



When a multinational bank needed to review its lending practices

Our modeling and analysis capabilities reduced risk and improved outcomes

Abstract

A multinational financial institution, among the largest commercial banks in the United States, faced a serious issue with its lending practices. Its securities lending division was under investigation by the U.S. Securities and Exchange Commission (SEC) for allegedly providing priority lending to funds owned by the bank.

Deloitte delivered sophisticated predictive modeling and analysis services to help the bank determine whether it was engaged in unfair lending practices. We also helped the client assess whether those practices led to financial losses and, if so, how to mitigate potential risks and losses in the future.

The challenge

Regulatory compliance is among the most challenging and complex of activities that financial institutions must undertake. Even the appearance of noncompliance can prompt an investigation by regulatory bodies.

The client, a multinational financial institution, provides a broad line of banking, mortgage, insurance, brokerage, and other services to consumers and businesses. Its securities lending division lends securities to mutual funds and hedge funds for trading purposes.

The division needed assistance with two interconnected issues. First, it faced investigation by the SEC for allegedly engaging in unfair securities lending practices by giving lending priority to funds owned by the bank.

Second, the majority of the securities being lent by the division were collateralized debt obligations (CDO) that had experienced significant financial losses. If the SEC accusations were accurate, then the bank as a whole was bearing a majority of those losses.

The bank needed to resolve both issues, first to avoid SEC sanctions or fines, and second to reduce any risks or losses to the bank and diversify its securities lending.

How we helped

Deloitte was engaged to assist the bank's outside legal counsel in determining whether the securities lending division was in fact engaged in unfair lending practices. We also helped the client determine whether those alleged practices had led to significant financial losses for the bank and, if so, to quantify those losses.

The engagement involved both Deloitte's Analytic & Forensic Technology (AFT) group and its Audit & Risk Enterprise Services (AERS) group. A total of eight Deloitte specialists worked on the engagement.

The team set to work by creating two analytic models. The first was a model of the actual lending history, focusing on transactions and pricing over a particular period of time. The second was a predictive model that incorporated these historic transactions along with what-if scenarios.



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Predictive models are designed to make correlations between various sets of data to forecast outcomes. In this case, the predictive model would home in on what the bank's transactions and pricing would have looked like had it diversified its lending practices in accordance with SEC standards. Notably, this was the first time the AFT group had employed predictive modeling to analyze data.

Deloitte produced models that enabled the bank to predict losses associated with its securities lending practices.

Here's how it worked. The team loaded historical financial data into a Microsoft SQL Server database and ran database queries and software routines against that data to prepare it for modeling.

It then combined Microsoft Excel and SAS Institute business intelligence software to produce the historical and predictive models. Those tools brought together disparate structured and unstructured historical data, including securities lending transactions and monthly collateral balance reports.

The most unique aspect of the engagement occurred during the analysis phase. The team applied regression analysis, which is used to show how the value of a specific dependent variable is affected when one independent variable is changed while all others remain the same. It used sophisticated regression methodologies to analyze loan history, client account data, and earnings data.

By running regression analysis on the historical data, it was able to determine the "normal" state. Based on this analysis, it could develop a predictive model. It then tuned the models by comparing the model outputs to known cases of fair lending practices during a comparable time period.

The what-if model revealed whether there was a differential, or gap, between the predictive model and the actual scenario. The gap between the results of the two models represented the aggregate losses that the bank had experienced that were associated with its securities lending practices.

The bank took advantage of AFT's economic and statistical consulting services and AERS's capital markets technology services. Together, the team was able to identify the business problem and develop a methodology for analyzing the data.

Solution

In simple terms, Deloitte helped the bank determine whether it was engaging in unfair lending practices to mutual funds and hedge funds. We did that by first taking a baseline of normal activity and then comparing it with activity during the period in question. We found that in fact the bank was favoring funds it owned over those it didn't.

We also helped the client determine whether those lending practices exposed the bank to losses. Our analysis showed that while lending to those funds generated increased fees, because the funds were overexposed during an economic downturn, the behavior did in fact result in losses.

The data capture and analysis that Deloitte performed was carefully reviewed by the SEC and deemed complete and accurate. As a result, the bank was able to take corrective action to satisfy the SEC. What's more, the engagement equipped the bank with the information it needed to establish controls that would prevent future issues with its lending practices.

For more information, please contact

Rick Porter
Partner
Deloitte AERS
Financial Services
+1 312 486 2046
rrporter@deloitte.com

Scott Read
Principal
Deloitte FAS LLP
Forensic & Dispute Services
+1 612 397 4702
sread@deloitte.com

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