REPORT ON COLLATERAL PLEDGED TO FEDERAL HOME LOAN BANKS

PREPARED FOR THE SENATE COMMITTEE ON BANKING, HOUSING AND URBAN AFFAIRS AND THE HOUSE COMMITTEE ON FINANCIAL SERVICES

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Division of Bank Regulation

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Section 1 - Background

Congress established the Federal Home Loan Bank System (System) under the Federal Home Loan Bank Act of 1932 (the Bank Act). The Federal Home Loan Banks (Banks) provide liquidity to their members and eligible non-member housing associates by making loans to them, referred to as advances.[1,2] Consistent with the provisions of the Bank Act, the Banks require their members to pledge collateral in the form of mortgages and other eligible assets to secure their advances and other collateralized products offered by the Banks to their members.

The Housing and Economic Recovery Act of 2008 (HERA) requires the Federal Housing Finance Agency (FHFA) to submit an annual report to Congress on the collateral pledged to the Banks, including an analysis of collateral by type and by Bank district.[3] FHFA's Report on Collateral Pledged to Federal Home Loan Banks provides the required information as well as additional analysis of data on the types and amounts of collateral pledged to the Banks to secure advances and other collateralized products offered by the Banks to their members. The information in this report uses data collected quarterly by FHFA's Division of Federal Home Loan Bank Regulation (DBR). The charts and graphs report data on the unpaid principal balance (UPB) of eligible collateral pledged by Bank members as of December 31, 2021, unless otherwise indicated.[4]

[1] Members of the Banks include commercial banks, savings banks and savings associations, credit unions, insurance companies, and community development financial institutions (CDFIs). The Bank Act, at 12 U.S.C. § 1424(a), as implemented by FHFA's regulations at 12 CFR § 1263.6, set forth the eligibility requirements for Bank membership. The Department of the Treasury's regulations at 12 CFR § 1805.200-201 set forth requirements for eligibility and certification as a CDFI.

[2] Non-member entities, such as state housing finance agencies, that meet certain requirements may obtain advances if they are designated as Bank "housing associates." Housing associates must also provide a more limited range of collateral to secure their advances. For the purposes of this report, any reference to members includes non-member housing associates.

[3] 12 U.S.C. § 1430(j)(12)(C).

[4] This report defines eligible collateral as the total unpaid principal balance of collateral pledged by a member and deemed eligible by the Bank. Eligible collateral is a "pre-haircut" measure. This definition of eligible collateral excludes ineligible collateral (the difference between the pledged collateral and eligible collateral values) pledged by members. However, this may or may not account for ineligibility factors Banks incorporate based on their collateral reviews as some Banks may impose the ineligibility factor as part of the haircut. The Banks will have ineligible collateral pledged as part of the blanket lien agreements with members.

Collateral at the Banks

The Bank Act and FHFA regulations require the Banks to obtain at the time the borrower originates or renews an advance, and thereafter maintain, a security interest in eligible collateral from the borrower or an affiliate of the borrower that is sufficient to fully secure the advances.[5] In general, the Banks comply with this requirement by requiring each member or housing associate to sign a collateral security agreement that gives the Bank a security interest in some or all of its assets in an amount that exceeds the amount of advances outstanding to the member. The most commonly used agreement is a blanket lien, under which the Bank's security interest attaches to all of a member's assets or, in some cases, to specified categories of a member's assets. Under a blanket lien, the Bank has a security interest in the member's assets that are subject to the lien, but it does not necessarily have detailed information about the specific assets covered by the lien.

The board of directors of each Bank establishes its Bank's collateral policy, consistent with statutory and regulatory requirements. Each Bank's collateral policy identifies the types and amounts of eligible collateral it will accept, and each Bank specifies its own method to establish collateral discounts, or "haircuts," on various types of collateral. To determine the lending value or borrowing capacity of the collateral, each Bank discounts, or gives a "haircut" to, the reported market or par value of pledged collateral to ensure that the liquidation value of pledged collateral exceeds the value of the product it is securing.[6]

Collateral policies differ across Banks, often reflecting differences in the types of members served by each Bank, the risk tolerances of each Bank, and the methods and vendors used by each Bank to determine collateral lendable values. Key collateral policy differences include the various types of eligible collateral each Bank will accept, the levels of collateral discount

[5] 12 U.S.C. § 1430(a)(1); 12 CFR § 1266.2(c)(1). The Bank Act, at 12 U.S.C. § 1430(a)(3), and FHFA regulations, at 12 CFR § 1266.7(a), specify the types of collateral that are eligible to secure advances. In addition to advances, other credit products offered by the Banks to their members must also be fully secured. *See e.g.*, 12 CFR § 1268.5(c) (requiring that the credit enhancement provided by members selling mortgages to the Banks under their acquired member assets programs be fully secured); 1269.5(b) (authorizing Banks to issue standby letters of credit only where their obligation thereunder is fully secured).
[6] The haircuts depend on many factors and may differ by Bank for similar collateral. These factors typically include the specific type of collateral pledged, the quality of the member's credit underwriting policies and practices, the method of securing the collateral pledged, the financial condition of the member, recent trends in asset values, and estimated losses under adverse macroeconomic conditions.

required, and the conditions under which a member must deliver its collateral to the Bank in order to be able to borrow against it.[7]

Section 2 of this report provides an overview and analysis of the System's collateral by composition, collateral type, and other relevant categories. That section includes graphs and tables reporting collateral data for both the System and for individual Banks. Section 3 provides a glossary and definitions of terms used throughout the report.

Section 2 – Analysis

Total advances at the Banks as of year-end 2021 were $351.3 billion, a decrease of about 17 percent from $422.6 billion as of year-end 2020.[8] Over the same period, the total UPB of the Banks' eligible collateral increased to $3.28 trillion from $3.26 trillion, an increase of about 0.4 percent.[9] The total UPB of pledged collateral also increased. The reported borrowing capacity of that collateral was $2.51 trillion, up from $2.46 trillion as of year-end 2020.

