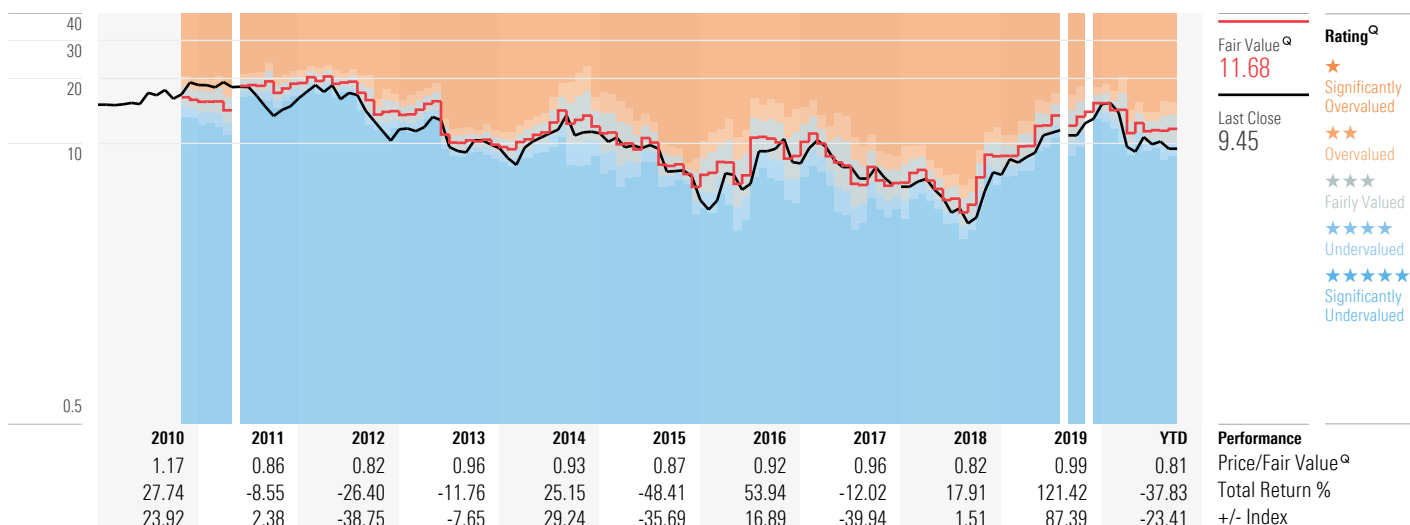


Cia Paranaense De Energia Copel Class B **XCOP** ★★★★★ Q 25 Sep 2020, 22:28 UTC

Economic Moat ^Q	Uncertainty ^Q	Price/Fair Value ^Q	Trailing Dividend Yield %	Market Cap	Investment Style	Sector	Industry
None	High	0.8	5.71	2.6341 Bil	Mid Value	Utilities	Utilities - Diversified



Total Return % as of 25 Sep 2020. Last Close as of 25 Sep 2020. Fair Value as of 25 Sep 2020, 22:28 UTC. Index: Morningstar Brazil GR BRL.

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Valuation^Q as of 25 Sep 2020



Fair Value^Q
11.68
Uncertainty^Q:
High

Last Close
9.45

XCOP is undervalued at a 19% discount.

Economic Moat^Q
None

Financial Health^Q
Moderate

1-Star Price^Q
> 15.60

5-Star Price^Q
< 8.75

Financials as of 25 Sep 2020 (Fiscal Year End 31 Dec 2020)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	YTD	Fiscal
7	8	8	9	14	15	13	14	15	16	9	Revenue (Bil)
933	1,305	992	1,113	1,644	2,034	1,822	2,040	2,258	3,084	2,354	Operating Income (Mil)
13.52	16.79	11.69	12.12	11.75	13.61	13.91	14.54	15.12	18.98	26.68	Operating Margin (%)
988	1,158	701	1,073	1,206	1,110	896	1,034	1,407	1,990	2,120	Net Income (Mil)
3.45	4.04	2.44	3.74	4.21	3.87	3.13	3.61	4.91	6.94	7.75	Diluted Earnings/Share
1,248	1,149	1,419	1,338	1,091	1,321	1,477	989	1,771	2,945	1,843	Operating Cash Flow (Mil)
-1,037	-1,642	-1,727	-1,719	-2,149	-1,721	-2,213	-2,012	-1,497	-548	-180	Capital Spending (Mil)
211	-493	-308	-382	-1,058	-401	-736	-1,023	274	2,397	1,663	Free Cash Flow (Mil)
274	274	274	274	274	274	274	274	274	274	274	Avg Shares Outstand(Mil)
0.64	1.99	—	—	—	0.93	1.25	2.96	1.16	2.85	0.54	Dividend Per Share

Valuation as of 25 Sep 2020

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Current	Calendar
1.17	0.86	0.82	0.96	0.93	0.87	0.92	0.96	0.82	0.99	0.81	Price/Fair Value ^Q
1.89	1.41	1.05	0.91	0.92	0.41	0.58	0.54	0.57	1.21	0.96	Price/Sales
16.25	9.57	9.17	11.00	8.32	6.60	5.55	17.25	8.17	9.52	5.32	Price/Earnings
9.65	7.77	6.87	5.05	12.01	8.75	4.31	4.76	6.17	8.32	4.96	Price/Cash Flow
1.21	0.91	0.69	0.65	0.76	0.47	0.50	0.45	0.53	1.07	0.87	Price/Book

