Fresh off IPO, Upstart aims to push boundaries of AI-based lending

By Penny Crosman | December 20, 2020

Credit modeling is still an imperfect science, even with the use of artificial intelligence, acknowledges Dave Girouard, co-founder and CEO of the online lender Upstart.

There's still room for a better understanding of human behavior and the impact of external factors on a person's ability to repay, he said in an interview after his company raised $240 million in an initial public offering last week.

Upstart has stood out since its inception in 2014 for several reasons. The San Francisco company takes a distinctive approach to lending — its software considers 1,600 data points to determine creditworthiness, including the college an applicant attended, the degree obtained and the profession he or she is entering.

Second, it's the only fintech to have received a no-action letter from the Consumer Financial Protection Bureau, getting the bureau's blessing to pursue AI-based lending provided Upstart sends it data about loan applicants, approvals and loans rejections on a regular basis. Upstart's IPO was a rare event among online lenders, too. Affirm delayed the one it had planned for 2020; SoFi is rumored to be thinking about doing one.

In the interview, Girouard discussed why his company decided to go public at this time, how it has evolved in partnership with banks and how it has maintained a special relationship with the CFPB. The following is a transcript of his comments, edited for length and clarity.

Why are you doing an IPO now?

DAVE GIROUARD: Our business has been really strong in the last year or so. The AI really got its legs in terms of having sufficient data. And I think it's a hint that there's something very different happening here. The company is mature. We just started to expand into auto lending. That's a category much more central to banks than is personal lending. So we have enormous interest from banks we aren't working with yet to create a far better auto product. And we feel like if we're going to partner with banks, it makes sense to be a public company with all the transparency and accountability that that implies.

"The vast majority of error in credit modeling remains unexplained by us or anybody else," says Dave Girouard, co-founder and CEO of Upstart. "There's a certain amount of randomness in the world that's never going to go away."

Originally Upstart was a direct lender that also partnered with banks. Are you strictly working with banks now?

The way I would describe it is when we started, almost all the loans were funded by somebody else. We always had some fraction, like 10%-ish. We backed ourselves. But for our first four or five years, we just worked with Cross River Bank. We came to a decision point about two years ago: Do you become a bank and pursue a bank charter, or do you decide to be a friend of banks and fan out from Cross River? We chose that second path. The last couple of years we have been adding banks to the platform, which of course means building the platform to support lots of banks and to customize it to each bank's needs. We still fund about 3% of the loans we make, but that's for research and development, so we can test new things. Almost all of our revenue is fees paid to us by banks for helping them get new customers and originate loans.

A lot of your prospectus talked about the need to get loans out to more people. So it's interesting that you're working with traditional banks that still presumably have the same kinds of policies that they did in the past. Yet with your technology, they're approving more people than they normally would.

Banks can set their credit box. If a bank only offers loans to people with a FICO score above 680, it can set that parameter in the software. The hope is, and I think we see evidence of this, as the product performs, you start to realize you don't really need that constraint. The AI can do the job of modeling and identifying the risk, so these kinds of hard guardrails we've had historically are maybe less necessary. But that's a gradual process because of course banks have model governance, they have credit committees. We're trying to help them adopt AI into their lending programs in a way that they can gain faith in over time.

In your offer letter, you said, "As good as our AI platform is today, it only scratches the surface of the accuracy gains that are possible." Can you describe that a little bit? How has the software changed over time, and how might it continue to get better?

We started in about 2014, so it's been six years now that we've been collecting data about each applicant and growing the training data. Every time there's a repayment or delinquency, that's like a row in a spreadsheet of training data. And then we keep upgrading the algorithms that interpret that data to more sophisticated forms of machine learning. So it's an AI system that's getting smarter. My co-founder Paul [Gu, Upstart's head of product] says the way to think of it is, if zero is completely random and 100 is omniscient — the model would only give loans to the exact right people — most lending systems are 2s. We believe our system is at about 10.

But frankly, the vast majority of error in credit modeling remains unexplained by us or anybody else. You can't get to 100 because there's a certain amount of randomness in the world that's never going to go away.

What about these uncertain times? It seems like we're in a time where what's been true in the past might not be true going forward. Can the model somehow adapt to that better than humans can?

Without question. As terrible as 2020 was, and the COVID experience continues to be terrible to our country and the world, one small silver lining for us is we got a proof point to see how our models would perform through a huge dislocation in the economy. And from an absolute sense, there was no harm at all to the returns on the credit portfolios of our bank partners. It was as if COVID never happened. Some of that may be due to government stimulus efforts. But we have very clear evidence that our models performed dramatically better than traditional systems. And the result of all that is we had far fewer people go into some form of hardship. The people that went into hardship came out at a much faster rate. We also took time during COVID to upgrade the system's ability to handle macro events, because I don't think our system ever perceived a world where unemployment could go from 4% to 14% in like three weeks. And certain industries are hit much harder than others. If you're lending to somebody who works in the hotel industry, you're going to be more careful than some other industry.

Our hope is when the next event happens, our bank partners will have confidence that the system will do the right thing. You won't have to get into the conference room and say, shut down the system and batten down the hatches.

Years ago, Upstart got a no-action letter from the Consumer Financial Protection Bureau. Is that still going on? Are you still working with the CFPB and have they given you any feedback?

That was a three-year agreement that we signed in November 2017. It was renewed December 1st of this year. And we also worked with them to upgrade the testing processes we do. So it's been more than three years that we've been sharing the information with the CFPB. We now have added some more rigor and additional tests. We've agreed to the CFPB that anytime our models are upgraded or there's more training data or the system is going to change, it will test for introduction of bias and prevent it from ever getting into the system. I feel pretty confident in saying our testing for bias is industry-leading. And banks aren't doing this type of testing. It's an area we feel we can be very helpful in.

Do you do that across the board with all your partners, with every loan?

That's right. Every single loan. And we generate reports for every single bank partner that gives them a level of confidence that there's no bias being injected into the system.