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Got Bounded Rationality and Political Gridlock? There's a Loan Disclosure Hack for That

Debra Poggrund Stark
UIC John Marshall Law School

Jessica M. Choplin
DePaul University

Andrew Pizor
National Consumer Law Center

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GOT BOUNDED RATIONALITY AND POLITICAL GRIDLOCK? THERE'S A LOAN DISCLOSURE HACK FOR THAT

DEBRA POGRUND STARK*
JESSICA M. CHOPLIN, PH.D.**
ANDREW PIZOR***

ABSTRACT

For decades, Congress has primarily relied upon the use of mandatory disclosure forms to protect consumers from entering into ill-advised loans by disclosing the terms of an offered loan before the borrower enters into it. This policy is not likely to change any time soon due to congressional gridlock. Frustratingly, despite improvements, consumers still have difficulties using these forms to obtain the key information and data they need to make wise decisions. These disclosures contain a great deal of information, and assume that consumers are capable of reading, understanding, and using all of it. Contrary to this assumption, research on the cognitive science of decision-making has repeatedly demonstrated that the amount of information that consumers can absorb and use is very limited (a phenomenon called “bounded rationality”). To overcome the limitations of bounded rationality, disclosures should engage consumers, focus their attentions on the most important information, and be tailored to their individual situations. In this Article, we propose online, individualized, and interactive disclosures that are data-based to address these and other limitations of current disclosures. These interactive, data-based disclosures can be implemented by government agencies without congressional action, thereby sidestepping the current congressional gridlock. Consumers would interact with these disclosures by entering information that is needed to individualize the information presented in the disclosure to their personal situations. For example, such interactive features should allow consumers to see how their APRs—the prices of their loans—change based on how long they hold loans. Such interactive features might also allow consumers to see how the APRs of their loan offers compare with average APRs for others with their credit score, thereby enabling borrowers to gain a sense of whether loan offers are the lowest-priced and most suitable loans that they can qualify for. We report the results of an experiment that we ran on both experienced home-loan borrowers and less experienced consumers designed to test a specific example of how these disclosures can be made interactive, individualized, and able to respect

* B.A. Brandeis University, Summa Cum Laude, J.D. Northwestern Pritzker School of Law, Cum Laude Professor of Law, UIC John Marshall Law School. The author thanks UIC John Marshall Law School for providing scholarship support for this Article.

** Professor of Psychological Science, DePaul University.

*** Attorney, National Consumer Law Center.

consumers' bounded rationality. We describe how making disclosures online, individualized, interactive, and data-based can be incorporated into other important aspects of home-loan decision-making, as well as student loan decision-making to better enable student-loan consumers to make rational, wealth maximizing decisions on student-loan offers.

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I. INTRODUCTION

The two largest consumer transactions that the typical person in the United States enters into are home loans and student loans.¹ But the consumers who enter into these

¹ There were over 11 trillion dollars in mortgage loans for one to four family residences in the third quarter of 2019. FED. RSRV., MORTGAGE DEBT OUTSTANDING, TABLE L.214, <https://www.federalreserve.gov/apps/fof/DisplayTable.aspx?t=L.214> (last updated June 11, 2020). The average size of a home loan in the U.S. was \$354,500 in 2019. *Average U.S. Mortgage Size Hits Record-High \$354,500*, REUTERS (Mar. 13, 2019, 9:52 AM),

two types of loans, often do so on terms that are not as favorable as they could have obtained had they better known what to look for when they received a loan offer and then shopped around further.² There are many reasons for this failure, including: the problem of bounded rationality (i.e., limitations on consumers' cognitive abilities to process complicated information while they are trying to make rational decisions);³ lenders designing loans that are difficult to understand and evaluate to hide the high price of the loan,⁴ and in some cases, presenting the loans in a deceptive fashion;⁵ and

<https://www.reuters.com/article/idUSKBN1QU1VA>. And there was approximately 1.4 trillion dollars in student loans in 2019, and the average student loan balance per student loan borrower was \$35,359 in 2018. Daniel Kurt, *Student Loan Debt: 2019 Statistics and Outlook*, <https://www.investopedia.com/student-loan-debt-2019-statistics-and-outlook-4772007> (last updated Nov. 15, 2019).

² In 2003, it was estimated that approximately 40% of homeowners qualified for lower-cost loans than they were induced to take out. ELIZABETH WARREN & AMELIA WARREN TYAGI, *THE TWO-INCOME TRAP: WHY MIDDLE-CLASS MOTHERS AND FATHERS ARE GOING BROKE* 135 (2003). And although federal student loans are typically lower priced and with better features than private student loans, 53% of borrowers who took out a private student loan did not first exhaust their ability to take out a federal Stafford home loan. See Andrew Zoeller, *The 2020 Student Loan Debt Statistics Almanac*, PUREFY (Feb. 17, 2020), <https://www.purefy.com/learn/student-loan-debt-statistics-almanac> (using data collected from the Federal Reserve and the U.S. Department of Education).

³ The concept of “bounded rationality” was first proposed by Herbert Simon, who offered it as an alternative to the view that was common in the field of economics at the time which used normative mathematical models of decision making. The basic idea was that consistent with those economic models people try to be rational, but contrary to those models there are limitations on the amount of information that people have, can process, or can process within the time limits that they need to process them. Herbert A. Simon, *Bounded Rationality and Organizational Learning*, 2 *ORG. SCI.* 125 (1991). For a detailed analysis of this concept, see generally *BOUNDED RATIONALITY: THE ADAPTIVE TOOLBOX* (Gerd Gigerenzer & Reinhard Selten eds., 2002).

⁴ See, e.g., OREN BAR-GILL, *SEDUCTION BY CONTRACT: LAW, ECONOMICS, AND PSYCHOLOGY IN CONSUMER MARKETS* 117 (2012) (“The root cause of the problem [riskier, higher priced loans being made to riskier borrowers] is that lenders hid these prices and borrowers underappreciated them.”). Bar Gil states an example is through the use of an adjustable rate loan that starts off at a low rate but a few years later rises to an unaffordable rate, deferring the costs into the future, so the borrower does not notice or fully appreciate how this impacts the price of the loan. *Id.* at 163–65; see also Zoeller, *supra* note 2 (stating that higher priced, riskier loans were also offered to many consumers who qualified for lower rate, fixed-rate loans).

⁵ Debra Pogrund Stark et al., *Dodd-Frank 2.0: Creating Interactive Home-Loan Disclosures to Enable Shrewd Consumer Decision-Making*, 27 *LOY. CONSUMER L. REV.* 95, 96–97 n.10 (2014) [hereinafter *Shrewd Consumer Decision-Making*]; Jessica M. Choplin & Debra Pogrund Stark, *Whispering Sweet Nothings: A Review of Verbal Behaviors That Undermine the Effectiveness of Government-Mandated Home-Loan Disclosures*, *COGNITIVE RSCH.: PRINCIPLES & IMPLICATIONS* (Feb. 13, 2019), <https://cognitiveresearchjournal.springeropen.com/articles/10.1186/s41235-019-0154-7> [hereinafter *Whispering*]; Debra Pogrund Stark & Jessica M. Choplin, *A License To Deceive: Enforcing Contractual Myths Despite Consumer Psychological Realities*, 5 *N.Y.U. J.L. & BUS.* 617, 708–12 (2009); Debra Pogrund Stark et al., *Ineffective in Any Form: How Confirmation*

the inadequate response of the legal system in light thereof.⁶ This combination has caused many consumers to overpay for their loans (enter into higher-cost loans than they qualified for as noted earlier) or to enter into loans with risky terms that cause the borrowers to default under the loan and lose their home in a foreclosure.⁷

In the context of residential mortgage loans made by banks, Congress has preempted many state law protections that might have tried to regulate loan pricing, impose duties of suitability, require affordable loans, or prohibit risky or oppressive loan features.⁸ In the place of such protections, Congress has primarily relied upon federally mandated home loan disclosure forms as the means for borrowers to learn about their key loan terms, so they can shop for the best-priced and least-risky loan they can qualify for in the marketplace. Only after the devastation from the sub-prime mortgage crisis and “Great Recession” (which began in 2007 and technically ended in 2009), did Congress finally and significantly respond by enacting the Dodd-Frank Wall Street Reform and Consumer Protection Act in 2010.⁹ The Dodd-Frank Act made some important reforms to try to prevent a similar crisis in the future.¹⁰ But the Dodd-Frank Act did not make all reforms needed to adequately protect borrowers from overpriced, unaffordable, and risky home loans.¹¹ In light of the current stalemate and policy divides between consumer advocates and the lending industry and its advocates, it is unlikely that further significant legislation will be enacted to better protect borrowers under home loans or student loans anytime soon.¹²

Bias and Distractions Undermine Improved Home-Loan Disclosures, 122 YALE L.J. ONLINE 377–400 (2013) [hereinafter *Ineffective in Any Form*].

⁶ *Shrewd Consumer Decision-Making*, *supra* note 5, at 99–108. Law reform efforts for student loans appear to be focused more on improving on how loan servicers help student loan borrowers address various issues relating to repayment of the loan versus providing greater protection when first taking out the student loan. See Maggie Thompson et al., *Report: Borrowers Bill of Rights: States Step up to Protect Student Loan Borrowers*, GENERATION (Aug. 10, 2017), <https://genprogress.org/borrowers-bill-of-rights>; Jillian Berman, *Watchdog Slams the Department of Education’s Oversight of Student-Loan Companies*, MARKETWATCH (Feb. 18, 2019, 9:01 AM), <https://www.marketwatch.com/story/watchdog-slams-the-department-of-educations-oversight-of-student-loan-companies-2019-02-14>.

⁷ Kimberly Amadeo, *Adjustable Rate Mortgages and Their Hidden Dangers*, BALANCE, <https://www.thebalance.com/what-is-an-adjustable-rate-mortgage-3305811> (last updated Oct. 21, 2019); see also NAT’L CONSUMER L. CTR., CONSUMER CONCERNS: HELPING ELDERLY HOMEOWNERS VICTIMIZED BY PREDATORY MORTGAGE LOANS 2 (2008), https://www.nclc.org/images/pdf/older_consumers/consumer_concerns/cc_elderly_victimized_predatory_mortgage.pdf.

⁸ See *Shrewd Consumer Decision-Making*, *supra* note 5, at 95 n. 5.

⁹ Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, Pub. L. No. 111–203, 124 Stat. 1376–2223 (2010).

¹⁰ See *Shrewd Consumer Decision Making*, *supra* note 5, at 99–113.

¹¹ *Id.*

¹² See Annie Nova, *It’s Not All About Impeachment. These Bills Could Impact Your Finances*, CNBC, www.cnbc.com/amp/2019/11/16/big-changes-could-be-coming-to-your-finances-in-2020.html (last updated Nov. 17, 2019, 8:54 AM) (describing some modest law reform bills

This state of affairs led us to explore alternatives to policy prescriptions that we have advocated elsewhere (seeking a federal law that would require specially tailored mortgage counseling for federally insured mortgage loans)¹³ and, instead, investigate whether the current federally required Loan Estimate disclosure form (See Appendix A) for home loans could be “hacked” (creatively changed to work around difficult problems) to better enable borrowers to know what they need to know to get the best priced, and least risky, loan they qualify for.¹⁴ Such a hack might enable borrowers to overcome bounded rationality and the general complexity of home loan or student loan decision making, enabling borrowers to easily learn the key things they need to know to make rational, wealth-maximizing home loan decisions. We believe that to do so, the borrower needs to learn from the Loan Estimate disclosure form (the form lenders are required by federal law to provide to borrowers within three days of making a home loan application with the lender) the following information:¹⁵

- (i) the full price of an offered loan;¹⁶
- (ii) whether the loan appears to be overpriced in light of the borrower’s financial situation;
- (iii) which of two or more offered loans is the least expensive taking into account the borrower’s estimated holding period of the loan;
- (iv) whether the loan contains any risky features, and how those features can increase the likelihood that the borrower will not be able to repay the debt;
- (v) the consequences the borrower will suffer if the borrower fails to repay the debt; and
- (vi) whether the borrower will achieve a net economic benefit from a refinance of their loan.

The sheer amount of information that must be communicated creates a difficult challenge for a Loan Estimate disclosure form to meet, but this challenge is made far

proposed that have some bi-partisan support). The narrow nature of these proposed bills with only some bi-partisan support, evidences the prevailing current political gridlock.

¹³ Debra Poggrund Stark & Jessica M. Choplin, *A Cognitive and Social Psychological Analysis of Disclosure Laws and Call for Mortgage Counseling to Prevent Predatory Lending*, 16 PSYCH. PUB. POL’Y & L. 85 (2010) [hereinafter *Cognitive and Social Psychological Analysis*].

¹⁴ We also consider at the end of the Article how our proposals relating to federally mandated home mortgage disclosures could be applied to federally mandated disclosure forms for student loans, in particular, private student loans, to better protect students.

¹⁵ CONSUMER FIN. PROT. BUREAU, *What is a Loan Estimate?*, <https://www.consumerfinance.gov/ask-cfpb/what-is-a-loan-estimate-en-1995/> (last updated Sept. 12, 2017).

¹⁶ A central point of this Article is that this full price can and should be expressed in the APR to create a simple tool that can be easily used by the borrower to make what would otherwise be a highly complicated decision.

worse yet by consumers' bounded rationality.¹⁷ To be even minimally adequate, disclosures would need to overcome consumers' bounded rationality barriers.¹⁸ These barriers include that consumers often cannot make sense of disclosures, that they do not know what information is relevant for identifying which loans are less expensive, that they do not even know that such information is available, and do not know where to find it.¹⁹ Effective disclosures need to overcome these barriers and recognize that consumers do not understand the disclosed information even when they see it. Consumers are generally not financial experts,²⁰ they lack the conceptual scripts and schemas needed to make judgments,²¹ and struggle with financial illiteracy and innumeracy²² that prevents them from adequately gauging tradeoffs and other judgments relevant to home loan decision making.²³ A minimally adequate disclosure would need to grab consumers' attention²⁴ and focus it on the loan attributes needed to identify the lowest priced loans,²⁵ all while respecting consumers' attentional limitations.²⁶ Consumers' attention cannot be stretched too thin.²⁷ Any minimally adequate disclosure would need to overcome the consumers' cognitive barriers of struggling to remember the information needed to make judgments,²⁸ and using the disclosed information effectively to make a rational decision relating to the transaction.²⁹

Due to the inordinate difficulties involved in overcoming these barriers, many who have studied the effectiveness of disclosure forms in general, and home loan disclosure forms specifically, have concluded that it is virtually impossible to accomplish the

¹⁷ To explore the concept of bounded rationality, see generally Simon, *supra* note 3; BOUNDED RATIONALITY: THE ADAPTIVE TOOLBOX, *supra* note 3.

¹⁸ *Cognitive and Social Psychological Analysis*, *supra* note 13, at 98–105 (describing fourteen cognitive and psychological factors that make disclosure forms ineffective).

¹⁹ Omri Ben-Shahar & Carl E. Schneider, *The Failure of Mandated Disclosure*, 159 U. PA. L. REV. 647, 709 (2011); *see also* *Whispering*, *supra* note 5, at 6.

²⁰ Ben-Shahar & Schneider, *supra* note 19, at 725.

²¹ *Cognitive and Social Psychological Analysis*, *supra* note 13, at 98–99.

²² Innumeracy is the inability to use mathematics.

²³ Ben-Shahar & Schneider, *supra* note 19, at 711–12.

²⁴ *Id.* at 729.

²⁵ *Id.*

²⁶ *Id.*

²⁷ *Cognitive and Social Psychological Analysis*, *supra* note 13, at 96–105.

²⁸ Ben-Shahar & Schneider, *supra* note 19, at 719.

²⁹ *Id.* at 720–21.

goal of allowing consumers to use disclosure forms effectively to make rational decisions.³⁰

Nevertheless, we hypothesize that the Loan Estimate disclosure form for closed-end home loans (loans with a stated end date versus revolving credit) could be hacked to create a series of simple-to-use tools that provide borrowers with virtually all of the information they need, tailored to their circumstances, to determine whether an offered loan is one they should accept. We further hypothesize that this can be done while respecting consumers' cognitive limitations, their bounded rationality. As tested in Part III and further detailed in Part IV, we argue that this can be done primarily by refocusing on, and providing manipulations to, the APR figure disclosed,³¹ so that it becomes an enhanced and interactive APR creating a key tool that consumers can focus on when deciding whether to accept an offered loan.

In Part II of this Article, we analyze the extent to which the current federally required Loan Estimate form (See Appendix A) enables a borrower to simply and effectively learn the answers to the six key pieces of information described above, so the borrower can rationally decide whether to accept an offered home loan. We focus in particular on serious problems with how the price of the loan is currently disclosed and share a bit on how the loan price disclosure can be substantially improved based on prior experiments we have run using a "Price Tag APR" on page 1 of the Loan Estimate that would make comparison shopping for the lowest priced loan easier and more accurate.

In Part III, we report for the first time on a new experiment we developed to determine whether the Price Tag APR could be further adjusted to reflect different estimates for how long the borrower will hold the loan, and enable consumers using the disclosure form to successfully choose the less expensive loan when the holding period changes. We developed this experiment to address the Consumer Financial Protection Bureau's ("CFPB") concern that buyers erroneously focus solely on the APR to determine the cost of a loan, when the APR does not take into account the borrower's likely holding period of the loan.³² Part III also considers and analyzes how the results from our APR experiments can apply in the real world.

In Part IV, we detail the changes we propose the CFPB make to the Loan Estimate. The primary change we recommend is creating a few simple-to-use tools that provide borrowers with virtually all of the information they need, tailored to their circumstances, to determine whether an offered loan is one they should accept. We also consider how providing the Loan Estimate online, with our proposed interactive features, can reduce deceptive sales tactics that have previously caused many borrowers to enter into overpriced and unaffordable home loans containing risky

³⁰ See, e.g., *id.* at 651. See generally OMRI BEN-SHAHAR & CARL E. SCHNEIDER, MORE THAN YOU WANTED TO KNOW: THE FAILURE OF MANDATED DISCLOSURE (2014); Lauren Willis, *Decision Making and the Limits of Disclosure: The Problem of Predatory Lending: Price*, 65 MD. L. REV. 707 (2006).

