

Accessing Markets Sourcing Liquidity

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▶ Primary Objectives:

1. Define the Structure/Framework of the US Equity Derivatives Market
2. Discuss Access Points and Execution Methods
 - ❖ Electronic
 - ❖ High-Touch/Capital Commitment
 - ❖ Agency Broker Dealer
3. Examine Liquidity Landscape and Fragmentation

▶ Takeaways:

- Provide Deeper Understanding of the Execution Process
- Supply Better Understanding of the Liquidity Ecosystem Interactions
- Create Framework for Determining the Best Execution Method for an Order



US Equity Derivatives Market Framework and Products

- ▶ Auction Marketplace with “LIT” Transparency Provided by Market Makers
- ▶ Trades Do Not Occur By Appointment or Thru “Cross Block” Facilities
- ▶ 16 Equity Derivative Exchanges
- ▶ Multi-List Products - Traded on all 16 Exchanges
 - ▶ Single Stock Options - ETF Options - FLEX Options
- ▶ Index Products - Traded at 1 Exchange
 - ▶ Proprietary - (SPX - VIX - MSCI - RUT)
 - ▶ Standardized Contracts with Larger Notional Value and Unique Attributes
- ▶ Over The Counter (OTC) - Requires ISDA Agreement - Single Counterparty
- ▶ Option Duration
 - ▶ Weekly - Quarterly - Monthly - Standard 3rd Friday - AM or PM Settled



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Access Points:

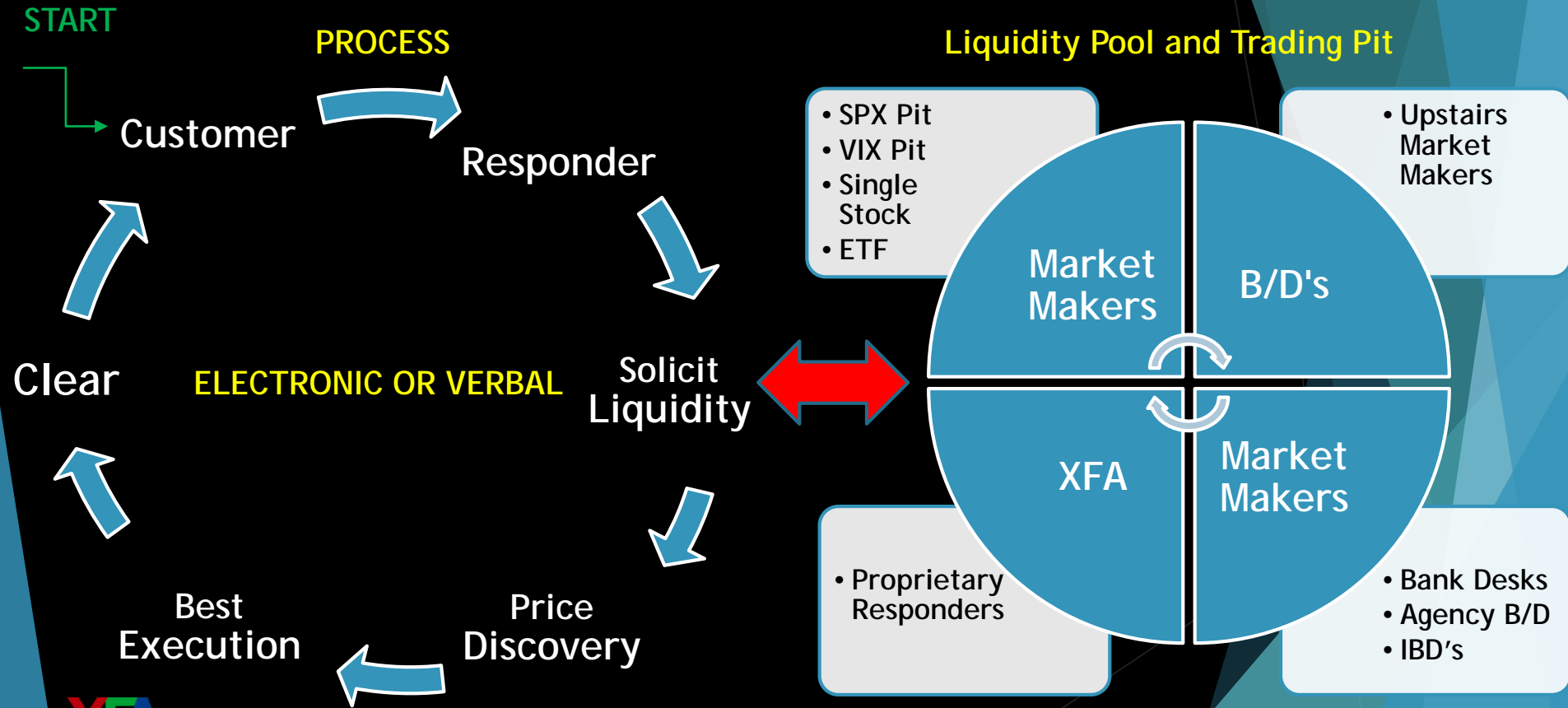
- ▶ Electronic
 - ▶ Low-Touch
- ▶ High-Touch
 - ▶ Bank = Capital Commitment
 - ▶ Agency Broker/Dealer
- ▶ ATS - Request For Quote (RFQ)
 - ▶ Limited Responders
 - ▶ Provides Electronic Audit Trail

