“DODD-FRANK 2.0: CREATING INTERACTIVE HOME-LOAN DISCLOSURES TO ENABLE SHREWD CONSUMER DECISION-MAKING”

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I. INTRODUCTION

Prior to 2010, the primary means that Congress employed to protect borrowers from entering into predatory home loans was to require lenders to provide borrowers with forms that disclosed the economic terms of the home loan they were applying for. Policy-makers

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expected that borrowers would carefully read and understand these forms and that they would use them to shop around for loans with the best terms possible. However, as home loan products increased in complexity, and credit began to be extended in a sub-prime market, the offered loan terms often contained highly problematic features that were not adequately highlighted or explained in the disclosure forms. Problems included loans that were overpriced, unaffordable, and contained otherwise risky features likely to lead to default. The Federal government’s reliance on home loan disclosure forms to prevent lenders from making and borrowers from taking problematic home loans was a dismal failure. A large number of borrowers, many without realizing it, entered into overpriced and unaffordable home


“Home buyers who would otherwise shop around for settlement services, and thereby reduce their total settlement costs are presently prevented from doing so because frequently they are not apprised of the costs of these services until the settlement date or are not aware of the nature of the settlement services that will be provided. The disclosure provisions... should ameliorate or eliminate such problems,” S. REP. No. 93-866, at 3.

An “overpriced” loan is one where the interest rate and fees exceed, sometimes far exceed, what the borrower could have qualified for. ELIZABETH WARREN & AMELIA TYAGI, THE TWO INCOME TRAP: WHY MIDDLE CLASS MOTHERS AND FATHERS ARE GOING BROKE 134 (2003) (estimating that approximately 40% of homeowners would have qualified for lower-cost loans than they were induced to take by unscrupulous mortgage brokers and lenders).

It was not unusual for borrowers to receive home loans where they were paying 50% or more of their income to their housing expenses.

An example of a risky and deceptive loan would be one that starts with a low, teaser interest rate but within 1-3 years would automatically adjust upward to a substantially higher rate. Another example would be a loan that is an interest only loan to make the loan look affordable, but that leads to a large balloon payment due when the loan matured, thereby increasing the risk of default at that time if the borrower is unable to refinance the debt when it matures.

As described in Stark & Choplin, A Cognitive And Social Psychological Analysis of Disclosure Laws and Call For Mortgage Counseling to Prevent Predatory Lending, 16 PSYCHOL. PUB. POL’Y & L. 85, 85-131 (2010)[hereafter Psychological Analysis of Disclosure Laws] many borrowers reported not realizing that they had entered into an adjustable rate home loan (note 27 and accompanying text) due in large part to mortgage brokers and lenders who engaged in deceptive presentations of the disclosure forms. The article includes descriptions of how unscrupu-
loans and loans with other risky features (referred to herein as “predatory loans”), leading to unprecedented levels of foreclosures.11

As a consequence of the foreclosure crisis, and the great real-estate recession that began in 2008, Congress further expanded its regulation of the home lending industry in an effort to address the predatory features of home loans that contributed to the foreclosure crisis. However, as discussed in this article, due to the limited nature of the Dodd-Frank Wall Street Reform and Consumer Protection Act ("Dodd-Frank") legislation, lenders can continue to make loans with predatory features to consumers.12

While Congress and the Consumer Financial Protection Bureau ("CFPB") have taken major steps forward with new disclosure rules and forms, effective August 1, 2015,13 we argue in this article these measures are inadequate. In-}

lous mortgage brokers and lenders engaged in “bait and switch” and “direction and deflection” techniques as well as methods they used to gain the borrower’s trust, in order to induce borrowers to enter into overpriced home loans (notes 28-30 and accompanying text). The article also analyzed fourteen cognitive and social psychological factors that cause disclosure forms as currently designed to be ineffective in protecting consumers. Id. at 97 (for a summary). It should also be noted that “interest only” loans are a way to mask the unaffordability of a more conventional, fully amortizing loan, which would have a higher monthly payment, and that when borrowers noticed they were being offered an adjustable rate loan and raised concern with affording the future higher payments they were often told not to worry about that because they could always refinance the loan, which is not true, as many learned after home prices started to go down. Indeed, the new Loan Estimate form makes a reference to the possibility of not being able to refinance.


13 See Section I of this article for an analysis of the “ability to repay” requirement and the safe harbor rules relating to “Qualifying Mortgages”. While it is now less likely that lenders will make loans that borrowers cannot afford to repay, other problematic loan terms such as the loan being “overpriced” or otherwise containing risky features are not prohibited.

14 See Section I of this article describing the key improvements made to the
instead, we argue that regulators have taken a step backward in how they treat the Annual Percentage Rate (“APR”), a key disclosure of the overall price of the loan.\textsuperscript{15} We report in Section II the results from two “APR Experiments.” These experiments found participants were only able to identify the lower-cost loan from two offered loans at a chance level (44% correct), despite using the CFPB’s new “Loan Estimate” disclosure form. In contrast, 74% were able to do so under our proposed enhanced APR disclosure to the Loan Estimate form described in Section II below.\textsuperscript{16}

We also argue the Loan Estimate disclosure form provided to the borrower at the loan application stage needs to be dramatically enhanced to better address the lack of financial literacy among consumers (as evidenced in the results from a financial literacy test that we gave participants described in Section II), as well as the cognitive barriers and deceptive mortgage sales practices that consumers face. We believe revising the Loan Estimate form to make it “interactive” in the manner we propose will better address these cognitive barriers and common deceptive sales practices that currently impede the effectiveness of the forms. The deeper level of information that the interactive features can convey will also better facilitate shrewd consumer decision-making not only by financially unsophisticated borrowers,\textsuperscript{17} but by financially sophisticated borrowers as well.\textsuperscript{18}

\begin{footnotesize}
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\item The APR is a combination of the interest rate, loan fees, and most of the closing costs of the home loan, expressed as a yearly rate over the term of the loan.
\item In the two loans that participants were asked to compare, the loan with the lower APR was at all times lower in total price than the higher APR loan. Because this might not be the case throughout the term of the loan, this possibility should be addressed in the Loan Estimate though interactive features described in infra note 17.
\item As discussed in Section III of this article, when there are problematic terms in the offered loan these terms could be highlighted in yellow or red and it would be mandatory for the consumer to click on the highlighted term and review the explanation before they would be able to sign the disclosure form.
\item For sophisticated consumers, they could elect to click on a link to a graph that depicts over time if it is possible for a lower APR loan to in fact at some points be at a higher price than a higher APR loan due to how much earlier than the maturity of the loan the borrower pays off the loan. The interactive features could include graphs showing how long the borrower would need to hold onto the loan (for example when they are comparing a loan with a lower interest rate but higher closing costs with a loan with a higher interest rate but lower closing costs), for the former loan to be at a lower price than the latter. Conversely, the graph could show when the borrower would need to pay off the loan when taking out a higher interest rate loan with lower closing costs (compared with a lower interest rate loan with
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In Section I, we summarize and analyze the Dodd-Frank laws that were enacted to regulate home loan terms and the key changes made to the home loan disclosure rules and forms, critiquing in particular the changes made to the APR component of the new CFPB disclosure form. In Section II, we detail and report on the methods and results from two APR Experiments we conducted (one using eye-tracking technology to see which areas of the disclosure form participants were looking at and for how long); we also report on the low level of financial literacy of the participants reflected in the results of the financial literacy test we gave them. In Section III, we consider how adding certain interactive features to the Loan Estimate can address financial literacy deficiencies and help overcome certain common deceptive practices that currently impede the effectiveness of home-loan disclosure forms. We consider which sections of the Loan Estimate form could benefit most from enhanced interactive features, including the enhanced APR disclosure that we recommend, and what those interactive features might look like. We also recommend certain other revisions to the Loan Estimate form for the CFPB to test to see if these changes will cause the form to be even more useful to consumers.

I. FEDERAL REGULATION OF HOME-LOAN TERMS AND CHANGES TO DISCLOSURE RULES AND FORMS IN THE WAKE OF THE FORECLOSURE CRISIS

In 2010, Congress enacted a sweeping series of laws under Dodd-Frank. In response to the widespread problem of mortgage lenders disregarding traditional underwriting practices and, instead, making loans without regard for the borrower’s ability to repay, Article XIV of Dodd-Frank requires that virtually all home-mortgage lenders make a reasonable and good faith determination of the borrower’s ability to repay the loan (the “Ability to Repay Requirement”). Congress also took steps to reign in the practice of tying higher closing costs (for the higher interest rate loan with lower closing costs to remain the lower priced loan).

19 Dodd-Frank, supra note 12.
20 Id. One would think that lenders would not make unaffordable home loans since they will suffer losses if the borrower defaults and the fair market value of the home does not exceed the debt amount and costs of foreclosure and resale of the home. However, originating lenders rarely held onto these unaffordable home loans and instead sold them in the secondary market, thus transferring the risk of default to others who relied on inflated ratings of these mortgage loan pools from rating
mortgage-broker compensation to the terms of a loan, particularly the interest rate.

Before Dodd-Frank, mortgage brokers were often paid a “yield spread premium.” The yield spread is the difference between the “par” rate, the lowest rate at which a lender would make a loan to a specific borrower, and the rate on the contract the borrower ultimately signed. The higher the contract rate, the bigger the spread, and the bigger the broker’s commission. 21 The practice of paying yield spread premiums not only incentivized mortgage brokers to place borrowers into higher-cost loans than for which they were qualified, but it also led many mortgage brokers to engage in deceptive practices so that consumers would not realize the extent to which their loans were overpriced.22 Even though the ban on yield spread premiums is an important change, Dodd-Frank does not prevent lenders from tying broker compensation to the size of a loan (the amount borrowed). Further, lenders can still profit by charging excessive interest rates and fees. Lenders also stand to profit from selling loans with terms that are attractive to secondary market participants.23 Consequently, Dodd-Frank and the CFPB’s implementing regulations do not eliminate the risk posed by incentives that promote unsafe lending practices.

Dodd-Frank and the CFPB’s regulations also establish other consumer protections that apply to most home loans including prohibiting lenders from financing abusive forms of credit life insur-

21 Id. §1403, (codified at 15 U.S.C. §1639b, amended as Truth in Lending Act §129(B) (as added by § 1402(a) by inserting after subsection (b) a new section: “(c) PROHIBITION ON STEERING INCENTIVES”) This new section prohibits various steering practices. The amendment includes a prohibition on loan originators receiving compensation from anyone based on the terms of the loan being made other than amount (which we logically infer therefore includes steering based on the interest rate being charged). The amendment is complicated and contains some exceptions and possible future exemptions, but later attempts to clarify that the new section does not permit yield spread premiums or other similar compensation that would permit the total amount of compensation to vary based on the terms of the loan (other than the amount of the principal)).


Dodd-Frank 2.0

2014

ance, requiring independent real estate appraisals, prohibiting mandatory arbitration clauses, and capping the amount of time during which prepayment charges can be imposed. However, the other key reforms are more of a “nudge” instead of an outright prohibition of those problematic terms. Dodd-Frank addresses these other problematic and risky home loan terms by prohibiting them only if the lender desires to have the loan be considered a “Qualifying Mortgage,” but does not require that any home loans in fact be “Qualify-

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24 15 U.S.C. § 1639c(d). Prohibits single premium credit life insurance, repayment insurance, and similar closing costs, versus paying for them in monthly installments, which are particularly predatory in nature when a borrower is then induced to frequently refinance the loans with the same charges being re-imposed.


26 15 U.S.C. § 1639c(e). If a loan is permitted to have a prepayment charge (i.e. it is a Qualifying Mortgage, not an adjustable rate loan, and the APR is not greater than the average of prime offer rates for comparable transactions by 2.5% for first mortgage loans or 3.5% for junior loans) then it is restricted to a charge of no greater than 3% of the loan balance in year one of the loan, 2% in year 2 and 1% in year 3 of the loan. After year 3, no prepayment charges are permitted. This regulation and restriction on prepayment charges is helpful, since now restrictions on prepayment charges will be expanded to virtually all home-loans (prior restrictions only covered very high cost home loans). However, the new law does permit a significant cost to borrowers who might need to prepay their loan during the first three years of their loan. In addition, the prepayment charge can be imposed even if interest rates have risen since the loan was first made, in which case the lender might even profit from reinvesting the sums advanced early rather than take a loss when interest rates have declined. Prior to the foreclosure crisis, prime loans (loans to borrowers with good credit and whose financial circumstances complied with prudent underwriting standards) typically did not include prepayment charges; while sub-prime loans did. And as previously indicated in Warren & Tyagi, supra note 7, many consumers who qualified for a prime loan were induced to take out a higher cost sub-prime loan, which then contained not only higher interest and closing costs, but also included prepayment charges. It is unclear how lenders will respond in structuring their home loans in light of these new rules and the impact of that on the frequency with which lenders impose prepayment charges.


28 Rather than prohibit the making of home loans with certain risky or highly unfair features, Congress instead provided certain incentives for lenders to make more fair loans.

29 Examples include: negative amortization loans (where the principal amount actually increases over the term of the loan), interest only loans (where the borrower will have to pay back the entire principal loan amount when the loan matures), loans with very high fees or points relative to the loan amount, or loans containing prepayment charges.
If a home loan meets the definition of a Qualifying Mortgage, then the Ability to Repay Requirements noted earlier is conclusively presumed to be satisfied by the lender. If the loan otherwise complies with the requirements to be a Qualifying Mortgage but is a “higher priced home loan,” the loan originator will gain only a rebuttable presumption of complying with the Ability to Repay Requirement. Weaknesses in the rules defining a Qualifying Mortgage extended exemptions to certain categories of lenders and the fact that some lenders may choose not to make a fully or partially Qualifying Mortgage, in turn permits lenders to continue to offer home loans with highly problematic features. For example, lenders can charge high interest rates and fees in excess of what the borrower might qualify for from other lenders based upon their credit score or structure their loans with risky features such as large prepayment penalties, negative amortization, adjustable rates, or large balloon payments of principal due at maturity of the loan. Consequently, even with the important reforms created by Dodd-Frank, unsophisticated borrowers remain vulnerable to taking out loans with highly problematic terms or features. In light of this reality, mandatory home loan disclosure laws and forms remain an important source of federal

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30 15 U.S.C. § 1639c(b) Creation of a safe harbor to the Ability to Repay requirement if the loan satisfied the requirements for a “Qualifying Mortgage.” To be a Qualifying Mortgage, the loan must: 1) have no negative amortization, 2) not be an interest only loan, 3) be a fully amortized loan with no balloon payment and a term no greater than 30 years, 4) include documentation of income and financial resources of the borrower, 5) comply with the guidelines on debt-to-service ratios (which require a 43% debt to service ratio cap), and, 6) points and fees on the loan can not be greater than 3% of the loan amount. It should be noted, however, that because this 3% figure excludes from its calculation any points charged to discount [reduce] the interest rate and the calculation of fees refers only to fees to the lender or mortgage broker, and excludes fees for other closing costs, a loan charging fees so defined in the 2-3% range may also in the authors’ opinion be indicative of an overpriced loan.

