

# ADF Liquidity Policy

## Technical Note

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ADF-14 Second Replenishment Meeting  
June 2016  
Abidjan, Cote d'Ivoire



AFRICAN DEVELOPMENT FUND

## Executive Summary

During the first meeting of the Fourteen General Replenishment of the African Development Fund in March 2016, the "ADF-14 Financing Framework" paper was presented to Deputies. They requested Management to provide an update on the Fund's liquidity policy to consider the impact of innovative instruments and to ascertain whether any change could be accommodated in order to improve the Advanced Commitment Capacity (ACC).

Deputies will recall that a similar request was made during the ADF-13 replenishment meetings and that Management came up with the following recommendations in a Technical Note on ADF Liquidity policy (second meetings of ADF-13):

- i. To maintain the Fund's liquidity policy<sup>1</sup> unchanged, with a target level of liquidity set between 50% and 75% of net disbursements for the purpose of monitoring the Fund's short-term liquidity.
- ii. To reaffirm that the use of the upper range of the liquidity policy, at 75% of net disbursements, for the purpose of computing the ACC given the long term nature of the underlying projections of this model and the need to maintain adequate safety buffers and avoid over-commitments;
- iii. To propose the progressive reduction of the size of the Treasury Investment portfolio Held at Amortized Cost<sup>2</sup> (The Held-to-Maturity (HTM) portfolio) from a size of UA 1.1 billion in 2012 to approximately UA 300 million in order to release the pressure on the Fund's liquidity, and increase the volume of liquidity available for disbursements. The purpose of this portfolio is primarily to improve the return on Treasury investments and also to serve as safety buffer in case of an increase in disbursements above projected levels.

In order to respond to the current request, Management has updated the projections of the Fund's liquidity - including new scenarios on innovative instruments, as well as the benchmark analysis with other Multilateral Development Banks (MDBs) - specifically IDA and the AsDF. The key conclusion of this review is that compared to ADF-13, the Fund's liquidity position did not improve. Based on revised projections, the Fund can now only afford to maintain the target size of its HTM portfolio at UA 300 million (as initially planned during ADF-13), only if a sufficient level of borrowings are contracted through innovative instruments. Furthermore, the Fund's liquidity policy cannot be viewed as conservative in comparison with the other MDBs, especially when taking into consideration the different cash flows patterns of these institutions which have higher loan reflows due to less concessional loan terms and a relatively higher number of blend countries.

Furthermore, stress tests on ADF liquidity long-term forecast have been updated and confirm that the use of the upper range of the Liquidity policy for the purpose of deriving the ACC, remains optimal to safeguard the Fund's long-term financial sustainability as it mitigates the risk of over-commitment and unforeseen stress events.

In conclusion, this document recommends to:

- i. Maintain the Fund's current liquidity policy largely unchanged with a slight adjustment to account for the debt expected to be contracted with the introduction of innovative instruments;
- ii. Continue to apply the upper limit of the liquidity policy (75% of net disbursements) in the ACC projections given the long term nature of these projections;
- iii. Consider maintaining an HTM portfolio of approximately UA 300 million in shorter maturities (for a maximum maturity of 5 years) to enhance its investment income and serve as safety buffer for unforeseen disbursements, in case the Fund successfully implement the Concessional Donor loans and the Bridge loans.

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<sup>1</sup> The last update of the Fund's liquidity policy is specified in the Fund's General Authority (Document ADF/BD/WP/2011/132).

<sup>2</sup> The Treasury Investment portfolio Held at Amortized Cost include long term securities which are generally held until maturity for the purpose of increasing the return on these securities. This portfolio will also be referred to as the "HTM portfolio" in this document.

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## Abbreviations

ACA	Advance Commitment Authority scheme
ACC	Advance Commitment Capacity
ADF	African Development Fund
ALM	Asset and Liabilities Management
AsDF	Asian Development Fund
BLs	Bridge Loans
CDLs	Concessional Donor Loans
FSF	Fragile State Facility
HTM	Held-to-Maturity portfolio
HTM-ACE	Held-to-Maturity liquidity for the Accelerated Encashment portfolio
IDA	International Development Association
MDRI	Multilateral Debt Relief Initiative
PML	Prudential Minimum Liquidity
PSF	Private Sector Credit Enhancement Facility
TSF	Transition Support Facility
SDR	Special Drawing Rights
UA	Unit of Account

## 1. Introduction

1.1. ADF commitments for a given replenishment currently include Donor's contributions and internally generated resources. Taking into account these resources, as well as existing commitments, ADF's liquidity needs to be carefully managed to ensure that future disbursements on loans and grants are backed by sufficient liquidity. To achieve this, donors' funds are encashed to match the disbursement profile of loans and grants, while the Advance Commitment Capacity is recalibrated for each replenishment cycle. Comprehensive liquidity projections are used to validate the availability of resources to meet future commitments.

1.2. Furthermore, ADF must, at all times, minimize the risk of over-committing its limited financial resources and needs to be able to address any unexpected demand on its liquidity. This is achieved primarily through compliance to the Fund's existing liquidity policy, which establishes that the Fund should hold sufficient liquidity to cover between 50% and 75% of annual net disbursements on loans and grants over a rolling 3-year period. This is an important consideration for ADF's financial planning, including when determining the volume of internal resources that can be made available in ADF-14 and subsequent replenishments.

1.3. Thus, in response to a specific inquiry by Deputies' during the first ADF-14 meetings held in Abidjan in March 2016, this technical note updates the analysis of the Fund's liquidity to provide comfort to Deputies on the Fund's long term financial sustainability, following the proposal for introducing innovative instruments. This document is organized in 7 sections. Following the introduction, section 2 recalls the key aspects of ADF liquidity policy. Section 3 describes the evolution of ADF liquidity position and its future projections. Section 4 assesses the impact of the introduction of debt instruments in the ADF-14 financing framework. Section 5 presents the impact of relaxing some of the liquidity policy constraints as well as the outcome of stress scenarios on the Fund's liquidity and its ACC. Section 6 provides a benchmarking analysis with other MDBs liquidity policies. Finally section 7 presents the recommendations and the conclusion.

