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Discussion Papers

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DP 24-01

PUBLISHED
November 2024

FRB CFI
PHILADELPHIA

DOI: https://doi.org/10.21799/frbp.dp.2024.01

The Rise in Mortgage Fees: Evidence from HMDA Data*

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November 1, 2024

Abstract

Although rising mortgage interest rates between 2022 and 2023 captured headlines, the cost of upfront mortgage fees also increased significantly during that time. Using new Home Mortgage Disclosure Act data on fees, collected since 2018, we estimate that borrowers' out-of-pocket upfront costs for getting a home purchase mortgage rose nearly 33 percent from 2021 to 2023, to almost $6,500. We document that the main driver of this increase has been rising payments of "discount points," as opposed to other types of lender fees and third-party fees. We show that loans originated by nonbanks, in particular, have seen large increases in discount points and yet also carry the highest interest rates, on average, after accounting for borrower and loan traits that influence risk premia.

Keywords: mortgage, closing costs, nonbanks, FinTech
JEL classification: G21, G51

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I Introduction

Interest rates for mortgages surged between 2022 and 2023 to levels not seen since the early 2000s. While this fact is widely understood, less public attention has been paid to upfront mortgage fees. These fees, which are paid at or before the time the loan is taken out, include three main components: discount points, which can be charged by lenders in return for an interest rate reduction; other fees charged by lenders (e.g., application fees); and various fees charged by other service providers such as appraisers, title insurance companies, and settlement agents (which we call "third-party costs"). As we document in this discussion paper, these costs have risen dramatically alongside rates.

Data on upfront costs for mortgages have been almost non-existent until recently. In one of the few previous studies of closing costs, Woodward (2008) hand-collected data from a small sample of closing documents. However, since 2018, lenders have reported data on upfront costs in their annual Home Mortgage Disclosure Act (HMDA) filings. We draw on these data, which represent the only comprehensive source of information on mortgage fees in the U.S., to describe the rise in upfront mortgage costs and how these increases have varied across loan and lender types. Additionally, because of the novelty and limited prior use of the HMDA upfront costs data, we also carefully describe these new fields and highlight some of their limitations, which may be beneficial to future data users.

We estimate from the HMDA data that upfront points and fees paid by home buyers to lenders and third-party service providers averaged nearly $6,500 in 2023, up from about $4,900 in 2021 — an increase of nearly 33 percent. Furthermore, we find that this increase was driven by rising payments of discount points, while third-party costs were largely unchanged in 2022 and 2023. Whereas discount points were typically close to zero in much of 2021, they jumped to about 0.7 points (where one "point" costs one percent of the loan

amount) in 2023, on average. About 30 percent of loans had over one point in 2023, up from about 10 percent in 2021. The jump in points implies that the simple headline rise in mortgage rates understates the true rise in mortgage costs.[1]

We also show that discount points have not risen uniformly across lenders. They have risen considerably more on loans originated by nonbank mortgage lenders, compared with loans from banks and, especially, from credit unions. This heterogeneity suggests rising points may be related to supply-side factors (e.g., differences across lenders in the costs of mortgage lending) more so than demand-side factors (i.e., borrowers wanting to buy down their rate).

Not only did nonbank loans have higher points in 2023, their loans also tended to have relatively high interest rates, controlling for borrower risk factors and loan characteristics. These results imply that nonbanks, on average, were more expensive to borrow from in 2023. For example, we estimate that a given borrower getting a $300,000 mortgage from the average nonbank would have paid about $2,000 more (the points difference plus the rate difference translated into upfront costs) relative to getting the same loan from the average bank, and almost $4,000 more relative to getting the same loan from the average credit union.[2]

Among nonbanks, our analysis distinguishes between "FinTech" lenders (Fuster et al., 2019), nonbanks that are integrated with large home builders, and all other nonbanks (which accounted for over three-quarters of overall nonbank home purchase originations in 2023). Unlike all other nonbanks, we find that FinTechs had, on average, similar (if not better) pricing compared with banks in 2023. For builders, we find that they originated mortgages that were substantially cheaper than those from banks, though we think this

[1] We also use higher-frequency data from Optimal Blue to show that discount points remain elevated through September 2024.

[2] Our finding that nonbanks are relatively expensive is consistent with evidence in Bhutta et al. (forthcoming (a)) using Optimal Blue data that nonbanks were relatively more expensive in pre-pandemic years.

likely reflects incentives builders offered to help sell new homes amid lower housing demand in 2023 (in 2021, we find that builder pricing was close to that of banks and credit unions). This analysis is the first to use HMDA data to evaluate pricing of nonbanks relative to depository lenders along *both* the interest rate and fees dimensions, thus adding to the growing literature on nonbanks, which have come to dominate the mortgage origination industry (Kim et al., 2018; Buchak et al., 2018; Fuster et al., 2019; Jagtiani et al., 2021).

Overall, when we compare mortgage pricing across lenders, we find a *positive* relationship between points and interest rates. However, studying borrowers with similar risk profiles seeking similar loans, at the same time and at the *same* lender, we find that paying one additional point is generally associated with a rate decline of about 23 basis points (bps). A recent report from Freddie Mac (Khater et al., 2024) — which compares prime conventional borrowers who paid points to those who did not pay points, *not* conditional on going to the same lender — finds that borrowers receive little rate benefit of paying points. Given our results, this lack of a rate benefit could reflect variation in pricing across lenders (i.e., borrowers who pay points may be going to more expensive lenders than borrowers who pay no points), rather than the point-rate trade-off of the average lender.

The CFPB has also recently reported on the rise in discount points (Consumer Financial Protection Bureau, 2023a) and raised concerns about rising "junk fees" for mortgages (Consumer Financial Protection Bureau, 2024a). Our findings that the rise in mortgage fees has been driven by rising discount points, and that payment of points at a given lender is associated with an interest rate reduction, suggest the rise in fees may simply reflect lenders and borrowers adjusting to a higher rate environment. Also, despite rising fees and mortgage rates, mortgage lending profits declined sharply in 2022 and 2023 (Mortgage Bankers Association, 2024). That said, we also find that some lenders are more expensive than others, underscoring the potential benefits to consumers of shopping around for lower fees and interest rates.

One limitation of the new HMDA loan cost fields that we highlight in this paper is that some of the fields reflect only "borrower-paid" amounts. Thus, our previously mentioned estimate of total lender and third-party points and fees of $6,500 may understate the true upfront costs to get a mortgage, to the extent that some closing costs are paid by other parties, such as sellers and homebuilders. We discuss this issue in greater detail throughout the paper, especially in Section II, and provide direct evidence in Section IV.A that discount points are sometimes partially paid by others.

II Background and Data

In this section we give an overview of how discount points and other fees factor into mortgage closing costs. We explain how these fees are reflected on the standard Closing Disclosure form that lenders are required to provide to mortgage borrowers and how the form's components map to upfront cost fields captured in HMDA data.

II.A Types of Mortgage Fees and Discount Points

Given the size of the borrowed amounts and the complexity of borrowing against real estate collateral, the origination process is more intensive for mortgages than other household credit products, such as credit cards or auto loans. Lenders typically charge fees (e.g., "origination fees," "application fees," and "underwriting fees") to help pay the costs of loan underwriters, processors, loan officers, and support staff, as well as non-personnel costs such as overhead.[3]

Some of the components of the origination process are completed by third parties, rather than in-house by the lender. For example, the lender typically orders an appraisal from an external appraisal company, and usually the appraisal fee is borne by the borrower

[3]Importantly, lenders who originate to distribute also make money when they sell a loan on the secondary market. Lenders who hold loans in portfolio (that is, holding the loans on their own balance sheets rather than selling them) also make money through the stream of interest payments borrowers make each month.

and rolled into the closing costs that must be paid at the time of the loan origination, much like the costs charged to compensate the lender for its work. Other third-party costs can include services such as title searches, lender's title insurance, title settlement services, credit report pulls, and lender-required flood risk determinations. Because these services are a requirement for originating the loan, they're considered "loan costs" on the Closing Disclosure forms provided to borrowers, as we discuss further below.

In addition to origination fees paid to lenders and the various fees paid to third-party service providers, loans may also carry costs for "discount points." To explain these costs, let us step back and acknowledge that mortgage lenders have a menu of loan options and features that they can offer prospective borrowers. Given different characteristics of the loan and borrower, such as the loan-to-value ratio and borrower credit score, lenders may adjust the interest rate they offer borrowers. They also may offer the borrower the ability to buy down their interest rate to a lower rate, thereby lowering their monthly payments for the life of the loan, in exchange for paying an upfront fee. Paying this fee is known as "purchasing discount points," also sometimes referred to simply as "paying points," where one "point" costs 1 percent of the loan amount.[4]

Not all loans come with discount point charges. Sometimes, borrowers may be offered a rate without any points, and they may choose not to buy it down. Further, sometimes borrowers receive *negative* discount points, in the form of lender "credits," in exchange for paying a higher interest rate, all else equal. This option is often employed when borrowers want to bring little or no money to the closing table to pay for upfront fees, applying the lender credits to offset those costs.

