**Billing Code: 8070-01-P**

**FEDERAL HOUSING FINANCE AGENCY**

**[No. 2019–N–5]**

**Designation of Replacement for Federal Housing Finance Agency's ARM Index**

**AGENCY:** Federal Housing Finance Agency.

**ACTION:** Notice.

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**SUMMARY:** The Federal Housing Finance Agency (FHFA or Agency) recently discontinued publication of its monthly index for adjustable rate mortgage loans, known as the National Average Contract Mortgage Rate for the Purchase of Previously Occupied Homes by Combined Lenders, due to dwindling participation by mortgage originators in the Agency's Monthly Survey of Rates and Terms on Conventional One-Family Non-farm Mortgage Loans, on which the index had been based. By this notice, FHFA is designating a replacement index, to be called "PMMS+." The replacement index will be an adjusted version of Freddie Mac's Primary Mortgage Market Survey 30-Yr FRM, and will take effect immediately. FHFA intends to publish the PMMS+ Index value monthly and on approximately the same schedule as it has been publishing the existing index. FHFA is soliciting public comments on its designation of the replacement index and will consider any comments received before finalizing its decision about the successor index.

**DATES:** Interested persons may submit comments on or before [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** Submit comments to FHFA, identified by "Designation of Replacement for Federal Housing Finance Agency's ARM Index (No. 2019-N-5)" by any of the following methods:

- *Agency Website*: *www.fhfa.gov/open-for-comment-or-input*.
- *Federal eRulemaking Portal*: *http://www.regulations.gov*. Follow the instructions for submitting comments. If you submit your comment to the *Federal eRulemaking Portal*, please also send it by *e-mail* to FHFA at *RegComments@fhfa.gov* to ensure timely receipt by the agency.
- *Mail/Hand Delivery*: Federal Housing Finance Agency, Eighth Floor, 400 Seventh Street SW., Washington, DC 20219, ATTENTION: Proposed Collection; Comment Request: "Designation of Replacement for Federal Housing Finance Agency's ARM Index (No. 2019-N-5)".

We will post all public comments we receive without change, including any personal information you provide, such as your name and address, email address, and telephone number, on the FHFA website at *http://www.fhfa.gov*. In addition, copies of all comments received will be available for examination by the public through the electronic comment docket for the Notice also located on the FHFA website.

**FOR FURTHER INFORMATION CONTACT:** David L. Roderer, Senior Financial Analyst, David.L.Roderer@fhfa.gov, (202) 649-3206; or Eric Raudenbush, Associate General Counsel, Eric.Raudenbush@fhfa.gov, (202) 649-3084 (these are not toll-free numbers); Federal Housing Finance Agency, 400 Seventh Street SW., Washington, DC 20219. The Telecommunications Device for the Hearing Impaired is (800) 877-8339.

**SUPPLEMENTARY INFORMATION:**

**A. Background of MIRS and the ARM Index**

FHFA's Monthly Survey of Rates and Terms on Conventional One-Family Non-farm Mortgage Loans, commonly referred to as the "Monthly Interest Rate Survey" or "MIRS," was a monthly survey of mortgage lenders that solicited information on the terms and conditions on all conventional, single-family, fully amortized, purchase-money mortgage loans closed during the last five working days of the preceding month. The MIRS collected monthly information on interest rates, loan terms, and house prices by property type (*i.e.*, new or previously occupied), by loan type (*i.e.*, fixed- or adjustable-rate), and by lender type (*i.e.*, mortgage companies, savings associations, commercial banks, and savings banks), as well as information on 15-year and 30-year fixed-rate loans. In addition, the survey collected quarterly information on conventional loans by major metropolitan area and by Federal Home Loan Bank district. The MIRS did not collect information on loans insured by the Federal Housing Administration or guaranteed by the Veterans Administration, loans secured by multifamily property or manufactured housing, or loans created by refinancing an existing mortgage loan.