31 Qualifying Mortgages are subject to restrictions that prohibit certain higher risk loan terms (such as balloon payments), and pricing restrictions, such as the amount which the APR and “points and fees” may exceed certain benchmarks.

32 Id.

33 A “higher priced loan” that would cause an otherwise Qualifying Mortgage with a conclusive presumption to become a Qualifying Mortgage with only a rebuttable presumption on compliance with the Ability to Repay Requirement is one where the APR is 1.5% greater than the average prime offer rate for a comparable first mortgage loan or 3.5% greater for a comparable junior loan.

2014

Dodd-Frank 2.0

protection and, potentially, a way to empower consumers to make shrewd home-loan decisions.

Beginning in 2008, the Federal government responded to the foreclosure crisis by taking steps to modify the home loan disclosure forms and rules. One key change proposed in 2008 and made effective 2010, was better disclosure at the loan application stage whether the loan was a fixed-rate or adjustable-rate loan, and to disclose how high the interest rate and monthly payments could rise during the term of the loan. This was a very important change to the disclosure forms because many consumers under the earlier disclosure forms failed to realize they entered into an adjustable-rate home loan. Another key change that became effective in 2010 was to restrict the lender’s ability to later increase many of the fees and costs initially quoted on the disclosure form provided to the borrower at the time of the loan application. Lenders were required to provide loan applicants with a “good faith estimate” of the expected settlement


36 Id.

37 See Psychological Analysis of Disclosure Laws, supra note 10. See also Stark, Choplin, & LeBoeuf, Ineffective In Any Form: How Confirmation Bias and Distractions Undermine Improved Home-Loan Disclosures, 122 YALE L.J. ONLINE 377-400 (2013), which noted how the manner in which the adjustable rate feature of the offered loan had previously been disclosed in the Truth in Lending Act disclosure form made it very difficult for borrowers to notice it was an adjustable rate home loan. Participants in experiments reported upon in the article that used the TILA disclosure form fared much more poorly than did participants using the new disclosure form at noticing the loan was an adjustable rate loan.

38 See RESPA Final Rule, Supra note 33. As summarized in CFPB, Final rule on simplified and improved mortgage disclosures, Detailed Summary of the Rule, http://files.consumerfinance.gov/f/201311_cfpb_tila-respa_detailed-summary.pdf [hereinafter Final Rule Summary] there are three categories of charges that cannot increase at all (subject to certain exceptions): “(1) the creditor’s or mortgage broker’s charges for its own services; 2) charges for services provided by an affiliate of the creditor or mortgage broker; and (3) charges for services for which the creditor or mortgage broker does not permit the consumer to shop.” As noted by the CFPB: “Charges for other services can increase, but generally not by more than 10%, unless an exception applies.” The CFPB notes four examples of exceptions: “(1) the consumer asks for a change; (2) the consumer chooses a service provider that was not identified by the creditor; (3) information provided at application was inaccurate or becomes inaccurate; or (4) the Loan Estimate expires.” Id. at 5-6.

39 12 C.F.R. §§ 1024.2(b) (defining “good faith estimate or GFE”)
charges associated with the loan within three days of the loan application; but before the 2008 change, a lender or mortgage broker could quote one set of fees and costs in the initial disclosures and then charge a higher set of fees and costs at the closing. As a result of this loophole, borrowers were exposed to the risk of intentional “bait and switch.” Despite the 2008 change, however, there is still no clear, statutory remedy for violations of the good faith estimate.\textsuperscript{40}

Another important reform enacted in 2008 was to forbid lenders from charging a borrower any fees, except for fees associated with obtaining a credit report until after the consumer was given the Loan Estimate form.\textsuperscript{41} This is an important change because when a borrower incurs substantial fees in connection with a loan application, the borrower is more likely to proceed with the loan due to those “sunk costs,”\textsuperscript{42} even if a borrower is disappointed with aspects of the offered loan as disclosed in the Loan Estimate.

In Section 1032(f) of Dodd-Frank, Congress mandated that the CFPB issue proposed rules and model disclosure forms in 2012, and in the following year issued its “Final Rule on simplified and improved mortgage disclosures” (the “Final Rule”); the feature was made effect on August 1, 2015. A key change to the disclosure forms under the Final Rule is to integrate the Truth in Lending Act (“TILA”)\textsuperscript{43} and Real Estate Settlement Procedures Act (“RESPA”)\textsuperscript{44} disclosures\textsuperscript{45} and certain newly required disclosures, so that borrow-
2014  

Dodd-Frank 2.0  

...ers receive a single “Loan Estimate” disclosure document within three days of the loan application\(^{46}\) (in place of the Good Faith Estimate and the Truth-in-Lending disclosure) and a single “Closing Disclosure” three days before the closing date\(^{47}\) (in place of the HUD-1 Statement and TILA disclosure). We agree that creating a single disclosure form at the loan application stage and a single disclosure form at the closing stage is likely to be a good idea. Consumers are more likely to carefully review the disclosure form when there is just one document to review versus many, especially when the information on the multiple forms overlap.\(^{48}\) In explaining their rationale behind combining the disclosure forms in this fashion, the CFPB indicated that not only was the information on the prior forms overlapping, the language used was also inconsistent, noting that the former disclosure forms were created under two different federal laws.\(^{49}\) The such as the appraisal notice under the Equal Credit opportunity act and the servicing application disclosure under RESPA. See Final Rule Summary, supra note 36, at 3.

\(^{46}\) Due to the problem of sunk costs (which covers not only the expenditure of money, but also the expenditure of time) the sooner that the borrower receives the Loan Estimate the better in order to enhance the borrower’s ability to reject a problematic loan and shop around and seek Loan Estimates for loans from other lenders with better terms. The Final Rules define “application” as the consumer’s name, income, and social security number to obtain the credit report, the property address, an estimate of the value of the property, and the mortgage loan amount sought. See Final Rule Summary supra note 36, at 4. The Final Rule also requires that if a lender or mortgage broker provides consumers with written estimates prior to application, including in advertisements, that the estimates contain a disclaimer so that Consumers do not think the estimates have the same legal consequences as if it they were the Loan Estimate form. Id.

\(^{47}\) Obtaining the Closing Disclosure three days before closing is better for consumers than obtaining it at the closing because it provides time for the consumer to digest the numbers, make sure they are not impossibly higher than numbers in the Loan Estimate, and then insist that any errors or violations of law are corrected before the closing. It also should provide consumers with better notice of the exact amount of money they will receive or have to pay at the closing.

\(^{48}\) It is not necessarily the case that one form will always be better than two forms, especially if two forms address issues that are clearly separate and unique from each other. However, two forms are extremely likely to be problematic in cases like the difference between the HUD-1 and TILA forms, when the differences in content between them is unclear and consumers do not know where they need to look to collect information.

\(^{49}\) The Good Faith Estimate was designed by the Department of Housing and Urban Development (“HUD”) under the Real Estate Settlement Procedures Act and the Truth-in-Lending disclosure was first designed by the Board of Governors of the Federal Reserve System under the Truth in Lending Act. See Final Rule Sum-
new Loan Estimate form is designed to help consumers “understand the key features, costs and risks of the mortgage loan for which they are applying,”50 and the Closing Disclosure is designed “to provide disclosures that will be helpful to consumers in understanding all of the costs of the transaction.”51 The CFPB tested the Loan Estimate and Closing Disclosure forms in comparison with the current disclosure forms and reported that, on average, the new integrated forms provided statistically significant better performance.52

Overall, we agree with the CFPB’s statement: “The forms use clear language and design to make it easier for consumers to locate key information, such as the interest rate, monthly payments, and costs to close the loan. The forms also provide more information to help consumers decide whether they can afford the loan and to compare the cost of different loan offers, including the cost of the loans over time”53 and that the Loan Estimate is now a more helpful disclosure on the “key features, costs, and risks of the mortgage loan for which they are applying,”54 yet we believe the Loan Estimate form can be made an even stronger tool for consumers.55

One key change in the new Loan Estimate form that we hypothesized would be a major set-back to aiding consumer decision

mary, supra note 36, at 2.

50 Id. at 3.

51 Id. We believe that another key function of the Closing Disclosure is to help the consumer check to make sure that the closing costs reflected in the Closing Disclosure have not increased from the costs reflected in the Loan Estimate beyond what is permitted by the law. This article focuses on the Loan Estimate disclosure form

52 Id.

53 Id.

54 Id.

55 We do not focus on the new Closing Disclosure form in this article because the central focus of this article is improving consumer decision-making on whether to take out an offered home loan at the loan application stage. The key function of the Closing Disclosure form is not to aid with that decision but instead to disclose whether the closing costs quoted on the loan have inappropriately risen and to detail all of the other closing costs (if the consumer is also purchasing the real estate). Having said that, if consumers fail to obtain an interest rate lock after they have applied for the home loan and before the closing, then it is critical for the consumer to check in the Closing Disclosure form what the interest rate is. Also, we recommend that better protections be enacted to limit the lender from changing the loan product offered, or adding to the loan a prepayment charge, in situations where the product offered is inappropriate or not available in order to reduce bait and switch type fraud. If these changes are permitted, they should be better disclosed to borrowers when they occur.
making was the decision to de-emphasize the APR disclosure. The APR is a combination of the interest charged, loan fees, and most of the closing costs expressed as a rate over the term of the loan. The CFPB moved the APR from its prominent location on the TILA disclosure form (one of four large boxes at the top of page 1) to a single line on page 3 of the new Loan Estimate disclosure form. The APR had, until this change, been a centerpiece of the federal TILA since the Act became law in the United States in 1968.

The APR is the unit price of credit. “Just as the consumer is told the price of milk per quart and the price of gasoline per gallon, so must the buyer of credit be told the ‘unit price.’”56 As such, the APR is a single piece of information that conveys a sense of the overall price/cost of a home loan and is intended to be the primary comparative tool for prices. The APR provides a simpler means to compare the overall price of loans with different interest rates and closing costs. The APR is disclosed in advertisements for nearly all consumer credit: it appears prominently in the documentation accompanying forms of credit as diverse as credit cards, auto loans, payday loans, mortgages, retail installment sales contracts, and unsecured personal loans. These disclosures are intended to promote consumers’ informed use of credit. As Congress explained in TILA’s declaration of purpose:

The Congress finds that economic stabilization would be enhanced and the competition among the various financial institutions and other firms engaged in the extension of consumer credit would be strengthened by the informed use of credit. The informed use of credit results from an awareness of the cost thereof by consumers. It is the purpose of this subchapter to assure a meaningful disclosure of credit terms so that the consumer will be able to compare more readily the various credit terms available to him and avoid the uninformed use of credit . . . 57

The more informed the consumer is about the price and other key terms of the loan, the more able the consumer will be to shop around for a loan with the best terms available in the marketplace. TILA requires creditors to disclose an APR that is based on a set of


57 Truth in Lending Act, § 102, 15 U.S.C. § 1601(a) (1968)
standardized rules, enabling consumers to compare the cost of otherwise diverse loan products on an apples-to-apples basis. This is in notable contrast to other aspects of credit, such as the duration of a loan, the method of calculating interest, as well as the number, amount, and frequency of payments, which can vary widely. By using the APR, “a shopper can tell whether a two-week loan is cheaper than a six-month loan by looking at just one number,” and a “unitary shopping instrument” informs the consumer which of two loans has a lower cost of credit, assuming both loans have the same term. 

Although using the APR is simple, calculating it is complex. It is derived from the relationship of the amount financed, the payment schedule, and the total finance charges anticipated on a debt. The amount financed is relatively straightforward: it is the real proceeds of the loan — the sum of money the borrower may use after the lender deducts any fees or charges. The payment schedule is the timing for repaying the loan. A loan may be repaid in a single lump sum or through multiple payments of the same or different amounts at regular or irregular intervals as set forth in the contract between the lender and borrower. The finance charge, however, has a more technical definition: in general, it includes any charge payable by the consumer and imposed by the creditor as an incident to or a condition of the extension of credit. The total finance charge primarily consists of interest charged on the loan and some of the fees or closing costs that the creditor imposes.

Calculating the APR “is sufficiently complicated that, practically speaking, no one attempts it by hand.” An appendix to the regulations implementing TILA includes pages of instructions for calculating an APR, using procedures not encountered in the typical

58 See 12 C.F.R. Part 1026, Appendix J (“Annual Percentage Rate Computations for Closed-End Credit Transactions”).
60 That is, two weeks or six months in the above example. The issue of how to factor in and disclose the impact of a consumer paying off the loan early is discussed in Section III of this article. The problem of not all of the closing costs related to the loan factoring into the APR is discussed in this Section I of this article.
61 See NATIONAL CONSUMER LAW CENTER, TRUTH IN LENDING § 5.5.1 (8th ed. 2012)(describing the derivation of the APR).
62 15 U.S.C. § 1605(a). There are a great many nuances and exceptions to the definition of “finance charge.” These are discussed in greater detail in chapter 3 of NATIONAL CONSUMER LAW CENTER, TRUTH IN LENDING (8th ed. 2012).
63 Renuart & Thompson, supra note 54, at 210 n.163.
high school math class. Before computers, creditors determined the 
APR using tables that the Federal Reserve Board developed. It is, 
therefore, fortunate consumers need not calculate an APR them-

selves.

After being mandatory in the consumer credit market for
nearly forty years, the APR has become widely recognized. One 
study found that more than 90% of the U.S. population is aware of 
the APR. Yet, despite widespread recognition and the good inten-
tions behind TILA, the APR has been criticized as confusing and in-
effective. Criticisms include (1) the APR is unreliable because there 
are so many exceptions to costs included in it; (2) the APR is not 
helpful for adjustable-rate loans; (3) the APR is inaccurate for con-
sumers who plan to sell or refinance in a few years; (4) consumers 
do not understand the difference between the APR and the contract 
interest rate; and (5) consumers do not understand what goes into 
the APR. These problems are based on a combination of definitions, 
disclosure methods, and practicalities. One of those definitions that 
go into the calculation of the APR that impedes the effectiveness of 
the APR is the term “finance charge.” The current regulations defin-
ing the finance charge exclude a variety of charges (for example, title

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64 See 12 C.F.R. pt. 1026, app. J (2011) (stating the formulas necessary to cal-
culate APR).
65 Renuart & Thompson, supra note 54, at 218, citing Thomas A. Durkin, 
66 It is unfortunate that the CFPB did not keep in the Final Rule their prior proposal to redefine APR to include almost all of the up-front costs of the loan. Indeed, we believe that all of the up-front true costs of the loan should be included in the APR calculation to make it an even more accurate “price” of the loan (although this would still not cover prepayment charges since that is not an up-front cost of the loan). It appears that the reason for not making this change was because lenders complained that it would lead to loans being made at higher APRs, which would in turn trigger certain consumer protections to come into play that are based on exceeding certain APR levels. However, this problem could have been dealt with by raising the existing APR triggers for consumer home loan protections to compensate for the increase in APR that would come with eliminating the exceptions. As new data collection projects provide better data on closing costs and APRs, the CFPB will be in a better position to perform this reform.
67 See The Truth, the Whole Truth, and Nothing but the Truth at 188 n.20 (de-
scribing the issue of APR inaccuracy in this situation).
related charges), thereby allowing savvy creditors to manipulate the final APR and finance charge calculations to make a loan look to be at a lower price than it really is. The CFPB initially proposed changes that would eliminate many of these exceptions, but these changes were not included in the final rule.

