monitor[®]

creditrisk VIRGIN AUSTRALIA HOLDINGS **BANKRUPTCY¹ CASE STUDY**

FILED ON 04/21/2020



CreditRiskMonitor's warning of Virgin Australia Holdings Limited's ("Virgin Australia") bankruptcy risk was determined by a combination of factors:

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^{1.} Bankruptcy throughout this case study refers to a proceeding in Australia called Voluntary Administration, which has several similarities to the U.S. Bankruptcy code.

MONTHLY AVERAGE FRISK® SCORE

CreditRiskMonitor's FRISK® score had been warning of financial stress at Virgin Australia (ASX: VAH) for more than a year. We issued an airline industry blog published March 11, 2020 as conditions continued to deteriorate and become more troubling.

The company ultimately filed for bankruptcy on April 21, 2020.

Negative FY19 earnings Virgin Australia to Debt issuance planned Virgin Australia remove hundreds of guidance on lower to repurchase Velocity hired restructuring employees after traffic given timing of stake as PE backer advisor and halts Easter Holiday and requests an exit from posting a full year interest payments local election period. loss of \$349 million. its 35% stake. amid coronavirus. 2019 2020 **Business Name** J S D J Virgin Australia Holdings Limited **BANKRUPT!** Fitch Ratings warned on Three senior executives, including the CEO, CFO, growing pressures to and COO are replaced and APAC airliners due to the The FRISK® score is middle management spread of the coronavirus.

96% accurate² in predicting the risk of corporate failure/bankruptcy over a 12-month horizon. All FRISK® scores are recalculated every night for each subsequent 12-month period.

receives salary freezes.

particularly in Australia.

FDICK® Cooks	BANKRUPTCY RISK RELATIVE TO THE HISTORICAL AVERAGE			
FRISK® Score	FROM	ТО		
10	0.00x	0.12x		
9	0.12x	0.27x		
8	0.27x	0.34x		
7	0.34x	0.55x		
6	0.55x	0.87x		
5	0.87x	1.40x		
¥ 4	1.40x	2.10x		
3	2.10x	4.00x		
₹ 2	4.00x	9.99x		
1	9.99x	50.00x		

While the risk of bankruptcy varies at each FRISK® score, 96% of public companies that eventually go bankrupt enter the FRISK® "red zone" prior to filing. A FRISK® score of 5 or less is an important warning sign.

2. FRISK® score accuracy of 96% is based on backtesting of U.S. public companies; results may vary by country.

THE FRISK® SCORE COMPONENTS

At the core of the CreditRiskMonitor® process is our 96% accurate FRISK® score, which indicates a company's level of financial stress on a scale of 1 to 10, based on the probability of bankruptcy over a 12-month horizon. When available, the FRISK® score incorporates a number of powerful risk indicators including:

A "Merton" type model using stock market capitalization and volatility Financial ratios, including those used in the Altman Z"-Score Model

Bond agency ratings from Moody's, Fitch, & DBRS Morningstar

Crowdsourced CreditRiskMonitor® Usage Data

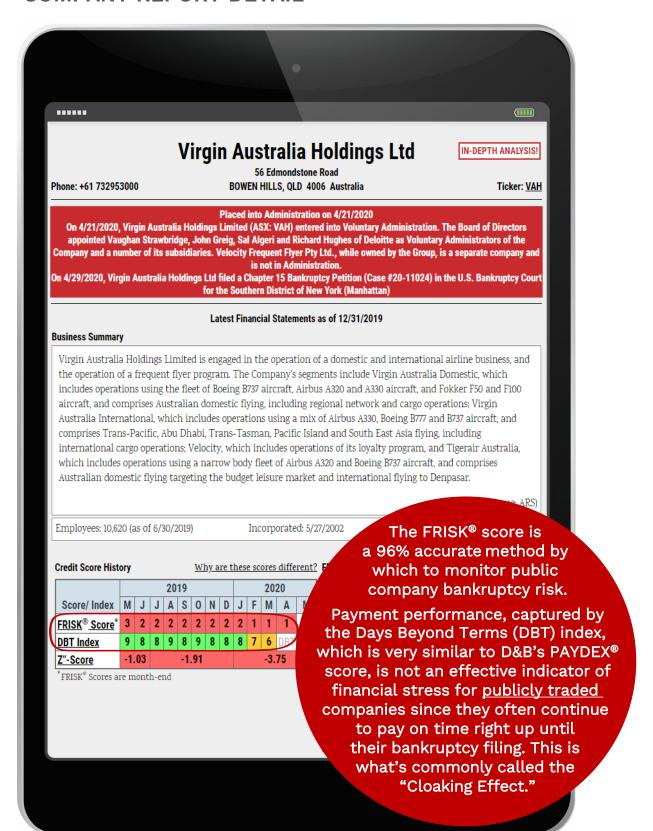
<u>Crowdsourcing</u> has enhanced the accuracy and timeliness of the FRISK® score. We collect and analyze data patterns from thousands of CreditRiskMonitor® subscribers, including professionals from more than 35% of the Fortune 1000 and other large corporations worldwide.