The MIRS originated with one of FHFA's predecessor agencies, the former Federal Home Loan Bank Board (FHLBB), in the 1960s and was continued by the former Federal Housing Finance Board (Finance Board) from 1989 through 2008. Data collected through the MIRS was used to derive the FHLBB's National Average Contract Mortgage Rate for the Purchase of Previously Occupied Homes by Combined Lenders (ARM Index), which was used by lenders to set mortgage rates on adjustable rate mortgages. From 2008 through May 2019[1], FHFA continued to conduct the MIRS and to produce the ARM Index. For various market reasons, the number of loans reported

[1] The last MIRS release was dated May 29, 2019, and was based on April data.

through the MIRS fell substantially over that period, which resulted in the data sample sizes becoming deficient.[2] When submitting its data for the May 2019 survey, one respondent whose loans have constituted a substantial majority of the monthly MIRS data in recent years informed FHFA that it would no longer submit any mortgage loan data for the survey. Without that loan data, the survey would no longer generate a reliable and statistically robust benchmark, including the ARM Index. Accordingly, FHFA decided that it had no other option than to discontinue the MIRS and announced in its May 29, 2019 MIRS news release that it had discontinued the survey and the ARM Index, effective immediately.

Section 402(e) of the Financial Institutions Reform, Recovery, and Enforcement Act of 1989 (FIRREA) addresses the continuation, subsequent to FIRREA, and the possible replacement of indices that previously had been used to calculate the interest rates on adjustable rate mortgage instruments.[3] As applied to the ARM Index, section 402(e)(4) of FIRREA requires that if FHFA can no longer make the ARM Index available it may substitute a substantially similar index, provided that the FHFA Director determines, after notice and opportunity for comment, that: (A) the new index is based upon data substantially similar to that of the ARM Index; and (B) the substitution of the new index will result in an interest rate substantially similar to the rate in effect at the time the ARM Index became unavailable. As discussed in further detail below, FHFA has determined that the weekly average interest rate on 30-year fixed rate mortgage

[2] In recent years, all publications of MIRS data have included a disclaimer stating, "The indices are based on a small monthly survey of mortgage lenders, which may not be representative. The sample is not a statistical sample but is rather a convenience sample."

[3] *See* Financial Institutions Reform, Recovery, and Enforcement Act of 1989 (FIRREA), Pub. L. 101-73, Title IV, section 402(e), 103 Stat. 359-60 (Aug. 9, 1989), *as amended by* Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. 111–203, title III, section 367(5)(D), 124 Stat. 1557 (July 21, 2010), *codified at* 12 U.S.C. § 1437 *note*.

loans, as published in the Freddie Mac Primary Mortgage Market Survey (PMMS), with a time adjustment and small spread adjustment, would satisfy those requirements and thus can be designated as a replacement for the ARM Index. To avoid confusion with the Freddie Mac index, FHFA is naming the replacement index "PMMS+" and will refer to the replacement index by that name when publishing the monthly index values going forward. FHFA is designating a replacement index so that holders of adjustable rate mortgage notes that currently use the ARM Index as the basis for adjusting the interest rates on their mortgage loans will be able to substitute the PMMS+ Index value for future adjustments.

**B. Designation of PMMS+ as Replacement Index**

Since FHFA announced the termination of the ARM Index, it has received requests from lenders with outstanding mortgage loans that are linked to the ARM Index to name a replacement index as soon as possible. Section 402(e) of FIRREA does not specify a timeframe within which FHFA must designate a replacement index. In the past, the Finance Board has solicited public comment prior to the effective date of any replacements.[4] Because of the abruptness of the recent withdrawal of the largest source of data for the MIRS, however, FHFA did not have an opportunity to solicit public comments before it needed to terminate the MIRS and ARM Index. In order to give effect to the apparent intent of Congress that FHFA should continue to make available a replacement index for any lenders that have been using the ARM Index to calculate the interest rates on their adjustable rate mortgage instruments, FHFA has determined that its designation of PMMS+ as the replacement index shall take effect immediately. So as

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[4] *See* 67 FR 79099, 79100 (Dec. 27, 2002) (Finance Board substitution of index rates subsequent to prior notice); 62 FR 9767, 9769 (March 4, 1997) (Finance Board request for comments on proposed revisions to MIRS).

to fulfill the other elements of the statutory process contemplated by FIRREA, FHFA also is soliciting comments on its determination that PMMS+ meets the requirements for a substitute index provided in Section 402(e)(4) of FIRREA. After reviewing any comments received, FHFA will determine whether to retain PMMS+ as the replacement index or to designate some other index, and will issue a subsequent notice informing the public of its decision.

