

A close-up look at BHG's eye-opening loan genealogy

by Dan Richard, VP, Predictive Analytics, BHG Financial

I've spent the past two decades analyzing and developing predictive credit models for decision-making in loan originations. While it's a passion of mine, I don't expect everyone to spend as much time considering BHG Financial's loan origination process as I do. Nonetheless, it's a fascinating exercise when one considers all the science, technology, data, and human ingenuity that are deeply ingrained in the origination of each loan. In fact, our process is surprisingly like that of another item people may take for granted—a pencil.

I have long been inspired by "[I, Pencil](#)", an essay published by economist Leonard Reed in 1958. There is also a [children's book adaptation](#) by Connor Boyack that my three children adore.

In Reed's essay, he speaks from the perspective of a pencil and says "Think about the world of activity that goes into making me. All the raw materials. The wood that was sawed and transported. The engineering that went into the logging truck. All the people and knowledge needed to mine graphite for the pencil lead and harvest rubber for erasers. All to make a pencil you can easily buy in any store."

In that same respect, it takes a conflux of raw materials and human expertise from all over the world to make a high-performing loan that banks can easily buy on BHG's [Loan Hub](#). Allow me to narrate the genealogy of a BHG loan.

Likelihood to respond, borrow, and pay

Every month, BHG reviews over 300 million records and analyzes the data of approximately 100 million potential prospects who might fit our profile. In addition to our own 21 years of loan data, we also buy data from 50+ external data providers. Ultimately, our discovery process seeks to answer the following questions with a high level of confidence:

- 1 What is a consumer's likelihood to respond to our marketing?
- 2 Once they respond, what's their likelihood to navigate the process and take a loan?
- 3 Once funded, what is their propensity to pay?



For more information, contact:

Continuing with the pencil metaphor, I will walk through the “manufacturing” process of BHG loans to highlight the thousands of data points and the human ingenuity we leverage to optimize our lending decision strategies.

Data—our raw material

BHG tends to target higher-income, more creditworthy individuals. Many of the borrowers we target are licensed professionals, doctors, engineers, CPAs, and attorneys with approximately 18-20 years of experience in their industries. We proactively reach out to those with whom we wish to transact, using marketing data from multiple internal and external sources to identify potential borrowers with the highest likelihood to respond, borrow, and pay.

Before we reach out to a prospect, we don't necessarily know their actual income. So, we use marketing data companies to find estimates of a consumer's income based on Census data and other survey data. We can also see in a marketing file if somebody has a professional license or a particular business association. Data like that helps us figure out what type of marketing creative we'll tag that consumer with. We also analyze public records to discover major events such as bankruptcies, tax liens, or other negative judgments.

We acquire and analyze any data point that can drive our understanding of who our customers

are. For example, we know certain occupations have higher response rates to our marketing than others, while some occupations tend to have a higher level of risk. Taken together, all this intelligence in the marketing stage helps decide who should be on our mailing list.

A prospect's credit file is the most important factor in our decision process. For instance, when we analyze the likelihood of someone defaulting on an unsecured loan, some of the most valuable information for predicting that outcome is their earlier performance on unsecured loans. It is not a guarantee of future performance, but there is a high level of correlation.

If a prospect has a mortgage, our credit models will look at the dollar amount of their mortgage, how much has been paid down, and the time left on the mortgage. We'll also look at their prior mortgage history. Same with credit cards, which are uniquely insightful in terms of understanding a consumer's credit utilization. Historically, the higher the utilization rate on revolving credit, the higher the risk is.



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The human touch

In "I, Pencil," Reed highlighted the significant human contribution in pencil manufacturing. The same is true of every loan originated by BHG. Our loans are the manifestation of skilled craftspeople and engineers from all over the world. Their professional acumen covers the gamut of loan origination expertise, from credit underwriters who synthesize the data we pull to salespeople who supply white glove treatment through every step of the loan process.

Our staff includes data scientists, data analysts and data engineers, as well as highly quantitative business analytics professionals. We also employ several PhDs who elevate BHG to ever-increasing heights of sophistication in model development, model validation, current expected credit loss (CECL) methodology, pricing optimization, and cloud computing technology.

More than meets the eye

Like a pencil, there is much more to constructing a BHG loan than meets the eye. When banks buy BHG loans, they get the end product of a confluence of data, technology, mathematics, and predictive analytics, all intelligently synthesized by expert data scientists and engineers from across the globe. As such, I believe the loans we make available to community banks have been scrutinized to a deeper degree than any other unsecured loans you will find in the market. Our bank customers have benefited tremendously: since 2001, banks that have purchased BHG loans have earned over \$1 billion in combined interest income, and our network of more than 1,500 community banks keeps growing.

Here's a closer look at the 500+ people who make up our loan origination team:



DATA ANALYTICS

170+ individuals who develop and monitor the performance of models, targeted marketing campaigns, lead routing strategies, credit and pricing policies, all based on extensive data resources.



CREDIT SPECIALISTS

60+ experts performing comprehensive analyses of financial histories to determine whether a prospect qualifies for funding. Additionally, we have another 20+ people on our fraud management team.



CLOSING TEAM

50+ professionals who sell the value of our loans and can adjust the interest rate of our loans within an approved range.



SALES FORCE

This 200+ person team is in constant communication with potential and incoming borrowers.



For more information, contact: