) If all deficits are borne by the Bank	8.83 m. by Bank or additional contribution of 13.4%	2.5% (unchanged)	31.4% (18%+13.4%)
2) If all deficits are borne by members with no minimum accrual rate	8.83 million	1.235%	18% (unchanged)
3) If all deficits are borne by members but with minimum 2% accrual rate, remaining transferred to Bank	i) 3.54 m. by members ii) 5.29 m. by Bank or additional 8% contribution	2%	26% (18%+8%)

If the variable accrual rate plan had been in place at the financing of the 2008 deficit with the minimum of 2% accrual rate, members' and Bank's share of risk would have been allocated as follows:

- a) Members: fixed contributions of 9% and accrual rate of 2% for five years.

b) Bank: Annual additional payment of 5.29 million or contributions of 26% (18%+8%) of basic salary for the coming five years.

These deficit payments by members and the Bank and the accrual rate remain the same for the five amortization years. But if the Plan decides to carry out another actuarial valuation in between these years, then the report would also reflect the new findings to be based on the level of the funding. The accrual rate and the contributions could go to the normal rates if the fund is in surplus.

### **3.3.2. Hybrid of DB/DC plan**

A hybrid of DB/DC plan provides a combination of retirement incomes to beneficiaries. Such incomes could be in the form of either life long pensions and/or one-time lump sum payments. The DB part of the plan's benefits constitute the guaranteed benefit payments, payable in the form of life long pension or lump sum payments or both. .

The DC part of the plan provides cash lump sum payments based on accumulated contributions paid by the employee and the employer. These accumulated contributions are invested in the financial market, often at the choice of the beneficiary. All the financial risks of the DC plan are borne by the members of the plan while the employer incurs very little or no risk.

We look into two hybrid models of DB/DC plans as applied by two multilateral institutions: EBRD and World Bank.

#### **a) The EBRD model**

The European Bank for Reconstruction and Development (EBRD) is one of the institutions that employed a hybrid of DB/DC systems by establishing two plans: Final Salary Plan (FSP) for the DB part and Money Purchase Plan (MPP) for the DC part.

a) Final Salary Plan (FSP): Members at normal retirement (63) or early retirement are entitled to accrued benefits which are paid as cash lump sum. The accrued benefits in cash lump sum are calculated as 24% of Final Gross Base Salary for each complete year and month. No contributions are paid by members of the Plan while the Bank contributes 24% of gross salary.

b) Money Purchase Plan (MPP): This plan provides a lump sum payment from the accumulated fund as accounted in the name of the individual members. Contributions are paid to the fund from the members (8% or 11% of gross salary) and the Bank (8% or 11% of gross salary). All investment risks that arise from this plan are borne by the members of the plan.

Some observations about the EBRD plan:

- The Bank's total contributions to the two plans are minimum of 32% or maximum of 35% of gross salary. Members total contributions are minimum of 8% or 11%, choice at their discretion
- Both plans provide lump sum payments to members at retirement or death. It is up to the members to make arrangements for their long-term income securities, such as purchase of annuities from insurance companies.
- The Bank is relieved of risks of life long pension payments (such as longevity factors, decline of interest or regular pension increases) but it has to maintain values of capital losses for the DB part, under the IAS19 obligation.
- There is a process to increase the current retirement age EBRD from the age of 63 to 65.

## **b) The World Bank model**

The World Bank operates two plans: a pure DB plan for employees recruited before 1998 and a hybrid of DB/DC plan for employees recruited after 1998.

### **i) Employees who joined the Bank before 1998: Pure DB plan**

The employees are covered under a defined benefit plan which provides long-term pension for life. It is financed by joint contributions from members 7% contribution from salary and the Bank contributing the actuarial balance. The benefit accrual rate is 2.2% of final average remuneration for each year of service for the first 25 years and 1.8% thereafter. Members are entitled to commute a third of their pension into lump sum payment and the remaining continue as pension.

### **ii) Employees who joined the Bank after 1998: hybrid DB/DC plan**

This second plan is designed as a hybrid of DB/DC plan and provides benefits in the form of long-term pension for life and cash lump sum payments. The DB part of the plan provides pension benefits calculated as 1% of the average salary for each year of service with a maximum of 35% of average salary. Members do not make any contributions to this plan and only the Bank pays all needed contributions as per the actuarial balance.

The DC part of the plan provides cash lump sum payments to beneficiaries from the accumulations of contributions and investment returns. Members pay 5% of salary where as the Bank pays 10% of salary. Members have the options of choosing the investment for their financial assets with the risk being taken by them.

Some observations about the World Bank plan

- The scope of administering two independent plans with different benefit provisions and options to its employees calls on a very complex management. There is also a high variability of benefit provisions in the two plans creating some form of lack of equity among the employees.
- The Bank's financial obligations to cover the two plans with DB provisions still incur a significant cost to the Bank towards the plans. This may be aggravated whenever there are declines of the assets in times of financial crisis.
- Members of the plan could loose a significant part of their capital if markets are not performing well hence creating uncertainty of future benefit incomes.

