"PRICE DISCRIMINATION" DISCRIMINATION

Talia B. Gillis*

Credit price personalization, where lenders set prices based on individual borrower and loan characteristics, is a common practice across many loan types. And conventional accounts of its harms focus on the ways in which risk-based pricing, or setting prices based on borrowers' credit risk, can lead to disparities for protected groups like racial minorities and women. This Article examines an often-overlooked yet potentially harmful form of price personalization—charging borrowers different rates based on their willingness-to-pay, known as price discrimination—and argues that this practice can exploit vulnerable borrowers, including protected groups like racial minorities and women, by imposing higher costs unrelated to their credit risk, resulting in what I term "price discrimination" discrimination. Beyond entrenching financial disparities, price discrimination can exacerbate default risks, especially as the use of big data and artificial intelligence can make price discrimination more pervasive.

Despite the potential risks of price discrimination for protected groups, the existing discrimination legal framework treats price discrimination categorically, as either entirely permissible or entirely impermissible, without providing clear or consistent criteria for when such practices are justified. In contrast, I propose a harm-based approach to addressing price discrimination discrimination, which evaluates the permissibility of pricing policies based on the extent of harm they cause. This approach considers two key factors: the magnitude of the disparities and the legitimacy of the pricing strategy. Focusing on these dimensions offers a more direct approach to addressing price discrimination concerns and aligns with the statutory framework prohibiting unfair, deceptive, and abusive acts or practices.

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INTRODUCTION

In recent years, consumer credit markets have become a focal point for discussions about social mobility,[1] exploitation,[2] inequity,[3] and discrimination.[4] At the core of these discussions lies a tension between the need for access to credit as a means to generate wealth and reduce financial insecurity,[5] and the concern that lending practices might worsen existing social inequalities.[6] Consumer credit markets have long been characterized by significant variations in interest rates and fees,[7] leading to discussions of lending inequality to focus on distinguishing permissible from impermissible term differentiation.

Much of the concern over price differentiation in consumer credit markets has focused on how lenders' pricing practices employ creditworthiness predictions to personalize loan prices based on credit risk in a way that produces disparities for protected groups like racial minorities and women.[8] Creditworthiness predictions—whether centralized in the form of credit scoring or individually assessed by a particular lender—are often seen as either the culprit for disparities in credit markets[9] or as a

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[1] *See, e.g.*, James Heckman & Stefano Mosso, *The Economics of Human Development and Social Mobility*, 6 ANN. REV. ECON. 689, 689 (2014) (surveying the economic research on human development and social mobility, including the role of credit constraints); *see also* Abbye Atkinson, *Rethinking Credit as Social Provision*, 71 STAN. L. REV. 1093, 1144 (2019) (arguing that credit has misguidedly become the principal mechanism of social mobility); KEEANGA-YAMAHTTA TAYLOR, RACE FOR PROFIT (2019) (documenting the exploitative lending practices that followed the ban on housing discrimination).

[2] *See, e.g.*, Lauren E. Willis, *Decisionmaking and the Limits of Disclosure: The Problem of Predatory Lending: Price*, 65 MD. L. REV. 707, 715–17 (2006); *see also* Elena Botella, DELINQUENT: INSIDE AMERICA'S DEBT MACHINE (2022) (documenting predatory credit card lending).

[3] *See, e.g.*, Abbye Atkinson, *Borrowing Equality*, 120 COLUM. L. REV. 1403, 1419 (2020) (arguing that Congress has adopted a perspective whereby access to credit is akin to equality and a public good); Mehrsa Baradaran, *Banking and the Social Contract*, 89 NOTRE DAME L. REV. 1283, 1336 (arguing that "access to safe credit is crucial in allowing the poor to escape poverty").

[4] *See e.g.,* STEPHEN L. ROSS & JOHN YINGER, THE COLOR OF CREDIT: MORTGAGE DISCRIMINATION, RESEARCH METHODOLOGY, AND FAIR-LENDING ENFORCEMENT (2002); *see also* Dan Black et al., *Discrimination in Mortgage Lending*, 68 AM. ECON. REV. 186, 189 (1978) ("[R]ace is an important determinant in the loan decision . . . ."); Helen Ladd, *Evidence on Discrimination in Mortgaged Lending*, 12 J. ECON. PERSP. 41 (1998) (discussing statistical methods to detect discrimination in mortgage markets). *See also* Peter Swire, *The Persistent Problem of Lending Discrimination: A Law and Economics Analysis*, 73 *TEX. L. REV*. 787 (1995) (discussing the causes of persistent discrimination in credit markets).

[5] *See* Ross & Yinger, *supra* note 4, at 1 ("Homeownership is the most commonly used method for wealth accumulation.").

[6] Atkinson, *supra* note 3 (arguing that the focus on credit has crowded out more meaningful solutions to social inequality, deepened the reliance on credit, and perpetuated social inequality).

[7] For an overview of the history of credit scoring, *see generally* JOSH LAUER, CREDITWORTHY: A HISTORY OF CONSUMER SURVEILLANCE AND FINANCIAL IDENTITY IN AMERICA (2017).

[8] *See* Lauer, *supra* note 7.

[9] *See, e.g.*, Barbara Kiviat, *The Moral Limits of Predictive Practices: The Case of Credit-Based Insurance Scores*, 84 AM. SOCIO. REV. 1134 (2019) (exploring the fairness of prediction technologies in resource allocation).

justification for them.[10] The rapid development of creditworthiness predictions that rely on big data and artificial intelligence to set credit terms,[11] has intensified debates over the justification of risk-based pricing.

Lawmakers in the United States[12] and abroad[13] have taken notice, with the European Union notably designating AI creditworthiness assessments as "high-risk"—a rare designation among private-sector uses of AI.[14] Scholars and commentators have amassed a substantial literature addressing discriminatory pricing practices in consumer credit markets, with a focus on risk-based pricing and

[10] *See, e.g.*, Robert B. Avery, Kenneth P. Brevoort & Glenn Canner, *Does Credit Scoring Produce Disparate Impact?*, 40 REAL EST. ECON. S65 (2012) (testing for disparate impact in credit scores).

[11] Creditworthiness determinations have increasingly turned to nontraditional data and advanced predictive technologies. *See*, *e.g.*, Talia B. Gillis, *The Input Fallacy*, 106 MINN. L. REV. 1175, 1204 (2022). For an overview of the adoption of machine learning in credit underwriting, *see* FINREGLAB, THE USE OF MACHINE LEARNING FOR CREDIT UNDERWRITING 9 (Sept. 2021), https://finreglab.org/wp-content/uploads/2021/09/The-Use-of-ML-for-Credit-Underwriting-Market-and-Data-Science-Context_09-16-2021.pdf.

[12] *See, e.g.*, Request for Information and Comment on Financial Institutions' Use of Artificial Intelligence, Including Machine Learning, 86 Fed. Reg. 16,837 (Mar. 31, 2021); Consumer Financial Protection Circular 2022-03: Adverse Action Notification Requirements in Connection with Credit Decisions Based on Complex Algorithms, 87 Fed. Reg. 35,864 (June 14, 2022).

[13] *See, e.g.*, BANK OF ENG. & FIN. CONDUCT AUTH., ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING (2022), https://www.bankofengland.co.uk/prudential-regulation/publication/2022/october/artificial-intelligence. The focus on the use of AI in credit markets has also spurred cross-Atlantic cooperation. *See, e.g.*, Joint Statement by Didier Reynders, Commission for Justice and Consumer Protection of the European Commission and Rohit Chopra, Director of the United States Consumer Financial Bureau, CFPB & COMM'R FOR JUST. & CONSUMER PROT. OF THE EUR. COMM'N (July 17, 2023). For a global analysis of the adoption of credit scoring, big data, and machine learning—including potential risks—*see* Charlotte Nan Jiang & Nadia Novik, *Leveraging Big Data and Machine Learning in Credit Reporting*, WORLD BANK (Aug. 10, 2021), https://blogs.worldbank.org/developmenttalk/leveraging-big-data-and-machine-learning-credit-reporting ("Big data and machine learning can play an instrumental role in expanding access to credit for the unbanked and underserved with thin credit history.").

[14] *Regulation of the European Parliament and of the Council Laying Down Harmonised Rules of Artificial Intelligence (Artificial Intelligence Act) and Amending Certain Union Legislative Acts* at 2, COM (2024) 206 final (2024) [hereinafter AI Act].

creditworthiness predictions.[15] Empirical studies have attempted to estimate the impact of AI default predictions on credit access and fairness.[16]

But the academic and regulatory scrutiny of risk-based pricing has overlooked another equally critical form of credit price personalization: price discrimination (PD), the practice by which pricing varies on the basis of what a seller believes a consumer is willing to pay.[17] Unlike risk-based pricing, which personalizes credit prices according to the individual borrower's credit risk, PD personalizes prices solely based on potential profit by identifying and targeting borrowers who are willing to pay more, thereby extracting greater consumer surplus. PD encompasses a broad range of

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[15] Most of these papers address the implications of AI and big data on creditworthiness assessments and fairness. *See, e.g.*, Mikella Hurley & Julius Adebayo, *Credit Scoring in the Era of Big Data*, 18 YALE J.L. & TECH. 148, 152–53 (2016) (highlighting the risk of big data credit scoring and the inadequacy of the current legal framework); Matthew Adam Bruckner, *The Promise and Perils of Algorithmic Lenders' Use of Big Data*, 93 CHI.–KENT L. REV. 3, 6 (2018) (focusing on the implications of algorithmic lenders' use of big data for credit scoring); Christopher K. Odinet, *Consumer Bitcredit and Fintech Lending*, 69 ALA. L. REV. 781, 783 (2018) (discussing the implications of fintech lending, including the use of machine learning in assessing borrower creditworthiness); Talia B. Gillis & Jann L. Spiess, *Big Data and Discrimination*, 86 UNIV. CHI. L. REV. 459, 464–65 (2019) (highlighting the tensions between existing antidiscrimination law and the use of machine-learning in creditworthiness assessments); Katja Langenbucher, *Responsible A.I.-Based Credit Scoring*, 31 EUR. BUS. L. REV. 527 (2020) [hereinafter Langenbucher, *Responsible A.I.*](comparing the regulatory oversight and legal frameworks for AI underwriting in the United States and European Union); Nikita Aggarwal, *The Norms of Algorithmic Credit Scoring*, 80 CAMBRIDGE L.J. 42, 46 (2021); Nydia Remolina, *The Role of Financial Regulators in the Governance of Algorithmic Credit Scoring* 5 (SMU Ctr. for AI & Data Governance, Working Paper 2/2022, 2022) (proposing a new governance framework for overseeing algorithmic credit scoring); Gillis, *supra* note 11, at 1180–81 (arguing against an input centric approach to algorithmic discrimination); Katja Langenbucher, *Consumer Credit in the Age of AI—Beyond Anti-Discrimination Law* 7–10 (ECGI, Law Working Paper No. 663/2022, 2023) (discussing the implications of AI underwriting on financial inclusion and how financial regulation can address the challenges).

[16] *See, e.g.*, Andreas Fuster, Paul Goldsmith-Pinkham, Tarun Ramadorai & Ansgar Walther, *Predictably Unequal? The Effects of Machine Learning on Credit Markets*, 77 J. FIN. 5, 6–7 (2022) (demonstrating the distributional impact of a change in the statistical technology used to predict default); Tobias Berg, Valentin Burg, Ana Gombovic & Maju Puri, *On the Rise of Fintechs: Credit Scoring Using Digital Footprints*, 33 REV. FIN. STUD. 2845, 2846 (2020) (showing the ability of digital footprints to predict default and discussion of the implications on the unbanked); Marco Di Maggio, Dimuthu Ratnadiwakara & Don Carmichael, *Invisible Primes: Fintech Lending with Alternative Data* 26 (Nat'l Bureau of Econ. Rsch., Working Paper No. 29840, 2022) (comparing lending outcomes of an alternative lender and a traditional lending model); Tobias Berg, Andreas Fuster & Manju Puri, *Fintech Lending*, 14 ANN. REV. FIN. ECON. 187, 194 (2022) (providing a survey of research on fintech creditworthiness predictions); Vitaly Meursault, Daniel Moulton, Larry Santucci & Nathan Schor, *One Threshold Doesn't Fit All: Tailoring Machine Learning Predictions of Consumer Default for Lower-Income Areas* (Fed. Rsrv. Bank of Phila., Working Paper No. 22–39, Nov. 2022).

[17] *See* Hal Varian, *Price Discrimination*, *in* 1 HANDBOOK OF INDUSTRIAL ORGANIZATION, 597 (R. Schmalensee & R.D. Willig eds., 1989) (discussing the difficulty of simply defining price discrimination as the practice of charging consumers different prices for the same good, given that the costs may vary by borrower and that uniform pricing could also be a form of price discrimination. Instead, he adopts the definition suggested by Stigler that "price discrimination is present when two or more similar goods are sold at prices that are in different ratios to marginal costs." At 598). In this context, "discrimination" does not hold the negative normative connotations associated with antidiscrimination legislation. Instead, it merely indicates differentiation among consumers. *See infra* Part II (discussing the efficiency and distributional implications of PD).

demand-based pricing strategies, from price-matching policies[18] to AI-predicted willingness-to-pay models.[19] This often-overlooked price personalization strategy[20] has a demonstrably disproportionate impact on protected groups. It means that racial minorities and women routinely pay higher interest rates regardless of their predicted default risk. The higher loan interest rates imposed on protected groups often stem from past discrimination and disadvantage. PD thus exacerbates existing inequalities. What is more, when these higher rates increase default—due to borrowers facing greater challenges in meeting financial obligations—PD further escalates default risk, creating a cycle of exclusion from favorable credit access.

This form of discrimination, in which demand-based pricing policies lead to disparate impacts on protected groups, is what I term "price discrimination discrimination" (PD discrimination). This type of discrimination has not only been overlooked in discussions of credit price personalization but is also conspicuously absent from legal discussions of PD in the contexts of consumer protection, which have largely ignored the discriminatory effects of PD.[21]

This Article seeks to articulate a legal theory of PD discrimination and address the heretofore inadequate legal treatment of this type of pricing. It makes three contributions to the literature on consumer protection and discrimination law. First, it marshals empirical evidence to expose PD discrimination and reveal how PD discrimination may exacerbate fair lending concerns by not only sustaining but perpetuating existing inequalities in credit markets. It provides a novel account of why PD can be particularly problematic for vulnerable and protected groups because of

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[18] Price matching refers to a practice in which a consumer who presents a lower loan offer from a competitor has their alternative offer "matched" by the lender. Price matching can serve as a way to engage in PD because it allows the lender to selectively offer lower prices to customers who are aware of the discount while charging nonsearchers a higher price. *See* Aaron S. Edlin, *Do Guaranteed-Low-Price Policies Guarantee High Prices, and Can Antitrust Rise to the Challenge?*, 111 HARV. L. REV. 528, 531 (1997).

[19] *See infra* section II.C.

[20] *But see* Ian Ayres, *Market Power and Inequality: A Competitive Conduct Standard for Assessing When Disparate Impacts Are Unjustified*, 95 CALIF. L. REV. 669, 672 (2007) (discussing a "competitive conduct standard" for disparate impact and arguing that supra-competitive profits should be a business justification); For a discussion of how price discrimination can violate E.U. non-discrimination law more generally, see Alan Sears, *The Limits of Online Price Discrimination in Europe*, 21 COLUM. SCI. & TECH. L. REV. 1, 33 (2019). *See also* Frederik Zuiderveen Borgesius, *Price Discrimination, Algorithmic Decision-Making, and European Non-Discrimination Law*, 31 EUR. BUS. L. REV. 401 (2019) (discussing online price discrimination and focusing on the condition under which it would give rise to an indirect discrimination claim). *See also* Laura Drechsler & Juan Carlos Benito Sánchez, *The Price Is (Not) Right: Data Protection and Discrimination in the Age of Pricing Algorithms*, 9 EUR. J.L. & TECH. (2018) (analyzing the intersection of EU data protection and anti-discrimination law in algorithmic pricing, focusing on data protection).

[21] For a general discussion of the consumer harms from algorithmic pricing of goods, *see* Oren Bar-Gill, Cass Sunstein & Inbal Talgam-Cohen, *Algorithmic Harm in Consumer Markets,* 15 J.L. Analysis 1 (2023). Their article focuses differs from this Article in two important ways. Firstly, they discuss consumer goods markets more generally and are not focused on credit markets and the specific harms in this context, as discussed in section II. Second, while their paper considers the possibility that algorithmic pricing will lead to discrimination (see Section 5) they ultimately conclude that "[w]hile acknowledging that concern, we argue that, at least in consumer markets, algorithms will often, though not always, *reduce* the risk of discrimination based on race and sex." This paper in contrast highlights the discrimination concerns and the specific legal frameworks meant to address discrimination.

their willingness to pay higher prices for credit. Second, it demonstrates that current legal structures—specifically, the disparate impact doctrine and "business justification" defense under federal fair lending laws—provide inadequate guidance on the legal status of PD policies. Third, it proposes a novel harm-based framework for assessing PD discrimination that is sensitive to both the magnitude of disparities created by a particular PD pricing strategy and its justifications. This framework, I argue, is consistent with the Federal Trade Commission (FTC) and Consumer Financial Protection Bureau's (CFPB) authority to prohibit unfair, deceptive, and abusive acts or practices.

The Article proceeds in four parts. Part I demonstrates how the intersection of demand-based loan pricing and discrimination law—PD discrimination—has been overlooked by discussions of fair lending, as well as other relevant legal frameworks like consumer protection and antitrust. These existing discussions have largely focused on risk-based pricing and ignored demand-based pricing's impact on protected groups. In drawing attention to PD discrimination, Part I unpacks the different forms of pricing differentiation most commonly employed in consumer credit markets, highlights the reasons lenders are able to extract greater consumer surplus from certain categories of borrowers, and discusses the empirical evidence for demand-based pricing in credit markets and the implications for protected groups.

Part II highlights the harms associated with PD discrimination. The harms of PD are amplified when it intersects with protected group status, as it builds upon and perpetuates pre-existing disadvantage. Protected groups may be willing to pay more for loans for reasons rooted in historical discrimination or other disadvantage, such as a greater reliance on credit markets to fund consumption. I contextualize PD discrimination's concrete negative effects and discuss how they are likely to intensify in light of current trends in big data and AI.

Part III argues that PD discrimination's current legal treatment is unacceptably vague. The predominant legal doctrine for evaluating acceptable disparities in fair lending is the "business justification" defense, which allows lenders to justify pricing policies with disparate results by pointing to valid business reasons.[22] I explain that regulators, enforcers, and litigants sometimes adopt a narrow interpretation of the business justification defense, which only permits disparities if they arise from creditworthiness assessments based on risk. At other times, these legal actors adopt a broader interpretation and treat additional profit-driven motives as normatively justifiable.[23]

Part IV provides a novel framework for analyzing PD discrimination. Shifting away from the binary structure of disparate impact and the business justification, in which pricing strategies are categorically either legal or illegal, it proposes a harm-based examination of PD discrimination based on two dimensions: magnitude of disparities and normative weight. To that end, Part IV creates a taxonomy of PD practices and explains how they vary in their legitimacy. Finally, it explains how this approach is

[22] *See infra* section III.A.1.

[23] *See infra* section III.A.

consistent with the set of statutory prohibitions on unfair, deceptive, and abusive conduct under the Federal Trade Commission Act (FTC Act)[24] and the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd–Frank).[25]

PD discrimination in consumer credit markets deserves particular attention given the unique characteristics of loans and credit relationships. The individually negotiated nature of credit contracts poses challenges for consumers comparing loan options, which can weaken competitive pressures in these markets. Additionally, the conventional economic assumption that better-off consumers, who may invest less effort in searching for lower prices, are most adversely affected by PD is unlikely to hold true in credit markets. In fact, there is often higher demand for credit among lower-income individuals, suggesting they may be more willing to pay higher prices. Factors such as lower levels of financial literacy and behavioral challenges further exacerbate the negative impacts of PD on vulnerable consumers. Moreover, the implications of elevated prices in credit markets extend beyond the mere loss of consumer surplus. Higher interest rates can themselves fuel a self-fulfilling prophecy of default, reducing liquidity and increasing credit risk, thereby causing both individual and societal harms.

Notwithstanding the unique characteristics of consumer credit markets, PD discrimination carries implications in other spheres. It affects such crucial areas as employment,[26] criminal justice,[27] and health.[28] For there, too, personalized decisionmaking increasingly relies on AI and necessitates a more precise articulation of how to balance the competing goals of more precise and accurate decision-making and the requirement that decisions be fair and non-discriminatory.[29] The belief that (algorithmic) colorblindness could realize equality goals, a notion suggested by the Supreme Court's recent decision in *Students for Fair Admissions*, is likely to prove

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[24] 15 U.S.C. § 45 (2018).

[25] 12 U.S.C. § 5531 (2018).

[26] *See, e.g.*, Pauline T. Kim, *Data-Driven Discrimination at Work*, 58 WM. & MARY L. REV. 857, 920 (2017) (discussing employer justification for disparate impact and explaining that its "exact meaning . . . is ambiguous, and . . . has proven difficult to apply consistently in practice").

[27] *See, e.g.*, Robert Bartlett, Adair Morse, Nancy Wallace & Richard Stanton, *Algorithmic Discrimination and Input Accountability Under the Civil Rights Acts*, 36 BERKELEY TECH. L.J. 675, 709 (2021) (discussing court defined business necessity in the case of parole determinations as a "threat to public safety").

[28] While healthcare decisions do not fall under the same legal analysis as disparate treatment and disparate impact in employment and lending, an important debate currently taking place in the medical context discusses how medical decisions may be able to justify the use of a protected characteristic and is relevant to consideration of the justification of disparities. *See, e.g.*, Darshali Vyas, Leo Eisenstein & David Jones, *Hidden in Plain Sight—Reconsidering the Use of Race Correction in Clinical Algorithms*, 383 NEW ENG. J. MED. 874, 879 (2020).

[29] Characterizing the tradeoff between fairness and accuracy has been a central task for the algorithmic fairness literature and features prominently in policy debates. *See, e.g.*, Sam Corbett-Davies, Emma Pierson, Avi Feller, Sharad Goel & Aziz Huq, *Algorithmic Decision Making and the Cost of Fairness*, *in* PROCEEDINGS OF THE 23RD INTERNATIONAL CONFERENCE ON KNOWLEDGE DISCOVERY AND DATA MINING 797 (2017); Annie Liang, Jay Lu & Xiaosheng Mu, *Algorithm Design: A Fairness-Accuracy Frontier* (July 13, 2023), https://arxiv.org/abs/2112.09975 (unpublished working paper).

misguided.[30] By shedding light on the ambiguous treatment of price discrimination within the high-stakes arena of consumer credit discrimination, this Article underscores the importance of accurately measuring and weighing the harm caused by algorithmic pricing.

I. "PRICE DISCRIMINATION" DISCRIMINATION

Discussions of price personalization in consumer credit markets have historically centered on practices that categorize borrowers according to their credit risk. But this practice, known as risk-based pricing, represents only one form of price personalization. This Part delves into another type of price personalization: demand-based pricing.

Other domains of law, such as consumer protection and antitrust, have paid greater attention to price discrimination but given little consideration to its disproportionate impact on protected groups. Section I.B reveals how the current literature in consumer protection law largely ignores the implications for protected groups when it articulates the role of behavioral biases in price personalization. Finally, Section I.C turns to the empirical evidence of price discrimination in consumer credit markets and highlights PD's disproportionate impact on protected groups.

A. Price Personalization

1. Risk- Versus Demand-Based Price Personalization

Price personalization refers to the scenario where consumers pay different prices for the same or similar products or services, based on specific consumer characteristics. This concept can be broadly bifurcated into two categories: risk-based and demand-based price personalization.

a. Risk-Based Price Personalization

Risk-based pricing is a form of price personalization in which a consumer's loan price (such as interest rate and fees) reflects their individual credit risk.[31] Lenders use borrower characteristics to predict their probability of default and set the loan's

[30] *Students for Fair Admissions, Inc. v. President & Fellows of Harv. Coll.*, 143 S. Ct. 2141 (2023). Although the case centered on college admissions and the Equal Protection Clause, it potentially speaks more generally to the consideration of race. In particular, Justice Gorsuch's concurring opinion argued that Title VI of the Civil Rights Act bars affirmative action and that Title VII (employment discrimination) contains similar language. *See id.* at 2208 (Gorsuch, J., concurring). Because of the close relationship between employment discrimination and fair lending (Title VIII), this may provide insight into Justice Gorsuch's understanding of a race-blind requirement in fair lending law.

[31] *See, e.g.*, Wendy Edelberg, *Risk-Based Pricing of Interest Rates in Household Loan Markets* 2 (Bd. of Govs. of the Fed. Rsrv. Sys., Finance and Economics Discussion Series No. 2003–62, 2003) (documenting the increased use of risk-based pricing in the mid-1990s and discussing its implications).

price accordingly, primarily to compensate for the credit risk.[32] Figure 1 shows how interest rates may increase with risk of default.

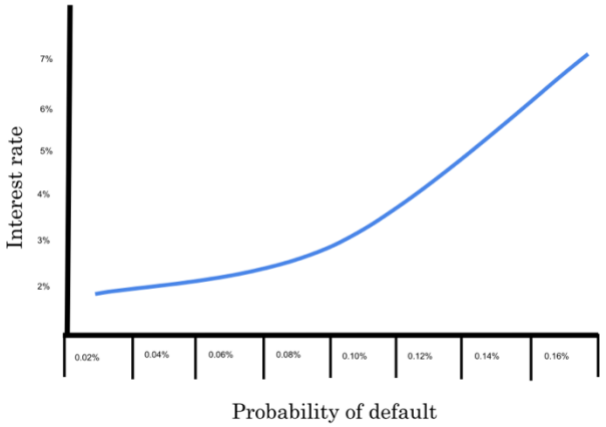

Figure 1: Risk-Based Pricing. The graph shows that as the predicted probability of default increases (on the horizontal axis), the interest rate compensating for that risk also increases (on the vertical axis).

There are other types of price personalization that may reflect the differential cost to the seller or lender in providing the product or service other than risk-based pricing. Other factors could impact the loan's cost, such as the complexity of verifying personal information, leading to differing mortgage loan origination fees.[33] Similarly, the cost of servicing a mortgage may vary by borrower.[34] Another example of cost factors that could impact price differentiation is the risk of loan prepayment—meaning the risk that a mortgage will be fully paid before the maturation date, reducing future interest payments from the borrower.[35] These examples illustrate how mortgage costs

[32] Not all consumer loans are underwritten with this approach. Many loans follow a one-size-fits-all model, meaning that a borrower either does or does not qualify for the loan, without the interest rate varying. Examples of these types of loans include public student loans, many payday loans, and other types of credit like overdraft fees. With more substantial loans, such as mortgages and auto loans, risk-based pricing is more common. *See* Liran Einav, Mark Jenkins & Jonathan Levin, *The Impact of Credit Scoring on Consumer Lending*, 44 RAND J. ECON. 249, 256–60 (2013) (documenting the increase in profits because of adopting risk-based pricing for auto loans).

[33] In many settings where the mortgage originator does not hold the loan or their books but rather sells the loan on the secondary market, verification of borrower characteristics is perhaps the most important step for the originator. In many situations, despite no longer being exposed to the credit risk after the loan is sold, lenders still face the put-back risk from poor documentation at origination, which could result in the credit risk returning to the lender.

[34] For a discussion of how technology can change the costs of mortgage origination beyond creditworthiness assessments, *see generally* Andreas Fuster, Matthew Plosser, Philipp Schnabl & James Vickery, *The Role of Technology in Mortgage Lending*, 32 REV. FIN. STUD. 1854, 1856 (2019) (demonstrating that fintech mortgage lenders can process applications faster and thus reduce their overall costs).

