



# CRIF Solution HUB

Credit and Risk management  
solutions to support MFI

SCORING AND BUREAU  
ROADMAP FOR MFI  
EXECUTIVES

2017 MCPI Annual Conference

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# CRIF AT A GLANCE

**27** country-based operations

**58** subsidiary companies

**4** continents

**3,600+** staff professionals to serve you

**6,300+** financial institutions

**44,000+** business clients

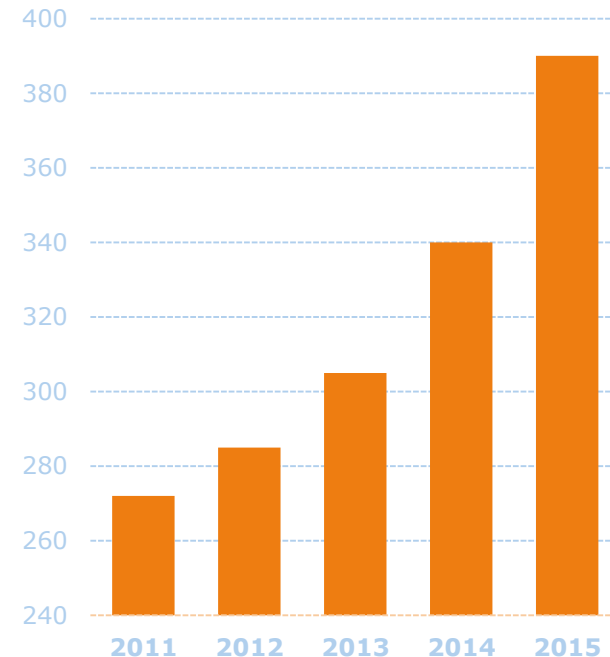
**190,000+** consumers

use CRIF services in **50** countries

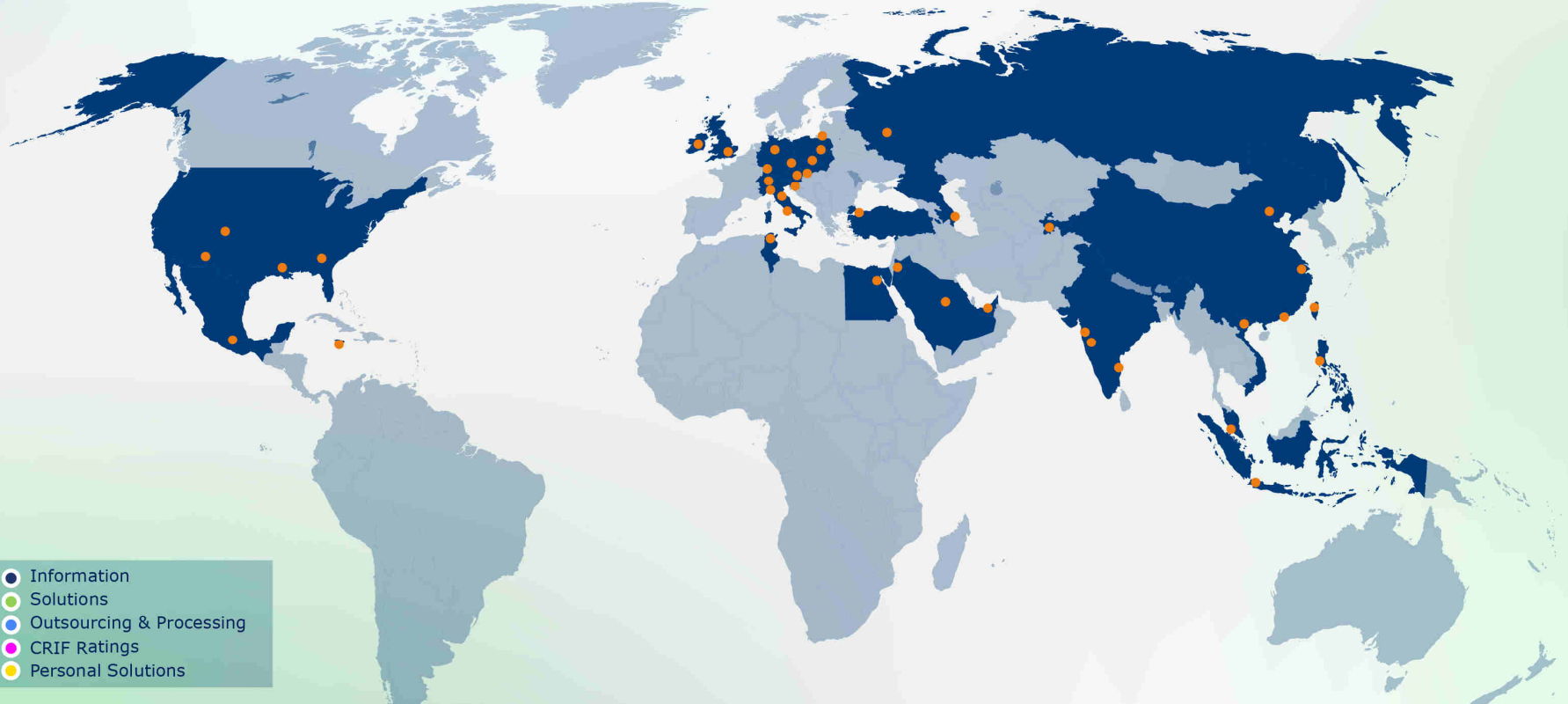
**20** countries with credit bureau solutions

