



## **AFRICAN DEVELOPMENT FUND**

### **UPDATING THE ADF ASSET MANAGEMENT GUIDELINES**

September 2003

## **I INTRODUCTION**

1. Like the African Development Bank, the African Development Fund (hereafter referred to as the ADF or the Fund) has undertaken a number of important reforms over the past few years to enhance the management of its financial resources. The most significant of these financial reforms include the replenishment-specific and accelerated encashment policies, the liquidity policy, the currency risk management policy, and the adoption of the first ADF asset management guidelines (hereafter referred to as the Guidelines).
2. One of the most visible outcomes of the recent reforms has been a progressive build up of the Fund's liquid assets, which have been invested in accordance with the limits prescribed in the Guidelines to enable the Fund to simultaneously meet future disbursement needs and to generate sufficient investment income to cover the Fund's administrative costs. The steady build-up in liquidity, however, has also coincided with a secular decline in market interest rates in all of the major currencies. As a consequence, the Fund's investment income has not kept pace with growth in the volume of liquidity. This has brought to the forefront one of the principal objectives of the Fund's asset management, which is to earn a reasonable return on the Fund's liquid investments, and has triggered this review of the duration limit and investment benchmark, two key factors affecting the interest rate sensitivity of the Fund's investment returns.
3. In view of these developments, the primary purpose of this paper is to propose modifications to the section of the ADF Guidelines that prescribes the duration limit and benchmark for the investment portfolio in order to capitalize on the flexibility created by the larger portfolio size. The paper is organized into five sections.
4. Following the introduction, section two describes the current Guidelines and the issues arising. Section three presents the proposed changes to the Guidelines that would ensure the availability of liquid resources to meet the operational needs of the Fund while at the same time improving the prospects for earning a reasonable rate of return on ADF investments. Section four analyzes the implications of the proposed changes. The fifth and final section presents Management's conclusions and recommendations.
5. While the principal thrust of this paper is to propose modifications to the guideline on the investment benchmark and duration limits, a number of minor changes to the credit limits and the list of eligible instruments have been included in this revision of the Guidelines. These changes are outlined in annex 5 and the revised Guidelines are attached as annex 6 to this paper.

## **II CURRENT GUIDELINE AND ISSUES**

6. The two of the most common mechanisms used by investment managers for managing the interest rate profile of a fixed income portfolio are: 1) a portfolio benchmark; and 2) duration limits<sup>1</sup>. The first, a portfolio benchmark, represents the

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<sup>1</sup> Value at risk measures are also becoming more common-place among investment managers as risk management tools.

“risk neutral” interest rate profile of the portfolio and therefore must be carefully selected to reflect the beneficiary’s risk- return objectives. The choice of benchmark usually determines most of the return volatility due to fluctuations in market interest rates that the portfolio will experience. For a portfolio with a short duration benchmark, such as 0 to 1 year, interest income will tend to move in line with changes in market rates but its market value will be relatively stable. For a portfolio with a longer duration benchmark, interest income will be relatively stable but the market value of the portfolio may be quite volatile.

7. The second mechanism, the duration limit, establishes the willingness of the beneficiary to permit the investment manager to deviate from the risk-neutral benchmark by taking tactical market views. A portfolio that is managed within wide duration limits around the benchmark denotes an active management strategy whereas a portfolio that constantly replicates the selected benchmark is passively managed.
8. The ADF Guidelines currently prescribe a duration limit of 0 to 1 year for the Fund’s investments, to emphasize the objective of limiting the potential reduction in the market value of the portfolio if interest rates move adversely. However, because the 1 year duration limit also causes the investment portfolio to re-price within a year, the income from investments is highly correlated with fluctuations in short-term interest rates. As illustrated in Table 1 below, this has caused the average return on investments to decline in tandem with the decline in market interest rates over the past few years. The result has been that despite a steady increase in invested liquidity, the income generated from the Fund’s investment portfolio has actually declined during the past three years.

