FHLBank
San Francisco

Electronic Promissory Notes (eNotes) Collateral Acceptance Requirements and Guidelines
Version 0.8

March 31, 2021

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The Federal Home Loan Bank (FHLBank) System developed these Electronic Promissory Notes (eNotes) Collateral Acceptance Requirements and Guidelines (Collateral Acceptance Requirements). And, the Federal Home Loan Bank of San Francisco (FHLBank San Francisco) adopted this modified version of the Collateral Acceptance Requirements for use by its members. As of March 31, 2021, these Collateral Acceptance Requirements apply to collateral for extensions of credit only and shall not apply to the collateralization of any other product offered by FHLBank San Francisco.

1   Introduction

An eNote is a promissory note created, signed, and stored electronically rather than by a traditional paper document signed with an ink signature. The 11 FHLBanks collectively developed a common set of core requirements and guidelines for accepting eNotes as pledged collateral. Despite the similarities in the adoption of the Collateral Acceptance Requirements, each FHLBank may have subtle differences in the actual versions adopted as a matter of each FHLBank's preferences.

The requirements and specifications in this document are based primarily on the requirements of the eSignature laws: ESIGN, which is a law that was adopted by Congress and signed into law in 2000, and the UETA, which was adopted by the National Conference of Commissioners on Uniform State Laws (NCCUSL) and recommended for adoption by the 50 states, the District of Columbia, and U.S. possessions and territories in 1999. For a detailed description of the eSignature Laws and for detailed guidance on requirements for electronic signatures, members are directed to the eMortgage Closing Guide, a mortgage industry reference tool published by the Mortgage Industry Standards Maintenance Organization, Inc. (MISMO).

Each FHLBank member financial institution is responsible for determining that an eNote meets the legal, technological, and operational requirements necessary to electronically create valid, enforceable, and transferable loan obligations, and/or to effectively service loans, and that it otherwise complies with FHLBank San Francisco's requirements, whether originated or purchased (which, in some cases, may be in addition to minimum statutory requirements).

As part of FHLBank San Francisco's eNote readiness review process, members will need to provide information about the systems and processes employed to originate, close, vault, and service eNotes. Prior to a member pledging eNotes, FHLBank San Francisco will work with participating members to assess their technology implementations and business processes for conformance with FHLBank San Francisco's eNote requirements.

This document is subject to revision at any time in the sole discretion of FHLBank San Francisco. Frequent updates may be made to accommodate this rapidly developing area of eMortgage lending.

2   Other Considerations

Since each FHLBank has their own systems, processes, and policies, members should consult FHLBank San Francisco's guidelines and requirements for further guidance on the acceptability of eNote collateral and not rely on this document as the sole authority of eNote collateral requirements.

Eligible eNote collateral is also subject to each individual FHLBank's collateral eligibility requirements for paper promissory notes. The requirements and guidelines for eNotes also do not include requirements that are already covered in an FHLBank's Addendum to the Advances and Security Agreement (ASA) or any other agreements already in effect.

Please consult FHLBank San Francisco's collateral guidelines in conjunction with each eNote agreement and credit and collateral policies, in addition to this document, to participate in the eNotes program.

To protect FHLBank San Francisco and its members, FHLBank San Francisco reserves the right to consider collateral eligibility on a case-by-case basis.

3   Collateral Requirements

FHLBank San Francisco, like the other FHLBanks, will retain independent member standards for eNote acceptance, including determining, in its sole discretion, individual member eligibility to pledge, method of pledging, collateral pledge arrangements, and collateral verification, consistent with FHLBank San Francisco's credit policies.

In the initial phase of accepting eNotes as pledged collateral, only 1-4 single-family residential 1st lien mortgage loans and closed-end 2nd mortgage loans are eligible. In the future, additional types of mortgage loans may be accepted as collateral when documented using an eNote.

Collateral review verification or onsite review requirements will be determined by FHLBank San Francisco. Processes for logically associating the eNote retained in the eNote Vault (eVault) and the loan file supporting documentation will be defined by FHLBank San Francisco. Imaged loan file supporting documentation may be retained in an eVault.

FHLBank San Francisco will retain independent reporting requirements for eNotes. It is at the discretion of FHLBank San Francisco to determine the format and the frequency of reporting.

4   Supporting Documentation Requirements

Reporting requirements for eNote collateral are determined by FHLBank San Francisco and in some instances may require members to clearly identify which loans in the pledge portfolio are held as eNotes versus paper. There may be conditions under which additional documents need to be presented with an eNote. Please consult with FHLBank San Francisco directly for eNote collateral reporting requirements.

Please consult FHLBank San Francisco for acceptance of any mortgage in which supplemental wet-ink signed documents are required for the eNote (e.g., use of the Power of Attorney, or a Trust), or where there is a requirement to make a permanent conversion from an eNote to a paper note (e.g., mortgages with a New York Consolidation, Extension, and Modification Agreement ("NY CEMA"), as they may be considered ineligible as eNotes.

The format of loan file supporting documentation will be determined by FHLBank San Francisco. When originals are not required for collateral eligibility, imaged loan file documentation supporting eNotes is preferred to reduce operational complexities and costs. Imaged loan file supporting documentation may be retained in an eVault; however, there is no current requirement to do so.

