## AGENDA

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic/Description</th>
<th>Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td>11 am</td>
<td>Welcome and Introductions – Introduce new members and review agenda</td>
<td>Freddie Mac, Fannie Mae</td>
</tr>
<tr>
<td>11:15 am – 11:30 am</td>
<td>FHFA’s Q1 Update on the Implementation of the Single Security Initiative and Common Securitization Platform</td>
<td>R. Fishman, FHFA</td>
</tr>
<tr>
<td>11:30 am – Noon</td>
<td>Implications of the Q2 2019 Schedule</td>
<td>R. Fishman, FHFA&lt;br&gt;Freddie Mac&lt;br&gt;Fannie Mae</td>
</tr>
<tr>
<td>Noon – 12:15 pm</td>
<td>Quick Break and Get Lunch</td>
<td></td>
</tr>
<tr>
<td>12:15 pm– 1:00 pm</td>
<td>Alignment</td>
<td>R. Fishman, FHFA&lt;br&gt;All</td>
</tr>
<tr>
<td></td>
<td>FHFA’s alignment efforts to date</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Single Security Initiative Governance Committee</td>
<td></td>
</tr>
<tr>
<td></td>
<td>How does the industry define alignment?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>What would you expect to see to ensure prepayments and security performance are staying aligned?</td>
<td></td>
</tr>
<tr>
<td>1:00 pm – 1:20 pm</td>
<td>Bloomberg Barclay’s MBS Index</td>
<td>Nick Gendron, Bloomberg</td>
</tr>
<tr>
<td>1:20 pm – 1:30 pm</td>
<td>Next Steps, Next Meeting and Adjourn</td>
<td>Freddie Mac</td>
</tr>
</tbody>
</table>
Single Security and CSP Industry Advisory Group (IAG)

April 27, 2017

Meeting location: New York

Attendees: About 45 (including those in the room and on the phone). Nick Gendron from Bloomberg (Barclays) Index was a guest speaker, and shared an update on the Bloomberg US MBS Index and considerations concerning the Index’s construction once the new, common single security, to be known as the Uniform Mortgage-Backed Security or UMBS, launches.

FHFA Single Security and CSP Update

Following new member introductions and an antitrust precautions reminder to the membership, FHFA reviewed their Update from March 23, 2017. The review included the timeframe for implementation of the Single Security Initiative, FHFA’s actions to address greater Enterprise alignment, and the costs to build the Common Securitization Platform (CSP). FHFA spent some time talking about the reasons for the reset of the Single Security Initiative implementation date from 2018 to Q2 2019. In moving the date out, FHFA considered what was learned with Freddie Mac’s Release 1 implementation. The required development time, tri-party project governance, and the level of testing needs led FHFA to extend the schedule. Release 2 – which will coincide with the Enterprises issuing the first UMBS – is a larger and more complex undertaking than Release 1 because Release 2 will encompass capabilities with respect to Fannie Mae’s adjustable-rate securities, both Enterprises’ multiclass securities, and the commingling of UMBS issued by the Enterprises into second-level securitizations to be known as Supers, which will be analogous to Fannie Mae’s Megas and Freddie Mac’s Giants. The additional time in the schedule provides for a longer period of testing. It also provides market stakeholders more time for their own system development and preparations – something some market participants have said they need.

There was discussion about the 2019 date and its implications. One member asked if Q2 2019 is a commitment or a target. FHFA stated it is a commitment, though nothing is 100% guaranteed. Other members asked what the most challenging aspect of meeting the 2019 date is, and whether the potential for GSE reform factors into the Single Security Initiative plans. Some of the challenges in getting to the 2019 date are internal to the project team, like completion of the CSP code and the required testing. Other challenges are external to the project team, such as the industry’s readiness for the new security, including system updates, needed changes to legal documents, and operational process changes. In addition, the Enterprises and FHFA are working to address the tax, accounting, and other potential regulatory issues with respect to the new securities and the (optional) exchange of legacy Freddie Mac Participation Certificates (PCs) for UMBS.

