

ISSUER IN-DEPTH

16 November 2021



RATINGS

AfDB

	Rating	Outlook
Long-term Issuer	Aaa	STA
Short-term Issuer	P-1	

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African Development Bank - Aaa stable

Annual credit analysis

OVERVIEW AND OUTLOOK

The credit profile of the African Development Bank (AfDB) is supported by the bank's robust capital buffers and superior risk management, which mitigate risks arising from the low credit quality of the bank's development-related assets. An ample liquidity buffer and unfettered access to the international capital markets also support its ability to meet its debt-service obligations. Moreover, the bank has a long track record of being the premier development institution in Africa and benefits from shareholders' ability and willingness to support its development objectives, exemplified by the most recent general capital increase (GCI) and the significant contributions of highly rated non-regional member countries.

The bank's credit challenges include its weak development asset credit quality compared with Aaa-rated peers because of its exposure to non-sovereign borrowers as well as to low-rated sovereign borrowers. However, the bank enjoys preferred creditor status on its sovereign loan exposure, which limits asset quality risks. Although still in line with Aaa-rated peers, AfDB's leverage ratios have deteriorated over the past decade.

A significant weakening in asset quality, as reflected in a sizable increase in nonperforming assets, especially in the context of a deteriorating operating environment and an increase in leverage, would prompt us to reassess the quality of risk management and could result in a downgrade.

This credit analysis elaborates on AfDB's credit profile in terms of capital adequacy, liquidity and funding and strength of member support, which are the three main analytical factors in Moody's <u>Supranational Rating Methodology</u>.

Organizational structure and strategy

Premier African multilateral development bank with over 50 years of operations

AfDB's overall goal is to contribute to the economic and social progress of its regional member countries, both individually and collectively. The agreement establishing the bank was adopted and opened for signature at a conference in Khartoum, Sudan, on 4 August 1963 and came into force on 10 September 1964. The bank's operations effectively began on 1 July 1966.

Membership was originally reserved for African sovereigns, but the bank gave non-regional sovereigns access to membership in 1982. Non-regional members contribute to AfDB's capital, but cannot borrow from it. The AfDB has 81 shareholders, including 54 regional member countries and 27 non-regional member countries. The latter are mostly composed of highly rated governments from the Organisation for Economic Cooperation and Development (OECD) and the Middle East. South Sudan joined as the 80th member country in April 2015. Ireland (A2 positive) became the 81st member in May 2020. By statute, African countries have 60% of the bank's shareholding.

The balance of regional and non-regional countries' participation is reflected in AfDB's governance structure. All the bank's powers are vested in the board of governors, with one governor appointed by each of the bank's members. The governors exercise the voting power of their appointing member country. Decisions by the board of governors require a two-thirds majority, or 70% on key issues if a member country requires it. As the voting power of each member is proportionate to that country's capital subscription, the voting rule ensures any significant decisions require the support of both regional and non-regional members.

The board of governors elects a board of directors, which is responsible for the conduct of the AfDB's operations. The board of directors comprises 20 members, with 13 executive directors representing the 54 regional member states and seven directors representing the non-regional member states. Similar to votes by the board of governors, decisions by the board of directors require a two-thirds majority, or 70% on key issues if expressly required by a member, with votes weighted by the share of capital of the members represented by each director.

The bank's "High 5s" strategy emphasizes sustainable energy solutions

Under its "Ten Year Strategy for 2013-22," the AfDB has been implementing an operational agenda dubbed the "High 5s." The aims of the "High 5s" are to: (1) light up and power Africa; (2) feed Africa; (3) integrate Africa; (4) industrialize Africa; and (5) improve the quality of life for the people of Africa. These operational priorities are informed by the 17 UN Sustainable Development Goals¹ (SDGs), which expand on the Millennium Development Goals² to include areas such as climate change, economic inequality, innovation, sustainable consumption, peace and justice. AfDB is in the process of preparing the successor to the Ten Year Strategy, which will include a financing strategy that increases co-financing, balance sheet optimization and strengthens the capital base.

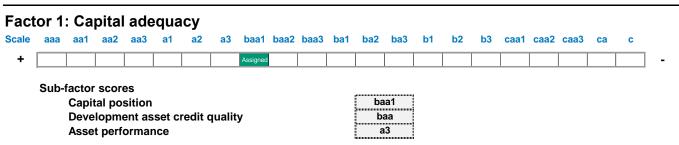
With regards to the "integrate Africa" priority, in March 2018 the AfDB approved a new regional integration strategic framework (RISF) covering the period 2018-25. The RISF emphasises the importance of the private and financial sectors as the key drivers of regional integration and focuses on three pillars: power and infrastructure connectivity, trade and investment, and financial sector integration.

The bank plans to ramp up investments, providing guarantees, co-financing and syndication under its "light up and power Africa" priority, including through private sector participation in initiatives such as the Africa Renewable Energy Initiative³ and the Sustainable Energy for All⁴ Initiative. In 2020, the initiative received approvals up to \$183 million and benefitted over 16 million people. The funds support investment in technologies for improved production of major staples. The bank expects to allocate \$25-\$40 billion to the "industrialize Africa" priority with a view to mobilizing a cumulative \$56 billion. In 2020, the initiative received approvals up to \$287 million and benefitted over 1.4 million individuals.

CREDIT PROFILE

Our determination of a supranational's rating is based on three rating factors: capital adequacy, liquidity and funding and strength of member support. For Multilateral Development Banks, the first two factors combine to form the assessment of intrinsic financial strength. Additional factors that can impact the intrinsic financial strength, including risks stemming from the operating environment or the quality of management, are also considered. The strength of member support is then incorporated to yield a rating range. For more information please see our Supranational Rating Methodology.

Capital adequacy score: baa1



Capital adequacy assesses the solvency of an institution. The capital adequacy assessment considers the availability of capital to cover assets in light of their inherent credit risks, the credit quality of the institution's development assetsand the risk that these assets could result in capital losses.

Note: In case the Adjusted and Assigned scores are the same, only the Assigned score will appear in the table above.

We score AfDB's capital adequacy at "baa1," reflecting the robust capital position supported by member contributions despite weak areas of operation and moderately high leverage metrics.

