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# Mortgage-Backed Securities Repackaging: User Guide

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## Overview



A mortgage-backed security (MBS) is a collection (pool) of mortgages that are securitized or packaged as a security. As an MBS ages, the underlying mortgages get paid down or are removed from the pool because of, for example, default or refinancing. Rolling multiple MBS pools into one larger one can substantially reduce risk, as the default of a single loan will have a smaller effect on the whole.

This demo executes the process of “repackaging” an MBS to reduce risk by consolidating several pools of loans into a single security.

## This Guide

This User Guide takes you step-by-step through MBS processing, executing a successful repackaging of a mortgage pool.

*Note: This demo is designed to show successful conclusion of the MBS without exceptions or error conditions. A full production implementation would include additional features, handle errors and exceptions, and incorporate appropriate security controls.*

## Workflow

### Roles and Responsibilities

Tasks are performed by following roles in the workflow.

Role	Responsibility
Mortgage Pool Holder	Propose a repacking of mortgage pools View new pools
Securitizer	Accept or reject a proposal
Market Operator	Settle repackages once proposed and accepted

### Steps

The MBS Process workflow involves these steps:





1. **Propose Mortgage Pool Agreement:** As the Mortgage Pool Holder, propose a repackaging of existing mortgage pools.
2. **Accept Proposal:** As the Securitizer, accept or reject the proposal.
3. **Settle Agreement:** Settle the proposal as the Market Operator. Settlement transfers and archives the underlying collateral, issues the MBS, and transfers the MBS as an atomic action – eliminating the counterparty risk from the transaction. (An atomic action is an uninterrupted sequence of operations, effectively making it a single operation.)
4. **View Mortgage Pool:** As the Mortgage Pool Holder, view the new MBS.

All of these steps can be executed through the demo prototype user interface but could be fully automated in a production implementation of the application.

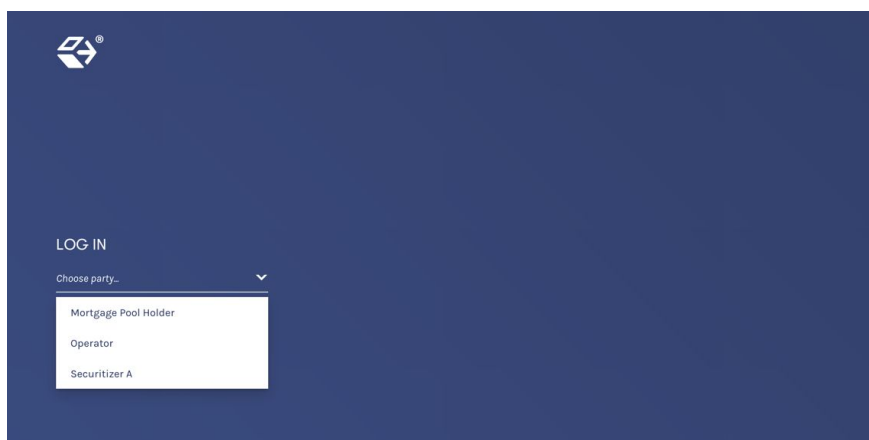
## Getting Started

### Accessing the Demo

Follow the instructions in the Read Me provided with the demo code to install and run the demo.

### Choosing and Changing Roles

When you launch the prototype, you will see the Log-In screen.



To use this screen:

1. To log in as a user, choose the role from the drop-down list.  
The username appears at the top of their dashboard.
2. To change to a different user:





- Choose **Log Out** below the current username on any screen.

CUSIP #	Pool Type	Pass-throu...	Issue Date	Maturity	Original Face Valu
e86d9ca2	Fixed	3.5%	3/15/1974	3/15/1986	\$60,024,200.00
2f9cbb8c	Fixed	3.5%	1/24/1998	1/24/2010	\$60,198,520.00
bc2d1f43	Fixed	3.5%	5/23/1996	5/23/2008	\$60,186,300.00
e9bf5d5e	Fixed	3.5%	8/12/1977	8/12/1989	\$60,049,120.00

- Log in as the new user.

## 1 Proposing Mortgage Pool Agreement


The workflow begins with a Mortgage Pool Holder proposing a consolidation of existing mortgage pools into one new security. This would generally be done when the current face values of the pools has dropped from their original values because of amortization, prepayments, defaults, or refinancings that affect the value of the pool.

To enter a new proposal:

1. Log in as Mortgage Pool Holder.

The Mortgage Pools list screen will be displayed.





