Stress Testing Markets

*Featuring: **Thomas Verbraken**, Executive Director, MSCI Research*

Adam Bass:

This is MSCI Perspectives. Your source for weekly research insights as investors respond to the COVID-19 pandemic. I'm your host Adam Bass, and today is June 11th, 2020. This week, much like health officials have been modeling different scenarios, so too have those analyzing financial markets. These stress tests present potential effects based on different sets of assumptions. And while not predictive, they can help investors think through their options and plan their way forward. We spoke with Thomas Verbraken, of the Risk Management Solutions Research Team, who conducts many of these tests for MSCI. Thomas, thanks for being here.

Thomas Verbraken:

Of course, it's my pleasure.

Adam Bass:

You're speaking with us from your home in Budapest, but you grew up on the other side of Europe in Belgium. They've been hit pretty hard by COVID-19.

Thomas Verbraken:

Yes, yes, that's right. Belgium is among the most impacted countries. And, unfortunately my hometown, Sint-Truiden, made the headlines because within Belgium it was a very severely impacted, among the worst places to be. Before the lockdown, there was still a carnival held in my hometown, and many people attended that who recently returned from ski trips to Italy. So that was kind of a super spreader event.

Adam Bass:

It's amazing how something so small, like a festival, can have such large repercussions.

Thomas Verbraken:

The toll the virus eventually takes really depends on these little details.

Adam Bass:

So, stress tests. Let's start at the beginning. What are they? Why are they important? Why are they useful?

Thomas Verbraken:

Yes, sure. Well, stress testing really got famous because of the role it's played in the financial crisis, and also in banking regulation since then. And I think one of the reasons why stress testing is so useful, and why many people do it, is because it's a form of storytelling. It's really answering the "what if" question. For example, what could happen to my portfolio if there is a second outbreak of COVID-19 in the second half of 2020. So, because it's all about narratives, about stories, many people can relate to it. Also, those who don't have a quantitative background to understand all the details, they can still relate to the narrative told in a stress test.

Adam Bass:

How do you design an effective stress test?

Thomas Verbraken:

Yeah, so basically we look at stress testing as a two-step procedure. The first step is coming up with the scenario. It's what we call the scenario design step. Basically coming up with a story, or stories, you want to tell, and then expressing them in a quantitative way. And typically that's done by defining shocks on major market variables.

Thomas Verbraken:

You can have a given story and then you say under that story, the MSL USA index would drop by 15%, the Treasury yield would go down by 50 basis points, and so on. So you have a story and a quantitative way of telling that story. But that's just the first step, because now you have, let's say, a handful of risk factor shocks defined to describe your scenario. But you want to see what your portfolio does under that scenario, so you have to propagate, as we say, the handful of risk factor shocks to your entire portfolio. And that's the second step. And it's really a crucial step because without this, it just remains meer storytelling. You have to be able to connect the narrative to your portfolio. And this is, of course, where risk systems come into play, because they allow you to do the propagation step to make sure that the portfolio is impacted in all its credit clarity in a consistent way.

Adam Bass:

The current situation stems from a health crisis, rather than a financial one. Does that change anything about how you conduct a stress test? Do you do anything differently?

Thomas Verbraken:

When we create a narrative, we always aim to capture the causation chain, starting with the primary driver and ending with the financial portfolio. And that's no different in this story. We really have to start with assumptions on the spread of the virus, and the corresponding policy responses in terms of containment measures such as lock downs, with how the virus might spread, what could be the reaction of governments to that virus, how they want to contain this. And then in the next step, we will move to the economic consequences. And basically, by combining all these elements into a coherent narrative, we want to answer the question, under that narrative, what will my portfolio do?

Adam Bass:

And how precise can you get with these tests? What do you do if the conditions of your scenario change?

