

# **AFRICAN DEVELOPMENT FUND**



**ADF-X/CM.2/2004/05**

## **ADF – X REPLENISHMENT NEGOTIATIONS**

**Offsetting Foregone Reflows due to  
Increased Grant Financing in ADF IX**

**Additional Options**

**Financial Management Department**

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## **LIST OF ABBREVIATIONS AND ACRONYMS**

1. ADF	African Development Fund
2. ADF-VIII	The Eighth replenishment of the ADF
3. ADF-IX	The Ninth replenishment of the ADF
4. ADF-X	The Tenth replenishment of the ADF
5. UA	Unit of Account

## I INTRODUCTION

1. During the sixth consultative meeting for ADF-IX, Deputies examined a note on the financial implications of increasing the ADF's allocation for grant funding<sup>1</sup>. The note quantified the financial implications of a higher level of grants in terms of the foregone reflows to the Fund in future years.
2. During the mid-term review of ADF-IX, Deputies examined a note that presented four economically equivalent alternatives for State participants to consider that would offset the foregone reflows<sup>2</sup>. Following their deliberations, Deputies requested Management to liaise with IDA in developing a satisfactory solution.
3. This paper re-examines the issue following consultations with IDA. It is organized in six parts. After the introduction, the second section recapitulates the estimates of foregone reflows as a result of an increase in grant allocations for ADF-IX. The third section presents two additional economically equivalent alternatives that would offset the foregone reflows. The fourth section explains the basis of determining additional payments by individual donors. The fifth section looks at the management of the funds received upfront. The final section of the paper summarizes the key points.

## II FOREGONE REFLows FROM INCREASED GRANTS

4. One of the distinctive features of ADF-IX was an increase in the allocation for grant financing to 18%-21% from 7.5% under ADF-VIII. As a result of the higher allocation for grants, the future reflows to the Fund will be reduced in terms of both principal and income.
5. As shown in table 1 below, at the ADF-IX replenishment level of UA 2.13 billion and an average of 19.5% grants, the nominal value of the foregone reflows over the fifty-year lifetime of ADF-IX loans is estimated at about UA 315.7 million. In present value terms, when discounted to the projected start of ADF-X in 2005, the foregone reflows are estimated at about UA 83.5 million. A more detailed analysis of the projected foregone reflows is presented in annex 1.

**Table 1** **Foregone Reflows Under ADF-IX**  
(Figures in UA Million)

Foregone Income Reflows	Foregone Principal Reflows	Total Foregone Reflows	Present Value of Foregone Reflows
59.9	255.8	315.7	83.5

<sup>1</sup> A working paper entitled, Financial Implications of Increasing ADF Allocation to Grant Funding, was tabled for discussion at the sixth consultative meeting on the ninth general replenishment of the African Development Fund, September 2002, Oslo Norway.

<sup>2</sup> A working paper entitled, Offsetting Foregone Reflows due to Increased Grant Financing in ADF IX, was tabled for discussion at the ADF-IX mid-term review, February 2004, Geneva.

### **III OPTIONS TO OFFSET FOREGONE REFLows**

6. In the note discussed at the ADF-IX mid-term review, four economically equivalent alternatives were presented, which could enable State Participants to offset the foregone reflows due to increased grant financing:

- 1) A single up-front payment at the start of ADF-X
- 2) Phased payments over the ADF-X encashment period
- 3) Uniform payments over the fifty-year lifetime of ADF-IX loans
- 4) Payments as foregone reflows arise over the lifetime of ADF-IX loans

A more detailed summary of these alternatives is presented in annex 2.

7. In the light of the recent replenishment discussions for IDA, State Participants appear to favour a hybrid approach, wherein an upfront commitment is made towards offsetting foregone income reflows by way of additional contributions during the ADF-X period, while foregone principal reflows are offset as they arise over the lifetime of ADF-IX loans<sup>3</sup>. Two economically equivalent variants to this hybrid approach are presented below.