Regarding potential GSE reform and the Single Security Initiative, FHFA stated that they believe the Single Security Initiative and CSP will work for the Enterprises as they operate today but also has the flexibility to address changes that may be required due to housing finance reform. Further, FHFA stated
that many of the GSE reform proposals include the notion of a mortgage securitization platform or utility.

With respect to the commingling of UMBS into Supers, there was a question about any legal documentation or agreement between the Enterprises covering the wrap of each other’s securities. FHFA and the Enterprises responded that there will be an agreement in place for commingled securities issuance. For a Supers security, the investor’s counterparty is the top-level issuer. Some IAG members pointed out that there could be differences of opinion between the Enterprises in the event of operational errors that involve a compensation claim in a commingled Supers security, as to the value of compensation to be paid. FHFA and the Enterprises agreed that more discussion on the topic of commingling could be warranted at a future meeting, perhaps walking the group through some real examples.

There was a brief discussion on the SIFMA Good Delivery Guidelines; an update will be needed in preparation for the introduction of the new securities. SIFMA is talking with its TBA Guidelines Steering Committee about the decisions that need to be made, what the committee has authority over, and the timing of the update, which will probably be about six months before the Single Security Initiative is implemented. SIFMA and its members are looking for resolution on some of the issues that are still outstanding, including accounting and tax treatment and alignment.

Other IAG members echoed the same request for resolution; money managers and dealers will need to be able to answer client questions definitively as they prepare for the transition to the new securities.

Freddie Mac provided an update on their efforts to obtain published guidance related to potential tax issues resulting from the exchange and issuance of UMBS. The IRS agreed to address the treatment of the exchange of the 45-day security for a 55-day security (the exchange) as well as the associated make whole and incentive payments (the associated payments) separately from the potential diversification issues associated with code section 817(h). Freddie Mac is preparing a draft of a letter that will be submitted to the IRS which will request published guidance on the tax treatment of the exchange and associated payments. The draft will be circulated among the Enterprises and FHFA in the next two weeks and prior to submission to the IRS. Freddie Mac and their outside tax counsels believe the PC exchange will be a non-taxable event. Regarding a ruling on 817(h), there will be a quick follow-up with the IRS once the exchange guidance request is submitted. The Enterprises have worked with SIFMA and ACLI (the American Council of Life Insurers) to obtain feedback from insurance companies and money managers on 817(h). Both insurance companies and money managers will need to be directly involved in requesting IRS tax relief, since the Enterprises are only interested parties and not directly affected. However, the Enterprises will work closely with SIFMA, ACLI, and other affected parties to facilitate discussions with the IRS.

With respect to obtaining a ruling from the SEC regarding how to account for the exchange of Freddie Mac legacy PCs for UMBS, the Enterprises have worked together and each has consulted with its outside auditor. All parties believe modification accounting treatment is appropriate for the exchange, and
there has been informal dialog with the SEC about this view. The Enterprises will submit their analysis to the SEC in mid-May, and they expect a relatively quick response and resolution.

FHFA has had several meetings with the banking regulators to discuss the Single Security Initiative, including the staff of the Board of Governors of the Federal Reserve System, the OCC, and FDIC. None of the regulators suggest capital policy implications with the Initiative. FHFA will also brief FDIC examination staff. Bank capital regulations do not distinguish between investments in Fannie Mae versus Freddie Mac securities, and apply the same risk rating to both Enterprises’ securities.

Some IAG members indicated they are already able to start on the behind-the-scenes system and “piping” work needed to prepare for the new securities. Others are working to determine how they will handle investment concentration issues – whether their investment guidelines are dictated by regulations or by their own internal policies.

