

# Artificial Intelligence for Business

## Emerging technologies

Lecture 4

Professor: Asror Norov

## Marketplace Lending

- ◎ Typical model for marketplace lending:
  - borrowers apply for a loan on a marketplace platform;
  - accepted loan applications are then originated by a partner bank (LendingClub and Prosper use Utah-based WebBank);
  - the MPL performs the underwriting of the loans, using criteria agreed with the partner bank
  - platforms purchase the loan from the partner bank;
  - the platform issues a note to lenders, instead of a contract.
- ◎ Marketplace or “peer-to-peer” lending platforms make a profit from arrangement fees rather than the spread between lending and deposit rates
- ◎ Marketplace lending has grown due to low interest rates, low default rates, improved lending process and scarcity of consumer credit

## Marketplace Lending

- ◎ Partnerships between banks and MPLs are becoming increasingly common in the US. BBVA Compass bank, for example, partners with OnDeck to originate small business loans through the platform by referring customers for smaller loan amounts.
- ◎ Other bank partnerships focus on funding, i.e. rather than simply referring the loan on to an MPL, the bank provides the funding themselves. For example, LendingClub and Citigroup announced a partnership in April 2015 in which Citigroup provides borrowers on the platform with funding through the Varadero Capital hedge fund, which takes on the first loss risk.
- ◎ These arrangements allow banks to provide funding to higher risk individuals or SMEs, while passing much of the credit risk on to investors.

## Mobile Payments

- ✓ Figures show the largest usage of mobile payments are those who do not have a bank account (45%).
- ✓ Likely that those combining hardware and software, such as Apple Pay and Samsung Pay, will be the dominant players.
- ✓ The following factors might increase the use of mobile wallets:
  - more Global Mobile Wallet Providers
  - more Smartphones
  - more Merchant acceptance of contactless payments



## Mobile Payments

- ✓ Mobile payment solutions may involve a mobile network operator (MNO) participating in the offering along with a financial institution.
- ✓ For some mobile payment solutions, the handset is simply a device for authentication and there may be no wider involvement of the MNO.
- ✓ Examples of new innovations:
  - NFC terminals
  - Mobile POS
  - Retailer Mobile Apps
  - Digital Wallets
  - Peer to peer mobile payments



## Blockchain Technology

- ✓ A 'blockchain' is the cryptographic technology that underlies bitcoin. It is effectively a public ledger of all transactions that have ever been executed with that bitcoin.
- ✓ Blockchain technology has other applications, for example, the NASDAQ exchange will soon start using a blockchain-based system to record trades in privately held companies.
- ✓ Blockchain technology introduced in the back-office in order to settle transactions and keep track of money flows in real-time has the potential to be the efficiency innovation in payments.

## InvesTech

- ✓ “Robo Adviser” for investments – automated wealth managers offering financial advice
- ✓ Based on KYC information, they offer tailor-made investment solutions, typically based on mutual funds / ETFs
- ✓ More sophisticated models are being deployed using artificial intelligence
- ✓ Typically, a license is required to provide these services

## Big Data

- ✓ “Big Data” means:
  - using new or expanded datasets and data, including data from unconventional sources such as social media
  - adopting the technologies required to generate, collect and store these new forms of data
  - using advanced data processing technologies
  - using sophisticated analytical techniques such as predictive analytics
  - applying this data knowledge in business decisions and activities
- ✓ By analyzing payment information, firms can build an insight into customer intelligence and behaviors that they may be able to monetize.

## Big Data

- ✓ Offers can be driven by analytics into a combination of historical payments information and big data analysis of demographics, location positioning and peer group analysis.
- ✓ By understanding customer behavior, firms can target new customers and cross-sell to existing customers.
- ✓ Firms can incorporate transactional-level data analysis within credit risk model development.
- ✓ Firms can give customers access to their own data, and help them manage their finances via apps that make use of the data.
- ✓ Big Data can be used to identify problems, for example, how credit lines are being used against agreed limits and to identify payments patterns of potential interest.

## RegTech

- ✓ RegTech broadly means technologies that facilitate the delivery of regulatory requirements.
- ✓ Deutsche Bank, JP Morgan, Santander and HSBC have all allocated teams to explore investment opportunities in the RegTech sector. 
- ✓ Governments are beginning to work with companies to identify ways to support the adoption of new technologies to facilitate the delivery of regulatory requirements.
- ✓ RegTech can reduce a client's regulatory and compliance costs, automate the certain compliance tasks and reduce risks.

## Benefits

User  
anonymity:  
Privacy

Transparency  
of transactions

Cheaper and  
faster  
transactions

Cyber-crime  
defense

Financial  
inclusion



## Risk

User  
anonymity:  
Crime

Lack of  
government  
intervention

Volatility

Low consumer  
protection

Terrorist  
financing