

PART

1

Introductory Elements

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Fundamental Collateral Concepts

This chapter is designed to provide an overview of many of the essential aspects of collateral and of collateral management – each topic will be expanded and explained fully within the relevant chapter.

What is collateral? Collateral refers to an asset of value that is given by one entity or firm (party A) as security for an amount owed to another entity or firm (party B).

The purpose of collateral is to provide assurance to party B that, in the event that party A does not fulfil its legal and *contractual obligations* relating to an underlying transaction, party B may legally sell the collateral in order to recover the full value owed by party A.

The generic and commonly used terms for such parties are *collateral giver* or *transferor* (party A) and *collateral taker* or *transferee* (party B).

For the collateral taker to be properly secured, the collateral asset must be of recognisable value in the open market place and be highly *liquid*, thereby enabling the collateral taker to quickly and easily convert the collateral to ready cash (should the need arise).

The underlying transactions that give rise to the giving and taking of collateral are many and varied, and in everyday life include, for example, mortgages on residential properties where the lending entity (e.g. a bank) lends cash to the homebuyer with the lender's legal right to take possession of the property should the homebuyer fail to abide by the terms of the mortgage agreement and make the necessary repayments. In this situation, the property itself is the collateral which the lender can sell in order to recover the cash it originally lent plus interest owed.

In the world of financial services, the underlying transaction types that give rise to the giving and taking of collateral fall into two main categories (note: the transaction types listed below are described fully within later chapters):

1. Transaction Types Involving Loaning of Assets

The common theme in this category is the lending of assets by one party to its *counterparty*, where the lender has an immediate risk of not having the lent asset

returned. To *mitigate* the lender's risk, collateral is given by the asset borrower. Such transaction types include:

- *sale & repurchase (repo)* transactions
- *securities lending & borrowing* transactions.

2. Transaction Types That Accumulate Value Over Time

The common theme in this category is that two parties enter into a *derivative* transaction that typically has a duration of many years – up to 50 years is possible. This means that each party has *exposure* to its counterparty on an ongoing basis throughout the transaction's lifetime. It is important to understand the nature of each transaction type in order to appreciate the associated risks, and the role collateral plays. Although each such transaction begins with equal value to both parties, as time passes the value of a transaction at a particular point in time will fall to the advantage of one party and therefore to the disadvantage of the other party. As time progresses, the transaction value can fluctuate significantly, where on a particular day party A will have the advantage and the next day party B will have the advantage. For these transaction types, the disadvantaged (non-exposed) party is required to provide collateral to the advantaged (exposed) party, in recognition of the risk that should the disadvantaged party go out of business during the lifetime of the transaction, the advantaged party will (it is assumed) need to replace the original transaction at 'current' market rates, thereby incurring greater costs compared with the original transaction. Such transaction types are generically known as *OTC derivatives* and include:

- interest rate derivative transactions (e.g. *interest rate swaps*)
- credit derivative transactions (e.g. *credit default swaps*)
- foreign exchange transactions (e.g. *foreign exchange swaps* and *cross-currency swaps*).

OTC Derivative trades have historically been executed directly between the two trading firms, and are said to have been traded on a *bilateral* basis. Another way of describing such transactions is to state they have been *privately negotiated*, rather than being executed via a derivative exchange (as occurs with *exchange-traded derivatives*).

Common to all the above-mentioned transaction types is the fact that collateral is given and/or taken. The type of collateral that may be given and taken is usually documented in a legal agreement between the two trading parties, ideally finalised (signed by both parties) before trading commences. The form that collateral normally takes is cash or *bonds* (debt securities), as such assets are subject to either zero fluctuation in value (cash) or limited fluctuation in value (highly rated bonds). *Equity* securities (shares) are less commonly used as collateral due to their fluctuating and sometimes unpredictable values.

A party that has given cash collateral normally earns an agreed rate of interest on the cash (assuming a *positive interest rate* environment), from the collateral taker.

Both bonds and equity are classified as *securities* which, when given as collateral are usually subject to a *haircut*; having established the *current market value* of a security, the relevant haircut percentage is deducted in order to identify the security's *collateral value*. Conversely, major currencies given as collateral usually have no haircut applied and therefore usually retain 100% of their 'market' value.

It is in a firm's own interest to monitor collateral values on an adequate frequency in order to determine whether a current *exposure* exists; for example, a bond received as collateral yesterday and whose value yesterday covered the lender's risk, may today have a value which is below the value of the lent asset, and the lender now has an exposure. The lender's exposure must be mitigated by the lender requesting additional collateral (a process known as a *margin call*) from the borrower. Conversely, should the value of collateral rise relative to the value of the lent asset, the borrower has an exposure (i.e. too much collateral with the lender) and should make a margin call to request the lender to return the excess collateral.

Securities collateral currently held by the collateral taker may today have been sold by the collateral giver. The collateral giver requires return of the original collateral so as to facilitate settlement of its sale on its due date (*value date*). Under such circumstances the collateral giver usually has the right to substitute the original collateral with one or many replacement pieces of collateral with either securities or cash (dependent upon the transaction type). The collateral taker must ensure it does not become exposed by returning the original collateral without simultaneous receipt of replacement collateral. This process is known as *collateral substitution*.

Securities collateral currently held by the collateral taker may have an *income* payment becoming due; this is known as a *coupon payment* in the case of a bond, and a *dividend payment* in the case of equity. The legal agreement between the two parties usually states that an equivalent payment must be made by the collateral taker to the collateral giver, when the payment falls due.

As exposure will have ceased upon termination of the underlying transaction, any collateral outstanding at that time must be returned to the collateral giver. With this in mind, it is important to appreciate that the tenure (duration) of a transaction can vary significantly dependent upon the transaction type; see the descriptions earlier in this chapter. For example:

1. Transaction Types Involving Loaning of Assets – *repo* transactions and *securities lending & borrowing* transactions are typically short-term, with a usual lifetime of a matter of days or weeks
2. Transaction Types That Accumulate Value Over Time – *OTC derivative* transactions are typically long term, with a lifetime of multiple years in many cases.

For its own protection, a firm involved in any and all such transactions must be prepared to 1) identify exposures and 2) mitigate exposures, at the relevant frequency, through the process of collateral management.