The types of supporting documentation will generally be retained by FHLBank San Francisco in the same manner as paper note loan file documentation. Processes for logically confirming the eNote retained in the eNote Vault and the loan file supporting documentation will be determined by FHLBank San Francisco, which will retain independent requirements for document custodians for any paper loan file documents. All pledged eNotes must be held in FHLBank San Francisco's eVault.

Please consult with FHLBank San Francisco directly for record retention of non-loan file supporting documentation (e.g., member relationship documents, including tri-party agreements for eNotes).

5   eSignature Requirements

5.1 Overview

The closing of an eNote requires the use of a specialized computing platform, generally known as an eClosing system, that allows the closing agent and the Borrower to electronically review, sign, store, and transfer closing documents.

An electronic signature (eSignature) is an action by a person to electronically apply an electronic sound, symbol, or process attached to or logically associated with a record and executed or adopted by a person with the intent to

sign the record. For detailed guidance on requirements for eSignatures, members are directed to the eMortgage Closing Guide[1], which is a mortgage industry reference tool published by the MISMO. Legal considerations that members should consider when pledging eNotes are discussed in Section 5 of the MISMO eMortgage Closing Guide. Specific eSignature requirements are covered in Section 7 of such guide.

Members must ensure that an eNote pledged as collateral to FHLBank San Francisco, whether originated by the member or purchased, meets the requirements outlined in this section.

5.2 ESIGN and UETA

In order to be acceptable as pledged collateral, an eNote must be a valid and enforceable transferable record pursuant to the Uniform Electronic Transactions Act ("UETA")[2], the Electronic Signatures in Global and National Commerce Act ("ESIGN")[3], and other applicable laws, and there must be no defect with respect to the eNote that would give FHLBank San Francisco, or a subsequent transferor, less than the full rights, benefits, and defenses of Control (as defined by UETA, ESIGN, or applicable law) of the transferable record.

ESIGN, UETA, and other applicable laws will be referred to collectively as the "eSignature Laws" in these guidelines. For a summary of UETA, members are directed to Section 5.3, "Uniform Electronic Transactions Act Summary," and Section 5.4, "ESIGN Summary, in the MISMO eMortgage Closing Guide."[4]

5.3 Disclosure and Consent

A member pledging eNotes must be aware of, and comply with, all applicable legal requirements, and otherwise follow applicable industry practices regarding electronic disclosures and consents.

Section 101(c) of ESIGN has specific requirements about the type and content of the consent that must be obtained from Borrowers before electronically providing any of the disclosures that are required by law to be given to Borrowers. The member or the applicable originator of the eNote must obtain the consent and provide the applicable disclosures. Additional requirements concerning the use of eSignatures, records, and disclosures may be imposed by regulatory agencies or through state legislation at any time in the future as eNotes evolve. Some of the key disclosures, requirements, and issues include, but are not limited to:

- Obtaining consumer's express consent to or opting out of electronically signing the record;
- Identifying what the consent applies to;
- The right to withdraw consent and the consequences of doing so;
- How to withdraw consent;
- Consumer's right to receive a paper copy of the electronic records;
- A statement to the consumer of the necessary hardware, software, and system requirements;
- A reasonable demonstration that the consumer can access electronic records regarding consent and the information that is the subject matter of the consent; and
- Hardware, software, and system changes that require notice of revised hardware and software requirements and right to withdraw consent without fees or consequences not previously disclosed.

For further information on disclosures and consent for eSignatures, members are directed to the following sections in the MISMO eMortgage Closing Guide[5]:

- 5.7, Consent Requirements under ESIGN and UETA;

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[1] http://www.mismo.org/standards-and-resources/emortgage-specifications/emortgage-closing-guide
[2] https://law.lis.virginia.gov/vacodepopularnames/uniform-electronic-transactions-act/
[3] https://www.fdic.gov/regulations/compliance/manual/10/x-3.1.pdf
[4] http://www.mismo.org/standards-and-resources/emortgage-specifications/emortgage-closing-guide
[5] http://www.mismo.org/standards-and-resources/emortgage-specifications/emortgage-closing-guide

- 5.8, Electronic Format and Delivery of Consumer Disclosures;

- 5.9, Summary of the Federal Board of Governors of the Federal Reserve Bank System's (FRB) Interim Final Rules; and

- 7.5.1, Consent and Disclosure.

5.4 Identify the Electronic Record to be Signed

The electronic record being signed must be clearly identified and clearly display the Borrower's name and must require the Borrower to take action to initiate the eSignature.

Each electronic record being signed must be presented individually to the Borrower for review and electronic signing. A single eSignature cannot be applied to multiple electronic records.

For further information on identification of the electronic record, members are directed to Section 7.4, eSignature Best Practice Guidelines, in the MISMO eMortgage Closing Guide.[6]

5.5 Establishing the Borrower's Intent to Use an eSignature

The member must ensure that each Borrower is aware of the legal consequences of using an eSignature. For specifics on this, consult Section 7.5.4, Establishing the Intent to Sign, in the MISMO eMortgage Closing Guide.[7]

5.6 Attaching/Logically Associating an eSignature to an Electronic Record

The eSignature system used must be designed to readily demonstrate, when reviewing an electronically signed eNote or other electronic record and its audit trail:

- That the Borrower's eSignature has been attached to, or is logically associated with, the eNote or other electronic record;

- The type of electronic symbol or process used;

- The name of the Borrower (the name must be typed or otherwise expressed in a visible way on the electronic record); and

- The time and date stamp of the eSignature.

5.7 Ineligible Types of eSignatures

The eSignature Laws permit eSignatures in various forms, including biometrics (such as fingerprint, voice, facial or retinal recognition systems) and video and/or audio recordings. At this time, an eNote that is electronically signed by audio or video recording or by biometric means is ineligible to qualify as collateral.

5.8 eNotarization and Presence at Signing

Electronic notarization (eNotarization) is a notarial act performed electronically, i.e., the Borrower's eSignature on an electronic security instrument and other electronic closing documents are remotely and electronically notarized. Notarial law varies widely from state to state and must be considered when contemplating the use of eNotarization.

There are two types of electronic notarial acts: in-person and remote online. For in-person Electronic Notarization (IPEN), the notarial act is performed by a notary public and a Borrower in the same physical location where documents are electronically signed and notarized. Remote Online Notarization (RON) is performed by means of an electronic device or process that allows a notary public and a Borrower who is not in the same physical

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[6] http://www.mismo.org/standards-and-resources/emortgage-specifications/emortgage-closing-guide
[7] http://www.mismo.org/standards-and-resources/emortgage-specifications/emortgage-closing-guide

location as the notary public to complete a notarial act and communicate with each other simultaneously by sight and sound.

Some state jurisdictions do not permit RON. In a jurisdiction where RON is not authorized but IPEN is authorized, each Borrower must be physically in the presence of the closing agent and/or a notary public coordinating the signing of the eNote, other electronic records, or paper closing documents. However, all Borrowers do not have to be in each other's presence at the time of signing.

The member is responsible for determining that notarization is performed in accordance with, and is legally valid under, the laws and regulations of the state in which the notarization is performed, at the time it was performed, and in compliance with the Uniform Electronic Transactions Act, as adopted in such state, and the Electronic Signatures in Global and National Commerce Act.

In states that permit RON, the member is responsible for ascertaining that the notary public is licensed and physically located in the state where the notarial act occurred and, where required by law or regulation, is specifically licensed to perform a RON. If the Borrower and the mortgaged premises are located in a state different from the state in which the notary public is licensed and located, the member is responsible to ascertain that the state law in the state where the notary public is licensed and located must authorize the notary public to engage in such interstate RON transactions.

Each member should verify that the system used for RON meets all of the following minimum standards[8].

- A minimum of two-factor identity authentications, including using a government-issued photo ID that has a signature, credential analysis, and identity-proofing;

- Tamper-sealed notarized documents and system security sufficient to (A) prevent interference with the authenticity, integrity, and security of the notarial ceremony or corruption or loss of the recording of the same, and (B) protect the communication technology, electronic record and backup record from unauthorized use;

- The remote online notary must keep a secure electronic journal of the notarial act including evidence of identity of the principal (a video and audio conference can be the basis for satisfactory evidence of identification) and maintain a backup of the electronic record; and

- Recording of the notarial ceremony with storage for the minimum period required by applicable laws, or if no period is specified in the applicable law, then for seven years.

Each member must have the capability to maintain the recording of the notarial ceremony.

If the loan document is required to be recorded, then the county recorder in the state and county where the property is located must accept the remotely notarized document for recording.

5.9 Transferable Record Requirements

To ensure that the eNote is a discrete transferable record, closing instructions or other procedures should be created to ensure that the Borrower signs only the eNote at closing and does not also sign a paper version of the Promissory Note.

Note: An imaged version of a wet-ink signed paper **promissory note** is not a transferable record or an eNote since it would not meet the technical requirements of a transferable record.

5.10 Electronic Signing Process Information

To preserve the ability to validate the signer's signature with his or her identity, certain documents and system records must be retained in a manner that will provide easy access to such documents and records should evidence be required. In addition to retaining evidence of a Borrower's identity in the loan file and additional

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[8] http://www.mismo.org/standards-and-resources/emortgage-specifications/remote-online-notarization-standards

information about the electronic signing process must be collected and retained in system logs and audit trails. The audit trails and/or system logs should:

- Establish a temporal and process link between the presentation of identity documents and the electronic signing of a document;

- Provide evidence of the Borrower's agreement to conduct the transaction electronically; and

- Provide evidence of the Borrower's execution of a particular eSignature.

At a minimum, retention of information about the signing process must include:

- The name of the person (and related entity, if the Borrower is not a person) who signed each document in the loan file;

- The date of the signature and the method by which the document was signed; and

- Any relevant identifying (and other) information that can be used to verify the eSignature and its attribution to the signer's identity.

6 eNote Document Requirements

6.1 Overview

The promissory note must contain certain features and attributes when in an electronic format. This section outlines the requirements for an eNote to be eligible as pledged collateral.

The member must ensure that an eNote pledged as collateral to FHLBank San Francisco, whether originated by the member or purchased, meets the requirements outlined in this section.

6.2 eNote Electronic Record Format and Software Licensing Terms

The member must ensure that eNote Vaults and eligible eNotes are in an electronic format free from software licensing conditions that would prohibit, limit, or inhibit FHLBank San Francisco from taking control of the pledged eNote or otherwise using the eNote and other electronic records for any customary business purpose. In addition, FHLBank San Francisco shall not be required to pay any royalties or any other fees for its use of the eNotes and electronic records.

