Agenda item 5:
Presentation and discussion of new financing strategies for hedging loan commitments

January 14, 2014
Reasons for the presentation

- The existing financing resolutions do not permit new hedges

- But there is a need to hedge interest-rate risk as the Agency’s lending initiatives ramp up
  - Hedging loan commitments (rate-lock to closing)
    - Not hedging long-dated variable-rate bonds

- Presentation is informational only
## What is a hedge?

<table>
<thead>
<tr>
<th>Reservation</th>
<th>60 days</th>
<th>Mortgage Loan Closing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reservation</strong></td>
<td><strong>60 days</strong></td>
<td><strong>Mortgage Loan Closing</strong></td>
</tr>
<tr>
<td>market rate: 4.00% (par coupon: $100.00)</td>
<td></td>
<td>market rate: 4.50% (par coupon: $100.00)</td>
</tr>
<tr>
<td>Pays $97.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Borrower</strong></td>
<td><strong>Loan Market</strong></td>
<td><strong>Borrower</strong></td>
</tr>
<tr>
<td>Funds $100.00</td>
<td>Pays $97.00</td>
<td></td>
</tr>
<tr>
<td>Starts paying on a 4.00% loan</td>
<td>Sells a 4.00% mortgage loan</td>
<td></td>
</tr>
<tr>
<td><strong>Mortgage Market</strong></td>
<td><strong>60 days</strong></td>
<td><strong>Hedge Settlement</strong></td>
</tr>
<tr>
<td><strong>Gain to CalHFA:</strong></td>
<td><strong>Net loss/gain:</strong></td>
<td>$3.00</td>
</tr>
<tr>
<td><strong>$3.00</strong></td>
<td><strong>$0.00</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Hedging loan commitments**

**60 days**

**Hedge settlement**
single-family lending
Existing TBA funding model

**Reservation**
- Publishes lending rates that generate sufficient premiums to fund the DPAs
- Publishes various lending rates (above market) to generate different levels of premium
- Hedge provider hedges rates and volume of loan commitments

**Mortgage Loan Closing**
- Lender
  - Funds 1st mortgage of $100 and warehouses for a week
- Reserve loan commitments
- Funds $3.50 for DPA and warehouses until sale of MBS
- Homeowner

**Delivery and Sale of MBS**
- First Southwest
  - Sells MBS at specified premium pricing
  - $4.00
  - $100
- Master Servicer

**Securitization**
- Master Servicer
  - Purchases 1st mortgage of $100 and warehouses until delivery of MBS
- Lender
Why change?

- To lower the cost structure
- The hedge provider is rewarded very well (gross margin of $0.75) for its services.

If we in-source the hedging function, we can:
  - increase our profit margin;
  - lower our lending rates.
To lower the cost structure

**Reservation**

- CalHFA
- Publishes lending rates that generate sufficient premiums to fund the DPAs
- Publishes various lending rates (above market) to generate different levels of premium
- Hedge provider hedges rates and volume of loan commitments

**Mortgage Loan Closing**

- Lender
- Funds 1st mortgage of $100 and warehouses for a week
- Reserve loan commitments
- Funds $3.5 for DPA and warehouses until sale of MBS

**Delivery and Sale of MBS**

- CalHFA
- Sells MBS at specified premium pricing
- $4.00
- $100
- Master Servicer

**Securitization**

- Master Servicer
- Purchases 1st mortgage of $100 and warehouses until delivery of MBS
- Lender

*market value = $104.50*
Why change?

- To generate future income streams
  - Over time, this model (one-time, upfront premiums) makes CalHFA's revenues susceptible to the ups and downs of the mortgage origination cycle.
  - If we in-source the hedging function, we can:
    - finance some portion of the loan production with tax-exempt bonds; thereby generating a "spread income" over time
To generate future income streams

Securitization

Master Servicer

Purchases 1st mortgage of $100 and warehouses until delivery of MBS

Lender

Delivery of MBS

CalHFA

Tests: 1) monthly deliveries exceed $20Mn per month; 2) expectation that the sale of bonds would generate a present value benefit

Continue to hedge while warehousing?

MBS

MBS

$100

$0.10+ average income until payoff

Issuance of tax-exempt bonds

Sale of bonds
multifamily lending
## Limitations of financing MF lending with fixed-rate bonds

<table>
<thead>
<tr>
<th></th>
<th>acquisition/rehabilitation</th>
<th>placed in service</th>
<th>rent stabilization</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>typical multifamily project</strong></td>
<td><img src="image" alt="Diagram" /></td>
<td><img src="image" alt="Diagram" /></td>
<td><img src="image" alt="Diagram" /></td>
</tr>
<tr>
<td>Acq/rehab loan:</td>
<td>$100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>tax credits</td>
<td>$60</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>financing structure with fixed-rate bonds</strong></td>
<td><img src="image" alt="Diagram" /></td>
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<td><img src="image" alt="Diagram" /></td>
</tr>
<tr>
<td>Short-term bonds:</td>
<td>$60 (1.50%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long-term bonds:</td>
<td>$40 (5.50%)</td>
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<td></td>
</tr>
<tr>
<td><strong>borrowing cost with fixed-rate bonds</strong></td>
<td><img src="image" alt="Diagram" /></td>
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<td><img src="image" alt="Diagram" /></td>
</tr>
<tr>
<td>Short-term borrowing cost:</td>
<td>3.10% (0.6+1.50%+0.4+5.50%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long-term borrowing cost:</td>
<td>5.50%</td>
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</tr>
</tbody>
</table>
Combining public and private cost structures can result in a more attractive product

- acquisiton/rehabilitation
- placed in service
- rent stabilization

#### typical multifamily project
- Acq/rehab loan: $100
- tax credits: $60
- Permanent loan amortizing: $40

#### private banks
- Funding with deposits: $100 (1.50%)

#### CalHFA
- Long-term borrowing cost: 5.70%
Next steps

- Will formally request the authority from the Board in March as part of the 2014 Financing resolutions
- Also enclosed is a draft Hedging Policy. Will formally request the Board to adopt the Hedging Policy in March
California Housing Finance Agency
MASTER HEDGE POLICY

I. Purpose

The purpose of this Master Hedge Policy ("the Policy") is to establish guidelines for the use and management of various derivative financial products (referred to herein as "Hedges") in conjunction with the California Housing Finance Agency's ("CalHFA" or the "Agency") management of the loan commitment pipeline. This policy and its contemplated Hedges are intended to cover only future hedging activities of the Agency's loan commitments.

This policy is not intended to encompass the Agency's existing portfolio of interest rate swaps.

This policy is not intended to completely eliminate the Agency's interest rate risk, for example, the Agency will continue to bear some interest rate risk in situations where the closing of loans and/or delivery of mortgage-backed securities precede the issuance of bonds.

The use of Hedges allows CalHFA to mitigate the risk of its exposure to movements in interest rates as part of managing the Agency's single family and multifamily loan commitment pipelines.

The Policy sets forth a framework for the utilization of Hedges with particular emphasis on their content and execution. As a framework, the intent of this Policy is to set forth guidance while maintaining the flexibility needed to effectively use and manage Hedges under changing market conditions.

II. Scope

The Policy describes the circumstances where Hedges may be used, the methods and guidelines to be employed when Hedges are used and the management and reporting responsibilities of staff and others necessary in carrying out this Policy.

III. Legal Authority

A. Authority

CalHFA may enter into Hedges, in order to reduce the amount and duration of interest rate risk. CalHFA has statutory authority to enter into hedge contracts.

B. Approval
CalHFA may enter into Hedge contracts in connection with management of the Agency’s loan commitments. The Agency’s Executive Director, Director of Financing and Financing Risk Manager are authorized to enter into hedges consistent with the Agency’s normal management process.

This Policy shall govern CalHFA’s use and management of all Hedges. While adherence to this Policy is required in applicable circumstances, the Agency recognizes that changes in the capital markets, Agency programs, and other unforeseen circumstances may from time to time produce situations that are not covered by the Policy and will require modifications or exceptions to achieve policy goals. In these cases, management flexibility is appropriate, provided the Board is informed of significant departures from normal practice.

The Policy shall be reviewed and updated periodically and presented to the Board for approval. The Director of Financing is the designated administrator of the Policy, and shall have the day-to-day responsibility and authority for structuring, implementing, and managing Hedges.