AfDB's leverage has deteriorated, but remains in line with that of peers

Our primary measure of a bank's capital position is the leverage ratio, which compares the size of its development-related assets (DRA) and treasury assets rated A3 and below against its usable equity.

For several years, AfDB's DRA grew faster than usable equity, resulting in an increase in leverage for most of the past decade. AfDB's leverage ratio, which was slightly stronger than the Aaa median in 2012-14 and 2016, peaked at just under 300% in 2019. In 2020, leverage declined slightly to 295% as the first contributions under the GCI VII contributed to faster growth of usable equity compared with DRAs. Although capital adequacy metrics have worsened in recent years, they remain in line with Aaa-rated peers (see Exhibits 1 and 2).

Exhibit 1
Increase in usable equity supports stabilization in leverage ratio
Annual growth of usable equity and development-related assets (% change year-over-year), leverage (%)

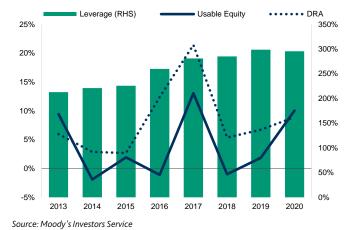
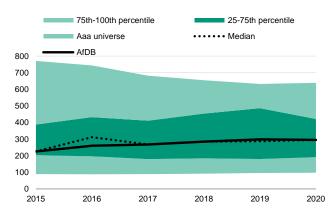


Exhibit 2
AfDB's leverage ratio is in line with its Aaa-rated peers
(Development related assets plus treasury assets rated A3 and below as percentage of usable equity, %)



AIIB is excluded because of its short operational history Source: Moody's Investors Service

AfDB repurposes lending to sovereigns in response to coronavirus shock

AfDB's response to the coronavirus pandemic balanced increased demand for resources from regional member countries against the bank's limited space to increase lending and leverage relative to internal capital thresholds. Rather than increase overall lending in 2020, AfDB repurposed its sovereign lending program, redirecting \$2.4 billion under its Crisis Response Budget Support (CRBS) for 14 member sovereigns. AfDB's concessional lending arm, the African Development Fund, approved \$1.2 billion and disbursed 92% of it through CRBS to 25 member sovereigns.

In the second quarter of 2020, AfDB breached its 100% limit on its risk capital utilization rate (RCUR), an internal prudential measure of capital adequacy, as it accelerated disbursements of loans under the CRBS. The bank returned below its RCUR limit after receiving UA 231 million (\$333 million), as part of GCI VII and earlier payments under earlier capital increases as well as the clearance of Sudan's arrears. However, AfDB adjusted downward its annual average level of lending that it plans over the next several years to ensure it remains in compliance with internal capital limits. The bank reduced its average annual lending to UA 5 billion, compared to UA 6.5 billion as originally agreed under GCI VII (see Exhibit 3).

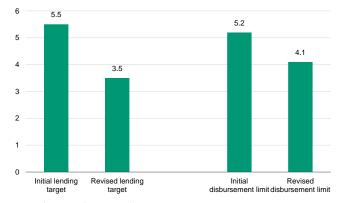
In 2021, the bank aims to return toward more normal lending operations. AfDB does not anticipate any lending under the CRBS, instead focusing lending on the health sector, such as projects around water and sanitation, and driving investment that supports private-sector industrialization, such as the development of the health industry on the continent.

GCI VII represents sizeable increase in capital stock, but unlikely to significantly reduce AfDB's leverage

In October 2019, <u>AfDB's Board of Governors agreed to a 125% capital increase</u>. The first paid-in capital contributions from GCI VII has helped alleviate pressures related to pandemic lending (see Exhibit 4). As of July 2021, 45 member countries have already paid their subscriptions, including 25 who made their first payments in 2020, with the remainder expected by the end of 2021.

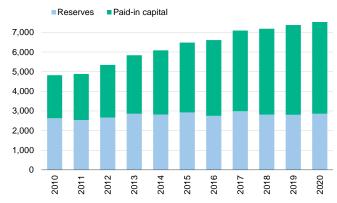
The 125% capital increase will moderate the rise in leverage, but the relatively low share of paid-in capital, which represents 6% paid in over an average of 10 years, will limit the improvement in leverage. We expect leverage to remain broadly stable in 2021 and 2022 as the combination of additional paid-in capital and lower lending targets dampen the rise in leverage.

Exhibit 3
AfDB revised its lending and disbursement programs during 2020 to remain within its internal risk limits
(UA billions)



Source: African Development Bank

Exhibit 4
Usable equity has grown because of the arrival of paid-in capital from the general capital increase approved in 2010
(Unit of account)



In 2020, 1 Unit of Account was equal to 1.43 USD Source: African Development Bank

Development asset credit quality is set to deteriorate

We assess AfDB's development asset credit quality at "baa," reflecting the potential for losses stemming from the low credit quality of the bank's loan portfolio and exposure to non-sovereign borrowers, which tend to weigh on the overall credit quality of the loan portfolio. Weak development asset credit quality is a long-standing credit constraint and reflects the difficult operating environment on the African continent.

Rating downgrades among regional member countries contributed to a worsening of AfDB's weighted average borrower rating (WABR). In 2020, AfDB's WABR decreased to B2 (see Exhibit 5). The score reflects over 50% of AfDB's portfolio is provided to borrowers rated Ba2 or lower. Indeed, AfDB's WABR has oscillated between B2 and Ba3 since 2006 given the bank's bias toward sovereign loans and its region of operation. AfDB faces similar challenges to other large regional MDBs with exposure to lowly rated borrowers, such as Inter-American Development Bank (IADB, Aaa stable) or Islamic Development Bank (IsDB, Aaa stable), a challenge that is compounded by private-sector exposure, which tends to be even lower credit quality than sovereign borrowers (see Exhibit 6).

As a result of the fiscal pressure of the pandemic, we do not expect an improvement in the credit quality of the bank's borrowers. In fact, more than half of AfDB's top 10 borrowers <u>Morocco</u> (Ba1 negative), <u>Tunisia</u> (Caa1 negative), <u>Nigeria</u> (B2 negative), <u>South Africa</u> (Ba2 negative) and <u>Kenya</u> (B2 negative) have negative outlooks, signaling further pressure on the WABR.

Exhibit 5
Borrower quality has deteriorated in line with sovereign downgrades in recent years

(Cumulative distribution of country exposures by sovereign rating across rated sovereigns, %)



WABR = Weighted average borrower rating Source: African Development Bank

Exhibit 6

AfDB still has some of the weakest borrowers among Aaa-rated supranationals

(Weighted average borrower rating, 2020)

	WABR
European Investment Fund	Baa1
Nordic Investment Bank	Baa2
European Investment Bank	Ba1
Asian Infrastructure Investment Bank	Ba2
Asian Development Bank	Ba3
International Bank for Reconstruction and Development	B1
African Development Bank	B2
International Development Association	B2
International Finance Corporation	B2
European Bank for Reconstruction and Development	B2
Islamic Development Bank	B3
Inter-American Development Bank	B3

Source: Moody's Investors Service

AfDB's exposure to the private sector, which accounts for 18% of total loans, also contributes to the relatively low credit quality of its development-related assets; the bank's non-sovereign loans tend to have a lower average borrower rating compared with its sovereign loans. In addition to loans, the bank is exposed to the private sector through its equity portfolio. Of the bank's equity investments, about half are investments in funds, with the remainder direct investments, mostly in development finance institutions.

Single-name and country concentration are low compared with rating peers. AfDB's largest exposure, Morocco, accounted for 12% of total development-related assets in 2020, lower than the corresponding figure for other Aaa-rated entities like the International Development Association (Aaa stable, 12%), IADB (15%) and Asian Development Bank (Aaa stable, 15%). The Herfindahl-Hirschman Index (HHI) for AfDB's country concentration was 5% in 2020, lower than 6% in 2018. This HHI is in line with or below that of most other Aaa-rated entities (see Exhibit 7). AfDB's top 10 exposures account for 63% of its development-related assets, in line with most peers.

Exhibit 7

AfDB's asset quality indicators are in line with those of most Aaa supranationals (2020)

			Weighted Average _	Herfindahl-Hirs	chman Index
MDB	Issuer rating	DACQ Assesment		Country of risk	Sector
AfDB	Aaa	baa	B2	5%	21%
ADB	Aaa	а	Ba3	9%	18%
AIIB	Aaa	а	Ba2	10%	42%
EBRD	Aaa	baa	B2	6%	15%
EIB	Aaa	aa	Ba1	8%	17%
EIF	Aaa	aa	Baa1	12%	25%
IADB	Aaa	baa	B3	8%	17%
IBRD	Aaa	aa	B1	5%	100%
IDA	Aaa	baa	B2	6%	100%
IFC	Aaa	baa	B2	5%	23%
IsDB	Aaa	ba	B3	4%	26%
NIB	Aaa	а	Baa2	21%	18%

Source: Moody's Investors Service

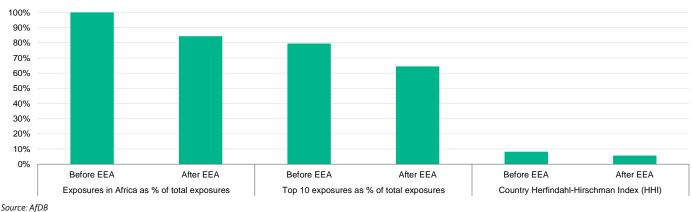
AfDB's balance sheet optimization framework intended to preserve Aaa rating, create headroom to expand lending and mobilize private investment for development financing

The bank approved a balance sheet optimization (BSO) framework in May 2020 to help mitigate some credit risks associated with its non-sovereign loans via a number of risk-transfer mechanisms. In the past, AfDB used various risk-transfer mechanisms, including an exposure exchange agreement (EEA) with other MDBs, a private sector facility (PSF) and, most recently, a synthetic securitization and credit insurance on a portion of its non-sovereign loan portfolio. We expect AfDB to continue using various risk-transfer mechanisms under its BSO framework, which will create room under its internal risk guidelines to support additional lending. These tools should provide enough risk mitigation to manage additional growth in AfDB's development-related asset portfolio without creating additional asset quality risk.

The synthetic securitisation and credit insurance in particular reduce the risks associated with the riskiest portion of the bank's loan portfolio and its low quality development-related assets, creating additional headroom under its capital adequacy framework to support its development mandate.

Exposure exchange agreements: AfDB has also reduced portfolio concentration through its participation in the EEA with the International Bank for Reconstruction and Development (IBRD, Aaa stable) and IADB. The agreement allows for a synthetic exchange of exposures to the nonperformance of sovereign borrowers with comparable credit profiles. Because the agreement is purely synthetic in nature, the lender of record does not change and any preferred creditor claims remain unimpaired. Because the exposures that are exchanged are of similar credit quality and the risks from exposures to Aaa-rated guarantors are minimal, the EEA has no immediate impact on capital adequacy under our methodology. It does, however, materially reduce AfDB's portfolio concentration (see Exhibit 8). The EEA, by its nature, also reduces regional exposure, although the improvement in the country HHI was marginal as AfDB's portfolio was already broadly diversified at the country level.

Exhibit 8
Exposure exchange agreements materially improve the AfDB's portfolio concentration (% of total, HHI)



Synthetic securitizations: Another scheme that has boosted asset quality is AfDB's September 2018 synthetic securitisation

transaction, the first of its kind by an MDB. Through the transaction with a private investor and Africa50, an investment infrastructure fund partially owned by AfDB, the bank reduced the credit risk on a portion of its private-sector loan portfolio. Although the size of the transaction (\$1.0 billion in notional value) was small relative to AfDB's overall loan portfolio of \$25 billion, it offers an innovative way for AfDB to satisfy shareholders' demands to increase lending with impacting capital.

A total of \$1 billion in loans is included in the reference portfolio. Of that amount, AfDB retained a 2% first-loss tranche. The bulk of credit risk was transferred to the private investor, which took the next 15.25% of potential losses. AfDB retained the remaining risk via the senior tranche.

