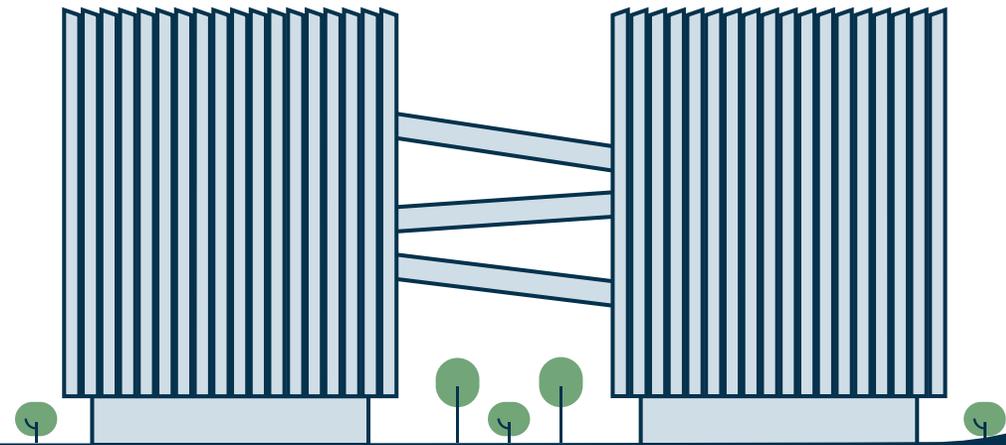


Single-Family Social Index

Methodology Overview

August 2023



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Summary

The Social Index aims to establish an industry standard for social MBS disclosures.

- Fannie Mae’s mission is to facilitate equitable and sustainable access to homeownership and quality affordable rental housing across America.
- As a leading source of mortgage financing in the U.S. at the forefront of affordable housing, we purchase mortgages from lenders and help facilitate the flow of capital into the housing market by issuing and guaranteeing mortgage-related securities that are purchased by investors across the globe.
- In recent years, socially conscious investors have expressed an increased interest to allocate capital in support of affordable housing and to provide access to credit for underserved individuals. However, mortgage-related disclosures may present data privacy concerns; specifically, a potential risk that certain disclosed information may be combined with other publicly available data leading to the ability to identify individuals – in our case, individual borrowers.
- Fannie Mae’s Social Index seeks to balance investors’ desire for information with the need to protect the privacy of the mortgage consumer’s personal information, focusing on three key outcomes:
 1. Prioritize the borrower.
 2. Allow investors to identify pools with high concentrations of loans that meet certain social criteria.
 3. Propose a solution for the industry.
- The design contemplates near-term disclosure of two pool-level measures as an effective solution to provide insights into mortgage pool social composition. Longer-term, one or both measures could support potential issuance of labeled Social MBS issuance:

Social Criteria Share (SCS)	Social Density Score (SDS)
Pool-level share of loans meeting specific social criteria.	Pool-level average of loan-level scores, reflecting layering of social attributes.

- Our desire is to develop a responsible and credible solution to provide investors with insights while reducing the potential impacts on the privacy of the mortgage consumer and to ensure industry alignment, in particular with Single Security.



Fannie Mae's Social Purpose

Fannie Mae's mission is codified in its Charter, with actions to promote that mission specified in statutory affordable housing goals, Duty to Serve requirements, and the Equitable Housing Finance Plan.

- We are committed to promoting a stronger and more efficient housing system for all.
- Our social purpose is codified in Fannie Mae's **Charter**, which details what Congress expects the Enterprise to do to promote access to affordable mortgage financing. Among other requirements, the Charter Act requires Fannie Mae to:
 - *“Provide ongoing assistance to the secondary market for residential mortgages (including activities relating to mortgages on housing for low- and moderate-income families involving a reasonable economic return that may be less than the return earned on other activities) by increasing the liquidity of mortgage investments and improving the distribution of investment capital available for residential mortgage financing”*
 - *“Promote access to mortgage credit throughout the Nation (including central cities, rural areas, and underserved areas) by increasing the liquidity of mortgage investments and improving the distribution of investment capital available for residential mortgage financing”*
- **Affordable housing goals** and our **Duty to Serve** provisions in federal law codify objectives for supporting low-income and minority communities, and three underserved markets: Manufactured Housing, Affordable Housing Preservation, and Rural Housing.
- More recently, Fannie Mae's **Equitable Housing Finance Plan** puts forward a series of actions to advance greater equity in America's housing finance system, its practices, and its outcomes.



