BC3402 Tutorial 7

Q2 - ATS

Done by: Group 4

(a) The rapid development of alternative trading systems (ATS) across the world has significantly impacted the market share of traditional stock exchanges.

What do you think are the three (3) main factors that help to fuel this growth of ATS?

Main factors that fuel the growth of ATS

Online transactions
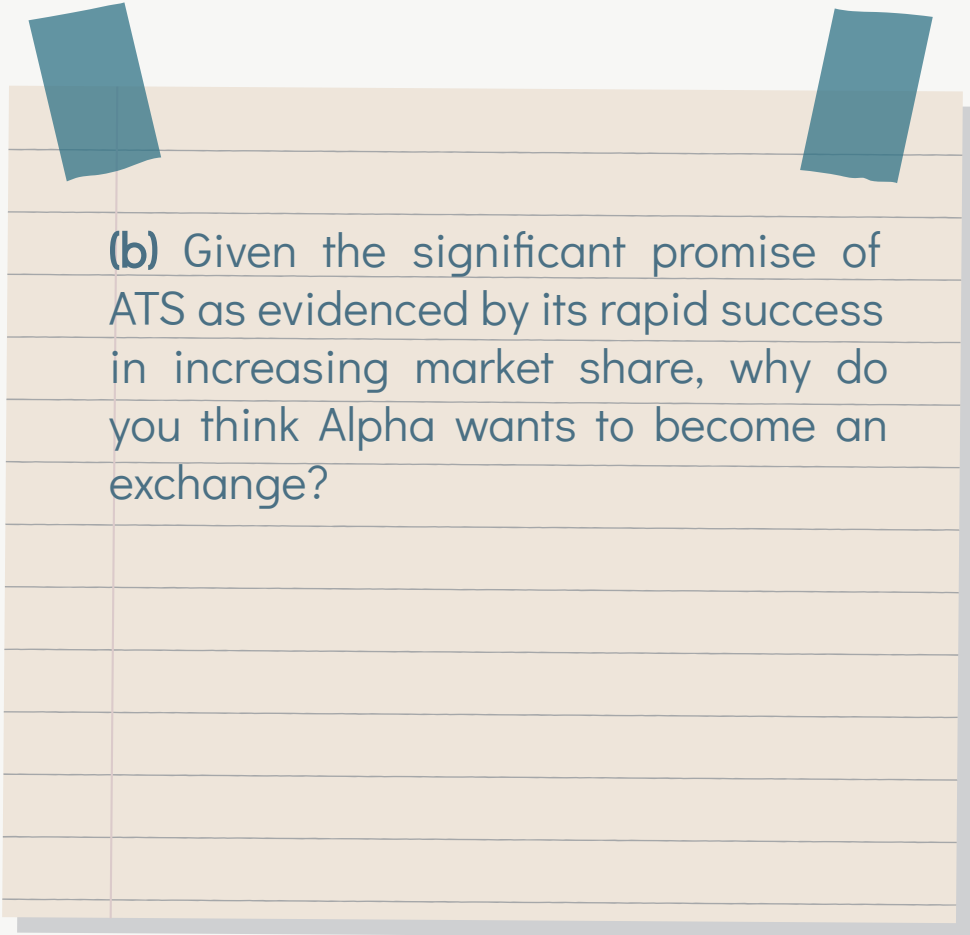
No middleman

New technologies

Online transactions

➢ Traders from different geographical areas of the world can conduct trades easily

➢ Traders can make trades based on after-hours news

➢ ATS are especially useful for those trading in large quantities

No middleman

➢ Solves the conflict-of-interest problem that exists between customers and broker-dealer firms

➢ Trading in real time allows investors to react to developments immediately

➢ Reduces the cost of transactions

New technologies

➢ Increased efficiency and competition

➢ Broad reduction in explicit trading costs for both institutional and individual investors

➢ Technology continues to drive the evolution of equity markets

(b) Given the significant promise of ATS as evidenced by its rapid success in increasing market share, why do you think Alpha wants to become an exchange?
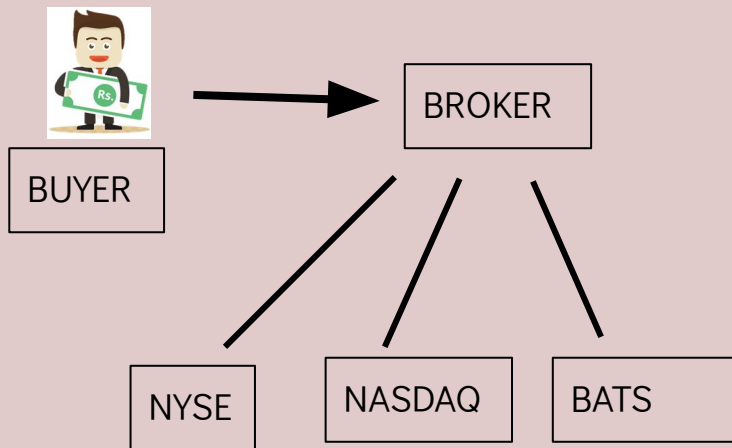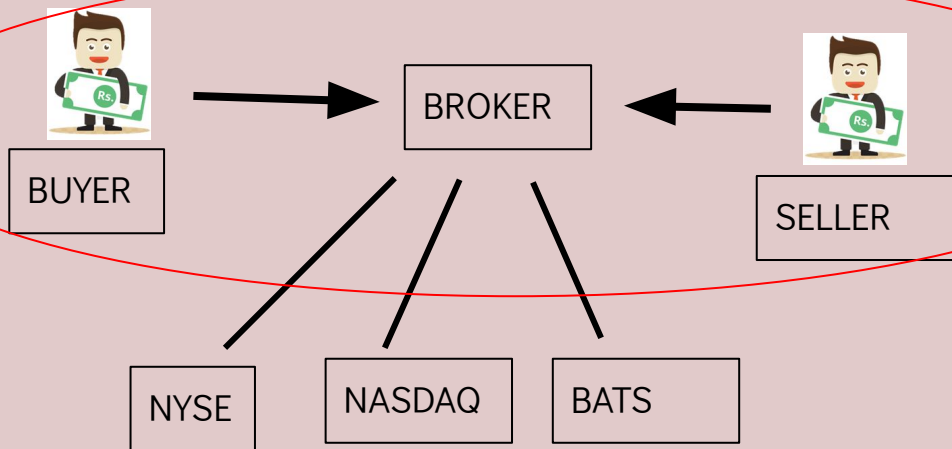
ATS