The deal substantially reduces credit risk associated with the \$1 billion portfolio. The transfer of credit risk beyond the first-loss tranche and below the senior tranche improves the quality of this share of AfDB's loan portfolio substantially, though the benefits to the bank's overall credit profile are more limited based on the size of the transactions relative to the bank's development-related assets.

To improve its asset quality further and unlock capital for additional lending based on its own risk-adjusted capital adequacy framework, AfDB has also engaged with the <u>African Trade Insurance Agency</u> (ATI, A3 stable) to buy credit protection against a portfolio of 30 non-sovereign loans. The outstanding balance of the reference portfolio is \$500 million, or around 2% of the bank's total loan book. AfDB estimates it can undertake approximately \$450 million in new private-sector lending on the back of this transaction.

Asset performance is set to worsen as a result of the pandemic

We assess AfDB's asset performance at "a3" based on its nonperforming asset (NPA) ratio of 2.6% in 2020. AfDB's mandate to lend in a region with volatile macroeconomic and operating conditions, combined with its hybrid focus on both public and private borrowers, translates into a persistently higher level of NPAs compared with most Aaa-rated regional and global MDBs.

AfDB's NPA ratio decreased to 2.6% in 2020 from 2.7% in 2019, but remained significantly above the Aaa-rated median of 0.4% (see Exhibits 9 and 10). We expect the overall NPA ratio to remain broadly stable, with resolution of arrears owed by Somalia in 2020 reducing the sovereign NPA ratio.

Exhibit 9

AfDB has one of the highest nonperforming assets ratio in the Aaarated universe...

(Nonperforming assets as % of development related assets)

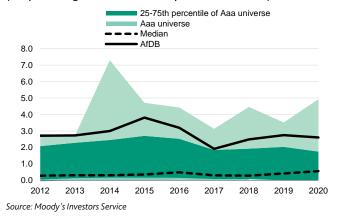
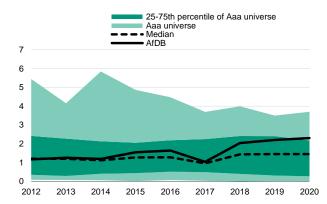


Exhibit 10while provisioning has increased (Provisions as % of gross loans)



Excluded: AIIB (short operational history), International Finance Corporation (IFC, exclusive focus on private sector), and European Investment Bank (EIB) and EIF (lack of data)

Source: Moody's Investors Service

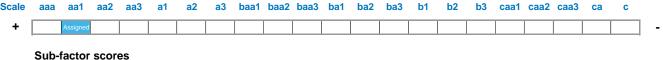
The bank has made progress in addressing its legacy sovereign NPAs. In 2020, Somalia settled its arrears with the bank, while in 2021 Sudan cleared \$206 million in arrears, which resulted in the bank writing back \$124 million of provisioning. Zimbabwe is the last remaining sovereign with arrears to AfDB. The country is seeking to reengage with its official lenders with a desire to clear its arrears. Like other large MDBs, AfDB does not write off its sovereign exposures.

The bank's non-sovereign loan portfolio remains the main source of asset quality risk. The nonperforming loans (NPL) ratio on AfDB's non-sovereign loan portfolio is higher than that on its sovereign portfolio, at 8.6% of total non-sovereign loans, higher than 7.4% in 2019. Of the 120 basis point increase in non-sovereign NPLs in 2020, 90 basis points was driven by a reduction in the size of AfDB's non-sovereign loan portfolio. The impairments on non-sovereign loans reflects idiosyncratic factors related to the projects and entities rather than the impact of a broad-based deterioration in the operating environment.

AfDB's non-sovereign NPLs are higher than the NPL ratio of other highly rated MDBs that have exposure to the private sector, such as International Finance Corporation (IFC, Aaa stable) and European Bank for Reconstruction and Development (EBRD, Aaa stable).

Liquidity and funding score: aa1

Factor 2: Liquidity and funding



Sub-factor scores Liquid resources Quality of funding

a2	
	Νį
aaa	į
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An entity's liquidity is important in determining its ability to meet its financial obligations. We evaluate the extent to which liquid assets cover net cash flows over the coming 18 months and the stability and diversification of the institution's access to funding.

Note: In case the Adjusted and Assigned scores are the same, only the Assigned score will appear in the table above.

AfDB's credit profile benefits from liquidity and funding positions that are in line with those of other Aaa-rated MDBs, with the "aa1" liquidity and funding position score reflecting these strengths. As part of AfDB's risk appetite statement, the bank seeks to maintain sufficient liquidity to continue normal operations for up to one year without recourse to capital markets. In practice, it maintains liquidity comfortably above the minimum set in the risk appetite statement.

The bank is a very frequent issuer of debt in the international capital markets, and enjoys access to borrowings at very low interest rates and from a large and diverse investor base. In addition to issuing debt in various currencies and markets, AfDB issues thematic bonds, such as green and social bonds, which help to deepen and diversify its investor base.

Liquid resources of the bank remain in line with peers

AfDB's "a2" score is based on our assessment of the bank's availability of liquid resources (ALR) to cover forthcoming loan disbursements, debt servicing and other potential cash outflows. We measure ALR by comparing projected net outflows over the next 18 months to discounted liquid assets. The numerator of the ALR, estimated net cash outflows, are outflows from mandate activities minus inflows from mandate activities plus debt repayments (both principal and interest). We include cash and cash equivalents, treasury assets rated A2 or higher and committed, unrestricted credit lines with prime lenders with a maturity greater than two years in the denominator. The composition and size of a supranational institution's liquid assets are important indicators of its capacity to readily sell assets to offset a deterioration in its cash inflows and its access to funding.

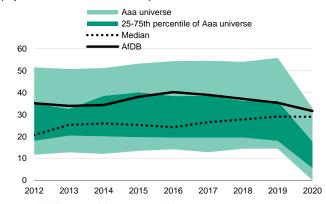
As of the end of 2020, AfDB's ALR was 101% of projected 18-month net cash outflows down from 133% in 2019. The bank's policy requires it to meet its net cash flow requirements (including debt-service payments, net loan disbursements, the notional value of committed guarantees and the value of undisbursed equity investments) over a rolling one-year horizon without recourse to capital markets. Compliance with this policy supports AfDB's favorable liquidity position.

