



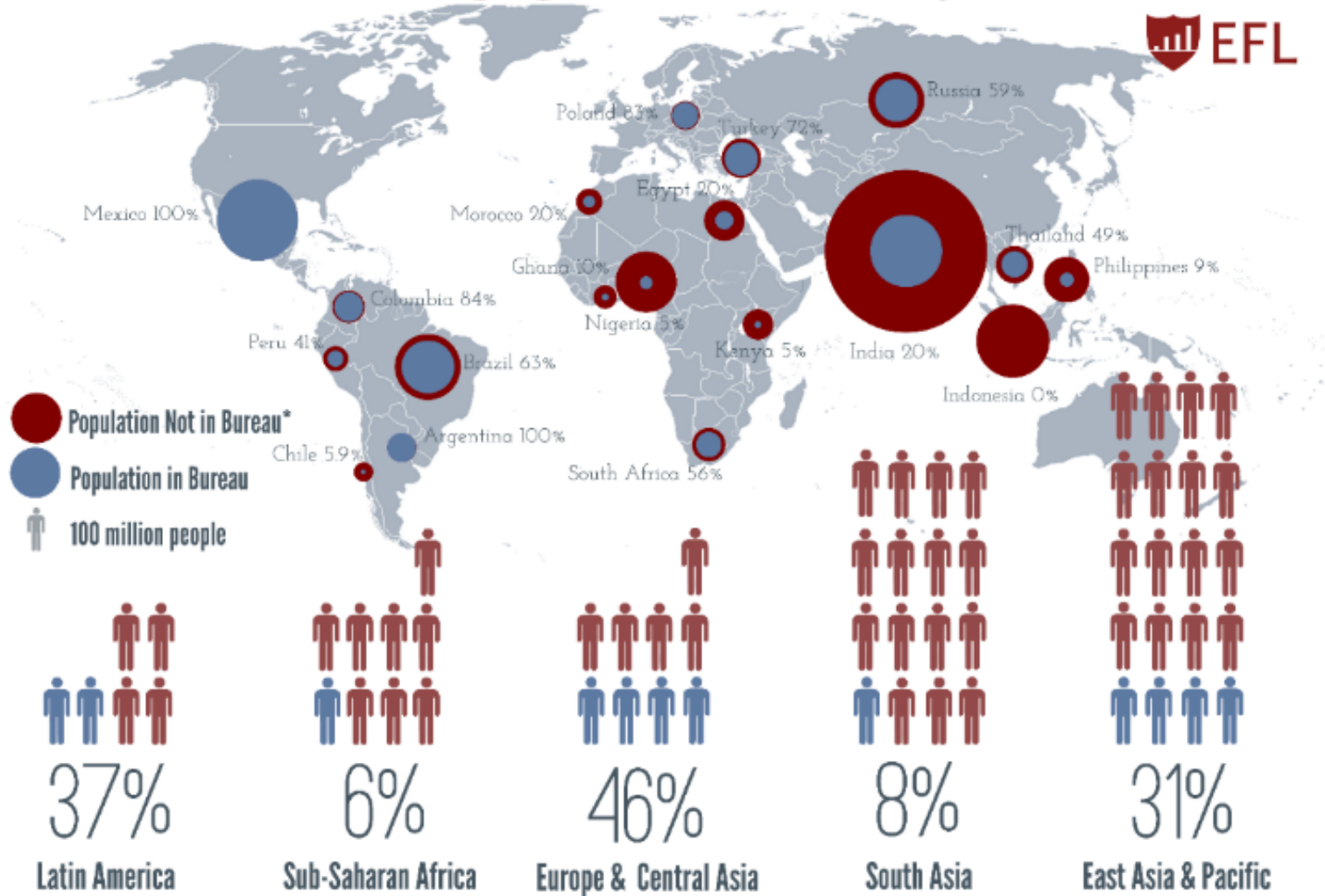
EFL

# Benchmarking Alternative Data for Scoring the “Uns”

Bailey Klinger  
EFL Global Ltd.



# How Much of the **Emerging World** is Covered by Credit Bureaus?



© 2014 EFL Global Ltd. Private credit bureau coverage (% of pop in L). Private credit bureau coverage reports the number of individuals or firms listed by a private credit bureau with current information on repayment history, unpaid debts, or credit outstanding. The number is expressed as a percentage of the adult population. <http://data.worldbank.org/indicator/UY.CD21.SVZF.ZS>

# Traditional Credit Scoring





1) Psychometrics

2) Mobile

3) Online Social

4) Benchmarking Results





1) Psychometrics

2) Mobile

3) Online Social

4) Benchmarking Results





## Ability

Business & Financial Skills

Fluid Intelligence



## Willingness

Ethics & Honesty

Attitudes & Beliefs

# Measuring Integrity



What percentage of suppliers cheat their customers?



