
Rethinking Education Finance: The Risks and Opportunities of Emerging Models

A Working Paper

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About the Author

A former White House policy advisor and frequent speaker and commentator on the intersection of education and economic mobility, John Bailey played a critical role in preserving liquidity for student borrowers during the financial crisis of 2008. He now serves as an advisor at the Walton Family Foundation and Visiting Fellow at the American Enterprise Institute.

John served as special assistant to the president for domestic policy at the White House (2007-2009) and as the deputy policy director to the U.S. Secretary of Commerce where he contributed to the first national pandemic preparedness strategy and worked on policies related to American competitiveness and comprehensive immigration reform. He previously served as Director of Educational Technology at the U.S. Department of Education, a Senior Program Office for the Bill and Melinda Gates Foundation, and as Vice President for policy for the Foundation for Excellence in Education.

Bailey is a Pahara-Aspen Institute Fellow, a member of the Aspen Global Leadership Network. He serves on advisory boards for the COVID Collaborative, the Aspen Institute's Future of Work, the Bush Institute, and the Center for Democracy and Technology. He has served as an advisor to four presidential campaigns.

He has served as a reviewer for the TechStars Workforce Accelerator, Communities Thrive Challenge, Adult Literacy XPrize, the \$1 Billion Wage Gain Challenge, and Fannie Mae's Sustainable Communities Innovation Challenge.

Preface: A Letter from Chris Keaveney, Meritize

In 2008, I was a credit officer for JPMorgan Chase’s student lending business, where I saw firsthand how the collapse of global financial markets and rising student loan debt impacted the career and financial trajectories of consumers and borrowers.

These experiences in financial services fueled my belief—both then and now—that, rather than deepen students’ dependence on legacy approaches to student lending, we should aspire to build something better. We needed—and still need—new models that can help people navigate faster and more affordable pathways to economic mobility, particularly for people with few financial assets and limited credit histories.

Our work at Meritize is focused on looking beyond legacy proxies or measures like the FICO score toward indicators of a working learner’s potential and determination. We focus on training sectors where the return on educational investment results in a clear, net positive value decision for students and believe that such an approach can provide needed resources for workers pursuing in-demand training for good jobs. But beyond this, the move beyond legacy proxies is a critical precondition for a more equitable and inclusive economic recovery. Of course, we also know that new models are not without risk.

As participants in the development of these new models, and with the lessons of history in mind, we are mindful that alternative scoring methods do not obviate providers’ responsibility to pressure test their own models and assess for disparate impact, but rather only increase the need and urgency to earnestly address those

concerns. We know that the benefits, and risks are deserving of public discourse, and the airing of divergent perspectives (in productive ways) leads to balanced progress in methods.

Against this backdrop, we commissioned this working paper to surface not just opportunities, but concerns about the recent evolution and role of technology in education finance and credit markets. We also sought to better understand the post-pandemic challenges in today’s labor market and, in particular, the impact on low-income and historically excluded people and communities where the barriers to full recovery are more acute.

We engaged [John Bailey](#), a policy expert that is highly regarded across the political and ideological spectrum to further investigate and frame the issues. Bailey has written myriad commentary and articles studying innovations in education finance, including book chapters on education savings accounts. He also brings deep expertise about the complex dynamics between data, technology, and education finance as a former board member to the Data Quality Campaign and the Center for Democracy and Technology.

This report is by no means comprehensive. We also appreciate that there is an inherent bias in the framing and commissioning of such a paper. But the paper is intended to raise issues, rather than expose a point of view. It is intended to encourage debate and conversation. We hope that it can be viewed, at least in part, as an objective resource that surfaces issues of import and serve as a primer for policymakers, private sector leaders and leaders working at the intersection of finance, education, and the labor market.

Setting the Stage: 2008–2021

In the aftermath of the Great Recession, millions of unemployed Americans pinned their hopes on college completion. Unfortunately, student loan borrowing **rose sharply**, even as student outcomes remained stagnant or worsened. According to JFF CEO Maria Flynn, that rising cost of education contributed to the fact that “fault lines exposed by COVID-19 were, after all, in existence long before the pandemic took hold.” Flynn **reminds us** that “Following the 2008 downturn when desperate workers accepted any job, only to find that the low wages and limited benefits extended well beyond the economic downturn. As a result, the top one percent captured 85 percent of income growth in the 12 years that followed the 2008 recession. Lower-wage workers were largely left behind.”

Today, in the wake of a deadly pandemic that caused the U.S. economy to shed **40 million jobs**, the American labor market is in a period of change and disruption that, in many ways, dwarfs the 2008 recession. Even as the economic recovery accelerates and job openings soar, there are still **millions** of American jobs that will never return, forcing impacted workers to upskill and reskill for roles in the new economy, often in new or totally unfamiliar industries.

The education and training landscape also looks very different from that of 2008. In defiance of the countercyclical enrollment pattern that has historically typified higher education, traditional four-year and community college enrollments have **tumbled** during COVID-19 and into the recovery. Working adults and

career starters are opting in growing numbers for short-term programs and credentials to prepare for middle-skills jobs that require less than a college degree—the largest and fastest-growing category of work in the U.S. economy.

The way that people finance their education and training pathways is changing, too. Many of these career-based programs are not currently eligible for federal funding. Although federal policymakers are weighing proposals to expand eligibility for the federal Title IV program to include workforce training programs, there is a high degree of uncertainty as to the likelihood of this change to federal law occurring.

In the interim, millions of skill-seekers must weigh existing options. To bridge this gap, new outcomes-based financing models and advanced data modeling have made it possible to underwrite based on datasets that help understand the likelihood that someone will be successful at completing the training they are seeking.

These advances in the world of education finance are occurring at a time when there is renewed scrutiny—and rightfully so—of emerging financial technologies and practices. Given the speed with which financial models, and the broader labor market, are evolving, these concerns are well-founded. A renewed focus on ensuring a more inclusive workforce and equitable economy has spurred important questions about these new models—and whether new policy guardrails should be created to protect borrowers.

A Labor Market in Crisis and Demand for New Models of Education and Training

As of May 2021, at least 20 million Americans were unemployed with 3.8 million unemployed for more than 27 weeks. Despite steady job growth, the economy had only recovered approximately 67 percent of the jobs lost since last year.

The emerging economic recovery is taking the shape of a “K” splitting along income, racial, geographic, and industry lines, which risks widening disparities in wealth, well-being, and inequality.¹ Just as COVID-19 disproportionately affected Black and Latino individuals, so too are those populations disproportionately affected with the economic recovery. More than 9 percent of Black workers and 7.3 percent of Latino workers were unemployed in May, compared to just 5.1 percent of white workers. There are 1.6 million fewer mothers in the labor force due to the increased childcare responsibilities at home. More than twice as many Black women with children had left the workforce since the beginning of the pandemic than white women with children.²

One of the starkest differences has been among those with postsecondary credentials. For those with at least some college education, the recovery and job market is robust. But those with less education attainment have faced far greater challenges. Forty-six percent of the jobs lost were held by workers with a high school diploma, with an additional 5.4 million jobs (24 percent) held by workers with some college but no degree.³ Those without postsecondary credentials face dimmer prospects securing jobs during the recovery. These trends did not start with the arrival of

COVID-19, but they have been accelerated in the wake of the resulting disruption.

The path not only to recovery out of the COVID-19 recession, but also the path to individual prosperity, lies in gaining the skills and credentials needed to secure good-paying jobs. The communities and institutions that are able to do this the fastest and with the highest degree of quality will be the ones that thrive in the years ahead.

FINANCING PATHWAYS TO OPPORTUNITY

The last decade has seen the growth of intertwined trends of increased demand for higher skills from employers, which are being met through a growing group of providers offering flexible pathways for learners to earn those credentials. Innovative FinTech companies are also offering new financial services to help learners take advantage of these programs.

The adoption of automation technologies and artificial intelligence (AI) is not only changing the nature of work, but also making every new job higher skilled. The U.S. Bureau of Labor Statistics found that during the economic recovery after 2008, 74 percent of the new jobs required a four-year degree, but 60 percent of the workforce did not have a degree.⁴

The labor markets have adapted: The explosion of alternative credentialing has become the currency to express the skills and competencies needed by employers and held by workers. The nonprofit Credential Engine found a staggering

738,428 unique credentials in the labor market that include:⁵

- 370,020 credentials issued by postsecondary educational institutions
- 315,067 credentials, including digital badges and online course-completion certificates, from nonacademic organizations
- 46,209 credentials from public and private secondary schools
- 7,132 credentials from massive open online course providers

A growing number of pathways beyond traditional postsecondary institutions offer flexible options to secure those credentials. As a recent Burning Glass/Workday report observed, “If students don’t think a college will do enough for them to get hired after graduation, they will look elsewhere.”⁶ And indeed, nearly 1 in 5 Americans have said they plan to enroll in an education program in the next six months, with 62 percent indicating they are considering non-degree options.⁷ Coding bootcamps have seen continued growth reaching 33,959 students last year.⁸ Online learning provider Coursera reported a record 69 million enrollments in 2020—a

430% increase compared to the same period the previous year.⁹

The challenge many of these providers confront is the inability to offer the same financial assistance that is available through traditional higher education programs. The postsecondary financial aid system still assumes that most skills are acquired through a community college or four-year degree program. “When it comes to alternative models of education and career training, the financial aid system has a lot of catching up to do—often because of the challenges of balancing innovative approaches with consumer protections,” said Daniel Pianko, managing director of University Ventures and a frequent commentator on alternative education finance issues. “That tradeoff has, ironically, led to a system in which effective but relatively untested training programs are sidelined from a financing standpoint, while institutions with worse outcomes are still able to benefit from the traditional system.”

As a result, new financial service models have emerged to serve these learners who otherwise have limited financial assistance to attend these flexible programs.

The Rise of Alternative Data

There has been considerable innovation in the traditional lending markets to unlock the educational opportunities for students and workers. As Jason Tyszko, vice president of the U.S. Chamber Foundation’s Center for Education and Workforce, observed, “These new finance providers can help to de-risk employee training and education investments. They can expand access to education and training opportunities in the short-term, while creating a longer-term horizon for companies to pay for and retire their debt.”

One specific area of innovation has been in the evaluation of credit risk for potential borrowers. Statistical models have traditionally guided decisions around consumer loans. The underwriting process evaluates a borrower’s risk based on credit scores derived from data in applicants’ credit files maintained by the major credit bureaus (Experian, Equifax, and TransUnion). These credit scores are calculated using payment history, the amount of debt a person has, and the length of their credit history. Higher scores suggest the person is considered to have demonstrated responsible credit behavior.

But this system has limitations. Much of the data fed into these models is backward-looking, making it more difficult for many individuals to secure loans. If a consumer does not have a credit record or if the record contains insufficient information to assess their creditworthiness, lenders are much less likely to extend credit.

The size of this underserved segment is staggering. The Consumer Financial Protection Bureau (CFPB) estimates as many as 26 million

Americans are “credit invisible,” meaning they have no credit history with a consumer reporting agency. Another 19 million have credit history that has gone stale or is insufficient to produce a credit score under most models.¹⁰

For those millions, the lack of a credit history or the reliance on limited measures prevents them from accessing the financial capital they need to improve their human capital. Even worse, it widens existing societal inequities by giving preference to students to borrow based on their parents’ earnings, education attainment, and wealth. That disproportionately impacts Black or Latino students, immigrants, and individuals who are recently divorced or widowed and lack a credit history. Shut out of public financing, those individuals have traditionally only had two options: forgo the training or turn to high-cost loans on the private markets.

In response, a growing number of FinTech companies are experimenting with different ways of using alternative data to measure a borrower’s risk based on their future potential, not just their backward-looking metrics. Information such as other financial data, online activities, banking activity, education, and rental payments can help lenders identify creditworthy borrowers who may otherwise be missed.

Early experiments are promising. The New York City comptroller’s office released a study of renters in 2017 using Experian data and found that about 29 percent of individuals were able to get a credit score for the first-time using alternative data—in this case their rental histories. The average new score was 700 points.

It also raised credit scores for an estimated 76 percent of tenants who elected to report their rent to the credit bureaus, including an increase of 11 points or more for an estimated 19 percent of participating renters.¹¹

This approach of using alternative data for lending decisions also has applications in evaluating the creditworthiness of individuals seeking financing to improve their skills and education. For example, a Milken Institute Financial Labs report highlighted A.M. Money, which provided loans to low- and middle-income students using alternative data that includes GPA, academic progress, and the historical loss rate of the school. While A.M. Money does not use a FICO score in making its decision, it does track the score over time. It reported that the average borrower had a FICO score of 600 at the time of origination (which would be too low to qualify for most loan products) and has seen improvement in credit scores over time.¹²

Besides expanding credit to those underserved, alternative data can help extend lower interest rates to borrowers. The management consulting firm Oliver Wyman highlighted a study that found the use of alternative data resulted in the average credit card interest rate dropping from 23 percent to 21 percent, representing a 10 percent reduction, for subprime borrowers.¹³

Federal regulators have also observed these benefits. Grovetta Gardineer, senior deputy comptroller for bank supervision policy at Treasury's Office of the Comptroller of the Currency (OCC), emphasized at an Urban Institute convening that millions of consumers without traditional credit scores "may be hard-working, responsible people who regularly pay their bills on time" and could be deemed creditworthy if scored using "their full financial record."¹⁴ In 2017, CFPB Director Richard Cordray (who currently serves as Federal Student Aid chief operating officer at the U.S. Department of Education), remarked, "On the whole, we are encouraged by the potential for alternative data underwriting to benefit the very consumers that the fair lending laws are designed to protect."¹⁵

In 2019, multiple regulators also came together to issue a joint statement endorsing the benefits of alternative data. The statement from the Federal Reserve Board, CFPB, the Federal Deposit Insurance Corporation, OCC, and the National Credit Union Administration noted the benefits of using alternative data to help lenders evaluate the creditworthiness of consumers who may not be able to obtain credit in the traditional, mainstream financial markets.¹⁶ They also emphasized that the use of alternative data may enable consumers to obtain more favorable prices and terms.

Risks With Alternative Data

These new innovations hold much promise, but it is important to consider the risks these models may create, which could exacerbate inequities. Naming these risks upfront can help providers take steps to mitigate them while also informing regulator efforts with establishing new guidance and frameworks. Several areas that will need further consideration include:

Fair Lending Concerns: Some alternative models use education data composed of variables tied to a borrower's postsecondary education, including institutional selectivity, sector, and program of study. The use of nonindividualized data may create disparate impacts because the lender is evaluating the applicant based on the characteristics of other students in a program, not the individual's unique characteristics.

The Equal Credit Opportunity Act: The ECOA prohibits discrimination in credit transactions based upon certain protected classes, including sex, race, color, national origin, religion, marital status, age. Scoring algorithms that utilize alternative data may conflict with ECOA if their systems include data that reflect personal characteristics such as the borrower's race, gender, and religion.

Data Bias: The datasets used by automated systems to produce a score may capture disparate patterns that can then introduce or amplify bias in the underwriting. Instead of opening new opportunities, these biases can

amplify and perpetuate systemic barriers to financial inclusion, particularly for Black and Latino borrowers. For example, an algorithm may be programmed to favor applicants who graduated from highly selective colleges. But if the admissions process for those colleges is biased against particular classes of people, the algorithm may incorporate and reflect the existing bias in its decision. Each new dataset must be scrutinized for these kinds of biases given the impact they could have on a decision.

