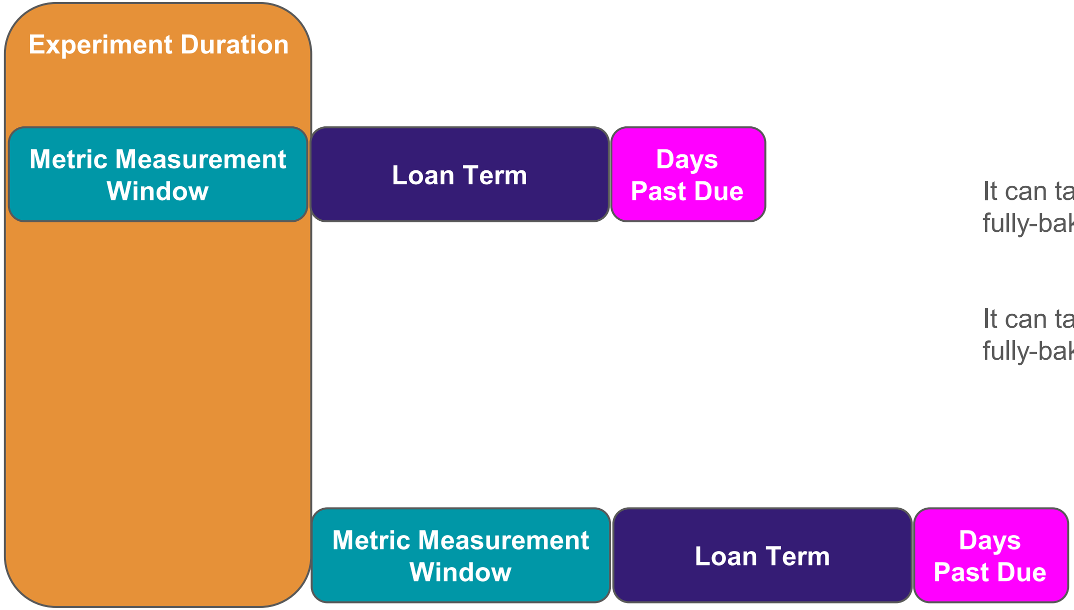
The Surrogate Index for Shorter-Duration Experiments

Tala is building the first global financial services platform where anyone can be a customer.

Our vision is that every person who comes through our door will be able to access the right kind of credit for their needs—today *and* tomorrow.

TALA FOR ALL

We use Early Read models to estimate the *long-term* impacts of treatments using ***short-term*** metrics so we can run ***shorter experiments*** and still improve our ***long-term*** **KPIs**



It can take nearly **130 days** to get a fully-baked **"1-month" metric**.

It can take nearly **460 days** to get a fully-baked **"12-month" metric**.

The Surrogate Index: Methodology

THE SURROGATE INDEX:
COMBINING SHORT-TERM PROXIES TO ESTIMATE
LONG-TERM TREATMENT EFFECTS MORE RAPIDLY AND PRECISELY

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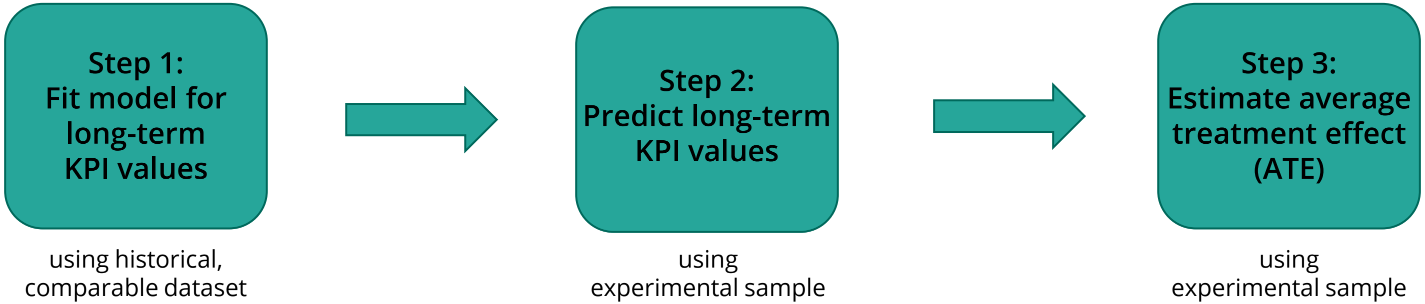
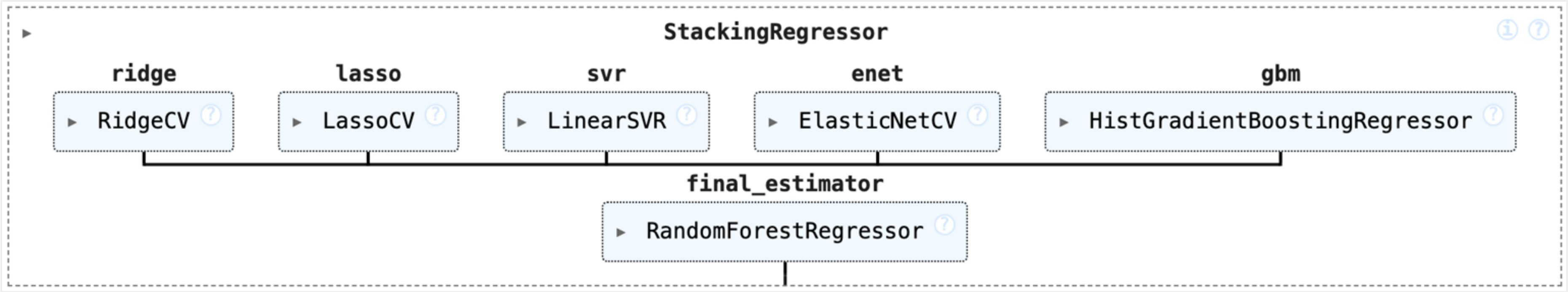


