Underwriting Leakage

Written by Ivan Maddox

A guide that addresses underwriting leakage and how to minimize the contributing factors.

INTERMAP®
Answers Now™

INTERMAP.COM

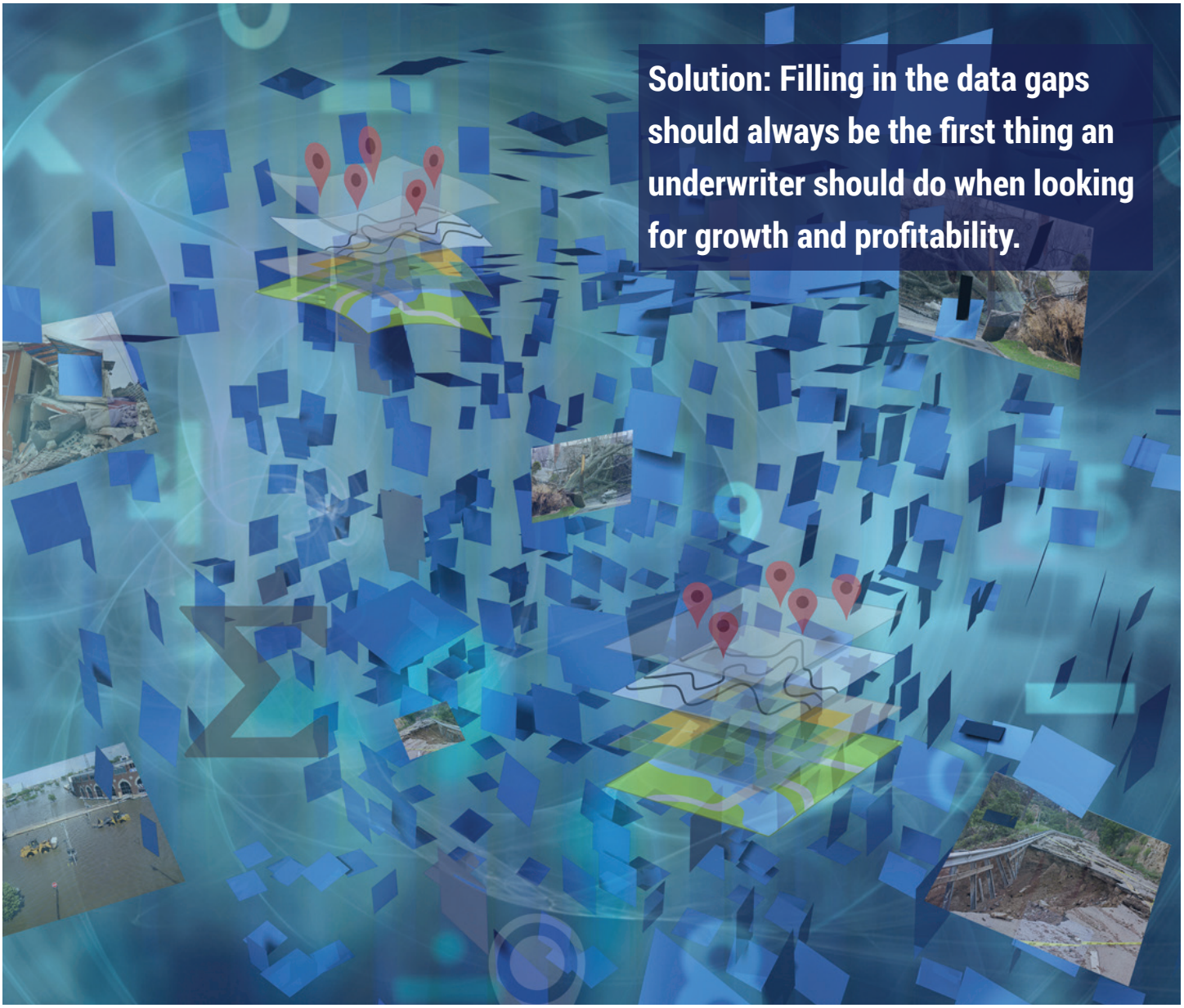
What is Underwriting Leakage?

Insurance is a hyper-competitive industry in which the winners are those who can best predict the unknowable, or at least be less wrong than their competition. Underwriters are the ones who have to price what is unknowable, so it can never be perfect. The gap between actual underwriting and perfection is called *underwriting leakage*. While it's impossible to know if any single underwriting decision is better, a better process will create better results over time, leading to increased profitability.

The following pages look at four contributors to underwriting leakage and how they can be minimized.