Table 1: System Collateral ($Trillions)

	2020	2021	Volume Change	Percent Change[10]
System Unpaid Principal Balance (UPB) Pledged	$3.63	$3.66	$0.02	0.66%
System Unpaid Principal Balance (UPB) Eligible	$3.26	$3.28	$0.01	0.37%
System Borrowing Capacity (BC)	$2.46	$2.51	$0.05	1.91%

Bank members pledge various types of collateral to the Banks to secure advances and other Bank products. This report aggregates collateral into five general categories based on the most

[7] Each Bank has a set of criteria under which it requires a member to deliver collateral to the Bank in order to protect itself. For example, having a Bank member credit rating fall below a specific level can trigger required delivery by the member.

[8] Advances information is based on data from the FHFA Call Report System (CRS). Unless otherwise noted, all other data is based on the Quarterly Collateral Survey. All volume changes and percentages are calculated prior to rounding.

[9] The UPB of eligible collateral excludes any known ineligible collateral and may account for ineligibility factors extrapolated from collateral reviews. Unless otherwise specified, reported collateral values reflect all eligible collateral pledged by all members and non-member housing associates.

[10] We calculated percent change numbers using unrounded figures.

common collateral types. We further split several of these categories into more granular subcategories. The categories (and subcategories) are:

- Single-family (SF) 1-4 unit residential first liens;[11]
- Securities:
  - Agency mortgage-backed securities (MBS)/collateralized mortgage obligations (CMOs);[12]
  - Non-MBS agency securities;
  - Private-label Commercial MBS (CMBS);
  - Private-label MBS (PLMBS); and
  - All other authorized securities (Other Securities).[13]
- Multifamily (MF) first and second liens;
- Other real estate-related collateral (ORERC):
  - Commercial real estate (CRE) first and second liens;
  - Closed-end SF second liens (SF second liens, home equity loans) and open-ended SF first and second liens (home equity lines of credit (HELOCS));
  - Land loans; and
  - Other ORERC.[14]
- Community financial institution (CFI) collateral:[15]
  - Small business loans/securities;
  - Small farm loans/securities;
  - Small agribusiness loans/securities;
  - Community development loans/securities; and
  - Not specified.[16]

[11] Single-family indicates fully disbursed, 1-4 unit first mortgage loans on improved residential property, including non-traditional loans, subprime loans, and government-guaranteed loans.
[12] Includes all Agency mortgage-backed securities and collateralized mortgage obligations, e.g., Fannie Mae, Freddie Mac, Ginnie Mae, etc.
[13] Other Securities include (among others) U.S. treasuries, eligible municipal bonds, cash, and certificates of deposit.
[14] Other ORERC includes (among others) real estate construction loans, participation loans, and loans covered by a loss sharing agreement.
[15] For 2021, a CFI is a Bank member whose deposits are insured under the Federal Deposit Insurance Act and that has average total assets less than $1.239 billion. 86 FR 6650 (Jan. 22, 2021). The Banks are authorized to accept from CFI members (and their affiliates) additional types of collateral that would not otherwise be considered eligible as security for advances, including small business loans, small farm loans, small agribusiness loans, community development loans, and securities representing a whole interest in such loans. 12 U.S.C. § 1430(a)(3)(E); 12 CFR § 1266.7(b)(1).
[16] CFI collateral: Not specified is a catch-all category for any Banks not reporting the level of granularity in the above categories.

Single-family loan collateral remained the largest single collateral category at year-end 2021, accounting for approximately 48 percent of all eligible collateral pledged across the Banks. Table 2 shows the composition of collateral pledged to the Banks based on the categories above. The amount of SF loan collateral pledged increased by approximately $58 billion or 3.8 percent from year-end 2020 to year-end 2021. The changes in other categories of collateral were mixed with some experiencing increases year-over-year and some categories experiencing decreases year-over-year. The largest percentage increase occurred in the securities collateral, where the total amount of securities collateral pledged increased approximately 4.8 percent from year-end 2020, PLMBS collateral pledged increased by over 25 percent, and Non-MBS Agency Securities increased by over 20 percent.

Table 2: System Eligible Collateral by Category ($B)[17]

Collateral Category	2020 Eligible Collateral	2020 Percent of Total Collateral	2021 Eligible Collateral	2021 Percent of Total Collateral	Change in Eligible Collateral (Volume)	Change in Eligible Collateral (Percent)
SF 1st lien	$1,525.4	46.7%	$1,583.6	48.3%	$58.2	3.8%
MF	$304.9	9.3%	$299.0	9.1%	-$5.8	-1.9%
ORERC: CRE	$689.7	21.1%	$692.0	21.1%	$2.3	0.3%
ORERC: HELOCS and SF 2nd lien	$177.8	5.4%	$143.5	4.4%	-$34.2	-19.3%
ORERC: Land	$65.3	2.0%	$67.6	2.1%	$2.3	3.6%
Other ORERC	$116.4	3.6%	$97.9	3.0%	-$18.5	-15.9%
CFI	$50.5	1.5%	$42.7	1.3%	-$7.8	-15.5%
Agency MBS/CMOs	$218.8	6.7%	$237.2	7.2%	$18.4	8.4%
Non-MBS Agency Securities	$17.0	0.5%	$20.4	0.6%	$3.5	20.4%
CMBS	$28.0	0.9%	$26.8	0.8%	-$1.2	-4.3%
PLMBS	$6.1	0.2%	$7.6	0.2%	$1.5	25.3%
Other Securities	$63.4	1.9%	$57.0	1.7%	-$6.4	-10.0%
Total	$3,263.2	100.0%	$3,275.4	100.0%	$12.2	0.4%

[17] Percentages were calculated using unrounded figures.

I. Distribution of Collateral by Type and Bank

The distribution of eligible collateral varied across the Banks. Mirroring the System, SF first lien loan collateral was the largest collateral category at 10 of the Banks. The Bank of Dallas was the only Bank that reported having more eligible CRE loan collateral ($131 billion) pledged than SF loan collateral ($128 billion). CRE loan collateral was the second largest collateral category at eight Banks and MF loan collateral was the second largest category at two Banks (Banks of New York and Cincinnati). Four Banks – Atlanta, Boston, Cincinnati, and New York – reported having no eligible CFI collateral pledged by their members. Table 3 provides more detail on the distribution of collateral at each of the 11 Banks.