6.3 eNote View

The human-readable view of the eNote must not contain any data that is sensitive or contain personal identifying information (PII), such as a Social Security Number (SSN).

6.4 Uniform Instruments

It is recommended that eNotes be originated using the Uniform Fannie Mae[9]/Freddie Mac[10] form of eNote. This form of an eNote is created by modifying the appropriate Fannie Mae/Freddie Mac Uniform Note, which includes the addition of a specific provision that addresses the electronic nature of the note, including that it is a transferable record. This special provision also includes a reference to the MERS® eRegistry.

Loans that are originated using the Uniform Fannie Mae/Freddie Mac form of eNote as specified by Fannie Mae and Freddie Mac are acceptable for pledging. FHLBank San Francisco reserves the right to consider formats other than Fannie Mae/Freddie Mac Uniform Notes from time to time, in its sole discretion.

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[9] https://www.fanniemae.com/singlefamily/notes

[10] https://sf.freddiemac.com/tools-learning/uniform-instruments/all-instruments

6.5 eNote Transferable Record Clause

An eNote must contain the following clause as the last numbered section (Fannie Mae/Freddie Mac Uniform Note Section 11, or Section 12 in the case of ARM eNotes, as applicable) of the eNote before the signature line.

"ISSUANCE OF TRANSFERABLE RECORD; IDENTIFICATION OF NOTE HOLDER; CONVERSION FROM ELECTRONIC NOTE TO PAPER-BASED NOTE

I expressly state that I have signed this electronically created note (the "electronic note") using an electronic signature. By doing this, I am indicating that I agree to the terms of this electronic note. I also agree that this electronic note may be authenticated, stored and transmitted by electronic means (as defined in subsection (F) of this section [___] (below)), and will be valid for all legal purposes, as set forth in the Uniform Electronic Transactions Act, as enacted in the jurisdiction where the Property is located ("UETA"), the Electronic Signatures in Global and National Commerce Act ("ESIGN"), or both, as applicable. In addition, I agree that this electronic note will be an effective, enforceable and valid transferable record (as defined in subsection (F) of this Section [___] (below) and may be created, authenticated, stored, transmitted and transferred in a manner consistent with and permitted by the transferable records sections of UETA or ESIGN.

Except as indicated in [___] (subsection (D) and (E) below, the identity of the note holder and any person to whom this electronic note is later transferred will be recorded in a registry maintained by **[Insert name of operator of registry here*]** or in another registry to which the records are later transferred (the "note holder registry"). The authoritative copy of this electronic note will be the copy identified by the note holder after loan closing but prior to registration in the note holder registry. If this electronic note has been registered in the note holder registry, then the authoritative copy will be the copy identified by the note holder of record in the note holder registry or the Loan Servicer (as defined in the Security Instrument) acting at the direction of the note holder, as the authoritative copy. The current identity of the note holder and the location of the authoritative copy, as reflected in the note holder registry, will be available from the note holder or Loan Servicer, as applicable. The only copy of this electronic note that is the authoritative copy is the copy that is within the control of the person identified as the note holder in the note holder registry (or that person's designee). No other copy of this electronic note may be the authoritative copy.

If [___] subsection (B) above fails to identify a note holder Registry, the note Holder (which includes any person to whom this electronic note is later transferred) will be established by, and identified in accordance with, the systems and processes of the electronic storage system on which this electronic note is stored.

I expressly agree that the note holder and any person to whom this electronic note is later transferred shall have the right to convert this electronic note at any time into a paper-based note (the "paper-based note"). In the event this electronic note is converted into a paper-based note, I further expressly agree that the paper-based note will be an effective, enforceable and valid negotiable instrument governed by the applicable provisions of the Uniform Commercial Code in effect in the jurisdiction where the property is located; my signing of this electronic note will be deemed issuance and delivery of the paper-based note; I intend that the printing of the representation of my Electronic Signature upon the paper-based note from the system in which the electronic note is stored will be my original signature on the paper-based note and will serve to indicate my present intention to authenticate the paper-based note; the paper-based note will be a valid original writing for all legal purposes; and upon conversion to a paper-based note, my obligations in the electronic note shall automatically transfer to and be contained in the paper-based note, and I intend to be bound by such obligations.

Any conversion of this electronic note to a paper-based note will be made using processes and methods that ensure that: (i) the information and signatures on the face of the paper-based note are a complete and accurate reproduction of those reflected on the face of this electronic note (whether originally handwritten or manifested in other symbolic form); (ii) the note holder of this electronic note at the time of such conversion has maintained control and possession of the paper-based note; (iii) this electronic note can no longer be transferred to a new note holder; and (iv) the note holder registry (as defined above), or any system or process identified in subsection (C) above, shows that this electronic note has been converted to a paper-based note, and delivered to the then-current note holder.

The following terms and phrases are defined as follows: (i) "authenticated, stored and transmitted by electronic means" means that this electronic note will be identified as the note that I signed, saved, and sent using electrical, digital, wireless, or similar technology; (ii) "electronic record" means a record created, generated, sent, communicated, received, or stored by electronic means; (iii) "electronic signature" means an electronic symbol or process attached to or logically associated with a record and executed or adopted by a person with the intent to sign a record; (iv) "Record" means information that is inscribed on a tangible medium or that is stored in an electronic or other medium and is retrievable in perceivable form; and (v) "transferable record" means an electronic record that: (a) would be a note under Article 3 of the Uniform Commercial Code if the electronic record were in writing and (b) I, as the issuer, have agreed is a transferable record."

Note: Insert "MERSCORP Holdings, Inc., a Delaware corporation" as the name of the operator of the registry, unless otherwise directed by FHLBank San Francisco.

6.6 eNote Header

An eNote must contain the following heading:

Note

(For Electronic Signature)

6.7 Signature Lines

Text above or below the signature must **not** contain the following: "(Sign original only)."

6.8 MISMO Format(s) Accepted

The eNote must be a valid, Version 1.02 MISMO Category 1 SMART Doc®™[11], signed using an eSignature process, and secured by a Tamper-Evident Signature.

6.9 Exceptions

To protect FHLBank San Francisco and its members, FHLBank San Francisco management reserves the right, in its sole discretion, to consider exceptions to some of the eNote document requirements on a case-by-case basis; however, the eNote transferable record clause must be present in the eNote in order to qualify as eligible collateral. To ensure collateral eligibility, please consult with FHLBank San Francisco well in advance of originating an eNote in a format or containing language that deviates from section 6.1 through 6.8.

7   eClosing Requirements

7.1 Overview

This section outlines the requirements for eClosing systems that have been established for eNotes as collateral. For detailed guidance on requirements for electronic closing systems and processes, members, whether originating or purchasing eNotes, are directed to the MISMO eMortgage Closing Guide[12]. An overview of the eClosing process that a member should consider when pledging eNotes is discussed in Section 3 of the MISMO eMortgage Closing Guide. Consult Section 6 of the guide for guidelines for electronic records and Section 9 for electronic record security requirements.

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[11] http://www.mismo.org/x142958.xml
[12] http://www.mismo.org/standards-and-resources/emortgage-specifications/emortgage-closing-guide

7.2 Electronic Record Security

The Member, whether originating or purchasing eNotes, is required to tamper-evident seal the eNote after each Borrower signs and immediately after the last Borrower signs.

Moreover, to preserve the integrity of the electronically signed document, an eNote and other electronically signed documents must be tamper-evident sealed using W3C compliant digital signature algorithms and using X.509 certificates issued by an accredited issuing authority. The tamper-evident seal digital signature value must be included in the document and be accessible to validate that the electronic record has not been altered after it was electronically signed.

Tamper-evident seals can be created using an individual user certificate or a server-based certificate. If a server-based certificate is used, evidence that the server-based certificate private keys are appropriately stored is required, and evidence of a separation of staff roles regarding access to those keys must be provided.

The eNote's eClosing system must have logged and reconciled the eNote Document's interim or final tamper-evident signature(s). Confirmations of validations to the SMART Document's DTDs/Schemas must be logged for the eNote. The validation and confirmation processes required in this section must be independently verifiable.

To maintain collateral eligibility, the member, whether originating or purchasing eNotes, must ensure that electronic records created and maintained by the eClosing system are not (and have not been) subject to unauthorized access or alteration. If there has been an incident of unauthorized access, alteration, or other breach, please notify FHLBank San Francisco.

7.3 Authoritative Copy and Copies of the Authoritative Copy

The eNote's eClosing System must distinguish the display Authoritative Copy as the original and not as a copy of the Authoritative Copy. The eVault screen on which the Authoritative Copy of the eNote appears must clearly and conspicuously state that the viewer is viewing the Authoritative Copy. Any other eNote vault screen on which a copy of the Authoritative Copy appears must clearly and conspicuously state that the viewer is viewing a copy of the Authoritative Copy.

7.4 Electronic Loan File

The eNote's eClosing system must create and store a record of each eNote and electronic record presented and signed (eClosing Transaction Record). The eClosing system must also track and log actions related to the creation, signing, and transferring of the eNote and other electronic records using the eClosing system. Such information must be contained in the eClosing Transaction Record. The eClosing Transaction Record must be retained and maintained by the member originating or purchasing the eNote and, if the servicing of the eNote is transferred, it must be retained and maintained by the subsequent servicer. At all times, the eClosing Transaction Record must be stored and maintained in a manner that preserves the integrity and reliability of the eClosing Transaction Record for the life of the applicable eNote.

7.5 Electronic Record

All eNotes and other electronic records, regardless of format, must have no licensing conditions that would prohibit, limit, or inhibit FHLBank San Francisco, any assignee of FHLBank San Francisco, or the purchaser of a liquidated portfolio of eNotes, from using the eNote and other electronic records for any customary business purpose, including making any transfers of such eNotes. In addition, FHLBank San Francisco shall not be required to pay any royalties or any other fees for its use of the eNotes and electronic records.

Electronic records presented to the Borrower in the eClosing system must comply with all applicable state and federal requirements concerning the content, display and format of information, and retention (as required for paper records).

The eNotes and other electronic records must accurately reproduce the fonts, styling, margins, and other physical features when electronically displayed and printed post-execution, and as required by state and/or federal law. In addition, the party viewing or printing the electronic record must be able to ascertain:

- The content of the electronic record;
- The name of the Borrower signing the electronic record and the legal capacity in which the Borrower signed; and
- The time and date the electronic record was signed.

7.6 Encryption Requirements

Encryption algorithms used by eClosing systems and processes must be compliant with National Institute of Standards and Technology (NIST) and FIPS 140-2 guidance.

The eNote's eClosing systems and processes that use X.509 digital certificates for device/server-based TLS/SSL session authentication must support a minimum of a SHA-256 signing hash. TLS session of eClosing systems and processes must use a minimum of 2048-bit RSA key and 128-bit AES key.

The eNote's eClosing systems and processes must support and use multifactor authentication methods such as combinations of unique user ID/password, S/Key, Password tokens, Biometrics, Smart card authentication, and X.509 digital certificates.

The member, whether originating or purchasing the eNotes, must conduct due diligence on a digital certificate issuing authority's (Certificate Authority) compliance with industry standards. Failure to do so may result in greater susceptibility to encryption eavesdropping (such as man-in-the-middle attacks) and fraudulent digital signatures, and increases the risk to data integrity and confidentiality.

8 MERS® (Mortgage Electronic Registration Systems, Inc.) eRegistry Requirements

8.1 Overview

An eRegistry, in simple terms, is a ledger that tracks an owner of an asset, any related transactions of that asset (including authentication), and the storage location of the Authoritative Copy. It may be thought of as a shared database repository that shows the transactions concerning a given asset (in this case, eNotes). Such details include where the asset originated, where it has moved, the owner of the asset, and an assurance that the asset has not changed in any way.

MERS offers the MERS System, a national electronic registry that tracks the changes in mortgage servicing, servicing rights, and beneficial ownership interests in residential mortgage loans that are registered on the MERS registry. MERS serves as the mortgagee in the land records for loans registered on the MERS System and is a nominee (or agent) for the owner of the promissory note.

MERS also offers an eRegistry and an eDelivery service for eNotes. The MERS® eRegistry is different and distinct from the MERS System. The MERS eRegistry component was created in 2003 in response to the eCommerce laws, and registration is required for eNotes sold to Fannie Mae and Freddie Mac. The MERS eRegistry meets the safe harbor requirements, as specified in the eCommerce laws, ESIGN and UETA, for transferable records.

For eNotes to qualify as collateral, FHLBank San Francisco currently requires use of the MERS eRegistry.

8.2 Agreements

The member must execute the membership agreement with MERS and any related addenda in order to be an active participant in the MERS eRegistry and establish FHLBank San Francisco as the Secured Party.

8.3 Registration

eNotes must be issued a MIN (Mortgage Identification Number) by MERS and registered in the MERS eRegistry prior to being considered qualifying collateral. eNotes must be registered within one business day of the closing date. FHLBank San Francisco may allow exceptions at the onboarding stage on a case-by-case basis, in its sole discretion.

The human-readable view of the eNote must not contain a Social Security number; please consult the MERS eRegistry technical support team for information on providing the Social Security number to the MERS eRegistry for eNote registration.

8.4 MERS eRegistry Designations

The level of FHLBank San Francisco control exercised over changes to MERS entities, location, data, or status with regard to pledged eNotes may vary based on member organization type, financial condition, risk rating, collateral quality, and collateral availability. In certain circumstances, a member's changes to an entity association may be automatically accepted. In other circumstances, such changes may require manual acceptance by FHLBank San Francisco as the Secured Party. This level of automated authorization is at the sole discretion of FHLBank San Francisco.

8.5 Authorized Rights Holder on the MERS eRegistry

8.5.1 Controller

The Controller is the party (entity) named on the System of Record that has Control of the eNote. For example, the Controller can be thought of as the "holder," "holder in due course," and/or "purchaser" of an original paper note as defined in the Uniform Commercial Code.

The member will be the Controller of the eNote. FHLBank San Francisco, as the Secured Party, may replace the member as the Controller in order to protect its security interest, unless otherwise required by the member's collateral arrangement with FHLBank San Francisco.

8.5.2 Controller's Delegatee

The Controller Delegatee is a member of the MERS eRegistry that is authorized by the Controller to perform certain MERS eRegistry transactions on the Controller's behalf. The assignment of the Controller Delegatee is designated at the member's sole discretion, unless restricted by the member's collateral arrangement with FHLBank San Francisco.

8.5.3 Secured Party

The Secured Party is the entity named on the MERS eRegistry that has been assigned or granted a security interest in the eNote by the Controller. All eNotes must list FHLBank San Francisco in the Secured Party field of the MERS eRegistry for as long as the collateral is pledged to FHLBank San Francisco.

8.5.4 Secured Party Delegatee

The Secured Party Delegatee is the member of the MERS eRegistry that is authorized by the Secured Party to perform certain transactions on the Secured Party's behalf. This field is determined at FHLBank San Francisco's sole discretion.

8.5.5 eNote Location

This is the entity that maintains the Authoritative Copy of the eNote, and any electronic documents that modify the terms of the eNote (Location). For pledged eNote collateral, this must be FHLBank San Francisco's eNote eVault.

8.6 Transfer of Control or Location

In the MERS eRegistry, a system transaction is to request a change to the current Controller or Location of an eNote, or location of a pledged eNote, and subject to FHLBank San Francisco notification and/or approval depending on the member's collateral arrangement. Note that upon acceptance of a transfer of control transaction, the Secured Party is removed. Such acceptance and authorizations are held at the sole discretion of FHLBank San Francisco, subject to FHLBank San Francisco's right as Secured Party to revoke that automatic acceptance.

