

Essential Trading and Settlement Concepts

1.1 INTRODUCTION

For any company in any industry, remaining in control of its goods and cash is fundamental to successful and efficient operation of its business. This involves maintaining up-to-date internal records of trading activity, deliveries and receipts of goods, as well as payments and receipts of cash, thereby enabling the prediction of future stock and cash flows and the reconciliation of internal records with external entities, including goods held in warehouses and cash held at banks.

This chapter highlights similarities and differences between a deal undertaken by an everyday business (for example, a sports goods retailer) and a company within the securities industry. In addition, typical terminology used within the securities industry is highlighted and explained.

1.2 TERMINOLOGY

Figure 1.1 lists the components of two trades; the trade in the upper half is undertaken by a sports goods retailer and the trade in the lower half is executed by a Securities Trading Organisation (STO).

Many of the phrases and terms used within the securities industry can be related to those used in the outside world. It is important to understand the meaning of the components of a trade in order to appreciate their impact following the agreement to trade.

Component	Description
Trade date	The date the parties to the trade agreed to trade; the date of <i>trade execution</i>
Operation	The type and direction of the trade, e.g. buy or sell, lend or borrow
Quantity	The number of units of the goods being exchanged
Goods	The specific goods being exchanged
Price	The price of each unit being exchanged
Supplier	The entity with whom the trade has been executed (the deliverer of goods and the receiver of cash)
Delivery date	The agreed intended date of delivery of goods by the supplier and payment of cash by the buyer
Cash due	The cash value of the trade due to be paid to the supplier upon delivery of the goods
Required location of goods	From the buyer's perspective, the desired storage location of the goods
Cash to be paid from	From the buyer's perspective, the specific bank from which payment is to be made

SPORTS GOODS RETAILER							
Buys 100 Training Shoes (colour blue) at USD 70.00 each from the Sports Supply Company (SSC) on 15 th June for delivery on 25 th June - total due to pay USD 7000.00							
the following is recorded							
Trade Date	Operation	Quantity	Goods	Price	Supplier	Del. Date	Cash Due
15 th June	Buy	100	Trainers Blue	USD 70.00	Sports Supply Co.	25 th June	USD 7000.00
Required location of trainers: Retailer's Warehouse No. 1, New York				Cash to be paid from: Retailer's account at Bank X, New York			

SECURITIES TRADING ORGANISATION (STO)							
Buys 2000 Sony Corporation shares at Yen 14,100 each from Counterparty X, London on 15 th June for delivery on 25 th June - total due to pay Yen 28,200,000							
the following is recorded							
Trade Date	Operation	Quantity	Securities	Price	Counterparty	Value Date	Cash Due
15 th June	Buy	2000	Sony Corp. Shares	Yen 14,100	Counterparty X	25 th June	Yen 28,200,000
Required location of securities: STO's CUSTODIAN, Cust. E, Tokyo				Cash to be paid from: STO's CUSTODIAN, Cust. E, Tokyo			

Figure 1.1 Comparison of terms

1.3 DIFFERENCES IN TERMINOLOGY

Of the terms listed above, within the securities industry the following terms differ:

Term	Securities Industry Term
Goods	The goods in which STOs invest are referred to as <i>securities</i> or <i>instruments</i> . From this point forward the term <i>securities</i> will be used in this book
Supplier	The party with whom the trade is conducted is known as the <i>counterparty</i> , whether buying or selling, lending or borrowing
Delivery date	The agreed intended date of delivery is known as the <i>value date</i> or <i>contractual settlement date</i> . From this point forward the term <i>value date</i> will be used in this book

Note: the focus of this book is primarily from the perspective of *securities trading organisations*; the abbreviation STO will be used throughout the book.

1.4 DIFFERENCES IN THE EXCHANGE OF GOODS/SECURITIES AND CASH

If a comparison is made of a local retailer and an STO, a major difference is likely to be found in the 'required location of goods' and 'cash to be paid from' areas.