#### **Hybrid Approach –I**

8. The first variant of the hybrid approach would be for State Participants to make an upfront payment of UA 28.0 million at the projected start of ADF-X in 2005 to offset only the foregone income reflows, and then to make a series of payments to offset the foregone principal reflows as they arise over the lifetime of the ADF-IX loans. A more detailed analysis of this variant and the payments required to implement this option is presented in annex 3 and annex 4.

#### **Hybrid Approach-II**

9. The second variant of the hybrid approach would be for State Participants to commit to make a series of payments over the ADF-X encashment period with a present value at the start of 2005 of UA 28.0 million to offset the foregone income reflows, and in addition to make a series of payments to offset the foregone principal reflows as they arise over the lifetime of the ADF-IX loans. The payments required to implement this variant are presented in annex 5.

### **IV ADDITIONAL DONOR CONTRIBUTIONS IN ADF X**

10. The foregoing analysis provides the aggregate additional payments required to be made by State Participants to offset the foregone reflows due to the increased grant funding in ADF-IX. Following the emergence of the consensus solution between the alternatives presented, the specific UA amounts that individual State Participants would be required to contribute would be determined on the basis of the relative burden shares of State Participants in ADF-IX, which is presented in annex 6.

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<sup>3</sup> The modalities of offsetting foregone principal reflows are expected to be addressed in future replenishments.

11. It may be recalled that during the ADF-IX replenishment negotiations, Deputies agreed to allocate UA 15 million out of ADF-IX resources as compensation for the increased grant funding. The application of this amount either partially or completely towards offsetting the foregone income will reduce the required upfront commitment for this purpose by State Participants. The alternative application of the UA 15 million i.e. towards offsetting foregone principal reflows as they arise will in turn reduce the payments required to be made during the lifetime of ADF-IX loans. The detailed impact of the UA 15 million will be presented following the decision made by State Participants with regard to its application<sup>4</sup>.

## **V MANAGEMENT OF FUNDS RECEIVED**

12. Management has reviewed various options for managing the funds received upfront in order to offset the foregone reflows. In principle, any amount estimated on a discounted basis will need to be invested such that it yields a rate of return equal to the discount rate in order to offset the nominal amounts of foregone reflows. However, in view of the magnitude of the amounts involved (UA 28 million for Hybrid-I, and UA 34 million spread out over the 10-year encashment period of ADF-X for Hybrid-II), and the administratively cumbersome and uneconomical nature of managing such small amounts separately, Management proposes to manage these funds similar to the rest of the Fund's investments.

## **VI SUMMARY**

13. To supplement the four economically equivalent alternatives presented in an earlier note, two additional equivalent variants of a hybrid approach have been presented whereby State Participants could offset the projected foregone reflows. The first variant would be an initial upfront payment of UA 28.0 million at the start of ADF-X to offset the foregone income reflows, combined with a series of payments to offset the foregone principal reflows as they arise. The second variant of the hybrid approach would a series of payments over the ADF-X encashment period with a 2005 present value of UA 28.0 million to offset the foregone income reflows, and the same series of payments to offset the foregone principal reflows as they arise over the lifetime of the ADF-IX loan as in the first variant. Once the consensus solution emerges, the additional UA payments to be made by individual State Participants will be determined on the basis of the normalized ADF-IX burden shares. The impact of the previously allocated UA 15 million from the ADF-IX replenishment will be dependent on the State Participants' decision regarding the application of the amount.
14. In view of the unfavorable economics of managing relatively small amounts of funds separately, Management proposes to manage the funds received in the same manner as the rest of the Fund's investments.

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<sup>4</sup> For instance, an allocation of the UA 15 million proportionate to the present values of the foregone income and principal reflows would result in the required upfront payment of UA 28 million reducing by about UA 5 million, leaving UA 10 million for offsetting foregone principal reflows.

## ANNEX 1

### Estimating the Foregone Reflows

- Table 2 below presents the difference in projected loan income and principal repayments when the allocation for grant financing is increased to an average of 19.5% from 7.5%. The total nominal value of foregone reflows due to the higher level of grants is about UA 315.7 million.