## 2. Overview of ADF Liquidity Management Policy

2.1. The last major update of the Fund's liquidity policy was approved by the Board of Directors in 2000<sup>3</sup>. Since then, this policy has undergone a number of minor revisions, and the most recent were in 2011 and are reflected in the Fund's General Authority<sup>4</sup> and the Fund's Asset and Liability management guidelines<sup>5</sup>. The key elements of this liquidity policy are the following:

2.2. Objective. The Fund's principal liquidity risk management objective is to hold sufficient liquid resources to enable it to meet all probable cash flow needs without having recourse to State Participants for supplementary encashment.

2.3. Prudential Minimum Liquidity (PML). To achieve this objective, the Fund's target level of liquidity is linked to net disbursements and is set between 50% and 75% of the three-year moving average of net disbursements.

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<sup>3</sup> Revised ADF Liquidity Policy Paper - (ADF/BD/WP/99/Rev.2)

<sup>4</sup> ADF- Proposal for a General Authority on Asset and Liability Management and Revision to the Financial Regulations – (ADF/BD/WP/2011/132)

<sup>5</sup> ADF- Updated Asset and Liability Management guidelines - (ADF/BD/IF/2012/99)

2.4. Eligible liquid assets. Under the Fund's revised liquidity policy, the Fund's eligible liquidity includes cash and investments held in the Treasury Trading portfolios, which are available for disbursement purposes. The liquidity held in the Treasury Investment portfolios, for the purpose of stabilizing the Fund's investment income, is excluded from the eligible liquidity. The Treasury Investment portfolios include:

- The Held to Maturity portfolio (HTM), which was set up to enhance investment returns on the excess liquidity that is not immediately required for operational purposes;
- The Held to Maturity liquidity for the Accelerated Encashment portfolio (HTM-ACE), which is dedicated to invest the proceeds from accelerated encashments in order to recoup the discount granted to State Participants, and minimize interest rate risk on accelerated encashments.

Nevertheless, maturing securities from the Investment Portfolio become part of the trading portfolio and therefore available for disbursements, when they are not re-invested in long term securities for the Investment portfolio.

2.5. *Advance Commitment Authority (ACA) scheme.* Since 2005, ADF has adopted an Advance Commitment Authority scheme which allows it to make commitments against projected reflows that are expected to be received in future years (a 50-year projection period is assumed for this scheme). The ACA scheme was established in recognition of the fact that commitments are disbursed over several years and do not have to be fully backed by available liquidity at the time of their approval. Through this scheme, an Advance Commitment Capacity (ACC) is determined and enables the Fund to supplement Donor resources by Internally Generated Resources.

When determining the maximum level of ACC that the Fund can provide, the ACA scheme bases its projections on the upper range of the liquidity policy and ensures that the projected level of liquidity does not fall below 75% of the moving average of projected net disbursements. This conservative approach is used to ensure that the Fund does not run the risk of over-commitment during this 50-year projection horizon. This approach represents the most important safety margins built in the model, to protect the Fund against various risks not accounted in the model such as:

- The adverse currency rate fluctuations that may impact the Fund's financial statements;
- The adverse interest rate fluctuations that may impact the Fund's investment income;
- An increase in the pace of disbursements above the projected disbursement profile;
- Delays in payments and encashments of promissory notes.
- A level of loan cancellation that differs from the expected level of loan cancellations; and
- An increase in administrative expenses above the budgeted level.

2.6. *Debt funding.* In March 2016, during the first meeting on ADF-14 replenishment, Management proposed the introduction of debt funding in the form of Concessional Donor Loans (CDLs) and Bridge Loans (BLs), to improve the volume of resources expected to be available during ADF-14. However, the introduction of debt funding into ADF's financing framework requires the implementation of appropriate risk management measures. Henceforth, Management has examined these risks and defined the appropriate risk management framework to manage the liquidity, interest rate, and currency risks that could arise from the introduction of debt funding into ADF's financing framework. Therefore, ADF's current risk management framework will be adjusted to cover incremental financial risks arising from the use of debt. The Fund's prudential minimum liquidity level (PML) will be increased to ensure the adequate coverage of debt serving payments. Furthermore, a prudential debt limit framework will be established to determine the maximum volume of debt that can sustainably be incorporated into the Fund's financing

framework. These changes will be reflected in the revised versions of the Fund's General Authority and Asset and Liability Management guidelines.

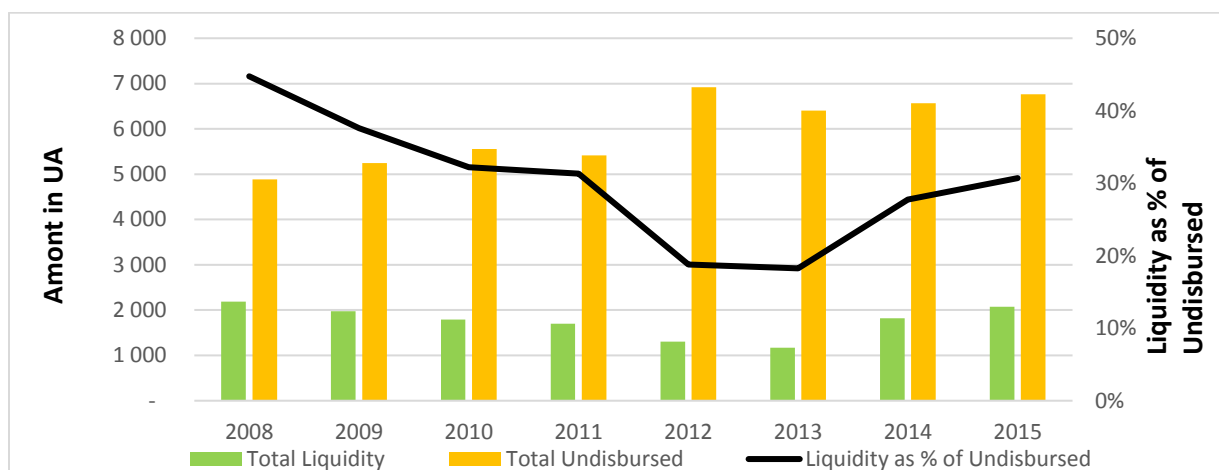
### 3. Evolution of ADF liquidity and future projections

#### *Historical overview of ADF liquidity position*

3.1. As indicated in Figure 1 below, ADF's eligible liquidity<sup>6</sup> was on a declining trend since 2008, and particularly in 2013 due to a large disbursement to the Transitional Support Facility (TSF). The liquidity position improved in 2014 and 2015, as maturing securities from the Investment portfolios were not re-invested owing to a low volume of disbursements and pending expected disbursements to the TSF and to the Private Sector Facility (PSF).

