Andrew Choi, Adam Linert, Pranav Maddali, Jeffrey Shen

Q: How has COVID-19 affected corporate debt/borrowing (look at dividends if possible) and what are the possible downstream effects of this effect (maybe interest & exchange rates)?

Coming into DataFest, we wanted to combine the worlds of finance and data analytics. Our main goal was to find the amount of corporate borrowing of US-based companies during the coronavirus pandemic and assess the possible downstream effects of this change in bond issuance and interest. In order to enhance our analysis, we decided to separate the sampled US companies into two categories: cash vulnerable companies and cash invulnerable companies. The cash invulnerable companies served as a control in our analysis in order to emphasize the decline in cash vulnerable companies.

Through historical analysis of companies that filed for bankruptcy over the last decade, we found that as we analyze the working capital ratio for these companies, the ratio was well below indication low debt capacity or the ability to pay off debts right before they crashed. While some companies survived, they were unable to pay off the debt in either the short-term or long-term.

The eruption of the deadly virus acted as a catalyst to simultaneous demand, supply, and finance shocks which deeply affected multiple business sectors in the United States. One of the most common ways to borrow for a company is through corporate bonds issuance. As a result, we can see that the total amount of bonds issued year-to-date increased dramatically in 2020. Even though new bonds are primarily investment grade-rated, there is a risk that rising corporate debt and worsening economic outlook can trigger a wave of credit rating downgrades. As a result, companies could struggle to raise fresh debt or refinance existing bonds. This could be particularly devastating considering the fact that the cash flows of the companies are shrinking and so might not be able to continue their operations in the near future.

We first identified that biomedical companies would be considered cash invulnerable companies. These companies will either not borrow as much as other cash vulnerable companies because they are still fairing well economically, or some companies will borrow more to increase funding for research and development to find a possible COVID-19 treatment which will result in long term benefits.

Once we identified the retail industry as most cash vulnerable during this pandemic, we found that the subsequent retail company financial statements revealed their inability to borrow - that is, their debt capacity was extremely low, with a high liability to low asset rate. Since these companies are unable to borrow, they will likely go bankrupt, according to historical data or similar impacted companies during the 2008 recession.

A: COVID-19 has decreased cash vulnerable company's ability to borrow, and has increased cash invulnerable company's ability to borrow. Companies that are cash vulnerable are in term more likely to be subject to bankruptcy.

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