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Corporación Andina de Fomento - Aa3 stable

Annual credit analysis

RATINGS

CAF

	Rating	Outlook
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OVERVIEW AND OUTLOOK

The credit profile of Corporación Andina de Fomento (CAF, Aa3 stable) reflects its prudent financial management, ample market access, improvements in the credit quality of its membership, and the strong performance of its loan portfolio. High levels of paid-in capital have not only led to improved capital adequacy, but also reflect members' strong commitment to the bank's mandate. Very strong asset quality continues to support portfolio quality, with nonperforming loans consistently at or close to zero. CAF's preferred creditor status ensures that debt owed to the bank is excluded from debt restructurings carried out by official debtors. CAF serves as a lender of last resort to some of its members.

These strengths are offset by CAF's continued high exposure to its lowest rated members, its absence of Aaa-rated members, and low levels of callable capital, which result in capital adequacy ratios that remain marginally weaker than peers despite recent improvements. These challenges reflect CAF's development mandate, which exposes its loan portfolio to a high degree of regional concentration and results in narrow profitability as the institution seeks to provide its members with the lowest possible cost of funding.

Although unlikely in the near future, upward credit pressure would develop if CAF meaningfully reduces its exposure to its lowest rated borrowers, decreases its dependence on short-term funding and deposits, and if its capitalization and liquidity ratios demonstrate significant improvement. The inclusion of new highly rated members responsible for a significant amount of callable capital would also support improved creditworthiness.

Conversely, downward pressure on the credit profile would develop if CAF faces a strong deterioration in asset quality, a credit event involving any of its major borrowers, or if it suffers an unexpected drop in liquidity or capitalization levels.

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

Organizational structure and strategy

CAF was established in 1970 by its five original member countries: Bolivia (Ba3 stable), Colombia (Baa2 negative), Ecuador (B3 stable), Peru (A3 stable) and Venezuela (C stable). CAF's establishing agreement was amended in 2005 to allow other Latin American countries to become full members. As a result, the bank now has 19 member countries – 11 full members (in 2016, Trinidad & Tobago (Ba1 stable) became a full member, having previously held associated member status) and eight associated members. In addition to the five original member countries, Argentina (B2 stable), Brazil (Ba2 stable), Panama (Baa2 positive), Paraguay (Ba1 stable) Trinidad and Tobago and Uruguay (Baa2 stable) have joined as full members. The following countries are presently associated members of CAF: Barbados (Caa3 stable), Chile (A1 stable), Costa Rica (Ba2 negative), the Dominican Republic (Ba3 stable), Jamaica (B3 positive), Mexico (A3 stable), Portugal (Ba1 positive), and Spain (Baa1 stable), as well as 13 commercial banks. Management has indicated that the member base could expand marginally, particularly into Central America and the Caribbean.

All 11 full member countries are both series "A" and "B" shareholders, while associated members are series "C" shareholders. All commercial bank members are series "B" shareholders but hold less than 1% of total shares. The new full members are each allowed to appoint one principal director to the board of directors, while the founding members are allowed to appoint two directors each. The other member countries that hold series "C" shares are entitled to elect two principal directors collectively.

Although it is still officially named Corporacion Andina de Fomento, CAF prefers to go by its acronym and refers to itself as "the Development Bank of Latin America" to reflect its broadening membership, which is no longer confined to the Andean region. In addition to the 19 current member countries, Italy (Baa2 RUR-) and Guatemala (Ba1 stable) have signed Letters of Intent to become future shareholders. Suriname (B2 negative) and El Salvador (B3 stable) have approached CAF about potentially becoming members, and the Bank is in discussions with Chile and Mexico about increasing the size of each country's participation.

CAF's mission is to support sustainable development and economic integration among its shareholder countries by helping them diversify their economies, making them competitive, and making them more responsive to social needs. CAF seeks to encourage foreign investment and capital markets development, promote the expansion of regional trade and exports, and support the development of small- and medium-sized enterprises. However, its principal activity is to provide loans to finance economic and social infrastructure projects as well as working capital and trade activities in its shareholder countries (see Exhibit 1). Available products include short-, medium-, and long-term loans, co-financing arrangements, guarantees, and selected equity investments. While the large majority of its loan operations are to the public sector, CAF offers its products to both member states and to the public and private financial institutions and corporations that operate within them.

Among the privileges afforded to CAF when operating within shareholder countries are the following: (1) free convertibility and transferability of assets; (2) exemption from all kinds of restrictions, regulations, control, and moratorium measures; (3) immunity from expropriation; and (4) exemption from taxes.

Exhibit 1
Loan portfolio by industry segment

	2017 Amount (in million USD)	% of Total	2016 Amount (in million USD)	% of Total
Infrastructure	**12,460**	**53%**	**11,664**	**53%**
Electricity, gas and water supply	**7,778**	**33%**	**7,314**	**33%**
Financial intermediation	**2,978**	**13%**	**2,494**	**11%**
Other activities	**307**	**1%**	**289**	**1%**
Manufacturing industry	**107**	**0%**	**216**	**1%**
Total	**23,631**	**100%**	**21,976**	**100%**

Source: CAF

CREDIT PROFILE

Our determination of a supranational's rating is based on three rating factors: Capital adequacy, liquidity and strength of member support. For Multilateral Development Banks, the first two factors combine to form the assessment of intrinsic financial strength, which provides a preliminary rating range. The strength of member support can provide uplift to the preliminary rating range. For more information please see our Supranational Rating Methodology.

Capital adequacy: High

Capital adequacy score underpinned by strong asset quality

Factor 1

Scale	Very High	High	Medium	Low	Very Low	
+		■				-

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 degree to which the institution is leveraged and the risk that these assets could result in capital losses.

CAF's Aa3 rating incorporates our "High" capital adequacy assessment, reflecting robust asset quality and limited leverage, counterbalanced by a moderate capital position due to greater portfolio concentration than other similarly-rated multilateral development banks (MDBs). Portfolio concentration and relatively low borrower quality reflect CAF's development mandate and as a result are unlikely to change significantly over the medium term. Nevertheless, prudent financial and risk management has resulted in a strong portfolio performance that is underpinned by a track record of very low nonperforming loans (NPLs could rise in the event of increased credit stress in Venezuela, which has defaulted on its market debt and continues to struggle to meet debt payments on official debt)[1].

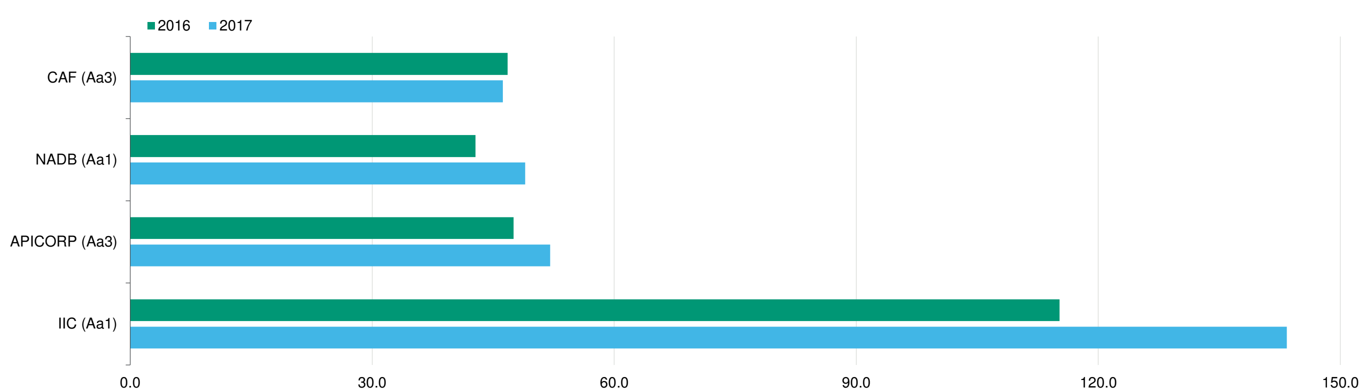
Capital position reflects high asset coverage ratio, but low borrower quality

CAF's capital position incorporates the coverage of assets in relation to the riskiness of those assets. In order to determine the strength of an MDB's capital position, we look at two key indicators: (1) asset coverage ratio (ACR)[2], and (2) weighted average borrower rating.

