



Zombie Stock #1 – Could Go to \$0 As Fed Raises Rates

Time is running out for cash-burning companies kept afloat with easy/cheap access to capital. These “zombie” companies are at risk of going bankrupt if they cannot raise more debt or equity, which is not as easy as it used to be.

As the Fed raises interest rates and ends quantitative easing, access to cheap capital is drying up quickly. At the same time, many companies face declining margins and may be forced to default on interest payments without the possibility of refinancing. As these zombie companies run out of the cash needed to stay afloat, risk premiums will rise across the market, which could further squeeze liquidity and create an escalating series of corporate defaults.

This report features [Carvana](#) (CVNA: \$25/share), a zombie company with a high risk of seeing its stock go to \$0/share. We also feature [Freshpet](#) (FRPT: \$55/share) [here](#) and [Peloton](#) (PTON: \$11/share) [here](#).

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Zombie Companies with Little Cash Are Risky

Companies with heavy cash burn and little cash on hand are risky in today’s market. Being forced to raise capital in this environment, even if the company is ultimately successful, is not good for existing shareholders.

Figure 1 shows the zombie companies most likely to run out of cash first, based on free cash flow (FCF) burn and cash on the balance sheet over the trailing-twelve-months (TTM). Each company in Figure 1 has:

- Negative [interest coverage ratio](#) (EBIT/Interest expense)
- Negative FCF over the TTM
- Less than 24 months before it needs more capital to subsidize the TTM FCF burn rate
- Been a [Danger Zone](#) pick

Not surprisingly, the companies that are most at risk of seeing their stock price go to \$0 are the ones with a poor underlying business model, which was overlooked by investors during the 2020-2021 meme stock-driven market frenzy. Companies such as Carvana, Freshpet, Peloton, and [Squarespace](#) (SQSP) have less than six months of cash on their balance sheets based on their FCF burn over the past twelve months. These stocks have a real risk of going to zero.

Figure 1: Danger Zone Stocks with Less than Two Year’s Worth of Cash on Hand: as of 1Q22

Company	Ticker	Interest Coverage Ratio	Months Before Bankruptcy
Carvana Co.	CVNA	-2.3	1
Freshpet Inc	FRPT	-13.1	1
Peloton Interactive Inc.	PTON	-33.3	3
Squarespace Inc.	SQSP	-0.8	5
Sweetgreen Inc	SG	-1487.1	8
Rivian Automotive Inc	RIVN	-119.4	10
Beyond Meat Inc.	BYND	-54.9	11
Snap Inc.	SNAP	-37.8	13
GameStop Corporation	GME	-157.3	18
Allbirds Inc	BIRD	-183.6	20

Sources: New Constructs, LLC and company filings.

To calculate “Months Before Bankruptcy” we divided the TTM FCF burn by 12, which equals monthly cash burn. We then divide Cash and Equivalents on the balance sheet through 1Q22 by monthly cash burn.

And Overvalued Zombie Stocks Are the Riskiest



Stock valuations that embed high expectations for future profit growth add more risk to owning shares of zombie companies with just a few months' worth of cash left. For the riskiest zombie companies, not only does the stock price not reflect the *short-term* distress facing the company, but it also reflects unrealistically optimistic assumptions about the *long-term* profitability of the company. With these stocks, overvaluation risk is stacked on top of short-term cash flow risk.

Below, we'll take a closer look at Carvana and detail the company's cash burn and how much further its stock price could fall.

Carvana (CNVA: \$25/share)

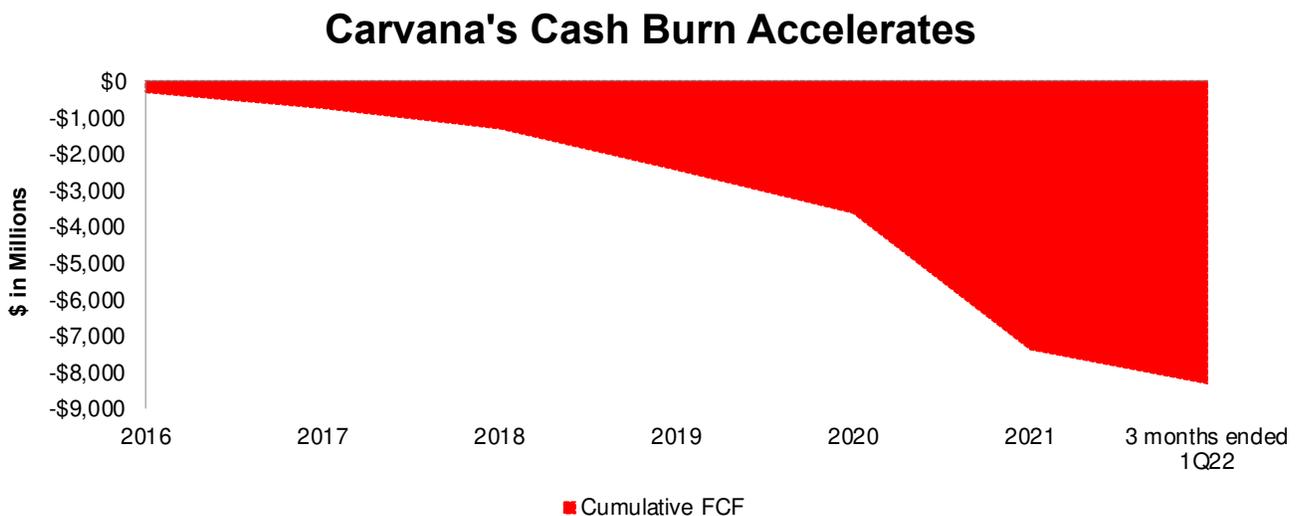
We put Carvana (CVNA) in the Danger Zone in [August 2020](#), and the stock has outperformed the S&P 500 as a short by 95% since then. Even after falling 93% from its 52-week high, 89% YTD, and 67% from our report in [April 2022](#), we think the stock has much more downside.