[4]Paying points may be optimal if a borrower anticipates that they will have their mortgage for a sufficient period of time to offset the upfront cost. Paying points may also be useful if a borrower needs to reduce their monthly debt payments to get below a debt-payment-to-income (DTI) ratio threshold for mortgage approval. Points can be paid for at closing, or they can be rolled into the balance of the mortgage. The latter option can help liquidity constrained borrowers in the short run but results in paying interest on that amount over the life of the loan. Likewise, rolling the points into the balance increases the loan-to-value ratio, which could trigger the loan to carry a higher interest rate or greater mortgage insurance costs.

While in principle a borrower pays points to buy down their mortgage rate, and borrowers can usually expect around a 20-25 bps interest rate reduction for each discount point, the size of the interest rate discount can vary over time and across lenders. Moreover, lenders often advertise significantly different interest rates, conditional on points (McManus et al., 2018). Thus, a borrower could pay more points at one lender than at another and yet still receive a higher rate than they would have at the other lender. Unfortunately, borrowers may not fully understand the mechanics of discount points or the benefits of shopping around (Woodward and Hall, 2010). Indeed, research has shown that borrowers with equivalent risk profiles, getting the same loans at the same time, and paying the same amount of points often receive substantially different interest rates (Bhutta et al., forthcoming (a)). We demonstrate such dispersion in the HMDA data in Section IV, and estimate point-rate trade-offs in Section V.

II.B The Closing Disclosure

Since 2015, the CFPB has required through its "Know Before You Owe" mortgage rule that lenders issue borrowers a standard Closing Disclosure document at least three days before closing on a loan.[5] This document, typically five pages in length, is intended to ensure transparency to the borrower by providing a detailed breakdown of the costs of a mortgage.

Figure 1 provides an example of the second page of the disclosure, which shows a detailed list of all closing costs. The top half of this form lists all "loan costs," or the fees associated with obtaining a mortgage, broken down by whether they are borrower-paid, seller-paid, or paid by others, and whether they are paid at or before closing. The bottom

[5]This rule is formally known as the Truth in Lending Act (TILA) and the Real Estate Settlement Procedures Act (RESPA) Integrated Disclosures, or "TRID." More information can be found at Consumer Financial Protection Bureau (2023b). Not all mortgages are subject to the TILA-RESPA Integrated Closing Disclosure (for example, reverse mortgages are not). The Closing Disclosure superseded the HUD-1 form that had been the industry standard disclosure form prior to October 2015.

half lists other closing costs that are generally not connected to the cost of obtaining a mortgage, such as taxes, real estate commissions, and insurance payments due at closing, again broken out by who pays and when it is paid. A subset of the costs reported on this page are the source data for the HMDA upfront cost fields described below.

II.C The HMDA Fields on Upfront Fees

Since 2018, the HMDA data include closing costs fields. In particular, for most mortgages, lenders now report four closing cost fields drawn directly from information provided to borrowers on page 2 of the Closing Disclosure (Figure 1):[6]

1. *Origination Charges* - This HMDA data field captures the total fees charged by the lender for originating the loan, including discount points, that are designated as borrower-paid (see Box A, top line of the borrower-paid column, on the Closing Disclosure). If discount points or other origination fees are paid by another party (e.g., a home seller), those costs would not be captured in this HMDA field. In other words, the Origination Charges field reflects amounts paid directly by the borrower to the lender, rather than the total fee revenue earned by the lender from the loan origination.

2. *Discount Points* - Discount points are disclosed in Box A of the Closing Disclosure on line 1. In the HMDA data, the Discount Points field captures the total amount spent on discount points, in dollars, including both borrower-paid points and points paid by others. Thus, Discount Points as reported in HMDA could potentially exceed Origination Charges if another party paid for the points. However, if all points are paid directly by the borrower, then Origination Charges would be fully inclusive of Discount Points.

[6] For mortgages that are reported in HMDA, but not subject to the TILA-RESPA Integrated Closing Disclosure requirement, these fields will not be reported, the Total Points and Fees field may be reported instead. For additional discussion of HMDA reporting, see Liu et al. (2020).

3. *Lender Credits* – This field captures rebates from the lender that can help borrowers offset their closing costs. In contrast to discount points, lender credits may be provided in exchange for the borrower taking on a higher interest rate. Note that HMDA only includes general credits listed at the bottom of the Closing Disclosure in Box J. Lenders may also provide credits to pay for specific closing items (e.g., title or taxes); such credits would be listed in the "Paid by Others" column of the Closing Disclosure. As a result, those credits—and the expenses they are offsetting—would not be observed directly in HMDA data.

4. *Total Loan Costs* – This field is the sum of borrower-paid origination charges (Box A) and borrower-paid third-party charges, such as appraisal fees and lender's title insurance (Boxes B and C). For FHA loans, Box C also includes the upfront mortgage insurance premium charges by FHA. For home purchase loans, this fee is 1.75 percent of the loan amount. Lenders typically will finance this fee by rolling it into the loan, and therefore borrowers generally do not pay it out-of-pocket at closing.

An important implication of these definitions for HMDA data users is that the Origination Charges and Total Loan Costs fields, because they are limited to *borrower-paid* amounts, may understate true closing costs and be difficult to interpret from an economic perspective. Unless borrowers directly pay all closing costs, these fields will not map to the actual prices that lenders and third-party service providers are charging.[7] Moreover, despite capturing the borrower-paid portion of fees, these fields nevertheless are unlikely to reflect the true burden of closing costs on borrowers. Indeed, in many instances borrowers could be indirectly paying for points or other closing costs, such as when a seller may pay some of the points on a mortgage in exchange for the buyer paying a higher price for

[7] Note that while we provide direct evidence in Section IV.A of discount points being paid by sellers or other parties, someone other than the borrower could also be paying other closing cost items, making those loan costs invisible in the HMDA data.

the home.

The incomplete accounting of lender credits can also complicate interpretation of the HMDA upfront cost data. If lenders provide specific credits by paying for third-party costs or items in the bottom half of the Closing Cost Details page (i.e., "Other Costs"), neither the credits nor the expenses themselves will be reflected in the HMDA fields. Such credits may occur, for example, when borrowers get a so-called "no cost mortgage," where lenders pay all closing costs. One complication that arises from missing lender credits is that net discount points (i.e., discount points minus lender credits), a key variable in our analysis below, will be overstated. In this period of higher interest rates and discount points, we suspect lender credits are less common and therefore less likely to be a major concern in our analysis; but in other rate environments they may be more common, and this may be more of an issue for some data users.

II.D HMDA Data Sample Description

To examine these new fields and what they can tell us about how upfront mortgage costs have changed over the past few years, we draw on 2018–2023 confidential HMDA data. The confidential version of the HMDA data differs from the publicly available data in a few ways that are important for this analysis. First, the confidential data include borrower credit score, which is an important determinant of loan pricing. Second, the confidential data include mortgage approval recommendations from Automated Underwriting Systems (AUS), such as Desktop Underwriter from Fannie Mae. (For more on these AUS and how they influence mortgage approvals, see Bhutta et al. (forthcoming (b)).) Third, the confidential data include application and closing dates, which allow us to document changes in mortgage rates and loan costs at a high frequency and account for differences in pricing across borrowers that may be due to daily fluctuations in market interest rates.

For the analysis in this paper, we focus on conventional and FHA-insured first-lien

home-purchase mortgage originations for single-family, owner-occupied, site-built properties. We further restrict our attention to standard 30-year, fixed-rate, closed-end mortgages that received an automated approval recommendation from Fannie Mae, Freddie Mac, or FHA AUS, following the methodology of Bhutta et al. (forthcoming (b)). We exclude originations where credit score, combined loan-to-value (CLTV) ratio, DTI, income, interest rate, or any of the cost fields described above are missing or implausible.[8] We also exclude loans smaller than $25,000 or larger than $2 million.

We supplement the confidential HMDA data with lender-level information from the National Information Center to distinguish banks, nonbanks, and credit unions.[9] We further break down nonbanks as traditional nonbanks vs. FinTech firms, using the classification used by Jagtiani et al. (2021). We also distinguish 30 nonbank lenders that are integrated with national and regional home builders, as described in the Appendix.

III Trends in Mortgage Fees and Discount Points

Rising mortgage interest rates made headlines beginning in early 2022, causing a dramatic increase in the cost of borrowing to buy a home or refinance a mortgage. Meanwhile, upfront fees paid by borrowers to close a loan were also increasing rapidly. In Figure 2, we plot the monthly time series of three upfront cost variables which we derive from the HMDA upfront cost fields described above. The dashed black line plots Origination Charges minus Lender Credits, which we will refer to as *Net Points & Fees* since this variable captures all points, net of observed lender credits, plus all other fees paid to lenders by borrowers. *Net Points & Fees* more than doubled between 2021 and 2023, jumping from an average of just under $1,500 during 2021 to an average of nearly $3,500 during 2023.

