

## CREDIT OPINION

20 October 2021

Update

✓ Rate this Research

### RATINGS

#### Banco Regional de Desenv do Extremo Sul

Domicile	Porto Alegre, Rio Grande do Sul, Brazil
Long Term CRR	Not Assigned
Long Term Issuer Rating	Not Available
Type	Not Available
Outlook	Stable

Please see the [ratings section](#) at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

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## Banco Regional de Desenv do Extremo Sul

### Update to credit analysis

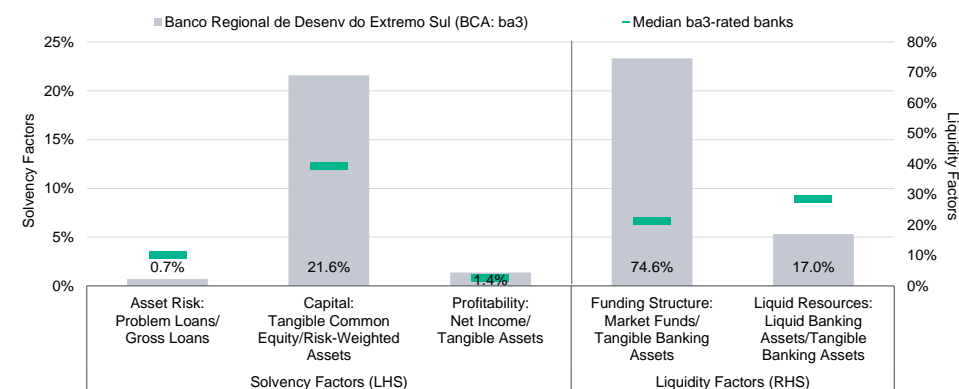
#### Summary

[Banco Regional de Desenv do Extremo Sul's](#) (BRDE) BCA of ba3, reflects the bank's established role in fostering development in the relatively prosperous southern states of Brazil, its position as one of the largest on-lender of [Banco Nac. de Desenv. Economico e Social's](#) (BNDES, Ba2/Ba2 stable, ba2<sup>1</sup>) funds to the agricultural sector, and sound capitalization levels. BRDE's stable, but highly concentrated, funding structure, composed of funds predominantly sourced from BNDES, is a key factor supporting its ratings. The BCA also incorporates BRDE's loan book concentration by sector and borrower owing to its footprint in the southern states whose economies have relevant contribution from agriculture, in addition to a moderate profitability due to its development bank role.

BRDE's Ba3 issuer rating is derived from its BCA of ba3 and does not receive any uplift from our assessment of moderate affiliate support from its owners.

Exhibit 1

#### Rating Scorecard - Key financial ratios Scorecard ratios as of June 2021



For the asset risk and profitability ratios, we calculate the average of the three latest year-end numbers and the latest quarterly data if available, and the ratio used is the weaker of the average and the latest period. For the capital ratio, we use the latest reported figure. For the funding structure and liquid resources ratios, we use the latest year-end figures.

Source: Moody's Investors Service

## Credit strengths

- » Established role as a regional development bank, with steady loan growth and focus on the agricultural industry
- » Sufficient capitalization levels
- » Limited susceptibility to political influence because of its three-state ownership

## Credit challenges

- » Concentrated funding structure, with high reliance on funds from BNDES
- » Asset risk and profitability challenges stemming from adverse economic conditions

## Rating outlook

The outlook on BRDE's ratings is stable and reflects our expectation that the bank's capitalization will offset potential asset risk and profitability challenges over the next 12-18 months

## Factors that could lead to an upgrade

- » BRDE's ratings could face upward pressure if the bank's asset risk sustains at low levels and its profitability recovers. Significant diversification of the bank's funding sources would also be positive, particularly if this funding is lower cost and stable.

## Factors that could lead to a downgrade

- » A significant weakening of BRDE's financial fundamentals, resulting from a larger-than-expected deterioration in the quality of the loan book and an ensuing reduction in capitalization levels, could have a negative effect on the bank's ratings.