II. Member Lien and Collateral Reporting Status

Banks secure advances and other collateralized products to a member through a lien agreement. There are two primary types of lien agreements:

- A blanket lien agreement occurs when the written agreement that creates the Bank's security interest provides that it applies to all of a member's assets or to all of a member's specific categories of assets.
- A specific lien agreement occurs when the Bank's written agreement that creates the Bank's security interest describes the specific assets that the member has pledged to the Bank as collateral.

When a Bank obtains a security interest in the assets described in the agreement, it acquires the right to liquidate any of those assets should the member default on its repayment obligation.[18]

[18] FHFA regulations require each Bank to execute a written security agreement with each borrowing member that, at a minimum, gives the Bank a "perfectible" security interest in the pledged collateral. 12 CFR § 1266.2(c)(3). Under the regulations a Bank may perfect its security interest in advances collateral at any time. 12 CFR § 1266.9(a)(3). These and other provisions of the regulations recognize that each Bank generally may determine how and when to perfect its security interest. The manner in which a Bank obtains and perfects its security interest is governed by the Uniform Commercial Code (UCC), as enacted by the laws of the appropriate state. Regardless of the collateral pledge method, a Bank can perfect its security interest in any securities collateral or loan collateral by filing a UCC-1 financing statement in the appropriate jurisdiction, or by other methods that would give it a higher-priority perfected security interest than would perfection by filing (*see* FHFA Advisory Bulletin 2013-10 for further details).

Table 3: UPB of Eligible Collateral by Bank ($B)[19]

Collateral Category	BOS	NYK	PIT	ATL	CIN	IND	CHI	DSM	DAL	TOP	SFR	Total
SF 1st lien	$103	$175	$139	$210	$260	$39	$80	$185	$128	$60	$205	$1,584
MF	$6	$74	$25	$13	$61	$7	$17	$25	$15	$5	$51	$299
ORERC: CRE	$19	$69	$90	$76	$51	$21	$36	$87	$131	$21	$91	$692
ORERC: HELOCS and SF 2nd lien	$14	$8	$33	$23	$22	$2	$8	$10	-	$4	$19	$144
ORERC: Land	-	-	$3	$0	$1	-	$3	$13	$46	$2	-	$68
Other ORERC	$2	$5	$1	$17	$3	$3	$1	$33	$31	$3	$1	$98
CFI	-	-	$2	-	-	$0	$7	$5	$6	$17	$5	$43
Agency MBS/CMOs	$16	$36	$2	$23	$21	$8	$7	$16	$62	$10	$37	$237
Non-MBS Agency Securities	$1	$5	$0	$1	$1	$2	$1	$1	$2	$1	$5	$20
CMBS	$0	$7	$3	$2	$2	$2	$1	$8	$1	$0	$0	$27
PLMBS	$0	-	$0	$2	$1	$0	$1	$1	$2	$0	$0	$8
Other Securities	$3	$18	$1	$8	$3	$3	$9	$6	$2	$1	$3	$57
Total	$165	$397	$299	$376	$428	$87	$170	$388	$426	$123	$417	$3,275

[19] For the purposes of this report, a dash ("-") indicates no reported information, while a zero ("$0") indicates reported collateral that rounds to zero.

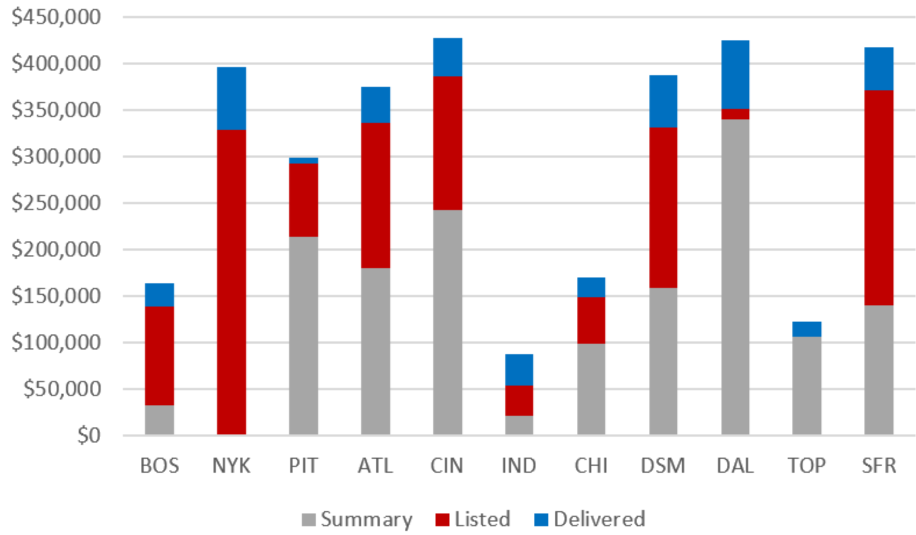
In addition to the lien agreements, the Banks use different methods of collateral control (collateral reporting status) to protect themselves further. These methods of collateral control are summary reporting, listing, and delivery. Summary reporting is only available to members under a blanket lien agreement. Under summary reporting, a Bank has little information about the individual loans that secure the advances. A listing arrangement differs in that a member provides loan-level details about the collateral pledged. A listing arrangement can occur under either a blanket or specific lien agreement. A Bank may require a member to list collateral when the borrower's creditworthiness may be an issue, or a member may elect to list collateral with the Bank for another reason.

A delivery arrangement differs from both summary reporting and listing in that the Bank has possession of the collateral. A delivery arrangement requires that the member deliver to the Bank or the Bank's custodian some or all of the assets covered by the Bank's lien agreement. A Bank often requires delivery of collateral that is readily transferrable by the member or if the Bank believes the member presents a heightened credit risk. A delivery arrangement can occur under a blanket or specific lien. Delivery may result in a Bank obtaining "possession" of tangible collateral such as mortgage loan notes or "control" of securities that exist only in electronic format, both of which give the Bank a first priority perfected security interest in the collateral (that is superior to security interests perfected by filing a UCC-1) under the UCC.