**C. Selection of PMMS+**

As described above, FHFA is no longer able to produce the ARM Index because of the recent loss of a substantial amount of mortgage loan data from which the ARM Index had been compiled. FHFA has determined that an adjusted version of Freddie Mac's PMMS can serve as the replacement index because it would satisfy the statutory requirements, *i.e.*, it would be based on substantially similar data and would result in substantially similar interest rates, and would align more closely to the ARM Index than the other index considered.

1. Substantially Similar Data

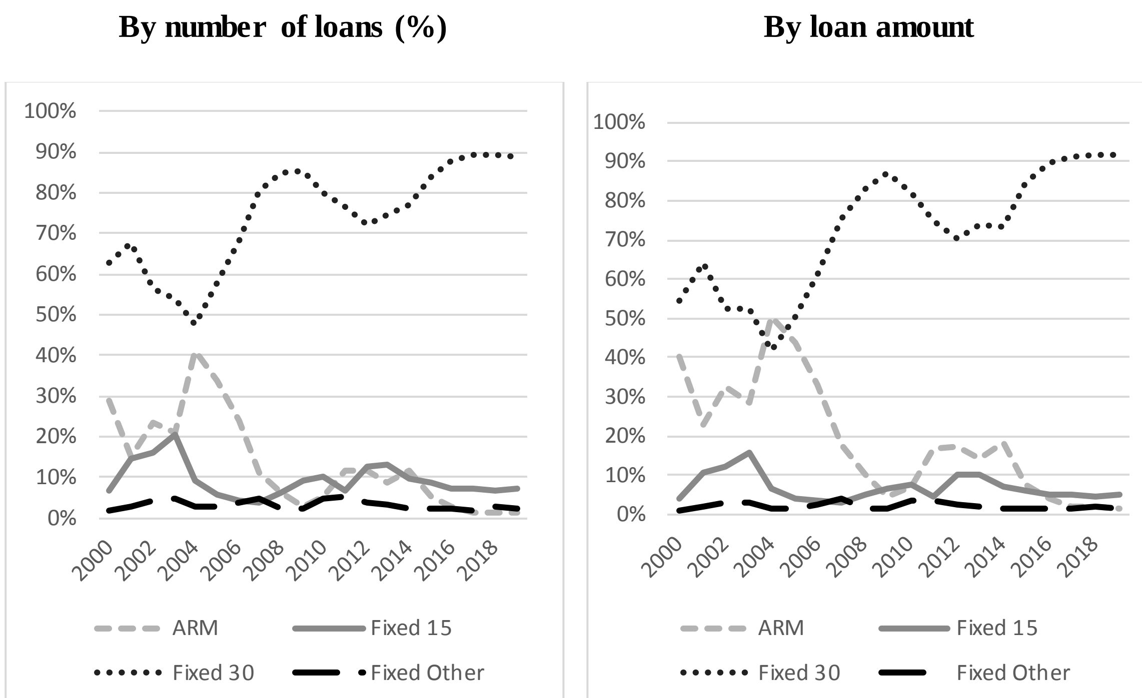
No other survey replicates the loan data that is collected by the MIRS, and no other mortgage index precisely matches the ARM Index. Moreover, the options available to FHFA as potential successor indices are rather limited, as most other mortgage indices have ceased being produced. FHFA has considered two mortgage rate indices as possible replacements for the ARM Index, both of which are still in production as of June 2019. In considering possible replacements for the ARM Index, FHFA has construed the statutory language regarding "substantially similar" data as requiring that FHFA look first to indices that are based on data pertaining to mortgage loans. Because of that statutory provision, FHFA has not considered other types of indices or references rates, such as LIBOR or U.S. Treasury security rates, as possible replacements for the ARM Index.