The solid red line in Figure 2 suggests that the increase in *Net Points & Fees* has been

[8]These variables could be missing because some lenders are exempt from reporting them (see Liu et al. (2020)), or because such information was not used for underwriting the loan.
[9]This information is matched to HMDA data and provided courtesy of Bob Avery in his HMDA lender file.

driven by a sharp rise in the *Net Points* component, which we calculate as Discount Points minus Lender Credits.[10] Given the expected inverse relationship between points and mortgage rates, all else equal, the rise in the average interest rate on closed mortgages — also shown in Figure 2 — may have been even larger in the absence of rising discount points.

The gap between the black dashed line and the solid red line can be used to infer the cost of all other fees that lenders collect at or before closing. However, it is important to note that this gap does not purely reflect lender fees since *Net Points & Fees* only captures borrower-paid points, while *Net Points* reflects all discount points including, for example, seller-paid points. Bearing these definitions in mind, the gap between the two lines likely understates lender fees to some extent, and suggests that lender fees for home purchase loans typically averaged over $1,000 during the period studied.

In contrast to rising points and fees paid to lenders, average borrower-paid *Third-Party Costs*, defined as Total Loan Costs minus Origination Charges and FHA upfront insurance premiums (if applicable), were largely unchanged from the end of 2021 through 2023, holding steady at nearly $3,000.[11] These costs include items such as appraisal fees, settlement service fees, and lenders' title insurance. Adding together *Net Points & Fees* and *Third-Party Costs* suggests that borrowers' out-of-pocket upfront costs for getting a home purchase mortgage averaged almost $6,500 in 2023, up from about $4,900 in 2021.

III.A The Rise in Discount Points

In this section, we further describe the rise in *Net Points*. To begin, we compare *Net Points* from the HMDA data with the time trend in discount points (net of lender credits) from

[10] In calculating *Net Points*, we subtract only lender credits that are in excess of 1/8 of a point.

[11] Upfront mortgage insurance premiums are paid to FHA, in the amount of 1.75 percent of the loan amount for home-purchase mortgages. This fee structure did not change during the period we study, and this fee is typically rolled into the loan amount at origination rather than being paid at closing.

another data source: Optimal Blue.[12] In the Optimal Blue data, we see a sharp rise in points beginning in late 2021, mirroring the time series patterns in the HMDA data (Figure 3). Additionally, because the Optimal Blue data are provided at a weekly cadence, rather than annually as with the HMDA data, we can see that discount points remain elevated into 2024 through September.

While the time series variation in discount points is nearly identical between the two data sources, the Optimal Blue data show notably higher *levels* of points relative to the HMDA data. These levels may differ for a number of reasons. One possibility is renegotiation of terms (e.g., the lender offering concessions) between the time the loan is locked and when it closes. Another factor could be "attrition," in that not all locks result in originations, particularly those with higher costs.[13] Differences in lender composition between the two sources may also be at play. Regardless, the key takeaway from Figure 3 is that we see a sharp rise in discount points in the Optimal Blue data, which helps to confirm the pattern observed in the HMDA data. Furthermore, Figure 3 shows that that the dollar amount rise in discount point costs displayed in Figure 2 is not explained by rising loan amounts. In fact, discount points as a percentage of loan amount also increased rapidly beginning in late 2021.

Figure 4 shows cumulative distribution functions (CDFs) of *Net Points* in 2019, 2021, and 2023. The y-axis measures the fraction of loans with the amount of points displayed on the x-axis or less. The CDF value of about 0.7 at one point in the red line indicates that about 30 percent of loans included one or more points in 2023, compared with just 10

[12] Optimal Blue provides a software platform to mortgage lenders to help them manage pricing and mortgage rate locks, and it connects mortgage originators to whole loan investors. Data from its platform include more than 1,000 lenders, which tend to be mid-size and smaller lenders including nonbanks, banks, and credit unions. Optimal Blue estimates that the platform has been used to lock one-third of US mortgage originations in recent years. The data are anonymized—they do not contain lender or customer identities, and they do not include complete rate sheets. The data are described in greater detail by Bhutta et al. (forthcoming (a)).

[13] According to Optimal Blue (2024), about 80 percent of purchase mortgage locks in 2023 and the first half of 2024 resulted in origination.

percent in the earlier years (where the CDF at one point is about 0.9). Over 10 percent of loans in 2023 included two points or more.

Figure 5 indicates that *Net Points* rose more for FHA loans relative to conventional loans. This may be surprising since FHA borrowers tend to be first-time home buyers with small down payments who may have relatively limited resources to pay points. That said, it is important to keep in mind that points are not always paid out-of-pocket by borrowers. Instead, for example, home buyers may negotiate with home sellers to pay mortgage points on their behalf in lieu of other concessions, and such arrangements may be more likely for FHA borrowers who need to lower their monthly payments to qualify for the mortgage. In Section IV.A we provide evidence that points are sometimes paid by parties other than borrowers.

The rise in *Net Points* has differed across lender types, as shown in Figure 6. The solid red line shows that *Net Points* have gone up more sharply for loans originated by nonbanks relative to loans originated by banks (dashed black line) and credit unions (dotted green line). In 2023, nonbanks, on average, charged about 0.25 points more than banks and about 0.5 points more than credit unions. In the next section, we will evaluate whether these differences could be explained by offsetting differences in mortgage rates or differences in the risk profiles of borrowers.

Figure 6 also shows that *Net Points* have risen most sharply for nonbank lenders integrated into home-building companies.[14] With many homeowners staying put and not listing their homes for sale due to a "lock-in" effect from the dramatic increase in mortgage interest rates (Batzer et al., 2024), new construction has made up a record share of homes sold (Tracey, 2023). Builders' share of purchase mortgages increased from about 4 percent of loans in 2018–2022 to over 6 percent in 2023, and their loans also tend to carry

[14]The "nonbank" line refers to all other nonbank mortgage lenders. Note that we also find that points have increased more for loans originated by nonbanks within both the conventional and FHA segments.

more discount points — about 1.5 points on average in 2023. However, during this period builders may often be paying some of these points as an incentive in the sale transaction, as we will provide some evidence for below.[15] Regardless, because builder mortgage pricing appears to be quite different relative to other nonbanks, we separate out these transactions in our analysis.

IV Are Nonbank Lenders More Expensive?

As discussed above, Figure 6 indicates that mortgages from nonbanks tend to have higher points compared with banks and credit unions, and that this gap widened in 2022 and 2023. In order to assess whether mortgages from nonbanks are costlier for consumers, we need to also compare the interest rates and other fees charged by these lenders relative to banks and credit unions. In addition, research suggests that nonbanks tend to originate loans to riskier borrowers, which can lead to elevated pricing and therefore also needs to be taken into account (Kim et al., 2022). As nonbanks have come to dominate the mortgage origination market — for example, the Urban Institute (2024) estimates that the nonbank share of agency home purchase originations was over 80 percent by mid-2024 — understanding price differences across lender types is important to evaluating the consumer welfare implications of the shift from traditional depository lenders to nonbank lenders.

In Figure 7, each data point displays the conditional average *Interest Rate* on the y-axis and the conditional average *Net Points* on the x-axis for a single lender's home purchase loans in 2023, restricted to lenders with at least 500 home purchase originations that year.[16]

[15] For some details on the history of builders providing financing services and discussion of builders offsetting the cost of financing incentives through the sale prices of the homes, see Eskridge (1984).

[16] To estimate conditional average *Interest Rates* and conditional average *Net Points* for each lender, we first estimate a separate regression of each of these variables on fixed effects for application date, county, and fully interacted bins of loan type, loan size, credit score, and CLTV. We then obtain residuals from these regressions, compute averages of the residuals by lender, and plot these average residuals (plus a constant) in Figure 7.

We use different shapes/colors to code each data point according to the type of lender: banks are signified by red squares, credit unions by green diamonds, nonbanks by black dots, and builders by blue triangles.

There are several interesting takeaways from Figure 7. First, for a given level of average points, there is a considerable amount of dispersion in average interest rates, and vice versa. Second, aside from builders, the relationship across lenders between rates and points tends to be *upward* sloping. That is, lenders that tend to charge a relatively high amount of discount points also tend to charge relatively high interest rates. Third, the black dots indicate that nonbanks tend to be more expensive than banks and, especially, credit unions.[17] These observations suggest that some lenders, particularly nonbanks, are substantially more expensive than others given observably identical borrowers getting similar loans at the same time and in the same county.

