

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.

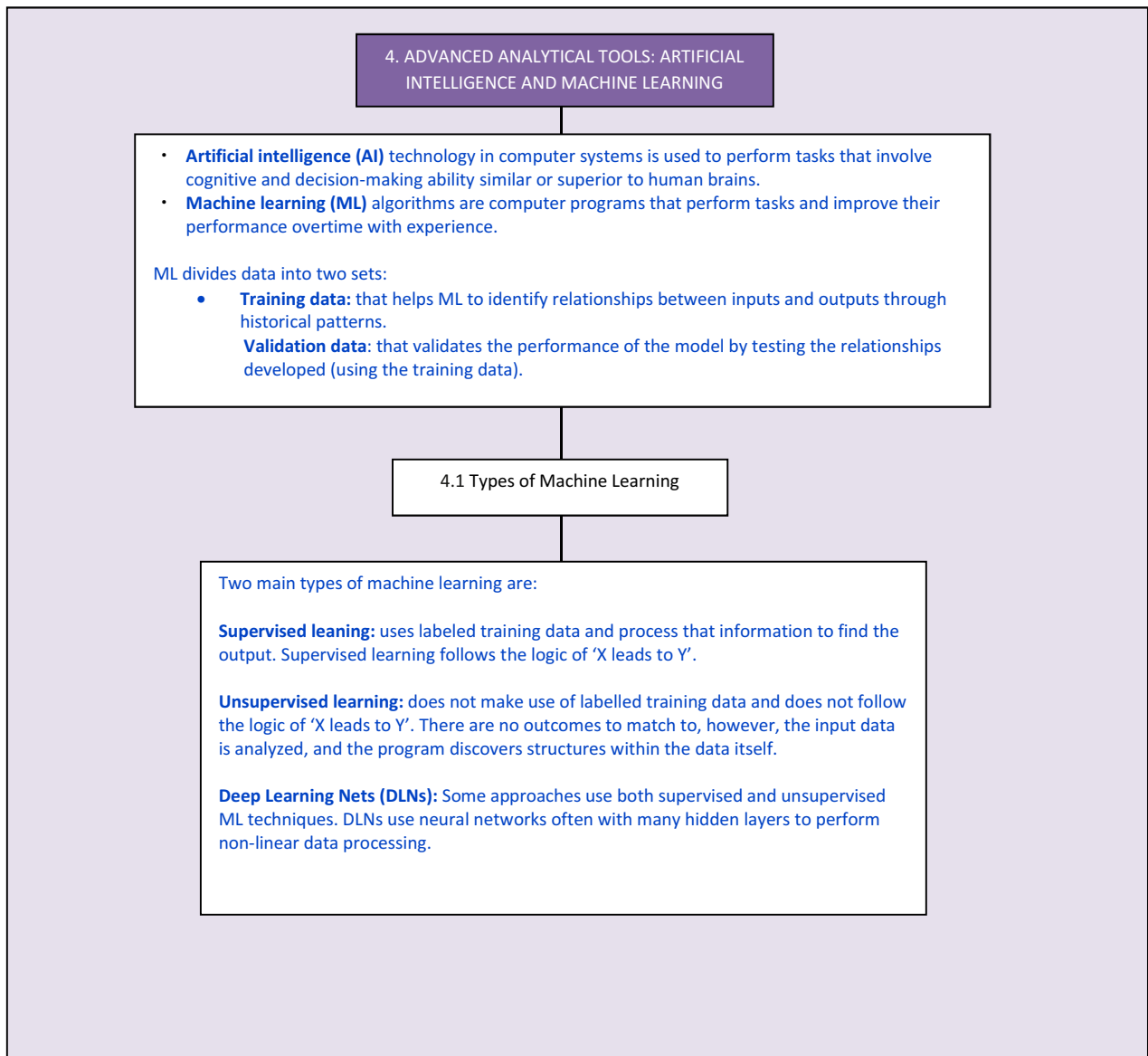
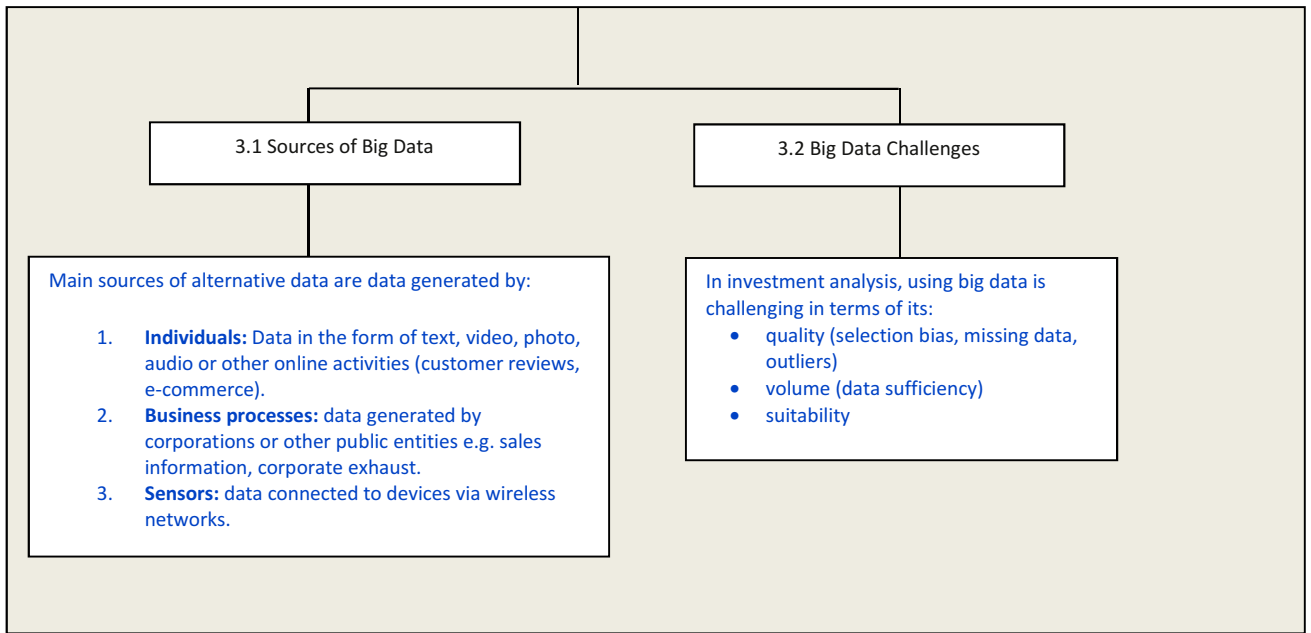
3. BIG DATA