The Director of Financing shall approve any transaction involving a Hedge. CalHFA shall be authorized to enter into Hedge transactions only with qualified Hedge counterparties, as described in Section VI below. The Director of Financing shall have the authority to select the counterparties, so long as the criteria set forth in the Policy are met.

IV. Use of Hedges

A. Appropriate Usage

CalHFA will use Hedges solely to mitigate the interest risk associated with running a lending program.

B. Prohibited Strategies

CalHFA shall not enter into Hedges where one or more of the following conditions exist:

1. The Hedge will expose the Agency to extraordinary leverage or risk;

2. The Hedge serves a purely speculative purpose, such as entering into a hedge for the sole purpose of trading gains;

3. The Agency will have insufficient liquidity or financing capacity to terminate the Hedge at current market rates;
4. There is insufficient pricing data available to allow the Agency and its advisors to adequately value the hedge instrument.

C. Procedure

Recommendations to enter into Hedges will be made based on CalHFA’s analysis of the loan commitment pipeline. Recommendations will consider the following elements:

1. The appropriateness of the transaction for the Agency based on the balance of risks and rewards presented by the proposed transaction, including a description of the transactional structure, a description of the risks it presents, and risk mitigation measures;

2. The legal framework for the transaction within the context of California statutes, Agency resolutions, and relevant indenture and contractual requirements (including those contained in credit agreements), as well as any implications of the transaction under federal tax regulations;

3. Potential effects that the transaction may have on the credit ratings of any Agency obligations assigned by the rating agencies;

4. The potential impact of the transaction on any areas where the Agency’s capacity is limited, now or in the future, including the use of variable-rate debt, bank liquidity facilities or letters of credit, and bond insurance;

5. The ability of the Agency to handle any administrative burden that may be imposed by the transaction, including accounting and financial reporting requirements; and,

6. Other implications of the proposed transaction as warranted.

V. Permitted Hedges

A. Permitted Hedges for Single Family

1. All permitted Hedges for single family are intended to be cash settled and are not contemplated to hedge long-term liabilities (e.g. long-dated variable-rate bonds). Hedges will be short term in nature and forward periods shall be less than 90 days.

2. TBA (to be announced)

A TBA would be used to hedge interest rates on single family loan commitments. A TBA is a forward mortgage-backed securities trade. Pass-through securities issued by Freddie Mac, Fannie Mae and Ginnie Mae trade
in the TBA market. The term TBA is derived from the fact that the actual mortgage-backed security that will be delivered to fulfill a TBA trade is not designated at the time the trade is made. The securities are "to be announced" 48 hours prior to the established trade settlement date. A TBA used to hedge single family commitments would be in effect for less than 90 days. The nominal term of the underlying mortgage-backed security (MBS) for a TBA trade for single family commitments shall not exceed 30 years.

On the TBA settlement date, if the TBA is “in-the-money”, CalHFA will receive a payment, but if the TBA is “out-of-the-money”, CalHFA will make a payment. Because CalHFA may owe the counterparty a payment, the counterparty bears additional credit risk to the Agency. That is, these transactions could result in additional collateral posting requirements to the counterparties.

B. Permitted Hedges for Multifamily

1. All permitted Hedges for multifamily are intended to be cash settled and are not contemplated to hedge long-term liabilities (e.g. long-dated variable-rate bonds). Hedges will be short term in nature and the forward periods shall be less than 36 months.

2. Forward Rate Option

Forward rate options would be used to hedge multifamily permanent-only loan commitments. A forward rate option is an option on a forward swap, whereby the issuer has the right, but not the obligation, to enter into a cash-settled swap similar to that described in the rate lock description above. The rate on the swap is decided when the option is purchased. The rate is typically set at a level above the current market rate and serves as insurance against rates rising above the designated rate. A forward rate option used to hedge multifamily commitments would have a forward starting date less than 36 months. The nominal term of the underlying swap shall not exceed 40 years. An upfront payment by CalHFA is required with a forward rate option, but upon termination, CalHFA can only receive a payment.