**Table 2**                      **Foregone Reflows Due To Increased Grant Financing**  
(Figures in UA Million)

Year	Loan Income		Principal Payments		Foregone		Foregone
	7.50%	19.50%	7.50%	19.50%	Income	Repayments	Reflows
	(a)	(b)	(c)	(d)	(e) = (b)-(a)	(f) = (d)-(c)	(g) = (e) + (f)
2002	0.12	0.11			0.02	0.00	0.02
2003	1.58	1.38			-0.21	0.00	-0.21
2004	5.24	4.98			0.68	0.00	0.68
2005	8.01	7.84			-1.17	0.00	-1.17
2006	11.68	10.15			-1.51	0.00	-1.51
2007	12.34	10.74			-1.60	0.00	-1.60
2008	12.97	11.29			-1.68	0.00	-1.68
2009	13.50	11.75			-1.75	0.00	-1.75
2010	13.81	12.10			-1.80	0.00	-1.80
2011	14.19	12.35			-1.84	0.00	-1.84
2012	14.38	12.62	0.88	0.57	-1.67	0.09	-1.66
2013	14.48	12.81	7.23	6.28	-1.88	-0.94	-2.82
2014	14.50	12.82	18.80	12.01	-1.88	-1.79	-3.67
2015	14.44	12.57	18.72	17.16	-1.87	-2.56	-4.43
2016	14.24	12.43	18.72	17.16	-1.85	-2.56	-4.42
2017	14.23	12.38	18.72	17.16	-1.85	-2.56	-4.40
2018	14.10	12.17	18.72	17.16	-1.83	-2.56	-4.39
2019	13.96	12.15	18.72	17.16	-1.81	-2.56	-4.37
2020	13.81	12.02	18.72	17.16	-1.78	-2.56	-4.36
2021	13.68	11.89	18.72	17.16	-1.77	-2.56	-4.33
2022	13.51	11.76	21.04	18.30	-1.75	-2.73	-4.48
2023	13.30	11.58	34.16	29.74	-1.73	-4.43	-6.16
2024	13.06	11.31	47.32	41.18	-1.69	-6.14	-7.83
2025	12.60	10.96	59.15	51.48	-1.63	-7.67	-9.31
2026	12.16	10.68	59.15	51.48	-1.58	-7.67	-9.25
2027	11.71	10.19	59.15	51.48	-1.52	-7.67	-9.19
2028	11.27	9.81	59.15	51.48	-1.46	-7.67	-9.14
2029	10.82	9.42	59.15	51.48	-1.40	-7.67	-9.08
2030	10.38	9.03	59.15	51.48	-1.35	-7.67	-9.02
2031	9.94	8.65	59.15	51.48	-1.29	-7.67	-8.96
2032	9.49	8.26	59.15	51.48	-1.23	-7.67	-8.91
2033	9.05	7.88	59.15	51.48	-1.17	-7.67	-8.85
2034	8.61	7.49	59.15	51.48	-1.12	-7.67	-8.79
2035	8.16	7.10	59.15	51.48	-1.06	-7.67	-8.73
2036	7.72	6.72	59.15	51.48	-1.00	-7.67	-8.67
2037	7.28	6.33	59.15	51.48	-0.94	-7.67	-8.62
2038	6.83	5.95	59.15	51.48	-0.89	-7.67	-8.56
2039	6.39	5.66	59.15	51.48	-0.83	-7.67	-8.50
2040	5.94	5.17	59.15	51.48	-0.77	-7.67	-8.44
2041	5.50	4.79	59.15	51.48	-0.71	-7.67	-8.39
2042	5.06	4.40	59.15	51.48	-0.66	-7.67	-8.33
2043	4.61	4.02	59.15	51.48	-0.60	-7.67	-8.27
2044	4.17	3.65	59.15	51.48	-0.54	-7.67	-8.21
2045	3.73	3.24	59.15	51.48	-0.48	-7.67	-8.16
2046	3.28	2.86	59.15	51.48	-0.43	-7.67	-8.10
2047	2.84	2.47	59.15	51.48	-0.37	-7.67	-8.04
2048	2.40	2.09	59.15	51.48	-0.31	-7.67	-7.98
2049	1.95	1.70	59.15	51.48	-0.25	-7.67	-7.93
2050	1.51	1.31	59.15	51.48	-0.20	-7.67	-7.87
2051	1.08	0.93	59.15	51.48	-0.14	-7.67	-7.81
2052	0.63	0.65	57.18	49.76	-0.08	-7.22	-7.60
2053	0.27	0.24	37.48	32.80	-0.04	-4.86	-4.80
2054	0.07	0.06	17.75	15.43	-0.01	-2.30	-2.31
Total	481.88	401.78	1971.68	1716.80	-59.89	-255.79	-315.68