3.2. In contrast, undisbursed signed commitments (loans and grants) have been steadily increasing by an annual average of 5% since 2008, and reached a peak level of UA 6.9 billion in 2012. Similarly to the trend of liquidity, the ratio of liquidity as a percentage of undisbursed commitments declined from 2008 to 2013 but bounced back in 2014 and 2015. As at end of December 2015, the Fund's undisbursed signed commitments stood at UA 6.8 billion, while unsigned approvals amounted to approximately UA 1 billion. With an expected increase in disbursements in 2016 of about UA 442 million (compared to 2015), primarily due to fast disbursing initiatives (PSF and FSF), we expect the level of eligible liquidity to decrease slowly from its current level of UA 1.6 billion as at December 2015.

**Figure 1: Historical overview of ADF Liquidity vs. Undisbursed**



<sup>6</sup> The eligible liquidity represents the liquidity available for disbursements and includes primarily Cash and the Trading Portfolio, while the Investment Portfolios are excluded (HTM and HTM-ACE).

### ADF actual eligible liquidity vs. ADF-13 projections

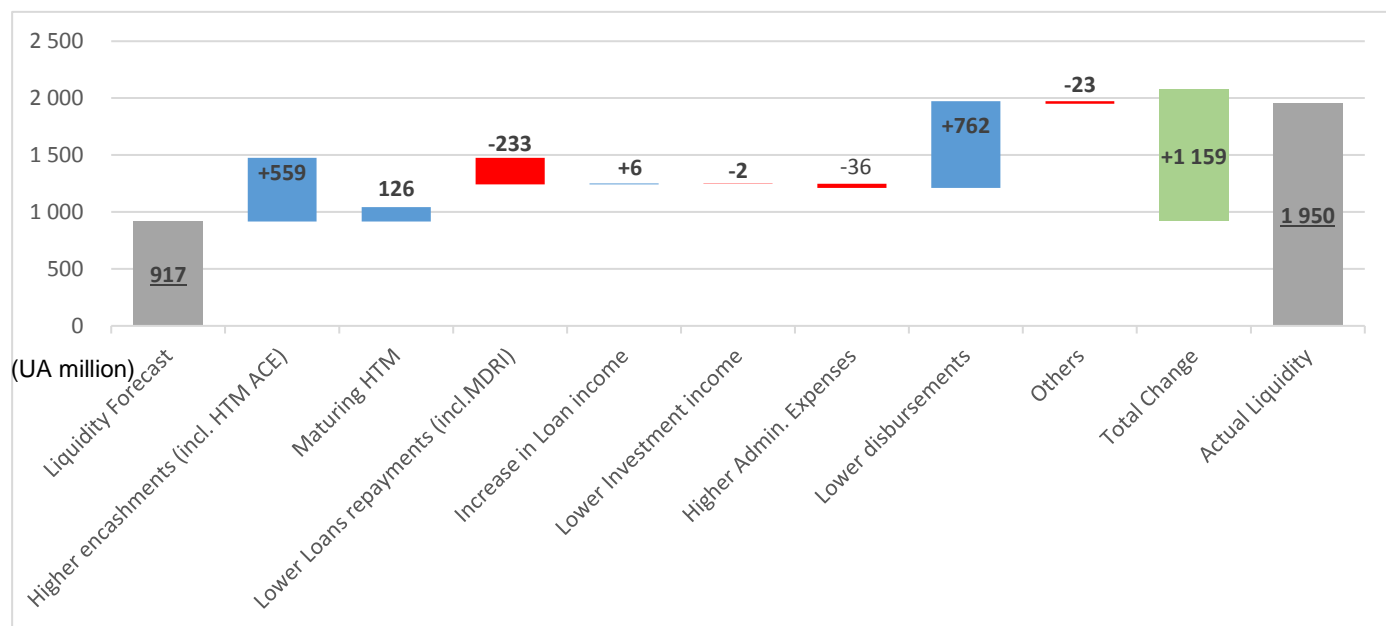
3.3. The Fund's eligible liquidity of UA 1.6 billion as at December 2015 is much higher than the projected level of UA 917 million for the same date during ADF-13, as was specified in the "Technical Note on ADF Liquidity" of June 2013. The primary reasons for this variance are summarized in Figure 2 as the following:

- (i) Disbursements from 2013 to 2015 fell short of projections by UA 762 million, primarily because large disbursements expected for fast disbursing initiatives did not materialize and are currently due in 2016 (for e.g. UA 359 million for the Arrears clearance for Zimbabwe and UA 165 million for the Private Sector Facility);
- (ii) A higher volume of maturing securities from the HTM Investment portfolio than projected was kept in the Trading portfolio to increase the eligible liquidity (+ UA 126 million)
- (iii) The impact of the accelerated encashment of Donors' contributions was also slightly underestimated as maturing securities from the HTM-ACE Investment portfolio have been higher than forecasted (+UA 53 million).

These positive variances for the eligible liquidity were however partially offset by:

- (iv) Lower than projected net loan reflows - including MDRI inflows (- UA233 million); and
- (v) Higher than planned administrative expenses for the period under consideration (-UA 36 million).

**Figure 2: Variance analysis – Liquidity forecast vs. actual as at 31<sup>st</sup> December 2015**





## ADF-14 Liquidity Projections

### 3.4. Key liquidity determinants

ADF liquidity is derived on the basis of comprehensive long-term cash flow projections, which are supplemented by stress testing scenarios based on events that have the potential to impact the liquidity. Such projections and stress tests are recalibrated on a regular basis to ensure resilience over time to various challenging financial market scenarios and events. Table 1 below shows ADF major Cash Flow Components.