**Table 1** **Interest Rates and Portfolio Performance**  
(Annualized Rates and UA Millions)

|                                | 1998  | 1999  | 2000  | 2001  | 2002  |
|--------------------------------|-------|-------|-------|-------|-------|
| USD 6 month Libor <sup>1</sup> | 5.69% | 5.12% | 6.33% | 4.91% | 2.03% |
| Return on Investments          | 6.18% | 4.75% | 5.87% | 4.44% | 2.63% |
| Volume of Investments          | 411   | 609   | 647   | 891   | 994   |
| Investment Income              | 21    | 24    | 37    | 34    | 25    |

1 Rates measured at February 1 each year

### III PROPOSED CHANGES

9. The cash flow projections for ADF, which are summarized in Table 2 below, show that over the next few years, the sum of encashments plus loan reflows will exceed expected disbursements. As a result of the projected net inflows to the Fund, the overall size of the investment portfolio is expected to continue to grow over the medium term.

**Table 2**                      **Cashflow Projections and the Volume of Investments**  
(UA millions)

|                          | <b>2003</b> | <b>2004</b> | <b>2005</b> | <b>2006</b> | <b>2007</b>      |
|--------------------------|-------------|-------------|-------------|-------------|------------------|
| Disbursements            | 505         | 607         | 630         | 615         | 640              |
| Encashments+Loan Reflows | 705         | 746         | 717         | 683         | 561 <sup>2</sup> |
| Volume of Investments    | 1,121       | 1,174       | 1,311       | 1,404       | 1,485            |

10. Given these portfolio growth projections as well as the substantial current stock of liquidity, a large part of the Fund’s investment portfolio can be considered as “stable” or “core” assets. The stable nature of these assets provides an opportunity for investing over a longer horizon to avoid frequent re-pricing, without compromising the Fund’s ability to continue disbursements in an orderly manner. However, notwithstanding the coverage of disbursements by encashments and reflows, the Fund would continue to require ready liquidity to cater for timing mismatches between encashments and disbursements, as well as for any unexpected increases in disbursements. Given these factors, Management proposes to adopt a dual portfolio structure, with the objective of benefiting from a longer duration for part of the portfolio, while continuing to ensure adequate liquidity for supporting the Fund’s operations.
11. The first portfolio in the dual portfolio structure, called the **Operational Portfolio**, would be held with the objective of providing ready liquidity in the event of any unexpected increases in disbursements<sup>3</sup>. In keeping with this objective, the Operational Portfolio would be designated “held-for-trading” and actively managed against a 3-month LIBOR benchmark within a minimum and maximum duration band of 0 to 1 year. Also in keeping with the Fund’s liquidity policy, the size of the Operational Portfolio would be determined quarterly as 75% of the next year’s projected disbursements.
12. The second portfolio, corresponding to the stable component of liquidity that is not part of the Operational Portfolio, would be called the **Investment Portfolio**. The Investment Portfolio would be passively aligned to a 10-year uniform re-pricing profile, which will ensure a systematic sampling of market rate movements by the part of the portfolio re-pricing each year (see annex 3). In keeping with the intent of passive management, securities held in the Investment Portfolio would be designated held-to-maturity<sup>4</sup> (HTM) for accounting purposes. The key consequence of such a

<sup>2</sup> For conservatism, excludes the encashments that can reasonably be anticipated from ADF-X.

<sup>3</sup> The inflows from encashments and loan reflows are adequate to meet expected annual disbursement needs. Therefore, liquidity would only be required to meet increases in disbursements.

<sup>4</sup> International accounting standards provide for three possible designations for investment securities. Investments designated as “trading” securities can be sold at any time and are regularly priced based on current market conditions. Unrealized gains or losses due to changes in fair value are reported as investment income. Investments designated as “available for sale” can also be sold at any time and are regularly priced based on current market conditions. Unrealized gains or losses due to changes in fair value are reported directly as changes to equity without passing through income. Investments designated as “held to maturity” cannot be sold until maturity or just before maturity. HTM securities

designation is that the Fund's income and its commitment capacity would not be affected by short-term variations in the market price of the investments held in this portfolio.

13. The implementation of the proposed dual structure would require an amendment of the current Guidelines, replacing the duration limit of 0 to 1 year on the aggregate portfolio held by the Fund, with the following:
  - 3-month LIBOR as the benchmark for the Operational Portfolio. Investments in the Operational Portfolio will be actively managed while keeping the average duration of the portfolio within a band of 0 to 1 year.
  - A 10-year uniform re-pricing profile as the passive benchmark for the Investment Portfolio.

#### IV IMPLICATIONS OF PROPOSED CHANGES

14. The implications of the proposed changes to the ADF asset management guidelines are examined from four perspectives:
  - Impact on the Fund's Liquidity
  - Impact on Investment Income
  - Impact on Currency Risk Management for the Fund
  - Implementation Horizon and the Management Process

##### Impact on Liquidity

15. The ADF's liquidity policy, adopted in 1999, stipulates that the Fund should hold a level of liquid assets between 50% and 75% of the three-year moving average of net disbursements. Under the proposed dual portfolio structure, the Operational Portfolio would continue to be a readily available source of liquidity. The determination of its size, as 75% of the next year's disbursements, would be in line with the intent of the Fund's liquidity policy, to ensure sufficient liquidity to cover operational requirements. As shown in Table 3 below, the Operational Portfolio is projected to remain between UA 450 million and UA 500 million over the next five years.

**Table 3** **Projected Portfolio Evolution**  
(UA millions)

|                              | 2003  | 2004  | 2005  | 2006  | 2007  |
|------------------------------|-------|-------|-------|-------|-------|
| Operational Portfolio (1)    | 455   | 473   | 461   | 480   | 480   |
| (Share of total investments) | 41%   | 40%   | 35%   | 34%   | 32%   |
| Investment Portfolio (2)     | 666   | 702   | 850   | 924   | 1,005 |
| (Share of total investments) | 59%   | 60%   | 65%   | 66%   | 68%   |
| Total Investments (1+2)      | 1,121 | 1,174 | 1,311 | 1,404 | 1,485 |

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are not fair valued after purchase and therefore unrealized gains or losses do not affect investment income.

16. Over and above the Operational Portfolio, the Investment Portfolio would also provide an additional source of liquidity for the Fund's operations. Mirroring the liquidity policy for the African Development Bank, investments that are designated as held-to-maturity would only be considered as liquid for monitoring compliance with the Fund's liquidity policy if they have a remaining maturity of less than one year.
17. Because the election to designate a security as held-to-maturity indicates both the intention and ability to hold an investment until it matures, this designation would reduce the flexibility to rapidly adjust profile of the Fund's Investment Portfolio. This reduced flexibility is adequately mitigated, however, by the dual portfolio structure and the proposed Operational Portfolio size guidelines. The ability of the proposed dual portfolio structure to provide for orderly disbursements under two different stress scenarios is examined in Annex 4.

### **Impact on Investment Income**

18. In the proposed dual portfolio structure, the Investment Portfolio would have a significantly longer<sup>5</sup> duration compared to the current portfolio, while the Operational Portfolio would have a profile similar to the current portfolio.
19. The longer duration of the Investment Portfolio would be expected to benefit the Fund in two principal ways:
  - It would reduce the sensitivity of investment income to fluctuations in the market interest rates, as the market price variations of the portfolio are excluded due to the HTM classification.
  - More often than not, the longer the duration of an investment, the higher its yield. As a result, over the medium to long term, the average returns from a longer duration portfolio can generally be expected to be higher.
20. In the near-term, the increased duration of the Investment Portfolio would have a clear positive impact<sup>6</sup>, largely due to the positively sloped yield curve<sup>7</sup> in US Dollars, which constitutes the bulk of the Fund's investments. In the medium-to-long term, the systematic re-pricing of 10% of the Investment Portfolio that matures each year would ensure that the returns from the portfolio closely track a moving average of long-term rates, resulting in reduced sensitivity to short-term market rate movements.
21. The returns from the Operational Portfolio are expected to closely track the proposed performance benchmark of 3-month LIBOR. The volatility of the returns on the Operational Portfolio should be similar to the volatility currently observed in the portfolio. Therefore, on an aggregate basis, given the relatively smaller share of the Operational Portfolio, the returns from the combined portfolio would be expected to

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<sup>5</sup> The duration of a uniform 10-year repricing profile is about 5 years.