Social Index Design Overview

The Social Index solution provides insights into social lending activities via two pool-level measures, the SCS and SDS.

Individual Loans Evaluated across Eight Specific Social Criteria

1) Low-Income Borrowers

Household Income <= 80% of AMI

2) Minority Borrower

At least one borrower identifies as a minority

3) First-Time Homebuyers

*At least one borrower is FTHB
Household Income <= 120% of AMI*

4) Low-Income Areas

*Home located in designated low-income area
Household Income <= 120% of AMI*

5) Minority Tract

*Home located in designated minority tract
Household Income <= 120% of AMI*

6) High-Needs Rural

*Home located in designated high-needs rural area
Household Income <= 120% of AMI*

7) Designated Disaster Area

*Home located in designated disaster area
Household Income <= 120% of AMI*

8) Manufactured Housing

*Home is manufactured housing
Household Income <= 120% of AMI*

- All loans evaluated at time of acquisition.
- Loans meeting one or more of the criteria flagged as social for this disclosure.
- **Second Homes excluded** from eligibility for all criteria.

Loan-Level Social Criteria Support Scoring Via Three Dimensions

Income

Loans meeting the Low-Income Borrowers criteria assigned a value of 1.

Borrower

Loans meeting either of the Borrower criteria assigned a value of 1.

Property

Loans meeting any of the five Property criteria assigned a value of 1.

- Loans assigned a loan-level social score reflecting the sum of their dimension-level values.
- In this manner, each loan received a score of 0 to 3.

Supporting Two Pool-Level Social Index Measures

Social Criteria Share (SCS)

Share of loans within the pool that meet any of the eight social criteria.

Social Density Score (SDS)

Average loan-level social score within the pool.
Score is limited to a maximum of 2.5 out of 3.0.

- Social index measures disclosed for all pools with >= 10 loans at time of pool issuance.
- Measures reflect pool composition at time of issuance.
- Measures are not updated as pools season.



Hypothetical Sample Pool

Social Index Methodology:

- For each loan in the pool, determine if the loan meets *any* of the eight social criteria. If it meets one or more criteria, it is a loan that is socially-oriented for purposes of this disclosure.
 - Social Criteria Share (SCS):** 90% of the loans in this sample pool are socially oriented in this construct.
- The eight social criteria are further segmented into three social dimensions (note color-coding). Determine which social dimensions each loan meets based on the social criteria mappings (binary result – either 1 or 0). The loan-level score is the count of the social dimensions it satisfies.
 - Social Density Score (SDS):** the simple average of the loan-level score for this pool is 1.5.

Table 1: Methodology Illustration for a Hypothetical Pool of 10 Loans

		Loan:	1	2	3	4	5	6	7	8	9	10		
Social Criteria	Low-Income Borrower	0	1	0	0	0	0	1	0	0	1	0		
	Minority Borrower	0	0	1	0	0	0	0	1	0	0	0		
	First-Time Homebuyer	1	1	0	0	1	0	0	0	0	0	0		
	Designated Disaster Area	0	0	0	0	1	0	0	0	0	0	0		
	Low-Income Area	1	0	1	0	0	0	0	0	0	0	0		
	Manufactured Housing	0	1	0	1	0	0	0	0	1	0	0		
	High-Needs Rural	0	1	0	0	0	0	0	0	0	1	0		
	Minority Tract	0	0	1	1	0	0	0	0	0	0	0		
Criteria Met Indicator¹		1	0	90.0%	SCS									
Social Dimensions	Income	0	1	0	0	0	0	1	0	0	1	0		
	Borrower	1	1	1	0	1	0	1	0	1	0	0		
	Property	1	1	1	1	1	1	0	0	1	1	0		
Loan-level Score²		2	3	2	1	2	1	1	1	1	2	0	1.5	SDS