A local retailer is likely to take direct delivery of goods purchased and then store the goods in a local warehouse, with cash being paid by handing over a cheque to the seller. Under this arrangement, the buyer is able to verify that the goods are those that were

purchased, that they are not damaged and that none are missing. Following a sale, delivery of goods by the retailer will also be under the retailer's direct control and receipt of a cheque upon delivery of goods to the buyer can be banked immediately.

By contrast, the securities industry is a global industry; numerous STOs in many of the world's financial centres invest in securities that are normally delivered locally to the security's place of issue. For example, an STO based in Stockholm may choose to invest in a Japanese security. There may be nothing to prevent the Stockholm based STO taking delivery of the securities in Stockholm, however, from an efficiency and cost perspective STOs typically require delivery to occur in the normal place of issue and delivery of the securities, in this example Tokyo. The alternative is that securities would be delivered from Tokyo to Stockholm, with lengthy delivery timeframes and the costs (e.g. insurance) of such a delivery to be considered, and with the seller likely to demand payment for the securities before the securities leave the seller's possession. If the buyer agrees to this arrangement, he would be taking a risk of being without both securities and cash – an unacceptable risk to most STOs.

In order to minimise this risk and to exchange securities and cash in the most efficient manner for all securities in which they invest, STOs typically utilise local agents to exchange securities and cash on their behalf. Local agents are often referred to as depots/nostros or custodians; the term *custodian* will be used in this book. Securities are held within a custodian securities account (also known as a depot account) and cash is held within a custodian cash account (also known as a nostro account). A large STO may employ the services of numerous custodians located in various financial centres around the globe, each custodian being responsible for exchanging securities and cash as a result of buying and selling by the STO, and for holding the resultant securities and cash in safekeeping on behalf of the STO.

Figure 1.2 illustrates the relationship that an STO typically has with its various custodians, according to the origin of each security.

In summary, a local retailer is likely to have direct control over its:

- goods; checked for completeness and quality at time of receipt, then stored in a warehouse until sold and
- cash; cheque written by the retailer

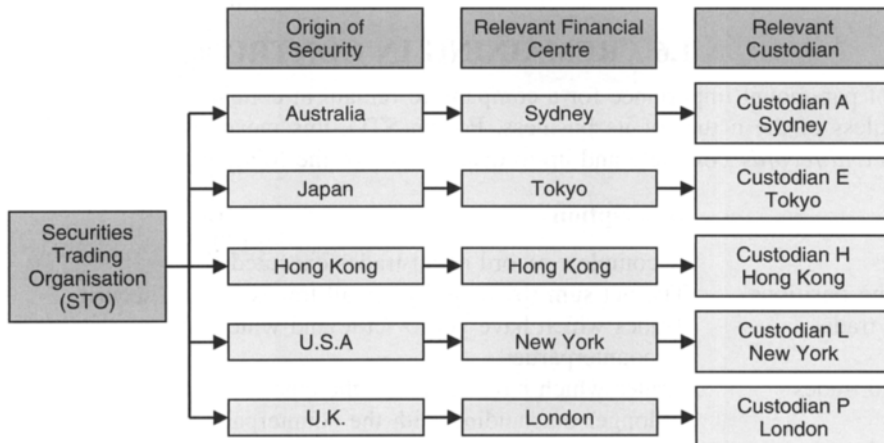


Figure 1.2 Example STO to custodian relationships

whereas STOs typically manage the exchange of securities and cash remotely through custodians, with the assets of the STO being under the trust of (but not owned by) the custodians.

1.5 METHODS OF EXCHANGING SECURITIES AND CASH

The exchange of securities and cash is known as *settlement* within the securities industry. The act of settlement should be viewed as no different from buying or selling goods in one's personal life. For instance, most people are reluctant to pay the purchase cost of a car without taking delivery of the car at the same time. Conversely, most people would not feel happy about handing over a car that they were selling without receiving the buyer's cash at the same time. The risk, applicable to both buyer and seller, is that at one point in time they may be in possession of neither asset, whether goods or cash.