Mortgage Pools

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Mortgage Pool Agreement Drafts

Mortgage Pool Agreement Proposals

Mortgage Pool Agreements

Mortgage Pool Holder

Mortgage Pools

CUSIP #	Pool Ty...	Pass-th...	Issue D...	Maturity	Original Face Value	Current Face Value	Lock St...
9a335e13	Floating	4.5%	3/13/1...	3/13/1...	\$60,089,900.00	\$50,449,500.00	
b47a32dc	Fixed	2.5%	2/13/1...	2/13/1...	\$60,103,960.00	\$50,519,800.00	
88dcaeb7	Floating	3.5%	2/20/1...	2/20/1...	\$60,052,960.00	\$50,264,800.00	
610c1295	Fixed	3.5%	1/9/1981	1/9/199...	\$60,074,040.00	\$50,370,200.00	
19d64147	Fixed	4.5%	5/1/1979	5/1/1991	\$60,061,660.00	\$50,308,300.00	
9876ee7e	Floating	2.5%	9/22/1...	9/22/1...	\$60,064,540.00	\$50,322,700.00	
2aa6454e	Floating	3.5%	8/3/19...	8/3/19...	\$60,114,680.00	\$50,573,400.00	
7b82429d	Fixed	4.5%	3/8/19...	3/8/19...	\$60,053,280.00	\$50,266,400.00	
280bd096	Fixed	4.5%	7/12/19...	7/12/2...	\$60,143,460.00	\$50,717,300.00	New
dd357b9e	Fixed	4.5%	12/31/1...	8/23/2...	\$101,248,500.00	\$101,248,500.00	

The Mortgage Pools list screen shows current mortgage pools holdings. Key things to note on the screen:

- Information on each pool includes the CUSIP, type – fixed or floating, the pass-through rate, dates, and original and current value
- Current value is lower than the original on virtually every pool
- Lock status indicates

Open: available for repackaging

Locked: not available for repackaging

- The last column shows “New” for any updated information
- The numbers in green circles indicate new data. Once you open the page, the number reverts to the dark blue total.
- Click the heading to sort by any column.

## 2. Choose **Mortgage Pool Agreement Drafts** in the menu bar at the left.

The Mortgage Pool Agreement Drafts list screen displays any current proposals.



Mortgage Pool Holder ▾

Mortgage Pool Agreement Drafts

+

 Create New

Q

Mortgage Pools10

Mortgage Pool Agreement Drafts

Mortgage Pool Agreement Proposals1

Mortgage Pool Agreements1

Reference #	Details	Face Value	Actions
No mortgage pools yet.			



3. Choose the **Create New** button to open the New Proposal pane.

### New Mortgage Pool Agreement Draft

1 Details

Pool type  
Select

Pass-Through Rate  
Select

Create

2 Allocations

3 Review and Submit

4. Enter the proposal data in the New Proposal pane:
  - a. **Pool Type:** Fixed
  - b. **Pass-Through Rate:** 3.5%
5. Choose the **Create** button.

When the new proposal is created, the Allocations section of the pane automatically expands. Only the mortgage pools that match the selected parameters will be displayed.

### New Mortgage Pool Agreement Draft

1 Details

Pool type  
Fixed

Pass-Through Rate  
3.5%

✓ New Mortgage Pool Agreement Draft Created (Reference #2ce5629d)

2 Allocations

CUSIP # ▾	Pool Type ▾	Pass-th... ▾	Issue D... ▾	Maturity ▾	Original Face Value ▾	Current Face Value ▾
<input type="checkbox"/> 935af7a3	Fixed	3.5%	12/15/1974	12/15/1986	\$60,029,700.00	\$50,148,500.00
<input type="checkbox"/> 8f184a8b	Fixed	3.5%	8/18/1984	8/18/1996	\$60,100,380.00	\$50,501,900.00
<input type="checkbox"/> 42c80979	Fixed	3.5%	4/5/1989	4/5/2001	\$60,134,200.00	\$50,671,000.00

Allocate

3 Review and Submit





6. Select all the matching mortgage pools to include by selecting checkbox(es).  
Choose the **Allocate** button.

Maturity and Face Value will be updated based on the pools allocated. The Review and Submit section of the draft proposal will expand.