Members may receive greater borrowing capacity when they agree to provide a listing of collateral (either under a blanket or specific lien) or delivery of collateral because these methods provide specific information about the collateral pledged to the Bank. This allows the Bank to make a more precise determination of the value of the collateral.

Figure 1 shows the distribution of collateral for each Bank by the collateral reporting status (i.e., summary reporting, listing, or delivery) rather than by member lien. As of year-end 2021, the Banks of Dallas and Topeka reported that 80 percent or more of the UPB of eligible collateral is under summary reporting, while the Bank of New York only reported listed and delivered collateral, which is consistent with its practices. In addition to New York, the Banks of Boston and San Francisco also reported that members listed over 50 percent of these Banks' eligible collateral. The Bank of Indianapolis reported the highest percentage of eligible collateral delivered, approximately 38 percent. No other Bank reported having delivered collateral of more than 18 percent. The Bank of Indianapolis's higher than average share of securities as a percentage of total collateral pledged resulted in a higher proportion of delivered collateral, as all Banks generally require members to provide securities under delivery.[20]

Figure 1: Distribution of UPB Eligible Collateral by Collateral Reporting Status ($M)



III. Haircuts

Generally, the Banks apply a haircut to either the market value of eligible collateral or the UPB of eligible collateral. However, the Banks have different collateral practices regarding eligibility, market valuations, and valuation caps, which affect each Bank's effective haircut differently. For the purposes of this report, we calculate the effective haircut as:

$$1 - \frac{Borrowing\ capacity}{Unpaid\ principal\ balance\ of\ Eligible\ Collateral}$$

This definition of a haircut identifies the difference between the reported UPB eligible of collateral and the borrowing capacity reported by the Bank for a collateral line item. The borrowing capacity is the amount each Bank is willing to lend to that member for that collateral type. When aggregating by category, we weight each of the line-item haircuts by its share of the UPB of eligible collateral within that collateral category.

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[20] The Bank of Indianapolis also has a higher level of CRE collateral pledged under delivery arrangements (including from insurance companies), further increasing its delivery percentage.

The effective haircuts applied by the Banks varied substantially based on the type of collateral pledged. Table 4 provides details on the effective haircuts for collateral categories. Securities generally have the lowest weighted average effective haircuts, ranging from about 3 to 13 percent. However, PLMBS have a higher weighted average effective haircut of about 25 percent. Loan collateral has weighted average effective haircuts ranging from approximately 20 percent for SF first liens to above 50 percent for ORERC land loans (both farm and non-farm). Overall, the weighted average effective haircuts generally increase with the perceived risk of the collateral type. The weighted average effective haircut for most security types increased since 2020, largely due to the increasing interest rate environment resulting in lower market valuations relative to the policy haircut levels.

Table 4: Weighted Haircuts by Collateral Type

Collateral Category	Weighted Average Effective Haircut
SF 1st lien	19.8%
MF	24.7%
ORERC: CRE	31.2%
ORERC: HELOCS and SF 2nd lien	39.6%
ORERC: Land	50.4%
Other ORERC	31.7%
CFI	43.8%
Agency MBS/CMOs	3.2%
Non-MBS Agency Securities	3.6%
CMBS	13.4%
PLMBS	24.9%
Other Securities	12.6%

IV. Single-Family Collateral

Single-family loan collateral includes a wide variety of residential loan types including traditional, subprime, nontraditional, held for sale, and government guaranteed loans (e.g., Federal Housing Administration loans, U.S. Department of Veterans Affairs loans, etc.). While the Quarterly Collateral Survey includes several subtypes for SF loan collateral (traditional, subprime, nontraditional, subprime and nontraditional, and other residential loans), not all Banks segment their pledged collateral at this level of granularity.[21] For the purposes of this report, we combine all of these subtypes of SF loan collateral into a single SF category for comparison purposes.

Single-family loan collateral represents the largest category of eligible collateral pledged to the Banks at approximately 48 percent of all eligible collateral pledged to the Banks in 2021, a slight increase over year-end 2020 (see Table 2 in a previous section). SF loan collateral increased in absolute terms by about $58 billion in the System. Table 5 provides more information on the eligible UPB of SF loan collateral.

Table 5: Single Family UPB Eligible by Bank ($M)

Bank	2020	2021	Change in Eligible Collateral (Volume)	Change in Eligible Collateral (Percent)[22]
BOS	$104,040.3	$102,694.2	-$1,346.2	-1.3%
NYK	$173,984.3	$174,507.0	$522.7	0.3%
PIT	$139,272.5	$138,943.5	-$329.0	-0.2%
ATL	$231,563.9	$210,469.8	-$21,094.1	-9.1%
CIN	$227,283.2	$259,951.9	$32,668.7	14.4%
IND	$42,263.2	$38,606.6	-$3,656.6	-8.7%
CHI	$90,557.4	$80,080.9	-$10,476.5	-11.6%
DSM	$152,262.9	$184,971.7	$32,708.8	21.5%
DAL	$121,782.2	$128,214.8	$6,432.6	5.3%
TOP	$56,677.5	$60,351.6	$3,674.1	6.5%
SFR	$185,687.5	$204,795.7	$19,108.2	10.3%
Total	$1,525,375.0	$1,583,587.7	$58,212.8	3.8%

Single-family loan collateral is the single largest collateral source at every Bank except the Bank of Dallas. As a percent of all eligible collateral, it ranges from around 30 percent at the Bank of Dallas to around 62 percent at the Bank of Boston as of year-end 2021. The amount of SF loan collateral as a percentage of all eligible collateral changed by less than five percent at all but one Bank (Bank of Des Moines), where the share of SF loan collateral increased by a little over seven percentage points. See Table 6 for additional details.

[21] For example, one Bank may report subprime loan collateral separately while another Bank may report subprime along with other SF subtypes together.
[22] We calculated percent change numbers using unrounded figures.