³¹ Having consumers primarily focus on the APR is what Congress initially intended when it enacted the Truth in Lending Act back in 1966. See generally Elizabeth Renuart & Diane Thompson, *The Truth, the Whole Truth, and Nothing but the Truth: Fulfilling the Promise of Truth in Lending*, 25 YALE J. ON REGUL. 181 (2008).

³² See generally Christine McClatchey & Cris de la Torre, *Comparing Fixed-Rate Mortgage Loans via the Annual Percentage Rate: Cautions and Caveats*, 60 J. FIN. SERV. PROS. 16 (2006).

features.³³ We then discuss the CFPB's authority to revise the Loan Estimate disclosure form as we propose.

We conclude by considering how creating interactive, data-based, loan disclosure forms that provide information to the user, tailored to the user's personal situation, can be used in other important loan settings such as student loans.

II. ASSESSING THE ABILITY OF BORROWERS TO EFFECTIVELY USE THE CURRENTLY REQUIRED LOAN ESTIMATE DISCLOSURE FORM TO DETERMINE WHETHER TO ACCEPT AN OFFERED HOME LOAN & PROPOSING SOME WAYS TO ADDRESS DEFICIENCIES AND CHALLENGES

To decide whether to accept a home loan disclosed in a Loan Estimate disclosure form, we believe consumers need to know the following information to make a rational and wealth-maximizing decision:

- (A) the complete price of the offered loan, expressed in a way that is easy to understand and use, and that makes shopping for the lowest priced loan easy;
- (B) whether the offered loan is the lowest priced loan the borrower appears to qualify for;
- (C) which of two or more offered loans is the least expensive, taking into account the borrower's estimated holding period for the loan;
- (D) whether the loan contains any risky features, and how those features can increase the likelihood that the borrower will default on the debt;
- (E) the consequences the borrower will suffer if the borrower defaults on the debt; and
- (F) if the offered loan will refinance an existing mortgage loan, whether the borrower will achieve a net economic benefit by refinancing the older loan.

These are the factors a home loan expert is likely to focus on when providing advice to clients.³⁴ These factors, and the extent to which the current mandatory Loan Estimate form for home loans provides these key pieces of information in a way that a typical consumer can simply and effectively use, are the focus of Part II.

A. (Does the Current Loan Estimate Form Communicate the Complete Price of the Offered Home Loan, in a Way that Is Easy to Understand and Use, and that Makes Shopping for the Lowest Priced Loan Easy?

The answer to the above question is "no" because consumers' bounded rationality³⁵ prevents them from properly understanding tradeoffs, such as the

³³ See *infra* Part IV.

³⁴ See Ben-Shahar & Schneider, *supra* note 19, at 726 (stating the importance of having needed information in a way the borrower can effectively use as an expert would analyze the decision).

³⁵ See generally Simon, *supra* note 3, at 125–34; BOUNDED RATIONALITY: THE ADAPTIVE TOOLBOX, *supra* note 3.

tradeoffs between closing costs and interest rates.³⁶ Instead, consumers use heuristics³⁷—mental shortcuts—or look for ad hoc reasons to justify their choices.³⁸ A 2006 study by Lauren Willis found that borrowers too often only looked at the monthly payment to judge the price and justify their choice, causing them to pay much more over the loan term than they should have paid.³⁹

To preview, we will argue that APR should be used to communicate the complete price of offered home loans, but the current disclosure rules de-emphasize the APR in the Loan Estimate due to some problems with the APR that we believe can be remedied as described below.

For decades, the APR was prominently displayed on the top of page 1 of Truth in Lending Act's home loan disclosure form.⁴⁰ This was because the APR is intended to be a single figure reflecting the price of the loan (versus trying to figure out the price of the loan by looking at the interest rate, closing costs, fees, and payment schedule). Having a single APR figure to focus on enables a borrower to compare the price of loans more easily than comparing interest rates, fees, closing costs, and payment schedules of two or more home loans. But, as detailed below, due to some problems with using the APR as the price of the loan, the CFPB decided to move it from its prominent place on the top of page 1 to a much less prominent place on page 3 of the form. This change in focus was misguided because, while there are some flaws with using the APR as the price of the home loan, those flaws can be remedied. Furthermore, the APR continues to be the simplest and easiest way for a consumer to see the price of the loan in a single figure.

In determining the critical information of the “price” (i.e. the expense) of the loan, the consumer needs to know the total amount of interest, fees, and other costs they will incur in order to borrow the loan amount. The “APR” was initially intended by Congress, when it enacted the Truth in Lending Act in 1968,⁴¹ to reflect this price of the loan by combining the loan's fees, costs, and interest payments, annualized over the term of the loan and expressed as a percentage figure. The idea was that the consumer could easily use this figure to compare one loan with others and shop around for the lowest priced loan they qualify for.⁴² Had this APR figure included all of these fees and costs and been calculated based upon the borrower's estimated holding period of the loan, the APR could be a very simple and effective way to price shop fixed-rate home loans. The APR would help to identify and select the least expensive loan. But

³⁶ Ben-Shahar & Schneider, *supra* note 19, at 724–25.

³⁷ See generally GERD GIGERENZER, ET AL., *SIMPLE HEURISTICS THAT MAKE US SMART* (1999).

³⁸ See generally Eldar Shafir et al., *Reason-Based Choice*, 49 *COGNITION* 11 (1993); Rui Mata & Ludmila Nunes, *When Less Is Enough: Cognitive Aging, Information Search, and Decision Quality in Consumer Choice*, 25 *PSYCH. & AGING* 289 (2010).

³⁹ Willis, *supra* note 30, at 780–81.

⁴⁰ *Shrewd Consumer Decision-Making*, *supra* note 5, at 107.

⁴¹ See Renuart & Thompson, *supra* note 31, at 189–90.

⁴² *Id.* at 186.

the way the APR is calculated has increasingly excluded some of the fees and costs to obtain the loan,⁴³ making the APR figure as currently disclosed not as accurate on the total price of the loan. This in turn makes comparing loans using the APR more difficult because one loan may charge for required items not covered by APR while another loan does not.

In addition, although loans can be, and usually are, repaid prior to their stated maturity date, borrowers cannot know exactly when they will finish repaying a loan at the time they take it out. So, the APR was, and still is, calculated based on the assumption that the borrower will hold the loan until it matures, which is typically 15 or 30 years.⁴⁴ But the actual APR on the loan will be different depending on when the borrower actually pays it off.

As will be explored in detail in Part III, when comparing the APR for two loans, one with a higher closing cost but a lower interest rate and another with a lower closing cost but a higher interest rate, the question of which is truly the least expensive loan depends on how long the borrower will actually keep the loan before paying it off. The actual APR figure will change depending on this holding period. For example, if the borrower plans to move in three years and expects to prepay the loan at that time, the loan with the higher interest rate but lower closing costs might have a lower price overall than another loan with a lower interest rate but higher closing costs. However, borrowers would only be able to easily and precisely know this if the APR was adjusted to take into account the borrower's estimated holding period of the loan.

The CFPB revised its home loan disclosure forms in 2010 in response to these difficulties and to certain studies that reflected that consumers did not understand exactly what APR is and how it is calculated.⁴⁵ The changes moved the APR from its former, prominent, and highly visible position at the top of page 1 of the Truth In Lending Act ("TILA") disclosure form, to a single line item on page 3, greatly de-emphasizing the APR.⁴⁶

In addition, in 2015, the CFPB made further mandatory revisions to the Loan Estimate form (See Appendix A). Now, to get a sense of the "price" (expense) of the loan offered, and to compare that price with other home loans, users of the new disclosure form need to look at numerous pieces of information: (1) the interest rate and monthly payments on page one of the form, (2) the various itemized closing costs listed on page two of the form (trying to find the total of such costs), (3) a new item, the dollar amount on page three, reflecting in 5 years, the "[t]otal you will have paid in principal, interest, mortgage insurance, and loan costs" and (4) another new item, a dollar amount one line down reflecting "[p]rincipal you will have paid off."⁴⁷ Consumers will then need to understand how to combine all this information to try to

⁴³ *Id.* at 207.

⁴⁴ McClatchey & de la Torre, *supra* note 32, at 18.

⁴⁵ *Id.* at 17.

⁴⁶ *Shrewd Consumer Decision-Making*, *supra* note 5, at 107.

⁴⁷ CONSUMER FIN. PROT. BUREAU, TILA-RESPA INTEGRATED DISCLOSURE: GUIDE TO THE LOAN ESTIMATE AND CLOSING DISCLOSURE FORMS, 1, 60 (2018) [hereinafter LOAN ESTIMATE], https://files.consumerfinance.gov/f/documents/cfpb_kbyo_guide-loan-estimate-and-closing-disclosure-forms_v2.0.pdf.

understand the price of the loan and compare it with other loans to determine the lowest price. We found the information contained in new items (3) and (4) described above to be confusing and unhelpful to borrowers trying to discover which of two home loans would be least expensive if the loans were paid off in year 5 of the loan.⁴⁸

We were concerned that replacing the focus on the APR figure with a focus on all of this other information was a step in the wrong direction. This change failed one of TILA's ultimate goals—to make shopping for a loan easier for consumers. We hypothesized elsewhere that even if a consumer does not fully understand what the APR is and how it is calculated, the APR could still be disclosed in a way that enables the consumer to use it, thereby making the disclosure form a better tool for helping consumers pick the least expensive of two loans.⁴⁹

This is especially important and difficult in cases where one loan offer has a higher interest rate and lower closing costs, and the other loan offer has a lower interest rate and higher closing costs. We ran an experiment in 2014 where the control group received disclosures of two loans on the current Loan Estimate home loan disclosure form, and the participants in the experimental condition received disclosures of the same two loans on the same form, except that for the participants in the experimental condition, the APR was prominently displayed on page 1 of the disclosure form with a price tag around it, stating “APR price of the loan. Lower is better for you.” We found that the users of the disclosure form containing our enhanced APR on page 1 were significantly more able than users of the current version of the home loan disclosure form to identify which of two loans was least expensive;⁵⁰ 44% of those in the control group were able to identify the lower priced of two loans (a result equal to chance level) while 74% in the experimental condition were able to do so.

The results from this experiment (and a financial literacy test we gave to all of the participants after the experiment, which showed that only 11.2% could accurately describe what APR was) demonstrate that our hypothesis was correct. Adding our enhanced APR to the disclosure form allowed consumers to use the disclosure form to better identify and pick the less expensive of two mortgage loans when one loan has a higher interest rate and lower closing costs, and the other has a lower interest rate and higher closing costs. This was the case even though our participants did not completely understand what an APR is or how it is calculated. Unfortunately, the current Loan Estimate form, by not incorporating this change, failed to disclose the prices of home loans for comparison purposes as simply and effectively as borrowers need.⁵¹

A key remaining reason, it appears, why the CFPB minimized the APR on the current Loan Estimate disclosure form, moving it to the third page, was the concern that it is calculated based on the borrower holding the loan for the entire loan term (i.e., 30 years for a 30-year mortgage). Paper-based disclosure forms could not be

⁴⁸ See *infra* Part III (discussing “5 year closing costs neglect”).

⁴⁹ *Shrewd Consumer Decision-Making*, *supra* note 5, at 113; see also Renuart & Thompson, *supra* note 31, at 217–18.

⁵⁰ See *Shrewd Consumer Decision-Making*, *supra* note 5, at 113–23.

⁵¹ The 2014 article, unfortunately, came out after the CFPB released the last set of changes to the Loan Estimate form. Those changes were made effective on August 1, 2015.

personalized for an individual borrower's expected holding period. As such, the APR can be misleading, a concept discussed further in Part III. Therefore, reliance on APR could lead to consumers selecting a loan that was not the lowest priced loan for their individualized expected holding period. These constraints go away, however, once disclosures are made electronic and interactive. We hypothesized that APR would be useful to consumers allowing them to select the lowest priced loan if they were provided APRs for likely holding periods. In Part III, we report the results of an experiment that we ran to test this hypothesis. As explained in Part III, we found the "comparison information in year 5" of the Loan Estimate form to be confusing, difficult to use, and unhelpful in determining which one of two loans is the least expensive if the borrower only holds the loan for five years. In addition, the information the Loan Estimate provides can harm consumers who plan to hold a loan for shorter or longer than the form anticipates.⁵² Based on our test results, we believe that a tailored approach to each consumer's situation through creating an interactive online Loan Estimate disclosure form, as described in Part IV, will provide much more useful information to consumers.

Furthermore, an interactive, online Loan Estimate disclosure form for closed-end home loans that allows consumers to enter personalized information can produce an individualized APR adjusted to reflect all of the fees and costs to obtain the offered loan, plus prepayment charges. Such an individualized APR will be extremely useful for helping consumers understand the price of the loan and helping them shop for the lowest priced loan they can receive. We also propose other features in Part IV that can make APR even more useful for consumers. The effectiveness of these proposals will be tested in future research.

We thus conclude that the current Loan Estimate disclosure form fails to communicate the complete price of the offered loan in a clear way and fails to express it in a way that makes shopping for the lowest priced loan easy.

B. (Does the Current Loan Estimate Form Enable the User of the Form to Easily Determine Whether the Offered Home Loan Is the Lowest Priced Loan she/he Qualifies for?

Trying to use the Loan Estimate form to shop around for the best priced loan the borrower can find is one way to get a sense of whether a specific loan offer is the lowest priced loan the borrower qualifies for. However, this process can be time consuming and labor intensive because a lender is not obligated to provide a Loan Estimate until after the borrower has made a loan application with them. This may explain why 79% of borrowers only end up applying with a single lender or broker instead of filling out multiple applications to find the best deal.⁵³

⁵² See *infra* Part III (discussing participants' justification of their decision).

⁵³ Sergei Kulaev, *Nearly Half of Mortgage Borrowers Don't Shop Around When They Buy a Home*, CONSUMER FIN. PROT. BUREAU (Jan. 13, 2015), <https://www.consumerfinance.gov/about-us/blog/nearly-half-of-mortgage-borrowers-dont-shop-around-when-they-buy-a-home/>. The TILA-RESPA Integrated Disclosure Rules ("TRID") redefined "loan application," so the lender must now provide the loan estimate after receiving 6 basic items of information, not yet needing to be verified: name, income, social security number (so the lender can pull a credit report, the property address, an estimate of the

Furthermore, as previously explained, the current Loan Estimate form fails to adequately communicate the price of the offered loan in a way that makes shopping for the lowest priced loan easy to do.

For these reasons, we conclude that the current Loan Estimate form fails to enable the user to determine whether the offered home loan is the lowest priced loan available. In Part IV, we propose an exciting way that the Loan Estimate form can be revised to include an interactive feature we call “APR For Your Credit Score,” which can help the borrower evaluate whether the APR of the offered home loan is overpriced, whether it is worth the borrower’s time and effort to shop around for more loan offers, and provides a strong inducement to do so.⁵⁴

C. Does the Current Loan Estimate Enable the Borrower to Easily Determine Which of Two or More Offered Loans Is the Least Expensive, Taking into Account the Borrower’s Estimated Holding Period of the Loan?

As noted earlier in the answer to the question posed in Part II.A, the current Loan Estimate form does not provide borrowers with a way to determine which loan offer is the least expensive for their expected holding period because making this determination requires complicated calculations involving tradeoffs between closing costs and interest rates.⁵⁵ Consumers’ bounded rationality and innumeracy⁵⁶ prevents them from making such a calculation on their own.⁵⁷ Furthermore, a good way to determine which loans are less expensive is to look at APRs, but currently the APRs disclosed on the Loan Estimate form are de-emphasized, assume a 30-year holding period, and fail to take into account a borrower’s individualized estimated holding

value of the property, and the desired loan amount), which may increase the number of people applying to multiple lenders. See LOAN ESTIMATE, *supra* note 47, at 12.

⁵⁴ The first author recommended this type of tool in 2004 and 2005. See Debra Pogrud Stark, *Become a Hero to a Family in Need—Predatory Lenders Beware*, 18 PROB. & PROP. 9, 11 (2004) (urging attorneys to provide pro bono counseling to borrowers on the advisability of their entering into an offered home loan and the issues to raise with their clients to determine if an offered home loan is overpriced, unaffordable, or contains risky terms); Debra Pogrud Stark, *Unmasking the Predatory Loan in Sheep’s Clothing: A Legislative Proposal*, 21 HARV. BLACKLETTER L. J. 129, 130 (2005) (recommending federally mandated mortgage counseling to help prevent borrowers from entering into overpriced, unaffordable home loans with risky features. The CFPB created a similar, but less comprehensive tool, which shows the interest rate for different credit scores, however, their tool fails to take into account the fees, and other costs to obtain the loan, which are also an important component of the “price” of a loan. *Explore Interest Rates*, CONSUMER FIN. PROT. BUREAU, <https://www.consumerfinance.gov/owning-a-home/explore-rates> (last visited Aug. 31, 2020).

⁵⁵ Ben-Shahar & Schneider, *supra* note 19, at 720.

⁵⁶ *Id.* at 712.

⁵⁷ *Id.* at 720.

period of the loan.⁵⁸ Adding a second APR to the Loan Estimate form could solve this problem. The second APR could be labeled “APR Adjusted for Your Estimated Holding Period” and would account for the borrower’s personalized holding period. It would then be easy for a borrower to compare the adjusted APR on different Loan Estimate forms and to select the lowest. Indeed, that is what was successfully tested in the APR experiment reported in Part III. The harder issue is what questions to ask in an interactive form to help the borrower estimate how long they will hold the loan before prepaying it, as few borrowers hold loans for the entire term.⁵⁹ Due to the difficulty consumers will likely have to estimate their holding period,⁶⁰ we recommend in Part IV the consumer can elect instead to learn what the APR assumes is the average period of time a borrower holds a loan before repaying it.⁶¹

D. Does the Current Loan Estimate Form Adequately Disclose Whether the Loan Contains Risky Terms that Increase the Likelihood the Borrower Will Default on Paying the Loan Back, with Explanations of Why These Terms Are Risky?