## **3.4 Increasing the age of retirement**

The age of retirement is one of the demographic factors that have implications on the financial positions of any pension scheme. The current retirement age of the Bank is sixty and the Plan's financial projections and assumptions are made on the basis of this retirement age. If this retirement age is increased this will certainly have a positive impact on the financial status of the Plan. If, for example, the retirement age had been 62 at the actuarial valuation of 2008, the defined benefit obligation (DBO) of the plan would have been decreased from UA 248.6 million to UA 231.6 million, a reduction of 6.84% of the total liabilities of the Plan. The deficit would then have also been reduced



from UA 38.3 million to UA 21.3 million. The actuarial funding level of the plan could also have correspondingly increased from 85% to 91%.

While such increases in the retirement age would improve the financial positions of the Plan, the policy on change of retirement ages is more often considered from the point of view of human resource policies and strategies of the Bank rather than merely pension fund perspectives. Other HR procedures, such as recruiting relatively younger generation of employees, would also improve the demographic and liability profiles of the Plan.

### **3.5 Liability Driven Investment (LDI)**

It would be possible to significantly reduce the risk profiles of the existing assets by more closely "matching" the liabilities of the Plan. In other words, if the Plan adopts an investment strategy that enables allocations of assets which move in value in the same way as the liabilities, the risk can be significantly reduced. Such investment strategy is termed as "Liability Driven Investment", or LDI.

A full ALM study will allow the Bank to understand fully how a low risk investment strategy would impact the liability.

### **3.6 Amortization period**

An additional way to reduce the volatility of contributions is to adopt an amortization period over which deficits are paid - this is very common for most funded plans and avoids the need for significant lump sum payments. Such amortization period would also give the fund the chance to recover part of the deficits through normal market movements. This study recommends the Plan to adopt an amortization period of five years.

## **4.0 Global trends and benefit designs of some comparator institutions**

A recent global survey (December 2008) by Watson Wyatt accounted that the 300 world's largest pension funds have assets under management (AUM), worth of USD 10.4 trillion. The survey further showed that the defined benefit funds represent 75% of the AUM indicating the predominance of defined benefit plans internationally. The other DC plan, reserve fund and hybrid plans represent 17.3%, 7.2% and 0.9% of the AUM respectively. The share of DB plans in Asia-Pacific and North America constitute more than 80% of their AUM while its share in Europe is close to 59%. On the other hand, the shares DC plans in Asia Pacific and Europe are 12.5% and 12.4% respectively while its share in North America goes up to 18%. DC plans account for a large proportion of assets in Latin American countries due to their historical attachment to the system.

**Comparator institutions:** In order to assess the benefit designs of comparator sister institutions, this paper have made references to the benefit provisions of the following seven institutions:

- 1. United Nations Joint Staff Pension Fund (UNJSPF)**
  - DB plan with final average remuneration,
  - Benefit accrual rate of 1.5%, 1.75% and 2% of final average remuneration, depending on years of membership to the Plan.
  - Pension for life with option of part lump sum (1/3), annual inflationary adjustment.
  - Contributions: Employee 7.9% and employer 15.8% of pensionable remuneration.
  
- 2. Inter American Development Bank (IADB):**

- DB plan with final average salary,
  - Benefit accrual rate 2.2% of highest average remuneration,
  - Pension for life with option of part lump sum (up to 1/2), inflationary adjustment
  - Contributions: Employee 10% of remuneration, employer: Actuarial balance
- 3. World Bank**
- a) For employees who joined the Bank before 1998:**
- DB plan with final average salary
  - Benefit accrual rate 2.2% of final average remuneration for first 25 years and 1.8% thereafter.
  - Pension for life with options of lump sum (1/3)
  - Contributions: Employee 7%; Employer: actuarial balance
- b) Employees who joined the Bank after 1998:**
- DB/DC hybrid plan
  - DB plan life long pension with accrual rate of 1% of average salary for each year of service (max. 35%)
  - DB plan contributions: employees: none employer: actuarial balance
  - DC plan accumulated cash balance paid as lump sum
  - DC plan contributions: employee: 5% ; employer 10%
- 4. European Bank for Reconstruction and Development (EBRD)**
- DB/DC hybrid plan
- a) DB: Final Salary Plan (FSP)- Accrued benefit paid as one time cash lump sum calculated as 24% of final gross base salary for each year of service.  
Contributions: Employee: no contribution; employer 24% of base salary
- b) DC: Money Purchase Plan (MPP): A lump sum payment of the member's cash accumulated fund after investment
- Contributions: Employee 8% or 11%; Employer 8% or 11%, employer matches contributions of employee.
  - Members could make additional voluntary contributions to their fund.
- 5. Asia Development Bank (AsDB)**
- DB plan with final average salary,
  - Benefit accrual rate 2.95% of highest average remuneration,
  - Pension for life with option of part lump sum (up to 1/2), inflationary adjustment
  - Contributions: Employee 9.3% of remuneration, employer: Actuarial balance
- 6. European Investment Bank (EIB)**
- DB plan with final average remuneration ( three years)
  - Benefit accrual rate: 2.33% of final average remuneration
  - Pensions for life with option of lump sum, indexation of pensions
  - Contributions: Employee 8%, Employer 16%.
- 7. International Monetary Fund (IMF)**
- DB plan with final average salary,
  - Benefit accrual rate of 1.8% and 2.2% of highest average remuneration, depending on service
  - Pension for life with option of part lump sum, inflationary adjustment
-