10%



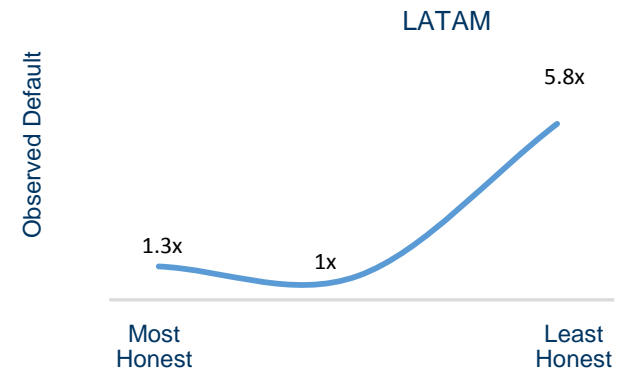
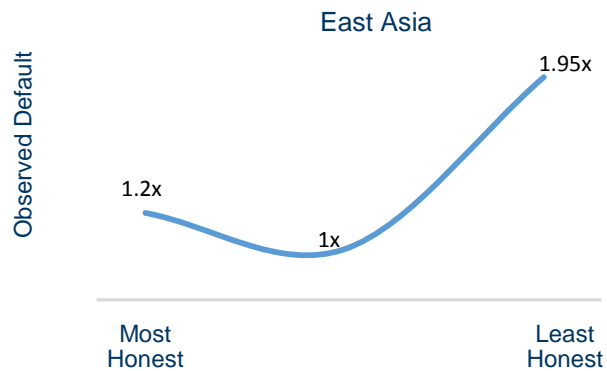
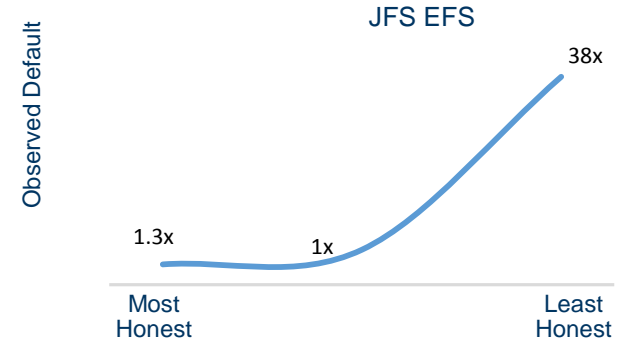
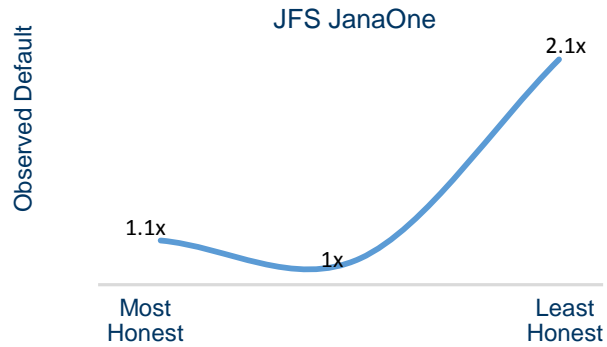
30%



60%



90%



# How it works





# Case study: Control risk & increase efficiency

BTPN has been able to maintain low default risk and reduce turn-around-time (TAT)



Top 5 micro banking portfolio in Indonesia with aggressive growth plan

### Situation:

- BTPN is one of the most aggressive microbanking lender in Indonesia

### Challenge:

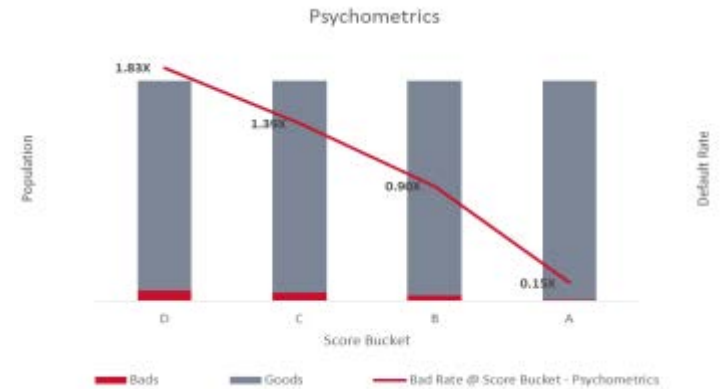
- Reduce overall credit risk in micro portfolio
- Enable sustainable growth especially in new to bank
- Standardizing credit operations and have better controls

### Solution:

- Re-engineer end-to-end credit process and approval to be able to scale up micro business



### Set cut off for low default risk



### Quick turn around time <2 days





## Case study: Increase portfolio

GMG increase portfolio by 35% whilst maintaining the same rate of default



Retailer Chain offering Direct financing to purchased items



Customers in-Store Seek loan for their purchase



In-Store staff conduct either:

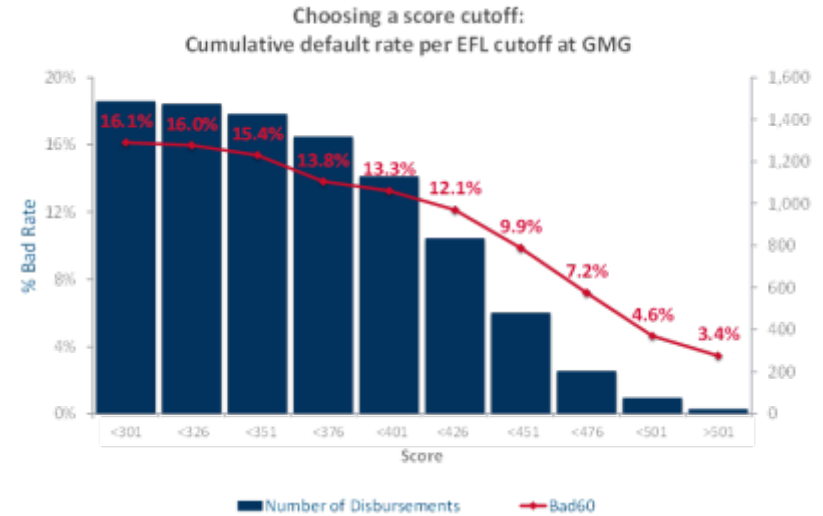
- EFL test: no credit history (new)
- Credit check: with credit history