**Table 1: ADF Primary Cash Inflows and Outflows**

CASH INFLOWS		CASH OUTFLOWS	
<input checked="" type="checkbox"/> Encashment of donor contributions		<input checked="" type="checkbox"/> Disbursements for Loans and Grants	
<input checked="" type="checkbox"/> Principal repayments on loans		<input checked="" type="checkbox"/> Administrative expenses	
<input checked="" type="checkbox"/> Income and charges from loans			
<input checked="" type="checkbox"/> Donor compensations for MDRI and Grants			
<input checked="" type="checkbox"/> Investment Income			
Net Income transfers from ADB			
Cash flows from Innovative Instruments			
<input checked="" type="checkbox"/> Proceeds of Concessional Donor Loans (CDLs) and Bridge Loans (BLs)		<input checked="" type="checkbox"/> Debt Service of CDLs and BLs	

### 3.5. Base Case projections for the Fund's liquidity.

Assumptions for liquidity projections are recalibrated at the beginning of each replenishment to ensure that these projections reflect the most recent and available information. Table 2 provides the key changes in these assumptions between ADF-13 and ADF-14 and indicates that, based on expectations, more conservative assumptions are used particularly for Donor contributions, Investment income and Administrative expenses. These assumptions do not take into account the implementation of the innovative instruments.

**Table 2: Changes in key assumptions of liquidity projections between ADF-13 and ADF-14**

Key Assumptions	Description	ADF-13	ADF-14	Trend
Donor Contributions for Future Replenishments	To maintain conservative Liquidity projections, no growth is assumed for Donor subscriptions in future replenishments.	5%	0%	↓
Encashment of discount notes	Timing of payments and encashments of discount notes from donors	To be received without significant delays		↔
	Average annual encashments	UA 1.315 billion	UA 1.200 billion	↓
Expected disbursements	Average annual disbursements	UA 1.716 billion	UA 1.657 billion	↓
Expected loans reflows	Average annual loan repayments (incl. MDRI)	UA 300 million	UA 294 million	↓
	Average annual loan income	UA 115 million	125 UA million	↑
Investment income	Average annual investment income	UA 48 million	UA 19 million	↓
Administrative expenses	Average annual admin. budget	UA 223 million	UA 256 million	↑
ACC Level	Static vs. dynamic computation of ACC over the next 3 replenishment cycles.	UA1.03 billion for ADF-13, 14 and 15	UA 415 million for ADF-14 & 15; UA2.19 billion for ADF-16	↓

### 3.6. *Base case liquidity projections*

Based on the revised assumptions for ADF-14, the results of the Base case liquidity projections are summarised in Table 3.

3.7. The Fund's net cash flows are expected to be negative in 2016 and that deficit will continue throughout until 2022 for the following reasons:

- (i) Portfolio disbursements, when including resources set aside for fast disbursing initiatives, are expected to increase to an average of UA 1.72 billion annually over the next two replenishment cycles, and exceeds the combination of expected loan repayments and encashments;
- (ii) Administrative expenses also consistently exceed income from loans and investment income combined. It should be recalled that this operational gap is primarily driven by the foregone income arising from MDRI and increased grants.

3.8. Thus, the cumulative cash flow shortfall will amount to about UA 630 million over the projection horizon, thereby resulting in a decrease in the Fund's liquidity which will reach its lowest level around 2022/2023.

3.9. Therefore based on the projections, the HTM Investment portfolio cannot be maintained at the target size of UA 300 million as initially planned during ADF-13 but must rather be gradually liquidated over time. Furthermore, as annual net cash flows become positive starting from 2023, the Fund's liquidity is expected to remain slightly above the required prudential minimum threshold, thereby building up a safety buffer of liquidity that should be available in case of an unforeseen acceleration in disbursements or any other stress event.

**Table 3: Base case projections of expected ADF liquidity over the period 2016-2026**

<i>In UA million</i>	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
<b>Total Approval</b>	<b>1,589</b>	<b>1,401</b>	<b>1,401</b>	<b>1,401</b>	<b>1,401</b>	<b>1,401</b>	<b>1,401</b>	<b>1,992</b>	<b>1,992</b>	<b>1,992</b>	<b>1,992</b>
<i>of which: Approval from Donor Contributions</i>	1,263	1,263	1,263	1,263	1,263	1,263	1,263	1,263	1,263	1,263	1,263
<i>of which: Approval from ACC</i>	326	138	138	138	138	138	138	729	729	729	729
<b>Beginning Liquidity</b>	<b>1,592</b>	<b>1,283</b>	<b>1,291</b>	<b>1,155</b>	<b>1,098</b>	<b>990</b>	<b>764</b>	<b>700</b>	<b>756</b>	<b>790</b>	<b>872</b>
Encashment of partners' contributions	1,212	1,179	1,110	1,137	1,202	1,147	1,194	1,226	1,218	1,306	1,264
95% Loans Repayments	73	80	89	102	116	132	152	165	182	200	212
Loans Income	82	88	93	97	102	107	112	117	122	127	133
Commitment charge	11	13	14	16	17	18	19	20	22	24	26
98% MDRI compensation (incl. lag of 10%)	110	114	133	139	143	161	178	183	189	191	193
Compensation for forgone income on grants	6	9	12	17	22	25	30	40	49	63	80
ADB Income transfer	40	35	35	35	35	35	35	35	35	35	35
Investment Income	42	33	29	23	10	7	6	5	5	5	6
Maturing HTM portfolio	144	150	45	192	92	26					
Maturing HTM-ACE portfolio	93	149	194	76	48						
Amortizing ACE13 Swap		99	122	100	85	92	84	71	25	-	-
<b>Total Inflows</b>	<b>1,815</b>	<b>1,951</b>	<b>1,875</b>	<b>1,933</b>	<b>1,870</b>	<b>1,750</b>	<b>1,808</b>	<b>1,862</b>	<b>1,846</b>	<b>1,951</b>	<b>1,949</b>
Loans & Grants disbursements <sup>7</sup>	1,710	1,714	1,779	1,750	1,731	1,721	1,610	1,537	1,534	1,582	1,561
<i>of which: Fast disbursing</i>	359	253	253	253	253	253	253	253	253	253	253
<i>of which: ACC</i>	56	78	85	96	113	124	130	161	241	326	390
Administrative expenses	221	228	233	240	247	255	262	270	278	286	295
ACE13 Investment Portfolio Increase	194										
<b>Total Outflows</b>	<b>2,125</b>	<b>1,942</b>	<b>2,011</b>	<b>1,990</b>	<b>1,978</b>	<b>1,976</b>	<b>1,872</b>	<b>1,807</b>	<b>1,812</b>	<b>1,868</b>	<b>1,857</b>
<b>Net Cash Increase (Decrease)</b>	<b>-310</b>	<b>9</b>	<b>-137</b>	<b>-57</b>	<b>-107</b>	<b>-226</b>	<b>-64</b>	<b>55</b>	<b>34</b>	<b>82</b>	<b>92</b>
<b>Ending Liquidity</b>	<b>1,283</b>	<b>1,291</b>	<b>1,155</b>	<b>1,098</b>	<b>990</b>	<b>764</b>	<b>700</b>	<b>756</b>	<b>790</b>	<b>872</b>	<b>964</b>
3Y-moving average of net disbursements	1,534	1,654	1,658	1,651	1,618	1,554	1,473	1,394	1,368	1,361	1,375
Liquidity ratio <sup>8</sup> (%)	104%	78%	78%	70%	68%	64%	52%	50%	55%	58%	63%
PML @50%	767	827	829	826	809	777	737	697	684	680	687
Excess (Gap) of liquidity vs. PML	825	456	462	329	289	213	28	3	72	109	185