<sup>6</sup> Assuming a stable yield curve, the 2004 investment income is likely to be higher by an indicative UA 5 million as a result of the proposed portfolio structure.

<sup>7</sup> A positively sloped yield curve means that the longer the duration of an investment, the higher its yield.

be higher in the near-term, and significantly less sensitive to market interest rate variations in the medium-term.

### **Impact on Currency Risk Management**

22. The principal currency risk management objective of the Fund is to minimize the risk of over-committing<sup>8</sup> the Fund's resources. The strategy used to attain this objective is to align the currency composition of Net Development Resources (NDR) with that of the SDR, the currency in which ADF commitments are made, to ensure that the Fund's commitment capacity is unaffected by exchange rate movements.
23. Since adopting this policy, alignment of the NDR with the SDR has been implemented by spot conversions from investment currencies in excess to those in deficit (vis-à-vis the SDR basket). In the future, with the impending signing of agreements to enable the Fund to enter into derivative transactions, the use of forward exchange contracts is expected to increase the Fund's flexibility in aligning the currency composition of its NDR to the SDR.
24. In the proposed dual portfolio structure, while the restrictions on selling HTM securities prior to maturity would limit changes to the Investment Portfolio's currency composition, the currency composition of the Operational Portfolio can be freely adjusted for alignment to the SDR<sup>9</sup>. In addition, if required, forward contracts can be used to adjust any remaining mismatches. Therefore, the currency risk management process for the Fund would be unaffected by the proposed changes to the Guidelines.

### **Implementation Horizon and Management Process**

25. The Treasury Department would continue to have principal responsibility for implementing the proposed dual portfolio structure as well as the other changes to the Guidelines.
26. The portfolio structure proposed for ADF is deliberately passive in nature, to minimize the influence of any specific views on the future evolution of interest rates. Nevertheless, prevailing interest rates being at historically low levels is a factor that is difficult to ignore, even while acknowledging the possibility that rates may decline even further or stay at current levels for an extended period of time. To balance the possible opportunity cost of investing longer-term in the current low interest rate environment, with the need to avoid a policy that is based on speculation on the future evolution of interest rates, Management proposes a progressive build-up of the Investment Portfolio, with complete alignment to the 10-year uniform re-pricing profile over a timeframe not exceeding December 31, 2004.

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<sup>8</sup> Approvals made in UA (SDR), while within the Commitment Capacity at the time of commitment, could exceed the capacity at a later date if adverse currency movements diminish the UA value of the available resources.

<sup>9</sup> The Fund's existing currency mismatches are well within the projected size of the Operational Portfolio.

27. The Treasury Risk Management Division (FFMA.3) would continue to carry out daily monitoring of compliance with the Guidelines and would report on any exceptions. The Asset and Liability Management Committee (ALCO) would continue to exercise Management oversight on the Fund's investment management process, based on monthly reports for the Fund's investment performance and quarterly rebalancing of the Operational and Investment Portfolios.
28. The Treasury Department would continue to prepare monthly reports on the Fund's investment performance for the Board and the Annual Market Risk Review would continue to serve as the principal instrument for Board supervision over the Fund's investment management process.

## **V CONCLUSIONS AND RECOMMENDATIONS**

29. Over the past few years, the returns generated by investing the Fund's liquidity have fallen in line with short-term market rates. The high correlation of the Fund's investment returns and market interest rates can be traced to the investment duration limit that is prescribed by the ADF Asset Management Guidelines.
30. Changes in the Fund's encashment policies over the past few years have resulted in a progressive increase in the size of the Fund's liquid assets. This has created the opportunity to move to a dual portfolio structure with an Operational Portfolio and an Investment Portfolio in order to stabilize the Fund's investment returns while continuing to ensure adequate liquidity to support its operational activities.
31. The Operational Portfolio would hold liquid securities needed to meet the Fund's cash flow needs and would be actively invested against a 3 month LIBOR benchmark within prescribed risk limits. The Investment Portfolio would hold the Fund's "stable" liquidity and would be passively managed against a 10-year uniform re-pricing profile.
32. In view of the foregoing, the Board is requested to approve the revised ADF Asset Management Guidelines, which incorporate the following updated investment benchmark and duration limit:
  - 3-month LIBOR as the benchmark for the Operational Portfolio. Investments in the operational portfolio will be actively managed while keeping the average portfolio duration within a band of 0 to 1 year.
  - A 10-year uniform re-pricing profile as the passive benchmark for the Investment Portfolio.
33. Under the oversight of ALCO, implementation of the dual portfolio structure will be completed before December 31, 2004.