- Contributions: Employee 10% of remuneration, employer: Actuarial balance

**The current plan provisions of the SRP of the African Development Bank are as follows:**

- DB plan with final average basic salary
- Benefit accrual rate: 2.5% of average basic salary for services of post 2005 and 2% of average pensionable salary for services prior to 2005.
- Pensions for life with option of lump sum (1/3), inflationary adjustment
- Contributions: Employees 9% of basic salary, employer: actuarial balance (currently 21% of basic salary)

## **5 Conclusions and recommendations**

### **5.1 Conclusions**

5.1.1 The SRP operates a defined benefit plan where members are guaranteed future benefit payments to be based on a certain percentage of their final average salaries and years of contributions. For services rendered before 2005, the accrual rate was 2% of average pensionable salary while the accrual rate was changed to 2.5% of average basic salary after 2005. Such guarantees of future benefit payments are expected to provide adequate income securities to members of the Plan. However, they also incur significant financial risks to the Bank as sponsor of the Plan. The main sources of these risks are:

- Investment performance results may be lower than expected.
- Beneficiaries may live longer than expected number of years.
- Salaries of members may increase higher than projected growth.

5.1.2 The 2008 actuarial valuation report shows that the Plan was in an actuarial funding deficit of UA 38.3 million, bringing the funding level of the Plan to 85%. In contrast, the valuation results of 2007 indicated that the Plan was in an actuarial surplus of UA 6.5 million with a funding level of 103%. One of the main factors ascribed to the deterioration of the assets in 2008 was the decline in the market values of the assets due to the financial market crisis during the year.

5.1.3 The financing method of this DB plan is based on a “balance of cost” mechanism where members pay fixed proportions of their salaries (9%) and the Bank contributes to cover the cost of the actuarial balance. Under this plan, the Bank is also responsible for the repair of any actuarial deficits. This financial responsibility of the Bank towards the Plan has brought some concerns to the Bank as its liabilities to the Plan showed gradual increases. One of the main reasons for such increases of actuarial deficits has been the high volatility and risk of the global financial markets.

5.1.4 In order to address these concerns, the Steering Committee of the SRP commissioned a study on the sustainability of the SRP. The main objective of the study was to propose alternative benefit designs that would broadly address two targets: maintaining the long-term sustainability of the Plan and limiting the financial obligations of the Bank to the Plan. The study also examined the scope of the risks of some benefit designs ranging from

the pure defined benefit plans to the pure defined contribution plans. It also assessed the current financial status of the Plan and its funding positions against the liability profiles of members of the Plan.

5.1.5 The main findings of the study focused on maintaining the pillars of a defined benefit plan with some form of participations of risk sharing by members of the Plan. This creates a system whereby members of the Plan, along with the Bank, participate in sharing the financial risks for better future continuity of the benefit provisions under the defined benefit plan. It is proposed that such risk sharing participation could be attained through the application of a variable accrual rate system.

5.1.6 Under the proposed modification, the application would be based on the actuarial funding level of the plan. If the fund is in a fully funded position, total pension contributions remain to be 27% (9% by members and 18% by the Bank) of salaries and the accrual rate would be 2.5% p.a. Any surplus that emerges at the valuation process would be retained in the fund. On the other hand, if the Plan is in an actuarial deficit, the actuary would estimate the accrual rate that would be afforded to cover the cost of deficit, the range of the accrual being between 2% and 2.5%. Any outstanding deficit not covered by this phase would then be transferred to the Bank. The Bank's financing of the deficits could be either in the form of annual installments or through increased contribution rates. The deficits could be recovered through an amortization period of five years.

5.1.7 The investment strategy of the assets of the Plan has also to take account of the liability profiles of members of the Plan. It was recommended that the strategy for the investment of the assets needs to adopt a Liability Driven Investment (LDI) approach.

5.1.8 Some human resources reforms and strategies could also positively contribute to the improvement of the financial positions of the Plan. The prominent HR policy measures would be the increase in the current retirement age to a higher age.