**500+** software installations

**Total revenues**  
(millions of Euro)



# CRIF COMPANIES AROUND THE WORLD



- Information
- Solutions
- Outsourcing & Processing
- CRIF Ratings
- Personal Solutions

<p><b>ITALY</b> ● ● ● ● ●</p> <ul style="list-style-type: none"> <li>• Bologna</li> <li>• Milan</li> <li>• Rome</li> </ul> <p><b>USA</b> ● ● ●</p> <ul style="list-style-type: none"> <li>• Atlanta</li> <li>• Albuquerque</li> <li>• Baton Rouge</li> <li>• Denver</li> </ul>	<p><b>AUSTRIA</b> ● ● ●</p> <ul style="list-style-type: none"> <li>• Vienna</li> </ul> <p><b>AZERBAIJAN</b> ● ●</p> <ul style="list-style-type: none"> <li>• Baku</li> </ul> <p><b>CHINA</b> ● ● ● ●</p> <ul style="list-style-type: none"> <li>• Beijing</li> <li>• Hong Kong</li> <li>• Shanghai</li> </ul>	<p><b>CZECH REPUBLIC</b> ● ● ● ● ●</p> <ul style="list-style-type: none"> <li>• Prague</li> </ul> <p><b>EGYPT</b> ● ●</p> <ul style="list-style-type: none"> <li>• Cairo</li> </ul> <p><b>GERMANY</b> ● ● ● ● ●</p> <ul style="list-style-type: none"> <li>• Hamburg</li> <li>• Karlsruhe</li> </ul> <p><b>INDONESIA</b> ● ● ● ●</p> <ul style="list-style-type: none"> <li>• Jakarta</li> </ul>	<p><b>INDIA</b> ● ● ● ●</p> <ul style="list-style-type: none"> <li>• Mumbai</li> <li>• Pune</li> <li>• Chennai</li> </ul> <p><b>IRELAND</b> ● ● ● ●</p> <ul style="list-style-type: none"> <li>• Dublin</li> </ul> <p><b>JAMAICA</b> ● ● ● ●</p> <ul style="list-style-type: none"> <li>• Kingston</li> </ul> <p><b>JORDAN</b> ● ● ● ●</p> <ul style="list-style-type: none"> <li>• Amman</li> </ul>	<p><b>KSA</b> ● ● ● ●</p> <ul style="list-style-type: none"> <li>• Riyadh</li> </ul> <p><i>in partnership with Bayan</i></p> <p><b>MALAYSIA</b> ● ● ● ●</p> <ul style="list-style-type: none"> <li>• Kuala Lumpur</li> </ul> <p><b>MEXICO</b> ● ● ● ●</p> <ul style="list-style-type: none"> <li>• Mexico City</li> </ul> <p><b>PHILIPPINES</b> ● ● ● ●</p> <ul style="list-style-type: none"> <li>• Manila</li> </ul>	<p><b>POLAND</b> ● ● ● ● ●</p> <ul style="list-style-type: none"> <li>• Krakow</li> <li>• Warsaw</li> </ul> <p><b>RUSSIA</b> ● ● ● ●</p> <ul style="list-style-type: none"> <li>• Moscow</li> <li>• Kaliningrad</li> </ul> <p><b>SLOVAK REPUBLIC</b> ● ● ● ● ●</p> <ul style="list-style-type: none"> <li>• Bratislava</li> </ul>	<p><b>SLOVENIA</b> ● ● ● ● ●</p> <ul style="list-style-type: none"> <li>• Koper</li> </ul> <p><b>SWITZERLAND</b> ● ● ● ● ●</p> <ul style="list-style-type: none"> <li>• Zurich</li> </ul> <p><b>TAJKISTAN</b> ● ● ● ● ●</p> <ul style="list-style-type: none"> <li>• Dushanbe</li> </ul> <p><b>TAIWAN</b> ● ● ● ● ●</p> <ul style="list-style-type: none"> <li>• Taipei</li> </ul> <p><b>TUNISIA</b> ● ● ● ● ●</p> <ul style="list-style-type: none"> <li>• Tunis</li> </ul>	<p><b>TURKEY</b> ● ● ● ● ●</p> <ul style="list-style-type: none"> <li>• Istanbul</li> </ul> <p><b>UAE</b> ● ● ● ● ●</p> <ul style="list-style-type: none"> <li>• Dubai</li> </ul> <p><b>UK</b> ● ● ● ● ●</p> <ul style="list-style-type: none"> <li>• London</li> </ul> <p><b>VIETNAM</b> ● ● ● ● ●</p> <ul style="list-style-type: none"> <li>• Hanoi</li> </ul>
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## How to read a scorecard