Operating Performance as of 25 Sep 2020 (Fiscal Year End 31 Dec 2020)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Q3	Fiscal (%)
6.23	6.26	3.47	4.84	4.95	4.37	3.23	3.25	4.07	5.36	3.89	Return on Assets
9.95	10.13	5.82	8.62	9.28	8.65	6.59	6.87	9.01	11.96	8.66	Return on Equity
6.23	7.33	4.83	6.63	6.15	5.14	3.78	4.06	4.89	6.61	5.31	Rtn on Invested Capital

Business Description

Cia Paranaense De Energia Copel is primarily involved in the production of power in the Brazilian state of Parana. Specifically, the company's operating segments include power generation and transmission, gas, power distribution, power sale, and telecommunications. Most of the company's revenue

is derived from the sale of electricity. It generates electricity through renewable energy sources such as hydroelectric, wind plants, and thermoelectric plants. The company was designed to allow Parana to manage the distribution of power and related services, so the state is a major shareholder.

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ii. **Quantitative Economic Moat:** Intended to describe the strength of a firm's competitive position. It is calculated using an algorithm designed to predict the Economic Moat rating a Morningstar analyst would assign to the stock. The rating is expressed as Narrow, Wide, or None.

Narrow – assigned when the probability of a stock receiving a "Wide Moat" rating by an analyst is greater than 70% but less than 99%.

Wide – assigned when the probability of a stock receiving a "Wide Moat" rating by an analyst is greater than 99%.

None – assigned when the probability of an analyst receiving a "Wide Moat" rating by an analyst is less than 70%.

iii. **Quantitative Star Rating:** Intended to be the summary rating based on the combination of our Quantitative Fair Value Estimate, current market price, Quantitative Uncertainty Rating, and momentum. The rating is expressed as One-Star, Two-Star, Three-Star, Four-Star, and Five-Star.

One-Star – the stock is overvalued with a reasonable margin of safety.

*Log (Quant FVE/Price) < -1*Quantitative Uncertainty*

*Micro-Caps: Log (Quant FVE/Price) < -1.5*Quantitative Uncertainty*

Two-Star - the stock is somewhat overvalued.

*Log (Quant FVE/Price) between (-1*Quantitative Uncertainty, -0.5*Quantitative Uncertainty)*

*Micro-Caps: Log (Quant FVE/Price) between (-1.5*Quantitative Uncertainty, -0.75*Quantitative Uncertainty)*

Three-Star – the stock is approximately fairly valued.

*Log (Quant FVE/Price) between (-0.5*Quantitative Uncertainty, 0.5*Quantitative Uncertainty)*

*Micro-Caps: Log (Quant FVE/Price) between (-0.75*Quantitative Uncertainty, 0.75*Quantitative Uncertainty)*

Four-Star – the stock is somewhat undervalued.

*Log (Quant FVE/Price) between (0.5*Quantitative Uncertainty, 1*Quantitative*

Uncertainty)

*Micro-Caps: Log (Quant FVE/Price) between (0.75*Quantitative Uncertainty, 1.5*Quantitative Uncertainty)*

Five-Star – the stock is undervalued with a reasonable margin of safety.

*Log (Quant FVE/Price) > 1*Quantitative Uncertainty*

*Micro-Caps: Log (Quant FVE/Price) > 1.5*Quantitative Uncertainty*

After the initial calculation for the star rating, there is a final filtering step based on the momentum of the company. We rank the companies based on their 12-1 month momentum, then restrict those below the 30th percentile to a maximum of 3 stars.

iv. **Quantitative Uncertainty:** Intended to represent Morningstar's level of uncertainty about the accuracy of the Quantitative Fair Value Estimate. Generally, the lower the Quantitative Uncertainty, the narrower the potential range of outcomes for that particular company. The rating is expressed as Low, Medium, High, Very High, and Extreme.

Low – the interquartile range for possible fair values is less than 10%

Medium – the interquartile range for possible fair values is less than 15% but greater than 10%

High – the interquartile range for possible fair values is less than 35% but greater than 15%

Very High – the interquartile range for possible fair values is less than 80% but greater than 35%

Extreme – the interquartile range for possible fair values is greater than 80%

v. **Quantitative Financial Health:** Intended to reflect the probability that a firm will face financial distress in the near future. The calculation uses a predictive model designed to anticipate when a company may default on its financial obligations. The rating is expressed as Weak, Moderate, and Strong.

Weak – assigned when Quantitative Financial Health < 0.2

Moderate – assigned when Quantitative Financial Health is between 0.2 and 0.7

Strong – assigned when Quantitative Financial Health > 0.7

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ii. **Quantitative Valuation**– Using the below terms, intended to denote the relationship between the security's **Last Price** and Morningstar's quantitative fair value estimate for that security.

Undervalued – Last Price is below Morningstar's quantitative fair value estimate.

Fairly Valued – Last Price is in line with Morningstar's quantitative fair value estimate.

Overvalued – Last Price is above Morningstar's quantitative fair value estimate.

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