In Table 1, we further evaluate price differences across lender types. The top panel displays results from four regressions of different pricing outcomes on lender type indicators, controlling for application date, county, and fully interacted bins of loan type, loan size, credit score, and CLTV, based on data from 2023. In these regressions, we include an additional lender category, namely FinTech lenders, which are identified using methodology from Jagtiani et al. (2021) as described earlier, whereas in Figure 7 these lenders were grouped into the nonbank category.[18] Banks are the omitted category, and therefore the coefficients measure the difference in the outcome variables, on average, between a given type of lender and banks.

Similar to the evidence from Figure 7, column 1 shows that mortgages originated by nonbanks tended to have the highest interest rates during 2023. Their rates were about

[17] To be sure, credit unions operate as non-profits, and therefore may be expected to be relatively inexpensive. These findings are consistent with previous research on credit unions by Shahidinejad (2024).

[18] The share of our sample of home purchase loans in 2023 for each lender type is as follows: banks 27 percent, credit unions 5 percent, nonbanks 53 percent, builders 4 percent, and FinTechs 11 percent.

11 bps higher than mortgages from banks, and 20 bps higher than mortgages from credit unions. At the same time, column 2 shows that nonbanks charged about 0.21 points *more* than banks, on average, while credit unions charged nearly 0.24 points *less* than banks. Combining these results, and assuming that a 25 bps rate buydown corresponds to one point, suggests that nonbanks typically charged about $2,000 more than banks, and $3,750 more than credit unions, in 2023 for a $300,000 mortgage.[19]

Builders appear to have provided relatively inexpensive mortgages in 2023, with average interest rates 70 bps cheaper than bank rates, while charging only 0.8 points more than banks on average. However, this finding must be interpreted with caution; builder financing is often bundled with the home sale, so there may be some offsetting costs to consumers that we do not observe in the data. Finally, FinTech mortgage pricing appears similar to bank pricing, if not somewhat cheaper, with rates that were about 9–10 bps lower than bank rates offset by 0.21–0.26 more points, on average, in the two years we study. Previous studies have examined earlier vintages of loans but have not had data on points, making it difficult to assess the relative pricing of these firms overall. Focusing on conventional conforming loans, Buchak et al. (2018) finds that FinTech firms charge 13 basis points *more* than depository institutions, while traditional nonbanks charge 2.4 bps *less* than depositories. Their data is based on loans acquired by Fannie Mae or Freddie Mac between 2000 and 2015.[20]

In column 3, the outcome variable is *Net Points & Fees*, and thus includes both discount points and other lender fees. In this regression, the difference in upfront costs between

[19] Specifically, for the $2,000 differential compared with banks: nonbanks charge on average $630 more than banks in points ((0.211/100) * $300,000), and the average 11 bps higher interest rate nonbanks charge would cost $1,320 to equalize if paying points at this assumed point/rate trade-off ((11 bps * $3,000 per point) / 25 bps). $630 + $1,320 = $1,950.

[20] In their online appendix, they show that nonbanks charged 3.7 bps more than depositories for FHA loans, and FinTech firms charged 4 bps less, but they caution that their data on FHA loans lack credit score to use as a control. Fuster et al. (2019) finds FinTech firms are 7.5 bps cheaper than other nonbanks for FHA purchase loans but have indistinguishable interest rates for FHA refinance loans.

banks and nonbanks expands to nearly 0.4 percent of the loan amount, suggesting that nonbanks charged even more in 2023, relative to banks, once we account for other lender fees. That said, recall that *Net Points & Fees*, unlike *Net Points*, is limited to borrower-paid amounts. If bank customers are more likely than nonbank customers to have had, for example, seller-paid points, that could drive this result. Yet in contrast, the coefficients for FinTechs and builders are smaller in column 3 than in column 2, suggesting seller-paid (or other-paid) points are more common in FinTech and builder originations than in bank originations. The especially large coefficient change for builders between columns 2 and 3 likely reflects a substantial amount of builder-paid points used as incentives to attract home buyers amid declining demand in high-rate environment of 2023.

Column 4 of the top panel of Table 1 displays regression results where the outcome variable is *Third-Party Fees*. Unlike the outcomes in columns 1–3, *Third-Party Fees* are not paid to lenders. As one might expect, these fees are not closely related to lender type, which helps reassure that the regression results in columns 1–3 do not reflect spurious differences between lender types.

Finally, the bottom panel of Table 1 repeats the same set of regressions, but uses data from 2021 — prior to the rise in rates, and when discount points were less prevalent. These results indicate that nonbanks were more expensive than banks even in 2021, but that this gap expanded by 2023 as points increased at nonbanks relative to banks. Unlike 2023, builders in 2021 — when housing demand was strong — do not appear to have been providing deep discounts on mortgages to their home buyers.

IV.A Are Points "Borrower Paid"?

Recall that on the Closing Disclosure, each fee is distinguished by which party is providing the payment, and the Origination Charges field in HMDA reflects only the "borrower-paid" portion. In contrast, the Discount Point field in HMDA represents the total points paid

for the loan: those paid by the borrower, by the seller (in the case of purchase-money mortgages), and by any other parties. We can take advantage of this difference to identify whether points are paid to any extent by sellers or other parties.

Figure 8 shows the relationship between *Net Points* and *Net Points & Fees*. If points were always paid by the borrower, then there would be a one-to-one relationship between these two variables along the plotted 45-degree line. At another extreme, if discount points were always paid by home sellers, we would expect no change in net origination fees as net discount points increased. In Figure 8, the one-to-one relationship approximately holds in the data for loans between zero and one discount point. But as *Net Points* rises above 1, the relationship between the two variables flattens out, especially above 2 points. This pattern suggests that borrowers on average in 2023 did not directly pay the discount points in excess of two points; instead, these marginal points were paid by either sellers or other parties (we cannot distinguish which).

Finally, one other interesting pattern emerges in Figure 8 as *Net Points* drops below zero. Between 0 and -1, the relationship with *Net Points & Fees* is again flat, which suggests that for these loans, lender credits tend to be offset by relatively high other fees charged by lenders (e.g., application fees). In other words, on net these loans do not seem to actually be receiving any credits.

V Is There a Rate Benefit to Paying Points?

In Figure 7 we observed that borrowers who paid a relatively high amount of points at a given lender were also more likely to pay higher interest rates than similar borrowers who paid fewer points at other lenders. In other words, across different lenders, there may not be a clear rate benefit associated with paying points relative to the pricing available from other lenders. However, for similar borrowers getting the same loan, at the same time, and at the *same* lender, there may be a clearer trade-off between discount points and interest

rates.

In Figure 9 we estimate a "within-lender" point-rate trade-off using 2023 HMDA data. The x-axis displays *Net Points* rounded to the nearest eighth of a point. The y-axis displays the average interest rate at each *Net Point* value, after controlling for application date and county fixed effects, fully interacted bins of loan type, loan size, credit score, and CLTV, and lender-by-loan type fixed effects. In other words, we compare the interest rates for similar borrowers getting similar loans at similar times from the same lender, but who paid different amounts of points.

Particularly among those borrowers with discount points above zero, we see a clear decline in interest rates among those who paid more points, with an average rate decline of nearly 23 bps for each point paid. However, among those with negative points due to lender credits, the relationship with interest rates is not as expected. While those with the largest lender credits indeed have the highest interest rates on average, there is a slight decline in the average interest rate moving from zero points to negative one point (i.e., a 1 percent credit). One potential explanation may come from our earlier discussion of Figure 8, that borrowers with negative *Net Points* between 0 and -1 may not actually be receiving credits after accounting for other lender fees. Another possible contributing factor is that there may be unobserved differences among borrowers across different levels of *Net Points*, and these unobserved differences may influence both the rates and points borrowers obtain. For example, perhaps the borrowers getting modest lender credits — particularly in this high rate environment — tend to have longstanding relationships with their lenders and are able to obtain relatively "good deals." Due to such potential selection issues, the point-rate trade-off observed in Figure 9 should be interpreted with caution.

VI Conclusion

Prior to 2018, HMDA data included scant information on the pricing of loans: just a single field that measured the rate spread (difference between prevailing average prime offer rate available in the market and the rate paid by the borrower), and even that was limited to only designated high-cost mortgages. In addition to now including mortgage interest rate and annual percentage rate for most mortgage originations in the United States, the HMDA data in 2018 and later also include total loan costs paid by borrowers, costs paid by borrowers for origination services provided specifically by the lender (rather than a third party), and the total amount spent by the borrower or other parties on discount points to buy down the interest rate on the loan. The data also include information on lender credits that help offset borrower closing costs.