**5.1.9 The Legal Department has considered the proposal for staff to participate in the financing of SRP actuarial deficits through the implementation of a variable accrual rate plan and advised that it would not violate any fundamental accrued rights of SRP participants.**

## **5.2 Recommendations**

Following the assessments and findings of the study, the Steering Committee of the SRP recommends the following reforms for the considerations of the Board of Directors:

### **5.2.1 Defined benefit plan**

It is recommended to maintain the continuation of the SRP as a defined benefit (DB) plan. It is further recommended that members of the Plan need to participate in the risk sharing process, under the premises of the current defined benefit environment.

### **5.2.2 Contributions and accrual rate when the Plan is in surplus**

When the Plan is in a fully funded position or is in surplus, the total contribution to be paid into the Plan would be a fixed rate of 27% of basic salary: 9% by members and 18% by the Bank. The benefit accrual rate remains at 2.5% of final average salary per year of service.

### **5.2.3 Contributions and accrual rate when the Plan is in deficits**

When the Plan is in an actuarial deficit position, the deficits should be recovered under the following processes:

- i) All actuarial deficits of the plan that will have been accrued up to 31 December 2010 would be fully financed by the Bank.**
- ii) Subject to item iii) below, the deficits that accrue after 31 December 2010 would be shared between the members of the Plan and the Bank on the basis of the following arrangement:**
  - a) To the extent possible within the parameters set out in b) below, the recognized deficit would be shared between the members of the Plan and the Bank in a 1:2 ratio (1/3 would be covered by members while the 2/3 would be covered by the Bank).**
  - b) Members' participation in the financing of deficits would be implemented through a variable accrual rate plan with a minimum accrual rate of 2% and the normal accrual rate of 2.5% as a ceiling.**
  - c) The Bank pays its share of financing of the deficits through additional contributions in the form of either lump sum payments or additional rates of contributions.**
  - d) The financing of these deficits by members and the Bank should be accounted for in an amortization period of five years.**
- iii) The Steering Committee decides the minimum level of deficits that will justify the application of item ii) above and develops further procedures on the application of the variable accruable rate plan.**

### **5.2.4 Increasing the age of retirement**

One of the human resource measures that could positively improve the funding position of the Plan is to increase the age of retirement. The increase in the retirement age from the current level to a higher age would lower actuarial liabilities thereby resulting a reduction in the level of deficits or an increase of surpluses in times of overfunding. Hence, Management is requested to undertake further studies and submit recommendations to the Board on possible increment of the age of retirement.

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## **Appendix A – Principles and operation of a DC plan**

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### **A.1 Introduction**

This appendix sets out in more detail the principles and operation of a DC plan.

### **A.2 Contributions**

Both the member and the Bank make regular contributions to the Plan, usually expressed as a percentage of the employee's salary.

The contributions from both the Bank and the member are defined in advance – the main unknown for the Bank is the total payroll on which its contributions will be based.

Many different types of contribution structure are available, the most common are:

- **Flat rate:** Both the member and the Bank pay a fixed proportion of salary
- **Matching:** The member is given a choice of contribution level and the Bank makes the same (or a multiple of the) contributions as the member. There may also be a base level of contributions paid by the Bank.

— For example, the member may be allowed to choose to contribute anything from 0% to 5% of pay. Whatever the member pays, the bank will contribute 5% of pay (base contribution) and in addition, the Bank will match twice the member's contributions (matching contribution), so in this example if the member pays 5%, the bank will pay 15% (5% base + 2 x 5% matching)

- **Age related:** Usually the member pays a fixed proportion of salary. The Bank pays a proportion of salary which is dependent on the member's age.

— For example, the member pays 5% of salary. The Bank pays 5% for members under age 30, 10% for members between 30 and 40 and 15% for members over 40.

— The aim of this type of structure is to replicate the value of accruing DB benefits (which gets higher for older members)

- **Service related:** As age related except the Bank's contributions increase with service instead of age

— The aim is to provide a proxy to an age related scale as well as an incentive or reward for longer serving employees.

It is possible to combine an age and a service related scale

### **A.3 Investing contributions before retirement**

The contributions are used to build up a personal fund, or retirement account, within the Plan for each contributing employee.

The fund is usually invested in stocks and shares, along with other investments, with the aim of growing the fund in the years to retirement.

It is usual to offer the members a choice of funds including:

- At least one equity fund
- At least one bond fund
- At least one property fund
- A cash fund
- A "lifestyle" or "lifecycle" fund – which invests in equities for younger members and automatically switches funds to bonds and cash as members approach retirement

There is an important balance to be struck between offering members a suitable diverse choice of investments and offering too many choices which makes it difficult both for the member to make a choice and for the Bank to administer the plan.

A default fund will also be chosen for members who do not, or do not wish to make a choice.

If it is decided that a DC plan would be attractive to the Bank, a great deal of consideration should go into this aspect of the design.

#### **A.4 At retirement**

In most DC plans, the accumulated fund is withdrawn from the Plan at retirement, and used to buy a life annuity from a financial institution such as an insurance company. Under such an arrangement, the insurance company receives the cash sum, and in exchange undertakes to pay a fixed (or increasing) amount each year for the rest of the member's life. The insurance company bears the risk of the member living longer than expected (or, indeed, gains from any members living shorter than expected), and bears the investment risk during the same period. The member ceases all financial links to the Plan once his/her pension starts.