In answering this question, we consider the following three loan terms to be risky because for many, but not all, borrowers each of these terms can increase the likelihood the borrower will default in paying back the loan:

- (i) adjustable interest rates (in particular when a loan starts with a fixed interest rate but can later convert to a much higher priced adjustable interest rate);⁶²

⁵⁸ See *Loan Estimate Explainer*, CONSUMER FIN. PROT. BUREAU, <http://www.consumerfinance.gov/owning-a-home/loan-estimate/> (last visited Aug. 31, 2020); see also *Shrewd Consumer Decision-Making*, *supra* note 5, at 107.

⁵⁹ Jessica Guerin, *Homeowners Are Staying Put, Just Not for as Long as Before*, HOUSING WIRE (May 1, 2019, 4:50 PM), <https://www.housingwire.com/articles/48946-homeowners-are-staying-put-just-not-for-as-long-as-before>.

⁶⁰ This requires predicting many possible changes in the future that could cause a borrower to pay off the loan early including: future interest rates (if a refinance is used to take advantage of that), home prices (if repayment is due to selling the home), job security (a loss of a job or better new job could lead to the borrower moving from the home to another location), family status (marriage, divorce, birth of a child), and health issues.

⁶¹ The average home tenure (time period a borrower remains in their home) was 4.2 years from 2000-2007 but is now over 8 years. See Guerin, *supra* note 59.

⁶² While technically not a loan term, the “affordability” of the loan to the borrower, based upon the borrower’s income, and other living expenses, is also an important consideration the borrower should consider when determining whether to take on an offered home loan, even for a fixed rate loan. We recommend the consumer be made aware of the issue of the affordability of the offered loan, in the Loan Estimate, as described in Part IV. See LOAN ESTIMATE, *supra* note 47, at 30.

- (ii) interest-only loans, where the borrower pays only the accrued interest each month but must make a balloon payment of the entire loan amount at maturity;⁶³ and
- (iii) prepayment penalties,⁶⁴ which are additional charges imposed on borrowers who prepay their loan substantially earlier than the full term. The most problematic prepayment penalties are those charged during the first two or three years of the loan.⁶⁵

The current Loan Estimate disclosure form appears to do a very good job of showing not only when a loan's interest rate can change during the loan term, but also how high that rate can go and how the rate change can affect the borrower's monthly payment.⁶⁶ While adjustable rate loans must specify a cap, the cap can be whatever the lender chooses (subject to state and federal usury laws).⁶⁷ For example, a disclosure may show that an initial interest rate of 4% can go as high as 12% with monthly payments going from \$703 initially to as high as \$2,068. This information is presented on page 1 of the Loan Estimate form in an apparent and straightforward manner under the captions "Loan Terms" and "Projected Payments."⁶⁸ Borrowers should be able to look at the interest rate, monthly payment amount, and maximum expected payment and be able to determine if this feature of their offered loan would make their loan difficult for them to be able to make payments on.

For some borrowers, however, any loan can be too risky if the debt-to-income ratio is too high. A borrower's debt-to-income ratio, usually expressed as a percentage, is his monthly debt service payments divided by monthly income. The current Loan Estimate form does not directly address the issue of affordability; instead, the form merely presents the numbers so the borrower can make their own decision regarding affordability. Since some borrowers could benefit from having a sense of how affordable an offered home loan is in light of their financial situation, a tool that enables the borrower to calculate their debt-to-income ratio and information that gives the borrower some context on the range of reasonable ratios could be an added feature in an interactive online disclosure form. This possibility is briefly discussed in Part IV.

⁶³ Alternatively, these loans may involve repaying some principal each month but not enough to pay it off in full. Later, some or most of the principal must also be paid when the loan is repaid. *Id.* at 24.

⁶⁴ In the future, lenders may come up with additional risky loan features or terms that make a borrower more likely to default or otherwise be problematic. Consequently, the Loan Estimate form should be revised to keep up with any additional such loan terms. *Id.*

⁶⁵ Prepayment penalties can make it difficult for borrowers to refinance or sell when they find a loan to be unaffordable. *Id.* at 14.

⁶⁶ *Id.* at 28–29.

⁶⁷ 12 U.S.C. § 3806(a) (2012); *see also* Truth in Lending Act (Regulation Z), 12 C.F.R. § 1026.30 (2011) (implementing regulation).

⁶⁸ LOAN ESTIMATE, *supra* note 47, at 14.

The Loan Estimate disclosure form (See Appendix A) also appears to do a good job of disclosing when there is a prepayment penalty⁶⁹ and how it adds to the amount owed when the loan is prepaid. It also appears to do a good job of disclosing when there is a balloon payment and how it impacts the amount owed at the end of the loan term.⁷⁰ On page 1 of the Loan Estimate disclosure form, “Prepayment” is the fourth item listed under “Loan Terms,” and “Balloon Payment” is the fifth listed under “Loan Terms.”⁷¹ Above these two items, in boldface, is the question: “Does the loan have these features?” and after each term the lender must indicate either “NO” or “YES” in bold.⁷² If there is a prepayment penalty, the lender must also disclose the following sentence: “As high as \$ ____ [dollar amount filled in] if you pay off the loan during the first ____ years;” and for a balloon payment, it then states in boldface: “You will have to pay \$ ____ [dollar amount filled in] at the end of year ____ [number filled in not in boldface].”⁷³

However, due to the problem of temporal discounting, borrowers may not accord proper weight to the adjustable interest rates, prepayment penalty, or the balloon payment when disclosed in the Loan Estimate form. Under temporal discounting, consumers under-evaluate future fees and costs.⁷⁴ Thus, borrowers may ignore important expenses such as (1) the higher costs when interest rates adjust upwards, (2) the costs of prepayment penalties (which might not occur at all if the borrower holds out for 3 years), and (3) delayed balloon payments. To address this problem, we recommend in Part IV that the Adjustable Rate or Prepayment Penalty be incorporated into a modified APR that would assume the loan is paid off early during the first three years of the loan, and we recommend labeling it something like “APR Taking into Account Adjustable Interest Rates” or “APR Taking into Account Prepayment Penalty.”⁷⁵ Adding the impact of the adjustable rates or prepayment penalty into the APR, causing the APR to increase immediately, will counter the impact of temporal discounting because consumers will not evaluate these as separate costs to be paid in the future. They will simply have a different APR number to compare with the APRs for alternative loans. It also enables the borrower to compare the APR of a loan with adjustable rates and/or a prepayment penalty with the APR of a loan without these features.

Another concern we have with relying upon the current Loan Estimate form is that it does not explain to borrowers why these risky loan features can be problematic and should generally be avoided. Our concern is based upon the dismal results from a

⁶⁹ We think the use of the word “penalty” versus “charge” may be a good term to use to try to signal to a borrower that the charge is not a customary one and should be avoided.

⁷⁰ LOAN ESTIMATE, *supra* note 47, at 24.

⁷¹ *Id.* at 14.

⁷² *Id.*

⁷³ *Id.* at 24.

⁷⁴ *Cognitive and Social Psychological Analysis*, *supra* note 13, at 98.

⁷⁵ Under Dodd-Frank, a loan with an adjustable interest rate cannot also have a prepayment penalty. 15 U.S.C. § 1639(c).

financial literacy test we gave to the participants in our 2014 APR experiment. While 83.6% of the participants were able to correctly describe what an adjustable rate loan was,⁷⁶ only 30% listed it as a problematic term that increases the likelihood of defaulting on payments.⁷⁷ Only 12.1% were able to correctly describe what a balloon payment was,⁷⁸ although a slightly higher 15.5% listed it as a problematic term increasing the likelihood of default in making payments.⁷⁹ Only 25% were able to correctly describe what a prepayment charge was, with 0% listing it as a problematic term that could lead to a default in making payments on their home loan.⁸⁰ In Part IV, we consider some interactive features that could be added to the Loan Estimate when the offered loan contains adjustable rates, balloon payments, and/or a prepayment penalty to better educate the user of the form on the risks of these terms in light of their financial situation.

E. Does the Loan Estimate Form Disclose the Consequences the Borrower Will Suffer if the Borrower Fails to Repay the Debt?

While the current Loan Estimate disclosure form identifies three risky loan terms that could lead to default, the form does not explain the consequences of default to the borrower.⁸¹ Without spelling this out, a borrower who perhaps put very little equity into purchasing the home may think that the worst thing that will happen if she/he defaults is that their credit score will drop or they will lose their mortgaged home.⁸² But in fact, in many states, in addition to these possibilities, there are other consequences as well. These additional consequences include the borrower being personally liable for the difference between the amount bid at the foreclosure sale and the amount due to the lender. The lender can then recover this deficiency amount through garnishing the borrower's wages and/or through placing a judgment lien on the borrower's other assets and seizing them.⁸³ In addition, the borrower might not

⁷⁶ See *Shrewd Consumer Decision Making*, *supra* note 5, at 124.

⁷⁷ *Id.* at 131.

⁷⁸ *Id.* at 125.

⁷⁹ *Id.* at 149.

⁸⁰ *Id.* at 125.

⁸¹ One exception we saw was in the Loan Estimate for a refinance, which notes that entering into the new loan could cause the borrower to end any state law protection they may currently have against liability for unpaid debt if the lender forecloses and there is remaining debt due after the foreclosure (i.e. referring to possible anti-deficiency laws in some states for a purchase money mortgage). A potential reason not to do a refinance in states with this type of law.

⁸² The first author received a phone call from a borrower who was surprised to learn that not only would he lose his home in a foreclosure action, but that the lender could also garnish his wages to satisfy the difference between the loan amount and the successful bid amount at the foreclosure sale.

⁸³ See generally SIDNEY KEYLES ET AL., *FORECLOSURE LAW & RELATED REMEDIES: A STATE-BY-STATE DIGEST* (ABA ed., 1995).

realize the extent to which a credit score damaged by default can harm them in obtaining future credit on favorable terms and even employment.⁸⁴

In the financial literacy test we gave participants in our first APR experiment, we asked them to identify the actions lenders can take to recover debt after a borrower defaults. Surprisingly, only 47.4% responded that the lender could “take back the property/foreclose” and only 12.0% responded that the lender could “seize other assets/property of the borrower,” although 23.3% did vaguely state: “sue/take legal actions.” Other responses included the following: damage credit (8.6%), charge higher interest rate (6.9%), charge late fees (14.7%), restructure or modify loan terms (3.4%), “increase payments” (1.7%), give more time (0.9%), place lien on home (0.9%), and “go to government” (0.9%).⁸⁵ Nearly twenty-one percent provided no answer. The results from the financial literacy test underscore the need for consumers to know about these legal consequences before they take out a home loan.

This lack of financial literacy has real world consequences. Professor Stark was contacted by a consumer who was induced to take out a loan with an initial low teaser rate; within three years, however, that rate rose to an unaffordable level. The consumer asked about that problem and was told by the mortgage broker not to worry because the consumer could refinance the loan when the interest rate was set to increase. Unfortunately, by the time the interest rate rose, the housing market bubble had burst, and the consumer was not able to refinance. He not only lost the home at a foreclosure sale, but also faced garnishment of his wages. He told Professor Stark that had he been aware that his wages could be garnished, he would not have taken out the adjustable rate loan.

While there is evidence that consumers assume they will not default,⁸⁶ and, by the time they obtain a Loan Estimate, they will be biased by sunk costs⁸⁷ and the endowment effect,⁸⁸ the first author sees no harm in providing these warnings in the Loan Estimate and hopes that for at least some consumers, this information may re-inform their decision to enter into an offered home loan.⁸⁹ As discussed in Part IV,

⁸⁴ According to a 2018 National Association of Professional Background Screener study, 47% of employers run credit or financial background checks on candidates. James Garvey, *Can Your Credit Score Affect Your Employment?*, RECRUITER.COM (Feb. 12, 2019), <https://www.recruiter.com/i/can-your-credit-score-affect-your-employment/>.

⁸⁵ See *Shrewd Consumer Decision-Making*, *supra* note 5, at 150.

⁸⁶ Chris Dawson & Andrew Henley, *Something Will Turn Up? Financial Over-Optimism and Mortgage Arrears*, 117 *ECON. LETTERS* 49–52 (2012); Hamish G.W. Seaward & Simon Kemp, *Optimism Bias and Student Debt*, 29 *N.Z. J. PSYCH.* 17–19 (2000).

⁸⁷ Sumit Agarwal, et al., *Sunk-Cost Fallacy and Mortgage Default*, 24 *J. FIN. INTERMEDIATION* 636 (2015); *Cognitive and Social Psychological Analysis*, *supra* note 13, at 89; Bhavneet Walia, *The Home Mortgage Loan Crisis: A Lesson in Ignoring Sunk Costs*, 15 *J. MGMT. POL’Y & PRAC.* 30 (2014).

⁸⁸ Daniel Kahneman, et al., *Anomalies: The Endowment Effect, Loss Aversion, and Status Quo Bias*, 5 *J. ECON. PERSP.* 193 (1991); *Cognitive and Social Psychological Analysis*, *supra* note 13, at 105.

⁸⁹ Adding information on legal consequences of a default into the Loan Estimate would be harmful to consumers only if in doing so, policymakers would then use that disclosure as a basis

one place this information could be added is the “Other Considerations” Box on page 3 of the Loan Estimate.

F. If the Loan is a Refinance of an Existing Mortgage Loan, Does the Loan Estimate Disclose Whether the Borrower Will Achieve a Net Economic Benefit from a Refinance of that Loan?

Finally, when a home loan’s purpose is to refinance an existing mortgage loan rather than to purchase the real estate, it would be highly useful if the Loan Estimate form provided borrowers with easy-to-use and to understand information, so they could learn whether they would receive a net economic benefit from refinancing, since net economic benefit is the borrower’s primary purpose in refinancing the loan.⁹⁰ By net economic benefit, we mean that the replacement of the current loan with the new loan will lead the borrower to obtain a less expensive loan, taking into account the transaction costs and certain other relevant factors.⁹¹ The current Loan Estimate disclosure form does not address potential net economic benefits from doing a refinance, but this is an important consideration to a refinance and a complicated one for a typical consumer to determine.

Part IV will briefly discuss some possible ways to help a borrower learn if the offered loan to refinance an existing loan will create a net economic benefit to the borrower by adding an interactive tool to the Loan Estimate that can help calculate that.

III. THE NEW APR EXPERIMENTS: TESTING OUT SOME OF OUR HYPOTHESES AND PROPOSALS

Information is currently presented to consumers on the mandated Loan Estimate form in ways that require them to weigh attributes in a compensatory manner. On this view, positive attributes, like a relatively good interest rate on a given loan offer, should compensate for negative attributes, like higher closing costs on that offer. The assumption is that consumers are capable of weighing attributes in this compensatory manner and naturally do so,⁹² but due to the limitations posed by consumers’ bounded

to conclude that prohibiting problematic loan terms is no longer necessary, or that any financial literacy information would no longer be covered in consumer financial literacy programs, if it is already covered in the Loan Estimate. Something we are not advocating for when recommending adding this information to the Loan Estimate.

⁹⁰ In some cases, the consumer needs to refinance because they now cannot afford to continue to make payments on the loan and need a loan with a lower monthly payment, to be able to avoid default. This can be a rational reason to refinance, even if the refinance does not lead the borrower to obtain a less expensive loan, taking into account the transaction costs and certain other relevant factors. Other examples of rational reasons to refinance are noted in Part IV.A.6.

⁹¹ For example, one relatively simple way to calculate if there is a net economic benefit from a refinance is to refinance only if the present value of the interest saved is at least as great as the direct cost of the refinancing (as contrasted with refining the analysis to determine the optimal time to refinance when current mortgage interest rates fall below the original rate by at least an amount calculated by a formula the authors developed). See Sumit Agarwal et al., *Optimal Mortgage Refinancing: A Closed Form Solution* (Nat’l Bureau of Econ. Rsch., Working Paper No. 13487, 2007) [hereinafter *Optimal Mortgage Refinancing*].

⁹² See generally JOHN WILLIAM PAYNE ET AL., *THE ADAPTIVE DECISION MAKER* (1993).

rationality, this assumption is false.⁹³ In fact, weighing attributes in this compensatory manner is computationally complex,⁹⁴ particularly for older adults.⁹⁵ Thus, except for some unusual situations, consumers do not typically weigh attributes this way.

Instead of undertaking such a cognitively complex compensatory strategy, consumers use simpler strategies that allow them to find a shortcut to make the decision easier. For example, consumers often look for a simple reason or justification for their choice and once they find a justification they choose the justifiable choice.⁹⁶ They might, for example, look at the monthly payment and use that to justify their choice if it fits in their budget.⁹⁷ This strategy is called reason-based decision making. Other examples of simpler strategies and shortcuts involve fast and frugal heuristics.⁹⁸ Sometimes these heuristics can be as simple as choosing the option that is recognized (called the recognition heuristic⁹⁹) or the option that has positive emotional associations (called the affect heuristic¹⁰⁰). Alternatively, people can be taught to use heuristics, especially in contexts where heuristics produce better decisions than alternative strategies in light of the processing constraints posed by bounded rationality.¹⁰¹

In the case of home mortgage decision making, APR is the only single attribute that automatically reflects a compensatory weighting of the other loan attributes (i.e., the cost of interest and fees). Relying upon APR is, therefore, automatically compensatory, and it does not unreasonably require consumers to calculate compensatory weighting on the fly, which is simply too cognitively complex for consumers to do given the constraints posed by bounded rationality. APR provides a good justification for making a home mortgage decision, and we propose that

⁹³ Anuj K. Shah & Daniel M. Oppenheimer, *Heuristics Made Easy: An Effort-Reduction Framework*, 134 PSYCH. BULL. 207, 207 (2008). See generally Amos Tversky, *Elimination by Aspects: A Theory of Choice*, 79 PSYCH. REV. 281 (1972).

⁹⁴ See generally Shah & Oppenheimer, *supra* note 93.