STOs are typically very risk averse and they try to avoid these situations whenever possible. The most efficient and risk-free method of settlement is known as Delivery versus Payment (DvP), whereby simultaneous exchange of securities and cash is effected between buyer and seller (through their custodians), the seller not being required to deliver securities until the buyer pays the cash and the buyer not being required to pay cash until the seller delivers the securities, thereby ensuring that both parties are protected.

The STO and its counterparty typically decide upon the method of settlement at the time of trade execution. In most cases, the method of settlement is assumed to be DvP, unless one of the parties specifically requests the alternative.

The alternative to settling on a DvP basis is to settle on a Free of Payment (FoP) basis, whereby one (or both) parties to the trade will need to arrange delivery of securities or payment of cash prior to taking possession of the other asset. Due to the risks involved, most STOs avoid settling in this manner, whenever possible.

However, the ability to settle trades on a DvP basis in all financial centres around the globe depends upon the historic and current practices of the particular financial centre. For the moment, suffice it to say that it can be a costly mistake to assume settlement occurs on a DvP basis in all financial centres. These points will be explored within later chapters of the book.

1.6 REMAINING IN CONTROL

It is of paramount importance for a company to remain in control of its goods and cash, regardless of the nature of its business. For an STO, this means maintaining within its *books and records* complete and up-to-date records of the following.

Item	Description
Trades	A complete record of all trades executed
Trading positions	The net sum (by quantity) of all trades in each security
Open trades	Trades which have yet to settle and which are outstanding with counterparties
Settled trades	Trades which have settled at the custodian and which are no longer outstanding with the counterparty
Settled positions	The net sum of all settled trades in each security, and in each currency

In order to prove that the STO's records are accurate, each of these items should be reconciled independently with external sources.

Furthermore, an STO's complete picture of an individual security can be reconciled internally by comparing:

- the trading position (also known as the 'ownership' position) with
- the sum of open trades and the settled position (also known as the 'location' position).

The value in performing an ownership versus location comparison is that it is intended to confirm that whatever quantity of goods the STO owns as a result of trading (represented by the trading position) is:

- held within the control of the STO (at the STO's custodian), and/or
- due to be delivered to the STO by counterparties from whom the STO has purchased securities, and/or
- due to be delivered by the STO to counterparties to whom the STO has sold securities

and that its records balance internally.

These concepts are important as they form the basis for good operational management and proper control over assets.

The three example trades listed in Table 1.1 will now be used as the basis to calculate ownership versus location positions at various moments in time within the books and records of an STO. All three trades are in the same security (Sony Corporation shares); there was no trading position prior to the first trade executed on 15th June and the time gap between trade date and value date is deliberate, to make the examples easier to follow.

Table 1.1

Counterparty	Trade date	Value date	Operation	Quantity	Trading position
'X'	15 th June	25 th June	Buy	2000	÷2000
'Y'	1 st July	10 th July	Buy	6000	÷8000
'Z'	15 th July	20 th July	Sell	5000	÷3000

Tables 1.2 to 1.6 show the ownership versus location position of Sony Corporation shares at various points in time, relating to the three trades listed in Table 1.1. Note that the convention used in these tables is:

- within 'ownership'
 - the STO's positive trading position is represented by a '+' sign, and consequently
- within 'location'
 - an open purchase due from a counterparty will be shown as a '-' sign
 - a settled purchase held at the STO's custodian will be shown as a '-' sign
 - an open sale due to a counterparty will be shown as a '÷' sign.

Table 1.2 shows the position immediately after the first trade has been executed. It shows that 2000 shares are owned by the STO and that these shares have not yet been delivered to the STO's custodian by the counterparty, as the value date (the intended date of delivery) is in the future.