Although AfDB compared favorably with Aaa-rated peers on other measures of liquidity before 2020, in 2020 the proportion of liquid assets to short-term debt plus currently maturing long-term debt decreased to 194% from 288% in 2019. AfDB's cash and treasury assets account for 32% of total assets, above the Aaa-rated median of 29% (see Exhibits 11 and 12).

Exhibit 11

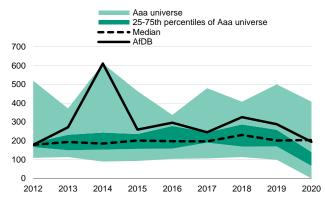
AfDB holds a larger share of liquid assets than most Aaa-rated peers...

(Liquid assets as % of total assets)



AIIB is excluded because of short operational history Source: Moody's Investors Service

Exhibit 12 ...and in liquid assets relative to maturing debt (Liquid assets as % of short-term and currently maturing long-term debt)



AIIB is excluded because of its short operational history. IDA excluding because of scale Source: Moody's Investors Service

The bank's cash and treasury investments amounted to UA11.16 billion (\$15.9 billion), or 32% of total assets and 44% of debt outstanding, as of the end of 2020, down from UA12.46 billion in 2019. Treasury investments are divided into three portfolios: an operational portfolio, a prudential portfolio and an equity-backed portfolio. Each portfolio has different liquidity characteristics and benchmarks, reflecting the cash flow and risk profile of its assets and funding sources. The core liquidity and prudential portfolios are held for trading, whereas the equity-backed portfolio is managed over a repricing period of 10 years and held at amortized cost.

The amortized cost portfolio is invested in a 10-year laddered portfolio with about 10% maturing in each year. Government agency and supranational obligations represented about 89% of the amortized cost portfolio excluding cash in June 2021. The credit quality of assets held in the portfolio is very high, with Aaa exposures making up 49% of the total (excluding cash).

The bank's risk management rules require it to match assets and liabilities by currencies via swaps and require borrowers to service their loans in the disbursed currencies. Even after matching assets and liabilities in the various currencies, any net asset position is matched to the currency composition of the SDR to minimize currency risk. The bank also manages interest rate risk via swaps with a view to generating a broadly stable overall net interest margin that is adequately resilient to sharp changes in market interest rates.

Quality of funding reflects reliable market access and favorable borrowing costs

Our assessment of AfDB's quality of funding at "aaa" takes into account the bank's track record of being a frequent issuer of debt in international capital markets, enjoying access to borrowings at very low interest rates and from a large and diverse investor base.

A large and broadly diversified investor base allows AfDB to reliably borrow at rates comparable to other Aaa-rated issuers, even as its funding needs increase. The weighted average cost of AfDB's direct borrowings stood at 1.93% as of the end of 2020, with a weighted average maturity of 3.84 years. Recent benchmark issuances in US dollars and euros, ranging from three-year to 10-year maturities, have come at relatively favorable rates.

In March 2020, AfDB issued \$3.1 billion under its "Fight Covid 2019 Social Bonds" with a maturity of three years, the largest social bond issue at the time of issuance. The bond received strong demand from the market and further diversified the bank's investor base, adding seven new investors. The bank also issued two additional global benchmark bonds amounting to \$2.5 billion in March 2021 and \$2.75 billion in July 2021.

AfDB is able to place bonds with a diverse investor base across the globe. Of its US dollar- and euro-denominated benchmark global bonds, almost half are held by central banks and other official institutions, while 30% are held by banks, and 28% are held by asset managers.

AfDB completes most of its borrowing requirements in the US dollar and euro currencies, and issues in other jurisdictions including Swedish krona, Norwegian krone and Australian dollar as well. In 2021, AfDB issued its largest Australian dollar denominated Kangaroo bonds as well as its largest sterling denominated transactions. In addition, the bank has become a regular issuer of thematic bonds, such as green bonds or bonds aligned with the operational priorities of its "High 5s."

The market's capacity to absorb AfDB's issuance was tested in recent years by a sharp increase in the institution's net borrowing, particularly in 2016 and 2017, when the bank's borrowing program exceeded \$9.0 billion per year. Rollover risk is limited by the bank's policy of limiting the amount of outstanding borrowing that can fall due in any year to 25% of total outstanding borrowing.

Qualitative adjustments

Qualitative adjustments to intrinsic financial strength

Adjustments

Operating environment Quality of management

0	i
+1	Ï

The capital adequacy and liquidity and funding factors represent the key drivers of our assessment of an institution's intrinsic financial strength (IFS). However, assessments of the operating environment and the quality of management are also important components of our analysis. To capture these considerations, we may adjust the preliminary IFS outcome that results from the capital adequacy factor and the liquidity and funding factor. The result of this analysis is the adjusted IFS outcome.

Diversified portfolio mitigates risks associated with difficult operating environment

While AfDB faces a difficult operating environment given the ongoing pandemic and its exposure in Africa, we do not make any adjustments for a challenging operating environment because it is already captured in our subfactor scores for development asset credit quality and asset performance. Additionally, the diversification of the bank's exposure across countries and sectors mitigate risks. Exposure to sovereigns under stress like Zambia (Ca stable) and Gabon (Caa1 stable) make up about 3.6% of AfDB's total development-related asset. AfDB's exposure to Tunisia is 7.4% of total development-related assets, placing it within the top 10 sovereign exposures.

Quality of management mitigates asset quality risks

We incorporate a "+1" adjustment to AfDB's intrinsic financial strength on account of its very robust and conservative risk management practices. We believe that the quality of management limits the risks associated with its development-related asset portfolio.

The bank employs a capital framework that compares a measure of potential unexpected losses to the level of risk capital (paid-in capital plus reserves). Total potential unexpected losses from sovereign and non-sovereign loans are calculated using a credit-value-at-risk approach, which incorporates assumptions on probability of default, loss given default, exposure at-risk and loan correlations. The calibration of probability of default are based on the Global Emerging Market (GEM) risk database, which incorporates default and recovery data from the 21 international financial institutions that are members of the GEM consortium.