CAF's ACR has been stable and has improved modestly over the past five years, standing at just under 46.2% at the end of 2017, compared to 41.6% in 2012. This ratio is only marginally weaker than similarly rated peers (see Exhibit 2). Usable equity, the numerator for the ACR, rose to $11.1 billion in 2017 from $10.5 billion in 2016 and $9.5 billion in 2015, reflecting the continued increase in its member base and capital contributions. CAF's ACR is bolstered by high levels of paid-in capital relative to total subscribed capital, given that in 2017 62.4% of capital was paid, 17.7% was unpaid subscribed[3], and 19.9% was callable[4].

Exhibit 2

The asset coverage ratio remains in line with peers
(Usable Equity/Gross Loans Outstanding + Equity Operations)



Source: Moody's Investors Service

Shareholder countries agreed to a program of three capital increases in 2007-17, which raised $6.3 billion in total. In November 2015, CAF's board approved a new general paid-in capital increase of $4.5 billion with contributions beginning in 2017, such that payments into the institution's capital base will continue just as the previous capital increase programs end. The capital increase would allow CAF to maintain its current capital adequacy ratios with a loan portfolio growth of 11%. We expect that loan growth will remain below 8%, which would support a modest improvement in capital adequacy. The compound annual growth rate of the loan portfolio from 2012-16 was 5.6%. After slowing to 6.3% in 2014, down from 10.1% a year prior, loan growth has accelerated slightly in recent years, growing at 7.5% in 2017.

While we expect loan growth to remain relatively stable over the next 2-3 years due to the ongoing volatility in global financial markets, it is likely that member sovereigns will shift their borrowing patterns toward MDB funding, a trend that slowly began in 2015-16. Although we consider it unlikely, loan growth could continue to accelerate to over 8% in the coming years as CAF offers members very favorable terms and can approve projects quicker than other MDBs that lend within the region. The technical assistance and the financing for projects that CAF provides is of great value to borrowers.

The two main credit challenges for CAF remain low borrower quality (which by design is consistent with the institution's mandate) including its exposure to C-rated Venezuela, and a relatively high level of portfolio concentration. Borrower quality, as measured by the weighted average borrower rating, is low for CAF. This is because the majority (66%) of outstanding loans were to non-investment grade countries in 2017, up from 62% a year earlier. Concurrently, the weighted average borrower rating remains below investment grade. CAF has made great strides in diversifying country exposure within its portfolio, but the top five exposures – Venezuela, Ecuador, Argentina, Peru, and Colombia – still account for 63% of the portfolio (see Exhibit 3).

Exhibit 3

CAF's portfolio exhibits significant concentration

Loan portfolio by country, 2017

	US$ million	% of total
Ecuador	3,438	14.5
Venezuela	3,285	13.9
Argentina	3,208	13.6
Colombia	2,516	10.6
Bolivia	2,484	10.5
Peru	2,280	9.6
Brazil	2,116	9.0
Panama	1,503	6.4
Uruguay	1,044	4.4
Paraguay	419	1.8
Mexico	305	1.3
Chile	305	1.3
Trinidad and Tobago	300	1.3
Dominican Republic	252	1.1
Costa Rica	90	0.4
Barbados	87	0.4
Spain	0	0.0
Jamaica	0	0.0
Gross loans	23,631	100.0

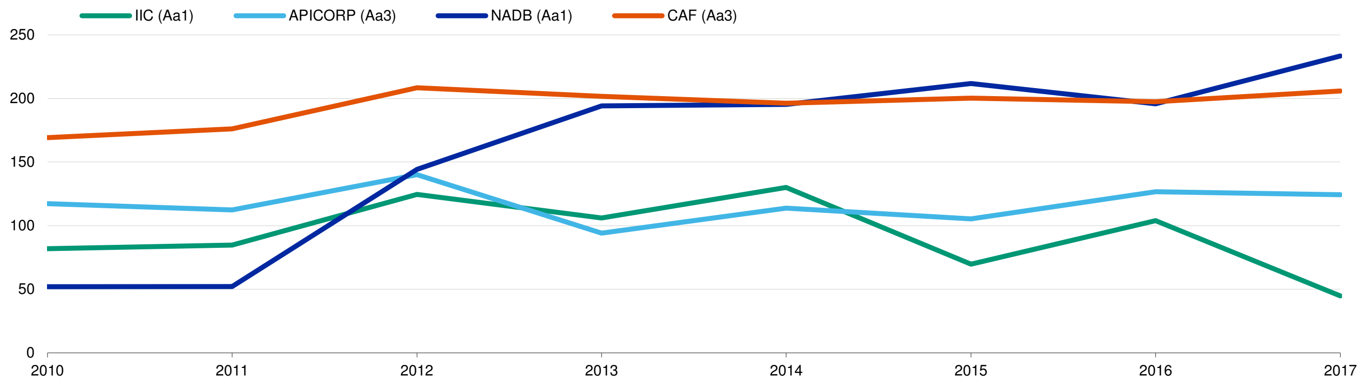
Source: CAF

Leverage is moderate relative to peers

CAF's debt rose to $22.9 billion in 2017 from $20.7 billion the prior year. The increase was due to a rise in bond debt, while commercial paper decreased by around 16% to further increase reliance on longer-term debt, lower rollover risk, and in anticipation of a rise in global interest rates. Bond obligations comprised 86% of total debt (relative to 83% in 2015), while the remainder is commercial paper

(8%) and other financial obligations (6%). Debt as a percent of usable equity is somewhat less favorable than peers (see Exhibit 4). In 2017, debt/usable equity rose slightly, to 206% from 197% in 2016, compared to the 'Aa' median of 151%.

Exhibit 4
CAF's leverage position is weaker than most 'Aa' peers
(Debt as % of useable equity)



Source: Moody's Investor Services

Strong asset performance is a key credit strength...

Despite the fact that CAF is controlled by its borrowing member countries, it maintains strict underwriting standards, as reflected in the strong performance of its portfolio, including loans to the private sector. The strong asset performance is a key credit strength that reflects prudent risk management and a strong sense of ownership by borrowing countries that serves as a strong incentive to fulfill their commitments to the institution.

Aside from strict underwriting standards, member countries with limited financing options view CAF as a lender of last resort. When Ecuador defaulted on two global bonds in 2008, it did not default on its debt owed to CAF. Moreover, both Ecuador and Peru (in the 1980s) remained current on their obligations to CAF even while they defaulted or were in arrears on their obligations to other MDBs, including the World Bank (IBRD, Aaa stable) and the Inter-American Development Bank (IADB, Aaa stable). Therefore, CAF is not only a preferred creditor, but is also a preferred creditor among MDBs.