Keeping appropriate caveats in mind, we use the HMDA data to examine important trends in how the cost of borrowing has changed over time. We show that in 2020–2021, costs for third-party-provided mortgage services increased substantially but then leveled off in 2022 onward. In contrast, as mortgage interest rates rose, discount points to buy down the interest rate also surged. The increase in points implies that the simple headline rise in mortgage rates understates the true rise in mortgage costs. If points had not risen, rates likely would have climbed to even higher levels than they did. Indeed, despite rising fees and mortgage rates, mortgage lending profits declined sharply in 2022 and 2023.

We also examine pricing differences across types of lenders. We find that nonbanks tend to be more expensive than banks and credit unions, especially in 2023 as points went up more for nonbank mortgages. However, there is important variation within the nonbank category: We find that FinTechs tend to have pricing that is more in line with that of banks, while nonbank lenders integrated with home builders provided relatively inexpensive mortgages in 2023, likely reflecting incentives to attract home buyers.

While the mortgage cost fields in the latest generation of HMDA data help improve our understanding of the costs of financing that borrowers face, HMDA data users should be aware of certain limitations. As we explain, the fields do not give a comprehensive account of the full cost of a mortgage, since they do not reflect some costs paid by third parties, such as home sellers, and may not be fully inclusive of all lender credits. Moreover, while some fields capture "borrower-paid" amounts, these fields do not necessarily capture the true economic incidence of closing costs for borrowers. Nonetheless, in this paper, we demonstrate that the new HMDA data can be used to better understand mortgage pricing. Future research should use these data to further our understanding of how efficiently mortgage markets function, while also improving our knowledge of data limitations and developing ideas of how these data might be improved.

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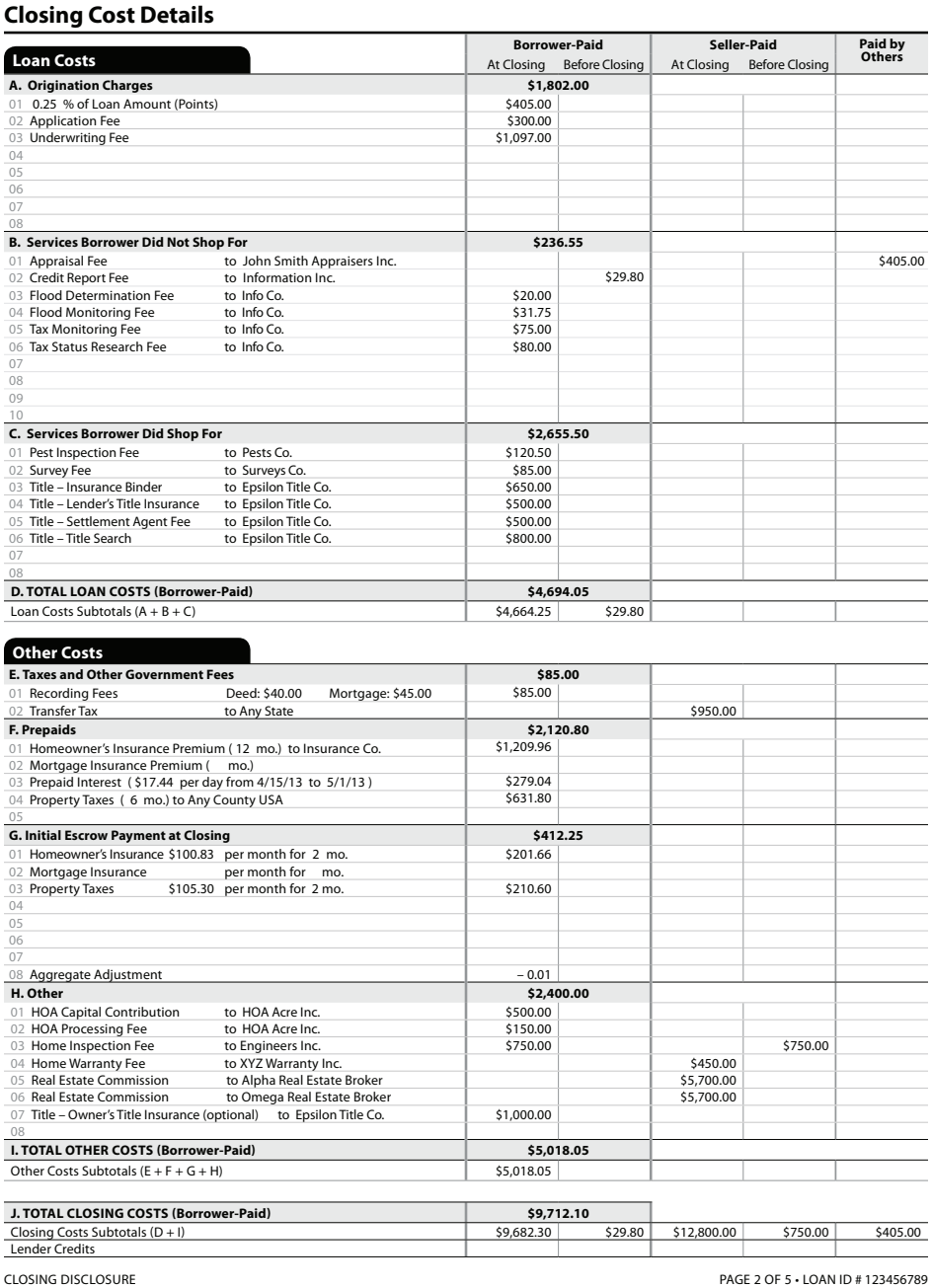
Figures



Closing Cost Details

Loan Costs	Borrower-Paid At Closing	Borrower-Paid Before Closing	Seller-Paid At Closing	Seller-Paid Before Closing	Paid by Others
A. Origination Charges	**$1,802.00**				
01 0.25 % of Loan Amount (Points)	$405.00				
02 Application Fee	$300.00				
03 Underwriting Fee	$1,097.00				
04					
05					
06					
07					
08					
B. Services Borrower Did Not Shop For	**$236.55**				
01 Appraisal Fee to John Smith Appraisers Inc.					$405.00
02 Credit Report Fee to Information Inc.		$29.80			
03 Flood Determination Fee to Info Co.	$20.00				
04 Flood Monitoring Fee to Info Co.	$31.75				
05 Tax Monitoring Fee to Info Co.	$75.00				
06 Tax Status Research Fee to Info Co.	$80.00				
07					
08					
09					
10					
C. Services Borrower Did Shop For	**$2,655.50**				
01 Pest Inspection Fee to Pests Co.	$120.50				
02 Survey Fee to Surveys Co.	$85.00				
03 Title – Insurance Binder to Epsilon Title Co.	$650.00				
04 Title – Lender's Title Insurance to Epsilon Title Co.	$500.00				
05 Title – Settlement Agent Fee to Epsilon Title Co.	$500.00				
06 Title – Title Search to Epsilon Title Co.	$800.00				
07					
08					
D. TOTAL LOAN COSTS (Borrower-Paid)	**$4,694.05**				
Loan Costs Subtotals (A + B + C)	$4,664.25	$29.80			

Other Costs					
E. Taxes and Other Government Fees	**$85.00**				
01 Recording Fees Deed: $40.00 Mortgage: $45.00	$85.00				
02 Transfer Tax to Any State			$950.00		
F. Prepaids	**$2,120.80**				
01 Homeowner's Insurance Premium (12 mo.) to Insurance Co.	$1,209.96				
02 Mortgage Insurance Premium (mo.)					
03 Prepaid Interest ($17.44 per day from 4/15/13 to 5/1/13)	$279.04				
04 Property Taxes (6 mo.) to Any County USA	$631.80				
05					
G. Initial Escrow Payment at Closing	**$412.25**				
01 Homeowner's Insurance $100.83 per month for 2 mo.	$201.66				
02 Mortgage Insurance per month for mo.					
03 Property Taxes $105.30 per month for 2 mo.	$210.60				
04					
05					
06					
07					
08 Aggregate Adjustment	– 0.01				
H. Other	**$2,400.00**				
01 HOA Capital Contribution to HOA Acre Inc.	$500.00				
02 HOA Processing Fee to HOA Acre Inc.	$150.00				
03 Home Inspection Fee to Engineers Inc.	$750.00			$750.00	
04 Home Warranty Fee to XYZ Warranty Inc.			$450.00		
05 Real Estate Commission to Alpha Real Estate Broker			$5,700.00		
06 Real Estate Commission to Omega Real Estate Broker			$5,700.00		
07 Title – Owner's Title Insurance (optional) to Epsilon Title Co.	$1,000.00				
08					
I. TOTAL OTHER COSTS (Borrower-Paid)	**$5,018.05**				
Other Costs Subtotals (E + F + G + H)	$5,018.05				

J. TOTAL CLOSING COSTS (Borrower-Paid)	**$9,712.10**				
Closing Costs Subtotals (D + I)	$9,682.30	$29.80	$12,800.00	$750.00	$405.00
Lender Credits					

CLOSING DISCLOSURE PAGE 2 OF 5 • LOAN ID # 123456789

Figure 1: Sample Closing Disclosure

Note: This figure displays a sample of page 2 of a fixed-rate mortgage Closing Disclosure document, courtesy of the CFPB. For samples of the other pages or other types of disclosures, see Consumer Financial Protection Bureau (2024b).