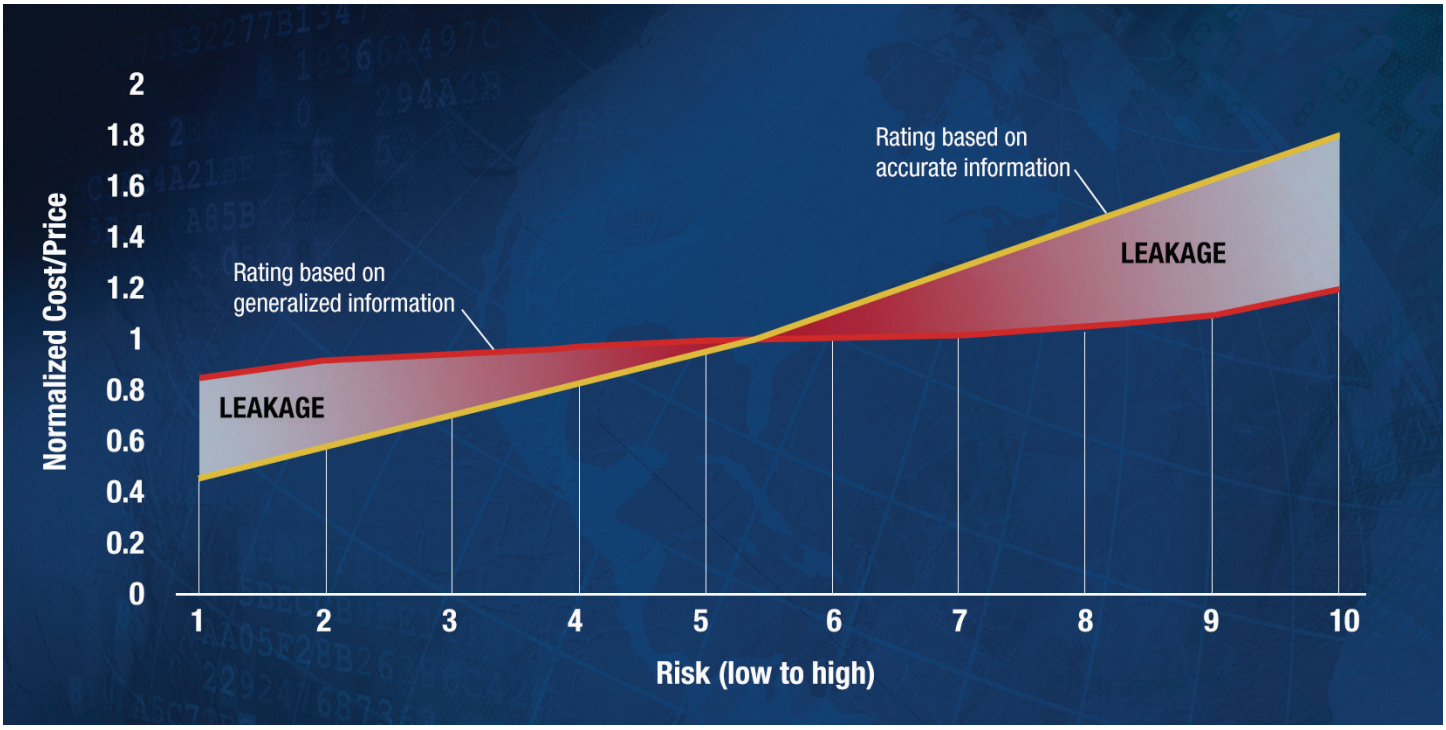
1 Incomplete Data

The biggest source of underwriting leakage is not having enough data to even estimate what a risk might be. This might include using accumulation information instead of a specific risk assessment, or simply rejecting a risk for which there is inadequate data. Either way, it is leakage, and the result is a willingness to lose money, while trying to ensure that it is not too much loss.



2 Generalized Data

While not nearly as dire as a lack of data, generalized data is a source of leakage. One example of generalized data is NFIP Flood Insurance Rate Maps (FIRMs) in certain places where the flood zones are huge and apply a uniform rate to properties that clearly have varying levels of risk. The result of using generalized data is "The Butterfly Chart."



The left wing is leakage due to overpricing the risk; this business will be lost to competition with better data. The right wing is leakage due to underpricing the risk; this business will lead to claims that overwhelm the premium taken in. Using the best possible data folds the butterfly's wings so that premium matches the normalized cost.