Table 6: Single Family Percentage of Eligible Collateral

Bank	2020	2021	Change[23]
BOS	60.2%	62.4%	2.2%
NYK	44.6%	44.0%	-0.6%
PIT	42.7%	46.5%	3.8%
ATL	56.9%	56.0%	-0.9%
CIN	56.1%	60.7%	4.6%
IND	48.2%	44.2%	-4.0%
CHI	50.0%	47.1%	-2.9%
DSM	40.3%	47.7%	7.4%
DAL	29.6%	30.1%	0.5%
TOP	47.6%	49.0%	1.4%
SFR	48.2%	49.1%	0.8%

V. Multifamily Collateral

System-wide, multifamily loans accounted for approximately nine percent of eligible collateral pledged at year-end 2021, largely unchanged from year-end 2020. However, the volume of eligible multifamily loan collateral decreased almost 2 percent year over year. The Bank of Des Moines saw the largest percentage increase in eligible MF loan collateral at over 19 percent, however, the Bank of San Francisco saw the largest volume increase at over $4 billion. The Bank of Pittsburgh saw the largest percentage decrease in eligible MF loan collateral at about 33 percent as well as the largest volume decrease. Table 7 provides more detail on MF loan collateral at the Banks.

Table 7: Multifamily UPB Eligible by Bank ($M)

Bank	2020	2021	Change in Eligible Collateral (Volume)	Change in Eligible Collateral (Percent)[24]
BOS	$5,859.5	$6,349.4	$490.0	8.4%
NYK	$73,840.1	$74,177.5	$337.4	0.5%
PIT	$36,980.5	$24,872.1	-$12,108.3	-32.7%
ATL	$15,383.0	$12,623.3	-$2,759.7	-17.9%
CIN	$65,083.9	$61,479.5	-$3,604.4	-5.5%

[23] Ibid.
[24] We calculated percent change numbers using unrounded figures.

Bank	2020	2021	Change in Eligible Collateral (Volume)	Change in Eligible Collateral (Percent)[24]
IND	$7,546.1	$7,489.4	-$56.7	-0.8%
CHI	$14,488.1	$17,166.3	$2,678.2	18.5%
DSM	$20,547.2	$24,533.4	$3,986.2	19.4%
DAL	$14,472.9	$14,827.4	$354.5	2.4%
TOP	$4,666.1	$4,862.0	$195.9	4.2%
SFR	$46,014.5	$50,656.1	$4,641.6	10.1%
Total	$304,881.9	$299,036.5	-$5,845.4	-1.9%

Additionally, the Banks of Cincinnati and New York both reported MF loan collateral of 14 percent or more of eligible collateral, with the Bank of San Francisco reporting around 12 percent of its eligible collateral as MF and the Bank of Chicago reporting over 10 percent. Table 8 provides more detail on the percentage of MF loan collateral at each of the Banks.

Table 8: Multifamily Percentage of Eligible Collateral

Bank	2020	2021	Change[25]
BOS	3.4%	3.9%	0.5%
NYK	18.9%	18.7%	-0.2%
PIT	11.3%	8.3%	-3.0%
ATL	3.8%	3.4%	-0.4%
CIN	16.1%	14.4%	-1.7%
IND	8.6%	8.6%	0.0%
CHI	8.0%	10.1%	2.1%
DSM	5.4%	6.3%	0.9%
DAL	3.5%	3.5%	0.0%
TOP	3.9%	3.9%	0.0%
SFR	12.0%	12.1%	0.2%

VI. Other Real Estate-Related Collateral (ORERC)

ORERC collateral includes all real estate-related, non-residential whole loans, including CRE as well as participation loans and residential loans not included in the SF first liens and MF loan categories (e.g., HELOCs). To qualify as ORERC, by statute, an asset must have a readily

[25] We calculated percent change numbers using unrounded figures.

ascertainable value and a Bank must be able to perfect a security interest in the collateral.[26] FHFA regulations further require that the collateral can be reliably discounted to account for liquidation and other risks and can be liquidated in due course.[27] Among the eligible collateral types accepted by the Banks, the Banks generally apply larger haircuts to the value of ORERC to secure advances relative to securities and SF loans. All Banks report ORERC securing advances.

Overall, the amount of ORERC collateral decreased in the System by approximately five percent between 2020 and 2021. The Bank of Des Moines saw the largest decrease in ORERC collateral. Table 9 provides more details on the ORERC collateral at each Bank.

Table 9: ORERC UPB Eligible by Bank ($M)

Bank	2020	2021	Change in Eligible Collateral (Volume)	Change in Eligible Collateral (Percent)[28]
BOS	$36,913.7	$34,660.3	-$2,253.4	-6.1%
NYK	$87,819.0	$81,693.2	-$6,125.9	-7.0%
PIT	$140,778.4	$127,181.8	-$13,596.5	-9.7%
ATL	$124,787.5	$116,523.6	-$8,263.9	-6.6%
CIN	$75,447.1	$77,444.4	$1,997.3	2.6%
IND	$24,801.9	$26,481.1	$1,679.2	6.8%
CHI	$45,259.1	$46,485.8	$1,226.7	2.7%
DSM	$170,973.4	$142,169.6	-$28,803.8	-16.8%
DAL	$202,661.3	$208,207.2	$5,545.8	2.7%
TOP	$27,670.5	$29,051.5	$1,381.0	5.0%
SFR	$112,079.5	$111,159.1	-$920.4	-0.8%
Total	$1,049,191.4	$1,001,057.6	-$48,133.8	-4.6%

Most Banks report that ORERC represents 35 percent or less of eligible collateral. However, the Banks of Dallas, Des Moines, and Pittsburgh reported that ORERC collateral represented approximately 49, 37, and 43 percent of all eligible collateral pledged as of year-end 2021, respectively. Table 10 provides more details.