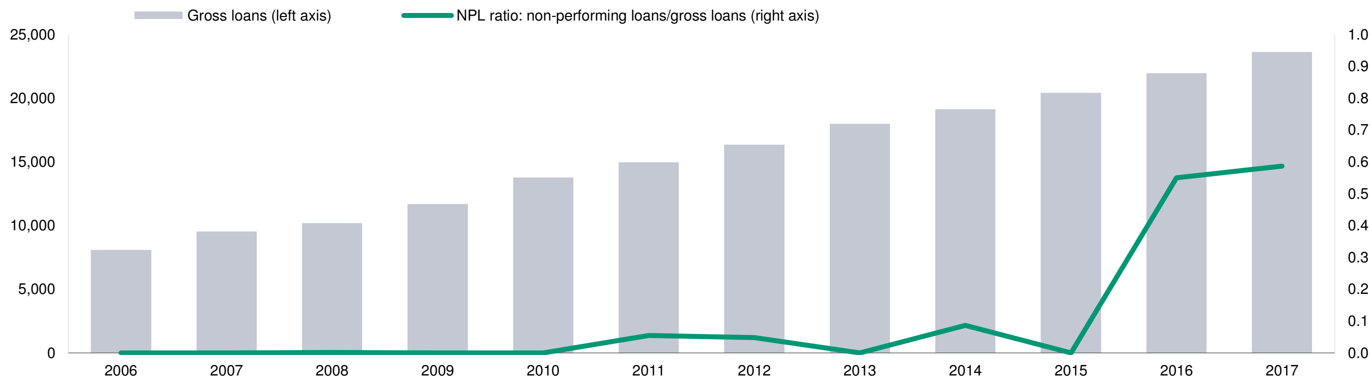
CAF has generally had virtually no NPLs despite the rapid growth of its portfolio and the low credit quality of some of its public-sector borrowers. Although CAF registered NPLs (totaling 0.05% of its loan portfolio) in 2011-12 for the first time since 2005[5], the NPL ratio went back down to zero in 2013. The uptick to 0.1% in 2014 was resolved and NPLs went back to zero in 2015, but rose to 0.55% and 0.59% in 2016 and 2017, respectively (see Exhibit 5). The NPLs reflect a deterioration in repayment capacity from lower-quality non-sovereign borrowers due to currency depreciations throughout most of Latin America over the same period.[6]

The bank's loan loss allowance increased to roughly $67 million in 2017 (0.3% of $23 billion loan portfolio) from $64 million in 2016 and $59 million in 2015. CAF had been reducing its loan loss allowances from 2009 to 2013 due to its strong historical loan performance. We believe that the economic slowdown in its operating region may have a negative effect on asset quality, and as a result, CAF is likely to continue increasing provisions in anticipation of any potential deterioration in credit quality. We expect that NPLs could continue to rise through 2018 but remain contained well below 2% of gross loans.

Although CAF does not recognize public sector loans as impaired until they are 180 days past due (a relatively liberal threshold), no loans were overdue aside from the impaired loans noted above. Management reports that no public sector loan has ever been more than a few days late, and in those cases the delay was simply due to administrative problems.

Exhibit 5

CAF's asset performance is very strong despite the recent rise in NPLs
(US$ million - left axis, percent of total loan portfolio - right axis)



Sources: CAF, Moody's Investors Service calculations

...but exposure to Venezuela could lead to slight upticks in non-performing loans

CAF's credit risk from exposure to Venezuela is manageable as the sovereign remains current on its loans. In the event that Venezuela, which was downgraded in March, were not current on its repayments, NPLs would likely remain contained below 5% unless the sovereign remained delinquent on repayments for 2-3 years, at which point this would begin to weigh on CAF's large existing capital buffers and potentially on its creditworthiness.

As of the date of this report, Venezuela remained current on all its obligations to CAF, including interest and principal on debt service, and more importantly, on capital contributions in the context of the latest general capital increase program through 2031. Although from time to time Venezuela has been delayed with some scheduled interest payments on loans, the sovereign usually clears up the late payments within a matter of weeks if not days. The delays seem to be mainly related to operating issues, including challenges posed by US sanctions. Because Venezuela remains current on all obligations to CAF despite the severe external liquidity crunch the sovereign is experiencing, it is unlikely that CAF's loan book will be materially affected.

Moreover, CAF has managed its exposure to Venezuela prudently so that there is little incentive for Venezuela to default on its payments to CAF. Venezuela's debt service on CAF loans is manageable and has remained well under $500 million every year since 2011. This amount is less than the yearly disbursements that the sovereign receives from CAF, resulting in a positive, net yearly flow of hard currency to Venezuela.

Loan portfolio continues to gradually diversify

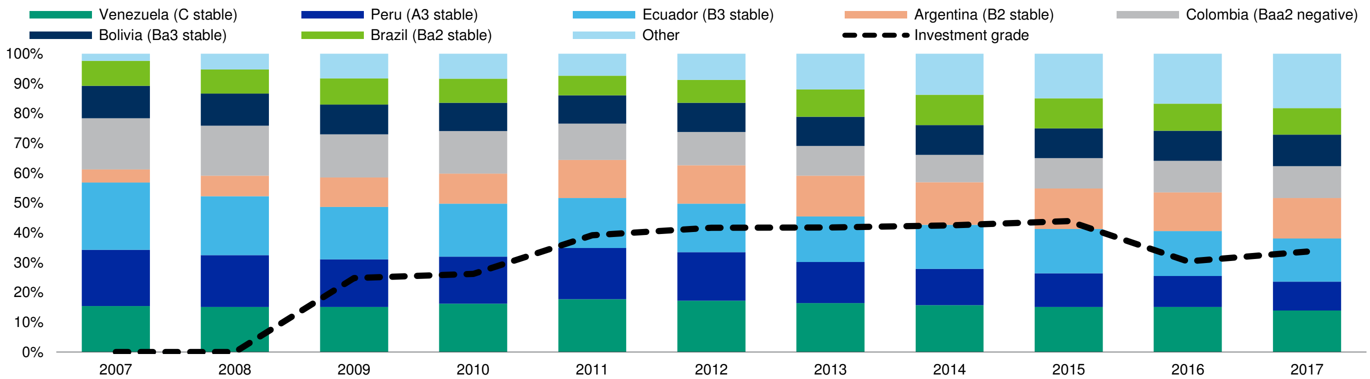
The vast majority of CAF's loans are to sovereigns (85.5%)[7], with non-sovereign loans[8] making up 14.5% of the portfolio. As a regional development bank, CAF lends primarily to Latin American countries, with the exception of small loans to Spain and Portugal. The most significant concentration risk for the bank relates to the fact that its top ten country exposures make up 70% of the loan portfolio; the top five exposures amount to 55% of the portfolio, traits that are common in regional MDBs.

Nevertheless, management continues to diversify the loan portfolio. Whereas the five founding members comprised 93% of total lending in 2006, they now comprise only 59%. This diversification stems from increased lending to Argentina, Brazil, and other non-founding members (see Exhibit 6). Moreover, at its peak in 2005, the largest single exposure represented over 25% of the portfolio, but management has made a concerted effort to bring this number down 14.5% in 2017 (see Exhibit 7), reaching a historical low. Finally, whereas CAF lent to no investment grade countries through 2008, as of 2017 34% of loans were to investment grade countries.

