

GUIDE TO CLEARANCE & SETTLEMENT

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Matching and Netting

The principle behind matching and netting is that less money means less risk.

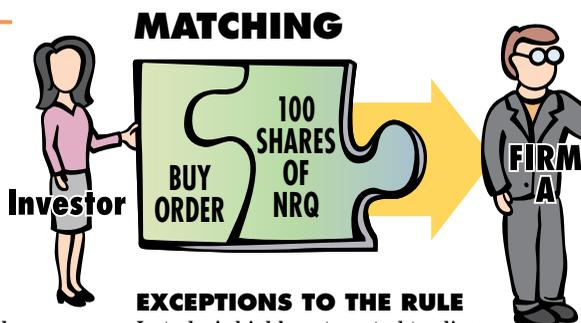
Matching and netting are key elements in clearing and settling securities transactions. NSCC uses a fully automated accounting system called **Continuous Net Settlement (CNS)**, which plays a central role in helping to reduce the total number of trade obligations that require financial settlement. Currently, on an average day, 99% of all trade obligations that occur in US equity markets don't require the exchange of money.

MATCHING THE DETAILS

Matching, or comparing the details of a transaction, is the first, essential step in ensuring that securities and the money to pay for them will be exchanged within the required three-day timeframe. In an equity trade, for example, the brokerage firm that places a buy or sell order and the contra firm that fills it must agree on the name of the stock, the price per share, and the number of shares that have been exchanged.

Here's how it works: If you give your broker at Firm A an order to buy 100 shares of NRQ stock, your broker will enter an order to buy 100 shares. Another firm—say Firm B—fills the order in its trading system in response to a client's instruction to sell NRQ. Its books will show a reciprocal order to sell 100 shares of NRQ stock. (You should note, though, that the process of filling orders is handled differently on the various trading platforms and that firms can satisfy a trade from their own inventory of securities. But however the transaction is handled, the broker handling it must ensure the investor gets the best price available.)

As the final step in the trade, the buy order is automatically matched electronically against the sell order at the marketplace or exchange. If the details agree, the order is complete, or **locked in**, and sent from the trading venue to NSCC. NSCC then confirms receipt of the details of the transaction by sending a communication electronically to the trading firms. This communication legally commits the firms to complete the deal.



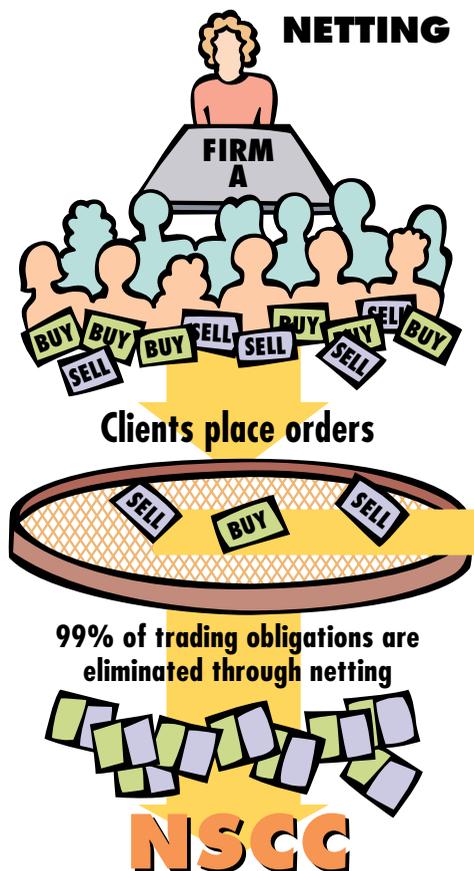
MATCHING

EXCEPTIONS TO THE RULE

In today's highly automated trading environment, 99.9% of all equity trades are matched before they arrive at NSCC.

Where there is an unmatched trade, because the buying firm's information doesn't match the selling firm's, the firms must resolve the discrepancies before the trade can be cleared. Misunderstandings may occur for a number of reasons. For example, the firms may not agree on the price or the size of the order.

Once the differences are resolved, the matched order goes on to NSCC for clearing and settlement following the standard procedure.