**Market Adoption Playbook Review**

Freddie Mac spent a few minutes reviewing the Market Adoption Playbook concept. The Enterprises are developing market stakeholder focused documents that can help companies plan for implementation of the Single Security Initiative. The playbooks will distill the key information about the new securities including features, identifiers, disclosure, the exchange and legal and compliance changes. The Enterprises requested feedback from IAG members on whether the playbooks would be helpful, as well as whether member companies would be willing to share their own views on the effects of the transition and preparation steps. The plan is to publish the playbooks this summer.

**Alignment**

FHFA reviewed their process for tracking alignment between the Enterprises. The notion of alignment tracking is to ensure that the Enterprises’ securities behave predictably and consistently – both for each Enterprise’s program taken individually and across the combined Enterprise UMBS market. Market stakeholders have expressed concern about alignment once the Single Security Initiative is implemented since fungibility is critical to the program’s success.

Currently, the FHFA reviews monthly tracking reports from various sources that include security cohorts, coupons, Seller/Servicers, and other characteristics. FHFA will follow up with an Enterprise when they see outliers. FHFA has created an internal Single Security Governance Committee that meets on a regular basis to review reports and to discuss product or policy changes the Enterprises propose. In some instances, FHFA has required the Enterprises to work together on a new initiative if they think it makes more sense for the market. FHFA’s goal is to get ahead of prepayment speeds, which are of course a lagging indicator of alignment.

IAG members expressed a desire for greater transparency on the alignment issue. They would like to have FHFA share the data that they review, potentially making the Enterprise reports public. Some members commented that while alignment could be tighter, they believe it is moving in the right direction. The biggest concern expressed was that there could be a race to the bottom. Some members
expressed concern that the Single Security Initiative will remove the incentive for the Enterprises to maintain quality because their securities will be priced the same in the TBA contracts. Some members believe this could lead to securities with more negative convexity and greater price swings when interest rates change.

Some members pointed out that prepayments will only continue to get more efficient because of the technology employed by Seller/Servicers, and that the market should anticipate faster speeds in general. Another member said the cost of origination has essentially doubled in the last few years, in some part because of the technology needed to compete.

Members were asked what aspects of alignment FHFA and the Enterprises should manage – just results or something more intermediate with respect to how Seller/Servicers produce mortgages for delivery into UMBS. Some pointed out how critical loan buyout policies and refinance programs are to securities prepayment behavior. There was general agreement that the Enterprises should still be allowed to compete, but that keeping prepayments within a certain range should be achievable. Some members indicated that right now, prepayments are within an acceptable tolerance – but they want more transparency into how the convergence in prepayment speeds was achieved.

It was pointed out that with the TBA market, there is naturally some acceptance of variability in securities. This variance should not be overly regulated, since that would have a negative effect on the TBA market. Identical prepay shifts are not being sought, but the member consensus is that more transparency is needed. Greater attention to differences in policies, products, and process will also help. FHFA and the Enterprises are being asked to manage what is within their ability, with IAG members acknowledging there are going to be factors that cannot be controlled or predicted.

The alignment discussion ended with the question of what happens when conservatorship ends, and how the governance and alignment process would work then. With the caveat that housing finance reform is a matter for Congress to determine, FHFA, the Enterprises and IAG members agreed more discussion on the topic of alignment is warranted.

**Bloomberg/Barclays Index**

Nick Gendron provided an update to the IAG on the transition of the Barclays Index to Bloomberg. The transition is nearly complete, with the plan to publish the entire US Aggregate Index, including the US mortgage index, through the Bloomberg infrastructure in the third quarter. The report will include prices, history, analytics and all the index components. Bloomberg is very focused on the transparency of the mortgage index constituent pieces on their system.

