RESEARCH

Insights

Primer: Capital Markets

An Overview of Capital Markets and the Role of Financial Institutions
A Deeper Look at Primary vs. Secondary Markets & Post-Trade Infrastructure

September 2024

SIFMA Insights Primers

The primer series from SIFMA Insights breaks down important technical and regulatory nuances. By fostering an understanding of the marketplace, we set the scene to address complex issues arising in today's markets. The primer series can be found here: www.sifma.org/primers

In addition to this primer, the series includes the following reports: Global Equity Markets Comparison, Capital Formation and Listings Exchanges, Equities, Options, Exchange-Traded Funds (ETF), and Fixed Income Markets and Electronic Trading.

In this primer: We analyze the many different moving pieces of capital markets, from creation and trading to the end of the trade lifecycle. The report explains the importance of market structure, focusing on the impact of liquidity on trade costs. The report then details: primary markets, where securities are created or issued; secondary markets, where securities are traded; and post-trade infrastructure and operations, where securities are cleared and settled. Finally, the report studies the role of financial institutions, which play a critical role in making markets work.

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Capital Markets Overview

Defining Capital

Broadly speaking, capital is cash that is being put to work for operational or investment purposes. It can be represented in the form of debt or equity securities. We note that the term capital as used in this report does not include regulatory capital, which must be held to meet regulatory requirements[1], not used for other purposes, and may be comprised of various financial instruments.

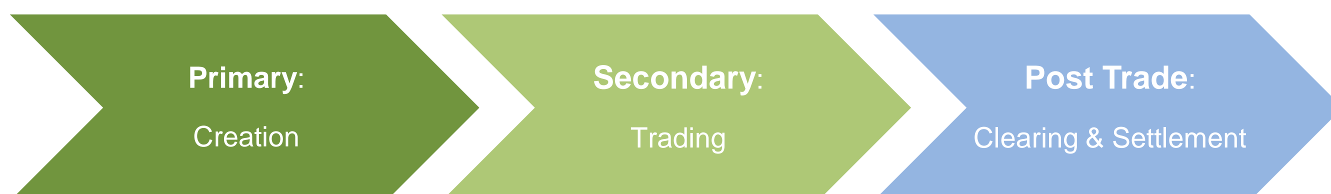
Capital is critical to corporations for running day-to-day business operations or financing future growth. Individuals or companies – whether at the startup level or an established firm – need capital to turn ideas into usable innovations and often new, sustainable enterprises. Governments need capital to operate their country, state, or city, as well as invest in infrastructure projects such as bridges, roadways, and schools. Therefore, capital is an integral component supporting job creation and economic development.

Defining Capital Markets

Capital markets include any marketplace where participants can buy and sell financial assets, such as stocks, bonds, or other securities. Capital markets facilitate the transfer of capital from those who seek a return on their assets to those who need capital to grow their enterprises. Capital markets, put simply, are the way we connect providers of capital – investors – with users of capital – issuers (companies or governments). These relationships are facilitated by financial institution intermediaries, which play a critical role in making capital markets work.

Both users and providers of capital benefit from robust and efficient capital markets. Efficient capital markets allow capital users to receive lower cost funding over time while allowing investors to identify appropriate opportunities to deploy their capital. Therefore, capital markets play a crucial role in a country's economy.

The three phases of capital markets include:

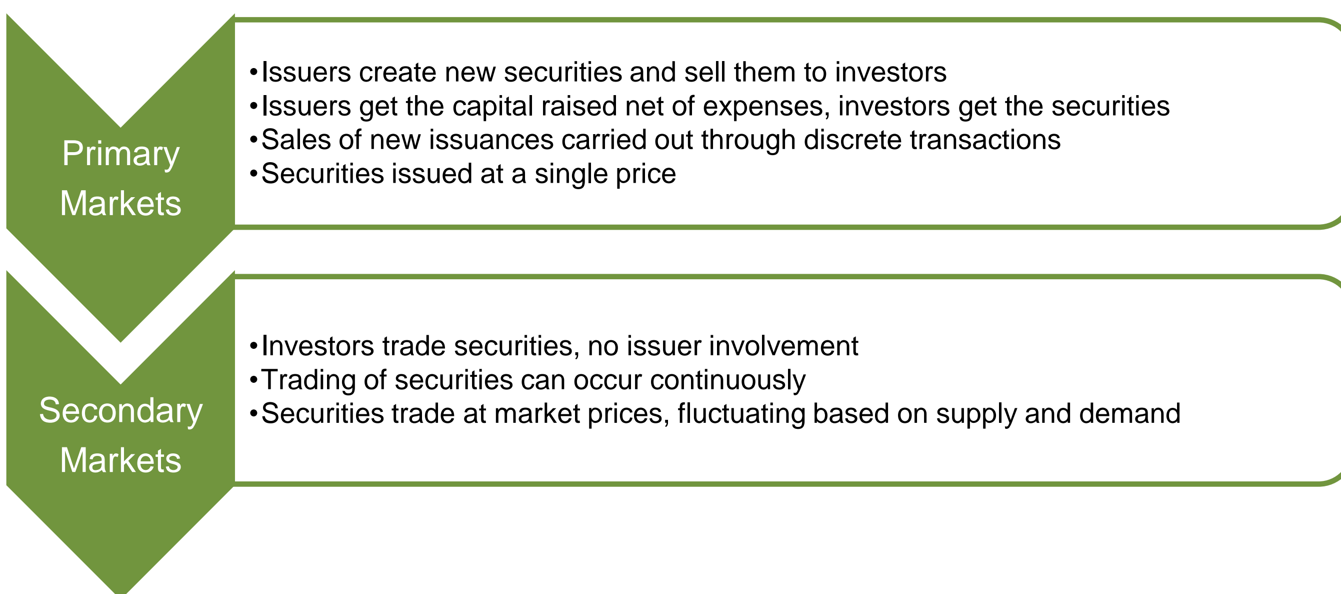


[1] For example, banks must hold prescribed amounts of regulatory capital in amounts that are related to their size, activities, and assets.

From Creation to Trading

Capital markets are split into primary and secondary markets. Primary markets are where securities are created, called capital formation. Firms sell stock or bonds to investors – for example through an initial public offering (IPO) – to generate funds for operations or growth. Secondary markets are where existing stocks and bonds are traded among investors, without the issuing companies' involvement.

Primary and secondary markets are symbiotic in nature. Primary markets enable issuers to raise capital and investors to own stakes in those issuers. In addition, investors utilize secondary markets to generate returns and manage risk. Healthy, efficient, and liquid secondary markets give issuers confidence their capital needs will be met at a good price level in primary markets.



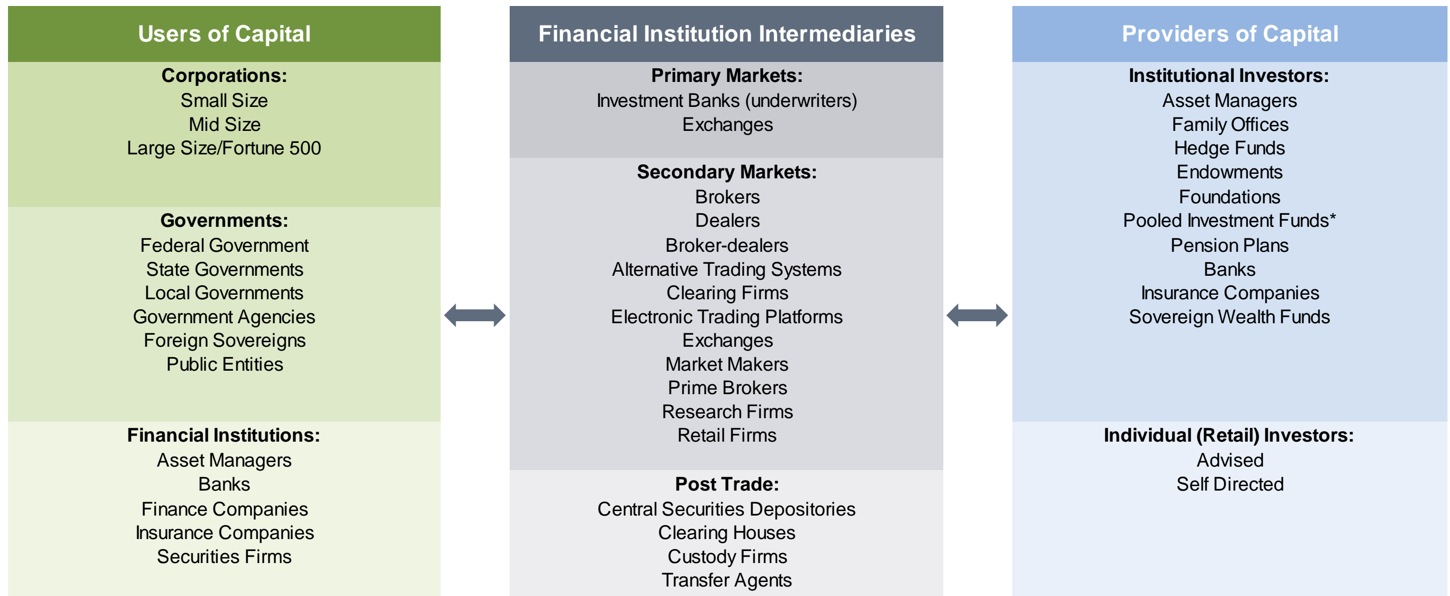
Note: For primary markets, while the final offering price is fixed a day prior to the effective date, it will fluctuate during the opening auction of the IPO as the exchange balances bids (offers to buy) and asks (offers to sell). Additionally, an issuer may have follow-on offerings, or the subsequent issuance and sale of new shares of the same security.

The End of the Trade Lifecycle

The last phase of the trade lifecycle is post-trade operations, involving clearing and settlement. After a trade takes place, market infrastructure firms (clearing-houses, central securities depositories) enable the comparison of trade details, record-keeping processes, and transfers of securities and cash. The processes and operations in this phase – as well as the market infrastructure firms executing these actions – make up the plumbing of the capital markets. This market infrastructure reduces overall risk in the system and contributes to liquid and efficient markets.

Capital Markets Participants

Capital markets connect users of capital (issuers) with providers of capital (investors). These relationships are facilitated by financial institutions.



Note: *Mutual funds, exchange-traded funds, etc.

Market Structure Overview

Importance of Market Liquidity

Market liquidity is the ability to efficiently buy or sell securities, as measured by speed and ease of execution, without causing a substantial change in the price. It impacts everything from the bid-ask spread – the difference between the highest price that a buyer is willing to pay for an asset and the lowest price that a seller is willing to accept, an important variable in calculating the total cost of a trade – to the ability to execute a trade.

Markets need robust trading volumes to remain liquid. In a less liquid market, there are not as many buyers and sellers and large transactions may lead to large price movements, thereby increasing volatility. Security prices represent the estimated value based on fundamental analysis, which may include both an assessment of the issuer's quality and the depth of the market for the particular security. In liquid markets, when market participants see prices move outside of their expected price range, they step in to buy/sell the security, which adjusts the price back to fair value accordingly. In illiquid markets, low demand leads to fewer transactions, hindering traders' ability to execute quickly and to understand costs efficiently. Fewer market participants mean traders are not there to step in and adjust prices, or at least not as quickly as in liquid markets. Therefore, prices can experience wide swings.

This can further limit demand for the securities, keeping volumes depressed. Lower volumes lead to increased time to execute a trade and wider bid-ask spreads, which increases costs to trade. Additionally, lower liquidity increases risk. The lack of liquidity is known as liquidity risk, and investors – and issuers in the primary market – will have to pay a premium to cover this risk, as traders cannot quickly open and close their positions. Spreads are often a measure of market liquidity.

Liquid Markets	Illiquid Markets
High demand for a security	Low demand for a security
Easier to trade larger sizes	Harder to trade larger sizes
Many buyers and sellers	Fewer buyers and sellers
Frequent trading	Infrequent trading (trading by appointment)
Narrower bid-ask spreads	Wider bid-ask spreads
Security easily converted to cash	Security not easily converted to cash

Why Market Structure Matters

Market liquidity impacts the costs to trade and therefore affects returns to investors. Higher spreads lead to higher transaction costs which decrease investors' returns. Lower liquidity can also increase the cost of capital raising for corporations and governments. Market structure matters as it can drive liquidity and trade costs. Market participants, therefore, continually strive to create the most efficient markets. This includes adapting new technologies to achieve operational efficiencies, searching for new ways to transact and, generally, sculpting market structure to maximize efficiencies and reduce controllable risks.

The total cost of a trade can be split into explicit and implicit costs:

Trade Cost = ƒ (explicit costs + implicit costs)

Explicit and implicit costs may include:

Type	Description
Explicit	Broker or dealer commissions: Fees to cover trade execution expenses; may provide a reasonable profit for executing the trade; may add a premium for the risk that the dealer may lose money executing the transaction (only if acting as a principal); covers the costs to hold the inventory of securities to make markets (supply of securities and capital required to be held against these securities); cover costs of staff and technology; etc.
	Transaction costs/market access fees: Fees paid for accessing liquidity are added to trade costs; rebates received for adding liquidity are subtracted from trade costs
	Clearing and settlement costs
	Regulatory fees (SEC Section 31 fees, FINRA trading activity fee, etc.)
Implicit	Bid-ask spreads
	Opportunity cost: The loss of potential gain for investors on other alternatives when one alternative is chosen; for example, the time it takes to fill an order, the percent of an order filled, etc.
	Price impact of a trade: Trade price deviates from current market price as a result of the trade, for example:
	-- Losses can occur from market prices moving when executing large volumes; block trades are often performed off exchange to lessen this price impact
	-- In some markets, including in the U.S., brokers are required to seek best execution for clients (best ex includes an assessment of an opportunity to get a better price than what is currently quoted, the speed of execution, the likelihood that the trade will be executed, percent of fulfillment at current prices, etc.). In the time it can take to meet this requirement, markets may move, and the broker must then execute at a less profitable price or not execute the clients' order.
	Information leakage: Occurs when other market participants learn a market participant plans to execute a large block; they get ahead of that trade and move prices. Blocks are typically split in smaller amounts and electronically executed (depending upon market) over time to avoid a significant price impact; however, this makes the trade vulnerable to others anticipating its occurrence and trading ahead of it. Anonymity is key.

Primary Markets: Where Securities Are Created

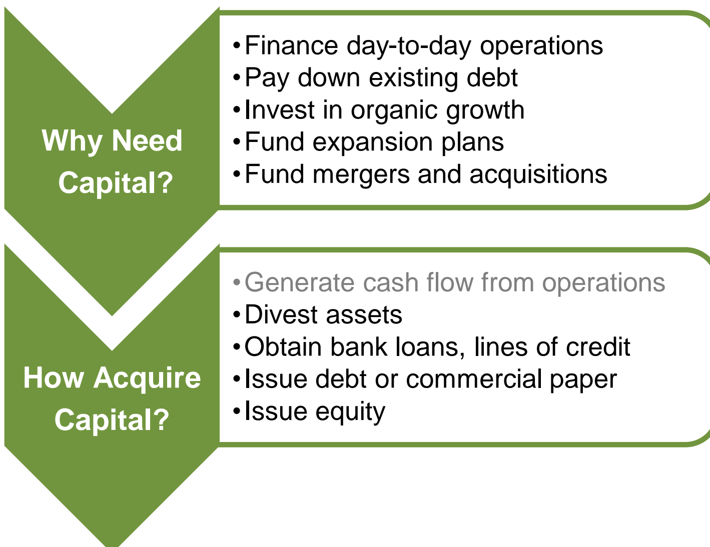
Defining Capital Formation

Companies may need capital for various business purposes. Earlier stage companies may need additional capital to grow to the next stage in the business life cycle. Or companies may need capital to expand organically or via acquisition, whether it be for product or regional diversification.

Firms have several ways they can acquire capital. Outside of generating cash from operations, firms can go to either the capital markets or loan markets. With capital markets, debt issuance is a more efficient and less restrictive form of borrowing for corporations than standard loan transactions. Capital markets typically function as shock absorbers during times of economic or market stress – whereas bank lending can dry up under strain – making capital markets a more stable source of funding. In the U.S., debt capital markets represent 74.9% of total financing for non-financial corporations (as of FY23).

Another capital markets vehicle is an initial public offering (IPO), during which a private company raises capital by offering its common stock (equity) to the public in the primary markets for the first time. Securities are issued at an established price, and the process is facilitated by investment banks acting as financial intermediaries. Shares then continue to trade between investors in the secondary market on exchanges or other trading venues.

Companies utilize capital markets to acquire capital in many ways, including:



Investors are on the other side of capital formation. Why do investors invest? Investors buy/sell securities:

- To generate investment returns: invest cash to generate income or exit an investment to realize a gain/loss, all while continually rebalancing investment portfolios.
- As risk management tools: hedge portfolio risk or change overall risk profile; update expectations on the future state of markets or securities.

The Creation of Securities

Issuance can occur across multiple asset classes:

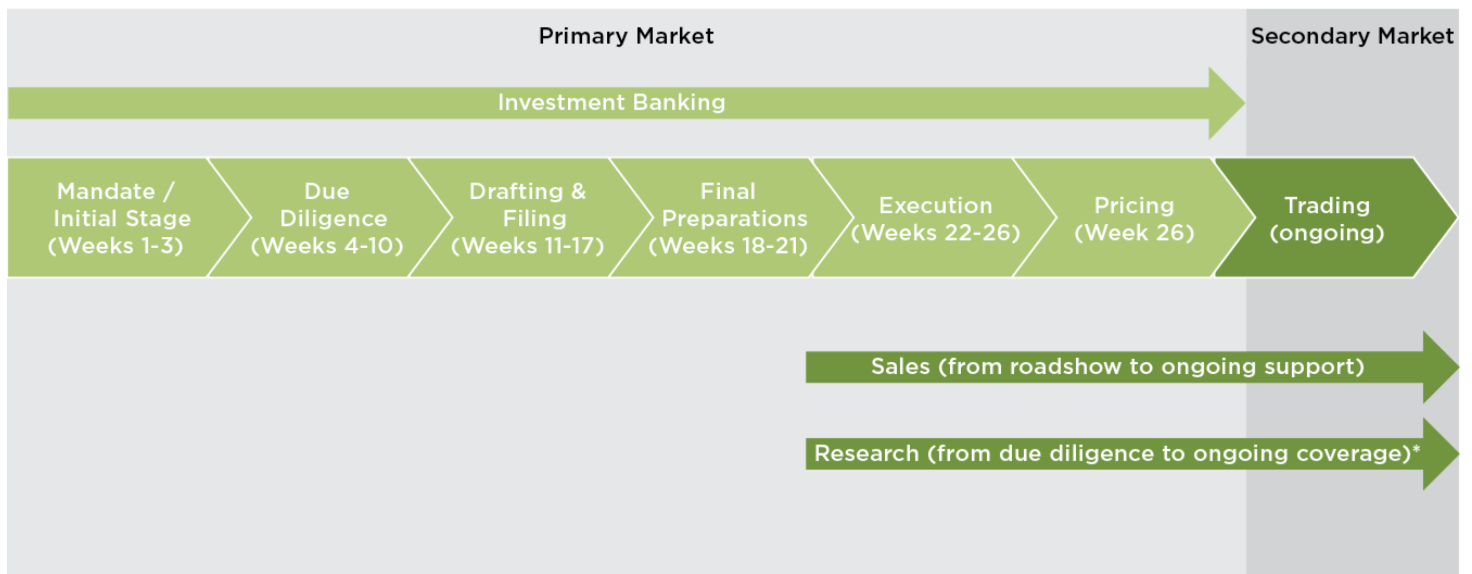
Equities	Fixed Income	Securitized Products
• Stocks and other equity-related products • Owned capital for the issuer • Buyer recieves ownership in the company • Buyer's return is from price appreciation and dividends, more variable and potentially irregular	• Coporate bonds, governent bonds, munis, agency • Borrowed capital for the issuer • Buyer does not recieve ownership; issuer obligated to repay debt • Buyer's reutrn is from interest payments, fixed and regular	• Securities backed by pools of underlying financial assets; MBS, ABS, etc. • Intended to fund further lending, provide balance sheet relief, improve liquidty, etc. • Investors receive a defined payment stream and the ability to pool asset risk

Note: Equity: Owned capital = capital raised from issuance and primary sale of stocks that is owned by the issuer. Fixed income: Capital raised is borrowed by the issuer; returns may include potential price appreciation as investors get a claim on certain assets or residual earnings in the event of a default (even if they do not receive an ownership interest in the issuer). Securitized Products: MBS = mortgage-backed security, ABS = asset-backed security; issuer is typically a special purpose vehicle set up by the sponsor/securitizer.

The IPO Process

An initial public offering (IPO) is when a private company raises capital by offering its common stock (equity) to the public in the primary markets for the first time. Underwriting is the process during which investment banks – the underwriters – act as intermediaries by connecting the issuing company with investors to assist the issuer in selling its initial set of public shares. The underwriters work with the issuer to determine what the IPO should look like and the best time to bring the deal to the market.

Below is an example of the IPO process:



Note: This is a general description, and timing can vary by deal. Firms may use different procedures or terminology. *The research analysts' due diligence and launch of coverage is performed separately from the work by the investment banking team.

Other Types of Capital Raises

In addition to IPOs, companies have other avenues to raise capital, including:

- **Secondary Offerings** (or follow-ons): Sale of shares by a company that has already IPOd. A non-dilutive offering is when one or more major shareholders sell all or a large portion of their holdings; proceeds from this sale are paid to the selling shareholders. A dilutive offering involves creating new shares and offering them for sale to the public; proceeds go to the company.

- **Shelf Offerings** (or shelf registrations): An SEC provision (Rule 415) allowing equity issuers to register new issues of securities without having to sell the entire issue at once, instead selling portions of the issue over a three-year period without re-registering the security or incurring penalties.

- **Convertibles**: Securities – usually bonds or preferred shares – which can be converted into common stock. They are not classified as debt or equity, but rather a hybrid security possessing cash flow features of both stocks and bonds. For example, convertible bonds allow bondholders to convert their creditor position to that of an equity holder at an agreed-upon price.

Types of Corporate Actions

As an asset owner, investors should be aware of the various types of corporate actions affecting their ownership or stake in the corporation. A corporate action is any activity that brings material change to an organization and impacts its stakeholders. Most events require board of directors' approval, and shareholders may be permitted to vote on some events as well.

Types of corporate actions can include:

- **Cash Dividend**: Distribution of a company's earnings to a specified class of shareholders; the dividend per share (DPS) payable on the ex-dividend date must be approved by the board.

- **Distributions-in-Kind**: Payments made in an alternative format, such as property or stock, instead of cash.

- **Stock Split**: Number of outstanding shares is increased by a specified multiple, while the share price is decreased by the same multiple; used by a company to decrease its stock price and potentially increase its investor base.

- **Reverse Stock Split**: Number of outstanding shares is decreased by a specified multiple, while the share price is increased by the same multiple; used by a company to increase its stock price and potentially decrease its investor base. Additionally, issuers may use reverse splits to get back into compliance with exchange continued listing guidelines which require a $1 bid test.

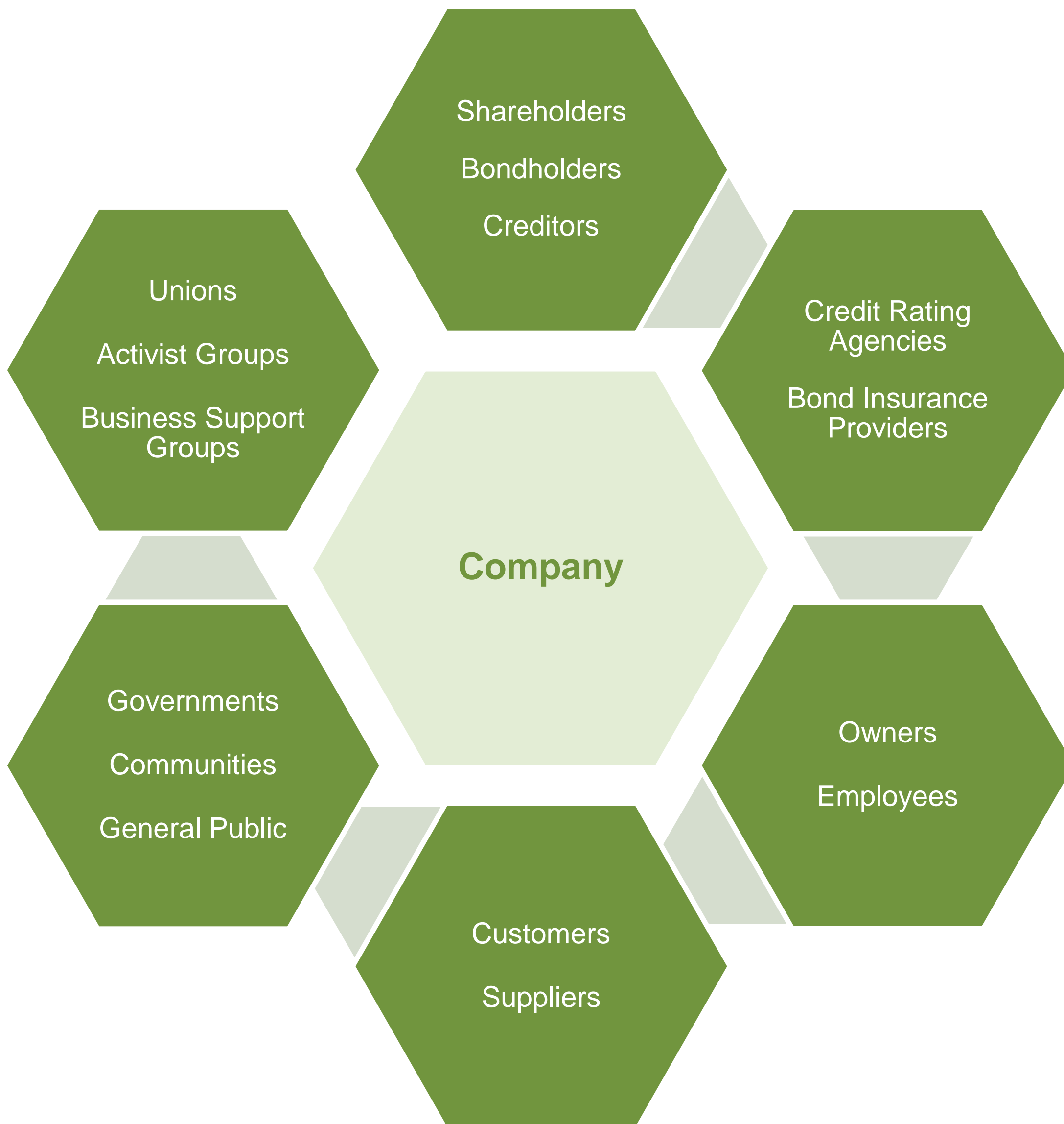
- **Rights Issue**: Offering of additional or new shares only to current shareholders, who are given the right to purchase or receive these shares before they are offered to the public; typically takes place in the form of a stock split.
- **Voting Rights**[2]: Right of a shareholder to vote (typically by proxy) on matters of corporate strategy, capital distribution or other corporate actions (ex: M&A); the number of votes corresponds to the number of shares held.
- **Redemptions**: Repayment of a fixed-income security (preferred stock, bond) on or before its maturity date; or, paying out mutual fund investors for all or part of their shares (minus fees). May trigger capital gains or losses.
- **Calls**: Some bonds or other securities have an embedded call provision that allows the issuer to redeem the security by a specified date at a set price. Calls create reinvestment risk for investors (albeit compensated by a call premium).
- **Tender Offer**: Public offer to buy all or some of shareholders' shares or securities at a premium to market price, typically associated with a takeover attempt.
- **Conversion/Exchange**: Bond issuers may give the holder the option to convert/exchange the security; ex: convertible bonds may be exchanged for a predetermined number of shares in the issuing company at a set conversion ratio.
- **Principal**: Amount of money owed by the borrower (corporation, government entity), excluding any added charges; or the amount of money an investor will receive at the end of the deal terms on the bond or loan.
- **Interest**: Fixed charge – percentage rate payable on the principal balance – the borrower pays for borrowing and the investor receives for lending the money.

[2] For voting rights, there can be structures where some shareholders (for example, the company's founders) have super voting rights, or greater proportional voting rights compared to other series or classes of stock.

Types of Stakeholders

A stakeholder is an individual, group, or party that has an interest in an organization and the outcomes of its actions. Stakeholders' interests can vary – financial returns, employment stability, product quality, corporate policies, etc. – causing companies to face trade-offs when trying to please all groups.

Types of stakeholders can include:



Secondary Markets: Where Securities Are Traded

It is important to have robust and efficient secondary markets, the trading of securities. Investors utilize secondary markets to generate returns and manage risk. Healthy and liquid secondary markets give issuers confidence their capital needs will be met at a good price level in primary markets. From a functional perspective, market makers enable the efficient flow of financial markets. Market makers stand ready to buy and sell securities at all times, thereby providing the necessary liquidity for markets to function efficiently.

Types of Trading

Types of trading by venue can include:

Exchange Traded	Over-the-Counter (OTC): Bilateral	Over-the-Counter (OTC): Other
• Traded on registered securities exchanges or alternative trading systems • More agency based • Frequent, continuous trading • Homogeneous products • High number of market participants • Open and closing auctions/cross, no direct negotiations; unidentified buyers/sellers enter competitive bids/offers at the same time	• Off-exchange trading between counterparties • More principal based • Infrequent, less continuous trading • Less homogenous products, more CUSIPs - ex: large issuer may have 100 bond CUSIPs vs.1 stock • No auction; bilateral trading between two known parties Dealer-to-Dealer (D2D): dealers trade amongst each other Dealer-to-Client (D2C): dealers trade with institutional clients	• Not all OTC is bilateral • Some trading may be done on electronic trading platforms

Note: Characterizing trading as frequent or infrequent are generalizations; different products within each group may trade more or less frequently than others. OTC – Bilateral: CUSIP = Committee on Uniform Security Identification Procedures' nine-digit, alphanumeric security identifier.