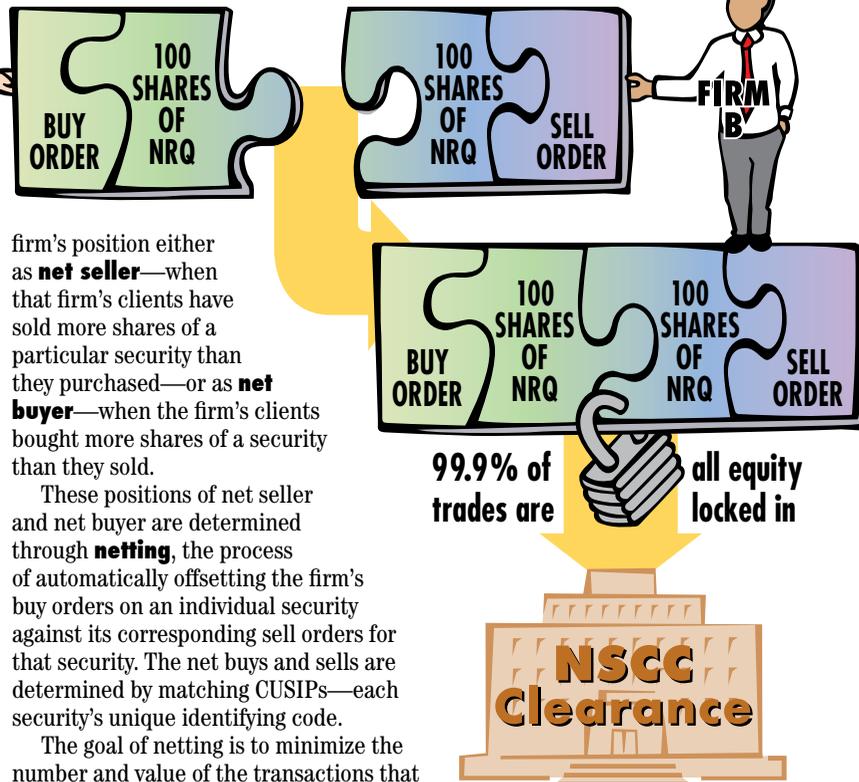
NETTING

99% of trading obligations are eliminated through netting

DISTILLING THE NUMBERS

On T+2, or two days after the trade date (T), NSCC provides each participating broker/dealer with a summary of all of its securities transactions to be settled the following day. The report also shows the

What makes netting of trades possible is that NSCC legally becomes the counterparty to all trades. So no matter how many different firms Firm A traded with on a particular security, all of those buys and



firm's position either as **net seller**—when that firm's clients have sold more shares of a particular security than they purchased—or as **net buyer**—when the firm's clients bought more shares of a security than they sold.

These positions of net seller and net buyer are determined through **netting**, the process of automatically offsetting the firm's buy orders on an individual security against its corresponding sell orders for that security. The net buys and sells are determined by matching CUSIPs—each security's unique identifying code.

The goal of netting is to minimize the number and value of the transactions that must take place between firms to settle their trades. For example, suppose that Firm A had 100 clients buying and selling shares of stock NRQ. Through netting, the vast majority of these trades may cancel each other out by offsetting shares bought against shares sold.

Though it's conceivable for a firm's trades in a particular security to net out perfectly, it isn't very likely. So, at the end of the day, NSCC may alert Firm A that it is a net seller of 500 shares of NRQ and must deliver those shares to settle its obligation.

99.9% of trades are all equity locked in



sells can be netted together. This process is known as **multilateral netting**.

Netting financial obligations—the money that must change hands—is even easier. All money owed to or from a particular firm for its trading activity is netted to a single dollar amount each day by NSCC.

What that means is that any firm that ends the day with a net debit needs to have only enough money on hand to cover its net financial obligation. That is always less than the actual value of its transactions.

Financial obligations are netted to a single dollar amount each day

NETTING

Through netting, DTCC's clearing agency subsidiaries are able to reduce the total number of trade obligations requiring financial settlement. Of the record \$315 trillion in equity securities transactions processed in 2008, NSCC netted down 99%. So only \$2.9 trillion required an exchange of securities or cash.

Netting also significantly reduces industry risk and helps DTCC customers optimize capital by freeing up trillions of dollars that they can use for other investment purposes. That increased liquidity is a significant advantage of the centralized clearance and settlement system that's a feature of US capital markets.

Tracking a Trade

There's a lot more to settling a trade than meets the eye.