Exhibit 6

CAF continues to diversify the loan portfolio

Loan portfolio, by country

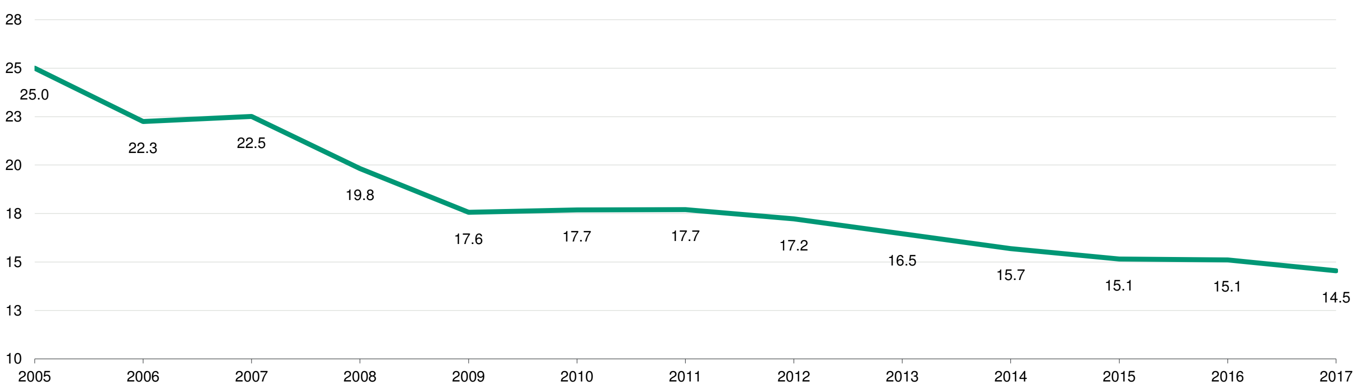


Sources: CAF and Moody's Investors Service

Exhibit 7

Management has reduced the single-largest country exposure in the loan portfolio

% of total loan portfolio



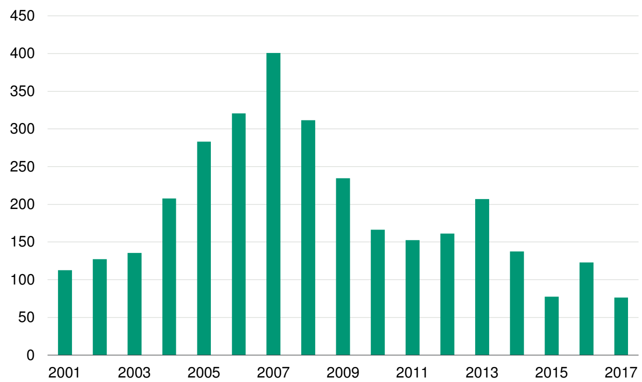
Source: CAF

Profitability remains subdued on tight net interest margin and accounting changes

Overall net income decreased 38% to $76.4 million in 2017 from $122 million in 2016 and $77 million in 2015 (see Exhibit 8). The decrease was due to a combination of a significant increase in loan loss provisions, which nearly doubled to $69.9 million from $38.3 million the year before. Strong growth in interest income continued in 2017, driven by growth in the loan book and additional revenue from rebalancing of the treasury portfolio away from cash holdings into securities. However, much of the gains in net interest income were offset by increased interest expense, which have grown in recent years as a result of increased borrowing costs and the rise in global interest rates. Overall net income has also been reduced since a change in accounting for contributions to stockholders' special funds, which brought payments on to the balance sheet for the first time beginning in 2015. Accordingly, return on average assets (ROA) and return on equity (ROE) dipped to 0.2% and 0.7% in 2017, from 0.4% and 1.2% in 2016, respectively, falling below their 2011-14 averages of 0.4% and 1.5% (although it is important to note that pre-2015 profitability figures are not comparable given that contributions to special funds were considered below the line expenditures, such that profitability seems higher those years). Though profitability has closely tracked LIBOR movements in recent years, we expect these trajectories to diverge slightly over the next two years as increased loan loss provision and higher borrowing costs squeeze margins (see Exhibit 9).

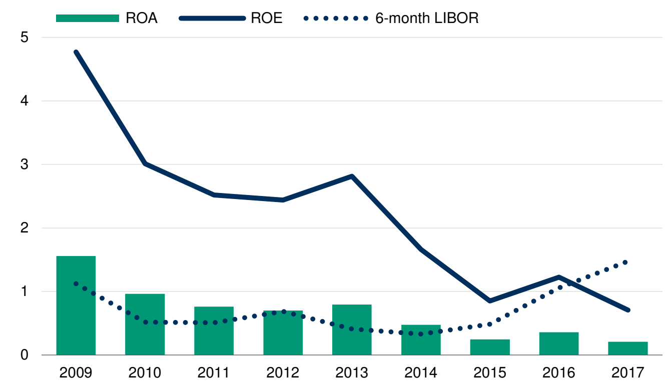
Net interest income is the major driver of profitability and its performance is strongly linked to LIBOR. When the LIBOR rate decreases, treasury assets yield lower returns as does the loan portfolio, more than offsetting the decline in CAF's financing costs. Although CAF's liquid assets in the very short term could experience a small amount of mark-to-market losses given higher yields, as was the case in 2017, over a slightly longer term horizon their profitability will increase, as would be the case for interest income from lending operations, likely offsetting increases in CAF's cost of funding such that profitability remains broadly stable to marginally higher.

Exhibit 8
Net income remains subdued, due to tighter lending margins
(US$, million)



Source: CAF

Exhibit 9
LIBOR largely drove profitability indicators, but the relationship inverted in 2017 on tighter margins
(%)

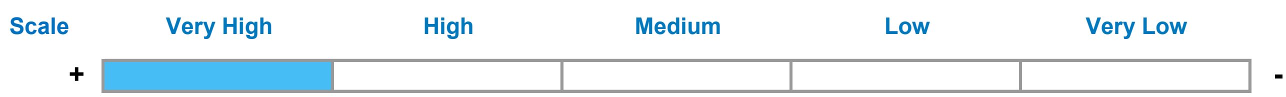


Sources: CAF, Haver, Intercontinental Exchange, and Moody's Investors Services

Liquidity: Very High

Lower reliance on short-term debt, high levels of liquidity and access to low-cost funding underpin favorable liquidity score

Factor 2

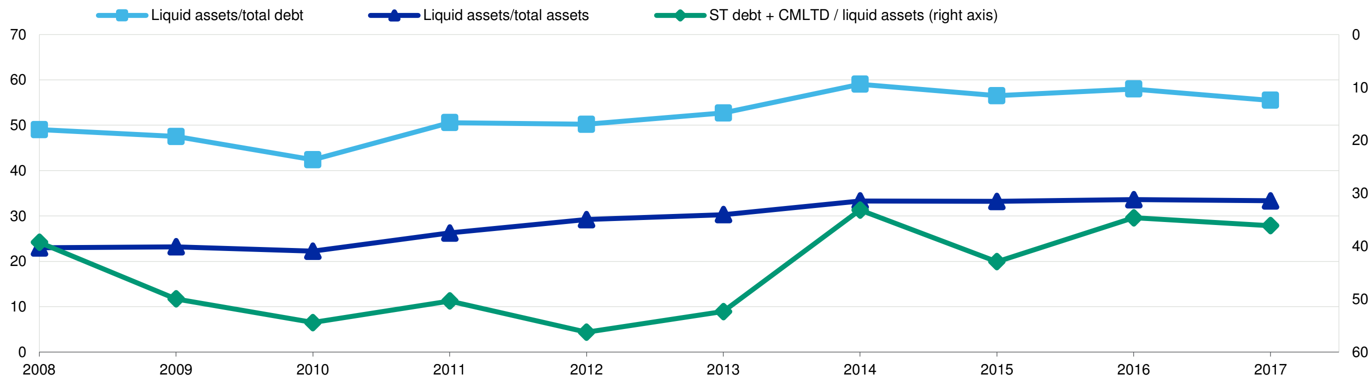


A financial institution's liquidity is important in determining its shock absorption capacity. We evaluate the extent to which liquid assets cover debt service requirements and the stability of the institution's access to funding.