In addition to the types of trading by venue, financial intermediaries can act in one of two roles:

- **Agency**, where there is no capital at risk.
- **Principal**, where a firm's capital is typically at risk, unless it is a riskless principal transaction (when a broker-dealer simultaneously buys and sells a security in separate but offsetting transactions to execute a customer's trade without taking on market risk).

Types of Markets

Types of trading markets can include:

Cash/Spot	Futures	Forward
• Market for the immediate settlement of transactions (settled on the spot) • Exchange traded: equities • OTC: currencies, bonds, etc.	• Auction market where standardized contracts are bought and sold for delivery on a specified future date • Price is marked-to-market daily, value fluctuates until the contract ends • Exchange traded: multiple asset classes	• Market setting the price of an asset for delivery on a set date in the future • Price is fixed, contract settles on the date of the end of the contract • OTC: currencies, etc.

Note: For cash/spot, immediate delivery = within the settlement conventions for the relevant product. Auction market = buyers and sellers enter competitive bids and offers; the price at which the trade is executed is the highest price the buyer is willing to pay and the lowest price the seller is willing to accept.

Types of Products

Types of trading products can include:

Securities	Derivatives	Securitized Products	Structured Products
• Equities, ETFs • Options, single-stock or index • Bonds • Exchange traded or OTC	• Security whose price is directly dependent upon (derived from) the value of an underlying asset(s) or pricing index • Frequently used for heding and as a risk management tool • Exchange traded or OTC	• The process of designing a new financial instrument by packaging underlying assets with similar charactersitcs, supported by cashflows from those assets (residential or commercial morgages, auto loans, etc.) • Transforms illiquid assets into tradable securities • OTC traded	• Replace payment features and returns of a traditional security with payments derived from the performance of an underlying security(ies) • Facilitates customized risk-return objectives • OTC traded

Note: Securities: ETF = exchange-traded funds are a subcategory of exchange-traded products (ETPs), or pooled investment vehicles holding an underlying basket of securities. The other subcategory is exchange-traded notes (ETNs), which differ from ETFs in that they are structured products issued as senior unsecured debt notes and backed by the creditworthiness of their issuer. i.e. they have credit risk. ETFs and ETNs are traded on exchanges. Some OTC products, such as bonds, are increasingly being traded on electronic trading platforms.

Types of Derivatives

Types of derivatives can include:

Futures	Options	Forwards	Swaps
• Agreement to purchase or sell an asset at an agreed upon price at the end of the set contract date (contract may be satisifed by delivery of the sepecified asset or offset in cash)	• Contract granting the right (not the obligation) to buy or sell an asset at a set strike price (price the contract may be exercised, or acted on) by an expiration date (date the option no longer has value/exisits)	• Agreement to deliver an asset at a specified future date and set price (agreed upon in advance or agreed upon at a time of delivery)	• Exchange of one asset or liablity for a similar asset or liability for the purpose of lengthening or shortening maturities, or otherwise shifting risks (ex: different currencies, exchanging income flows, etc.)

Note: For derivatives contracts where you are the counterparty responsible for delivery of the security to close out the position on contract date, you often must first buy that security in the market. Options: Can include bilateral contracts between sophisticated counterparties or contracts traded on an exchange. Futures contracts have standardized terms and specifications, while forwards contracts are private agreements that can be customized by the two parties.

Investment Fund Products

An investment fund – mutual fund, exchange-traded fund, hedge fund, money market fund – is essentially a portfolio of stocks, bonds, or other assets. It is a supply of capital often belonging to multiple investors[3] used to purchase securities, providing a broader selection of investments, greater management expertise, and lower investment fees than investors might be able to obtain on their own.

While investors retain ownership and control of their own shares in the fund, they do not make decisions about how a fund's assets are invested. A fund manager decides which securities to hold, in what quantities, and when to buy/sell securities, typically tracking an index (but not always). Funds can be used for direct investments or in retirement accounts, where the investor originally selects the funds and then each regular contribution automatically goes into those selected funds.

Investors can achieve diversification by selecting funds offering different investment styles. Some examples of fund styles include:

- **Asset Class**: Equities, fixed income, commodities, currency, alternatives, or hybrids.
- **Region**: Domestic securities only; international securities; country specific (U.S., Australia, UK, etc.); or regional groupings (developed, emerging, frontier, etc.).
- **Sectors/Groups/Industries**: Financials, healthcare, retail, infrastructure, merger arbitrage, trend following, environment, artificial intelligence, etc.
- **Investment Style**: Broad market; market cap (large, mid, small[4]); high dividend yield; smart beta (rules-based strategies aiming to deliver better risk-adjusted returns than traditional market-cap-weighted indexes); etc.
- **Open- vs. Closed-End**: Open-end funds issue/retire shares as investors add/redeem money to the pool (priced at the end of the trading day based on net asset value/NAV); closed-end funds issue a fixed number of shares and trade on an exchange (potentially at a premium or a discount to NAV).

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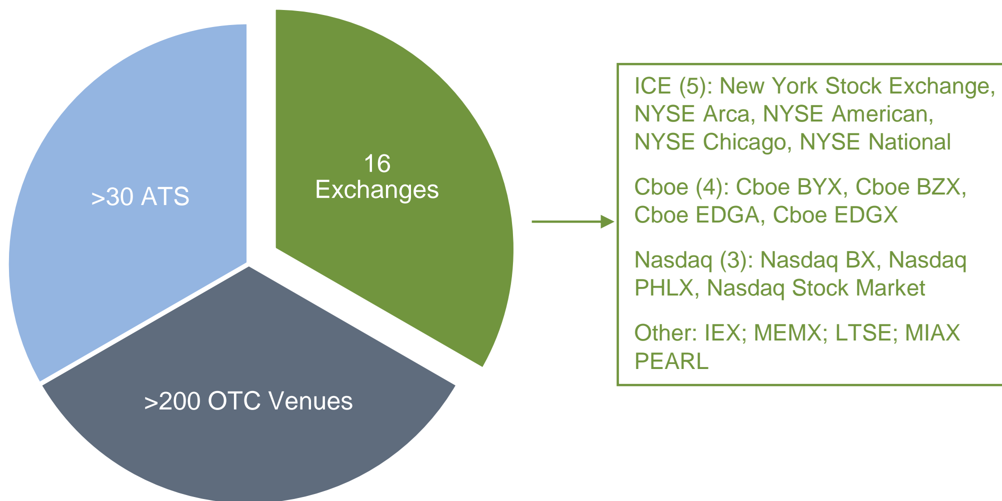
[3] Some funds represent single entities or persons, such as separate accounts, family offices, etc.
[4] Large cap $10B+ (mega cap >$200B), mid cap $2B-$10B, and small cap $300M-$2B (micro cap <$300M, nano cap <$50M)

Equity Markets

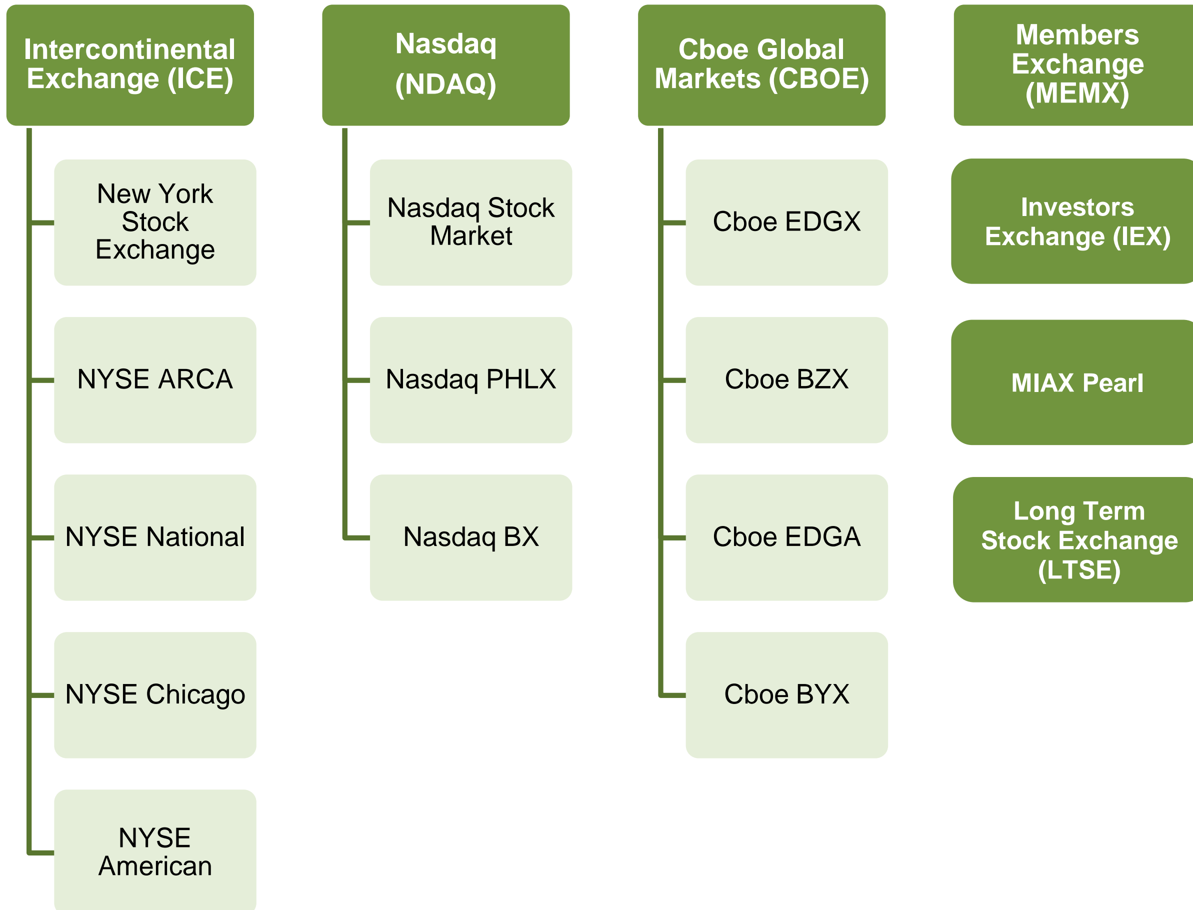
The U.S. equity markets continue to be among the deepest, most liquid, and most efficient in the world, with investors enjoying narrow spreads, low transaction costs, and fast execution speeds. There is also plenty of opportunity for price improvement, especially for retail investors.

Today, we have 16 exchanges – predominantly under three main parent groups – over 30 alternative trading systems (ATS), and over 200 over-the-counter (OTC) venues. Parent exchange groups set up different exchanges to serve the various needs of end users, mainly based on pricing models. We note that each individual exchange must be approved by and registered with the SEC.



Source: Cboe Global Markets, FINRA, SIFMA estimates
Note: ICE = Intercontinental Exchange, owner of the NYSE and other exchanges and clearing houses. Cboe = Cboe Global Markets; IEX = Investors Exchange; MEMX = Members Exchange; MIAX = Miami International Securities Exchange; LTSE = Long Term Stock Exchange.

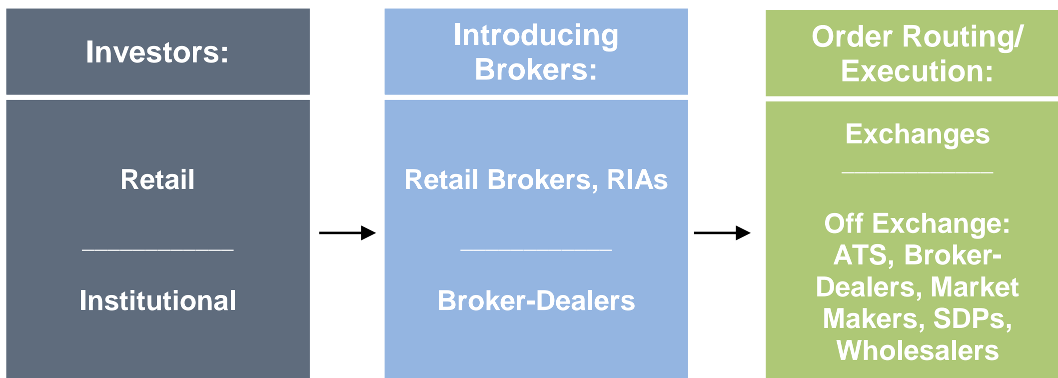
Equity Exchanges



Source: Cboe Global Markets, SIFMA estimates
Note: Volumes also trade off exchange

Equity Order Routing

The equity order routing process is complex, and labeling firms can be just as complicated. An individual firm may not be monolithic, as it can have multiple businesses. For example, a global investment bank could have a business unit registered as a broker-dealer, a retail broker, a wholesaler, an ATS, an asset manager, and a market maker. That said, below we define firm types and list many of the players in the equity trading ecosystem.



Note: ATS= alternative trading system; SDP = single-dealer platform. RIA = registered investment advisor. RIAs have the option to route through their clearing firm or manage their own connections and routing. Most prefer the former given cost constraints and the added regulatory and compliance burdens. That said, they are still responsible for best ex and any regulatory reporting/disclosures (ex: Rule 605).

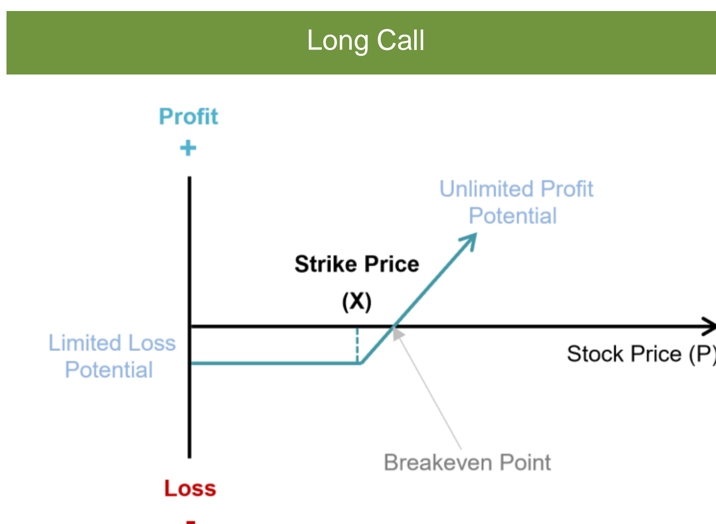
Options Markets

An option is a contract to buy or sell an underlying security (stocks, ETFs, etc.) at a specified price on or before a given date. With an equity option, the contract holder (buyer) has the right, but not the obligation, to buy/sell (if a call/put) shares of the underlying security. The writer (seller) of an option is obligated to sell/buy (if a call/put) the shares to/from the buyer of the option at the specified price upon the buyer's request.