Up to and including one day prior to value date (i.e. 24th June), the ownership versus location position remains the same as in Table 1.2 due to the fact there were no more

Table 1.2

Sony Corporation shares (as at 15 th June)			
Ownership		Location	
STO	+ 2000	- 2000	Counterparty 'X'
	+ 2000	- 2000	

trades executed as at that date, and settlement has not yet occurred for the trade which has been executed.

Assuming that the trade settles on value date (at the custodian), the internal records will need to be updated as in Table 1.3. This shows that 2000 shares are owned by the STO and that these shares have been delivered by the counterparty to the STO's custodian, Custodian E, Tokyo. It also shows that there are no open trades in this security.

Table 1.3

Sony Corporation shares (as at 25 th June)			
Ownership		Location	
STO	+ 2000	- 2000	Custodian E, Tokyo
	+ 2000	- 2000	

If the ownership versus location position were now viewed after the second trade was executed on 1st July, it would be as in Table 1.4. This shows that, as a result of the second trade, the ownership position has increased; part of the position is held at the STO's custodian and the remainder is open with the counterparty. (This purchase settled on value date (10th July)).

Table 1.4

Sony Corporation shares (as at 1 st July)			
Ownership		Location	
STO	+ 8000	- 2000	Custodian E, Tokyo
		- 6000	Counterparty 'Y'
	+ 8000	- 8000	

Moving ahead to 20th July, Table 1.5 reveals that the ownership position has been reduced due to the sale on 15th July, that 5000 shares have failed to settle on the value date and are still owed to the counterparty and that the securities owed to the counterparty

are still held in the STO's Tokyo custodian. The reasons for *settlement failure* will be explored in Chapter 19.

Table 1.5

Sony Corporation shares (as at 20 th July)			
Ownership		Location	
STO	+ 3000	– 8000	Custodian E, Tokyo
		+ 5000	Counterparty 'Z'
	+ 3000	– 3000	

Viewing the situation on 22nd July, Table 1.6 shows that the sale is still outstanding and will remain so until settlement occurs.

Table 1.6

Sony Corporation shares (as at 22 nd July)			
Ownership		Location	
STO	+ 3000	– 8000	Custodian E, Tokyo
		+ 5000	Counterparty 'Z'
	+ 3000	– 3000	

In all cases, the ownership position is equal to the sum of the location position. Providing that *double-entry bookkeeping* methods are employed, it should not be possible for the ownership versus location position to become out-of-balance, whether using manual methods or a *books and records* system. Although the focus in the given examples has been on the quantity of securities, the same concepts are applicable to cash.

1.7 RECORDING DETAILS OF INDIVIDUAL TRADES

The accurate recording of every trade executed, inclusive of the components of each trade, enables an STO to track

- in terms of securities:
 - those that are due to be received from counterparties
 - those that are due to be delivered to counterparties
- in terms of cash:
 - that which is due to be paid to counterparties
 - that which is due to be received from counterparties

all of which in turn provides the basis for accurate cash management and minimal banking costs.

1.8 SUMMARY

Failure to maintain up-to-date and accurate records of its trading and settlement activity means that an STO is highly likely to be:

- uncertain of its trading positions
 - affecting the STO's ability to trade with confidence
- uncertain of the trades which are open with counterparties
 - affecting the STO's ability to assess the risk of counterparties failing to settle trades
 - for purchases, affecting the accurate prediction of incoming securities and outgoing cash
 - for sales, affecting the accurate prediction of outgoing securities and incoming cash
- uncertain of the quantity of securities and cash held by custodians
- unable to reconcile the securities and cash it believes it owns based on its internal records with the statements of settled security positions and cash balances provided by its custodians.

If an STO fails to predict incoming and outgoing movements of securities and cash, and/or fails to deliver sold securities to the counterparty on value date and fails to pay cash to counterparties when the seller is able to deliver the securities, the STO will be prone to excessive operational costs with a direct negative impact on overall company profits.

Ultimately, if the business is not controlled adequately, operational costs can become so excessive that the ongoing viability of the organisation will be at risk. These operational risks will be explored at various points throughout this book.