3 Efficient Use of the Data

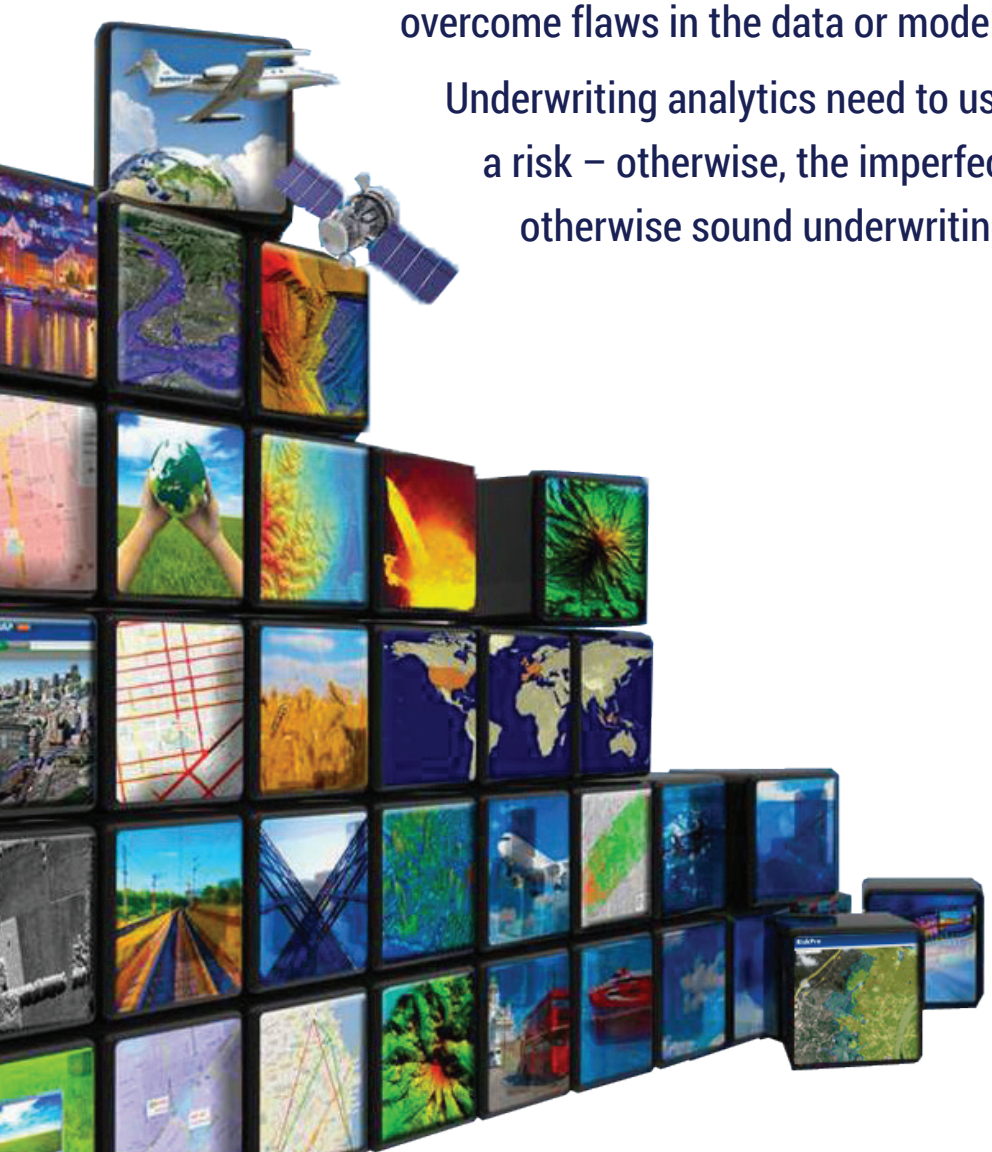
Even if an underwriter has access to perfect data (which doesn't exist), any inefficiencies in their workflow is a source of leakage. Underwriters should be able to apply the necessary data to a submitted risk without any hassle or delay – this is where analytics come in. Proper underwriting analytics should automatically consider a submission and present the underwriter with the exact correct information (note: data has been converted to answers now) to make his or her job easy and fast. That information might be a red light or green light; or it might be a numerical value (or set of numbers) that can be applied to business rules, or it might actually bind and issue the policy without any human intervention. The less time and effort it takes to underwrite, the less leakage there is.

4 Suitable Analytics for Underwriting

Once solid data is being used efficiently, there is still one pitfall that causes underwriting leakage: using the wrong analytics. Even if the analytics are extremely efficient, if they are not built for underwriting, there is leakage.