Options provide flexibility, enabling an investor to tailor their portfolio to investment objectives and market environment, including:

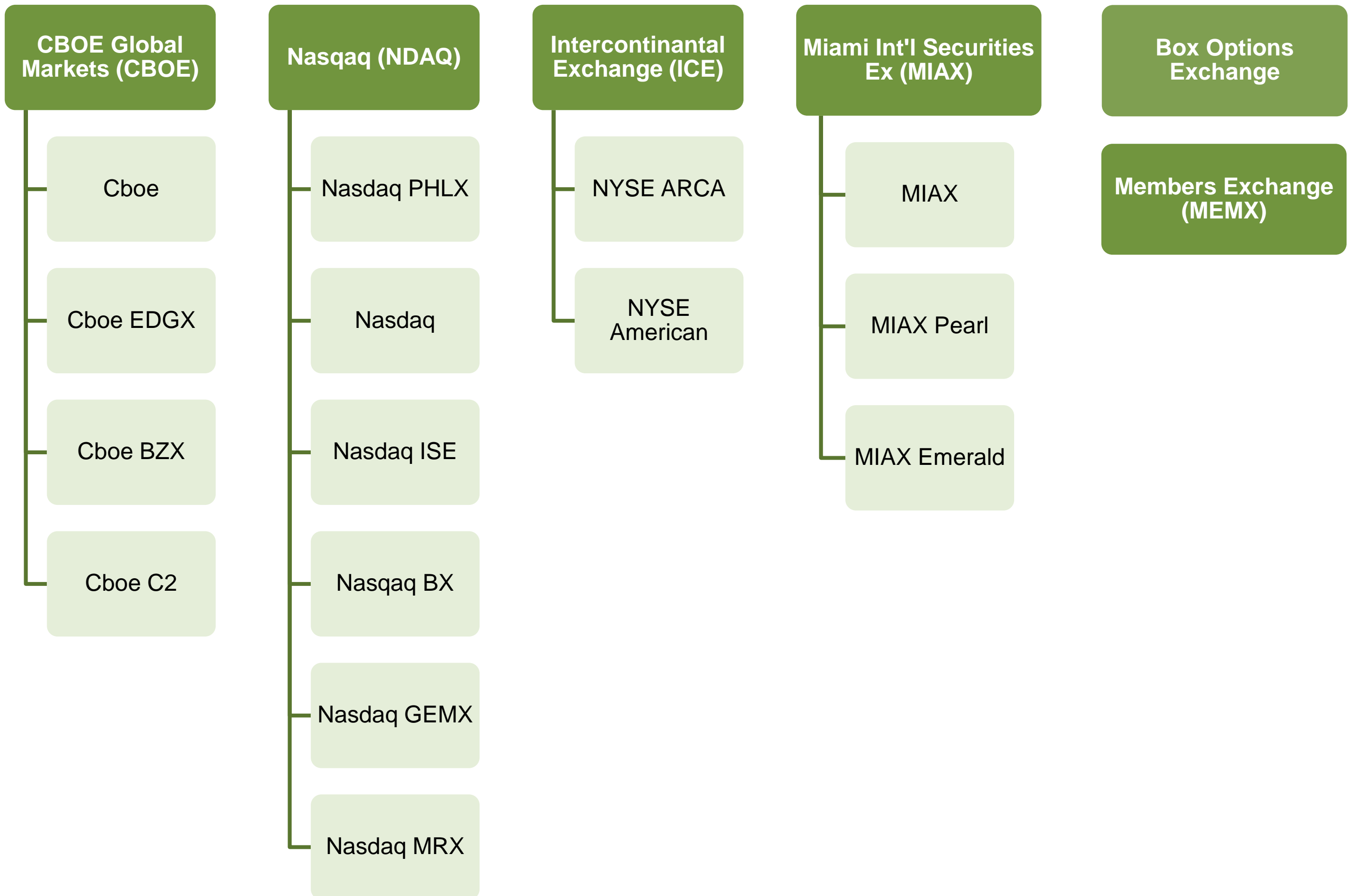
- Protect from a decline in stock prices.
- Benefit from a stock decline.
- Ability to purchase a security below market price.
- Position a portfolio for market moves, even if direction of the move is unpredictable.
- Benefit from little or no stock movement.
- Boost portfolio returns without the costs or capital outlay of buying the individual stock (the initial investment is limited to the price of the option contract premium.
- Generate income against stock holdings in your portfolio.
- Define risk, time, and probability in a trade.

In bull markets, the investor expects the price of the underlying to increase but also wants to limit risk. An example of this strategy would be a long call option (buy a call):



Note: Strike – set price at which the options contract is exercised. Exercise – to put into effect the right specified in a contract, ex: the owner of a call/put may buy/sell the underlying stock. Stock price – price of the underlying stock.

Options Exchanges

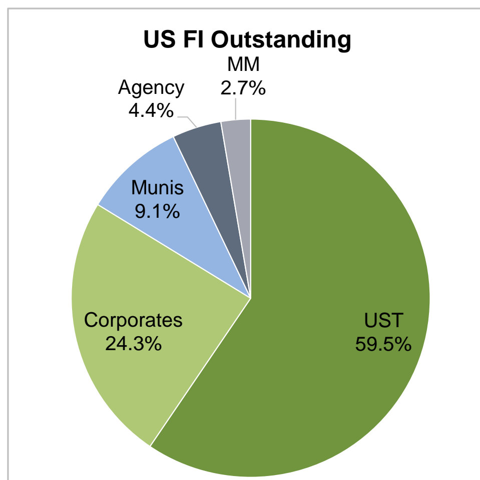


Fixed Income Markets

It is important to note we write fixed income markets as plural for a reason. There are several distinct markets that include multiple subcategories within each main category: U.S. Treasuries (UST), mortgage-backed securities (MBS), corporate bonds (corporates), municipal securities (munis), federal agency securities (agency), asset-backed securities (ABS), and money markets (ex: commercial paper). The UST and agency markets are referred to as the rates markets, as valuation and bondholder risk is tied to interest rates. The remaining credit markets involve both interest rate and credit risk, or the probability of the borrower defaulting. There are also repurchase agreements (repos), which aid secondary market liquidity for the cash markets (for example, UST), allowing dealers to act as market makers in a very efficient manner.

Fixed income products do not generally trade on exchanges and are usually not fungible, as is the case with cash equities. Recently issued securities often dominate secondary market trading volumes, acting as an important part of price discovery for markets. We have seen a transformation in fixed income markets since the global financial crisis – historically bilateral and performed by banks – as trading increasingly moves to electronic trading platforms in many asset classes.

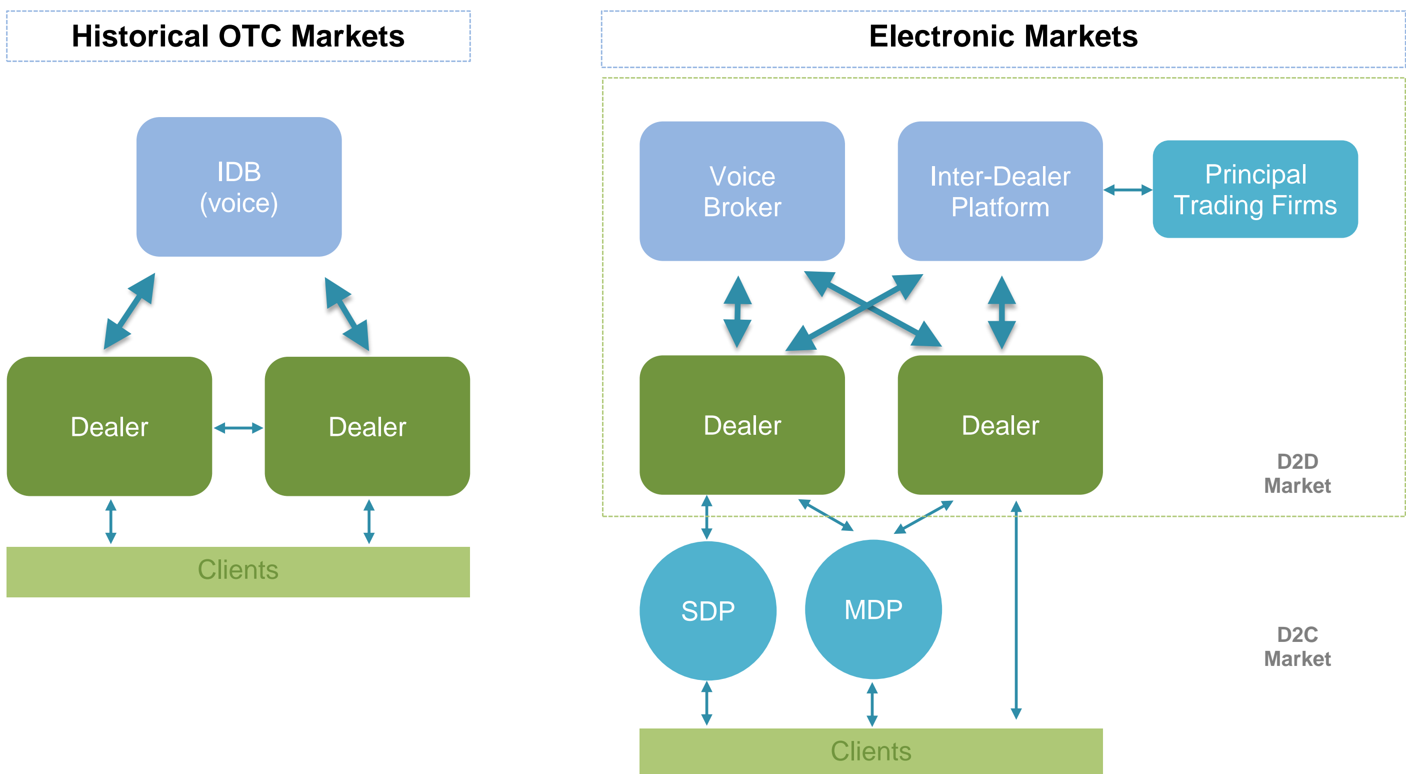
Another noteworthy factor in market structure in the U.S. Treasury market (and in many other sovereign bond markets) is the use of primary dealers. These firms act as trading counterparties to the Federal Reserve Bank of New York and bid at all auctions of U.S. Treasury securities. Primary dealers also play a crucial role in open market operations, which support the implementation of U.S. monetary policy. Dealers' actions as market makers contribute to the overall efficiency and depth of the U.S. Treasury market, which helps keeps U.S. debt costs low.



Source: Federal Reserve, Federal Reserve Bank of New York, US Agencies, US Treasury, SIFMA estimates
Note: As of 4Q23. UST = US Treasury securities, Corporates = corporate bonds, Agency = federal agency securities, Munis = municipal bonds, MM = money markets.

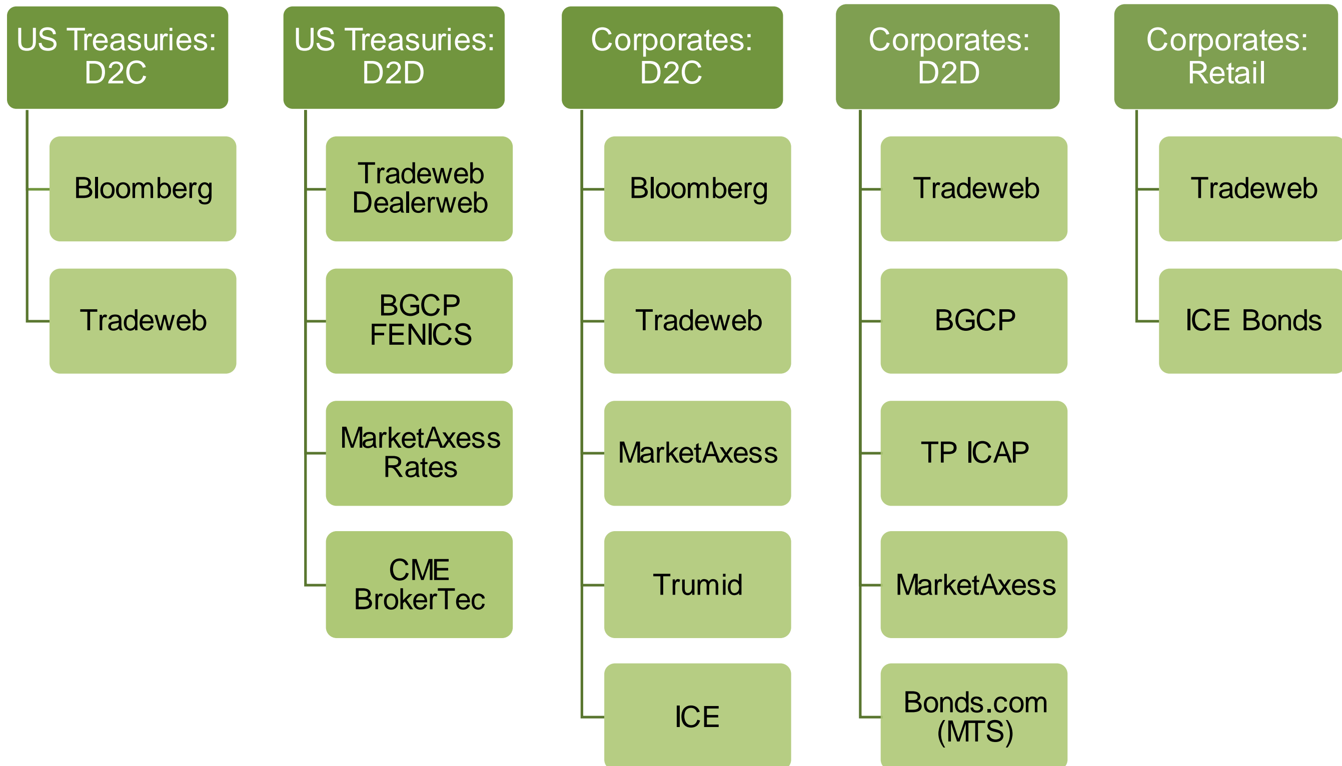
Electronification of Markets

As technological advances and market structure evolved over time, markets and products began the electronification journey from bilateral to multi-lateral trading, predominantly in search of liquidity. The electronification of markets is illustrated by the increasing percentage of trading performed on electronic trading platforms (ETPs). Platforms differ by trade protocols and types of end users, and counterparties may be matched in the negotiation or execution stages. Counterparty identities may not be known depending on trading venue and product traded.



Note: Visual is representative of a fixed income trading platform. IDB = inter-dealer broker = financial intermediary facilitating transactions between investment banks, broker-dealers, and other large financial institutions (formerly called voice brokers); SDP = single-dealer platform; MDP = multi-dealer platform; D2D = dealer-to-dealer, dealers trade amongst each other; D2C = dealer-to-client, dealers trade with institutional clients.