(DIFFERENT CREDIT PRODUCTS HAVE DIFFERENT SCORECARDS)

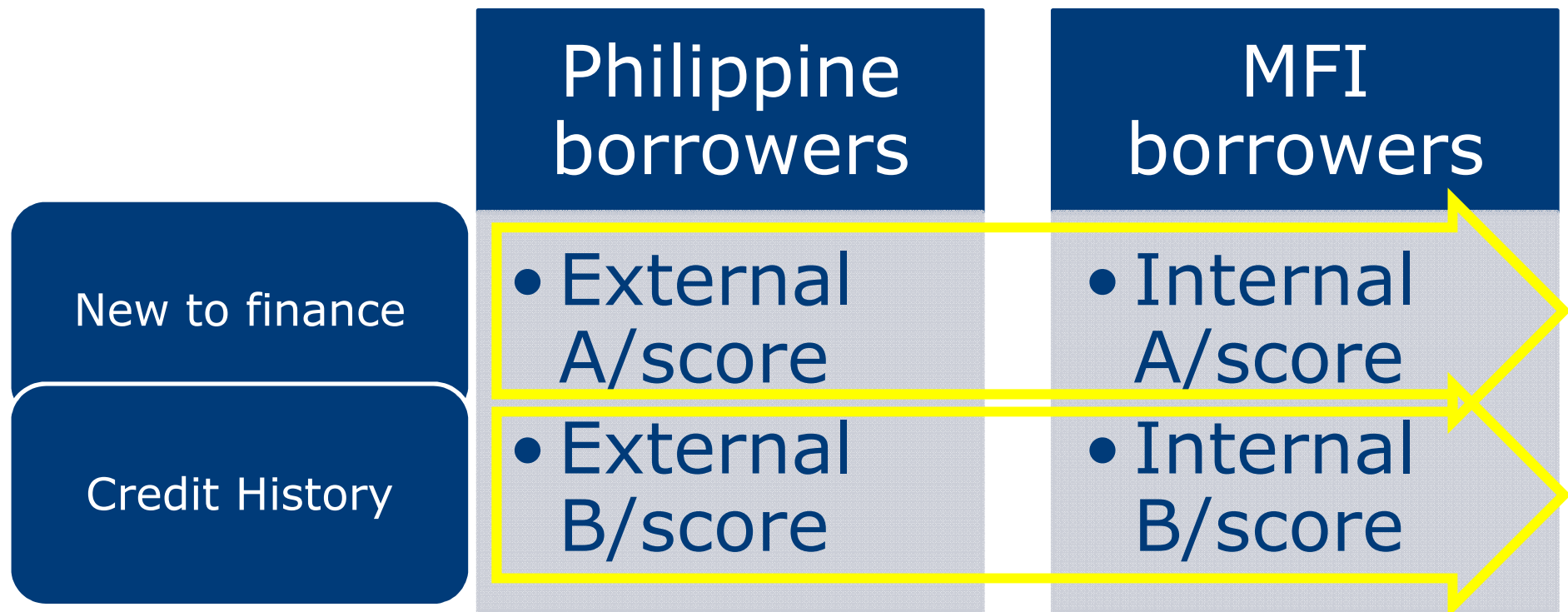
Tranche	Score ranges	% Bad	% Total	KS	Rev. Cum. Bad Rate
A	150 - <= 246	66.98%	10.00%	66.67%	9.14%
B	> 246 - <= 442	16.27%	9.98%	74.11%	5.30%
C	> 442 - <= 479	11.13%	20.18%	59.42%	2.56%
D	> 479 - <= 506	4.28%	30.05%	26.39%	1.45%
E	> 506 - < High	1.34%	29.79%	0%	--
<b>Total</b>		<b>100%</b>	<b>100%</b>	<b>74.11%</b>	<b>23.29%</b>