⁹⁵ Rui Mata, et al., *The Aging Decision Maker: Cognitive Aging and the Adaptive Selection of Decision Strategies*, 22 PSYCH. & AGING 796, 796 (2007); Mara Mather, *A Review of Decision-Making Processes: Weighing the Risks and Benefits of Aging*, in WHEN I'M 64, 145 (Laura Carstensen & Christine Hartel eds., 2006); Ellen Peters et al., *Adult Age Differences in Dual Information Processes: Implications for the Role of Affective and Deliberative Processes in Older Adults' Decision Making*, 2 PERSPS. ON PSYCH. SCI. 1, 1 (2007).

⁹⁶ See generally Shafir et al., *supra* note 38; Mata & Nunes, *supra* note 38.

⁹⁷ Willis, *supra* note 30, at 780–81.

⁹⁸ See generally, GIGERENZER, *supra* note 37.

⁹⁹ Daniel Goldstein & Gerd Gigerenzer, *Models of Ecological Rationality: The Recognition Heuristic*, 109 PSYCH. REV. 75, 75–76 (2002).

¹⁰⁰ Joseph A. Mikels et al., *Following Your Heart or Your Head: Focusing on Emotions Versus Information Differentially Influences the Decisions of Younger and Older Adults*, 16 J. EXP. PSYCH.: APPLIED 87 (2010).

¹⁰¹ Julian N. Marewski & Gerd Gigerenzer, *Heuristic Decision Making in Medicine*, 14 DIALOGUES CLINICAL NEUROSCIENCE 77, 83 (2012).

consumers can be taught to effectively use APR to make optimal home mortgage decisions even though they often do not fully understand what it means or the finer details of how it is calculated.

The experiment that we report here was designed to test this hypothesis. We presented the APR to participants in a manner that previous research suggested would maximize the usefulness of APR for making home mortgage decisions and maximize the likelihood that consumers would use it.¹⁰² We also modified the APR to reflect the expected holding period because the appropriate compensatory weighting between costs and fees and interest rates depends upon the holding period.¹⁰³ This experiment investigated whether consumers would use APRs given this presentation and whether modifying APRs to reflect holding periods could allow consumers to make optimal home mortgage judgments that appropriately weigh costs and fees and interest rates for different holding periods without requiring them to calculate compensatory weighting on the fly.

A. Method

1. Expert Participant Sample

For this experiment, we obtained participants through the website Amazon Mechanical Turk.¹⁰⁴ For this expert participant sample, Amazon Mechanical Turk's filter criteria were set to target prior home mortgage borrowers. Ninety-nine Amazon Mechanical Turk workers from the United States responded (63 self-reported as female and 35 as male; 1 did not answer). They were paid \$0.25 for their participation.¹⁰⁵ Their average self-reported age was 44.0 years old. Eighty-two self-reported as white, 7 as African-American, 4 as Asian, 3 as Hispanic or Latin American, 2 as mixed race, and 1 did not answer. Self-reported educational levels were high with 31 reporting that they had graduate degrees, 50 reporting that they had college degrees, 14 that they had some college, 3 reporting that they had only a high school education, and 1 did not answer. Income levels were also high with 31 reporting that they earn over \$100,000 per year, 25 reporting between \$100,000 and \$75,000, 28 reporting between \$75,000 and \$50,000, 11 reporting between \$50,000 and \$25,000, 3 reporting less than \$25,000, and 1 did not answer. Of these 99 expert participants, 26 reported that they lived in rural areas, 58 that they lived in suburban areas, 14 that they lived in areas that the participants described as urban, and 1 did not answer. Although the experiment was targeted towards prior home mortgage borrowers in Amazon Turk, only 90 of the 99 participants reported taking out a home loan. In addition, 51 of the 99 reported taking out student loans and 23 of the 99 reported taking a class in which

¹⁰² *Shrewd Consumer Decision-Making*, *supra* note 5, at 95.

¹⁰³ *Id.*

¹⁰⁴ This website is commonly used to obtain participants for experiments in many fields, including psychology, marketing, and artificial intelligence.

¹⁰⁵ This amount of compensation, although a small amount of money, is on a par with how people are paid on this widely used website. The second author estimated ten minutes of time to perform the experiment on this website. Many tasks run on this website require only a few seconds for participants to respond to and those participants typically receive only a few cents for their participation.

they were taught about home loans. This expert participant sample, therefore, had a great deal of experience with loans.

The data from two of the participants was dropped from analysis. One did not answer the questions, and the other gave nonsensical responses—talking about student loans and quick approval—which were not relevant to the cover stories or loan decisions here. After dropping data from two participants, we ended up with 49 participants in the experimental condition and 48 participants in the control condition for analysis.

2. Less Experienced Participant Sample

For this less experienced sample, Amazon Mechanical Turk's filter criteria was set to target those who had never taken out a home mortgage, though a number of them reported that they had done so as described below. Ninety-nine Amazon Mechanical Turk workers from the United States responded. The gender percentages of this sample were similar to the gender percentages of the expert participant sample (57 self-reported as female; 39 as male; 1 did not answer; 1 marked prefer not to answer, and 1 identified as non-binary). They were paid \$0.25 for their participation. The age and racial identifications were also similar to the experienced participant sample. Their average age was 42.6 years old, and 83 self-reported as white, 7 as Asian, 5 as African-American, 1 as Hispanic or Latin American, 2 as mixed race, and 1 marked prefer not to answer. The educational levels of the less experienced participant sample were slightly lower than the expert sample but remained high, with 25 participants reporting that they had graduate degrees, 31 that they had college degrees, 32 that they had some college, and the remaining 9 reporting that they had a high school education (2 did not answer). The income levels of the less experienced participant sample were substantially lower than the income levels of the experienced participant sample with only 11 reporting that they earned over \$100,000 per year (compared to 31 in the experienced participant sample), 14 reporting that they earned between \$100,000 and \$75,000 (compared to 25), 22 reporting that they earned between \$75,000 and \$50,000 (compared to 28), 34 reporting that they earned between \$50,000 and \$25,000 (compared to 11), and 18 reporting that they earned less than \$25,000 (compared to 3). Of these 99 less experienced participants, 22 reported living in rural areas, 51 in suburban areas, and 25 in areas that the participants described as urban (1 did not answer). This experiment was targeted in Amazon Turk's filter towards those who lacked experience with home mortgages, but 39 of the 99 participants still reported taking out a home loan, perhaps because they did so subsequent to registering on Amazon Mechanical Turk. In addition, 64 of the 99 reported taking out student loans and 14 of the 99 had taken a class in which they were taught about home loans. They, therefore, had much less experience with loans than the expert group, but they did have some experience.

No participants from the less experienced sample were dropped from analysis. Due to random assignment, there were 46 participants in the experimental condition and 53 participants in the control condition.

3. Procedures

Participants first reviewed and agreed to the consent form required by the DePaul University Institutional Review Board. After that, participants were given two cover stories involving two fictional borrowers so that they could evaluate and choose between loan offers both when (A) high closing costs are very problematic and higher interest rates are less so, namely when there is a shorter expected holding period such

as 3 years and when (B) high closing costs are less problematic but higher interest rates are more so, namely when there is a longer expected holding period and high closing costs can be amortized across a long enough period of time such as 18 years.

The first cover story asked participants to imagine that they had a friend, a fictional borrower named Kimberly, who wanted to purchase a home in her hometown in Nebraska in 2016. She received two loan offers—one from loan officer Ms. Jones and the second from loan officer Ms. Smith—and she needed to choose between the two loan offers. One of these loan offers had a higher interest rate and lower closing costs (which was the less expensive loan for a shorter 3-year holding period). The other offer had a lower interest rate and higher closing costs (which was the less expensive loan for a longer 18-year holding period). The participants' task was to review these two loan offers and decide which loan was less expensive and which loan they recommended for her.

The second cover story involved another fictional borrower, Ken, who purchased a home in his hometown in Pennsylvania in 2019 and needed to choose between loan offers—one from loan officer Ms. Jenkins and the second from loan officer Ms. Stevens. Like the loan offers that Kimberly received, one of the loan offers that Ken received had a higher interest rate and lower closing costs (which was the less expensive loan for a shorter 3-year holding period). The other offer that Ken received had a lower interest rate and higher closing costs (which was the less expensive loan for a longer 18-year holding period). The participants' task was to review the two loan offers that Kimberly and Ken received and decide which loan was less expensive and which loan they recommended. The cover story involving Kimberly was presented first and the cover story involving Ken was presented second.

Having these two cover stories allowed us to manipulate the length of time the mortgage was held within participants because one of the fictional borrowers estimated they would hold the mortgage for 3 years and the other estimated that they would hold the loan for 18 years. The assignment of how long each of the fictional borrowers would hold the mortgage was counterbalanced. That is, for approximately half of the participants (randomly assigned) Kimberly planned to hold on to the loan for three years and Ken planned to hold on to the loan for eighteen years; for the other half, Kimberly held the loan for the longer period and Ken for the shorter.

This counterbalancing also allowed us to control for order effects and specific item effects. It controlled for order effects because neither loan length was consistently first or second, so any effects that we observe cannot be attributed to the order in which participants made their judgments. This counterbalancing also controlled for specific item effects because all unique peculiarities of the cover stories (e.g., the genders of the characters, their home states, or anything unique in the disclosure forms, etc.) were paired with each loan length—approximately half of the time paired with the expectation that the loan would be held for 3 years and half of the time paired with the expectation that the loan would be held for 18 years.

To test the hypothesis that calculating APRs for the lengths of time that loans are expected to be held should help avoid some of the limitations posed by bounded rationality, this experiment also manipulated how APRs were calculated. In the control condition, the APRs were calculated as if the loans were going to be held for 30 years (the way the current Loan Estimate form calculates the APR; henceforth in this section, "Unmodified 30-Year APRs"). In the experimental condition, the APRs were modified to account for the lengths of time that participants were informed the loans would likely be held (henceforth in this section, "Modified APRs"). This experiment, therefore, had a 2 (length of time the mortgage was intended to be held: short-term, 3

years and long-term, 18 years) x 2 (type of APR: Unmodified 30-Year APRs or Modified APRs) design.

Unlike the length of time variable, which was manipulated within-participant such that each participant saw both a cover story in which the mortgage was supposed to be held for 3 years and a cover story in which the mortgage was supposed to be held for 18 years, the type of APR variable was manipulated between-participant such that each participant only saw either Unmodified 30-Year APRs or Modified APRs.

The two loan offers that the participants reviewed for each fictional borrower (4 loan offers total) were presented on the current Loan Estimate disclosure form on which APR is presented on the third page, but this form was modified as proposed and tested by Stark, Choplin, LeBoeuf, and Pizor.¹⁰⁶ This modification also presented APR on the top of the first page of the disclosure form inside of a price tag icon with the words “APR: Price of the Loan” inside and the words “Lower is better for you” (together, the “APR Price Tag”). The Unmodified 30-Year APR was presented to the participants randomly assigned to the control group, both on page 1 of the Loan Estimate form and on a new page 4 that we added to this form that they viewed online. The Unmodified 30-Year APR was also presented to the participants randomly assigned to the experimental group on page 1 of the Loan Estimate form that they viewed online, but then the Modified APR was presented to these experimental group participants on the new page 4 that we added to the Loan Estimate form.

All of the participants received written instructions on page 4 that they must write the APR figure down from page 4 for future reference. Participants in the experimental condition were given written instructions to remember that, after answering a series of questions, the borrower determined that she or he would likely live in the house for only 3 years or for 18 years. The written instructions on the new page 4 that we added to the Loan Estimate form also instructed all of the participants to use this APR to compare this loan offer to the other loan offer and—due to our concern that participants might not remember the exact APR—these written instructions told participants to write this APR figure down for future reference.¹⁰⁷ After proceeding to subsequent pages, participants could not backtrack to previous pages.

To facilitate loan comparisons, the APRs (the Unmodified 30-Year APRs for the participants in the control condition and the Modified APRs for the participants in the experimental condition) for both of the loan offers were presented one last time on the same screen. This comparison page further reduced the likelihood that they would not remember the exact APR and provided a backup if they failed to write it down despite being instructed to do so in writing. As discussed below, we recommend that the loan attributes of all of the loan offers that an individual consumer is considering at the same time should be stored in an online database to facilitate direct comparisons of loan offers analogous to this comparison page presented to the participants in this experiment.

For our dependent measures, participants then judged (1) which loan was less expensive and (2) which loan they would recommend. Lastly, they (3) justified their

¹⁰⁶ *Shrewd Consumer Decision Making*, *supra* note 5, at 114.

¹⁰⁷ In real life, consumers can, and would be encouraged to, print out their online Loan Estimate form so they will not have to memorize the APR figure, or other key information in the form, as adjusted to take into account estimated holding period (and other proposed manipulations of the APR we propose in Part IV).

responses by writing about why they recommended this loan. After they finished reviewing the loan offers that Kimberly received and answering these questions for her loan offers, they went through the entire process again for the loan offers that Ken received and answered these questions for his loan offers albeit with a different expected holding period for his offers.

Finally, participants filled out the demographic survey giving us the information reported in the Participants section above. The second author estimated that the entire experiment took approximately 10 minutes to complete.

B. Results

1. Loans Held for a Short Period of Time

We first analyzed the results from the condition in which the loan was only to be held for 3 years. In this condition, the high closing costs were not spread across enough time to make accepting these costs economical. The fictional consumers in this condition were, therefore, better off choosing the loan with the low closing costs despite the higher interest rate. Modifying the APRs in this condition to reflect the shorter 3-year holding period produces APRs that warn participants to stay away from loans with high closing costs. We, therefore, predicted that modifying the APR would improve judgments in this condition. Consistent with this prediction, we found that among the expert participants in the control condition who only saw the Unmodified 30-Year APRs, only 6 of the 49 participants (12.2%) correctly judged which loan was less expensive. By contrast, in the experimental condition in which the participants saw the Modified APRs, 35 of the 49 participants (71.4%) correctly recommended the lower cost loan. This difference was highly significant, $\chi^2(1, N = 98) = 35.27, p < 0.001$. This effect replicated in the less experienced participant sample. In that sample, only 4 of the 53 control participants (7.5%) correctly judged which loan was less expensive, while 36 of the 46 participants (78.3%) in the experimental condition correctly recommended the less expensive loan. This difference was also highly significant, $\chi^2(1, N = 99) = 51.14, p < 0.001$.

Consistent with their judgment of which loan was less expensive, only 7 of the 49 expert participants (14.3%) correctly recommended the less expensive loan in the control condition, while 33 of the 49 participants (67.3%) correctly recommended the less expensive loan in the experimental condition. This difference was also highly significant, $\chi^2(1, N = 98) = 28.56, p < 0.001$, and it replicated in the less experienced sample. In the less experienced sample, only 4 of the 53 participants (7.5%) correctly recommended the lower cost loan in the control condition, while 37 of the 46 participants (80.4%) correctly recommended the lower cost loan in the experimental condition. This difference was again also highly significant, $\chi^2(1, N = 99) = 53.92, p < 0.001$. These results strongly suggest that modifying APRs to reflect holding periods will greatly improve judgments for consumers who hold their loans for shorter periods of time.

2. Loans Held for Longer Periods of Time

We next analyzed the results from the condition in which the loan was to be held for 18 years. In this condition, closing costs are amortized across 18 years, a sufficiently long period of time to make it worthwhile to pay higher closing costs in exchange for lower interest rates. The fictional consumers in this condition who had an 18-year holding period were better off taking out the loan that had the lower interest rate, despite the higher closing costs. Modifying the APR to reflect the 18-year holding

period produces APRs that recommend the same loans as APRs with 30-year holding periods. We therefore predicted that modifying the APR would not improve judgments in this condition. Consistent with these predictions, in the control condition in which participants only saw the Unmodified 30-Year APRs, 44 of the 49 expert participants (89.8%) correctly judged which loan was lower cost. Likewise, in the experimental condition in which the participants saw the Modified APRs, 41 of the 49 participants (83.7%) correctly recommended the lower cost loan. This difference was not significant, $\chi^2(1, N = 98) = 0.80, p > 0.05$. This effect replicated in the less experienced sample. In that sample, 50 of the 53 participants (94.3%) correctly judged which loan was lower cost. Likewise, in the experimental condition in which the participants saw the Modified APRs, 41 of the 46 participants (89.1%) correctly recommended the lower cost loan. This difference was not significant, $\chi^2(1, N = 99) = 0.90, p > 0.05$.

Consistent with their judgment of which loan was less expensive, 44 of the 49 expert participants (89.8%) recommended the less expensive loan in the control condition, while 43 of the 49 participants (87.8%) recommended the less expensive loan in the experimental condition. This difference was clearly not significant, $\chi^2(1, N = 98) = 0.75, p > 0.05$. This null effect replicated among the less experienced participants among whom 50 of the 53 participants (94.3%) recommended the less expensive loan in the control condition, while 41 of the 46 participants (89.1%) recommended the less expensive loan in the experimental condition, again not significant, $\chi^2(1, N = 99) = 0.90, p > 0.05$. These results demonstrate that modifying the APR to reflect longer holding periods does not produce more errors than leaving APRs unmodified for 30-year holding periods.

3. Holding Period Appropriate Judgments

Ideally, any system of APR disclosure should not only help consumers identify the less expensive loan for particular holding periods, but should also help them learn to do so when presented with different factual situations (i.e., identifying the loan with the lower closing costs as less expensive at 3 years, despite the higher interest rates, and identifying the loan with the lower interest rates as less expensive at 18 years, despite the higher closing costs). The within-participant design of this experiment allowed us to test our participants' abilities to do this because participants chose between loans both when the expected holding period was 3 years and when it was 18 years. We were, therefore, also able to analyze the number of correct switches that participants made. In the control condition in which the expert participants only saw the Unmodified 30-Year APRs, only 4 of the 49 expert participants (8.2%) correctly switched. By contrast, in the experimental condition in which the expert participants saw the Modified APRs, 29 of the 49 expert participants (59.2%) correctly switched. This difference was highly significant, $\chi^2(1, N = 98) = 28.55, p < 0.001$. This effect replicated in the less experienced participant sample wherein only 4 of the 53 less experienced participants (7.5%) correctly switched in the control condition, but 34 of the 46 less experienced participants (73.9%) correctly switched in the experimental condition. This difference was again also highly significant, $\chi^2(1, N = 99) = 45.86, p < 0.001$.