The group chief risk officer is independent and reports to the president, while a board-approved risk appetite statement sets out how much risk the bank can take across core risks (mainly credit risk) and non-core risks (such as market and operational risk). The bank's risk management framework incorporates limits on non-sovereign credit risk, which includes both loans and equity. The bank also sets target ranges for its sovereign and non-sovereign loans, as well as equity exposure in terms of credit risk, based on its internal credit risk scale. In addition, AfDB sets country, sector, single name and equity limits, measured in terms of risk capital.

SOVEREIGN AND SUPRANATIONAL MOODY'S INVESTORS SERVICE

Strength of member support score: Very High

Factor 3: Strength of member support Scale Very High Medium Low **Very Low Sub-factor scores** Ability to support ba2 Willingness to support: Contractual aaa Very High Willingness to support: Non-contractual

Shareholders' support for an institution is a function of their ability and willingness. Ability to support is reflected by the shareholders' credit quality. Willingness to support takes into consideration (1) the members' contractual obligations that primarily manifest in the callable capital pledge, a form of emergency support, and (2) other non-contractual manifestations of support to the institution's financial standing and mission. Strength of member support can increase the preliminary rating range determined by combining factors 1 and 2 by as many as three scores.

Note: In case the Adjusted and Assigned scores are the same, only the Assigned score will appear in the table above.

AfDB benefits from a "Very High" strength of shareholder support, reflected in continued capital increases, as well as demonstrated support from non-regional shareholders outside of regular capital increases.

Under our methodology, we assess the ability of shareholders to support an MDB by calculating the weighted average credit rating of the shareholders (WASR). The presence of lower-rated sovereigns in its capital base limits AfDB's WASR to Ba2, below investment grade (see Exhibit 13); the only other two Aaa-rated supranationals to have a non-investment grade WASR are the IsDB and IADB. Because of its regional nature, AfDB is somewhat limited in its capacity to secure highly rated sovereign shareholders. However, the bank has attracted a significant amount of non-regional shareholders who support the bank's mandate in the region. As of the end of 2020, non-regional shareholders represented 45% of total shares (see Exhibit 14). The addition of non-regional members also serves to reduce the regional concentration of capital sources.

Exhibit 13 AfDB's shareholder rating remains below other Aaa-rated peers (WASR, weighted average shareholder rating)

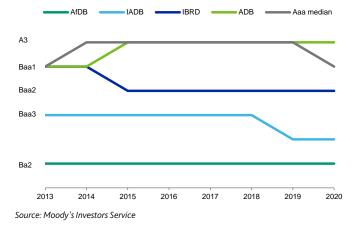


Exhibit 14 Non-regional members provide a substantial share of AfDB's capital

Regional members	Issuer rating	% of Suscribed capital	Non-regional members	Issuer rating	% of Suscribed capital
Nigeria	B2	13.5	Japan	A1	7.9
Morocco	Ba1	5.4	Germany	Aaa	6.0
Egypt	B2	3.8	United States of America	Aaa	4.4
Libya	-	3.4	Italy	Baa3	3.5
South Africa	Ba2	3.3	Canada	Aaa	3.3
Algeria	-	3.3	United Kingdom	Aa3	2.6
Others	-	22.1	Others	-	17.5
Total	-	54.8	Total	-	45.2

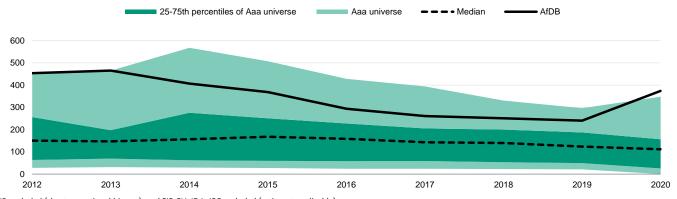
Source: Moody's Investors Service

AfDB has significant callable capital relative to debt

Although AfDB has a weaker WASR than most other Aaa-rated supranationals, the bank does have significantly more callable capital in relation to its debt than most other Aaa-rated supranationals. This means that it has a significant debt-coverage buffer compared with other Aaa-rated supranationals. The agreement on GCI VII resulted in a sizable increase in AfDB's callable capital buffer. The bank's callable capital to debt ratio increased to 374% in 2020, among the highest levels of contractual support for Aaa-rated MDBs. (see Exhibit 16).

Exhibit 15

AfDB's debt coverage increased significantly in 2020
(Callable capital as % of outstanding debt)



AIIB excluded (short operational history), and EIF, EU, IDA, IFC excluded (ratio not applicable) Source: Moody's Investors Service

AfDB has a history of consistent support from both regional and non-regional shareholders, which supports our "very high" assessment of non-contractual support.

- » On 5 March 2021, AfDB issued a Special Temporary Callable Capital Increase (STCCI) for an amount of UA28.6 billion (or about \$41.2 billion) with a deadline of depositing instrument of subscription by 23 September 2023. As of September 2021, 11 members including four Aaa-rated sovereigns (Sweden (Aaa stable), Germany (Aaa stable), Luxembourg (Aaa stable) and Denmark (Aaa stable)) deposited their instruments. The callable capital would become effective in the event that AfDB's stock of Aaa-rated callable capital declined by at least 30%, which increased the ratio of Aaa-rated callable capital to net debt above 100%.
- » Support beyond ongoing involvement: Member support is supposed to capture support beyond ongoing member involvement in the MDB, which includes things like periodic capital increases to support operations. AfDB's non-regional shareholders have a track record of supporting the institution beyond what we consider to be their ongoing involvement. In 2019, Canada (Aaa stable) pledged \$1.1 billion in temporary callable capital to AfDB, illustrating the support of one of its largest non-regional shareholders.
- » In October 2019, Sweden added a pledge of \$492 million in temporary capital. In 2010, Canada and Korea (Aa2 stable) provided a similar pledge of temporary callable capital to support AfDB's financial position while the bank completed its previous GCI.

