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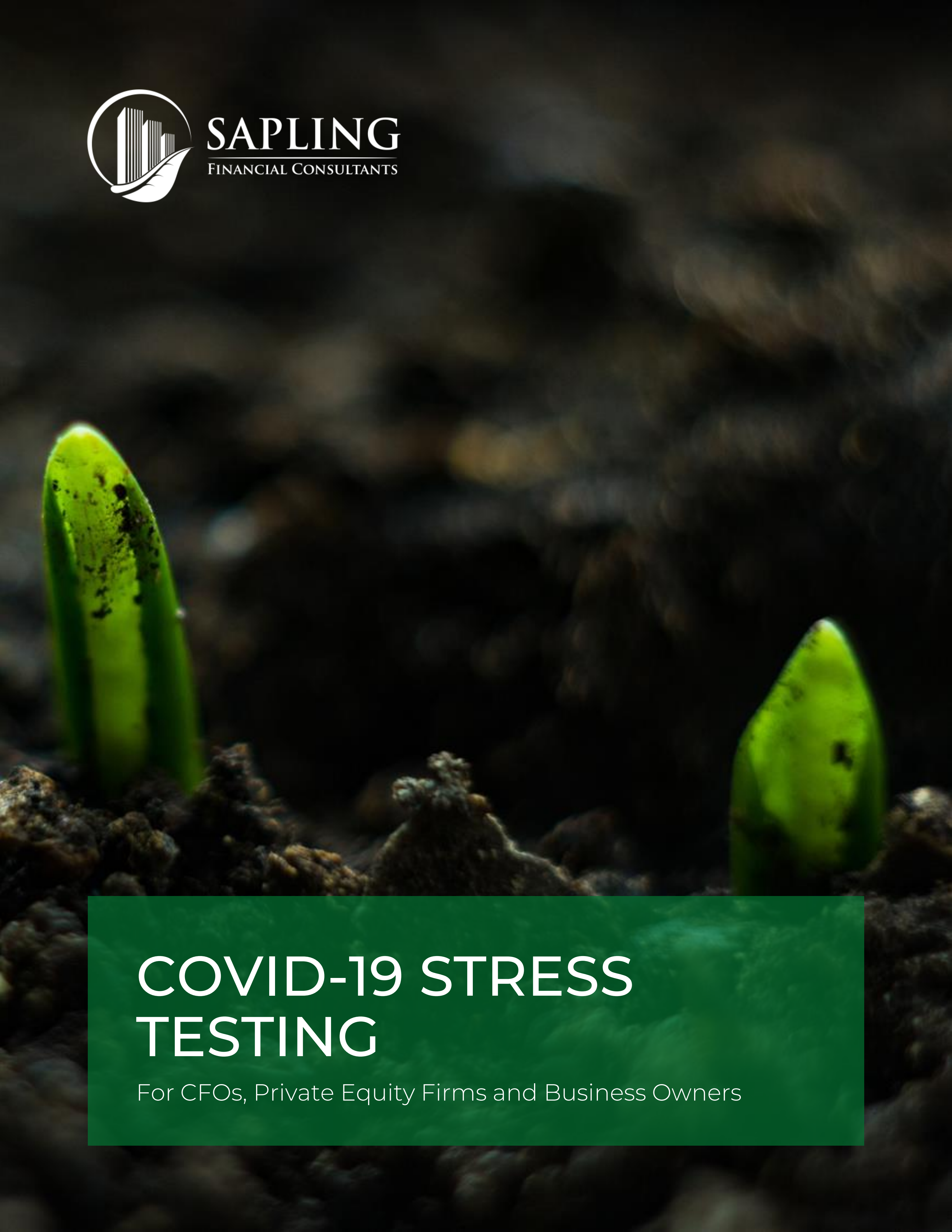


COVID-19 STRESS TESTING

For CFOs, Private Equity Firms and Business Owners

Sapling Financial Consultants Inc. (“Sapling”) assists many small and midmarket businesses across various industries to make data-driven decisions through the use of customized financial models and data analytics.

This whitepaper covers how businesses can enhance their financial situation during the COVID-19 crisis through Stress Testing. A companion financial model, provided free of charge, can be downloaded here (with separate versions for US and Canadian companies):

https://saplingfinancial.com/blog/covid-19-stress-testing/

SURVIVING THE GLOBAL PANDEMIC THROUGH STRESS TESTING

With the sudden outbreak of the COVID-19 pandemic, and the announcement of a state of emergency across many jurisdictions, millions of businesses are either shut down or under-performing, with the exception of a few essential business such as grocery stores, conferencing software, and Personal Protective Equipment manufacturers, which are experiencing what is likely a temporary increase in sales. The resultant loss in revenues has caused mass layoffs around the world, and left many small- to medium-sized businesses concerned about their survival. Although governments are passing legislation for numerous support programs, such as wage subsidies and low-interest/forgivable loans, businesses may still find that these measures are insufficient to weather the crisis. Cost-cutting and layoffs continue to be required for many firms, but firms must do so in such a way as to survive this crisis strategically and to get back to normalcy from a stronger position.