[35] *See* Jason Allen, Robert Clark & Jean-François Houde, *Price Dispersion in Mortgage Markets*, 62 J. INDUS. ECON. 377, 403–04 (2014) (discussing the possibility that observed price dispersion in the Canadian mortgage market reflects prepayment risk); *see also* Jack Fisher, Alessandro Gavazza, Lu Liu, Tarun Ramadorai & Jagdish Tripathy, *Refinancing Cross-Subsidies in the Mortgage Market* 1 (Bank of Eng., Working Paper No. 948, 2022), https://ssrn.com/abstract=3962433 (documenting that poorer households are less likely to refinance when interest rates drop); Simon Firestone, Robert Van Order & Peter Zorn, *The*

can fluctuate between consumers, resulting in cost-based personalization. This paper will focus on risk-based pricing.

b. Demand-Based Price Personalization

With demand-based personalization, the lender differentiates pricing based on how much consumer surplus can be extracted from each consumer, unrelated to the cost of providing a loan. For example, if two borrowers have the same credit risk but a lender offers one borrower a loan with a higher interest rate because they know the borrower is more likely to agree to the higher interest rate, the resulting price differentiation is based on the lender's ability to earn higher above-cost profits. This type of price personalization is typically known as "price discrimination" (PD).[36] An essential prerequisite for PD is the seller's ability to predict the highest price a borrower is willing to pay for the loan, known as the borrower's willingness-to-pay or reservation price.[37] Figure 2 depicts perfect PD, where all consumers are charged their maximum willingness-to-pay and a firm is able to extract all the consumers' surplus.

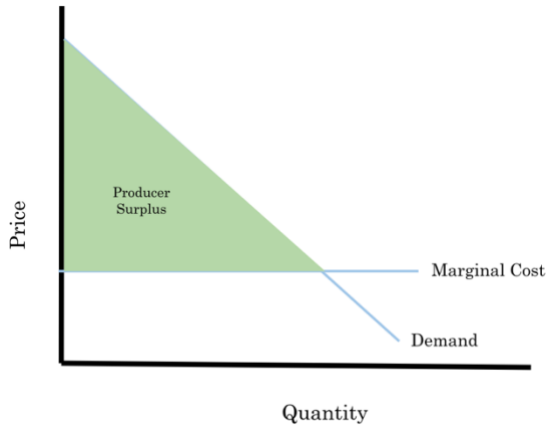

Figure 2: Demand-based pricing: This figure depicts perfect price discrimination where instead of setting the price at the marginal cost, the firm sets the price individually for each consumer at their demand (perfect price discrimination), so that the green triangle that was initially the consumer surplus becomes the producer surplus.

Consumer willingness-to-pay can vary for a multitude of reasons. It may reflect differences in individual preferences, budget constraints, or perceptions of alternative prices available in the market. In some instances, willingness-to-pay may represent the diverse value or utility a consumer derives from a particular product or service, which

Performance of Low-Income and Minority Mortgages, 35 REAL EST. ECON. 479, 479–80 (2007) (showing that low-income households and racial minorities are less likely to prepay when optimal).

[36] Economists typically distinguish between three types of PD. First-degree PD, also known as perfect PD, occurs when a seller charges each buyer their maximum willingness to pay. Essentially, the seller extracts all consumer surplus. Second-degree PD involves charging different prices based on the quantity purchased. For example, a seller may offer discounts for buying in bulk. Finally, third-degree PD involves charging different prices to different segments of the market. These segments can be defined by a variety of characteristics.

[37] In practice, PD also requires that a firm has autonomy over pricing. In perfectly competitive markets, a seller's attempt to engage in PD could drive the consumer to a competitor.

can include personal tastes and preferences. Furthermore, willingness-to-pay might be influenced by the actual or perceived costs of alternatives or substitutes for the specific product or service in question.[38] The ability to engage in PD may hinge on either the seller's actual market power or the consumer's perception of the seller's market power. If a consumer believes that a seller possesses market power and that there are no alternative purchasing options, they may have a higher reservation price and be more inclined to accept a higher price for the good.[39] Ideally, PD aims to charge each consumer their precise willingness-to-pay. In practice, however, PD often adopts a feature-based approach, whereby consumers are charged according to their individual characteristics and the predicted willingness-to-pay of their statistical group.[40]

While many traditional examples of PD present consumers with a take-it-or-leave-it offer that may vary among individuals, numerous situations involve a more complex bilateral negotiation between seller and consumer.[41] Such negotiations often uncover additional information about a consumer's willingness-to-pay, which can then influence the seller's pricing strategy. This interaction allows for a more dynamic pricing structure that takes into account individualized factors, resulting in varied offers. Price-matching policies can illustrate this approach. In this scenario, a seller might explicitly or implicitly reduce their price when a consumer presents an alternative, potentially more affordable offer from a competitor. By making this alternative offer known, the consumer provides valuable insights into their willingness-to-pay, and the seller may respond with a customized, discounted price. This reactive pricing based on negotiations is also a form of PD and highlights the multifaceted nature of pricing strategies in today's markets.

PD is the prevailing form of price personalization in most markets, as the costs for sellers or service providers do not typically vary among individual consumers. For instance, the cost of selling a microwave online is usually consistent across consumers,

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[38] Typically, willingness-to-pay refers to differences in the underlying valuations of a good, shaped by preferences and ability to pay, rather than market differences, which do not reflect value differences. The term "reservation price" might better capture these different aspects of willingness-to -pay. Despite the slight conflation in terminology by including market competition differences under willingness-to-pay, I do this for simplicity.

[39] The possibility of "behavioral overcharge" even in the absence of market power has been previously discussed. *See, e.g.*, Rory Van Loo & Nikita Aggarwal, *Amazon's Pricing Paradox*, HARV. J.L. & TECH. (forthcoming 2023) (manuscript at 30).

[40] *See* Maxime Cohen, Adam Elmachtoub & Xiao Lei, *Price Discrimination with Fairness Constraints*, 68 MGMT. SCI. 8536, 8536 (2022) ("[C]ompanies often try to engage in first- or third-degree price discrimination tactics by leveraging the available data on their consumers, such as past purchase behavior, browsing history, and personal attributes, to predict consumer valuations.").

[41] *See* Rafi Mohammed, *How Retailers Use Personalized Prices to Test What You're Willing to Pay*, HARV. BUS. REV. (Oct. 20, 2017), https://hbr.org/2017/10/how-retailers-use-personalized-prices-to-test-what-youre-willing-to-pay ("The goal of salespeople is to determine how much each customer is willing to pay for a car through individualized negotiation. . . . Evaluating each shopper's characteristics and actions creates a pricing profile."). For a discussion of such negotiations in the context of mortgages, *see* Allen et al., *supra* note 35, at 377.

rendering risk- and other cost-based pricing irrelevant.[42] PD has been extensively discussed in various markets, including the airline industry,[43] the car industry,[44] and markets for other goods.[45]

Credit markets are exceptional in that the cost of providing a loan can vary significantly among borrowers, associating personalization in these markets closely with risk-based pricing. This variability is not limited to credit markets alone; insurance markets present a similar scenario. In insurance, the cost of underwriting a policy can fluctuate considerably based on the individual risk associated with the insured event occurring.[46]

2. Determinants of Demand-Based Price Personalization

Demand-based Personalization—PD—is a strategy of extracting consumer surplus by charging consumers a price that is close to their individual estimated willingness-to-pay. To assess the impact of price discrimination on protected groups in consumer credit markets, it is helpful to first consider why certain borrowers have a higher willingness-to-pay for a loan in the first place. A discussion of the determinants of price dispersion and characterizing consumers with a high willingness-to-pay sheds light on the populations most impacted by price discrimination.[47]

Typically, differences in willingness-to-pay can be decomposed into differences in the utility loss from a good's price, which is likely to vary because of consumer income and wealth, and differences in utility gain from the good.[48] In many markets, particularly markets of nonessential or luxury goods, consumers with higher willingness-to-pay are likely to be more affluent. For example, it is often true that consumers who fly first class, pay for early airplane boarding or purchase expensive opera tickets do so because they have a higher willingness-to-pay than those who fly

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[42] Ignoring shipping costs, of course, which could create significant heterogeneity across consumers. Typically, these costs are kept separate to the product price.

[43] *See* Severin Borenstein & Nancy L. Rose, *Competition and Price Dispersion in the U.S. Airline Industry*, 102 J. POL. ECON. 653, 663–67 (1994) (documenting price dispersion for passengers on the same flight route).

[44] *See* Pinelopi Koujianou Goldberg, *Dealer Price Discrimination in New Car Purchases: Evidence from the Consumer Expenditure Survey*, 104 J. POL. ECON. 622, 624 (1996) (explaining dispersion in the price of new cars primarily by the characteristics of the purchase rather than consumer-specific characteristics).

[45] *See* Saul Lach, *Existence and Persistence of Price Dispersion: An Empirical Analysis*, 84 REV. ECON. & STAT. 433, 433 (2002) (documenting persistence in price dispersion).

[46] *See* TOM BAKER, KYLE LOGUE & CHAIM SAIMAN, INSURANCE LAW AND POLICY: CASES AND MATERIALS (5th ed. 2021). For a discussion of risk-pricing in the context of insurance and AI, *see* Daniel Schwarcz & Anya Prince, *Proxy Discrimination in the Age of Artificial Intelligence and Big Data*, 105 IOWA L. REV. 1257, 1260–62 (2020) (discussing how the use of AI in insurance markets can cause "proxy discrimination," whereby a proxy for a protected characteristic is used since the protected characteristic itself carries predictive weight).

[47] For a discussion of the frequency with which these vulnerable borrowers also belong to a protected class, *see infra* section II.A.

[48] Jerod Coker & Jean-Manuel Izaret, *Progressive Pricing: The Ethical Case for Price Personalization*, 173 J. OF BUS. ETHICS 387, 389 (2021).

economy, board last or sit in the "nose-bleed" seats. This could be either because wealthier consumers have lower utility loss from higher prices or because they value expensive tickers more. By engaging in price discrimination of airline and opera tickets, therefore, sellers are able to provide services to consumers with differing willingness-to-pay rather than charging a single price and pricing out lower willingness-to-pay consumers. If we view higher willingness-to-pay as less vulnerable populations, we may be less concerned about price discrimination.[49]

The assumption that higher willingness-to-pay consumers are wealthier is unlikely to be true in the case of consumer credit.[50] This is because the determinants of price dispersion in mortgage markets suggest that it is more vulnerable borrowers who have a higher willingness-to-pay. Below I highlight three possible determinants of price dispersion: financial literacy, shopping, and liquidity constraints. These determinants also interact with one another in complex ways. For example, a lack of familiarity may impact the willingness or ability to shop around for alternative offers. Traditionally, lower levels of negotiation and searching have been associated with higher opportunity costs of time, rooted in rational search models,[51] or other competition level measures, like the number of mortgage originators servicing a particular area.[52] My emphasis here is on recent empirical work that has highlighted additional factors such as financial literacy, behavioral tendencies, and differences in the willingness or ability to shop or negotiate.[53]

Financial Sophistication and Literacy.—Several studies have demonstrated the association between financial sophistication and mortgage cost.[54] For example,

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[49] In fact, recent work has highlighted the progressive potential of price discrimination. *See Id.* at 387; Juan M. Elegido, *The Ethics of Price Discrimination*, 21 BUS. ETHICS QUARTERLY, Oct. 2011, at 633.

[50] There is some discussion in other settings of situations in which price discrimination might result in poorer consumers subsidizing richer consumers. *See* Ming-Hui Huang, *Unequal Pricing in the Information Economy: Implications for Consumer Welfare,* 56 J. OF BUS. ETHICS, 305 (2005) (discussing how in the information economy early adopters, who might have greater resources, pay less) and Richard G. Frank, 2001. *Prescription Drug Prices: Why Do Some Pay More Than Others Do?,* 20 HEALTH AFF., Mar.-Apr. 2001, 115–28 (discussing how poorer consumers pay more for drugs).

[51] *See* Bronson Argyle, Taylor Nadauld & Christopher Palmer, *Real Effects of Search Frictions in Consumer Credit Markets,* 36 REV. FIN. STUD. 2685 (2023) (demonstrating that high-search-cost borrowers are more likely to accept a loan with higher markups); *see also* Jason Allen, Robert Clark & Jean-François Houde, *Search Frictions and Market Power in Negotiated-Price Markets*, 127 J. POL. ECON. 1550 (2019); Alexei Alexandrov & Sergei Koulayev, *No Shopping in the U.S. Mortgage Market: Direct and Strategic Effects of Providing Information* 26 (CFPB Office of Rsch., Working Paper No. 2017-01, 2018).

[52] *See* Greg Buchak & Adam Jørring, *Does Competition Reduce Racial Discrimination in Lending?* (Stan. Univ., Working Paper No. 3800, 2017). In areas in which there are many mortgage originators, consumers may have a lower willingness-to-pay, reflecting their ability to select a lender.

[53] For a survey of the literature on consumer finance, including shopping behavior and financial literacy, *see generally* Jonathan Zinman, *Household Debt: Facts Puzzles, Theories, and Policies,* 7 ANN. REV. ECON. 251 (2015).

[54] For example, many studies have found that refinance mortgages tend to be lower and have less dispersion than purchase mortgages, suggesting that sophistication matters for pricing. *See* Robert Bartlett, Adair Morse, Richard Stanton & Nancy Wallace, *Consumer Lending Discrimination in the Fintech Era*, 143 J. FIN. ECON. 30, 40 (2020) (explaining the lower level of dispersion in refinancing). The possibility that education level and negotiating ability are related to markups in auto-lending was

mortgage rates for borrowers likely to be less financially sophisticated—evidenced by lower FICO scores and higher loan-to-value (LTV) ratios—are more widely dispersed,[55] often leading these borrowers to overpay for a mortgage.[56] This relationship is further corroborated by direct survey data, which shows that consumers who score lower on financial literacy tests or have less familiarity with mortgage markets pay significantly higher interest rates after accounting for loan and borrower characteristics.[57]

Lack of financial literacy may have a direct correlation with the quality of mortgage terms that consumers are able to secure if it leads consumers to misconstrue vital loan characteristics.[58] Given the complexity of terms and conditions often associated with mortgages, an absence of clear understanding could inadvertently lead consumers to accept loans that are ultimately more costly. Consumers with low levels of financial literacy may also focus on the immediate access to funds or the ability to make purchases because of present bias[59] and susceptibility to marketing efforts, making them willing to pay higher costs over time,[60] even for credit products with

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referenced in an expert report for the defense in *Cason v. Nissan Motor Acceptance Corp.*, 212 F.R.D. 518 (M.D. Tenn. 2002). For a more general account of the association between high-cost borrowing and lower levels of financial literacy, see Annamaria Lusardi & Carlo de Bassa Scheresberg, *Financial Literacy and High-Cost Borrowing in the United States* (Nat'l Bureau of Econ. Rsch., Working Paper No. 18969, 2013).

[55] *See* Neil Bhutta, Andreas Fuster & Aurel Hizmo, *Paying Too Much? Price Dispersion in the U.S. Mortgage Market* 13 (Bd. of Govs. of the Fed. Rsrv. System, Finance and Economics Discussion Series No. 2020-062, 2020) ("[T]he dispersion is substantially larger for loan types and borrower characteristics that are associated with being more financially constrained and potentially less sophisticated, such as [Federal Housing Agency] loans, low-FICO borrowers, or first-time homebuyers . . . .").

[56] *See id.* at 16 (looking at the gap between the offer and lock rate and noting that overpayment is "conditional on loan amount, [with] lower-FICO borrowers and higher-LTV borrowers continu[ing] to pay more").

[57] *Id.* (finding that the least financially savvy borrowers tend to substantially overpay). Similarly, analysis of the National Survey of Mortgage Originations (NSMO) reveals that familiarity with the mortgage market corresponds to lower contract rates relative to the market rate for similar loans and borrowers. *See id.* at 22.

[58] For a discussion of the relationship between financial literacy and investment decisions, *see* James Choi, David Laibson & Brigitte Madrian, *Why Does the Law of One Price Fail? An Experiment on Index Mutual Funds*, 23 REV. FIN. STUD. 1405, 1408 (2010) ("We conclude that mistakes driven by financial illiteracy are the primary source of the demand for high-fee index funds . . . ."). This lack of comprehension may extend to fundamental mortgage aspects, such as the long-term effects of interest rates on the total payment over the loan's lifetime and the various manners in which interest rates can fluctuate.

[59] *See* John Gathergood & Jörg Weber, *Financial Literacy, Present Bias and Alternative Mortgage Products*, 78 J. BANKING & FIN. 58, 59 (2017) (evaluating "time preferences for consumption now or in the future" based on "whether consumers have high discount rates or show a 'present bias' for consumption due to an underlying self-control problem").

[60] *See, e.g.*, Jamie Coen, Anil Kashyap & May Rostom, *Price Discrimination and Mortgage Choice* 2 (Bank of Eng., Working Paper No. 926, 2021) (finding that UK lenders offer mortgage menus with more price dispersion to "customers who may be less able to identify and avoid expensive options, or have fewer options to go elsewhere"). Borrowers with lower levels of financial literacy are more likely to have non-amortizing mortgages. *See* Gathergood & Weber, *supra* note 59, at 2.

repeated usage, like credit cards or payday loans.[61] Moreover, mortgage originators are inclined to present menus with greater price dispersion to customers perceived as less adept at discerning or avoiding costly options.[62]

Shopping and Comparisons.—Beyond financial literacy, shopping behavior also plays a significant role in mortgage price discrimination.[63] The very existence of price dispersion implies that borrowers can potentially negotiate lower mortgage prices.[64] Empirical evidence also links shopping behavior to lower interest rates,[65] showing that consumer behavior such as considering multiple lenders or brokers, applying for loans with multiple lenders, and seeking more information sources are correlated with lower mortgage prices.[66]

Despite the potential benefits of shopping, ample evidence suggests that many consumers avoid seeking alternative offers.[67] Standard explanations often point to variations in shopping costs, such as differing opportunity costs and search expenses.[68] Typically, in other goods markets, consumers that are more financially constrained are assumed to invest more in shopping for lower prices, which is why higher WTP is often associated with greater affluence. However, in credit markets these

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[61] *See, e.g.,* Kyoung Tae Kim & Johnhee Lee, *Financial Literacy and Use of Payday Loans in the United States*, 25 APP. ECON LETTERS 781 (2018) (showing that financial literacy was associated negatively with the use of payday loans).

[62] *See* Coen et al., *supra* note 60, at 1 (observing that "almost no one picks the cheapest option" of mortgage offers).

[63] The relationship between bargaining and price discrimination has been documented in other markets. *See, e.g.*, David Byrne, Leslie Martin & Jia Sheen Nah, *Price Discrimination by Negotiation: A Field Experiment in Retail Electricity*, 137 Q.J. ECON. 2499 (2022) (discussing privately negotiated agreements and PD in electricity contracts).

[64] *See* Sven Damen & Erik Buyst, *Mortgage Shoppers: How Much Do They Save?* 45 REAL EST. ECON. 898 (2016) (demonstrating that shopping around for five mortgage offers can lead to savings of over €7,000); Doug McManus, Liyi Liu & Mingzhe Yi, *Why Are Consumers Leaving Money On The Table?*, FREDDIE MAC ECON. & HOUS. RSCH. INSIGHT (Apr. 17, 2018), https://www.freddiemac.com/research/insight/20180417-consumers-leaving-money.

[65] *See, e.g.*, Bhutta et al., *supra* note 55 (identifying market offers lower than the borrower's final contractual rate).

[66] *See* Allen et al., *supra* note 35, at 380 (finding that consumers "with the knowledge and ability to generate competition amongst lenders" paid relatively lower rates despite often having poor financial characteristics in the Canadian mortgage market). There is also evidence that brokers, as key intermediaries, tend to receive higher payments when borrowers neglect to shop around. *See* Susan Woodward & Robert Hall, *Diagnosing Consumer Confusion and Sub-Optimal Shopping Effort: Theory and Mortgage-Market Evidence*, 102 AM. ECON. REV. 3249 (2012) (demonstrating that borrowers also pay more for broker services when they do not shop for those services).

[67] A recent survey by Fannie Mae discusses borrowers' decision not to shop for alternative offers and argues that "[b]y not shopping around to give themselves leverage when negotiating their mortgage, some homebuyers are leaving money on the table." *See* Doug Duncan, *Shopping Around for a Mortgage Pays Off for Consumers*, FANNIE MAE (Aug. 5, 2019), https://www.fanniemae.com/research-and-insights/perspectives/shopping-around-mortgage-pays-consumers; *see also* Jinkook Lee & Jeanne Hogarth, *Relationships Among Information Search Activities When Shopping for a Credit Card*, 34 J. CONSUMER AFFS. 330 (2000).

[68] *See* Alexandrov & Koulayev, *supra* note 51.

considerations are likely overwhelmed by other factors such as divergent beliefs and abilities, leading vulnerable consumers to engage in lower levels of shopping.[69] If vulnerable consumers perceive that there are lower returns to search, this itself will decrease search behavior potentially reinforcing higher pricing for this group.[70]

Interplay Between Financial Literacy and Shopping Behavior.—Lack of financial sophistication may itself explain the reluctance to shop, whether due to incorrect beliefs about the returns to shopping or because improved financial literacy reduces the costs of shopping because consumers are better able to understand and compare mortgage terms. Shopping frictions may be higher for consumers with lower financial literacy, as they may be less aware of alternative prices or how to search for alternatives. In the complex landscape of mortgage lending, evaluating price involves deciphering interrelated components—such as rates, fees, and points—and making assumptions about the mortgage's duration.[71] Thus, search costs may be difficult to separate from financial literacy traits.[72] Lenders might even capitalize on this complexity, further complicating consumer efforts to minimize search costs.[73] Shopping for alternative offers may be particularly tricky when a given lender's pricing strategies vary such that merely receiving a recommendation from family or friends regarding a particular lender does not guarantee a lower price.[74]

Shopping behavior and financial literacy may also act as substitutes. Lenders may offer lower prices if they perceive a borrower as sophisticated and less likely to accept the first offer presented. This is consistent with data indicating that low-FICO and high-LTV borrowers pay higher rates due to a lack of shopping and financial knowledge relative to their high-FICO and low-LTV counterparts.[75]

Liquidity constraints.—Liquidity-constrained households are more likely to have higher WTP because they do not face the choice of whether to fund consumption

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[69] There may be a positive relationship between searching and interest rate if borrowers searching the most are most likely to be rejected. *See* Sumit Agarwal, John Grisby, Ali Hortaçsu, Gregor Matvos, Amit Seru & Vincent Yao, *Searching for Approval* (Nat'l Bureau of Econ. Rsch., Working Paper No. 27341, 2020). This suggests that overpaying is partially driven by the fear of rejection. *See* Umit Gurun, Gregor Matvos & Amit Seru, *Advertising Expensive Mortgages*, 71 J. FIN. 2371 (2016) (showing that sub-prime mortgage lenders that advertise more in a region also sell more expensive loans); *see also* Bhutta et al., *supra* note 55 (discussing how many consumers accept the first quote offered, perhaps due to a belief in high market competition and low price dispersion).

[70] Such reinforcing effects have been studied in the context of efforts to learn and increase creditworthiness. *See* Peter Swire, *Equality of Opportunity and Investment in Creditworthiness*, 143 U. PA. L. REV. 1533 (1995).

[71] *See* Duncan, *supra* note 67.

[72] *See id.*

[73] For a discussion of how firms can purposefully make it difficult for consumers to reduce search costs in other industries, *see generally* Byrne et al, *supra* note 63.

[74] *See* Bhutta et al., *supra* note 55, at 13 ("Even after controlling for lender-specific time-varying pricing and branch-by-month fixed effects the dispersion persists suggesting that it is not merely a matter of identifying the 'right' lender."); *cf.* Alexandrov & Koulayev, *supra* note 51 (suggesting that brand loyalty is the source of much of the price dispersion).

[75] Bhutta et al., *supra* note 55, at 24.

or purchase assets with cash or credit and are instead forced to rely on credit.[76] One study has demonstrated that the most substantial disparity between potential offers and the actual price paid by consumers occurs with FHA loans, which are designed to enhance homeownership for lower-income households.[77] Consumers dependent on credit for substantial purchases or daily consumption may be more willing to bear higher loan costs. Hence, the demand for loans swells for those facing greater liquidity constraints, making them more reliant on credit.

In conclusion, the determinants of pricing in mortgage markets are characterized by a complex interplay of financial literacy, shopping behavior, and lenders' perceptions and strategies. Importantly, higher WTP is associated with characteristics that make borrowers more vulnerable, often stemming from limited access to resources, information, or alternatives.[78]

3. Overlooked Demand-Based Personalization

Price personalization raises important concerns with respect to the treatment of protected groups, particularly racial minorities. Traditionally, fair lending laws have been concerned both with the extensive margin of lending—whether protected groups are discriminated against with loan approvals—and with the intensive margin of lending—the terms on which they obtain a loan. Pricing personalization concerns the intensive margin of lending, raising questions around whether price personalization leads to differential pricing for protected groups.

Much of the prior literature on price personalization and its impact on protected and vulnerable groups in the consumer credit context has concentrated on risk-based pricing. This is true of both the earlier work on consumer credit discrimination and the more recent wave of research on the impact of AI on credit fairness and discrimination. Earlier empirical work focused on the extent to which the white/Black lending gap can be explained by differences in credit risk, with limited attention to explaining the pricing practices that lead to the residual gap.[79] Similarly, earlier work has paid attention to racial disparities created by credit scores, but missed that credit scores may play only a partial role in the ultimate lending decisions and the disparities they create.[80]

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[76] William Adams, Liran Einav & Jonathan Levin, *Liquidity Constraints and Imperfect Information in Subprime Lending*, 99 AM. ECON. REV. 49 (2009) (documenting the relationship between liquidity constraints and demand for higher loans).

[77] Bhutta et al., *supra* note 55.

[78] The determinants of higher willingness-to-pay are also associated with protected classes like race, meaning that racial minorities under PD are likely to pay higher prices for loans controlling for credit risk.

[79] It is interesting, for example, that in the authoritative book on mortgage discrimination up to the early 2000s by Stephen Ross and John Yinger, the discussion of causes for discrimination focuses primarily on forms of statistical discrimination where the underlying object of interest is creditworthiness. *See* Ross & Yinger, *supra* note 4, at 213–34.

[80] *See, e.g.*, Avery et al., *supra* note 10 (providing an empirical analysis of whether credit scores include variables that are proxies for protected characteristics rather than being independently predictive of

As lenders have increasingly adopted big data and machine learning in recent years,[81] there has been a growing interest in understanding and addressing discrimination and fairness concerns that arise from the use of AI. Despite the implications of AI for price discrimination,[82] discussions in the consumer credit context have focused nearly exclusively on predictions of creditworthiness. Legal scholarship[83] and empirical work[84] have brought to the forefront the ways in which the increased use of AI in consumer credit can increase disparities by analyzing distributional concerns due to greater granularity in creditworthiness assessments, without consideration of the use of AI for price discrimination.

This focus on the impact of AI on risk-based pricing is also reflected in the emerging regulation of AI. The most comprehensive proposed regulation to date for the regulation of AI is the European Union's AI Act.[85] First circulated in April 2021,[86]and adopted by the European Parliament on March 13, 2024, the AI Act defines risk categories for several uses of AI and varies the stringency of regulation by the level of risk. The preamble of the Act sets out the goals of the regulation, including consumer protection and the right to nondiscrimination.[87] The Act singles out creditworthiness assessments as "determin[ing] those persons' access to financial resources or essential services" and warns that the use of AI could "perpetuate historical patterns of discrimination."[88]

Despite the AI Act's recognition that credit allocation is a high-stakes setting worthy of greater scrutiny, the Act focuses solely on creditworthiness assessments, meaning risk-based pricing, and ignores the implications of demand-based pricing on access to credit.[89] The omission of PD from the category of high-risk uses implies that only minimal regulatory requirements apply, such as the requirement that firms disclose to consumers that they are exposed to AI pricing.[90] This lack of attention to

default risk). For an earlier analysis that was mostly theoretical due to data limitations, *see* Ross & Yinger, *supra* note 4, at 273.

[81] *See* Gillis, *supra* note 10.

[82] *See supra* section I.C.

[83] *See* Langenbucher, *Responsible A.I.*, *supra* note 15; Aggarwal, *supra* note 15; Remolina, *supra* note 15.

[84] Fuster et al., *supra* note 16; Meursault et al., *supra* note 16.

[85] AI Act, *supra* note 14.