<sup>7</sup> Disbursements are net of cancelled commitments assumed at about UA30 million annually.

<sup>8</sup> Liquidity ratio = Ending liquidity / 3Y rolling average of net disbursements.

#### 4. Impact of innovative financial instruments

4.1. For ADF-14, Management proposed the introduction of debt funding in the form of Concessional Donor Loans (CDLs) and Bridge Loans (BLs). While the full nominal amount of the CDLs will directly contribute to the increase of ADF-14 resource envelope, the BLs will contribute indirectly to an increase of resources through the increase of the ACC. For the purpose of this analysis, we assume that the level of BLs and CDLs that will be achieved during ADF-14 will reach respectively UA 1 billion for each instrument. The analysis will be updated once the actual volume of debt is confirmed, but we do not expect major changes in the overall conclusion of the analysis.

##### *Impact on ACC.*

4.2. The table below summarises the impact of debt instruments on the ACC.

4.3. Impact on ACC. Table 5 below summarizes the impact of the debt instruments on the ACC.

4.4. Table 5: Impact of CDLs and BLs on ACC

**Table 4: The impact of CDLs and debt instruments on the Advance Commitment Capacity**

<i>In UA million</i>	<b>ADF-14</b>	<b>ADF-15</b>	<b>ADF-16</b>
Baseline ACC	415	415	2,186
ACC increase with CDL <sup>9</sup> + BL <sup>10</sup>	895	893	-876

##### *Impact on ADF overall liquidity.*

- Table 6 below provides ADF cashflow projections with the innovative debt instruments over the next 10 years. The proceeds of BLs and CDLs are expected to be received during ADF-14 and will therefore significantly boost the Fund's liquidity, therefore enabling the Fund's net cash gap to turn positive from 2017 to 2019.
- On the other hand, the introduction of debt into ADF financing framework will also result in an increase in Approvals and Disbursements by an average annual amount of UA 231 million and UA 153 million respectively during the projection period. Henceforth starting 2020, higher disbursements in combination with new debt service obligations will result in negative net cash flow until 2025, when reflows from loans are expected to increase. However, in the long run, the Fund liquidity position will gradually revert back to the level it would have been without the debt instruments. This is further depicted in Figure 3 below, which provides a schematic representation of the Fund's liquidity following the implementation of the innovative debt instruments.

<sup>9</sup> Assuming average maturity of CDLs at 35 years (incl. 5 –year grace period) - 3 equal installments drawdown during ADF-14.

<sup>10</sup> Assuming average maturity of CDLs at 20 years (incl. 10 –year grace period) - full drawn down of BLs in 2017.

**Figure 3: Impact of BL and CDL (UA1 billion each) on ADF Liquidity**

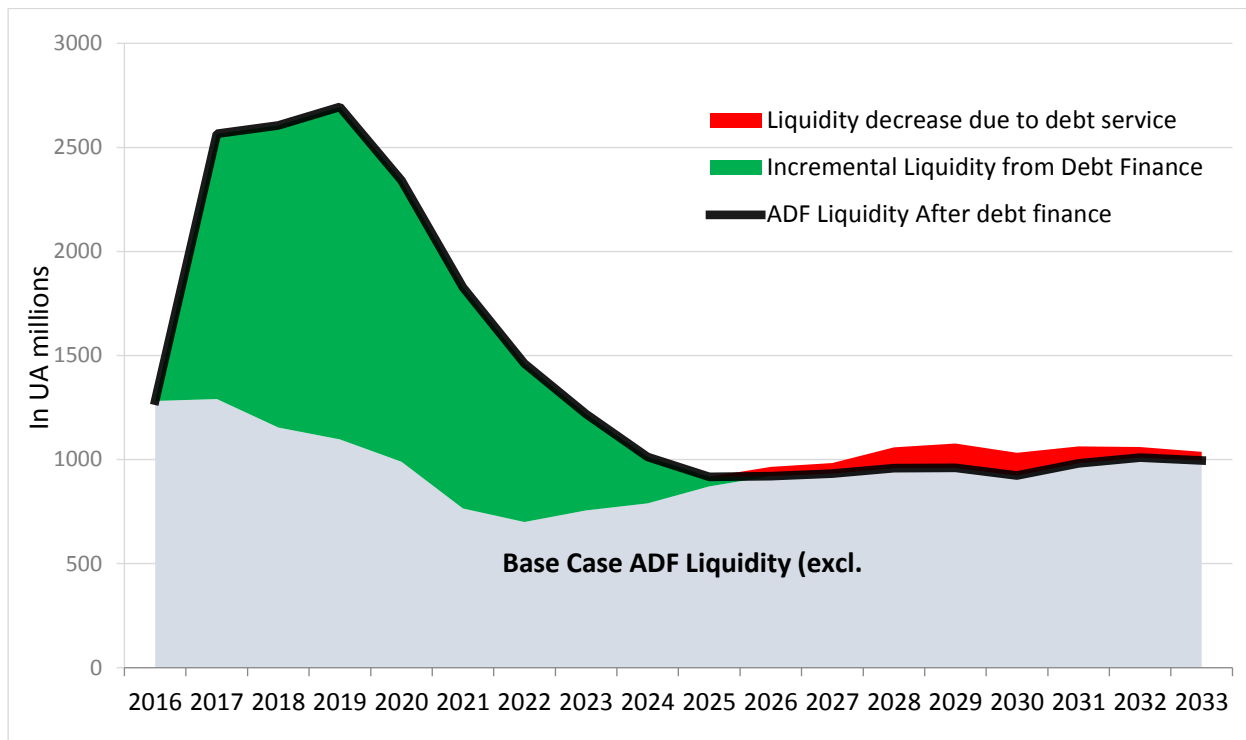


Table 5: ADF Liquidity Projections with the impact of the combination of BL and CDL– Amount UA 1 billion at 0.5% each