The MIRS Index was based on the interest rates of closed loans made by various kinds of mortgage originators, all of whom provided the information voluntarily. This type of data is no longer available to FHFA due to a variety of market factors. FHFA's analysis determined a good proxy for rates of mortgage loans that are closed are rates for mortgage loans that have been quoted or committed to in the origination process. We determined that two indices were substantially similar to MIRS when an appropriate time lag is applied.

Those indices are the PMMS and the Mortgage Bankers Association's Weekly Applications Survey (WAS) Index. Both indices are more timely, more reliable, and provide better representation of the mortgage market than the MIRS-based ARM Index. Both indices have been produced for long periods of time, with WAS having a history of over 25 years and PMMS has a history of over 47 years, commencing in 1971. Having considered these options, FHFA has concluded that the PMMS 30-Yr FRM meets the statutory requirements and is the better choice as a replacement because it has substantially similar raw data.

Neither PMMS nor WAS is drawn from data that are identical to the MIRS data, but the underlying data are similar in both cases. However, this data is substantially similar due to MIRS, PMMS and WAS being based on single family residential mortgage loans that are in or have just completed the origination process. The MIRS ARM Index is a composite national index covering closed fully amortized conventional jumbo and non-jumbo 30- and 15-year fixed-rate and 5/1 adjustable-rate purchase mortgages on single family homes. In contrast, the WAS Index covers those types of loans included in MIRS, as well as fully amortized refinance loans at the time of commitment. The PMMS 30-Yr FRM Index covers only conventional 30-year non-jumbo fixed-rate purchase mortgages (Freddie Mac does not produce a composite index). As shown in Figure 1 below, however, since 2008 the vast majority of loans reported through the MIRS have been 30-year conventional non-jumbo fixed-rate purchase mortgages, and the number of such loans has approached 90 percent for the past several years.

**Figure 1: MIRS Composition**




This analysis has led FHFA to conclude that the PMMS 30-Yr FRM Index is based on data that is "substantially similar" to that of the ARM Index as required by FIRREA Section 402(e)(4)(A). The WAS Index fails to satisfy this requirement because the loan mix is substantially different. Additionally, it does not correlate as closely to the ARM Index as would the PMMS+ Index.

2. Substantially similar rates

As a result of the similar composition of the data pools, the PMMS 30-Yr FRM Index rate has been in close alignment with the ARM Index rate over an extended period of time, when appropriate adjustments are made to account for timing differences. The ARM Index is published monthly and reflects rates on closed loans, while both the WAS and PMMS Index are published weekly and reflect rates that reporting institutions would be likely to offer borrowers if they were to request a loan on the day the survey is to be published.[5]

PMMS tracks the interest rates that would be obtained from the ARM Index more closely than does the WAS, based on a correlation analysis. Correlations improve for PMMS when applied with an eleven week lag time, *i.e.*, when a lender uses a PMMS Index value as of a date that is eleven weeks earlier than would ordinarily be the case if using the ARM Index.

As previously discussed, the majority of the discrepancy can be adjusted for by utilizing a lagging PMMS 30-Yr FRM Index. FHFA compared the historical ARM Index Rate with the PMMS 30-Yr FRM Index Rate using different lag times and found that the two indices are significantly different if determined as of the same date or as of dates that are up to ten weeks apart, as shown on Table 1. Table 1 also illustrates that PMMS has a higher correlation than WAS.[6]

[5] Both PMMS and WAS are weekly indices. PMMS is based on data that is reported one day prior to the publication of the index. WAS is based on data that is reported three days prior to its publication.
[6] The closer to a value of 1,00 the more perfect positive correlation. A value of 0 means there is no correlation.

