

DEFAULT CASE STUDY

JUNE 30, 2020

ABOUT

Virgin Australia Holdings Ltd (Virgin Australia), an Australian carrier with one-third share of the domestic market, entered administration after the government denied a bailout.

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COVID-19 Disruption Pushes Virgin Australia Into Administration

Virgin Australia, an Australian carrier, appointed administrators on April 21, 2020 with debt of about AUD 5 billion. The airline reported consecutive annual losses for the last seven years, before the beginning of travel disruptions caused by the COVID-19 pandemic. In this report, we use Moody's Analytics' public-firm probability of default (PD) metrics to analyze whether this default was foreseeable and to look at possible implications for the airline sector more broadly.¹

What can a credit risk model tell us about Virgin Australia?

Due to accumulating losses, Virgin Australia was in financial difficulty over the last few years. Like most airlines worldwide, the company has been seeking government support through an AUD 1.4 billion emergency loan after the coronavirus breakout. However, the government was unwilling to bail the carrier out, given that over 90% of the equity was owned by wealthy foreign carriers including Etihad Airways, Singapore Airlines, and Virgin Group. The appointment of administrators came immediately after the Australian government denied the bailout in April 2020.² Figure 1 highlights some of these recent milestones alongside our one-year PD measure.

Figure 1 Virgin Australia's One-Year PD (%)



¹ Data in this report is drawn from the Moody's Analytics public-firm EDF™ (Expected Default Frequency) model.

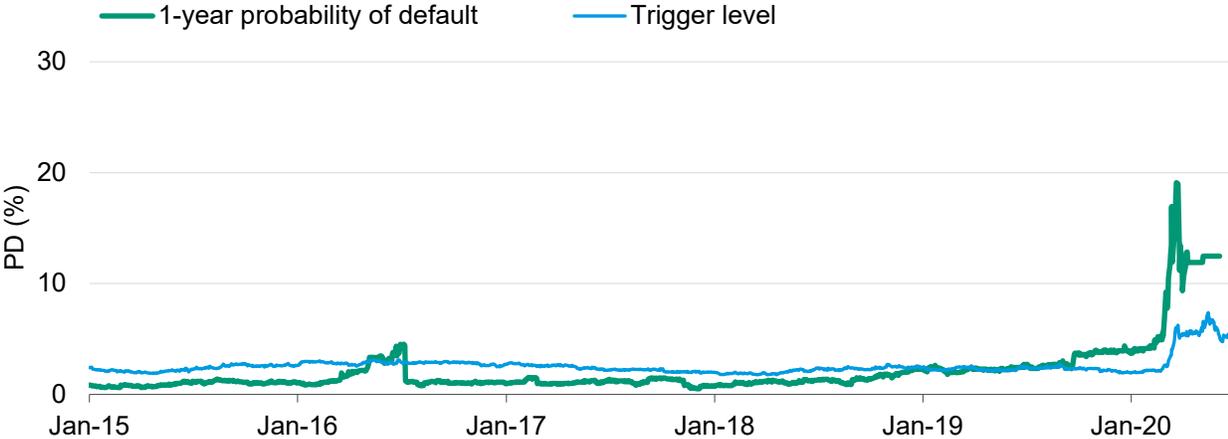
² ["Denied a bailout, Virgin Australia is a warning for other airlines." The Business Times, April 23, 2020.](#)

The company's credit risk trends before this event allow us to assess whether the firm's subsequent default was indicated ahead of time. Virgin Australia's one-year PD was 19.1% just one month prior to default, indicating that the company was at increased risk. During 2018-2019, expected default frequency (EDF) rose rapidly along with net debt to earnings ratio. It peaked in the middle of March 2020 when airlines started canceling flights and cutting jobs. However, hope of a bailout and potential buyers brought the EDF down slightly in early April 2020.³

When did Virgin Australia first show signs of credit deterioration?

To provide an actionable metric for each firm, we produce an early-warning monitoring "trigger," calibrated by country and industry. This trigger indicates a credit-risk level above which a company may be considered an elevated default risk. Virgin Australia exceeded its trigger one-and-a-half years prior to default and went well above the trigger during the last six months of this year (Figure 2).

