

Agenda Item 18: Interim proposal related to the use of local currency loans  
Submission by the African Development Bank

**AFDB FUNDED GUARANTEED LOAN UNDER CTF TRUST FUNDS LOCAL CURRENCY LENDING**

**Introduction**

In November 2012, a proposal to use local currency loans under the CTF Trust Fund was put forward by the trustee to the joint meeting of the CTF and SCF Trust Fund Committees. Six currencies namely Colombian Peso, Mexican peso, Philippine Peso, South African Rand, Thailand Baht and Vietnamese Dong were identified in the interim proposal for utilizing local currency loans under CTF programs approved by the CTF Trust Fund Committee. The trustee suggested that, for the period of up to 18 months after this decision is approved, USD 100 million may be utilized from the CTF Trust Fund resources to provide local currency lending to the programs in the six countries named above. At the same time the trustee suggested that CTF Trust Fund resources in the amount of USD 100 million should be set aside to help mitigate the risk of potential losses related to repayments of the local currency loans due to foreign exchange rates fluctuations.

Under this proposal to fund local currency loans in USD with no hedge in place the trust fund is exposed to real foreign exchange rates fluctuations losses up to the USD 100 million if the local currencies depreciate against the USD during the life of the loan and to interest rate risk. The long maturities of the CTF loans are another factor increasing the FX risk under this proposal.

To address these concerns the African Development Bank is proposing a funded guaranteed structure for its ZAR CTF financing portion under the local currency initiative. For the purpose of illustration we will assume a USD100 million ZAR equivalent project that will equally be co-financed by the AFDB and the CTF. The paper's objective is to show how the funded guaranteed structure will strongly mitigate the FX risk of the ZAR CTF financing compared to the Interim proposal to use local currency loans for private sector projects under the CTF Trust Fund.

**1 – Description of the Funded Guaranteed Loan**

In this structure CTF provides a guarantee to the African Development Bank by pledging USD to back up the ZAR loan financed by the Bank. Using the funded guarantee, AFDB will extend the full local currency loan to the client with CTF retaining the credit exposure to the project for their financing share (USD 50 million). CTF will receive an interest rate of Fed funds minus 12.5 basis points on the USD 50 million and the defined ZAR margin converted at each interest payment date by the AFDB at the applicable FX spot rates. USD principal repayments will be made using the same principal amortization structure as the ZAR loan reducing the amount of the funded guarantee provided to the AFDB. The funded guaranteed loan protects the principal of the loan against any FX and base interest rate risk (because the funding was provided by AfDB in ZAR) but doesn't protect the margin payments against FX risk as margin is converted at prevailing spot rates at the time of payment.

Since margin payments are small compared to loan principal amortization payments and the base interest rate payments this structure mitigates the fund's exposure to FX risk. Overall the funded guaranteed structure protects CTF against any FX risk and base interest rate risks on their portion of the ZAR financing and provides interest repayments of Fed funds minus 12.5 basis points on the outstanding USD guaranteed balance and the ZAR margin converted to USD. CTF's only exposure is FX risk on the project's credit margin

## **2 – Example of ZAR funding**

To showcase the benefits of the funded guaranteed loan, the assumptions are as follow:

- CTF loan amount is USD 50 million ZAR equivalent
- Maturity of 14 years with 4 years grace period
- Estimated Credit risk margin of 300 basis points (3%)
- Interest rate index is JIBAR 6m and the forecasted JIBAR rates are based on the index' volatilities for the past 14 years (1999 to 2013) replicated for the next 14 years.
- USD/ZAR forecasted FX spot rates for the next 14 years are calculated using the FX volatilities of the currency pair for the past 14 years replicated for the next 14 years.

### **Scenario 1: USD 50 million ZAR equivalent loan using the Interim proposal (Annex 1)**

Under this scenario, CTF takes full FX risk exposure for 14 years on the principal and interest repayments. Based on the forecasted FX volatilities the ZAR FX rates depreciate by 46.2% from 9.133 ZAR per USD today to 13.352 ZAR per USD in 2027. Due to the forecasted FX rate depreciation the total principal and interests repayments received by CTF will totaled USD 57.9 million instead of USD 68.8 million had the FX risk been hedge. The FX loss under this scenario is USD 11 million.

### **Scenario 2: USD 50 million ZAR funded guaranteed loan by AFDB (Annex 2)**

Under this scenario, CTF only takes FX risk exposure on the margin repayments not on the principal repayments nor on the base interest repayments as the AFDB will repay CTF the USD principal using the same repayment profile of the ZAR loan and will assume the ZAR interest rate risk. Under this example on each payment date after grace period, AFDB receives ZAR 22.9 million in principal repayments from the project and repays USD 2.5million to CTF regardless of the prevailing market spot rates. CTF will therefore receive a total loan repayment including interests of USD 56.9 composed of the USD 50 million principal and USD 6.9 million of margin. The FX loss related to the margin translation is USD 1million however CTF will also receive the prevailing fed funds rate minus 12.5 basis points at each payment date.