## Key indicators

Exhibit 2

### Banco Regional de Desenv do Extremo Sul (Consolidated Financials) [1]

	06-21 <sup>2</sup>	12-20 <sup>2</sup>	12-19 <sup>2</sup>	12-18 <sup>2</sup>	12-17 <sup>2</sup>	CAGR/Avg. <sup>3</sup>
Total Assets (BRL Million)	16,109.2	16,652.0	16,871.8	17,255.4	17,179.7	(1.8) <sup>4</sup>
Total Assets (USD Million)	3,210.4	3,205.9	4,194.1	4,452.1	5,179.1	(12.8) <sup>4</sup>
Tangible Common Equity (BRL Million)	3,351.4	3,223.3	3,024.9	2,721.7	2,530.0	8.4 <sup>4</sup>
Tangible Common Equity (USD Million)	667.9	620.6	752.0	702.2	762.7	(3.7) <sup>4</sup>
Problem Loans / Gross Loans (%)	0.6	0.4	0.4	1.4	3.0	1.2 <sup>5</sup>
Tangible Common Equity / Risk Weighted Assets (%)	21.6	19.5	19.2	17.8	16.3	18.9 <sup>6</sup>
Problem Loans / (Tangible Common Equity + Loan Loss Reserve) (%)	2.1	1.6	1.7	6.0	13.6	5.0 <sup>5</sup>
Net Interest Margin (%)	4.8	4.3	4.3	4.6	4.9	4.6 <sup>5</sup>
PPI / Average RWA (%)	3.4	3.0	3.3	3.8	3.3	3.4 <sup>6</sup>
Net Income / Tangible Assets (%)	1.6	1.2	1.6	1.0	0.7	1.2 <sup>5</sup>
Cost / Income Ratio (%)	32.4	36.0	32.6	30.7	42.5	34.8 <sup>5</sup>
Market Funds / Tangible Banking Assets (%)	73.7	74.6	77.5	77.2	79.9	76.6 <sup>5</sup>
Liquid Banking Assets / Tangible Banking Assets (%)	16.4	17.0	18.2	20.0	17.5	17.8 <sup>5</sup>
Gross Loans / Due to Customers (%)	130897.2	--	--	--	--	130897.2 <sup>5</sup>

[–] Further to the publication of our revised methodology in July 2021, for issuers that have "high trigger" additional Tier 1 instruments outstanding, not all ratios included in this report reflect the change in treatment of these instruments. [1] All figures and ratios are adjusted using Moody's standard adjustments. [2] Basel III - fully loaded or transitional phase-in; LOCAL GAAP. [3] May include rounding differences because of the scale of reported amounts. [4] Compound annual growth rate (%) based on the periods for the latest accounting regime. [5] Simple average of periods for the latest accounting regime. [6] Simple average of Basel III periods.

Sources: Moody's Investors Service and company filings

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on [www.moody's.com](http://www.moody's.com) for the most updated credit rating action information and rating history.

## Profile

Founded in 1961, Banco Regional de Desenvolvimento do Extremo Sul (BRDE) is owned by the states of Rio Grande do Sul, Santa Catarina and Parana, which together contribute around 17% of Brazil's GDP. The bank lends directly to private-sector companies, largely agricultural producers and to cooperatives, as well as to infrastructure projects.

According to its mandate to foster development in the south of Brazil, BRDE's operations are focused on the relatively prosperous states of Parana, Santa Catarina and Rio Grande do Sul. From 2012 to 2016, the bank's loan operations expanded at a compound annual growth rate of around 14% and remained flat after this period. The bank has acted as a conduit for growth in the agricultural industry in the region, however, the loan book decreased 1.6% in June 2021 compared with June 2020, while loan disbursement decreased 3.5% over the same period, reaching BRL1.2 billion, despite BRDE's strong relationships with regional credit cooperatives, which channel resources to smaller producers and provide strong loan guarantees.

## Detailed credit considerations

### Focus on the agricultural industry in the south of Brazil

As a result of its importance in southern Brazil, the agricultural sector represents more than 60% of BRDE's loans and is split among cattle breeding, protein production, multiple crops, warehouse services and transformation companies. Among the main credit lines offered by the bank are loans to finance machinery acquisition, investments to improve production plants or construct new plants and some working capital financing. For the most part, the bank provides long-term loans, with an average maturity of more than five years, and also lends to infrastructure projects, mostly in the energy industry.