¹Indicates if a loan met any of the eight criteria

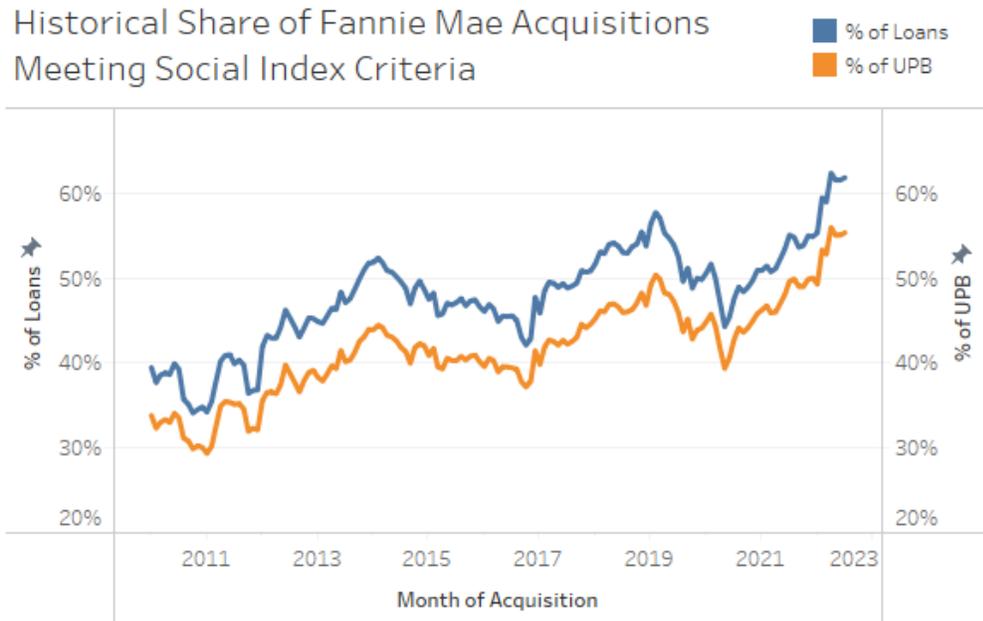
²Loan-Level Score is the sum of the three Social Dimension scores



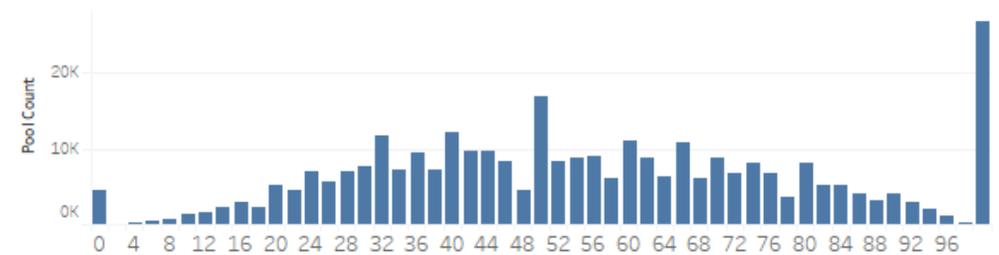
Social Criteria Share (SCS)

The pool-level share of loans meeting specific social criteria.

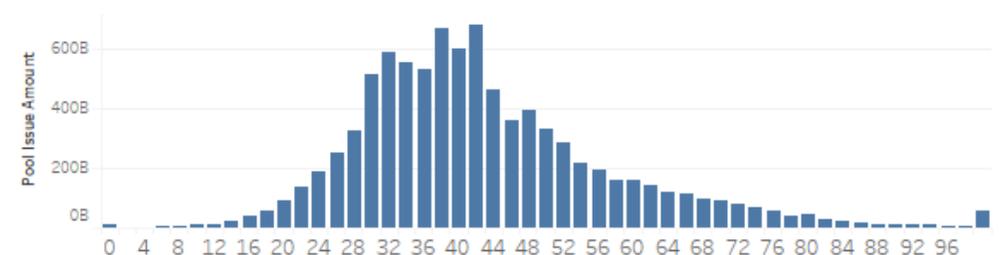
- Any loan meeting one or more of the eight criteria would be deemed social for the purposes of the Social Index disclosure.
- The first measure within the Social Index, the Social Criteria Share (SCS), reflects the pool-level share of loans identified as social in this manner.
- Investors can choose what level of SCS constitutes a social pool within their investment mandate.



Jan 2010 - Jul 2022 Pool-Level Distribution of SCS



Jan 2010 - Jul 2022 Pool-Level Distribution of SCS - Reflecting UPB Issued



Updated October 18, 2022, with larger population and refined methodology.