Carvana has failed to generate positive free cash flow in any year since going public in 2017. Since 2016, Carvana has burned through \$8.3 billion in FCF, per Figure 2. Indeed, the cash bonfire at Carvana is roaring as the company burned through \$4.0 billion in FCF over the TTM ended 1Q22. With just \$247 million in cash and cash equivalents on the balance sheet at the end of 1Q22, Carvana's cash balance could only have sustained its cash burn for less than one month after 1Q22.

Not surprisingly, Carvana issued \$3.3 billion in senior unsecured notes in April 2022, which bear an interest rate of 10.25%. The interest rate on the debt is substantially higher than the 4.875% rate on senior unsecured notes issued in August 2021. However, most of this capital is already accounted for, as Carvana is using the proceeds to fund the \$2.2 billion acquisition of ADESA's U.S. auction business.

Assuming Carvana pockets the \$1.1 billion of cash remaining after the ADESA deal, the company has just three additional months of cash left, based on its TTM cash burn rate. Even if the company's FCF burn slows to its three-year average, the additional capital would keep the business afloat for just six months. Despite raising capital just three months ago, Carvana will likely need to raise more before the end of this year.

Figure 2: Carvana's Cumulative Free Cash Flow Since 2016



Sources: New Constructs, LLC and company filings.

Valuation Implies Carvana Generates More Sales than the Two Largest Used Car Dealers

We use our reverse discounted cash flow (DCF) model to analyze the future cash flow expectations baked into Carvana's current valuation. Despite fierce competition and negative profit margins when used-car prices have skyrocketed, Carvana's stock is priced as if the business will grow revenues to higher levels than of [CarMax](#) (KMX) and [AutoNation](#) (AN), a feat that is highly unlikely to materialize.

To justify its current price of \$25/share, our [model](#) shows that Carvana would have to:



- immediately improve its NOPAT margin to 3%, (above 2021 NOPAT margin of -1% but below CarMax at 4%) and
- grow revenue by 15% compounded annually (1.6x [projected](#) industry growth through 2027) for the next seven years.

In this [scenario](#), Carvana's revenue in 2028 would reach \$34.1 billion, which is 106% of the TTM revenue of CarMax and 128% of the TTM revenue of AutoNation, the two largest used-car dealers by revenue.

This scenario implies the firm would sell ~1.2 million retail and wholesale vehicles in 2028¹ versus just over 632,000 sold over the last twelve months. Such high sales would be three-fourths the vehicles sold over the TTM by the largest U.S. used car retailer, CarMax. In a mature market, which used cars surely are, that much growth requires taking significant market share away from formidable competitors.

This scenario also implies Carvana grows NOPAT from -\$446 million over the TTM to \$1.0 billion in 2028, which is 82% of CarMax's fiscal 2022 NOPAT.

80% Downside If Carvana Grows at Industry Rates

Below, we review an additional DCF scenario to highlight the downside risk even if Carvana's revenue grows at the same pace as the [used-car industry](#) and margins rise to half that of CarMax.

If we assume Carvana's:

- NOPAT margin improves to 2% (above 2021 NOPAT margin of -1%, TTM margin of -3%, and half of CarMax's TTM margin),
- revenue grows at consensus rates in 2022 and 2023, and
- revenue grows by 9% a year from 2024 through 2028 (equal to projected industry growth rate through 2027), then

the stock would be worth just [\\$5/share today](#) – an 80% downside to the current price.

In this scenario, the firm grows revenue to \$32.1 billion in 2028, and assuming Carvana generates ~\$28 thousand per vehicle sold (using same assumptions as prior scenarios), the firm would sell 1.1 million vehicles in 2028, a near doubling from TTM levels and 69% of the vehicles sold by CarMax in its fiscal 2022.