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
<b>Total Approval</b>	<b>1,589</b>	<b>2,033</b>	<b>2,033</b>	<b>2,033</b>	<b>1,699</b>	<b>1,699</b>	<b>1,699</b>	<b>1,700</b>	<b>1,700</b>	<b>1,700</b>
<i>of which: Approval from Donor Contributions</i>	1,263	1,263	1,263	1,263	1,263	1,263	1,263	1,263	1,263	1,263
<i>of which: Approval from ACC</i>	326	437	437	437	436	436	436	437	437	437
<i>of which: Approval from CDL</i>	0	333	333	333	0	0	0	0	0	0
<b>Beginning Liquidity</b>	<b>1,592</b>	<b>1,284</b>	<b>2,566</b>	<b>2,605</b>	<b>2,694</b>	<b>2,341</b>	<b>1,828</b>	<b>1,462</b>	<b>1,219</b>	<b>1,012</b>
Encashment of partners' contributions	1,212	1,179	1,110	1,137	1,202	1,147	1,194	1,226	1,218	1,306
95% Loans Repayments	73	80	89	102	116	132	152	165	183	201
Loans Income	82	88	93	98	104	109	115	121	127	133
Commitment charge	11	13	15	17	19	20	22	23	24	24
98% MDRI compensation (incl. lag of 10%)	110	114	133	139	143	161	178	183	189	191
Compensation for forgone income on grants	6	9	12	17	22	25	30	40	49	63
ADB Income transfer	40	35	35	35	35	35	35	35	35	35
Investment Income	43	37	39	39	17	15	13	10	8	7
Maturing HTM portfolio	144	150	45	192	92	26	-	-	-	-
Maturing HTM-ACE portfolio	93	149	194	76	48	-	-	-	-	-
Amortizing ACE13 Swap	-	99	122	100	85	92	84	71	25	-
<b>BLs drawdown</b>		<b>1,000</b>								
<b>CDLs net inflows</b>		<b>333</b>	<b>337</b>	<b>339</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>24</b>	<b>36</b>	<b>39</b>
<b>Total Inflows</b>	<b>1,816</b>	<b>3,288</b>	<b>2,223</b>	<b>2,291</b>	<b>1,888</b>	<b>1,770</b>	<b>1,830</b>	<b>1,899</b>	<b>1,893</b>	<b>1,999</b>
Loans & Grants disbursements	1,710	1,778	1,943	1,954	1,985	2,019	1,924	1,827	1,778	1,763
<i>of which: Fast disbursing</i>	359	253	253	253	253	253	253	253	253	253
<i>of which: ACC</i>	56	92	134	182	239	292	333	364	401	437
<i>of which: CDL</i>	0	50	117	121	134	138	120	98	91	75
Administrative expenses	221	228	233	240	247	255	262	270	278	286
ACE13 Investment Portfolio Increase	194									
BL debt service		0	5	5	5	5	5	5	5	5
CDLs repayment		0	2	3	5	5	5	39	39	39
<b>Total Outflows</b>	<b>2,125</b>	<b>2,006</b>	<b>2,183</b>	<b>2,202</b>	<b>2,242</b>	<b>2,283</b>	<b>2,196</b>	<b>2,141</b>	<b>2,100</b>	<b>2,094</b>
<b>Net Cash Increase (Decrease)</b>	<b>-309</b>	<b>1,282</b>	<b>40</b>	<b>89</b>	<b>-354</b>	<b>-513</b>	<b>-366</b>	<b>-243</b>	<b>-207</b>	<b>-95</b>
<b>Ending Liquidity</b>	<b>1,284</b>	<b>2,566</b>	<b>2,605</b>	<b>2,694</b>	<b>2,341</b>	<b>1,828</b>	<b>1,462</b>	<b>1,219</b>	<b>1,012</b>	<b>917</b>
3Y-moving average of net disbursements	1,556	1,732	1,807	1,867	1,879	1,853	1,795	1,709	1,650	1,577
Liquidity ratio* (%)	102%	74%	142%	140%	143%	126%	102%	86%	74%	64%
PML @50%	778	866	908	938	944	931	902	860	830	794
Excess (Gap) of liquidity vs. PML	815	418	1,657	1,667	1,750	1,410	926	603	389	218

## 5. Stress testing ADF's liquidity policy and projections

### *Relaxing constraints of ADF liquidity Policy*

5.1. As indicated in section 2.5, for the determination of the ACC, the key safety margin is to set the minimum liquidity requirement at 75% of projected annual disbursements, due to the long term nature of the model. Based on this approach, with the ACC that was determined, the above projections indicate that the liquidity is expected to remain only slightly above the PML. Stress events may even cause further deterioration of the liquidity and may jeopardize the Fund's ability to meet its obligation.

5.2. A reduction of the liquidity threshold in the ACC model from the current level of 75% to 50% would result in an increase in the ACC and therefore in the Fund's commitments by about UA 496 million. However, our projections indicate that with such level of commitments, ADF will run into a liquidity crisis by 2020, and will require additional resources to meet disbursements and operational requirements. Therefore, the 75% threshold used in the ACC model should be maintained.

### *Assessment of ADF Liquidity under various stress scenarios*

5.3. The robustness of the Fund's liquidity is assessed against the plausible occurrence of five risk events to ensure that the Fund will not need to have recourse to its donors. These stress events include: i) delays in encashments of donor resources and MDRI/Grant compensations, ii) unexpected increase in disbursements, iii) unexpected increase in administrative expenses above the approved budget, iv) fluctuations in interest rates and v) unforeseen increase in loans arrears.

