

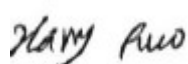


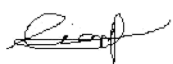
# **Fixed Rate Loans and Banking Book Hedging IRS Review Procedure**

**(June 2021)**

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V1.0	June 2021	Harry Guo/Adrian Long	Original

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Qian Peng, SVP & Head of Treasury		June 2021
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## 1. Overview

Based on BOCNY Banking Book Hedging Procedure, all significant commercial fixed rate loans are required to be hedged by interest rate swap (IRS) at inception, and the fixed rate loan hedging is only applicable to interest rate risk.

The IRS unwinding cost shall be covered by the yield maintenance in the loan. The bank should only offer three (3) months window before loan maturity for Borrower to prepay the loan without penalty. Any requirement for a free prepayment period longer than three months must be approved by the EVPs in charge of the Treasury and business lines.

To the extent agreed by the clients, the benchmark used in the yield maintenance calculation shall match the reference rate when the fixed rate loan pricing is quoted in term sheet. It is understood that in market practice, yield maintenance payment is commonly calculated based on treasury yield of the comparable duration. The final prepayment penalty should be 1% (floor) or yield maintenance cost, whichever is higher. Any exception on the floor must be approved by the EVPs in charge of the Treasury and business lines.

This procedure describe TRY's review procedure on the fixed rate loans and its banking book hedging IRS. Hedge effectiveness assessment is not in this scope.

## 2. TRY Review Scope

TRY involve the review from initial loan contracts, IRS hedging proposal, and the final hedge execution. TRY need to make sure

- The fixed rate loan contract covers the prepayment risk. The client should pay the full unwound cost of the hedging IRS via yield maintenance when the loan is prepaid. In case the client don't want to pay the full unwounded cost, a conservative prepayment penalty schedule based on "worst" case scenario during maturity period should be developed.
- The IRS fixed leg should match the fixed rate loan terms including trade date, maturity date, cash flow date, rate, notional and schedule etc. The notional schedule, trade date, maturity date of the IRS floating leg should be consistent with the IRS fixed leg.

- The rate for the fixed rate loan should not be locked early. Ideally the rate should be locked within 2 business days before the fixed rate loan closing. Otherwise the IRS hedge may not be effective.

### 3. Review Process and Cases

Appendix 6.6 provides a flow chart of the review process, below are the general description of the process under different cases or scenarios.

The draft loan contracts should be reviewed with FLU's loan officers before they are final and signed. TRY need to focus on the prepayment risks and the terms on the prepayment penalty. There are usually following cases

- **Clients pay full prepayment cost:** This is the ideal contract and there is no issue from TRY. TRY need to review the yield maintenance formula in the contract. There are variation of the formula, but one of the common form is
  - $\max(1\%, (\text{initial fixed rate} - \text{market equivalent fixed rate at prepayment date})) * \text{notional} * (\text{maturity date} - \text{prepayment date}) / 365$  or
  - $\max(1\%, (\text{initial benchmark rate at loan closing date} - \text{market benchmark rate at prepayment date})) * \text{notional} * (\text{maturity date} - \text{prepayment date}) / 365$ .

The example is the fixed rate loan with Justice Avenue Tower executed at 5/11/2021.

- **Clients pay prepayment penalty based on agreed schedule:** In case the clients don't want to pay the full prepayment cost, BOC and client should agree a prepayment penalty schedule which should be conservative for BOC and is based on foreseeable worst case scenarios during the loan life. The prepayment penalty schedule is usually developed from the IRS unwounded cost (i.e. mark to market of the IRS after prepayment) based on the lowest interest rate (including negative interest rate) scenarios. This interest rate scenario should be agreed among FLU originating the loan, TRY, MKD, SRD, and MRD. A special sign-off from EVP in charge of loan department and EVP in charge of TRY are required in this case. The examples are the PAS/OES fixed rate loans executed at 9/14/2020, 5/19/2021, and 5/20/2021.

- **Clients don't want to pay prepayment penalty:** In this case, the deal should mostly be rejected. In case this deal is proposed to move forward, special approval from EVPs-in-charge should be obtained.

After the loan contracts are reviewed and agreed, TRY will review the cash flow schedule of the fixed rate loans. The cash flow schedule will be used by MKD to price and quote the hedging IRS. TRY should review and make sure that the cash flow schedule of the IRS fixed leg is consistent with fixed rate loan.

## 4. Approval Process

TRY should review and final sign-off on following approval documentation.