Alternative trading system (ATS) is an non-exchange trading venue that matches buyers and sellers for transactions.

Trading information occured on ATS is not publicly available, which is especially popular for traders who wish to trade large amounts of securities altogether.

BUYER

BROKER

NYSE

NASDAQ

BATS

Alpha realised that since they have enough clients who want to sell and buy, they can just make that exchange internally without the need to go to the exchange

In this case, alpha will not need to pay fees to the exchange for the transaction to occur. This allows them to cut cost and to be more profitable.

Furthermore, Alpha can also earn the listing fee by becoming an exchange.

(c) One purpose of a trade execution venue is to determine the underlying price of the trading security (i.e. price discovery).

How does an ATS determine the executed price of a particular security?

Price Discovery

Price discovery is the overall process, whether explicit or inferred, of setting the spot price or the proper price of an asset, security, commodity, or currency based on the principles of supply and demand.

ATS Categories

(1) Electronic Communication Networks (ECNs)

Enables investors to trade securities *without a middleman* (specialist/dealer)

Order Driven Market

ECN broker through a computer based system **consolidates** price quotations *(bid ask quotes)* from several market participants then **automatically matches and execute orders.**

- ECNs tend to display the price and the size of limit orders real time anonymously (open limit order book)

(1) Electronic Communication Networks (ECNs)

Contributes to price discovery

- Buyer - seller matching on an agency basis

It only matches trades between other market participants and cannot trade against the client.

(2) Crossing Networks

Systems that cross **multiple orders at a single price** that do not allow orders to be crossed or executed outside of specified times

Crossing System

- Traders enter unpriced buy/sell orders
- System will match and determine the transacted price based on a variety of parameters. No negotiation.
- Crosses can occur at various times of the day/close
- Trades are typically executed at the midpoint of the mid-ask spread in primary markets, but could be priced using last sale price/other objective price.

(2) Crossing Networks

No price discovery

Details of the trade are not relayed through public channels
→ public quotes/ security prices are not affected & does not appear on order books

(d) In recent years, various stock exchanges have experienced immense competition from alternative trading systems (ATS) across the world.

What are some ways information technology can help reinvent the original business model of an exchange to increase its profits?

Pain points in traditional business model

Poor performance with large data

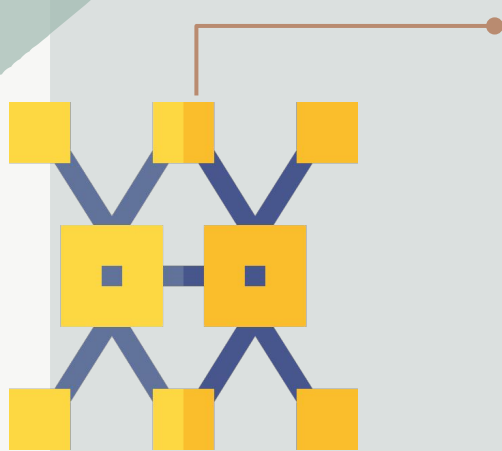Complex & non-friendly user access

Poor integration

(1) Poor performance with large data

Avg Exchange data volume = 2TB daily

Surge in data volumes makes it difficult to ingest, synthesize and make it consumable to downstream applications

(2) Complex & non-friendly user access

Ie. NYSE Euronext

NYSE Euronext trades 14 different types of products.
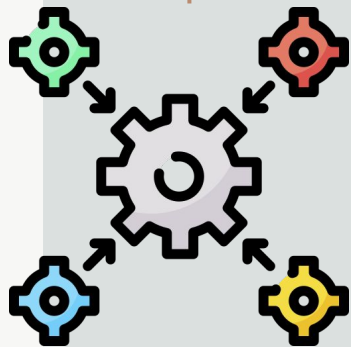
Different product types means different data structures, increasing integration challenge.

(3) Poor integration

Integration, an age old challenge

Unable to effectively integrate data across multiple exchanges and enterprises

(1) Faster Processing

➢ Ie. Adoption of MPP (Massively Parallel Processing) technology

➢ **High-speed trading**

➢ Streamline & prioritise information flow to achieve greater transaction speeds

➢ More efficient processes = greater productivity per dollar cost

(2) Better IT infrastructure

➤ Increased product offerings (technological services)

➤ **Provision of data/cloud services**

➤ Resolves existing integration challenge

➤ Lower operational costs & increases in revenue

Thank You!