The crowdsourcing advantage is even more powerful in our FRISK® score since many of the professionals who use our service are credit managers:

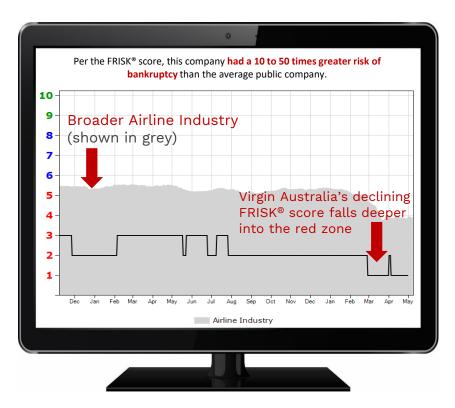
- Credit managers control one of the largest sources of working capital going into a company
- They are not held to the same "Fair Disclosure" restrictions that prevent non-disclosed information sharing on public companies
- Credit managers use a variety of non-public information sources such as their own company's management and sales representatives to be alerted to concerns in a public company's performance
- It is commonly known credit managers confidentially share information with other credit managers, thus collectively, their behavior helps to provide advanced insight to financial problems in public companies

Read more in Credit Research Foundation's quarterly journal article, "Assessing Public Company Financial Risk by Crowdsourcing the Research of Credit Professionals"

COMPANY REPORT DETAIL



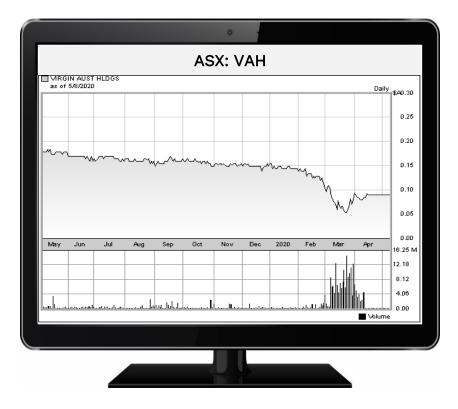
FRISK® DEEP DIVE



The FRISK® score relative to the broader Airline industry raised an additional red flag signaling heightened risk relative to peers, as well...

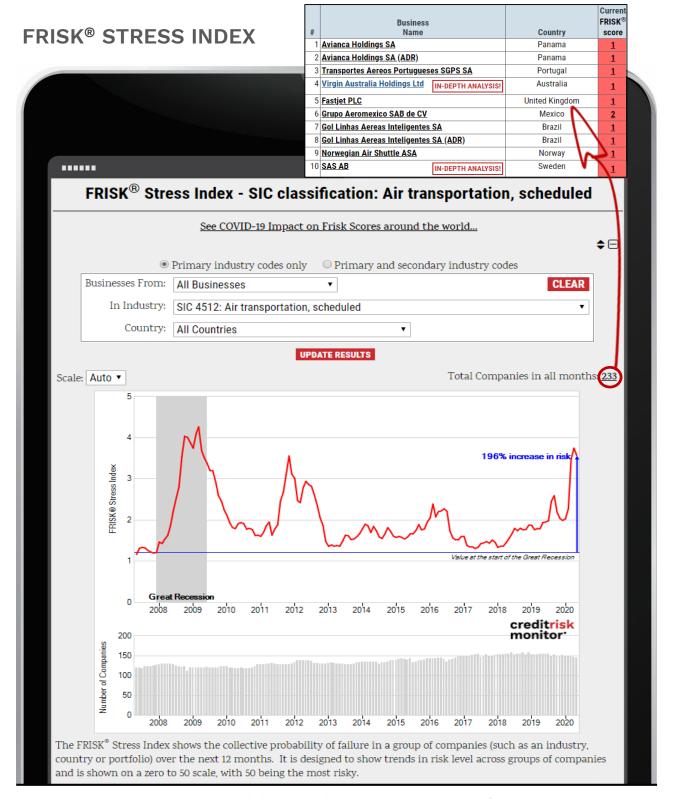
MAKING IMMEDIATE ATTENTION REQUIRED.