- **Agreement on the fixed rate loan prepayment clause:** After review and revision on the prepayment terms/clause, TRY should provide an email sign-off so that account officer can move forward on the final loan contracts.
- **Banking Book IRS Transaction Request Form:** This form is provided by account officer and reviewed by TRY. The hedging IRS details should match the fixed rate loans. There will be sign-off on the draft request form. A final request form with loan ID/Client ID will be circulated after the fixed rate loan is booked and the loan ID is available.
- **IRS request form sent to HO (关于纽约分行在银行账簿叙做配套固定贷款利率掉期交易的请示):** This request form is drafted by MKD and signed off by head of MKD, head of TRY, and EVP in charge.

## 5. IRS Booking and Recording

Per MOD requirement on Banking Book Hedging Deal Comment, below are the booking and recording requirement.

- TRY is responsible for identifying deal purpose for each banking book hedging deal and providing comment adding instructions with deal purpose statement in standardized deal comment format and related information to MKD when initiating banking book hedging deal. For banking book IRS, deal comment format should be "IRRMA Loan Id/Client Id Amount Maturity Date";

- The notional amount, maturity date is available in the Banking Book IRS Transaction Request Form. The Loan ID, client ID should be communicated via email, instead of putting into the Request Form, per documentation agreement among OSD, MKD, MOD, and TRY.
- MKD will execute transaction based on TRY request and pass all information to MOD input operation team;
- MOD input operation team will input deal comment into Deal text section in OPICS system based on comment adding instructions from TRY.

All records including loan agreements, approval documentations and spreadsheet should be saved in shared folder.

## 6. Appendix

### 6.1 Sample Loan Agreement: 88-08 Justice with full prepayment penalty agreement.

Please see page 9 “prepayment fee” and page 11 “Yield Maintenance Amount” for details. The key part is copied below.

Page 9. “**Prepayment Fee:** (i) if the prepayment occurs on or prior to the second anniversary of the date hereof, (a) one percent (1%) of the principal amount prepaid, plus (b) the yield maintenance amount; (ii) if the prepayment occurs after the second anniversary of the date hereof, but on or prior to three (3) months prior to the Stated Maturity Date (the “**Applicable Target Date**”), the greater of (x) one percent (1%) of the principal amount prepaid, and (y) the yield maintenance amount; (iii) if the prepayment occurs after the Applicable Target Date, zero. “

Page 11, “**Yield Maintenance Amount:** an amount equal to the product of the following: (i) the amount of such principal prepayment (or the amount of Principal so accelerated), multiplied by (ii) an amount equal the excess of (x) the Applicable Interest Rate over (y) the swap rate as of the date of prepayment for a time period equal to the period from the date of prepayment to the stated Maturity Target Date, as such swap rate is determined by Administrative Agent, and further multiplied by (iii) a fraction whose numerator equals the number of days between the date of prepayment and the Stated Maturity Date and whose denominator is three hundred-sixty (360). “



Loan Agreement -  
88-08 Justice Ave [E]

## 6.2 Sample Loan and Security Agreement: PAS loan with prepayment penalty schedule.

Please see section 2 payment for details. The key part is copied below.

“On any scheduled Payment Date and upon not less than thirty (30) days’ prior written notice, Borrower shall have the right to prepay all (but not less than all) of the outstanding principal balance of any Equipment Note, together with all interest and late charges accrued through the date of prepayment, a prepayment charge in an amount equal to (i) if prepayment occurs in the first year of the Equipment Note Term, 4.50% of the amount prepaid; (ii) if prepayment occurs in the second year of the Equipment Note Term, 4.25% of the amount prepaid; (iii) if prepayment occurs in the third year of the Equipment Note Term, 3.25% of the amount prepaid; (iv) if prepayment occurs in the fourth year of the Equipment Note Term, 2.25% of the amount prepaid; and (v) if the prepayment occurs in the fifth year or any time later in the Equipment Note Term but prior to the end thereof, 1.25% of the amount prepaid (the “**Prepayment Charge**”). “



Precise Asset  
Sourcing\_ LLC. - Loa

## 6.3 Sample spreadsheet to access the prepayment penalty schedule

Here is the calculator to setup the prepayment penalty schedule for the PAS/OES fixed rate loan at May 2021.



Hedge calc to PAS  
refi -MKD 2021.03.02

## 6.4 Sample Banking Book IRS Transaction Request Form.



Here is the form for the PAS/OES fixed rate loan at May 2021.



Banking Book IRS  
Transaction Request

**6.5 Sample IRS request form sent to HO (关于纽约分行在银行账簿叙做配套固定贷款利率掉期交易的请示).**

Here is sample form for the PAS/OES fixed rate loan at May 2021.



纽资传 (2021) 6  
关于纽约分行在银行