Electronic Trading Platforms



Note: Different firms may use different terminology or segment platforms differently, and this list may not be all inclusive. D2D = dealer-to-dealer, D2C = dealer-to-client. While we have separated D2D and D2C, lines are blurring with all-to-all trading (buy-side and sell-side liquidity) continuing to grow. MarketAxess Rates includes LiquidityEdge acquisition. ICE Bonds includes BondPoint, TMC Bonds acquisitions. Tradeweb includes eSpeed. Retail can be referred to as retail/click-to-trade; there is some institutional activity on these platforms, albeit minimal. Voice trading remains an option across all asset classes. Broker dealers may also trade with clients on proprietary electronic platforms (single-dealer platforms).

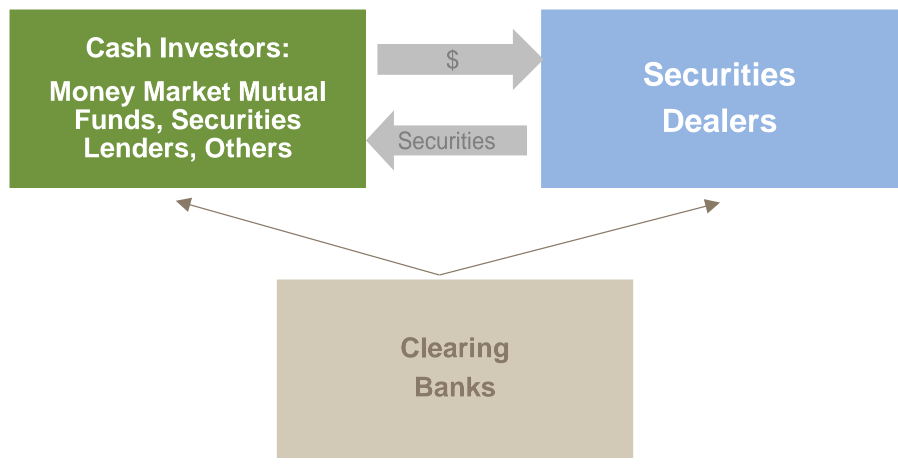
The Role of Repo Markets

A repurchase agreement (repo) is a financial transaction in which one party sells an asset to another party with a promise to repurchase the asset at a pre-specified date (a reverse repo is the same transaction seen from the perspective of the security buyer). Repos can be overnight (duration one day) or term (duration up to one year, albeit some are up to two years and the majority are three months or less).

The repo market enables market participants to provide collateralized loans to one another, and financial institutions predominantly use repos to manage short-term fluctuations in cash holdings, rather than general balance sheet funding. Repos aid secondary market liquidity for the cash markets (for example, U.S. Treasuries/UST), by allowing dealers to act as market makers in a very efficient manner.

Bilateral Repo

Tri-Party Repo



The Role of Securities Lending

Securities lending (sec lending) is the practice of loaning securities to investors – institutional, not typically retail – requiring the borrower to put up collateral (cash, securities). When a security is loaned, the title and the ownership are transferred to the borrower, including voting rights. The clearing broker charges loan fees and interest to the client for this service, based on how difficult it is to locate the securities to borrow – the scarcer the supply, the higher the costs. The lender of securities receives a rebate. Borrowers provide at least 100% of the security's value as collateral, based on volatility and other factors, with the minimum initial collateral at least 102% of market value (plus accrued interest for debt securities).

Sec lending provides liquidity to markets, generates additional interest income for long-term holders of the securities, and enables short selling.

An Example:[5]

A prime broker has a client who wants to short KMK stock. It borrows 1,000 shares on behalf of its client. The stock owner agrees to a 6-month loan to the client for $100,000, with a 3% loan fee and $102,000 cash collateral required (which is invested in liquid short-term securities, ex: U.S. Treasuries). The client sells the shares for $100,000.

Four months into the loan, KMK shares fell to $90. The client buys 1,000 shares for $90,000, creating a $10,000 gross profit. The loan fee of 3% on $100,000 amounts to $250 per month, or $1,000 for four months. The shareholder earns a $9,000 net profit and returns the shares. The stock owner returns the collateral.

Stock Prices		
P_0 (today):	$	100
P_e (expected):	$	80
P_1 (in 4 months):	$	90
The Loan		
Borrow: 1,000 shares	$	100,000
Terms: 6 months, 3% fee	$	1,500
Collateral: 2%	$	102,000
The Transaction		
Buy: 1,000 shares	$	90,000
Gross profit:	$	10,000
Loan Fee:	$	1,000
Net Profit:	$	9,000
Borrowed Shares: returned	$	-
Collateral: returned	$	-

[5] Diagram does not account for interest earned on the collateral or the fee charged by the prime broker.

The Role of Short Selling

Many factors come into play in investment decisions, such as current stock price, fundamental valuation, economic factors, comparison to other companies in its sector and the market to name a few.[6] Once analyzing the investment in a stock, investors have the option to buy or sell a stock.

- **Long position**: An investor buys and owns shares of a stock. Investors take long positions – go long – when they expect the stock price to rise in the future.

- **Short position**: An investor sells stocks they do not own. Investors take short positions – short a stock – when they expect the stock price to decline in the future, believing it is overvalued.

When short selling, investors borrow stocks today to make the trade, with the obligation to buy back stocks in the future to return the borrowed shares. Short sellers believe the stock is currently overvalued, and analysis indicates the price should decline to move in line with the fundamentals. If accurate, they can buy back the stock at a lower price, making a profit on the price differential. If wrong, short sellers face short squeezes. The stock price increases, and the short seller must buy the shares back at a higher price. This creates additional upward pressure on stock prices and increases liquidity needed to cover the short.

In general, short selling can improve market quality by contributing to price efficiency, increasing liquidity, and enhancing corporate governance.

An Example: Expect KMK stock price to fall from \$100 (P_0) to \$75 (P_e). To make a profit:

- Borrow 100 shares at P_0 and sell for \$10,000
- Scenario #1: Hypothesis holds, and KMK stock price declines to \$75
    - Buy 100 shares at P_e for \$7,500 → Profit = \$2,500
- Scenario #2: Hypothesis does not hold, and KMK stock price rises to \$125
    - Buy 100 shares at P_e for \$12,500 → Loss = -\$2,500

Current Environment	
Stock Price: P_0	\$ 100
Hypothesis: $P_e < P_0$ (declines)	\$ 75
Borrow Shares:	100
Sell: 100 shares:	\$10,000
Scenario #1: Pe Declines	
P_1	\$ 75
Buy: 100 shares	\$ 7,500
Net Profit:	\$ 2,500
Scenario #2: Pe Rises	
P_1	\$ 125
Buy: 100 shares	\$12,500
Net Profit:	\$ (2,500)

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[6] Stock selection and trade direction can also include technical analysis, which identifies opportunities by analyzing statistical trends gathered from trading activity, such as price movements and volumes.

The Role of Collateral

- **Margin Trade**: If an investor wants to borrow money from a broker to buy shares, he must have a margin account rather than a standard brokerage account. In this account, a broker lends the investor money to buy more securities than they could otherwise buy based on their account balance. Margin is the money borrowed to complete the transaction, calculated as the difference between the total value of securities in the account and the amount borrowed.

- **Collateral**: Buying securities on margin can be described as using the cash and securities in your account as collateral for a loan. While trading on margin enables the borrower to increase the number of shares it can buy and therefore the potential profit, it also increases the risks. If the shares decrease in value, the broker requires payment of the difference in value (loss). The balance in the investor's account serves as collateral should they fail to cover this loss. Collateral is essentially an insurance policy for the lender.

- **Margin Call**: When the value of an investor's margin account falls below the broker's required amount, the broker will require the investor to deposit additional money or securities into the account to bring it up to the maintenance margin level. At this time, the investor must deposit more money/securities or sell some of the securities held in the account.

- **Types of Collateral**: Collateral can come in many forms, with the most common being cash and government securities, the most liquid of financial assets. Other forms of securities – agency MBS, letters of credit, corporate bonds, equities, etc. – may also be used as collateral, dependent on the type of product traded and type of trading account.

Best Execution

In general, best execution rules require broker-dealers to use reasonable diligence to ascertain the most favorable terms for execution of customers' orders given current market conditions. To comply with this requirement, broker-dealers must perform regular and rigorous reviews of execution quality and periodically assess which competing markets, market makers, or alternative trading systems offer the most favorable terms of execution. This best execution obligation complements fair pricing rules in some market segments.

Key factors broker-dealers consider when executing customer orders include but are not limited to the price obtained, speed of execution, transaction costs, likelihood of full trade execution and customer needs and expectations. Brokers must evaluate these characteristics when choosing how to route equity, options, or bond orders for execution. If broker-dealers receive order-routing inducement or trade as principal with customer orders, it must not let those factors interfere with their duty of best execution.

Existing rules and guidance on best execution have been provided by both the Financial Industry Regulatory Authority (FINRA) and the Municipal Securities Rulemaking Board (MSRB):

- FINRA Rule 5310 (Best Execution and Interpositioning)
  https://www.finra.org/rules-guidance/notices/21-23
  https://www.finra.org/sites/default/files/notice_doc_file_ref/Notice_Regulatory_15-46.pdf
- MSRB Rule G-18 (Best Execution)
  https://www.msrb.org/Rules-and-Interpretations/MSRB-Rules/General/Rule-G-18
- On December 14, 2022, the U.S. Securities and Exchange Commission (SEC) issued four equity market structure proposals, one of which included its own best execution regulation:
  https://www.sec.gov/news/press-release/2022-226

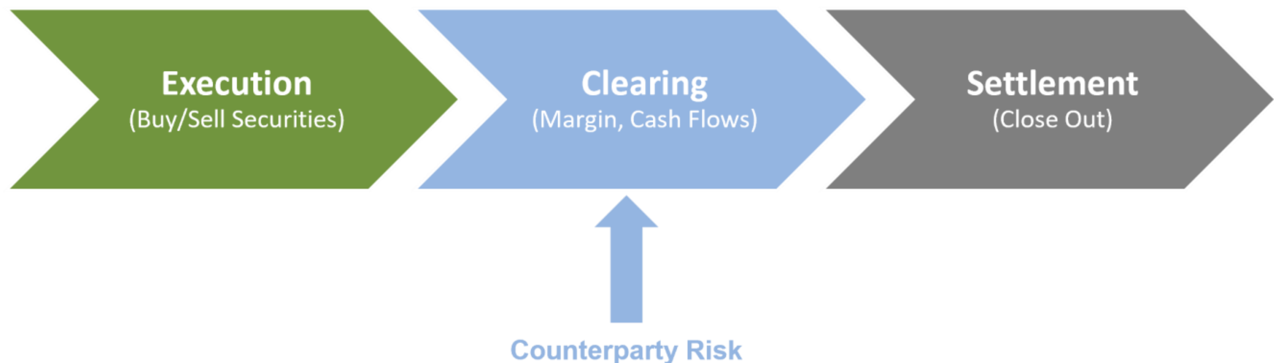
Post-Trade Infrastructure & Operations: Where Securities Are Cleared & Settled

The Lifecycle of a Trade

The lifecycle of a trade begins with execution, the buying and selling of securities. It then moves into the clearing phase. Clearing houses have members (or participants) consisting of clearing brokers, typically a broker-dealer firm, that act as liaisons between investors and clearing houses to ensure trades are completed and recorded.

Once entering the clearing phase of the trade lifecycle, counterparty risk is introduced. Values of the security – or the underlying asset with derivatives – can fluctuate between trade and settlement dates. Trades submitted to the clearing house are netted – offsetting the value of multiple positions or payments to be exchanged between counterparties – among members to reduce risk. During this phase, it is important to manage risk of price fluctuations or a counterparty default, which is when a member is unable to fulfill its obligations. Margin payment obligations are calculated to reflect security price movements, and net cash flows are exchanged across counterparties.

The trade is then closed out at settlement, where security ownership is transferred.

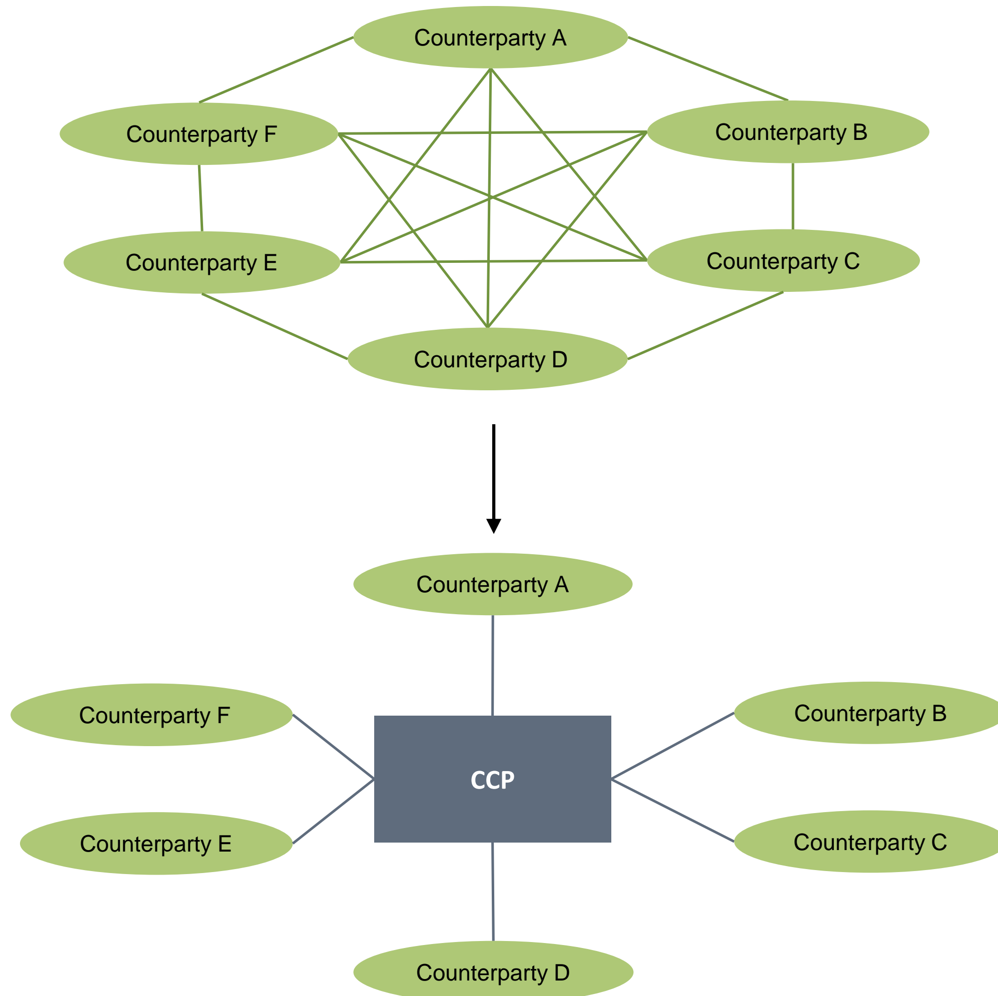


Note: Clearing brokers handle buy and sell orders, maintain custody of account owners' securities and manage the trade and clearing record keeping. Settlement conventions vary by product, ex: T+1 (trade date + 1 day) for cash equities in the U.S. A counterparty is the other side of a trade – pairing buyers and sellers – and every trade must have a counterparty to complete the transaction. When trading on an exchange or electronic trading platform, counterparty identities are typically not known.