If positive, then Customer continue with verification by phone (in store)



Loan approval



Additional 35% customer base despite high cutoff score at 40% of population, from being able to access new market

From those rejected, based on client tracking in credit bureau, >30% has defaulted after 5 months of loan they obtain elsewhere

**After proven success of Psychometric scoring implementation in GMG Peru, it is now being rolled to Guatemala and most recently Nicaragua**



# Case study: Control risk

## 50% reduction on default rate by combining EFL with Equifax traditional model

**EQUIFAX** Prominent credit bureau in South America

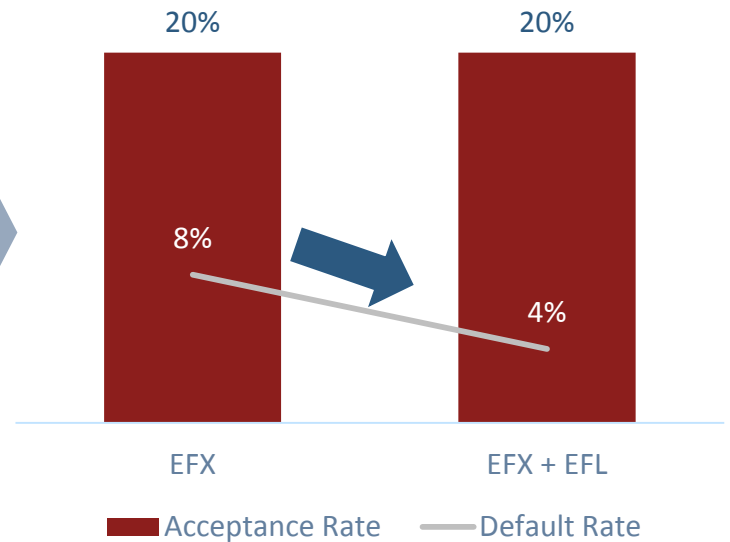
Using standalone Equifax scoring

		EFL Score					
Equifax Score	Group 1	This information is unavailable without the EFL score					8%
	Group 2						13%
	Group 3						18%
	Group 4						20%
	Group 5						33%

Combined Equifax + EFL scoring

		EFL Score					EFL Average
		Group A	Group B	Group C	Group D	Group E	
EFL Score	Group 1	4%	12%				8%
	Group 2	0%	6%				3%
	Group 3	0%					0%
	Group 4						N/A
	Group 5						N/A
EFL Average		1%	9%	N/A	N/A	N/A	4%

**Reduce defaults by 50%** while maintaining acceptance rate.



Encouraged by the result of pilot, Equifax and EFL has since launched full scale commercial partnership, integrating scoring capabilities help lenders in leading market in South America

# Footprint



+\$500 million disbursed | +265,000 assessments | +20 languages



Global and Regional Partnerships with:





1) Psychometrics

2) Mobile

3) Online Social

4) Benchmarking Results





Call Detail Records (CDR) matched to loan repayment data

## Capturing characteristics such as:



### Mobile Financial Patterns

- Average amount of time between their mobile top ups
- Number of times per week subscriber checks balance
- Fluctuations in top up amounts over time



### Network Communication

- Number of outgoing calls & texts made in an average week
- Proportional distribution of calls made during working vs evening hours
- Average amount of time between missing and returning a call



