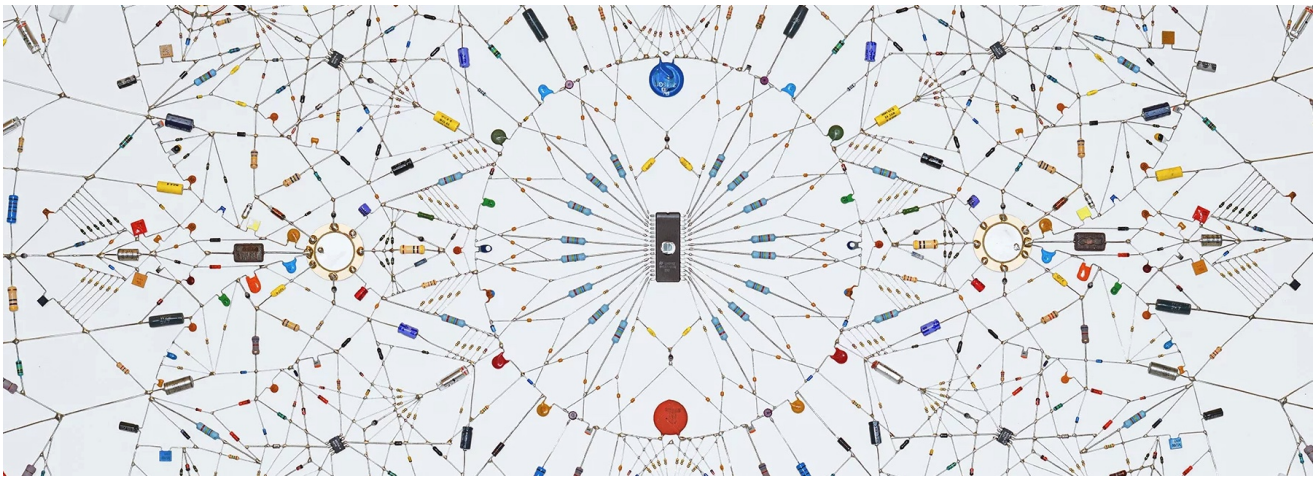


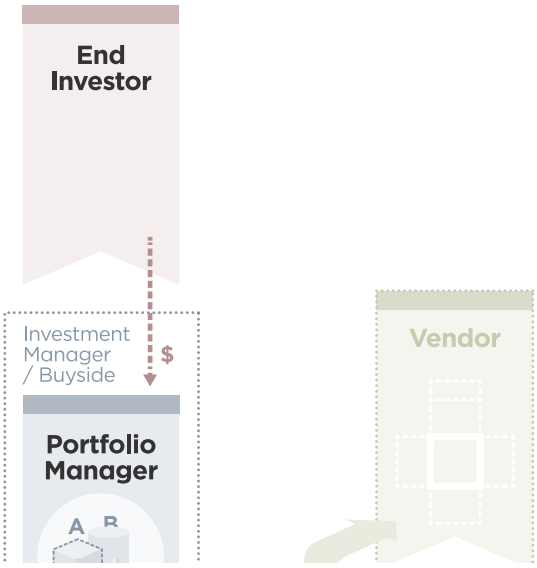
Market Structure Primer

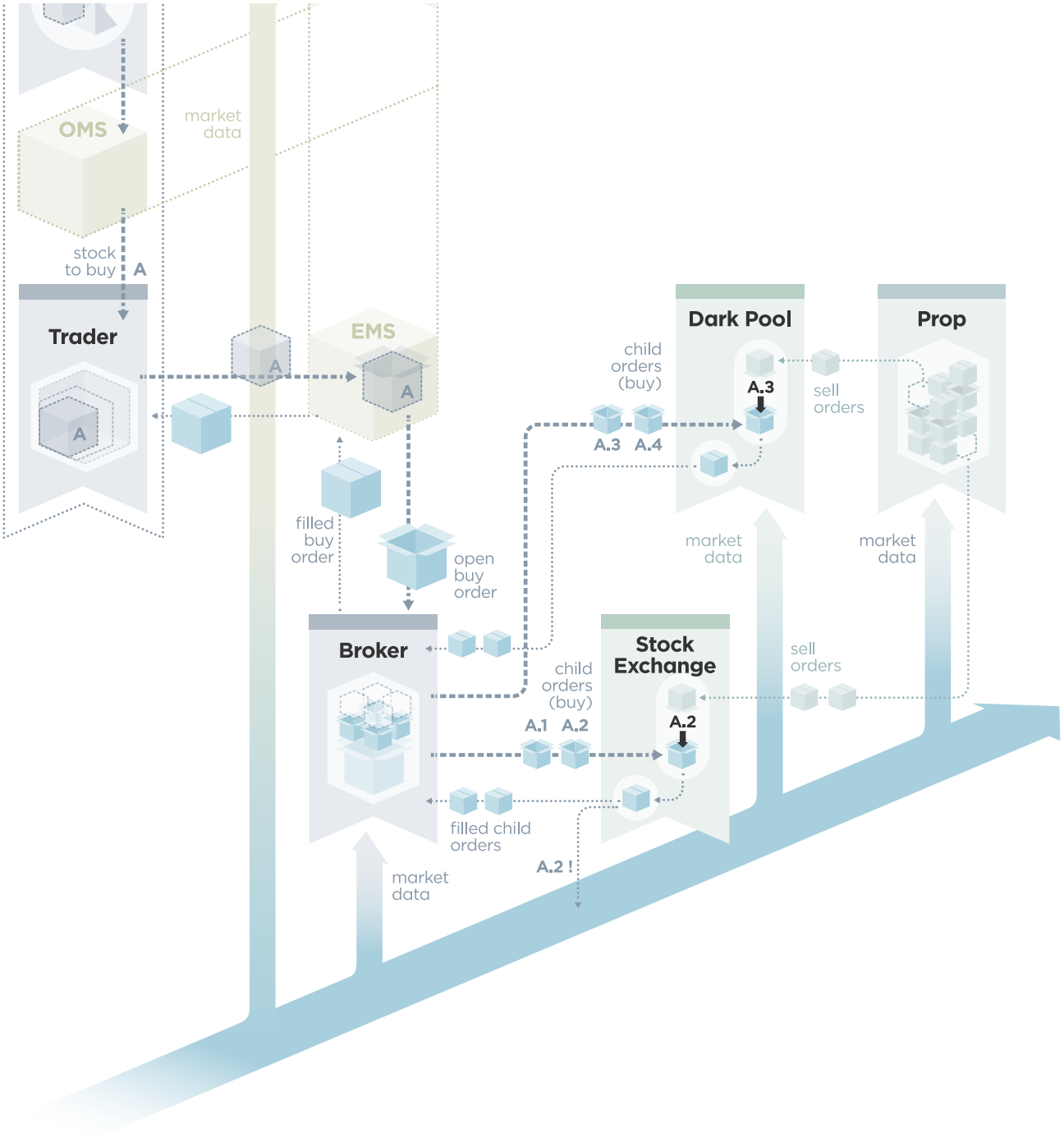
Get Started!

The purpose of this document is to provide an overview of the US equity trading landscape. It started as an onboarding document to help new hires who aren't as well versed in market structure. It can be read start to finish in order, or you can jump around. The visual Life Cycle of an Order also provides a handy view of the various events and entities involved in the process of a trade - from conception to completion. For those with little to no prior knowledge, the three core sections on market participants, mechanisms of communication between participants, and a birds-eye view of overall market activity should provide a working understanding of trading in the US equities market as it is today. Over time, we will be adding material that delves more deeply into further topics, especially into market stucture history and the conflicts of interest that evolve along with market structure.

The Life Cycle of An Order/Trade

This graphic illustrates how the various participants in the stock market interact to form the lifecycle of an order placed by an institutional investor, from its inception through to any trades that result. At the periphery of the process (outside of the stock market itself), end investors give money to an investment manager. The portfolio manager decides what stocks to buy and sell, and in what quantities. When the portfolio manager decides to buy/sell a stock, they communicate this to a trader, typically through a piece of technology known as an order management system (OMS). The trader makes high level decisions about how the trade(s) should be accomplished, like what broker(s) should be used and what algorithms. The trader's instructions are then communicated to a broker-dealer, typically through a piece of technology known as an execution management system (EMS). The broker consumes real-time market data from various sources, and uses this to make low level decisions about how best to implement the instructions in current market conditions. The broker produces "child" orders derived from the "parent" order instructions, and routes them to trading venues such as exchanges and dark pools. On these venues, the child orders may interact (either immediately or after some waiting) with orders submitted by counterparties like themselves or by proprietary traders, so-called because they trade on their own behalf, not on behalf of external end investors. When two orders on a venue are matched in a trade, the venue sends the relevant information back to the brokers/proprietary traders, and also reports it to the "tape," meaning that it becomes part of the market data that others consume.




OMS
market data
stock to buy A
Trader
A
A
EMS
A
filled buy order
open buy order
Broker
child orders (buy)
A.3 A.4
Dark Pool
A.3
sell orders
Prop
market data
market data
sell orders
Stock Exchange
child orders (buy)
A.1 A.2
A.2
filled child orders
A.2 !
market data