

Straight-Through Processing Adoption

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INTRODUCTION

Free trading has been instrumental in the enormous growth of the number and volume of cross-border trading transactions across all industries. In 2000, volume at the National Securities Clearing Corporation (NSCC) reached 18.1 million securities transactions, with actual daily share volumes regularly exceeding 5 billion shares in major financial markets (Depository Trust and Clearing Corporation [DTCC], 2000).

Securities trading starts with either an individual or a business institution expressing desire to purchase securities. While the process is deceptively simple, approximately \$1.8 trillion of securities trades remain unsettled and outstanding every business day (David & Kumar, 2000), which poses significant risks to all participants and players in the securities trading cycle. A shorter settlement cycle is seen as an approach to reduce both nonpayment and nondelivery risks to all stakeholders in the trading cycle (Toppen, Smits, & Ribbers, 1998). Compressing settlement cycles needs the redesign and management of securities business processes with significant IT support and involvement. Recent advances in information technology provide ample opportunities for various stakeholders to communicate seamlessly through electronic communication networks (ECNs), enabling both speedier and richer information exchange (Dale, 1996; Venkataraman & Zaheer, 1990).

Currently, settlement times largely vary between 2 and 5 days. Constant push from governmental regulatory bodies is expected to reduce this to 1 or less than 1 day, popularly known as T+1/T+0 settlement times (Freund, 1991; Group of Thirty, 1993). While it is possible to achieve straight-through processing (STP) without targeting for T+1/T+0, it is almost impossible to attain T+1/T+0 without STP (Leman, 2003). There is a dearth of empirical research with emphasis on financial securities operations. This article attempts to address an existing void in this area.

The first part of this article examines current securities trading operations and STP, and discusses the business drivers of STP. The second part of the article elaborates the factors influencing the adoption of STP by various participants. Finally, the article discusses areas that are amenable to future exploration and empirical research with the aim of ultimately increasing the adoption of STP globally.

BACKGROUND

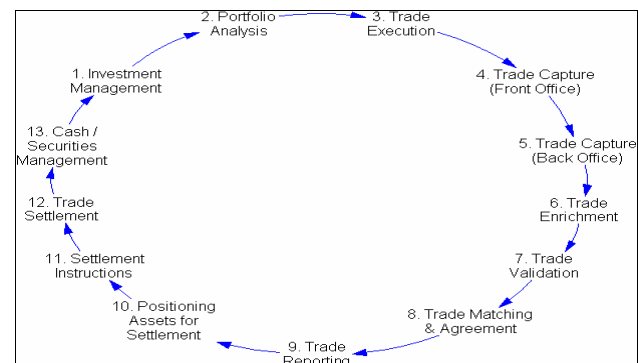
Securities Trading Process (Trading Cycle)

The steps involved in a trade, from the point of order receipt and trade execution through trade settlement, are commonly referred to as the securities trading life cycle (STLC). Basically, the STLC is a combination of the investment and portfolio analysis process, the trading process, and the settlement process comprising major phases like execution, confirmation, settling, and clearance (Toppen et al., 1998). Figure 1 depicts the STLC.

The STLC is usually initiated by an investor or an investment management organization deciding to either buy or sell securities. The preferred approach is the delivery-vs.-payment (DVP) approach in which the transfer of securities and payment takes place simultaneously to reduce nonpayment and nondelivery risks. Following the trade settlement, the investment manager ensures that cash and/or securities positions are updated to reflect the actual situation. The stakeholders involved in the STLC include the following:

- **Investor:** An entity (an individual or a business organization) initiating the STLC by buying and/or selling securities.
- **Investment Manager/Advisor:** A professional providing support to the investor in the decision to invest capital with the ultimate objective of maximiz-

Figure 1. Steps in securities trading life cycle



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ing returns for the investor. Usually, investment managers also liaise with securities trading organizations and brokers as needed.

- **Securities Trading Organization (STO):** An organization involved in the buying, selling, and holding of securities for its own purpose
- **Broker/Dealer:** A broker or dealer places orders on behalf of the investor or STO for execution at the appropriate venue, like a stock exchange, which is based on the type of securities to be executed. A broker's primary objective is to match sellers and buyers.
- **Regulatory Authority:** Usually a government entity that sets rules for the functioning of the securities marketplace, and subsequently monitors and controls the activities of the marketplace to ensure compliance to rules and regulations.
- **Stock Exchange:** A government-recognized entity where securities can initially be issued and subsequently be bought and sold by investors
- **Custodian:** An organization that provides services to its clients including the holding of securities, holding of cash, settlement of trades, and collection of corporate actions.
- **Registrar:** An organization appointed by the issuer of a registered security to maintain a register of holders of that security. It is also known as a transfer agent.
- **Clearing Firm:** Central receiving and distribution centers that provide clearing facilities to entities involved in the trade.
- **Depository and Settlement Facility:** A central entity that holds all securities and usually facilitates the clearing, comparing, and settlement of trades.

Table 1 summarizes the primary involvement of various stakeholders along the STLC phases. With such a complex set of processes distributed across multiple participants, the smooth execution and practice of the

STLC presents numerous challenges, including the following:

- Transmission of information among various stakeholders
- Multiple points of data entry
- Multiple interaction points between trading partners
- Definitive shift to cross-border trading practice with divergent rules and regulations
- Increased trading volumes
- Potentially long trade-execution time with high failure rates and increasing costs
- Nonstandard trading business processes among stakeholders
- High exposure to different operations and credit-risk profiles

What is Straight-Through Processing?

With the intention of addressing the challenges identified earlier, the Securities Industry Association (SIA) and the DTCC recommended a complete transformation of securities operations. This industry-wide initiative, called straight-through processing, encompasses all stakeholders participating in the STLC. STP increasingly is coming to represent a continually evolving set of aspirations rather than an existing reality (Douthitt, 2000; McIntyre, 2004). In its current (and still evolving) form, STP means the complete transformation and management of all aspects of investment operations (Douthitt, 2000). Straight-through processing is the capability of financial services companies to process cross-border trade execution, clearance, payments, settlement, custody, reporting, and accounting with minimal human intervention (David & Kumar, 2000). STP applies to all major trading areas including foreign exchanges, equities (including corporate actions), bonds, treasuries, money markets, commodities and futures, mutual funds, unit trusts, derivatives, and futures and options.

Table 1. Stakeholders in the STLC (Adapted from Toppen et al., 1998)

Stakeholders	Securities Trading Life-Cycle Processes												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Investor	X	X						X					X
Investment Manager/Advisor	X	X						X					X
Securities Trading Organization			X	X	X	X	X	X	X	X	X	X	X
Broker/Dealer/Agent			X	X	X	X	X	X	X	X	X	X	X
Custodian										X	X	X	X
Clearing Firm			X								X	X	X
Securities Depository			X							X	X	X	X
Regulatory Authority			X								X	X	
Stock Exchange			X								X	X	
Registrar			X	X	X					X			X

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