The loans that participants recommended followed their judgments of which loans were less expensive. Only 5 of the 49 expert participants (10.2%) in the control condition correctly switched compared to 29 of the 49 participants (59.2%) in the experimental condition, which was highly significant, $\chi^2(1, N = 98) = 25.94, p < 0.001$. Likewise, only 4 of the 53 less experienced participants (7.5%) correctly switched in the control condition compared to 35 of the 46 participants (76.1%) in the

experimental condition, which was also highly significant, $\chi^2(1, N = 99) = 48.46$, $p < 0.001$.

4. \$ Justifications Among the Experimental Participants Who Were Given Modified APRs

We next analyzed participants' written explanations of their loan recommendations in the experimental condition. This analysis divided participants by whether or not they successfully switched, because on first assessment it appeared that the successful switchers apparently knew what they were doing, and we wanted to understand their reasoning better and contrast their reasoning with the reasoning of the participants who did less well.

As described above, in the experimental condition 29 of the 49 expert participants (59.2%) successfully switched. Of those 29 successful switchers, 13 (44.8%) mentioned the APR in their justification. By contrast, only 1 of the 20 expert participants (5.0%) who did not switch mentioned the APR in their justification. This difference was highly significant, $\chi^2(1, N = 49) = 9.20$, $p < 0.01$. This pattern replicated among the 35 less experienced participants who successfully switched in the experimental condition. Nineteen of the 35 less experienced participants who successfully switched (54.3%) mentioned the APR in their reasons for choosing the low closing cost, high interest rate loan when a 3-year holding period was expected while 16 did not (45.7%). By contrast, only 2 of the 11 less experienced participants (18.2%) who did not switch mentioned the APR in their justification while 9 (81.8%) did not, which again was statistically significant, $\chi^2(1, N = 46) = 4.40$, $p < 0.05$.

We see only mixed evidence that those who successfully switched but did not mention APR knew what they were doing. Of the 16 expert participants who successfully switched their recommendations but did not mention the APR, 5 correctly mentioned lower loan fees and closing costs in the 3-year holding period condition. One expert participant pointed out that there was less to pay back (presumably because the closing costs were lower). However, six others mentioned interest rates despite the fact that the interest rate of the low closing cost/high interest loan was higher for the lower cost loan in the 3-year holding period condition; although, it is possible that these 6 expert participants may have confused the interest rate with the APR and really meant the APR in their reasoning. Another participant pointed out that this loan involved paying off more of the principal, most likely because the amount of principal paid off in 5 years was higher on the currently required Loan Estimate disclosure form, although this was misleading under "Comparisons" and "In 5 Years" on the form because the high closing costs were added to the principal amount,¹⁰⁸ (henceforth, "5 year closing cost neglect"). One mistakenly claimed that the monthly payment was less for the low closing cost/high interest loan in the 3-year holding period condition. Four other participants wrote responses that did not clarify the reason for their choice such as "better deal," "felt right," "yes," and that 3 years was such a short period of

¹⁰⁸ Looking at the amount of principal paid off after 5 years to determine which loan was less expensive at 3 years is misleading, because while more principal is paid off after 5 years with the high closing cost, low interest loan the higher closing costs far exceed that amount. Ken would have paid \$3,593.37 more in principal, but \$7,000 more in closing costs. Kim would have paid \$2,452.64 more in principal, but \$5,000 more in closing costs. Since these closing costs are added to the principal, in essence the extra amount paid off only served to pay off some of the extra closing costs.

time that it did not matter which loan was chosen (some participants mentioned several factors, so numbers do not add up to 16). Overall, we classified between 17 (58.6%) and 22 (75.9%) of the 29 successful switchers' reasons to be true, clear, and valid (depending upon whether they meant APR when they referred to the "interest rate"). Seventeen of 29 (58.6%) would be the conservative estimate.

This pattern replicated among the 35 less experienced participants who successfully switched but did not mention the APR in the experimental condition. Among the 16 out of 35 less experienced participants who successfully switched their recommendations but did not mention the APR, we see only mixed evidence that they knew what they were doing. Five had responses that very likely were meant to correctly refer to the APR such as "[i]t will be the least expensive," "it is a better price," "price of the loan is lower," "it was lower," and "[t]he price was lower." Another one probably meant to do so but was less clear, namely "less money." Four of these less experienced participants correctly mentioned the lower loan fees and closing costs of the low closing cost/high interest rate loan in the 3-year holding period condition, but six others mentioned interest rates despite the fact that the interest rate was higher.¹⁰⁹ One of these less experienced participants mistakenly claimed that the monthly payment for the low closing cost, high interest loan was less. Four other of these less experienced participants did not clarify the reasons for their recommendations. Of these 4, one wrote that it was "all good;" one said that they were unable to judge; one said that "[i]t is only a few cents lower so overall one would be saving just a few cents more;" and a last one failed to write anything (some participants mentioned several factors, so numbers do not add up). Overall, we classified between 24 (68.6%) and 30 (85.7%) of the 35 successful switchers' reasons to be true, clear, and valid (depending upon whether they meant APR when they referred to the "interest rate"). Twenty-four of 35 (68.6%) would be the conservative estimate.

By contrast, we see a clear pattern of mistakes and confusion among the participants in the experimental condition who failed to successfully switch their recommendations. As discussed above, there were 20 expert participants who did not switch. Four of these 20 expert participants incorrectly recommended the low closing cost/high interest loan both for the 3-year and the 18-year holding periods. One of these 4 justified their recommendations by incorrectly pointing to the lower fees and closing costs of the higher closing cost/lower interest loan in the 18-year condition. One mistakenly pointed to the lower monthly payment of the low closing cost/high interest loan in the 3-year holding period condition when it was actually higher. The remaining two wrote responses that did not clarify the reason for their choice (i.e., "good" and "nice"). Of the remaining 16 participants who failed to switch, only 1 mentioned the APR as described above, but this one was simply incorrect about which loan had the lower APR in the 3-year holding period condition. Five others cited the interest rate and 4 pointed to the monthly payment, both of which led them to recommend the higher cost loan (the one with the higher closing costs) in the 3-year holding period condition. Two mistakenly pointed to lower costs: one mistakenly claimed that the low interest/high closing cost loan had lower costs in the 3-year holding period condition and one mistakenly claimed that the costs were the same. Two pointed to the amount of principal that would be paid off and 1 said that there

¹⁰⁹ Although just as among the expert participants, these 6 less experienced participants may have confused the interest rate with the APR.

was less to pay back. This must have been due to “5 year closing cost neglect.” Five other expert participants wrote responses that did not clarify the reason for their choice such as “dependable,” “no,” “good,” and “YES RECOMMENDED FOR KIMBERLY” (again some participants mentioned several factors, so numbers do not add up to 16). Overall, we evaluated only 1 (5.0%) of the 20 unsuccessful switchers’ reasons to be true, clear, and valid (compared to the conservative assessment of 17 of the 29 successful switchers’ reasons, which was highly significant, $\chi^2[1, N=49]=14.64, p<0.001$). Many of these were because they pointed to loan attributes that failed to identify the lower cost loan in both conditions. The one unsuccessful switcher who nevertheless gave good reasons talked about what might happen should the fictional character change their mind regarding how long to remain in the home.

Evidence of mistakes and confusion among the participants who failed to successfully switch their recommendations was also observed in the less experienced participant sample. Of the 11 less experienced participants, who failed to successfully switch their recommendations in the experimental condition, 2 recommended the low closing cost/high interest loan both with the 3-year and the 18-year holding period. Both of these participants mistakenly justified their recommendations of the low closing cost/high interest loan when the holding period was 18 years by pointing to the APR when the APR was actually higher. Of the remaining 9 less experienced participants, who failed to successfully switch, none mentioned the APR properly for both holding periods. Most made mistakes in their reasoning for the 3-year holding period: one cited the interest rate which led them to recommend the loan with the very high closing costs. Another one pointed to the monthly payment, which also led them to recommend the loan with the very high closing costs. Two said that more of the principal would be paid most likely because of “5 year closing cost neglect.” Two falsely said that there would be more equity at the end of the 3 years, again most likely because of “5 year closing cost neglect.” Three other participants wrote responses that did not clarify the reason for their choice such as “[j]ust better I would recommend,” “[b]ecause of the three years in home,” and “will pay back loan after 3 years” (again some participants mentioned several factors, so numbers do not add up). Overall, our assessment was that 0 (0.0%) of the 11 unsuccessful switchers’ reasons were completely true, clear, and valid (compared to the conservative assessment of 24 of the 35 successful switchers’ reasons, which was a highly significant difference between the successful and the unsuccessful switchers; it was not possible to run a χ^2 , because of the observation of 0, so we ran a Fisher exact test, $p<0.001$). Just as among the expert participants, many of the reasons given by the less experienced participants pointed to loan attributes that failed to identify the lower cost loan in both conditions. Many reasons were simply false.

5. Justifications Among Participants Who Were Given Unmodified 30-Year APRs

As noted above, there were only 4 of the 49 expert participants (8.2%) in the control condition who successfully switched their recommendations. However, based upon their written justifications, they might have switched only by chance. One of the four correctly pointed out that the advantages of low interest rates are minimal for such a short period of time but then failed to note that the closing costs were lower for the high interest loan. One cited the APR but had only seen the Unmodified 30-Year APR which was higher for the loan that they recommended, and the remaining two wrote responses that did not clarify the reason for their choice, namely “yes,” “better overall.” Of the 45 participants in the control condition who did not correctly switch

their recommendations, 2 recommended the high interest/low closing cost loans both for 3 years and for 18 years. One of them correctly pointed to the high closing costs but pointed to them for the 18-year holding period as well when it made sense to accept the higher closing costs in exchange for the lower interest rate. The other's written comment did not clarify their reasoning (i.e., "nice"). Of the remaining 43 participants, the reasons that they offered for their judgments reflected how they were misled. Twenty-three of these expert participants pointed to the 30-Year APR. Eleven pointed to the interest rate while ignoring the high closing costs (if they did not actually mean the misleading 30-year APR). Ten pointed to the monthly payment while ignoring the high closing costs.¹¹⁰ Four said that these loans paid off more of the principal apparently because of "5 year closing cost neglect." Two correctly pointed to the closing costs but failed to recommend the loan with the lower closing costs (again some participants mentioned several factors, so numbers do not add up to 43). These results demonstrate how the 30-year APR is misleading and can cause consumers to choose higher cost loans, especially when closing costs are high.

A similar pattern of results was observed in the less experienced participant sample. There were only 4 of the 53 less experienced participants (7.5%) in the control condition who successfully switched their recommendations. Like the expert participants who switched, however, they might have switched only by chance judging from their written justifications. One was simply wrong about which 30-year APR was lower. Another pointed to the misleading information regarding how much principal would be paid off after 5 years. One wrote responses that did not clarify the reason for their choices, "no" and "good." The last one said that the one with the lower [30-Year] APR still had a lot to pay off, which might have made sense if they were talking about paying off closing costs, but they might have been talking about principal and their reasoning was not clear. Of the 49 participants in the control condition who did not correctly switch their recommendations, all incorrectly judged the loan with the high closing costs (and low interest rate) to be less expensive even with the 3-year holding period, and they ended up recommending the higher cost loan in that condition. Their reasoning reflected how they were misled. In particular, 29 of the less experienced participants justified their recommendations by pointing to the 30-year APR and another 3 talked about lower rates which probably referred to the APR. Nine pointed to the interest rate which ignored the high closing costs (if they did not actually mean the misleading 30-year APR). Four were misled by the lower monthly payments.¹¹¹ Four pointed to the amount of principal that would be paid off, most likely because of "5 year closing cost neglect." Five incorrectly pointed to lower fees and costs but recommended the loan with the higher closing costs (again some participants mentioned several factors, so numbers do not add up to 49). These results again demonstrate how the 30-year APR is misleading and can cause consumers to choose higher cost loans, especially when closing costs are high.

C. Discussion

This Part reported the results of an experiment that we ran on two different samples (one expert sample of participants and one of less experienced participants) that

¹¹⁰ Borrowers commonly use the monthly payment to justify home-loan decisions. See Willis, *supra* note 30, at 780–81.

¹¹¹ *Id.*

investigated the effectiveness of adjusting APRs for the particular holding periods that individual consumers expect to hold their mortgages. This experiment built upon experiments that we ran in 2014. The 2014 experiments investigated whether—despite extensive literature documenting the problems the consumers have understanding and using APR to evaluate loans—APR could nevertheless prove useful if they were placed within a price tag icon with the words “APR: Price of the Loan” and the words “Lower is better for you.” Those 2014 experiments demonstrated that presenting APR in this way dramatically improved the usefulness of APR. Suddenly consumers could use APR to identify less expensive loan options even if they did not understand what APR represented, could not define it, and did not even know whether smaller or larger values were better. Presented this way, consumers knew immediately that smaller numbers represented less expensive loans.

One problem with this approach, however, was that the APRs presented to our participants during those 2014 experiments were 30-year APRs calculated under the assumption that borrowers were going to hold on to their mortgages for that long. However, few borrowers do so.¹¹² Furthermore, APRs change across time for certain loans. In particular, closing costs are amortized over time for loans that have high closing costs, thereby reducing their impact on how expensive they are and on APR. What home loan consumers really need is information personalized with their individual information. The experiment reported in this Part, therefore, manipulated the how long fictional consumers intended to hold on to their loans to see whether holding period adjusted APRs would allow participants to identify the lower cost loans across a variety of different holding periods that individual borrowers might expect to hold them for. We found that this strategy worked. Participants were able to use holding-time adjusted APRs to identify the least expensive loans across a variety of expected holding periods.

As in all lab-based studies, these experiments have limitations. First, actual home loan mortgage consumers differ from our participants in several important ways. The method of APR disclosure that we explored here may be even more effective among actual home loan mortgage consumers. Actual consumers care more about their home loans than our participants cared about the fictional characters’ home loans and may therefore pay closer attention to these disclosures. Second, our participants reviewed four different loan offers within just a few minutes. Actual home loan consumers would usually have fewer loan offers to review. Actual consumers could print out their forms to compare them side by side. Alternatively, the method of APR disclosure that we explored here could be less effective among actual home loan mortgage consumers. Actual consumers have to focus on more factors than our participants when reviewing a home loan. Holding period adjusted APRs are not the only issue that they need to consider—they may also encounter loan offers with adjustable interest rates or with prepayment penalties or with balloon payments. They need to consider that they might be unable to meet their obligations under the loan due to these risky loan terms and may default. They also need to understand the consequences of defaulting. Borrowers need to decide whether to expend considerable time and effort to obtain additional loan offers if, for example, the “APR With Your Credit Score” we propose indicates they should receive a lower APR based on their credit score. All of

¹¹² See Guerin, *supra* note 59.

this could reintroduce the exact thing that our proposal was designed to avoid—overloading the consumer with too much information.

Lastly, actual consumers—unlike our participants—face salespeople who know how to distract consumers while they review information and disrupt their thinking.¹¹³ Salespeople also violate conversational norms and offer consumers false explanations.¹¹⁴ Careful thought as well as future experiments and field studies will be needed to devise strategies that address these difficulties of the accumulation effect and the effect of deception. This topic will be discussed further in Part IV.

IV. PROPOSAL TO ADD ENHANCED & INTERACTIVE APRs & OTHER INTERACTIVE TOOLS TO THE LOAN ESTIMATE FORM SO BORROWERS CAN DECIDE WHETHER TO ACCEPT AN OFFERED LOAN LIKE AN EXPERT WOULD

A. (Identifying the Most Relevant Disclosures for Borrowers

As previously explained, in order to decide whether to accept an offered home loan as disclosed in a Loan Estimate form that is a rational, wealth-maximizing decision, a borrower needs to know:

1. the complete price of the offered home loan, expressed in a way that is easy to understand and use, and that makes shopping for the lowest priced loan easy;
2. whether the offered home loan is the lowest priced loan she/he appears to qualify for;
3. which of two or more offered loans is the least expensive, taking into account the borrower's estimated holding period of the loan;
4. whether the loan contains any risky features, and how those features can increase the likelihood that the borrower will not be able to repay the debt;
5. the consequences the borrower will suffer if the borrower fails to repay the debt;¹¹⁵ and
6. if the loan is a refinance of an existing mortgage loan, whether the borrower will achieve a net economic benefit from a refinance of that loan.

After analyzing the shortcomings of the current Loan Estimate form to achieve these goals due to a variety of challenges for consumers we described in Part II, and

¹¹³ *Ineffective in Any Form*, *supra* note 5, at 377–400.

¹¹⁴ *Whispering*, *supra* note 5, at 6; Jessica M. Choplin et al., *A Psychological Investigation of Consumer Vulnerability to Fraud: Legal and Policy Implications*, 35 LAW & PSYCH. REV. 61, 100 (2011).

¹¹⁵ As noted earlier, this may help some consumers, but will likely not be adequate for most consumers for the reasons indicated above. *See supra* notes 65, 66, and 67 and accompanying text.

in light of the results of the APR experiments we have run, we propose the CFPB consider the following revisions to the Loan Estimate to achieve each of the goals articulated.

1. The Complete Price of the Offered Home Loan, Expressed in a Way that Is Easy to Understand and Use, and that Makes Shopping for the Lowest Priced Loan Easy

To accomplish this goal, we first propose that when calculating the APR for the Loan Estimate form that the APR calculation be revised to include all of the fees and costs imposed on the borrower in connection with the offered loan. Those fees and costs (as well as the interest charged on the loan) are considered “finance charges” under the Truth In Lending Act, which are used to calculate the APR. But currently, the regulations implementing TILA exclude some fees and costs from the definition of “finance charge.”¹¹⁶ This often makes the APR lower than it otherwise would be.

