Investment banking: Collateral Reconciliation of Fixed Income Securities

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Abstract: *Collateral is a borrower's pledge of specific property to a lender, to secure repayment of a loan. The collateral serves as protection for a lender against a borrower's default - that is, any borrower failing to pay the principal and interest under the terms of a loan obligation. If a borrower does default on a loan (due to insolvency or other event), that borrower forfeits (gives up) the property pledged as collateral—and the lender then becomes the owner of the collateral. Marketable collateral is the exchange of financial assets, such as stocks and bonds, for a loan between a financial institution and borrower. Collateral is used as security which is pledged by a financial institution against the benefit received from the swap bank in case of default to oblige the agreement. Collateral can be either security or currency. Security will be the bond which would generate coupons. Currency will be liquid & can generate interest. This paper is an attempt to understand the mechanism of collaterals applied in fixed income securities. It also reflects the emerging trend of applying the financial resources for productive purpose.*

Key Words: *Artificial Intelligence, Scalability, Technology Enabled Service (TES) and Datafication.*

1. INTRODUCTION:

Collateral is a borrower's pledge of specific property to a lender, to secure repayment of a loan. The collateral serves as protection for a lender against a borrower's default - that is, any borrower failing to pay the principal and interest under the terms of a loan obligation. If a borrower does default on a loan (due to insolvency or other event), that borrower forfeits (gives up) the property pledged as collateral and the lender then becomes the owner of the collateral. The bank uses a legal process called foreclosure to obtain real estate from a borrower who defaults on a mortgage loan obligation. A pawnbroker is an easy and common example of a business that may accept a wide range of items rather than just dealing with cash. Marketable collateral is the exchange of financial assets, such as stocks and bonds, for a loan between a financial institution and borrower. To be deemed marketable collateral, assets must be capable of being sold under normal market conditions with reasonable promptness at a fair market value. Conditions are based upon actual transactions on an auction or similarly available daily bid, or ask price market.

2. LITERATURE REVIEW:

A typical mortgage loan transaction, for instance, the real estate being acquired with the help of the loan serves as collateral. Should the buyer fail to pay the loan under the mortgage loan agreement, the ownership of the real estate is transferred to the bank [1]. Collateral, especially within banking, traditionally refers to secured lending (also known as asset-based lending). More recently, complex collateralization arrangements are used to secure trade transactions (also known as capital market collateralization). The item used as collateral provides security to the lender, letting them know that they'll get their money back whether or not you're able to satisfactorily repay the loan [2]. There is often presentation of unilateral obligations secured in the form of property, surety, guarantee or other as collateral (originally denoted by the term security), whereas the latter often presents bilateral obligations secured by more liquid assets such as cash or securities, often known for margin [3]. For national banks to accept a borrower's loan proposal, collateral must be equal or greater than 100% of the loan or credit extension amount. The bank's total outstanding loans and credit extensions to one borrower may not exceed 15 percent of the bank's capital and surplus, plus an additional 10 percent of the bank's capital and surplus [4]. Declination of collateral value is the primary risk of securing loans with marketable collateral. Financial institutions closely monitor the market value of any financial asset held as collateral and take appropriate action if the value subsequently declines below the predetermined maximum loan-to-value ratio [5]. Collateral is used as security which is pledged by a financial institution against the benefit received from the swap bank in case of default to oblige the agreement. Collateral can be either security or currency. Security will be the bond which would generate coupons. Currency will be liquid & can generate interest [6].

3. RESEARCH METHODOLOGY:

The study is descriptive in nature with an objective of discussions relevant to the concept of collaterals being applied in most of leading Investment banks as one of the asset class for the better investment options under the derivatives. The researcher has attempted to emphasize on the practical application of the concepts in the operational

segment of reconciliation exclusively confined to back office operations of fixed income securities (especially Bonds). There is scope for venturing into more detailed research by collecting the data from the leading investment banks to explore innovative strategies in the area of collaterals.

4. COLLATERAL APPLICATION IN FIXED INCOME SECURITIES:

The concept of the collaterals are applied in the fixed Income securities can be well explained with an illustration of its mechanism. Let's consider two firms A LTD & B LTD who have below requirements, current position, benefits received and collaterals pledged through Swap bank.

Table 1: The current positions held by both A LTD and B LTD

A LTD	Fixed Interest rate
B LTD	Floating Interest rate

(Source: Author's own compilation for illustration)

Table 2: The requirements by A LTD and B LTD

A LTD	Floating Interest rate
B LTD	Fixed Interest rate

(Source: Author's own compilation for illustration)

4.1 Mechanism

Firms A & B LTD approach swap bank with their respective requirements & the swap they are looking for. Swap bank identifies the opportunity in the deal & gets into an agreement individually with A LTD & B LTD separately promising to provide the benefits they require in exchange for fees, commission or charges using LIBOR (London Inter-bank Offer rate). Here firms A & B don't know each other but are receiving the benefits through swap bank.

