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ANALYZING UNDERWRITING FAIR LENDING RISK

Best Modeling Practices May Require Seeing Underwriting as a Two Phase Process and Using Non-HMDA-Reported Data Points

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Analyzing Underwriting Fair Lending Risk:

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ADI conducts regression-based analyses of Fair Lending underwriting[1] risk for residential mortgage lenders. The primary goal is to evaluate whether any prohibited basis group members were more likely to have their application denied than comparison group members within a given period. In the design phase, we develop an analysis plan to model each client's underwriting process. We consider the range of products offered and applicant characteristics to design our technical approach. We use rigorous methods designed to ensure that we draw our conclusions about Fair Lending risk from models that are well aligned with client underwriting processes.

We have found that modeling the underwriting processes of many lenders requires a dynamic analysis plan. Information initially provided by an applicant is updated by the underwriter, and this has important implications. Indeed, the function of the underwriter is to validate information provided by the applicant according to methods that meet the standards of the investors to whom the lender anticipates selling the mortgage, if originated. A significant challenge in underwriting modeling, then, is determining how to take into account the dynamic features of the underwriting process in the design of underwriting models. By "dynamic" we mean the changes in factors such as income and debt from self-reported values to those determined by the underwriter.

Broadly, there are two approaches that we see – *static* and *dynamic*.

- A static modeling approach assumes that all information is collected and evaluated at a single stage. The static approach assumes that an approval – denial decision[2] occurs as a result of information collected reasonably contemporaneous to the decision. We see the static approach as simplistic and ignoring our observation that income, debt and other data points are updated in a dynamic way as underwriting evolves.
- A dynamic modeling approach is more realistic and better aligned with the underwriting process we see at many lenders. The dynamic modeling approach assumes that, effectively, there are two phases through which an application must pass to be approved. In Phase 1, the lender determines whether, based on self-reported information, each application is sufficiently likely to be approved (and result in an origination) to warrant expending the resources of an

[1] ADI conducts underwriting, pricing, pricing exceptions and product choice analyses to evaluate Fair Lending risk for mortgage lenders. In addition, ADI conducts Fair Lending analyses for auto and consumer lenders, as well.

[2] For simplicity, we ignore applications that are withdrawn by the applicant or closed for incompleteness in this article.

underwriter. In Phase 2, the lender assigns an underwriter to methodically review and update key self-reported data points, as well as compile relevant file information. On the basis of Phase 2 data, a final decision is rendered by the lender's underwriting staff, only for those applicants that proceed through Phase 1.

We see that it is best to decompose underwriting risk modeling into these two distinct phases. This approach is better aligned with the process used by lenders, results in lower and well-identified high risk cases, and should be well received by regulatory authorities. In this article, we describe why we see the dynamic, two-phase modeling approach as superior to the static, single-phase approach. And, we explain ways in which lenders may adapt their Loan Origination Systems (LOS's) to support these analyses and improve their Fair Lending position.

Comparing Fair Lending Questions Addressed by Static and Dynamic Modeling Approaches

A <u>static approach</u> addresses the question:

- *Were applicants who were members of a protected class more likely to be denied than similarly situated comparison group applicants as a result of the lender's underwriting process?*

The static approach incorporates the income, debt and DTI at a single point in the underwriting process for each application. For an approved application, the DTI would reflect the information developed by an underwriter. An application that was denied – if denied on the basis of self-reported information – would not reflect the value added by the underwriter's work. This approach would then ignore a critical component of a lender's underwriting process. For the application to have been approved, the lender effectively made a <u>preliminary decision</u> to invest in its underwriting and a <u>final decision</u> to approve.

A <u>dynamic approach</u> decomposes the question into two phases to evaluate risk for all applications at Phase 1 and those reviewed by an underwriter at Phase 2. Those not reviewed at Phase 2 are excluded from the Phase 2 analysis, reflecting a key source of the reduced Fair Lending risk associated with this approach. The questions asked in the dynamic two phase approach include:

- At Phase 1: *Based on self-reported information, were members of a protected class less likely to advance to an underwriter than applications from comparison group members who reported similar information*?
- At Phase 2: *Among those applications reviewed by an underwriter, did the information collected by the underwriter result in more denials than similarly situated comparison group members?*

For lenders to gain a solid understanding of their Fair Lending underwriting risk – and to gain actionable information from regression-based analyses – we recommend that a two-phase, dynamic approach be used.