Past attempts to eliminate those exclusions were rebuffed by lenders for a variety of reasons including fears that the resulting higher APRs would discourage consumers from applying, increase compliance costs to lenders, increase the risk of litigation, trigger consumer protection laws that apply to higher APR loans, and that consumers do not understand APR.¹¹⁷ Elizabeth Renuart and Diane Thompson responded to each of these industry concerns in their 2008 article *The Truth, The Whole Truth, and Nothing but the Truth: Fulfilling the Promise of Truth in Lending*, arguing that the cost of compliance could be as low as \$1 per loan, and that existing protections from excessive litigation costs already exist under the Truth In Lending Act.¹¹⁸ They also noted that prior APR rates were artificially understated, the lender can control whether to unbundle its fees, outsource origination functions, and create complex structures, rather than simply include the entire price of credit in the interest rate, and, for closed-end mortgage loans (the focus of this Article) the difference in APR percent will not be significantly higher than under existing rules.¹¹⁹ Finally, central to this Article, Renuart and Thompson stated:

[C]onsumers do not need to understand the APR to use it to shop. . . . Consumers cannot effectively shop for credit without a single number that combines both interest and fees. Denying consumers the benefit of the APR sows the seeds of abusive pricing. . . . Neither TILA nor the APR is responsible for information overload. The bulk of the material given consumers . . . is required not by TILA but by lenders. . . . The APR, rather than being a cause of information overload, is an answer to information overload.”¹²⁰

¹¹⁶ Renuart & Thompson, *supra* note 31, at 199–206.

¹¹⁷ *Id.* at 236–43; *see also* Integrated Mortgage Disclosures Under the Real Estate Settlement Procedures Act (Regulation X) and the Truth in Lending Act (Regulation Z), 78 Fed. Reg. 79730, 79901 (Dec. 31, 2013) (describing comments received in response to CFPB proposal to eliminate exclusions).

¹¹⁸ Renuart & Thompson, *supra* note 31, at 236–42.

¹¹⁹ *Id.* at 242 (citing a Federal Reserve board example of a loan reflecting 7.20 under current TILA versus 7.52 if TILA were revised to include all loan related costs).

¹²⁰ *Id.* at 243–44.

We thus recommend that the CFPB change the definition of “finance charge” to reflect all fees and charges the borrower incurred or will incur to be able to obtain the offered loan. Until then, the Loan Estimate form would display the legally binding, official APR (with the current definition of “finance charge”). However, the Loan Estimate form could also state “go to this website for more information on the price of your offered loan” and that website would have the modified all-inclusive APR, with an explanation of how it differs from the APR on the paper version of the Loan Estimate, plus any other calculation tools that would be useful.¹²¹

Second, the APR, calculated in this inclusive way, should be moved from its current line item status on page 3 of the Loan Estimate and placed at the top of page 1 in a “Price Tag APR” format:

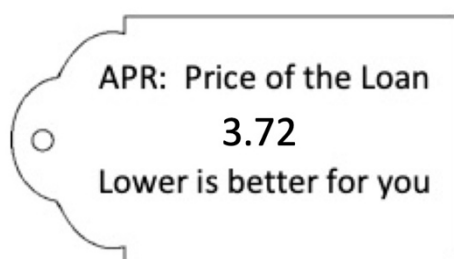


Figure 1. The “Price Tag APR.”

Adding the Price Tag APR in this way will enable users of the revised Loan Estimate to use this term simply, easily know the price of the loan (assuming it is held for the entire term of the loan), and use this price in comparison with the Price Tag APR for other offered home loans to shop for the lowest priced loan.

Consideration of how the Loan Estimate form can be revised to reflect the user’s estimated holding period (or a five-year holding period) through the creation and disclosure of a second APR (the “Holding Period APR”) is discussed in Part IV.A.3 below.

2. Whether the Offered Home Loan Is the Lowest Priced Loan she/he Appears to Qualify for

To accomplish this goal, we propose prominently adding to the online Loan Estimate¹²² the statement: “*Learn whether the APR price of your loan is the lowest APR price you qualify for.*”

¹²¹ This is an example of the kind of “hack” of home loan disclosures we are recommending can be done to provide useful information to consumers as soon as possible.

¹²² We recommend that for borrowers with an email address they receive an email with the online Loan Estimate as an attachment, and for borrowers without an email address they receive the Loan Estimate in paper form. The above statement could still appear, but then add that they can obtain this information by creating an email account and sending the lender or mortgage broker they are working with an email asking for an online Loan Estimate.

The Loan Estimate form will state that the user will need to click on this statement on the online form and answer the questions posed in order to sign the disclosure form.¹²³

Like the CFPB's Explore Interest Rates tool,¹²⁴ but replacing interest rates with APRs, the Loan Estimate form user will be asked to input their credit score once they click on this statement to find out the APR rate that others with the same credit score received on average, and the percentage who received a lower APR.

We are concerned that the information presented by the CFPB's Explore Interest Rates tool¹²⁵ may be too complicated for some consumers. In particular, combination graphs might be too complicated for many consumers to understand.¹²⁶ An alternative might be for the online form to simply show the following information: "Average APR for Your Credit Score: __" or "__% of Other Borrowers with Your Credit Score Who Have Received a Lower APR."

The form can then be updated to prominently add after these two pieces of information (or one if testing shows one is more effective than the other to encourage shopping for a lower priced loan): "When your APR is higher than the Average APR for Your Credit Score (or higher than what __% of others with your credit score received) this strongly indicates that you may qualify for a lower priced loan and should seek APR quotes from more lenders, or negotiate with the lender of this offered loan for a loan with a lower APR."

As a first step, though, we recommend the CFPB test and collect the data necessary to add the "Average APR for Your Credit Score" and/or "__% of Other Borrowers With Your Credit Score Who Have Received a Lower APR Than Yours" to the Loan Estimate form to determine which best helps borrowers to identify if the offered loan appears overpriced and induces them to shop for a lower priced home loan. The first author used to perform this satisficing type test whenever asked to advise a home purchaser on whether to accept an offered home loan by checking the APR in the offered loan against the APR that, according to www.mfico.com was the APR being

¹²³ Currently, a signature by the borrower acknowledging receipt, is optional, perhaps to avoid the burden and time delay of asking consumers to mail back their Loan Estimate. We propose that consumers who have an email address receive the Loan Estimate by email attachment and by hard copy, and that consumers who do not use the internet and have no email address, receive the Loan Estimate by hard copy in the mail. We believe that the benefits in requiring consumers to sign the online Loan Estimate and email it back (to ensure they scroll through and take advantage of the interactive tools in the electronic form) exceed the inconvenience of doing so. And for those consumers who do have an email address, but choose instead to review a paper copy of the Loan Estimate, requiring them to sign and return it by mail, may cause some of them to change their mind and use the online version with the interactive tools. For those who do not have an email address, signing the form and placing it in the mail should not create a large burden.

¹²⁴ *Explore Interest Rates*, *supra* note 54.

¹²⁵ *Id.*

¹²⁶ See generally Alycia Chin & Wändi Bruine de Bruin, *Helping Consumers to Evaluate Annual Percentage Rates (APR) on Credit Cards*, 25 J. EXPERIMENTAL PSYCH.: APPLIED 77, 77 (2019) (exploring the effect of various graphs on consumers' ability to comprehend and compare credit card costs).

charged by lenders for borrowers with specified credit scores.¹²⁷ We do not recommend that the borrower be sent to this link, but we recommend instead that the CFPB collect data on what APRs are being offered in relation to the borrower's credit scores to generate the information described above. It appears that the CFPB already has this information from the data they currently receive from the Home Mortgage Disclosure Act ("HMDA").¹²⁸

Because some borrowers might not know their credit score, the Loan Estimate could be revised to include the borrower's credit score. If the Loan Estimate requirements were changed to require the lender to disclose the borrower's credit score in the Loan Estimate, then this will make it possible to disclose the "Average APR for Your Credit Score" or the "% of Other Borrowers With Your Credit Score Who Have Received a Lower APR Than Yours" in the form without seeking this information from the borrower. The Loan Estimate form can be revised to require lenders to add to the Loan Estimate form the average of the credit scores of the borrower that they received. The form can then include the above information, without any work on the part of the borrower using the form, which information would be prominently displayed in the Loan Estimate form.

3. Which of Two or More Offered Loans is the Least Expensive, Taking Into Account the Borrower's Estimated Holding Period of the Loan

As we did in the experiment we described in Part III, the Loan Estimate form should be revised to reflect on page 1 the unmodified 30-year APR, and then on a separate page, another APR, modified to reflect an individual borrower's expected holding period of the loan.¹²⁹

¹²⁷ See *MyFICO*, FAIR ISAAC CORP., <https://myfico.com> (last visited Sept. 1, 2020). It is a "satisficing" test, because it does not answer completely the question of whether the APR price is too high or low based upon what comparable borrowers are receiving. This is because it is based solely on the credit score, which, while a key element, is not the only element lenders focus on in pricing a loan (such as debt-income ratio and loan to value ratio). If the borrower's APR on the offered loan is higher than the average for other borrowers with the same credit score, or the percentage of borrowers with a lower APR is high, this does not tell the borrower to reject the loan, but that they should shop around further since this information points to a strong possibility they are receiving a loan that is higher priced than they may qualify for. *Id.*

¹²⁸ For all loans covered by the HMDA, lenders must report "the credit score or scores relied on in making the credit decision and the name and version of the scoring model used to generate each credit score" 12 C.F.R. § 1003.4(a)(15)(i) (2020), and "the difference between the covered loan's annual percentage rate and the average prime offer rate for a comparable transaction as of the date the interest rate is set." 12 C.F.R. § 1003.4(a)(12)(i) (2020). The average prime offer rate is the standard for determining whether a loan is subject to TILA's protections for high and higher cost mortgages. ELIZABETH RENUART ET AL., TRUTH IN LENDING § 9.7.1 (Nat'l Consumer L. Ctr. ed., 10th ed. 2019). The number required by HMDA is called the rate spread. By adding the average prime offer rate as of the loan date and the reported rate spread, it is possible to calculate a loan's APR.

¹²⁹ In the experiment, to facilitate loan comparisons, the participants first saw the unmodified 30-year APR on the first screen (equivalent to the first page of the Loan Estimate) and then in that experiment later saw the APRs for both loan offers presented on the same screen reflecting their estimated holding periods (the equivalent of a new page form to the Loan Estimate). We added this comparison screen page to reduce the likelihood that the participants would not

The online and interactive Loan Estimate form can be revised to provide this information by creating an: “APR for your Estimated Holding Period of the Loan: ___%” or “APR based on the Typical 5 Year¹³⁰ Holding Period of the Loan.”

The form could include a statement like:

Most borrowers do not keep their loan for the entire length of the loan and prepay their loan typically in the 5th year after taking out the loan. How long you actually hold the loan before paying it off can affect the APR price of the loan. Please click here to estimate how long you will hold the loan before you decide to pay it off and obtain the APR for this offered loan based upon your estimated holding period.

Once the borrower clicks on this portion of the Loan Estimate, the borrower can be asked a series of questions that relate to the factors that most typically cause a borrower to prepay their loan (needing to move due to change in job, change in school attending, birth of a child, divorce, illness, or to take advantage of the opportunity to obtain a lower priced loan in the future because of falling interest rates or the borrower’s improved credit score) and ask them if they know now of any planned changes that would cause them to want or need to pay off the loan early and when they would do so. They could be instructed to insert a number reflecting the year they estimate they will repay the loan, but if they are unsure, they can instead enter the number “5” for when borrowers typically repay their home loans after taking out the loan.

Once the borrower inserts this number, the Loan Estimate form will generate either a “APR for your Estimated Holding Period ___%” (if they enter a number other than 5) or the “APR based on the Typical 5 Year Holding Period ___%.”

This new proposed APR based disclosure can be combined and presented on a single new page to the Loan Estimate form with the other new APR based disclosures we propose: “Average APR for Your Credit Score” or “___% of Borrowers with Your Credit Score with a Lower APR” (described in (2) above), along with, if applicable to an offered home loan, the “APR Reflecting Maximum Possible Interest Rate: ___%” (to be used, as explained in (4) below, when the loan is a floating rate loan or an adjustable rate loan where it cannot be determined at the time of the Loan Estimate exactly how much higher or lower the interest rate can move from the initial interest rate) or the “APR Reflecting Payment Penalty and Holding Period of the Prepayment: ___%” when applicable to the offered home loan (described in (4) below).

After engaging with all of the required interactive features of the online Loan Estimate form, the user can then print out the online Loan Estimate form in its entirety, including this new page of APR related information, for the user’s future use in deciding whether to accept the offered home loan and in comparing this loan with other possible loan offers they receive on other Loan Estimate forms.

remember the exact APR and provided a backup if they failed to write it down. We believe that something like this (a page reflecting the different APR calculations we propose that the user can print out and use in comparing one loan with other offered home loans) will be needed to facilitate actual loan offers as well.

¹³⁰ What is a typical (average) repayment period can change, so the number should be reset, each year if there is a change in the average number of years for the repayment period.

We also propose a way to facilitate comparisons of the various loan offers that a consumer is considering on a single computer screen, the CFPB could make an optional database available for consumers. This database would store all of the active loans and loan offers that an individual consumer has or is considering. This database would be optional such that individual consumers could opt out, and it would also need to have proper privacy protections in place so only the individual consumer and the CFPB would have access (no lenders would have access, and law enforcement could only access it with a court order) and even the CFPB's access should not be connected to any identifiable individual consumer. Once all of an individual consumer's loan offers and their APRs are available in one place, consumers who prefer viewing comparison information on a computer screen, or who cannot find their previously printed out Loan Estimate forms, can do so on a computer screen. This tool would also be extremely useful for consumers considering a refinance as discussed in Part IV.A.6 below.

4. Whether the Loan Contains Any Risky Features, and How Those Features Can Increase the Likelihood that the Borrower Will not Be Able to Repay the Debt

The Loan Estimate on page 1 already discloses when a loan is an adjustable rate loan, a loan containing a balloon payment, or a prepayment penalty, and it provides a sense of the impact. When the answer is "YES" there is a brief explanation of the impact of the loan term.¹³¹

Because of the problem of temporal discounting (and each of these features capitalizes on that), and to enable the user to compare the impact of this feature with other loans that have or do not have these terms, we propose that in the case of an adjustable rate loan or a loan with a prepayment penalty, that the Loan Estimate also reflects how the APR of the loan rises due to either of these two features.

When a loan is an adjustable rate loan where it can be determined at the start of the loan how the adjustable rate will adjust and what interest rates will apply during the term of the loan, then these adjustments in interest paid during the term of the loan are included in the calculation of the APR. But, if a loan has a floating rate or adjustable rates where it cannot be determined at the start of the loan what the interest rates will be during the term of the loan, the current calculation of the APR does not now capture how high the interest rate can rise. In addition, as previously noted, the APR does not now include prepayment charges since one does not know at the time the loan is entered into, whether a prepayment will take place during the early years of the loan when a prepayment charge can be imposed.

Consequently, when a loan is an adjustable rate loan where the impact cannot be determined at the start of the loan, or contains a prepayment penalty,¹³² the Loan Estimate's Holding Period APR should be adjusted to include and assume the highest level the interest rate in the adjustable rate or floating rate loan can rise to after the

¹³¹ *Explore Interest Rates*, *supra* note 54.

¹³² A home loan cannot contain both an adjustable or floating rate and a prepayment penalty under Dodd-Frank, so only one of these two features could be present in an offered loan. *See* Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, Pub. L. No. 111-203, 124 Stat. 1376-2223 (2010).

expiration of the initial interest rate,¹³³ and assume the highest prepayment penalty that could be charged, with the added notation: “This APR also includes the maximum possible interest rate since this offered loan includes a floating rate or adjustable rate with a cap of _%” or for a loan with a prepayment: “This APR includes the maximum prepayment penalty charge under this loan, since this offered loan includes a prepayment penalty.”

These can be automatically created and included in the Loan Estimate form when these features apply to the offered loan.

If the loan contains a prepayment penalty, the year and percentage of the prepayment penalty would be charged. The online Loan Estimate should be programmed to take these pieces of information when inputted to calculate and disclose the loan’s APR adjusted to reflect these features. The borrower will thus be able to receive this information without having to first answer any questions to obtain this information.

To address the problem of low financial literacy, which will cause some consumers to think that they can just refinance if the interest rate adjusts upward, a warning can be added to page 1 of the Loan Estimate which currently shows how high the loan can rise in interest rate and monthly payments using the language already in the “Other Considerations” section of the Loan Estimate on page 3:

You might not be able to refinance this loan to avoid paying higher monthly amounts due to increases to your interest rate. Your ability to refinance depends on your future financial situation, the property value, and market conditions. You should consider seeking a loan with a fixed rate to avoid this risk.

We propose that the user be required to click on the Prepayment Penalty feature when it is marked “YES” on page 1 of the Loan Estimate form and that the following sentence then pops up: “If after taking out this loan you discover you need to find a lower cost loan to stay current on monthly payments, having to pay this prepayment penalty charge might cause you to have insufficient money to pay off this loan with a new lower cost loan.”

There is no direct way to incorporate the risks involved in balloon payments into the APR. Consumers need to evaluate the risks from a balloon payment separately. Nevertheless, we think that assessing the risks posed by balloon payments can be accomplished without requiring too much from consumers that would exceed the limitations of their bounded rationality. In particular, we propose that the user be required to click on the Balloon Payment feature when it is marked “YES” on page 1 of the Loan Estimate, causing the following sentences to then pop up:

Loans with balloon payments make the loan look more affordable than it really is. The most prudent loan is one where you are making monthly payments that pay not only interest on the loan, but a portion of the principal amount of the loan, so that on your last monthly payment you owe no more money than the normal

¹³³ The APR already includes how the interest rate will adjust in an adjustable rate loan when it can be determined at the start of the loan how the adjustable rate will adjust and what interest rates will apply during the term of the loan. But, if a loan has a floating rate or adjustable rates where it cannot be determined at the start of the loan what the interest rate will be during the term of the loan, the APR does not now capture how high the interest rate can rise.

monthly payment amount you make (a “fully amortized loan”). You should consider seeking a loan that is a fully amortized loan so when you make your last loan payment you will owe no further money. This way, you avoid the risk that when this offered loan needs to be repaid, you might not be able to obtain a low priced and affordable new loan to pay off this loan.