## ANNEX 1

### **Historical Evolution of the ADF Duration Limit and Benchmark**

1. Prior to 1999, the management of the Fund's investments was governed by the prevailing Asset and Liability Management Guidelines for the African Development Bank. In practice, the Fund's investments were generally placed in money-market instruments, largely short-term deposits, resulting in an average duration of less than 6 months.
2. In 1999, the Board approved the first ADF Asset Management Guidelines. The Guidelines established an overall duration limit of 1 year for the Fund's investments and authorized the Treasurer to set an appropriate benchmark for managing the investments. Until 2002, the Fund's investments continued to be largely money-market oriented. With declining interest rates depressing investment income, a more active approach has been recently employed in managing the Fund's investments, including greater emphasis on higher-yielding AAA-rated asset-backed securities (ABS). While the Fund's investments are currently not managed against any specific benchmark, the average duration of the investment portfolio has remained around 6 months.
3. The proposed changes to the Guidelines would enable the Fund's investments to be managed against a benchmark that has been designed to take maximum advantage the expected evolution of the Fund's liquidity over the medium-term. The dual portfolio structure, with a longer-duration Investment Portfolio designated held-to-maturity plus a short-duration Operational Portfolio designated held-for-trading, is expected to reduce the sensitivity of investment income to interest rate volatility, while continuing to ensure adequate liquidity for operational purposes.

## ANNEX 2

### Comparison with other MDBs

1. The benchmarks and duration guidelines used by three peer MDBs for managing the investments of their concessionary lending windows, are described below:

#### **International Development Agency (IBRD)**

2. The International Development Agency's (IDA) investments are divided into two tranches. The first tranche, meant to match net disbursement projections, is actively managed against a long duration 5-10 year bond benchmark, and is comparable to the proposed longer-duration Investment Portfolio for the ADF. The second tranche, meant to serve as ready liquidity, is managed against a 1-3 year bond benchmark, and is comparable to the proposed short-duration Operational Portfolio for the ADF. IDA designates all investments as held-for-trading.

#### **The Asian Development Fund (AsDB)**

3. The Asian Development Fund (AsDF) manages its investments with a target duration of 1 year and designates its investments as available-for-sale. Based on informal interactions, it appears that a longer duration benchmark may be considered, as the quality of their cashflow forecasting improves.

#### **Fund for Special Operations (IADB)**

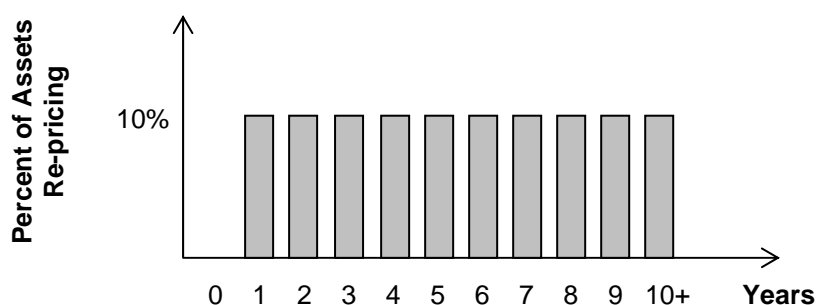
4. All of the Fund for Special Operations' (FSO) investment securities are held in a trading portfolio carried at market value. The investment strategy is a Libor-based floating rate strategy with an emphasis on liquidity and a duration limit of 6 months. The current policy is under review with consideration being given to implementing a longer duration strategy and maintaining the trading designation.

