**Chapter 3: Trading**

* Primary market
	+ Trading directly with the firm that issues the security
	+ Example: buying shares during an IPO
* Secondary market
	+ Trading with other investors, who are not the issuing firm
	+ Example: buying shares on E\*Trade
* Types of secondary markets
	+ Auction market
		- Used for stocks, options, and futures
		- Limit order/offer-driven markets
		- Best order “wins”
		- Individual traders trade with other individuals
			* These trades are generally matched on an exchange
			* This process is more complex than it appears
		- Individual traders rarely trade on their own. They typically use a broker
			* An occasional trader wouldn’t/can’t invest the time to find the best price
		- Markets organized around limit order books
			* Limit order book: compilation of all standing offers to buy or sell
			* Incoming orders are generally filled from these orders
		- Designated Market Maker (DMM)
			* Formerly known as “specialists”
			* Runs/maintains order book
			* Liquidity provider that functions similarly to a dealer
			* Supports the market’s reputation for providing liquidity
				+ They can step in and provide additional supply/demand to keep the market running smoothly
		- The broker’s role is limited to finding the best price and fulfilling the client’s trade
			* Each trader also employs a custodian
			* The buyer’s custodian holds the cash
			* The seller’s custodian traditionally held physical paper stock certificates
				+ Now, a central securities depository holds those records
				+ This entity is the Depository Trust & Clearing Corporation (DTCC) in the US
		- The exchange’s role is essentially limited to matching the trades
			* The trade is sent to a clearinghouse to actually be executed
			* The clearinghouse eliminates counterparty risk, as it buys from the seller and sells to the buyer
		- The issuing company employs a share transfer agent
			* May be known as a registrar outside of the US
			* Maintains an up-to-date register of the firm’s shareholders
				+ Ensures that dividends flow to the proper recipients
	+ Dealer market
		- Used for bonds, currency swaps, and other OTC derivatives
		- Quote-driven
			* Dealer’s offer prices
		- Many dealers for each security who maintain inventories to meet demand
		- All trades go through a dealer, individual traders don’t trade with each other
		- Works better than alternative structures for low volume securities
			* Spread on trading incentivizes the dealer to continue trading
			* Reduces search costs for individual traders
* How are prices determined?
	+ In both types of markets, there are separate prices for buying and selling
		- The single “stock price” we see is the price at which the last trade executed
		- This price holds little meaning for us in most circumstances
	+ Bid: dealer’s buying price
		- Our selling
	+ Ask: dealer’s selling price
		- Our buying
		- The ask price will always be higher than the bid price
	+ Where do bid and ask come from?
		- In a dealer market, these are given by dealer quotes
			* All trades have to go through a dealer, so they are the only ones who post prices
		- In an auction market, these are compiled into the limit order book and sorted from best to worst (from the counterparty’s perspective)
			* The “best” bid is the highest price (ordered highest to lowest)
			* The “best” ask is the lowest price (ordered lowest to highest)
		- Your order will always be matched with the best opposing order
			* A sell will be matched with a bid offer
			* A buy will be matched with an ask offer
		- When you intend to sell, you will look at the bid price
		- When you intend to buy, you will look at the ask price
* Order types
	+ Market orders
		- Buy or sell orders that are to be executed immediately at current market bid or ask prices
		- No price control
		- Generally receive the best matching price available
			* A market buy order will match with the best available ask
			* A market sell order will match with the best available bid
		- In any event, you will not necessarily get the same price that you expect
		- Example: at what price would we execute a market buy for 500 shares?
			* Look at the ask side, take the best price (lowest) as long as there are enough shares available
			* 500 shares at $30.76
		- Order execution price
			* Often, an order will need to be matched with multiple offers in order to be filled
				+ In that case, there will be several trades occurring at different prices
				+ Since they’re all occurring at once, the broker will only charge you a single commission
				+ Your broker will report a single price, which is the weighted average of these different transactions

