



# To Our New Subscribers

Thank you to our new subscribers and welcome to the fourth issue of the ARM quarterly newsletter! We hope to make this publication valuable to you with several brief articles that provide unique insights, some ideas about how to address specific problems and introduce potential risks that may not yet be on your radar.

The primary authors are Dave Ingram and Max Rudolph. In this issue we return David Ensor as a guest author. We are all active participants in the risk management, actuarial, investment and insurance spaces, and have been for many years.

Subscribers can suggest topics for articles and ask questions of the authors during our follow-up webinars and discussion sessions. Ever cognizant of regulatory requirements, leveraging them to add value to your company in practical ways, will be our focus.

Published by Actuarial Risk Management (ARM), the Strategic and Risk Solutions for Executives (SRSE) subscription consists of two paid tiers. The newsletter is free to all.

A webcast is available at either the company or individual level, as well as a follow-up one-on-one discussion with the newsletter authors that extends the general webcast. More info can be found at the final page of this newsletter.

We hope you find a solution that works for you!

For more details  
Visit [actrisk.com](http://actrisk.com)

or

Contact Marc Altschull  
[maltschull@actrisk.com](mailto:maltschull@actrisk.com)

**We hope you will join us on our journey!**

**Sign-up to receive future newsletters automatically at  
<https://www.surveymonkey.com/r/AMRSRSE>**



# Three Levels of Stress

One of the reasons that many people are uncomfortable with performing stress testing is that there is no clear standard of how bad that a stress scenario needs to be. It seems to some like a dangerous move to do a stress test and then end up learning that you were much harder on yourself than another company so a casual observer might not understand why your result might look worse.

Stress testing just seems to be too open-ended and un-defined. For discussions with various internal audiences and especially for discussions between insurers and regulators reviewing the ORSA as well as for discussions between regulators, a common language about stress tests needs to be developed and used.

But it is difficult to find a definition of “stress” that fits what everyone wants. Regulators seem to be most focused upon company failure and they are therefore most interested in extreme loss situations that might not have any realistic likelihood of ever happening. On the other hand, management is often focused on things that might challenge earnings in the short-term, while the board needs to look beyond even the likely tenure of current management to assess the long term viability of the firm with the risk and capital structure that is implied by the risk tolerance.

To deal with these conflicting objectives, stress testing needs to include several different levels of stresses:

- Normal Variability - Stress events are based upon the events that might cause least best year for a normal five or ten-year period.
- Realistic Disaster - The worst experience



that is reasonably expected over a long period of time is the stress event. To put that on a human scale, look at a forty-year period, the length of a single person’s career.



# Three Levels of Stress (cont'd)

- Worst case - Maximum plausible loss that could occur even if you believe that likelihood is extremely remote. This might be significantly worse than the Realistic Disaster.

As you might imagine, management will be able to use the Normal Volatility stress test for their earnings risk management focus. The board can work with the Realistic Disaster when they are looking to assess the longer-term viability of the company and the regulator can assess company failure risk from the Worst Case scenario.

If you wanted to apply this approach to equity risk, for example, the Normal Volatility stress might be a 7% drop in the market. Over the past 50 years, that has been a 10-year worst case about 50% of the time. For a Realistic Disaster you might choose a market drop of 25%. (In fact, 26.5% was the worst market drop in 49 of the past 50 years.) And for the Worst Case Scenario, a market drop of 50% could be used.

These three levels of adversity would be handled differently by a risk management framework:

- Normal Volatility that can be managed via risk control cycle processes and the breakthrough losses kept to amounts that can be absorbed into earnings.



Did someone share this newsletter with you? Sign-up to receive future newsletters for free at

<https://www.surveymonkey.com/r/AMRSRSE>



# Three Levels of Stress (cont'd)

- Realistic Disasters will sometimes be large enough that they cannot be absorbed into earnings but must be absorbed into capital. These stresses then become the focus of capital management and capital adequacy assessment. They are considered to be remote but plausible adverse events. The products or other activities that are most associated with these scenarios would then be thought of as driving the need for the risk capital buffer of the company.
- Worst Case scenarios are sometimes quite large but are also highly unlikely. It is very difficult for a management team to focus on such events. These scenarios are tested primarily out of curiosity, and the test results may or may not drive any risk management actions because they are so remote. But since regulators do want to look at these types of scenarios, they can get a sense of which types of events would drive an industry wide problem or a problem for a single company that has higher exposure or vulnerability to a particular worst case scenario. Of course to get the best information about these types of situations, the regulator would be best served by asking all insurers to look at their potential losses under the same Worst Case scenario. Unfortunately, regulators themselves do not yet seem to have had this insight.

*“But it is difficult to find a definition of “stress” that fits what everyone wants.”*



This approach to stress testing can be applied to all of your significant risks and if applied year after year can add a layer of comparability both between risks and between years for a company.

And if it were adopted by multiple companies, stress testing could start to develop towards intercompany comparability.

Would your company be interested in personalized continuing education on risk management topics for your board or C-suite members? We'll work with you to develop the program you need for the audience desired.