Debt-service coverage improves, converging with peers

Since MDBs are not eligible to access emergency lines offered by central banks, we assign a high value to strong liquidity positions in the credit assessment of MDBs. CAF's average debt-service coverage ratio over the past three years is 37.9%, which is relatively weaker than the 23.6% median for 'Aa'-rated MDBs. That said, liquidity indicators have been increasing steadily since 2010 (see Exhibit 10), with 2017 values in line with 'Aa' medians.

Exhibit 10
Liquidity position indicators continue to improve
(%)



Source: Moody's Investors Service

Robust policy strengthens CAF's liquidity position

In September 2014, CAF implemented a more conservative liquidity policy, bringing it more in line with the bank's established practice of over-compliance with its previously more relaxed minimum liquidity requirements. The policy requires CAF to maintain sufficient liquid assets to cover at least 12 months of net cash requirements. Net cash requirements include committed disbursements and debt service minus loan collections and committed paid-in capital payments to be received from shareholders. That compares to the previous policy, which required the bank to hold the greatest of (1) 45% of the undisbursed total of committed project loans; (2) 35% of debt service plus gross expected disbursements over the next 12 months; or (3) 25% of total financial liabilities. Total liquidity as of December 2017 covers 24 months of net cash requirements, with liquidity standing at more than twice the minimum liquidity required under the more stringent liquidity policy, suggesting that CAF could stay out of funding markets for two years and still fullfil all its debt-servicing commitments during that time.

Even prior to the revision of the liquidity policy, CAF regularly maintained liquid assets well above the minimum requirement. On average over the 12 years when the previous policy was in effect, liquid assets have been double the minimum requirements. By the end of 2013, they approached three times the minimum requirements.

This liquidity policy puts CAF in line with other comparable MDBs. While the policy is more restrictive than the Inter-American Development Bank's (IADB, Aaa stable, High liquidity position), it is more in line with the World Bank's (IBRD, Aaa stable, High liquidity position), the Caribbean Development Bank's (CDB, Aa1 stable, Very High liquidity position) and the North American Development Bank's (NADB, Aa1 stable, Very High liquidity position) policies.

Similar to CAF's new guidelines, the NADB's liquidity policy states that "the minimum amount of aggregate liquid asset holdings is equal to the highest consecutive 12 months of the following 18 months of expected debt service obligations, plus committed net loan disbursements (if positive), plus projected operating expenses for the relevant fiscal year." The World Bank sets its liquidity policy equal to the highest consecutive six months of projected debt service obligations, plus one-half of projected net loan disbursements on approved loans. On the other hand, the IADB holds an investment portfolio sufficient to cover at least six months of cash outflows. Finally, the CDB has a policy of 40% of undisbursed commitments and three years of net funding requirements.

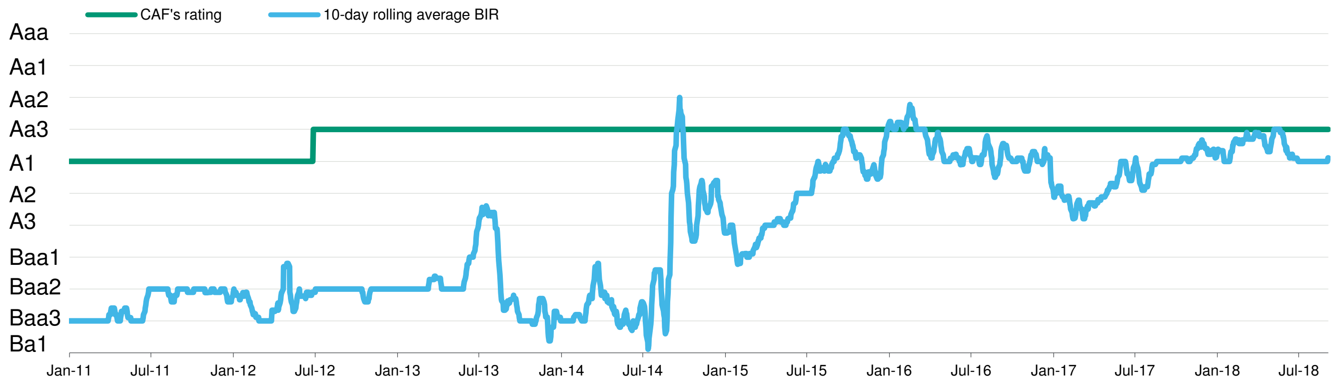
Relatively high but moderating reliance on short-term funding and deposits

While bonds comprise the majority of CAF's financial liabilities, it also relies on short-term funding obtained through its two commercial paper (CP) programs and deposits, which accounted for about 7% and 11% of total liabilities, respectively, as of 31 December 2017. Management seeks to mitigate the risk of a loss of access to short-term funding by maintaining separate CP programs in the US and Europe, and uses both actively. As of 31 December 2017, CAF had a total of nearly $1.8 billion in CP outstanding, down from $2.1 billion in 2016, and $2.6 billion 2015.

Consistent and diversified access to capital markets and private funding

Given CAF's weaker debt-service coverage ratio relative to other MDBs, CAF's management recognizes the importance of establishing and maintaining strong market access and has made concerted efforts to develop diversified sources of funding. CAF has an established and recognized presence in the international capital markets and has demonstrated its ability to raise funds in difficult market conditions. The Bank's broad access to capital markets has resulted in favorable funding costs and attests to investor appetite for a range of medium and long tenors as well as good secondary market trading for its debt issuances. CAF's bond implied rating is relatively stable and since 2015, has generally fluctuated between Aa3 and A2. The gap between the bond implied rating and the market implied rating has narrowed significantly since mid-2012 (see Exhibit 11).

Exhibit 11
The gap between the bond and bond implied rating (BIR) is narrowing



Source: Moody's Investors Service

CAF benefits from significant diversification in the financial markets that it accesses. As of 31 December 2017, CAF had $19.7 billion in bonds outstanding, in 18 different currencies: US dollars, euro, Japanese yen, Colombian pesos, Australian dollars, Swiss francs, Mexican pesos, Peruvian nuevos soles, Norwegian krone, Hong Kong dollars, Turkish lira, South African rand, Brazilian real, Indian rupee, Canadian dollar, Venezuelan bolivar, Bolivian boliviano and Paraguayan Guarani. In 2016, the bank issued its first ever thematic bond, a "water bond," to fund specific water projects. Issued on 28 January 2016 on the Uridashi market, the water bond is a dual-currency bond – with one tranche offered in Turkish lira and another in South African rand – which will mature in 2020. A second and third water bond were issued in February 2016 and again in January 2017, in Japanese yen and Brazilian reais, respectively. The top three currencies in which CAF issues debt (US dollar, euro, and Swiss franc) represent 88% of outstanding bond debt. Virtually all of CAF's debt is swapped to US dollars. In addition, CAF's access to the markets allows it to opportunistically lock in funding costs for its longer-term project financings.

When analyzing an MDB's funding position, we also look at its cost of funding, specifically analyzing the weighted average cost of loans, as measured by the seven-year average interest rate on loan debt. For CAF, the weighted average cost of loan debt is 2.2%, lower than that of APICORP (Aa3 stable, 2.5%) and just moderately higher than NADB's (1.9%).