Our Early Read model **combines predictions** from different types of models to deliver **robust estimates** of the *long-term* KPI

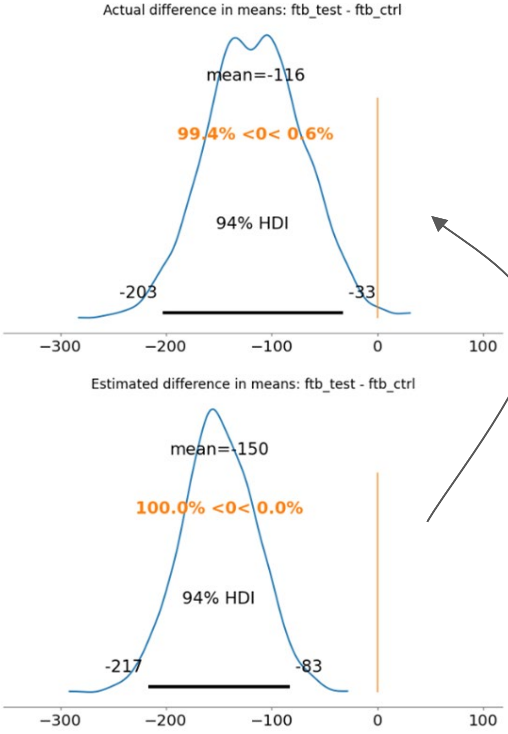


In the **Philippines**, we tested the impact of different **loan product types** for first-time borrowers on a *long-term* KPI

Test - Control

Actual **9-mo** ATE

Estimated 9-mo ATE using **1-mo** predictors



We predict this outcome

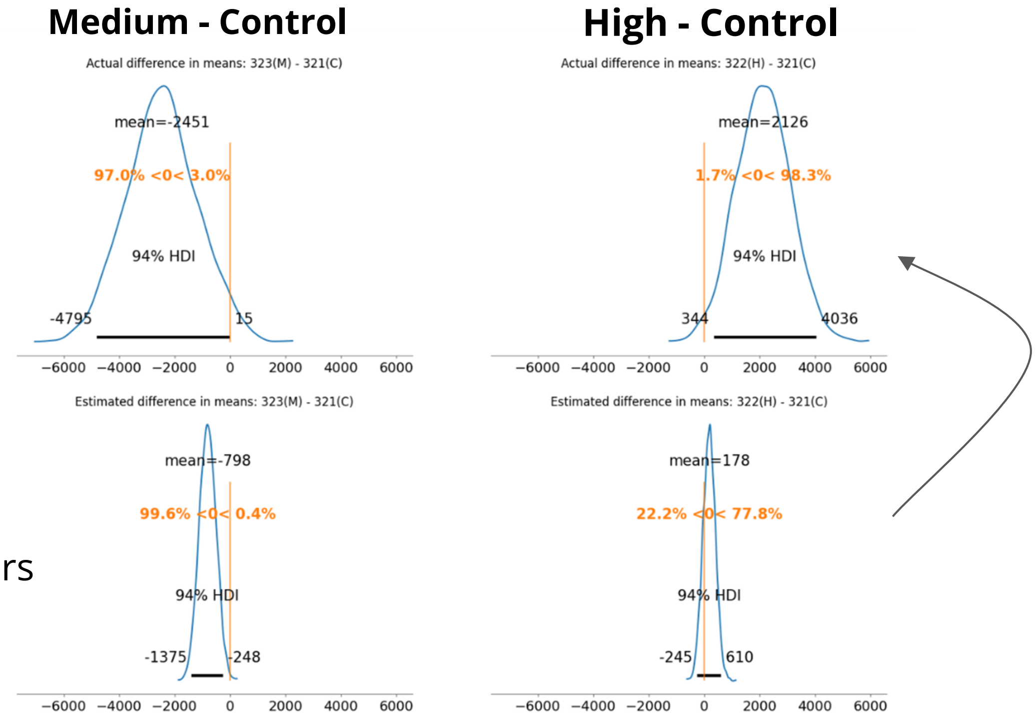
using this estimate, *reducing time-to-analysis by over **240 days***, enabling us to gain insights and make informed decisions more quickly to unlock value to our customers.