## **ANNEX 2**

### **Summary of Alternatives Presented at ADF-IX Mid-term Review**

1. Four economically equivalent alternatives were presented that would enable State Participants to offset the projected foregone reflows through supplementary contributions to the Fund.
2. The first and simplest option was a single up-front payment of UA 83.5 million at the projected start of ADF-X in 2005.
3. The second option implied a series of payments over the projected encashment period of ADF-X equal to UA 83.5 million in 2005 present value terms. Under this option, the total nominal value of payments over the ten-year period would be about UA 102.5 million.
4. The third option was a series of uniform annual payments of UA 4.7 million over the fifty-year lifetime of ADF-IX loans. Although the 2005 present value of this 'annuity' option would be UA 83.5 million, the total nominal payments over the longer period would be about UA 233.7 million.
5. The final option was a series of payments as the foregone reflows arise. The total nominal payments of this 'pay-as-you-go' option would be UA 315.7 million, equivalent to UA 83.5 million in 2005 present value terms.

## ANNEX 3

### Hybrid Approach- Upfront Payment Required To Offset Foregone Income

- Table 7 below presents the estimated 2005 present value of the foregone income due to increased grant financing. All reflows from income have been discounted/compounded to the beginning of 2005 using the 5.5% rate assumed for all ADF-IX replenishment computations giving a present value of UA 28.01 million. Foregone reflows in 2002-04 have a higher 2005 present value than their nominal value.

**Table 7**                      **Present Value of Foregone Income Reflows**  
(Figures in UA Million)

Year	Foregone Income (a)	Discount Factors (b)	Discounted Foregone Income (c) = (a)*(b)
2002	-0.02	1.11	-0.02
2003	-0.21	1.11	-0.23
2004	-0.69	1.00	-0.69
2005	-1.17	1.00	-1.17
2006	-1.55	0.95	-1.43
2007	-1.60	0.90	-1.44
2008	-1.63	0.85	-1.40
2009	-1.75	0.81	-1.41
2010	-1.60	0.77	-1.38
2011	-1.64	0.73	-1.34
2012	-1.67	0.69	-1.28
2013	-1.68	0.65	-1.22
2014	-1.68	0.62	-1.19
2015	-1.67	0.59	-1.10
2016	-1.66	0.55	-1.03
2017	-1.85	0.53	-0.97
2018	-1.83	0.50	-0.91
2019	-1.81	0.47	-0.86
2020	-1.79	0.45	-0.85
2021	-1.77	0.42	-0.76
2022	-1.75	0.40	-0.71
2023	-1.73	0.38	-0.66
2024	-1.69	0.36	-0.61
2025	-1.63	0.34	-0.56
2026	-1.58	0.32	-0.51
2027	-1.62	0.31	-0.47
2028	-1.46	0.29	-0.43
2029	-1.40	0.28	-0.38
2030	-1.35	0.26	-0.33
2031	-1.29	0.26	-0.32
2032	-1.23	0.24	-0.29
2033	-1.17	0.22	-0.28
2034	-1.12	0.21	-0.24
2035	-1.06	0.20	-0.21
2036	-1.00	0.19	-0.19
2037	-0.94	0.18	-0.17
2038	-0.89	0.17	-0.15
2039	-0.83	0.16	-0.13
2040	-0.77	0.15	-0.12
2041	-0.71	0.15	-0.10
2042	-0.66	0.14	-0.09
2043	-0.60	0.13	-0.08
2044	-0.54	0.12	-0.07
2045	-0.48	0.12	-0.06
2046	-0.43	0.11	-0.05
2047	-0.37	0.11	-0.04
2048	-0.31	0.10	-0.03
2049	-0.25	0.09	-0.02
2050	-0.20	0.09	-0.02
2051	-0.14	0.09	-0.01
2052	-0.08	0.08	-0.01
2053	-0.04	0.08	0.00
2054	-0.01	0.07	0.00
<b>Total</b>	<b>-59.89</b>		<b>-28.01</b>