ESG considerations

How environmental, social and governance risks inform our credit analysis of AfDB

Moody's takes account of the impact of environmental (E), social (S) and governance (G) factors when assessing supranational issuers' credit profile. In the case of AfDB, the materiality of ESG to the credit profile is as follows:

Environmental and social considerations are not material for AfDB's rating. Many of AfDB's borrowers in Africa are exposed to environmental risks, mostly because of their reliance on large agricultural sectors and thus exposure to extreme weather conditions, including rising temperatures, as identified in our report on environmental risks and their impact on sovereigns. However, taking into account AfDB's diversified portfolio and capacity to absorb environmental or social risks materializing for some of its borrowers, these considerations do not significantly affect AfDB's credit profile. The bank conducts environmental and social assessments (ESAs) on sectorwide and regionwide programmes to determine the environmental and social consequences. The ESAs allow the bank to incorporate these findings in its assessment of the climate impact of its lending activity.

Governance considerations are material for the rating. AfDB adheres to very robust and conservative risk management practices, which we believe limit the risks associated with its development-related assets. AfDB's risk management framework incorporates limits on non-sovereign credit risk, which includes both loans and equity.

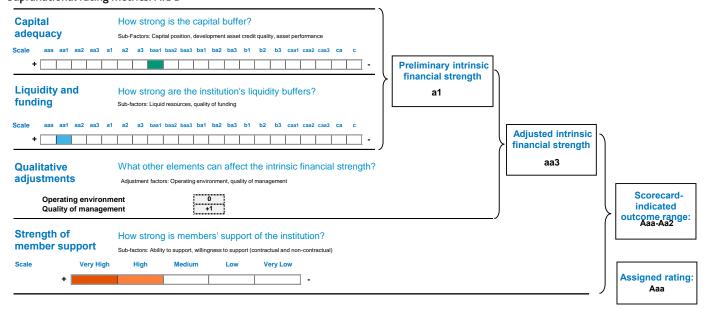
All of these considerations are further discussed in the "Credit profile" section above. Our approach to ESG is explained in our cross-sector methodology <u>General Principles for Assessing ESG Risks</u>. Additional information about our rating approach is provided in our <u>Supranational Rating Methodology</u>.

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Rating range

Combining the scores for individual factors provides an indicative rating range. While the information used to determine the grid mapping is mainly historical, our ratings incorporate expectations around future metrics and risk developments that may differ from the ones implied by the rating range. Thus, the rating process is deliberative and not mechanical, meaning that it depends on peer comparisons and should leave room for exceptional risk factors to be taken into account that may result in an assigned rating outside the indicative rating range. For more information please see our Supranational Rating Methodology.

Exhibit 16 Supranational rating metrics: AfDB



Source: Moody's Investors Service

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SOVEREIGN AND SUPRANATIONAL MOODY'S INVESTORS SERVICE

Comparatives

This section compares credit relevant information regarding AfDB with other supranational entities that we rate. It focuses on a comparison with supranationals within the same rating range and shows the relevant credit metrics and factor scores.

AfDB is significantly smaller than the Aaa-rated median in terms of total assets. AfDB's development related assets as a percentage of usable equity of around 296% is in line with the Aaa-rated median of around 278%. AfDB benefits from high liquidity with liquid assets making up about 32% total assets, similar to IBRD at 29% and EIF at 27%. AfDB's callable capital to total debt is among the highest in the MDB portfolio, significantly above its rated peers.

Exhibit 17 AfDB key peers

	Year	AfDB	IBRD	EBRD	ADB	EIF	CEB	Aaa Median
Rating/Outlook		Aaa/STA	Aaa/STA	Aaa/STA	Aaa/STA	Aaa/STA	Aa1/STA	
Total assets (US\$ million)	2020	50,552	296,804	85,617	271,741	3,995	34,309	90,709
Factor 1: Capital adequacy		baa1	a1	а3	a1	a2	а3	
DRA / Usable equity ^{[1] [2] [4]}	2020	295.5	513.8	196.6	259.8	329.0	572.1	277.6
Development assets credit quality score (year-end)	2020	baa	aa	baa	а	aa	aa	baa
Non-performing assets / DRA ^[1]	2020	2.6	0.2	5.1	0.2	0.0	0.0	0.6
Return on average assets ^[4]	2020	0.4	0.0	0.4	0.6	4.1	0.3	0.4
Net interest margin (X) ^[4]	2020	1.2	0.7	1.3	0.9	0.8	0.6	0.9
Factor 2: Liquidity and funding		aa1	aa1	aaa	aa1	aaa	aa2	
Quality of funding score (year-end)	2020	aaa	aaa	aaa	aaa	aaa	aa	aaa
Liquid assets / ST debt + CMLTD ^{[3][4]}	2020	193.9	167.3	204.1	181.0	0.0	255.2	203.8
Liquid assets / Total assets ^[4]	2020	31.6	29.0	45.4	18.0	27.1	30.0	29.3
Preliminary intrinsic financial strength (F1+F2)		a1	aa2	aa3	aa2	aa2	a1	
Adjusted intrinsic financial strength		aa3	aa1	aa2	aa1	aa2	aa3	
Factor 3: Strength of member support		VH	VH	н	VH	VH	M	
Weighted average shareholder rating (year-end)	2020	ba2	baa2	a2	а3	aa1	baa1	baa1
Callable capital / Total debt	2020	373.8	111.0	48.8	112.1	0.0	21.4	112.1
Callable capital (CC) of Baa3-Aaa members/Total CC ^[4]	2020	46.9	81.0	94.9	91.6	98.6	87.3	90.9
Scorecard-indicated outcome range (F1+F2+F3)		Aaa-Aa2	Aaa-Aa2	Aaa-Aa2	Aaa-Aa2	Aaa-Aa2	Aa1-Aa3	

^[1] Development related assets

Source: Moody's Investors Service

^[2] Usable equity is total shareholder's equity and excludes callable capital

^[3] Short-term debt and currently-maturing long-term debt

^[4] Ratio not used in Scorecard

DATA AND REFERENCES

Rating history

Exhibit 18

African Development Bank[1]