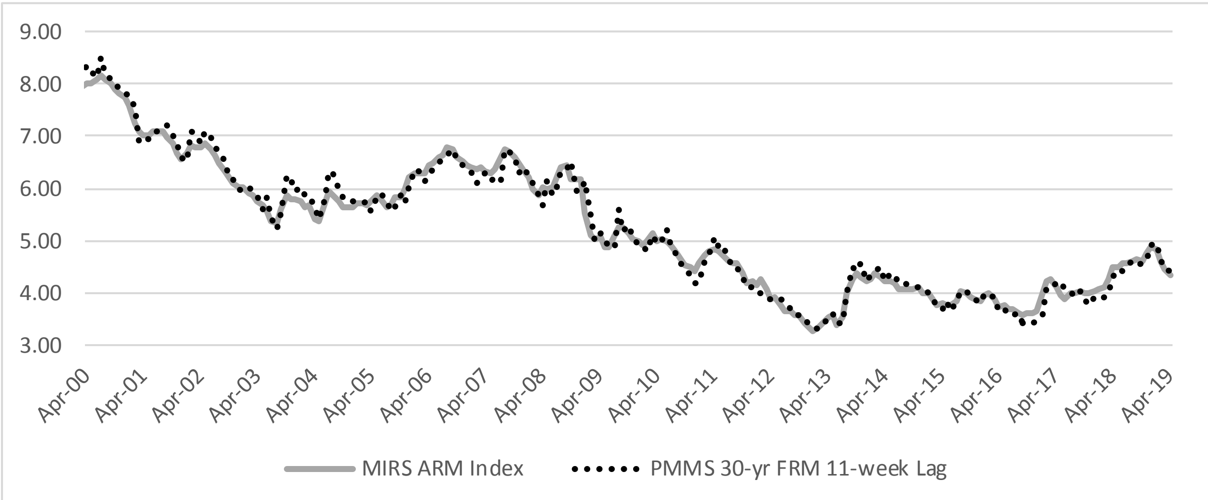
**Table 1: Pairwise correlation between MIRS and PMMS, and MIRS and WAS**

| | 0 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|
| **PMMS** | 0.9846 | 0.9930 | 0.9930 | 0.9931 | 0.9932 | 0.9931 | 0.9927 |
| **WAS** | 0.9757 | 0.9882 | 0.9877 | 0.9870 | 0.9868 | 0.9857 | 0.9852 |

The differences between the ARM Index and PMMS become statistically insignificant, however, with an 11-week lag time between the dates (with a difference between the mean rates of less than 1.0 basis point and a high correlation). This concept is intuitively logical given that the interest rate on a closed loan often reflects a rate commitment made two or three months earlier. Figure 2 below shows that the 11-week lagging PMMS 30-Yr FRM Index rate has closely tracked the ARM Index rate over time, particularly over the last 19 years.[7]

[7] FHFA calculates the ARM Index from MIRS as a simple average, while the PMMS Index is a weighted average based on lender size. FHFA has recalculated the ARM Index as a weighted average based on the lender size starting in 2007 and found that the differences between the weighted and unweighted figures are insignificant. Thus, the difference in calculation methodology does compromise the PMMS 30-Yr FRM Index's suitability as a potential replacement for the ARM Index.

**Figure 2: Comparison of ARM Index Rate with 11-week Lagging PMMS 30-Yr FRM Index Rate 2000-2018**




Based on those comparisons, FHFA has concluded that the replacement of the ARM Index with an index based on the 11-week lagging PMMS 30-Yr FRM Index will result in an interest rate that is substantially similar to the interest rate that would be obtained from the MIRS ARM Index, as required by FIRREA section 402(e)(4)(B). As shown in Table 2 below, the 11-week lagging PMMS 30-Yr FRM Index rate has been substantially similar to the ARM Index rate for each of the first five months of 2019. FHFA conducted a similar comparison using different lag times for the WAS Index, which is also based on loan commitments, but found that the differences in the composition of the data pools for the two indices resulted in dissimilar reported interest rates, irrespective of any adjustment for lag time. That dissimilarity in interest rates led FHFA to conclude that the WAS Index would not satisfy the statutory requirements to replace the ARM Index.