The most common example of this is the use of accumulation software (or even cat models) for underwriting property risk. Accumulation can overcome weaknesses in data and models by the law of big numbers – but underwriting is based on single locations (even if underwriting a schedule of properties, they each need to be assessed for risk based on their own merits), and can't leverage big numbers to overcome flaws in the data or models.

Underwriting analytics need to use multiple datasets to evaluate a risk – otherwise, the imperfections of the data can ruin otherwise sound underwriting.



As underwriting leakage is reduced, profitability will increase…but how will you know?

It can take years for underwriting profitability to manifest itself, because premium doesn't necessarily increase (it might decrease!) and losses don't suddenly go down. But over time, the quality of the risks written, and the premium collected for those risks resonate into a profitable portfolio. Luckily, AIG has studied this and produced a chart to illustrate it.

This chart tracks the Return on Investment on innovation in general, and it is absolutely applicable to underwriting technology. The performance depicted is based on the ability to cover the cost of capital. High performing companies see the most ROI on their innovation, but it takes 10 years for some separation from the under performers. Only after 20 years, and even more so after 30 years, does the innovation REALLY drive some differentiation.

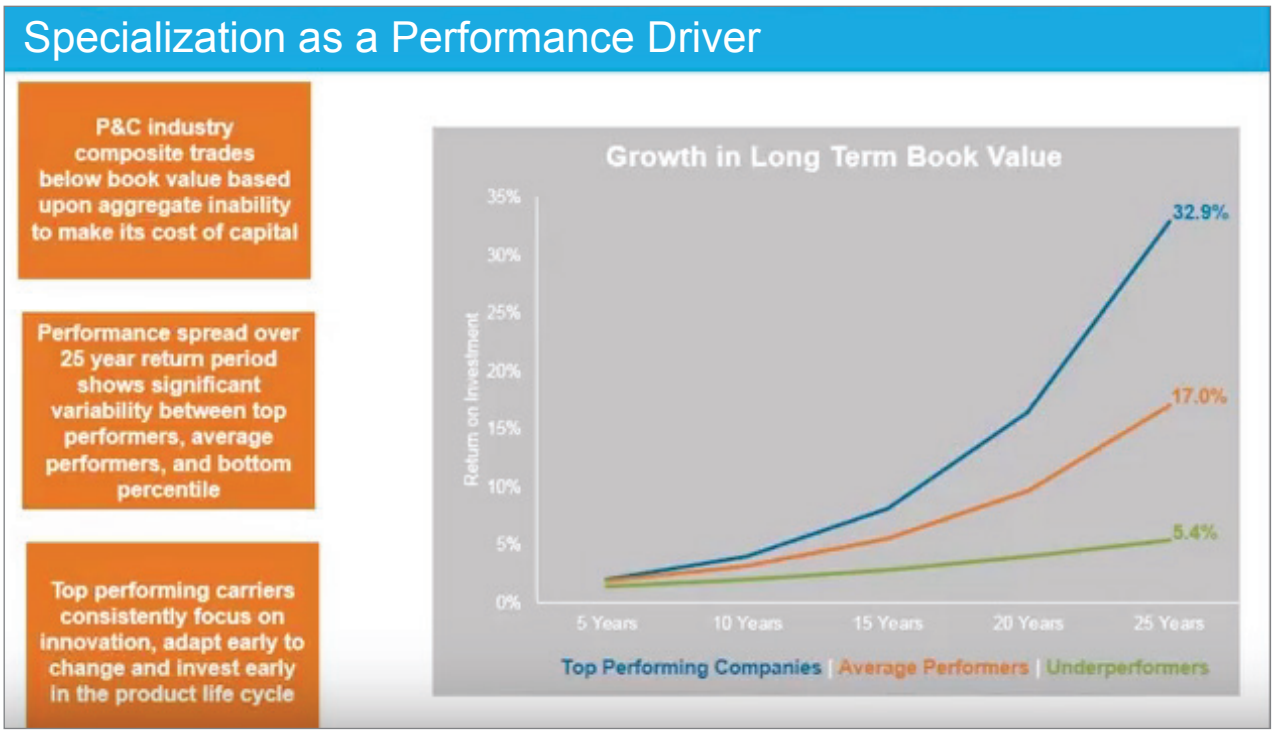


Chart from AIG's Robert Schimek's presentation titled "The Changing Landscape of Risk."

Conclusion

Every Bit Counts: Underwriting leakage can never be eliminated – perfection is impossible. But every bit of leakage that can be eliminated from the workflow will lead to increased profitability, eventually. Reducing leakage is a constructive cycle, too, because the more efficient and solid an underwriter's workflow gets, the more time he or she will have for finding new business. And, there will be time to reduce leakage even more.