CAF's management expects that its cost of funding will continue falling over the next several years due to a shift in investor appetite, given that there is more high grade market interest now than in the past. The bank's management has also indicated that the shift in its investor base has led to greater interest on the part of central banks, which it expects will enable it to bring down yields even further. It also plans to increase the size of its issuances to improve secondary market liquidity, though it will take some time before larger issuance sizes will have a meaningful impact on the CAF's average cost of funding.

Strength of member support: Low

Members' willingness to provide extraordinary support is strong, but their ability is relatively limited

Factor 3

Scale | **Very High** | **High** | **Medium** | **Low** | **Very Low**

\+ -

Contractual support primarily manifests itself in the callable capital pledge, which is a form of emergency support. Extraordinary support is a function of shareholders' ability and willingness to support the institution in ways other than callable capital. Strength of member support can increase the preliminary rating range determined by combining factors 1 and 2 by as many as three scores.

Contractual support from members is low

In our assessment of strength of member support, one of the most important criteria is contractual support, as measured by callable capital coverage of the debt stock. Since the majority of CAF's capital is paid-in, it has limited callable capital. Only 19.9% of CAF's capital is callable; of total callable capital, only 50% was from investment grade (IG) countries in 2017. As a result, the debt stock is 3,134% the amount of callable capital from IG countries, resulting in a very low level of contractual support.

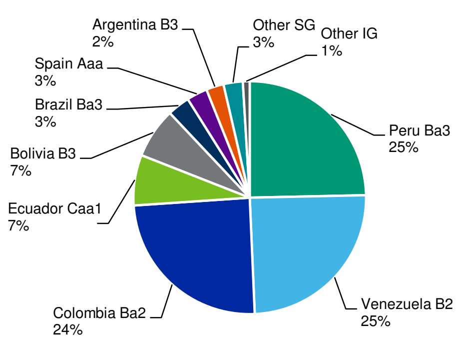
Ability to provide extraordinary support is moderate

In addition to contractual support, extraordinary support, a function of shareholders' ability and willingness to support CAF above and beyond their contractual obligations, is the other subfactor that determines overall strength of member support. We measure ability to provide extraordinary support using the weighted median shareholder rating, which in the case of CAF was Ba1 as of 2017. This represents an improvement since 2006, when the weighted median shareholder rating was two notches lower at Ba3. Nevertheless, it is lower than APICORP's weighted median shareholder rating of A1 and lower than those of nearly all its Aa2- and Aa1-rated peers, except CDB and FLAR, which has the same weighted median shareholder rating of Ba1. CAF's relatively lower weighted median shareholder rating implies that its members would find it more difficult than peers' to provide extraordinary support to the bank, should it become necessary.

In 2017, of the total 19 shareholders, fewer than half (8 out of 19) were IG (see Exhibit 13). In 2005, CAF's only shareholder countries with IG ratings were Chile, Mexico, and Spain. While all three have remained IG, in 2017 Colombia, Panama, Peru, and Uruguay were IG as well. Nevertheless, CAF is different from all of the more highly rated MDBs in that it has no 'Aaa' shareholders. Its only 'Aa' shareholder in 2017, Chile, was downgraded to A1 in 2018 and has less than a 0.5% share.

Exhibit 12

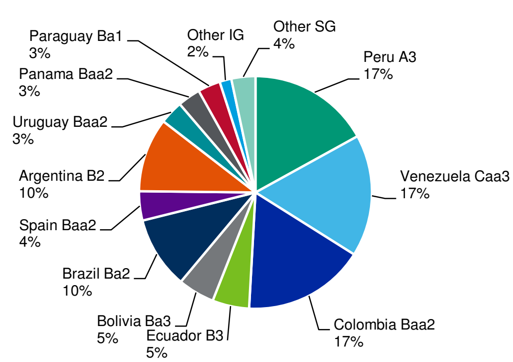
CAF's shareholder base has also diversified...
(Shareholder base, 2005)



Sources: CAF and Moody's Investors Service

Exhibit 13

...and now includes modestly more investment-grade sovereigns
(Shareholder base, 2017)



Sources: CAF and Moody's Investors Service

Members have strong willingness to provide extraordinary support…

CAF's greatest credit weaknesses, the absence of highly rated non-borrowing members from outside the region and low levels of callable capital, are arguably also the root of one of its key strengths. CAF is a development institution in which its borrowers are also its shareholders. This results in members' very strong willingness to support the institution. Although not counted as 'contractual support' in our Supranational Rating Methodology, the bank's high level of paid-in capital reflects this commitment, as do the significant capital increases to which members have subscribed over the last few years. Absent the recent capital increase, relatively high levels of capital contributions through 2017 would have shortened the distance to the limit of authorized capital, eventually curtailing lending growth. The continued capital increase programs demonstrates members' commitment to CAF and affords the institution more room to boost its future operations and fulfill its countercyclical mandate.

Additionally, despite the severe credit stress that Venezuela is going through, the sovereign has remained current not only on its debt service to CAF but also its capital payments due under the capital increase programs. This supports the idea that members see CAF as a key policy institution even when in default to other MDBs.

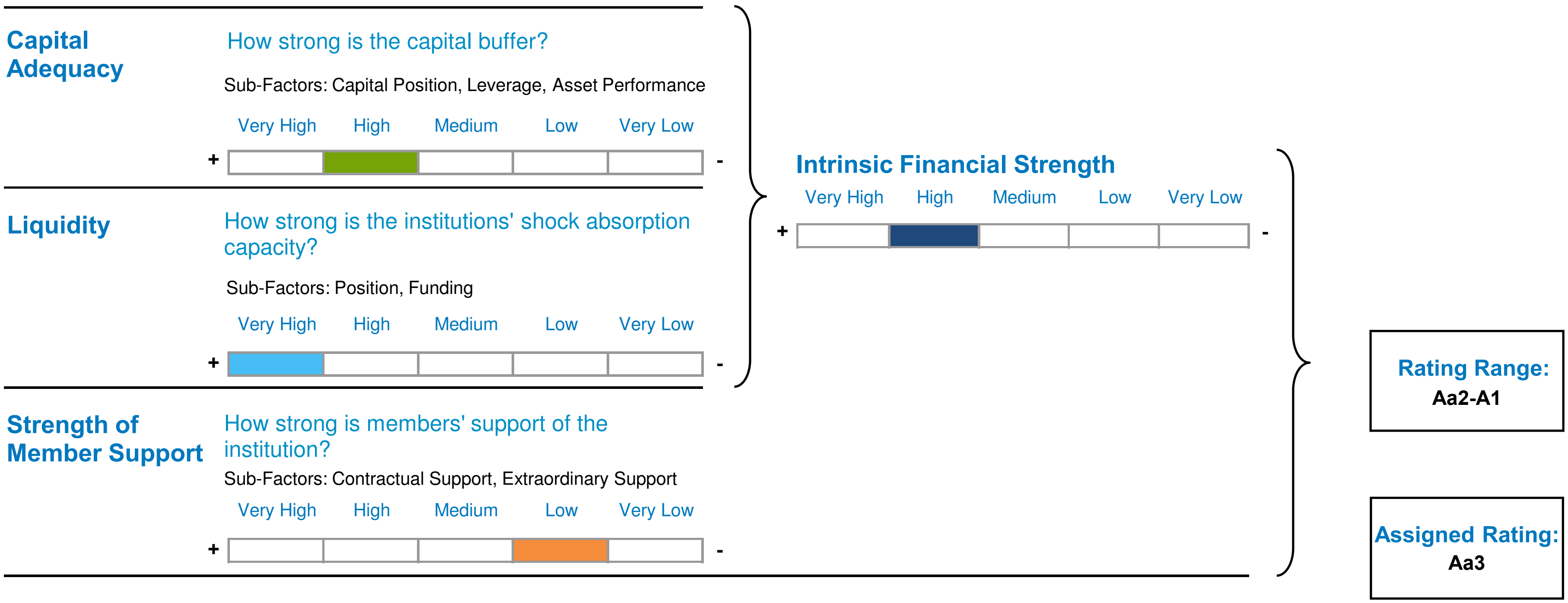
…but high correlation of members and assets constrains members' ability to support