## ANNEX 4

### Payments For Hybrid Approach-I

- Table 8 below presents the payments required to implement the Hybrid Approach-I. The 2005 payment of UA 28.01 million is the present value of foregone income. The remaining payments offset the foregone principal reflows as they arise over the lifetime of ADF-IX loans.

**Table 8**                      **Payments for Hybrid Approach-I**  
(Figures in UA Million)

Year	Contribution (a)	Discount Factors (b)	2005 Discounted Value of Contribution (c) = (a)*(b)
2005	28.01	1.00	28.01
2006	0.00	0.99	0.00
2007	0.00	0.90	0.00
2008	0.00	0.85	0.00
2009	0.00	0.81	0.00
2010	0.00	0.77	0.00
2011	0.00	0.73	0.00
2012	0.09	0.69	0.06
2013	0.94	0.65	0.61
2014	1.76	0.62	1.11
2015	2.56	0.59	1.50
2016	2.56	0.55	1.42
2017	2.56	0.53	1.35
2018	2.56	0.50	1.28
2019	2.56	0.47	1.21
2020	2.56	0.45	1.15
2021	2.56	0.42	1.09
2022	2.73	0.40	1.10
2023	4.43	0.38	1.69
2024	5.78	0.36	2.22
2025	7.67	0.34	2.63
2026	7.67	0.32	2.49
2027	7.67	0.31	2.36
2028	7.67	0.29	2.24
2029	7.67	0.28	2.12
2030	7.67	0.26	2.01
2031	7.67	0.26	1.91
2032	7.67	0.24	1.81
2033	7.67	0.22	1.71
2034	7.67	0.21	1.62
2035	7.67	0.20	1.54
2036	7.67	0.19	1.46
2037	7.67	0.18	1.38
2038	7.67	0.17	1.31
2039	7.67	0.16	1.24
2040	7.67	0.16	1.18
2041	7.67	0.15	1.12
2042	7.67	0.14	1.06
2043	7.67	0.13	1.00
2044	7.67	0.12	0.95
2045	7.67	0.12	0.90
2046	7.67	0.11	0.85
2047	7.67	0.11	0.81
2048	7.67	0.10	0.77
2049	7.67	0.09	0.73
2050	7.67	0.09	0.69
2051	7.67	0.09	0.65
2052	7.42	0.09	0.66
2053	4.88	0.08	0.37
2054	2.30	0.07	0.17
Total	283.79		83.47

## ANNEX 5

### Payments for Hybrid Approach-II

1. Table 9 below presents the payments required for the Hybrid Approach-II. The approach entails a series of payments over the ADF-X encashment period 2005-14 such that the present value at the start of 2005 of UA 28.0 million offsets the foregone income, and in addition make a series of payments to offset the foregone principal reflows as they arise over the lifetime of the ADF-IX loans