8.7 Change Data Transactions

Changes to data on the MERS eRegistry for assumptions, naming or releasing a Servicer or a Delegatee, modifying an eNote, and/or updating data (such as a name change) may need acceptance or prior approval from FHLBank San Francisco.

8.8 Change Status Transactions

8.8.1　Pay Off + Reversal and Charge Off and Reversal

MERS has the ability to change set restrictions of the Controller (or any other authorized Rights Holder) to deactivate an eNote record while a Secured Party is named.

If a MERS member is permitted to perform deactivations to an eNote record while FHLBank San Francisco is named as Secured Party, FHLBank San Francisco will receive notification.

If a MERS member is not permitted to deactivate an eNote record while FHLBank San Francisco is named as Secured Party, FHLBank San Francisco will need to first release its interest before the eNote can be deactivated.

8.8.2　Registration Reversal

While named as the Secured Party, FHLBank San Francisco will receive notification of registration reversals.

8.8.3　Conversion to Paper and Reversal

MERS has the ability to restrict the Controller (or any other authorized Rights Holder) to convert an eNote record to paper while a Secured Party is named. However, under the terms of the Addendum to ASA, a member cannot convert eNotes to paper notes without written consent from FHLBank San Francisco when such eNotes are pledged.

If a MERS member is permitted to convert an eNote record to paper while FHLBank San Francisco is named as Secured Party, FHLBank San Francisco must receive prior notification.

If a MERS member is not permitted to convert an eNote record to paper while FHLBank San Francisco is named as Secured Party, FHLBank San Francisco will need to first release its interest before the eNote can be converted to paper.

8.8.4　Transfer to Proprietary Registry and Reversal

MERS has the ability to restrict the Controller (or any other authorized Rights Holder) to transfer an eNote to a proprietary registry while a Secured Party is named.

If a MERS member is permitted to transfer an eNote to a proprietary registry while FHLBank San Francisco is named as Secured Party, FHLBank San Francisco will receive notification.

If a MERS member is not permitted to transfer an eNote to a proprietary registry while FHLBank San Francisco is named as Secured Party, FHLBank San Francisco will need to first release its interest before the eNote will be transferred to a proprietary registry.

8.8.5   Modification Reversal

While named as the Secured Party, FHLBank San Francisco will receive notification of modification reversals.

8.9 Doing Business As (DBA) Tradenames on eNotes

Generally, state law recognizes a DBA or tradename as an alias; it is not a separate legal entity, but merely an alternative name for the legal entity using the tradename. There are special considerations for DBA tradenames on eNotes on the MERS® eRegistry.

The relationship between the differing names – the DBA is listed on the eNote and the member's legal entity name (MERS eRegistry Organization identifier) as the Controller – is not reflected on the MERS eRegistry. This may cause risk to the member's legal rights as the Controller.

For members that intend to use DBA tradenames on eNotes:

(1) the legal entity name must also be included on the face of the eNote (e.g. ABC Financial, Inc., dba XYZ Mortgage), AND

(2) the initial MERS eRegistry registration must reflect the legal entity name as the initial controller.

9   eVault Requirements

FHLBank San Francisco has completed a basic security and technical review of many eVault vendor systems. The member needs to ensure that their eVault is Fannie Mae or Freddie Mac compliant with requirements in this section. If the member's eVault was not previously reviewed by FHLBank San Francisco, the eVault must go through FHLBank San Francisco's interface and integration process.

Prior to FHLBank San Francisco's acceptance of a member's eNotes as collateral, the member must execute the necessary legal agreement(s) with FHLBank San Francisco and complete any approved initial checks required to ensure compatibility with FHLBank San Francisco's eVault.

9.1 Authoritative Copy Requirements

Once approved, the member must store the Authoritative Copy of an eNote in the member's eVault until pledged. Once an eNote is pledged and the location of the Authoritative Copy is transferred to FHLBank San Francisco's eVault, the member must store *a copy* of the Authoritative Copy of the eNote in its own eVault. Periodic reconciliation between the member eVault and the MERS eRegistry to ensure alignment between the two systems is required. Additionally, the member's eVault must have functionality to perform eNote integrity validation to verify that the tamper-evident seal digital signature is valid and has not been compromised. Proof of periodic audits of the tamper-evident seal digital signature are required.

The eVault used by the member must interface with MERS eRegistry. Third parties involved with the process of pledging the eNotes must also be set up in the member's MERS eRegistry profile in MERS and within the eVault application. This includes all related third parties within the eNote process for loans pledged to FHLBank San Francisco (e.g., servicer, sub-servicer, and Location).

The member's eVault view screen on which the Authoritative Copy appears must state that the eNote being viewed is the Authoritative Copy.

The member's eVault view screen on which *a copy* of the Authoritative Copy appears must state the eNote being viewed is *a copy* of the Authoritative Copy.

Upon receipt of the eNotes, the eVault used by the member validates (re-computes) all of the eNotes' tamper-evident signatures and compares them with the corresponding tamper-evident signatures in the MERS eRegistry.

Note: Validation against the MERS eRegistry is automatically completed by FHLBank San Francisco's eVault upon delivery of the Authoritative Copy of the eNote.