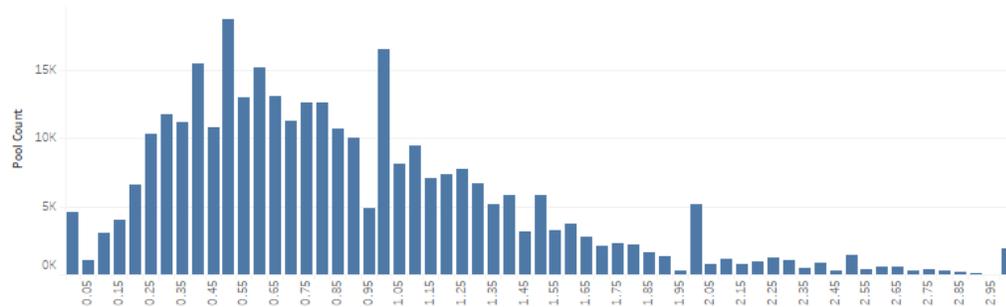


Social Density Score (SDS)

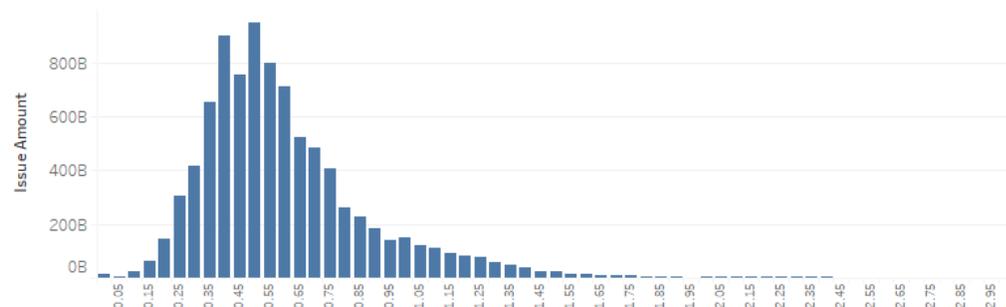
The pool-level average of loan-level scores, reflecting layering of social attributes.

- Within the Social Index, loan-level scores indicate concentrations of socially-oriented lending activities by acknowledging that some loans meet multiple criteria across the three dimensions
- Reflecting social activity concentrations is aimed to promote lender focus on the most underserved segments: those featuring social criteria across more than one dimension

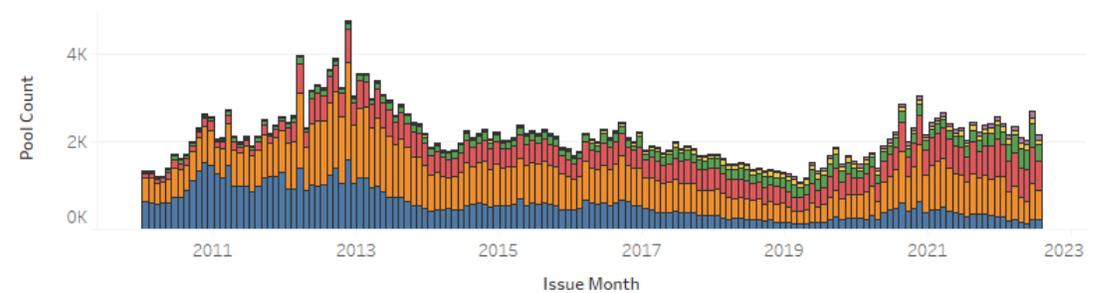
Jan 2010 - Jul 2022 Pool-Level Distribution of SDS by Pool Count



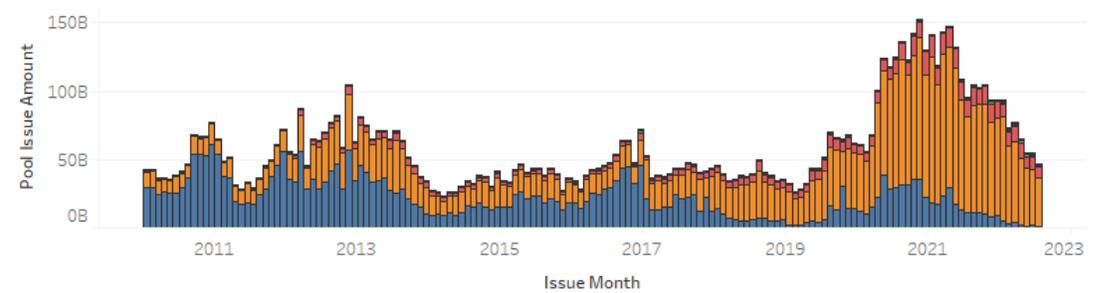
Jan 2010 - Jul 2022 Pool-Level Distribution of SDS by Issue Amount