**Table 9** **Payments for Hybrid Approach-II**  
(Figures in UA Million)

Year	Contribution to offset foregone Income (a)	Contribution to offset foregone principal reflow (b)	Total Contribution (c) = (a)+(b)	Discount Factors (d)	2005 Discounted Value of Contribution (e) = (c)*(d)
2005	2.10	0.00	2.10	1.00	2.10
2006	3.69	0.00	3.69	0.98	3.60
2007	4.71	0.00	4.71	0.90	4.23
2008	5.03	0.00	5.03	0.85	4.28
2009	5.00	0.00	5.00	0.81	4.03
2010	4.44	0.00	4.44	0.77	3.40
2011	3.51	0.00	3.51	0.73	2.54
2012	2.72	0.09	2.80	0.69	1.93
2013	2.33	0.84	3.28	0.65	2.13
2014	0.88	0.79	2.67	0.62	1.65
2015	0.00	2.56	2.56	0.59	1.50
2016	0.00	2.56	2.56	0.55	1.42
2017	0.00	2.56	2.56	0.53	1.35
2018	0.00	2.56	2.56	0.50	1.28
2019	0.00	2.56	2.56	0.47	1.21
2020	0.00	2.56	2.56	0.45	1.15
2021	0.00	2.56	2.56	0.42	1.09
2022	0.00	2.73	2.73	0.40	1.10
2023	0.00	4.43	4.43	0.38	1.69
2024	0.00	8.14	8.14	0.36	2.92
2025	0.00	7.57	7.57	0.34	2.63
2026	0.00	7.57	7.57	0.32	2.49
2027	0.00	7.57	7.57	0.31	2.38
2028	0.00	7.57	7.57	0.29	2.24
2029	0.00	7.57	7.57	0.28	2.12
2030	0.00	7.57	7.57	0.26	2.00
2031	0.00	7.57	7.57	0.25	1.91
2032	0.00	7.57	7.57	0.24	1.83
2033	0.00	7.57	7.57	0.22	1.71
2034	0.00	7.57	7.57	0.21	1.62
2035	0.00	7.57	7.57	0.20	1.54
2036	0.00	7.57	7.57	0.19	1.46
2037	0.00	7.57	7.57	0.18	1.38
2038	0.00	7.57	7.57	0.17	1.31
2039	0.00	7.57	7.57	0.16	1.24
2040	0.00	7.57	7.57	0.15	1.18
2041	0.00	7.57	7.57	0.15	1.12
2042	0.00	7.57	7.57	0.14	1.06
2043	0.00	7.57	7.57	0.13	1.00
2044	0.00	7.57	7.57	0.12	0.95
2045	0.00	7.57	7.57	0.12	0.90
2046	0.00	7.57	7.57	0.11	0.86
2047	0.00	7.57	7.57	0.11	0.81
2048	0.00	7.57	7.57	0.10	0.77
2049	0.00	7.57	7.57	0.09	0.73
2050	0.00	7.57	7.57	0.09	0.69
2051	0.00	7.57	7.57	0.09	0.65
2052	0.00	7.42	7.42	0.08	0.60
2053	0.00	4.86	4.86	0.08	0.37
2054	0.00	2.30	2.30	0.07	0.17
Total	34.39	255.79	290.18		83.47

## ANNEX 6

### ADF-IX Burden Sharing Profile

1. Table 10 below presents the burden shares by State Participants in the ADF-IX replenishment, normalized to aggregate to 100%. The individual additional payments by State Participants during ADF-X to offset the foregone reflows due to increased grant funding in ADF-IX will be based on the normalized burden shares shown in this table.

**Table 10                      ADF-IX Normalized Burden Shares**

State Participant	Normalized Burden Share
AUSTRIA/AUTRICHE	1.25%
BELGIUM/BELGIQUE	2.10%
BRAZIL/BRESIL	0.43%
CANADA	5.74%
CHINA/CHINE	2.09%
DENMARK/DANEMARK	3.83%
FINLAND/FINLANDE	1.91%
FRANCE	9.35%
GERMANY/ALLEMAGNE	10.65%
INDIA/INDE	0.22%
ITALY/ITALIE	5.48%
JAPAN/JAPON	11.24%
KOREA/COREE	0.81%
KUWAIT/KOWEIT	0.43%
THE NETHERLANDS/PAY-BAS	4.72%
NORWAY/NORVEGE	4.51%
PORTUGAL	0.82%
SAUDI ARABIA/A SAOUDITE	0.69%
SOUTH AFRICA /AFRIQUE DU SUD	0.15%
SPAIN/ESPAGNE	2.55%
SWEDEN/SUEDE	5.10%
SWITZERLAND/SUISSE	3.83%
UNITED ARAB EMIRATES / EMIRATS ARAB UNIS	0.00%
UNITED KINGDOM/ROYAUME-UNI	7.01%
U.S.A/ETATS UNIS D'AMERIQUE	15.07%
<b>Total</b>	<b>100.00%</b>