Clearing up Counterparty Risk[7]

A clearing house or central counterparty clearing house (CCP) bridges the gap between counterparties, becoming the buyer to every seller and the seller to every buyer. With the introduction of a CCP, the original bilateral trades are novated – replacing an obligation to perform with a new obligation – to the CCP, creating separate trades between each counterparty (clearing members), and the CCP.

The CCP guarantees the trades and becomes responsible for managing cash flows until settlement, thereby taking on the counterparty risk of each trade. This procedure also increases the efficiency of the post-trade process by netting – or aggregating – the many trades carried out by clearing members themselves or on behalf of their clients. Netting offsets the value of multiple positions or payments due between counterparties, thereby reducing risk.



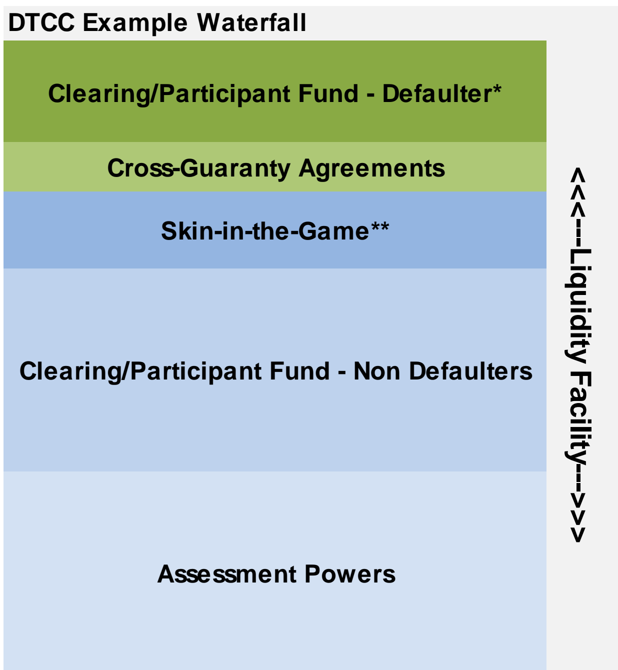
[7] We note that not all trades are centrally cleared.

Risk Management Tools

A CCP's first line of defense is clearing membership access and monitoring. Rules for members are contractual obligations (for example, capital requirements). Should a member default on its obligations, a CCP has contractual rights to stop clearing for that member.

The second line of defense is the default management process, called the waterfall. It is composed of substantial pre-funded initial margin – or clearing fund contributions in the DTCC example below – as the first-loss stage (CCPs can also require margin add-ons to mitigate member specific exposures). Should a defaulting member's initial margin/clearing funds not be enough to cover losses, the CCP moves into the other layers of the waterfall to manage the default. CCPs also have liquidity facilities to manage operational liquidity demands in the event of a clearing member default.

Of note, during the Lehman Brothers default in 2008 no major CCP breached the initial margin bucket, and no non-defaulting clearing member or CCP experienced a loss.



Note: *includes variation margin; **25% of retained earnings. This is a sample waterfall at DTCC = The Depository Trust & Clearing Corporation which includes the National Securities Clearing Corporation (NSCC; CCP for U.S. equities and more), Fixed Income Clearing Corporation (FICC; CCP for U.S. government securities, repo, and MBS), and The Depository Trust Company (DTC; the central securities depository in the U.S. for equities and more). There are many other CCPs, such as CME (derivatives), Intercontinental Exchange (ICE; derivatives, credit), Options Clearing Corporation (OCC; CCP for U.S. equity options and more), etc.

The Role of Margin at a CCP

The focus of the waterfall is on margining, setting margin levels to cover all potential losses in the event of a clearing member default. Margin mitigates counterparty risk to the CCP by creating an incentive for clearing members to limit excessive risk in their open positions, as they must pay for that risk via increased margin, called margin add-ons. Margin is based on transaction volumes, volatility, types of products cleared, and the risk of both the clearing member's house account and its clients' portfolios, as well as the clearing member's own financial and operational risk.

Margining occurs in two stages:

- **Initial margin:** Original balance to guarantee contract fulfillment, based on exposures of each clearing member's portfolio. Margin is accepted in cash or other liquid, low-risk securities (for example, U.S. Treasuries), with appropriate haircuts set by the CCP.

- **Variation margin:** Based on changes in market values of open exposures and posted collateral, calculated by the CCP at least daily if not on an intraday basis. The net amount owed to the CCP is collected – typically in cash – to maintain the required initial margin balance.

Margin is calculated in a way to cover the following credit exposures should a clearing member default:

- **Current exposure:** The immediate loss a CCP would face, calculated as the larger of zero or the market value (replacement cost) of a clearing member's netted portfolio.

- **Potential future exposure:** Exposure of a clearing member's open positions, measuring market value fluctuations between current market price and the time to liquidate or hedge the portfolio in a default, referred to as the margin period of risk/MPR.

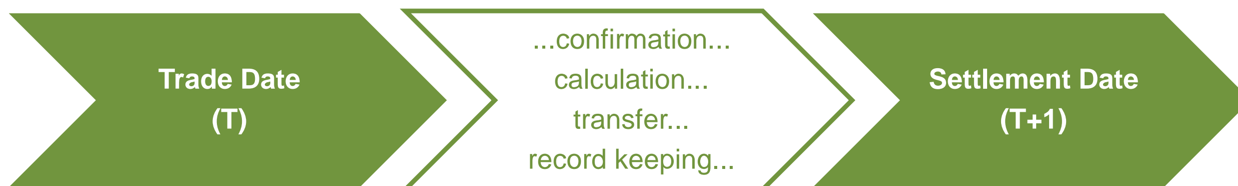
Settlement: Closing Time

Trade settlement is a two-way process which comes in the final stage of the trade lifecycle. Once the buyer receives the securities and the seller receives payment, the trade is said to be settled. The official trade happens on the trade date (T), and the settlement date is when the final ownership is transferred.[8] For example, in U.S. equities, settlement occurs on T+1, or trade date plus one day.

Key players in this phase of the trade lifecycle include:

- **Custodian**: A financial institution that holds customers' securities (whether in electronic or physical form) for safekeeping to prevent them from being lost or stolen. Most custodians offer related services such as account administration, collection of dividends and interest payments, tax support, and foreign exchange management. Investment advisers are required to arrange for a custodian for assets they manage on behalf of their clients.

- **Central Securities Depository (CSD)**: A market infrastructure firm that provides securities accounts, a securities settlement system, and custody services to market participants. CSDs hold securities, such as stock shares, either in certificated or uncertificated (dematerialized) form. This enables ownership to be electronically transferred through a book entry process rather than the transfer of physical certificates, i.e. straight-through processing.



Note: Settlement time could be extended if there are fails, which occur when a buyer fails to deliver funds or a seller fails to deliver an asset by the settlement date. Common reasons for fails include the inability to pay, not owning the asset to deliver, or mismatched/late/missing trade information.

[8] Settlement timing may vary across asset classes or country/region of the security traded.

The Depository Trust & Clearing Corporation (DTCC)

DTCC already plays an important role in U.S. markets. Equities are cleared through NSCC and settled at DTC. This role is expanding given the SEC's mandate to clear a larger portion of the U.S. Treasuries and repurchase agreement (repo) markets.

DTCC has the following business lines:

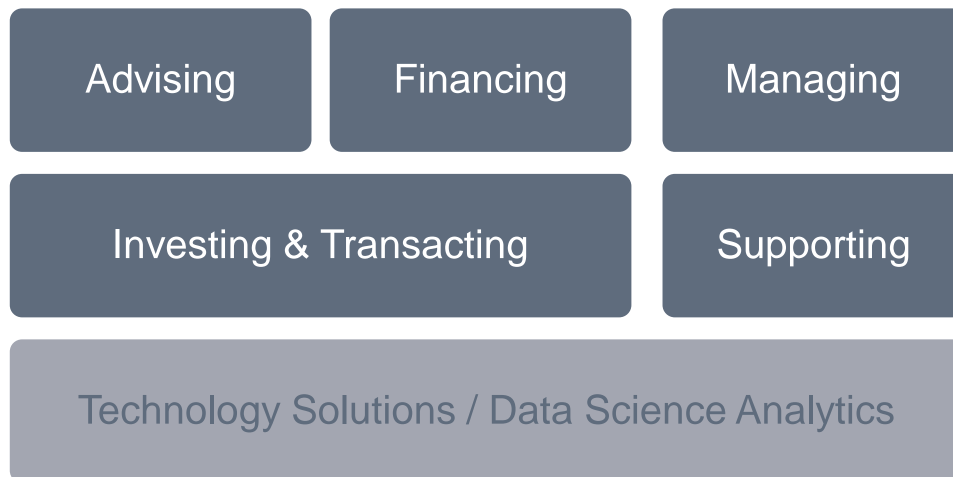
NSCC	FICC	DTC	Other
• National Securities Clearing Corporation • Established in 1976 • Provides clearing and settlement, among other services, for equities, corporate and municipal debt, and more.	• Fixed Income Clearing Corporation • Created in 2003 by integrating the Government Securities Clearing Corporation (GSD) and the Mortgage-Backed Securities Clearing Corporation (MBSD). • GSD provides clearing and other services for US Treasuries and repos. • MBSD provides similar services for the MBS market.	• The Depository Trust Company • Established in 1973 to reduce costs and provide clearing and settlement efficiencies (after the paperwork crisis in the late 1960s). • Provides settlement for NSCC, among other services.	• Data repositories • Derivatives repository • Deriv/SERV • Solutions • Institutional Trade Processing (ITP)

The Role of Financial Institutions

Financial institutions play a critical role in making capital markets work. Acting as financial intermediaries, these firms provide advice and connect clients needing capital – corporations, governments – with those providing capital – investors, both institutional and retail.[9]

Services & Functions Provided

Financial institutions provide many services and functions to clients, constantly innovating to meet clients' needs.



[9] Firms may use different terminology, group businesses differently, or offer different or additional services (may not be an all-inclusive list). The top visual is an example of the financial intermediary's role in capital raising. Financial services firms also provide advice, risk management, and many other services.

Full-Service Financial Institution

The following breaks out different divisions and activities for a full-service financial institution:

Note: Firms may use different terminology, group businesses differently, or offer different or additional services (may not be an all-inclusive list).

Broker-Dealers' Role

The broker-dealer is the capital markets arm of a full-service financial institution.

- **Broker:** Acts as an agent on behalf of its clients, no capital at risk.
- **Dealer:** Acts as a principal, putting capital at risk to facilitate transactions.
- **Broker-Dealer:** A broker-dealer buys and sells securities on behalf of its clients to enable trading activities and the flow of securities in markets. Some broker-dealers put their own capital at risk to provide the necessary liquidity to keep markets functioning efficiently, i.e. market making. Broker-dealers play many other roles in making capital markets function, including, among others: underwriting securities (capital raising for clients in the primary markets), publishing investment research, and distributing investment products to clients.

Investment Banking: Corporate Financial Advisors

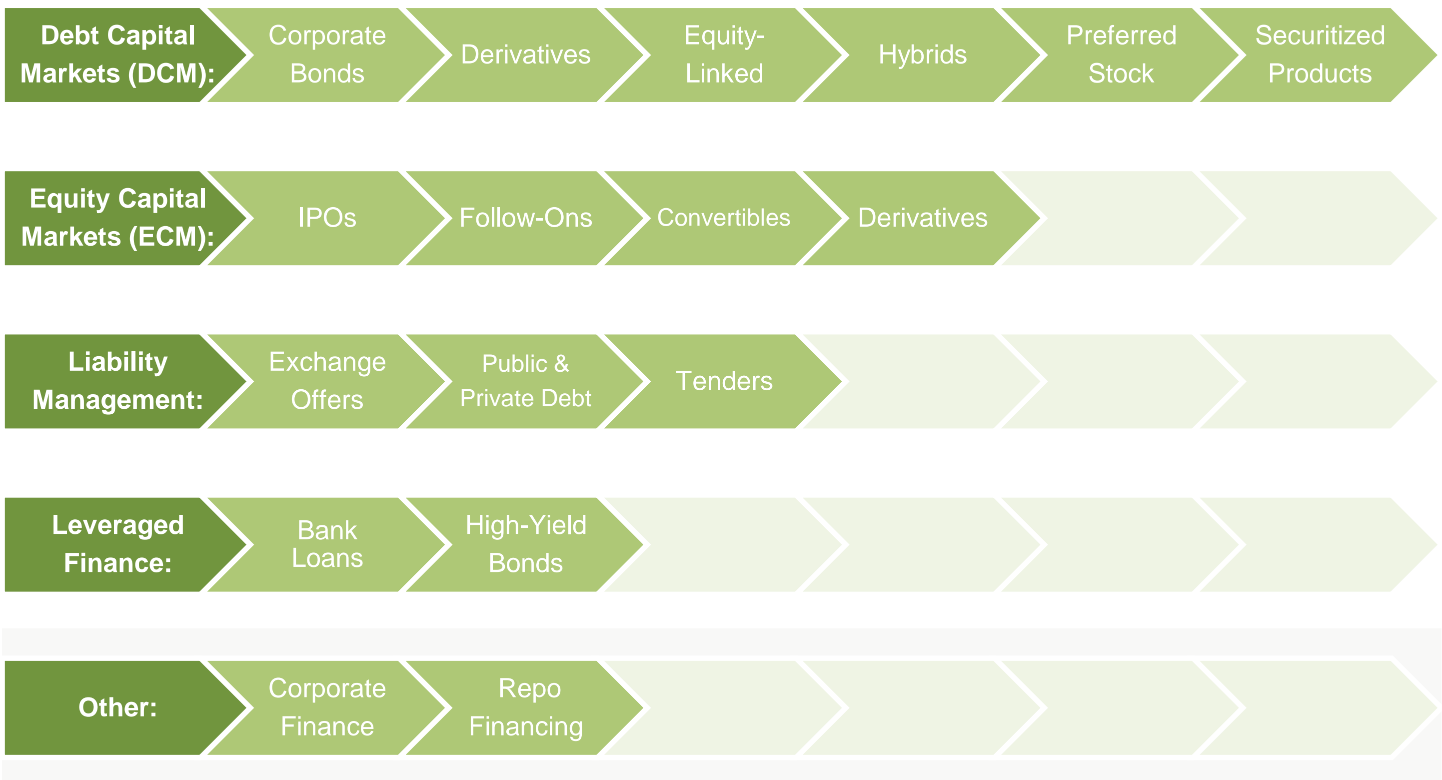
Advisory Services

Investment Banking provides advisory and financing services to corporations, governments, boards of directors, public authorities and many other client types. The following depicts different types of advice investment banking divisions provide:

Note: Firms may use different terminology, group businesses differently, or offer different or additional services (may not be an all-inclusive list).