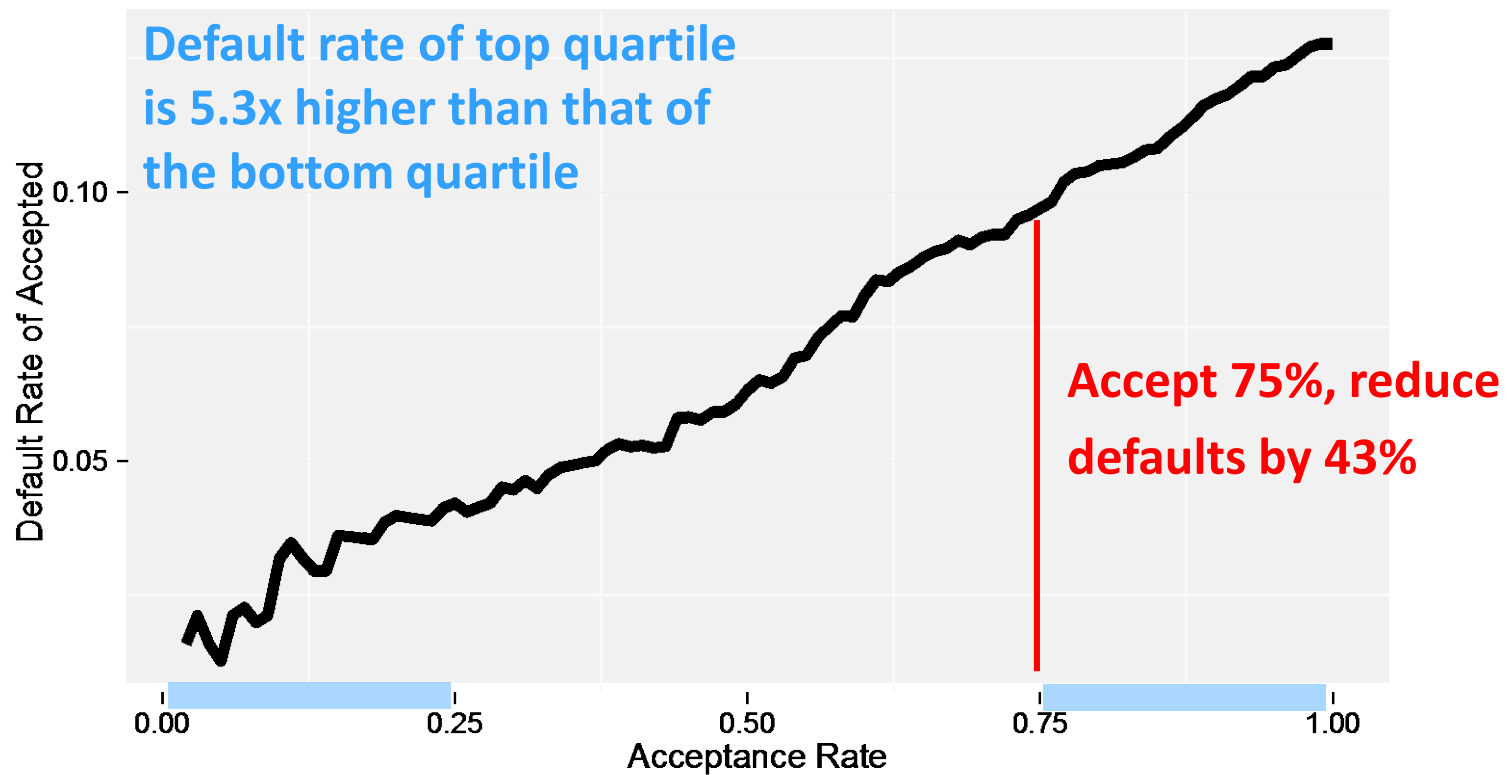
### Patterns of Communication

- Percentage of outgoing communication made by text vs. voice
- Average length of voice call
- Number of subscriber has switched phones

Samples on the subset of variables used to develop predictive credit model based on CDR data



## CDR-based score highly predictive of loan default





1) Psychometrics

2) Mobile

3) Online Social

4) Benchmarking Results

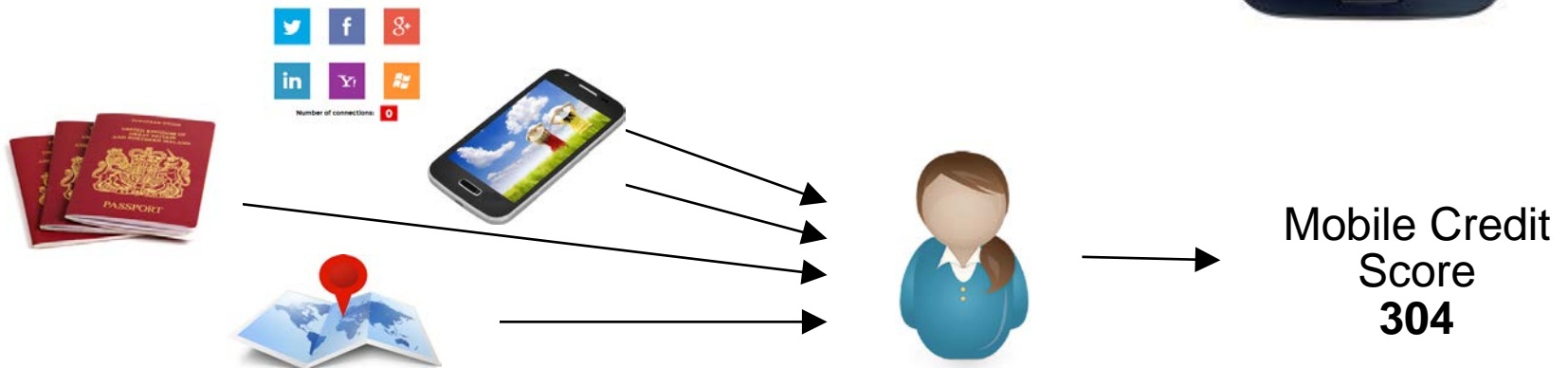
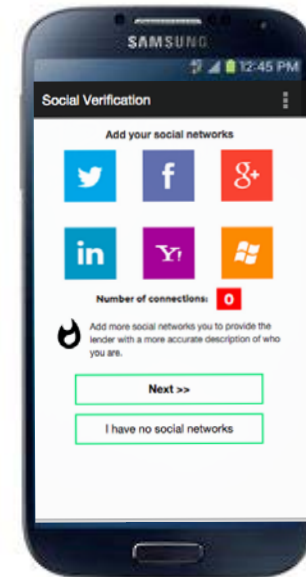


# Social Media Data



Social Media Authentication Serves a variety of purposes:

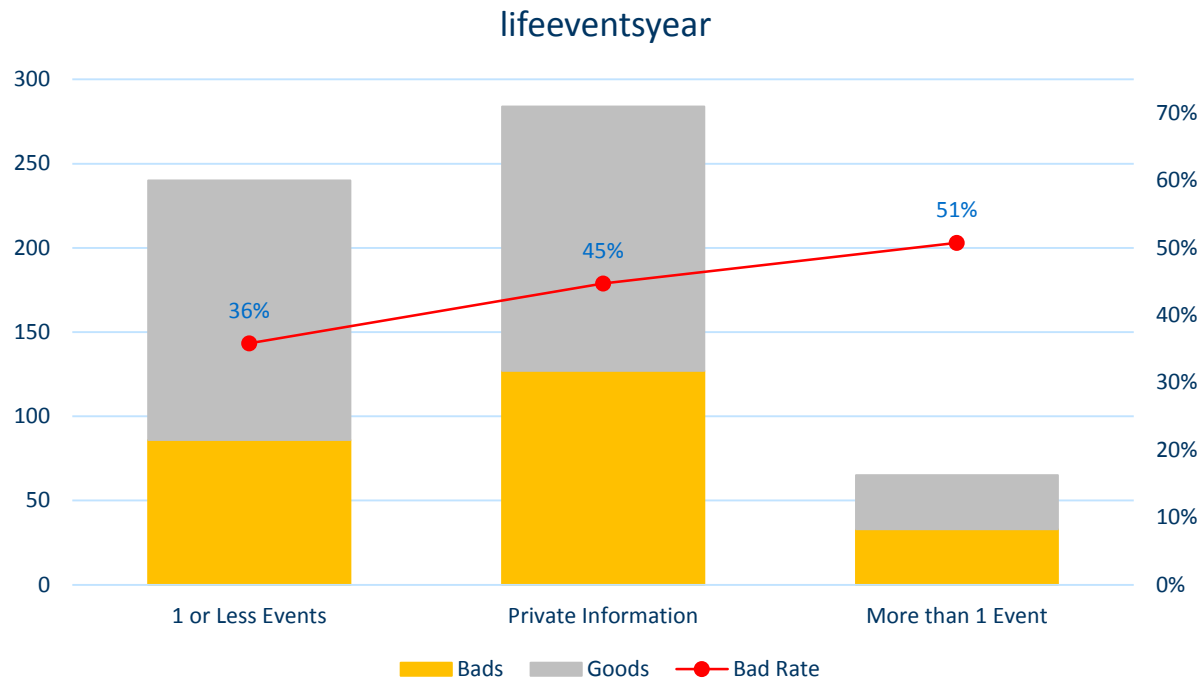
- Login to one or more social networks shows usage
- Can help to verify identity, education, work history
- Usage patterns based on a detailed lengthy profile can be highly predictive of risk





# Feature Example – Life Events

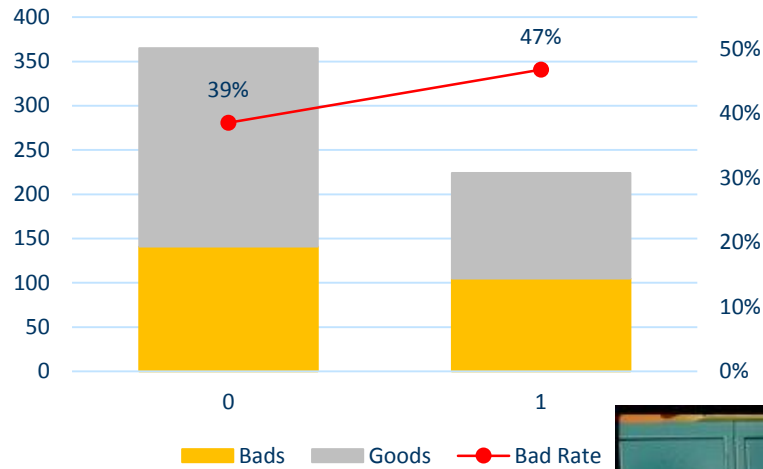
The number of life events (born, moved, traveled, got married, graduated, first met, etc.) people have posted in the past year.



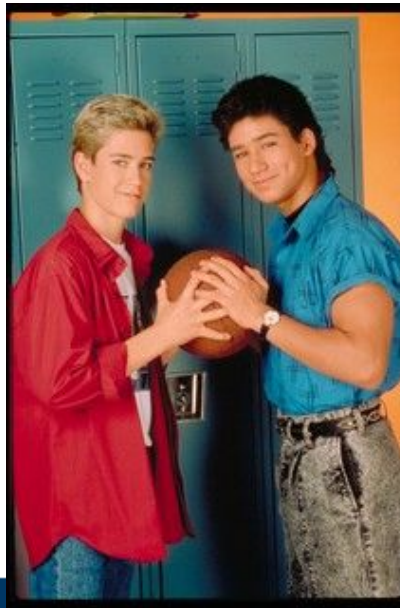
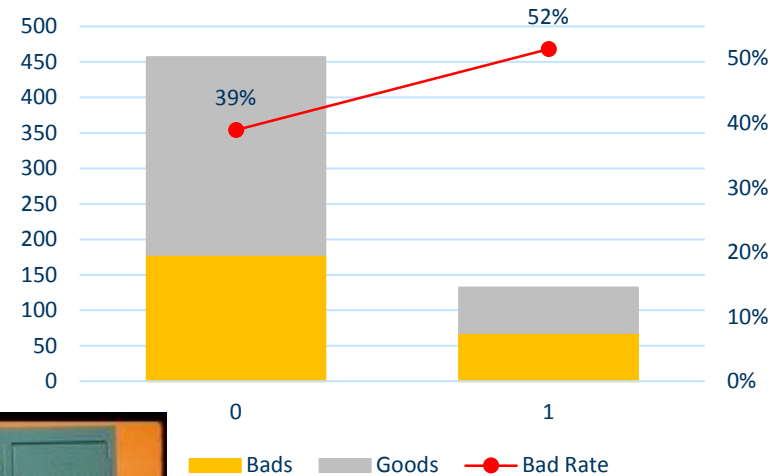