Figure 2 Virgin Australia's PD vs. Trigger Level (%)

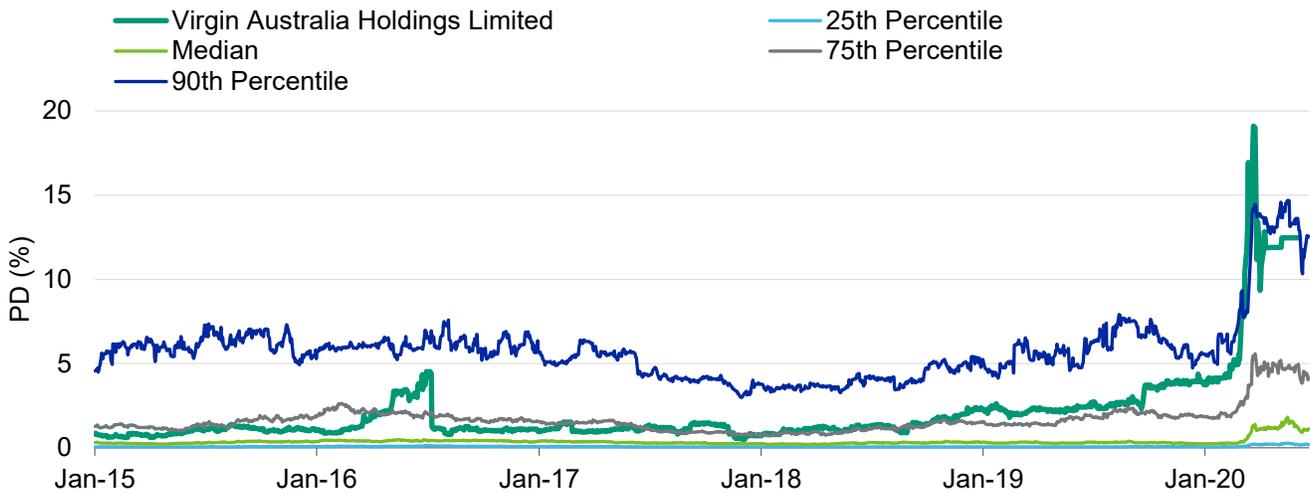


Virgin Australia's performance relative to its peers

We can gain additional insight into a company's credit profile by comparing it with its industry peers; a company performing worse than its peer group may have additional firm-specific problems driving its credit risk higher. Figure 3 shows Virgin Australia's one-year PD relative to 162 publicly traded air transportation firms globally. Virgin Australia moved above the 90th percentile of the group in March 2020 but fell in April 2020. The group's 90th percentile rose sharply in the beginning of March 2020 as countries across the globe started suspending air travel because of an increase in COVID-19 infections. At the same time, the company's PD remained significantly above the group's 90th percentile, indicating that the company was becoming riskier than almost all of its peers in the already-risky group.

³ ["Struggling airline Virgin Australia goes into a trading halt after asking government for a \\$1.4billion loan." Daily Mail, March 30, 2020.](#)

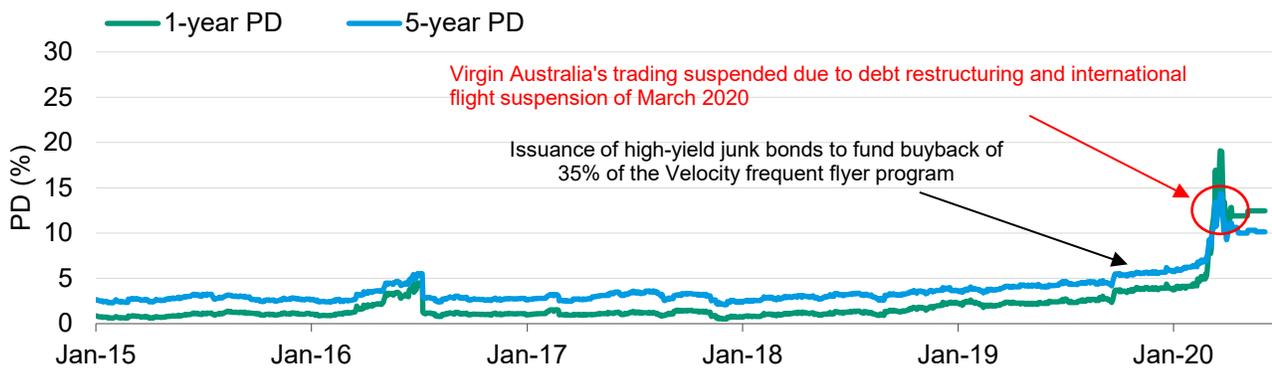
Figure 3 Virgin Australia's PD vs. Global Air Transportation Group (%)