7. Select the Counterparty: Securitizier A

### New Mortgage Pool Agreement Draft

1 Details
✓ New Mortgage Pool Agreement Draft Created (Reference #2ce5629d)

Pool type  
Fixed

Pass-Through Rate  
3.5%

2 Allocations
✓ You have successfully allocated collateral (Reference #2ce5629d)

CUSIP # ▾	Pool Type ▾	Pass-th... ▾	Issue D... ▾	Maturity ▾	Original Face Value ▾	Current Face Value ▾
935af7a3	Fixed	3.5%	12/15/1974	12/15/1986	\$60,029,700.00	\$50,148,500.00
8f184a8b	Fixed	3.5%	8/18/1984	8/18/1996	\$60,100,380.00	\$50,501,900.00
42c80979	Fixed	3.5%	4/5/1989	4/5/2001	\$60,134,200.00	\$50,671,000.00

Add or remove collateral

3 Review and Submit

Maturity  
4/5/2001

Face Value  
\$151,321,400.00

Counterparty  
Select ▾  

Securitizier A

Submit

8. Choose the **Submit** button.

A message will indicate that the new mortgage pool agreement draft has been created.

**Tip:** Make a note of the agreement reference number:

✓ New Mortgage Pool Agreement Draft Created (Reference #2ce5629d)

9. Choose the **Mortgage Pool Agreement Proposals** in the menu bar to see the proposal displayed on the list screen. The “New” tag and the reference number identify it. You can also use the Search function to locate the proposal by reference number.

Choose **View Allocations** to expand that section and see what is included in the proposal.







Mortgage Pools	Mortgage Pools							Lock St...	
	CUSIP #	Pool Type	Pass-th...	Issue D...	Maturity	Original Face Value	Current Face Value		
Mortgage Pool Agreement Drafts	fa37e3ee	Floating	4.5%	8/17/1986	8/17/1998	\$60,114,960.00	\$50,574,800.00		
	e9c73469	Floating	4.5%	3/18/1994	3/18/2006	\$60,170,360.00	\$50,851,800.00		
Mortgage Pool Agreement Proposals	935af7a3	Fixed	3.5%	12/15/1974	12/15/1986	\$60,029,700.00	\$50,148,500.00		New
	8f184a8b	Fixed	3.5%	8/18/1984	8/18/1996	\$60,100,380.00	\$50,501,900.00		New
Mortgage Pool Agreements	88556c61	Fixed	3.5%	8/2/1995	8/2/2007	\$60,180,400.00	\$50,902,000.00		
	6b618784	Floating	4.5%	10/8/1974	10/8/1986	\$60,028,340.00	\$50,141,700.00		
	665cb903	Fixed	3.5%	7/9/1983	7/9/1995	\$60,092,260.00	\$50,461,300.00		
	52355f7c	Fixed	4.5%	2/18/1990	2/18/2002	\$60,140,580.00	\$50,702,900.00		
	49027595	Floating	3.5%	5/3/1995	5/3/2007	\$60,178,580.00	\$50,892,900.00		
	48a26fda	Floating	4.5%	6/3/1996	6/3/2008	\$60,186,520.00	\$50,932,600.00		
	42c80979	Fixed	3.5%	4/5/1989	4/5/2001	\$60,134,200.00	\$50,671,000.00		New
	3ea0a849	Floating	4.5%	5/31/1974	5/31/1986	\$60,025,740.00	\$50,128,700.00		
	345aed18	Fixed	4.5%	12/31/1969	2/24/20...	\$151,557,600.00	\$151,557,600.00		
	3416a864	Floating	3.5%	10/21/1977	10/21/1989	\$60,050,520.00	\$50,252,600.00		
	06da750f	Floating	3.5%	3/14/1973	3/14/1985	\$60,016,880.00	\$50,084,400.00		



## 2 Accepting Proposal

The Securitizer now accepts the proposed repackaging so that the pools can be combined into one new MBS. The Securitizer can also reject a proposal, in which case the repackaging does not go forward.

To accept:

1. Log in as Securitizer A.
2. Choose **Mortgage Pool Agreement Proposals** in the menu bar to view the open proposals. Select the **View Allocations** link to see pools being proposed for the new security.

Reference #	Details	Face Value	Actions
2ce5629d	<b>Alleged By:</b> Mortgage Pool Holder <b>Pool Type:</b> Fixed <b>Pass-through Rate:</b> 3.5% <b>Maturity:</b> 4/5/2001 <a href="#">View Allocations</a>	\$151,321,400.00	<a href="#">Accept</a> <a href="#">Reject</a> <span>New</span>

CUSIP #	Pool Type	Pass-th...	Issue D...	Maturity	Original Face Value	Current Face Value
935af7a3	Fixed	3.5%	12/15/1974	12/15/1986	\$60,029,700.00	\$50,148,500.00
8f184a8b	Fixed	3.5%	8/18/1984	8/18/1996	\$60,100,380.00	\$50,501,900.00
42c80979	Fixed	3.5%	4/5/1989	4/5/2001	\$60,134,200.00	\$50,671,000.00

3. Choose the **Accept** button to accept the new proposal.

The number of the Mortgage Pool Agreements in the menu bar will be updated to reflect the accepted agreement. In a production implementation, all parties would be notified of this action, including the CSD or Registry that will create a new CUSIP for the security.