The main purpose of Stress Testing is to incorporate all available information into forecasts to enable decisionmakers to make *surgical*, rather than *blunt*, changes to the business in order to preserve as much capacity as required, such that the business be best positioned to emerge from the crisis. This goes hand-in-hand with building support for planned changes with key stakeholders like employees, lenders and investors, who will be aligned with decisions grounded in a strong rationale and data rather than those based on just “knee-jerk” or “gut” reactions. Additionally, an increasing number of market observers are stating that companies that do right by their customers and employees will emerge

stronger from this crisis, and quantitative decision-making is central to this.

Key changes that companies can implement to preserve cash flow include:

- Layoffs
- Revisiting all contracts (rental, supply, etc.) to understand options
- Renegotiating with vendors
- Stretching accounts payable days, and reducing inventory days
- Maximizing the use of all government subsidies and programs
- Requesting payment deferrals, reduced interest, increased loan availability, and other arrangements from lenders
- Raising equity through new financings, or capital calls from existing investors

To be able to incorporate these changes vis-à-vis your revised revenue forecast, a detailed and flexible Stress Testing model is a must. In terms of high-level functionality, a number of features are critical. The model should be equipped with, at a minimum, functionality to calculate monthly forecasts in order to keep you apprised of likely changes to your cash position during this volatile time. In some cases we found that companies need to go as granular as weekly or daily with their forecasts. It should also include a functioning revolver (line of credit) and other financial resources that can be maxed out; this will give an indication of your true cash shortfall in the worst-case scenario. In addition, full financial statements (income statement, balance sheet and cash flow statement) are required to generate all necessary financial ratios for your communications with stakeholders. Finally, your model should also incorporate functionality to reflect the impact of government liquidity supports, and be built in such a way that adding new such programs (as new legislation is passed) is straightforward.

A number of more detailed features are also helpful. Sales should be calculated as price times quantity instead of flat dollar amounts plus (or minus) a growth factor. After all, many companies are discounting their product prices in order to drive volumes sold, so breaking the sales figure down in the model provides a closer fit with actual operations. A list of staff organized by department and group, along with a start date/end date by group, is also helpful as it will allow you to vary your headcount based on functional requirements. For example, instead of laying off six employees, it is prudent to indicate that you're laying off six analysts from the Finance department rather than six factoryworkers, both for decision-making around firm productive capacity, and for communication of your rationale for layoffs to the affected employees. In addition, calculating the severance or termination pay associated with each employee helps to assist with the decision of choosing to lay off temporarily or permanently. Inclusion of inputs for the specific shut-down period timeline ("Shut Down" and "Back to Normalcy" dates) is critical, as key scenarios should be run around the length of shutdown (whether shorter or longer). These inputs help you to determine when the company should enter cost-saving mode to cut down expenditures and to lay off staff, and when the company can restore normalcy and begin re-hiring employees. Building in functionality for various lender arrangements such as payment-in-kind, reduced interest, and deferred payments will also assist with coming up with concrete proposals with your lender.

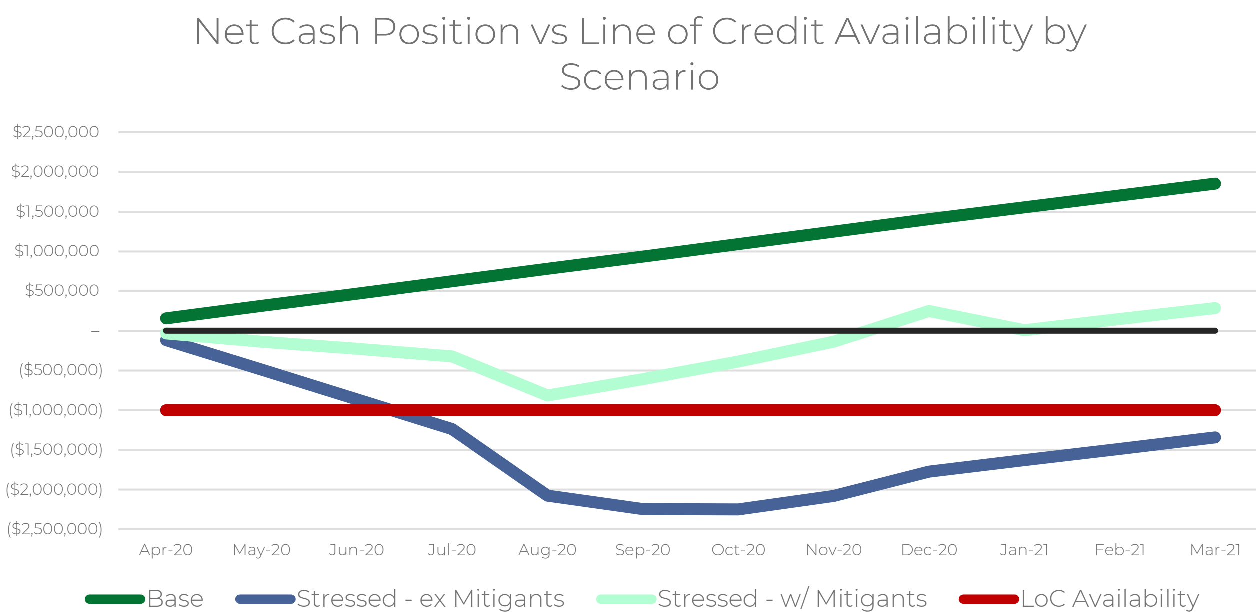
Once you have a model that can accommodate Stress Testing, setting up the right scenarios is critical in order to obtain the correct insights from the model. In developing revenue forecasts, we suggest using data from your business operation drivers, such as KPIs, as well as public information, and predictions by industry and economic experts. Overall, we recommend developing three broad categories of scenarios:

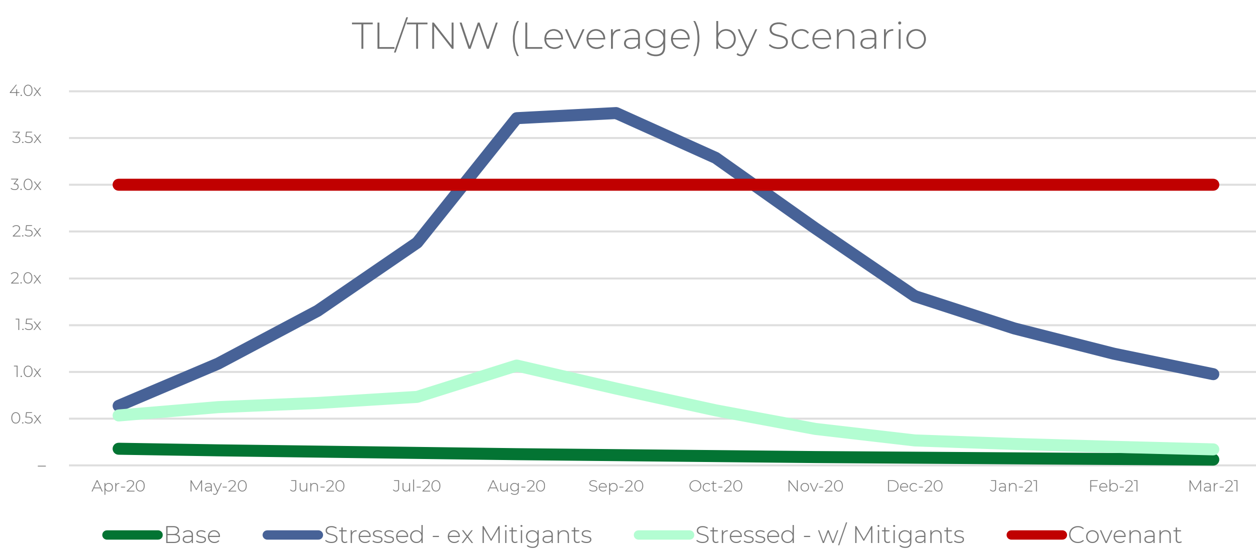
- Base Case: This takes what your business operations *would have been* had the crisis not occurred. Ideally, it's from a model that has already been run by your investors and lenders. This will help with understanding deltas in their expected returns, while also offering a baseline for what a future recovery may look like
- Stressed Case (without Mitigants): This scenario starts with your Base Case, and then reduces revenues based on revised expectations in light of the COVID-19 crisis. What you don't do in this scenario is build in any mitigants such as layoffs or loan arrangements. This scenario will estimate the largest cash shortfall possible for the worst-case scenario. You can have several versions of this scenario based on different shutdown lengths and revenue reductions
- Stressed Case (with Mitigants): Finally, in this scenario you start with your revenue forecast from the Stressed Case (without Mitigants), and then layer in mitigants like layoffs and other cost-cutting methodologies, to show what you expect your cash profile to actually look like. As with the Stressed Case (without Mitigants), you can run several versions based on different shutdown lengths

Once you've set and run your model, the key to interpreting results is to know what to look at. The most important output is the cash balance over time, including line of credit and other financial resources. Obviously, when you run out of cash (after drawing down available lines of credit and other resources), it's game over. Looking at a chart of how this evolves over time, both before and after mitigants, is helpful in understanding what steps you need to take and how much margin for error you have. Loan covenants, such as the debt coverage ratio and leverage ratio, are also important, though in speaking with a lender, we learned that banks are generally being less reactive to breaches of these covenants. Lenders are supportive of companies with committed ownership, open communication and realistic financial discussions and analyses. Conversely, companies can fail in building a constructive path forward with their lenders where they lack essential knowledge on internal liquidity and have poor planning.

One CFO who has gone through this exercise extensively, including modelling on a daily basis, told us that through stress testing, they were able to present their staff with stronger rationales for key decisions. As a result, employees are more motivated than ever, with higher-than-normal performance evident in key performance indicators. Doing the right thing really can pay off.

Figure: Two Key Outputs from our Stress Testing





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