Financing

The following depicts different types of financing investment banking divisions provide:

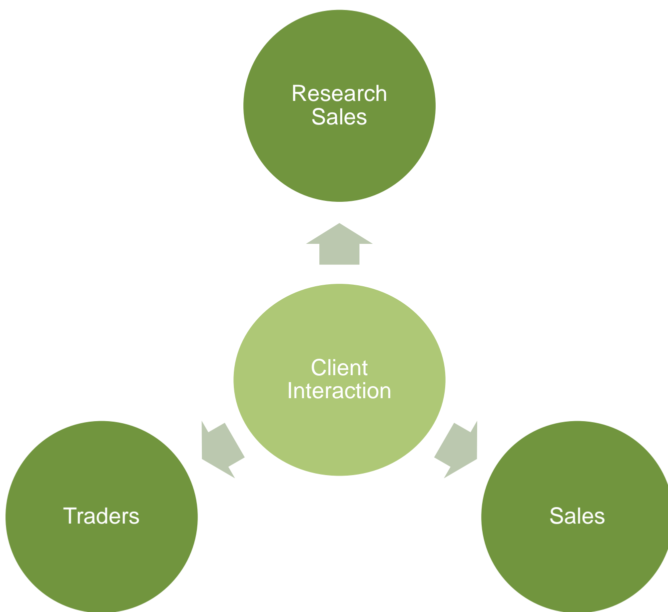


Note: Firms may use different terminology, group businesses differently, or offer different or additional services (may not be an all-inclusive list). Examples of financing provided to corporations. DCM and ECM handle capital raisings; the corporate finance division handles financing options for day-to-day business operations.

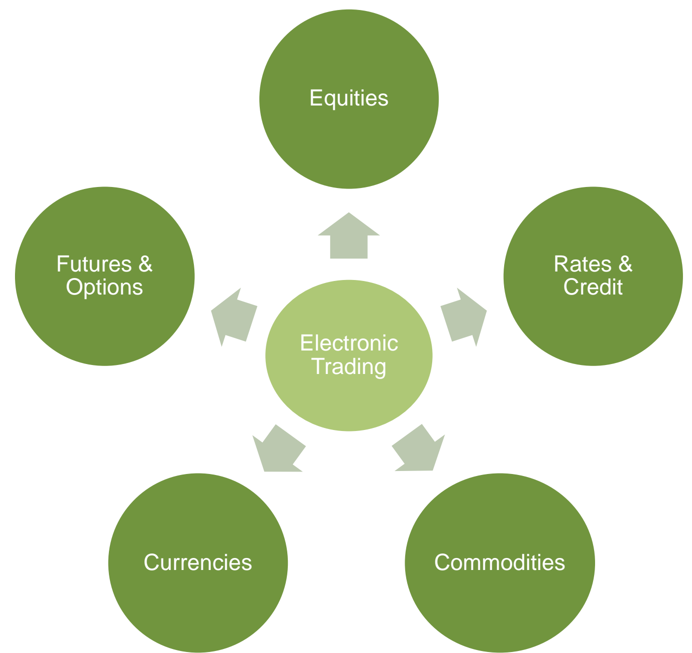
Markets & Securities: Institutional Client Services and Execution

Markets & Securities personnel understand clients' needs and connect them with the right products to fit their investment objectives. Roles include, among others: executing trades, making markets, managing risk, providing investment advice, and publishing investment recommendations.

Focus: Tailored Investment Solutions



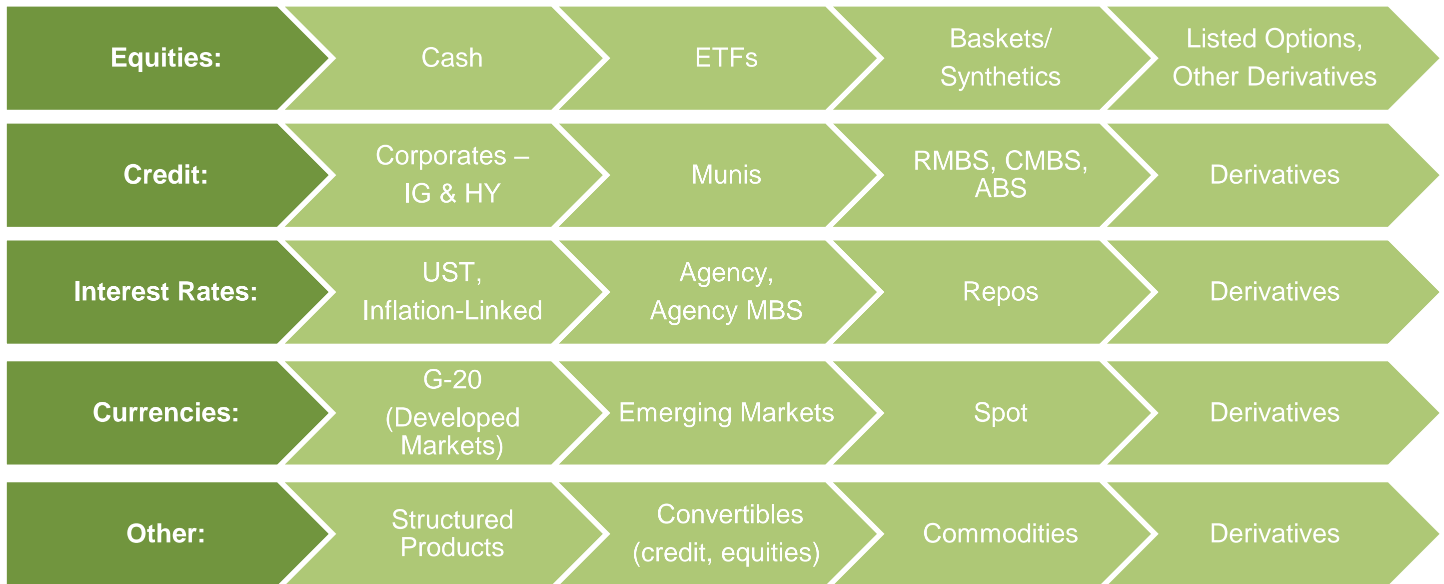
Focus: Low Cost, High Efficiency Execution



Note: Firms may use different terminology, group businesses differently, or offer different or additional services (may not be an all-inclusive list).

Products

The following depicts different product groups in markets and securities:



Note: Firms may use different terminology, group businesses differently, or offer different or additional services (may not be an all-inclusive list). ETF = exchange-traded fund. IG = investment grade; HY = high-yield; UST = U.S. Treasuries; MBS = mortgage-backed security; RMBS = residential MBS, CMBS = commercial MBS. ABS = asset-backed security. Derivatives can include exchange-traded (ETD) and/or over-the-counter (OTC). G-20 = Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, South Korea, Japan, Mexico, Russia, Saudi Arabia, South Africa, Turkey, the United Kingdom, the United States, and the European Union. Structured products provide a return based on the performance of an asset (equity, interest rates, property markets, etc.).

Prime Services

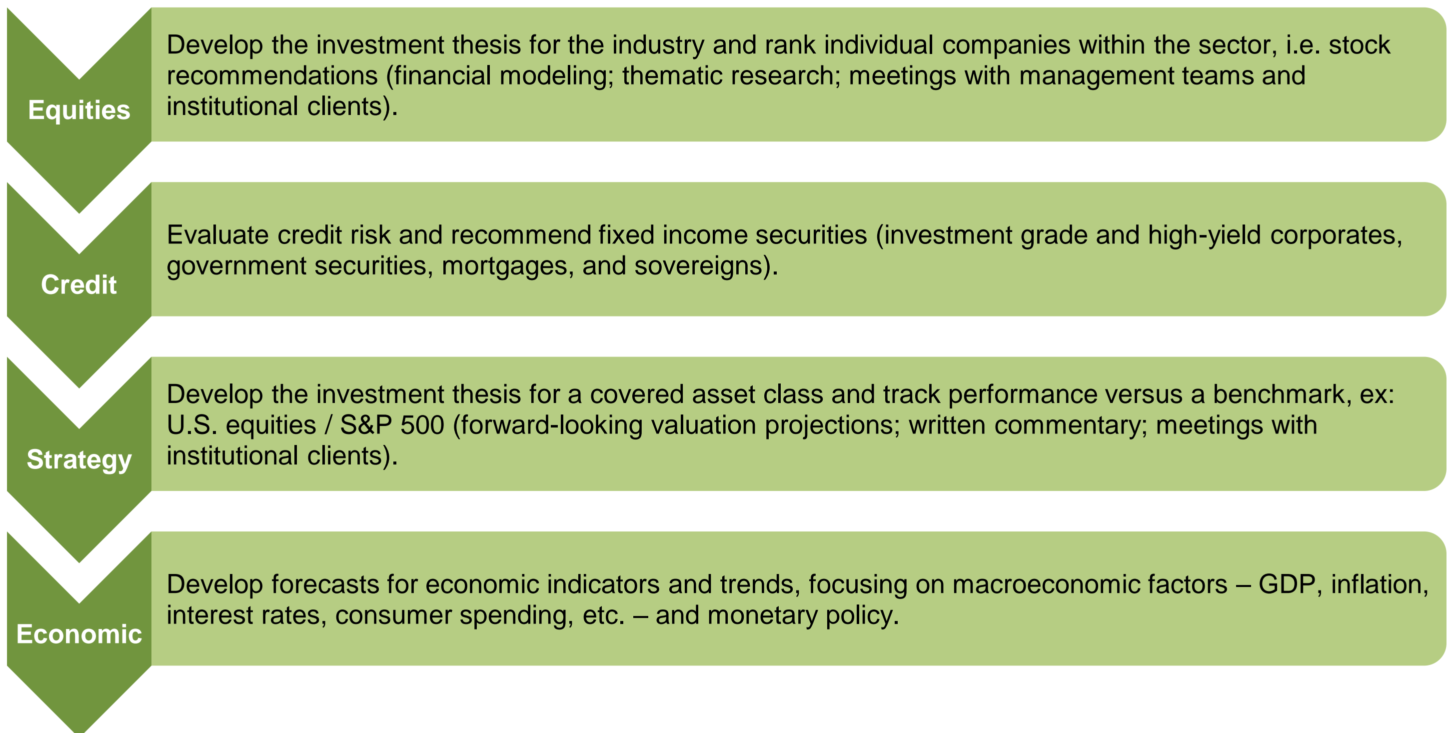
Prime services serve institutional clients with active trading operations and therefore complex financial needs. The following depicts various prime services:

Note: Firms may use different terminology, group businesses differently, or offer different or additional services (may not be an all-inclusive list).

Research: Investment Recommendations

Research analysts provide insight on a diverse range of topics and make security recommendations. The following depicts various types of research:

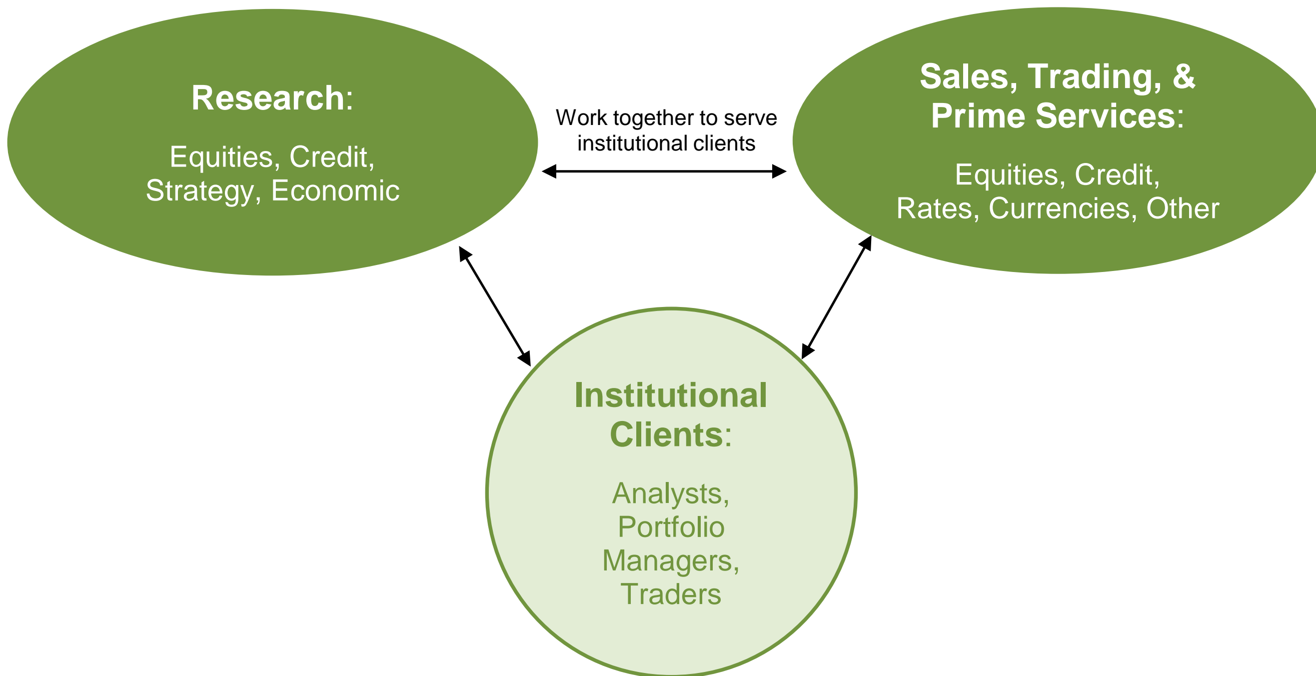
Types of Research



Note: Firms may use different terminology, group businesses differently, or offer different or additional services (may not be an all-inclusive list).

Interaction with Institutional Clients

The following depicts ways research analysts interact with institutional clients:



Note: Firms may use different terminology, group businesses differently, or offer different or additional services (may not be an all-inclusive list).