In a few DC plans, the accumulated fund remains in the Plan, and the Plan pays a pension calculated as an agreed age-related proportion of the accumulated fund at retirement.

The advantage of using the annuity approach is that the Plan bears no financial risks; on the other hand, it assumes the ready availability of annuities from insurance companies, which may not be the case in some countries where the ADB operates.

The third option is for the Plan simply to pay all the cash to the member at retirement. This is the simplest option but it assumes that the members are responsible enough to arrange their respective financial affairs so that they have enough to live on during their whole retirement, rather than spending it all in the first few years.

The Bank may wish to compel employees to use (at least part of) their fund to provide some sort of pension. It is common that some of the fund may be taken as a cash sum, however taking the total fund as cash is less common for the reasons set out above.

The amount of pension income will depend on:

- The size of the fund at retirement which depends on:
  - how much the member pays into the fund
  - how much the Bank pays into the fund
  - how well the investments have performed

- Annuity rates at the time of retirement (i.e. the cost of purchasing a pension)

The type of annuity that is chosen (e.g. widow's pension, pension increases, etc)

### **A.5 Ancillary benefits**

In addition to the main pension benefits, the SRP also provides some "insurance type" risk benefits. In particular, an ill-health pension and a death in service pension.

These types of benefits do not lend themselves well to being provided from a DC plan, and instead it is usual to insure these benefits with an external organisation. In the case of the Bank, this may be difficult due to availability of suitable products. If this were the case, it would be possible for the Bank to self-insure these benefits through annual contributions to a special fund set aside for such purposes.

Other benefits, such as withdrawal, early retirement and death after retirement can be handled well by a DC plan:

- Withdrawal benefits are usually the value of the accumulated fund
- Early retirement benefits are usually the same as the normal retirement benefit (the accumulated fund used to purchase an annuity)

Death after retirement benefits will depend on the type of annuity chosen by the member at retirement

### **A.6 Other considerations**

#### **Administration**

The administration of a DC plan is rather more complicated than that of a DB plan. For each member the administrator must record:

- Details of all transactions made by the member
  - All contributions made
  - Switches between funds
  - Any withdrawals
- Details of each member's accumulated fund
  - Split by investment option
- The member's choice as to where ongoing contributions are to be credited

In our experience, the complexity of the administration is often underestimated by employers wishing to adopt a DC structure. In many cases the administration of such plans has been outsourced to specialist organisations – and many of these organisations have also struggled with the complexity. These specialists have now learned through experience and generally provide a very good service. If the Bank were to adopt a DC structure, it should give serious consideration to the outsourcing of the administration.



## **Communication**

Good communication and education is much more important with a DC plan than with a DB plan. Members must understand:

- The principles of how the plan operates
- The contribution structure - and their options with regards to contributions
- The investment options available to them
- The retirement options available to them
- The ancillary benefits

In addition to education materials, member should be provided with annual benefit statements which will include:

- Details of their fund value, including its allocation between the asset classes
- Details of where future contributions will be paid
- A projection of the estimated benefits at retirement and the impact on that estimate of the market risks

## **A.7 Impact on members**

In the remainder of this appendix, we set out the expected impact on members benefits of the Bank adopting either a flat rate or age related scale.

In each case, we have assumed that 2.5% of pay is taken from the Bank's contribution to provided insured benefits, the rest being paid towards the DC fund to accumulate for retirement.

## **A.8 Assumptions**

In calculating benefit projections, a certain number of assumptions must be made.

In this section we have assumed:

- The plan is closed to all members
- Pensionable pay will increase at 4.0% p.a.
- Inflation will be 2.5% p.a.
- DC funds will attract investment returns of 7.0% p.a.
- The cost of providing one unit of pension for life from the DC fund will be 25 units

— This assumes the benefits post retirement will be equivalent to those under the current structure

- All employees remain in service until retirement

**A.9 Explanation of results**

The results of our analysis are presented in the tables on the following pages.

- Each table shows the results split out for members of different ages with different amounts of accrued service with in the SRP
- The top figure in each cell of the table is the projected pension as a percentage of final salary under the current structure
- The bottom figure in each cell is the projected pension as a percentage of final salary under the proposed structure
- The colour of the cell represents the difference between the two projected figures. The darker the colour, the greater the impact.