# Feature Example – High School Hero

abouts



ppnumberlikes - categorized - optimal binning \* abouts





1) Psychometrics

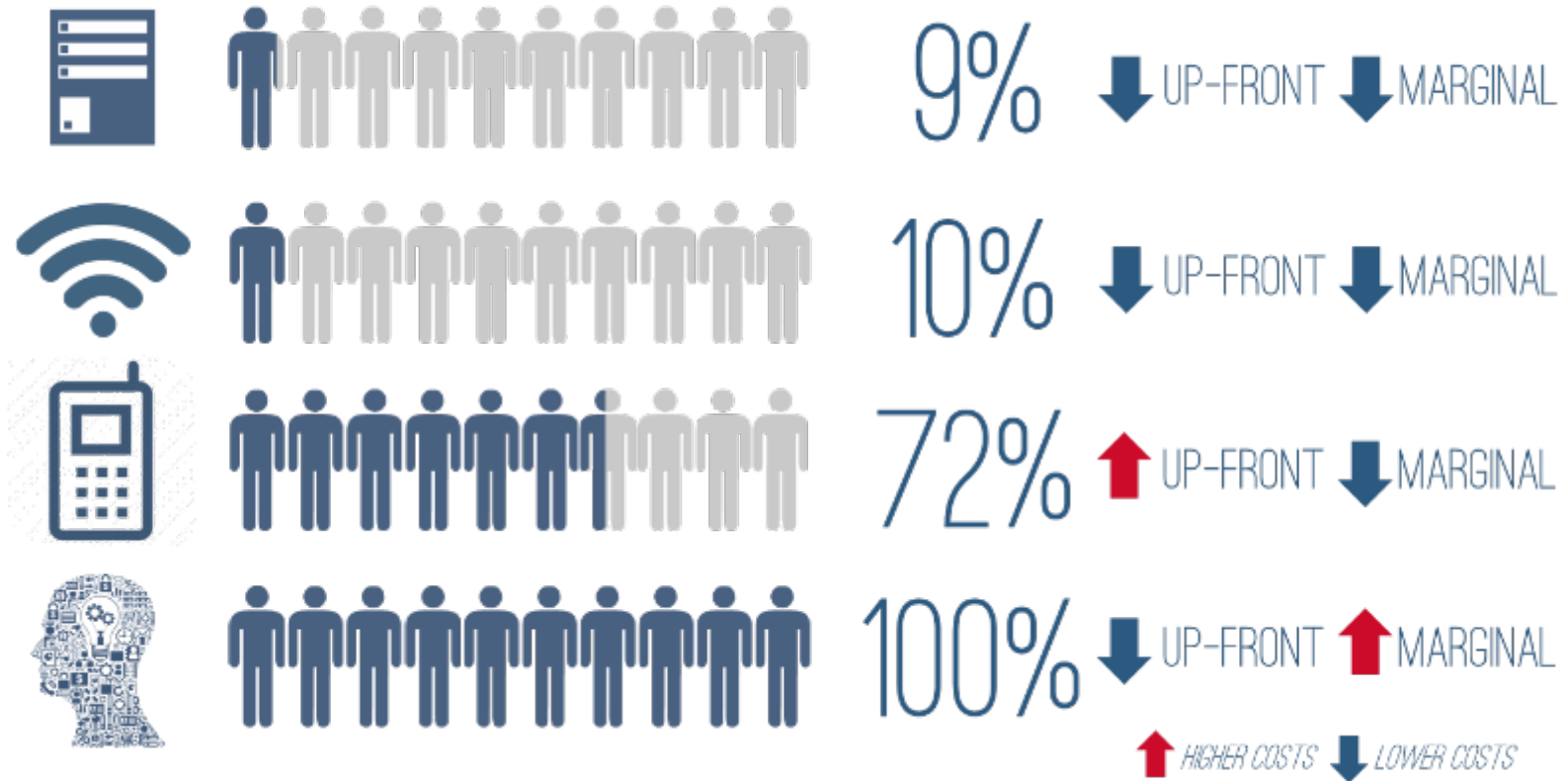
2) Mobile

3) Online Social

4) Benchmarking Results

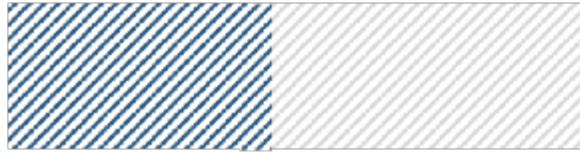


# Availability & Cost





# Predictive Power



42%

RETROSPECTIVE DATA  
STORED BY BUREAUS



14%

RETROSPECTIVE DATA  
STORED ONLINE



26%