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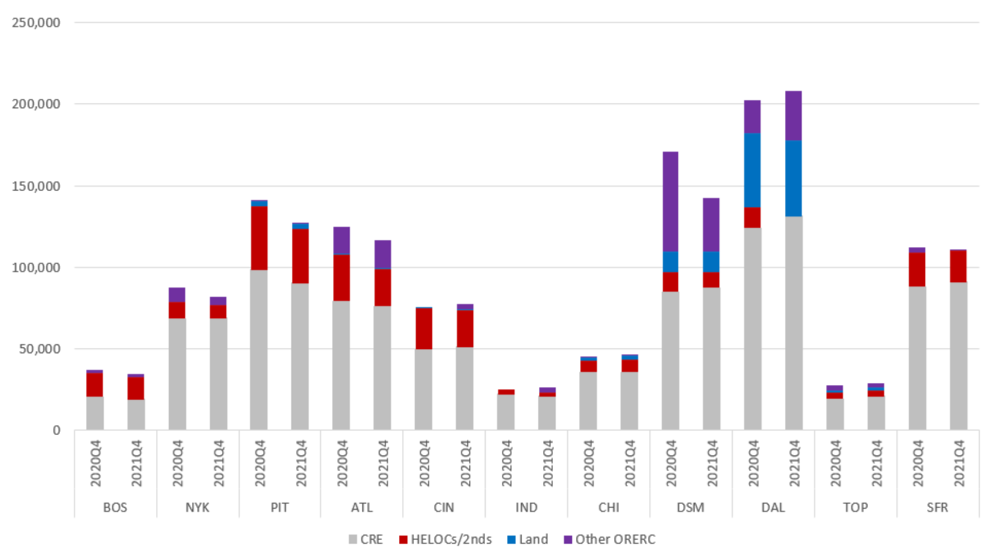
[26] 12 U.S.C. § 1430(a)(3)(D).
[27] 12 CFR § 1266.7(a)(4)(i)(A).
[28] We calculated percent change numbers using unrounded figures.

Table 10: ORERC Percentage of Eligible Collateral

Bank	2020	2021	Change
BOS	21.4%	21.1%	-0.3%
NYK	22.5%	20.6%	-1.9%
PIT	43.2%	42.5%	-0.6%
ATL	30.6%	31.0%	0.4%
CIN	18.6%	18.1%	-0.5%
IND	28.3%	30.3%	2.0%
CHI	25.0%	27.4%	2.4%
DSM	45.3%	36.7%	-8.6%
DAL	49.3%	48.9%	-0.4%
TOP	23.2%	23.6%	0.3%
SFR	29.1%	26.6%	-2.5%

CRE loans remain the largest single ORERC collateral category and second largest collateral category System-wide as of year-end 2021. HELOCs and SF second liens remain the second largest category of ORERC collateral and fifth largest category of collateral System-wide. Figure 2 provides details on the breakdown of ORERC collateral by Bank and the year-over-year change.

Figure 2: Types of ORERC Collateral by Bank - 2020 Q4 vs 2021 Q4 ($M)



CRE loans are also the largest ORERC collateral category at most Banks, with seven Banks reporting $50 billion or more in eligible CRE collateral. The Banks of Pittsburgh, Atlanta, and Cincinnati account for over half of the System's eligible HELOC and SF second lien collateral.

Land loans represented a noteworthy amount of collateral at only two Banks: Des Moines and Dallas. These two Banks account for 87 percent of all land loan collateral System-wide.[29] Other ORERC includes construction loans, participation loans, loans covered by loss sharing agreement, and student loans.

VII. CFI Collateral

The Banks accept from CFI members (and their affiliates) additional types of collateral that would otherwise not be eligible collateral as security for advances, including small business loans, small farm loans, small agribusiness loans and community development loans, and securities representing a whole interest in such loans.[30] Overall, the Banks reported approximately $43 billion in eligible CFI collateral pledged, less than two percent of the total UPB of eligible collateral System-wide. Eligible CFI collateral pledged to the Banks decreased year over year. Table 11 provides more details on the CFI collateral pledged in the System.

Typically, the Banks require larger haircuts for CFI collateral and four of the Banks – Atlanta, Boston, Cincinnati, and New York – reported no eligible CFI collateral pledged as of year-end 2021. The Banks of Topeka, Chicago, and Dallas reported approximately $17 billion, $7 billion, and $6 billion in eligible CFI collateral pledged, respectively, and accounted for around 71 percent of all eligible CFI collateral pledged to the System. No other Bank held more than $6 billion of eligible CFI collateral in its collateral portfolio. All Banks saw a decrease in eligible CFI collateral. The Bank of Dallas saw the largest percentage decrease in eligible CFI collateral at approximately 38 percent.

Table 11: CFI UPB Eligible by Bank ($M)

Bank	2020	2021	Change in Eligible Collateral (Volume)	Change in Eligible Collateral (Percent)[31]
BOS	-	-	-	-
NYK	-	-	-	-
PIT	$2,796.3	$2,119.2	-$677.1	-24.2%
ATL	-	-	-	-

[29] ORERC: Land collateral is loans secured by unimproved or agricultural land (non-CFI). This includes farm real estate loans not provided as community investment loans.
[30] Several Banks also accept farmland loans from non-CFI members, which is included in the ORERC category.
[31] We calculated percent change numbers using unrounded figures.

Bank	2020	2021	Change in Eligible Collateral (Volume)	Change in Eligible Collateral (Percent)[31]
CIN	-	-	-	-
IND	$244.3	$192.7	-$51.6	-21.1%
CHI	$8,593.7	$7,065.5	-$1,528.2	-17.8%
DSM	$4,875.8	$4,513.2	-$362.6	-7.4%
DAL	$9,768.2	$6,108.3	-$3,659.9	-37.5%
TOP	$18,568.4	$17,329.0	-$1,239.4	-6.7%
SFR	$5,679.0	$5,347.9	-$331.1	-5.8%
Total	$50,525.5	$42,675.7	-$7,849.9	-15.5%

The Bank of Topeka has the largest percentage of eligible collateral in the CFI category at around 14 percent. No other Bank has CFI collateral as a percentage of eligible collateral larger than five percent. Table 12 provides more detail on CFI as a percentage of eligible collateral at each Bank.