	Long-Te	erm Ratings	Short-Term			
Supranational	Senior	Subordinate	Ratings	Outlook	Date	
African Development Bank (AfDB)	Aaa	(P)Aa1	P-1	STA	10/25/2019	
African Development Bank (AfDB)	Aaa	(P)Aa1	P-1	STA	08/25/2017	
African Development Bank (AfDB)	Aaa	(P)Aa1	P-1	STA	08/29/2014	
African Development Bank (AfDB)	Aaa	(P)Aa1	P-1	STA	8/28/2010	
African Development Bank (AfDB)	Aaa	Aa1	P-1	STA	11/15/2003	
African Development Bank (AfDB)	Aaa	Aa1	P-1	-	03/15/2000	
African Development Bank (AfDB)	Aaa	Aa1	-	-	1/13/1995	
African Development Bank (AfDB)	Aaa	-	-	-	12/21/1994	
African Development Bank (AfDB)	Aaa	-	-	-	03/23/1984	

Notes: [1] Table excludes rating affirmations. Please visit the issuer page for $\underline{\mathsf{AfDB}}$ for the full rating history. Source: Moody's Investors Service

Annual statistics

Exhibit 19

African Development Bank

Balance Sheet, USD Millions	2014	2015	2016	2017	2018	2019	2020
Assets							
Cash & Equivalents	589	1,683	1,757	1,660	2,855	2,928	3,335
Securities	10,823	11,694	14,310	16,307	14,495	14,172	12,622
Derivative Assets	1,657	2,016	1,659	1,015	907	1,471	2,209
Net Loans	18,105	17,832	20,295	24,959	26,131	27,213	29,811
Net Equity Investments	865	975	967	1,106	1,174	1,375	1,340
Other Assets	1,212	924	976	1,061	1,151	1,228	1,234
Total Assets	33,251	35,124	39,963	46,108	46,712	48,387	50,552
Liabilities							
Borrowings	21,450	22,794	27,753	32,803	33,183	34,963	35,881
Derivative Liabilities	1,237	1,504	1,158	1,488	1,444	883	1,321
Other Liabilities	1,756	1,846	2,172	1,777	2,145	2,416	2,208
Total Liabilities	24,443	26,144	31,083	36,069	36,773	38,263	39,411
Equity							
Subscribed Capital	94,366	90,741	88,035	92,707	90,059	90,812	144,220
Less: Callable Capital	87,318	83,973	81,451	85,658	83,203	84,016	134,132
Less: Other Adjustments	2,318	1,837	1,397	1,232	799	513	3,033
Equals: Paid-In Capital	4,729	4,931	5,187	5,818	6,057	6,283	7,055
Reserves	4,079	4,048	3,693	4,221	3,882	3,840	4,087
Total Equity	8,808	8,979	8,879	10,038	9,940	10,124	11,141
Source: Moody's Investors Service							
Exhibit 20 African Development Bank							
Income Statement, USD Millions	2014	2015	2016	2017	2018	2019	2020
Net Interest Income	463	427	468	537	559	600	556
Interest Income	688	606	706	926	1,158	1,254	918
Interest Expense	224	178	238	389	599	654	362
Net Non-Interest Income	-53	-38	-58	71	-54	-18	76
Income from Equity Investments	9	21	10	13	15	10	19
Other Income	-62	-59	-68	58	-69	-29	56
Other Operating Expenses	189	189	190	238	265	296	280
Administrative, General, Staff	178	169	175	209	229	246	227
Other Expenses	11	20	15	29	36	49	54
Pre-Provision Income	221	200	220	370	239	286	352
Loan Loss Provisions (Release)	1	71	59	4	67	113	68
Net Income (Loss)	46	-43	34	250	58	72	199
Other Accounting Adjustments and Comprehensive Income	-106	190	-268	83	-62	-85	-113
Comprehensive Income (Loss)	-60	147	-234	333	-5	-13	86

Source: Moody's Investors Service

Exhibit 21 **African Development Bank**

Financial Ratios	2014	2015	2016	2017	2018	2019	2020
Capital Adequacy, %							
DRA / Usable Equity	217.9	219.4	249.3	267.8	285.0	298.6	295.5
Development Assets Credit Quality (Year-End)					baa	baa	baa
Non-Performing Assets / DRA	3.0	3.8	3.2	1.9	2.5	2.7	2.6
Return On Average Assets	0.1	-0.1	0.1	0.6	0.1	0.2	0.4
Net Interest Margin	1.6	1.4	1.3	1.3	1.3	1.4	1.2
Liquidity, %							
Quality of Funding Score (Year-End)					aaa	aaa	aaa
Liquid Assets / ST Debt + CMLTD	610.6	259.0	295.8	245.3	325.4	287.7	193.9
Liquid Assets / Total Debt	53.2	58.7	57.9	54.8	52.3	48.9	44.5
Liquid Assets / Total Assets	34.3	38.1	40.2	39.0	37.1	35.3	31.6
Strength of Member Support, %							
Weighted Average Shareholder Rating (Year-End)	Ba2						
Callable Capital / Gross Debt	407.1	368.4	293.5	261.1	250.7	240.3	373.8
Callable Capital (CC) of Baa3-Aaa Members/Total CC	47.0	47.1	46.8	46.6	47.1	48.3	46.9

Source: Moody's Investors Service

Moody's related publications

- » Credit Opinion: African Development Bank Aaa stable: Update following rating affirmation, outlook unchanged, 28 October 2021
- » Sector In-Depth: Supranationals Global: Gains from MDB credit enhancement tools vary with scope, effectiveness and usage, 3 March 2021
- » Rating Methodology: Multilateral Development Banks and Other Supranational Entities, 28 October 2020

To access any of these reports, click on the entry above. Note that these references are current as of the date of publication of this report and that more recent reports may be available. All research may not be available to all clients.

Related websites and information sources

- » Sovereign and supranational risk group web page
- » Sovereign and supranational rating list
- » African Development Bank

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Endnotes

- 1 https://www.un.org/sustainabledevelopment/sustainable-development-goals/
- 2 https://www.un.org/millenniumgoals/
- 3 http://www.arei.org/
- 4 https://www.se4all-africa.org/

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