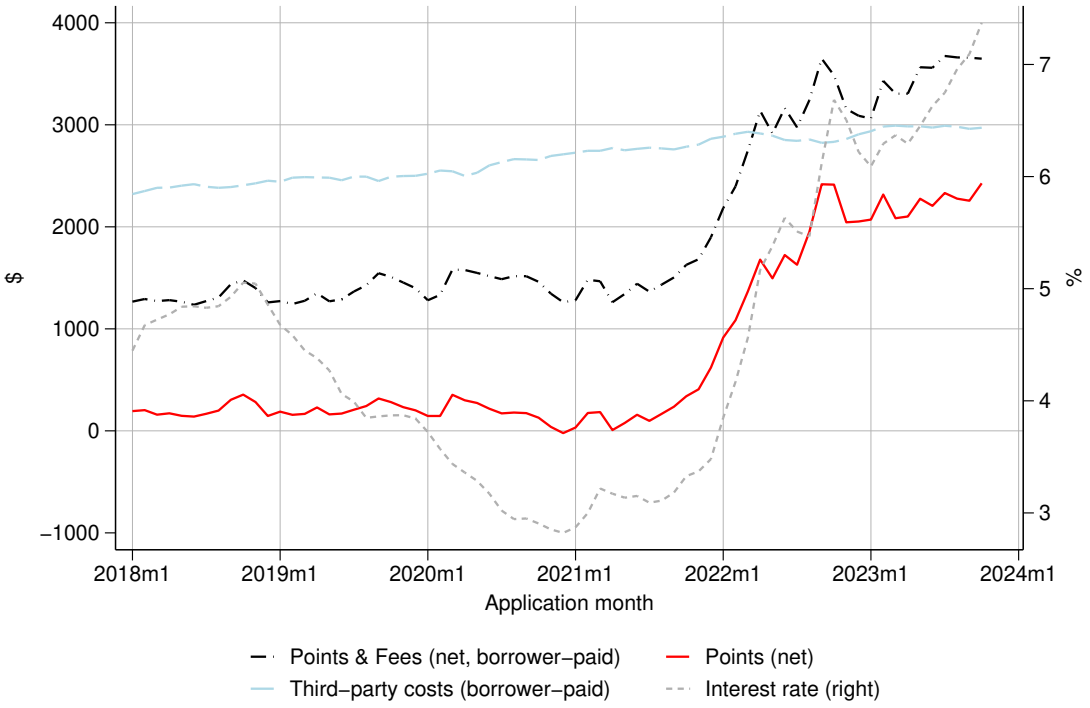


Figure 2: Mortgage Costs over Time ($, Monthly Averages)

Note: Figure shows monthly averages of loan costs for first-lien conventional and FHA home purchase mortgages, for loans with application dates between January 2018 and October 2023 that were originated by December 2023. "Points & Fees" and "Points" are expressed net of lender credits. See text for full details about variable construction and sample restrictions. Source: Authors' calculations using Home Mortgage Disclosure Act data.

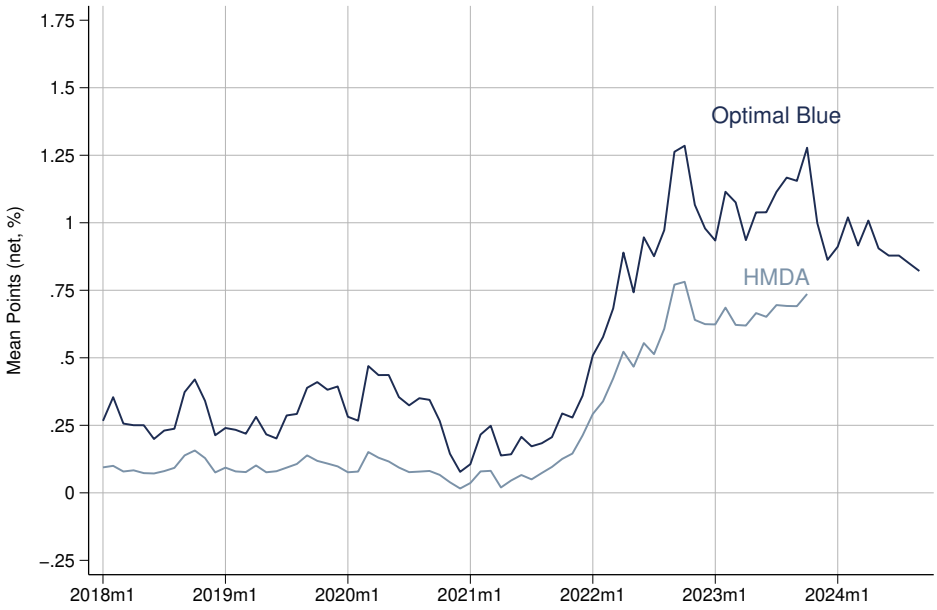


Figure 3: Mean Points over Time in HMDA and Optimal Blue

Notes: Figure shows monthly averages of discount points, net of lender credits, as a percent of loan amount for first-lien conventional and FHA home purchase mortgages. Time along the x-axis reflects application date for HMDA and lock date for Optimal Blue. HMDA data include loans with application dates between January 2018 and October 2023 that were originated by December 2023. Optimal Blue data include mortgages that were locked between January 2018 and September 2024. See text for full details about variable construction and sample restrictions. Sources: Authors' calculations using Home Mortgage Disclosure Act data and Optimal Blue data.

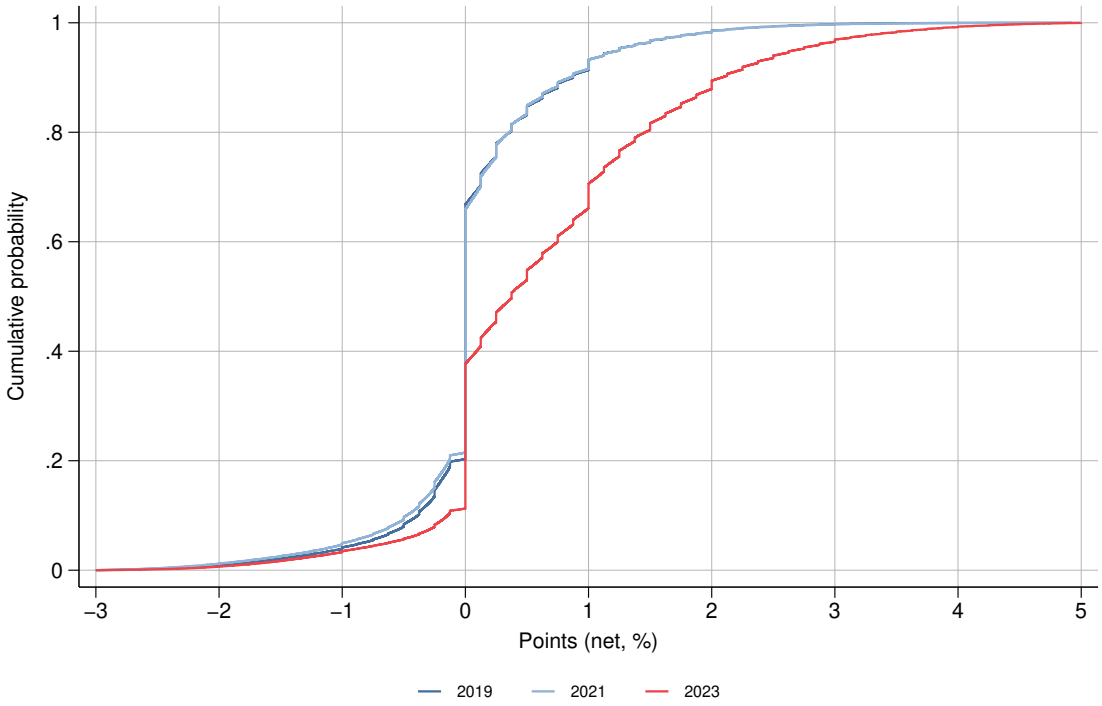


Figure 4: Distribution of Points (Net, percent) in 2019, 2021, and 2023

Note: Figure shows cumulative distribution functions of discount points, net of lender credits, as a percent of loan amount for first-lien conventional and FHA home purchase mortgages, by year of origination. See text for full details about variable construction and sample restrictions. Source: Authors' calculations using Home Mortgage Disclosure Act data.

