Voyager Labs

MIT MANAGEMENT SLOAN SCHOOL

Overview	• Voyager Labs has developed technologies to analyze human behavior using big data from the social sphere • Two main products are Voyager Analytics and Scorpio

Project	• Provide a comprehensive analysis of the global market of credit scoring solutions based on publicly available consumer social data. Specifically:
	  o Demand for alternative credit scoring
	  o Current competitive landscape
	  o Partnership potential and business models
	  o Promising markets

Market Opportunity for Credit Scoring

Rise of Alternative Scoring from
- High unbanked/thin-file populations coupled with financial crisis
- More data collection through higher user penetration and tech start-ups
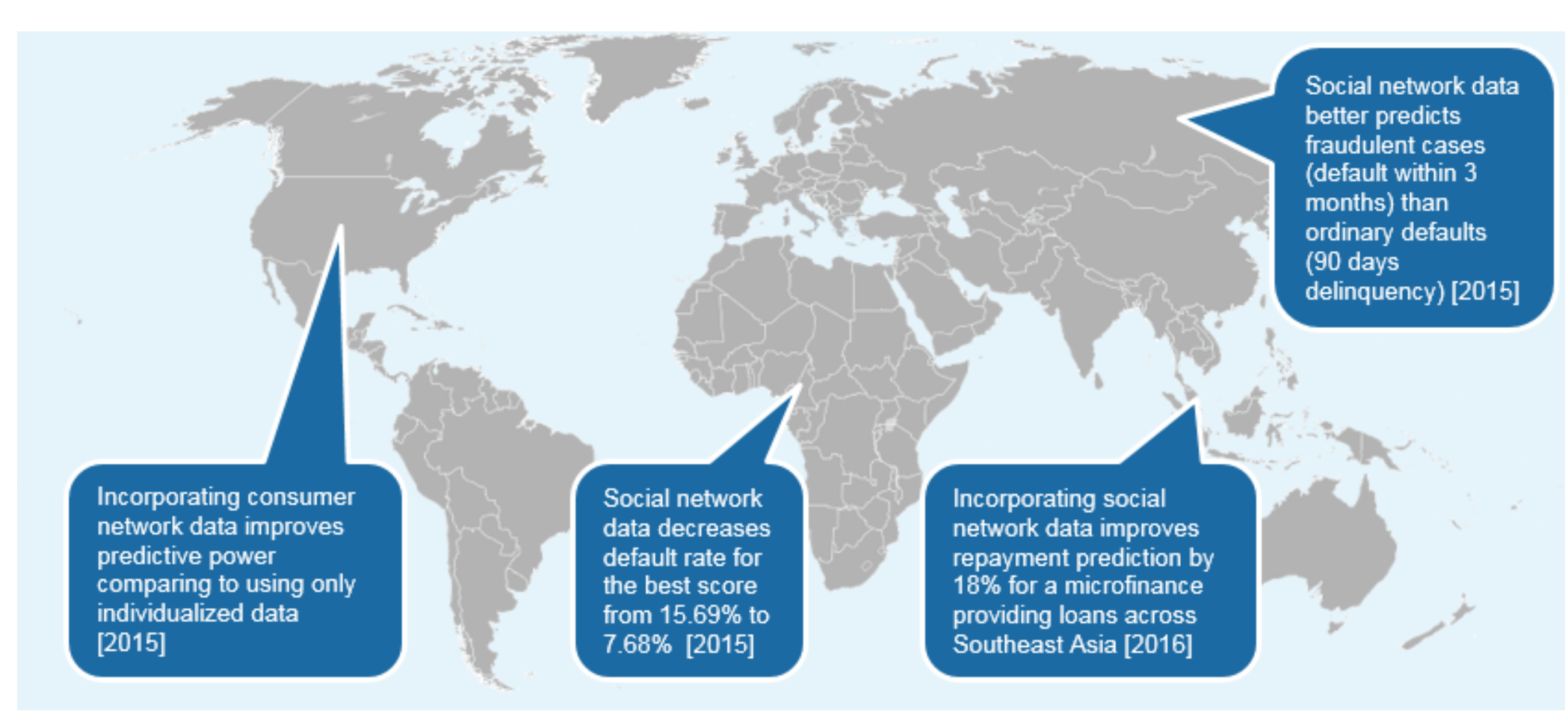- Increasing demand from middle class

Four main types of alternative data are social, online, mobile, and psychometric with different level of predictive power

Predictive Power

Social Network Data Can Be Predictive

Social network data better predicts fraudulent cases (default within 3 months) than ordinary defaults (90 days delinquency) [2015]

Incorporating consumer network data improves predictive power comparing to using only individualized data [2015]

Social network data decreases default rate for the best score from 15.69% to 7.68% [2015]

Incorporating social network data improves repayment prediction by 18% for a microfinance providing loans across Southeast Asia [2016]

Combination of Different Data Types Is Better

Fig. 28. ROC curve of the social module in the credit scoring model.

ROC curve - Social module

Area under the curve = 72%

Fig. 29. ROC curve of the final model, integrating the traditional and social modules.

ROC curve - Final model (traditional + social)

Area under the curve = 79%

Business Model

Three Key Business Models Apparent Based on Survey of Competition

1 License Software	2 Underwrite	3 Facilitate P2P
• Alternative score used to aid in lending decision • Revenue: new partnerships (origination fees), per score charge	• Fundraise and start offering loans based on scoring model • Take on default risk • Revenue: interest and fees	• Connect investors with borrowers • Scoring to set rates for borrowers and warn lenders of risks • Revenue: fees

Potential Partnerships by Business Model

	Partnership	Example	Pros	Cons
1	Existing Scorers	FICO, VantageScore	• Revenue regardless of which credit bureau lender relies on • Huge marketshare	• Difficult to land partnership • Already using alternative data but haven't expressed interested in social
1	Credit Bureaus	Experian, TransUnion, Equifax	• Comfortable with SaaS business model • Huge marketshare	• Difficult to land partnership • More heavily regulated
1	Lenders	Mortgage, Auto, P2P, E-Commerce	• Easier to land partnership • Potential for increased personalization of algorithm through targeted partnerships	• Less scalable than partnering with credit bureaus/existing scorers
2 3	Consumers	Develop B2C platform	• Build brand reputation • Leverage for future partnerships	• Requires advertising • Additional design/usability considerations

ISRAEL LAB 2016: Rachel Lee, Ellie Klose, Toey Chonlavorn, Meen Supokaivanich