5. \$ The Consequences the Borrower Will Suffer if the Borrower Fails to Repay the Debt

We recommend that the Loan Estimate add just before the borrower’s signature the topic: “Serious Consequences If You Fail to Pay What You Owe” and that something like the following be stated after that heading:

If you fail to make a required payment under your loan (after any applicable cure period, reinstatement right, and redemption period) the lender can foreclose on your mortgage and remove you from your home. In addition, in many states, the lender can garnish your wages and seize your other property to recover the remaining debt you may still owe after the foreclosure. It is important to make sure that you can afford to pay this offered loan and that the loan does not contain risky features like Adjustable Interest Rates, Balloon Payments, or a Prepayment Penalty that make it more likely you will not be able to make future required loan payments.

The words “you can afford to pay” can be set up so that the user of the online form can click on those words and receive information on how to calculate their debt-to-income service ratio and be alerted whether their ratio is one that reflects a loan at risk of being unaffordable. Since obtaining the data to make this calculation can be difficult, we would not require the user to do this to sign the Loan Estimate. Having said that, another possible way for the user to have this information is to require the lender, who is already making this type of calculation, to provide the borrower’s debt service ratio (calculating as the CFPB sets forth in instructions to the revised Loan Estimate) in the form. The borrower could then click on that information to learn if the borrower’s debt-to-income service ratio is considered to be very prudent (if at or less than 25%) or very risky (by exceeding the 43% debt to income ratio for a loan to be a “Qualified Mortgage” under Dodd-Frank¹³⁴), suggesting that ratios between these numbers fall somewhere between prudent to risky.¹³⁵

While the CFPB, overall, has not included educational type information or warnings in the current Loan Estimate, it did do so in the “Other Considerations” section of the current Loan Estimate, so there is precedent for including this in the disclosure form.

¹³⁴ 15 U.S.C. § 1639c(b) (2018).

¹³⁵ Because there is debate on ways to measure this, and what number is the right number, we think that using these two numbers as outliers provides some guidance without being more specific.

6. If the Loan is a Refinance of an Existing Mortgage Loan, Whether the Borrower Will Achieve a Net Economic Benefit from a Refinance of that Loan

When a borrower fills out a Loan Estimate form for a refinance, we propose the form be revised to add a feature where the borrower is able to learn whether the refinance will create a wealth maximizing net economic benefit for borrowers whose primary purpose for the refinance is achieving that goal. A net economic benefit is not created solely because the new loan has a lower interest rate. Determining whether the refinance creates a net economic benefit can be a complicated process for the typical borrower since one must look at additional factors beyond the difference in interest rates, including the costs to obtain the new loan.

We think it would be most helpful to the borrower to learn this information at the Loan Estimate stage rather than the Closing Disclosure stage, if possible.

Because we think it would be most helpful to the borrower to learn this information earlier rather than later, we recommend the following sentence be added to the Loan Estimate (rather than first disclose this information on the Closing Disclosure) on the page that the borrower signs, that states: “To learn if taking out this home loan, in place of your current home loan, will create a wealth maximizing net economic benefit, click here.”

Economists and lawmakers have many different theories of how to determine whether refinancing a loan will give the borrower a net tangible benefit or otherwise be a wealth maximizing decision.¹³⁶ We need not debate those theories here. Instead, we recommend that the CFPB select an appropriate method and embed software to implement it on a website with an interactive Loan Estimate. Borrowers could then use the Closing Disclosure from their existing loan and the Loan Estimate for each loan offer to determine whether a particular offer would give them a net tangible benefit.

If the borrower no longer has a physical copy of the Closing Disclosure for their existing loan (to create the new amortization with), they can easily request one from

¹³⁶ See, e.g., *Optimal Mortgage Refinancing*, *supra* note 91; Sumit Agarwal et al., *Why Do Borrowers Make Mortgage Refinancing Mistakes?* 11–12 (Fed. Rsr. of Chicago, Working Paper No. 2013-02, 2012); PAUL G. BENNET ET AL., IMPLIED MORTGAGE REFINANCING THRESHOLDS, FED. RES. BANK OF N.Y. STAFF REP. NO. 49 (1998); Benjamin J. Keys et al., *Failure to Refinance* 20 (Kreisman Working Papers Series in Housing L. & Pol’y, Paper No. 32, 2014); Yan Chang & Abdullah Yavas, *Do Borrowers Make Rational Choices on Points and Refinancing?*, 37 REAL EST. ECON. 635 (2009); Andrew H. Chen & David C. Ling, *Optimal Mortgage Refinancing with Stochastic Interest Rates*, 17 REAL EST. ECON. 278, 281 (1989); Jeremy J. Siegel, *The Mortgage Refinancing Decision*, 3 HOUS. FIN. REV. 91 (1984); Glenn B. Conner et al., *Mortgage Refinancing*, 76 FED. RES. BULL. 604 (1990); Rich Fortin & Stuart Michelson, *The Tax Impacts of Home Mortgage Refinancing: An Analysis and a Model*, 13 J. REAL EST. LITERATURE 189, 189–202 (2005); Paul Bennett et al., *Implied Mortgage Refinancing Thresholds*, REAL EST. ECON. (2003); James R. Follain & Dah-Nein Tzang, *Interest Rate Differential and Refinancing a Home Mortgage*, 56 APPRAISAL J. 243 (1988); Gary L. Hoover, *The Mortgage Refinance Decision: An Equation-Based Model*, 12 FIN. SERVS. REV. 319 (2003); Rich Fortin et al., *Mortgage Refinancing: The Interaction of Break Even Period, Taxes, NPV, and IRR*, 16 FIN. SERVS. REV. 197–200 (2007). See generally PIZOR ET AL., MORTGAGE LENDING app. B (Nat’l Consumer L. Ctr. ed., 3d ed. 2019) (listing state laws requiring and defining net tangible benefit for certain mortgage transactions).

their loan servicer. Or, the optional database that we proposed in (3) above could also facilitate direct comparisons of the various loan offers that a consumer is considering to an existing loan on a single computer screen. If the Closing Disclosure for the existing loan was placed on and still exists in the optional database.

Because, as noted in Part II.F, not all rational reasons to refinance can be calculated mathematically, this section of the Loan Estimate could list other reasons that borrowers may wish to consider.¹³⁷ This would help borrowers make a decision if they had a rational reason but the online comparison said the loan offer was, otherwise, not wealth maximizing.

B. Can the Loan Estimate Form Include All of These Simple-to-Use Interactive Tools Without Causing Information Overload?

All of these proposals will substantially reduce information overload because we are substituting simple tools for the consumer to use to gain the key information they need to make a decision on the offered loan. Future experiments and field studies can explore how taxing the Loan Estimate is with these tools and remaining information in the Loan Estimate. The top three changes that will reduce information overload are: (1) “APR Price Tag” on page 1 (based on term of the loan),¹³⁸ and on the page where the borrower would sign the Loan Estimate, the interactive (2) “APR for your Estimated Holding Period: _%” [or] “APR Based on the Typical 5 Year Holding Period” (which will include, if applicable, maximum floating or adjustable rates as described in (4) above),¹³⁹ and: (3) “Average APR for Your Credit Score: _” [or “_% of Borrowers With a Lower APR and Your Credit Score”].¹⁴⁰ The remaining proposed

¹³⁷ Examples of other rational reasons to refinance a loan include: switching from a risky adjustable rate loan to a fixed rate loan, switching to a loan with a more affordable monthly payment in order to avoid a default and foreclosure, or obtaining needed funds from equity in the home for a needed debt consolidation or home improvements.

¹³⁸ This one figure tells the borrower the price of the loan. Without this figure the borrower needs to review several other parts of the Loan Estimate to get a sense of the price of the loan, but without the precision to make comparison shopping easy.

¹³⁹ By framing this adjustment to the APR to reflect an earlier repayment of the loan as a modification of the 30-year APR, and not as a separate loan feature, it continues to be just one attribute, the price of the loan, making this information less taxing. By adding an interactive tool to the Loan Estimate that can calculate the APR taking into account the borrower’s estimated holding period and maximum floating rate, the borrower is provided a simple way to see how these loan terms affect the price of the loan and compare that price with other offered home loans.

¹⁴⁰ Giving consumers information about the average APR for people with their credit score would be consistent with adaptation-level theory, a theory of attribute evaluation in which to-be-evaluated attributes are compared to the average. HARRY HELSON, ADAPTATION-LEVEL THEORY: AN EXPERIMENTAL AND SYSTEMATIC APPROACH TO BEHAVIOR (1964). Giving consumers information about the percentage of consumers with their credit score who received lower APRs than their offer would be consistent with range-frequency theory, a theory of attribute evaluation in which to-be-evaluated attributes are evaluated according to their percentile rank. *See generally* ALLEN PARDELLI, HAPPINESS, PLEASURE, AND JUDGMENT: THE CONTEXTUAL THEORY AND ITS APPLICATIONS (1995). Both of these theories of attribute

features, by and large, simply require clicking to read an explanation or warning, which should not be overtaxing.

However, we are concerned that two of the interactive features we recommend could cause cognitive overload and decision avoidance. The first interactive feature we have this concern with is the interactive tool to determine if there would be a wealth maximizing, net economic benefit from a refinance of an existing loan. While the calculation can be performed by software, and it just needs very basic information (outstanding loan amount for the existing loan and new loan amount for the new loan, monthly payment of principal and interest for each loan, and the remaining loan term for the existing loan and loan term for the new loan), future research might explore whether this concept and procedure is too complicated and confusing for consumers. The second interactive feature we are concerned about is the one answering whether the offered loan is affordable, especially if the burden is placed on the borrower to accumulate the information necessary to create the debt-to-income service ratio needed. For this reason, we recommend requiring the lender offering the new loan to provide on the Loan Estimate form the debt-to-income service ratio information to the extent they have already calculated it.

To make sure that together all of these proposed interactive features do not lead to cognitive overload, we recommend that testing should be done to determine how long it takes a user of the form to work through each of our proposed interactive features. Testing should also be done to determine how well a consumer is able to use and benefit from each of these interactive features. Consideration should also be given to which parts of the current Loan Estimate form can be removed or de-emphasized in light of these added features.

As another way to reduce information overload, we recommend that the five-year comparison information be deleted from the Loan Estimate. Based upon the results in our experiment reported on in this Article, participants were not aided by this information and were misdirected by it. Having an APR adjusted for a five-year holding period (or different holding period that reflects the average holding period) would be much easier for a consumer to use to determine which of two or more loans would be least expensive based upon the consumer's estimated holding period. We also think that once the APR includes all of the relevant costs to obtain the loan, the itemization of the closing costs related to obtaining the loan becomes much less useful. We recommend, therefore, that the itemization of those closing costs be an addendum¹⁴¹ to the Loan Estimate (versus on page 2) freeing up space to display the APR figures we recommend more prominently: (1) the APR for the average holding period or user's estimated holding period (which if there is an applicable prepayment charge, would also include the maximum prepayment charge, or if there was a floating rate loan or an adjustable rate loan where the actual adjustments cannot be determined at the time the loan is entered into, the maximum interest that could be charged under those loans); and (2) the average APR that borrowers with their credit score received (or the percentage of borrowers with their credit score who received a lower APR).

evaluation have been tested for over half a century and have received a great deal of support. Which would be better for the purposes of the disclosure here should be tested in future research.

¹⁴¹ Part of why we do not recommend it be deleted from the form is that this itemization of closing costs is that it was originally required by statute so the CFPB might lack authority to delete it entirely from the Loan Estimate.

But even well-designed disclosure forms can be undermined by deceptive sales practices.¹⁴² No matter how simple and effective a revised Loan Estimate form is, if a consumer is purposefully distracted by a mortgage broker or lender while reading it, or if thereafter they are deceptively induced to think that this is the best deal they could get, when it is not, or to think that a risky term is not in fact risky, the form can lose its effectiveness.¹⁴³ We believe that by providing an online, interactive Loan Estimate form, there will be less opportunity for a mortgage broker or lender to be present when the borrower reviews the form, so the borrower will not be as distracted while reading it. And it will be impossible¹⁴⁴ for a mortgage broker or lender, if present when the borrower is reviewing the online form, to just point out the beneficial loan terms disclosed in it (like monthly payment amount), while ignoring the problematic terms and then show the borrower where to sign the form.¹⁴⁵ This is because the Loan Estimate form would now be online and interactive, requiring the borrower to click on certain portions of it (the key potentially problematic terms) and, in some places, input certain information to obtain further useful disclosures they would notice pop up as a result, before the borrower will be able to sign the online form.

But if, after carefully processing through the interactive, online Loan Estimate form, a borrower is thereafter unsure about whether to take out the offered loan, or otherwise speaks with the lender or mortgage broker they were working with, there is still the possibility that a mortgage broker or lender will try to explain away any problematic terms in the offered loan—Often consumers’ concerns can be allayed by an explanation (these explanations do not need to be true or even sensible).¹⁴⁶ To try to proactively inoculate the borrower from this possibility, the form could add a final interactive feature: “Warning Against Deceptive Sales Tactics” that they would be required to click on before they could sign the Loan Estimate form. The warning could provide specific types of deceptive practices that have been used in the past such as: (i) a bait and switch, where the terms of the loan change, including the interest rate, (and the importance of getting an interest rate lock for the period until the purchase or refinance is intended to occur), (ii) being told and believing that this is the best loan they qualify for when it very well might not be (and the importance of shopping for a lower priced and less risky loan), and (iii) how to contact the CFPB if they have questions on the Loan Estimate provided to them or their receipt of a subsequent Loan Estimate from the same lender with changed terms.

¹⁴² See Agarwal, *supra* note 87, at 637; *Cognitive and Social Psychological Analysis*, *supra* note 13, at 89; Walia, *supra* note 87, at 30 (describing some deceptive sales practices that prey on cognitive biases).

¹⁴³ *Ineffective in Any Form*, *supra* note 5, at 377–400.

¹⁴⁴ Impossible, unless a mortgage broker or lender was able to access and then click through the online Loan Estimate form and then convince the borrower to sign the form after doing so.

¹⁴⁵ Ronald Paul Hill & John C. Kozup, *Consumer Experiences with Predatory Lending Practices*, 41 J. CONSUMER AFFS. 29, 32 (2007). See generally Mark A. LeBoeuf et al., *Eye See What You Are Saying: Testing Conversational Influences on the Information Gleaned from Home-Loan Disclosure Forms*, 29 J. BEHAV. DECISION MAKING 307 (2016).

¹⁴⁶ *Whispering*, *supra* note 5, at 6.

C. CFPB Authority to Make the Proposed Changes

Most of the changes we recommend would be implemented either through the CFPB's general authority or its specific authority to implement the Truth in Lending Act. The Bureau's congressionally mandated Office of Financial Education has authority to issue educational materials designed to improve financial literacy and to help consumers make wise financial decisions,¹⁴⁷ and Congress has given the CFPB broad authority to implement TILA.¹⁴⁸ That authority includes the power to create "additional requirements, classifications, differentiations, or other provisions," as well as "such adjustments and exceptions for all or any class of transactions," as the Bureau deems necessary to meet TILA's goals.¹⁴⁹

The Bureau has the authority to redesign the Loan Estimate, as we recommend, because Congress specifically instructed the Bureau to "publish a single, integrated disclosure for mortgage loan transactions."¹⁵⁰ The authority used to create the form certainly would include permission to make changes to it. Many of the new disclosures we recommend, particularly the online disclosures, would be more in the nature of educational materials authorized by the power granted to the Office of Financial Education.¹⁵¹

One specific change—the all-inclusive APR—could be created online as an educational tool, in addition to the existing APR on the mandatory disclosures. But our recommendation would be more effective if the Bureau amended the regulations to require the all-inclusive APR for all purposes. The Bureau has the authority to do so (by amending the definition of "finance charge"¹⁵²) under the authority granted by 15 U.S.C. § 1604(a), as quoted above. The cost to industry of implementing these changes would be a one-time event that would be outweighed by the benefit to consumers and the market of better consumer decision making.

We share the following thoughts as we conclude our proposed reforms to how the Loan Estimate disclosure form can be made a more robust tool for borrowers to use. Many commentators, including us, have criticized the assumption that most consumers have the ability to review a home loan disclosure form and then use that information to make a rational, wealth-maximizing decision.¹⁵³ In a previous article, for example, the first and second authors identified numerous cognitive and social psychological factors that cause disclosure forms to be ineffective and concluded that

¹⁴⁷ See 12 U.S.C. § 5493(d).

¹⁴⁸ See 15 U.S.C. § 1604.

¹⁴⁹ 15 U.S.C. § 1604(a).

¹⁵⁰ 15 U.S.C. § 1604(b).

¹⁵¹ Fair and Accurate Credit Transactions Act of 2003, 15 U.S.C. § 1601.

¹⁵² 12 C.F.R. § 1026.4 (2019).

