

# NOTE

## CLOSING THE RACIAL GAP IN FINANCIAL SERVICES: BALANCING ALGORITHMIC OPPORTUNITY WITH LEGAL LIMITATIONS

*Julia F. Hollreiser*<sup>†</sup>

INTRODUCTION .....	1234
I. HISTORICAL ROOTS AND PERVASIVE REMNANTS OF RACE- BASED INEQUALITY IN WEALTH AND FINANCE .....	1235
A. The Reconstruction Era and Freedpeople’s Attempted Shift from Being Capital to Becoming Capitalists .....	1236
B. The Great Migration: A Geographic and Economic Shift .....	1239
C. The Civil Rights Movement to Today .....	1241
II. TRADITIONAL LENDING TECHNIQUES, MINORITY COMMUNITIES, AND THE LAW .....	1244
A. Target Marketing, Lending Discrimination, and the Race-Based Gap in Wealth, Finance, and Credit .....	1244
1. <i>Reverse Redlining and Disparate Impact           Lending Discrimination</i> .....	1245
2. <i>The Potential Perils of Using Targeted           Marketing to Address the Racial Gap in           Financial Services</i> .....	1246
B. Traditional Credit Assessment Techniques and Minority Borrowers .....	1248
III. THE ROLE OF ALGORITHMS, BIG DATA, AND ARTIFICIAL INTELLIGENCE IN CREDIT ASSESSMENT AND DECISION MAKING .....	1249
A. Algorithmic Credit Decisions and Associated Risks .....	1250

---

<sup>†</sup> B.S., Cornell University, 2015; J.D., Cornell Law School, 2020; Managing Editor, *Cornell Law Review*, Vol. 105. Thank you to Professor Robert Hockett and Rohan Grey for their encouragement and guidance in the composition of this Note, which began as a paper for the course Markets, Morals, and Methods. Thank you to my parents, siblings, and friends for their unconditional love and support throughout my time in law school. Finally, thank you to my colleagues at the *Cornell Law Review* for their diligence and hard work in preparing this Note for publication.

B. The Biased Algorithm . . . . .	1251
C. Racially Discriminate Outputs as the Predictable Outcome of Algorithmic Credit Assessment . . . . .	1253
IV. CLOSING THE GAP: SEIZING ALGORITHMIC OPPORTUNITY WITHIN THE BOUNDS OF LEGAL LIMITATIONS . . . . .	1255
CONCLUSION . . . . .	1259

## INTRODUCTION

“To be a poor man is hard, but to be a poor race in a land of dollars is the very bottom of hardships.”<sup>1</sup> Although our nation’s narrative paints a picture of progress towards economic equality, race-based inequality is an enduring aspect of the United States economy.<sup>2</sup> Indeed, even though it is well recognized that access to credit is necessary for individuals to achieve economic stability, minority communities nevertheless continue to be excluded from equal access to financial institutions and financial products.<sup>3</sup> To be sure, throughout the last two centuries, there have been financial movements particularly aimed at banking the unbanked, such as credit unions, savings banks, and building and loan “thrift banks.”<sup>4</sup> However, these largely localized movements are an insufficient cure to modern banking problems that are propelled by not only deregulation and profit-oriented financial institutions, but also an electronic currency economy.<sup>5</sup>

Within our growing electronic currency economy, financial technology (fintech) has had an undeniable impact on the way that both the banked and the unbanked interact with the economy. Moreover, given its accessibility and algorithmic infrastructure, fintech has the potential to serve as a modern mechanism for closing the race-based gap in financial services.<sup>6</sup> In doing so, however, fintech also poses the risk of going too far by employing lending techniques that go beyond merely

<sup>1</sup> W.E.B. DU BOIS, *THE SOULS OF BLACK FOLK* 8 (1903).

<sup>2</sup> Michael W. Kraus et al., *Americans Misperceive Racial Economic Equality*, 114 *PROCEEDINGS NAT’L ACAD. SCI.* 10324, 10324 (Sept. 26, 2017).

<sup>3</sup> See *infra* Part I-C.

<sup>4</sup> MEHRSA BARADARAN, *HOW THE OTHER HALF BANKS: EXCLUSION, EXPLOITATION, AND THE THREAT TO DEMOCRACY* 64, 77, 85 (2015).

<sup>5</sup> See *id.* at 64, 101, 139.

<sup>6</sup> Stephanie MacConnell, *How FinTech Companies Are Closing the Banking Gap*, *FORBES* (Oct. 23, 2017, 3:50 PM), <https://www.forbes.com/sites/stephaniemacconnell/2017/10/23/financial-inclusion-do-good-make-money/#66c5daef3fc3> [<https://perma.cc/TXL9-XPk9>].

closing the banking gap—if used imprudently, fintech can actually *disadvantage* protected classes of individuals.<sup>7</sup>

This Note will explore the potential for financial institutions to use fintech to address race-based financial inequality while also being attentive to the possibility that seemingly innocuous technologies can generate biased banking practices against minority communities. Part I of this Note will discuss the history of the inequitable distribution of wealth in the United States and race-based gaps in access to financial services and products. Part II will then identify various techniques that financial institutions have used to target minority consumers. It will discuss the legality of those techniques under existing regulations, statutes, and case law. Part III of this Note will describe the role that algorithms, big data, and artificial intelligence have come to play in credit assessment and lending decisions, focusing on the risks inherent in algorithmic decision-making and the potential for these decisions to generate racially discriminate results. Part IV will then explore the opportunity for algorithmic lending in fintech to close the racial gap in financial services while still operating within the broader legal landscape. It will propose strategies that financial institutions can implement in order to adequately use big data and algorithmic credit assessment models to serve minority populations while also ensuring that the techniques they use have no impermissible discriminatory effect.

## I

### HISTORICAL ROOTS AND PERVASIVE REMNANTS OF RACE-BASED INEQUALITY IN WEALTH AND FINANCE

In 2017, approximately 8.4 million U.S. households—over 20 million individuals—were unbanked.<sup>8</sup> Notably, low-income, less-educated, Black, and Hispanic households were most likely to be unbanked, and the unbanked rate for Black and Hispanic households was substantially higher than the overall unbanked rate.<sup>9</sup> This racial disparity in banking, however, is nothing new. In fact, the racial wealth gap is an outgrowth of

---

<sup>7</sup> U.S. DEP'T TREASURY, A FINANCIAL SYSTEM THAT CREATES ECONOMIC OPPORTUNITIES: NONBANK FINANCIALS, FINTECH, AND INNOVATION 57 (July 2018) (noting that while one advantage of fintech is that it can potentially help avoid discrimination based on human interactions, it can also risk discrimination through using biased data in algorithms).

<sup>8</sup> FED. DEPOSIT INS. CORP., 2017 FDIC NATIONAL SURVEY OF UNBANKED AND UNDERBANKED HOUSEHOLDS 1 (Oct. 2018), <https://www.fdic.gov/householdsurvey/2017/2017report.pdf> [<https://perma.cc/AC8H-CDBQ>].

<sup>9</sup> *Id.* at 18.

centuries of racial struggle, and it has only accelerated throughout the last thirty years.<sup>10</sup>

A. The Reconstruction Era and Freedpeople's Attempted Shift from Being Capital to Becoming Capitalists

The racial disparity in wealth and finance can be traced back to institutionalized slavery in the United States.<sup>11</sup> For nearly 250 years, Black individuals were themselves forms of capital and wealth,<sup>12</sup> but they were not allowed to own assets or work for pay, which prevented them from truly participating in the economy.<sup>13</sup> Accordingly, when slavery was abolished and the Black population for the first time had the opportunity to acquire wealth, they were forced to start from a wealthless baseline.<sup>14</sup> Indeed, after the Civil War, emancipated slaves had to make a 180-degree transition from “being capital to becoming capitalists.”<sup>15</sup> The political and social atmosphere throughout the United States at that time, however, made it difficult for freedpeople to make this transition.

Although freedpeople sought to begin their lives anew as independent capitalists, because they lacked cash or access to

---

<sup>10</sup> See MEHRSA BARADARAN, *THE COLOR OF MONEY: BLACK BANKS AND THE RACIAL WEALTH GAP* 249 (2017) [hereinafter BARADARAN, *COLOR OF MONEY*] (explaining that over the last thirty years, the average wealth of White households has grown three times as quickly as that of Black households).

<sup>11</sup> *Id.* at 10–11; see also MELVIN L. OLIVER & THOMAS M. SHAPIRO, *BLACK WEALTH/WHITE WEALTH: A NEW PERSPECTIVE ON RACIAL INEQUALITY* 12–13 (1995) [hereinafter OLIVER & SHAPIRO, *BLACK WEALTH/WHITE WEALTH*] (“[W]ealth inequality has been structured over many generations through the same systemic barriers that have hampered blacks throughout their history in American society: slavery, Jim Crow, so-called de jure discrimination, and institutionalized racism.”); Christian Weller, *Only Large Policy Interventions Such as Reparations Can Shrink the Racial Wealth Gap*, *FORBES* (Mar. 21, 2019), <https://www.forbes.com/sites/christianweller/2019/03/21/only-large-policy-interventions-such-as-reparations-can-shrink-the-racial-wealth-gap/#12d533b01721> [<https://perma.cc/AL65-HRLK>] (“The racial wealth gap is the result of decades, even centuries of systematic economic barriers to African-Americans’ economic progress. Starting with slavery to the Jim Crow era to today’s mass incarceration, U.S. policy has held back African-Americans and denied them an equal opportunity for centuries.”).

<sup>12</sup> In fact, Black individuals were a critical component of the Southern economy, as they were readily sold at auction, pledged as collateral for loans, and used as assets to fulfill payments and resolve debts. Felipe González et al., *Start-Up Nation? Slave Wealth and Entrepreneurship in Civil War Maryland*, 77 *J. ECON. HIST.* 373, 374 (2017).

<sup>13</sup> BARADARAN, *COLOR OF MONEY*, *supra* note 10, at 10–11.

<sup>14</sup> Notably, even after they were freed, Black Americans were not compensated for any of the labor they provided to White Americans throughout their 246 years of slavery, and so their future labor power was their only means to acquire wealth. MANNING MARABLE, *HOW CAPITALISM UNDERDEVELOPED BLACK AMERICA: PROBLEMS IN RACE, POLITICAL ECONOMY, AND SOCIETY* 7 (2000).

<sup>15</sup> BARADARAN, *COLOR OF MONEY*, *supra* note 10, at 15.

an independent credit system,<sup>16</sup> many of them had to continue to work at the behest of White landowners as sharecroppers.<sup>17</sup> Under the sharecropping system, many Black families rented land from White landowners for a fixed payment and, at the end of the year, were obligated to give the landowners a portion of their crops.<sup>18</sup> While this system was a mechanism by which freedpeople gained employment, in practice, it operated as an exploitative monopolistic financial structure.<sup>19</sup> In order to purchase the agricultural supplies that they needed, Black sharecropper families would “pledge [their] future crop as a lien against credit advanced for the growing season”—binding them to their merchants and landlords, and subjecting them to unabated credit prices.<sup>20</sup> Accordingly, a major consequence of the sharecropping system was that Black individuals often became “trapp[ed] . . . in permanent debt,” as landowners and local merchants advanced goods to them on credit at high interest rates.<sup>21</sup>

Additionally, the nature of the United States’ capitalist system itself hindered Black Americans’ transition away from slavery and into the economy. With the abolition of slavery came a need for the country’s proletariat—now consisting of both White and Black workers—to fill the former slaves’ role as la-

---

<sup>16</sup> Upon the slaves’ emancipation, the prevailing belief was that in order to gain economic self-sufficiency, Black individuals needed to have the opportunity to become landowners. Accordingly, rather than the promise of access to a credit system, the promise of “40 acres and a mule” became the cornerstone of America’s first systematic attempt to provide reparations to the Black population. *See generally* Henry Louis Gates, Jr., *The Truth Behind ‘40 Acres and a Mule’*, PBS, <https://www.pbs.org/wnet/african-americans-many-rivers-to-cross/history/the-truth-behind-40-acres-and-a-mule/> [https://perma.cc/5PHF-MBZX] (last visited May 11, 2019) (explaining the historical development of the “40 acres and a mule” proposal).

<sup>17</sup> *See* EDWARD E. BAPTIST, *THE HALF HAS NEVER BEEN TOLD: SLAVERY AND THE MAKING OF AMERICAN CAPITALISM* 408 (2014); PBS, *Slavery by Another Name: Sharecropping*, <http://www.pbs.org/tpt/slavery-by-another-name/themes/sharecropping/> [https://perma.cc/WX49-AZQ3] (last visited Apr. 24, 2019).

<sup>18</sup> HISTORY, *Sharecropping*, [https://www.history.com/topics/black-history/sharecropping#section\\_2](https://www.history.com/topics/black-history/sharecropping#section_2) [https://perma.cc/U7LV-BNDH] (last visited Apr. 24, 2019).

<sup>19</sup> Roger L. Ransom & Richard Sutch, *Debt Peonage in the Cotton South After the Civil War*, 32 J. ECON. HIST. 641, 642 (1972).

<sup>20</sup> *Id.*

<sup>21</sup> BAPTIST, *supra* note 17, at 408; *see also* *Slavery by Another Name: Sharecropping*, *supra* note 17 (“High interest rates, unpredictable harvests, and unscrupulous landlords and merchants often kept [Black] tenant farm families severely indebted, requiring the debt to be carried over until the next year or the next.”).

borers.<sup>22</sup> White landowners, however, “recoiled from the idea of a free labor system in which they would negotiate as equals with [B]lack employees.”<sup>23</sup> Indeed, the White elite feared that if Black Americans were to gain economic freedom, landowners would become deprived of their own power. Resultantly, they sought to preserve the existing hierarchy through emphasizing to the proletariat the differences between the races. In his 1935 magnum opus, W.E.B. Du Bois explained:

The race element was emphasized in order that property-holders could get the support of the majority of white laborers and make it more possible to exploit Negro labor. But the race philosophy came as a new and terrible thing to make labor unity or labor class-consciousness impossible. So long as the Southern white laborers could be induced to prefer poverty to equality with the Negro, just so long was a labor movement in the South made impossible.<sup>24</sup>

Du Bois further explained that capitalism in fact created *two* proletariats: the Black and the White. Although Black Americans’ suffering, he opined, was the result of the capitalist system as a whole, it was most fundamentally caused not by the capitalists, but rather by the White laborers.<sup>25</sup> As a result of this divide, emancipation’s promise of “economic freedom” for former slaves was far from reality—it was merely the promise of an opportunity for Black individuals to continue their work as “free,” but nevertheless exploited, laborers who were structurally separate from their White counterparts.

Furthermore, the United States government throughout Reconstruction adopted a position that ran contrary to freedpeople’s efforts to integrate themselves into the economy. For instance, although Congress passed the Freedmen’s Bureau Acts of 1865 and 1866 in order to provide resources and land to newly freed Black families,<sup>26</sup> President Andrew Johnson “thoroughly undermined” the legislation and asserted that free mar-

---

<sup>22</sup> See generally *Slavery by Another Name: Sharecropping*, *supra* note 17 (explaining that both Black and White Americans served as sharecroppers “at the bottom of the social ladder,” laboring for wealthy landowners).

<sup>23</sup> R. Tracy McKenzie, *Southern Labor and Reconstruction*, in *A COMPANION TO THE CIVIL WAR RECONSTRUCTION* 368 (2005).

<sup>24</sup> W.E.B. DU BOIS, *BLACK RECONSTRUCTION IN AMERICA: AN ESSAY TOWARD A HISTORY OF THE PART WHICH BLACK FOLK PLAYED IN THE ATTEMPT TO RECONSTRUCT DEMOCRACY IN AMERICA, 1860–1880* 680 (1935).

<sup>25</sup> W.E.B. Du Bois, *Marxism and the Negro Problem*, *THE CRISIS*, May 1933, at 104.

<sup>26</sup> UNITED STATES SENATE, *Freedmen’s Bureau Acts of 1865 and 1866*, <https://www.senate.gov/artandhistory/history/common/generic/FreedmensBureau.htm> [<https://perma.cc/FQ4N-Z2AA>] (last visited Apr. 25, 2019).

ket principles were a sufficient instrument for freedpeople to accumulate land and wealth.<sup>27</sup> Indeed, although Congress overrode President Johnson's veto of the legislation, Johnson nevertheless undercut the Bureau's legitimacy by removing members who he viewed as sympathetic to freedpeople and restoring Confederate land to its original owners.<sup>28</sup> To be sure, the Freedmen's Bureau did succeed in providing food, medical care, education, and other services to the Black community.<sup>29</sup> However, in 1872, Congress dismantled it.<sup>30</sup>

But while the Freedmen's Bureau permanently closed, the Freedmen's Savings Bank—which was chartered by Congress in order to teach freedpeople about American values that are integral to economic development—remained in operation.<sup>31</sup> In fact, throughout the first decade of its existence, the Freedmen's Savings Bank enjoyed surprising success, handling what would today be approximately \$1.5 billion of deposits from Black individuals.<sup>32</sup> Over time, however, the nature of the Freedmen's Savings Bank shifted—without the freedpeople's knowledge or consent—from a simple savings operation to an investment bank, and by 1874, it became insolvent and shut its doors.<sup>33</sup> Significantly, along with the disappearance of the Freedmen's Savings Bank came the disappearance of more than half of the accumulated Black wealth.<sup>34</sup>

## B. The Great Migration: A Geographic and Economic Shift

The 1900s saw a notable shift in the economic position of the United States' Black population.<sup>35</sup> In what became known as the Great Migration, Black Americans responded to decades

<sup>27</sup> BARADARAN, *COLOR OF MONEY*, *supra* note 10, at 16–18.

<sup>28</sup> HISTORY, *Freedmen's Bureau* (Oct. 3, 2018), <https://www.history.com/topics/black-history/freedmens-bureau> [<https://perma.cc/M9Q5-C9RS>].

<sup>29</sup> *Id.*

<sup>30</sup> *Id.*

<sup>31</sup> BARADARAN, *COLOR OF MONEY*, *supra* note 10, at 23–24; *see also* FREEDMAN'S SAVINGS BANK, *Founding*, <http://freedmansbank.org/> [<https://perma.cc/K4F7-QLUH>] (last visited Apr. 25, 2019) (“[A] Freedman's Bank was established to help newly freed Americans navigate their financial lives. Call it the financial literacy program of its day.”).

<sup>32</sup> BARADARAN, *COLOR OF MONEY*, *supra* note 10, at 25.

<sup>33</sup> *Id.* at 27–30.

<sup>34</sup> *Id.* at 30. It is worth noting, however, that although the Freedmen's Savings Bank failed in its mission of accumulating Black wealth, it did succeed in “implant[ing] certain social and economic ideals” in Black life and giving Black individuals facility in handling money and conducting financial transactions. *See* ABRAM L. HARRIS, *THE NEGRO AS CAPITALIST: A STUDY OF BANKING AND BUSINESS AMONG AMERICAN NEGROES* 45 (1936).

<sup>35</sup> *See* OLIVER & SHAPIRO, *BLACK WEALTH/WHITE WEALTH*, *supra* note 11, at 23–24.

of oppression by taking “the first big step that the nation’s servant class ever took without asking” and relocating to the North, where they hoped to find jobs, better pay, and greater opportunities for advancement.<sup>36</sup> Upon their transition to the North, the Black population also generated their own economy that was propelled by a Black banking sector.<sup>37</sup> The Black community recognized that White banks would not supply aspiring Black businessmen with the necessary capital or credit, so by 1934, they organized at least 134 banks, either as private institutions or through governmental charters.<sup>38</sup> Additionally, the community organized numerous credit unions and loan associations.<sup>39</sup>

The Great Depression, however, counteracted much of this development and left behind only eight surviving Black-owned banks.<sup>40</sup> Although the economic effects of the Great Depression touched nearly all groups of Americans, “[n]o group was harder hit than African Americans,” approximately half of whom lost their jobs.<sup>41</sup> Indeed, even the progressive New Deal policies that were intended to cure the economic landscape were structured so as to preserve a racial hierarchy, exclude Black Americans from welfare programs, and maintain Black individuals’ inferior status within the economy.<sup>42</sup> Significantly, the New Deal created a modern credit system that “segregated access to loans based on race.”<sup>43</sup> For example, the Home Owners Loan Corporation streamlined home mortgage appraisals by creating neighborhood maps and identifying areas of perceived risk—using race as a “proxy for desirability.”<sup>44</sup> Simi-

---

<sup>36</sup> Isabel Wilkerson, *The Long-Lasting Legacy of the Great Migration*, SMITHSONIAN MAG. (Sept. 2016), <https://www.smithsonianmag.com/history/long-lasting-legacy-great-migration-180960118/> [<https://perma.cc/YQQ8-FEAP>]; BARADARAN, COLOR OF MONEY, *supra* note 10, at 69.

<sup>37</sup> BARADARAN, COLOR OF MONEY, *supra* note 10, at 70.

<sup>38</sup> HARRIS, *supra* note 34, at 48, 54.

<sup>39</sup> *Id.* at 48.

<sup>40</sup> BARADARAN, COLOR OF MONEY, *supra* note 10, at 86–87. Studies show, however, that even before the Great Depression, many of the Black banks that were in operation were not profitable and thus could not have generated wealth for the Black community. *See id.* at 87.

<sup>41</sup> LIBRARY OF CONGRESS, *Great Depression and World War II, 1929–1945: Race Relations in the 1930s and 1940s*, <http://www.loc.gov/teachers/classroom-materials/presentationsandactivities/presentations/timeline/depwwii/race/> [<https://perma.cc/RT5F-3UCR>] (last visited Apr. 25, 2019).

<sup>42</sup> BARADARAN, COLOR OF MONEY, *supra* note 10, at 101.

<sup>43</sup> *Id.* at 103.

<sup>44</sup> *Id.* at 105; *see also* NPR, *A ‘Forgotten History’ of How the U.S. Government Segregated America* (May 3, 2017, 12:47 P.M.), <https://www.npr.org/transcripts/526655831> [<https://perma.cc/G9LM-42VS>] (calling the New Deal’s housing programs a “state-sponsored system of segregation”).



larly, the Federal Housing Administration refused to insure mortgages in and near Black neighborhoods, and it explicitly prohibited lending in areas that were changing in racial composition—a policy that lasted until 1968.<sup>45</sup> Given that the government propelled such segregation, Black individuals continued to remain on the sidelines of the United States' credit system, and they were poised for exploitation by high-cost lenders.<sup>46</sup>

### C. The Civil Rights Movement to Today

Beginning in the 1960s, the Black community protested against racial injustice, and the government began making meaningful strides towards equality.<sup>47</sup> In 1964, Congress passed the Civil Rights Act, which banned racial discrimination in employment and public accommodations.<sup>48</sup> Additionally, Congress passed a series of legislation addressing lending and housing discrimination, including the Fair Housing Act,<sup>49</sup> Equal Credit Opportunity Act,<sup>50</sup> and Community Reinvestment Act.<sup>51</sup> These legislative tools, however, proved to have insufficient teeth.<sup>52</sup> Indeed, throughout the last several decades, there have been consistently stark differences in the levels of homeownership, income, and wealth between Black and White households.<sup>53</sup>

---

<sup>45</sup> See Alexis C. Madrigal, *The Racist Housing Policy that Made Your Neighborhood*, THE ATLANTIC (May 22, 2014), <https://www.theatlantic.com/business/archive/2014/05/the-racist-housing-policy-that-made-your-neighborhood/371439/> [<https://perma.cc/K5NN-P67V>]. Significantly, the FHA's discriminatory practices prevented Black individuals from accumulating assets through the housing market, which had a lasting effect on Black Americans' wealth portfolios. See OLIVER & SHAPIRO, BLACK WEALTH/WHITE WEALTH, *supra* note 11, at 18.

<sup>46</sup> See BARADARAN, COLOR OF MONEY, *supra* note 10, at 110.

<sup>47</sup> *Id.* at 134–35.

<sup>48</sup> See 42 U.S.C. §§ 2000(a), 2000(e)-2 (1964).

<sup>49</sup> 42 U.S.C. § 3601 (1968).

<sup>50</sup> 15 U.S.C. § 1691–1691f (1974).

<sup>51</sup> 12 U.S.C. § 2901–2908 (1977).

<sup>52</sup> See BARADARAN, COLOR OF MONEY, *supra* note 10, at 149–50 (explaining that while racism was the underlying cause of inequality, prohibiting discrimination could not fix the problem unless the underlying issue—the undercapitalization of the Black community—was also addressed). This is not to suggest, however, that the Black population did not experience any improvement in their social and economic status. The civil rights movement led to a significant increase in the number of Black individuals in high-level jobs, colleges, and universities, as well as a rise in Black home ownership and income. See OLIVER & SHAPIRO, BLACK WEALTH/WHITE WEALTH, *supra* note 11, at 23.

<sup>53</sup> See PEW RESEARCH CENTER, *Demographic Trends and Economic Well-Being* (June 27, 2016), <https://www.pewsocialtrends.org/2016/06/27/1-demographic-trends-and-economic-well-being/> [<https://perma.cc/TAF4-NBAR>] (noting that the Black-White gap in homeownership is widening; the “income of households

Significantly, throughout this period, Black Americans' quest for economic equality was not rooted in demands for equal access to credit, but rather in demands for increased employability—that is, access to paying jobs, opportunities for job advancement, and assurances of job security.<sup>54</sup> Black Americans' perspective during this time—that access to jobs was the pathway to other greater benefits—mirrored, or was perhaps even a continuation of, their Reconstruction-era efforts to gain economic equality through means other than credit.<sup>55</sup> But with access to credit resting as not a standalone goal, but rather a byproduct of other visions of equality, the Black population arguably pushed themselves against a dead end in their effort to break the long-racialized capitalist order. Indeed, with no one actively seeking to push open the door to credit for the Black community, the structural dynamics of the capitalist system that gave initial rise to the racial disparity in credit access became more deeply entrenched and reinforced. Accordingly, throughout the last several decades, the need to extend credit to the Black community on sufficient and equal terms has remained an outstanding issue ripe for reparation, and the racial gap in wealth and finance has remained intolerably wide.

A 1984 study of wealth distribution demonstrated that for every dollar of mean net financial assets owned by White middle-income households, comparable Black households held only twenty cents.<sup>56</sup> This study further showed a Black-to-White income ratio of seventy-seven percent, and a wealth ratio of nineteen percent—highlighting the continued pervasiveness of race-based inequality in wealth and finance.<sup>57</sup> Notably, research into these disparities demonstrated that, despite the strides that the Black community has made in combatting discrimination, massive financial gaps continue to be the result of systemic discriminatory practices.

In 1991, the Federal Reserve conducted a study of 6.4 million home mortgage applications, which showed a “widespread

---

headed by [B]lacks has persistently lagged behind that of [W]hite households since the U.S. Census Bureau began collecting these data in the late 1960s”; and the wealth gap between Black and White households has widened since 1983).

<sup>54</sup> See JAMES W. BUTTON ET AL., *BLACKS AND THE QUEST FOR ECONOMIC EQUALITY: THE POLITICAL ECONOMY OF EMPLOYMENT IN SOUTHERN COMMUNITIES IN THE UNITED STATES* 153 (2009).

<sup>55</sup> See Gates, Jr., *supra* note 16 (explaining how upon their emancipation from slavery, Black individuals prioritized entering the economy through land acquisition, rather than through credit access).

<sup>56</sup> OLIVER & SHAPIRO, *BLACK WEALTH/WHITE WEALTH*, *supra* note 11, at 25.

<sup>57</sup> *Id.*

and systemic pattern of institutional discrimination in the nation's banking system" and revealed that commercial banks rejected Black applicants twice as often as they rejected White applicants.<sup>58</sup> Additionally, the report showed that the poorest White applicant was more likely to get approved for a home mortgage than a Black applicant in the highest income bracket—rebutting the position that the disparity may be the result of neutral factors like financial considerations or risk assessments.<sup>59</sup>

Although the issue of racial inequality in wealth and finance has been brought to the forefront of public discourse in recent years,<sup>60</sup> racial stratification nevertheless remains a pervasive issue. For instance, the 2008 financial crisis disproportionately affected Black communities—wiping out fifty-three percent of total Black wealth—and resultantly “turned the persistent racial wealth gap into a chasm.”<sup>61</sup> Furthermore, the most recent Survey of Consumer Finances shows that median Black families possess approximately \$17,000 in net wealth, while median White families possess over ten times that amount.<sup>62</sup> Accordingly, although the Black community certainly has made significant steps towards closing the gap in wealth and finance since the Antebellum, there nevertheless remains a crater in banking that needs a meaningful modern solution.

---

<sup>58</sup> *Id.* at 19.

<sup>59</sup> *See id.* at 19–20. In fact, even when creditworthiness is factored into the equation, the conclusion that financial institutions often make their lending decisions on the basis of race, rather than finances, still stands. *See id.* Interestingly, however, many economists challenge the notion that financial institutions discriminate on the basis of race; they contend that, in a competitive market, profit-seeking banks have no incentive to reject well-positioned minority applicants who may generate a profitable loan. *See* Peter P. Swire, *The Persistent Problem of Lending Discrimination: A Law and Economics Analysis*, 73 TEX. L. REV. 787, 789 (1995).

<sup>60</sup> The 2011 Occupy Wall Street movement is largely accredited with introducing the issue of wealth inequality to the public, though the movement failed to focus on race. But in 2013, in his speech on the 50th anniversary of the March on Washington, President Obama drew explicit attention to the racial wealth gap and its enduring presence. *See* Melvin L. Oliver & Thomas M. Shapiro, *Disrupting the Racial Wealth Gap*, 18 CONTEXTS 16, 17 (2019).

<sup>61</sup> BARADARAN, COLOR OF MONEY, *supra* note 10, at 249.

<sup>62</sup> Oliver & Shapiro, *Disrupting the Racial Wealth Gap*, *supra* note 60, at 18.

## II

TRADITIONAL LENDING TECHNIQUES, MINORITY  
COMMUNITIES, AND THE LAW

The continued pervasiveness of the race-based wealth gap is the result of numerous factors, including “racialized structures” that connect our nation’s long history of segregation and discrimination with lending techniques that take individuals’ demographics into account.<sup>63</sup> Indeed, research demonstrates that financial institutions engage in underwriting practices that “tend to systematically vary by borrowers’ demographic characteristics[,]” which is either an explicit or an implicit function of lenders’ beliefs about how race correlates with creditworthiness.<sup>64</sup> Although banks have been required for several decades to track and report their borrowers’ demographic information so that discriminatory lending practices can be detected, financial institutions nevertheless continue to disproportionately target Black borrowers with harmful financial products.<sup>65</sup>

A. Target Marketing, Lending Discrimination, and the  
Race-Based Gap in Wealth, Finance, and Credit

One prevalent technique that financial institutions use when offering financial products and services to consumers is market segmentation—the process of “dividing the population into niches according to [demographic] characteristics” to gauge individuals’ attractiveness as targets for financial products.<sup>66</sup> Although segmenting the population based on demographics is not an inherently bad practice, and indeed can serve as a tool for ensuring that minority populations are

---

<sup>63</sup> *Id.*

<sup>64</sup> See Sarah K. Harkness, *Discrimination in Lending Markets: Status and the Intersections of Gender and Race*, 79 SOC. PSYCHOL. Q. 81, 81–82 (2016); see also Linda E. Fisher, *Target Marketing of Subprime Loans: Racialized Consumer Fraud & Reverse Redlining*, 18 J.L. & POL’Y 121, 122 (2009) (“[E]vidence is mounting that certain subprime lenders deliberately sought out financially vulnerable borrowers for deceptive sales tactics and predatory mortgage loans . . . to obtain mortgages generating large profits for themselves.”).

<sup>65</sup> See Tracy Jan, *The Senate Rolls Back Rules Meant to Root Out Discrimination by Mortgage Lenders*, WASH. POST (Mar. 14, 2018), [https://www.washingtonpost.com/news/woonk/wp/2018/03/14/the-senate-rolls-back-rules-meant-to-root-out-discrimination-by-mortgage-lenders/?utm\\_term=.2cb5d3845e9a](https://www.washingtonpost.com/news/woonk/wp/2018/03/14/the-senate-rolls-back-rules-meant-to-root-out-discrimination-by-mortgage-lenders/?utm_term=.2cb5d3845e9a) [<https://perma.cc/HC2T-K6DM>]; see also Ross D. Petty et al., *Regulating Target Marketing and Other Race-Related Advertising Practices*, 8 MICH. J. RACE & L. 335, 339 (2003) (describing how, despite the passage of federal laws aimed at preventing discriminatory lending practices, the banking industry continues to engage in practices linked to inferential racism).

<sup>66</sup> Fisher, *supra* note 64, at 129.

receiving financial services, the practice walks a fine line, and segmentation based on either race or proxies for race can quickly become problematic.<sup>67</sup>

1. *Reverse Redlining and Disparate Impact Lending Discrimination*

The practice of singling out Black borrowers for predatory loans and harmful financial products has been dubbed “reverse redlining” and is an outgrowth of the more traditionally recognized practice of “redlining.”<sup>68</sup> A financial institution engages in redlining when it refuses to lend to individuals in particular neighborhoods due to the income, race, or ethnicity of the neighborhoods’ residents.<sup>69</sup> Conversely, reverse redlining is the practice of extending credit on unfair terms to particular groups of individuals that have been historically underserved, predominantly due to their race.<sup>70</sup> Throughout the last several decades, the Black community has been a central target of reverse redlining by financial institutions, likely due to the extensive scarcity of wealth, assets, and credit among the Black population.<sup>71</sup> Indeed, as civil rights attorney John Relman notes,

[t]he legacy of historic discrimination . . . often leaves the residents of minority communities desperate for credit, and without the knowledge or experience required to identify loan products and lenders offering products with the most advantageous terms for which they might qualify. Instead, residents of underserved minority communities often respond favorably to the first offer of credit made, without regard to the fairness of the product.<sup>72</sup>

Notably, a financial institution need not *intentionally* target borrowers on the basis of race in order to engage in impermissi-

---

<sup>67</sup> See Petty et al., *supra* note 65, at 343 (noting that, although target marketing helps advertisers more effectively promote their products, using demographic data to support this process can result in discrimination).

<sup>68</sup> Fisher, *supra* note 64, at 126–27.

<sup>69</sup> Hargraves v. Capital City Mortg. Corp., 140 F. Supp. 2d 7, 20 (D.D.C. 2000) (internal citations omitted).

<sup>70</sup> *Id.*

<sup>71</sup> See Charles L. Nier, III & Maureen R. St. Cyr, *A Racial Financial Crisis: Rethinking the Theory of Reverse Redlining to Combat Predatory Lending Under the Fair Housing Act*, 83 TEMP. L. REV. 941, 942 (2011); Jacob S. Rugh & Douglas S. Massey, *Racial Segregation and the American Foreclosure Crisis*, 75 AM. SOC. REV. 629, 632 (2010) (“[M]inority borrowers’ underserved status made them prime targets for subprime lenders who systematically targeted their communities for aggressive marketing campaigns”).

<sup>72</sup> John P. Relman, *Foreclosures, Integration, and the Future of the Fair Housing Act*, 41 IND. L. REV. 629, 637 (2008).

ble reverse redlining.<sup>73</sup> In fact, courts have recognized disparate impact in lending as a cognizable type of lending discrimination under the Equal Credit Opportunity Act and the Fair Housing Act.<sup>74</sup> “A disparate impact occurs when a lender applies a racially . . . neutral policy or practice equally to all credit applicants but the policy or practice disproportionately excludes or burdens certain persons on a prohibited basis.”<sup>75</sup> Accordingly, even financial institutions that lend in good faith must be mindful of the effects that their practices have on protected classes of individuals.

## 2. *The Potential Perils of Using Targeted Marketing to Address the Racial Gap in Financial Services*

The recognition of disparate impact as a cognizable lending discrimination claim is particularly relevant for financial institutions that seek to expand their borrower bases and actively make their products and services more accessible to underserved minority communities. In fact, the United States’ acute need to extend credit to the Black community, considered in conjunction with federal lending laws, places financial institutions in a difficult bind: lenders must attempt to serve and meet the credit needs of minority communities—which inherently require leveraging riskier loans because they are generally comprised of individuals with less accumulated wealth, assets, and income—but also ensure that the mechanisms they use to achieve this end do not have a disparate impact on the targeted communities.

This bind that financial institutions find themselves in can be clearly demonstrated through a brief study of the Community Reinvestment Act and financial institutions’ response to this statutory mandate. In 1977, Congress passed the Community Reinvestment Act (CRA), which was designed to encourage banks to help meet the credit needs of all segments of their communities, particularly low- and moderate-income (LMI) populations.<sup>76</sup> Under this program, the Office of the

---

<sup>73</sup> *Hargraves*, 140 F. Supp. 2d at 20.

<sup>74</sup> *Federal Fair Lending Regulations and Statutes*, FEDERAL RESERVE 2-3 [https://www.federalreserve.gov/boarddocs/supmanual/cch/fair\\_lend\\_over.pdf](https://www.federalreserve.gov/boarddocs/supmanual/cch/fair_lend_over.pdf) [<https://perma.cc/FM74-6JBW>] (last visited Apr. 30, 2019).

<sup>75</sup> *Id.* However, if the policy or practice is justified by “business necessity,” and there is no less discriminatory alternative available to the financial institution, then there is no violation of the Fair Housing Act or the Equal Credit Opportunity Act. *See id.*

<sup>76</sup> *See* OFFICE OF THE COMPTROLLER OF THE CURRENCY, *Community Reinvestment Act Fact Sheet*, at 1, <https://www.occ.gov/topics/community-affairs/publica>

Comptroller of the Currency (OCC) evaluates banks' lending activities and assigns banks a rating that is based partially on the demographics of the communities that the banks serve.<sup>77</sup> In general, financial institutions strive to earn high CRA ratings because these ratings are considered in regulatory decisions regarding bank mergers, acquisitions, and new branch establishments.<sup>78</sup> Additionally, banks try to achieve high ratings because the CRA mandates that all CRA reviews be publicly disclosed, placing financial institutions' behavior directly within the public eye.<sup>79</sup> Accordingly, beyond the positive policy rationale for lending to traditionally underserved communities, financial institutions have a strong incentive to approach the CRA's mandate seriously and lend to LMI borrowers.

In response to these incentives, many financial institutions have in fact actively adopted business plans intended to meet the credit needs of LMI communities. For example, Sterling National Bank recently published a "Community Reinvestment Act Plan, Commitments and Goals" document, which outlines the bank's goal of extending credit to LMI communities and explains the bank's implementation strategies.<sup>80</sup> The strategies that Sterling National Bank decided to pursue include, among other things, "advertising in local community publications" and interacting with community-based entities and organizations.<sup>81</sup> These types of targeted marketing strategies are not unique to Sterling National Bank, and other institutions have also adopted similar strategies in response to the CRA's mandate that banks lend in LMI communities in order to correct the United States' imbalance in credit allocation.

Significantly, however, although the CRA is "framed in nonracial terms," it is well known that its true mission is to correct the United States' *race-based* asymmetry in credit.<sup>82</sup> Thus, the statute's genuine mandate is for financial institu-

---

tions/fact-sheets/pub-fact-sheet-cra-reinvestment-act-mar-2014.pdf [https://perma.cc/EX2H-F9JA] (last visited Apr. 29, 2019).

<sup>77</sup> See *id.* at 2.

<sup>78</sup> William Mutterperl, *CRA and Disparate Impact Now More Muddled than Ever*, BNA'S BANKING REPORT (May 28, 2013).

<sup>79</sup> See Financial Institutions Reform, Recovery, and Enforcement Act of 1989, Pub. L. No. 101-73, 103 Stat. 183 (codified in scattered sections of 12 U.S.C.).

<sup>80</sup> STERLING NATIONAL BANK, *Community Reinvestment Act Plan, Commitments and Goals 2016-2018*, at 4, 6-7, [https://www.snb.com/stuff/contentmgr/files/0/1b4492d14d2b158b3e510a8d3b230f1d/files/sterling\\_cra\\_plan\\_ver2dy.pdf](https://www.snb.com/stuff/contentmgr/files/0/1b4492d14d2b158b3e510a8d3b230f1d/files/sterling_cra_plan_ver2dy.pdf) [https://perma.cc/W7HR-RYVF] (last visited May 4, 2019).

<sup>81</sup> *Id.*

<sup>82</sup> See Keith N. Hylton & Vincent D. Rougeau, *Lending Discrimination: Economic Theory, Econometric Evidence, and the Community Reinvestment Act*, 85 GEO. L.J. 237, 246 (1996).

tions to more actively lend to racial minority borrowers. This directive accordingly makes financial institutions vulnerable to disparate impact allegations, in the event that the strategies they choose to implement in pursuit of their statutory mandate have a disproportionate effect on a protected class of individuals.

#### B. Traditional Credit Assessment Techniques and Minority Borrowers

For the majority of Americans, qualification for financial services and products is dependent upon credit scores and credit reports.<sup>83</sup> Credit scores and credit reports are the means by which lenders can evaluate the credit risk posed by a potential borrower. The majority of U.S. lenders use credit scores that are generated through Fair Isaac Corporation (FICO).<sup>84</sup> Further, three major credit bureaus—TransUnion, Experian, and Equifax—conduct the majority of consumer data compilation and create credit reports, which are used to score individual consumers.<sup>85</sup>

Although, in today's market, FICO generates consumer credit scores through the use of an automated underwriting model, this was not always the mechanism by which individuals' creditworthiness was assessed. Indeed, for many years, individual loan officers had to engage in the labor-intensive process of evaluating loan applicants on a case-by-case basis. This approach, however, was ripe for improper decision making.<sup>86</sup> Indeed, numerous studies have made it clear that implicit racial bias by human decision makers is "real, pervasive, and difficult to change," and that bias inevitably affected lending decisions.<sup>87</sup>

Automated underwriting, however, has proven to have its own weaknesses. For instance, credit-scoring models like that used by FICO consider only certain credit-based data points, such as a consumer's payment history, amounts owed, new

---

<sup>83</sup> See *What Is a Credit Score?*, MYFICO, <https://www.myfico.com/resources/credit-education/credit-scores> [<https://perma.cc/3H3C-KUZD>] (last visited May 1, 2019).

<sup>84</sup> See *id.*

<sup>85</sup> See Mikella Hurley & Julius Adebayo, *Credit Scoring in the Era of Big Data*, 18 YALE J.L. & TECH. 148, 154–55 (2017).

<sup>86</sup> See *id.* at 155.

<sup>87</sup> Justin D. Levinson, *Forgotten Racial Equality: Implicit Bias, Decisionmaking, and Misremembering*, 57 DUKE L.J. 345, 352 (2007); CATHY O'NEIL, WEAPONS OF MATH DESTRUCTION: HOW BIG DATA INCREASES INEQUALITY AND THREATENS DEMOCRACY 142 (2016) (describing how minorities were "routinely locked out" from being approved for credit through traditional lending systems).



credit, and types of credit used, and they ignore other relevant data points such as employment history and salary.<sup>88</sup> As a result, populations that have been historically excluded from the credit market—such as Black Americans—are often mislabeled as being uncreditworthy as a result of skewed data inputs.

Errors in individuals' credit reports are also a fairly common occurrence, and errors have the potential to lead to credit denials, higher interest rates, or generally less-favorable loan terms.<sup>89</sup> Notably, Black borrowers who are less experienced in finance are particularly susceptible to having such errors be contained on their credit reports and having those errors go undetected. These weaknesses associated with traditional credit assessment techniques leave room for new technologies to step in and assess creditworthiness in a more accurate and less biased way.<sup>90</sup>

### III

#### THE ROLE OF ALGORITHMS, BIG DATA, AND ARTIFICIAL INTELLIGENCE IN CREDIT ASSESSMENT AND DECISION MAKING

Although financial technology is often thought of as a thoroughly modern phenomenon, the fintech sector has played a key role in finance for many years. Indeed, five decades of technological developments—from credit and debit cards, to ATMs, to electronic stock trading, to the Internet and sophisticated data analytics—have formed the fintech infrastructure that shapes today's financial services sector.<sup>91</sup> Up until recently, the expansion of fintech has worked in complementary tandem with the growth of traditional banks; but as technology continues to develop and offer services such as payment apps, robo-wealth advisors, and online lending, fintech services are arguably well on their way to taking over the financial services sector altogether.<sup>92</sup>

At first blush, this transformation in the way that we provide financial services may appear to be a positive thing—com-

---

<sup>88</sup> See Hurley & Adebayo, *supra* note 85, at 155–56.

<sup>89</sup> See *id.* (stating that a 2013 FTC study revealed that 26% of consumers had mistakes in their credit reports, and that half of those mistakes were material enough to affect a person's credit).

<sup>90</sup> See *id.* at 157.

<sup>91</sup> See Falguni Desai, *The Evolution of Fintech*, FORBES (Dec. 13, 2015), <https://www.forbes.com/sites/falgunidesai/2015/12/13/the-evolution-of-fintech/#597fcd317175> [<https://perma.cc/R2QE-2MGK>].

<sup>92</sup> See *id.*

puterized decision making is bound to make lending decisions clearer and more rational, thus eliminating implicit human bias and abating the driver behind capricious credit evaluations. However, the use of big data, artificial intelligence (AI), and algorithms to conduct financial decision making has not yet lived up to this rose-colored vision of progress. Indeed, even when the algorithms used to evaluate credit applicants and make lending decisions are transparent and facially neutral, there is still the very real possibility that their inputs nevertheless produce discriminatory decisions.<sup>93</sup>

### A. Algorithmic Credit Decisions and Associated Risks

Although FICO's credit-scoring models were the beginning of algorithmic risk evaluation, today's models are much more sophisticated in their structure. Today, big data<sup>94</sup> and AI play an increasingly critical role in underwriting and lending, as statisticians and mathematicians are able to predict people's creditworthiness based on a "mishmash of data," such as zip codes, web browsing and searching patterns, recent purchases, behavioral tracking, and mobile app data.<sup>95</sup>

---

<sup>93</sup> For example, one company that has taken the lead in using big data and AI to assess creditworthiness is Big Data Scoring, a cloud-based credit decision engine. See BIG DATA SCORING, <https://www.bigdatascoring.com/> [<https://perma.cc/63XD-UJY3>] (last visited May 4, 2019). Big Data Scoring touts itself as working with some of the world's biggest financial institutions in order to provide them with "more accurate underwriting . . . in real time and remove[] the risk of human error or personal judgment." *Id.* But in reality, it is unlikely that Big Data Scoring, or other companies employing similar evaluation mechanisms, actually remove the underlying concerns of bias and systematic exclusion in credit decision making. See *infra* Parts III-B. & III.

<sup>94</sup> "Big data" is often defined in a variety of ways, but it can essentially be described as "a collection of data from traditional and digital sources inside and outside [a] company that represents a source for ongoing discovery and analysis." Lisa Arthur, *What Is Big Data?*, FORBES (Aug. 15, 2013), <https://www.forbes.com/sites/lisaarthur/2013/08/15/what-is-big-data/#37e4625b5c85> [<https://perma.cc/5WBP-39YZ>].

<sup>95</sup> O'NEIL, *supra* note 8787, at 143; Larry Alton, *Understanding the Role of Big Data in the Lending Industry*, SMARTDATACOLLECTIVE (Apr. 18, 2018), <https://www.smartdatacollective.com/understanding-the-role-of-big-data-in-the-lending-industry/> [<https://perma.cc/HYZ9-DH8B>]. Interestingly, several years ago, social media giant Facebook started putting wheels in motion to allow online banking institutions to use individuals' Facebook profiles and networks as benchmarks for creditworthiness. After the Federal Trade Commission suggested that this would open Facebook up to regulation as a consumer-reporting agency, however, these plans lost their steam. See Laura Lorenzetti, *Lenders Are Dropping Plans to Judge You by Your Facebook Friends*, FORTUNE (Feb. 24, 2016), <http://fortune.com/2016/02/24/facebook-credit-score/> [<https://perma.cc/Q7Q7-47NK>].

The Federal Trade Commission has identified four phases through which “little” data becomes the “big” data that is used by financial institutions to guide the development and promotion of their services and products: (1) collection; (2) compilation and consolidation; (3) analysis; and (4) use.<sup>96</sup> The first two steps of this life cycle are deeply embedded in society, as companies are constantly tracking, linking, and consolidating consumers’ behavior through monitoring the activities conducted on their computers, tablets, smartphones, and wearable technologies that reflect their habits and preferences. The more obscured aspects of the life cycle are the latter two stages. Upon collecting massive amounts of consumer data, companies then use algorithmic models to attribute to individuals the qualities of other consumers who appear similar, and then they either target those consumer groups that appear profitable or avoid those consumer groups that appear too risky.<sup>97</sup> Importantly, although they are computer-driven, these aspects of the life cycle are still vulnerable to risks of biased logic, flawed assumptions or judgments, and incorrect output interpretation—and “[t]he immediate fallouts of [these] risks can include inappropriate and potential illegal [lending] decisions.”<sup>98</sup>

## B. The Biased Algorithm

“[I]t is a mistake to assume [big data lending techniques] are objective simply because they are data-driven.”<sup>99</sup> Indeed, algorithms present the possibility of generating biased decisions through both the data being used as inputs and the design of the algorithmic mechanism itself. The use of certain

---

<sup>96</sup> FTC REPORT, *Big Data: A Tool for Inclusion or Exclusion?*, at i (Jan. 2016), <https://www.ftc.gov/system/files/documents/reports/big-data-tool-inclusion-or-exclusion-understanding-issues/160106big-data-rpt.pdf> [<https://perma.cc/T8BA-MHWL>].

<sup>97</sup> It is worth noting that this method of conducting predictive analytics is not a huge leap away from the way in which traditional credit scoring models function: comparing known credit characteristics of a particular consumer with historical data regarding how people with similar credit characteristics have performed in meeting their credit obligations. But predictive analytics that use big data and AI use nontraditional—and often noncredit related—characteristics to make these predictions, thus widening the potential for biased inputs or inaccurate data-point associations. See *id.*

<sup>98</sup> See DELOITTE, *Managing Algorithmic Risks*, <https://www2.deloitte.com/us/en/pages/risk/articles/algorithmic-machine-learning-risk-management.html> [<https://perma.cc/K3LK-N42T>] (last visited May 5, 2019).

<sup>99</sup> EXECUTIVE OFFICE OF THE PRESIDENT, *Big Data: A Report on Algorithmic Systems, Opportunity, and Civil Rights*, at 6 (May 2016), [https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/2016\\_0504\\_data\\_discrimination.pdf](https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/2016_0504_data_discrimination.pdf) [<https://perma.cc/R77P-WN6P>].

consumer information as algorithmic inputs may increase the potential of producing discriminatory decisions, even when the decision makers themselves have no discriminatory motive. “Proxies for prohibited categories might be found in relatively innocuous activities such as web-browsing behavior. . . . The worry is that algorithms will utilize proxies for impermissible information, reconstructing with reasonable accuracy that barred information through analysis of available information.”<sup>100</sup> For instance, algorithms may be constructed to consider zip codes and geographic information such as cities or, more narrowly, neighborhoods. But where zip codes, cities, and neighborhoods have been historically segregated, a predictive model that takes this information into account may unintentionally discriminate on the basis of race. As such, while the algorithmic model itself has no inherent bias, it nevertheless imports the biases of the larger world around it.

Additionally, there is a risk that analytical models will incorporate discrimination in previous lending decisions into new lending decisions by integrating pre-existing, biased definitions of what constitutes a “creditworthy borrower” into the analysis.<sup>101</sup> For example, in the past, financial institutions may have developed internal sets of criteria for who constitutes a “creditworthy borrower”; this set of criteria would help the institution identify attractive loan applicants based on the profiles of previous and existing consumers who were profitable.<sup>102</sup> However, given that finance has historically been a biased institution,<sup>103</sup> the criteria-set that the institution developed over time would itself be skewed against minority individuals—thus creating a facially neutral, but inherently biased variable that could create a disparate impact if incorporated into the new algorithmic model.

Beyond the potential for algorithmic inputs to generate biased results, there is also the risk that the inner workings of the algorithm itself are structured so as to produce biased decisions. For instance, Jo Ann Barefoot, a former CFPB Con-

---

<sup>100</sup> Anupam Chander, *The Racist Algorithm?*, 115 MICH. L. REV. 1023, 1038 (2017); see also O’NEIL, *supra* note 87, at 145 (describing how analyzing individuals through proxies generates discriminatory “people like you” calculations that “march us back in time”).

<sup>101</sup> See FTC REPORT, *supra* note 96, at 28 (describing the potential for patterns of discrimination to reproduce themselves through the use of data analytics in employment decisions).

<sup>102</sup> U.S. DEPT’ TREASURY, *supra* note 7, at 134 (identifying “traditional” criteria that have been considered when assessing credit applicants, such as their lines of credit, length of credit history, and loan payment history).

<sup>103</sup> See *supra* Part I.

sumer Advisory Board member, offered one theory of a biased algorithmic model that a financial institution may create to predict creditworthiness.<sup>104</sup> She suggested that a model may be created that uses a person's propensity for paying for gas inside the station, rather than at the pump, as a predictor of creditworthiness: people who pay inside are more likely to smoke, and people who smoke are less likely to be creditworthy. This hypothetical algorithm, however, has been structured in a way that fails to account for reasons other than smoking which may have prompted an individual's decision to pay inside (such as simply purchasing a snack, using the restroom, or paying with cash). This absence of relevant variables is a design flaw that could lead to credit decisions that are not only inaccurate, but also disproportionately harmful to particular groups of individuals.

### C. Racially Discriminate Outputs as the Predictable Outcome of Algorithmic Credit Assessment

To be sure, racially discriminate outputs of credit assessment algorithms can often be attributed to a bias that has been manufactured through either the algorithmic inputs that are being used or the structure of the algorithmic mechanism itself. Critically, however, one must not overlook the fact that racially disparate outputs may simply be the predictable result of a credit system that has been built upon decades of racial stratification and otherization. Indeed, the fact that data-driven credit scoring mechanisms identify Black applicants as higher credit risks than White applicants, thus placing Black individuals on track for less favorable credit terms, products, and services, may very well be evidence of an objectively unbiased algorithm that is operating precisely as intended.<sup>105</sup>

At its core, credit assessment and scoring is a process that is meant to estimate a potential borrower's chance of default and identify the associated risk that a lender would take on by working with that individual.<sup>106</sup> Historically, this has been an

---

<sup>104</sup> Charles Lane, *Will Using Artificial Intelligence to Make Loans Trade One Kind of Bias for Another?*, NPR (Mar. 31, 2017), <https://www.npr.org/sections/alltechconsidered/2017/03/31/521946210/will-using-artificial-intelligence-to-make-loans-trade-one-kind-of-bias-for-anot> [HTTPS://PERMA.CC/VL2D-TSGB].

<sup>105</sup> But this is certainly not to say that such systems should remain intact moving forward. A system that produces racially discriminate results when "operating as intended" should be redesigned with a modified intention of not only accurately identifying credit risks, but also accounting for and remediating structural inequities. See *infra* Part IV.

<sup>106</sup> See *supra* note 83.

alyzed through credit-related predictors, and today the measurement is made even more robust through secondary evidence of behavioral patterns that, ostensibly, correlate with individuals' likelihood of default. When algorithms that take these primary and secondary credit-related factors into consideration produce racially disparate outcomes, one explanation could certainly be that the credit analysis is being skewed by racial considerations.<sup>107</sup> However, another explanation may be that a credit scoring mechanism that classifies Black individuals as a higher credit risk than White individuals may actually be an accurate risk analysis—one that is not “being skewed,” but rather is *inherently skewed* due to the underlying system that it operates within. In fact, though a bitter pill, this explanation may be an inescapable reality of the credit system that our nation has developed.

One of the most “striking fact[s] about American economic history and politics is the brutal and systemic underdevelopment of Black people . . . [who] have been on the other side of one of the most remarkable and rapid accumulations of capital seen anywhere in human history.”<sup>108</sup> Even after being “integrated” into the United States' capitalist system, Black Americans, as a class, have been unable to surpass the lowest economic rung to achieve capitalist success and stability. Accordingly, where credit-scoring mechanisms are designed to evaluate which individuals pose a credit risk, Black individuals are structurally more likely to be labeled a higher risk than White individuals. Therefore, although perhaps inherently racist, the prevailing credit scoring system is in fact accurate, and the issue is not that algorithmic assessment models are skewing outcomes based on race, but rather that the most accurate, predictive outcomes and associated lending decisions are, at the baseline, racially skewed.<sup>109</sup>

---

<sup>107</sup> See *supra* Part III-B.

<sup>108</sup> MARABLE, *supra* note 14, at 1–2; see also *supra* Part I.

<sup>109</sup> A similar area in which there is a debate regarding whether racially disparate evaluations and decisions are “being skewed” or are inherently skewed is college admissions. Historically, the United States has seen racial gaps in college enrollment, and college admission decisions are typically based upon a number of factors thought to be predictive of academic success—GPA, standardized test scores, personal statements, extracurricular involvement, and other similar factors. When an analysis of these factors results in racially disparate admissions decisions, one explanation is that the analysis is being skewed by racial considerations. However, an alternative explanation is that factors that can objectively be viewed as mechanisms for meritocracy (such as GPA or SAT scores) in reality reflect accumulated race-based disadvantages in academic opportunity—that is, Black individuals may in fact have lower academic performance and thus be greater “academic risks,” but only because Black Americans have, as a class, been

## IV

CLOSING THE GAP: SEIZING ALGORITHMIC OPPORTUNITY  
WITHIN THE BOUNDS OF LEGAL LIMITATIONS

Despite their propensity to generate racially discriminate results, algorithmic models for assessing creditworthiness nevertheless have the potential to make financial services more accessible to underserved communities. Whereas traditional underwriting systems rely heavily on information about applicants' credit history, algorithmic models draw on a broader range of predictive variables. Accordingly, algorithmic models resolve the catch-22 that Black borrowers have long found themselves in: that in order to get credit, a person must already be entrenched in the system and have a reviewable credit history.<sup>110</sup> Given this opportunity that fintech presents for closing the pervasive racial gap in financial accessibility, the challenge for financial institutions is not in fact *whether* they should use big data, algorithmic models, and AI in order to better serve the Black population; rather, their relevant concern should be *how* to most effectively do so without discriminating against protected groups of borrowers in the process.

One way in which financial institutions can use fintech capabilities in order to serve the Black community while remaining in compliance with lending laws is by vigilantly monitoring the impact of their lending mechanisms and adjusting the input variables as necessary.<sup>111</sup> That is, institutions should regularly inquire into whether Black applicants are receiving statistically worse credit decisions than White applicants, given the variables that are being collected and fed into their credit assessment models.<sup>112</sup> Notably, however, identifying and removing disparate impact through scrutinizing inputs and outputs can be a complex task that requires some exper-

---

subjected to academic inequities for centuries. See generally Richard V. Reeves & Dimitrios Halikias, *Race Gaps in SAT Scores Highlight Inequality and Hinder Upward Mobility*, THE BROOKINGS INSTITUTION (Feb. 1, 2017), <https://www.brookings.edu/research/race-gaps-in-sat-scores-highlight-inequality-and-hinder-upward-mobility/> [<https://perma.cc/2DLL-QWTW>].

<sup>110</sup> See Colin Wilhelm, *Big Data vs. the Credit Gap*, POLITICO (Feb. 7, 2018), <https://www.politico.com/agenda/story/2018/02/07/big-data-credit-gap-000630> [<https://perma.cc/7PMV-3HVB>]; see also generally *supra* Part I.

<sup>111</sup> See Chander, *supra* note 100, at 1039.

<sup>112</sup> Focusing on the inputs and outputs of the analysis, rather than on the inner workings of the algorithm itself, is a particularly useful practice given the "black box" nature of many predictive credit models. Financial institutions don't need to break open the black box—they simply need to study it from the outside.

tise.<sup>113</sup> Indeed, particularly where the concern is unintentional discrimination based not on the explicit use of impermissible variables (like explicit reliance on applicant race), but rather the use of general characteristics or behavioral patterns, smoking out the problematic inputs for removal can be a difficult challenge. Accordingly, when credit assessment models do appear to be having a disparate impact in lending decisions, financial institutions should consider employing statisticians to evaluate and transform their input datasets.<sup>114</sup> Further, even when no disparate impact is readily detectable, financial institutions may nevertheless benefit from employing an auditing team to test the model with hypothetical applicant profiles. This type of anticipatory auditing can help institutions detect problematic algorithms before they have a tangible discriminatory effect on real applicants.

There are also softer means by which financial institutions can work to ensure fairness in their lending techniques. For instance, institutions should consider hiring a diverse group of coders to build their credit assessment models and analyze the effects of their lending mechanisms. Individuals with differing perspectives can offer insights to combat the otherwise unchallenged biases that are present when selecting data inputs or, perhaps more importantly, evaluating the outputs to make lending decisions.<sup>115</sup>

Additionally, financial institutions that use big data, algorithms, and AI to make lending decisions should actively assess whether there are articulable business justifications for using a particular data set or algorithm. While this practice will not affect the lending decisions that financial institutions reach, it is nevertheless a critical way for institutions to protect themselves, as lenders are permitted to use proxy variables that have a disparate impact on protected groups of individuals when they can show that the variables are a legitimate busi-

---

<sup>113</sup> See generally Michael Feldman et al., *Certifying and Removing Disparate Impact* (July 16, 2015) (archived manuscript), <https://arxiv.org/pdf/1412.3756.pdf> [<https://perma.cc/8BMN-EMMZ>] (proposing complex, multivariable algorithms for identifying algorithmic disparate impact).

<sup>114</sup> See *id.* Somewhat paradoxically, data scientists who have developed strategies for pinpointing and correcting algorithmic disparate impact have done so through the creation and implementation of *other* algorithms (known as “classifier algorithms” and “repair algorithms”). See *id.*

<sup>115</sup> See generally DELOITTE, *Avoid the Pitfalls of Cognitive Bias by Tapping into Diverse Perspectives*, <https://www2.deloitte.com/ca/en/pages/risk/articles/avoid-the-pitfalls-of-cognitive-bias.html> [<https://perma.cc/HL56-JDSA>] (last visited May 11, 2019) (explaining how employing a group of diverse thinkers can help bring unconscious biases to light and challenge habitual thought processes).



ness necessity.<sup>116</sup> In the lending context, this business necessity will almost invariably be that the proxy variables that are being used measure applicants' level of credit risk. Significantly, however, achieving higher profit margins through extending high-priced products and services to high-risk minority borrowers does *not* satisfy the business necessity defense.<sup>117</sup>

One final approach that financial institutions could follow in order to take advantage of the opportunity that fintech offers to remediate the racial gap in financial services is one that, on its face, may appear perverse: accepting—and in fact embracing—algorithmic credit scoring models' inherent tendency to produce racially discriminate results.<sup>118</sup> Indeed, if institutions accept this reality, then they can take affirmative steps to manipulate their models to work towards equality, rather than disparity.

The concept of “affirmative action” originated in 1961, when President Kennedy issued an executive order seeking to promote employment actions that would achieve nondiscrimination.<sup>119</sup> In 1995, President Clinton's administration defined affirmative action as “any effort taken to expand opportunity for . . . minorities by using membership in those groups that have been subject to discrimination as a consideration [in decision making or allocation of resources][.]”<sup>120</sup> Two of the most notable areas in which race has been used as a factor in decision making to expand opportunity and achieve nondiscrimination are employment and education—areas in which racial stratification and otherization have been systematically perpetuated to create lasting racial disparities.<sup>121</sup>

---

<sup>116</sup> See *supra* note 75 (describing the “business necessity” affirmative defense to disparate impact claims).

<sup>117</sup> See Robert Bartlett et al., *Consumer-Lending Discrimination in the Era of FinTech 2*, (Working Paper, October 2018).

<sup>118</sup> See *supra* Part III-C. In fact, a number of scholars have recognized that since attempting to build truly colorblind algorithms is a futile effort, the best way to ensure fairness is to actively use protected traits in algorithms in order to “set a fairness constraint within the algorithm design.” See Jason R. Bent, *Is Algorithmic Affirmative Action Legal?*, 108 GEO. L. REV. 803, 807 (2020).

<sup>119</sup> See Exec. Order No. 10925 (instructing that various entities take “affirmative” steps and actions in order to ensure that individuals are employed without regard to their race).

<sup>120</sup> Carol M. Swain, *Affirmative Action: Legislative History, Judicial Interpretations, Public Consensus*, in AMERICA BECOMING: RACIAL TRENDS AND THEIR CONSEQUENCES 319 (2001) (alteration in original).

<sup>121</sup> See, e.g., *Fisher v. Univ. of Tex. at Austin*, 136 S. Ct. 2198, 2205 (2016) (dealing with a university that crafted a race-conscious admissions process); *Johnson v. Transp. Agency*, 480 U.S. 616, 616 (1987) (dealing with an employer that promulgated an affirmative action program for the promotion of its employees

Similarly, then, affirmative action could be an effective solution to achieve racial equality in lending—another area in which racial stratification has been perpetuated and where there is a long-standing need to extend, and ultimately equalize, access.<sup>122</sup> Specifically, algorithmic affirmative action—a practice of analyzing predictive data for Black applicants separately from data for White applicants—could help financial institutions assess Black applicants’ risk relative to that of other individuals in their class, rather than relative to the risk of White applicants who, as a result of the broader capitalist system, are on an incomparable playing field.<sup>123</sup> This type of “race-aware algorithm” would be designed to predict how likely credit applicants are to meet their future obligations, weighing certain variables differently for Black applicants than for White applicants.<sup>124</sup> Underlying this race-conscious design would be the recognition that, as a result of the ongoing structural dynamics that have long denied Black Americans access to credit (or that have granted them access to credit, but on such insufficient or unequal terms that default inevitably resulted), Black applicants objectively pose a greater credit risk than White applicants.<sup>125</sup> The affirmative algorithmic model would account for this fact by adjusting the algorithm’s ultimate output and prompting financial institutions to subjectively consider Black applicants as more desirable applicants than they objectively are.

To be sure, financial institutions that implement algorithmic affirmative action models could face legal challenges apart from disparate impact, since taking race into account is itself disparate treatment. Indeed, since algorithmic affirmative action models are being actively manipulated in order to take race into account, there is an identifiable human component to the action—meaning that the disparate treatment cannot be simply blamed on “the machine.” However, financial institutions may be able to escape this legal conundrum by leaning on precedent that has allowed entities to engage in race-conscious affirmative action plans.

---

in order to increase the number of female and minority workers in a typically segregated job classification).

<sup>122</sup> See generally *supra* Part I.

<sup>123</sup> See Chris Bousquet, *Algorithmic Fairness: Tackling Bias in City Algorithms*, DATA-SMART CITY SOLUTIONS (Aug. 31, 2018), <https://datasmart.ash.harvard.edu/news/article/algorithmic-fairness-tackling-bias-city-algorithms> [https://perma.cc/JE9U-872X]; see also Chander, *supra* note 100, at 1039 (advocating greater transparency of algorithms to address their outcomes).

<sup>124</sup> Bent, *supra* note 118, at 2.

<sup>125</sup> See *supra* at Part III-ERROR! REFERENCE SOURCE NOT FOUND..

In the employment context, the Supreme Court has held that an affirmative action plan can serve as a legitimate, non-discriminatory rationale for an employer's taking race into account when making an employment decision.<sup>126</sup> Significantly, the Court's willingness to allow employers to actively take race into account is founded upon its recognition that the United States has engaged in "centuries of racial injustice" that resulted in the systematic exclusion of Black Americans from equal access to fundamental opportunities.<sup>127</sup> Accordingly, the Court has opined that statutory prohibitions on disparate treatment that are intended to eliminate the effects of discrimination "should not be read to thwart such efforts."<sup>128</sup> A logical extension of this doctrine, therefore, would be to allow financial institutions to implement algorithmic affirmative action models for lending. Such models would serve the legitimate, nondiscriminatory purpose of correcting the "centuries of racial injustice" embedded in our nation's capitalist system. Indeed, it would be aberrantly ironic if the legislation that was first triggered by the government's concern over perpetual racial injustice in lending, and that was intended to break down patterns of segregation and hierarchy in finance, were to hinder those very goals.<sup>129</sup>

#### CONCLUSION

Algorithmic credit assessment models wear two faces: one operating to perpetuate centuries of racial stratification and otherization in the United States' capitalist system, and one standing poised to correct such injustice by smoking out both inherent human biases and the remnants of past discrimination that are embedded in the system. Although the United States has undertaken efforts to equalize Black Americans' access to opportunities in education, employment, and other critical benefits, no modern and sustained effort has been made to ensure that the Black community is extended credit on suffi-

---

<sup>126</sup> *Johnson*, 480 U.S. at 626. However, if a plaintiff can demonstrate that this justification was merely pretextual, then the employer may be found to have engaged in impermissible discrimination. *See id.*

<sup>127</sup> *Id.* at 628-29 (quoting *United Steelworkers v. Weber*, 443 U.S. 193, 204 (1979)).

<sup>128</sup> *Id.* at 630.

<sup>129</sup> Notably, it has already been recognized that Congress intended for the Fair Housing Act to serve as a means of overcoming historic practices of housing segregation; in 2015, the Department of Housing and Urban Development (HUD) adopted a rule requiring local governments, states, and public housing agencies to take "meaningful actions" to affirmatively further fair housing. *See Affirmatively Furthering Fair Housing*, 24 C.F.R. §§ 5.150-5.180 (2016).

cient and equal terms, without the effects of prior inequities continuing to pervade financial institutions' lending practices.

This Note has explored just a handful of ways in which financial institutions can take advantage of the capabilities of algorithms, big data, and artificial intelligence in order to close the racial gap in wealth and finance. Although institutions' rote use of these technologies is not enough to ensure that racially discriminate practices are not being reinforced through algorithmic credit assessment and lending models, the mindful design, use, and monitoring of fintech lending models presents an opportunity to begin making strides towards bringing Black Americans more meaningfully within the bounds of our financial system and eradicating racial restraints on capitalism.