4. Log in as the Mortgage Pool Holder and choose **Mortgage Pool Agreements** in the menu bar to see the new agreement on the Mortgage Pool Agreements list screen.

Reference #	CUSIP #	Details	Face Value
2ce5629d	a7f7349a	<b>Alleged By:</b> Mortgage Pool Holder <b>Pool Type:</b> Fixed <b>Pass-through Rate:</b> 3.5% <b>Maturity:</b> 4/5/2001 <a href="#">View Allocations</a>	\$151,321,400.00



### 3 Settling Agreement

Once both parties agree to the terms of the new Mortgage Pool Agreement, the Market Operator can settle the trade.

To settle:

1. Log in as Operator.

Reference #	CUSIP #	Details	Face Value	Actions
2ce5629d	a7f7349a	<b>Alleged By:</b> Mortgage Pool Holder <b>Pool Type:</b> Fixed <b>Pass-through Rate:</b> 3.5% <b>Maturity:</b> 4/5/2001 <a href="#">View Allocations</a>	\$151,321,400.00	<a href="#">Settle</a> <a href="#">New</a>

2. Locate the new agreement and choose the **Settle** button.

Settlement transfers the underlying mortgage pool from the Mortgage Pool Holder to the Securitizer; issues a new security, and transfers ownership of the new security to the Mortgage Pool Holder. In a production implementation, the new security would be registered with the Federal Reserve.



## 4 Viewing Mortgage Pool

To view the results of the repackaging from the point of view of the Mortgage Pool Holder:

1. Log in as the Mortgage Pool Holder. You will see the new mortgage pool on the Mortgage Pools list screen

Identify it by the “New” label. The original and current face value will be equal. The new pool has an open symbol, indicating that it could be repackaged should this be required later.

CUSIP #	Pool Type	Pass-thru	Issue Date	Maturity	Original Face Value	Current Face Value	Lock Status
fa37e3ee	Floating	4.5%	8/17/1986	8/17/1998	\$60,114,960.00	\$50,574,800.00	🔒
e9c73469	Floating	4.5%	3/18/1994	3/18/2006	\$60,170,360.00	\$50,851,800.00	🔒
a7f7349a	Fixed	3.5%	12/31/1969	4/5/2001	\$151,321,400.00	\$151,321,400.00	🔒 New
88556c61	Fixed	3.5%	8/2/1995	8/2/2007	\$60,180,400.00	\$50,902,000.00	🔒
6b618784	Floating	4.5%	10/8/1974	10/8/1986	\$60,028,340.00	\$50,141,700.00	🔒
665cb903	Fixed	3.5%	7/9/1983	7/9/1995	\$60,092,260.00	\$50,461,300.00	🔒
52355f7c	Fixed	4.5%	2/18/1990	2/18/2002	\$60,140,580.00	\$50,702,900.00	🔒
49027595	Floating	3.5%	5/3/1995	5/3/2007	\$60,178,580.00	\$50,892,900.00	🔒
48a26fda	Floating	4.5%	6/3/1996	6/3/2008	\$60,186,520.00	\$50,932,600.00	🔒
3ea0a849	Floating	4.5%	5/31/1974	5/31/1986	\$60,025,740.00	\$50,128,700.00	🔒
345aed18	Fixed	4.5%	12/31/1969	2/24/20...	\$151,557,600.00	\$151,557,600.00	🔒
3416a864	Floating	3.5%	10/21/1977	10/21/1989	\$60,050,520.00	\$50,252,600.00	🔒
06da750f	Floating	3.5%	3/14/1973	3/14/1985	\$60,016,880.00	\$50,084,400.00	🔒

2. Search for any mortgage pool selected for repackaging. You will find they have been removed.



## Additional Exploration

You can explore additional features of the MBS demo.

Some options:

- As the Mortgage Pool Holder, withdraw some proposals. Choose the **Withdraw** button on the Mortgage Pool Agreement Proposals list screen to cancel the proposal if it has not yet been accepted.
- As the Securitizer, reject a proposal.

Bear in mind that this demo does not handle exceptions or errors in the way that a production build would do.