**A.10 Results**

Flat rate DC, preserve the link to salary

		Age						
		25	30	35	40	45	50	55
Service	0	83%	71%	59%	47%	35%	24%	12%
		60%	48%	37%	27%	19%	12%	5%
	5	94%	82%	70%	58%	47%	35%	23%
		72%	59%	48%	38%	30%	23%	17%
	10		91%	80%	68%	56%	44%	33%
			68%	57%	48%	40%	32%	26%
	15			89%	77%	66%	54%	42%
				67%	57%	49%	42%	36%
	20				87%	75%	63%	51%
					67%	58%	51%	45%
25					84%	73%	61%	
					68%	61%	54%	
30						82%	70%	
						70%	64%	
35							80%	
							73%	

Age related DC, preserve the link to salary

**African Development Bank  
Staff Retirement Plan**

		Age						
		25	30	35	40	45	50	55
Service	0	83%	71%	59%	47%	35%	24%	12%
	5	61%	52%	42%	34%	25%	17%	8%
	10	94%	82%	70%	58%	47%	35%	23%
	15	72%	63%	54%	45%	36%	28%	20%
	20		91%	80%	68%	56%	44%	33%
	25		73%	63%	54%	45%	37%	29%
	30			89%	77%	66%	54%	42%
	35			72%	64%	55%	47%	39%
	40				87%	75%	63%	51%
45				73%	64%	56%	48%	
50					84%	73%	61%	
55					74%	66%	57%	
60						82%	70%	
65						75%	67%	
70							80%	
75							76%	

Flat rate DC, break the salary link

		Age						
		25	30	35	40	45	50	55
Service	0	83%	71%	59%	47%	35%	24%	12%
	5	60%	48%	37%	27%	19%	12%	5%
	10	94%	82%	70%	58%	47%	35%	23%
	15	67%	55%	44%	36%	28%	21%	16%
	20		91%	80%	68%	56%	44%	33%
	25		61%	51%	43%	35%	30%	25%
	30			89%	77%	66%	54%	42%
	35			58%	50%	43%	38%	33%
	40				87%	75%	63%	51%
45				57%	51%	46%	42%	
50					84%	73%	61%	
55					58%	54%	51%	
60						82%	70%	
65						62%	60%	
70							80%	
75							69%	

Age related DC, break the salary link

		Age						
		25	30	35	40	45	50	55
Service	0	83%	71%	59%	47%	35%	24%	12%
	5	61%	52%	42%	34%	25%	17%	8%
	10	94%	82%	70%	58%	47%	35%	23%
	15	68%	59%	50%	42%	34%	26%	19%
	20		91%	80%	68%	56%	44%	33%
	25		66%	57%	49%	41%	35%	28%
	30			89%	77%	66%	54%	42%
	35			63%	56%	49%	43%	36%
	40				87%	75%	63%	51%
45				63%	56%	51%	45%	
50					84%	73%	61%	
55					64%	59%	54%	
60						82%	70%	
65						67%	63%	
70							80%	
75							72%	

**A.11 Comments on results**

- Under each option, expected benefits are reduced by 3% to 30% of final pay depending on age and service
- The impact is greater on younger members (who would have to accrue a greater proportion of their benefits under the DC structure)
- The age related scale provides a greater benefit to members than the flat scale – this is because the contributions are targeted more appropriately for the cost of the accruing benefit

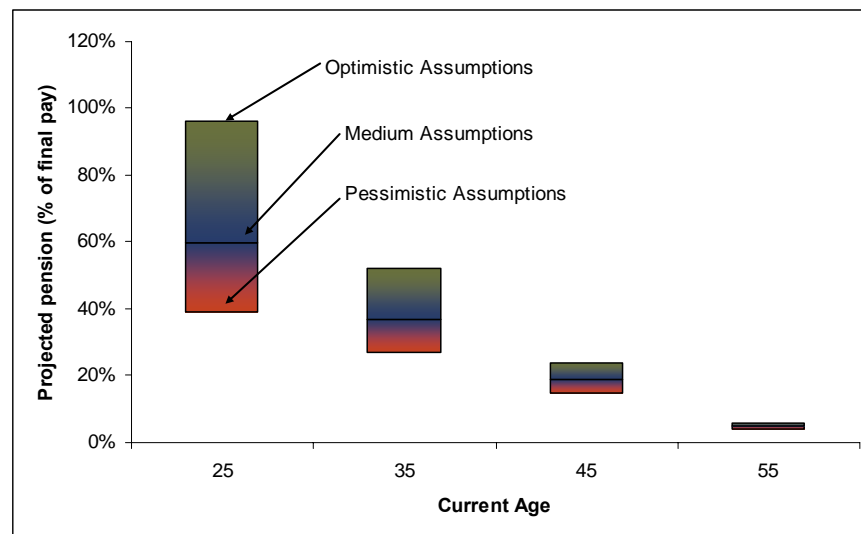
Breaking the salary link significantly increases the impact of the changes, and affects those members with greater past service more than those with little past service

### **A.12 Variability of results**

In the charts above, we have set out the results of our analysis using (what is generally regarded) as a set of assumptions which are neither optimistic nor pessimistic.

One of the key features of the DC plan is that the risks are borne by the employees, should experience be better than expected, their benefits will be higher and should experience be poor, the benefits will be lower.