Transparency: The data collected and weights applied to a traditional credit score are easy to understand because they are widely published and shared. The complex scoring algorithms used in many alternative methodologies may not be as transparent, which can lead to confusion about which factors are having the most impact on their score. The lack of transparency can prevent consumers from contesting the data on their record, contesting unfair credit decisions, correcting inaccurate data, and understanding how to improve their scores in the future. Alternative data used for credit decisions must be displayable and disputable.

Apples-to-Apples Comparison: More data do not necessarily guarantee a more comprehensive view of a student. Just because a consumer paid utility bills does not necessarily mean the individual is likely to repay loans. Additional research is needed to identify the best, most-accurate proxies for evaluating risk.

The Path Forward

The current model also has its limitations. As Matt Chingos, director of the Center on Education Data and Policy at the Urban Institute, pointed out, “Not giving access to financing also has a disparate impact.” New alternative financing models for talent are vital for helping individuals acquire the skills and credentials needed to succeed in the modern economy. They will be important tools in the effort to help Americans acquire the skills needed to secure jobs in the COVID-19 economic recovery.

FinTech companies using alternative data will initially be held to a higher standard by policymakers and regulators given the real and perceived risks for consumers. As noted in the U.S. Chamber of Commerce’s *Talent Finance* report, a public-private talent finance ecosystem should provide assurances that partners have quality management systems in place to promote overall trust with recipients and beneficiaries.¹⁷ FinTech companies will need more robust quality assurance systems, including possible independent auditing to provide additional levels of trust and assurance among consumers, employers, and regulators.

The following recommendations are offered to help guide future work in these areas:

Regulatory Clarity: Regulators must create frameworks that provide clear “rules of the road” for these new financial services. Clearly defining the criteria upfront gives FinTech companies the guidance they need to design their services and the criteria by which to evaluate their data and algorithms. Developing this guidance will require more collaboration between FinTech companies and regulators. CFPB should continue

leveraging No Action Letters that enable it to form partnerships with FinTech companies with more robust data sharing that may more quickly surface concerns and better inform regulatory strategies going forward.

Adopting Ethical Uses of Alternative Data:

FinTech companies using alternative data should acknowledge the need for ethical frameworks that guide the way data are collected, analyzed, used, and reported. Other industries have created an ethics panel or task forces to inform their work by leveraging expertise from the private sector, innovators in other sectors, and academic researchers.

Data and Algorithmic Audits: Lenders could consider strategies for examining, evaluating, and mitigating discrimination and bias in their data models by seeking reviews from internal and external parties. For example, IBM’s AI Fairness 360 open-source toolkit allows developers to share and receive state-of-the-art codes and datasets related to AI bias detection and mitigation.¹⁸ Another approach is algorithmic auditing, where an independent entity scrutinizes the data and structures of an algorithmic system to surface concerns about bias and fairness and check for unintended consequences.¹⁹ This kind of audit was included in a series of recommendations in a 2016 White House report on algorithmic systems, opportunity, and civil rights.²⁰

Loan Limits and Income Repayment Plans:

Several higher education advocates and researchers, including Robert Kelchen, an associate professor of higher education at Seton Hall University, have suggested limiting the size

of loans as a way to minimize student exposure. Income-based repayment plans could also be another way to help borrowers with managing the risk of repayments.

Transparency: The advantage of the traditional credit score is that borrowers understand the data used to evaluate their credit risk. It is important for lenders to transparently share the alternative data used as part of their model, particularly given borrowers' unfamiliarity with these new approaches.

The economic crisis triggered by COVID-19 requires a national commitment to ensure

individuals have the education and skills needed to succeed in a changing economy. The urgency of the moment demands new approaches to how we provide these skills as well as finance them. It also demands a new way of regulating the market—one that acknowledges the risks upfront but creates pathways for entrepreneurs to address the challenges, thereby creating a path for others. It will require FinTech entities to also collaborate in establishing industry norms aligned to ethical principles to prevent these systems from widening inequities. And it will require better student outcome data at all levels of education to ensure decisions are made based on program quality.

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