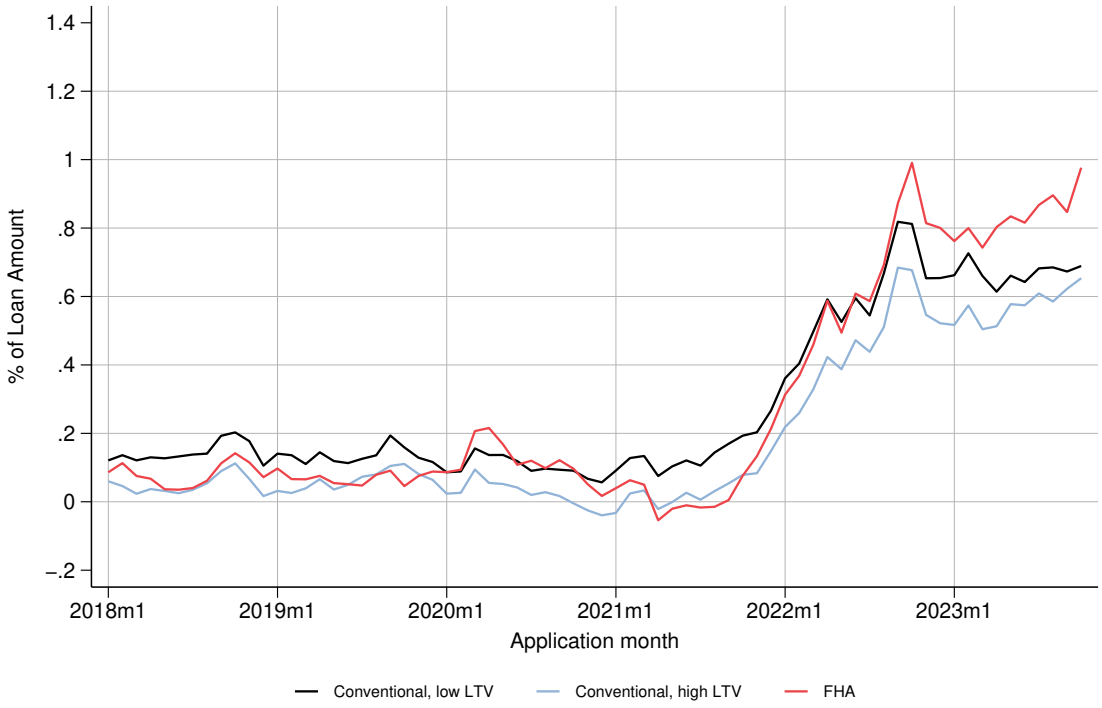


Figure 5: Mean Points (Net, percent of Loan Amount) over Time, by Loan Type

Note: Figure shows monthly averages of discount points, net of lender credits, as a percent of loan amount for first-lien home purchase mortgages, by loan type and loan-to-value (LTV) ratio. "High-LTV" is defined as over 80 percent. See text for full details about variable construction and sample restrictions. Source: Authors' calculations using Home Mortgage Disclosure Act data.

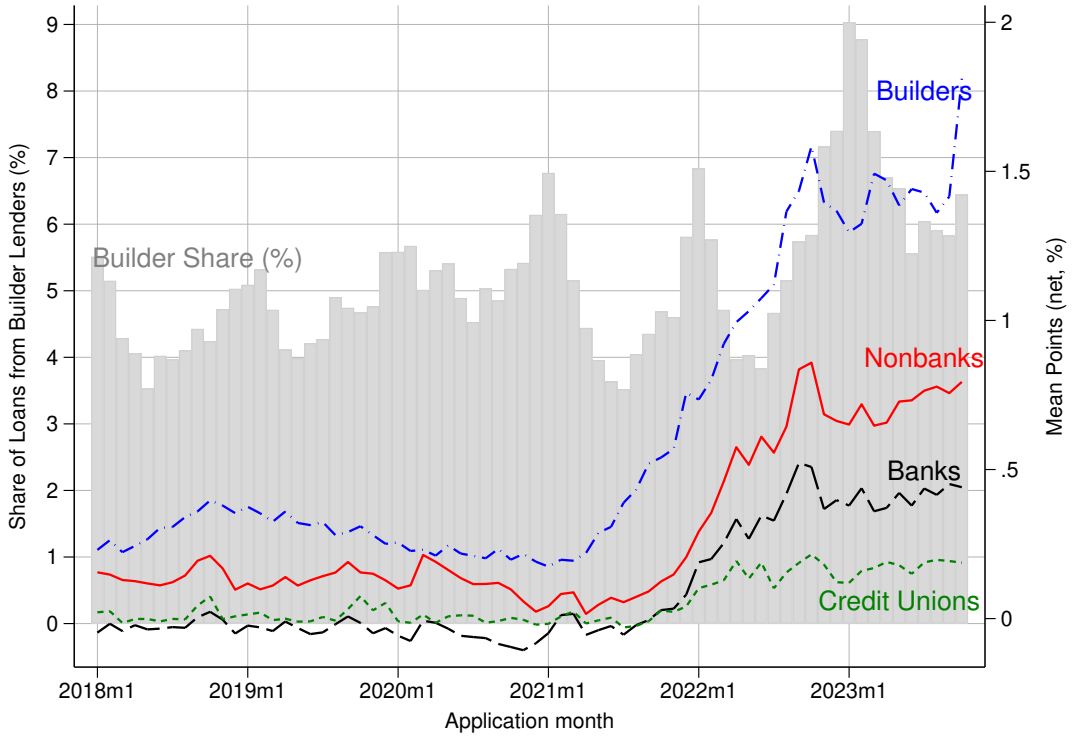


Figure 6: Mean Points (Net, percent) over Time, by Lender Type

Note: Figure shows monthly averages of discount points, net of lender credits, as a percent of loan amount for first-lien home purchase mortgages, by lender type. See text for full details about variable construction and sample restrictions. Source: Authors' calculations using Home Mortgage Disclosure Act data and the Avery HMDA lender file.

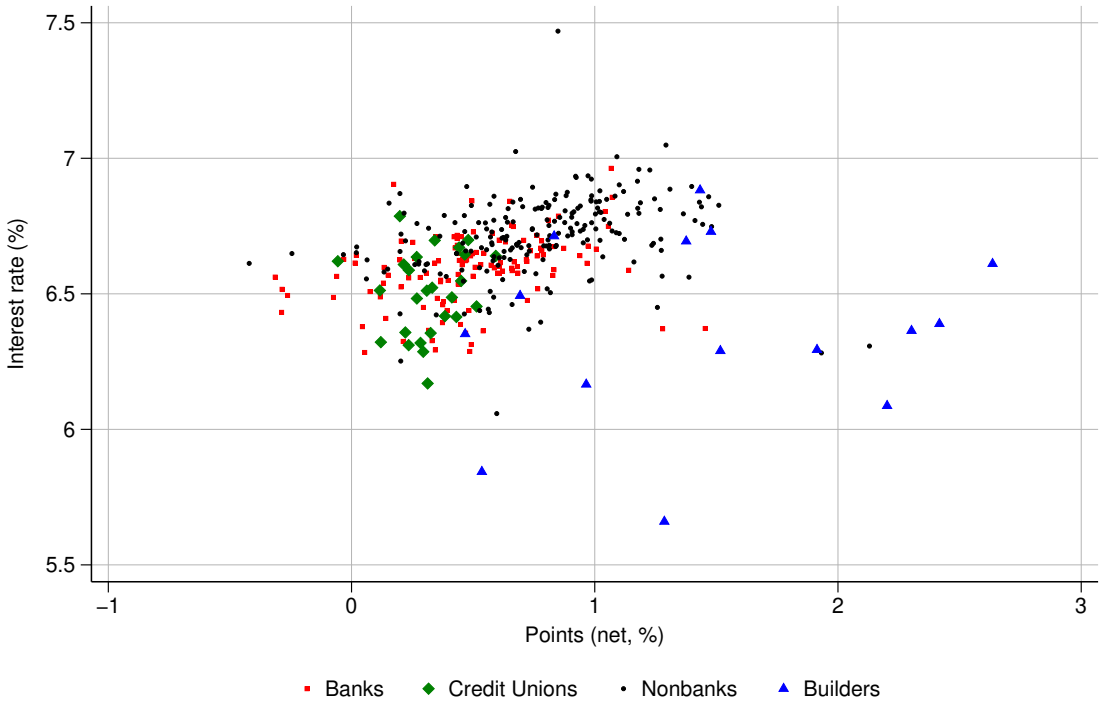


Figure 7: Average Rate and Points (Net, percent), by Lender

Notes: Each data point represents an estimate of the average interest rate and the average discount points (net of lender credits, as a percent of loan amount) for first-lien conventional and FHA home purchase mortgages originated in 2023 by an individual lender, after controlling for application date and county fixed effects, and fully interacted bins of loan type, loan size, credit score, and CLTV. Figure includes only lenders with at least 500 home purchase originations in 2023. See text for full details about methodology and sample restrictions. Source: Authors' calculations using 2023 Home Mortgage Disclosure Act data and the Avery HMDA lender file.