Similar to other regional development banks, BRDE is also involved in managing funds for federal and state governments. Alongside BNDES, the bank is an agent of the Fundo Setorial do Audiovisual (FSA) fund, which supports film-making and small-scale television industries. BRDE also manages a development fund that channels loans to municipalities in Santa Catarina (FUNDAM). The bank is responsible for the origination of these loans and for monitoring credit allocation, but it does not share credit risk with public funds and receives around 3% of disbursements as management fees.

### Low problem loan level will be strained by the adverse economic conditions

As of June 2021, BRDE's problem loan<sup>2</sup> ratio was 0.6%, slightly lower than 0.7% twelve months earlier. The bank's volume of problem loans remains low, significantly below that of retail-oriented government-owned banks and in line with that of BNDES, its main source of funding.

In May 2021, the bank extended payment deferrals to SMEs affected by a new COVID-19 wave, mainly in the restaurant, tourism, and transportation segments. After government emergency measures to support the economy expire by YE2020, asset quality can deteriorate in 2021, however BRDE has traditionally maintained a high reserve coverage of 422.1% of problem loans as of June 2021, up from 414.5% a year earlier, which alleviates the pressure of an increase in problem loans. Net charge-offs represented a gain of 0.9% of gross loans in June 2021, from a gain of 0.5% a year earlier, reflecting the bank recoveries in the period. Most of the bank's operations are backed by guarantees, which does result in higher recovery ratios of its charge-offs.

BRDE's loan book also shows credit risks associated with relatively high geographic and sector concentration, as well as by borrower type. The bank's focus on the southern states, despite their stronger economic growth than that of other states, constrains its operations to a single region, which also results in a less diversified revenue structure than that of its peers with nationwide coverage.

Similarly, the bank's loan book also features a high concentration in the agriculture segment, leading to higher credit risk than if its operations covered a variety of segments, such as BNDES. The exposure to agriculture, however, has been positive for BRDE in light of the sector's recent good performance, which has propped up regional and national economic growth.

### High capitalization buffers to remain adequate following previous dips

BRDE's capitalization, which we measure as tangible common equity/risk-weighted assets (RWA)<sup>3</sup>, increased to 21.6% as of June 2021 from 19.6% in June 2020, and its regulatory Common Equity Tier 1 capital ratio was of 20.7% as of June 2021, well above the minimum regulatory.

We expect BRDE to maintain its capital above the regulatory minimum levels, particularly in light of the creation of a new resolution in 2015, through which the bank will transfer profits into its capital reserves semiannually. Moreover, the bank's bylaws require that the totality of earnings be retained and incorporated into the bank's capital reserves.

### **Profitability recovers due to lower loss provision**

Although BRDE's mandate is not focused on profitability but on increasing lending with the objective of development to ensure economic prosperity and job creation in the south of Brazil, the bank's recurring earnings generation has historically been adequate to maintain capital at sound levels. Net income increased 57.1% in H1 2021 compared to H1 2020, incrementing net income to tangible assets ratio to 1.6% from 1.0% in the same period, mainly due to lower provisions.

In H1 2021 there was a reversal of provisions of BRL3 million, while in the same period of 2020 the bank had built a loan loss provision of BRL75 million. Net interest income increased 19.8% in the same period, mainly because of lower interest expenses. On the other hand, operating expenses increased 20% in H1 2021 from a year earlier, mainly due to higher personnel expenses and other administrative costs.

We expect profitability to be constrained by the adverse economic conditions that can increase loan loss provisions and reduce business volume.

### **A still concentrated funding base leaves BRDE susceptible to BNDES' lending policies, despite efforts to reduce funding concentration**

Because of its policy role as a development bank, BRDE is not allowed to take deposits from individuals and companies. As a result, of the bank's total funding of BRL11.9 billion as of June 2021, BNDES funds accounted for 68.2% of total loans. BRDE was the second 2<sup>nd</sup> largest disburser of BNDES' credit lines in the south region of Brazil in H1 2021, despite the bank operates only in the south region of Brazil. The rest of BRDE's funding base is composed of resources from [Caixa Economica Federal \(CAIXA\)](#) (Ba2/Ba2 stable, ba3), Fundo de Garantia do Tempo de Serviço (FGTS), [Banco do Brasil S.A.](#) (Ba2/(P)Ba2 stable, ba2) and the federal government, including Financiadora de Estudos, Projetos (FINEP) Fundo Geral do Turismo (FUNGETUR), Fundo de Defesa da Economia Cafeeira (FUNCAFE) and Fundo Constitucional de Financiamento do Centro-Oeste (FCO). In 2018, BRDE raised foreign funding for the first time with multilateral agencies such as the Agence Francaise de Developpement (AFD), [European Investment Bank](#) (EIB, Aaa stable), and in 2020 with [Corporacion Andina de Fomento](#) (CAF, Aa3 stable). Additionally, in May 2021, [Inter-American Development Bank](#) (Aaa stable) approved a USD 150 million line to the bank, focusing on SME, to be disbursed over the years. BRDE has also been using its own capital to finance its new loans.