5.4. The impact of each of the above parameters on the ACC and ADF liquidity is summarized in Table 7 and Table 8 below.

**Table 7: Results of stress-test of liquidity key risk factors, excluding debt innovative instruments**

		Avg. Liquidity ratio			Avg. excess (gap) of liquidity vs. PML@50%			ADF-14 ACC (PML @75%)
		ADF-14	ADF-15	ADF-16	ADF-14	ADF-15	ADF-16	
Amounts are in UA millions								
#	Scenarios	75%	61%	54%	416	177	61	415
1	+5% growth in donors' contributions	74%	61%	55%	410	172	71	448
2	-5% in donors' contributions	76%	62%	54%	421	180	51	382
3	20% delay on MDRI compensations	75%	61%	54%	414	172	53	407
4	-10% in MDRI compensations	74%	57%	46%	392	110	(60)	297
5	+5% Increase in disbursements	72%	52%	33%	369	30	(237)	135
6	+ 5% increase in admin. expenses	74%	59%	51%	400	146	14	367
7	-100bps (parallel) shift of interest yield curve	73%	55%	46%	372	87	(53)	268
8	+100bps (parallel) shift of interest yield curve	78%	67%	64%	460	271	188	573
9	+10% increase in loans arrears	74%	59%	51%	405	148	8	369

**Table 8: Results of stress-test of liquidity key risk factors –incl. innovative debt instruments<sup>11</sup>**

		Avg. Liquidity ratio			Avg. excess (gap) of liquidity vs. PML@50%			ADF-14 ACC (PML @75%)
		ADF-14	ADF-15	ADF-16	ADF-14	ADF-15	ADF-16	
#	Baseline	127%	152%	114%	1,402	1,870	1,051	1,310
	Scenarios							
1	+5% growth in donors' contributions	117%	121%	74%	1,242	1,357	413	1,354
2	-5% in donors' contributions	120%	126%	75%	1,253	1,366	393	1,266
3	20% delay on MDRI and grant compensations	118%	124%	74%	1,246	1,358	396	1,305
4	-10% in MDRI compensations	117%	120%	67%	1,224	1,295	282	1,214
5	+5% Increase in disbursements	115%	113%	53%	1,198	1,197	60	1,025
6	+ 5% increase in administrative expenses	118%	122%	72%	1,232	1,331	356	1,275
7	-100bps (parallel) shift of interest yield curve	116%	117%	63%	1,196	1,227	215	1,152
8	+100bps (parallel) shift of interest yield curve	121%	132%	87%	1,300	1,504	609	1,464
9	100% CDLs in negative yield currencies (EUR/JPY)	118%	122%	70%	1,237	1,319	333	1,255
10	+10% increase in loans arrears	117%	120%	68%	1,226	1,305	296	1,228

5.5. Tables 7 and 8 confirm that the Fund's liquidity position is greatly sensitive to the level of disbursements, the timely payment of MDRI compensations, the interest rate environment and the level of arrears in the portfolio. Table 8 particularly further confirms the positive impact that the innovative debt instruments - especially the BL - will have on the Fund's overall liquidity position. Thus, given the greater flexibility provided by the introduction of the BL into ADF financing framework, an HTM portfolio of approximately UA 300 million with a shorter final maturity (5 years) can be maintained.

5.6. *Recommendation* – Based on the positive liquidity gaps projected during ADF-14 and ADF-15 (even under stress conditions) due to the introduction of debt finance instruments, the Fund can consider maintaining a Held-to-Maturity (HTM) portfolio of approximately UA 300 million to enhance its investment returns and build a safety buffer for unforeseen events impacting its liquidity. This will contribute to enhance the Fund's financial sustainability.

#### Other factors that will impact the Fund's liquidity

5.7. *The maturity and interest rate of Concessional Donor Loans (CDLs)*. CDLs are expected to fund not only Blend countries, but also "Green Light" countries whose loans have maturities of 40 years and concessional all-inclusive interest rate of 75 bps. Therefore it is very important that the terms of CDLs loans received from Donor countries match a maturity of 40 years and do not exceed an interest rate of 0.5% when swapped in currencies that are in high demand by ADF countries. CDLs with shorter maturities than 40 years will limit ADF borrowing capacity as it will impact the Fund's liquidity position.

5.8. *Inclusion of the Renminbi (RMB) in the SDR basket*. With effect from October 1, 2016 the composition of the SDR currency basket will include the RMB. Henceforth, compliance with the Fund's ALM guidelines will require rebalancing the Fund's net assets in order to match the new SDR currency basket. This change in the SDR basket requires a very large volume of alignment trades for the Fund, and as a result: i) Borrowing member countries will be asked to re-dominate their loans in RMB on a voluntary basis. The Fund will certainly record higher volatility in its currency revaluation accounts with gains or losses that will impact its liquidity (ii) the Fund's eligible liquid assets will include a large volume of RMB, while this currency might not be favored by ADF borrowers.

<sup>11</sup> 35-year CDLs (incl.5-year grace period) at 0.5% and 20-year BLs (incl.10-year grace period) at 0.5%.



5.9. The inclusion of the RMB in the SDR basket will put additional pressure on the Fund's liquidity management, hence the need to maintain a conservative liquidity policy.

## 6. Benchmarking with other MDBs

### *Differing liquidity policies*

6.1. It should be recalled that while ADF maintains its PML at 50% of the 3-year moving average of expected annual net disbursements, IDA maintains its PML at 33% of annual gross disbursements, and the AsDF maintains its PML at 81% of next year's projected cash outflows<sup>12</sup>. Several reasons justify the use of different liquidity policies by these institutions among which are: i) the different cash flow profiles and ii) the different approaches for tranching liquidity for investment purposes.

### *Cash flow profile of MDBs*

6.2. Table 8 below presents shows the very wide discrepancy in the size of credit reflows between the Fund and its peers. This discrepancy justifies why the Fund must be more conservative in its liquidity management approach than other MDBs. Such differences are primarily due to variances in the maturity of the loan portfolios (ADF having the least mature of all), the level of concessionality of loans, the percentage of grants as well as the percentage of Blend countries in these institutions, as indicated in Table 8.