The following chart sets out the potential variability in expected benefit (using the flat rate design) by using some optimistic and pessimistic assumptions:



It is clear from the chart, that particularly for a younger member, one of the implications of adopting a DC is a greater level of uncertainty over the benefit which will be provided by the fund.

### **A.13 Early leavers**

In our modelling, we have only considered members who remain in service until retirement.

For employees who leave service before retirement, DC benefits can be more generous than DB deferred pensions – and have the advantage of offering the leaver greater flexibility.

If the Bank decided to further investigate the possibility of a DC plan, it should also consider the impact on early leavers.

## **Appendix B – Risk sharing plans**

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### **B.1 Introduction**

This appendix sets out the key features of a fuller range of Risk sharing plans.

### **B.2 Career average**

This plan is similar to a final salary plan (the SRP current design) however the benefit is based on average pay over the career of the member (rather than the final pay). In some cases pay in early years is revalued in line with inflation to calculate the average. This passes much of the salary risk onto the member.

This type of plan has become very common for employers who wish to continue to provide DB benefits but at a much reduced cost.

### **B.3 Final salary balance**

The benefit is defined as a lump sum at retirement which depends on years of service and final salary. The member must use this lump sum to purchase an annuity away from the plan – eliminating any post retirement risks for the employer.

### **B.4 Cash balance**

This type of plan seems similar to DC, however rather than the contributions being invested in the markets on behalf of members, the contributions are granted a fixed increase to the time of retirement. At retirement the accumulated contributions are used to buy an annuity.

This type of plan passes the salary and annuity risks to the member, whilst retaining the investment risk (the risk actual investments will underperform the fixed increase) with the employer.

### **B.5 DB/DC top up**

DB and DC plans can be used in conjunction to provide an appropriate balance of risk.

Typically a DB plan is used to provide pension up to a certain amount (for example on all pay below UA15,000). All pay above that amount is pensioned as DC. This provides a minimum guaranteed level of benefit for the members, with an opportunity for them to top up this benefit through a riskier (for members) DC arrangement.

### **B.6 Investment guarantee**

This benefit is similar to the DC arrangement described in section 7 – the only exception is the employer provides a minimum guarantee (which may be 0%) on the investment returns which will be achieved by the member's funds. This way the employer takes some of the investment risk from the employee.

This type of benefit is very common in several European countries.

**B.7 Guaranteed annuity**

This benefit is similar to the DC arrangement described in section 7 – the only exception is at retirement, the annuity is provided by the employer at a pre-determined rate (rather than by an external organisation). The employee retains all pre retirement risks, but passes the risks to the employer at retirement.

This type of arrangement has been common in the UK although is now tending to be phased out.

**B.8 Variable pension increases**

This benefit is similar to the current SRP design – however cost of living increases are not guaranteed on the pensions. If plan liabilities increase faster than expected, or assets do not achieve the necessary return, the funding level is restored by reducing or eliminating cost of living increases for pensions in payment.

This type of arrangement is common in several European countries and was common in the UK until the law required that cost of living increases were always granted. This law is often cited as one of the main reasons for the decline in provision of DB pensions in the UK.

**B.9 Overview of risk sharing options**

There are many different types of risk sharing plan, and many variations on each type. We have listed some of the more common types in the table below and indicated how the three risk categories are divided between employer and member.

**Risk Sharing Plans**

<b>Type of plan</b>	<b>Investment Risk</b>	<b>Salary Risk</b>	<b>Annuity Risk</b>
Career average pension	Employer	Employer and Member	Employer
Final salary balance	Employer	Employer	Member
Cash balance	Employer	Member	Member
DC with investment guarantee	Employer and Member	Member	Member
DB/DC top up	Employer and Member	Employer and Member	Employer and Member
DC with guaranteed annuity	Member	Member	Employer
DB with variable pension increases	Employer	Employer	Employer and Member

Appendix C: This appendix sets out the benefits provided by comparator organizations

