

instruction paragraphs are needed to describe these cells. In the latter two sections “aggregate memoranda and warehouse loans” FRMs are commingled with adjustable-rate mortgages (ARMs), multifamily mortgages, and non-residential mortgages.

Schedule RED collects FRM data in two separate sections: FRMs (10 fields, 4 of which are new “credit-risk” attributes); and loan memoranda (8 fields). Ignoring the credit-risk attributes, there are in all 14 separate fields on RED collecting data on FRM loans and MBS, and only 14 instruction paragraphs are needed to describe these cells.

A simplistic comparison of the CMR cell count for FRMs (107) to the RED attribute count (14) would overstate the benefits of the RED because the CMR is restricted to one data point per cell, while the RED will typically take multiple observations of each attribute

field. A more informative comparison is between the instruction counts (18 CMR vs. 14 RED), since these represent the business logic that must be written, tested, deployed, and maintained in reporting software. By this measure, the RED represents a 29% reduction in reporting burden relative to the current CMR.

2. Flexibility

The current CMR format is rigid in defining the data it accepts. For example, the definition of the five coupon buckets for fixed-rate mortgages currently covers the following ranges: <7%, 7–8%, 8–9%, 9–10%, and >10%. With few exceptions, mortgages above 7% have not been issued for some time, and refinancing to the current lower rates has been intense. As a result, CMR’s data bucketing has less value in the current environment, as nearly all new mortgages and refinancings fall into the first bucket. Addressing this

problem by redefining the bucket ranges requires reprinting the form, editing the instructions, and testing the edit and NPV model software. This process may take several filing cycles to complete. When rates rise again, the process would have to be repeated.

These transitions would be unnecessary with Schedule RED, because flexibility is built into its structure. The basic structure of Schedule RED is similar to that currently used to collect supplemental positions (for example, the supplemental OBS or supplemental assets and liabilities tables). All data in the RED would be entered into tables, the rows of which represent financial positions held by the thrift, and the columns of which are the attributes of those positions. For example, here is one of the proposed RED tables, for ARM servicing rights:

ADJUSTABLE-RATE MORTGAGE-SERVICING RIGHTS

Type	Balance	Original maturity	Remaining maturity	Rate code	Margin	Service fee	Sub-serviced	FHA VA	Conventional

OTS believes that proposed Schedule RED eliminates most of the rigidities present in the current CMR layout while still providing pertinent data for input into the NPV model.

3. Increased Data Detail

a. Increased Granularity

While slashing the field count in half, the RED would increase the number of data points by collecting finer-grained observations on each field. All reporting schemes entail bucketing with some degree of categorization, *i.e.*, granularity. By definition, all loans within a given bucket are treated identically—typically by assuming that all loans lie at the center of the bucket. For example, suppose loans in the 2-to-5-year rate-reset bucket have an average rate-reset frequency of exactly 3.5 years. Thus, the NPVs and sensitivities of loans at one end or another of a bucket will tend to be less accurate. These estimation differences do not necessarily disappear when the whole bucket is averaged. To the extent that the NPV model’s results guide supervision policy, this less accurate

estimate of the loan characteristics may adversely affect some thrifts, while arbitrarily rewarding others.

Reducing bucket sizes to shrink the potential measurement error can alleviate this “bucketing burden.” This increases granularity and necessarily reduces the average magnitude of the estimation error in measuring loan characteristics. However, changing bucket ranges requires flexibility in the structure of the reporting schedule.

In the case of Schedule CMR, increasing granularity means adding cells. Because the cells are indexed sequentially, this requires renumbering and/or redefining some cells. For example, in the case of FRMs, there are 5 coupon buckets.² Inserting a new column (*i.e.*, a new bucket) on this page of the form would require either: (a) inserting cells with non-sequential numbers; or (b) renumbering all subsequent cells in the form. Either solution necessitates a redefinition of certain cells, and either is likely to create confusion and implementation difficulties. As a result, increases in data

granularity are infrequent under the current Schedule CMR.

In the case of Schedule RED, the number of observations collected is open-ended, and *all* bucketing is handled through the aggregation rules defined in the instructions to the form.³ Thus, increasing or decreasing granularity in any particular dimension involves only a change to the instructions. Of course, the reporting institutions (or their vendors) must still implement this change. However, these changes in aggregation rules do not redefine the attributes collected, but only the number and composition of the observations reported. Increases in the number of observations (the granularity) for a particular instrument have no impact on reporting elsewhere on the form. At the same time, it is similarly possible to add (or remove) to the list of RED attributes collected without affecting reporting elsewhere on the form.

² See Schedule CMR page 28.

³ See discussion *infra*.