When analyzing MDBs, a high correlation of members and assets is credit negative because it means that shareholders are also borrowers. Therefore, if borrowers were to run into difficulties paying debt owed to CAF, they would also be less able to provide support to the institution. The correlation of members and assets at CAF is high; of the top five shareholders (Peru, Venezuela, Colombia, Argentina, and Brazil), three are also among the top five exposures within the loan portfolio – with the exception of Brazil and Peru. This high correlation of members and assets contributes to our overall assessment that, even despite strong willingness to provide extraordinary support to CAF, members' ability to do so is relatively constrained.

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 14
Supranational rating metrics: CAF



Source: Moody's Investors Service

Comparatives

This section compares credit relevant information regarding CAF 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.

Healthy growth of the loan portfolio has grown CAF's total assets to $38 billion in 2017, many times the Aa-rated median. Growth of the loan portfolio has been partially funded through increased debt, and has a contributed to a debt/useable equity of 206%, somewhat above the Aa-median of 151%. Nonetheless, asset quality remains strong with a lengthy history of low NPLs and an asset-coverage ratio that approximates the Aa median. While CAF's DSCR is higher than the median and most peers, it has come down in recent years and will continue to as management shifts from short-term borrowing to longer-term debt. A key credit weakness is CAF's low strength of member support, with a Ba1 weighted median shareholder rating that only compares to CDB and FLAR, the latter of which is another Latin American MDB who exposed to the same regional and portfolio concentration.

Exhibit 15
CAF key peers

	Year	CAF	NADB	IIC	APICORP	ICD	FLAR	Aa Median
Rating/Outlook		Aa3/STA	Aa1/STA	Aa1/STA	Aa3/STA	Aa3/STA	Aa2/STA	--
Total Assets (US$ million)	2017	38,112	2,146	2,185	6,237	3,001	6,262	6,249
Factor 1		**High**	**High**	**Very High**	**Very High**	**Medium**	**Very High**	**--**
Usable Equity/Gross Loans Outstanding + Equity Operations (%)[1]	2017	46.2	49.1	143.5	51.5	62.9	677.0	51.5
Debt/Usable Equity (%)[1]	2017	206.0	233.4	44.8	124.4	176.7	0.0	150.6
Gross NPLs/Gross Loans Outstanding (%)[2]	2017	0.6	1.1	0.9	2.0	13.4	0.0	0.5
Factor 2		**Very High**	**High**	**Very High**	**High**	**High**	**Very High**	**--**
ST Debt + CMLTD/Liquid Assets (%)[3]	2017	36.1	31.9	1.7	7.1	15.4	0.0	26.1
Bond-Implied Ratings (Long-Term Average)	2011-2017	A3	A1	--	--	Baa1	--	Aa3
Intrinsic Financial Strength (F1+F2)		**High**	**High**	**Very High**	**Very High**	**Medium**	**Very High**	**--**
Factor 3		**Low**	**High**	**Medium**	**Very High**	**Medium**	**Low**	**--**
Total Debt/Discounted Callable Capital (%)[4]	2017	3134.1	27.7	--	447.6	0.0	--	122.8
Weighted Median Shareholder Rating (Year-End)	2017	Ba1	A1	A3	A1	Aa2	Ba1	A1
Rating Range (F1+F2+F3)		**Aa2-A1**	**Aaa-Aa2**	**Aaa-Aa2**	**Aaa-Aa2**	**A1-A3**	**Aaa-Aa2**	**--**

Notes:
(1) Usable equity is total shareholder's equity and excludes callable capital
(2) Nonperforming loans
(3) Short-term debt and currently maturing long-term debt
(4) Callable capital pledge by members rated Baa3 or higher, discounted by Moody's 30-year expected loss rates associated with ratings.
Source: Moody's Investors Service

DATA AND REFERENCES

Rating history

Exhibit 16

CAF[1]

	Issuer Rating		Senior Unsecured	Outlook	
	Long-term	Short-term			Date
Rating Raised	Aa3	--	Aa3	--	Jun-12
Rating Raised	A1	--	A1	--	Jun-05
Outlook Assigned	--	--	--	STA	Nov-03
Rating Assigned	--	P-1	--	--	Dec-02
Rating Raised	A2	--	A2	--	May-01
Rating Raised	A3	--	A3	--	Jun-97
Review for Upgrade	Baa2	--	Baa2	--	Jan-97
Rating Raised	Baa2	--	Baa2	--	Jan-96
Rating Assigned	Baa3	--	--	--	Dec-94
Rating Assigned	--	--	Baa3	--	Jun-93

Notes: [1] Table excludes rating affirmations. Please visit the issuer page for CAF for the full rating history.
Source: Moody's Investors Service

Annual statistics

Exhibit 17

	2011	2012	2013	2014	2015	2016	2017
Balance Sheet, USD Thousands							
Assets							
Cash & Equivalents	1,895,893	1,732,679	2,473,478	3,017,022	3,992,817	2,721,324	3,516,929
Securities	3,760,325	5,453,137	5,831,244	7,130,791	6,787,875	9,267,953	9,194,991
Derivatives	703,264	772,448	417,658	383,703	215,509	118,353	532,668
Net Loans	14,773,075	16,152,774	17,884,562	18,998,913	20,276,867	21,817,650	23,463,318
Net Equity Investments	111,889	146,811	228,385	292,345	328,390	386,051	433,025
Other Assets	290,904	345,862	582,993	635,397	868,237	1,357,657	970,635
Total Assets	**21,535,350**	**24,603,711**	**27,418,320**	**30,458,171**	**32,469,695**	**35,668,988**	**38,111,566**
Liabilities							
Borrowings	11,187,828	14,308,872	15,757,860	17,191,398	19,081,389	20,679,489	22,906,568
Derivative Liabilities	93,869	60,067	182,824	383,086	808,097	1,021,292	553,594
Other Liabilities	3,902,400	3,369,710	3,661,087	4,120,450	3,056,115	3,494,564	3,529,668
Total Liabilities	**15,184,097**	**17,738,649**	**19,601,771**	**21,694,934**	**22,945,601**	**25,195,345**	**26,989,830**
Equity							
Subscribed Capital	4,782,185	5,187,154	5,495,040	5,804,155	6,511,460	7,219,455	7,987,370
Less: Callable Capital	1,552,820	1,550,439	1,553,660	1,553,660	1,553,660	1,589,660	1,589,660
Plus: Additional Paid-In Capital	739,733	782,523	1,342,903	1,911,487	2,354,537	2,890,091	3,259,471
Equals: Paid-In Capital	3,969,098	4,419,238	5,284,283	6,161,982	6,845,812	7,673,636	8,243,766
Retained Earnings (Accumulated Loss)	152,579	160,169	206,757	137,639	77,630	122,717	76,399
Accumulated Other Comprehensive Income (Loss)	-	-	(317)	32	(571)	(1,563)	-
Reserves	2,229,576	2,285,655	2,325,826	2,463,583	2,601,223	2,678,853	2,801,571
Other	57,748	90,313	273,941	274,069	491,379	937,342	452,518
Total Equity	**6,351,253**	**6,865,062**	**7,816,549**	**8,763,236**	**9,524,094**	**10,473,643**	**11,121,736**