- How to interpret the above table: if we assume to use the CIC Global score in an application process, setting the cut-off on the worst **10%** of the applicants (Tranche **A**), we reject **67%** of the expected Bads and we expect to reduce the average risk from **23.3%** to **9.1%**
- Application Score represents a synthesis of the customer's risk in repaying: **probability** to fail to repay (late 90 days from the due installment) in the **next 12 months** at least 1 tradeline

## Scoring system: benefits

- Being able to predict in advance which of the customers will be more likely to skip a payment, the score allows to:
  - Differentiate pricing mechanism factoring the individual risk
  - Create faster evaluation, by using score indicator for risk
  - Improve risk capital allocation across different segments in portfolio, and correlate risk with profitability of segments
  - Improve operational efficiency, allocating collection strategies and resources
  - Better cross selling and management of the current portfolio based on the risk
  - Use the accumulated knowledge on the customers behavior to improve the lending schemes

# Scoring system: best combination of knowledge on your borrowers



## How to Interpret CRIF Application Scoring (A/score)

- CRIF Application Score represents a synthesis of the customer's risk in repaying: **probability** to fail to repay in the **next 12 months** at least 1 tradeline in which he's applicant or co-applicant (late 90 days from the due installment)
- The formula (model) is **built on socio-demographic attributes** of anonymized (population) and thus **works on any individuals represented by the data** (MFI portfolio or CIC Philippine portfolio). The first is more predictive when MFI is targeting products/segments already well know, while the second is mode predictive when MFI is chartering into new products (higher amount, etc) or new segments
- **Does not require a credit report to work, it is then effective to completely new to finance customers**

## How to Interpret CRIF Bureau Score (B/score)

- CRIF Bureau Score represents a synthesis of the customer's risk in repaying: **probability** to fail to repay in the **next 12 months** at least 1 tradeline in which he's applicant or co-applicant (late 90 days from the due installment)
- The formula (model) is built on **actual individual repayment data**, works on any individuals represented by the data (MFI portfolio or CIC Philippine portfolio). The first is more predictive when MFI is targeting repetitive customers, while the second is more predictive when MFI is targeting first time customers
- **It does require a credit report to work, it is then more predictive than an A/score but works only for not new-to-finance customers (requires for MFI to be in production with CIC already)**



# Scoring system: roadmap

	Pre-requisites	CRIF service	Timeline	COST
External A/score	• None	• SPRINT A/score	• Immediate	•
Internal A/score	• None	• custom score for MFI	• Now/ 4 months	
External Data - CIC	• CIC prod	• SPRINT ACADEMY	• Now	
External B/score		• SPRINT B/score	• 2017	