Historical Distribution of Pool-Level SDS by Pool Count



Historical Distribution of Pool-Level SDS by Pool Issue Amount



Note: Pool-level SDS scores are not capped at 2.5, to provide insights into historical shares above that level. These scores will be capped in the disclosure.

Updated October 18, 2022, with larger population and refined methodology.



Historical Issuance Snapshot

Score Concentrations for Fannie Mae Issuance Since 2010

Distribution of Historical UPB by Pool-Level Score Combination
(Jan 2010 - Jul 2022 Issuance)

Pool SDS	Pool SCS							Grand Total
	00%<-25%	25%<-50%	50%<-75%	75%<-90%	90%<-95%	95%<-100%	100%	
0.00-0.00	0.12%							0.12%
0.00<-0.25	2.74%	0.07%						2.80%
0.25<-0.50	2.45%	31.78%	0.05%					34.29%
0.50<-0.75	0.00%	35.45%	3.12%	0.01%				38.57%
0.75<-1.00		0.46%	13.31%	0.11%	0.01%	0.00%	0.01%	13.90%
1.00<-1.25		0.00%	5.35%	0.52%	0.02%	0.01%	0.02%	5.93%
1.25<-1.50		0.00%	0.97%	1.69%	0.06%	0.01%	0.05%	2.78%
1.50<-1.75			0.02%	0.57%	0.12%	0.06%	0.07%	0.84%
1.75<-2.00			0.00%	0.07%	0.08%	0.06%	0.12%	0.33%
2.00<-2.25			0.00%	0.01%	0.03%	0.04%	0.10%	0.17%
2.25<-2.50				0.00%	0.00%	0.02%	0.16%	0.19%
2.50<-2.75				0.00%	0.00%	0.00%	0.06%	0.06%
2.75<-3.00						0.00%	0.02%	0.02%
Grand Total	5.31%	67.75%	22.82%	2.98%	0.32%	0.21%	0.61%	100.00%

Less than 0.1% issued with SDS > 2.5

Less than 11% issued with SDS > 1

4.1% > 75% SCS

26.9% > 50% SCS

Historically, a very small share of issued pool UPB has reflected very high values for either or both measures contemplated in the Social Index.

Note: Pool-level SDS scores are not capped at 2.5, to provide insights into historical shares above that level. These scores will be capped in the disclosure.





Appendix

Social Criteria

The eight criteria identified below reflect GSE Mission-focused activities that investors have expressed interest in supporting.

Low-Income Borrower

High housing costs, in part driven by difficulties obtaining affordable financing, continue to create financial hardship for many lower income families.

Since 2017: 26.3% of loans

Minority Borrower

A substantially lower homeownership rate for minority versus white, Non-Hispanic families has persisted over the past half-century, exacerbating racial inequality.

Since 2017: 23.1% of loans

First-Time Homebuyer

Supporting First-Time Homebuyers helps expand sustainable access to homeownership.

Since 2017: 12.3% of loans

Low-Income Area

Some census tracts are disadvantaged and have a median income that is low relative to the surrounding county. Supporting these areas can facilitate sustainable homeownership for entire communities.

Since 2017: 10.2% of loans

Minority Tract

Historic redlining excluded many minority areas from equitable access to the housing finance system, worsening racial inequality.

Since 2017: 12.1% of loans

High-Needs Rural

Many rural regions face unique challenges when it comes to access to quality housing and affordable mortgage financing. A disproportionate number of families in rural areas struggle to own a home.

Since 2017: 0.8% of loans

Designated Disaster Area

Families located in disaster areas designated by FEMA often require temporary support to continue to afford quality affordable housing.

Since 2017: 8.6% of loans

Manufactured Housing

Manufactured housing provides an affordable alternative to site-built homes, allowing for the expansion of homeownership in a supply constrained market.

Since 2017: 0.6% of loans

Updated October 18, 2022, with larger population and refined methodology.