**Table 8: Comparison of MDBs outstanding portfolios' characteristics (2015)**

Description	ADF	IDA	AsDF
Credit reflows	\$133 million	\$5 billion	\$1.6 billion
Share of grants	33%	13%	13%
Share of blend and gap	8%	35%	21%
Concessionality on regular credits	61%	35%	37-48%

6.3. Another difference arises from the level of income compared to administrative expenses. Table 9 highlights a much lower coverage for ADF compared to other MDBs, again mainly due to the lower level of loan income. Henceforth, this further confirms that the Fund needs to maintain a higher level of liquidity to cover its structural operational gap.

**Table 9: MDBs' Coverage of Administrative expenses by Loan income**

	2011	2012	2013	2014	2015	Average
ADF	28%	25%	26%	25%	33%	27%
IDA	73%	80%	81%	51%	57%	68%
AsDF	112%	124%	110%	111%	N/A	114%

### *'Tranching' liquidity and Investment strategies*

6.4. IDA, the AsDF, and the ADF have implemented different approaches to tranche their liquidity and apply different investment strategies for each tranche of liquidity, impacting the liquidity requirements of each institution. Depending on the objectives assigned to each tranche of liquidity,

<sup>12</sup> Net cash outflows for the AsDF include projected loan and grant disbursements and administrative expenses.

the monitoring of compliance with the PML could differ from one institution to the other. For instance, liquidity tranches for proceeds from accelerated encashments, or for resources not expected to be immediately disbursed (HTM and HTM-ACE portfolio for ADF) may be excluded from the eligible liquidity monitored against the PML for certain institutions and not for others. This makes the liquidity policies of these institutions not always comparable. Annex 1 provides more details on the approach taken by each MDBs to tranche their liquidity.

*‘Core liquidity /Undisbursed commitments’*

6.5. Although MDBs may indeed apply different liquidity policies, they do all retain a certain volume of core liquidity (i.e. liquidity invested with a duration of not exceeding 3 years) for operational purposes. Table 6 shows that the ratio of core liquidity over undisbursed commitments for ADF is actually similar to IDA’s and slightly below that of AsDF. Therefore, if anything, this is further indication that ADF actually holds just about the right amount of liquidity available to face its undisbursed commitments.

**Table 10: Comparison of core liquidity/undisbursed commitments among MDBs**

	2011	2012	2013	2014	2015	Average
ADF	31%	19%	18%	28%	31%	25%
IDA	27%	22%	22%	18%	24%	23%
AsDF	41%	41%	52%	26%	N/A	32%

## 7. Conclusion and Recommendation

7.1. Since ADF does not borrow from the capital markets, it is critical that ADF ensures to retain sufficient funding resources and liquidity to meet its contractual obligations to disburse approved development credits and grants in a timely manner and without having recourse to Donors for supplementary resources in case of stress events.

7.2. In light of the above analysis, Management’s recommendations are the following:

- ❖ The Fund’s liquidity policy as specified in the ADF General Authority approved by the Board in 2011 and as detailed in the ADF Asset and Liability Management guidelines are sound and should remain basically unchanged, except to account for the coverage of the additional debt of innovative instruments.
- ❖ The Fund should maintain the application of target level of liquidity (PML) at 75% of the three-year moving average of net disbursements for the computation of the ACC;
- ❖ Given the expected pressure on the Fund’s liquidity, without the introduction of debt in its financial framework, the Fund will be obliged to fully liquidate its HTM investment portfolio. However, with the implementation of debt instruments (CDL and BL) from Donors, and HTM portfolio of approximately UA 300 million may be maintained.

This section provides information on the different approaches implemented by MDBs to tranche their liquidity

#### **International Development Association (IDA) liquidity Tranching**

IDA currently maintains 3 major tranches in its liquidity portfolio as follows:

- The first tranche of liquidity includes liquidity from Accelerated Encashments and is invested with an immunization strategy which consists of matching investments with the projected net cash outflows stream of liabilities. This portfolio represents approximately 60% of IDA's total liquidity and has a long duration of approximately 4.3 years given the cash flows profile of the liabilities.
- The second tranche of liquidity include IDA's remaining contracted cash outflows, related commitments already made, as well as the liquidity available for future replenishments and 40% of the required PML. This portfolio represents approximately more than 20% of IDA's total liquidity and is invested with a duration of 3 years.
- The third tranche of liquidity includes liquidity required for working capital for the current year plus 60 percent of the required Prudential Minimum Level of liquidity. This liquidity represents less than 20% of IDA's total liquidity and is invested with a duration that does not exceed 1 year.

#### **Asian Development Fund (AsDF) Liquidity tranching**

The AsDF maintains 2 major tranches in its liquidity portfolio as follows:

- The first tranche of liquidity includes liquidity from accelerated encashments which are invested with an immunization strategy by matching the maturity profile of projected disbursements. The first tranche also includes all contractual cash flows linked to commitments already made as well as working capital required for operational purposes, which are invested in short term instruments to ensure liquidity.
- The second tranche of liquidity includes the required Prudential Minimum of Liquidity as well as liquidity available for future commitments. As Tranche 2 liquidity is not immediately required it can be invested with a longer duration to enhance returns, in line with the investment authority

#### **ADF Liquidity tranching**

The Fund maintains 3 key tranches of liquidity as follows:

- The HTM-ACE portfolio which includes proceeds from accelerated encashments and is invested to match the normal encashment schedule with an average duration<sup>13</sup> of 1.76 years as at April 30<sup>th</sup> 2016. The HTM-ACE portfolio is held at amortized cost and as such does not result in significant volatility in the Fund's financial statements despite the long maturity.
- The Trading portfolio which objective is to cover working capital requirement, primarily disbursements and administrative expenses, and is used to monitor compliance with the PML. This portfolio has a duration of 3 months.
- The HTM portfolio which is also held at amortized cost and is invested primarily to generate additional income with a residual duration of 2.49 years as at April 30<sup>th</sup> 2016. As indicated in the previous section, this portfolio was originally expected to reduce over time.

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<sup>13</sup> Duration refers to the Modified Duration, a measurement of price volatility when interest rates change.