## ANNEX 3

### The Re-Pricing Profile Benchmark for the Investment Portfolio

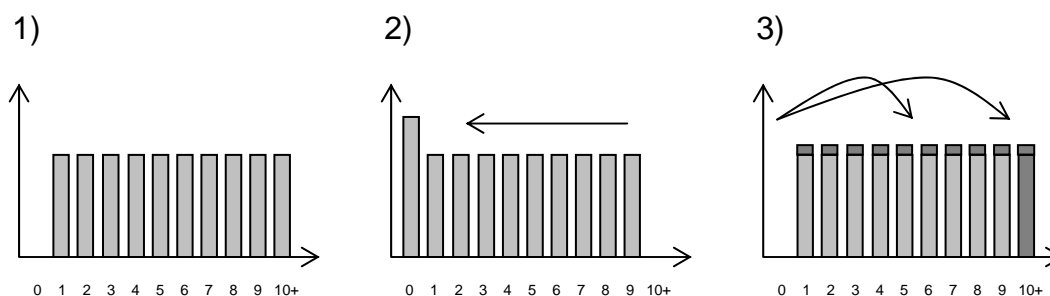
- In 2002, the African Development Bank instituted a formal benchmark for managing the interest rate sensitivity of its fixed rate assets funded by equity. The same benchmark is proposed for the Fund’s Investment Portfolio. As illustrated in Figure 1 below, the proposed benchmark for Fund’s Investment Portfolio is a uniform ten-year re-pricing profile.

**Figure 1 – Re-pricing Profile Benchmark for the Investment Portfolio**



- In this “ladder” structure, a uniform ten-percent of the fixed rate assets in the Fund’s Investment Portfolio would mature each year and therefore would re-price at current market rates. This means that the rate of interest on the remaining ninety percent of the Investment Portfolio would be unaffected by movements in market interest rates in any given year. Every year, the fixed rate assets maturing in each annual re-pricing “bucket”, shown on the horizontal axis, would move one year closer to their re-pricing dates. The average duration of the proposed benchmark is about five years.
- As illustrated schematically in Figure 2, to replicate the benchmark, each year the fixed rate securities that mature would be re-invested in new ten-year maturity fixed rate assets at current interest rates. In addition, as the volume of liquidity in the Investment Portfolio grows, the interest rate sensitivity of these new assets would be distributed across maturities to maintain alignment with the uniform re-pricing profile of the benchmark. The mechanical structure of this benchmark means that, over time, the average return on the Fund’s Investment Portfolio would be closely correlated to a ten-year moving average of ten-year market interest rates.