## **3 - Interest rate risk and other risks**

If the CTF ZAR loan was funded out of USD resources, the CTF would bear in addition to FX risk, an interest rate risk. However, the proposal above entirely covers that risk which will be borne by the AfDB. Even if the interest rate index is fixed CTF is still exposed to interest rate risks because there will be a mismatch in the asset and liabilities in the balance sheet. The local currency lending is based on a fix or floating local index whereas the debt on the CTF liabilities side is based on USD and a libor index.

Nevertheless non market related risks such as default, prepayment, late payment etc will be entirely passed on by AfDB to the CTF by deducting the appropriate amount from the USD deposit. The latter would be reinstated when the borrower makes the requisite payment.

In both scenarios, on top of the FX losses, the volatility of the interest rate index (JIBAR) which moved down by 154% (from 5.92% to 2.33%) under the assumed interest rate volatilities incurred a loss of USD 5.1million. However this cost is borne by CTF under scenario 1 whereas under scenario 2 AFDB assumes that risk which is hedged by our funding matching.

#### **4 - Conclusion**

As described in the scenarios above, the funded guaranteed loan eliminates the FX and interest rate risk exposure on the CTF ZAR funding. Although credit margins are not FX risk hedged, the funded guaranteed loan offers CTF the possibility to leverage on AFDB's treasury possibilities to guarantee full principal repayments and interests on the USD and reduced risks for the projects.

## ANNEX 1: ZAR FINANCING UNDER THE CTF LOCAL CURRENCY LENDING PROPOSAL

<b>USD Loan Amount</b>		50,000,000.00					
<b>Today ZAR Spot Rate</b>		9.133		Credit Risk Margin			
<b>ZAR Amount</b>		456,650,000.00		3%			
Date	Forecasted 6M Jibar + Margin	ZAR Interests	ZAR Principal	Principal Amortization	ZAR Cash Flows	Forecasted ZAR FX Rates	USD Cash flows
8/1/2013				456,650,000.00			
2/1/2014				456,650,000.00			
8/1/2014				456,650,000.00			
2/1/2015				456,650,000.00			
8/1/2015				456,650,000.00			
2/1/2016				456,650,000.00			
8/1/2016				456,650,000.00			
2/1/2017				456,650,000.00			
8/1/2017				456,650,000.00			
2/1/2018	8.92%	20,809,428.12	22,832,500.00	433,817,500.00	43,641,928.12	11.264	3,874,371.55
8/1/2018	7.55%	16,474,546.12	22,832,500.00	410,985,000.00	39,307,046.12	10.653	3,689,771.22
2/1/2019	6.53%	13,725,219.78	22,832,500.00	388,152,500.00	36,557,719.78	9.569	3,820,585.61
8/1/2019	6.65%	12,983,123.65	22,832,500.00	365,320,000.00	35,815,623.65	9.116	3,929,034.51
2/1/2020	6.33%	11,818,757.78	22,832,500.00	342,487,500.00	34,651,257.78	9.837	3,522,534.03
8/1/2020	6.10%	10,562,204.59	22,832,500.00	319,655,000.00	33,394,704.59	9.225	3,619,967.99
2/1/2021	6.16%	10,062,678.16	22,832,500.00	296,822,500.00	32,895,178.16	10.526	3,125,061.80
8/1/2021	6.70%	9,999,031.46	22,832,500.00	273,990,000.00	32,831,531.46	10.855	3,024,448.42
2/1/2022	7.19%	10,067,954.86	22,832,500.00	251,157,500.00	32,900,454.86	10.787	3,050,022.63
8/1/2022	7.55%	9,531,180.26	22,832,500.00	228,325,000.00	32,363,680.26	11.204	2,888,623.54
2/1/2023	8.07%	9,420,092.09	22,832,500.00	205,492,500.00	32,252,592.09	10.960	2,942,659.38
8/1/2023	8.58%	8,862,697.05	22,832,500.00	182,660,000.00	31,695,197.05	15.320	2,068,816.22
2/1/2024	7.62%	7,113,679.12	22,832,500.00	159,827,500.00	29,946,179.12	11.706	2,558,241.40
8/1/2024	6.56%	5,300,335.64	22,832,500.00	136,995,000.00	28,132,835.64	11.340	2,480,897.19
2/1/2025	6.35%	4,446,307.05	22,832,500.00	114,162,500.00	27,278,807.05	10.989	2,482,464.09
8/1/2025	5.97%	3,427,374.04	22,832,500.00	91,330,000.00	26,259,874.04	10.767	2,438,815.76
2/1/2026	5.59%	2,610,485.46	22,832,500.00	68,497,500.00	25,442,985.46	10.173	2,500,968.22
8/1/2026	5.60%	1,927,468.50	22,832,500.00	45,665,000.00	24,759,968.50	11.591	2,136,086.78
2/1/2027	5.60%	1,306,587.28	22,832,500.00	22,832,500.00	24,139,087.28	12.475	1,935,013.41
8/1/2027	5.33%	611,458.69	22,832,500.00	-	23,443,958.69	13.352	1,755,816.43