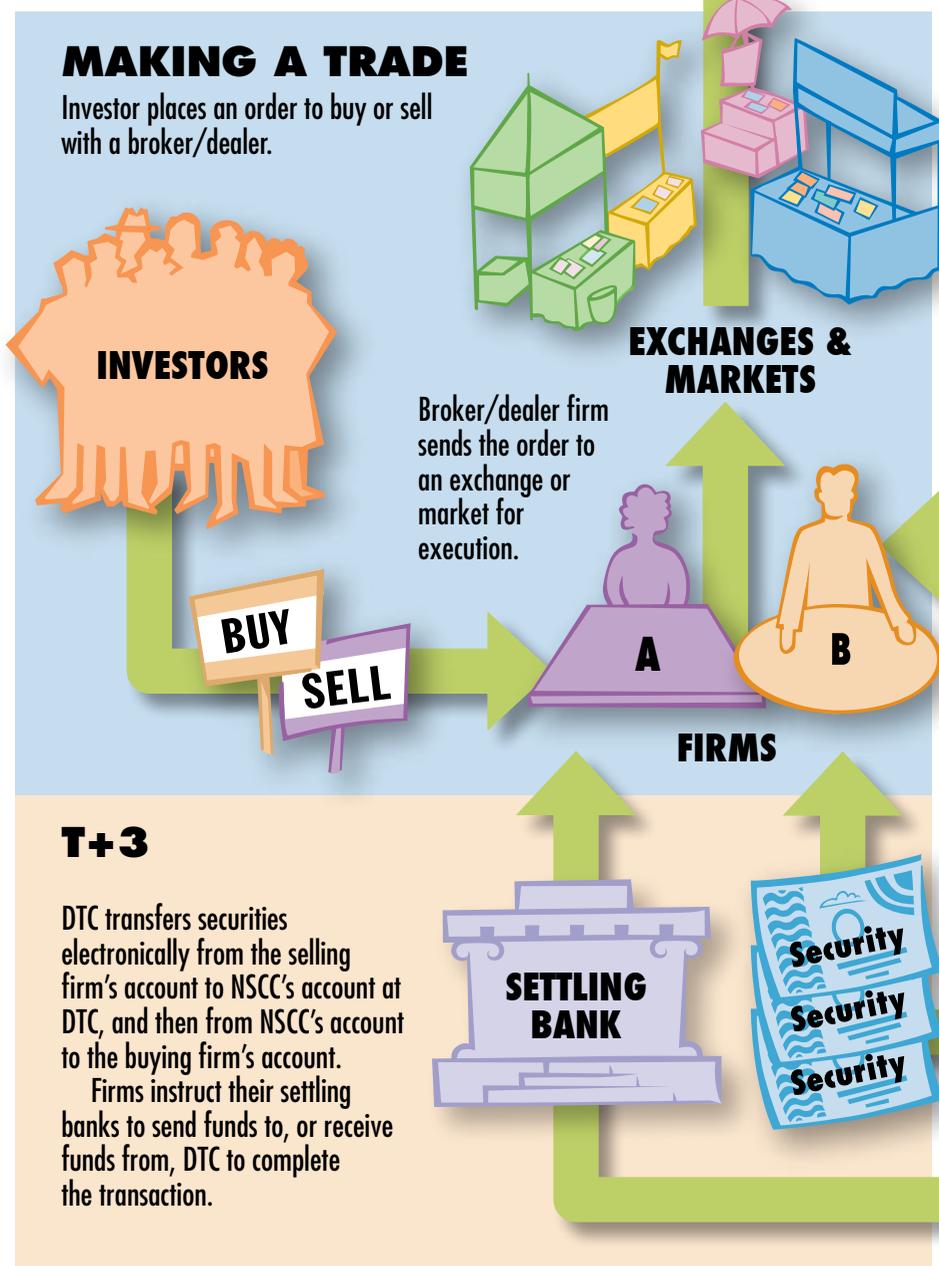
The National Securities Clearing Corporation (NSCC) and **The Depository Trust Company (DTC)** facilitate orderly transfer of more than 100 million equity transactions, on average, every trading day.

More than 99.9% of all equity, municipal, and corporate bond transactions in the United States are settled within three business days—the timetable mandated by the Securities and Exchange Commission (SEC) to ensure the stability and efficiency

of the financial markets. This settlement cycle begins the first business day after the trade is executed. So, if you bought a stock on Friday morning, T+1 would occur the following Monday, and T+3 would occur on Wednesday.

MAKING A TRADE

Investor places an order to buy or sell with a broker/dealer.



T+3

DTC transfers securities electronically from the selling firm's account to NSCC's account at DTC, and then from NSCC's account to the buying firm's account.

Firms instruct their settling banks to send funds to, or receive funds from, DTC to complete the transaction.

T (TRADE DATE)

After the transaction is matched, or locked-in, between buying and selling firms, the market's automated system sends trade information to NSCC.

In the case of equity transactions, 99.9% are

sent to NSCC as locked-in trades, which means that the marketplace compared them at the time of execution, confirming all details, including share quantity, price, and security.

NSCC confirms trade details with participating firms, legally binding them to complete the transaction.

T+1

At midnight between T+1 and T+2, NSCC steps in as central counterparty (CCP) to the trade. At this point, NSCC assumes responsibility to make the trade whole should either the buying or selling firm be unable to fulfill its end of the obligation.

T+2

NSCC issues a trade summary to the buying and selling firms, indicating net money and net securities owed for settlement.

NSCC sends instructions to DTC detailing net positions to be settled.