Critics who say the disclosed APR is inaccurate for consumers who pay off a loan early or is unreliable for adjustable-rate loans are correct. Because the APR is disclosed at the beginning of a transaction, the creditor must make certain assumptions. TILA and Regulation Z require creditors to assume both that the consumer will make all scheduled payments on the loan through maturity and that interest rates will not change in the future (unless that change is hard-wired into the terms of the contract). To do otherwise would require a crystal ball. However, because all creditors are required to make the same assumptions, the APR remains standardized and can be compared across different loans, assuming one is comparing one or more adjustable rate home loans or one or more fixed rate home loans. Currently, a loan calculated as if it would be held by the borrower for the entire length of the loan could show a lower APR and still not be the lowest-price loan for borrowers who hold the loan for a shorter period. Interactive Loan Estimates could aim consumers in estimating how long they believe they will hold the loan, and APR could then be recalculated based on different holding periods that the consumer chooses, assuming that the consumer makes a balloon payment for the remainder of the loan after they sell the property or refinance the loan. In the $277,968 loan used in Experiments 1 and 2 with $19,458 in fees, for example, the APR calculated as if it were going to be held

70 See generally National Consumer Law Center, supra note 56, ch. 3 (describing calculation of finance charge and exceptions).
73 As will be discussed in Section III of this article, the interactive forms could explain the dangers of entering into an adjustable rate loan and how one might be better off with a higher fixed-rate loan than a lower adjustable-rate home loan.
for 30 years was 3.71%. If it was held for only one year, however, the APR would be 10.60%. It would be 4.78%, if held for five years, and 4.38%, if held for seven years.74 Of note, individuals who have critiqued reliance on APR, by noting how the APR changes based on how long a consumer holds the loan, have failed to propose an alternative that is better than the APR for predicting the lower-priced option when comparing multiple offered home loans.

The remaining two criticisms—that consumers do not understand what goes into the APR or the difference between the APR and the contract interest rate—are problems that theoretically could be addressed by disclosure techniques, a possibility we explored in the APR Experiments. Creditors in the Loan Estimate form are required to provide a brief description of the APR, such as “the cost of your credit as a yearly rate.”75 Although this description is an improvement over the previous required explanation by clarifying it is not the interest rate, it fails to simply state that the APR rate is a reflection of the overall price of the home loan and that the lower the rate the better for the consumer.

Researchers found consumers have difficulty explaining the APR, often confusing it with the contract interest rate for a transaction. In 1998 the Federal Reserve Board and the U.S. Department of Housing and Urban Development jointly commissioned a study, using the University of Michigan’s Survey Research Center’s Survey of Consumers, to learn more about consumers’ understanding of the APR: they found that at least 40% of consumers did not understand the relationship between the APR and contract interest rates.76 Reviewing other studies on the APR, the researchers asserted there was “a general consensus in the research community that consumers do not seem to understand APRs.”77 Other studies, however, found consumers understand the importance of the APR and its relationship to the cost of credit.78 Studies also found consumers use the APR for

74 See infra Appendix [ ].
75 12 C.F.R. § 1026.18(e)(2013).
78 MACRO INT’L, INC., supra note 63, at 52 (“Most participants [in focus
In 2011, the CFPB commissioned the Kleimann Communication Group to conduct qualitative research on several versions of proposed mortgage disclosures that included the APR. Kleimann found that most study participants did “not grasp the basics” of the APR and often confused it with the interest rate.80 Kleimann also tested four different descriptions of the APR: (a) “Annual Percentage Rate [___]% expresses interest and costs over 30 years;”81 (b) “Your interest combined with fees over 30 years as a yearly rate;”82 (c) “This is not your interest rate. This rate expresses your costs over 30 years;”83 and (d) “This is not your interest rate. This rate expresses your costs over the loan term.”84

They only found improvement, however, when using the latter two, which reduced confusion with the interest rate.85 Intriguingly, one consumer test participant was quoted as saying “I would need an explanation on what that APR rate is exactly because I wouldn’t know if higher or lower is good or worse.”86 Unfortunately, Kleimann does not appear to have pursued that suggestion by testing other APR explanations. Neither Kleimann nor other previous research understood that the Annual Percentage Rate was associated with the calculation of their interest charges, and that a lower APR generally corresponded to lower charges.

See Jinkook Lee & Jeanne M. Hogarth, Consumer Information Search for Home Mortgages: Who, What, How Much, and What Else?, 9 Fin. Services Rev. 277, 286 (2000) (stating 78% of homeowners who refinanced their homes reported comparison shopping based on the APR); Iain Ramsay, Consumer Credit Regulation as 'The Third Way' at 12, note 45 (unpublished, undated manuscript on file with author) citing Consumer Awareness of Credit Issues — Research Study conducted for the Department of Trade and Industry, THE MARKET AND OPINION RESEARCH INTERNATIONAL (Sept. 2003) (London: DTI) (last viewed Nov. 5, 2012) (UK study finding 83% of those surveyed consider the APR to be the foremost factor in their mind when considering a loan or credit card—second only to the lender’s reputation). The Iain Ramsay article was unpublished and on file with the author.


81 Id. at B-2.
82 Id. at D-2.
83 Id. at F-2.
84 Id. at G-8.
85 Id. at xxviii, 101, 127, 303.
86 Id. at 146.
searchers appear to have directly tested whether the manner of disclosing the APR would affect a consumer’s ability to select the lowest cost loan even when the consumer could not articulate an explanation of the APR.

With respect to this consumer comment, we hypothesized consumers could, successfully use APR to identify lower cost loans — even without understanding the APR — as long as (1) they are told that lower values are better for them and (2) the APR is displayed in a simple and consumer-friendly format on the first page of the Loan Estimate. If correct on this hypothesis, then moving the APR to make it inconspicuous is a misguided change, since it denies consumers a critical tool they need to identify the lowest-priced loans. As discussed in Section III, this change also reduces consumers’ ability to compare an offered loan’s APR to the market-level APR that should in fact apply to their credit situation as a means to check if the offered loan appears to be overpriced. Because of these concerns with how the APR is disclosed on the new CFPB Loan Estimate form, we conducted two experiments investigating participants’ abilities to use APR to evaluate loans; Section II reports these two experiments. These experiments tested our hypothesis that consumers would be able to use the APR to select the lowest of two offered home loans, if the APR figure were disclosed simply and prominently and described in terms that consumers could understand.

Section II presents the results of two experiments designed to investigate consumers’ abilities to use APR to inform their home-loan decision-making under various conditions and the results of a financial literacy test we gave to participants in the experiments. Section III presents policy implications of these findings and describes how interactive home-loan disclosure forms can be used to address certain key barriers to effective use of the Loan Estimate form by consumers in connection with their offered home loan.

II. THE APR EXPERIMENTS AND FINANCIAL LITERACY TEST

We conducted two experiments to test consumers’ ability to use APR to evaluate loan costs. Experiment 1 tested whether consumers would be able to use APR to identify a lower cost loan if the APR was displayed simply, prominently, and in a manner that con-

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87 See attachment reflecting this “Enhanced APR Disclosure”
88 See Section III infra on creating a link in the Loan Estimate that would allow the consumer to see the market level APR based on their credit score and compare that with the APR they are being offered.
Loyola Consumer Law Review

Consumers could understand. The hypothesis was that consumers may not need to completely understand APR to use it. We aimed to investigate what consumers minimally needed to know to use APR effectively. Experiment 2 used eye-tracking technology to test consumers’ abilities to find and remember APR, as remembering this number is necessary for informed decision-making.

A. The APR Experiments

The participants in Experiments 1 and 2 reviewed two loans disclosed on the CFPB’s new home-loan disclosure form to determine which of the two was the lower cost loan. Experiment 1 presented these disclosures on 8.5” x 11” pieces of paper, which allowed participants to easily flip back and forth between the forms to compare the loans. Participants in Experiment 1 did not need to remember values to identify the lower cost loan. Experiment 1, therefore, resembles situations wherein consumers have received several loan offers and have the Loan Estimates in front of them to compare.

Experiment 2 used eye-tracking technology to allow us to investigate where consumers look on these forms. Consumers in Experiment 2 could not so easily flip back and forth between forms to identify the lower cost loan and had to rely upon memory to make these judgments. Experiment 2, therefore, resembles situations wherein consumers only receive one Loan Estimate at a time and need to rely upon memory to determine which loan is the lowest cost.

EXPERIMENT 1 METHODS

DESIGN

This study manipulated how the APR was communicated to participants. One format — the “regular” version — was the CFPB’s Loan Estimate disclosure form, which only presents the APR on the third page. The other format — the “enhanced” version — modified the CFPB’s form to more prominently display the APR on the first page. The APR was presented within a price-tag icon labeled “APR: Price of the Loan” and the clarification “Lower is better for you.” Participants reviewed two loans and were randomly assigned to do so using either the regular or the enhanced version. The order in which the two loans appeared during the study was counterbalanced to con-

89 See Figure 1.
control for order effects.

PARTICIPANTS

A total of 75 participants read through the form, and 67 participants completed the entire demographic questionnaire. Of the 75 participants, 19 were students (eight women, $M_{age} = 20.59$ years, age range: 18 – 27 years), and 56 were members of the local community (28 women, $M_{age} = 38.7$ years, age range: 26 – 59 years) who responded to an advertisement. Students received course credit while community members received $20 for participating, and both could earn additional money if they correctly preferred and identified the less expensive loan option. The demographic data on the participants who completed the demographic questionnaire revealed that participants were well-educated ($M = 15.20$ years of formal education for community participants, $SD = 1.96$ and $M = 13.53$ years for students, $SD = 1.42$) and spoke English as their primary language (92% of community participants and 100% of students), but differed in their experience with home loans (31% of community participants and 0% of students). Minority representation was quite high in our sample (53% minority among community participants and 35% among students).

MATERIALS

The CFPB’s loan estimate forms were used to disclose the loan terms. The first and second loans were labeled “A” and “B”, respectively. Terms for both loans were spread across six pages, three pages per loan. An eight-question survey was located after the final page of the second loan estimate. The first two questions asked participants, “If you were going to replace your mortgage with a new mortgage, which loan would you prefer to take out, A or B?” and “Which of these two loans is less expensive overall (i.e., in interest, fees, closing costs, and other charges), A or B?” Participants were also asked to explain why they preferred the chosen loan, and how they decided which of the two loans was less expensive. The remaining questions were designed to test participants’ financial literacy. Four questions assessed participants’ knowledge of several key loan terms, asking them to describe the APR, a balloon payment, a pre-payment charge, and the difference between a fixed-rate and adjustable-rate

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90 The results of these questions are reported in the Results of Experiment 1 section below.
mortgage. The final two questions asked participants to describe “problematic loan terms or features that make it more likely that the borrower will default in making payments,” and to describe “the actions a mortgage lender could take against a borrower to recover an unpaid loan if the borrower defaulted on making payments.”

PROCEDURE

All participants were run individually in sessions lasting approximately 30 minutes. Prior to beginning, participants were instructed to review the terms of two home loans under the assumption they already owned a home with a mortgage but would like to replace that mortgage with a new one. They were told their task was to decide which of the two loans was a better deal and either loan was a viable option for replacing their existing mortgage. The experimenter communicated this information to participants and was also located on the first page of the packet containing the loan estimates and questionnaire. Participants were instructed to think about reasons why they thought one loan was a better deal than the other while reviewing the loans and to evaluate the overall cost based on the entire life of the loan (30 years). Once participants were briefed and understood their role, they started to read through the loan estimates, after which they decided which of the two loans they preferred and which loan cost less money over the life of loan. Participants then completed the questionnaire, as well as the demographic survey, and were paid according to the number of correct answers provided. Participants were then debriefed and thanked for their time.

RESULTS OF EXPERIMENT 1

DECISION OUTCOMES

The sample loan estimates were designed so that one loan had a slightly lower interest rate than the other (3.125% versus 3.2%) but higher loan costs ($19,458 versus $15,180). In this case, the loan with the lower interest rate and higher costs had a higher APR of 3.71% compared to the loan with the higher interest rate and lower costs that had a 3.65% APR. Participants should have identified the loan estimate with the lower APR as lower in cost and preferred it against the

91 The results of these financial literacy questions are presented in Section II.B. “Financial Literacy Test Results” below.
loan with the higher APR. Results indicated that those who reviewed the enhanced forms preferred and correctly identified the lower cost, 3.65% APR, loan at greater than chance levels (Preference = $\chi^2(1) = 5.16, p = .02, 68\%$ correct; Cost = $\chi^2(1) = 8.53, p = .003, 74\%$ correct). In contrast, those who reviewed the regular forms without the APR on the first page preferred and identified the lower cost loan at chance levels (Preference = $\chi^2(1) = 0.44, p = .50, 44\%$ correct; Cost = $\chi^2(1) = 1.00, p = .31, 42\%$ correct).

We next investigated whether individual differences in formal education (years), prior experience with home loans ($1 = \text{experience}$), gender ($\text{female} = 1$), and ethnicity ($1 = \text{member of minority group}$) influenced the likelihood that the lower APR loan was preferred and identified as less expensive. Age was not included in the model because it was highly correlated with loan experience ($r = .54$) and years of formal education ($r = .26$); language was excluded due to the low number of participants reporting English as a secondary language. The data were split by experimental condition, and a backward stepwise logistic regression was conducted separately for the preference and cost questions. None of the demographic variables significantly predicted preference with either version of the form (All $p > .05$). Years of formal education predicted the likelihood that the lower cost loan would be correctly identified with the form containing the APR on the first page, $B = .513, S.E. = .25$, Wald’s $\chi^2(1, n = 34) = 4.334, p = .03$, $\exp(B) = 1.67$, as each additional year of education increased the odds of identifying the lower cost loan by 67%.

**DECISION EXPLANATIONS**

Participants were asked to explain why they preferred Loan A to Loan B, or vice-versa, and how they decided which of the two loans was less expensive. For each question, we broke these responses into individual comments or thoughts that referenced a particular decision criterion. For instance, a response such as, “I chose loan A because it had a lower APR and lower total loan costs than loan B” contains two decision criteria: the APR and total loan costs. The number of participants referencing a particular criterion was then added together separately for the preference and cost questions. As shown in Table 1a, participants in both conditions most frequently cited the interest rate and closing costs when deciding which loan they preferred and which loan was less expensive.\(^92\) We used Bar-

\(^92\) As previously noted, the directions provided to the participants in the exper-
nard’s unconditional test for superiority\textsuperscript{93} to examine differences in the percentage of participants who mentioned the APR with the enhanced version relative to the regular version for the Cost and Preference questions. A significantly greater percentage cited the APR as a decision criterion in deciding which of the two loans was less expensive (Cost = 18.4\% vs. 2.7\%, \( p = .03 \)). A marginally greater percentage also cited the APR when deciding which loan they would prefer to take out if they had reviewed the enhanced version (Preference = 23.7\% vs. 8.1\%, \( p = .06 \)). The two criteria that commonly led participants to prefer the higher cost loan or fail to identify the lower cost loan were the interest rate and the five-year comparison information, which displayed the total amount paid in principal, interest, mortgage insurance, and loan costs paid after a period of five years\textsuperscript{94} (see Table 1b).