ZAR TOTAL	627,710,609.69
USD TOTAL	57,844,200.16
USD TOTAL with FULL HEDGE	68,729,947.41

**ANNEX 2: ZAR FINANCING UNDER AFDB's FUNDED GUARANTEED LOAN**

Date	Credit Margin	ZAR Margin	ZAR Principal	Principal Amortization	Forecasted ZAR Spot rate	ZAR Margin Converted to USD	USD Principal Repayments	Total USD Cash flows
8/1/2013				456,650,000.00				
2/1/2014				456,650,000.00				
8/1/2014				456,650,000.00				
2/1/2015				456,650,000.00				
8/1/2015				456,650,000.00				
2/1/2016				456,650,000.00				
8/1/2016				456,650,000.00				
2/1/2017				456,650,000.00				
8/1/2017				456,650,000.00				
2/1/2018	3.00%	7,001,966.67	22,832,500.00	433,817,500.00	11.26	621,609.12	2,500,000.00	3,121,609.12
8/1/2018	3.00%	6,543,413.96	22,832,500.00	410,985,000.00	10.65	614,233.40	2,500,000.00	3,114,233.40
2/1/2019	3.00%	6,301,770.00	22,832,500.00	388,152,500.00	9.57	658,587.35	2,500,000.00	3,158,587.35
8/1/2019	3.00%	5,854,633.54	22,832,500.00	365,320,000.00	9.12	642,263.20	2,500,000.00	3,142,263.20
2/1/2020	3.00%	5,601,573.33	22,832,500.00	342,487,500.00	9.84	569,437.71	2,500,000.00	3,069,437.71
8/1/2020	3.00%	5,194,393.75	22,832,500.00	319,655,000.00	9.23	563,069.48	2,500,000.00	3,063,069.48
2/1/2021	3.00%	4,901,376.67	22,832,500.00	296,822,500.00	10.53	465,633.74	2,500,000.00	2,965,633.74
8/1/2021	3.00%	4,477,072.71	22,832,500.00	273,990,000.00	10.86	412,428.99	2,500,000.00	2,912,428.99
2/1/2022	3.00%	4,201,180.00	22,832,500.00	251,157,500.00	10.79	389,468.60	2,500,000.00	2,889,468.60
8/1/2022	3.00%	3,788,292.29	22,832,500.00	228,325,000.00	11.20	338,124.41	2,500,000.00	2,838,124.41
2/1/2023	3.00%	3,500,983.33	22,832,500.00	205,492,500.00	10.96	319,422.43	2,500,000.00	2,819,422.43
8/1/2023	3.00%	3,099,511.88	22,832,500.00	182,660,000.00	15.32	202,312.05	2,500,000.00	2,702,312.05
2/1/2024	3.00%	2,800,786.67	22,832,500.00	159,827,500.00	11.71	239,265.53	2,500,000.00	2,739,265.53
8/1/2024	3.00%	2,424,050.42	22,832,500.00	136,995,000.00	11.34	213,765.15	2,500,000.00	2,713,765.15
2/1/2025	3.00%	2,100,590.00	22,832,500.00	114,162,500.00	10.99	191,160.82	2,500,000.00	2,691,160.82
8/1/2025	3.00%	1,721,951.04	22,832,500.00	91,330,000.00	10.77	159,921.61	2,500,000.00	2,659,921.61
2/1/2026	3.00%	1,400,393.33	22,832,500.00	68,497,500.00	10.17	137,654.41	2,500,000.00	2,637,654.41
8/1/2026	3.00%	1,033,170.63	22,832,500.00	45,665,000.00	11.59	89,133.48	2,500,000.00	2,589,133.48
2/1/2027	3.00%	700,196.67	22,832,500.00	22,832,500.00	12.47	56,128.47	2,500,000.00	2,556,128.47
8/1/2027	3.00%	344,390.21	22,832,500.00	-	13.35	25,792.83	2,500,000.00	2,525,792.83

72,991,697.08      7,992,083.33

**Total      56,909,412.79**