ADJUSTED MARKET CAP VOLATILITY



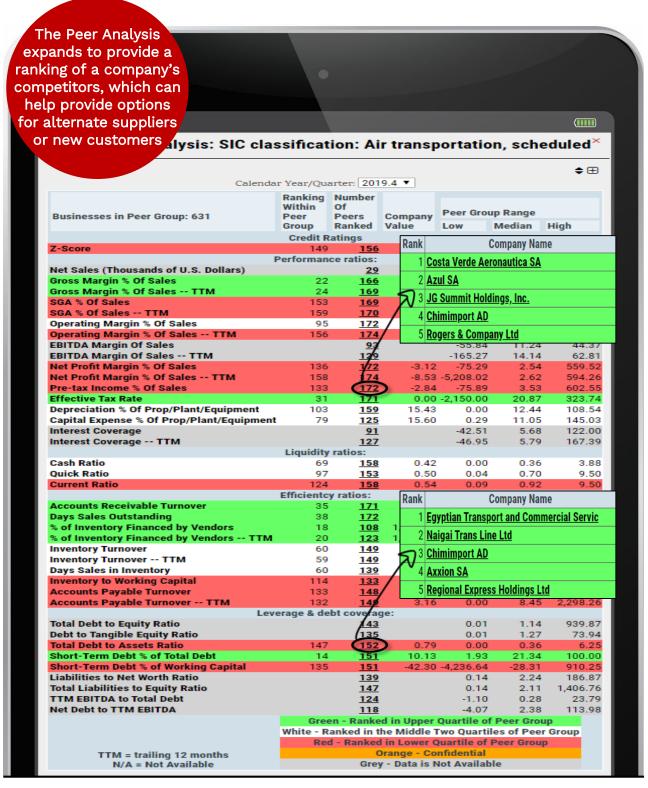
One of the inputs of the FRISK® score is a company's market cap volatility, adjusted for dividends, over the course of a year. Incorporating this information allows us to capture the "wisdom of markets" on a daily basis. This ensures our subscribers are getting the most up to date view of the risks they face since stocks tend to be more liquid and faster moving than bond prices and ratings.

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The average probability of failure for SIC code 4512 (Air transportation, scheduled) has increased 196% since 2007. Virgin Australia was among the weakest names in the industry as evidenced by its FRISK® score of 1.

PEER ANALYSIS ON ALTERNATE SUPPLIERS AND CUSTOMERS



Virgin Australia demonstrated bottom quartile ranking in key financial ratios (shown in red) versus its industry peers.

QUARTERLY PERFORMANCE RATIOS

Ineffective hedges and impairments led to steep EBIT losses

Significant net losses and cumulatively negative free cash flow

Performance Ratios - Sequential Quarters (Thousands of Australian Dollars)