¹⁵³ See *Ineffective in Any Form*, *supra* note 5, at 377 (focusing on the problem of dual tasking (when a mortgage broker or lender chats with a consumer on other matters as they are trying to review a Loan Estimate) and confirmation bias undermining the effectiveness of the then current, paper based Loan Estimate); Ben-Shahar & Schneider, *supra* note 19 (discussing the failure of mandated disclosure to correct these problems); Willis, *supra* note 30, at 764–66.

disclosures were inadequate to protect consumers.¹⁵⁴ In response to these inadequacies, we advocated mandatory financial counseling from an expert who could review the loan and help the borrower decide if it is the best loan they could get.¹⁵⁵ Likewise, in their influential article *The Failure of Mandatory Disclosures*, Omri Ben-Shahar and Carl Schneider concluded that “[m]andatory disclosures cannot reliably improve people’s decisions.”¹⁵⁶

Because additional protections beyond loan disclosures and what has already been enacted by Congress are not likely to occur anytime soon, we decided to consider whether it would be possible to hack loan disclosures to make them more useful to consumers, starting with the Loan Estimate for a home loan. And, indeed, many of the problems raised with disclosures can be improved, if not solved, by reforming disclosures as proposed herein. Furthermore, with the interactive tools we propose, the Loan Estimate can not only fulfill the original intent of Congress to empower borrowers to shop around for the lowest priced loan they qualify for, the Loan Estimate can also function much like having an expert by the borrower’s side, assisting the borrower as an attorney (or well-trained mortgage counselor) might if representing the borrower. For these reasons, consumer advocates should be in support of the recommended changes to the Loan Estimate that we have detailed. We also believe that responsible members of the lending industry should be supportive of the recommended changes to the Loan Estimate because the proposed reforms are educational in nature and free-market reforms that do not directly prohibit any loan term, and the reforms should not cause any significant time delays or impose any significant costs on lenders when implemented.¹⁵⁷

V. CONCLUSION

We conclude by considering the wider implication from the experiments we have run and the proposals we have made. Ben-Shahar and Schneider laid out the preconditions for mandatory disclosures to be considered “successful,” which they then apply to mandated disclosures in different types of consumer transactions to show how those disclosure forms failed to truly be effective.¹⁵⁸ We summarize here, what those preconditions are, and whether they have been met, with the approach we proposed in Part IV. We then consider how this approach could be applied to student loan disclosures.

¹⁵⁴ *Cognitive and Social Psychological Analysis*, *supra* note 13, at 85.

¹⁵⁵ *Id.*

¹⁵⁶ Ben-Shahar & Schneider, *supra* note 19, at 704–05. In drawing this conclusion, they argued that “mandated disclosure rests on false assumptions: that people want to make all the consequential decisions about their lives, and that they want to do so by assembling all the relevant information, reviewing all the possible outcomes, reviewing all their relevant values, and deciding which choice best promotes their preferences.” *Id.*

¹⁵⁷ See Renuart & Thompson, *supra* note 31, at 199–207.

¹⁵⁸ Ben-Shahar & Schneider, *supra* note 19, at 705–09.

First, consumers need to know that the information they need exists and where to find that information.¹⁵⁹ The current Loan Estimate form has a lot of information and consumers do not know what information is important or what they should look at.¹⁶⁰ This fact leads to cognitive information overload and causes consumers to be vulnerable to factors that misdirect their attention.¹⁶¹ Then, the consumer using the form must be able to understand the information disclosed, remember that information, and use the information effectively to make a rational decision relating to the transaction.¹⁶²

The primary cognitive barrier for consumers that prevents them from understanding, remembering, and using disclosed information is that they lack adequate conceptual scripts and schemas for making sense of this information.¹⁶³ If they had the necessary sophisticated conceptual scripts and schemas to make sense of all of this information, they would in essence be experts,¹⁶⁴ which would eliminate problems of financial illiteracy and innumeracy.¹⁶⁵ These conceptual scripts and schemas would direct their attention to the most essential information, thereby overcoming the problems of excess information¹⁶⁶ and information overload,¹⁶⁷ the accumulation effect (i.e., information overload that results from adding more and more information over time),¹⁶⁸ and problems of decision aversion that come from having too much information.¹⁶⁹ These conceptual scripts and schemas would equip consumers to make sense of all of the information presented on disclosure forms, thereby allowing them to perform all of the calculations necessary to understand tradeoffs.¹⁷⁰ These conceptual scripts and schemas would also enable them to

¹⁵⁹ *Id.* at 709.

¹⁶⁰ That consumers at times do not know what information to look for was demonstrated by the results of the control conditions of the experiments that we reported in our 2014 paper in which our participants were at chance level picking which of the two loans was less expensive. See *Shrewd Consumer Decision Making*, *supra* note 5, at 116–18, 120–22.

¹⁶¹ *Cognitive and Social Psychological Analysis*, *supra* note 13, at 85; *Whispering*, *supra* note 5, at 6.

¹⁶² Ben-Shahar & Schneider, *supra* note 19, at 709–18.

¹⁶³ *Cognitive and Social Psychological Analysis*, *supra* note 13, at 107.

¹⁶⁴ Ben-Shahar & Schneider, *supra* note 19, at 725–26.

¹⁶⁵ *Id.* at 711.

¹⁶⁶ *Id.* at 729.

¹⁶⁷ *Cognitive and Social Psychological Analysis*, *supra* note 13, at 105–06.

¹⁶⁸ Ben-Shahar & Schneider, *supra* note 19, at 705.

¹⁶⁹ *Id.* at 727–28.

¹⁷⁰ *Id.* at 720.

remember the information and use it.¹⁷¹ Because consumers typically do not have this level of expertise, Ben-Shahar and Schneider concluded that virtually none of the disclosure forms they reviewed, that sought to present complicated facts, met the challenge of providing important information that the consumer would need and could easily use to make a rational decision on the transaction, taking into account the consumer's situation.¹⁷²

We believe, however, that the results from our experiments demonstrate that it is possible to go a long way towards meeting the challenges and tests laid out by Ben-Shahar and Schneider as well as the concerns that we expressed in previous work. These proposals create a promising new way for disclosures to be structured to provide a much more effective tool for consumers to use to understand the costs, benefits, and risks of their loans and make decisions.

Highlighting APR and eliminating other information or relegating that other information to secondary status will communicate to consumers—even unsophisticated consumers—what information is important and what they should look at,¹⁷³ thereby focusing consumers' attention and reducing their cognitive information overload.¹⁷⁴ This focused attention should reduce consumers' vulnerability to misdirections of their attention that we discussed in previous work including confirmation biases, dual tasking, and violations of conversational norms.¹⁷⁵ Furthermore, the APR can provide a simple reason or justification for consumers' choices.¹⁷⁶ In particular, APR provides a much better, more reliable indication of which loans are less expensive than the loan feature that Willis (2006) found that consumers use, namely monthly payment.¹⁷⁷ Steering consumers towards APRs, especially personalized, individualized APRs, as the basis for identifying less expensive loans and making decisions also creates a much more reliable heuristic than many alternatives.¹⁷⁸

Presenting the APR in the "APR Price Tag" format (that is, inside of a price tag icon with the words "APR: Price of the Loan" and the words "Lower is better for you" inside) allows consumers to understand the information disclosed, remember that information, and use the information effectively to make a rational decision relating

¹⁷¹ *Id.*

¹⁷² *Id.* at 705, 742.

¹⁷³ *Id.* at 729.

¹⁷⁴ *See generally id.*; *Cognitive and Social Psychological Analysis*, *supra* note 13, at 106.

¹⁷⁵ *See generally Ineffective in Any Form*, *supra* note 5; LeBoeuf, *supra* note 145 (describing the role of conversational norms in home-loan disclosures and recognizing the need for further research). The extent to which it does so should be explored in future research.

¹⁷⁶ *See generally* Shafir et al., *supra* note 38; Mata & Nunes, *supra* note 38.

¹⁷⁷ Willis, *supra* note 30, at 780–81.

¹⁷⁸ *See generally* GIGERENZER, *supra* note 37 (exploring the various heuristics that enable people to make smart and rational decisions).

to the transaction.¹⁷⁹ This format allows them to identify the lower cost loan just by comparing the loans on a single attribute—the APR—and, thereby, understand which loan is the lower cost loan, even if they do not understand the finer details of how it was calculated or even what an APR is or means. This format gives them a conceptual schema for making sense of this information,¹⁸⁰ provides them with a heuristic for making this judgment,¹⁸¹ and a reason or justification for choosing the lower cost loan.¹⁸² They, therefore, would not need to be experts,¹⁸³ and the problems of financial illiteracy and innumeracy would, thereby, be eliminated.¹⁸⁴ By directing consumers' attention to the most essential information, the APR, this format overcomes the problems of excess information¹⁸⁵ and information overload,¹⁸⁶ the accumulation effect,¹⁸⁷ and decision aversion.¹⁸⁸

It eliminates the calculations needed to understand tradeoffs¹⁸⁹ and drastically reduces the information that consumers need to remember.¹⁹⁰ Personalizing disclosures as we propose in this paper through interactive online disclosures takes into account each consumer's individual situation.¹⁹¹ We conclude that this strategy goes a long way towards satisfying Ben-Shahar and Schneider's criteria and should be implemented, particularly when other strategies such as mandatory financial counseling¹⁹² are not politically feasible.

As an important example, we end by considering how creating an online, interactive, and data-based disclosure, tailored to the borrower's situation, could also be successfully used in student loan disclosures. The first key feature a borrower

¹⁷⁹ The APR Price Tag we propose meets many of the key preconditions laid out in Ben-Shahar & Schneider, *supra* note 19, at 709–16, on what is needed for a disclosure form to be effective.

¹⁸⁰ *Cognitive and Social Psychological Analysis*, *supra* note 13, at 115.

¹⁸¹ See generally GIGERENZER, *supra* note 37 (exploring the various heuristics that enable people to make smart and rational decisions).

¹⁸² See generally Shafir et al., *supra* note 38; Mata & Nunes, *supra* note 38.

¹⁸³ Ben-Shahar & Schneider, *supra* note 19, at 725–26.

¹⁸⁴ *Id.* at 711–12.

¹⁸⁵ *Id.*

¹⁸⁶ *Cognitive and Social Psychological Analysis*, *supra* note 13, at 96.

¹⁸⁷ Ben-Shahar & Schneider, *supra* note 19, at 704–05.

¹⁸⁸ *Id.* at 727–28.

¹⁸⁹ *Id.* at 720.

¹⁹⁰ *Id.*

¹⁹¹ *Id.* at 692 (referring to the difficulty to create disclosures in light of the variety of different circumstances, preferences, and choices of the person receiving the disclosure form).

¹⁹² *Cognitive and Social Psychological Analysis*, *supra* note 13, at 90.

should have in mind when deciding whether to take out an offered student loan is whether the student loan will lead to a positive return on the consumer's investment based upon the consumer's future plans and the amount and costs of the loan.¹⁹³ We recommend that student loan disclosure forms be revised to include a tool that would enable a borrower to gain a sense, based upon the borrower's selected major, degrees, and career, whether the amount and costs of the offered student loan(s) will yield a positive return on the borrower's investment. This interactive tool could also help a borrower determine whether the career choice made possible through the student loans will lead to a stream of income that after graduation would enable the borrower to be able to afford the offered student loan(s).

A second key factor in whether to accept an offered student loan is whether it is the lowest priced, least risky loan with the best grace period, deferral, and repayment options, that the borrower can obtain. Federal student loans are generally much better for students than a private student loan.¹⁹⁴ Federal student loans accrue interest at a fixed interest rate set by Congress, while private student loans accrue interest at an adjustable interest rate,¹⁹⁵ typically leading to the federal student loan being at a lower price than private student loans.¹⁹⁶ In addition, federal student loans typically provide other advantages—such as the federal government paying the borrower's interest payments on a subsidized loan while the borrower is still in school—and offer many options to reduce or postpone payments on the loan that private loans do not.¹⁹⁷ Nevertheless, 53% of private student loan borrowers in 2015-2016 borrowed less than they could have in federal Stafford Loans, and 30% did not take out any federal loans at all.¹⁹⁸ This underscores the need for disclosures of an offered private student loan to contain more effective comparative information of the key relevant terms of the

¹⁹³ See, e.g., Teddy Nykiel, *Why College Students Take on Loans They Can't Repay*, NERDWALLET (Mar. 17, 2019), <https://www.nerdwallet.com/blog/loans/student-loans/why-students-borrow-loans-cant-repay/> (“[S]tudent debt isn't good when your degree doesn't lead to a job that earns enough to repay it. . . . Limit borrowing so that future monthly payments don't consume over 10% of take-home pay. By that standard, someone expecting to earn \$50,000 a year could afford a monthly payment of about \$279. . . . At the current undergraduate federal student loan interest rate of 4.53% that payment would support college debt of about \$26,800.”).

¹⁹⁴ See *Student Loans: Choosing a Loan That's Right for You*, CONSUMER FIN. PROT. BUREAU, <https://www.consumerfinance.gov/paying-for-college/choose-a-student-loan/#o1> (last visited Sept. 1, 2020) [hereinafter *CFPB Choosing a Loan*].

¹⁹⁵ *Id.*

¹⁹⁶ In a 2018 report on student debt, the Institute for College Access & Success found that in September 2018, interest rates for undergraduate private education loans were as high as 14.24%. INST. FOR COLL. ACCESS & SUCCESS, *STUDENT DEBT AND THE CLASS OF 2017 12* (2018), https://ticas.org/files/pub_files/classof2017.pdf. Federal student loan interest rates for the 2017–2018 school year ranged from 4.45% to 7%. Max Fay, *Interest Rates on Student Loans*, DEBT.ORG, <https://www.debt.org/students/financial-aid-process/interest-rates/> (last visited Sept. 1, 2020).

¹⁹⁷ See *CFPB Choosing a Loan*, *supra* note 194.

¹⁹⁸ Zoeller, *supra* note 2.

offered private student loan in comparison with the terms of federal loans currently available.

We thus recommend that if the offered student loan is a private student loan, more detailed comparisons of the price of the private student loan should be made in comparison to the price of current federal student loans. We believe that the current way the adjustable rate feature of private student loans is disclosed does not adequately alert a borrower as to how high the rate, and their monthly payments under that rate, can increase. We thus recommend that not only should the initial interest rate, resulting monthly payments under that rate, and maximum interest rate be disclosed under the adjustable rate private student loan (which they currently are), but the resulting monthly payment under that maximum rate should also be disclosed.¹⁹⁹ We also recommend a third depiction of what the interest rate and monthly payments might be under the adjustable rate loan based upon several decades of data on how the index used to calculate the interest rate has risen and fallen, and presenting the average interest rate under that data (plus the applicable margin added to that rate for the offered loan), along with the monthly payment under that rate be disclosed.

We further recommend that the student loan disclosure forms be revised to include the Price Tag APR that includes all the relevant costs to obtain the loan, so student loan borrowers can use this to more easily compare prices of loan offers. For a floating rate, private student loan, the APR price tag could first be presented based upon the initial interest rate, and labeled, “APR Price of the Loan Assuming Your Initial Interest Rate.” But we recommend a second APR price tag be presented reflecting the maximum interest rate that could be charged and labeled: “APR Price of the Loan Assuming Your Maximum Interest Rate.” We also recommend a third APR be presented based upon the historical data mentioned earlier, using the average interest rate for that index, plus the margin for the loan, to create a third APR labelled: “APR Assuming the Historical Average Interest Rate.”

Finally, we recommend that comparison information be presented in the private student loan disclosure, between what federal student loans provide and what the offered student loan provides in terms of: deferred accrual of interest, deferred repayment of the loan, and the variety of different repayment options available under those loans.

We believe that, with these added tools, features, and information, borrowers considering an offered student loan will be able to more easily make rational, wealth-maximizing, student loan decisions, and we recommend that the CFPB test these recommendations and implement them if the testing reflects they improve student loan decision making.

¹⁹⁹ See *H-21 Private Education Loan Application and Solicitation Sample*, FED. RSRV., <https://www.federalreserve.gov/newsevents/pressreleases/files/bcreg20090730a6.pdf> (last visited Sept. 1, 2020); *H-19 Private Education Loan Approval Model Form*, FED. RSRV., <https://www.federalreserve.gov/newsevents/pressreleases/files/bcreg20090730a4.pdf> (last visited Sept. 1, 2020); *H-20 Private Education Loan Final Model Form*, FED. RSRV., <https://www.federalreserve.gov/newsevents/pressreleases/files/bcreg20090730a5.pdf> (last visited Sept. 1, 2020).

Appendix A
Sample CFPB Loan Estimate Form with our proposed APR price tag icon
addition.

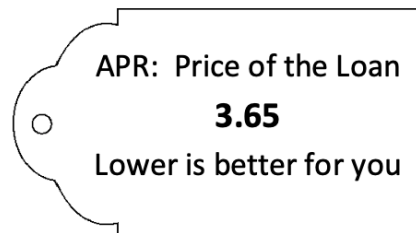
FICUS BANK

4321 Random Blvd., Somecity, ST 12340

Save this Loan Estimate to compare with your Closing Disclosure.

Loan Estimate

DATE ISSUED 7/23/2012
APPLICANTS James White and Jane Johnson
 123 Anywhere St., Apt 678
 Anytown, ST 12345
PROPERTY 456 Somewhere Avenue
 Anytown, ST 12345
EST. PROP. VALUE \$345,000
LOAN TERM 30 years
RATE LOCK ☐ NO ☒ YES, until 9/21/12 at 5:00 p.m.
 EST
Before closing your interest rate, points, and lender credits can change unless you lock the interest rate. All other estimated closing costs expire on 8/16/12 at 5pm EST



LOAN TYPE ☒ Conventional ☐ FHA ☐ VA
PURPOSE Refinance

Loan Terms	Can this amount increase after closing?
Loan Amount	\$276,006 NO
Interest Rate	3.2% NO
Monthly Principal & Interest <i>See Projected Payments Below for Your Total Monthly Payment</i>	NO \$1,193.63
Prepayment Penalty	Does the loan have these features? NO
Balloon Payment	NO

Projected Payments	Years 1-30
Payment Calculation	
Principal & Interest	\$1,193.63
Mortgage Insurance	
Estimated Escrow <i>Amount Can Increase Over Time</i>	+ \$468
Estimated Total Monthly Payment	\$1,661.63
Estimated Taxes, Insurance & Assessments <i>Amount Can Increase Over Time</i>	This estimate include <input checked="" type="checkbox"/> Property Taxes <input checked="" type="checkbox"/> Homeowner's Insurance <input checked="" type="checkbox"/> Other: <i>See Section G on page 2 for escrowed property costs. You must pay for other property costs separately</i>
	In escrow? YES YES NO

Cash to Close	
Estimated Cash to Close	-\$7,255 Includes \$19,229 in Closing Costs (\$15,180 in Loan Costs + \$4,049 in Other Costs - \$0 in Lender Credits). See details on page 2.

Visit www.consumerfinance.gov/learnmore for general information and tools

LOAN ESTIMATE

PAGE 1 OF 3

LOAN ID #