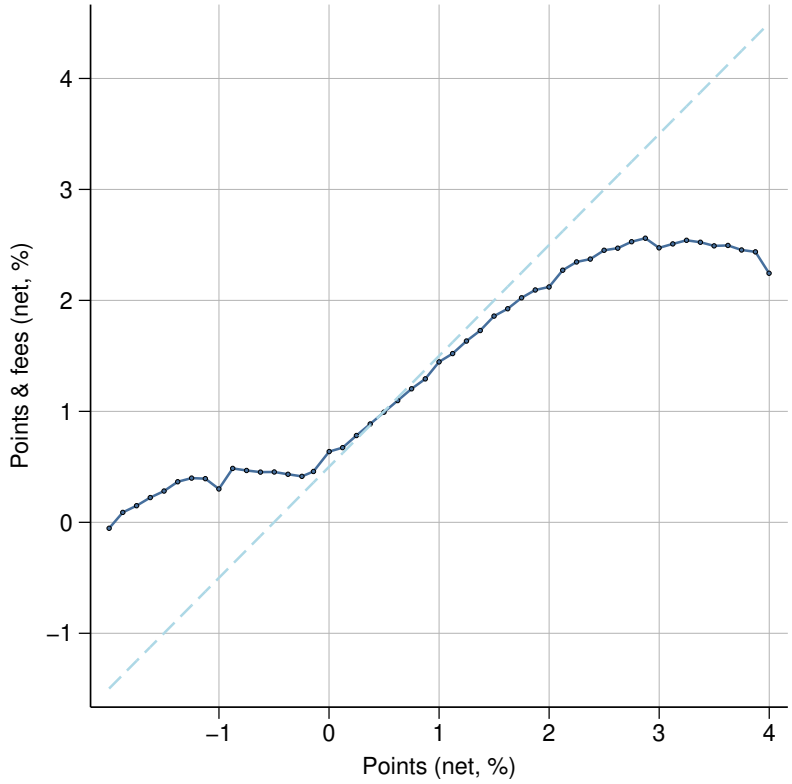


Figure 8: Borrower-Paid Points & Fees vs. Points

Notes: Figure plots average *borrower-paid* points & fees at every 1/8th net discount points, controlling for application date and county fixed effects, and fully interacted bins of loan type, loan size, credit score, and CLTV, for first-lien conventional and FHA mortgages originated in 2023 with application dates from January 2023 through October 2023. Source: Authors' calculations using Home Mortgage Disclosure Act data.

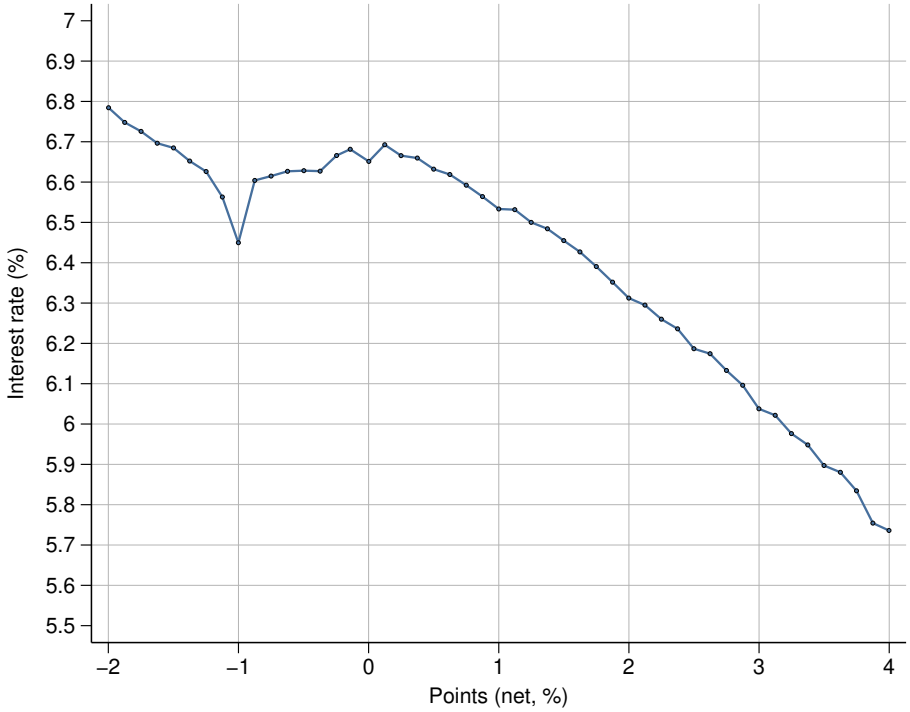


Figure 9: Rate vs. Points

Notes: Figure plots average interest rates at every 1/8th of a net discount point, after controlling for application date and county fixed effects, fully interacted bins of loan type, loan size, credit score, and CLTV, and lender-by-loan type fixed effects, for first-lien conventional and FHA mortgages originated in 2023 with application dates from January 2023 through October 2023. Source: Authors' calculations using Home Mortgage Disclosure Act data.

A. 2023

	(1) Rate	(2) Points	(3) Points + Fees	(4) 3rd-Party Fees
Credit Union	-0.091***	-0.238***	-0.269***	0.026
	(0.027)	(0.058)	(0.052)	(0.024)
Nonbank	0.108***	0.211**	0.397***	0.044*
	(0.022)	(0.097)	(0.056)	(0.024)
Builder	-0.702***	0.830***	-0.340*	-0.083
	(0.111)	(0.275)	(0.193)	(0.068)
FinTech	-0.096**	0.211*	0.078	-0.052
	(0.042)	(0.112)	(0.141)	(0.036)
Adj R-sq	0.48	0.13	0.17	0.57
N	1,524,186	1,524,186	1,524,186	1,522,476
Mean of dep. var.	6.61	0.67	1.13	1.04

B. 2021

	(1) Rate	(2) Points	(3) Points + Fees	(4) 3rd-Party Fees
Credit Union	0.010	0.000	-0.010	0.037
	(0.027)	(0.037)	(0.037)	(0.025)
Nonbank	0.080***	0.059	0.205***	0.056**
	(0.019)	(0.041)	(0.037)	(0.028)
Builder	0.055	0.235***	0.059	-0.072
	(0.047)	(0.059)	(0.125)	(0.078)
FinTech	-0.085**	0.256*	0.166	-0.059*
	(0.043)	(0.149)	(0.130)	(0.034)
Adj R-sq	0.37	0.06	0.18	0.50
N	2,329,793	2,329,793	2,329,793	2,325,291
Mean of dep. var.	3.10	0.04	0.54	1.03

Table 1: Pricing Differences Across Lender Types

Source: Authors' calculations using Home Mortgage Disclosure Act data and the Avery HMDA lender file. Note: "Rate" is the interest rate on the loan. "Points" is discount points (net of lender credits), "Points + Fees" is the borrower-paid lender fees and points (net of lender credits), and "3rd-Party Fees" is borrower-paid fees for third-party-provided origination services (see text for more details). The outcomes in (2) – (4) are expressed as a percentage of the loan amount. See Section II.D for sample restrictions. These models include loans applied for in Jan.-Oct. of 2023 (panel A) and 2021 (panel B) and originated in Jan.-Dec. of those years, respectively. Each model includes fixed effects for application date, county, and fully interacted bins of loan type (FHA vs. conventional), loan size, credit score, and combined loan-to-value ratio. Standard errors are clustered at the lender level. ***, **, and * indicate statistical significance at the 1 percent, 5 percent, and 10 percent levels, respectively.

Appendix: Identifying Builder Lenders

We identify lenders integrated with homebuilders in three steps:

First, we search for lenders in the HMDA Transmittal Sheet file that have names similar to those of large homebuilders listed in academic and trade publications. When we find an apparent match, we search the lender and builder online to confirm their relationship. We also confirm that the majority of the lender's loan applications in HMDA were for home purchases, rather than refinances or home equity withdrawal. For each of the lenders we designate as builder lender, over 95 percent of their applications between 2018 and 2023 were for purchase mortgages.

In the second step, we search the website of the remaining lenders on the lists included in the academic and trade publications. We visit the financing section of each firm's website for links to affiliated lenders, and we note the lender as a builder lender if it appears to be co-owned or exclusively partnered with the builder.

In the third step, we search in the HMDA loan/application register (LAR) data for lenders who received over 1,000 applications between 2018 and 2023, with over 95 percent being for purchase mortgages. We then search for these firms online to identify if they are part of a builder's company, following a similar procedure as in the earlier steps. We identify 30 distinct HMDA reporter legal entity identifiers as builder lenders. Our goal has been to focus on lenders that are integrated within the same company as the builders, such that they provide their services exclusively (or nearly exclusively) for the builder's homebuying clients, based on online descriptions of the firms.

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