

Use Data to Fix the Small Business Lending Gap

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Access to credit is a key constraint for entrepreneurs. And limited credit is in part caused by the difficulty of predicting which small businesses will and won't succeed. In the past, a community bank would have a relationship with the businesses on Main Street, and when it came time for a loan, there would be a wealth of informal information to augment the loan application. Today, community banks [are being consolidated](#) and larger banks are relying more and more on data-driven credit scoring to make small business loans—if they are making them at all.

With larger volumes of data being used to analyze everything from the genome to traffic patterns and lunch choices, it is natural to ask whether big data can crack the code on small business credit risk. There is reason for optimism.

My recent [Harvard Business School Working Paper on small business credit](#) explores new technology-driven entrants in the world of small business lending. These innovative players, such as OnDeck, Funding Circle, and Fundera are disrupting the market by using technology to solve problems that have made small business lending costly for traditional banks. For example, they use online marketplaces to reduce the search costs for willing lenders to find creditworthy borrowers. And they are allowing new sources of capital such as peer-to-peer lending to replace traditional bank capital. However, all these online models depend on developing accurate new predictive models of credit assessment, often using new sources of data.

At first blush, it seems relatively easy to build an algorithm that has greater predictive power than the personal credit scores that some lenders continue to use as their primary small business credit indicator. Personal credit scores like FICO consider a combination of metrics such as payment history, current level of indebtedness, and types of credit used by potential small business borrowers.

In the high flying days of 2005-2007, banks around the country relied heavily on these scores to make quick decisions on millions of uncollateralized small business loans, with disastrous results. Since the crisis, banks have reconsidered their overreliance on personal credit scores in small business lending. Many lenders have built their own predictive models that incorporate key metrics about the borrower's business – such as industry trends and number of employees – in addition to personal scores. Some lenders – as well as the Small Business Administration, which provides a partial guarantee on some loans made by lenders – have also incorporated third-party credit scores like those produced by Dun & Bradstreet, which use proprietary predictive models that contain a blend of personal and business data to better assess borrower risk.

New entrants to small business lending have been taking this blended model even one step further. Online lending platforms like OnDeck have been using information on cash flows and direct deposits from small businesses' bank accounts as a key indicator of credit health since 2006. Intuit has been experimenting with using companies' QuickBooks data (with their permission) to create a credit score that the business can then show to lenders via a QuickBooks platform that includes several of the large banks and online lenders. Others have even gone as far as to use data from social media sites like Yelp in their predictive formulas. After all, isn't the customer's voice relevant if you are going to finance a plumber or restaurant?

Some worry that social media is unreliable and can often be manipulated by an aggressive

NEW DATA SOURCES FOR ASSESSING SMALL BUSINESS CREDIT

	RATIONALE	SOURCES	USERS	
			Alternatives	Banks
More predictive ↑	CASH FLOW Best measure of firm fundamentals, gauging ability to repay and managing risk repayment cycle during life of loan		×	
	CREDIT BUREAU Useful for consumer risk profile, but limited business risk profile information and weak predictor of credit-worthiness	 	×	×
	FIRM-GRAPHIC Risk correlates to revenue and profit level, firm size, age, industry, geography, customer size, owner education	 	×	×
Less predictive ↓	SOCIAL Highly volatile day to day, but viewed holistically can be a predictor of riskiness, esp. in retail/restaurant	 	×	

SOURCE THE STATE OF SMALL BUSINESS LENDING: CREDIT ACCESS DURING THE RECOVERY AND HOW TECHNOLOGY MAY CHANGE THE GAME

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competitor or [by the small business itself](#). And early reports from the architects of these newer algorithms caution how long it takes to thoughtfully incorporate new metrics into the models. For now, the blended models based on personal scores and business-specific data continue to be the industry standard.

However, as new entrants increasingly experiment with cash-flow and direct-deposit data as a means of better predicting the ability of a small business to repay its loans, those with easy access to that data could have a real advantage.

Currently, large banks such as Wells Fargo and JP Morgan Chase, as well as credit card companies such as American Express and Capital One, have access to vast quantities of this type of data, and are beginning to incorporate it into their predictive models more often.

It is early days in the use of predictive modeling to reduce risk and create new markets for small business loans. But the likelihood for some success seems good. As new players enter the small business lending market and unveil new opportunities, large banks with both troves of data and teams experienced in this type of modeling are beginning to take note. What seems novel and niche in small business credit scoring today has the potential to be ubiquitous tomorrow.

In August, OnDeck announced an IPO valued at \$1.5 billion. Some, at least, believe that new entrants and their innovative predictive approaches can change the game in small business lending. And if that's the case, the ultimate winners will be America's small businesses and entrepreneurs.