	2011	2012	2013	2014	2015	2016	2017
Income Statement, USD Thousands							
Net Interest Income	**188,551**	**225,732**	**187,935**	**227,638**	**238,532**	**292,510**	**315,634**
Interest Income	390,109	493,272	468,973	526,181	573,216	752,966	925,020
Interest Expense	201,558	267,540	281,038	298,543	334,684	460,456	609,386
Net Non-Interest Income	**36,828**	**22,577**	**41,051**	**48,927**	**39,918**	**78,855**	**74,023**
Net Commissions/Fees Income	35,845	18,869	30,434	40,868	39,982	31,961	31,845
Non-Interest Income (Loss) from Liquid Assets	-	-	-	-	6,504	21,726	36,183
Other Income	2,404	482	3,687	4,998	(3,136)	32,662	3,171
Other Operating Expenses	**84,570**	**91,851**	**105,646**	**117,374**	**182,117**	**210,377**	**243,396**
Administrative, General, Staff	81,006	90,988	103,997	116,678	125,072	140,973	150,135
Grants & Programs[1]	-	-	-	-	54,000	68,000	92,064
Other Expenses	3,564	863	1,649	696	3,045	1,404	1,197
Pre-Provision Income	**140,809**	**156,458**	**123,340**	**159,191**	**96,333**	**160,988**	**146,261**
Loan Loss Provisions	(11,771)	(4,865)	(83,417)	21,552	18,703	38,270	69,902
Net Income (Loss)	**152,580**	**161,323**	**206,757**	**137,639**	**77,630**	**122,718**	**76,359**
Other Accounting Adjustments and Comprehensive Income	-	-	(317)	349	(603)	(992)	1,563
Comprehensive Income (Loss)	**152,580**	**161,323**	**206,440**	**137,988**	**77,027**	**121,726**	**77,922**

[1] Prior to 2015, Grants & Programs were accounted for as a below-the-line operating expense.

	2011	2012	2013	2014	2015	2016	2017
Financial Ratios							
Capital Adequacy, %							
Usable Equity / (Gross Loans + Equity)	42.1	41.6	42.9	45.1	45.9	46.8	46.2
Debt/Usable Equity	176.2	208.4	201.6	196.2	200.3	197.4	206.0
Allowance For Loan Losses / Gross NPLS	1,602.1	1,602.3	-	337.0	-	52.8	48.5
NPL Ratio: Non-Performing Loans / Gross Loans	0.1	0.0	-	0.1	-	0.5	0.6
Return On Average Assets	0.8	0.7	0.8	0.5	0.2	0.4	0.2
Interest Coverage Ratio (X)	1.8	1.6	1.7	1.5	1.2	1.3	1.1
Liquidity, %							
St Debt + CMLTD / Liquid Assets	50.3	56.2	52.3	33.1	42.9	34.6	36.1
Bond-Implied Rating	Baa2	Baa2	A3	A3	A2	A2	A1
Liquid Assets / Total Debt	50.6	50.2	52.7	59.0	56.5	58.0	55.5
Liquid Assets / Total Assets	26.3	29.2	30.3	33.3	33.2	33.6	33.4
Strength of Member Support, %							
Callable Capital (CC) of Baa3-Aaa Members/Total CC	-	-	58.8	58.8	58.8	51.8	49.3
Total Debt/Discounted Callable Capital	1,403.0	2,210.7	1,910.9	2,039.9	2,610.2	2,833.7	3,134.1
Weighted Median Shareholder Rating (Year-End)	-	-	Baa3	Baa2	Baa3	Ba1	Ba1

Exhibit 20

Gross loans outstanding and equity investments
(% of total)

(% of total)	2009	2010	2011	2012	2013	2014	2015	2016	2017
– Country Detail									
Venezuela	15.1	16.2	17.7	17.2	16.5	15.7	15.1	15.1	13.9
Ecuador	17.6	17.7	16.8	16.2	15.2	14.8	14.9	15.1	14.5
Peru	16.0	15.8	17.2	16.3	13.8	12.2	11.2	10.3	9.6
Argentina	9.9	10.1	12.8	12.9	13.7	14.2	13.6	12.9	13.6
Colombia	14.5	14.3	12.1	11.2	10.0	9.2	10.2	10.6	10.6
Bolivia	9.9	9.4	9.5	9.8	9.7	10.0	9.9	10.1	10.5
Brazil	8.9	8.1	6.6	7.7	9.2	10.1	10.1	9.0	9.0
Panama	1.1	1.0	2.1	3.6	4.9	6.6	6.3	6.7	6.4
Uruguay	5.0	4.8	2.3	2.0	2.1	2.7	3.2	4.3	4.4
Others	2.2	2.6	2.9	3.1	4.9	4.6	5.4	5.9	7.5
Total									**100**
– Sector Detail									
Manufacturing industry	2.2	1.5	1.9	1.3	1.7	2.1	1.0	1.0	0.0
Electricity, gas and water supply	25.4	29.7	33.5	33.8	34.1	34.6	35.0	35.0	33.0
Transport, warehousing and communications	31.3	31.7	35.5	35.6	35.2	37.0	36.0	36.0	32.0
Commercial banks	12.8	12.3	7.2	7.0	7.8	6.2	8.0	8.0	9.0
Development banks	1.2	1.8	1.7	3.0	3.3	3.0	3.0	3.0	3.0
Social and other infrastructure programs	26.0	22.3	19.7	18.5	16.6	15.9	16.0	16.0	21.0
Others	1.2	0.8	0.5	0.7	1.2	1.2	1.0	1.0	1.0
Total									**100**

Source: CAF

Moody's related publications

- **Sector Comment:** Exposure risks to Venezuela vary, but strong buffers contain negative credit pressures, 7 June 2018
- **Credit Opinion:** CAF (Corporacion Andina de Fomento) Aa3 Stable: Regular update, 27 April 2018
- **Rating Action:** Moody's affirms CAF's Aa3 rating; stable outlook, 26 October 2017
- **Rating Methodology**: Multilateral Development Banks and Other Supranational Entities, 17 September 2018

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
- CAF website

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Endnotes

1 The ACR we use in our Supranational Rating Methodology is calculated as usable equity/(loans + equity operations + risk-weighted liquid assets), however due to the confidential nature of risk-weighted liquid assets, we use the following calculation for ACR in the text of the report: usable equity/(loans + equity operations).

2 Although we incorporate the weighted average borrower rating into our Supranational Rating Methodology, that information is confidential. For this reason, we do not publish the weighted average borrower rating.

3 Unpaid subscribed capital is capital that has been subscribed and will be paid in future years.

4 As do most MDBs, CAF has a share of its capital that is callable – an unconditional and full-faith obligation of each member country to provide additional capital for the sole purpose of servicing debt, the fulfillment of which is independent of the action of other shareholders.

5 There was an isolated NPL in 2008 for $112,359 (0.001% of gross loans) that was quickly resolved.

6 In 2012, a single loan for $4.1 million (0.025% of the total loan portfolio) was written off.

7 Sovereign loans include those granted to national, regional, or local governments or decentralized institutions and other loans fully guaranteed by national governments.

8 Non-sovereign loans include those granted to corporate and financial sectors, among others, which are not guaranteed by national governments (for both public and private sectors).

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