	(Thousands of Australian Dollars)					
Period Ended	6 mos	6 mos	6 mos	6 mos	6 mos	
	12/31/2019	6/30/2019	12/31/2018	6/30/2018	12/31/2017	
Net Sales \$	\$3,118,200	\$2,756,100	\$3,071,000	\$2,629,700	\$2,791,000	
% change	13.14%	-10.25%	16.78%	-5.78%	14.73%	
Gross Margin \$ % change	\$1,875,100 29.10%	\$1,452,400 -14.85%	\$1,705,600 19.29%	\$1,429,800 -8.09%	\$1,555,700 17.98%	
% of sales	60.13%	52.70%	55.54%	54.37%	55.74%	
change as % of incremental sales	116.74%	02.70% n/m	62.50%	04.37% n/m	66.16%	
SG&A \$	\$1,082,000	\$1,078,600	\$1,046,800	\$982,600	\$977,900	
% change	0.32%	3.04%	6.53%	0.48%	0.24%	
% of sales	34.70%	39.14%	34.09%	37.37%	35.04%	
change as % of incremental sales	0.94%	n/m	14.55%	n/m	0.64%	
Operating margin \$	\$105,200	(\$301,800)	\$167,200	(\$136,000)	\$83,700	
% change	134.86%	-280.50%	222.94%	-262.49%	152.02%	
% of sales	3.37%	-10.95%	5.44%	-5.17%	3.00%	
change as % of incremental sales	112.40%	n/m	68.71%	n/m	68.25%	
EBIT \$	(\$210,100)	(\$300,900)	\$167,200	(\$135,900)	\$83,600	
% change	30.18%	-279.96%	223.03%	-262.56%	169.67%	
% of sales	-6.74%	-10.92%	5.44%	-5.17%	3.00%	
change as % of incremental sales	25.08%	n/m	68.68%	n/m	56.81%	
Pre-tax income \$	(\$88,600)	(\$383,000)	\$87,700	(\$209,800)	\$8,400	
% change	76.87%	-536.72%	141.80%	-2,597.62%	103.46%	
% of sales	-2.84%	-13.90%	2.86%	-7.98%	0.30%	
change as % of incremental sales	81.30%	n/m	67.41%	n/m	70.06%	
Net income (loss) \$	(\$97,300)	(\$403,900)	\$54,800	(\$670,700)	(\$10,300)	
% change	75.91%	-837.04%	108.17%	-6,411.65%	94.41%	
% of sales	-3.12%	-14.65%	1.78%	-25.50%	-0.37%	
change as % of incremental sales	84.67%	n/m	164.40%	n/m	48.52%	
Tax expense \$	\$0	\$6,200	\$13,900	\$447,900	\$4,000	
Effective tax rate	0.00%	-1.62%	15.85%	-213.49%	47.62%	
Depreciation expense \$	\$290,200	\$170,700	\$153,500	\$140,800	\$152,200	
% of sales	9.31%	6.19%	5.00%	5.35%	5.45%	
% of capital expenses	98.88%	61.85%	56.58%	50.61%	48.67%	
% of PP&E, net (annualized)	15.43%	10.70%	9.89%	9.31%	10.26%	
Capital expenditures \$	\$293,500	\$276,000	\$271,300	\$278,200	\$312,700	
% change	6.34%	1.73%	-2.48%	-11.03%	25.33%	
% of PP&E, net (annualized)	15.60%	17.30%	17.47%	18.40%	21.08%	
% of working capital (annualized) Free cash flow \$	-49.88% (\$94,400)	-47.47% (\$69,000)	-60.34% (\$8,300)	-97.73% \$100,800	-108.29% (\$121,300)	
% change	-36.81%	-731.33%	-108.23%	183,10%	-10,208.33%	
Source:	Interim Report	ARS	Interim Report	ARS	Interim Report	
oduce.	2/25/2020	9/17/2019	2/12/2019	9/17/2019	2/12/2019	
	_,,	-,,	_,,,	-,,	_,,	

QUARTERLY LEVERAGE RATIOS

Quarterly
shareholders'
equity and tangible
net worth rapidly
declined overtime
and turned
negative

Leverage Ratios - Sequential Quarters (Thousands of Australian Dollars)

High financial leverage became uncontrollable and debt-to-assets subsequently reached 79%

eriod Ended	12/31/2019	6/30/2019	12/31/2018	6/30/2018	12/31/2017
Total debt \$	\$5,354,600	\$3,028,800	\$2,561,000	\$2,568,100	\$2,401,900
% change	76.79%	18.27%	-0.28%	6.92%	-1.29%
Stockholders' equity \$	(\$1,599,600)	\$618,900	\$993,500	\$1,095,000	\$1,659,000
% change	-358.46%	-37.71%	-9.27%	-34.00%	5.41%
Total debt to equity ratio	n/a	4.89	2.58	2.35	1.45
% change	n/a	89.84%	9.91%	61.99%	-6.36%
Tangible net worth \$	(\$2,172,300)	\$38,200	\$372,200	\$478,000	\$1,041,300
% change	-5,786.65%	-89.74%	-22.13%	-54.10%	8.85%
Total debt to tangible net worth	n/a	79.29	6.88	5.37	2.31
% change	n/a	1,052.32%	28.07%	132.92%	-9.32%
Total assets \$	\$6,782,400	\$6,468,200	\$6,050,800	\$6,188,400	\$6,354,000
% change	4.86%	6.90%	-2.22%	-2.61%	-0.03%
Total debt to assets ratio	0.79	0.47	0.42	0.42	0.38
% change	68.59%	10.66%	1.98%	9.79%	-1.25%
Tangible assets \$	\$6,209,700	\$5,887,500	\$5,429,500	\$5,571,400	\$5,736,300
% change	5.47%	8.44%	-2.55%	-2.87%	-0.04%
Short-term debt \$	\$542,200	\$771,900	\$768,700	\$295,100	\$317,300
% change	-29.76%	0.42%	160.49%	-7.00%	12.96%
Short-term debt % of total debt	10.13%	25.49%	30.02%	11.49%	13.21%
% change	-60.27%	-15.09%	161.21%	-13.02%	14.44%
Short-term debt % of working capital	-42.30%	-72.03%	-61.29%	-54.21%	-53.39%
% change	41.28%	-17.53%	-13.07%	-1.53%	-6.59%
Total liabilities \$	\$8,382,000	\$5,849,300	\$5,057,300	\$5,093,400	\$4,695,000
% change	43.30%	15.66%	-0.71%	8.49%	-1.82%
Total liabilities to equity ratio	n/a	9.45	5.09	4.65	2.83
% change	n/a	85.67%	9.44%	64.36%	-6.86%
Total liabilities to tangible net worth ratio	n/a	153.12	13.59	10.66	4.51
% change		1 026.93%	27.52%	136.33%	-9.81%
Source:	Int		Interim Report	ARS	Interim Report
	High reli	ance on	2/12/2019	9/13/2018	2/27/2018