Price= (Σi=1Sharesi x Offer Pricei) / Total Shares

* + Limit orders
		- A price contingent buy or sell order which can be executed only if the market reaches or betters that price
			* Limit buy: order to buy a stock at or below a specified price
			* Limit sell: order to sell a stock at or above a specified price
			* Limit order book: collection of limit orders waiting to be executed
		- Limit orders specify a “worst-case” price
			* They will only be executed if the market price is equal to or better than the limit price
			* You are willing not to trade if you don’t get the price you asked for
		- Example: limit buy for 1500 shares with a limit price of $30.75
			* Look at the Ask side, $30.75 is the lowest you will go
			* The current best offer is for $30.77 which is too high
			* This trade will not be executed and will be listed as an offer on the Bid side instead, 1500 shares at $30.75
		- Example: limit sell for 500 shares with a limit price of $30.74
			* Need at least $30.74
		- Issues with limit orders
			* Double commissions
				+ Since limit orders can be partially filled, they may be filled in two or more transactions, this can result in multiple commission charges
			* Can’t force the price
				+ Just because you place a limit order, doesn’t mean that you will actually be able to trade at that price
			* Offer prices
				+ Once the limit order is listed in the order book, you will only typically receive the limit price
				+ A limit order that is executed right away might receive a better price
	+ Stop orders
		- An order executed if and only if the stock hits a price limit
		- Why not use a market order?
			* Lock you in and eliminate potential upside
			* What if the stock price goes up after you sell?
			* What if the stock price goes down after you buy?
		- Why not use a limit order?
			* May or may not execute
			* You may get “stuck”
		- A stop order will allow you to set a “give up” price
			* You set a price at which you’re no longer willing to lose any more money and you want to close out the position
		- Types of stop orders
			* Sell stop
				+ Order to sell stock if price falls below a set level
				+ Designed to limit losses or lock in a certain profit
				+ Also known as a stop-loss order
			* Buy stop
				+ Order to buy stock if price rises above a set level
				+ Used to trigger a purchase when you are short the asset
				+ Also known as a stop-buy order
		- Stop order facts
			* Stop orders only serve as a trigger mechanism for placing a market or limit order
				+ They are not executed directly
			* Stop orders are able to trigger a buy or sell, but they don’t guarantee a particular price
				+ This means that the stock could continue to move in the wrong direction for you and you could receive an even worse price
			* Why use a stop order?
				+ They provide some automation, so we don’t have to sit in front of our computer all day
				+ They are cheaper than other alternatives like a protective put—the only cost is the commission on the trade
		- More stop orders
			* Both a sell stop and a buy stop come in one of two varieties:
				+ Stop market

When triggered, the stop order will generate a market order

Guarantees that the order will execute if the stop is triggered

* + - * + Stop limit

When triggered, the stop order will generate a limit order

Requires setting both the stop price and the limit price

May not execute if the price moves past the limit price before it is processed

* + - * + Most stop orders are stop market
		- NYSE and Nasdaq stopped accepting stop orders
			* The major exchanges no longer accept stop orders
				+ In February 2016, NYSE joined Nasdaq in no longer accepting stop orders
				+ All existing orders were cancelled
			* Why are stop orders still relevant then?
				+ Brokers can still perform them
				+ Just because a stock is listed on an exchange, doesn’t mean all of its trading takes place there
* Listing venues versus trading venues
	+ US has 14 stock exchanges
	+ Exchanges (NYSE, Nasdaq)
		- Most exchanges are linked by the consolidated quotation system
		- Broker or customer can see all activity from one screen
	+ Exchange listing
		- A listing is a sponsorship (companies pay to be listed)
		- The exchange monitors the financial statements, governance, and trading activity
		- The listing exchange is a “home” for trading activity
* Trade execution
	+ For an exchange-listed stock, a broker may direct an order to:
		- That exchange
		- Another exchange (ex. A regional exchange)
		- “Third market maker”: a firm that stands ready to buy or sell at publicly quoted prices
	+ The broker could choose to send your order to an ECN (Electronic Communications Network) or another division of their own firm to be filled out of the firm’s inventory
		- Broker’s firm profits on the spread (and your commission)
		- Broker has fiduciary duty of best execution
	+ SEC rules specify disclosures that can give us more info about our trade execution:
		- Market centers required to make monthly disclosures on their quality of execution
			* Info about effective spreads
			* How their executions compare to public quotes
		- Brokers must make quarterly disclosures of the market centers they use for “significant” numbers of trades
			* They must also respond to client requests for routing info for individual trades made in the last 6 months
* Order instructions
	+ Instructions (designations) are special instructions that you can give your broker regarding how long an order will remain active and/or how it should be executed
		- Typically apply to limit orders
	+ Two most commonly available are:
		- Time in force designations
			* Day order
				+ Automatically terminated at the end of the day if not filled
				+ Sometimes called a “good till day” order
			* Good till cancelled
				+ An order that remains in effect until it’s executed or explicitly cancelled

Most brokers automatically cancel it after 1 to 2 months

* + - * + The NYSE and Nasdaq no longer accept good till cancelled orders, but you may still be able to use them

Same situation as stop orders

* Margin transactions: you only provide a portion of the proceeds for the investment
	+ Broker supplies remainder as a loan
* Margin account: an account you have with a broker in which you place collateral to cover your position
	+ Broker requires collateral to cover credit risk
* What is margin?
	+ Difference in the market value of a collateral and the amount of the loan against it
		- Typically the collateral we think about are stocks
		- Our broker usually lends to us
	+ Margin = equity / value of stock
* Margin trading rules (for stocks)
	+ These are three important requirements when trading on margin