Virgin Australia's PD term structure

This section shows Virgin Australia's one-year PD relative to its five-year PD. Similar to a bond yield curve, we expect firms with sound credit to have short-term risk that is lower than long-term risk—an inverted PD curve points to increased default risk. Virgin Australia's one-year and five-year PD were very close from March through June 2016 and in September 2019, and term structure permanently inverted in March 2020, one month before the bankruptcy (Figure 4).

Figure 4 PD term structure (%)



Impact of COVID-19 on the air transportation industry

Virgin Australia collapsed soon after the government denied the bailout in April 2020. In February 2020, travel restrictions related to the COVID-19 pandemic began to affect the global economy, with the airline industry being one of the most immediately and severely affected. In March 2020, Virgin Australia stopped all its international flights for the next two to three months.

Virgin Australia is the second airline bankruptcy due to COVID-19, after the collapse of UK-based Flybe in February 2020. To see the ongoing impact on the industry, we used aggregate industry-level data (similar to Figure 3) to examine risk at the 75th percentile of the PD distribution; most defaulters are above the 75th percentile of their peer group at the time of default. Figure 5 shows the top five industries, ranked by the percentage change in the 75th percentile PD from January 20, 2020—when COVID-19 began to affect financial markets globally—to June 19, 2020.

Figure 5 Global industries ranked by increase in 75th percentile PD

INDUSTRY	75TH PERCENTILE PD		PERCENTAGE CHANGE	ABSOLUTE CHANGE
	JUNE 19	JANUARY 20		
1 Air Transportation	3.89%	1.54%	152.5%	2.35%
2 Utilities, Gas	1.44%	0.58%	150.6%	0.87%
3 Broadcast Media	6.90%	3.43%	101.0%	3.47%
4 Lessors	2.50%	1.30%	91.9%	1.20%
5 Hotels & Restaurants	3.55%	1.86%	90.6%	1.69%

The trend is concerning for the Air Transportation sector, which is ranked in first place. Industry supplier sectors Utilities, Gas and Lessors saw a significant relative increase in default risk since the coronavirus crisis began, as firms struggle due to lower revenue. Sectors such as Broadcast Media and Hotels & Restaurants have also seen increased credit risk as non-essential spending declines.

Despite some hope of the government support, the Air Transportation sector has been uncertain because of high sensitivity to developments so far. Given the uncertainty surrounding the COVID-19 outlook, there is considerable downside risk to the economy. If these risks materialize, volatility in the already-troubled Air Transportation industry is likely to result in further defaults. With limited bailout capacity from their governments, the majority of airlines are trying to delay defaults through operational and financial restructuring.⁴

Conclusion

Virgin Australia's collapse was expected in line with the carrier's high-speed burning of cash during the last six months.⁵ The company's credit metrics showed elevated default risk—the revenue shock caused by the coronavirus outbreak exposed the company's existing financial weaknesses and capital structure. More broadly, the airline industry remains highly sensitive to COVID-19 developments. Further adverse shocks such as denial of bailout or failure to find buyers will likely result in more airline sector defaults.

⁴ ["Airlines are racking up billions in debt to get through COVID-19. Can they survive what comes next?" The Dallas Morning News, May 11, 2020.](#)

⁵ ["Bankrupt Virgin Australia's Foreign Backers Became Liability in Search for Bailout." The Wall Street Journal, April 21, 2020.](#)

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