Thomas Verbraken:

That's why under these very uncertain circumstances we really prefer to model the range of scenarios. And I really want to get that message across that stress testing, it's not about having a crystal ball. It's absolutely not about forecasting the most likely scenario. What we use it for is to model severe, but plausible, scenarios based on the information we have at hand. And that process gives you a range of outcomes, which you can take into account when managing the downside risk of your portfolios.

Adam Bass:

How many different scenarios did you design for this stress test?

Thomas Verbraken:

Well, we basically created four COVID scenarios, and these are based on an analysis done by the IMF. And, as I mentioned before, the key ingredient of the narrative is really how the dynamic evolves. For example, there is a scenario where we assume that no further outbreak will happen and we will fairly quickly go back to an economic situation as before. Or, there is a scenario where outbreaks and lockdowns return right into 2021 with, of course, much more significant implications for the economy.

Adam Bass:

These are the V, U, L, and swoosh-shape recoveries we've been reading about. Do you mind explaining those in a little more detail?

Thomas Verbraken:

So the V-shaped recovery assumes that we fairly quickly go back to business as usual without any further outbreaks. A second scenario, a U-shaped scenario, also assumes that there wouldn't be further outbreaks, but that restrictions are lifted more slowly. So, there will still be quite heavy social distancing measures in place, but we won't have another major lockdown as we've seen in the first half of the year. Then we have a swoosh-shaped scenario. By the way, swoosh is the Nike logo, so it really represents that very quick contraction followed by a really slow recovery. Now under that scenario, we assume that there will be a further outbreak in the second half of the year. And under the L-shaped scenario as I mentioned before, we assume that while the virus will be around with outbreaks and with lockdowns well into 2021, so we will really have severe damage to the company.

Adam Bass:

And what were your results?

Thomas Verbraken:

Well, basically, in the equity market impact compared to pre-COVID levels, so basically compared to mid February levels, ranged from minus 13% for a V-shaped recovery, to minus 45% under an L-shaped recovery. But now, we are again close to the mid February levels for equity markets, so the impacts I was just mentioning would be similar relative to today's levels. And for a more diversified multi-asset class portfolio, consisting of 60% global equities and 40% US fixed income, the impact relative to today's levels could range between minus 5% and minus 25%.

Adam Bass:

How have equity markets reacted since the stress test? Have we seen any particular shape?

Thomas Verbraken:

Yes. So basically, the equity market impact which we stayed under our scenarios, they are basically assuming that the equity markets react to changing expectations. As we went from mid February to basically the bottom of the market somewhere in March, we've seen that markets were gradually pricing worse and worst case scenarios. And around the end of March, they were in line or consistent with our swoosh-shaped scenario. So the long, but most severe scenario. But since then, they have started recovering and by now they're actually exceeding our optimistic V-shaped scenario.

Thomas Verbraken:

So, does that mean that markets are implicitly predicting that the economic recovery will be swift? No, that's not what this is meant to do. But we want to do what kind of providing this range is showing, that under the assumptions of our scenarios, equity markets would be around that level under those assumptions. So basically, it helps to assess the impact under more pessimistic scenarios than where we are now in order for investors to help manage the downside risk, if new outbreaks occur, if new lockdowns occur. And basically that's kind of in line with what they say that you should hope for the best, but always be prepared for the worst. And that's what we're trying to achieve with providing those ranges of scenarios.

Adam Bass:

That's all for this week. Thanks to Thomas and to all of you for joining us. We hope you'll join us next week when Dimitirs Melas, Head of Global Equity Research, returns with five lessons from the crisis so far. If you have a moment, we hope you'll subscribe to this podcast so you can stay up to date on our latest episodes and insights. If there's a topic you'd like explored, or just want to let us know what you think, don't hesitate to leave us a comment. For more from MSCI, check out our sister podcast, ESG Now. Follow us on the MSCI LinkedIn page, and don't forget to bookmark www.msci.com/coronavirus for all our crisis related content. Until next week. I'm your host, Adam Bass, and this is MSCI Perspectives. Stay safe, everyone.

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