What are the Barriers to a Two-Phase, Dynamic Approach?

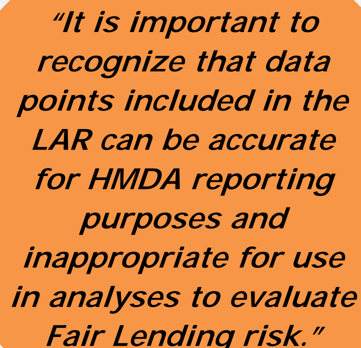
Often, we cannot conduct a two-phase, Dynamic modeling evaluation of underwriting risk for lenders. Why?

With many mortgage lenders that deny some applications on the basis of self-reported applications, and then approve or deny others based on information collected by their underwriter, we see two barriers that make it difficult or impossible to implement a two-phase approach.

- **Barrier 1: Weak LOS Capability**. A lender must be able to query its LOS to obtain self-reported (Phase 1) income and debt data for those applications that advance to Phase 2. This is often not possible, because self-reported data is overwritten by information gathered by the underwriter. Lenders do not see the value in maintaining an electronic version of the original data points, so it is not retained. Yet, the self-reported information was used to make a fundamental decision – whether the lender should invest in underwriting the loan because it represented an application likely to be approved.

  Our view is that lenders should make the investments in their LOS and in staff training to ensure that self-reported data points are retained electronically for all applicants. This investment will support a lender's ability to efficiently identify sources of Fair Lending risk. Our clients who adopt this approach become aware of actionable information: *What caused their Fair Lending risk – actions taken prior to the underwriter's involvement or actions taken by the underwriter?* These clients can carefully review and address detected risk from previous periods while developing targeted action plans to reduce or eliminate the sources of risk within the business processes going forward.

- **Barrier 2: Misperception about the role of HMDA-Reported Data Elements**. Using a two-phase approach means that Phase 1 analyses rely upon income, debt and DTI data points – for applications that advance to Phase 2 – that are not consistent the income data point reported in their HMDA Loan Application Register (LAR).



  Analyses of Fair Lending risk ought to consider the information available at Phase 1 - the self-reported information - and at Phase 2 - the underwriter-obtained information. Often, this may mean that data points reported in HMDA are not used in Phase 1 for those applications that were approved or that were denied at Phase 2. Our view is that it is important that Fair Lending analyses model underlying applicant – lender interactions and decision-making processes. This is

consistent with Federal regulators' examination guidelines that call for their own analyses to be cognizant of a lender's business practices.

There is neither a requirement nor an expectation on the part of Federal regulators that underwriting models be based on the same data points as reported in a lender's HMDA LAR. The lender's HMDA LAR records the final data point for income, for instance. If this value is different at two points in the underwriting process because of the dynamic nature of the application and underwriting process itself, models that reflect this dynamic, two-phase process will be much more predictive than those that reflect a static underwriting process.

It is important to recognize that data points included in the LAR can be accurate for HMDA reporting purposes and inappropriate for use in analyses to evaluate Fair Lending risk. Dynamic, two-phase model approaches will also be much more effective at identifying lower levels of Fair Lending risk and fewer high risk, non-approved loans than static approaches.

By implementing a dynamic, two-phase approach to modeling Fair Lending risk, lenders will demonstrate a well-founded commitment to a key component of their broader compliance program.

For More Information

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About ADI Consulting

ADI Consulting has been helping financial institutions comply with federal and state regulatory requirements for nearly 15 years. Our work focuses on the Fair Lending, the Community Reinvestment Act (CRA), the Home Mortgage Disclosure Act (HMDA), and Anti-Money Laundering challenges our clients face.ADI works where client and consumer interests intersect. Our clients strive to sell products and services that consumers want to buy from them. To succeed, they must comply with regulatory requirements and deliver a compelling customer experience. ADI assists with regulatory compliance through deep subject matter expertise and sophisticated quantitative analysis. We help clients build lasting customer relationships by delivering consistently rewarding experiences, grounded in solid research, thorough analysis, and practical advice.

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