[86] In June 2023, the European Parliament passed the Act draft, and it is now being negotiated in the three branches of the European Union. *See* Adam Satariano, *Europeans Take a Major Step Toward Regulating A.I.*, N.Y. TIMES (June 14, 2023), https://www.nytimes.com/2023/06/14/technology/europe-ai-regulation.html.

[87] AI Act, *supra* note 14, at 24 ¶ 28.

[88] *Id.*

[89] It remains unclear whether the Act might be interpreted more functionally to also include demand-based pricing.

[90] AI Act, *supra* note 14, at 10.

demand-based price personalization is concerning given its significant presence in credit markets and its impact on racial minorities.

B. Price Personalization in Consumer Protection and Antitrust

The problem of PD discrimination has not only been overlooked in the context of fair lending law, which continues to focus primarily on risk-based pricing, but also in the consumer protection literature and in antirust debates, which have paid little attention to the intersection of PD and discrimination law.

1. Consumer Protection

Recent literature suggests several ways in which consumers may be harmed by increased PD, beyond the crowding out of consumer surplus.[91] Harm to consumers is most pronounced when price personalization perpetuates or takes advantages of behavioral biases.[92] For example, if consumers overestimate the value of a good or service and are charged their willingness-to-pay, they will pay more than its actual value to them.[93] Companies' ability to create this harm increases as they are able to increase their market power,[94] increase their collection of consumer data,[95] and use technologies to create consumer confusion or exacerbate consumer behavioral biases.[96]Although not new to the algorithmic setting, PD is likely to increase with the use of big data and AI for pricing.[97]

Current discussions tend to either overlook discrimination law concerns or minimize the implications of PD for protected groups.[98] Accordingly, they focus on the classic toolkit of consumer protection rather discrimination law.[99] For example,

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[91] For a general discussion, *see* Pascale Chapdelaine, *Algorithmic Personalized Pricing*, 17 N.Y.U. J.L. & BUS. 1 (2020).

[92] *See* Rory Van Loo, *Helping Buyers Beware: The Need for Supervision of Big Retail*, 163 U. PA. L. REV. 1311, 1322, 1370–75 (2015) ("Mass retailers continually fine-tune their pricing algorithms through advanced behavioral data-mining operations. . . . Together, these cases provide some—albeit indirect—support for concluding the doctrine of unfairness covers sales practices that contribute to consumer irrationality or information asymmetries."); *see also* Rory Van Loo, *Technology Regulation by Default: Platforms, Privacy, and the CFPB*, 2 GEO. L. TECH. REV. 531 (2018).

[93] *See* Bar-Gill et al., *supra* note 21.

[94] *Id.* at 9.

[95] *Id.* at 13.

[96] *See* Van Loo & Aggarwal, *supra* note 39, at 21; *see also* Van Loo, *supra* note 92.

[97] *See supra* section I.C.

[98] *See* Bar-Gill et al., *supra* note 21, at 4 ("[W]e argue that, at least in consumer markets, algorithms will often, though not always, *reduce* the risk of discrimination based on race and sex."). For a notable exception in the European context, *see* Zuiderveen 2019, supra note 20. For a discussion of how the contract law unconscionability doctrine can be used to challenge algorithmic price discrimination *see* Haggai Porat, *Algorithmic Personalized Pricing in the United States: A Legal Void* (Nov. 2023), https://ssrn.com/abstract=4628745 (unpublished working paper) [hereinafter Porat, *Algorithmic Personalized Pricing*], at 21-14.

[99] For a discussion of algorithmic personalized pricing under consumer protection law and data protection law—a legal framework not discussed in this Article—*see* Porat, *Algorithmic Personalized Pricing*.

privacy protections limit companies' ability to collect and process data that allows for a prediction of willingness-to-pay.[100] Similarly, consumer protection laws that aim to improve disclosures to provide more information on financial products and facilitate comparisons and shopping behavior can also impact PD attempts. Data protection laws could require the disclosure of data collected for PD purposes.[101] The recent EU Consumer Credit Directive requires that lenders disclose when "the price was personalized on the basis of automated processing."[102] Like existing consumer protection laws, some attempts to regulate AI indirectly impact PD through limits on the collection and use of consumer data or through the monitoring and auditing of algorithms for fairness purposes.[103]

2. Antitrust

Because PD is typically understood as requiring some degree of market power, many discussions of the legality of the practice take place within the context of antitrust and competition law.[104] In the United States, PD has traditionally not been

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supra note 98. For a discussion of personalized pricing under the European Consumer Credit Directive and the Unfair Contract Terms Directive, see Melvin Tjon Akon, *The Unfairness of Personalised Price Terms in Consumer Credit Products*, 20 EUR. REV. OF CONT. L. (2024).

[100] Ryan Calo, *Digital Market Manipulation*, 82 GEO. WASH. L. REV. 995 (2014). The CCPA provides several rights that could limit price discrimination. Under the CCPA, consumers can request to limit the collection of sensitive personal information, have a right to request that personal data be deleted and opt out of the sale of their information. These rights are likely to curtail the ability to engage in price discrimination. *See also* Frederik Zuiderveen Borgesius & Joost Poort, *Online Price Discrimination and EU Data Privacy Law*, 40 J. CONSUMER POL'Y 347 (2017) (analyzing the applicability of EU data protection law to personalized online pricing, arguing that personal data processing triggers transparency and consent requirements which could mitigate potential adverse effects of price discrimination).

[101] The GDR requires that sellers disclose personalized pricing practices (*see* Mateusz Grochowski, Agnieszka Jablonowska, Francesca Lagioia & Giovanni Sartor, *Algorithmic Transparency and Explainability for E.U. Consumer Protection: Unwrapping the Regulatory Premises,* 8 CRITICAL ANALYSIS OF L., 43 (2021). The CCPA also requires the disclosure of data usages, including price discrimination, but only upon consumer request. (*See* discussion in Porat, *Algorithmic Personalized Pricing*, *supra* note 98).

[102] *See* Directive 2023/2225 of the European Parliament and of the Council of 18 October 2023 on credit agreements for consumers and repealing Directive 2008/48/EC, 2023 O.J. (L 2225), 29 (Article 11(4)(h). The new Directive updates the 2008 Directive, and focuses primarily on personal loans of up to 100 thousand euros.).

[103] Recent proposals have considered ways that transparency and explicability can curb PD in consumer markets. *See* Bar-Gill et al., *supra* note 21.

[104] A necessary condition for PD is the ability to set prices, so naturally firms that exercise PD are likely to have market power. *See* Douglas M. Kochelek*, Data Mining and Antitrust*, 22 HARV. J.L. & TECH. 515, 532 (2009) ("[T]he presence of price discrimination within a market is itself evidence that the discriminating firm has some amount of market power."); Akiva Miller, *What Do We Worry About When We Worry About Price Discrimination? The Law and Ethics of Using Personal Information for Pricing,* 19 J. TECH. L. & POL'Y 41, 54 (2014) ("[T]he seller must have at least a small measure of market power, even if only for a short while, and cannot be a pure "price-taker."); *see also* Mark Klock, *Unconscionability and Price Discrimination*, 69 TENN. L. REV. 317 (2002) (suggesting that unconscionability should be understood as addressing PD); HORST EIDERMÜLLER & GERHARD WAGNER, LAW BY ALGORITHMS 54 (Mohr Siebeck ed., 2021) ("[T]he case for such a radical measure is weak.").

considered a violation of antitrust laws, and in any event, the current legal framework pays little attention to how PD can specifically impact protected groups.[105]

The Robinson–Patman Act of 1936 specifically targets anticompetitive practices related to pricing, including PD.[106] However, the Act was designed to protect small businesses from being undercut by larger companies capable of negotiating lower prices from suppliers rather than to protect consumers and in any event applies only to "commodities."[107] The Sherman Act of 1890[108] and the Clayton Act of 1914[109] primarily focus on promoting competition and preventing monopolies, which indirectly protects consumers from unfair pricing, but neither law explicitly prohibits PD against consumers.[110] Price discrimination may facilitate collusion[111] or allow for predatory pricing—and therefore, the creation of monopoly power[112]—but in many cases, PD is simply a way to extract more surplus from consumers rather than a strategy to make predatory pricing viable.[113]

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[105] For further discussion, *see* Porat, *Algorithmic Personalized Pricing*, *supra* note 98.

[106] Anti-Price Discrimination Act, Pub. L. No. 74-692, 49 Stat. 1526 (1936) (codified as amended at 15 U.S.C. § 13(a) (2022)).

[107] The Act protects those that receive unfavorable treatment relative to competitors. *See* Ramsi A. Woodcock*, Big Data, Price Discrimination, and Antitrust*, 68 HASTINGS L.J. 1371, 1394 (2017). The Act is also restricted to the sale of commodities and not services. For further discussion of the Act, *see* Kochelek, *supra* note 104, at 524 (concluding that "neither the doctrine nor the underlying policy of the Robinson–Patman Act seems to favor its application to discriminatory pricing measures implemented through data mining by retailers of commodity goods"). On the general weaknesses of the Robinson–Patman Act, see HERBERT HOVENKAMP, FEDERAL ANTITRUST POLICY: THE LAW OF COMPETITION AND ITS PRACTICE 629 (4th ed. 2011).

[108] Sherman Antitrust Act of 1890, 26 Stat. 209 (codified at 15 U.S.C. §§ 1–7 (2022)). Most relevant for present purposes is Section 2, which prohibits monopolization. *See* 15 U.S.C. § 2.

[109] Federal Trade Commission Act, ch. 311, 38 Stat. 717 (1914) (codified as amended at 15 U.S.C. §§ 41–58 (2018)).

[110] *See* discussion Porat, *Algorithmic Personalized Pricing*, *supra* note 98, at 10.

[111] Prohibited under Section 1 of the Sherman Act. *See* Salil K. Mehra, *Price Discrimination-Driven Algorithmic Collusion: Platforms for Durable Cartels,* 26 STAN. J.L. BUS. & FIN. 171 (2021).

[112] *See* Christopher R. Leslie, *Predatory Pricing Algorithms*, 98 N.Y.U. L. Rev. 49, 73, 100 (2023) ("Through the tailored use of predatory pricing algorithms, a firm can offer below-cost prices to those consumers who are currently customers of the firm's rivals, while continuing to charge profitable prices to the firm's already loyal customers," ultimately concluding that "algorithmic pricing reduces the perceived disincentives for using predatory pricing to monopolize a market*"). See also* Porat, *Algorithmic Personalized Pricing*, *supra* note 98*,* at 12-19.

[113] In many ways, the lack of recognition of PD as an antitrust violation is surprising, given the law's purported focus on consumer welfare rather than aggregate welfare. *See, e.g.*, Steven Salop, *Question: What is the Real and Proper Antitrust Welfare Standard? Answer: The True Consumer Welfare Standard,* 22 LOY. CONSUMER L. REV. 336 (2010); Woodcock, *supra* note 107, at 1381 ("So far, the consumer welfare standard has prevailed."); John B. Kirkwood & Robert Lande, *The Fundamental Goal of Antitrust: Protecting Consumers, Not Increasing Efficiency*, 84 NOTRE DAME L. REV. 191 (2008); Jonathan B. Baker, *Economics and Politics: Perspectives on the Goals and Future of Antitrust*, 81 FORDHAM L. REV. 2175 (2013); Miller, *supra* note 104, at 70 ("It is widely held that the original and primary purpose of the antitrust laws is to protect consumer welfare, not overall social welfare."); Kochelek *supra* note 104, at 516 ("[A]lthough the policies behind antitrust law tend to disfavor price discrimination, the doctrines do not typically proscribe such

Some have advocated for a stricter treatment of PD under antitrust law,[114] by considering PD as an impermissible abuse of dominance. [115] In some jurisdictions, PD is targeted more directly,[116] by considering PD a prohibited abuse of a "dominant position."[117] As current doctrine stands, however, there is little scrutiny of PD in the United States outside the context of monopolization,[118] which may reflect a more general disconnect between antitrust and consumer protection in the United States.[119]

Discussions of PD within the antitrust domain are limited in two important ways. First, the focus on the dominance of the firm overlooks the reality faced by many consumers, which is that their perception as price takers—rather than the level of market competition—is what allows lenders to charge them higher prices.[120] PD is more shrouded in consumer credit markets because prices to begin with are more personalized due to risk-based pricing.[121] This makes it easier for nondominant firms to engage in PD. Second, current debates of PD overlook the ways in which these practices have a disproportionate impact on protected groups like racial minorities.[122]

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discriminatory conduct."). If antitrust were concerned with aggregate welfare, then a transfer of surplus from consumers to producers would not be a problem.

[114] *See* Kochelek, *supra* note 104, at 535 ("Data-mining-based price discrimination schemes fall into a gap between antitrust doctrine and the policies underlying the doctrine"). Some scholars have reservations about using antitrust for PD. *See* Miller, *supra* note 104, at 74 ("[U]sing antitrust law as a basis for wider enforcement against price discrimination is misguided.").

[115] For example, Ramsi Woodcock has argued that antitrust should scrutinize abuse of dominance and not just monopolization, including restricting PD, and that preparatory steps for PD may constitute violations of the Sherman Act. Woodcock, *supra* note 107; *see also* Ramsi A. Woodcock, *Personalized Pricing as Monopolization*, 51 CONN. L. REV. 311, 372 (2019) ("There is no reason for which the consumer welfare standard should only be used to restrict the ambit of antitrust rules . . . by extending them to condemn new categories of conduct, such as personalized pricing.").

[116] In the European Union, for example, PD is primarily regulated under competition law—specifically, under Article 102 of the Treaty on the Functioning of the European Union (TFEU). Consolidated Version of the Treaty on the Functioning of the European Union art. 102, June 7, 2016, 2016 O.J. (C 202) 47.

[117] Article 102 prohibits any abuse by one or more undertakings of a "dominant position," where PD can be considered an abuse of a dominant position. Note that not all forms of price discrimination are prohibited under EU law. For example, price differences can be justified if they reflect differences in the cost of supply. For a comparative perspective of the legal treatment of PD under competition law in the US and the EU, *see* Daniel J. Gifford & Robert T. Kudrle, *The Law and Economics of Price Discrimination in Modern Economies: Time for Reconciliation?*, 43 U.C. DAVIS L. REV. 1235 (2010).

[118] *See* Leslie, *supra* note 112.

[119] Rory Van Loo, *Broadening Consumer Law: Competition, Protection and Distribution*, 95 NOTRE DAME L. REV. 211 (2019).

[120] *See* Qian Li, Niels Philipsen & Caroline Cauffman, *AI-Enabled Price Discrimination as an Abuse of Dominance: A Law and Economics Analysis*, 9 CHINA–EU J. (2023) 51 (discussing EU and Chinese law on AI price discrimination and suggesting that an effective regime would use antitrust and other consumer protection frameworks).

[121] See *infra* Section I.A.1.

[122] For a discussion on the color-blindness of antitrust policy, *see* Hiba Hafiz, *Antitrust and Race*, 100 WASH. UNIV. L. REV. 1471, 1474 (2023) ("[Antitrust] has been blind to and even reinforced exclusions and anticompetitive harms impacting people of color by simultaneously failing to challenge

This Article seeks to turn the focus onto the ways in which PD strategies can cause disproportionate harm to protected groups. PD should be understood as transcending the traditional domain of consumer protection and antitrust to the domain of discrimination law, and specifically fair lending in the case of consumer credit. The next section focuses on the empirical evidence of PD and its impact on protected groups.

C. The Empirics of Demand-Based Pricing and Protected Groups

Several studies document that protected groups, particularly racial minorities, receive more expensive loans irrespective of their credit risk. Empirically documenting price discrimination in credit markets is challenging given the interplay between cost-based price personalization and demand-based personalization.[123] Consumers with higher default risk might also have a higher willingness-to-pay for a loan, meaning that observed prices could reflect either or both pricing strategies. This makes it difficult to distinguish risk-based pricing and demand-based pricing solely on observed pricing dispersion. A further challenge in empirically documenting the impact of price discrimination on racial minorities is that in many consumer credit settings, there is no information on consumer race.[124] In the context of mortgage lending, the Home Mortgage Disclosure Act (HMDA)[125] requires the collection of applicant race information, which explains why most studies of credit racial inequality focuses on mortgage lending. In fact, Regulation B limits lenders asking about borrower race in non-mortgage lending.[126]

Early work on racial disparities in mortgage markets focused on showing that minority borrowers with similar observable characteristics to their white counterparts were rejected at higher rates and paid more for mortgages.[127] These studies implicitly

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anticompetitive conduct that disproportionately impacts them and targeting self-help measures and coordination that benefits them.").

[123] *See supra* section I.A.

[124] *See* Winnie F. Taylor, *Proving Racial Discrimination and Monitoring Fair Lending Compliance: The Missing Data Problem in Nonmortgage Credit*, 31 REV. BANKING & FIN. L. 199 (2011); Miranda Bogen, Aaron Rieke & Shazeda Ahmed, *Awareness in Practice: Tensions in Access to Sensitive Attribute Data for Antidiscrimination*, *in* PROCEEDINGS OF THE 2020 CONFERENCE ON FAIRNESS, ACCOUNTABILITY, AND TRANSPARENCY (2020). *See also* U.S. Gov't Accountability Off., GAO-08-698, *Fair Lending: Race and Gender Data Are Limited for Nonmortgage Lending*, (2008) (discussing how collection of demographic information can facilitate enforcement).

[125] Home Mortgage Disclosure Act, 12 U.S.C. §§ 2801–2810 (2018).

[126] Equal Credit Opportunity Act (Regulation B), 12 C.F.R, § 1002.5(b).

[127] A number of studies have focused on subprime lending before the financial crisis and documented that racial minorities with similar characteristics to white borrowers face higher interest rates, attributing these disparities to nonrisk factors by controlling for characteristics that are likely to impact credit risk. *See, e.g.*, Robert Avery & Robert Cook, *New Information Reported Under HMDA and Its Application in Fair Lending Enforcement*, 91 FED. RSRV. BULL. 344 (2005) (documenting the higher rates of subprime mortgages among racial minorities); Marsha Courchane, *The Pricing of Home Mortgage Loans to Minority Borrowers: How Much of the APR Differential Can We Explain?*, 29 J. REAL EST. RES. 399 (2007) (documenting higher interest rates for racial minorities in loans originated in 2004 and 2005). Later studies that looked at the same years contained richer data covering more types of mortgages. *See* Carolina Reid, Debbie Bocian, Wei Li & Roberto Quercia, *Revisiting the Subprime Crisis: The Dual Mortgage*

assume that by controlling for attributes that may reflect credit risk, any remaining disparities cannot be explained by risk-based pricing.[128] This is an imperfect way to document PD discrimination in credit markets. First, the remaining disparities could reflect other biased pricing, such as intentional discrimination, rather than demand-based pricing. Second, in controlling for certain attributes, researchers might also be accounting for demand-based pricing.[129]

Recent studies have begun to explore racial disparities in mortgage pricing by implementing different methods to control for credit risk, thus isolating any additional spread not explained by credit risk. One such strategy involves examining loans purchased in the secondary market, primarily through Government-Sponsored Enterprises (GSE) and Federal Housing Administration (FHA) loans, effectively shielding mortgage originators from credit risk.[130] These loans are bought for a predetermined price known to the lender. Since selling the loan transfers the credit risk away from the mortgage originator, any interest charged above the purchasing price set by the GSE and FHA cannot be attributed to compensation for credit risk. One study has found that, controlling for the loan purchase price set by the GSEs and purchase price of loans made by the FHA,[131] there is significant price dispersion,[132] and racial minorities tend to pay an additional 2 to 5 basis points above the purchase price of the loan.[133]

Market and Mortgage Defaults by Race and Ethnicity, 39 J. URB. AFFS. 469 (2016) (documenting how racial minority borrowers were more likely to receive mortgages with nontraditional terms and higher interest rates). For a background on the earlier research, *see generally* Ross & Yinger, *supra* note 4.

[128] These studies often label any differences not explained by observable characteristics as simply "discrimination." This classification overlooks the many complexities in explaining the residual from the analysis. For example, some of this earlier work was criticized for not being able to account for variables not collected under the HMDA and other data collected by regulators that were being used by lenders to make loan decisions.

[129] These early studies are unable to distinguish between loan decisions that relate to credit risk and other profit-maximization considerations. For examples of this early wave, *see* Harold Black, Robert Schweitzer & Lewis Mandell, *Discrimination in Mortgage Lending*. 68 AM. ECON. REV. 186 (1978); Alicia Munnell, Geoffrey Tootell, Lynn Browne & James McEneaney, *Mortgage Lending in Boston: Interpreting HMDA Data*, 86 AM. ECON. REV. 25 (1996).

[130] GSEs determine pricing for each loan type by a matrix of LTVs and credit scores. In many ways, this is a crude pricing system, resulting in significant heterogeneity in credit risk within cell. For a discussion of systematic differences in risk not accounted for by GSE pricing, *see* Benjamin Keys, Tomasz Piskorski, Amit Seru & Vikrant Vig, *Mortgage Financing in the Housing Boom and Bust*, *in* HOUSING AND THE FINANCIAL CRISIS 143, 161 (Edward L. Glaeser & Todd Sinai eds., 2013); Vadim Elenev, Tim Landvoigt & Stijn Van Nieuwerburgh, *Phasing Out the GSEs*, 81 J. MONETARY ECON. 111 (2016); Eric Hurst, Benjamin Keys, Amit Seru & Joseph Vavra, *Geographic Redistribution through the US Mortgage Market*, 106 AM. ECON. REV. 2982 (2016). For our purposes, GSE represents for the lender the cost of eliminating credit risk.

[131] Like GSEs, FHA loans are insured against default, eliminating any credit risk for lenders. FHA has little risk-based pricing relative to mortgages purchased by the GSEs.

[132] Bartlett et al., supra note 54, at 37 fig. 3, 39.

[133] *Id.* at 37. Jason Allen, Robert Clark, and Jean-François Houde use a similar strategy to study mortgage price dispersion in Canada, examining contracts guaranteed by government-backed insurance. In this context, where lenders face no credit risk, they identify substantial price dispersion, with standard

Other studies have unveiled price dispersion unrelated to risk by rigorously controlling for loan and borrower attributes as well as day-to-day fluctuations in rates.[134] Using platform data on available mortgage rates,[135] one such study finds that the mortgage rate gap between the tenth and ninetieth percentile of similar borrowers and loans equates to fifty-four basis points, translating into a $6,500 difference on a $250,000 loan.[136] It further finds that this dispersion is most pronounced among low-FICO groups and FHA-insured loans.[137] Although this dispersion disproportionately impacts racial minorities, there remains some debate as to whether interest rate differences are explained by other mortgage cost dimensions.[138]

Demand-based disparities have been documented in consumer credit markets other than mortgages[139] and for other protected groups. In auto loan markets, for

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deviation margins of around sixty-four basis points. Perhaps due to data limitations and the unavailability of race data, the authors do not consider price dispersion for racial minorities. *See* Allen et al., *supra* note 35, at 378, 392.

[134] *See* Bhutta et al., *supra* note 55; Alexandrov & Koulayev, *supra* note 48, at 14 (focusing on variation across banks of posted rates).

[135] A unique feature of the data used by Neil Bhutta, Andreas Fuster, and Aurel Hizmo is that they use "Optimal Blue" data. This is an industry platform that connects mortgage lenders and wholesale investors. The authors use "two components of the data generated by the platform: a) data on mortgage products and mortgage prices actually accepted by consumers, and b) data on mortgage products available and mortgage prices offered by lenders." Bhutta et al., *supra* note 55, at 8.

[136] *See id.* at 12. One significant advantage of this study is that it has information on the points paid by the borrower, which provides a more accurate estimate of the true rate paid by the borrower. It also shows a more direct measure of "overpayment" by comparing the interest rate difference between loan offers available on the market for a particular borrower and the interest rate locked down by the consumer. They show that this offer-lock gap is significantly dispersed.

[137] The fact that FHA loans have the highest dispersion also suggests that this dispersion is a result of credit risk. *Id.* There is also significant dispersion for GSE loans, which are also fully guaranteed.

[138] Neil Bhutta and Aurel Hizmo analyze FHA loans and show that minority borrowers pay significantly higher interest rates, but that the gap in interest rates only reflects one dimension of mortgage costs and that when accounting for discount points these disparities are offset. *See* Neil Bhutta & Aurel Hizmo, *Do Minorities Pay More for Mortgages*, 34 REV. FIN. STUD. 763 (2021). The authors claim that the difference is offset by differences in discount points "because these borrowers are more likely to self-select into higher-rate/lower-point loans." *Id.* at 767. Although the authors do not provide any direct evidence that this difference is a result of self-selection rather than lender steering, they argue that the likely explanation is self-selection. *Id.* at 767 n.12. For an additional perspective on these findings, *see* Paul Willen & David Zhang, *Testing for Discrimination in Menus* (Fed. Rsrv. Bank of Boston, Working Paper No. 20-19, 2023) (discussing how the econometric approach used by Bhutta and Hizmo does not properly account for differences in menus offered to minority and white borrowers and identifying mortgage pricing differentials by race, particularly for lower LTV borrowers).

[139] Although the focus here is on mortgage markets because it is the most important consumer loan, price dispersion has been documented in other consumer credit markets. Given the data limitations discussed above, most of these studies do not look at disparities for protected groups. For a discussion of auto loan dispersion, *see* Argyle et al., *supra* note 51, and credit cards, *see* Victor Stango & Jonathan Zinman, *Borrowing High Versus Borrowing Higher: Price Dispersion and Shopping Behavior in the U.S. Credit Card Market*, 29 REV. FIN. STUD. 979 (2016). There are also other domains of consumer finance in which dispersion has been documented, such as mutual fund fees. S*ee* Ali Hortacsu & Chad Syverson, *Product Differentiation, Search Costs, and Competition in the Mutual Fund Industry: A Case Study of S&P 500 Index Funds*, 119 Q.J. ECON. 403 (2004); Choi et al., *supra* note 58.

instance, a study showed that racial minorities pay 70 basis point higher interest rates, controlling for creditworthiness.[140] Several audit studies have also shown that racial minorities with similar credit profiles face higher interest rates.[141] Similar findings have been reported in other areas such as peer-to-peer lending[142] and small business loans.[143] Research has also shown a correlation between loan pricing and characteristics like age[144] and gender[145] unrelated to credit risk.

Consumer differentiation is not confined to disparate prices for identical loans: it also manifests in the promotion of differentiated products.[146] In certain instances, consumers may be urged to opt for nonstandard mortgages—which carry higher costs—even when such a choice bears no relation to credit risk.[147] Numerous academic

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[140] *See* Alexander W. Butler, Erik J. Mayer & James P. Weston, *Racial Discrimination in the Auto Loan Market*, 36 REV. FIN. STUD. 1 (2022). *See also*, Andrew Grunewald, Jonathan Lanning, David Low & Tobias Salz, *Auto Dealer Loan Intermediation: Consumer Behavior and Competitive Effects* (Nat'l Bureau of Econ. Rsch., Working Paper No. w28136, 2020) (showing that indirect auto loan markups result in large interest rate disparities for black borrowers), available at: https://www.nber.org/papers/w28136. *See also*, H.R. Comm. on Financial Services Memorandum, "Examining Discrimination in the Automobile Loan and Insurance Industries" (May 1, 2019), https://democrats-financialservices.house.gov/uploadedfiles/hhrg-116-ba09-20190501-sd002-u1-_memo.pdf)

[141] *See* Ian Ayres, *Fair Driving: Gender and Race Discrimination in Retail Car Negotiations*, 10 HARV. L. REV. 817 (1991); Ian Ayres, *Further Evidence of Discrimination in New Car Negotiations and Estimates of Its Case*, 94 MICH. L. REV. 109 (1995); Ian Ayres & Peter Siegelman, *Race and Gender Discrimination in Bargaining for a New Car*, 85 AM. ECON. REV. 204 (1995). These audit studies were supported by a large observational study in 2003. *See* Mark A. Cohen, *Imperfect Competition in Auto Lending: Subjective Markup, Racial Disparity, and Class Action Litigation*, 8 REV. L & ECON. 21 (2012). *See also*, NATIONAL FAIR HOUSING ALLIANCE, DISCRIMINATION WHEN BUYING A CAR: HOW THE COLOR OF YOUR SKIN CAN AFFECT YOUR CAR-SHOPPING EXPERIENCE (2018) (using an audit study methodology to show that non-white testers who were equally or more qualified were offered more expensive financing options) (https://nationalfairhousing.org/wp-content/uploads/2018/01/Discrimination-When-Buying-a-Car-FINAL-1-11-2018.pdf).

[142] Devin G. Pope & Justin R. Sydnor, *What's in a Picture? Evidence of Discrimination from Prosper.com*, 46 J. HUM. RES. 53 (2011) (documenting that black borrowers are 25% to 35% less likely to receive funding than white borrowers with similar credit).

[143] *See* David G. Blanchflower, Phillip B. Levine & David J. Zimmerman, *Discrimination in the Small-Business Credit Market*, 85 REV. ECON. & STAT. 930 (2003) (documenting that black-owned firms are charged a full percentage point higher interest rate than equally creditworthy white-owned firms).

[144] Will Dobbie, Andres Liberman, Daniel Paravisini & Vikram Pathania, *Measuring Bias in Consumer Lending*, 88 REV. FIN. STUD. 2799 (2021) (showing bias against immigrant and older loan applicants in a high-cost lender in the UK and explaining much of it by the difference between the lender's preference for long-term profitability versus the incentives of the loan offices which focus on short-term profitability).

[145] Ping Cheng, Zhenguo Len Lin & Yingchun Liu, *Do Women Pay More for Mortgages?*, 43 J. REAL EST. & FIN. ECON. 423 (2011).

[146] This is often referred to as second-degree price discrimination.

[147] *See* Gathergood & Weber, *supra* note 59 (documenting how less financially sophisticated consumers are more likely to hold and interest-only mortgage).

studies[148] and regulatory interventions[149] have concentrated on lender practices that result in minority borrowers of equivalent credit risk receiving subprime mortgages.

II. PROBLEMS WITH PRICE DISCRIMINATION DISCRIMINATION

The prevailing empirical evidence in credit markets[150] reveals a disconcerting pattern: Even after controlling for default risk, protected groups frequently incur higher costs. These pricing differences are what I term "'price discrimination' discrimination" (PD discrimination). They are a form of discrimination where the demand-based mechanisms used to differentiate prices among consumers inadvertently—or even intentionally—lead to disproportionate adverse effects on certain protected groups. With PD discrimination, it is not merely the pricing that varies on the basis of predicted WTP but rather the discriminatory impact of the pricing strategy that may further marginalize those already at an economic disadvantage.

This Part highlights the reasons that PD, more generally, can cause harm in credit markets. When PD then intersects with protected group status, what I term PD discrimination, the harm is amplified as it builds on pre-existing disadvantage and discrimination. Consequently, a primary apprehension regarding PD in credit markets pertains to its potential to exacerbate fair lending concerns by not only sustaining but *perpetuating* existing inequalities in credit markets. PD discrimination is not just an abstract concept. It is a practice that poses a tangible threat to equality and fairness, leading to systematic inequalities and biased treatment in credit markets.

Section II.A explains why PD discrimination is harmful in both theory and practice. It begins by discussing the repercussions to protected groups of facing higher interest rates for loans due to potential exploitation from historical discrimination, arguing that PD discrimination not only reflects past disadvantages but exacerbates future credit access and default risks. It concludes by explaining how certain factors—specifically loan value misperceptions—can intensify these harms.[151]

Section II.B provides an overview of the future of PD discrimination in light of current trends in big data and AI. Specifically, it explains how increasingly sophisticated methods of deploying PD in the consumer finance industry pose unique risks to consumers.

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[148] *See* Jacob Rugh, Len Albright & Douglas Massey, *Race, Space, and Cumulative Disadvantage: A Case Study of the Subprime Lending Collapse*, 62 SOC. PROBS. 186 (2015); *see also* Linda E. Fisher, *Target Marketing of Subprime Loans: Racialized Consumer Fraud & Reverse Redlining*, 18 J.L. & POL'Y 121 (2009) (analyzing the evidence of racial minorities being disproportionately targeted for subprime lending); CHERYL WADE & JANIES SARRA, PREDATORY LENDING AND THE DESTRUCTION OF THE AFRICAN AMERICAN (2020).

[149] See *supra* section III.A.2.

[150] *See supra* section I.C.

[151] While several protected groups may be disproportionately affected by PD, this Part focuses primarily on racial minorities.

A. The Harms of Price Discrimination Discrimination

The welfare implications of PD are complex under classic economic analysis.[152] In economics, consumer welfare is typically measured by the difference between the consumer's willingness-to-pay for a product and the price they actually pay. This gap is known as the consumer surplus. The producer surplus, on the other hand, is measured by the difference between the price of a product and the cost of production. When consumers all pay the same price, the total consumer surplus is the difference between that price and the willingness-to-pay of consumers. Under full PD (known as "first-degree" PD), there is no difference between the price and willingness-to-pay. Thus, the main impact of PD is that consumer surplus becomes producer surplus.[153]

In some markets, price discrimination is considered a necessary condition for the existence of the market, particularly in cases where there are high fixed costs, such as the pharmaceuticals, telecommunications and software industries.[154] Even in markets that are not characterized by high fixed-costs and low marginal-costs, there could be a welfare gain from PD,[155] particularly with monopolistic producers. When a monopolistic producer prices a product uniformly, as is the case when PD is not possible, the producer may increase the price above competitive levels, leading to consumers with lower WTP being priced out. In contrast, when PD is possible, a monopolistic producer is able to offer a lower price to consumers with lower WTP, who were previously priced out under uniform pricing.[156] PD therefore has two effects: While PD allows the producer to capture the consumer surplus of higher WTP consumers by increasing the price they pay, it also allows the producer to reduce the price for lower WTP consumers who would otherwise be priced out, which can increase welfare.[157] The latter effect is often referred to as eliminating deadweight loss.[158] The transfer of surplus from consumers to sellers may not cause inefficiency

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[152] For an overview of the welfare implications of third degree PD, *see* Dirk Bergemann, Benjamin Brooks, & Stephen Morris, *The Limits of Price Discrimination*, 105 AM. ECON. REV., Mar. 2015, at 921.

[153] *See* Kochelek, *supra* note 104, at 516 (2009) ("[P]rice discrimination allows producers to recover some or all of the economic surplus. . . .").

[154] *See* LOUIS PHLIPS, THE ECONOMICS OF PRICES DISCRIMINATION (1983).

[155] *See* Terrell McSweeny & Brian O'Dea, *Data, Innovation, and Potential Competition in Digital Markets–Looking Beyond Short-Term Price Effects in Merger Analysis*, CPI ANTITRUST CHRON. (2018) [hereinafter McSweeny & O'Dea, *Data, Innovation, and Potential Competition*] at 2 ("Indeed, some products and services would not be offered at all without price discrimination.").

[156] *See* Terrell McSweeny & Brian O'Dea, *The Implications of Algorithmic Pricing for Coordinated Effects Analysis and Price Discrimination Markets in Antitrust Enforcement*, 32 ANTITRUST 75, 79 (2017) ("[A]lgorithmic price discrimination has the potential to provide consumer benefits, such as enabling companies to identify and offer discounts to targeted consumers who were previously priced out of certain markets . . . ."). Richard Schmalensee, *Output and Welfare Implications of Monopolistic Third-Degree Price Discrimination*, 71 AM. ECON. REV., 242 (1981)

[157] This may be true in cases in which a firm would not be able to cover costs without price discrimination or when a monopoly restricts output. *See, e.g.*, Hal Varian, *Price Discrimination and Social Welfare*, 75 AM. ECON. REV. 870 (1985).

[158] One harm to total welfare that can be caused by PD is causing firms to waste resources to create market power or to allocate resources to developing technology to predict consumer willingness-to-pay. This is because PD merely transfers surplus, and willingness-to-pay estimation capabilities do not

concerns but may raise distributional concerns if socially we weigh seller and consumer welfare differently.[159] The overall effect of PD, summarized in Figure 3, can be to increase total welfare but reduce consumer welfare.[160]

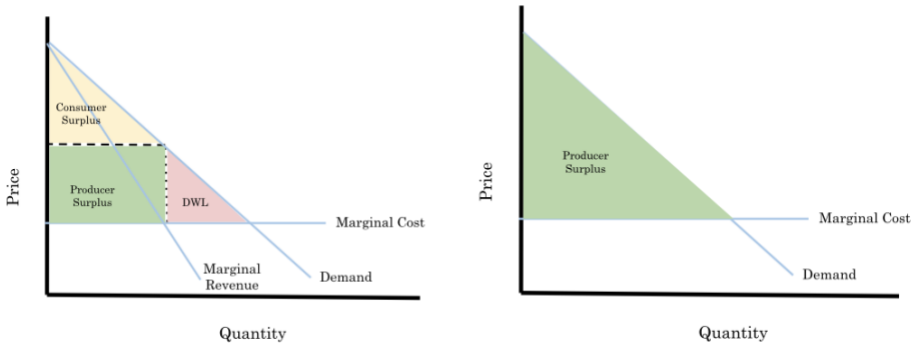

Figure 3: Monopolistic Pricing versus Price Discrimination: The graph on the left shows the pricing of a monopoly that sets the same price for all consumers. The monopolist chooses to set the price at marginal revenue rather than marginal cost, leading to some consumers being priced out: The red triangle is the "dead weight loss" resulting from the loss of welfare. The graph on the right shows that under perfect price discrimination, there is no loss in welfare but rather a transfer of all consumer surplus to producers.

If protected groups have a higher WTP, they are impacted by the higher pricing of PD and are not the main beneficiaries of expanding access to borrowers with lower WTP. Thus, to the extent that there might be benefits in cases of PD, they are unlikely to be captured by protected groups. Moreover, if protected groups' higher WTP is linked to historical and ongoing discrimination, then the use of PD to charge disproportionately high prices will perpetuate existing inequality.

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increase total welfare. *See* Richard Posner, *The Social Costs of Monopoly and Regulation,* 83 J. POL. ECON. 807 (1975). Some scholars have also focused on the deadweight loss that is created when consumers turn to aftermarket arbitrage as a result of PD. *See, e.g.*, Kochelek, *supra* note 104**Error! Bookmark not defined.**, at 516 ("[P]rice discrimination incentivizes consumers to engage in aftermarket arbitrage. . . . These changes in behavior waste resources that would otherwise be efficiently allocated in a competitive market.").

[159] There could be distributional concerns associated with the increased cost to consumers because we weigh consumer surplus more than producer surplus. Accordingly, leaving consumers worse off is not desirable. *See* Miller, *supra* note 104, at 69 ("Even the most hardheaded economist ought to concede that practices that increase overall social welfare but harm most consumers raise serious ethical concerns."); McSweeny & O'Dea, *Data, Innovation, and Potential Competition*, *supra* note 155 ("As a matter of economic theory, however, the consumer welfare effects of price discrimination are ambiguous—and targeted price discrimination may actually benefit consumers in some situations.").

[160] A distributional analysis of PD depends on several factors, including the social welfare weights of sellers and consumers as well as determining which consumers have higher willingness-to-pay. PD distributes from consumers to sellers, and so, if we put greater social weight on consumer surplus than seller surplus, this transfer may be undesirable. Another harm of PD that arises primarily in settings in which consumers are repeat players and pricing depends of their behavior, is that strategic consumers will distort their behaviors based on future gains. *See* Haggai Porat, *Behavior-Based Price Discrimination and Data Protection in the Age of Algorithms* (Oct. 31, 2022), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4254326 (unpublished working paper).

1. Perpetuating Existing Inequality

In contrast to some markets for goods,[161] in the context of consumer credit, consumers with a higher WTP are likely to be poorer and more vulnerable.[162] Lower financial literacy and lack of familiarity with some credit markets, like mortgage markets, are associated with higher interest rates.[163] Moreover, WTP could reflect the number of mortgage originators servicing a particular area and the ability of consumers to engage in shopping.[164] In areas with many mortgage originators, consumers may have a lower WTP, reflecting their ability to select a lender. Households that are more liquidity-constrained are also more likely to have a higher WTP because they rely on credit for large purchases—like a home or automobile—or for daily consumption.[165]

Racial minorities, like other protected groups, are more likely to have higher WTP for loans because the determinants of higher WTP are correlated with protected-group status. Previous work has demonstrated that minority borrowers are more likely to have lower levels of financial literacy.[166] They are also more likely to live in areas with fewer mortgage originators and therefore have access to fewer shopping options.[167] Racial minorities are also more likely to face liquidity constraints.[168]

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[161] *See supra* section I.A.2.

[162] For a discussion of the possible determinants of which consumers pay more for loans irrespective of the credit risk, *see supra* section I.B.2. In ethics discussions of price discrimination, some scholars have suggested ethical issues may arise of those with higher reservation prices are more vulnerable. See Elegido *supra* note 49, at 639 ("If it could be shown that vulnerable groups, which are already at an economic disadvantage relative to other groups, are systematically the victims of price discrimination and that the effect of this is to worsen their already bad situation, this would raise a serious ethical issue for the businesspeople involved in such price discrimination."). Also see, Mark E. Bergen, Shantanu Dutta, James Guszsza, & Mrk J. Zbaracki, *How AI Can Help Companies Set Prices More Ethically* HARV. BUS. REV. (2021)

[163] Many studies have documented, for example, that refinance mortgages tend to be lower and have less dispersion than purchase mortgages, which suggests that sophistication matters for pricing. *See* Bartlett et al., *supra* note 54, at 40 ("Refinancing borrowers are, by definition, experienced . . . .").

[164] *See supra* section I.A.2; *see also* Buchak & Jørring, *supra* note 52.

[165] *See* Adams et al., *supra* note 76 (documenting the relationship between liquidity constraints and demand for higher loans); Bhutta et al., *supra* note 55, at 15. Although in some cases, lower levels of financial literacy may be explained with lack of familiarity, such as mortgage markets, studies have documented ways in which even for loan products for which consumers are likely to be repeat players, such as credit cards or payday loans, high borrowing cost is associated with lower levels of financial literacy. See Lusardi & Scheresberg, *supra* note 54.

[166] Annamaria Lusardi & Olivia Mitchell, *Financial Literacy and Retirement Planning in the United States*, 10 J. PENSION ECON. & FIN. 509, 515 (2011).

[167] Buchak & Jørring, *supra* note 52. For other credit products, like payday loans, the presence in in areas with more vulnerable consumers and racial minorities is higher. With such predatory lending practices, the higher presence itself increases the reliance on high-cost loans.

[168] Neil Bhutta, Andrew Chang, Lisa Dettling & Joanne Hsu, *Disparities in Wealth by Race and Ethnicity in the 2019 Survey of Consumer Finances*, FEDS NOTES (Sept. 28, 2020), https://www.federalreserve.gov/econres/notes/feds-notes/disparities-in-wealth-by-race-and-ethnicity-in-the-2019-survey-of-consumer-finances-20200928.html.

Higher WTP is likely also related to past and ongoing discrimination. For example, the lower level of mortgage originator competition can probably be attributed to historical redlining, which itself could cause less familiarity with the financial complexities of mortgages among populations traditionally excluded from mortgage markets.[169] When the determinants of higher WTP reflect pre-existing disadvantage for protected groups, PD poses the risk of perpetuating inequality by building on it to charge disproportionately high prices.

2. Increased Default Risk

While in most contexts, higher prices simply mean a transfer of surplus from the consumer to the seller, in the consumer credit market, higher interest rates also increase the probability of default. The relationship between higher interest rates and higher default risk is usually explained in terms of lenders charging a higher interest rate to compensate for the greater risk as a form of risk-based pricing.[170] Higher interest rates mean higher period payments, which reduce liquidity. Being liquidity-constrained makes consumers more vulnerable to income or outflow shocks, which increases default risk.[171] This increased credit risk is not always internalized by the lenders, meaning that they benefit from increased interest rates but not from increased credit risk.[172]

The increased default risk for protected groups caused by PD has negative implications both for borrowers and their communities. Default can cause displacement,[173] employment harms,[174] and long-term barriers for access to credit. Default can also create social costs, particularly in situations of foreclosure.[175]

More expensive loans for protected groups, particularly mortgages, create costs for both the consumer and society through the increased risk of default. Importantly, increased default risk is another domain in which pre-existing disadvantages and discrimination that shaped higher WTP in the first place can

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[169] See Daniel Aaronson, Daniel Hartley & Bhashkar Mazumder, *The Effects of the 1930s HOLC "Redlining" Maps*, 13 AM. ECON. J. 355, 372 (2021).

[170] *See supra* section 1.A.1.

[171] Higher interest rates also increase default risk. *See* Allen et al., *supra* note 35, at 404–05.

[172] Lenders, who set loan prices, often do not hold the credit risk of loans because they are sold to the secondary market. As a result, they do not internalize the cost of increased default risk.

[173] *See* Tammy Leonard & James Murdoch, *The Neighborhood Effects of Foreclosure*, 11 J. GEO. SYS. 317 (2009).

[174] For a discussion of racial differences in foreclosure rates, *see* DEBBIE GRUENSTEIN BOCIAN, WEI LI & KEITH S. ERNST, FORECLOSURES BY RACE AND ETHNICITY: THE DEMOGRAPHICS OF A CRISIS (2010). In the context of evictions, researchers also have documented the far-ranging implications of housing insecurity on employment. *See, e.g.,* Matthew Desmond & Carl Gershenson, *Housing and Employment Insecurity among the Working Poor*, 63 SOC. PROBS. 46 (2016) (documenting the relationship between housing loss and job loss).

[175] *See* Allen et al., *supra* note 35, at 404 ("The resulting dispersion, if it leads to higher default probability, can induce systemic risks and generate negative externalities on the overall market.").

maintain and deepen credit inequalities by reinforcing exclusion from credit markets. Default can also cause negative externalities not fully internalized by borrowers.[176]

3. Loan Value Misperceptions

Another instance in which PD discrimination can perpetuate pre-existing inequalities is when higher WTP reflects misperceptions about the value of a loan. This could happen if the WTP is a function of both preferences and misperceptions that inflate demand.[177] These misperceptions may be mitigated when consumers are protected by one-price or lower-price dispersion. With personalization and price discrimination, however, consumers are pushed towards their WTP. When the WTP is above the true value to a consumer, the consumer can pay beyond their value, resulting in a negative value to the consumer.

There are reasons to think that borrower WTP for loans goes beyond their true value to the consumer and that this discrepancy might be more pronounced for protected groups. Consumers may overestimate their future ability to pay off a loan—leading to situations in which borrowers are paradoxically worse off by being approved for a loan.[178] Consumers who overweigh current consumption relative to future consumption in a present-bias manner may overvalue a loan that increases current consumption. [179] Consumers may also inflate their expected future gain when borrowing for investment reasons.[180] Lack of financial sophistication can also cause an inflated sense of a loan's value or a misunderstanding of the loan's true cost.[181]

B. The Future of Price Discrimination Discrimination

While PD is not new, the ability of sellers to engage in demand-based differentiation has amplified in recent years. As a result, the prevalence of PD discrimination is likely to increase.[182] PD often relies on information of consumer preferences or behaviors. Firms' increased use of big data and AI facilitates the

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[176] One such example is the impact of foreclosures on neighborhoods and communities. *See* Cary Martin Shelby, *Racism as a Threat to Financial Stability*, 118 NW. U. L. REV. 757 (2023).

[177] *See* Oren Bar-Gill, *Price Discrimination with Consumer Misperception*, 10 APPLIED ECON. LETTERS 829 (2021); Bar-Gill et al., *supra* note 21.

[178] For example, some payday loans may end up making borrowers worse off. *See* John Gathergood, Benedict Guttman-Kenney & Stefan Hunt, *How Do Payday Loans Affect Borrowers? Evidence from the U.K. Market*, 32 REV. FIN. STUD. 496 (2008) (showing that receiving a payday loan can cause increases in defaults and exceeding bank overdraft limits).

[179] *See* Gathergood & Weber, *supra* note 59, at 64.

[180] For example, Elengold has argued that students may inflate the expected gain from education in certain circumstances, leading to overborrowing high-interest loans to fund education. *See* Kate Sablosky Elengold, *The Investment Imperative*, 57 HOUS. L. REV 1 (2019)

[181] For an example of less financially sophisticated picking the wrong product, *see id.*

[182] Despite the increased personalization, current algorithmic PD practices are still likely to be far from first degree PD discrimination and are more granular forms of third degree PD. *See* discussion in Porat, *Algorithmic Personalized Pricing*, *supra* note 98, at 6.

obtaining and processing of such individualized data.[183] The extensive data collection of consumers' online searching and purchasing behaviors enables sellers to estimate future behavior and reservation prices.[184] Advances in statistical methods have enhanced data storage and processing, facilitating the transformation of big data into precise consumer willingness-to-pay predictions.[185] Furthermore, the shift towards online shopping in the consumer goods sector allows for individualized pricing, unattainable in traditional brick-and-mortar establishments.[186]

Firms tend to conceal their pricing policies, particularly when they engage in practices like PD that could cause consumer backlash.[187] As a result, publicly known examples of PD are far fewer than their real-life prevalence. Recent studies and reports have documented personalized pricing in ride-hailing apps,[188] goods on e-commerce

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[183] *See* Bar-Gill, *supra* note 21 ("The rise of big data and sophisticated, machine learning algorithms is increasing the prevalence of price discrimination."); HORST EIDERMÜLLER & GERHARD WAGNER, LAW BY ALGORITHMS 50 (Mohr Siebeck ed., 2021) ("What we are witnessing with the advent of Big Data and Artificial Intelligence are new forms of price discrimination carried out on a different scale.").

[184] *See* THE WHITE HOUSE, BIG DATA AND DIFFERENTIAL PRICING 4 (2015), https://obamawhitehouse.archives.gov/sites/default/files/whitehouse_files/docs/Big_Data_Report_Nonembargo_v2.pdf ("Big data has lowered the costs of collecting customer-level information, making it easier for sellers to identify new customer segments and to target those populations with customized marketing and pricing plans."); *see also* Miller, *supra* note 104, at 45.

[185] Axel Gautier, Ashwin Ittoo & Pieter Van Cleynenbreugel, *AI Algorithms, Price Discrimination and Collusion: A Technological, Economic, and Legal Perspective*, 50 EUR. J.L. & ECON. 405, 409 (2020) ("The use of algorithms, based on AI technologies, could facilitate the emergence of finer-grained PD (tending towards first-degree), or at least help firms to optimize the menu of options that they propose to consumers, as well as the pricing of these options."); *see also* Rebecca Kelly Slaughter, *Algorithms and Economic Justice: A Taxonomy of Harms and a Path Forward for the Federal Trade Commission*, 23 YALE J.L. & TECH. (SPECIAL ISSUE) 1, 34 (2021) ("[F]uture algorithmic advances could allow firms to precisely target willingness to pay and pocket all consumer surplus as profit.").

[186] Ariel Ezrachi & Maurice Stucke, *The Rise of Behavioral Discrimination*, 37 EUR. COMPETITION L. REV. 484, 489–91 (2016); Leslie, *supra* note 112, at 77 ("Online sellers can, however, disguise their price discrimination . . . preventing consumers from directly discerning whether they are being charged a higher price.").

[187] *See* Leslie, supra note 112, at 77 ("Because of the risk of consumer backlash, some commentators view concealment as a prerequisite for personalized pricing."). *See also* Joost Poort & Frederik J. Zuiderveen Borgesius, *Does Everyone Have a Price? Understanding People's Attitude Towards Online and Offline Price Discrimination*, 8 INTERNET POL'Y REV. (2019) (examining consumer attitudes toward price discrimination practices in digital and physical markets)

[188] *See* Arwa Mahdawi, *Is Your Friend Getting a Cheaper Uber Fare than You Are?*, THE GUARDIAN (Apr. 13, 2018), https://www.theguardian.com/commentisfree/2018/apr/13/uber-lyft-prices-personalized-data (providing anecdotal reports of personalized ride-hailing app pricing)*; see also* Yenjae Chang, Clifford Wilson & Jia Yan, *Does Uber Benefit Travelers by Price Discrimination?* 65 J.L. & ECON. 433 (2022) (finding that Uber prices correlate with the price of hotel rooms at the destination); Ivan Didur, *Dynamic Pricing Algorithm on Uber and Lyft*, DATA ROOT LABS (May 5, 2021), https://datarootlabs.com/blog/uber-lift-gett-surge-pricing-algorithms.

platforms,[189] and various other sectors.[190] A 2017 study with ZipRecruiter used an experiment to predict subscribers' WTP and vary pricing accordingly.[191] Moreover, the emergence of third-party companies offering pricing services, although often opaque in methods, signifies an increasing reliance on rich consumer data to boost profitability.[192]

Academic research on methodologies for PD also demonstrates the relationship between big data and predicting WTP and reservation prices.[193] Studies

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[189] *See* DELOITTE DIGITAL AND SALESFORCE, CONSUMER EXPERIENCE IN THE RETAIL RENAISSANCE 11 (2018), https://c1.sfdcstatic.com/content/dam/web/en_us/www/documents/e-books/learn/consumer-experience-in-the-retail-renaissance.pdf (claiming that many companies that use AI to personalize customer experience also use AI to tailor pricing); Van Loo & Aggarwal, *supra* note 39, at 22 (discussing how Amazon's collection of consumer data allows it to estimate consumers' susceptibility to behavioral biases and to charge higher prices).

[190] One of the best-known cases of online price discrimination involved a change of price on Amazon after erasing cookies. *See* Alberto Cavallo, *More Amazon Effects: Online Competition and Pricing Behaviors* (Nat'l Bureau of Econ. Rsch., Working Paper No. 25138, 2018); David Streitfield, *On the Web, Price Tags Blur*, WASH. POST (Sept. 27, 2000), https://www.washingtonpost.com/archive/politics/2000/09/27/on-the-web-price-tags-blur/14daea51-3a64-488f-8e6b-c1a3654773da/. For an example of Staples' PD practices, *see* Christopher Townley, Eric Morrison & Karen Yeung, *Big Data and Personalized Price Discrimination EU Competition Law*, 36 Y.B. EUR. L. 683 (2017) (involving a price changed after erasing browser history); *see also* Julia Angwin, Surya Mattu & Jeff Larson, *The Tiger Mom Tax: Asians Are Nearly Twice as Likely to Get Higher Price from Princeton Review*, PROPUBLICA (Sept. 1, 2015). For further examples, *see, e.g.*, Gautier et al., *supra* note 185; Aniko Hannak, Gary Soeller, David Lazer, Alan Mislove & Christo Wilson, *Measuring Price Discrimination and Steering on E-Commerce Web Sites*, *in* PROCEEDINGS OF THE 2014 CONFERENCE ON INTERNET MEASUREMENT CONFERENCE 305–18 (2014) (documenting price personalization in nine out of sixteen e-commerce websites examined).

[191] Jean-Pierre Dube & Sanjog Misra, *Scalable Price Targeting* (Nat'l Bureau of Econ. Rsch., Working Paper No. 23775, 2017).

[192] For example, ATPCO is a software company designed for airlines to improve their fare pricing schemes. Although very little is revealed about the kinds of data the company uses to design its algorithms, in essence it offers its customers up-to-date flagship pricing data direct from airlines and incorporates broader market fluctuations in real time. *See* ATPCO, *ARCHITECT: Premier Pricing Management Tool for Achieving Pricing Excellence*, https://www.atpco.net/solutions/pricing/architect; Darie Dreptate, *The Rising Value of APIs in a Troubled Travel Industry,* ATPCO BLOG FOR THE AIRLINE INDUS. (Aug. 20, 2020), https://blog.atpco.net/the-rising-value-of-apis.

HubSpot is a software company that develops software products to improve marketing, sales, and the business operations. One piece of the many services offered by HubSpot includes data sales pricing strategy calculator, along with professional advice about how to improve pricing by tapping into regional markets or differentiating between different geographic areas. Although the company only endorses geographic pricing at a large scale (*e.g.*, West Coast versus East Coast), it is potentially possible that the software could allow client companies to engage in PD at a smaller scale—this is unverifiable in the absence of actually purchasing and using HubSpot's sales products.

Perfect Price is a small tech start-up that uses AI and third-party data to "empower companies to stay ahead of constantly changing market dynamics and customer behaviors." The company advertises that its software automates pricing to predict demand and adapt to market conditions in real-time. The company, founded in 2013, no longer has its website up and there is very little information about what precisely itengages in personalized pricing.

[193] For a discussion of the potential gap between the theoretical results of price discrimination and real-life evidence of granular price discrimination, *see* Gautier et al., *supra* note 185, at 415 ("Consequently,

have demonstrated the feasibility of predicting purchase propensities from browsing history,[194] and randomized price experiments can be used to train a demand model.[195] Some studies have looked to implement PD strategies in particular industries, such as the cruise ship industry.[196]

In the domain of credit, little is publicly known about how lenders engage in price discrimination and the extent to which they are likely to rely on big data and AI in the future. But given the consumer finance industry's long reliance on price differentiation—at least for the purposes of creditworthiness assessments—and the increasing amount of data collected by lenders on applicants, it is likely that demand-based pricing will become even more prevalent.[197] Studies have demonstrated the revenue-enhancing potential of dynamically adjusting prices based on estimated demand in industries like auto-lending.[198] While the transition to online mortgage underwriting could in theory impede PD by spurring competition and reducing search costs, this is unlikely to happen in practice. Given the correlation between high WTP and lower levels of sophistication and shopping, it is unlikely that online underwriting will lead to less PD, especially given the selection of borrowers who choose an automated mortgage process.[199]

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there still remains a gap between PD implementations in practice and the models developed in scientific experiments.").

[194] *See, e.g.*, Benjamin Shiller, *Approximating Purchase Propensities and Reservation Prices from Broad Consumer Tracking*, 61 INT'L ECON. REV. 847 (2020) (showing that ability to predict purchase propensities is significantly higher when using browsing history than when relying on demographic information, such as consumer income and ZIP code). E-commerce platforms that personalize pricing based on web browsing histories can increase profits "by 14.55%," resulting in some customers paying nearly double the price for the same product. By contrast, collecting demographic information alone, including race/ethnicity, children, household income ranges, oldest household member's age range, household size ranges, population density of zip code from the Census, and Census region, allowed personalized pricing to increase profits by 0.3%.

[195] This model can then be used for price targeting. *See* Dubé & Misra, *supra* note 191.

[196] Aidin Namin, Dinesh Gauri & Robert Kwortnik, *Improving Revenue Performance with Third-Degree Price Discrimination in the Cruise Industry*, 89 INT'L J. HOSP. MGMT. 102597 (2020).

[197] Bartlett at al., *supra* note 54, at 40; Brian Wallheimer, *Are You Ready for Personalized Pricing?*, CHI. BOOTH REV. (Feb. 26, 2018), https://www.chicagobooth.edu/review/are-you-ready-personalized-pricing ("Imagine what it could charge if it also factored in location, income, credit score, number of dependents, or other available information. Many of these data points could be used to suss out how much people will pay for given goods and services.").

[198] *See* Gah-Yi Ban & N. Bora Keskin, *Personalized Dynamic Pricing with Machine Learning*., 67 MGMT. SCI. 5549 (2017) (demonstrating the ability of dynamically adjusting prices based on estimated demand to increase revenue and apply this method to an online auto-lender company that could increase expected revenue by 47%).

[199] Fintech lenders set higher interest rates than non-fintech lenders, despite the costs savings, suggesting that the appeal of fintech lenders is in differing tastes of consumers. *See* Greg Buchak, Gregor Matvos, Tomasz Piskorski & Amit Seru, *Fintech, Regulatory Arbitrage, and the Rise of Shadow Banks* 468 (Nat'l Bureau of Econ. Rsch., Working Paper No. 23288, 2018) (finding that fintech lenders serve more creditworthy borrowers). Notably, a recent paper looking at an alternative lender found that the borrowers most likely to benefit from the lender's model relative to traditional models were borrowers with low credit scores and short credit histories. *See* Di Maggio et al. 2022, *supra* note 16.

PD in consumer lending can be achieved by adjusting loan offers in ways beyond interest rates. Lenders may charge consumers fees for loan origination and application verification, which may differ depending on consumer sensitivity to the fee. Furthermore, lenders can vary the menu of loan options in a way that could lead consumers to select more expensive loans.[200]

The use of big data to personalize pricing has become a key concern for consumer protection.[201] In a 2018 report, the OECD argued that PD in the digital era could lead to a decline in consumer welfare.[202] Several regulatory agencies have also considered the issue of online PD and have conducted research in the European Union,[203] Germany,[204] and the United Kingdom.[205]

The conclusion is that PD is likely to be a growing concern in many consumer markets. In consumer credit markets in which those impacted the most by PD are protected groups, the increased reliance on big data and AI in determining credit terms is like to exacerbate the problem of PD discrimination.

III. THE LAW'S INADEQUATE GOVERNANCE OF PRICE DISCRIMINATION DISCRIMINATION

PD in consumer credit markets is problematic because it increases the likelihood that certain populations end up paying higher prices for credit, regardless of their credit risk.[206] PD may be actionable as illegal discrimination under federal fair lending laws when factors contributing to price differentiation interact with protected classes. If a lender directly uses race, gender, or any other protected characteristic in pricing decisions, this may give rise to a claim of disparate treatment.[207] In that case, it

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[200] *See* Van Loo & Aggarwal, supra note 39 (documenting the ability to charge higher prices to consumers based on menu effects that rely on behavioral biases in the context of Amazon's pricing).

[201] For a discussion on the implications of behavior-based pricing and the effect of regulatory policies, *see* Haggai Porat, *Behavior-Based Price Discrimination and Data Protection in the Age of Algorithms, supra* note 160.

[202] *See* OECD, PERSONALIZED PRICING IN THE DIGITAL ERA (2018), https://one.oecd.org/document/DAF/COMP(2018)13/en/pdf; *see also* Bar-Gill et al., *supra* note 21.

[203] EUR. COMM'N, CONSUMERS, HEALTH, AGRICULTURE & FOOD EXECUTIVE AGENCY, CONSUMER MARKET STUDY ON ONLINE MARKET SEGMENTATION THROUGH PERSONALISED PRICING/OFFERS IN THE EUROPEAN UNION FINAL REPORT (2018), https://data.europa.eu/doi/10.2818/990439.

[204] Werner Reinartz, Justus Haucap, Nico Wiegand & Matthias Hunold, *Price Differentiation and Dispersion in Retailing*, 6 SELECTED PUBL'NS IFH-FÖRDERER (2017).

[205] UK COMPETITION & MKTS. AUTH., PRICING ALGORITHMS (2018), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/746353/Algorithms_econ_report.pdf.

[206] *See supra* section II.A.

[207] *See* Alan M. White, *Borrowing While Black: Applying Fair Lending Laws to Risk-Based Mortgage Pricing*, 60 S.C. L. REV. 677, 699 (2009) ("[T]here could simply be individual brokers who make it their practice to charge higher fees to black borrowers.").

is irrelevant whether the motivation for the consideration of a protected characteristic is animus towards the group[208] or profit-maximization.[209] The problem is that disparate treatment is difficult to detect in practice.[210]

That said, even if pricing policies aimed at setting interest rates close to willingness-to-pay do not *directly* use protected characteristics, they may still be illegal under the disparate impact doctrine. This Part examines how the courts and regulators have thus far failed to set an intelligible standard for proscribing discriminatory demand-based pricing practices. It concludes that a new paradigm is needed to discern when PD becomes PD discrimination.

Section III.A. begins by discussing fair lending law's statutory articulation of the disparate impact and regulatory implementation by the CFPB, HUD, and other agencies with rulemaking and guidance authority. Next, it turns to the patchwork enforcement of the prohibition on disparate impact in consumer credit through enforcement actions and private enforcement, which primarily focus on challenging the practice of discretionary loan markups, which I explain in further detail below.[211]

Section III.B. demonstrates the failure of policymakers and the courts to define with precision the "business justification" defense, under which the legality of disparate pricing outcomes can be defended when they are produced by a legitimate business consideration. It discusses how the legality of PD—that is, whether PD is "discrimination" in the legal sense—depends on whether the business justification defense is read in narrow or broad terms. It concludes with an examination of the relevant regulatory language, enforcement actions, and private litigation to make the case that they result in unclear, inconsistent and vague legal standards for determining what types of pricing practices are permissible.

Finally, Section III.C. explains how the binary approach to the business justification defense, where a pricing scheme is either legal in all cases or in none, fails to produce a workable standard for regulating credit markets. It argues that such an all-or-nothing approach fails to account for the crucial issue of the *extent of harm* that a

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[208] This is what economists would call taste-based discrimination, where there is a discriminatory preference against a group. *See* Aziz Huq, *What Is Discriminatory Intent?*, 103 CORNELL L. REV. 1211, 1242–63 (2018) (discussing the various interpretations of discriminatory intent in the context of the Equal Protection Doctrine, including the animus-based interpretation). *See generally* GARY BECKER, THE ECONOMICS OF DISCRIMINATION (2d ed., 2010) (offering a background on taste-based discrimination in economics).

[209] If, for example, race was being used as a proxy for willingness-to-pay, this would be what economists would call statistical discrimination. This is still disparate treatment, as it is directly conditioning the decision on a protected characteristic. *See* Gillis, *supra* note 11, at 1222 (discussing disparate treatment in an algorithmic setting).

[210] Several enforcement actions have either explicitly or implicitly made disparate treatment claims in the context of discretionary markups. *See, e.g.*, Complaint at 12 ¶ 27, Fed. Trade Comm'n v. Liberty Chevrolet, Inc., No. 20-CV-3945 (S.D.N.Y. May 21, 2020) ("At least since 2010, Defendants have charged, on average, African-American and Hispanic borrowers higher markups than similarly situated non-Hispanic white consumers.").

[211] *See supra* section II.A.3.

firm's pricing structure and that structure's disparate outcomes pose for protected groups.

A. Business Justification

1. Disparate Impact in Fair Lending

The two federal statutes that form the core prohibition on discrimination in credit pricing are the Fair Housing Act (FHA)[212] and the Equal Credit Opportunity Act (ECOA).[213] FHA, also known as Title VIII of the Civil Rights Act of 1968, protects renters and buyers from discrimination by sellers or landlords. It covers a range of housing-related conduct and prohibits discrimination in setting housing-related credit terms based on race, color, religion, sex, disability, familial status, and national origin.[214] It is complemented by ECOA, which extends the prohibition on discrimination to all credit transactions[215] and not just those in the context of housing.[216]

Both ECOA and FHA incorporate the doctrines of "disparate treatment" and "disparate impact."[217] Disparate treatment deals with the direct conditioning of a credit

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[212] Fair Housing Act, Pub. L. No. 90-284, 82 Stat. 73 (1968) (codified as amended at 42 U.S.C. §§ 3601–3619 (2018)).

[213] Equal Credit Opportunity Act, Pub. L. No. 93-495, 88 Stat. 1500 (1974) (codified as amended at 15 U.S.C. § 1691 *et seq.* (2018)).

[214] In 1988, the Fair Housing Amendments Act was passed, adding sex, disability, and family status as protected groups. *See* Fair Housing Amendments Act of 1988, Pub. L. No. 100-430, 102 Stat. 1619 (codified as amended at 42 U.S.C. § 3601).

[215] *See* 15 U.S.C. § 1691 (a)(1)–(2).

[216] Initially, ECOA only covered discrimination on the basis of sex and marital status—it was amended in 1976 to prohibit discrimination because of race, color, religion, and other grounds. See Pub. L. No. 94-239, 90 Stat. 251 (1977) (codified as amended at 15 U.S.C. § 1691). There are other laws that have additional provisions relating to credit pricing discrimination that are not the subject of this Article. The Community Reinvestment Act (CRA), 12 U.S.C. § 2901 (2018), encourages banks and other lenders to address the needs of low-income households within the areas they operate. The CRA does not create a private right of action, instead instructing the relevant supervisory agency on how to oversee that institutions are serving the lending needs of their communities. HMDA, 12 U.S.C. § 2801, requires that certain financial institutions make regular disclosures to the public on mortgage applications and lending. Although HMDA does not contain any explicit discrimination provisions, one of its purposes is to allow the public and regulators to consider whether lenders are treating borrowers differently. The empirical discussion of this Article relies on HMDA data. *See supra* section I.C.

[217] While the texts of ECOA and FHA do not explicitly recognize the two discrimination doctrines, the disparate impact doctrine has long been recognized in credit pricing cases by courts and agencies alike. The Supreme Court recently affirmed that disparate impact claims could be made under FHA in *Texas Dep't of Hous. & Cmty. Affs. v. Inclusive Communities Project, Inc.*, 576 U.S. 519 (2015), confirming the position of eleven appellate courts and various federal agencies including the Department of Housing and Urban Development (HUD), the agency primarily responsible for enforcing FHA.). *See* Robert G. Schwemm, *Fair Housing Litigation after* Inclusive Communities*: What's New and What's Not*, COLUM. L. REV. SIDEBAR 106, 106 (2015) ("The Court's 5-4 decision in the *ICP* case endorsed forty years of practice under the FHA, during which the impact theory of liability had been adopted by all eleven federal appellate courts to consider the matter."). There is not an equivalent Supreme Court case with respect to ECOA, but the Consumer Financial Protection Bureau (CFPB), the agency primarily responsible for enforcing the ECOA, and lower courts have found that the statute allows for a claim of

decision on a protected characteristic, often when there is an intent to discriminate. Disparate impact covers cases in which a facially neutral rule has an impermissible disparate effect on protected groups. Disparate impact is thus likely the more relevant doctrine for PD, as few pricing policies overtly consider a consumer's membership to a protected group.[218]

A disparate impact case typically follows the three-part burden-shifting framework originally developed in the Title VII employment discrimination context.[219] First, the plaintiff must make a prima facie showing that a practice resulted in a disparate outcome for a protected group.[220] Once a plaintiff has established the disparate outcome and its cause, the burden shifts to the defendant to demonstrate that there was a "business justification," sometimes also referred to as "business necessity," for the policy that led to the disparity. If the defendant satisfies this burden, the plaintiff must show that the business interest could be achieved with a less discriminatory alternative.

The question of whether PD is discriminatory under the disparate impact doctrine turns primarily on the inquiry at the second step: whether price differentiation based on willingness-to-pay can be justified as a business necessity.[221] When pricing policies are aimed at charging the highest price possible that still satisfies the consumer's willingness-to-pay, the first step of a disparate impact claim looks to

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disparate impact. *See, e.g.*, *Ramirez v. GreenPoint Mortgage Funding, Inc.*, 633 F. Supp. 2d 922, 926–27 (N.D. Cal. 2008); *Equal Credit Opportunity Act (ECOA)*, CFPB CONSUMER LAWS AND REGULATIONS (2013), https://files.consumerfinance.gov/f/201306_cfpb_laws-and-regulations_ecoa-combined-june-2013.pdf ("The ECOA has two principal theories of liability: disparate treatment and disparate impact."). During the Trump Administration, the CFPB proposed abandoning disparate impact liability under the ECOA. *See* Press Release, Mick Mulvaney, Statement of the Bureau of Consumer Financial Protection on Enactment of S.J. Res. 57 (May 21, 2018) (stating that the CFPB will reexamine its guidance on disparate impact liability under the ECOA). For a skeptical view of whether the statutory language of ECOA supports disparate impact, *see generally* Peter N. Cubita & Michelle Hartmann, *The ECOA Discrimination Proscription and Disparate Impact—Interpreting the Meaning of the Words That Actually Are There*, BUS. LAW. 829 (2005).

[218] As discussed below, there are several discretionary markup cases that involve claims of disparate treatment. *See infra* section III.B.

[219] Disparate impact first entered American law in the 1971 landmark case *Griggs v. Duke Power Co.*, 401 U.S. 424 (1971) (concerning a legal challenge to hiring requirements of a high school diploma and aptitude test). A formal burden-shifting framework was articulated in the subsequent employment decision *Albermarle Paper Co. v. Moody*, 422 U.S. 405 (1975), which became the three-step burden-shifting approach that is applied today. The burden-shifting framework was codified in Title VII in Section 703(k), added by the Civil Rights Act of 1991. Similar language exists in the 2013 HUD Disparate Impact Rule. *See* 12 C.F.R. § 202.6 n.2 (2003) (discussing the relevance of Title VII for interpreting fair lending disparate impact); *see also* Equal Credit Opportunity, 41 Fed. Reg. 29,870, 29,874 (proposed July 20, 1976) (codified at 12 C.F.R. § 202) ("Congress intended certain judicial decisions enunciating this 'effects test' from the employment area to be applied in the credit area.").

[220] *See Albermarle*, 422 U.S. at 425.

[221] The HUD Disparate Impact Rule does not use the term "business necessity" because it covers conduct that is not necessarily business-oriented, but HUD has clarified that it means its defense to be consistent with what has been termed by other agencies as "business necessity." *See* Implementation of the Fair Housing Act's Discriminatory Effects Standard, 78 Fed. Reg. 11,460, 11,470 (Feb. 15, 2013) (codified at 24 C.F.R. § 100).

whether the practice leads to higher prices for protected groups. If the pricing practice creates disparities adverse to a protected group, then the lender is required to show that there is a business justification for the practice. In other words, a model or pricing practice can be justified if it is predictive of or reflects a relevant outcome.[222]

In the next Section, I demonstrate that the regulatory guidance and enforcement action are unclear on the question of whether pricing based on willingness-to-pay—meaning PD—can constitute a business necessity. Arguably, adopting a pricing policy that is aimed to increase lender profits would seem at the core of what businesses try to achieve.[223] But many past discussions surrounding the business justification have focused narrowly on justifying pricing policies by showing that they are related to pricing credit risk (risk-based pricing).[224] Some scholars and policy advocates have argued that the business necessity should be interpreted narrowly to include only disparities that result from a prediction of loan performance or creditworthiness.[225]

2. Rules and Guidance

a. ECOA

Section 1002.6 of Regulation B, implementing ECOA, states that the information a lender uses in a credit decision cannot discriminate on a protected basis.[226] The official interpretation of Regulation B states that the prohibition does not cover situations in which the challenged practice "meets a legitimate business need."[227] This language does not clarify whether a business need would only cover risk-based pricing and not demand-based pricing. The Bureau's 2013 Auto Lending Bulletin[228] provided guidance on the Bureau's interpretation of disparate impact when indirect

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[222] *See* RELMAN COLFAX PLLC, FAIR LENDING MONITORSHIP OF UPSTART NETWORK'S LENDING MODEL, SECOND REPORT OF THE INDEPENDENT MONITOR (2021), https://www.relmanlaw.com/media/cases/1180_PUBLIC%20Upstart%20Monitorship_2nd%20Report_FINAL.pdf.

[223] Note that this view of the business justification would potentially mean that disparate impact doctrine primarily aims to curb behaviors that are not motivated by profits. This view highlights the role of disparate impact in addressing covert discriminatory intent. *See* Richard A. Primus, *Equal Protection and Disparate Impact: Round Three*, 117 HARV. L. REV. 494, 520 (2003).

[224] *See infra* section III.A.2 (discussing enforcement action and private litigation).

[225] *See* Bartlett et al., *supra* note 54; White, *supra* note 207, at 703 ("Business necessity in the truest sense should be limited to cost-based pricing policies and should exclude price adjustments that exploit market failures."); Ayres, *supra* note 20, at 673 ("[C]ourts should reject the market power defense when it is used to extract supra-competitive profits.").

[226] 12 C.F.R. § 1002.6 (a)(2) (2011). This prohibition covers the doctrine of disparate impact, which Regulation B refers to as the "effects tests."

[227] 12 C.F.R. § 1002.6.

[228] CONSUMER FIN. PROT. BUREAU BULL., 2013-02, INDIRECT AUTO LENDING AND COMPLIANCE WITH THE EQUAL CREDIT OPPORTUNITY ACT (2013).

auto lenders[229] permit dealers to increase consumer interest rates and take a cut of the increased interest revenue.[230] This practice, known as discretionary "markup" pricing, creates an incentive for dealers to increase borrower interest rates beyond the lender's "base-rate," and was declared by the Bulletin to constitute disparate impact discrimination, leading to a series of enforcement actions against auto loan financers before it was invalidated in 2018.[231] The limits on markup pricing could be interpreted as limiting demand-based pricing under ECOA.

b. FHA

HUD implemented FHA through its 2013 Disparate Impact Rule, which was partially motivated by existing variation in the application of the disparate impact doctrine in case law.[232] The 2013 Disparate Impact Rule was reinstated in 2023,[233] following an attempt in 2020 to alter the rule.[234]

The language used by the 2013 HUD Rule for the FHA is similarly vague as the language used in Regulation B and its official interpretation. According to the rule, a "legally sufficient justification exists where the challenged practice [is] necessary to

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[229] This guidance applied to all indirect auto lenders within the jurisdiction of the CFPB, including both depository institutions and nonbank institutions. *See id.* at 1.

[230] In indirect auto financing, dealers gather personal information from buyers and use an automated system to forward this to potential lenders, who may offer a "buy rate" indicating the minimum interest rate for purchasing the buyer's retail installment sales contract. Adjustments to the contract terms can be made by lenders or through dealer negotiation. Dealers can charge buyers a higher rate than the buy rate, earning compensation from lenders through a "dealer reserve" or "participation" fee, which is based on the interest rate difference. This compensates dealers for loan origination and sourcing financing.

[231] In May 2018, former President Trump signed a joint Congressional Review Act resolution passed by Congress disapproving of the Bulletin. *See* Congressional Review of Agency Rulemaking, Pub. L. No. 115-172, 132 Stat. 1290 (2018). The joint resolution was significant because it was the first instance in which Congress has used the CRA to void an agency action that was not treated by the agency as a substantive rule. *See* S.J. Res. 57, 115th Cong. (2018); Dechert LLP, *Congress Applies the Congressional Review Act in a New Way—Voiding CFPB Bulletin on Indirect Auto Lending*, JD SUPRA (June 7, 2018), https://www.jdsupra.com/legalnews/congress-applies-the-congressional-41466/. In repealing the Bulletin, the Government Accountability Office (GAO) stated that the Bulletin itself constituted a "rule" and therefore was required to have been presented for review. *See* Memorandum from Joseph L. Barloon, et al. on Consumer Financial Protection Bureau Update (2018). Even though the Bulletin has no force or effect, ECOA and Regulation B are unchanged and remain in force. It remains unclear whether the types of enforcement action pursued under the Bulletin are equally viable on the basis of ECOA and Regulation B.

[232] *See* 24 C.F.R. § 100 (2013) ("Through four decades of case-by-case application of the Fair Housing Act's discriminatory effects standard by HUD and the courts, a small degree of variation has developed in the methodology of proving a claim of discriminatory effects liability.").

[233] Reinstatement of HUD's Discriminatory Effects Standard, 88 Fed. Reg. 19,450, 19,489 (Mar. 31, 2023) (to be codified at 24 C.F.R. § 100).

[234] In 2020, HUD promulgated a new rule for FHA's disparate impact standard, 24 C.F.R. § 100 (2020), allegedly to bring disparate impact in line with the Supreme Court's decision in *Inclusive Communities Project*. The 2020 Rule was challenged by three separate lawsuits and never came into effect. *See Mass. Fair Hous. Ctr. v. HUD*, 496 F. Supp. 3d 600, 611 (D. Mass. 2020).

achieve one or more substantial, legitimate, nondiscriminatory interests of the respondent."[235] The 2020 Rule had made direct reference to profits by stating that a practice could be defended with a legitimate objective "such as a practical business, profit, policy consideration, or requirement of law."[236] It thus suggested a broader range of considerations when defending a credit decision than creditworthiness alone. Its absence from the 2013 Rule, as reinstated by the 2023 Rule, suggests that the current regulatory regime views the business justification more narrowly, potentially excluding demand-based pricing.

c. Other Guidance

Beyond official rulemaking, several government agencies that have enforcement authority over certain financial institutions have provided guidance concerning the business necessity justification.[237] The 1994 Interagency Policy Statement on Discrimination in Lending describes factors that may be relevant to the business necessity defense, including cost and profitability.[238] The Federal Deposit Insurance Corporation (FDIC) has stated in its March 2021 Consumer Compliance Examination Manual[239] that factors that are relevant to the business justification include "cost and profitability."[240] As discussed below,[241] the inclusion of "profitability" hints at a justification that could be broad enough to include demand-based pricing.

3. Enforcement Actions

There are a number of fair lending enforcement actions that have targeted loan pricing disparities that are unrelated to credit risk and could indicate whether non risk-

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[235] 24 C.F.R. § 100.500 (2013).

[236] 24 C.F.R. § 100.500 (2020) ("[T]he challenged policy or practice is arbitrary, artificial, and unnecessary to achieve a valid interest or legitimate objective such as a practical business, profit, policy consideration, or requirement of law."). This is the language used to describe the burden on the plaintiff, as one of the changes made by the 2020 Rule was to increase the burden on the plaintiff at the first stage of a disparate impact claim.

[237] *Fair Lending Program*, DOJ CIVIL RIGHTS DIVISION, https://www.justice.gov/crt/fair-lending-program (last visited Aug. 9, 2023).

[238] Policy Statement on Discrimination in Lending, 959 Fed. Reg. 18,266 (Apr. 15, 1994). This joint statement included the Department of Housing and Urban Development, Office of Federal Housing Enterprise Oversight, Department of Justice, Office of the Comptroller of the Currency, Office of Thrift Supervision, Federal Reserve, FDIC, Federal Housing Finance Board, FTC, and National Credit Union Administration.

[239] *Fair Lending Laws and Regulations*, FDIC Consumer Compliance Examination Manual 1.1, 1.3 (2021), https://www.fdic.gov/resources/supervision-and-examinations/consumer-compliance-examination-manual/documents/4/iv-1-1.pdf.

[240] *Id.* The Federal Reserve provides the same interpretation in its Consumer Compliance Handbook. *See Federal Fair Lending Regulations and Statutes Overview*, Federal Reserve Bank 1, 6 (2017), https://www.federalreserve.gov/boarddocs/supmanual/cch/fair_lend_over.pdf ("Factors that may be relevant to the justification include cost and profitability.").

[241] *See infra* section III.B.1.

based pricing policies are covered by the business justification defense.[242] Because most of these cases result in settlements and consent orders, discussions of the conduct and legal standard are not robust.[243] Most of these cases involve conduct that can be broadly described as discretionary markups, although the type of challenged entity and exact practice differ. There are three main groups of cases—mortgage cases prior to the financial crisis, CFPB indirect auto lending cases, and FTC dealership cases.

The first group of discretionary markup cases was in the wake of the 2007–2008 financial crisis, when numerous enforcement cases were initiated to examine lending disparities in mortgage markets.[244] A typical example is the consent order from 2014 resulting from a challenge of National City Bank's practice of setting lending "base-rates"—the interest rate determined by borrower creditworthiness, also known as "par rates"—and then giving loan officers and brokers discretion to deviate from those rates. Importantly, loan officers and brokers were compensated for obtaining higher interest rates through a "yield spread premium" (YSP), whereby lenders permitted brokers to adjust interest rates relative to base-rates, subsequently dividing the excess with them.[245] This resulted in the origination of loans with higher fees and interest for racial minorities.[246] The consent order concludes that "African-American and Hispanic borrowers pay[] higher interest rates, fees, and other costs than similarly-situated non-Hispanic White borrowers that could not be explained fully by factors

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[242] Enforcement of ECOA and FHA—and fair lending law more generally—is spread across several agencies. With the creation of the CFPB in 2011, the Bureau assumed enforcement responsibility over ECOA with respect to entities within its jurisdiction. This loosely covers institutions like banks and lending companies. For a full discussion of the various CFPB authorities and institutions that they cover, *see* Adam J. Levitin, *The Consumer Financial Protection Bureau: An Introduction*, 32 REV. BANKING & FIN. L. 321, 343 (2013). Other federal agencies share enforcement authority with respect to institutions over which they have supervisory authority. With respect to FHA, HUD shares enforcement authority with the DOJ. *See* Jonathan Zasloff, *The Secret History of the Fair Housing Act*, 53 HARV. J. ON LEGIS. 247, 250 (2016). Although both HUD and the DOJ can bring enforcement action, they are subject to different statutes of limitations. On the enforcement of FHA, *see generally* ADAM LEVITIN, CONSUMER FINANCE: MARKETS AND REGULATION 455 (2d ed. 2023). My focus here is primarily on disparate impact claims, although there have been enforcement action cases that allege discriminatory conduct more directly. *See, e.g.*, Complaint at 3 ¶ 21, United States v. Long Beach Mortg. Co. No. 96-CV-6159 (C.D. Cal. Sept. 5, 1996).

[243] *See* Alex Gano, *Disparate Impact and Mortgage Lending: A Beginner's Guide*, U. COLO. L. REV. 1109, 1136 (2017) ("No court has ever decided a fair lending case under a theory of disparate impact on its merits.").

[244] There were a number of enforcement actions that predated the financial crisis. *See, e.g.*, Complaint United States v. Huntington Mortg. Co. (N.D. Ohio); Complaint, United States v. Long Beach Mortg. Co., No. 96-CV-6159 (C.D. Cal. 1996). The vast majority of cases that challenge discretionary markups, however, followed the financial crisis.

[245] Although this practice is now prohibited in mortgage lending—but not auto-lending, as discussed below it was a central issue in several consent orders, which considered the scope of business justification defense. *See* Howell E. Jackson & Laurie Burlingame, *Kickbacks or Compensation: The Case of Yield Spread Premiums*, 12 STAN. J.L. BUS. & FIN. 289 (2007) (discussing why YSPs are harmful for consumers). This type of compensation is prohibited under Title XIV of the Dodd–Frank Act. *See* 15 U.S.C. §§ 1403, 1639b(c)(1) (2018).

[246] *See* Consent Order, CFPB v. Nat'l City Bank, No. 13-1817, 2014 WL 12774769 (W.D. Pa. Jan. 9, 2014).

unrelated to race and national origin, in violation of the ECOA and the FHA."[247] Other cases include cases brought against Provident Funding Associates[248] and Bancorp South.[249]

The second group of cases involves the auto lending industry, in which discretionary markup policies were not prohibited after the financial crisis. In a series of cases following the now-invalidated 2013 CFPB Bulletin, the CFPB challenged auto financers' markup and compensation policies.[250] The main cases included complaints

[247] For other similar cases *See* Consent Order at 4–5, United States v. Provident Funding Associates, No. 15-2373 (N.D. Cal. May 28, 2015); Consent Order, United States v. BancorpSouth Bank, No. 16-118 (N.D. Miss. July 25, 2016); Complaint, United States v. Countrywide Fin. Corp., No. 11-10540 (C.D. Cal. Dec. 21, 2011); Consent Order, United States v. JPMorgan Chase Bank, N.A., No. 1:17-CV-00347-AJN (S.D.N.Y. Jan. 20, 2017); Consent Order, United States v. Primelending, No. 3:10-CV-2494-P (N.D. Tex. Jan. 11, 2011).

[248] Provident had argued that competing in the market required it to allow mortgage brokers the discretion to set and negotiate their own compensation with borrowers—and thus that the practice was justified by a legitimate business purpose. *See* Consent Order at 4–5, United States v. Provident Funding Associates, No. 15-2373 (N.D. Cal. May 28, 2015).

[249] *See* Consent Order, United States v. BancorpSouth Bank, No. 16-118 (N.D. Miss. July 25, 2016); *see also* Complaint, United States v. Countrywide Fin. Corp., No. 11-10540 (C.D. Cal. Dec. 21, 2011); Consent Order, United States v. JPMorgan Chase Bank, N.A., No. 1:17-CV-00347-AJN (S.D.N.Y. Jan. 20, 2017); Consent Order, United States v. Primelending, No. 3:10-CV-2494-P (N.D. Tex. Jan. 11, 2011) (challenging Primlending's practice of compensating its employees for increasing the interest rate of a mortgage).

[250] The auto lending industry had been under significant scrutiny in the years leading up to the 2013 CFPB Bulletin. Early studies by Professor Ian Ayres demonstrated how discretionary dealer markups disproportionately impacted racial minorities. *See* Ian Ayres (1991), *supra* note 141; Ian Ayres (1995), *supra* note 141; Ian Ayres & Peter Siegelman (1995), *supra* note 141. These audit studies were supported by a large observational study in 2003. *See* Mark A. Cohen, *Imperfect Competition in Auto Lending: Subjective Markup, Racial Disparity, and Class Action Litigation*, 8 REV. L & ECON. 21 (2012). This research resulted in a series of cases between 2003 and 2007 in which the National Consumer Law Center settled several class actions. *See* NAT'L CONSUMER L. CTR., AUTO ADD-ONS ADD UP: HOW DEALER DISCRETION DRIVES EXCESSIVE, ARBITRARY, AND DISCRIMINATORY PRICING (Oct. 2007), https://filearchive.nclc.org/car_sales/report-auto-add-on.pdf. Ian Ayres, Expert Report, Willis et al. v. American Honda Finance Corp. No. 3-02-0490 (M.D. Tenn. Jun. 30, 2004); *see also* Mark Cohen, *Imperfect Competition in Auto Lending: Subjective Markups, Racial Disparity, and Class Action Litigation*, (Vanderbilt L. and Econ. Rsch. Paper No. 07-01, 2006).

against Ally Financial in 2013,[251] Honda in 2015,[252] Fifth Third Bank in 2015,[253] and Toyota in 2016.[254] While this line of complaints ended with the subsequent invalidation of the CFPB 2013 Auto Lending Bulletin, it remains evidence of the Bureau's concern about discretionary markups.

The third group of cases are complaints initiated in recent years by the FTC targeting auto lending practices. These cases differ from the CFPB cases in that they challenge the dealerships directly for providing brokers or employees with discretion in setting the markup rather than challenging the financers providing the dealerships with discretion.[255] In 2020, the FTC brought a complaint against Liberty Chevrolet, an auto dealer whose markup practices resulted in discrimination.[256] Liberty had allowed sales personnel to add a markup to the base-rate, for which it was compensated by the financing entity.[257] This was followed by two similar cases in 2022, against North

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[251] *Ally Financial Inc.*, CFPB No. 2013-0010 (Dec. 19, 2013). Consent Order, United States v. Pacifico Ford, Inc., No. 2:07-CV-3470(PBT) (E.D. Pa. Sept. 4, 2007). According to the consent order, Ally used its underwriting model to determine the base-rate—the minimum interest rate at which it would finance or purchase an installment contact, also known as the "buy rate." Ally would then allow dealers discretion in setting the markup interest rate above the base-rate and would compensate dealers for the spread. CFPB analysis of the markup rates revealed that Black borrowers were paying on average 29 basis points more, Hispanic borrowers were paying 20 basis points more, and Asian and Pacific Islanders were paying 22 basis points more than white borrowers with similar base-rates. The consent order explicitly states that the markup pricing disparities were not based on risk-based considerations like "creditworthiness or other objective criteria related to borrower risk," concluding that "Ally's specific policy and practice are not justified by legitimate business need.

[252] *Honda*, CFPB No. 2015-0014 (July 14, 2015). The CFPB found that Honda allowed dealers to increase a consumer's interest rate above Honda's own "established risk-based buy rate." This resulted in a dealer markup that was 36 basis points higher for Black borrowers than similarly situated non-Hispanic white borrowers—with the difference not "based on creditworthiness or other objective criteria related to borrower risk."

[253] *Fifth Third Bank*, CFPB No. 2015-0024 (Sept. 28, 2015). Black borrowers were charged 35 basis points more, and Hispanic borrowers were charged 36 basis points more, in dealer markup than similarly situated non-Hispanic white borrowers for retail installment contracts.

[254] *Toyota Motor Credit Corp.*, CFPB No. 2016-0002 (Feb. 2, 2016). There were a number of enforcement actions against auto lenders that predate the CFPB. *See, e.g.*, Partial Consent Decree, United States v. Nara Bank, No. 2:09-CV-7124(RGK)(JC) (C.D. Cal. Nov. 18, 2009). Toyota was accused of allowing auto dealers to offer discretionary interest rates above its buy rate based on "individual borrowers' creditworthiness and other objective criteria related to borrower risk." This discretion resulted in higher rates charged to racial minorities. That CFPB examination revealed that, on average, Black borrowers were charged 27 basis points more, and AAPI borrowers were charged 18 basis points more, than similarly-situated non-Hispanic white borrowers. Again, the CFPB concluded that Toyota's "policy and practice" of compensating dealers from markup revenue was not justified by legitimate business purpose.

[255] Section 1029 of Dodd–Frank excluded auto dealers from the CFPB's direct oversight. Thus, the cases brought by the CFPB deal with indirect auto lending activity.

[256] *See* Complaint for Permanent Injunction and Other Equitable Relief, Fed. Trade Comm'n v. Liberty Chevrolet, Inc., No. 20-CV-3945 (S.D.N.Y. May 21, 2020).

[257] *See* Complaint at 12, Fed. Trade Comm'n v. Liberty Chevrolet, Inc., No. 1:20-CV-3945 (S.D.N.Y. May 21, 2020). The case ultimately settled the following year. *See* Stipulated Order for Permanent Injunction and Other Equitable Relief, Fed. Trade Comm'n v. Liberty Chevrolet, Inc., No. 1:20-CV-3945 (S.D.N.Y. May 22, 2020), ECF Nos. 9, 10. As discussed below, the Liberty complaint differs from

American Automotive Services[258] and Passport Automotive Group,[259] for discriminating against racial minorities, emphasizing the discretionary nature of their markup pricing policy.

4. Private Litigation

There are several fair lending cases in the lower courts that have suggested that the business necessity justification relates to the creditworthiness of a borrower—that is, risk-based pricing, implying that the business justification would not cover demand-based pricing.[260] In some of the cases, the court focused on the lenders claim that a factor used for lending decisions is related to creditworthiness,[261] but fall short from considering whether non risk but profit-related considerations can be covered by the business justification.[262]

In *Miller v. Countrywide Bank, N.A.*,[263] the District of Massachusetts expressed hostility towards the lender's argument that pricing disparities were a result of differing borrowers' willingness-to-pay and was therefore not discriminatory. Although the court did not explicitly discuss this point in the context of disparate impact's business justification, it suggested that it did not view demand-based market pricing, unrelated to creditworthiness, as a defense to disparate impact.

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other markup cases in that the complaint suggested that Liberty engaged in disparate treatment: "Defendants have instructed sales personnel to charge African-American and Hispanic consumers higher markups and additional fees . . . stating that these consumers have limited education."

[258] *See* Complaint for Permanent Injunction, Monetary Relief, and Other Relief, Fed. Trade Comm'n v. N. Am. Auto. Servs., No. 1:22-cv-01690 (N.D. Ill. Mar. 31, 2022).

[259] The FTC alleged that Passport, the owner and operator of nine car dealerships, engaged in "discriminatory and unfair financing" that imposed higher costs on Black and Latino consumers. Like previous auto finances cases, Passport had the discretion to add a markup beyond the financing buy rate. *See* Complaint for Permanent Injunction, Monetary Relief, and Other Relief, Fed. Trade Comm'n v. Passport Auto. Grp., No. 8:22-cv-02670-GLS (D. Md. Oct. 18, 2022).

[260] *See supra* section I.A.1.

[261] In *A.B. & S. Auto Service v. South Shore Bank of Chicago*, the Northern District of Illinois held that once there is a prima facie case of disparate impact, the lender must demonstrate that "its practice of considering an applicant's criminal record is legitimately related to the extension of credit," ultimately concluding that a person's criminal record was related to creditworthiness because it related to their "character and judgment." 962 F. Supp. 1056, 1064 (N.D. Ill. 1997)),

[262] In *Lewis v. ACB Business Services*, the Sixth Circuit found that ECOA was only intended to prohibit credit determinations based on "characteristics unrelated to creditworthiness." The court did not explicitly consider other pricing practices, like demand-based pricing, and whether they could be defended under the business justification. 135 F.3d 389, 406 (6th Cir. 1998).

[263] 571 F. Supp. 2d 251, 253 (D. Mass. 2008).

There has also been notable private litigation concerning discretionary markup practices in both auto lending[264] and mortgages,[265] which also suggest skepticism over the use of demand-based pricing strategies.[266] Most of these markup lawsuits were settled, offering limited insights into how these practices would be analyzed under the business justification.[267]

The next section considers what can be learnt from the regulatory language, enforcement action and private litigation about the boundaries of the business justification, and specifically whether it includes demand-based pricing—PD—or whether it is limited to arguments related to creditworthiness. My conclusion is that the open-ended language in regulatory guidance is not resolved by challenges to markup pricing, as the interpretation of these challenges can be reconciled both with the view that the business justification should exclude PD and that it should include PD, resulting in a vague and conflicting treatment of PD.

B. Defining the Boundaries of the Business Justification

The core issue in defining the boundaries of the business justification is whether to adopt a narrow or broad definition, which is the determining factor in whether PD discrimination is indeed impermissible discrimination or whether PD that creates disparities can be justified and escape liability under the disparate impact

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[264] *See, e.g.*, *Willis v. Am. Honda Fin. Corp.*, No. 3-02-0490 (M.D. Tenn. Nov. 8, 2004); *Claybrooks v. Primus Auto. Fin. Serv., Inc.*, 363 F. Supp. 2d 969 (M.D. Tenn. 2005). For further discussion of these cases, *see* Cohen, *supra* note 250, at 49. Between 2003 and 2007, the National Consumer Law Center (NCLC) settled several auto finance cases. A list of these cases and settlements can be found at NAT'L CONSUMER L. CTR, CASE INDEX – CLOSED CASES, https://nclc-old.ogosense.net/litigation/case-index-closed-cases.html.

[265] *See, e.g. Miller v. Countrywide Bank, N.A.*, 571 F. Supp. 2d 251 (D. Mass. 2008); *Ramirez v. GreenPoint Mortg. Funding, Inc.*, 633 F. Supp. 2d 922 (N.D. Cal. 2008); *Ware v. Indymac Bank*, 534 F. Supp. 2d 835 (N.D. Ill. 2008); *Zamudio v. HSBC North America Holdings, Inc.*, No. 07-C-4315, 2008 WL 517138 (N.D. Ill. Feb. 20, 2008); *Martinez v. Freedom Mortg. Team, Inc.*, 527 F. Supp. 2d 827 (N.D. Ill. 2007); *Newman v. Apex Financial Group, Inc.*, No. 07 C 4475, 2008 WL 130924 (N.D. Ill. Jan. 11, 2008); *Jackson v. Novastar Mortg., Inc.*, 645 F. Supp. 2d 636 (W.D. Tenn. 2007); *Guerra v. GMAC, LLC.*, 2009 WL 449153 (E.D. Pa. Feb. 20, 2009) (denying a motion to dismiss); *Taylor v. Accredited Home Lenders, Inc.*, 580 F. Supp. 2d 1062 (S.D. Cal. 2008) (denying a motion to dismiss); *Garcia v. Countrywide Fin. Corp.*, No. 07-1161 (C.D. Cal. Jan. 15, 2008)(denying motion to dismiss, including claims of discretionary markups).

[266] For a detailed discussion of one example of this type of litigation, *see* Ian Ayres, Gary Klein & Jeffrey West, *The Rise and (Potential) Fall of Disparate Impact Lending Litigation*, *in* EVIDENCE AND INNOVATION IN HOUSING LAW AND POLICY 231, 234 (Lee Anne Fennell & Benjamin J. Keys eds. 2017) (discussing the Wells Fargo lending discrimination case and highlighting the expert report, which used regression analysis to demonstrate the residual disparities not explained by credit risk variables).

[267] Since these cases were settled, the Supreme Court in *Wal-Mart Stores, Inc. v. Dukes*, 564 U.S. 338 (2011), refused class certification where plaintiffs were challenging the company's policy to provide promotion discretion to local managers. The Court held that there was no challenge to a uniform policy, as providing discretion was the opposite of a policy. Although this case involves employment discrimination, it has had an impact on class actions in the fair lending context. *See* Ayres et al., *supra* note 224, at 245 ("After Wal-Mart, almost no class remedies based on the impact of discretionary decision making remain.").

doctrine.[268] A narrow business justification would restrict the defense to creditworthiness, permitting certain forms of risk-based pricing but excluding demand-based PD. This definition of the business justification would expand the scope of the disparate impact prohibition, deeming certain profit-motivated and facially-neutral pricing policies discriminatory when they create disparities for protected groups. A narrow business justification is therefore consistent with the view that disparate impact doctrine is not limited to covert intentional discrimination but instead is intended to prevent the perpetuation of existing inequality in the critical domain of consumer credit.[269]

A broad business justification would permit defenses relating to other profit-motivated considerations—like PD. Under this view, PD practices are considered legitimate under the business justification as long as they do not explicitly use protected characteristics and are not motivated by animus or intentional discrimination.[270] A broad business justification therefore limits the scope of disparate impact doctrine and is more consistent with the view that the doctrine is meant to address only covert *intentional* discrimination.[271]

Proponents of a narrow business justification that would only include risk-based pricing point to case law to support this position,[272] primarily *Miller* which is the case most explicitly hostile towards the use of "market forces" arguments to defend markup disparities.[273] However, even *Miller* falls short of explicitly holding that only risk-based pricing strategies can be defended.[274]

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[268] There are additional important questions regarding the business justification beyond the issue of its scope, such as who has the burden of showing the business justification and the strength of the evidence needed. *See* Ross & Yinger, *supra* note 4, at 317; Peter E. Mahoney, *The End(s) of Disparate Impact: Doctrinal Reconstruction, Fair Housing and Lending Law, and the Anti-Discrimination Principle*, 47 EMORY L.J. 409 (1998).

[269] *See* Samuel R. Bagenstos, *Disparate Impact and the Role of Classification and Motivation in Equal Protection Law after Inclusive Communities*, CORNELL L. REV. 1115, 1132 (2016); *see also* Richard A. Primus, *The Future of Disparate Impact*, 108 MICH. L. REV. 1341, 1352 (2010) ("Disparate impact doctrine was widely understood as a means of redressing unjust but persistent racial disadvantage in the workplace."); *see also* Noah Zatz, *Disparate Impact and the Unity of Equality Law*, 97 B.U. L. REV. 1357, 1268 (2017) ("[O]ther efforts to situate disparate impact liability within a broader theory generally take structural subordination between groups as fundamental"); *supra* note 48 and accompanying text..

[270] See Susan Grover, *The Business Necessity Defense in Disparate Impact Discrimination Cases*, 30 GA. L. REV. 387, 414 (1995) (arguing for a narrow business necessity defense in the case of employment discrimination and not a broad defense as "to permit the employer to prevail simply by proving that it had legitimate, non-discriminatory reason for adopting the practice is to change impact analysis into a search for intent to discriminate.").

[271] Elsewhere I have referred to this view of disparate impact as the "intent-based" view (as opposed to the "effect-based" view) of disparate impact. *See* Gillis, *supra* note 11, at 1196; *see also* Richard A. Primus, *Equal Protection and Disparate Impact: Round Three*, 117 HARV. L. REV. 494, 520 (2003).

[272] *See, e.g.*, Bartlett et al., *supra* note 54 at 31.

[273] *Miller v. Countryside Bank, N.A.*, 571 F. Supp. 2d 251, 258 (D. Mass. 2008).

[274] The court seems primarily unimpressed by the haphazard way in which markups were determined in that case, repeatedly referring to them as being based on "subjective" criteria. However, demand-based pricing can theoretically be just as evidence-based as risk-based pricing.

Below I discuss how regulatory guidance and enforcement actions are willing to contemplate non-risk-based pricing practices and that ultimately there is ambiguity in whether regulators and courts have adopted a narrow or broad business justification.

1. Ambiguity in Regulatory Language

Most rules and guidance documents hint towards a broader business justification that includes more than just risk-based pricing, but they fail to provide adequate guidelines on its boundaries. The HUD 2013 Disparate Impact Rule is couched in terms of "substantial, legitimate, nondiscriminatory interests,"[275] and the Rule's preamble explicitly refuses to endorse (or reject) a profit motivation under the business justification.[276] This is further reflected in the language of the 2023 Rule's preamble, which states that profitability—and not just cost—may form the basis for a business justification[277] but refuses to adopt profitability as a per se defense.[278] The official interpretation of Regulation B, implementing ECOA, is equally vague stating that the business justification is available under ECOA when the challenged practice "meets a legitimate business need."[279]

Regulatory guidance elsewhere more explicitly uses the broader language of profit-motivated pricing policies as a business justification, which would likely include PD. Examples of such language can be found in the 1994 Interagency Policy Statement on Discrimination in Lending,[280] the March 2021 FDIC Consumer Compliance

[275] 24 C.F.R. § 100.500 (2013).

[276] *Id.* In the preamble to the 2013 Rule, HUD references a comment to the Proposed Rule that requested that "the final rule expressly state that increasing profits, minimizing costs, and increasing market share qualify as legitimate, nondiscriminatory interests." HUD, in response, refuses to endorse or reject this interpretation because "what qualifies as a substantial, legitimate, nondiscriminatory interest for a given entity is fact-specific and must be determined on a case-by-case basis." That said, the preamble refuses to explicitly profit motives as a legitimate business defense as "creating per se defenses would erroneously weaken the rule."

[277] The preamble to the 2023 Rule states that "HUD agrees that factors that may be relevant to a defendant's step two burden could include cost and profitability . . . . [T]he rule still allows regulated entities to make the practical business choices and profit-related decisions that sustain a vibrant and dynamic free-enterprise system." *Id.* Part of the tension in this language is that scholars have disagreed over whether PD in this setting reflects a functioning market. *See* Ayres, *supra* note 20, at 692.

[278] 24 C.F.R. § 100. The 2020 Rule, which is no longer in effect, made direct reference to "profit" by saying that a practice could be defended with a legitimate objective "such as a practical business, profit, policy consideration, or requirement of law." *See* 24 C.F.R. § 100.500 (2020).

[279] *See* Regulation B Official Interpretation, 12 C.F.R. § 1002.6, Supp. I § 1002.6(a)-2. The example given in the interpretation use of income information for an overdraft line when income information has a relationship to creditworthiness.

[280] The Statement describes factors that may be relevant to the legally sufficient justification, including cost and profitability. *See* Policy Statement on Discrimination in Lending, 959 Fed. Reg. 18,266 (Apr. 15, 1994).

Examination Manual,[281] and the Federal Reserve's Consumer Compliance Handbook.[282]

The bottom line is that the perimeters of the business justification as it relates to non-risk-related, demand-based price personalization—meaning PD—is unclear.[283] While the possibility of profit-maximizing price strategies constituting a business justification is implied by regulatory guidance, there seems to be a deliberate resistance by regulators against defining when these strategies are justified.

2. Ambiguity of Markup Cases

The CFPB and other agencies with ECOA and FHA enforcement authority have focused on cases that challenge markups beyond the loan "base-rate." As discussed in section III.A.2, some of these markup cases involve mortgage originators' loan officer discretion, some involve auto lenders allowing dealership markups, and others challenged auto dealerships that allowed their employees to set markups.

One interpretation of these cases is that the discretionary markup pricing is illegal because the business justification cannot be used to justify demand-based—PD—pricing disparities. Support for this position can be found in statements that the lender faces liability because the pricing was unrelated to creditworthiness, suggesting that risk-based pricing alone can justify disparities.[284]

A different interpretation of the markup cases is that the underlying concern was that disparities were a result of intentional discrimination, akin to disparate treatment. Under this view, the cases do not speak to the issue of whether demand-based pricing is prohibited.[285] Even when complaints do not explicitly evoke disparate

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[281] *Fair Lending Laws and Regulations*, FDIC Consumer Compliance Examination Manual 1.1, 1.3 (2021), https://www.fdic.gov/resources/supervision-and-examinations/consumer-compliance-examination-manual/documents/4/iv-1-1.pdf.

[282] *Federal Fair Lending Regulations and Statutes Overview*, Federal Reserve Bank 1, 6 (2017), https://www.federalreserve.gov/boarddocs/supmanual/cch/fair_lend_over.pdf ("Factors that may be relevant to the justification include cost and profitability.").

[283] Other regulatory statements reflect the current ambiguity over the exact definition of a business justification. The FFIEC Interagency Fair Lending Examination Procedures from 2009 stated that "[t]here is very little authoritative legal interpretation" of the business necessity. *See Interagency Fair Lending Examination Procedures*, FFIEC app. (2009), https://www.ffiec.gov/pdf/fairappx.pdf; *see also* CREDIT DISCRIMINATION, NAT'L CONSUMER L. CTR. § 4.3.2.5, https://library.nclc.org/book/credit-discrimination ("With respect to claims under the ECOA, no guidance is given in Regulation B as to what might constitute a legitimate business necessity in credit discrimination cases.").

[284] *See, e.g.*, Consent Order, United States v. Provident Funding Associates, No. 15-2373 (N.D. Cal. May 28, 2015) (stating that that Provident faced liability because brokers were allowed to consider factors "unrelated to an applicant's credit risk characteristics or loan product features"). The consent order in *Ally Financing* similarly concludes that pricing disparities were not based on "creditworthiness or other objective criteria related to borrower risk." According to the consent order "Ally's specific policy and practice are not justified by legitimate business need" but does not contain any discussion of this point. *Ally Financial Inc.* at 8, CFPB No. 2013-0010 (Dec. 19, 2013). *See also, e.g.*, *Honda*, CFPB No. 2015-0014 (July 14, 2015).

[285] For example, in the Liberty case, the FTC claimed that the dealership's markups were based on borrowers' race., stating in the complain that the lenders "have instructed sales personnel to charge

treatment, many cases suggest that the markups could not be attributed to factors other than race. These cases typically challenge the originator or lender's policy for allowing discretion rather than securitizing the markups directly. As a result, even if the markup was a result of intentional discrimination, the originator's discretion policy would be challenged under a theory of disparate impact.[286] But the underlying concern is that the employee or broker directly considered a protected characteristic in pricing and not that a truly neutral demand-based pricing rule resulted in disparities. The National City Bank consent order, for example, concludes that the differing treatment "could not be explained fully by factors unrelated to race and national origin,"[287] suggesting that third-party brokers may be directly factoring in these protected characteristics. Under this interpretation, the cases do not provide guidance on whether demand-based pricing can be defended under the business justification.

A similar ambiguity is reflected in the CFPB's recent Supervisory Highlights publication, which deals with the practice of lending pricing exceptions in response to competitive offers, a form of PD.[288] The report states that CFPB examiners have found that lenders have "violated ECOA and Regulation B by discriminating in the

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African-American and Hispanic consumers higher markups and additional fees . . . stating that these consumers have limited education" and arguing that the markups were directly conditioned on borrowers' race. *See* Complaint at 12, Fed. Trade Comm'n v. Liberty Chevrolet, Inc., No. 20-CV-3945 (S.D.N.Y. May 21, 2020).

[286] The possibility that markup discretion cases fit into a kind of hybrid disparate treatment/impact doctrine has been discussed before. *See* Robert G. Schwemm & Jeffrey L. Taren, *Discretionary Pricing, Mortgage Discrimination, and the Fair Housing Act*, 45 HARV. C.R.-C.L. L. REV. 375, 406 (2010) (arguing that the conduct being scrutinized arguably a neutral practice but that the brokers' discretion may be intentionally used to discriminate against protected groups). For a discussion of this strategy for challenging discretionary policies, and the potential challenges associated with this litigation strategy, *see* Ayres et al., *supra* note 266.

[287] Consent Order, CFPB v. Nat'l City Bank, No. 13-1817, 2014 WL 12774769 (W.D. Pa. Jan. 9, 2014). The wording "factors unrelated to race and national origin" alludes to the possibility that third-party brokers are taking race and national origin directly, which makes the core issue closer to intentional discrimination. Similar language is used in the 2017 JPMorgan complaint. Complaint, United States v. JPMorgan Chase Bank, N.A., No. 1:17-CV-347, 3 (S.D.N.Y. Jan. 18, 2017) (stating that racial minorities paid higher interest rates "not based on their creditworthiness or other objective criteria related to borrower risk but because of their race or national origin"). Also see the DOJ's complaint against Countrywide discussed in Ian Ayres et al., *The Rise and (Potential) Fall of Disparate Impact Lending Litigation*, *in* EVIDENCE AND INNOVATION IN HOUSING LAW AND POLICY 231–54 (Lee Anne Fennell & Benjamin J. Keys eds., 2017). Other cases, such as *BancorpSouth* claim that similarly situated minorities were being treated differently also suggest the markup disparities were based on a protected characteristic (the bank had "illegally discriminat[ed] against African-American applicants in the underwriting [and pricing] of certain mortgage loans.") Consent Order, United States v. BancorpSouth Bank, No. 1:16-cv-118 (N.D. Miss. July 25, 2016). One of the reasons that this wording is vague is that it is unclear what makes two borrowers "similarly situated." If demand-based pricing factors can be included in the definition of "similarly situation," then disparities arising from PD may be justifiable as a matter of fair lending law. For example, the definition in the consent order included whether a borrower presented the broker with a more competitive offer, resulting in a lower price, such that that business necessity can cover noncredit risk profitability considerations. In contrast, in *National City Bank*, the differences in pricing cannot be explained by profitability considerations.

[288] CFPB, SUPERVISORY HIGHLIGHTS, ISSUE 30 (Summer 2023).

incidence of pricing exceptions across a range of ECOA-protected characteristics,"[289] suggesting that the conduct is suspected of constituting disparate treatment.[290]

If discretionary markup cases implicitly or explicitly rely on a theory that the markups are based on race, they should not be interpreted as speaking directly to the question of whether PD discrimination is prohibited. This leaves open the question of whether a narrow or broad business justification has been adopted in these cases.

3. Ambiguity of Remedies

The remedies in many of these consent order only deepens the mystery with respect to the regulatory interpretation of the business justification and whether PD disparities can avoid liability. Some of these settlements require that dealerships end the personalization of non-risk-based markups altogether,[291] suggesting that PD discrimination cannot be justified under the disparate impact doctrine. At other times, the consent order requires that lenders in the future provide sufficient documentation and evidence that disparities are a result of price matching alternative offer and not intentional discrimination.[292] This suggests that demand-based pricing—PD—is a legitimate pricing strategy as long as it is not used as a pretext for intentional discrimination.[293]

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[289] *Id.* at 15.

[290] On the other hand, the report suggests the CFPB's concerns are statistical, with no "evidence of legitimate non-discriminatory reasons that explained the disparities." The report is ultimately ambiguous because it does not explain what constitutes "non-discriminatory reasons" or when consumers are "similarity situated."

[291] *See, e.g.*, Stipulated Order for Permanent Injunction, Monetary Relief, and Other Relief, Fed. Trade Comm'n v. Passport Auto. Grp., No. 8:22-cv-02670-GLS (D. Md. Oct. 18, 2022) ("The dealership must [c]harge an interest rate not greater than the Buy Rate on all retail installment sales contracts, or [c]harge the same number of basis points… above the Buy Rate on all non-subverted retail installment sales contracts.") Stipulated Order for Permanent Injunction and Other Equitable Relief, Fed. Trade Comm'n v. Liberty Chevrolet, Inc., No. 1:20-CV-3945 (S.D.N.Y. May 22, 2020), ECF Nos. 9, 10. The CFPB's 2013 Auto Lending Bulletin had similarly recommended that indirect auto lenders impose controls on dealer markup and compensation policies or eliminate dealer discretion altogether by instead compensating dealers through a flat fee per transaction.

[292] *See, e.g.*, Stipulated Order for Permanent Injunction, Monetary Relief, and Other Relief, Fed. Trade Comm'n v. Napleton., No. 1:22-cv-01690 (N.D. Ill. Mar. 31, 2022) at 15 (explaining that deviating from the preset standard number of basis points above the buy rate is permitted upon "a consumer presenting a more favorable offer from another dealer . . . provided that [dealer] creates and maintains a contemporaneous written record"); *see also Honda*, CFPB No. 2015-0014 (July 14, 2015) (requiring Honda to establish a compliance program for monitoring dealer markup and providing fair lending training to employees and dealers); Stipulated Final Judgement and Order for Permanent Injunction and Other Equitable Relief, Fed. Trade Comm'n v. Golden Empire Mrtg., Inc., No. CV 09-03227 CAS (C.D. Cal. Sept. 16. 2010) ("In the event that the reason is the business necessity of matching a lower competing offer, the supporting documentation shall include a copy of the competing offer or a contemporaneous written narrative record explaining why such documentation was not obtained . . . .").

[293] *See, e.g.*, Statement of Chair Lina M. Khan Joined by Commissioner Rebecca Kelly Slaughter in the Matter of Napleton Automotive Group, FTC No. 2023195, at 15 (2022)(explaining that deviating from the preset standard number of basis points above the buy rate is permitted upon "a consumer presenting a more favorable offer from another dealer . . . provided that [dealer] creates and maintains a

The conclusion is that the discretionary markup cases are at times consistent with a narrow business justification, prohibiting any type of pricing strategy like PD that creates disparities other than risk-based pricing, and a broad interpretation, according to which PD is permissible as long as it is not a pretext for intentional discrimination. Ultimately, a close reading of the regulatory language and enforcement actions is that the analysis of the permissibility of PD discrimination is either absent, vague or inconsistent.

C. The Binary Approach of the Business Justification

The previous Section revealed the ambiguity of whether current discrimination doctrines actually restrict PD discrimination, which depends on whether the business justification should be interpreted narrowly or broadly. But regardless of whether one adopts a narrow or broad interpretation of the business justification, the current structure of the defense is binary—it either provides a full defense of disparities or no defense at all. For example, adopting the narrow view of the business justification would mean that any demand-based policy that creates disparities, even if they were not very large, would be illegal. Conversely, a broad interpretation of the business justification would allow any disparities created by demand-based policies to be justified, even if those policies were minimally profitable to the lender.[294]

Moreover, even if the magnitude of harm were to play a role in disparate impact claims on the margin,[295] the degree of disparity arising from a pricing policy still does not influence whether there is a business justification for the pricing policy. Essentially, if a pricing policy aligns with predefined categories in the business

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contemporaneous written record"); *see also* Brent W. Ambrose et al., *Does Borrower and Broker Race Affect the Cost of Mortgage Credit?*, 44 REV. FIN. STUD. 790 (2021) (showing that minorities pay more for mortgages when obtaining loans from white brokers suggesting a direct bias against black borrowers).

Some consent orders also require lenders to base pricing on "objective borrower characteristics," which does not necessarily limit pricing to risk-related factors only. *See, e.g.*, Consent Order, United States v. BancorpSouth Bank, No. 1:16-cv-118, 11 (N.D. Miss. July 25, 2016) ("Defendant will utilize rate sheets to price all Mortgage Loans to natural persons originated by its Community Banking Department that exclusively base pricing on objective credit and borrower characteristics supported by a legitimate business need.").

[294] There is some threshold under the business justification. For a discussion of the European non-discrimination doctrine of indirect discrimination (not specific to fair lending), and a seller's ability to provide an "objective justification" to defend a facially neutral pricing policy that creates disparities, see Zuiderveen 2019, supra note 20, at 413 (showing that the "objective justification" is unclear as to whether a profit motivation can constitute a defense).

[295] The first step of the burden shifting framework does not make reference to required magnitude of disparities. *See* HUD 2023 Disparate Impact Rule, at 19,486 ("HUD further declines to set statistical standards, including statistical thresholds . . . ."); *see also* Kevin Tobia, *Disparate Statistics*, 126 YALE L.J. 2382 (2017). In employment disparate impact claims typically follow a showing of a magnitude of disparities of at least 4/5 to survive the first step of the burden shifting framework. *See* Uniform Guidelines on Employment Selection Procedures, 29 C.F.R. § 1607.15 (1978). That said, this ratio can be regarded as more of a rule of thumb than a definitive test for identifying disparate impact. *See* Manish Raghavan & Pauline T. Kim, *Limitations of the 'Four-Fifths Rule' and Statistical Parity Tests for Measuring Fairness*, 8 GEO. L. TECH. REV. (forthcoming 2023). Moreover, the third step, which allows the plaintiff to show that there is a less discriminatory alternative, also limits the ability of lenders to adopt policies that create unnecessarily large disparities.

justification, the scale of disparity it creates is deemed acceptable. When the business justification is interpreted expansively, all disparities resulting from a price-matching policy are considered permissible, irrespective of their magnitude. By contrast, a narrow interpretation, limited to only risk-based pricing, would classify even minimal disparities from price matching as discriminatory.

This binary paradigm is ineffective not just for demand-based pricing but also for risk-based pricing. If a pricing policy causes disparities without direct reliance on protected group characteristics, it is justified if it can be shown that the disparities stem from default risk differences.[296] For instance, consider a lender transitioning to a newer pricing algorithm, leading to higher interest rates for women. If improved accuracy, even slightly, is achieved by the new algorithm, it can validate any arising disparities, which is a troubling proposition.[297]

In the next Section, I propose an alternative to the binary approach of the business justification. This proposed alternative focuses on the harm produced by a pricing rule that takes a spectrum view of discrimination. On this approach, the justifiability of PD discrimination turns on the harm the pricing rule creates, which depends on both the magnitude of disparities and the normative weight of the particular pricing practice.

IV. A HARM-BASED APPROACH TO PRICE DISCRIMINATION DISCRIMINATION

The previous Section explored the law's ambiguity in determining whether the business justification should be interpreted narrowly or broadly and hence whether the disparate impact doctrine restricts PD discrimination. This Article advocates for an alternative approach to PD discrimination that moves away from the existing binary framework of viewing PD as either per se legal or per se illegal. It instead considers the harms associated with a specific pricing strategy to determine whether the lender faces liability. Although my focus is on demand-based pricing, arguably, risk-based pricing should also be subject to a harm-based examination.

This approach would consider two dimensions of harm. The first is the magnitude of disparities created by a challenged pricing strategy: If a demand-based pricing strategy does not create large disparities between pricing for white and minority borrowers, the law should take that magnitude into account when determining liability. The second relates to the normative justification of the pricing strategy. This most clearly comes into play when comparing risk-based and demand-based pricing: Risk-based pricing may have greater normative weight because it is intended to compensate lenders for risk and is arguably necessary for a functioning credit market. But even when considering demand-based pricing, different types of PD strategies may have

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[296] The 2023 HUD Disparate Impact requires that the justification be "substantial" but provides little guidance. *See* 2023 Disparate Impact Rule, 24 C.F.R. § 100.500(b)(2) ("A legally sufficient justification must be supported by evidence and may not be hypothetical or speculative.").

[297] *See* Fuster et al., *supra* note 16 (explaining how the statistical technology itself could change the disparities created by a pricing rule).

different normative justifications. For example, some PD policies may produce positive externalities, as they could encourage consumer shopping, which increases market efficiency. Prohibiting such pricing policies would affect consumers' incentives to seek information, inadvertently suppressing information-seeking and comparative shopping behaviors that actually promote market competition. This Part argues for a framework that takes into account the various dimensions of harm associated with demand-based pricing strategies.

Section IV.A describes the role that the magnitude of disparities should play in a harm-based framework for assessing the legality of PD discrimination. It proposes a taxonomy of pricing strategies and discusses the reasons we might wish to distinguish between them as a normative matter. As a starting point, it analyzes three dimensions of PD strategies: (1) active vs. passive, (2) predicting confusion vs. predicting behavior, and (3) advertisement vs. hiding.

Section IV.B argues that this harm-based analysis can be incorporated into the legal prohibition on UD(A)AP, enforced by the FTC and CFPB. It explains how the three prongs contemplated by the FTC Act and Dodd–Frank—unfairness, abusiveness, and deceptiveness—may provide a framework for effective future enforcement.

A. Analyzing Price Discrimination Discrimination Harm

I argue that the determination of whether a lender utilizing a PD pricing strategy should face liability for discrimination should depend on the harm created by their policy. Below, I discuss two dimensions of PD discrimination harm: (1) the magnitude of the pricing's disparities and (2) its normative justification.

1. Magnitude of Disparities

Evaluating PD discrimination should depend on the magnitude of disparities induced by pricing rules to gauge discriminatory harm.[298] Considering the magnitude of harm is consistent with the goals of fair lending law, despite the disparate impact doctrine's development in a manner that largely overlooks the magnitude of disparities.[299] The conventional understanding of disparate impact is as a structured decisionmaking process.[300] On this understanding, disparities are subject to a binary

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[298] The considered disparity harm is the gap in price discrimination for protected groups. Other researchers have discussed other fairness harms in the context of personalized pricing. *See*, for example, Xi Chen, David Simchi-Levi & Yining Wang, *Utility Fairness in Contextual Dynamic Pricing with Demand Learning*, SSRN ELEC. J. (2023) (discussing a fairness constraint that requires that pricing policy to offer similar prices to customers whose utility values are similar, even when their characteristics are different).

[299] See *supra* section III.C.

[300] Louis Kaplow, *Balancing Versus Structured Decision Procedures: Antitrust, Title VII Disparate Impact, and Constitutional Law Strict Scrutiny*, 167 U. PA. L. REV. 1375, 1420 (2019) (discussing how disparate impact would be analyzed under a balancing approach rather than a structured decisionmaking approach). *See* Grover 1995, *supra* note 270, at 417 (discusses the balancing approach to the business necessity in employment discrimination, arguing that the rule-based approach is preferrable given the possibility that balancing will introduce bias).

evaluation rather than a spectrum analysis.[301] But the goal of fair lending goes beyond discriminatory intent to preventing the perpetuation of existing inequalities in novel lending practices, even those practices without improper intent.[302] Accordingly, it is the actual harm induced by the pricing strategy that warrants attention.[303]

It is likely that the magnitude of disparities already plays a greater role in fair lending enforcement than is currently recognized. Past class actions and regulatory enforcement cases tend to be very specific about quantifying the disparities created by pricing policies.[304] And even if disparate impact doctrine is intended to ignore the magnitude of disparities for a finding of liability, it is highly improbable that a court or a regulatory would overlook weighing the relative harms and benefits as a practical matter.[305]

Despite the practical challenges that may arise from moving to a spectrum analysis of harm, lenders are currently required to engage in ongoing monitoring of their pricing practices. A spectrum analysis may be onerous to execute, as it requires the quantification of disparities created by pricing policies and may lead to increased ambiguity when the permissibility of disparities depends on the particular pricing policy. Such vagueness could pose uncertainty for lenders attempting to institute pricing rules, particularly when they cannot predict the resulting disparities. However, analyzing the magnitude of disparities has been implicit in some regulatory guidance. For example, a no-action letter issued by the CFPB to Upstart in 2017 presents a contextual, incremental approach to assessing liability under ECOA. The letter

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[301] *See generally* Mark MacCarthy, *Standards of Fairness for Disparate Impact Assessment of Big Data Algorithms*, 48 CUMB. L. REV. 67 (2018) (discussing the extent to which disparate impact represents a moral wrong or should be considered discrimination altogether).

[302] *See also* Samuel R. Bagenstos, *Disparate Impact and the Role of Classification and Motivation in Equal Protection Law After* Inclusive Communities, 101 CORNELL L. REV. 1115, 1132 (2016); *see also* Primus, *supra* note 269, at 1352 ("Disparate impact doctrine was widely understood as a means of redressing unjust but persistent racial disadvantage in the workplace . . . .").

[303] In considering the harms of price discrimination more generally, the UK Financial Conduct Authority (FCA) has laid out several questions that may be relevant to considering harm in the context of discrimination as well. For example, the FCA has suggested that beyond the number of people harms and the profitability gap (similar to the magnitude of interest rate differences I consider), the harm may be impacted by the precise group that is harmed. *See* FIN. CONDUCT AUTHORITY, FAIR PRICING IN FINANCIAL SERVICES, DP 19/9, at 16 (2018), Although ECOA and the FHA do not create a hierarchy without categories of protected groups, there may be groups that are considered more vulnerable than others.

[304] *See supra* section III.A.2.

[305] *See* Kaplow, *supra* note 300, at 429 ("Note that, even if the doctrine does not formally admit any dependence of the stridency in step 2 . . . on the magnitude of what is found in step 1 . . . it seems plausible that a judge who embraced this view would at least to some degree be influenced by [the disparity] . . . ."). It is also clear that parties view the magnitude of the disparities as a key issue. For example, the battle of the experts in *Walker v. Wells Fargo Bank, N.A.*, No. 05-cv-555 (E.D. Pa. dismissed Feb. 29, 2008) shows that even the defense expert did not argue that disparities did not exist. Rather, she was able to explain most of the disparities other than 31 basis points. *See* White, *supra* note 207, at 695.

mandated that Upstart prove its pricing model to be more inclusive and produce fewer disparities than traditional models.[306]

As discussed previously, several consent orders, have required that defendants engage in periodic disparity testing.[307] Regulatory guidance concerning algorithmic fair lending compliance also underscores the importance of ongoing disparate impact assessments, suggesting that monitoring pricing policies, which likely includes quantifying disparities, is both a current and evolving expectation for lenders. So that while employing a spectrum approach to pricing policies does impose a burden on lenders to assess disparities preemptively and continually, it mirrors lenders' current expectations.

In short, the magnitude of disparity should be considered in determining the permissibility of a given pricing practice. Although disparate impact doctrine has thus far rejected such a spectrum analysis as a theoretical matter, fair lending enforcement has implicitly considered magnitude in practice. And in any event, considering the magnitude of harm aligns with the policy rationale of fair lending law, which seeks to prevent the entrenchment of existing disparities.

2. Normative Weight of Pricing Strategy

In a harm-based approach to PD discrimination, the magnitude of disparities would only be the first factor. The second dimension of harm would consider the pricing policy's legitimacy—that is, its normative justification.

a. Risk-based pricing

A threshold issue for assessing the legitimacy of a given pricing rule is whether it is rooted in risk- or demand-based considerations. There are compelling reasons to distinguish these two approaches. Risk-based pricing reflects credit provision costs, which are potentially essential for a lender's survival.[308] Conversely, uniform pricing, which does not differentiate between borrowers of varying risks, could prove detrimental to a lender.[309] Additionally, the expenses arising from defaults and foreclosures affect consumers, suggesting that elevated interest rates for high-risk borrowers might deter unsound lending practices.

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[306] In a 2019 update to the no-action letter, the CFPB reported on the results of its analysis. *See* Patrice Ficklin & Paul Watkins, Consumer Fin. Prot. Bureau, *An Update on Credit Access and the Bureau's First No-Action Letter* (Aug. 6, 2019), https://www.consumerfinance.gov/about-us/blog/update-credit-access-and-no-action-letter/. The second letter incorporates a framework for periodic reporting. *See* Consumer Fin. Prot. Bureau, *No-Action Letter* (Nov. 30, 2020), https://www.consumerfinance.gov/about-us/newsroom/consumer-financial-protection-bureau-issues-no-action-letter-facilitate-use-artificial-intelligence-pricing-and-underwriting-loans/.

[307] *See supra* section III.A.3.

[308] *See* Ayres, *supra* note 20 (explaining that risk-based pricing would persist even in a competitive credit market).

[309] This can manifest in the form of adverse selection of less creditworthy borrowers opting for higher rates, potentially culminating in the drying up of credit markets.

The advantages of risk-based pricing are conspicuously absent in demand-based pricing. Elevated interest rates inherently escalate credit risk by increasing monthly repayments and diminishing liquidity and financial resilience. Demand-based pricing might increase default risk, especially for borrowers.[310] PD can also target vulnerable groups.[311] While it is true that these groups might have a higher risk of default under risk-based pricing, the negative effects are more pronounced in demand-based pricing without the added benefit to the stability of credit markets.

b. Demand-based pricing

Even when considering PD, not all manifestations of demand-based pricing strategies are equal in legitimacy and impact. Therefore, they should not all be weighed in the same way against disparities. Below, I provide three examples of distinctions that highlight the varying degrees of legitimacy for PD pricing strategies.[312]

Active vs. Passive PD.—Active PD refers to a situation where a lender proactively, and at their own initiative, tries to predict a borrower's willingness-to-pay based on the borrower characteristics. Passive PD refers to strategies where the lender relies on borrowers providing direct information to the lender about their lower willingness-to-pay in order to receive a discount on loan prices.

There are several reasons why passive PD may be less problematic than active PD. When a lender engages in passive PD they wait for borrowers to identify themselves as having a high or low willingness-to-pay. For example, price matching—where a lender agrees to a lower loan price following a borrower providing a lower alternative offer—does not require any active inference by the lender. Rather the lender is passive in inferring the borrower's willingness-to-pay based on the information the borrower provides. PD that relies on consumer self-identification may be less prone to lender biases and less likely to rely on stereotyping borrowers. Prior fair lending enforcement actions suggest that regulators already consider practices like price matching to be less problematic, as several enforcement actions have allowed price matching policies if they are documented.[313]

Passive PD policies, may also produce positive externalities, as they could encourage consumer shopping, which increases market efficiency. Prohibiting such pricing policies would affect consumers' incentives to seek information, inadvertently suppressing information-seeking and comparative shopping behaviors that actually

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[310] *See* Allen et al., *supra* note 35, at 380 ("From a welfare perspective, price dispersion associated with discrimination motives can distort borrowing decisions by increasing the risk of default on consumers . . . .").

[311] *See supra* Part II.

[312] The UK Financial Conduct Authority (FCA) has recently suggested other questions to consider the harm of PD, and whether it necessitates intervention, that relate to what I consider the normative weight of price discrimination. For example, the consider the type of characteristics used for price personalization and whether they are immutable, as a factor in determining the harm of PD. They also suggest that society's view of the type of PD should play a role in whether government should intervene. *See* Fin. Conduct Authority (2018), *supra* note 303.

[313] *See supra* section II.A.2.

promote market competition.[314] What is more, curbing such policies would also be at odds with CFPB's stated policy goal of empowering consumers to make educated choices and facilitating comparison.[315]

Informed consumers, by actively engaging in comparing fees and interest rates, can also create pressure on lenders.[316] The market may accordingly reward lenders who are transparent and competitive in their offerings. Informed consumers can promote competition in additional ways by encouraging new firms to enter the market and rewarding innovation.[317] Furthermore, comparison shopping could encourage the development and popularization of third-party platforms dedicated to comparing and analyzing mortgage offers.[318]

Informed consumers can also serve as a counterforce against opaque pricing mechanisms. When consumers are equipped to decipher and evaluate complex pricing structures, financial institutions face a heightened impetus to simplify and clarify their pricing. This not only aids consumers in decisionmaking but also combats information asymmetries that can otherwise distort market dynamics.[319]

Although PD strategies in which the lender is passively relying on borrower-provided information may be less problematic than lenders actively engaging in an *ex ante* prediction of consumers' willingness to pay, it is also important not to exaggerate the potential benefits of price matching strategies. In the context of credit PD, however, contracts are highly personalized, and so benefits may accrue to informed consumers alone rather than sophisticated consumers creating positive externalities for unsophisticated consumers.[320] It is the very segregation of sophisticated and unsophisticated consumers at the heart of PD that prevents the positive spillover effects to all borrowers.[321]

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[314] *See, e.g.*, Ayres, supra note 20, at 707 (explaining how expert testimony in the General Motors Acceptance Corporation class action stated that increasing revenues and profits is "the most legitimate activity of any business in a free market").

[315] *See* Talia B. Gillis, *Putting Disclosure to the Test: Toward Better Evidence-Based Policy*, 28 LOY. CONSUMER L. REV. 31, 43 (2015). Some scholars have also proposed ways in which consumer financial protection can help to facilitate comparison by improving and simplifying information. *See* Jared Ruiz Bybee, *Fair Lending 2.0*: *A Borrower-Based Solution to Discrimination in Mortgage Lending*, 45 U. MICH. J.L. REFORM 113 (2011) (proposing an ex-ante approach to consumer protection by facilitating consumer shopping).

[316] *See* Sridhar Moorthy and Ralph Winter, Price-matching guarantees, 37 RAND J. ECON. (2010).

[317] *See supra* section I.A.

[318] *See* Moorthy & Winter, *supra* note 316.

[319] Yuxin Chen, Chakravarthi Narasimhan & Z. John Zhang, *Consumer Heterogeneity and Competitive Price-Matching Guarantees*, 20 MARK'T SCI. 300 (2001).

[320] PD is precisely meant to limit any benefits from shopping to informed consumers.

[321] For further discussion of how competition can lead to market segregation, see David Laibson & Xavier Gabaix, *Shrouded Attributes, Consumer Myopia, and Information Suppression in Competitive Markets*, 121 Q.J. ECON. 505 (2006) (showing how firms can shroud attributes so that myopic consumers focus only on non-shrouded attributes). Laibson and Gabaix's analysis seems particular relevant to lending where

Predicting Financial Confusion vs. Predicting Shopping Behavior.—Even when PD is active, in the sense that it does not rely on consumer self -identification but rather on a lender's proactive predictions, the basis for these predictions could matter for the legitimacy of the pricing strategy. Increasing interest rates based on predictions of consumer confusion may be considered particularly pernicious.[322]

Passive predictions about shopping behavior, in contrast, may still encourage consumers to act in an information-seeking way. The literature on behavior-based pricing suggests that consumers who know that lenders engage in PD based on shopping may behave in a strategic way to signal their willingness-to-pay.[323] Borrowers may thus choose to adopt behaviors of "shoppers," knowing that this could impact the prices they face. Although active predictions of shopping behavior may carry fewer benefits of increasing information in the market than price matching strategies that encourage borrowers to seek cheaper offers, they still rely on behaviors that create positive externalities, rather than simply predicting consumer confusion.

In practice, pinpointing the exact motivation behind demand-based pricing can be elusive. However, in the case of algorithms, where decisions are automated and the object of the prediction exercise is known, it may be feasible to identify pricing motivations and distinguish strategies that rely on predicting shopping behavior from those that rely on predicting consumer confusion.

Advertised vs. Hidden PD.—Finally, it is helpful to distinguish between pricing practice that the lender makes known to consumers ("advertised") from those that do not ("hidden").[324] For example, an advertising lender may advise consumers that it will price match alternative loan offers, while a hiding lender may keep this pricing policy secret.

When a PD strategy is advertised, it has two benefits relative to a hidden PD strategy. First, it could permit consumers to avoid increased pricing by shopping around for offers. Second, it educates consumers about the existence of PD strategies more broadly, which is important because many borrowers are unaware of pricing dispersion in credit markets in the first place.[325] If consumers are aware of the role PD plays in loan pricing, they may change their behavior at the time of lending.

In sum, the acceptability of PD discrimination pricing policies should depend on both the magnitude of disparities they create and their normative justification. The foregoing detailed examination of pricing policies is absent in contemporary regulatory

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multiple price dimensions (e.g., points and interest rates of mortgages) allow lenders to lower costs on salient dimensions while shifting costs on non-salient dimensions for certain consumers.

[322] *See supra* section II.A.1.

[323] *See* Porat, *supra* note 160.

[324] The FCA has also suggested that when PD is transparent it may raise less harm concerns. *See* Fin. Conduct Authority (2018), *supra* note 303. It is important to note that in the EU there are rules that mandate the disclosure of personalized pricing, such as the Consumer Credit Directive *see supra* note 102.

[325] *See supra* section I.C.

guidance regarding pricing personalization—which remain unresponsive to these nuances and focus instead on non-risk-based pricing emanating from opaque human decisions. In such settings, discerning the precise rationale for markups is virtually insurmountable.

B. UD(A)AP as a Harm-Based Approach to Price Discrimination Discrimination

In the previous Section, I discussed the need to move to a harm-based approach to PD discrimination, where the permissibility of a given pricing policy depends on assessing the magnitude of disparities against the policy's normative weight. Although this approach is in tension with the binary nature of the business justification defense, I argue that the UD(A)AP prohibition should be interpreted as incorporating this harm-based approach to PD discrimination.

I focus on two legal frameworks. The first is the UDAP prohibition—of unfair and deceptive acts or practices—prescribed by Section 5 of the FTC Act, which covers all individuals and entities involved in interstate commerce.[326] The second is the UDAAP prohibition under Section 1031 of the Dodd–Frank Act, which covers providers of consumer financial products or services to engage in unfair and deceptive and abusive acts or practices.[327] One way in which this prohibition differs from the FTC Act prohibition is the additional prohibition of "abusive" acts or practices.[328] The FTC's jurisdiction also covers a broader range of consumer protection issues than financial products and services alone, including advertising and marketing practices across many industries.[329] The principles of "unfair" and "deceptive" practices in the

[326] There are specific financial institutions, including banks, savings associations, and credit unions, that are not subject to the FTC's jurisdiction, but the agencies with regulatory oversight over these institutions have authority to enforce Section 5 of the FTC Act for the institutions under their supervision. Regulatory oversight for these entities is instead exercised by banking agencies, including the FDIC, OCC, Federal Reserve, and NCUA.

