

Fintech in Investment Management

1. INTRODUCTION

Fintech (finance + technology) is playing a major role in the fields of:

- investment management industry
- investment advisory services
- financial record keeping, blockchain and distributed ledger technology (DLT)

2. WHAT IS FINTECH

Some salient fintech developments related to the investment industry include:

- **Analysis of large data sets:**
 - traditional data sources include economic indicators, financial statements
 - non-traditional data sources (such as social media, sensor networks) to generate profits.
- **Analytical tools:** artificial intelligence (AI) helps identifying complex, non-linear relationships among gigantic datasets.
- **Automated trading:** lower transaction costs, market liquidity, secrecy, efficient trading etc.
- **Automated advice:** Robo-advisors or automated personal wealth management are low-cost alternates for retail investors.
- **Financial record keeping:** DLT provides advanced and secure means of record keeping and tracing ownership of financial assets on peer-to-peer (P2P) basis.

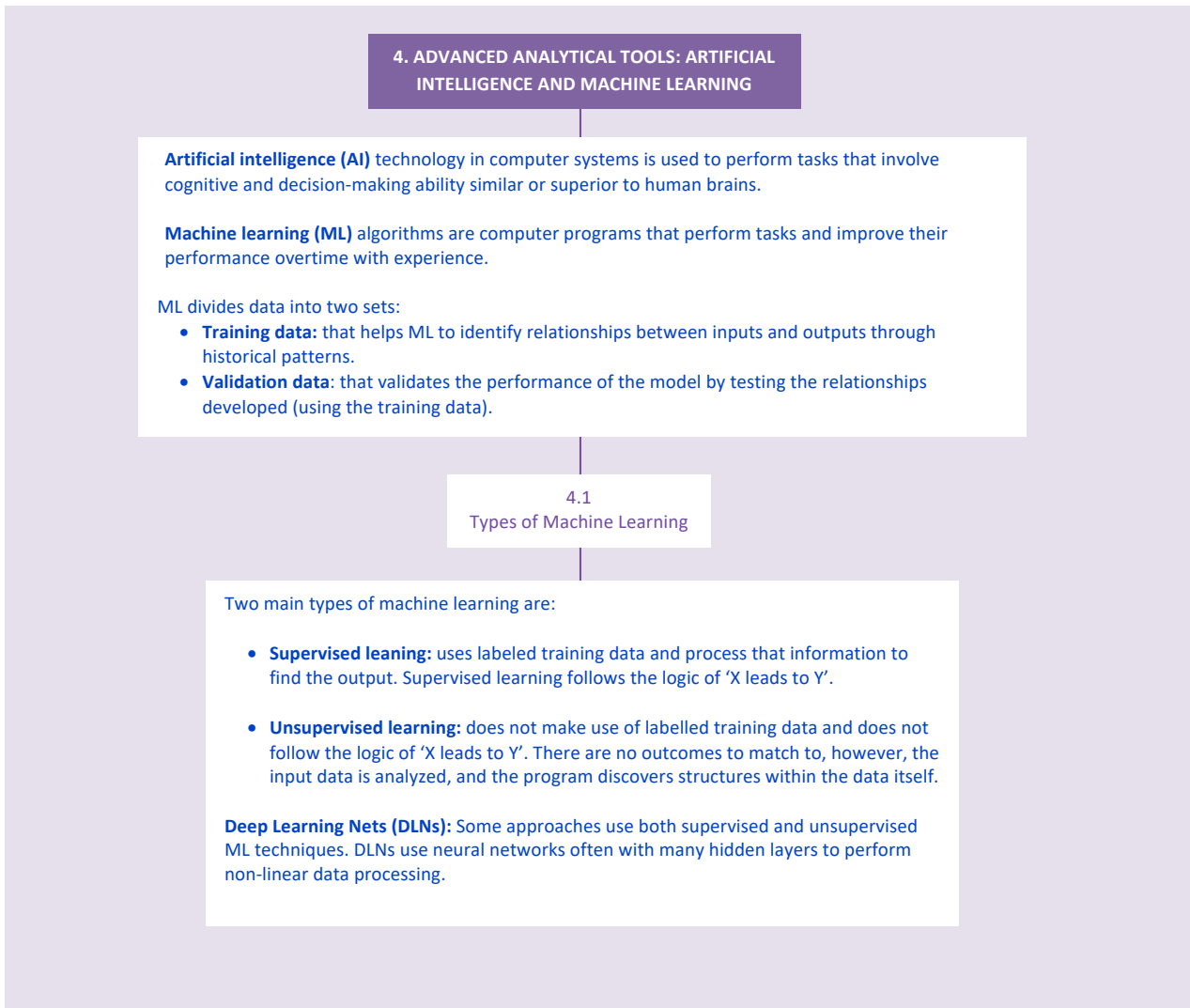
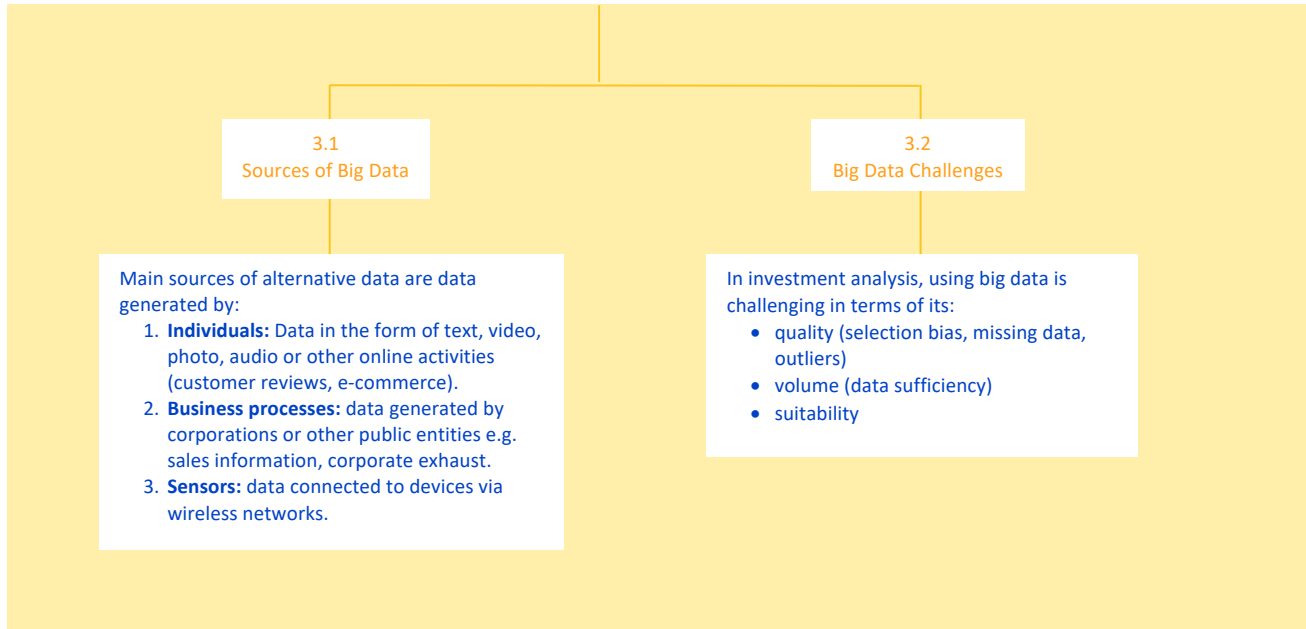
3. BIG DATA