* Early-read models using 1-mo outcome and additional predictors are able to generate a 9-mo ATE estimate that is within the confidence interval of the actual 9-mo ATE.

In the **Kenya**, we tested the impact of increasing **maximum loan limits** for mature customers who have been stuck at the maximum on a *long-term* KPI

Actual **9-mo** ATEs

Estimated 9-mo ATEs using **1-mo** predictors



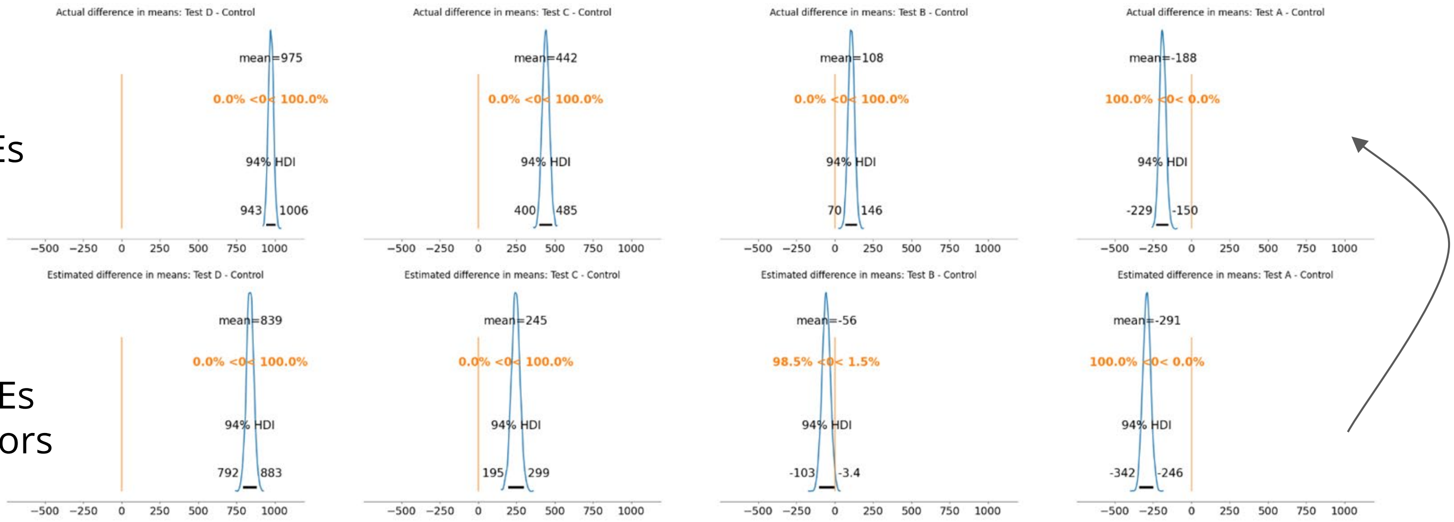
* Early-read models using 1-mo outcome and additional predictors are able to generate a 9-mo ATE estimate that is within the confidence interval of the actual 9-mo ATE.

In **Mexico**, we tested the impact of increasing **first loan limits** for first-time borrowers on a *long-term* KPI

Test D - Control | **Test C - Control** | **Test B - Control** | **Test A - Control**

Actual **9-mo** ATEs

Estimated 9-mo ATEs
using **1-mo** predictors



* Early-read models using 1-mo outcome and additional predictors are able to generate a 9-mo ATE estimate that is within the confidence interval of the actual 9-mo ATE.

Key learnings to help you succeed with shorter, reliable, reproducible experiments

1. **Collaborate closely with business partners** to select the historical experiments, define the variables and time frames, and review the results. By doing so, your partners will be invested in the validation effort, understand the analyses, and be equally excited about the results.

2. **Extend the technique with flexible models and additional predictors**. By doing so, you will identify models you are confident will provide reliable estimates of ATEs on long-term KPIs.

3. **Build the technique in a robust infrastructure** so you can reliably reproduce results, generalize the technique across markets, experiments, and long-term outcomes, and enable your partners to use it quickly, easily, and appropriately.

4. **Productionize the Dynamically Adjusted Surrogate Index method** so you can estimate the long-term effects of *dynamic*, *novel* treatments.

Discussion