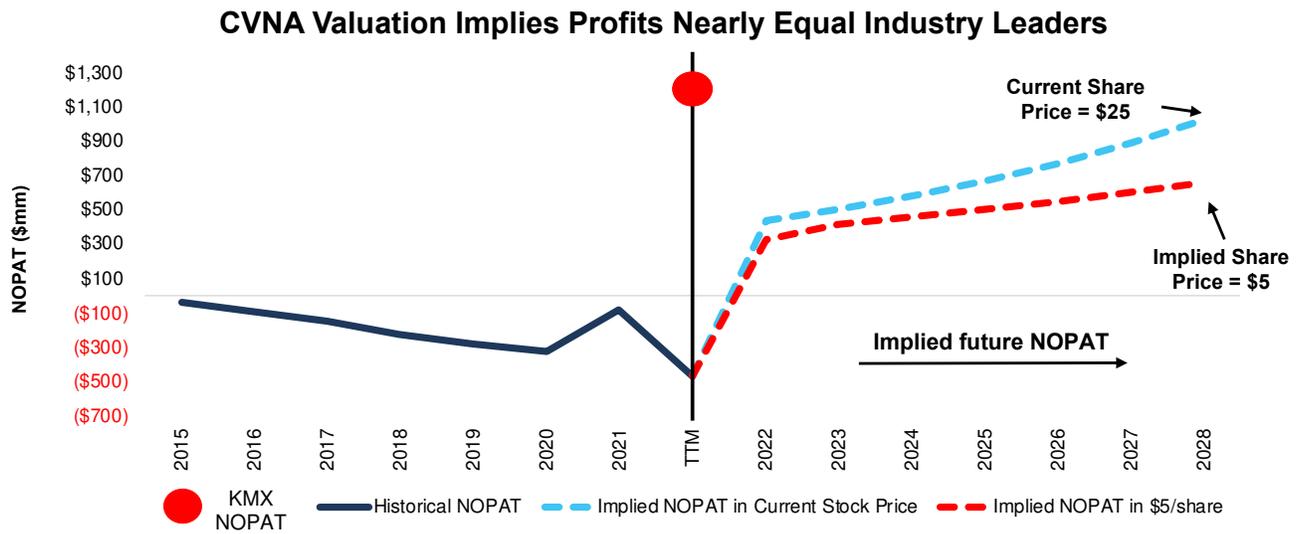
This scenario implies Carvana grows NOPAT from -\$446 million over the TTM to \$657 million in 2028, which is 53% of CarMax's fiscal 2022 NOPAT.

Figure 3 compares Carvana's implied future NOPAT in these scenarios to its historical NOPAT. We also include the TTM NOPAT for CarMax for reference.

¹ Calculated by taking the implied revenue divided by the implied revenue per vehicle. Over the TTM, Carvana generated a total of \$14.1 billion in revenue and sold 632 thousand combined retail and wholesale vehicles, which equates to ~\$22.2 thousand in revenue per unit sold. Assuming inflation of 3.5% per year, revenue per unit sold in 2028 would be ~\$28.3 thousand.



Figure 3: Carvana's Historical and Implied NOPAT: DCF Valuation Scenarios



Sources: New Constructs, LLC and company filings.

Each of the above scenarios also assumes Carvana grows revenue, NOPAT, and FCF without increasing working capital or fixed assets. This assumption is highly unlikely but allows us to create best-case scenarios that demonstrate the expectations embedded in the current valuation. For reference, Carvana's invested capital grew 86% compounded annually from 2015 through 2021. If we assume Carvana's invested capital increases at a similar rate in the DCF scenarios above, the downside risk is even larger.

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Disclosure: David Trainer, Kyle Guske II, and Matt Shuler receive no compensation to write about any specific stock, style, or theme.

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Key quotes from the paper:

- “[New Constructs’] *Total Adjustments* differs significantly from the items identified and excluded from Compustat’s adjusted earnings measures. For example... 50% to 70% of the variation in *Total Adjustments* is not explained by *S&P Global’s (SPGI) Adjustments* individually.” – pp. 14, 1st para.
- “A final source of differences [between New Constructs’ and S&P Global’s data] is due to data collection oversights...we identified cases where Compustat did not collect information relating to firms’ income that is useful in assessing core earnings.” – pp. 16, 2nd para.

Superior Models

A top accounting firm features the superiority of our ROIC, NOPAT and Invested Capital research to Capital IQ & Bloomberg’s in [Getting ROIC Right](#). See the [Appendix](#) for direct comparison details.

Key quotes from the paper:

- “...an accurate calculation of ROIC requires more diligence than often occurs in some of the common, off-the-shelf ROIC calculations. Only by scouring the footnotes and the MD&A [as New Constructs does] can investors get an accurate calculation of ROIC.” – pp. 8, 5th para.
- “The majority of the difference...comes from New Constructs’ machine learning approach, which leverages technology to calculate ROIC by applying accounting adjustments that may be buried deeply in the footnotes across thousands of companies.” – pp. 4, 2nd para.

Superior Stock Ratings

Robo-Analysts’ stock ratings outperform those from human analysts as shown in this [paper](#) from Indiana’s Kelley School of Business. Bloomberg features the paper [here](#).

Key quotes from the paper:

- “the portfolios formed following the buy recommendations of Robo-Analysts earn abnormal returns that are statistically and economically significant.” – pp. 6, 3rd para.
- “Our results ultimately suggest that Robo-Analysts are a valuable, alternative information intermediary to traditional sell-side analysts.” – pp. 20, 3rd para.

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