On the forward starting date (the “Strike Date”), if the option is “in-the-money”, CalHFA will exercise the option and receive a payment, but if the option is “out-of-the-money”, CalHFA will not exercise the option and allow the option to expire. Because CalHFA cannot owe the counterparty any payment on the Strike Date, the counterparty does not bear any additional credit risk to CalHFA. That is, these transactions should not result in additional collateral posting requirements to the counterparties.
VI. Counterparties

Hedge products may create, for the Agency, exposure to the creditworthiness of financial institutions (when the mark-to-market of the Hedges are “in-the-money” to the Agency, i.e. CalHFA is due a payment upon immediate termination) that serve as the Agency’s counterparties on Hedge transactions. In general, the Agency will utilize the following standards in selecting counterparties:

A. Credit Standards

Standards of creditworthiness, as measured by credit ratings, will determine eligible counterparties. Differing standards may be employed depending on the term, size and interest-rate sensitivity of a transaction, type of counterparty, and potential for impact on the Agency’s or a specific enterprise-fund’s credit rating. As a general rule, the Agency will enter into transactions only with counterparties whose obligations are rated in the A category or better from at least one nationally recognized rating agency. In cases where the counterparty’s obligations are rated based on a guarantee or specialized structure to achieve the required credit rating, the Agency shall thoroughly investigate the nature and legal structure of the guarantee or structure in order to determine that it meets the Agency’s requirements in full.

B. Diversification of Exposure

The Agency will seek to avoid excessive exposure to a specific counterparty by diversifying its counterparties and monitoring the potential termination value of each counterparty both in absolute dollar values and in percentages of the entire portfolio.

C. Termination

If a counterparty’s credit ratings are downgraded below the A category by at least one nationally recognized rating agency, the Agency may exercise a right to terminate the transaction prior to its scheduled termination date. The Agency will seek to require, whenever possible, that terminations triggered by a counterparty credit downgrade will occur in financial terms that are favorable to the Agency, and which would allow the Agency to go back into the market to replace the downgraded party with another suitable counterparty at no out-of-pocket cost to the Agency.

VII. Internal Management of Obligations and Exposure

Achieving the Agency’s goals to meet state housing needs while protecting interest rates committed to borrowers requires the Agency to address several risks. The provisions of this policy are designed to create a framework for evaluating and addressing these risks with hedging and ongoing management. The following paragraphs describe pertinent risks and the means through which the Agency may mitigate them.
Interest Rate Risk is the risk that unhedged rates committed to through the single family loan reservation process or the multifamily loan commitment process may rise, producing either losses in income or absolute losses. The Agency may enter into Hedges to mitigate this interest rate risk. The Agency may also choose to incur an acceptable level of interest rate exposure. In defining the desired amount of rate exposure, the Agency will consider its ability to withstand losses in a rising rate environment.

Risks Related to Hedges

Non-Delivery Risk is the risk that the committed loans do not deliver thus the hedges effectively become an investment, which exposes the Agency to the mark-to-market of the hedges.

Size Risk is the risk that the amount of loan commitments that deliver is significantly above or below the anticipated size leaving the loan commitment over-hedged or under-hedged and the issuer is left with a potentially costly settlement upon termination.

Timing Risk is the risk that loan extensions or early closings leave the loan commitment under-hedged or over-hedged and the issuer is left with a potentially costly settlement upon termination.

Hedge Mismatch Risk is the risk that the settlement payment on the hedge fails to offset the change in the actual cost of the deferred debt financing. This risk arises because debt instruments are issuer and market-specific while hedges generally are designed around generic market indexes whose price movement may be different.

Termination Risk is the risk that due to some event or exercise of a right the Hedge may terminate or be terminated prior to its scheduled expiration which could result in a termination payment becoming payable by the Agency. To mitigate this risk, the Agency will enter Hedges with appropriate termination provisions. If a Hedge terminates, the Agency must decide whether to replace the Hedge. The Agency would evaluate the nature and scope of its interest rate risk without the terminated hedges and its ability to make any termination payments without entering a replacement. Since any termination payment owed by the Agency will generally be funded by payment from the replacement counterparty, the Agency considers its exposure to be market risk (as defined below) and the aggregate value of the bid-ask spread or the difference between the payments it would receive and make on each Hedge.