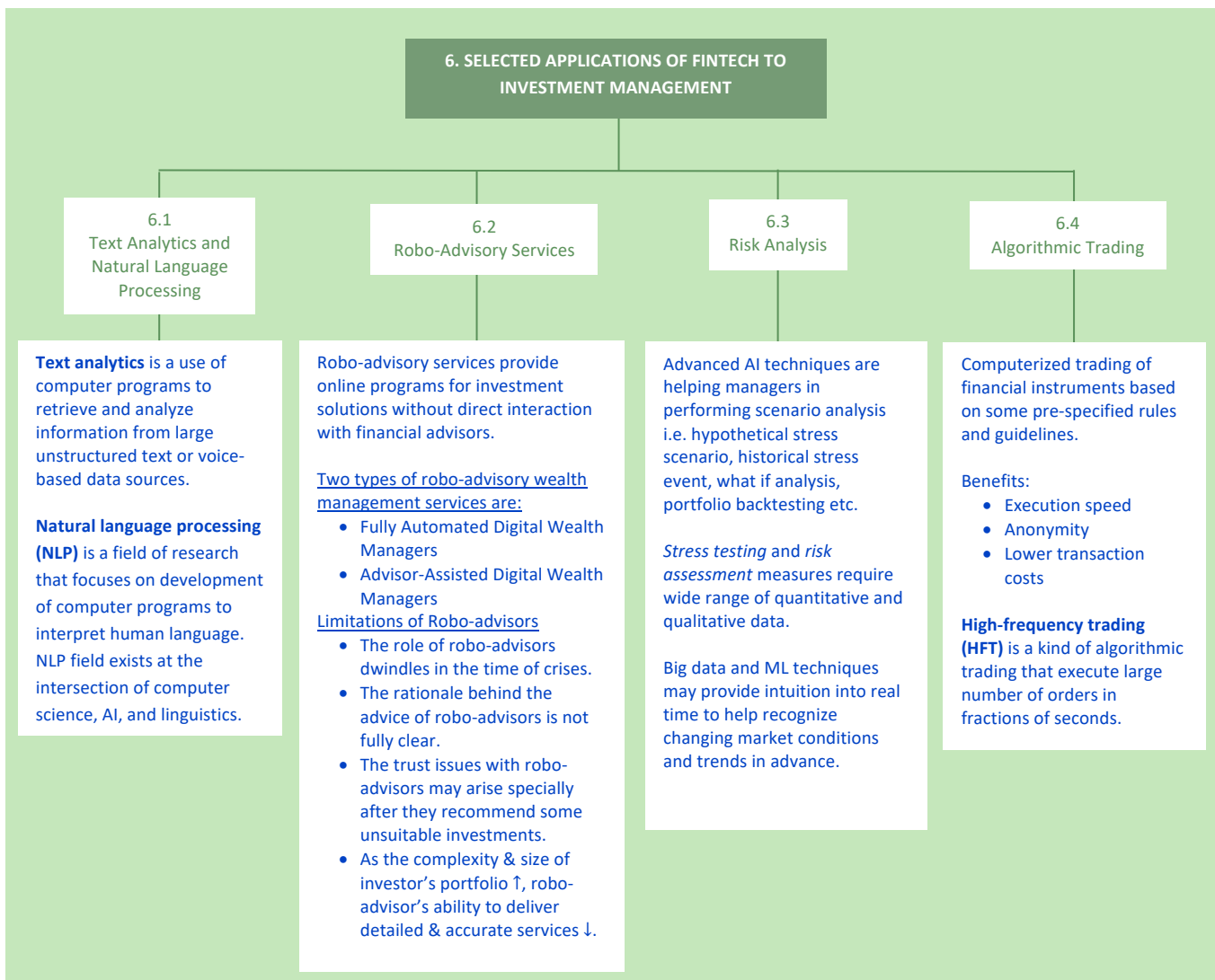
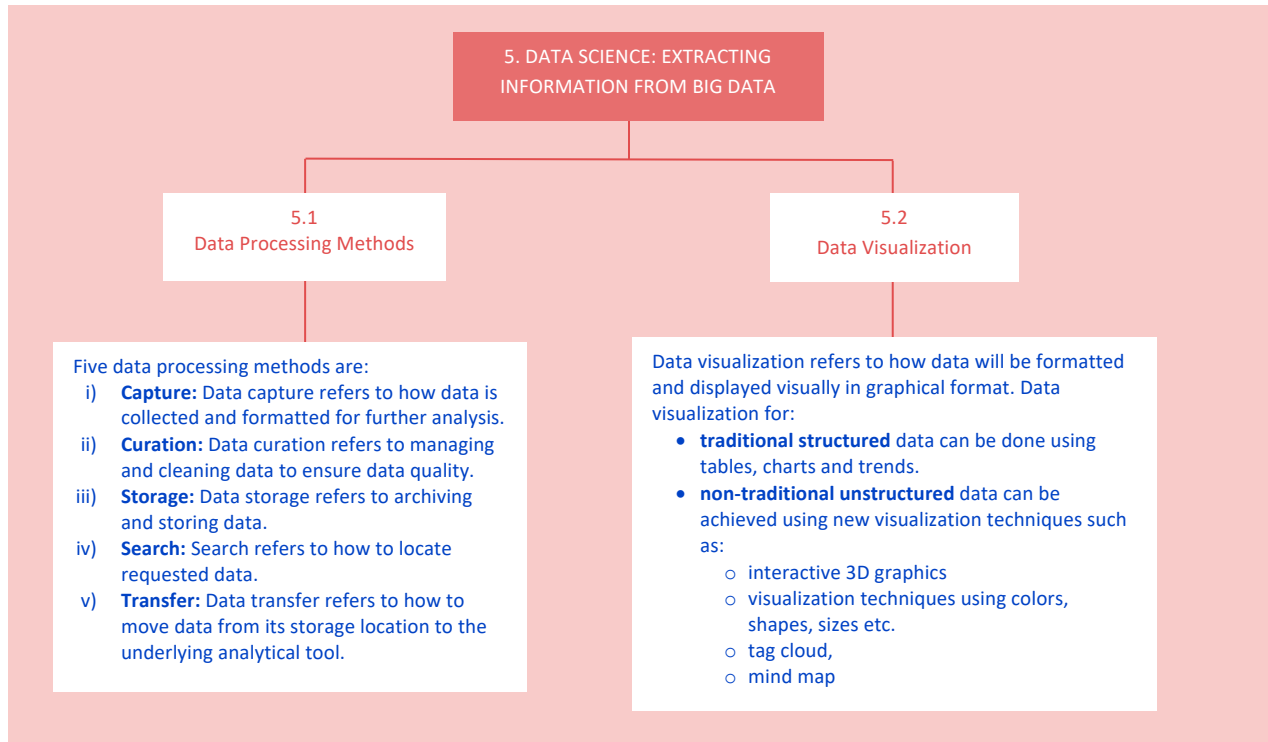
	Traditional		Non-traditional (alternate)
Sources	Institutions, Businesses, Government, Financial Markets	Sources	Social media, Sensor networks Company-used data, Electronic devices, Smart phones, Cameras, Microphones, Radio-frequency identification (RFID)
Forms of Data	Annual reports, Regulatory filings, Sales & earnings, Conference calls, Trade prices & volumes	Forms of Data	Posts, Tweets, Blogs, Email, Text messages, Web-traffic, Online news sites

Big data typically have the following features:

- Volume
- Velocity
- Variety

continue





7. DISTRIBUTED LEDGER TECHNOLOGY

Distributed ledger technology (DLT) – advancements in financial record keeping systems – offers efficient methods to generate, exchange and track ownership of financial assets on a peer-to-peer basis.

DLT advantages:

- i) accuracy
- ii) transparency
- iii) secure record keeping
- iv) speedy ownership transfer
- v) peer-to-peer interactions

Limitations:

- i) excessive energy consumption
- ii) not fully secure technology

Three basic elements of a DLT network are:

1. **Digital ledger** – a digital database to record & store transactions
2. A **consensus mechanism** - mechanism which ensures that entities verify the transactions and agree on the common state of the ledge
3. **Participant network** – a peer-to-peer network of nodes.

A **distributed ledger** is a digital database where transactions are recorded, stored and distributed among entities in a manner that each entity has a similar copy of digital data.

Blockchain is a digital ledger where transactions are recorded serially in blocks that are then joined using cryptography