RETROSPECTIVE DATA  
STORED BY MNO'S

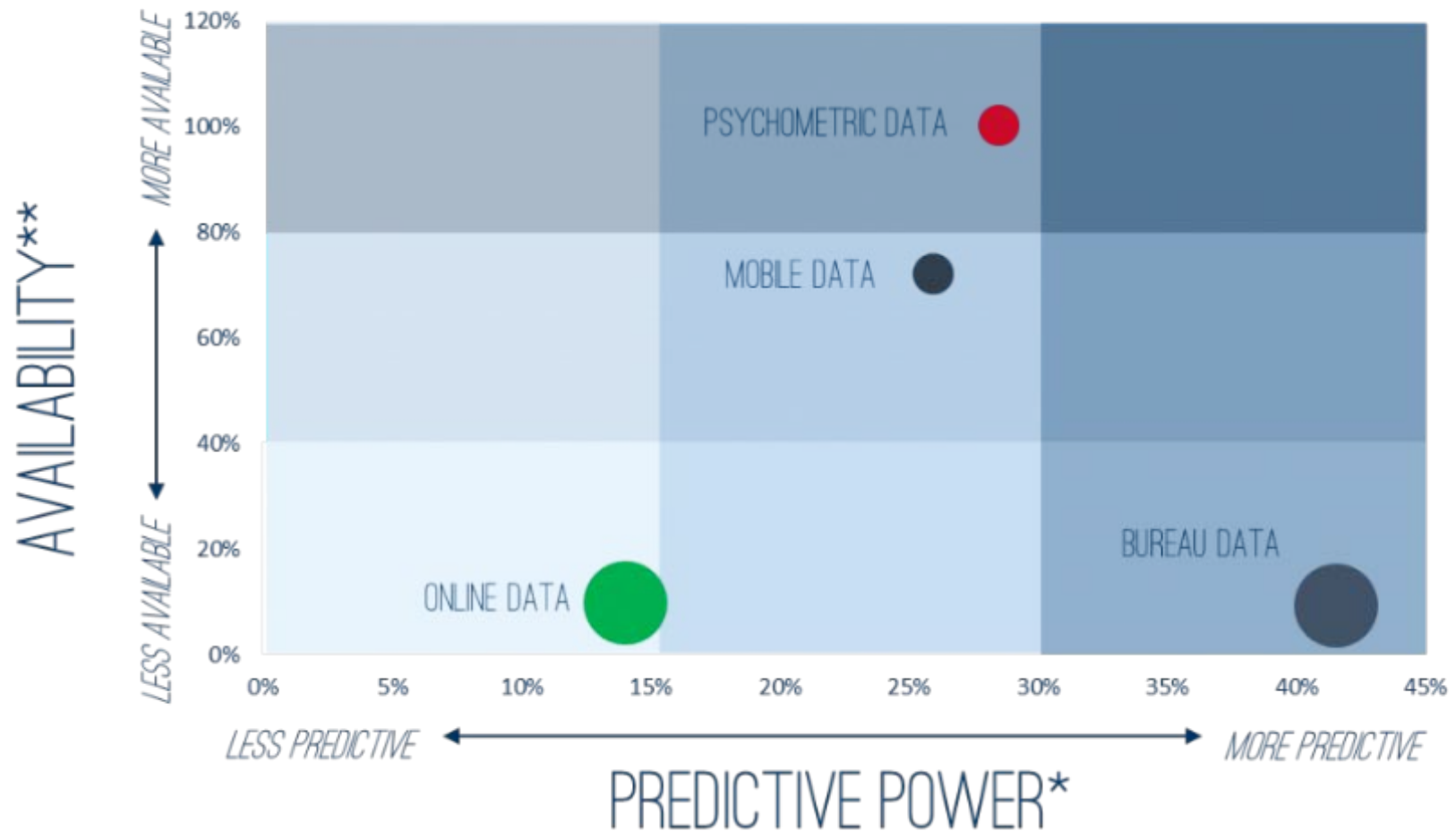


29%

FORWARD-LOOKING DATA  
CAPTURED IN APPLICATION



# Summary



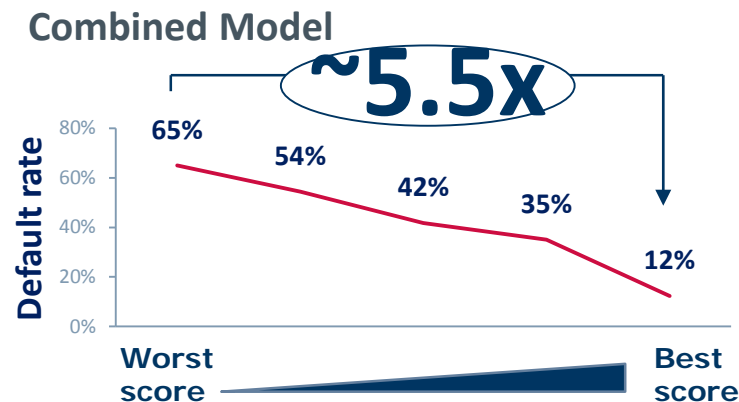
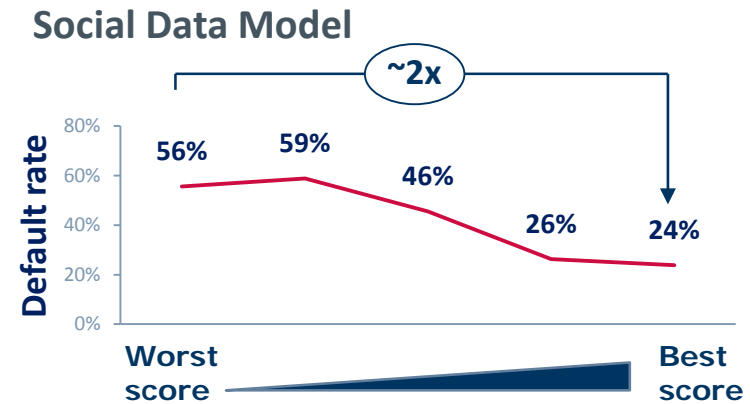
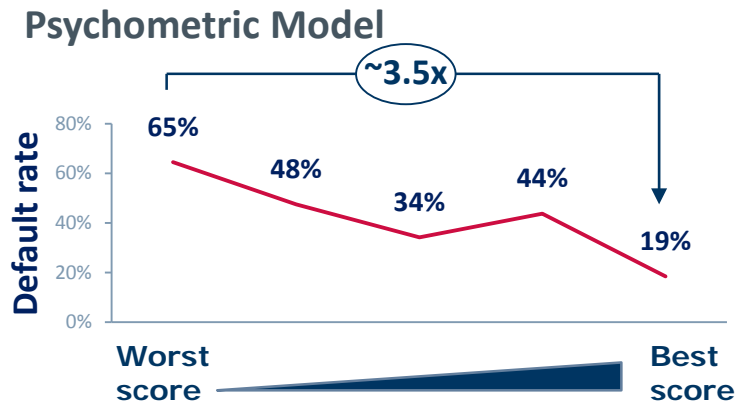
● Online   ● Mobile   ● Psychometrics   ● Traditional Bureaus  
size of bubble approximates ease of implementation. Bigger bubble = Lower costs