\textsuperscript{94} The amount paid after five years turned out to be confusing for purposes of comparing which of the two loans was lower priced. This is because while the amount paid in principal was greater after five years for the higher APR loan, the amount remaining to be paid was also higher for the higher APR loan than for the lower APR loan. The higher closing costs on the higher APR loan also meant that more of the loan amount went towards closing costs with the higher APR loan than towards payment of the purchase price of the home, than occurred with the lower APR loan. The higher APR loan had a $1,962 higher loan amount and so the $4,278 extra in higher fees for the higher APR loan was paid in part by the $1,962 higher loan amount and also an extra $2,316 of the loan that was spent on closing costs rather than going towards the purchase price of the home. Although there was a 0.08\% difference in interest rate between the two loans, it was not large enough to compensate for the $4,278 extra in higher fees for the higher APR loan. The lower APR loan reflected more interest paid after 5 years than the higher APR loan because the interest rate on the lower APR loan was slightly higher than the interest rate on the higher APR loan. For example, calculating the total fees, costs, and interest paid, the total amount paid by the borrower after 5 years for the lower APR loan would be $57,722 and would be $61,271 for the higher APR loan.
EXPERIMENT 2 METHODS

DESIGN

The experimental manipulation and counterbalancing procedures used in Experiment 2 were identical to Experiment 1, except the disclosure forms were presented on a computer screen so that their eyes could be tracked.

PARTICIPANTS

The sample consisted of 20 students (16 women, $M_{\text{age}}=19.15$ years, age range: 18 – 20 years), and 21 members of the local community (7 women, $M_{\text{age}}=39.6$ years, age range: 26 – 65 years) who responded to an advertisement. Students received course credit while community members received $20 for participating, and both could earn additional money if they correctly preferred and identified the less expensive loan option. Memory for the interest rate, APR, monthly payment amount, and total closing costs were also assessed and participants received one dollar for each factor they correctly recalled. Participants were well educated ($M = 14.62$ years of formal education for community participants, $SD = 1.97$; $M = 12.55$ years for students, $SD = 0.69$) and spoke English as their primary language (95% of community participants and 80% of students) but differed in their experience with home loans (38% of community participants and 0% of students). Minority representation was quite high in our sample (57% minority among community participants and 35% among students). All participants had normal or corrected-to-normal vision.

MATERIALS

Terms for both loan estimates were spread across twelve screens, six screens per loan, so participants first viewed the top-half of a page followed by the bottom-half. The pages were divided in half to improve textual resolution when participants were reviewing each loan, and responses were entered via a keyboard located on the table in front of the eye tracker.

APPARATUS

Eye-movements were recorded monocularly at a sampling rate of 1000 Hz using the SR Research EyeLink 1000 infrared eye
tracking system with a high degree of spatial accuracy (less than 0.5° of error). Participants were seated approximately 76 centimeters from the computer screen (18 inch Sony Trinitron), where each half-page of information was displayed as a digital image at an aspect ratio of 1,024 x 768 pixels.

**PROCEDURE**

All participants were run individually in sessions lasting approximately 30 minutes. The instructions provided to participants before reviewing the loan estimates were identical to Experiment 1. However, participants in Experiment 2 were also informed that a camera would track their eye movements as they read through the forms, their ability to recall the exact dollar amounts associated with key loan terms would be assessed once they finished reviewing the forms, and they would not have access to the form while answering these questions. Participants received as much time as needed to complete the task. Once participants were briefed and understood their role, they learned how to navigate between pages in the form with the keyboard by engaging in a practice reading trial. After successfully completing this task, participants were given a brief calibration-validation procedure on the computer screen. They then read through the forms, half of a page at a time, presented sequentially. A drift correct screen also appeared each time they moved between half pages. This drift correct screen required participants to stare at a dot and hit a single key.

After reading through the forms, participants decided which of the two loans they preferred and which cost less money over the life of loan, and then completed the free recall questions. Finally, participants completed the questionnaire used in Experiment 1 and were paid according to the number of correct answers provided. The same questions that were presented to participants once they had reviewed both loan offers in their entirety in Experiment 1 were also presented to participants in Experiment 2. However, Experiment 2 also included two eye-movement measures as well as a free recall measure, both of which are outlined below.

**RESULTS OF EXPERIMENT 2**

**DECISION OUTCOMES**

Unlike the participants in Experiment 1, the participants in Experiment 2 could not skip multiple pages with a single keystroke.
Each keystroke advanced their position in the form backward or forward by half a page. A drift correct screen also appeared each time a move occurred between pages, during which participants stared at a dot and hit a single key. These features discouraged participants from comparing the loans. Experiment 2 is therefore more similar to situations where consumers need to identify lower cost loans, but do not have all of the disclosure forms for these loans in front of them and need to rely upon memory to make decisions.

Would displaying the APR in the enhanced format on the first page of the form aide participants in identifying the lower cost loan when they need to rely upon memory? To investigate this question, we compared the number of correct responses observed against what would be expected by chance separately for both forms using a Chi-squared test. To calculate this test with an equal number of participants in each condition, one participant selected at random was excluded from analysis from the group that did not see the enhanced form. Results indicated that the likelihood of preferring or correctly identifying the lower cost loan was at or near chance levels when the APR was displayed only on page 3 (Preference = 50% correct; Cost = 50% correct) or on page 1 and 3 (Preference = $\chi^2(1) = 0.8, p = .37$, 60% correct; Cost = $\chi^2(1) = 0.8, p = .37$, 60% correct). These results suggest that the advantages of the enhanced APR disclosure help primarily when consumers have opportunities to compare loan offers side-by-side. When consumers need to rely upon memory, even the enhanced APR disclosure will not help.

**Decision Explanations**

Decision explanations for Experiment 2 resembled those of Experiment 1 and are summarized in Table 2. None of the differences in participants’ explanations for their decisions across conditions reached significance in Experiment 2 (all $p$s>.1). When we combine Experiments 1 and 2, however, there is a significant relationship between whether participants received the enhanced APR disclosure and whether they justified their decision by citing the APR, $\chi^2(1) = 6.2, p = .01$ for the preference question and $\chi^2(1) = 4.25, p = .03$ for the cost question.

**Information Search**

Two eye-movement measures were collected. In particular, we examined whether key loan terms were fixated or noted, and the total number of times each term was noted (fixation count). For a par-
ticular term to be integrated into one’s overall evaluation of the loan, the dollar amount or rate associated with that term must be viewed. The number of fixations landing on a particular element measured the relative amount of attention a particular term received, where more fixations indicate more attention. If and how frequently participants processed key loan terms outlined in both forms was assessed via a number of non-overlapping, rectangular Areas of Interest (“AOIs”) created around the dollar amounts/rates associated with each (see Figure 2 for example). An AOI specifies the areas of a display that are under consideration, and only eye-movements (fixations) that land on or within these areas are analyzed. In the present study, a fixation was defined as a set of consecutive gaze coordinates located within 1° of visual field for a duration of 200ms or greater.

For a term to be considered as noted, the term (for example, 3.2%, $1,661, etc.) had to be fixated once for a duration of 200ms or greater. A fixation count was then calculated by adding the total number of fixations landing within the AOI encompassing the dollar amount/rate.

We did not include one student in this analysis due to a recoding error. We used Barnard’s exact test to examine whether the likelihood of noting the APR was greater with the enhanced version relative to the regular version. The percentage of participants noting the APR was significantly greater (100% vs. 81%, \( p = .04 \)) with the enhanced version. Stated differently, 19% of participants who viewed the regular form failed to fixate this information in either of the loans at least once. Fixation count was calculated by adding the number of fixations that landed on the APR for those who noted this term. Counts that were greater than three standard deviations from the mean of all fixation counts (15.44) were not included (n = 1) in this analysis. As expected, the APR received significantly more attention (i.e., fixations) with the enhanced version, \( t(33) = 3.505, p = .001, d = 1.21 \) (\( M_{\text{Fix-Count}} = 18.4 \) (SD = 8.89) vs. \( M_{\text{Fix-Count}} = 9.561 \) (SD = 5.24)).

**FREE RECALL**

A total of 38 participants completed the free recall portion of the study. We excluded three participants from this analysis due to recording errors (n = 1 enhanced, n = 2 normal). Credit was provided

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95 See Alex Poole & Linden J. Ball, Eye Tracking in HCI and Usability Research, in Encyclopedia of Human Computer Interaction 211, 211-19 (Claude Ghaoui ed., 2006).


when the first two digits of the rate (for example, 3 and 1 for the interest rate=3.125%) or dollar amount (for example, 1 and 6 for the monthly payment=$1,658) reported matched that outlined in the form. The total number of correctly recalled values (0 – 2) was aggregated separately for each participant. A total of 38 participants (n = 19 per condition) completed the free recall portion of the study. We observed the largest differences in recall between conditions for the interest rate and APR. Specifically, when the APR was displayed on the first page of the form, 42% (16/38) of recalled APR values were correct compared to 26% (10/38). In contrast, 45% (17/38) of recalled interest rate values were correct when the APR was not displayed on the first page compared to 29% (11/39) when the APR was disclosed only on page three. Neither difference achieved significance (All ps > .10). Recall performance for the monthly payment amount (enhanced = 10/38(26.3%), regular = 10/38(26.3%)) and total closing cost (enhanced = 9/38(23.6%), regular = 6/38(15.7%)) was similar between conditions.

B. Financial Literacy Test Results

EXPERIMENTS 1 & 2

Responses to the loan attribute description questions, the problematic loan terms question, and the lender’s remedies question were aggregated across both experiments for ease of interpretation. Each of these questions is examined in greater depth below.

RESULTS OF FINANCIAL LITERACY TEST

LOAN ATTRIBUTE DESCRIPTIONS

Participants were asked to describe the APR, a balloon payment, a pre-payment penalty, and the difference between a fixed-rate and adjustable-rate mortgage. Correct and incorrect responses for these questions were also coded as “1” and “0,” respectively. Correct responses were those that captured the general features associated with a particular loan-attribute (i.e., that the APR takes into account virtually all costs of receiving a loan and expresses them as a yearly rate, or that payments on a fixed-rate mortgage remain constant over the life of the loan while payments for an adjustable-rate mortgage can vary). Balloon payment was coded correct if participants mentioned it was a large payment due at the end of the loan. Pre-payment charge was coded correct if they mentioned that it was a charge for
paying off the loan earlier than it was due. By contrast, incorrect responses were those that bared little resemblance to the actual meaning of the attribute or simply repeated a description contained in the form; instances in which no response was provided were also classified as incorrect. Across both Experiments, 11.2% (13 of 116) of participants correctly described the APR98; 12.1% (14 of 116) correctly described a balloon payment; 25.0% (29/116) correctly described a prepayment charge; and 83.6% (97 of 116) correctly described the difference between a fixed and adjustable rate mortgage. The differences between conditions regarding the percentage of correct responses for the four questions were insignificant (all ps > .10), indicating that both conditions were equally familiar with these four terms. Next, we added the total number of correct responses for each participant and then regressed the resulting values on years of formal education, experience with home loans (1 = has prior experience with home loans), gender (1 = female), and ethnicity (1 = member of minority group) using a backward elimination method. Prior experience with home loans, years of formal education, and gender explained a significant proportion of variance in the total number of correct responses, $R^2 = .236$, $F(3,102) = 10.509$, $p < .001$. Both home loan experience, $b = .610$, $t(102) = 3.398$, $p = .001$, and years of formal education, $b = .076$, $t(102) = 2.096$, $p = .03$, were significant predictors while gender was a moderately significant predictor, $b = -.248$, $t(102) = -1.789$, $p = .07$, of the total number of correct answers provided. Taken together, these results indicate that participants with prior home loan experience and more years of formal education possess greater knowledge of home loans, and that men possess moderately more knowledge about home loans than women.

### APR

Of the four loan attributes, the lowest percentage of participants correctly described the APR. The vast majority simply stated what the abbreviation “APR” stood for or repeated the definition contained in the form but did not provide a description. However, amongst those who provided an incorrect response to this question, only 7.7% (8 of 103) stated the APR was the annual interest rate or similar to the interest rate. This suggests that the descriptive state-

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98 Breaking this result down by condition, we found that 12.1% (7/58) of participants described the APR correctly in the enhanced APR disclosure condition and 10.3% (6/58) did so in the non-enhanced condition. This finding demonstrates that consumers can use APR effectively without understanding it.
ment on the final page of the form that briefly explains the APR (i.e., “your costs over the loan term expressed as a rate. This is not your interest rate”) is an effective way to prevent consumers from believing that the APR and interest rate are one and the same. Nevertheless, consistent with previous research these results demonstrate participants could not define APR and did not know what it represented. The participants in Experiment 1 were, nevertheless, able to use APR to identify the lower cost loan to a statistically significant amount. These results demonstrate consumers do not need to understand APR or define it to successfully use it to identify lower cost loans.

BALLOON PAYMENT.

While most participants understood that a balloon payment involved a significant payment of money, few (only 12.1%; 14 of 116) could explain what this feature meant. The two most common misconceptions were that balloon payments were payments that gradually increased over time (12.7%; 13 of 102) (for example, “a payment that increases as time passes”) or fees or penalties for failing to make monthly mortgage payments on time (5.8%; 6 of 102) (for example, “a balloon payment is if you are late making a mortgage payment then the bank can raise your interest rate”).

PREPAYMENT CHARGE.

Relatively more participants could describe a pre-payment charge (25.0%; 29 of 116). However, 42.9% (33 of 77) of incorrect responses described a pre-payment charge as payment made prior to the funding of the loan, similar to a down payment (for example, a prepayment charge is like a down payment to assure the lenders of your ability to pay the month-to-month payments).

FIXED VS. ADJUSTABLE RATES.

Most participants correctly described the difference between fixed and adjustable-rate mortgages (83.6%; 97 of 116). In fact, when we excluded non-responders (n=15), 96% (97 of 101) of responses were correct.