Social Criteria

The eight criteria identified in the methodology design are activities embedded in Fannie Mae’s statutory mission.

Low-Income Borrower

The Fannie Mae Charter Act (“**Charter Act**”)¹ and the Federal Housing Enterprises Financial Safety and Soundness Act of 1992, as amended (“**GSE Act**”),² direct Fannie Mae to facilitate the financing of affordable housing for low-income families. The **GSE Act**³ establishes the affordable housing goals requirement to support low- and very low-income borrowers.

Since 2017: 26.3% of loans

Minority Borrower

The **Charter Act**⁴ requires the assessment of underwriting standards, business practices, repurchase requirements, pricing, fees, and procedures that may yield disparate results based on the race of the borrower. In its recently published **Equitable Housing Finance Plan**,⁵ Fannie Mae outlines a range of specific actions it will take to knock down barriers faced by minority homeowners.

Since 2017: 23.1% of loans

First-Time Homebuyer

The **GSE Act**⁶ requires Fannie Mae to develop capacity to help finance housing for first-time homebuyers. In addition, Fannie Mae is required by the **Charter Act**⁷ to report annually on financing activities related to first-time homebuyers.

Since 2017: 12.3% of loans

Low-Income Area

The **Charter Act**⁸ directs Fannie Mae to promote access to mortgage credit in underserved areas. The affordable housing goals specified in the **GSE Act**⁹ include purchasing mortgages on housing for families that reside in low-income areas. To meet these goals, the **GSE Act**¹⁰ directs Fannie Mae to help lenders make housing credit available in areas with concentrations of low-income families.

Since 2017: 10.2% of loans

Minority Tract

The **Charter Act**¹¹ directs Fannie Mae to promote access to mortgage credit in underserved areas. The affordable housing goals specified in the **GSE Act**¹² include purchasing mortgages on housing for families that reside in minority census tracts. To meet these goals, the **GSE Act**¹³ directs Fannie Mae to help lenders make housing credit available in areas with concentrations of minority families.

Since 2017: 12.1% of loans

High-Needs Rural

The **Charter Act**¹⁴ directs Fannie Mae to promote access to mortgage credit in rural areas. The Duty to Serve requirements specified in the **GSE Act**¹⁵ include a duty to support rural housing.

Since 2017: 0.8% of loans

Designated Disaster Area

The **Charter Act**¹⁶ directs Fannie Mae to promote access to mortgage credit in underserved areas. The affordable housing goals specified in the **GSE Act**¹⁷ include purchasing mortgages on housing for families that reside in designated disaster areas.

Since 2017: 8.6% of loans

Manufactured Housing

The **Charter Act**¹⁸ directs Fannie Mae to promote access to mortgage credit in underserved areas. The Duty to Serve requirements specified in the **GSE Act**¹⁹ include a duty to support manufactured housing.

Since 2017: 0.6% of loans

Updated October 18, 2022, with larger population and refined methodology.

Please refer to last appendix slide for citations.



Social Criteria - Citations

Low-Income Borrower

- (1) 12 U.S.C. § 1716(3)
- (2) 12 U.S.C. § 4501(7)
- (3) 12 U.S.C. §§ 4561-4563

Minority Borrower

- (4) 12 U.S.C. § 1723a(n)(2)(G)
- (5) www.fanniemae.com/media/43636

First-Time Homebuyer

- (6) 12 U.S.C. § 4565(b)(4)
- (7) 12 U.S.C. § 1723a(n)(2)(D)

Low-Income Area

- (8) 12 U.S.C. § 1716(4)
- (9) 12 U.S.C. § 4562(a)(1)(B)
- (10) 12 U.S.C. § 4565(b)(3)(A)

Minority Tract

- (11) 12 U.S.C. § 1716(4)
- (12) 12 U.S.C. §§ 4502(28) and 4562(a)(1)(B)
- (13) 12 U.S.C. § 4565(b)(3)(A)

High-Needs Rural

- (14) 12 U.S.C. § 1716(4)
- (15) 12 U.S.C. § 4565(a)(1)(C)

Designated Disaster Area

- (16) 12 U.S.C. § 1716(4)
- (17) 12 U.S.C. §§ 4502(28) and 4562(a)(1)(B)

Manufactured Housing

- (18) 12 U.S.C. § 1716(4)
- (19) 12 U.S.C. § 4565(a)(1)(A)





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