In 2021, as a pilot project, BRDE issued three tranches of Bank Receipt Deposits (RDB) raising BRL 30 million through its collateral agencies Rio Grande do Sul, Santa Catarina and Paraná. Also, as part of BRDE's efforts to diversify its funding, BNDES' resources represented 57.6% of new loans in 2020 compared with 94.0% in 2017. The bank is also using its own resources for lending, which accounted for more than 19.6% of new loans in 2020. However, the high concentration of funding remains and weighs negatively on BRDE's creditworthiness. While funding from BNDES is relatively long term and, hence, more stable than market funding, the pending elimination of BNDES' subsidized lending rates will cause BRDE's spreads on new loans to remain compressed. Although management is attempting to diversify its funding sources, we expect the lion's share of funding to continue to come from BNDES.

### **BRDE's rating is supported by Brazil's Moderate- Macro Profile**

Brazil's Moderate- Macro Profile incorporates the country's large-scale and highly diversified economy, despite the sharp decline in growth in 2020 because of the negative effect of the coronavirus outbreak. We expect Brazil's economy to contract by 5.7% in 2020 before rebounding in 2021 with 3.3% growth. The pandemic will have a direct negative effect on Brazilian banks' profitability in 2020, as it weakens asset quality in 2021. However, we expect banks pre-provision earning generation to improve as business volumes benefit from a continued recovery of economic activity. Improving profits will support capital in coming quarters. Our view of Brazil's operating environment also considers challenges related to low government effectiveness and political developments that could still negatively affect the sweeping structural reform agenda. Our macro profile also reflects Brazil's favorable credit conditions that will benefit from a low interest rate environment supporting credit demand, borrowers' repayment capacity and private consumption.

## ESG considerations

BRDE's exposure to environmental risks is low, consistent with our general assessment for the global banking sector. See [Environmental risks heat map](#), for further information.

Overall, we expect banks to face moderate social risks. The most relevant social risks for banks arise from the way they interact with their customers. Social risks are particularly high in the area of data security and customer privacy, which are partly mitigated by sizable technology investments and banks' long track record of handling sensitive client data. Fines and reputational damage because of product mis-selling or other types of misconduct are a further social risk. Social trends are also relevant in a number of areas, such as shifting customer preferences toward digital banking services increasing information technology costs, aging population concerns in several countries affecting the demand for financial services or socially driven policy agendas that may translate into regulations that affect banks' revenue base. See our [Social risk heat map](#) for further information. We regard the coronavirus outbreak as a social risk under our ESG framework, given the substantial implications for public health and safety.

Governance is highly relevant for BRDE, as it is to all entities in the banking industry. Corporate governance weaknesses can lead to a deterioration in a bank's credit quality, while governance strengths can benefit its credit profile. Governance risks are largely internal rather than externally driven. For BRDE, we do not have any particular governance concern. Nonetheless, corporate governance remains a key credit consideration and requires ongoing monitoring.

## Support and structural considerations

### Notching considerations

In the absence of a bail-in resolution regime framework in Brazil, the ratings follow the additional notching guidelines, according to our Banks rating methodology. In these cases, the approach takes into account other features specific to debt classes, resulting in additional notching from the issuer's Adjusted BCA.

### Affiliate support

We believe there is a moderate probability of affiliate support to BRDE from its owner states. Therefore, in applying our Joint Default Analysis based on the State of Parana's rating, BRDE's Adjusted BCA of ba3 receives no uplift from its ba3 standalone BCA.

### Government support

We believe there is a low likelihood of government support for BRDE's liabilities. This reflects the bank's reduced market share of deposits in Brazil.