PROBLEMATIC LOAN TERMS

Participants in both experiments were asked to “Describe problematic loan terms or features that make it more likely that the
borrower will default in making payments.” The key problematic features we were looked for were: (i) features that could lead to the loan becoming unaffordable, such as adjustable rate features, (ii) terms that cause a loan to be unaffordable from the inception of the loan, such as high interest rates, fees, and closing costs, and (iii) terms that could make it difficult to pay off the loan at its maturity or when the borrower needs to move and sell the home, such as an interest only loan or loan that otherwise has a large balloon payment due upon repayment such as a negative amortization loan, or loans with prepayment charges due upon early repayment of the loan.\textsuperscript{99} As shown in Table 3, the most frequently cited problematic features were loans containing an adjustable interest rate or monthly payment, followed by loans with balloon payments and high interest rates. The fact that more participants cited balloon payments as problematic (n = 18) than correctly described this feature (n = 14) may suggest that consumers have a vague sense that balloon payment features are problematic. Approximately 54% of participants provided at least one correct response (See Table 3 for grading criteria). Using multiple linear regression with backward elimination for a model with years of formal education, gender, and experience with home loans as predictor variables, we found that years of education, $b = .070, t(104) = 2.041, p = .04$, and gender, $b = -265, t(104) = -1.871, p = .06$, $R^2 = .236$, $F(3,102) = 10.509, p < .001$, accounted for a significant proportion of variance in the total number of correct responses, $R^2 = .07$, $F(2,104) = 3.944, p = .02$. Similar to the loan-attribute description questions, men and participants who had more years of formal education correctly listed more problematic features and terms.

LENDER REMEDIES QUESTIONS

Participants were also asked in both experiments to describe the actions a mortgage lender could take against a borrower to recover an unpaid loan if the borrower defaulted on making payments. The

\textsuperscript{99} It also occurs to us that borrowers are probably not aware of the fact that home loan documents provide that the lender can add to the loan amount due, not only the balance of the loan due on the date of the default, but also all accrued interest from the date of the default through the judgment and foreclosure sale and the recovery of various expenses the lender incurs to collect on the loan. These items can greatly add to the amount due on the loan and ability of the borrower after a default to be able to exercise their equitable and statutory right of redemption. When the Loan Estimate addresses lender remedies it might be helpful to add a link with this information.
key actions the lender could take to recover the unpaid loan we were looking for were: (i) foreclose on the mortgage on the home resulting in a loss of title to the home, (ii) a deficiency action against the borrower for the difference between the loan amount due and the amount the property sold for at the foreclosure sale (which could lead to a garnishment of the borrower’s wages to satisfy this amount over time or the imposition of judgment liens on other properties/assets that the borrower owns leading to a forced sale of these other properties/assets to recover the deficiency amount).100 68% of all participants provided at least one correct answer for this question (see Table 4 for grading criteria). Approximately 31.8% of participants mentioned only foreclosure as an action, 4.3% mentioned only wage garnishment, and 1.7% mentioned only seizure of other properties and assets. Of all participants, 14.6% mentioned foreclosure in addition to wage garnishment or seizure of other properties and assets. We replicated the regression analyses implemented in the prior two sections with the same predictor variables (i.e., gender, years of formal education, and home loan experience) and the number of correct remedy responses as the outcome variable. However, none of the predictor variables remained in the final model (all ps > .10).

III. POLICY IMPLICATIONS:

Although Dodd-Frank has led to the creation of some useful consumer protections,101 the Federal government still relies primarily upon home loan disclosures to protect consumers from predatory mortgage lending.102 Moreover, while the new Loan Estimate and Closing Disclosure forms103 are a vast improvement over the forms used prior to 2010,104 we contend that the Loan Estimate should be revised and made interactive, as described in this Section. Doing so will likely make the Loan Estimate much more effective in the face

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100 Although those were the key remedies we were looking for, we also recognized other answers that were responsive to actions the lender could take that would assist them in recovering the loan amount due.
101 See Section I of this article for a discussion and analysis of these consumer protections.
102 See analysis of this point in Section I of this article.
103 The new Loan Estimate and Closing Disclosure forms that will become effective on August 1, 2015 are themselves based on revisions to the forms first proposed in 2008, which became effective in 2010. See, RESPA Final Rule, note 34, supra.
104 See analysis of this point in Section I of this article.
of three major challenges confronting consumers: deceptive practices in how the disclosures are presented by lenders and mortgage brokers, to gain a sense of how mortgage counselors, mortgage brokers, and lenders review home loan disclosure forms with borrowers today, in May 2014 we distributed a survey to participants at a conference on financial counseling for low-wealth clients that was sponsored by Housing Action Illinois. The results indicated that, at least in Illinois, while face-to-face meetings have declined, many lenders and mortgage brokers continue to meet with borrowers in person at the loan application stage. Almost half of the responding housing counselors indicated that mortgage brokers and lenders tend to do so when presenting the disclosure forms (the remaining indicated that forms are mailed). To get a better sense of the practices of lenders and mortgage brokers when they do meet borrowers in person, this survey asked these financial counselors what they know about these practices based on what they have heard from the borrowers or others. Of the respondents, only nine had experience counseling borrowers who were considering offered loans (the remaining had experience providing general financial literacy or counseling for loans already in default). The findings from the Survey of Financial Counselors indicate that mortgage lenders and brokers have opportunities through their conversations with consumers to adversely affect the information that consumers glean from home-loan disclosure forms.


107 See the results from the Financial Literacy Test reported on in Section II of this article.

108 The reforms we propose should be empirically tested by running experiments like those reported in Section II.
mon, although deceptive, ways that mortgage brokers and lenders present disclosure forms to borrowers, (ii) address some of the demonstrated cognitive barriers to effective use of the disclosure form, and (iii) provide key additional information geared specifically to unsophisticated or sophisticated borrowers for consumers to better understand and evaluate the loan being offered to them.

Based upon a review of case law, discussions with former mortgage brokers, and the results from a survey of home mortgage counselors, evidence suggests it is common practice for lenders and mortgage brokers to do one or more of the following when presenting a home loan disclosure form to a borrower:

(i) Saying “sign here” as they hand the form to the borrower, (typically with a pile of other papers the borrower is asked to sign). This gives the borrower the impression it is not appropriate or necessary for the borrower to read the document. Unscrupulous mortgage brokers exacerbate this problem when they give borrowers the impression that they are trying to find the borrower the best possible deal when, in fact, that was not the case.

(ii) Providing a brief explanation of the form and then say “sign here,” again inducing the borrower to believe they should not and do not need to read the form before signing it.

(iii) Engaging in distracting conversation as the borrower attempts to read or skim the form (causing dual tasking, which leads to increased confirmation biases and greater inability to recognize a

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109 See, e.g., In re First Alliance Mortgage Company v. Lehman Commercial Paper, Inc., 477 F.3d 977 (9th Cir. 2006)(see the background discussion that details the deceptive lending practices that the lender’s employees engaged in when presenting the disclosure forms to the borrowers in support of their claims for relief from these deceptive lending practices).

110 See Psychological Analysis of Disclosure Laws supra note 28, 30, and accompanying text.


112 In response to the question in the Survey of Financial Counselors whether lenders and mortgage brokers tend to simply say “sign here” or to review the form with the borrower, six of the nine reported that mortgage brokers and lenders simply tell consumers to “sign here” and two reported that they review the form (one did not respond).

113 In response to the question in the Survey of Financial Counselors whether mortgage lenders and brokers tend to review only some of the terms, all of the terms, or just answer the borrower’s questions, four reported that mortgage lenders and brokers tend to review only some of the terms; one reported that they review all of the terms explaining that “they read through quickly,” and five reported that they tend to just answer the borrower’s questions.
problematic loan term).\textsuperscript{114}

(iv) Pointing out the favorable terms in the disclosure form and not pointing out the problematic terms (a violation of the Grecean norm of conversation).\textsuperscript{115}

(v) Providing either senseless explanations\textsuperscript{116} when a borrower skims the document and notices a problem or otherwise deceptive answers to those questions\textsuperscript{117} to induce the consumer to proceed with the loan notwithstanding the problem they found.\textsuperscript{118}

Furthermore, even when these forms are mailed to consumers, the information consumers glean from them could be affected by what mortgage brokers or lenders say to the consumer before the consumer receives the forms in the mail.

In addition, due to a lack of financial sophistication, many consumers do not even know what they should be looking for as they review the disclosure form or where to find that information (examples of “schema deficits”).\textsuperscript{119} While the CFPB revised the Loan Estimate form due in part to studies reflecting that consumers rarely understand what the APR is, we predicted that many consumers do not understand other key terms disclosed, nor how those terms could be problematic for them. For example, consumers may see on the form that the interest rate and monthly payment could increase over the term of the loan; however, consumers may not understand this could make the loan harder to afford and ultimately cause them to default.

Consumers may also misunderstand the consequences of defaulting on a mortgage. We suspected that most people would be

\textsuperscript{114} See Psychological Analysis of Disclosure Laws supra note 96.

\textsuperscript{115} LeBoeuf, M. A., Choplin, J. M., & Stark, D. P. Eye See What You Are Saying: Testing Conversational Influences on the Information Gleaned from Home-Loan Disclosure Forms (manuscript on file with the authors).


\textsuperscript{117} Another tactic is to engage in “argument immunization” where the mortgage broker or lender explains away objections that consumers are likely to hear later. When consumers later hear strong reasons to object, they will then be less likely to accept those reasons. See Psychological Analysis of Disclosure Laws supra note 96, at 102.

\textsuperscript{118} Surprisingly, many consumers are vulnerable even to “senseless” explanations of problematic contractual terms—such as written terms that are inconsistent with what they had been orally promised).\textit{Id.}

\textsuperscript{119} \textit{Id.} at 98-99 (Sections on “Lack of contractual schemas or knowledge structures” and “Inaccurate default assumptions of how contractual provisions are likely to be structured and if the contract is negotiable.”).
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131

aware if they default on a mortgage loan, they could lose their home. But we predicted many consumers might not realize this fact, in some states, the lender could obtain a deficiency judgment, a court order to pay the balance remaining due after the house is sold at a foreclosure sale, and then garnish the consumer’s wages or obtain a seizure of the borrower’s other property to satisfy the judgment.120

The results from the Financial Literacy Test reflect a far poorer level of financial literacy than we predicted. Participants displayed a serious level of misunderstanding of a “balloon payment” as only 12% were able to correctly describe this and many confused this term with pre-paid loan closing costs; participants likewise displayed a serious level of misunderstanding of a prepayment charge as only 25% correctly describing it. As previously explained, both of these features increase the likelihood of default by making it harder for a financially distressed borrower to refinance the loan or sell the house.121 The inability to understand these terms makes consumers far less likely to benefit from their disclosure. When asked to identify problematic loan terms or features that make it more likely for a borrower to default, 28.4% did not provide an answer, which we interpret to mean they could not think of any example; of note, 29 of the 33 answered at least one other financial literacy test question and only four participants left all of the financial literacy test questions blank. Only 30% identified the risks of a variable rate loan;122 16%

120 See Rao, J., Walsh, G., Foreclosing a Dream: State Laws Deprive Homeowners of Basic Protections, NCLC, Inc. (Feb. 2009), http://www.nclc.org/images/pdf/foreclosure_mortgage/state_laws/foreclosing-dream-report.pdf; [hereinafter State Foreclosure Laws] (“In 36 States and the District of Columbia mortgage holders pursue so called ‘deficiency judgment’ claims against homeowners even after the foreclosed home has been sold at auction. . .[which] can be pursued without condition in 15 states and the District of Columbia.”)

121 It should be noted, however, that even when a borrower is aware of the consequences of default that they may still fail to appreciate those consequences due to the phenomenon of “temporal discounting” under which consumers fail to weight future or uncertain costs in proportion to current or certain costs; Stevenson, M.K., Decision Making With Long-Term Consequences: Temporal Discounting for Single and Multiple Outcomes in the Future, 122 J. OF EXPERIMENTAL PSYCHOL.: GENERAL 3, 3–22 (1993); Chapman, G.B., Temporal Discounting and Utility for Health and Money, 22 J. OF EXPERIMENTAL PSYCHOL.: LEARNING, MEMORY, AND COGNITION 771, 771–791 (1996).

122 Adjustable rate loans are riskier than fixed rate loans because the interest rate can rise to a level that the borrower cannot afford to pay and the borrower might not be able to take out a new loan to pay off the adjustable rate loan at a rate they can afford. See Final Rule Summary supra note 36, at 3.
identified the risks when a loan has a balloon payment;\textsuperscript{123} \textsuperscript{123} \textsuperscript{123} 14% identified high interest rates;\textsuperscript{124} \textsuperscript{124} \textsuperscript{124} and 4% identified expensive monthly payments.\textsuperscript{125} \textsuperscript{125} \textsuperscript{125}

When asked to list all of the actions the lender could take to recover the unpaid loan amount after the borrower defaults, 21% did not provide an answer, which we interpreted to mean that they could not think of an example, and 23% vaguely stated “sue/take legal actions.” Approximately 52% of participants mentioned at least one of the following actions: foreclosure, wage garnishment, or seizure of other properties and assets: 31.8% mentioned only foreclosure; 4.3% mentioned only wage garnishment; and 1.7% mentioned only seizure of other properties and assets. Of all the participants, only 14.6% mentioned foreclosure in addition to wage garnishment or seizure of other properties and assets. This surprisingly high level of non-awareness of the major consequences of default makes borrowers even more prone to miscalculating the costs-benefits of risky loan

\textsuperscript{123} With a balloon payment, at the time of maturity or early repayment of the loan, the borrower may owe a substantial amount of money, perhaps the entire original amount borrowed, and will need to obtain a new loan (or sell the property) to pay off the balance due on the prior loan. With a fully amortizing loan with no balloon payment, when the loan matures there is no additional payment to make, just the last monthly installment of interest/principal. Loans with balloon payments are riskier because the borrower might have trouble obtaining a new loan to pay off the balloon payment if the borrower’s creditworthiness has decreased, the property value has decreased, or the underwriting standards have become stricter. Also, interest rates may have gone up and the borrower will now have to take out a loan to pay the balloon payment at a higher interest rate than they were paying under the prior loan (which may make the loan less affordable too). Borrowers with interest-only loans (which have balloon payments of the entire principal due at maturity) face a heightened risk of these problems, in particular, decreases in property value. Interest-only loans make the borrower more like a renter than an owner unless the property increases in value.

\textsuperscript{124} Even if affordable, a loan with a high interest rate might in fact be predatory in nature when the borrower could have obtained a loan at a lower interest rate based on their credit score, loan to value ratio, and source of income. Borrowers should be made aware of this risk and needless loss of substantial money over several years under a loan. For example, a borrower will spend an extra $14,690.47 when they take out a $300,000 loan at 3.25\% rather than 3.00\% and pay off the loan at maturity, and will pay an extra $5,039.28 seven years after taking out the loan if they sell the home or refinance the loan at that time.

\textsuperscript{125} Of course a high interest rate will lead to high monthly payments that in turn will make the loan less affordable and make it more likely for the borrower to default.
features or products, such as adjustable rate loans. Another consequence of this lack of financial sophistication is that many borrowers are likely to, at best, merely skim over the disclosure document rather than read it carefully. This could lead to greater confirmation biases (a circumstance in which consumers look for evidence that confirms positive statements the lender or broker made about the loan rather than looking for details suggesting what they were might be untrue).