Market Risk is the risk that under a termination event, the Agency will not be able to obtain a replacement Hedge because the Hedge market has suffered a loss of liquidity or collapsed.

Credit Risk is the risk that under a termination event, the Agency will not be able to obtain a replacement hedge because its credit has deteriorated. It is important to note that the termination value or the price the Agency must either pay or receive upon early termination is determined without regard to its current credit since the market quotations
are not issuer specific. However, the Agency may be unable to actually find a replacement counterparty if its credit has become insufficient for efficient use of the hedge market. The Agency will carefully monitor its credit and act to maintain its rating.

**Counterparty Risk** is the risk that a counterparty will fail to make required payments. In order to limit the Agency's counterparty risk, the Agency will seek to avoid excessive concentration of exposure to a single counterparty or guarantor by diversifying its counterparty exposure over time. Exposure to any counterparty will be measured based on the potential termination value of any Hedge contracts entered into with the counterparty. Termination value will be determined at least quarterly, based on a mark-to-market calculation of the cost of terminating the Hedge contract given the market conditions on the valuation date. Aggregate Hedge termination value for each counterparty should take into account netting of offsetting transactions (i.e. fixed-to-floating vs. floating-to-fixed). As a matter of general principle, the Agency may require counterparties to provide regular mark-to-market valuations of Hedges they have entered into with the Agency, and may also seek independent valuations from third party professionals.

As a general rule, the Agency will manage the risks of its Hedge exposure on an enterprise-wide or “macro” basis, and will evaluate individual transactions within the larger context of their impact across the relevant enterprise. In each case, the degree of risk should be evaluated in comparison with degree of benefit provided.

**VIII. Disclosures and Financial Reporting Requirements**

The Agency will track the financial implications of the Hedges it enters into, taking steps to ensure that there is full and complete monitoring and disclosure of all Hedges to the Board, to rating agencies, and in disclosure documents. Disclosure shall provide a clear summary of the special risks involved with Hedges and any potential exposure to interest rate volatility or unusually large and rapid changes in market value. With respect to its financial statements, the Agency will adhere to the guidelines for the financial reporting of Hedges, as set forth by the Government Accounting Standards Board.

Internal disclosures: A regular report will be prepared for the Board including:

A. A summary of outstanding Hedges and their counterparties;

B. The mark-to-market value (termination value) of its Hedges, as measured by the economic cost or benefit of terminating outstanding contracts as of a designated valuation date;

C. The amount of exposure that the Agency has to each specific counterparty, as measured by aggregate mark-to-market value, netted for offsetting transactions;
D. The credit ratings of each counterparty (or guarantor, if applicable) and any changes in the credit rating since the last reporting period; and,

E. Any collateral posting as a result of Hedge agreement requirements.

IX. Selecting and Procuring Interest Rate Hedges

The Agency will choose counterparties for entering into Hedge contracts on either a negotiated or competitive basis. As a general rule, a competitive selection process will be used if the product is relatively standard, if it can be broken down into standard components, if two or more providers have proposed a similar product to the Agency, or if competition will not create market pricing effects that would be detrimental to the Agency’s interests. Negotiated procurement may be used for original or proprietary products, for original ideas of applying a specified product to Agency need, to avoid market pricing effects that would be detrimental to the Agency’s interests, or on a discretionary basis in conjunction with other business purposes. The Agency will strive to use standard hedge products wherever possible.

Consideration may be given in negotiated transactions to those counterparties who have demonstrated their willingness to participate in competitive transactions and have performed well. If it is determined that a Hedge should be competitively bid, the Agency may employ a hybrid structure to reward unique ideas or special effort by reserving a specified percentage of the Hedge to the firm presenting the ideas on the condition that the firm match or better the best bid. To provide safeguards on negotiated transactions, the Agency should generally secure outside professional advice to assist in the process of structuring, documenting and pricing the transaction, and to verify that a fair price was obtained. In any negotiated transactions, the counterparty shall be required to disclose all payments to third parties (including lobbyists, consultants and attorneys) who had any involvement in assisting the counterparty in securing business with the Agency.

X. Procedures

Hedging procedures are being developed and will be provided to CalHFA’s Board of Directors when they are completed.