Organisation	Retirement age	Benefit structure	Determination of benefit	Form of pension and benefit adjustment	Contribution
UN (UNJSPF)	62	Defined benefit (final average remuneration)	- Accrual rate from 1.5%, 1.75% and 2% of final average remuneration, depending on years of membership. - Lump sum option (1/3)	-Pension for life - pensions inflationary adjustment	Employee: 7.9% of pensionable remuneration Employer: 15.8% of pensionable remuneration
Inter American Development Bank	62	Defined benefit (final salary)	- Accrual rate of 2.2% of highest average remuneration - Lump sum option	-Pension for life -Inflationary adjustment	Employee: 10% of remuneration Employer: Actuarial balance
World Bank	62	DB/DC hybrid	-Pre-1998- DB plan with accrual rate of 2.2% with lump sum options.  Post 1998: DB plan with accrual rate of 1% and DC plan of cash balance from individual accumulated fund.	-Pre-1998: pensions for life with adjustment. - Post 1998: pensions for life and cash balance payment.	-Pre-1998 Employee: 7% of average remuneration Employer: Actuarial balance -Post 1998 DB: Employee: None and employer : Actuarial balance DC: Employee : 5% and employer 10%
European Bank for Reconstruction and Development	63 (process of moving to 65 in progress)	DB/DC hybrid	DB: Final salary plan (FSP): 24% of salary for each year of service -lump sum payment DC: Money Purchase Plan(MPP): Accumulated cash balance in individual account	DB- One time lump sum payment DC- Accumulated cash balance in individual account	Employee: No contributions for FSP 8-11% for MPP Employer: 24% for FSP 8% or 11% for MPP
European Investment Bank		Defined benefit (final salary)	-Accrual rate 2.33% of final average remuneration for each years of service - Options of lump sum payment	-Pension for life with annual indexations	Employee: 8% of remuneration  Employer: 16% of remuneration
Asian Development Bank	60	Defined benefit (Final salary)	-Accrual rate: 2.95% of highest average remuneration -lump sum option	- pension for life -Inflationary adjustment	Employee 9.3% of remuneration Employer: Actuarial balance
International Monetary Fund (IMF)	62	Defined benefit (final salary)	- accrual rate of 1.8%-2.2% of highest average remuneration - Lump sum options	- Pension payment for life -inflationary adjustment	Employee 7% of gross remuneration Employer: Based on actuarial balance
African Development Bank	60	Defined benefit (final average salary)	-Accrual rate : 2.5% of final average salary - Option of lump sum (1/3)	- Pensions for life with -Pension adjustment for COLA.	Employee: 9% of basic salary Employee: Actuarial balance (currently 21%)



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**AFRICAN DEVELOPMENT BANK**

**BOARD OF DIRECTORS**

**Resolution N° B/BD/2010/04**

Adopted on a Lapse of Time basis, on 17 February 2010

**Financial Sustainability of the Staff Retirement Plan of the Bank**

**THE BOARD OF DIRECTORS,**

**HAVING REGARD** to: (i) the Agreement Establishing the African Development Bank, in particular Articles 8, 9, 10, 11, 13, 22, 32 and 37 (2); (ii) the Staff Retirement Plan of the Bank (“the SRP” or “the Plan”), adopted by Board of Governors Resolution B/BG/89/05 (as amended by Board of Directors Resolutions B/BD/99/16, B/BD/2004/28, B/BD/2007/14 and B/BD/2008/09; (iii) Regulations 3.3 and 8.1 of the Financial Regulations of the Bank; and (iv) Regulation 8.2 of the Staff Regulations of the Bank;

**RECOGNIZING** the concerns arising from the current method of financing of actuarial deficits of the SRP, according to which the Bank is exclusively responsible for making additional contributions to cover all such deficits;

**HAVING CONSIDERED** Management’s proposals in Document ADB/BD/WP/2009/115/Rev.2 entitled “Financial Sustainability of the SRP – Revised Version” (“the Proposal”), and the recommendations contained therein;

**NOTING** the recommendations made in a study commissioned by the Steering Committee of the SRP on the financial sustainability of the Plan, as summarized in the Proposal;

**DECIDES** to maintain the SRP as a defined benefit plan, subject to participation by members of the Plan in the financing of SRP actuarial deficits as follows:

- 1) When the Plan is in a fully funded position or in surplus, the total contribution to be paid into the Plan will be 27% of the basic salary of the members, comprising contributions of 9% by members and 18% by the Bank; and the benefit accrual rate will remain at 2.5% of the final average salary per year of service;
- 2) When the Plan is in deficit, the deficit will be recovered as follows:
  - a) All actuarial deficits that will have been accrued during the period up to 31 December 2010 will be fully financed by the Bank;

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- b) Subject to paragraph c) below, any actuarial deficits that accrue after 31 December 2010 will be shared between the members of the Plan and the Bank on the basis of the following arrangement:
- i) To the extent possible within the parameters set out in subparagraph ii) below, the deficits will be shared between the members of the Plan on the one hand and the Bank on the other hand in a ratio of 1:2, i.e. one third of the deficit will be covered by members and two thirds by the Bank.
  - ii) Members' participation in the financing of deficits will be implemented through a variable accrual rate plan with a minimum accrual rate of 2% and the normal accrual rate of 2.5% as a ceiling;
  - iii) The Bank will finance its share of deficits through either lump sum payments or additional contributions at an increased rate over time;
  - iv) The financing of deficits by members and the Bank will be accounted for during an amortization period of five years.
- c) The SRP Steering Committee will decide on the minimum level of deficits that will justify the application of paragraph b) above and develop further procedures for the application of the variable accrual rate plan.

**DIRECTS** Management to undertake a detailed study and submit recommendations to the Board on all relevant aspects of a possible increase of the Bank's mandatory retirement age, taking into account the human resource perspectives thereof and the expected impact of such an increase on the funding level of the SRP; and

**AUTHORIZES** the President to take such administrative measures as may be necessary or expedient to implement the terms of this Resolution.