4.2 Agreement

Swap bank gets into an agreement defining that Firm A & B that they would receive the benefits only when the pledge collateral in case of any default from either party. Swap bank gives the collateral received from Firm A to B, collateral received from Firm B to A without both firms' knowledge. The collaterals must be returned back to either party on the expiry of the agreement period.

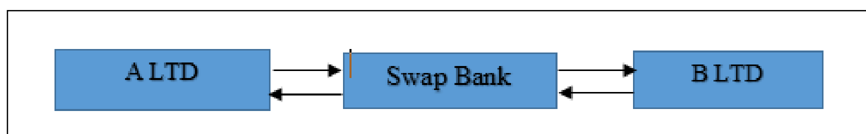

Fig 1: Process of Collaterals through swap bank
(Source: Author's own compilation for illustration using SmartArt)

Collaterals can be classified into two major groups under the asset class of fixed income portfolios with respect to reconciliations. They are as below:

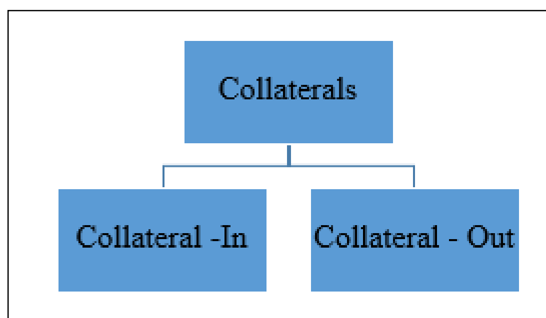

Fig 2: Types of collaterals
(Source: Author's own compilation for illustration using SmartArt)

4.3 Application

The collaterals are applied to the bonds under the asset class of derivatives in two prominent basis namely as a security or currency. The treatment towards reconciliation of the portfolio changes based on the type of application.

4.4 Reconciliation

Reconciliation with respect to the portfolio is always performed for books of accounts of the investment banking firm and custodian from the cash as well as position perspective for accuracy.

4.3.1 Security: If Firm A receives Security as collateral from the swap bank pledged by Firm B then The Portfolio maintained to manage the security becomes the Collateral-In.

Table 3: Table showing the position of A Ltd and B Ltd

A LTD	B LTD
Security (Fund) : Collateral - In	Security (Fund): Collateral - Out

(Source: Author's own illustration)

(a) Cash Reconciliation: Cash Reconciliation is performed only for the collateral – In A/C (Funds) only. The below are the procedures of cash exceptions to be reconciled.

- Collateral transactions of specific broker traded must be matched from both custody & Investment banking firm on reconciliation tool. These are booked by Derivative portfolio team as income entries.
- Dividend re –investment on the security at the end of every month on "IE" securities. Investment banking firm buy trade must be matched off with Investment banking firm credit income entry. Custody buy trade with custody income entry must be matched off.
- Cash flows of either contribution or redemption must be matched off at both custody & Investment banking firm together. On day 1 custody will reflect advisory fees where Investment banking firm will reflect full amount of cash flow. On next day custody entry for balance cash flow will hit reconciliation tool.
- Investment banking firm is not entitled for any of the coupons on the securities as they belong to third party (Firm B) & hence should be withdrawn at Investment banking firm by Derivative portfolio admin team.
- Custody fees can be posted in accounting system as normal procedure to Bond account.
- Month end Credit interest can be posted in accounting system.
- Debit interest must be queried with Department of Portfolio administration to confirm on postings.
- Positions between Investment banking firm & Custody must be reconciled & should match.

(b) Position Reconciliation: The position reconciliation is performed to ensure the accuracy of the quantity. The steps involved are as follows.

- Positions between Investment banking firm & Custody must be reconciled & should match.
- The holdings on the OTC securities between Investment banking firm & Custody must match.
- Cash Management securities (IE securities) must be reconciled as normal & ensure position between Custody & Investment banking firm matches.

4.3.2 Currency: If Firm A receives Currency as collateral from the swap bank pledged by Firm B then The Portfolio maintained to manage the Currency becomes the Collateral-In. Here currency received s Liquid in nature & hence can't be left idol in the A/C. Hence Firm A invests the money into Cash MGT or Money market securities by purchasing Z-Table securities.

Table 4: Table showing the position of A Ltd and B Ltd

A LTD	B LTD
Currency (Fund) : Collateral - In	Currency (Fund): Collateral - Out

(Source: Author's own illustration for Illustration)

- A LTD receives currency which is income to the A/C.
- The cash received is invested on buying Z –Table securities.
- Investment banking firm Credit Income & buy trade will offset & should be matched off on reconciliation tool.

- Custody Credit Income & Buy trade should me matched off on reconciliation tool.
- On expiry of agreement, Z-table security is sold at Investment banking firm & sale proceeds are given to B LTD. Hence Sell entry must be matched off with debit income.
- Monthly interest, custody fees must be posted in accounting system.

5. CONCLUSION:

Collaterals were conventionally treated as only security against the granted loans and other financial assistance. However the current robust and changing business environment have paved way for making the best use of the collaterals in generating the source of income without compromising on the title of the ownership and also ensures there is fair business practice. This also acts as hedging the quantum of risk exposed by the lending institutions in covering the systematic risk.

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