High reliance on short-term debt indicated funding issues and refinancing risks

QUARTERLY LIQUIDITY RATIOS AND RATES OF RETURN

Working capital weakened due to more finance leases	Liquidity Rat	tios - Seque			Meager quick and urrent ration decline further
Period Ended	12/31/2019	6/30/2019	12/31/2018	6/30/2018	12/31/2017
Current assets \$	\$1,484,900	\$2,165,300	\$1,692,100	\$1,979,500	\$1,699,400
% change	-31.42%	27.97%	-14.52%	16.48%	-4.93%
% of short-term debt	273.87%	280.52%	220.12%	670.79%	535.58%
Current liabilities \$	\$2,766,800	\$3,236,900	\$2,946,300	\$2,523,900	\$2,293,700
% change	-14.52%	9.86%	16.74%	10.04%	-2.33%
Working capital \$	(\$1,281,900)	(\$1,071,600)	(\$1,254,200)	(\$544,400)	(\$594,300)
% change	-19.62%	14.56%	-130.38%	8.40%	-5.97%
% of sales (annualized)	-20.56%	-19.44%	-20.42%	-10.35%	-10.65%
Cash \$	\$1,172,200	\$1,771,200	\$1,272,000	\$1,427,600	\$1,257,300
% change	-33.82%	39.25%	-10.90%	13.54%	-11.54%
% of short-term debt	216.19%	229.46%	165.47%	483.77%	396.25%
Cash ratio	0.42	0.55	0.43	0.57	0.55
% change	-22.57%	26.75%	-23.67%	3.17%	-9.42%
Quick assets \$	\$1,396,200	\$2,039,900	\$1,542,200	\$1,709,200	\$1,556,100
% change	-31.56%	32.27%	-9.77%	9.84%	-10.06%
% of short-term debt	257.51%	264.27%	200.62%	579.19%	490.42%
Quick ratio	0.50	0.63	0.52	0.68	0.68
% change	-19.93%	20.41%	-22.71%	-0.18%	-7.93%
Current ratio	0.54	0.67	0.57	0.78	0.74
% change	-19.76%	16.47%	-26.78%	5.86%	-2.67%
Source:	Interim Report 2/25/2020	ARS 9/17/2019	Interim Report 2/12/2019	ARS 9/13/2018	Interim Report 2/27/2018

Anemic turns on					
quity and	Rate of Return (Thousands	- Sequent of Australian	T		
assets eriod Ended	6 mos 12/31/2019	6 mos 6/30/2019	6 mos 12/31/2018	6 mos 6/30/2018	6 mos 12/31/2017
Return on equity	-15.72%	-40.65%	5.00%	-40.43%	-0.65%
% change	61.33%	-912.34%	112.38%	-6,076.93%	93.41%
Return on net tangible equity	-254.71%	-108.52%	11.46%	-64.41%	-1.08%
% change	-134.72%	-1,046.56%	117.80%	-5,882.16%	92.58%
Return on total assets	-1.47%	-6.45%	0.90%	-10.69%	-0.16%
% change	77.24%	-820.56%	108.37%	-6,497.72%	94.25%
Return on tangible assets	-1.61%	-7.14%	1.00%	-11.86%	-0.18%
% change	77.46%	-816.44%	108.40%	-6,508.75%	94.22%
Source:	Interim Report 2/25/2020	ARS 9/17/2019	Interim Report 2/12/2019	ARS 9/17/2019	Interim Report 2/12/2019

