# To Our New Subscribers

**Thank you to our new subscribers and welcome to the third 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 add David Ensor as a guest author. We are 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 will consist 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.

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**maltschull@actrisk.com**

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

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# No Free Lunch

**The sign at the head of the path promises "Free Lunch - This Way." Free lunches are generally hard to find. But lately, signs like this one have been popping up more frequently.**

Recent monetary and fiscal stimulus has inflated what some call an everything bubble. This article highlights areas in risk modeling, both assets and liabilities, that help build resiliency. For insurers, reflecting consistent methodologies and conservatism into their internal models builds resiliency and enhances solvency.

In the late 1980s the new asset class was junk (high yield) bonds. Spreads were in the hundreds of basis points while historical defaults were in the dozens. As we know, it did not end well for concentrated owners of junk bonds. In the 2000s mark-to-model accounting generated low capital requirements on complex (often collateralized or illiquid), highly rated, assets derived from home mortgages. These securities failed to perform after promising large spreads and low defaults. The recent era of low nominal yields has seen investment managers reach for yield, assuming that adding risks like reduced liquidity leads to consistently higher returns.

Some are concerned that recently developed asset classes will follow this playbook, initially paying out but eventually stressing a portfolio. History doesn't repeat, but it does rhyme. It feels like a buy now pay later scheme, with models employed that don't always include the pay later part of the cycle. The lack of built-in redundancy increases the likelihood of asset defaults causing cash flow problems for insurers.

Your firm may be considering buying these new asset classes. How can a model align the potential risks with the promised returns when little historical data is available? The goal is to accurately predict future assumptions. Over long time horizons that cover a full cycle (e.g., credit, liquidity, government stimulus) you can't have it both ways. There is, unfortunately, no free lunch.


Financial models are used internally at insurance companies to manage the company, including exercises such as income statement projections and pricing. Using historical data would seem to leave little room for manipulation, and efficient market theory suggests that bubbles are



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# No Free Lunch (cont'd)

theoretically impossible. But we continue to seek out a free lunch when we should instead be looking for consistent methodologies that align with company risk expectations. We model mortality with increasing complexity, including trends and mortality improvement factors, while

an asset assumption like default charge has a simple level basis point charge even though events like pandemics and recessions both occur periodically and impact net income in similar ways. We need to use consistent methodologies between risks and use narrative scenarios that require aligned assumptions. Some say "It's different this time!" but it's not. It is the risk manager's job to challenge so-called paradigm shifts that invariably revert back to prior norms.

As the song says – "Sign, sign, everywhere a sign." Which sign will we follow?

Assumptions in these models should reflect best estimates regarding the future. What methods will build resiliency for those who trust insurers with their savings? Principle-based methods align with narrative scenarios, allowing a holistic view of the quantitative results versus rule-based methods that build conservatism into each individual assumption.

Historically, insurers have become insolvent due to concentration of risk that goes bad – either small geographic concentrations covering health or property insurance, or going big on a specific asset class. It's important to fully reflect the asset risk in your strategy. Modeled investment strategies perform best when spreads and defaults reflect a full credit cycle. This can be difficult to implement when a new asset class has enjoyed early success.

One person's reasonable statistical technique may be another's cherry picked result. The challenge is to build out full cycle (e.g., credit, liquidity) results prior to





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# No Free Lunch (cont'd)

the downside part of the cycle playing out. These new asset classes tend to be complex, making it difficult to test or challenge assumptions. Focusing on initial positive returns and ignoring assumptions calibrated over a full cycle may lead a model to reflect a "free lunch," or riskless profit. This methodology will work until it doesn't. Cycles eventually complete the circle. What becomes an asset crisis often starts off with excellent returns before a trigger event changes expectations and liquidity suddenly dries up.

Common sense is in the eye of the beholder. Conservatism can only be verified in hindsight. In this environment conservative modelers can lose business and, if things go sour, aggressive modelers say it was just bad luck.

An insurer should internally strive to model risk levels more conservatively than the floor required by regulators.

What can those modeling a block of business do to ensure solvency under plausible adverse scenarios? For example, why do houses built in forests known to be tinder boxes overdue for a major fire event have to wait until historical data "proves" rates should increase? Why are rising tides in Miami not driving flood premiums and mortgage rates up?

Modelers should use common sense to model an unknown known, where historical data may not be predictive. Disclosure and transparency are key for internal use. Some examples from the past that may rhyme with future situations include

- Pandemic risk
- Junk bonds
- Aggressive asset ratings
- Combinations of emerging risks
- Bubbles created by government stimulus

Historical investment and liability data should be looked at critically and at times adjusted. Change in the world of finance is accelerating and climate change as a threat multiplier changes the relationship between assumptions. The best analysts will revert to first principles rather than relying on rules of thumb. Beware of risk concentrations and aggressive assumptions that seem too good to be true.

The definition of credible data should be expanded to allow anticipated changes to historical data. Disclosure of data that conflicts with market-driven prices should be encouraged, including future mean reversions, trends or tightening of government policy. Modelers, risk managers, actuaries and investment professionals should work together to build the appropriate level of conservatism, disclosure and transparency into the process.

Some modelers will follow the signs, expecting a risk-free profit, following the path until it suddenly falls off into the abyss. Then they see another sign. It says, "There is no free lunch." Build resiliency and survive.



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