Nick stated that Fannie Mae and Freddie Mac securities are 55% of the mortgage index; with the remainder Ginnie Mae pools. 30-year mortgage pools make up 83% of the index. With the Q3 publication, the Bloomberg Valuation Service (BVAL) system will be used rather than prices from Barclays trading desk.
Bloomberg plans to continue collecting feedback from their Index Advisory Council members – through their annual meetings and then possibly more ad hoc feedback on mortgages and the implications of the Single Security Initiative. Bloomberg publishes a full mortgage index as well as one that is float-adjusted that removes the Federal Reserve’s holdings. Bloomberg is considering the same for the indices after Freddie Mac begins exchanging legacy PCs for UMBS so that market participants will be able to track both the 45-day and 55-day components of the index.

Adjourn

Freddie Mac closed the meeting, reminding members to provide feedback on the market adoption playbook. FHFA and the Enterprises will share updates on the accounting and tax questions and alignment at a future date.
Common Securitization Platform and Single Security

Market Adoption Playbook Overview
Market Adoption Playbook – Overview and Intent

- As we continue to flesh out the details of Single Security Initiative implementation, one of our goals is to make adoption as easy as possible for our industry participants.
- To support this goal, we propose creating a market adoption playbook, tailored to the interests of our primary stakeholder groups and various functions (front office, back office, operations, accounting, legal, compliance etc.).
- These documents should make it easier for stakeholders by consolidating in one place:
  - Information on what is changing with Single Security Initiative
  - Input from key market vendors on how they will approach the Single Security Initiative changes
  - Access to increasing levels of detail to help stakeholders create their own requirements for changes to internal processes, systems, reporting, etc.
- We are also soliciting stakeholders to share their own impacts – consolidation and publication of your insights can help us ensure that all market participants are ready to adopt the UMBS and/or Supers market conventions.
- Our objective today is to get your feedback on this concept:
  - Is this idea appealing? Could it help meet your Single Security Initiative adoption needs?
  - Are there specific topics you want to see? Information you need?
  - Do you have a preferred format, e.g., actual document, online repository, or both?
## Modular and audience-specific approach

Each module will include information on what is changing, potential impacts to stakeholders, and outstanding questions...different modules could make up each document based on audience.

<table>
<thead>
<tr>
<th>Module</th>
<th>Summary of Topics to be Covered</th>
<th>Audience</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Investors*</td>
</tr>
</tbody>
</table>
| Introduction & Features | - Introduction, purpose of document(s)  
- General overview regarding Single Security Initiative  
- Common Securitization Platform (CSP) | ✓          | ✓       | ✓            | ✓         |
| Timeline             | - TBD – either common, or customized for each audience                                            | ✓          | ✓       | ✓            | ✓         |
| Prefix/Pool Number   | - UMBS conventions (follows current FNM), examples  
- TBA and Non-TBA Changes                                                               | ✓          | ✓       | ✓            | ✓         |
| Disclosure           | - Description of changes, examples  
- Links to spec, sample and test files  
- Logistics of future disclosure distribution                                             | ✓          | ✓       | ✓            | ✓         |
| Exchange Disclosure  | - Explanation of exchange disclosures, examples  
- How they relate to Tradable Supply                                                     | ✓          | ✓       | ✓            | ✓         |
| Exchange Transactions | - Explanation of transaction, mirrors  
- Compensation methodology for 10-day difference in payment  
- Information on Tax & Accounting guidance for Exchange                                   | ✓          | ✓       | ✓            | ✓         |
| Trading              | - Information on UMBS identifiers (01f)  
- Description of trading screen & updates  
- Explanation of index updates  
- Information on Name Limit guidance & EPN updates  
- Information on Tax & Accounting guidance for booking trades                           | ✓          | ✓       | ✓            | ✓         |
| Legal and Compliance | - Information on expected investment guideline changes  
- Information on MSFTA changes                                                               | ✓          | ✓       | ✓            | ✓         |

* includes Money Managers  
** includes all vendors – e.g., data vendors, trading platforms, etc.
Industry Advisory Group
April 2017
Market Outreach Discussion

- How can we engage with your members? What else should we be doing?
  - We meet regularly with SIFMA’s MBS Ops and AMG committees, and have had the occasional call with other associations
  - We will present to the MBA MBS Ops committee at the MBA Secondary Conference (3rd time)
  - Industry stakeholder webinars – considering for later in Q2 or Q3
  - Conferences? What other communications channels or tactics would help?