9.2 Assignment of FHLBank San Francisco to Secured Party and Location Roles in MERS eRegistry

As instructed by the member, FHLBank San Francisco's proper assignment within the MERS eRegistry will need to be performed, per-loan, to support FHLBank San Francisco as the Secured Party for pledging.

9.3 Length of time to support the eNote and supporting documents

The eVault used by the member must preserve the eNote (or copy of the eNote) and other electronic documents that relate to pledged collateral for the life of loan plus seven years.

9.4 Integrity and Security

Regarding the integrity and security components of a member's eVault:

- The eVault must support one or more authentication methods to authenticate user access.
- The eVault must protect system integrity through appropriate measures, such as safeguarding against malware, firewall, and network perimeter security controls, etc.
- The eVault must verify document integrity, including, but not limited to, compliance with eNote Document Type Definition ("DTD") or schema and eNote Tamper-Evident Seal before accepting documents.
- The eVault must log the validations (re-computations of Hash Values) of eNotes' and any other SMART Documents' Tamper Seals.
- The eVault must periodically reconcile the information stored in the eVault and the information stored on the MERS eRegistry.

9.5 eVault to eVault Transfers and eDelivery

The eVault used by the member must have the capability to transfer eNotes and any other Electronic Mortgage File Documents in the eVault to another eVault using MERS eDelivery, or by other means, as mutually approved in advance by the member and FHLBank San Francisco.

9.6 Verifications

The collateral review process includes verification that there is a physical representation of an eSignature present on the eNote and that the Borrower's name is typed below the eSignature.

Verification of the registry operator (e.g., "MERSCORP Holdings, Inc., a Delaware corporation") listed as the operator of the Registry in Transferable Record Section of the eNote is required, as excerpted below:

> *(B) Except as indicated in[11][12](subsections (D) and (E) below, the identity of the Note Holder and any person to whom this Electronic Note is later transferred will be recorded in a registry maintained by MERSCORP Holdings, Inc., a Delaware corporation or in another registry to which the records are later transferred (the "Note Holder Registry").*

Refer to Section 5.4 of these guidelines, "eNote transferable record clause," for registry operator requirements.

9.7 Encryption Requirements

Regarding the encryption requirements for a member's eVault:

- The eVault encryption algorithms used by the member must be compliant with NIST and FIPS 140-2 guidance.

- The eNote Vault X.509 digital certificates used by the member for device/server-based TLS/SSL session authentication must support a minimum of SHA-256 signing hash. The eVault used by the member for TLS sessions must use a minimum of 2048-bit RSA key and 128-bit AES key.

- The eVault used by the member must support industry-acceptable multifactor authentication.

The member should conduct appropriate due diligence on a digital certificate issuing authority's (Certificate Authority) compliance with industry standards. Failure to do so may result in greater susceptibility to encryption eavesdropping (such as man-in-the-middle attacks) and fraudulent digital signatures, and increases the risk to data integrity and confidentiality.

9.8 eMortgage File Documentation Management

The Mortgage Collateral Update (MCU) File for eNotes pledged may contain paper and electronic documents. The member must maintain records that cross-reference the paper and electronic documents.

Paper documents must be retained as required by FHLBank San Francisco's collateral policies and guidelines, and the Electronic Mortgage File Documents must be retained in the member's eVault.

If the eVault does not allow storage of Electronic Mortgage File Documents other than the eNote, the documents must be stored securely as required by FHLBank San Francisco's collateral policies or guidelines.

10 Servicing System Requirements

10.1 eMortgage Servicer

As used in this section, a servicer may refer to the member or a third-party servicer.

The servicer must have an FHLBank San Francisco-approved eVault, or have a third-party arrangement with a custodian or servicer that is holding eNotes on the member's behalf in an approved eVault, to have the ability to perform MERS eRegistry transactions. FHLBank San Francisco may need access to the servicer's eVault and/or servicing data while collateral is pledged.

The servicer must have the ability to identify all eNotes pledged. The servicer must be an approved and active member and user of the MERS eRegistry that has (and shall maintain at all times) connectivity to the MERS eRegistry and eDelivery.

The servicer must have the ability to record all status changes and required actions that occur during the life of the eNote in the MERS eRegistry. The servicer must have the ability to confirm that the MERS eRegistry accurately reflects the "Controller," "Secured Party," and "Location" at all times.

The servicer must have documented eNote servicing procedures.

10.2 Performing Loans

The servicer must maintain the current status of the eNotes on the MERS eRegistry.

Neither the servicer nor any other party may convert a pledged eNote into a paper note without FHLBank San Francisco's prior specific and express written consent. Once a pledged eNote is converted into a paper note it can no longer be considered eNote collateral and is no longer considered eligible collateral.

In the event FHLBank San Francisco gives its specific and express written consent to convert a pledged eNote to paper, the member must comply with FHLBank San Francisco's instructions in connection with such conversion.

10.3 Transfer of Servicing of eMortgages

Members may be required to notify FHLBank San Francisco prior to any future changes in servicing and to document custody of paper loan file documents. Please consult FHLBank San Francisco's collateral policies and guidelines prior to moving servicing or document custody. For changes in servicing, the member must update the MERS eRegistry. Additional agreements may need to be executed and testing may need to be performed to ensure compatibility with FHLBank San Francisco's eVault.

11 Glossary

Capitalized terms used and not defined in these guidelines shall have the meaning set forth in the MISMO eMortgage Glossary.