### Counterparty Risk (CR) Assessment

**BRDE's CR Assessment is positioned at Ba2(cr)/Not Prime (cr)**

BRDE's CR Assessment is positioned at Ba2(cr) and Not Prime (cr), which is one notch above the bank's Adjusted BCA of ba3.

### Counterparty Risk Rating (CRR)

**BRDE's CRRs are positioned at Ba2/NP**

BRDE's global local-currency CRRs are positioned at Ba2 and Not Prime, one notch above the bank's Adjusted BCA, reflecting the lower probability of default of CRR liabilities and our expectation of a normal level of loss given default.

### About Moody's Bank Scorecard

Our Scorecard is designed to capture, express and explain in summary form our Rating Committee's judgment. When read in conjunction with our research, a fulsome presentation of our judgment is expressed. As a result, the output of our Scorecard may materially differ from that suggested by raw data alone (though it has been calibrated to avoid the frequent need for strong divergence). The Scorecard output and the individual scores are discussed in rating committees and may be adjusted up or down to reflect conditions specific to each rated entity.

## Rating methodology and scorecard factors

Exhibit 3

### Banco Regional de Desenv do Extremo Sul

#### Macro Factors

**Weighted Macro Profile**      **Moderate**    **100%**

Factor	Historic Ratio	Initial Score	Expected Trend	Assigned Score	Key driver #1	Key driver #2
Solvency						
Asset Risk						
Problem Loans / Gross Loans	0.7%	a3	↔	b1	Sector concentration	
Capital						
Tangible Common Equity / Risk Weighted Assets (Basel III - transitional phase-in)	21.6%	a3	↔	baa3	Expected trend	
Profitability						
Net Income / Tangible Assets	1.4%	baa3	↔	b1	Earnings quality	
Combined Solvency Score		baa1		ba2		
Liquidity						
Funding Structure						
Market Funds / Tangible Banking Assets	74.6%	caa3	↔	b2	Extent of market funding reliance	
Liquid Resources						
Liquid Banking Assets / Tangible Banking Assets	17.0%	ba3	↔	ba3		
Combined Liquidity Score		b3		b1		
Financial Profile				ba3		
Qualitative Adjustments				Adjustment		
Business Diversification				0		
Opacity and Complexity				0		
Corporate Behavior				0		
Total Qualitative Adjustments				0		
Sovereign or Affiliate constraint				Ba2		
BCA Scorecard-indicated Outcome - Range				ba2 - b1		
Assigned BCA				ba3		
Affiliate Support notching				-		
Adjusted BCA				ba3		

Instrument Class	Loss Given Failure notching	Additional notching	Preliminary Rating Assessment	Government Support notching	Local Currency Rating	Foreign Currency Rating
Counterparty Risk Rating	1	0	ba2	0	Ba2	Ba2
Counterparty Risk Assessment	1	0	ba2 (cr)	0	Ba2(cr)	
Senior unsecured bank debt	0	0	ba3	0	Ba3	

[1] Where dashes are shown for a particular factor (or sub-factor), the score is based on non-public information.

Source: Moody's Investors Service

## Ratings

Exhibit 4

Category	Moody's Rating
<b>BANCO REGIONAL DE DESENV DO EXTREMO SUL</b>	
Outlook	Stable
Counterparty Risk Rating	Ba2/NP
Baseline Credit Assessment	ba3
Adjusted Baseline Credit Assessment	ba3
Counterparty Risk Assessment	Ba2(cr)/NP(cr)
Issuer Rating -Dom Curr	Ba3
ST Issuer Rating -Dom Curr	NP

Source: Moody's Investors Service

## Endnotes

- <sup>1</sup> The bank ratings shown in this report are the bank's domestic deposit rating, senior unsecured debt rating (where available) and Baseline Credit Assessment.
- <sup>2</sup> We consider as problem loans the loans overdue rated between E and H under Brazilian Central Bank's resolution 2,682/99.
- <sup>3</sup> Our preferred measure of capitalization, which deducts from capital the intangible assets and a significant portion of deferred tax assets that do not provide significant loss absorption, and we adjust the bank's RWA by applying a risk factor of 100% to its significant holdings of the Brazilian government securities, weighted 0% by local regulations.



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Japan 81-3-5408-4100  
EMEA 44-20-7772-5454