[327] The CFPB was given rulemaking authority and with respect to entities within its jurisdiction as well as enforcement and supervision authority. For some financial institutions, the CFPB only has rulemaking authority. The banking agencies that have supervisory and enforcement authority, have authority both for the UDAP provisions of Section 5 of the FTC Act and the UDAAP provisions of the Dodd-Frank Act. State Attorney Generals also have authority to enforce the Dodd-Frank's UDAAP provisions against non-banks and state-chartered financial institutions under their jurisdiction. *Dodd-Frank Act*, 12 U.S.C. § 5552(a)(1) (2010)

[328] The Federal Trade Commission (FTC) Act encompasses all individuals and entities involved in interstate commerce. However, there are specific entities, including banks, savings associations, and credit unions, which are not subject to the FTC's jurisdiction. Regulatory oversight for these organizations is instead exercised by banking agencies. These include the FDIC, OCC, the Fed, and NCUA. These bodies retain the authority to enforce Section 5 of the FTC Act for the institutions under their supervision.

[329] The FTC's jurisdiction covers a broader range of consumer protection issues than financial products and services alone, including advertising and marketing practices across many industries.

Dodd-Frank Act are similar to those under Section 5 of the FTC Act.[330] I jointly refer to UDAP and UDAAP as the prohibition on UD(A)AP.[331]

The FTC's case against Passport was the first enforcement action to challenge discriminatory conduct under the UDAP prohibition. While the CFPB has yet to exercise its UDAAP authority in the context of discriminatory lending, it announced its intention to do so in March 2022,[332] "including in situations where fair lending laws may not apply."[333] The announcement came as part of a general update to the UDAAP supervisory guidance to examiners, which included guidance on "the interplay between unfair, deceptive, or abusive acts or practices and other consumer protection and antidiscrimination statutes."[334]

The use of the UD(A)AP prohibition for antidiscrimination enforcement has been controversial.[335] In his dissent in the Passport case, Commissioner Philips argued that the FTC Act is not an antidiscrimination statute, citing the absence of the disparate impact doctrine in its text.[336] Nonetheless, the view that the UDAP prohibition

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[330] *See* CONSUMER FIN. PROT. BUREAU, UNFAIR, DECEPTIVE, OR ABUSIVE ACTS OR PRACTICES MANUAL V.3, 1 (2022).

[331] Although not my focus here, it is important to note that many states have their own UDAP laws. The language of these laws, and their interpretation, tend to be heavily influenced by the FTC and CFPB's language and interpretation. Therefore, much of the analysis in this section may apply to state UDAP laws. Importantly, because many state UDAP laws allow for private enforcement of UDAP statutes, this many have the greatest impact on enforcement. For further discussion of state UDAP laws, and their use to address discriminatory conduct, *see* Jeff Sovern, *Is Discrimination Unfair?* 41 GEORGIA STATE L. REV. 14 (forthcoming fall 2024) [hereinafter Sovern 2024].

[332] Press Release, CFPB, *CFPB Targets Unfair Discrimination in Consumer Finance* (Mar. 16, 2022), https://www.consumerfinance.gov/about-us/newsroom/cfpb-targets-unfair-discrimination-in-consumer-finance/.

[333] *Id.*

[334] The announcement references the new UDAAP supervisory guidance. The manual states that UD(A)AP authority for rulemaking, supervision and enforcement runs in parallel to other laws, such as ECOA. *See* CONSUMER FIN. PROT. BUREAU, UNFAIR, DECEPTIVE, OR ABUSIVE ACTS OR PRACTICES MANUAL V.3, 1 (2022) ("Similarly, a discriminatory act or practice that is unfair, deceptive, or abusive may also violate other antidiscrimination laws, such as ECOA.") Supervisory guidance is meant to provide internal guidelines to supervisors but does not have the legal impact of rulemaking.

[335] The use of UDAAP to address discrimination has been disputed also by industry groups. *See, e.g.*, INDEPENDENT CMTY. BANKERS OF AM., UNFAIRNESS AND DISCRIMINATION: EXAMINING THE CFPB'S CONFLATION OF DISTINCT STATUTORY CONCEPTS (2022), https://www.icba.org/all-products/product-details/unfairness-and-discrimination (claiming that additional authority is required to address discriminatory conduct). This has led to the lawsuit discussed in the main text. *See* Complaint, Chamber of Com. of the U.S. v. CFPB, 691 F.Supp.3d 730 (E.D.Tex., 2023). See discussion in Sovern 2024 (arguing that statutory interpretation tools demonstrate that unfairness includes discrimination as well as policy justifications for UD(A)AP rules).

[336] *See* Dissenting Statement of Commissioner Noah Joshua Phillips, FTC No. 2023199 (2022), https://www.ftc.gov/system/files/ftc_gov/pdf/Dissenting-Statement-of-Commissioner-Noah-Joshua-Phillips.pdf; *see also* Alan S. Kaplinsky, *Why the CFPB's Expansion of Its UDAAP Authority to Target Discrimination Requires Rulemaking*, BALLARD SPAHR LLP (May 2, 2022), https://www.consumerfinancemonitor.com/2022/05/02/why-the-cfpbs-expansion-of-its-udaap-authority-to-target-discrimination-requires-rulemaking/.

includes discriminatory conduct was the majority FTC view in Passport,[337] which was foreshadowed in prior FTC statements[338] and has received academic support.[339]

In response to the CFPB March 2022 updated Supervision and Examination Manual that included discrimination as a UDAAP,[340] the US Chamber of Commerce and other bank trade groups sued the CFPB for exceeding their statutory authority.[341] In September 2023, Judge Barker of the Texas District Court invalidated the CFPB

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[337] In a majority statement, FTC Chair Khan and Commissioners Slaughter and Bedoya explicitly rejected the notion that the existence of ECOA, a sector-specific discrimination law, could limit the use of the FTC's unfair authority. *See* Joint Statement of Chair Lina M. Khan, Commissioner Rebecca Kelly Slaughter, and Commissioner Alvaro M. Bedoya in the Matter of Passport Auto Group 2, FTC No. 2023199 (2022), https://www.ftc.gov/system/files/ftc_gov/pdf/joint-statement-of-chair-lina-m.-khan-commissioner-rebecca-kelly-slaughter-and-commissioner-alvaro-m.-bedoya-in-the-matter-of-passport-auto-group.pdf ("Practices that meet the factors of Section 5(n) are not insulated from the Commission's oversight merely because they involve discriminatory conduct . . . . The fact that harmful conduct may be subject to other legal or regulatory regimes does not in itself limit (or lessen) the FTC's responsibility to use all of our available authorities to target such conduct."); *see also FTC v. Wyndham Worldwide Corp.*, 799 F.3d 236 (3d Cir. 2015) (holding that the FTC Act applied to data security and rejecting Wyndham's argument that the enactment of cybersecurity legislation means congress intended conduct to not be covered by the "unfair" practices provision).

[338] In two cases involving discriminatory discretionary markups that were challenged under ECOA, the FTC Statement of the complaints—but not the complaints themselves—suggested that the discriminatory policies were also a violation of the FTC Act. In the FTC Liberty case statement, FTC Chair Chopra said that, in addition to a violation of ECOA, Liberty's discretionary markups were a violation of the UDAP prohibition. *See* Statement of Commissioner Rohit Chopra, FTC No. 1623238 (2020), https://www.ftc.gov/system/files/documents/public_statements/1576002/bronx_honda_final_rchopra_bronx_honda_statement.pdf. In addition, in the FTC case against Napleton Automotive Group, Chair Khan discussed the allegation of unfair practices for discriminatory conduct. *See* Statement of Chair Lina M. Khan Joined by Commissioner Rebecca Kelly Slaughter in the Matter of Napleton Automotive Group, FTC No. 2023195 (2022), https://www.ftc.gov/system/files/ftc_gov/pdf/Statement%20of%20Chair%20Lina%20M.%20Khan%20Joined%20by%20RKS%20in%20re%20Napleton_Finalized.pdf.

[339] The Student Borrower Protection Center has argued that discriminatory conduct more generally should be considered unfair. The main target of its influential report is consumer financial domains not explicitly covered by doctrines like disparate impact. *See* STEPHEN HAYES & KALI SCHELLENBERG, STUDENT BORROWER PROT. CTR., DISCRIMINATION IS "UNFAIR": INTERPRETING UDA(A)P TO PROHIBIT DISCRIMINATION (2021), https://protectborrowers.org/wp-content/uploads/2021/04/Discrimination_is_Unfair.pdf; *see also* Luke Herrine, *Consumer Protection After Consumer Sovereignty* 26 (2023); Andrew D. Selbst & Solon Barocas, *Unfair Artificial Intelligence: How FTC Intervention Can Overcome the Limitations of Discrimination Law*, 171 U. PA. L. REV. 1023 (2023). Crucially, the FTC and CFPB use their UD(A)P authority to make discrimination claims, not merely to challenge discriminatory conduct under consumer protection laws. Also see Sovern 2024, *supra* note 335. *Compare with* Sablosky Elengold, *Consumer Remedies for Civil Rights*, 99 B.U. L. REV. 587 (2019) (discusses the ability of a plaintiff to claim a violation of UDAP rather than discrimination by making reference to the conduct itself, regardless of the plaintiff's race.). Elengold discusses more broadly the relationship between discrimination and consumer protection, particularly in the housing context. Her focus is on the overlap between individual claim disparate treatment and consumer protection.

[340] *See* Press release, *supra* note 332. CONSUMER FIN. PROT. BUREAU, UNFAIR, DECEPTIVE, OR ABUSIVE ACTS OR PRACTICES MANUAL V.3 *supra* note 330, at Part II.C.

[341] Complaint, Chamber of Com. of the U.S. v. CFPB, 691 F.Supp.3d 730 (E.D.Tex., 2023).

Manual.[342] A CFPB appeal was stayed pending the Supreme Court decision dealing with the constitutionality of the CFPB's funding,[343] a case that was recently resolved.[344] A judgment on the CFPB's appeal is likely to have important implications for the analysis below.

The application of UD(A)AP authority to discrimination is most consequential when applied to entities and conduct not covered by other antidiscrimination laws.[345] When UD(A)AP authority overlaps with existing discrimination laws, such as ECOA, an important question is whether conduct that would not be deemed discriminatory under ECOA can be considered discriminatory under the UD(A)AP prohibition[346] and vice-versa. This question is particularly contentious when considering the whether UD(A)AP, and specifically "unfairness," also covers cases of disparate impact. The FTC Passport case suggests an approach to UDAP discrimination enforcement that closely tracks disparate impact enforcement under ECOA.[347]

Below, I argue that UD(A)AP authority can and should be used to address PD discrimination.[348] Importantly, the tests laid out in the unfair, deceptive, and abusive prongs correspond to the harm-based approach to PD discrimination discussed in the previous Section. Specifically, the "unfair" prong requires substantial injury, implicating the magnitude of harm. The requirement that the harm be unavoidable

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[342] Chamber of Com. of the U.S. v. CFPB, 691 F.Supp.3d 730 (E.D.Tex., 2023).

[343] Order Granting Mot. to Stay Further Proceedings, Chamber of Com. of the U.S. v. CFBP, 5th Cir. (2023) (No. 23-40650), https://www.consumerfinancemonitor.com/wp-content/uploads/sites/14/2023/11/1767000-1767804-https-ecf-ca5-uscourts-gov-n-beam-servlet-transportroom-servlet-showdoc-00516970569.pdf

[344] CFPB v. Community Fin. Serv. Assoc., 601 U.S. 416 (2024).

[345] The main objection seems more relevant to domains in which there is no existing discrimination legislation, unlike consumer credit, where ECOA applies. *See* Kaplinsky, *supra* note 336; Selbst & Barocas *supra* note 339.

[346] The main example provided in the CFPB supervision guidance relates to discrimination in opening deposit accounts, which does not fall under ECOA because it is not a credit transaction. CONSUMER FIN. PROT. BUREAU, UNFAIR, DECEPTIVE, OR ABUSIVE ACTS OR PRACTICES MANUAL V.3, at 10 (2022).

[347] It is important to note that the Passport enforcement case suffers from the same ambiguity as the discretionary markup cases under ECOA. *See supra* section III.A.

[348] The question of whether UDAAP, and specifically unfairness, covers disparate impact is unclear, even from the CFPB's perspective. In 2022, CFPB Assistant Director for the Office of Enforcement Eric Halperin stated that disparate impact was a distinct concept from Dodd-Frank's prohibition of unfair conduct. *See* Audio tape: CFPB's New Approach to Discrimination: Invoking UDAAP, held by the American University Symposium (June 29, 2022) (https://media.wcl.american.edu/Mediasite/Play/84641bd899fb4671aa92cce893bf66ec1d); *see also Halperin Discusses Invoking UDAAP Under CFPA*, BUCKLEY INFOBYTES BLOG (July 1, 2022), https://buckleyfirm.com/blog/2022-07-01/halperin-discusses-invoking-udaap-under-cfpa, summarizing the discussion. Jeff Sovern has argued that these statements suggest that the CFPB does not intend to apply a disparate impact standard under UDAAP, although he questions whether this is of practical relevance given that the "unfairness" standard also doesn't require intention. *See* Jeff Sovern, *Unfairness and Disparate Effects*, CONSUMER L. & POL'Y BLOG (July 30, 2022), https://clpblog.citizen.org/unfairness-and-disparate-effects/; Also see Sovern 2024, *supra* note 335. See, however, Hayes & Schellenberg, *supra* note 339 (more explicitly arguing that an act that constitutes disparate impact is likely to be unfair).

similarly suggests sensitivity to the particular pricing policy strategy and the ability of consumers to avoid PD. While this interpretation of PD discrimination under the UD(A)AP prohibition departs from the binary structure of disparate impact's business justification, the UD(A)AP prohibition contains its own tests and considerations that should be interpreted independently from the disparate impact doctrine.[349]

1. Unfairness

An unfair act or practice has three elements.[350] First, it must cause or be likely to cause "substantial injury" to consumers.[351] This typically means financial harm but can also include other types of harm such as unwarranted health and safety risks. Second, the harm must "not be reasonably avoidable":[352] If consumers have a free and informed choice and they choose a course of action that results in harm, then the harm is not "unfair." Finally, the injury must "not [be] outweighed by countervailing benefits" to consumers or competition.[353] This ensures that an act or practice is not deemed "unfair" if it produces greater benefit than harm.[354]

The three elements of "unfair" are consistent with the harm-based approach to PD discrimination, as they reflect sensitivity both to the magnitude of harm and to the distinctions between different PD strategies. Starting with the first prong, the substantial injury requirement has already been recognized as potentially covering situations in which the harm is measured in the aggregate rather than for each consumer.[355] While the majority statement in *Passport* suggests that higher prices for racial minorities are themselves a harm,[356] it may be possible to demonstrate that the way prices are raised can also cause future harm. For example, high pricing itself causes default risk, potentially creating an ongoing harm for consumers in future access to

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[349] I view this position as consistent with the position of Sovern 2024, *supra* note 335 that unfairness is a distinct doctrine from disparate impact.

[350] This standard was first stated in the by the FTC in a policy statement. *See FTC Policy Statement on Unfairness*, FED. TRADE COMM'N (Dec. 17, 1980), https://www.ftc.gov/legal-library/browse/ftc-policy-statement-unfairness. Congress later amended the FTC Act to include this specific standard in the Act itself. *See* 15 U.S.C. § 45(n). The CFPB UDAAP manual makes clear that the standard for unfairness in Dodd-Frank is the same as the three-part test in the FTC Act. *See* CONSUMER FIN. PROT. BUREAU, UNFAIR, DECEPTIVE, OR ABUSIVE ACTS OR PRACTICES MANUAL V.3, at 2 (2022).

[351] 12 U.S.C. § 5531(c)(1)

[352] *Id.*

[353] *Id.*

[354] For an analysis of the evolution of the "unfairness" prong and the historical attempt to limit its reach, *see* Luke Herrine, *The Folklore of Unfairness*, 96 N.Y.U. L. REV. 431 (2021).

[355] Dennis D. Hirsch, *That's Unfair! Or is it? Big Data, Discrimination and the FTC's Unfairness Authority*, 103 KY. L.J. 345, 353 (2015).

[356] *See* Joint Statement of Chair Lina M. Khan, Commissioner Rebecca Kelly Slaughter, and Commissioner Alvaro M. Bedoya in the Matter of Passport Auto Group, FTC No. 2023199 (2022), https://www.ftc.gov/system/files/ftc_gov/pdf/joint-statement-of-chair-lina-m.-khan-commissioner-rebecca-kelly-slaughter-and-commissioner-alvaro-m.-bedoya-in-the-matter-of-passport-auto-group.pdf.

credit.[357] Importantly, the requirement to demonstrate "substantial" harm reflects a sensitivity to the magnitude of harm created, suggesting that a PD strategy that creates minor disparities for protected groups would not be deemed "unfair" per se.[358]

The possibility of reasonable avoidance is a complicated inquiry that naturally lends itself to an inquiry into the normative weight of the pricing policy.[359] Turning to the taxonomy discussed above, some PD strategies can be said to be more avoidable than others. For example, when PD is passive (such as price matching) rather than active (such as a prediction of willingness-to-pay), it is likely more avoidable. Similarly, when a PD strategy is advertised, consumers may have more awareness of the possibility that they are charged a markup and may seek to avoid the higher price by shopping.[360] An alternative interpretation of the second element is that it is almost always satisfied in the case of discriminatory conduct. The CFPB in its manual states that consumers typically cannot be said to be able to avoid discriminatory harms.[361] Similarly, in *Passport*, the FTC states that the second element is satisfied because consumers "had no way of knowing they were being charged more than their White counterparts."[362]

Finally, the balancing element, often referred to as cost-benefit analysis,[363] is similarly amenable to analysis under the proposed taxonomy. For example, price matching may encourage shopping and information-seeking that benefits the market more generally. This type of benefit would be taken into consideration when deciding whether conduct is unfair.[364] Similarly, if the remedy to a discretionary markup policy

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[357] *See supra* section II.A.2.

[358] While the CFPB has suggested that emotional and dignitary harms can be considered substantial injury, it is unclear whether that would apply to non-intentional facially neutral pricing policies that created disparities. For example, it is unclear whether PD discrimination passes the threshold of "substantial injury."

[359] *See* Slaughter, *supra* note 185, at 40 ("Unfairness is an imperfect tool, introducing the hurdles of 'reasonable avoidability' and 'countervailing benefits' into what can already be a complicated question of the specific injury caused by disparate outcomes . . . .").

[360] See Sovern 2024, *supra* note 335, at 34 ("When transaction terms are set privately, so that consumers cannot readily ascertain how much other consumers are paying, it is difficult for consumers to recognize that they are being charged more than others").

[361] See CFPB UDAAP Manual, *supra* note 330, at 3. Also see Sovern 2024, *supra* note 335, at 35.

[362] Discrimination may be unavoidable with intentional discrimination, but it is unclear whether avoiding a facially neutral pricing rules is unavoidable. The wording of the Passport complaint is quite vague. Complaint for Permanent Injunction, Monetary Relief, and Other Relief at 18, Fed. Trade Comm'n v. Passport Auto. Grp., No. 8:22-cv-02670-GLS (D. Md. Oct. 18, 2022).

[363] *See* Hirsch, *supra* note 355, at 484.

[364] *See* Hayes & Schellenberg, *supra* note 339, at 15–16 (taking the position that if a practice fails the "business justification" of disparate impact it would also fail the third prong).

is a flat markup for all consumers[365] then there are likely to be consumers who are worse off.[366]

2. Deceptiveness and Abusiveness

An act or practice is deceptive if it (1) misleads or is likely to mislead a consumer; (2) the consumer's interpretation is reasonable under the circumstances; and (3) the representation is material.[367] PD and markup policies have not been challenged as deceptive in the past. There have been cases that have challenged misrepresentations of loan terms as "deceptive," such as advertising that a mortgage had a fixed interest rate when in fact it had an adjustable interest rate.[368] That said, PD discrimination could be challenged as deceptive when lenders make representations that lead consumers to believe that lenders differentiate prices only on the basis of risk. In such a case, the representation is likely material.[369] A more expansive view of deception would also include statements or omissions that could mislead consumers.[370]

Abusive conduct is defined as an act or practice that materially interferes with the ability of a consumer to understand the terms of a product or service or that takes unreasonable advantage of the consumer's lack of understanding, the inability of the consumer to protect their interests or the reasonable reliance by the consumer on the product or service provider to act in the interests of the consumer.[371] The addition of the "abusive" prohibitions in the Consumer Protection Act was a result of the recognition that the other two prohibitions of "unfairness" and "deceptiveness" may fail to capture harmful conduct.[372]

The abusive test may be especially appropriate when lenders engage in a type of PD that relies on consumer confusion or lack of financial literacy to charge higher markups. While no lending pricing practices have been challenged on the ground that they are abusive, pricing on the basis of consumer confusion is likely to satisfy the

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365 *See supra* section III.B.

366 *See* FED. TRADE. COMM'N, STATEMENT OF POLICY ON THE SCOPE OF THE CONSUMER UNFAIRNESS JURISDICTION (1980).

367 Unlike the definition of "unfair," "deceptive" is not defined in the FTC Act or Dodd–Frank. For the widely used definition of "deceptive," *see FTC Policy Statement on Deception*, FED. TRADE COMM'N (Oct. 14, 1983), https://www.ftc.gov/system/files/documents/public_statements/410531/831014deceptionstmt.pdf; *see also* CONSUMER FIN. PROT. BUREAU, UNFAIR, DECEPTIVE, OR ABUSIVE ACTS OR PRACTICES MANUAL V.3, at 5 (2022).

368 Stipulated Preliminary Injunction at 7, Fed. Trade Comm'n v. Chase Financial Funding, Inc., No. SAVC04-549(C.D. Cal. 2004).

369 *See* Hayes & Schellenberg, *supra* note 339, at 24 ("For example, deceptive techniques may be used to steer protected class members into inferior products or higher rates . . . .").

370 *See* Lauren E. Willis, *Deception by Design*, 34 HARV. J. OF L. & TECH. 115 (2020).

371 *See* 12 U.S.C. §5531(d). For an analysis of how the added abusiveness test was meant to address the erosion of the unfairness test in the FTC Act, *see* Herrine, *supra* note 339, at 434.

372 *See* discussion in Carey Alexander, *Abusive: Dodd-Frank Section 1031 and the Continuing Struggle to Protect Consumers*, 85 ST. JOHN'S L. REV. 1105 (2011).

requirement that the pricing takes unreasonable advantage of the inability of the consumer to protect themselves.[373]

The FTC and CFPB's UD(A)AP authority thus provides an alternative normative framework for considering PD discrimination as part of a harm-based framework that is better attuned to analyzing the magnitude of disparities and allows for a more nuanced consideration of different PD practices. Although unfairness has been the focal point of discussions around the use of UD(A)AP for discriminatory practices,[374] the deceptive and abusive tests may also play a role in preventing the more pernicious forms of PD.

This framework is also sufficiently flexible to stay abreast of technological developments that lead pricing practices away from relying on opaque human discretion. The use of the FTC and CFPB's UD(A)AP authority to curb consumer financial misconduct may become more important in the future if the disparate impact doctrine under ECOA is further challenged.[375] If ECOA covers disparate treatment alone, UD(A)AP provides an alternative for challenging discriminatory conduct without an intent requirement.[376] In addition, as we move away from pricing that is focused on low-tech pricing methods—namely the use of human discretion markups to automated pricing facilitated by the use of big data,[377] the importance of identifying and challenging the different components of pricing will increase.[378]

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[373] Like the unfairness test, if the conduct being targeted involves the direct conditioning on a protected characteristic, a consumer is unable to protected themselves. *See* Hayes & Schellenberg, *supra* note 317, at 24 ("[A]busive practices may take unreasonable advantage of consumers' inability to protect themselves because differences in treatment are based on immutable protected characteristics.").

[374] *See id.* at 7 ("We focus here on 'unfairness' because it is an obvious fit for addressing common types of discriminatory conduct . . . .").

[375] *See* Cubita & Hartmann, *supra* note 217, at 840; *see also* Winnie F. Taylor, *The ECOA And Disparate Impact Theory: A Historical Perspective*, 26 J.L. & POL'Y 575 (2018) (discussing whether the Supreme Court is likely to find that ECOA covers the doctrine of disparate impact).

[376] *See* Press Release, Consumer Fin. Prot. Bureau, CFPB Targets Unfair Discrimination in Consumer Finance (Mar. 16, 2022), https://www.consumerfinance.gov/about-us/newsroom/cfpb-targets-unfair-discrimination-in-consumer-finance/. CFPB Director Rohit Chopra, while a FTC Commissioner, took the position that discriminatory practices without intent met the FTC Act's standard for unfairness in disparate impact claims.

[377] Although the FTC has yet to challenge an automated price discriminating algorithm, it discussed the ways in which AI could raise UDAP concerns in a blog post. *See* Elisa Jillson, *Aiming for Truth, Fairness, and Equity in Your Company's Use of AI*, FED. TRADE COMM'N (Apr. 19, 2021), https://www.ftc.gov/business-guidance/blog/2021/04/aiming-truth-fairness-equity-your-companys-use-ai.

CONCLUSION

At this pivotal moment, the challenge of discrimination within consumer credit markets demands urgent attention, especially as the use of big data and artificial intelligence (AI) for price personalization becomes more prevalent. Regulators are beginning to recognize the discrimination issues inherent in AI-driven systems,[379] identifying the need for regulatory frameworks tailored to oversee these technologies in credit markets[380] and adapting existing laws to the evolving landscape of credit decisions.[381]

However, an essential issue remains inadequately addressed: lenders' practice of setting credit prices based on consumers' willingness-to-pay. This omission reflects traditional fair lending's confused treatment of PD discrimination in which regulatory guidance and enforcement actions reflect an ambiguous and conflicting treatment of demand-based pricing. Similarly, policy and scholarly debates have focused predominantly on the dangers of risk-based pricing, neglecting the implications of demand-based pricing.

The stakes of overlooking demand-based personalization are high. PD discrimination results in protected groups facing higher loan interest rates, perpetuating historical discrimination and exacerbating social inequalities. These higher rates increase default risk— because borrowers struggle more to meet their financial commitments—so that PD discrimination can also further financial exclusion in the future.

The harm-based approach to PD discrimination I propose is a departure from the categorical treatment of pricing practices under the business justification, aligning more closely with the evolving requirements of fair lending. Regulators are increasingly requiring lenders to proactively engage in "robust fair lending testing of models, including regular testing for disparate treatment and disparate impact"[382] rather than merely defend pricing practices when challenged. The harm-based strategy I propose, in line with UD(A)AP prohibition, offers a more practicable solution as the industry shifts from opaque discretionary decision-making by loan officers, brokers, and dealers, towards automated systems where pricing strategies are explicit and their impacts quantifiable. In such a world, lenders should be required to monitor and audit their price personalization practices to consider their potential harm.

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[379] *See* CFPB, DOJ, EEOC & FTC, JOINT STATEMENT ON ENFORCEMENT EFFORTS AGAINST DISCRIMINATION AND BIAS IN AUTOMATED SYSTEMS (2023).

[380] *See* Quality Control Standards for Automated Valuation Models, 88 Fed. Reg. 40638 (proposed June 21, 2023).

[381] *See, e.g.*, Consumer Financial Protection Circular 2023-03, Adverse Action Notification Requirements and the Proper Use of the CFPB's Sample Forms Provided in Regulation B (Sept. 19, 2023).

[382] Brad Blower, *CFPB Puts Lenders & FinTechs on Notice: Their Models Must Search for Less Discriminatory Alternatives or Face Fair Lending Non-Compliance Risk*, NAT'L CMTY. REINVESTMENT COAL. (Apr. 5, 2023) (quoting Patrice Ficklin, head of Fair Lending at the CFPB), https://ncrc.org/cfpb-puts-lenders-fintechs-on-notice-their-models-must-search-for-less-discriminatory-alternatives-or-face-fair-lending-non-compliance-risk/.