**Figure 2 – Replicating the Re-pricing Profile Benchmark**

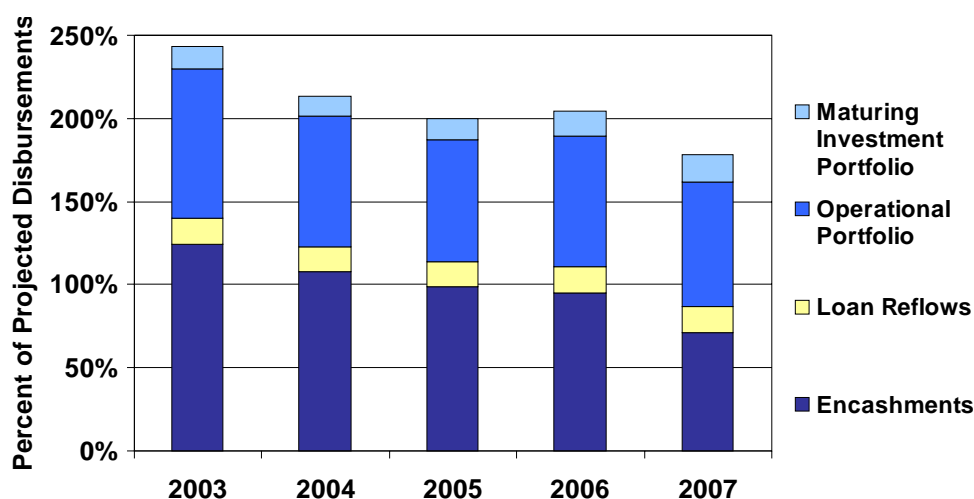


## ANNEX 4

### Liquidity Adequacy Under Stress Scenarios

1. Two principal stress scenarios could conceivably put pressure on the Fund's liquidity:
  - a temporary unexpected surge in disbursements, or
  - a fundamental change in the Fund's administration that causes a structural decline in the Fund's liquidity level.
2. A temporary unexpected surge in disbursements would give Management little time to react. Such an event is reasonably plausible and the proposed dual portfolio structure needs to give the Fund the flexibility to meet such a contingency. Chart 1 below shows the cushion available to cover any unexpected surges in disbursements over the next few years. The four different sources of liquidity, namely: encashments<sup>10</sup>; loan reflows; the entire Operational Portfolio; and, the component of the Investment Portfolio maturing each year, are expressed as a percentage of the expected disbursements for each of the next few years. It can be seen that on average, available liquidity is sufficient to accommodate a doubling of disbursements throughout the projection period.

**Chart 1** Liquidity to Cover A Surge of Disbursements



3. On the other hand, a change in the Fund's administration that causes a structural decline in the Fund's level of investments would likely be a protracted process. This would give Management adequate time to adjust both the size of the two portfolios and their benchmarks, to align with the new structural liquidity outlook. For instance, an orderly increase in the expected disbursements would automatically trigger a gradual increase in the size of the Operational Portfolio, which is pegged at 75% of the next year's disbursements. This can be accommodated by an allocation of the maturing part of the Investment Portfolio.

<sup>10</sup> Does not include encashments that can be reasonably expected from ADF-X, hence 2007 encashments are artificially low.

## ANNEX 5

### **Proposed Modifications of the Credit Limits**

1. The principal modification proposed to the credit limits contained within the revised Guidelines pertains to an additional limit on the Fund's investment in asset-backed securities (ABS). Asset-backed securities are bonds that represent pools of loans of similar-types, duration and interest rates. The pools of loans can be mortgages, consumer loans such as credit cards, or auto loans, student loans, business loans and trade receivables as well as others.
2. The ADB Group's experience with ABS has been generally satisfactory. However, while different segments under the ABS umbrella have varying risk-return characteristics, ABS as an asset class tends to exhibit rating volatility, primarily because the rating of ABS is based on both qualitative data and statistical data. The qualitative aspect of the assessment makes the volatility particularly difficult to predict.
3. In November 2002, recognizing the special characteristics of ABS, ALCO approved limits on investment in ABS for the African Development Bank, deferring similar limits for the ADF pending the review of the ADF Guidelines underway. The proposed limit on ABS for the ADF, at 35% for the Operational Portfolio plus 10% for the Investment Portfolio, and a 5% overall limit for the more exotic ABS, while avoiding altogether the riskier collateral types, will align the Fund's credit limits with Bank's credit limits framework. The implementation horizon for these limits will coincide with the horizon for the investment benchmark implementation.

### **Proposed Modifications of the List of Eligible Instruments**

4. Under the current Guidelines, the Fund's investment choice is severely limited by the exclusion of even simple derivative instruments such as futures and swaps. The inability to exploit the flexibility afforded by these standard derivative instruments impacts not only the potential returns on the Fund's investments, but also precludes some of the more efficient means of hedging the portfolio in volatile market conditions. Unlike the Fund, the ADB's investment guidelines permit a wide range of derivative products, and its investment performance has clearly benefited as a result.
5. The revised ADF Guidelines would remove this handicap to the efficient management of the Fund's Operational Portfolio, by permitting the use of certain simple derivatives, namely Exchange Traded Futures, Forward Rate Agreements and Interest Rate Swaps. The derivatives included in the Fund's Guidelines are a subset of the derivatives permitted in the ADB guidelines. The impact of these derivative instruments on the risk profile of the Operational Portfolio will be adequately measured and controlled through the proposed benchmark and duration limits framework.