Table 12: CFI Percentage of Eligible Collateral

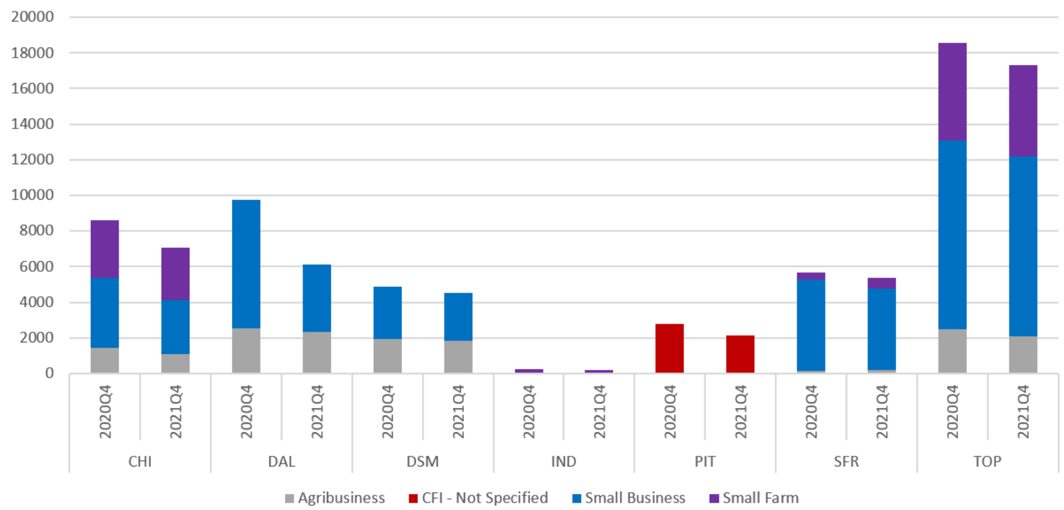
Bank	2020	2021	Change[32]
BOS	-	-	-
NYK	-	-	-
PIT	0.9%	0.7%	-0.1%
ATL	-	-	-
CIN	-	-	-
IND	0.3%	0.2%	-0.1%
CHI	4.7%	4.2%	-0.6%
DSM	1.3%	1.2%	-0.1%
DAL	2.4%	1.4%	-0.9%
TOP	15.6%	14.1%	-1.5%
SFR	1.5%	1.3%	-0.2%

The largest category of CFI collateral is small business loans, which represented approximately 57 percent of all eligible CFI collateral as of year-end 2021. While small business loans are also the largest CFI collateral category at most Banks, the Bank of Pittsburgh reports all of its CFI collateral in aggregate (CFI - not specified) rather than segmenting it out. Across the System,

[32] Ibid.

agribusiness and small farm loans accounted for approximately 18 percent and 21 percent of CFI collateral, respectively. The Banks did not report any collateral in the community development category. Figure 3 provides details on the breakdown of CFI collateral by Bank and the year-over-year change.

Figure 3: Types of CFI Collateral by Bank – 2020 Q4 vs 2021 Q4 ($M)[33]



VIII. Securities Collateral

Members pledge many different types of securities to the Banks as collateral for advances and other collateralized products, which includes Cash and Certificates of Deposit, Treasuries, Agency MBS/CMOs, Non-MBS Agency securities, CMBS, PLMBS, and others. System-wide, eligible securities collateral increased in total UPB by almost 5 percent from 2020 to 2021. The increases by Bank ranged from around 1 percent to 28 percent. The Banks of San Francisco and New York saw both the largest percentage increases as well as the largest dollar volume increases. Four Banks saw a decrease in the dollar value of eligible securities collateral (Boston, Pittsburgh, Cincinnati, and Chicago). Table 13 provides more detail on the securities collateral pledged in the System and at each Bank.

While securities represented approximately 11 percent of eligible collateral across the System as a whole, they represented a larger percentage of collateral at five Banks. The Banks of New York and Indianapolis reported eligible securities collateral at around 17 percent of total eligible

[33] We excluded the Banks with no reported CFI collateral from this figure.

collateral, the Bank of Dallas reported around 16 percent, and the Bank of Boston reported around 13 percent. Table 14 provides more details.

Table 13: Securities UPB Eligible by Bank ($M)

Bank	2020	2021	Change in Eligible Collateral (Volume)	Change in Eligible Collateral (Percent)[34]
BOS	$26,044.5	$20,951.3	-$5,093.2	-19.6%
NYK	$54,836.2	$66,381.4	$11,545.3	21.1%
PIT	$6,403.5	$5,916.3	-$487.2	-7.6%
ATL	$35,482.0	$36,336.1	$854.1	2.4%
CIN	$37,261.6	$29,134.2	-$8,127.4	-21.8%
IND	$12,837.2	$14,659.0	$1,821.9	14.2%
CHI	$22,194.6	$19,159.3	-$3,035.3	-13.7%
DSM	$29,011.5	$31,312.3	$2,300.8	7.9%
DAL	$62,112.2	$68,195.9	$6,083.7	9.8%
TOP	$11,489.1	$11,653.6	$164.5	1.4%
SFR	$35,559.9	$45,365.4	$9,805.5	27.6%
Total	$333,232.3	$349,064.8	$15,832.5	4.8%