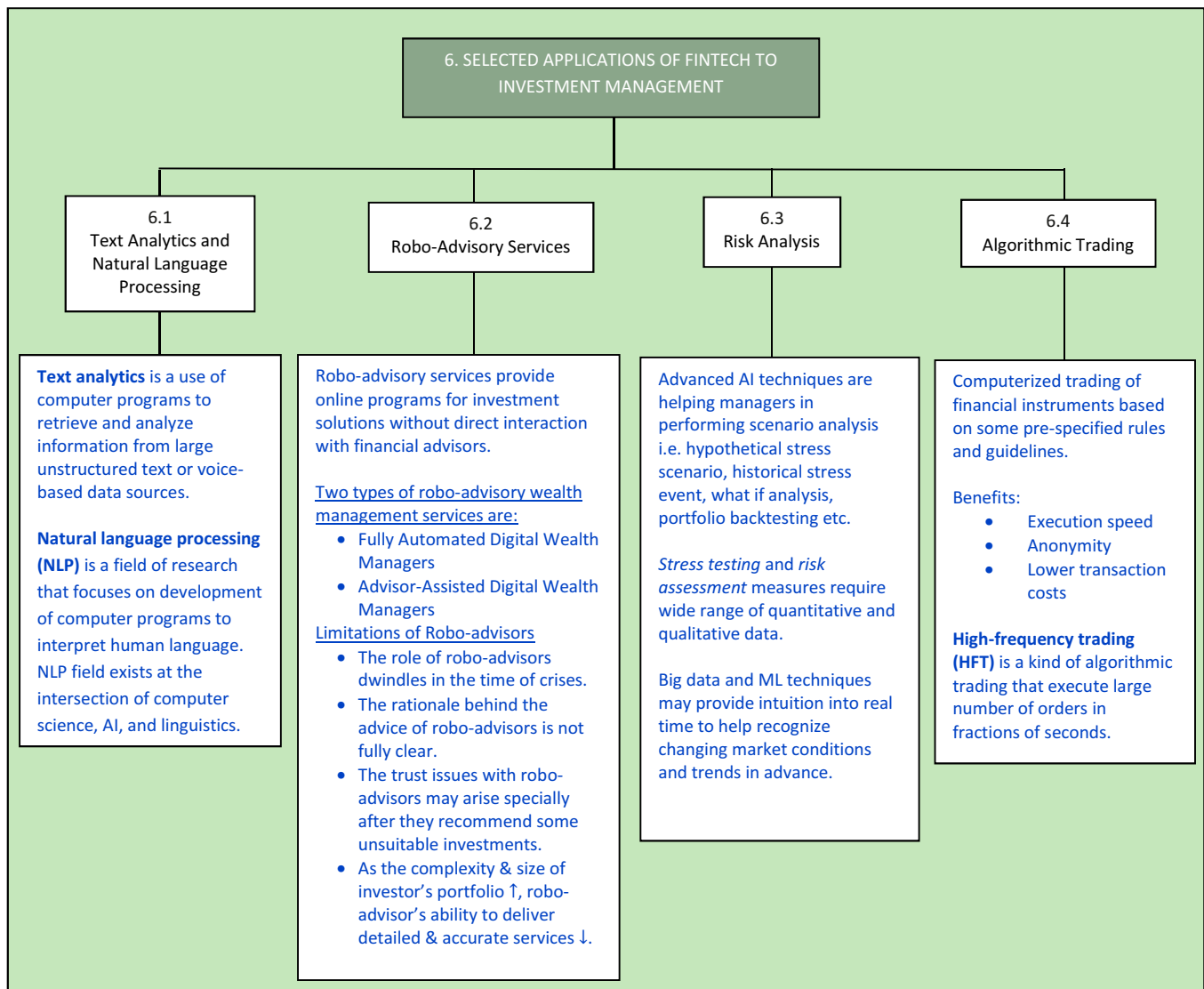
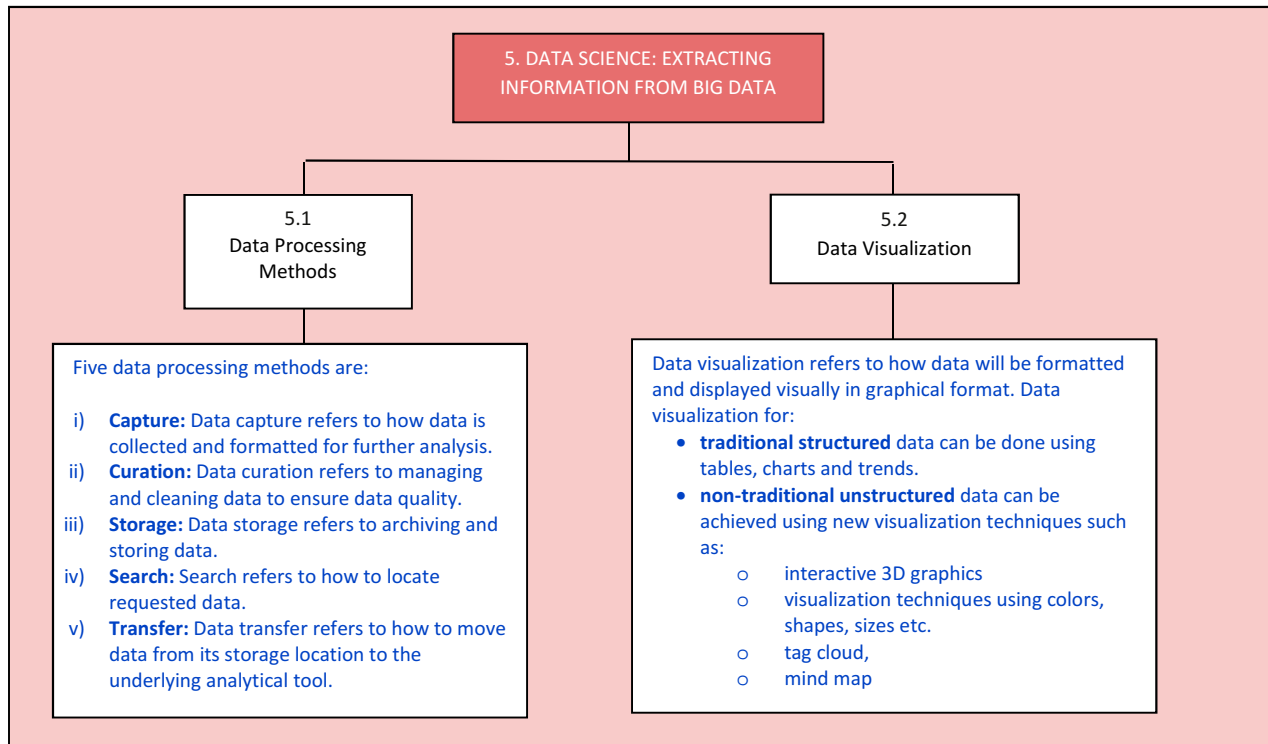
Traditional		Non-traditional (alternate)	
Sources	Institutions, Businesses, Government, Financial Markets	Sources	Social media, Sensor networks Company-used data, Electronic devices, Smart phones, Cameras, Microphones, Radio-frequency identification (RFID)
Forms of Data	Annual reports, Regulatory filings, 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:

- i. **Digital ledger** – a digital database to record & store transactions
- ii. **A consensus mechanism** - mechanism which ensures that entities verify the transactions and agree on the common state of the ledge
- iii. **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.

7.1
Permission and
Permissionless Networks

7.2
Application of Distributed Ledger
Technology to Investment Management

7.2.1
Cryptocurrencies

7.2.2
Tokenization

7.2.3
Post-trade
clearing and
settlement

7.2.4
Compliance

DLT networks can be permissionless or permissioned.

Permissionless networks are open to new users. Participants can see all transactions and can perform all network functions.

Permissioned networks are closed networks where activities of participants are well-defined. Only pre-approved participants are permitted to make changes.

a digital currency that works as a medium of exchange to facilitate near-real-time transactions between two parties without involvement of any intermediary.

helps in authenticating & verifying ownership rights to assets on digital ledger by creating a single digital record.

DLT provides near-real time trade verification, reconciliation and settlement using single distributed record ownership among network peers, therefore reduces complexity, time, costs, trade fails and need for 3rd party facilitation and verification.

advanced & automated compliance & regulatory reporting procedures provide greater transparency, operational efficiency & accurate record-keeping.