Thus, the lack of necessary background financial education can have a profound negative impact on the effectiveness of disclosure forms as a means to help borrowers make wise home loan decisions. While financial education in high school or at some other point before a borrower applies for a home loan can help, there is no requirement for such education in order to take out a typical home loan. In addition, even if a borrower received this type of education in the past, they may have forgotten much of what they learned, and testing reflects that people learn most effectively when they are learning about something they are about to use.

To try to address these three problems, we propose testing how creating and adding to the Loan Estimate form certain interactive features might aid comprehension. The interactive features we propose testing could include warning lights—red and yellow—that highlight potentially problematic loan terms along with internet links.

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126 Even when a consumer understands how adjustable rate loans could cause a default in the future, the phenomenon of “temporal discounting” can cause the consumer to under value this risk; M. K. Stevenson, Decision Making With Long-Term Consequences: Temporal Discounting for Single and Multiple Outcomes in the Future, 122 J. OF EXPERIMENTAL PSYCHOL.: GENERAL 3, 3–22 (1993); G. B. Chapman, Temporal Discounting and Utility for Health and Money, 22 J. OF EXPERIMENTAL PSYCHOL.: LEARNING, MEMORY, AND COGNITION 771, 771–791 (1996).

127 While there are numerous financial educational resources available to consumers from governmental websites, it does not appear that many consumers are aware of them and use them.

128 Borrowers obtaining loans defined as “high-cost” by the Home Ownership and Equity Protection Act (15 U.S.C. §§ 1602(bb), 1639) are required to obtain housing counseling before the loan closing. Loans of this type are currently relatively rare (2,185 made in 2012). See Consumer Financial Protection Bureau website, http://www.consumerfinance.gov/hmda/explore.


providing more details customized to the specific borrower. Electronic versions of the Loan Estimate could have flashing warning lights and live hyperlinks. The links could take the borrower to a website providing a personalized evaluation tool that could enable the borrower to determine whether the highlighted loan terms were appropriate or unduly risky given the borrower’s situation. The difference between the red and yellow lights would indicate the risk of default posed by the highlighted term, possibly based on historical data, and the likelihood the loan term is unsuitable for the borrower. The effectiveness of these potential reforms should be tested in future experiments like those reported in Section II.

The website could also provide plain-English explanations of the loan terms, in particular, problematic terms, and information about how to shop for loans without those problematic terms. The borrower could be required to click on and navigate through the links associated with the warnings, and perhaps also keep certain screens of information open, before the borrower could proceed with the loan. Experiments like those reported in Section II should test whether requiring borrowers to do so increases the amount of attention borrowers give the disclosures and thereby reduces the practice of borrowers simply signing without looking or just skimming the disclosures. The rules for disclosures could be revised to require that if the borrower does not click on the mandatory links in the Loan Estimate, and navigate through them, they will not be able to sign the Loan Estimate. In that case, the lender would not be allowed to further process the borrower’s loan application. Future experiments should also test whether the highlighted links would help unsophisticated borrowers know where to look on the disclosure form, as these links would point out to them problematic terms in their offered loan and provide them more personalized and impartial guidance on the suitability of those terms. The interactive features can act as a good mortgage counselor or attorney would for the borrower, pointing out and explaining problematic features of the loan they are considering.

One problem is borrowers who do not have easy access to a computer to utilize the interactive Loan Estimate, or who are not adequately computer literate to feel comfortable navigating the interactive features. We recommend mortgage counselors be trained to use the interactive features and to help those borrowers who are not comfortable navigating those features on their own, including consumers who do not have access to a computer. We estimate it should take on average approximately thirty minutes for the typical consumer to click and navigate through the required links, although this would need to be empirically confirmed. Thus, the charge to perform this
service should be low, and could be regulated to be provided at a low rate, such as $50-$75. Due to the large number of people who have entered into overpriced loans in the past, we believe the added cost for this service to the consumer, a fraction of what they pay for example for the required appraisal, is far outweighed by the benefits the consumer will receive from the service in detecting, among other things, when the closing costs they are being charged appear overpriced and how to negotiate or shop around for a lower cost loan. However, we are mindful this could lead to borrowers who are elderly, poor, or have limited access to computers, most likely to incur this charge. We therefore propose several ideas to address that undesirable outcome. First, shift the cost of this service to lenders or mortgage brokers since their common practice of telling consumers to “sign here,” rather than encourage them to carefully read the form, and other deceptive practices noted earlier, is one of the key reasons interactive Loan Estimate forms are necessary. Lenders could then be prohibited from charging this as an added loan charge or service to the borrower. Alternatively, if the lending community objects to absorbing this cost, and successfully blocks it, is to design the interactive Loan Estimate so it can be viewed on smart phones, thereby increasing access, with paper forms printed in color, and the interactive system designed to be done via voice on a traditional phone as well. In addition, private practice lawyers acting pro bono, free legal services organizations, and law school clinics could be encouraged to receive training on the use of the interactive features and provide free help to lower income and elderly borrowers who do not have access to a computer or otherwise might have difficulty navigating the interactive features on their own.\textsuperscript{131}

The following are examples of how adding interactive features to the CFPB’s Loan Estimate form could aid consumer understanding and decision-making. All of these proposals should be tested in future experiments before they are implemented and further details would need to be fleshed out to implement these interactive features.

\textsuperscript{131} Indeed, the results in Section II for the eye-tracking experiment suggest that when the consumer is comparing two different loans on two different Loan Estimate forms and relying upon memory (versus being able to compare the disclosures side by side with printed out versions), it is difficult for the consumer to choose the lower priced home loan. Consequently, enabling the consumer to have the key relevant data from the two loans on one piece of paper or computer screen may be necessary for them to most effectively price compare using the Loan Estimate form. This should also be empirically tested.
1. We recommend the Loan Estimate form be programed so that it would flash yellow over the APR figure in the form if the APR for the offered loan is higher than the national average APR offered to borrowers with the same credit score on that date. Currently, one can log onto www.myfico.com for free to input a credit score and then determine the APR is nationwide associated with that credit score on that day. A similar process could be used by the CFPB with this interactive feature. Although currently a borrower could do this type of check on their own for free by using www.myfico.com, assuming they already know their credit score, few borrowers seem aware of this possibility and how to use it, as reflected by the fact that in the past a tremendous percentage of consumers have taken out overpriced home loans (i.e., loans at a higher price than which they would have qualified). The lender could be required to disclose in the Loan Estimate the average of the three borrower’s credit scores that the lender typically obtains through its credit check of the borrower. The form would flash yellow over the Enhanced APR Disclosure on page 1 of the Loan Estimate if the APR disclosed is greater than the APR figure that borrowers with this credit score are currently getting in the marketplace. As previously noted, there are no current protections under Federal law to prevent the borrower from taking out an overpriced home loan. Thus, this added disclosure is very important. The flashing yellow link can state something such as, “It appears you may be paying too much for this Loan! Click here to see the APR price that borrowers with your credit score are getting.” The borrower could then receive in the link information and explanations on the elements that lenders focus on to determine the price for the loan that they charge to different borrowers: the borrower’s creditworthiness as reflected by their credit score, the loan to value ratio, the debt to service ratio, the source of the borrower’s income, and length of employment. The link could emphasize that the consumer should shop around to obtain other APR quotes from other lenders to make sure they are not being overcharged, with some tips on how to do that, and could provide an example of how a difference of only .25% can lead to thousands of dollars of added payments under the loan. If the offered loan contains an APR figure that is equal to or less than the market APR for borrowers with that credit score, then there will not be a flashing yellow over the link and no requirement to click on that link in order to be able to sign the Loan Estimate form.

2. We recommend testing whether the five year comparisons currently on page three of the Loan Estimate, which attempts to show the cost of the disclosed loan over a five-year period to enable price comparisons that assume a five year holding period, should be re-
placed with the following more tailored disclosure and link. The disclosure could read:

“The APR reflected on page 1 of the Loan Estimate assumes you will not pay off the loan early (for example, by refinancing or selling your house). If you know that you will pay off the loan early, you may want to click on the link below to see whether that will change the APR on this loan. Over the last five years, homeowners have typically paid off their mortgages after [insert number] years. But you should make a decision based on your own personal situation. Shopping for more than one loan and comparing the APRs can help you save money.”

Future research should investigate whether this approach is suitable for less sophisticated consumers, or only suitable for more sophisticated consumers, as it requires the borrower to predict events that will be years in the future (i.e., events and economic conditions that affect whether the borrower will pay off the loan early). In addition, the concept that the APR will change depending upon the length of time the consumer holds the loan may be too difficult a concept for unsophisticated consumers to understand. We wish to empirically test how well consumers do with this highly sophisticated analysis before we recommend whether it should be a mandatory link or an optional one. We assume more sophisticated borrowers will choose to perform this analysis. Once they click on this link, the link can pose questions for the borrower relating to their life circumstances that will help them gauge the timeline of moving from the home and also help them gauge the timeline of a likely refinance (for example, if they think their credit score is likely to go up in the near future allowing them a lower APR or if interest rates appear to be coming down over the next few years).

3. We recommend testing whether flashing yellow or red lights over potentially or clearly problematic loan features would improve the chances that attention might be drawn to these features. That is, for each of the “Loan Terms” listed on page one of the CFPB’s Loan Estimate form, which discloses whether the loan amount can increase, whether the interest rate or monthly payment can increase and whether the offered loan contains a prepayment charge or balloon payment, if the offered loan contains any of these potentially or clearly problematic features (i.e., “Yes” is marked on the form), a yellow or red light could flash over the “Yes” disclosure. These lights could have links that borrowers could be required to click onto and navigate through in order to be able to proceed with the loan process. The links should then include easy-to-understand explanations of these features and why they may be, or are, problem-
atic. As noted earlier, the vast majority of participants in the Financial Literacy Test reflected a lack of understanding of what is meant by the terms prepayment charge and balloon payment, yet these terms and features increase the risk of default. These changes may help borrowers avoid these terms and facilitate shopping around for loans without these features.

4. We recommend testing whether adding the sentence “This loan meets the definition of a ‘Qualifying Mortgage’” to the Loan Terms listed on page one of the CFPB’s Loan Estimate form improves home loan decision-making. If the loan does meet the definition indicated by a “Yes” after this sentence on the form, then there would be no mandatory link. If the answer is “No,” however, then there would be a mandatory link with a flashing red light. The link could explain in plain English the standards established to be a Qualifying Mortgage, an attempt under Dodd-Frank to create a modicum of protection from problematic loan terms, and why certain features are considered unsafe or otherwise unfair. For borrowers interested in learning more even when the link is not mandatory, the link could caution that a loan could be a Qualifying Mortgage and still be overpriced since the cap on interest rates and fees are set at a high level. In responding to the concern that there are exemptions to the Qualifying Mortgage requirement for certain smaller banks, the directions on filling in this disclosure could clarify to the lender and its agents that they still must indicate “No” here for exempt lenders since the focus is on the features of the loan not the source of the loan.

5. We recommend testing the effectiveness of adding a link for each of the Categories A-C of the closing costs detailed on page two of the Loan Estimate. The link could provide the median total closing costs for each of those categories for the State and County that applies to the mortgaged property. These links would not be mandatory to click on and navigate through unless the total median costs for the applicable category has been exceeded, in which case the category link will flash in red. The link could then explain that the costs reflected in the category for the offered loan exceed the typical costs charged and provide information on how to seek a reduction to those charges with the lender and/or how to shop around for a loan with lower closing costs. While we did not test for experiment participants’ knowledge of median closing costs figures, we believe we safely assume that borrowers are typically not aware of this information and hypothesize that having it disclosed in this fashion could be very useful to them in analyzing whether the loan is overpriced. For example, while the APR figures in the APR Experiments were quite low in light of historical APRs, we note that the category A loan


charges for both of the loans we used struck us as high and assume that if the borrower shopped around they could have received a loan with lower Category A charges.

7. We also recommend testing a number of possible changes to page three of the Loan Estimate form, just before the signature line, to the category called “Other Considerations” which contains some very helpful information for borrowers and goes beyond disclosing the costs of the loan, but which borrowers may not be noticing or understanding:

    First, the language under “Appraisal” states: “We will promptly give you a copy of any appraisal, even if your loan does not close.” This statement contains very helpful information, but we wonder how many borrowers will notice it especially since it is on the last page of the Loan Estimate. Second, under “Loan Acceptance” the final version of the Loan Estimate form states: “You do not have to accept this loan because you have received this form or signed a loan application.” This is also very helpful information that may empower consumers to reject a bad loan offer, but also appears on page three of the Loan Estimate. To improve the likelihood that consumers notice these portions of the Loan Estimate form, testing should be done on the impact of underlining or otherwise highlighting those words. We also recommend that an additional sentence be added in light of the interactive warning system we have recommended: “If any portion of this Loan Estimate form has appeared with a yellow or red flashing light, this is an indication that the highlighted term is potentially problematic (yellow) or is problematic (red) by being an overpriced or non-standard charge or is a loan term that increases your risk of defaulting under the loan.” Indeed, it may make sense to instead provide this kind of warning and explanation in a set of directions to the Loan Estimate form that the CFPB could create to accompany the interactive Loan Estimate form to alert the borrower up front as to the meaning of the yellow and red lights and to save space on page three of the form.

    Also, we found the language explaining, “Refinance” and “Liability after Foreclosure” to be not as helpful as they could be. Currently, “Refinance” reads: “Refinancing this loan will depend on your future financial situation, the property value, and market conditions. You may not be able to refinance this loan” [emphasis added]. This is a very important point and counters what many mortgage brokers and lenders reportedly have told borrowers to reassure them to enter into loans with potentially problematic features such as adjustable interest rates. But some consumers might misconstrue the italicized language to mean there is a prohibition on paying off the loan
early. This ambiguity should be clarified by saying instead something such as: “While you have the right to pay off this loan early, you may have trouble obtaining a new loan to pay off this loan, or the new loan may have the same or even less favorable features. So be sure you are comfortable with the features of this loan, and if you are not, shop around for a loan with better features and terms.”

Finally, the description of “Liability after Foreclosure” appears to refer to changes in state law where the mortgaged property is located that may have expanded lenders’ rights upon borrower default that would apply to future home loans. We believe the more important point that should be noted in the Loan Estimate, especially in light of the results from our Financial Literacy Test, is that if the borrower defaults, the borrower can lose more than their home; that in some states the lender can also seek to recover the debt due with a wage garnishment, where the lender will receive a portion of the borrower’s paycheck each pay period until the entire debt is paid in full, or obtain a judgment lien on other real or personal property the borrower owns and sell those properties too in order to collect the full amount due. This general information could be noted either briefly on the form with a link providing details or, even better, if the CFPB can keep track of the relevant state laws, the form could flash yellow over the term “Liability after Foreclosure” when the state where the mortgaged property is located does not include anti-deficiency laws that prohibit this from occurring.132 This information is important to ensure borrowers can better understand and weigh the negative consequences of taking out a home loan with risky features. However, determining whether supplying this information in fact serves that purpose, notwithstanding temporal discounting, sunk costs, and the “endowment effect,”133 should be empirically tested. The link could also explain how the loan amount due just prior to the loan default can be increased to include interest that has accrued on the debt, the lender’s out of pocket payment of real estate taxes and property in-

132 See State Foreclosure Laws, supra note 106.
133 Temporal discounting and sunk costs have been previously explained in this article. For the Endowment effect, see Kahneman, Daniel et al., Experimental Tests of the Endowment Effect and the Coase Theorem, 98 J. POLIT.ECON. 1325, 1326-29 (1990) (Under the endowment effect, borrowers making an original purchase may feel as if they own the house prior to closing after imagining their possessions in the house and their children sleeping in the bedrooms. They might then so value the home that they are more likely to proceed with an overpriced loan or one with other problematic features due to their fear of losing their ability to close on the house purchase.)
surance, and certain other out-of-pocket expenses the lender may incur in maintaining the mortgaged property after the loan default. We assume most consumers are not aware of this unless they have already experienced a loan in default, yet it is important information since it shows how the amount owed that the borrower could be personally responsible for can rise dramatically beyond the unpaid loan amount at the time of the default.