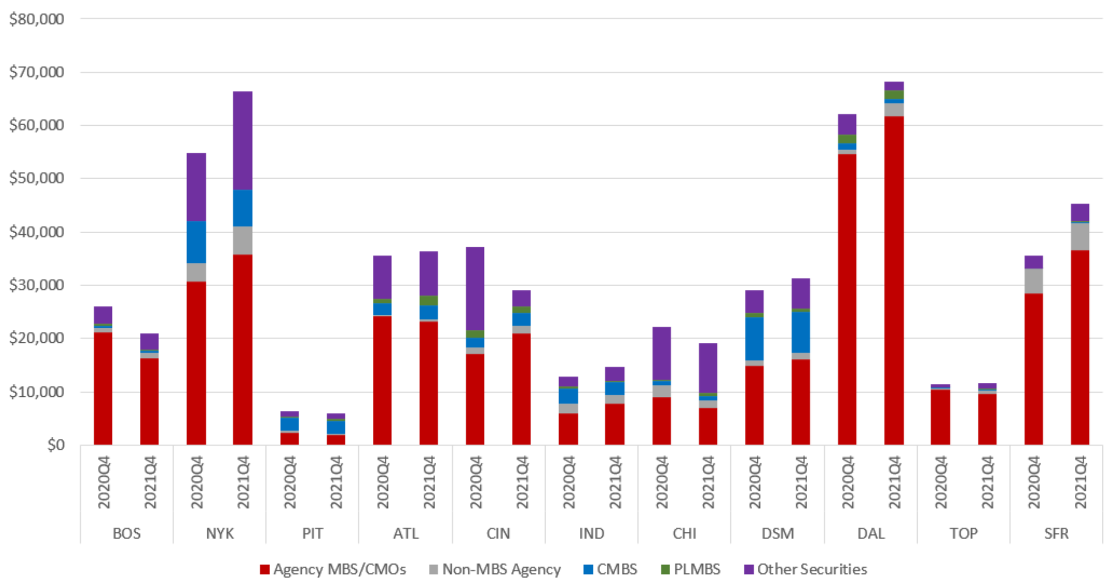
Table 14: Securities Percentage of Eligible Collateral

Bank	2020	2021	Change[35]
BOS	15.1%	12.7%	-2.3%
NYK	14.0%	16.7%	2.7%
PIT	2.0%	2.0%	0.0%
ATL	8.7%	9.7%	1.0%
CIN	9.2%	6.8%	-2.4%
IND	14.6%	16.8%	2.1%
CHI	12.3%	11.3%	-1.0%
DSM	7.7%	8.1%	0.4%
DAL	15.1%	16.0%	0.9%
TOP	9.6%	9.5%	-0.2%
SFR	9.2%	10.9%	1.6%

[34] We calculated percent change numbers using unrounded figures.
[35] Ibid.

Within securities collateral, Agency MBS/CMOs constitute approximately 68 percent of all eligible securities pledged to the Banks as of year-end 2021. Agency MBS/CMOs include all Agency mortgage-backed securities and collateralized mortgage obligations (e.g., GNMA, FNMA, etc.).[36] Non-MBS agency securities are an additional six percent of all eligible securities pledged to the Banks, representing the fourth largest category. Other securities, the second largest category, represent approximately 16 percent of eligible securities pledged to the Banks.[37] The third largest category, CMBS, represents around eight percent of all eligible securities pledged as collateral. PLMBS is the fifth largest category and represents approximately two percent of all eligible securities pledged as collateral. Figure 4 provides more detail on the securities collateral breakdown by type of securities.

Figure 4: Types of Securities Collateral by Bank - 2020 Q4 vs 2021 Q4 ($M)



[36] This includes Agency MF MBS.
[37] Other Securities include (among others) U.S. treasuries, eligible municipal bonds, cash, and certificates of deposit.

Section 3 – Glossary

Advance – A secured extension of credit or loan from a Bank to a member or housing associate.

Agency Mortgage-Backed Securities (MBS) and Collateralized Mortgage Obligations (CMOs) – MBS and CMOs issued, insured, or guaranteed by the U.S. Government or a U.S. Agency thereof, including Fannie Mae and Freddie Mac.

Blanket lien – A form of collateral security agreement under which the member grants a Bank a security interest in all or most of its assets, or one or more broad categories of assets, to secure advances.

Borrowing capacity – The lendable value of collateral pledged based on member and collateral type, net of haircuts and all other adjustments.

Community Financial Institution (CFI) – A member, the deposits of which are insured under the Federal Deposit Insurance Act, that has average total assets of $1 billion or less, based on an average of total assets over the last 3 years. FHFA is required to adjust the $1 billion asset threshold annually, based on the rate of inflation. For 2021, FHFA increased the CFI asset cap to $1,239,000,000, which reflects a 1.2 percent increase in the unadjusted CPI-U from November 2019 to November 2020. Bank members that are CFIs may pledge small business loans, small farm loans, small agribusiness loans, and community development loans, all of which may be fully secured by collateral other than real estate, and securities representing a whole interest in such loans.

Haircut – The collateral discount applied to pledged collateral to provide borrowing capacity to a member to account for different risks including, but not limited to, the risk of collateral value decline. Initial collateral borrowing capacity is determined by subtracting the collateral haircut from 100 percent of either the unpaid principal balance of eligible collateral or the market value of eligible collateral.

Housing Associate – A housing associate is a non-member entity to which a Bank may make advances if it meets specific requirements in FHFA regulations. Housing associates are often state housing finance agencies.

Market value of eligible collateral – The total market value of all collateral pledged and eligible. If market value is not available or the collateral was not priced, the value defaults to the UPB.

Member – A financial institution that has been approved for membership and has purchased stock in a Bank.

Nontraditional mortgage loans – Nontraditional mortgage loans include those that allow negative amortization or the deferment of payments of principal or interest.

Other Real Estate-Related Collateral (ORERC) – As defined under 12 CFR § 1266.7(a)(4). ORERC eligible collateral may include but is not limited to: PLMBS not otherwise eligible; second mortgage loans including home equity loans; commercial real estate loans; and mortgage loan participations. Such collateral may be eligible provided that it has a readily ascertainable value, can be reliability discounted to account for liquidation and other risks, can be liquidated in due course, and the Bank can perfect a security interest in such collateral. For purposes of this report, the ORERC section focuses on loan collateral while any ORERC securities are included in the Securities section.

Specific lien – A form of collateral security agreement under which the member grants a Bank a security interest in a specific set or list of assets, to secure advances.

Subprime mortgage loan – A subprime loan generally is a loan to a borrower having a credit score below a threshold level. Because there is not standard threshold score that defines a subprime loan, threshold levels may vary within limits from lender to lender.

UPB of eligible collateral – The total unpaid principal balance of all collateral pledged and eligible. This definition excludes any ineligible collateral and accounts for any ineligibility factors determined from collateral reviews by the Banks