ANNUAL STATEMENT OF CASH FLOWS

Decline in cash from		•			
operating					
activities ant of Cash Flor	ws - Year-o	ver-Year -	Standardiz	ed - Year t	
Tolle of Guoli 110		f Australian Dol		iou rour c	o Duito
	6 mos				
Period Ended	12/31/2019	12/31/2018	12/31/2017	12/31/2016	12/31/2015
		Reclassified 12/31/2019			
Cash Flows from Operating Activities:					
Cash receipts	\$3,358,800	\$3,337,000	\$3,009,300	\$2,825,900	\$2,848,800
Cash payments	(3,097,300)	(3,060,600)	(2,738,700)	(2,682,400)	(2,750,600)
Cash interest paid	n/a	n/a	(71,300)	(70,000)	(69,800)
Changes in working capital	(62,400)	(13,400)	(7,900)	(50,300)	(18,200)
Total cash from operating activities	199,100	263,000	191,400	23,200	10,200
Cash Flows from Investing Activities:					
Capital expenditures	(293,500)	(271,300)	(312,700)	(224,400)	(536,900)
Other investing cash flow items, total	170,800	7,700	(12,400)	67,900	274,100
Total cash from investing activities	(122,700)	(263,600)	(325,100)	(156,500)	(262,800)
Cash Flows from Financing Activities:					
Financing cash flow items	(943,700)	(102,300)	(28,900)	(38,900)	(22,400)
Issuance/retirement of stock, net	0	(700)	0	931,400	n/a
Issuance/retirement of debt, net	235,200	(95,700)	(8,500)	(331,100)	142,000
Total cash from financing activities	(708,500)	(198,700)	(37,400)	561,400	119,600
Foreign exchange effects	(300)	35,300	(8,700)	43,900	11,200
Net change in cash	(632,400)	(164,000)	(179,800)	472,000	(121,800)
Net cash-beginning balance	1,740,000	1,415,500	1,396,100	1,123,800	1,028,500
Net cash-ending balance	\$1,107,600	\$1,251,500	\$1,216,300	\$1,595,800	\$906,700
Source:	Interim Report 2/25/2020	Interim Report 2/25/2020	Interim Report 2/27/2018	Interim Report 2/17/2017	Interim Report 2/11/2016

NEWS ALERTS: A TIMELINE OF CONCERNING NEWS ITEMS

		in Australia's earnings update was a credit negative event, which would 4.8x towards a higher-end 5.5x.
05/17/2019	Moody's Investors Service	Moody's – Virgin Australia Holdings Limited: Virgin's trading update is credit negative
Velocity Frequer		ers, planned to sell its minority investment of 35% in Virgin Australia's quisition required Virgin Australia to raise \$700 million, which would be stake.
07/10/2019	Australian Associated Press	Virgin Australia frequent flyer backer to exit
CEO, CFO, COO,		r the worse as four new C-suite leaders were appointed, including the kecutive changes in combination with financial stress are one of the
08/27/2019	Reuters	Virgin Australia Appoints Keith Neate as CFO
	ising \$425 million, Virgin A its ongoing cash flow sho	ustralia would issue another \$325 million to fund the Velocity tfalls.
10/27/2019	Australian Associated Press	Virgin Australia raises issues size of notes offering
		raded to "1," indicating up to 50x higher risk of bankruptcy versus the much worse than the airline industry's average FRISK® score of "5".
02/28/2020	CRMZ News Service	Virgin Australia Holdings Ltd: FRISK® score downgraded to 1
and no debt ma	turities until late 2021. Hov	nat it would reduce flight capacity and had in excess of \$1 billion in cas wever, the coronavirus pandemic caused an unprecedented collapse in sfy short-term obligations within weeks of the public statements.
03/12/2020	CRMZ News Service	Virgin Australia announces steep cuts as coronavirus hits demand
Virgin Australia v U.S. bankruptcy		ation on April 21, 2020 and later filed a Chapter 15 Bankruptcy Petition i

ABOUT THIS REPORT/CONTACT CREDITRISKMONITOR®



CreditRiskMonitor® is a financial risk analysis and news service that helps credit, supply chain and financial professionals stay ahead of and manage risk quickly, accurately and cost effectively. More than 35% of the Fortune 1000, plus over a thousand other large corporations worldwide, rely on our financial risk coverage of over 58,000 global public companies.

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provide post-filing analyses of public company
bankruptcies. Our case studies educate subscribers
about methods they can apply to assess bankruptcy
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