We wish to emphasize these are only preliminary thoughts on how the Loan Estimate form could be made much more effective and responsive to the problems noted through the creation of an interactive form. It is essential that consumer testing take place on any proposed interactive features to determine if they in fact lead to better consumer decision making by addressing the various barriers to effective use of the Loan Estimate previously described. The first two authors plan to develop experiments to test the impact of various types of interactive features to identify best practices for improved home loan decision making by consumers.

The second key category of reform we propose is revising the Loan Estimate form to include the Enhanced APR Disclosure we used in the APR Experiments, supplemented by the interactive features noted earlier. As detailed in Section II, while experiment participants using the new CFPB Loan Estimate form\textsuperscript{134} were able to identify the lower cost home loan at only chance level (44%), participants using the Loan Estimate form with the “Enhanced APR Disclosure” were able to identify the lower cost home loan 77% of the time.

In addition, the APR is the single piece of information that provides a good sense of the overall price of a home loan. Because the Loan Estimate discloses many different components of the price of a home loan, many consumers are likely to experience “information overload”\textsuperscript{135} as they review the form and revert to “reason based decision making”\textsuperscript{136} (where the consumer focuses on only one factor for making a decision). We believe that as revised in the fash-

\textsuperscript{134} The Loan Estimate form we used in our experiments was based on the form as proposed by the CFPB at the time we conducted our experiments. Although the CFPB made some edits to the final version of the form from its proposed version, those edits were minor and did not relate to what was being examined in the APR Experiment.

\textsuperscript{135} Lussier, D.A., Olshavsky, R.W., Task Complexity and Contingent Processing in Brand Choice, 6 J. Of Consumer Res., 1979, at 154, 154–165

ion we propose (including the interactive features we propose), the APR is the best single factor for consumers to use if they revert to that type of single factor based decision-making due to information overload. The APR can also serve as the basis for consumers to determine if offered loans are overpriced or at the market rate in light of the borrower’s credit score as previously explained.

But in order to use the APR effectively, the borrower must first notice and fixate on it. Unfortunately, 19% of participants who received the regular Loan Estimate form did not look at the APR, while all of the participants who received the Enhanced APR Disclosure looked at it. Furthermore, of those who did look at the APR, those who received the Enhanced APR Disclosure looked at it twice as often as those who received the current CFPB Loan Estimate Disclosure form. While it is true that there are some limitations in completely relying upon APR as currently calculated, the most serious limitation, the impact of an early payoff on the ultimate accuracy of the disclosed APR figure, can be addressed through interactive features previously described.

Consequently, we conclude that relegating the APR to page three of the Loan Estimate form in an inconspicuous fashion is not sound policy since it incorrectly signals to consumers that APR is not important information on which to focus. We therefore recommend the CFPB revise the Loan Estimate to reflect the Enhanced APR Disclosure we used in our APR Experiments, as supplemented with interactive features that enable the borrower to also receive a revised APR figure based on the borrower’s estimated period of holding the loan.

Before concluding this policy analysis, it is worthwhile to briefly address the legal question as to the CFPB’s authority to make the kind of changes to the Loan Estimate that we have proposed. Congress gave the CFPB broad authority to implement the disclosure requirements of TILA. Section 1032(f) of Dodd-Frank specifically directs the CFPB to publish integrated mortgage disclosure forms, which they did with the Loan Estimate and Closing Disclosure forms. Because the Enhanced APR disclosure we proposed to the Loan Estimate form is a smaller change than moving the APR to the third page as the CFPB did, it is clear the CFPB has the authority to make our recommended and empirically tested change to the Loan Estimate. Furthermore, because the interactive features we propose for the APR would not distract from the mandatory disclosures and are

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137 Those limitations are discussed and responded to in Section 1.
intended to educate consumers," there is also no question that the CFPB has authority to add the interactive features that we propose. The CFPB also clearly has authority to implement the other interactive features to the Loan Estimate form we have recommended they consider and test, in light of the CFPB’s general rulemaking authority under TILA Section 105(a), 15 U.S.C. 1604(a), and the fact that the interactive changes are designed to further the purposes of TILA. Section 105(a) authorizes the CFPB to prescribe regulations that contain “additional requirements” that the Bureau finds are necessary or proper to effectuate the purposes of TILA. One of the purposes of TILA is “to assure a meaningful disclosure of credit terms so that the consumer will be able to compare more readily the various credit terms available to him and avoid the uninformed use of credit.” The interactive features we propose the CFPB to consider and test are intended to promote those purposes. In addition, we are hopeful the proposed interactive features will lead to fewer consumers heeding the typical mortgage lender or broker’s direction to “sign here” and

138 The Dodd-Frank Act also required the Bureau to establish an Office of Financial Education to improve the financial literacy of consumers.

139 We agree with the CFPB’s description of its rule making authority in their proposed regulations to the integrated disclosure rules: “As amended by the Dodd-Frank Act, TILA section 105(a), 15 U.S.C. 1604(a), directs the Bureau to prescribe regulations to carry out the purposes of TILA, and provides that such regulations may contain additional requirements, classifications, differentiations, or other provisions, and may provide for such adjustments and exceptions for all or any class of transactions, that the Bureau judges are necessary or proper to effectuate the purposes of TILA, to prevent circumvention or evasion thereof, or to facilitate compliance. A purpose of TILA is “to assure a meaningful disclosure of credit terms so that the consumer will be able to compare more readily the various credit terms available to him and avoid the uninformed use of credit. TILA section 102(a); 15 U.S.C. 1601(a). . . Historically, TILA section 105(a) has served as a broad source of authority for rules that promote the informed use of credit through required disclosures and substantive regulation of certain practices. However, Dodd-Frank Act section 1100A clarified the Bureau’s section 105(a) authority by amending that section to provide express authority to prescribe regulations that contain ‘additional requirements’ that the Bureau finds are necessary or proper to effectuate the purposes of TILA, to prevent circumvention or evasion thereof, or to facilitate compliance. This amendment clarified the authority to exercise TILA section 105(a) to prescribe requirements beyond those specifically listed in the statute that meet the standards outlined in section 105(a). . .” Integrated Mortgage Disclosures Under the Real Estate Settlement Procedures Act (Regulation X) and the Truth In Lending Act (Regulation Z), 77 Fed. Reg. 51,116 (codified at 12 CFR 1024 and 12 CFR 1026 ) (2012)).

140 TILA § 102(a); 15 U.S.C. § 1601(a).
not carefully read the disclosure form, thus negating the entire purpose of the disclosure form. Requiring an interactive version of the Loan Estimate which makes that result far less likely is thus consistent with the Congressional directive to the CFPB to prescribe rules to prevent “circumvention or evasion”\textsuperscript{141} of TILA.

III. CONCLUSION

This article focused on addressing the primary reasons why home loan disclosures fail to empower many borrowers to make wise home loan decisions, such as: (i) the complexity of decision-making on home loan products, (ii) the common harmful practices of mortgage brokers and lenders when presenting the disclosure forms (including saying “sign here” before the consumer has had a chance to carefully read or even skim the disclosure form), (iii) high levels of financial illiteracy among consumers, and (iv) cognitive limitations among consumers. We believe revising the Loan Estimate form to make it interactive in the general fashion we proposed is necessary to attempt to address these barriers to effective use of the form. We therefore urge the CFPB to test and consider adopting the creation of an interactive Loan Estimate form and to incorporate into that form the Enhanced APR Disclosure that performed so well in our APR Experiments. By taking advantage of technology that will enable the creation of interactive disclosure forms, and by empirically testing and refining these forms, the Dodd-Frank legislation promoting consumer home loan protection can be upgraded to a much needed, higher functioning “Version 2.0.”

\textsuperscript{141} See supra note 125.
### 2014 Dodd-Frank 2.0

#### FICUS BANK

**FICUS BANK**

456 Somewhere Avenue
Anytown, ST 12345

**Save this Loan Estimate to compare with your Closing Disclosure.**

**Loan Estimate**

**DATE ISSUED**: 7/23/2012  
**APPLICANTS**: James White and Jane Johnson  
**PROPERTY**: 456 Somewhere Avenue  
**EST. PROP. VALUE**: $345,000  
**RATE LOCK**: 30 years  
**NOTE**: Before closing your interest rate, points, and lender credits can change unless you lock the interest rate. All other estimated closing costs expire on 6/14/12 at 5pm EST.

<table>
<thead>
<tr>
<th>Loan Term</th>
<th>Can this amount increase after closing?</th>
<th>Loan Amount</th>
<th>Interest Rate</th>
<th>Prepayment Penalty</th>
<th>Balloon Payment</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 years</td>
<td><strong>NO</strong></td>
<td>$275,006</td>
<td>3.2%</td>
<td><strong>NO</strong></td>
<td><strong>NO</strong></td>
</tr>
</tbody>
</table>

**APR: Price of the Loan**  
3.65  
Lower is better for you

**LOAN TYPE**: Conventional  
**PURPOSE**: Refinance

---

**Loan Estimate**

**DATE ISSUED**: 7/23/2012  
**APPLICANTS**: James White and Jane Johnson  
**PROPERTY**: 456 Somewhere Avenue  
**EST. PROP. VALUE**: $345,000  
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<th>Loan Term</th>
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<th>Loan Amount</th>
<th>Interest Rate</th>
<th>Prepayment Penalty</th>
<th>Balloon Payment</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 years</td>
<td><strong>NO</strong></td>
<td>$1,193.63</td>
<td></td>
<td><strong>NO</strong></td>
<td><strong>NO</strong></td>
</tr>
</tbody>
</table>

**LOAN TYPE**: Conventional  
**PURPOSE**: Refinance

---

**APR: Price of the Loan**  
3.65  
Lower is better for you

**LOAN TYPE**: Conventional  
**PURPOSE**: Refinance
Table 1a: Number and percentage of participants who cited a particular loan attribute when responding to the Preference question (“If you were going to replace your mortgage with a new mortgage, which loan would you prefer to take out? Why?”) and Cost question (“Which of these two loans is less expensive overall? And how did you decide which of the loans was less expensive?”) in Experiment 1.

<table>
<thead>
<tr>
<th>ENHANCED</th>
<th>REGULAR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PREFERENCE</td>
</tr>
<tr>
<td>N PARTICIPANTS (%)</td>
<td>N</td>
</tr>
<tr>
<td>APR</td>
<td>9</td>
</tr>
<tr>
<td>Closing costs</td>
<td>9</td>
</tr>
<tr>
<td>Interest rate</td>
<td>11</td>
</tr>
<tr>
<td>Fees</td>
<td>5</td>
</tr>
<tr>
<td>5 year comparison</td>
<td>6</td>
</tr>
<tr>
<td>Monthly Payment</td>
<td>4</td>
</tr>
<tr>
<td>Loan Amount</td>
<td>1</td>
</tr>
<tr>
<td>Total interest %</td>
<td>1</td>
</tr>
<tr>
<td>Total Loan Cost</td>
<td>0</td>
</tr>
<tr>
<td>Not Classifiable</td>
<td>6</td>
</tr>
</tbody>
</table>
Table 1b: Number and percentage of loan attributes cited by participants who *incorrectly* preferred or identified the higher cost loan as a function of condition (Enhanced vs. Regular) in Experiment 1. For instance, 21 participants who reviewed the regular loan versions incorrectly preferred the higher cost loan. Of these participants, 12 (57.1%) cited the interest rate when evaluating which loan was less expensive overall.

<table>
<thead>
<tr>
<th></th>
<th>Enhanced (N = 12)</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>Regular (N = 21)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PREFERENCE (%)</td>
<td>COST</td>
<td>PREFERENCE (%)</td>
<td>COST</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>APR</td>
<td>1 8.3</td>
<td>1 10.0</td>
<td>2 9.5</td>
<td>1 4.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Closing costs</td>
<td>2 16.6</td>
<td>2 20.0</td>
<td>4 19.0</td>
<td>5 23.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest rate</td>
<td>5 41.6</td>
<td>3 30.0</td>
<td>12 57.1</td>
<td>10 47.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fees</td>
<td>1 8.3</td>
<td>1 10.0</td>
<td>4 19.0</td>
<td>2 9.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 year comparison</td>
<td>5 41.6</td>
<td>5 50.0</td>
<td>6 28.5</td>
<td>4 19.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monthly Payment</td>
<td>3 25.0</td>
<td>0 0.0</td>
<td>3 14.2</td>
<td>5 23.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loan Amount</td>
<td>1 8.3</td>
<td>0 0.0</td>
<td>0 0.0</td>
<td>0 0.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total interest %</td>
<td>1 8.3</td>
<td>0 0.0</td>
<td>3 14.2</td>
<td>5 23.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Loan Cost</td>
<td>0 0.0</td>
<td>0 5.6</td>
<td>0 0.0</td>
<td>1 4.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long Term Cost</td>
<td>0 0.0</td>
<td>0 5.6</td>
<td>0 0.0</td>
<td>1 4.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not Classifiable</td>
<td>0 0.0</td>
<td>1 10.0</td>
<td>1 4.7</td>
<td>1 4.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 2: Number and percentage of participants who cited a particular loan attribute when responding to the Preference question (“If you were going to replace your mortgage with a new mortgage, which loan would you prefer to take out? Why?”) and Cost question (“Which of these two loans is less expensive overall? And how did you decide which of the loans was less expensive?”) as a function of condition (Enhanced vs. Regular) in Experiment 2.