- Given the 2019 date for the Single Security Initiative implementation, when will you start your planning process? What tools or information do you / your members / your clients need?
  - We are pursuing the tax and accounting treatment opinions from IRS and SEC
  - Market adoption playbook development

- How often do you need to hear from us?
  - IAG meeting frequency is now twice a year; is that enough/too much/about right?
  - Email when we have significant updates; post materials to our websites

- (For vendors): What are your plans for drafting and getting feedback from your customers on screen/terminology/process changes? How can we help?
Single Security and CSP Industry Advisory Group

Bloomberg Barclays US MBS Index
Bloomberg Barclays MBS Index

Agenda

- Update on transition of Bloomberg Barclays Indices
- Summary of Bloomberg Barclays MBS Index Structure / Methodology
- Recap of Recent Move to BVAL Pricing
- Considerations Regarding Single Security Initiative and the MBS Index
Bloomberg Barclays MBS Index

- Fixed-rate MBS index generics are formed by grouping individual MBS pools into “cohorts” based on program, coupon and vintage

- These cohorts are assigned eight-character identifiers. For example, a FNMA Conventional 30yr security with a 3.5% coupon and origination year of 2015 will have a generic identifier of FNA03415.

- These cohorts must have:
  - outstanding amounts of at least $1 billion
  - WAM of at least 1 year
  - Fixed rate

Bloomberg
# Bloomberg Barclays MBS Index

<table>
<thead>
<tr>
<th>Program</th>
<th># of Bonds</th>
<th>Mkt Val %</th>
<th>Mkt Val ($bn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FN Conv 30</td>
<td>69</td>
<td>34.0%</td>
<td>1,854</td>
</tr>
<tr>
<td>FN Conv 15</td>
<td>30</td>
<td>7.3%</td>
<td>400</td>
</tr>
<tr>
<td>FN Conv 20</td>
<td>25</td>
<td>2.3%</td>
<td>127</td>
</tr>
<tr>
<td>FH Conv 30</td>
<td>57</td>
<td>21.4%</td>
<td>1,165</td>
</tr>
<tr>
<td>FH Conv 15</td>
<td>27</td>
<td>5.0%</td>
<td>270</td>
</tr>
<tr>
<td>FH Conv 20</td>
<td>18</td>
<td>1.3%</td>
<td>70</td>
</tr>
<tr>
<td>GN 30</td>
<td>76</td>
<td>28.1%</td>
<td>1,530</td>
</tr>
<tr>
<td>GN 15</td>
<td>13</td>
<td>0.6%</td>
<td>34</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>315</strong></td>
<td><strong>100%</strong></td>
<td><strong>5,451</strong></td>
</tr>
</tbody>
</table>
Bloomberg Barclays MBS Index - Pricing

• Pricing of the MBS Index was moved to BVAL in November 2016. Formerly used Barclays desk pricing

• Index prices assume same-day settlement using either estimated or actual paydowns throughout the month depending on the day

• A price for each cohort is calculated using an outstanding balance weighted average of the pool prices in that cohort

• Specified pools are excluded from the price calculation: Loan Balance, MHA, LTV, FICO, Geography, Investor
Bloomberg Barclays MBS Index – Considerations Regarding Single Security Initiative

• Bloomberg index governance process

• Is current index methodology and cusip structure sufficient to handle the move to single security or are changes warranted

• Tracking of a significantly larger set of pools and ongoing movement of balances from one cohort to another; how to handle in returns universe vs. projected universe

• Pricing methodology impact

• Tracking of float adjustments