\*out of sample gini coefficient with comparable model & sample.  
\*\*Hit rate on sample of low-income applicants in emerging markets



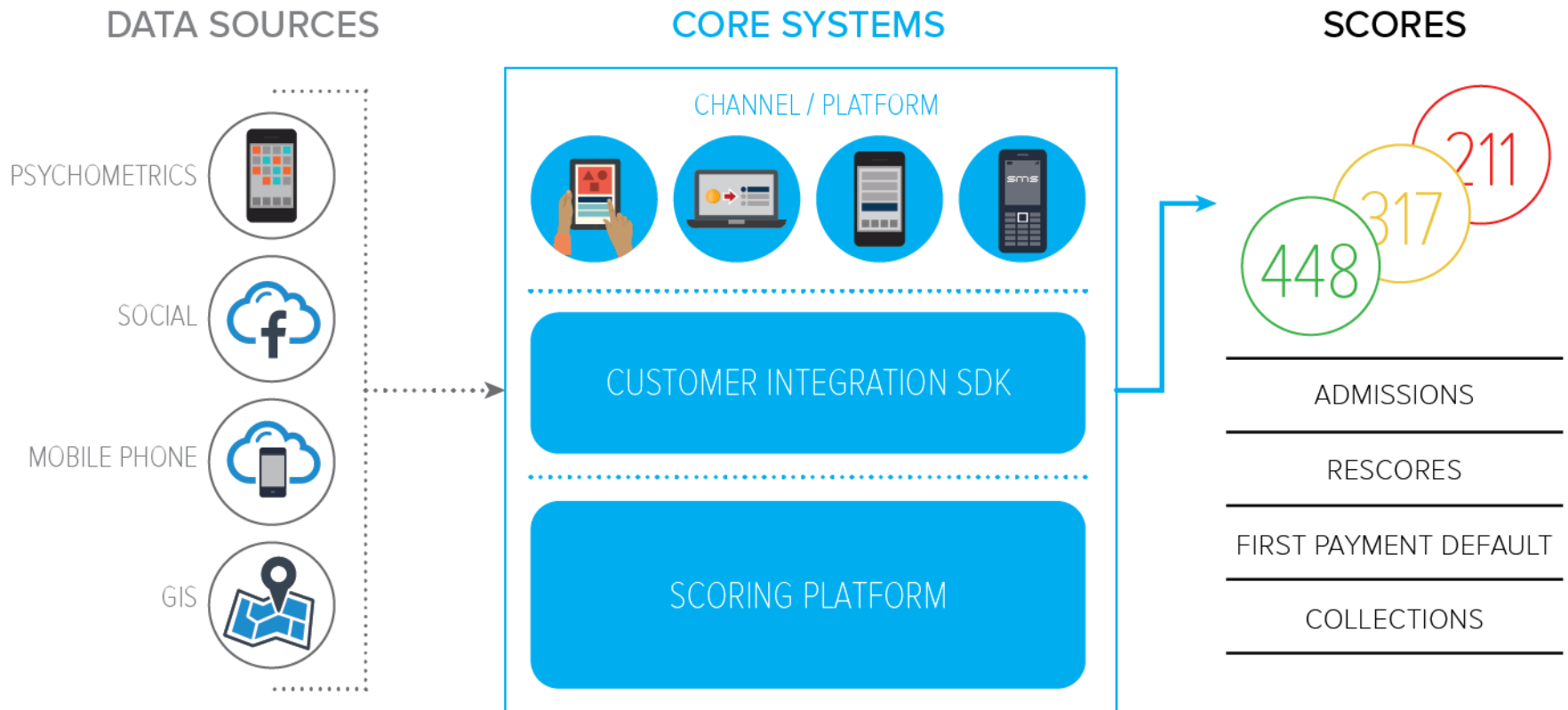
# The Power of Combining Sources

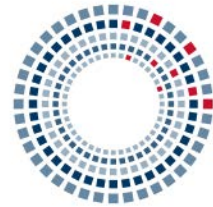
## Psychometric Model + Social Model in a Latin American Retailer





# The EFL Product





Thank you.

[www.eflglobal.com](http://www.eflglobal.com)