**Table 2: Comparison of ARM Index Rates with 11-week Lagging PMMS 30-Yr FRM Index Rates During 2019**

| MIRS release date | ARM Index | 11-week lag from the final Thursday | PMMS 30-yr FRM Index |
|---|---|---|---|
| 1/29/2019 | 4.83 | 11/15/2018 | 4.94 |
| 2/28/2019 | 4.60 | 12/13/2018 | 4.63 |
| 3/28/2019 | 4.46 | 1/10/2019 | 4.45 |
| 4/30/2019 | 4.36 | 2/07/2019 | 4.41 |
| 5/29/2019 | 4.15 | 3/14/2019 | 4.31 |

There are several additional reasons that FHFA believes the PMMS 30-Yr FRM Index to be an appropriate basis for a replacement index: (1) it includes data from more lenders than does the ARM Index—around 80 per week versus 20 per month for the ARM Index in 2018; (2) Freddie Mac intends to continue the PMMS for the foreseeable future and lenders have been willing to provide sufficient loan data on a voluntary basis; and (3) similar to the ARM Index, but unlike the WAS Index, the PMMS indices are available to the public at no cost.

FHFA further determined that the transition from the ARM Index to the PMMS+ Index should not adversely affect the borrowers or the lenders, *i.e.*, the coupon rate on the mortgage loan should be the same whether the lender were to use the ARM Index or PMMS+ for the next interest rate reset. Notwithstanding the close correlation between the ARM Index rates and the lagged PMMS rates over time, they do diverge from month to month, as was the case for the May 2019 ARM Index value, which was 16 basis points (bps) less than the value for the 11-week lagged PMMS Index.[8] To ensure that the transition is neutral with respect to loan coupons, FHFA has adjusted the 11-week lagged PMMS rate by a spread of -16 bps, using the last available MIRS data from May

[8] Bps are basis points or 0.01%. Therefore -16 bps means 0.16%

2019. This adjustment creates exactly the same reference rate at the May 2019 transition. Therefore the adjusted interest rate of a mortgage loan would be the same whether using MIRS or PMMS+. Over time, however, the 10 year average spread differential has been much lower, approximately -1 basis point. To accommodate this average spread, FHFA will gradually reduce (on an absolute basis) the embedded spread by 3 bps a month until the spread has been reduced to -1 basis point. Thereafter, the value of the PMMS+ Index for a given month will equal the 11-week lagged PMMS Index reduced by one basis point.

Table 3 indicates the appropriate PMMS dates to use for the ARM Index for the rest of the year.[9] FHFA intends to publish updated information about the PMMS+ values each month, on approximately the same schedule that it currently publishes the ARM Index values. FHFA expects servicers to use the appropriate PMMS+ reference rate based on the released monthly calculated PMMS+ after adjusting for the look back period of the mortgage. For illustrative purposes, if a mortgage loan interest rate adjusting on October 1, 2019 has a 60-day look back period for determining the index value, the servicer would use the August 2019 PMMS+ Index as its reference rate value.

[9] Due to the 11-week lag, FHFA can calculate the PMMS+ values into August.

**Table 3: PMMS 30-yr FRM dates to use as a replacement for the ARM Index for 2019**

| Release Month (2019) | PMMS | adjustment | MIRS replacement (PMMS+) |
|---|---|---|---|
| May | 4.31 | -0.16 | 4.15 |
| June | 4.12 | -0.13 | 3.99 |
| July | 4.10 | -0.10 | 4.00 |
| August | 3.82 | -0.07 | 3.75 |
| September | unknown | -0.04 | unknown |
| October | unknown | -0.01 | unknown |
| November | unknown | -0.01 | unknown |
| December | unknown | -0.01 | unknown |

**D. Designation of Replacement Index Is For Benefit of Current Note Holders**

For the reasons discussed above, FHFA is exercising its authority under section 402(e)(4) of FIRREA to designate PMMS+ as the replacement for the ARM Index so that holders of currently outstanding adjustable rate mortgage instruments may use it in lieu of the discontinued index to calculate future adjustments to the interest rates on those loans. This designation is not intended to apply to newly-originated loans and FHFA does not endorse the use of PMMS+ or any other PMMS Index as a reference rate on newly-originated adjustable rate mortgage loans.

Dated: July 1, 2019.

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[FR Doc. 2019-14475 Filed: 7/8/2019 8:45 am; Publication Date: 7/9/2019]