<table>
<thead>
<tr>
<th></th>
<th>Enhanced Preference (N = 20)</th>
<th>Enhanced Cost (N = 20)</th>
<th>Regular Preference (N = 21)</th>
<th>Regular Cost (N = 21)</th>
</tr>
</thead>
<tbody>
<tr>
<td>APR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Closing costs</td>
<td>3</td>
<td>15.0</td>
<td>3</td>
<td>15.0</td>
</tr>
<tr>
<td>Interest rate</td>
<td>3</td>
<td>15.0</td>
<td>5</td>
<td>25.0</td>
</tr>
<tr>
<td>Fees</td>
<td>1</td>
<td>5.0</td>
<td>3</td>
<td>15.0</td>
</tr>
<tr>
<td>5 year comparison</td>
<td>4</td>
<td>20.0</td>
<td>5</td>
<td>25.0</td>
</tr>
<tr>
<td>Monthly Payment</td>
<td>1</td>
<td>5.0</td>
<td>2</td>
<td>10.0</td>
</tr>
<tr>
<td>Loan Amount</td>
<td>2</td>
<td>10.0</td>
<td>1</td>
<td>5.0</td>
</tr>
<tr>
<td>Total interest %</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Not Classifiable</td>
<td>6</td>
<td>30.0</td>
<td>5</td>
<td>25.0</td>
</tr>
</tbody>
</table>
Table 3: Number and percent of participants across Experiments 1 and 2 who cited problematic terms or features that increase the likelihood a borrower will default in making payments on their home loan. “+” represents correct and “-” represents incorrect. The answers we were seeking are noted in the discussion of this Table 3 in Section II. Nevertheless, we marked some answers we were not seeking as credit when they were still overall accurately responsive to the question.

<table>
<thead>
<tr>
<th>FEATURE</th>
<th>N(%) OF PARTICIPANTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable Rate (+)</td>
<td>35(30.2)</td>
</tr>
<tr>
<td>Balloon Payment (+)</td>
<td>18(15.5)</td>
</tr>
<tr>
<td>Increase in property taxes (-) [not a loan term]</td>
<td>7(6.0)</td>
</tr>
<tr>
<td>High interest rates (+)</td>
<td>16(13.8)</td>
</tr>
<tr>
<td>Length of loan (+)</td>
<td>1(0.9)</td>
</tr>
<tr>
<td>Expensive monthly payments (+)</td>
<td>5(4.3)</td>
</tr>
<tr>
<td>No option to refinance (-) [not a permitted loan term]</td>
<td>2(1.7)</td>
</tr>
<tr>
<td>Lose of job/income (-) [not a loan term]</td>
<td>6(5.2)</td>
</tr>
<tr>
<td>High pre-payment charges (+)</td>
<td>2(1.7)</td>
</tr>
<tr>
<td>Hidden fees (+)</td>
<td>2(1.7)</td>
</tr>
<tr>
<td>High late fees (+)</td>
<td>6(5.2)</td>
</tr>
<tr>
<td>High closing costs (+)</td>
<td>2(1.7)</td>
</tr>
<tr>
<td>Fixed interest rates (-) [not problematic per se]</td>
<td>1(0.9)</td>
</tr>
<tr>
<td>Lack of borrower understanding (-) [not a loan term]</td>
<td>5(4.3)</td>
</tr>
<tr>
<td>No answer (-)</td>
<td>33(28.4)</td>
</tr>
</tbody>
</table>
Table 4: Number and percent of participants across Experiments 1 and 2 who identified these actions as ones lenders can take after a borrower defaults to recover the debt due. The “+” and “-” signs indicate which responses were considered correct and incorrect, respectively. The answers we were seeking are noted in the discussion of this Table 3 in Section II. Nevertheless, we marked some answers we were not seeking as “+” when they were still somewhat accurately responsive to the question. We coded “Restructure or modify loan terms” correct since it could lead to enabling the borrower to cure the default and repay the debt. We coded “Charge higher interest rate” since it is unlikely that lenders can do this if there is no authority to unilaterally do so under the loan documents. We coded “Give more time” as correct as it could lead to curing the default and the lender recovering the debt. We coded “Charge late fees” as incorrect as it doesn’t enable the borrower to cure the default and repay the debt and is not much of a leverage to get the borrower to repay if they are able. We coded “Damage credit” as correct as it is leverage lenders can use to extract some of the money due from some borrowers in default.

<table>
<thead>
<tr>
<th>ACTIONS</th>
<th>N(%) OF PARTICIPANTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restructure or modify loan terms (+)</td>
<td>4(3.4)</td>
</tr>
<tr>
<td>Foreclose on home/take back property (+)</td>
<td>55(47.4)</td>
</tr>
<tr>
<td>Seize other assets/properties (+)</td>
<td>14(12.0)</td>
</tr>
<tr>
<td>Charge higher interest rate (-)</td>
<td>8(6.9)</td>
</tr>
<tr>
<td>Give more time (+)</td>
<td>1(0.9)</td>
</tr>
<tr>
<td>Charge late fees (-)</td>
<td>17(14.7)</td>
</tr>
<tr>
<td>Sue/take legal actions (-) [Too vague]</td>
<td>27(23.3)</td>
</tr>
<tr>
<td>Place lien on home (-) [Mortgage lien already exists]</td>
<td>1(0.9)</td>
</tr>
<tr>
<td>Damage credit (+)</td>
<td>10(8.6)</td>
</tr>
<tr>
<td>Increase payments (-) [Meaning unclear]</td>
<td>2(1.7)</td>
</tr>
<tr>
<td>Go to government (-) [Meaning unclear]</td>
<td>1(0.9)</td>
</tr>
<tr>
<td>No answer (-)</td>
<td>24(20.7)</td>
</tr>
</tbody>
</table>
Appendix: Mathematical modeling of how APR changes as a function of how long a loan is held.

Of the two loans used in Experiments 1 and 2, one loan had an interest rate of 3.125% on a loan amount of $277,968 and total loan costs (Category D. TOTAL LOAN COSTS [A + B + C] on the CFPB’s home loan disclosure form) of $19,458, giving this loan an APR of 3.71% assuming that the loan is held for 30 years. The other loan had an interest rate of 3.2% on a loan amount of $276,006 and total loan costs of $15,180, giving it a lower APR than the first loan of 3.65% assuming it is held for 30 years. With these particular loans, the second loan with the lower APR is always the less expensive one across the life of both loans. This can be demonstrated by calculating APR assuming that the house is sold and the loan paid off early in a balloon payment. Doing this, the second loan with an APR of 3.65% assuming that it is held for 30 years is still less expensive than the first loan with an APR of 3.71% assuming it is held for 30 years even if each were paid off early at 20 years (in which case the second loan would have an APR of 3.70% versus 3.76% for the first loan), 7 years (APR of 4.18% for the second loan versus 4.38% for the first loan), or one year (APR of 9.03% for the second loan versus 10.60% for the first loan). The reason for this, however, is that the difference in interest rate 0.075% is so small relative to the large difference in loan costs of $4,278.

Often, however, when one loan has higher loan costs and the other loan has a higher interest rate, it will take time before that becomes the lower cost loan. For example, if the interest rate on the first loan with higher closing costs were lowered to 3.0% (which would then be 0.2% below the interest rate of the second loan), then the first loan would have an APR of 3.58% assuming that it is held for 30 years, which is lower than the second loan’s APR of 3.65% assuming that it is held for 30 years. But, it would not have a lower APR if it were only held for 1 year (10.47% for the first loan versus 9.03% for the second loan) or even 7 years (4.25% for the first loan versus 4.18% for the second loan). But it would have a lower APR if held for 20 years (3.63% versus 3.70%).
Appendix. The CFPB home loan disclosure form that was used in these experiments. This version of the disclosure form was the preliminary version that the CFPB sent out for comments. The final version is virtually identical.
## 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**
$455,000

**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 8/14/12 at 5pm EST.

<table>
<thead>
<tr>
<th>Loan Terms</th>
<th>Can this amount increase after closing?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loan Amount</td>
<td>$276,006</td>
</tr>
<tr>
<td>Interest Rate</td>
<td>3.2%</td>
</tr>
<tr>
<td>Monthly Principal &amp; Interest</td>
<td></td>
</tr>
<tr>
<td>Prepayment Penalty</td>
<td></td>
</tr>
<tr>
<td>Balloon Payment</td>
<td></td>
</tr>
</tbody>
</table>

**Projected Payments**

<table>
<thead>
<tr>
<th>Payment Calculation</th>
<th>Years 1-30</th>
<th>Principal &amp; Interest</th>
<th>$1,193.63</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mortgage Insurance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estimated Escrow Amount</td>
<td></td>
<td>+ $468</td>
<td></td>
</tr>
<tr>
<td>Estimated Total Monthly</td>
<td></td>
<td>$1,661.63</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Estimated Taxes, Insurance &amp; Assessments</th>
<th>Amount Can Increase Over Time</th>
<th>This estimate include</th>
<th>In escrow?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$533 a month</td>
<td>Property Taxes</td>
<td>YES</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Homeowner's Insurance</td>
<td>YES</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other:</td>
<td>NO</td>
</tr>
</tbody>
</table>

**Cash to Close**

<table>
<thead>
<tr>
<th>Estimated Cash to Close</th>
<th>-7,255</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
<td></td>
</tr>
</tbody>
</table>
## Closing Costs Details

<table>
<thead>
<tr>
<th>Loan Costs</th>
<th>Other Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Origination Charges</strong></td>
<td><strong>E. Taxes and Other Government Fees</strong> $152</td>
</tr>
<tr>
<td>% of Loan Amount (Points) $13,503</td>
<td>Recording Fees and Other Taxes $152</td>
</tr>
<tr>
<td>Application Fee $372</td>
<td>Transfer Taxes $0</td>
</tr>
<tr>
<td>Loan Origination Fee $2,450</td>
<td><strong>F. Prepaids</strong> $1,194</td>
</tr>
<tr>
<td>Broker Fee $3,254</td>
<td>Homeowner’s Insurance Premium (12 months) $1,000</td>
</tr>
<tr>
<td>Admin Fee $3,676</td>
<td>Mortgage Insurance Premium (0 months) $0</td>
</tr>
<tr>
<td><strong>B. Services You Cannot Shop For</strong></td>
<td>Prepaid Interest ($24.28 per day for 8 days @ 3.2%) $193.58</td>
</tr>
<tr>
<td>$820</td>
<td>Property Taxes (0 months) $0</td>
</tr>
<tr>
<td>Appraisal Fee $305</td>
<td><strong>G. Initial Escrow Payment at Closing</strong> $1,067</td>
</tr>
<tr>
<td>Credit Report Fee $30</td>
<td>Homeowner’s Insurance $83.33 per month for 2 mo. $167</td>
</tr>
<tr>
<td>Flood Determination Fee $35</td>
<td>Mortgage Insurance $0 per month for 0 mo. $0</td>
</tr>
<tr>
<td>Lender’s Attorney $400</td>
<td>Property Taxes $450.00 per mo. for 2 mo. $900</td>
</tr>
<tr>
<td>Tax Status Research Fee $50</td>
<td><strong>H. Other</strong> $1,636</td>
</tr>
<tr>
<td><strong>C. Services You Can Shop For</strong></td>
<td>Title - Owner’s Title Policy (optional) $1,636</td>
</tr>
<tr>
<td>$857</td>
<td><strong>J. TOTAL OTHER COSTS (E + F + G + H)</strong> $4,049</td>
</tr>
<tr>
<td>Pest Inspection Fee $125</td>
<td><strong>I. TOTAL CLOSING COSTS</strong> $19,229</td>
</tr>
<tr>
<td>Survey Fee $150</td>
<td>D + I $19,229</td>
</tr>
<tr>
<td>Title - Lender’s Title Policy $132</td>
<td>Lender Credits $0</td>
</tr>
<tr>
<td>Title - Settlement Agent Fee $300</td>
<td><strong>Calculating Cash to Close</strong></td>
</tr>
<tr>
<td>Title - Title Search $150</td>
<td>Total Closing Costs (j) $19,229</td>
</tr>
<tr>
<td><strong>D. TOTAL LOAN COSTS (A + B + C)</strong> $15,180</td>
<td>Closing Costs Financed (Included in Loan Amount) $19,229</td>
</tr>
<tr>
<td></td>
<td>Down Payment/Funds from Borrower $0</td>
</tr>
<tr>
<td></td>
<td>Deposit $0</td>
</tr>
<tr>
<td></td>
<td>Funds for Borrower $7,255</td>
</tr>
<tr>
<td></td>
<td>Seller Credits $0</td>
</tr>
<tr>
<td></td>
<td>Adjustments and Other Credits $0</td>
</tr>
<tr>
<td></td>
<td>Estimated Cash to Close $7,255</td>
</tr>
</tbody>
</table>
## 2014

### Dodd-Frank 2.0

**Additional Information About This Loan**

<table>
<thead>
<tr>
<th>LENDER</th>
<th>Ficus Bank</th>
</tr>
</thead>
<tbody>
<tr>
<td>NMLS/LICENS</td>
<td></td>
</tr>
<tr>
<td>ID</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MORTGAGE BROKER</th>
<th>Pecan Mortgage</th>
</tr>
</thead>
<tbody>
<tr>
<td>NMLS/LICENSE ID</td>
<td>222222</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LOAN OFFICER</th>
<th>Joe Smith</th>
</tr>
</thead>
<tbody>
<tr>
<td>NMLS ID</td>
<td>12345</td>
</tr>
<tr>
<td>EMAIL</td>
<td><a href="mailto:jsmith@ficusbank.com">jsmith@ficusbank.com</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LOAN OFFICER</th>
<th>Jane Jones</th>
</tr>
</thead>
<tbody>
<tr>
<td>NMLS ID</td>
<td>67890</td>
</tr>
<tr>
<td>EMAIL</td>
<td><a href="mailto:jjones@pecanmortgagebroker.com">jjones@pecanmortgagebroker.com</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PHONE</th>
<th>111-222-3333</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>PHONE</th>
<th>333-444-5555</th>
</tr>
</thead>
</table>

### Comparisons

<table>
<thead>
<tr>
<th>In 5 Years</th>
<th>$71,618</th>
<th>Total you will have paid in principal, interest, mortgage insurance, and loan costs.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$29,733</td>
<td>Principal you will have paid off.</td>
</tr>
</tbody>
</table>

| Annual Percentage Rate (APR) | 3.65% | Your costs over the loan term expressed as a rate. This is not your interest rate. |

| Total Interest Percentage (TIP) | 5.69% | The total amount of interest that you will pay over the loan term as a percentage of your loan amount. |

### Other Considerations

#### Appraisal

We may order an appraisal to determine the property's value and charge you for this appraisal. We will promptly give you a copy of any appraisal, even if your loan does not close. You can pay for an additional appraisal for your own use at your own cost.

#### Assumption

If you sell or transfer this property to another person, we will allow, under certain conditions, this person to assume this loan on the original terms. ☒

#### Homeowner’s Insurance

This loan requires homeowner’s insurance on the property, which you may obtain from a company of your choice that we find acceptable.

#### Late Payment

If your payment is more than 15 days late, we will charge a late fee of 5% of the monthly principal and interest payment.

#### Refinance

Refinancing this loan will depend on your future financial situation, the property value, and market conditions. You may not be able to refinance this loan.

#### Servicing

We intend: ☒

- to service your loan. If so, you will make your payments to us.
- ☐ to transfer servicing of your loan.

#### Product

- 30 year, fixed-rate

### Confirm Receipt

By signing, you are only confirming that you have received this form. You do not have to accept this loan because you have signed or received this form.

<table>
<thead>
<tr>
<th>Applicant Signature</th>
<th>Date</th>
<th>Co-Applicant Signature</th>
<th>Date</th>
</tr>
</thead>
</table>