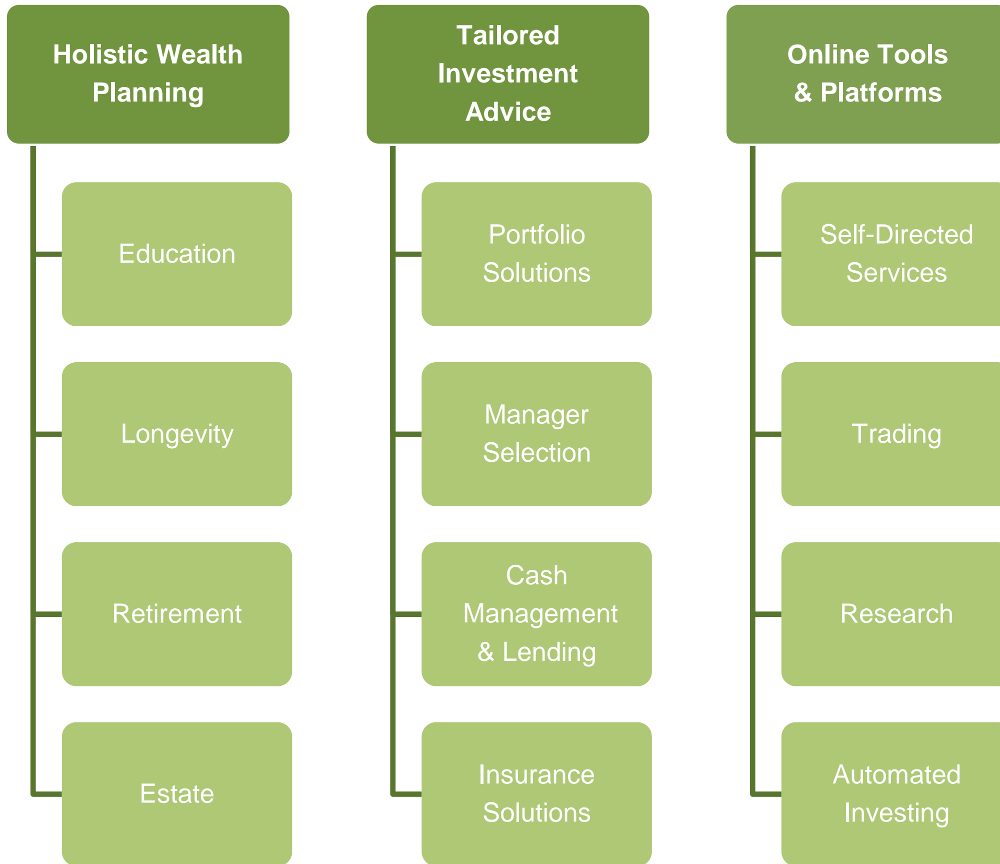
Asset Management: Providing Institutional Solutions

The following depicts ways asset managers service institutional clients:

Note: Firms may use different terminology, group businesses differently, or offer different or additional services (may not be an all-inclusive list). This includes institutions that manage money on behalf of individual investors.

Private Wealth Management: Individual Client Solutions

The following depicts ways private wealth managers service individual investors:



Note: Firms may use different terminology, group businesses differently, or offer different or additional services (may not be an all-inclusive list).

Banking & Lending

The following depicts divisions and products in the banking and lending division:

Note: Firms may use different terminology, group businesses differently, or offer different or additional services (may not be an all-inclusive list).

Appendix: Capital Markets Terms to Know

Statistics	
Y/Y	Year over Year
Q/Q	Quarter over Quarter
M/M	Month over Month
W/W	Week over Week
D/D	Day over day
YTD	Year to Date
QTD	Quarter to Date
MTD	Month to Date
WTD	Week to Date
BPS	Basis Points
PPS	Percentage Points
CAGR	Compound Annual Growth Rate
RHS	Right hand side (for charts)

Other	
AUM	Assets Under Management
DCM	Debt Capital Markets
ECM	Equity Capital Markets

Regulators	
North America	
FINRA	Financial Industry Regulatory Authority (United States)
SEC	Securities and Exchange Commission (United States)
CSC	Canadian Securities Administrators
European Union	
ESMA	European Securities and Markets Authority
AMF	Autorité des marchés financiers (France)
BaFin	Federal Financial Supervisory Authority (Germany)
FINMA	Swiss Financial Market Supervisory Authority (Switzerland)
United Kingdom	
FCA	Financial Conduct Authority
AsiaPac	
ASIC	Australian Securities and Investments Commission
CSRC	China Securities Regulatory Commission
SFC	Securities and Futures Commission (Hong Kong)
SEBI	Securities and Exchange Board of India
FSA	Financial Services Agency (Japan)
MAS	Monetary Authority of Singapore

Trading	
ADV	Average Daily Trading Volume
Algo	Algorithm (algorithmic trading)
ATS	Alternative Trading System
Best Ex	Best Execution
BPS	Basis Points
CLOB	Central Limit Order Book
D2C	Dealer-to-Client
D2D	Dealer-to-Dealer
ECN	Electronic Communication Network
ETP	Electronic Trading Platforms
HFT	High-Frequency Trading
IDB	Inter-Dealer Broker
IOI	Indication of Interest
MM	Market Maker
OTC	Over-the-Counter
SDP	Single-dealer platform
Bid	An offer made to buy a security
Ask, Offer	The price a seller is willing to accept for a security
Spread	The difference between the bid and ask price prices for a security, an indicator of supply (ask) and demand (bid)
NBBO	National Best Bid and Offer
Locked Market	A market is locked if the bid price equals the ask price
Crossed Market	A bid is entered higher than the offer or an offer is entered lower than the bid
Opening Cross	To determine the opening price of a stock, accumulating all buy and sell interest prior to the market open
Closing Cross	To determine the closing price of a stock, accumulating all buy and sell interest prior the market close

Order Types	
AON	All or none; an order to buy or sell a stock that must be executed in its entirety, or not executed at all
Block	Trades with at least 10,000 shares in the order
Day	Order is good only for that trading day, else cancelled
FOK	Fill or kill; must be filled immediately and in its entirety or not at all
Limit	An order to buy or sell a security at a specific price or better
Market	An order to buy or sell a security immediately; guarantees execution but not the execution price
Stop	(or stop-loss) An order to buy or sell a stock once the price of the stock reaches the specified price, known as the stop price

Post Trade	
DTCC	The Depository Trust and Clearing Corporation
CSD	Central Securities Depository
CCP	Central Counterparty Clearing House
CP	Counterparty
IM	Initial Margin
VM	Variation Margin
MPR	Margin Period at Risk
T	Trade Date
T+1	Settlement Date

Investors	
Institutional	Asset managers, endowments, pension plans, foundations, mutual funds, hedge funds, family offices, insurance companies, banks, etc.; fewer protective regulations as assumed to be more knowledgeable and better able to protect themselves
Individual	Self-directed or advised investing

Equities	
EMS	Equity Market Structure
NMS	National Market System
Reg NMS	Regulation National Market System
SIP	Security Information Processor; aggregates all exchange's best quotes, sent back out to the market in one data stream
PFOF	Payment For Order Flow
Tick Size	Minimum quote increment of a trading instrument
CAT	Consolidated Audit Trail
SRO	Self Regulatory Organization

ETFs/Funds	
AP	Authorized Participant
PCF	Portfolio Composition File
NAV	Net Asset Value
IIV	Intraday Indicative Value
ETF	Exchange-Traded Fund
ETP	Exchange-Traded Product
MF	Mutual Fund
OEF	Open-End Fund
CEF	Closed-End Fund
UIT	Unit Investment Trust

Options	
Call	The right to buy the underlying security, on or before expiration
Put	The right to sell the underlying security, on or before expiration
Holder	The buyer of the contract
Writer	The seller of the contract
American	Option may be exercised on any trading day on or before expiration
European	Option may only be exercised on expiration
Exercise	To put into effect the right specified in a contract
Underlying	The instrument on which the options contract is based; the asset/security being bought or sold upon exercise notification
Expiration	The set date at which the options contract ends, or ceases to exist, or the last day it can be traded
Stock Price	The price at which the underlying stock is trading, fluctuates continuously
Strike Price	The set price at which the options contract is exercised, or acted upon
Premium	The price the option contract trades at, or the purchase price, which fluctuates constantly
Time Decay	The time value portion of an option's premium decreases as time passes; the longer the option's life, the greater the probability the option will move in the money
Intrinsic Value	The in-the-money portion of an option's premium
Time Value	(Extrinsic value) The option premium (price) of the option minus intrinsic value; assigned by external factors (passage of time, volatility, interest rates, dividends, etc.)
In-the-Money	For a call option, when the stock price is greater than the strike price; reversed for put options
At-the Money	Stock price is identical to the strike price; the option has no intrinsic value
Out-of-the-Money	For a call option, when the stock price is less than the strike price; reversed for put options

Equity Capital Formation	
IPO	Initial Public Offering; private company raises capital buy offering its common stock to the public for the first time in the primary markets
SPAC	Special Purpose Acquisition Company; blank check shell corporation designed to take companies public without going through the traditional IPO process
Bought Deal	Underwriter purchases a company's entire IPO issue and resells it to the investing public; underwriter bears the entire risk of selling the stock issue
Best Effort Deal	Underwriter only guarantees the issuer it will make a best effort attempt to sell the shares to investors at the best price possible; issuer can be stuck with unsold shares
Secondary	(Follow-on) Issuance of shares to investors by a public company already listed on an exchange
Direct Listing	(Direct placement, direct public offering) Existing private company shareholders sell their shares directly to the public without underwriters. Often used by startups or smaller companies as a lower cost alternative to a traditional IPO. Risks include, among others, no support for the share sale and no stock price stabilization from the underwriter after the share listing.

Underwriting	
Underwriting	Guarantee payment in case of damage or financial loss and accept the financial risk for liability arising from such guarantee in a financial transaction or deal
Underwriter	Investment bank administering the public issuance of securities; determines the initial offering price of the security, buys them from the issuer and sells them to investors.
Bookrunner	The main underwriter or lead manager in the deal, responsible for tracking interest in purchasing the IPO in order to help determine demand and price (can have a joint bookrunner)
Lead Left Bookrunner	Investment bank chosen by the issuer to lead the deal (identified on the offering document cover as the upper left hand bank listed)
Syndicate	Investment banks underwriting and selling all or part of an IPO
Arranger	The lead bank in the syndicate for a debt issuance deal
Greenshoe	Allows underwriters to sell more shares than originally planned by the company and then buy them back at the original IPO price if the demand for the deal is higher than expected, i.e. an over-allotment option

Documentation	
Pitch	Sales presentation by an investment bank to the issuer, marketing the firm's services and products to win the mandate
Mandate	The issuing company selects the investment banks to underwrite its offering
Engagement Letter	Agreement between issuer & underwriters clarifying: terms, fees, responsibilities, expense reimbursement, confidentiality, indemnity, etc.
Letter of Intent	Investment banks' commitment to the issuer to underwrite the IPO
Underwriting Agreement	Issued after the securities are priced, underwriters become contractually bound to purchase the issue from the issuer at a specific price
Registration Statement	Split into the prospectus and private filings, or information for the SEC to review but not distributed to the public, it provides investors adequate information to perform their own due diligence prior to investing
The Prospectus	Public document issued to all investors listing: financial statements, management backgrounds, insider holdings, ongoing legal issues, IPO information and the ticker to be used once listed
Red Herring Document	An initial prospectus with company details, but not inclusive of the effective date of offering price, filed with the SEC
Tombstone	An announcement that securities are available for sale. (Also a plaque awarded to celebrate the completion of a transaction or deal)

Process	
Roadshow	Investment bankers take issuing companies to meet institutional investors to interest them in buying the security they are bringing to market
Non-Deal Roadshow	Research analysts and sales personnel take public companies to meet institutional investors to interest them in buying a stock or update existing investors on the status of the business and current trends
Pricing	Underwriters and the issuer will determine the offer price, the price the shares will be sold to the public and the number of shares to be sold, based on demand gauged during the road show and market factors
Stabilization	Occurs for a short period of time after the IPO if order imbalances exist, i.e. the buy and sell orders do not match; underwriters will purchase shares at the offering price or below to move the stock price and rectify the imbalance
Quiet Period	(Cooling off period) The SEC mandates a quiet period on research recommendations, lasting 10 days (formerly 25 days) after the IPO

SEC Filings	
Reg S-K	Regulation which prescribes reporting requirements for SEC filings for public companies
Reg S-X	Regulation which lays out the specific form and content of financial reports, specifically the financial statements of public companies
Form S-1	Registration statement for U.S. companies (described above)
Form F-1	Registration statement for foreign issuers of certain securities, for which no other specialized form exists or is authorized
Form 10-Q	Quarterly report on the financial condition and state of the business (discussion of risks, legal proceedings, etc.), mandated by the SEC
Form 10-K	More detailed annual version of the 10Q, mandated by the SEC
Form 8-K	Current report to announce major events shareholders should know about (changes to business & operations, financial statements, etc.), mandated by the SEC
EGC	Emerging Growth Company; qualified companies may choose to follow disclosure requirements that are scaled for newly public

Fixed Income	
CUSIP	Committee on Uniform Securities Identification Procedures; a nine character security identifier
FICC	Fixed Income, Currencies and Commodities
FI	Fixed Income
TRS	Total Return Swap

Rates Markets	
UST	U.S. Treasury Securities
FRN	Floating Rate Note
T-Bill	U.S. Treasury Bill
T-Note	U.S. Treasury Note
T-Bond	U.S. Treasury Bond
TIPS	Treasury Inflation Protected Securities
Repo	Repurchase Agreement; also have reverse repos
Agency	Federal Agency Securities
FAMC	Farmer Mac/Federal Agricultural Mortgage Corporation
FCS	Farm Credit System
FHLB	Federal Home Loan Banks
FHLMC	Freddie Mac/Federal Home Loan Mortgage Corporation
FNMA	Fannie Mae/Federal National Mortgage Association
GNMA	Ginnie Mae/Government National Mortgage Association
TVA	Tennessee Valley Authority

Credit Markets	
Corporates	Corporate Bonds
HY	High Yield Bond
IG	Investment Grade Bond
Munis	Municipal Securities
GO	General Obligation Bond
Revenue	Revenue Bond

Securitized Products	
MBS	Mortgage-Backed Security
CMO	Collateralized Mortgage Obligation
CMBS	Commercial MBS
RMBS	Residential MBS
ABS	Asset-Backed Securities (auto, credit card, home equity, student loans, etc.)
CDO	Collateralized Debt Obligation

Money Markets (MM)	
CP	Commercial Paper
ABCP	Asset-Backed Commercial Paper
MMF	Money Market Funds

SIFMA Insights Research Reports

SIFMA Insights: www.sifma.org/insights

- Ad hoc reports on timely market themes
- Annual Market Structure Compendiums: Equity and Fixed Income
- COVID Related Market Turmoil Recaps: Equities; Fixed Income and Structured Products

Monthly Market Metrics and Trends: www.sifma.org/insights-market-metrics-and-trends

- Statistics on volatility and equity and listed options volumes
- Highlights an interesting market trend

Market Structure Primers: www.sifma.org/primers

- Capital Markets: An Overview of Capital Markets and the Role of Financial Institutions
- Global Equity Market Comparison
- Capital Formation & Listings Exchanges
- Equities
- Options
- ETFs
- Fixed Income & Electronic Trading

Conference Debriefs

- Insights from market participants into top-of-mind topics
- Pre-Conference Survey Comparison, compares survey results across various conferences

Equity Market Structure Analysis

- The ABCs of Equity Market Structure: How US Equity Markets Work and Why
- Analyzing the Meaning Behind the Level of Off-Exchange Trading, Part II
- Analyzing the Meaning Behind the Level of Off-Exchange Trading
- Why Market Structure and Liquidity Matter

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