Factors to Consider:

- ▶ Agency or Capital Commitment
- ▶ Liquidity Complex Fragmentation
- ▶ Responders - Obligated vs. Choice
- ▶ Liquidity Depth and Spreads
- ▶ Quote Risk Management (QRM's)



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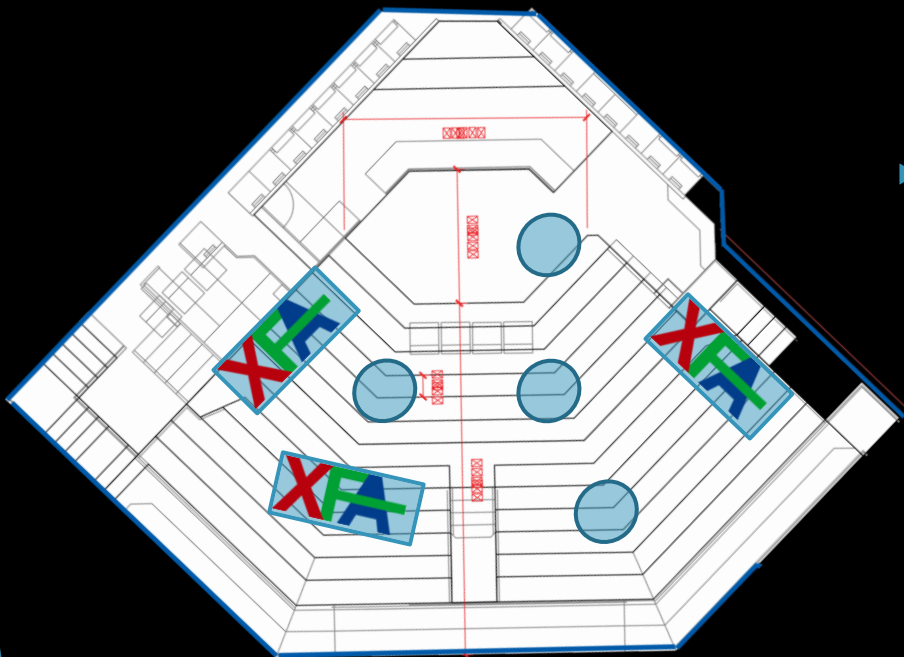




- ▶ S&P 500 Index represents approximately 80% of the total market value of U.S. equities
 - ▶ SPX Options trade on Cboe electronically and in open outcry
 - ▶ SPX is one of the most liquid options markets in the world
 - ▶ The SPX options market is supported by 19 professional liquidity providing firms (i.e., market makers)



SPX Trading Pit



- ▶ The SPX trading crowd (or “pit”) is made up of approximately 200 people and is set up like an amphitheater.
 - ▶ Within the pit reside both
 - ▶ *Brokers* - represent customer orders
 - ▶ *Market Makers* - provide liquidity (or “markets”) to the brokers looking to fill customer orders
 - ▶ Each brokerage group is represented by the blue circles
 - ▶ Market Makers then fill in around each brokerage group competing to provide liquidity and interact with the order flow from each broker