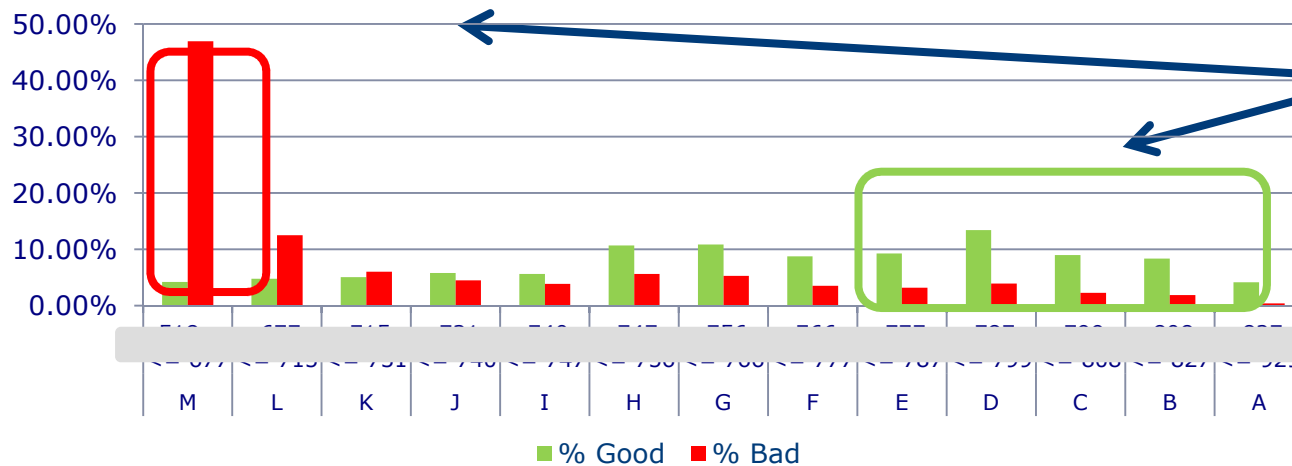
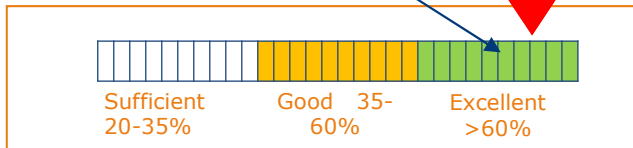
Cost? Impact not only on provisioning and non performing lines, but what if you can directly reduce *operational cost*? E.g. instead of collecting every two weeks, skip one cycle for the low risk customers => **50% direct operational cost reduction**

# CRIF India MFI score: Performance indicators

## Development and validation samples

Indicator	Development sample	Hold-out
KS	[Redacted]	[Redacted]
Information value		
Gini Index		

- Development sample – Observation period (T0) is from August 2012 to July 2013
- Hold-out sample – T0 is from August 2012 to July 2013 (different set of individuals from development sample)



PERFORM MFI separates GOOD from BAD individuals very well. Performance indicators are **very high**.

## Benefits of CRIF MFI score

Features	Benefits
Rank-orders the likelihood of a future delinquency on the application	Helps credit issuers quickly and consistently identify good and bad credit risks among existing and new clients. Separating low- and high-risk applications leads to better management decisions, which maximize profitability.
Easy to interpret	PERFORM MFI is a simple yet comprehensive risk measure. Each score is a proxy of the likelihood of an individual defaulting on a loan by examining their entire credit portfolio. A higher score indicates lower risk of delinquency while lower scores indicate higher risk. The possible score values range from 300 to 929.
Development based on approx. 3 mil+ Indian individuals	The large data sample encompasses applications from all over the country with all types of credit products and payment histories. This array of information makes PERFORM MFI a robust and diverse model that provides enhanced risk prediction for existing account holders as well as for new account prospects.

## Benefits of CRIF MFI score

Features	Benefits
Hold-out Validation sample based on 1.4+ mil Indian individuals	A random sample of individuals with credit files selected from across the country (without individuals in the development) at the same time as the development sample was used to validate the final PERFORM MFI.
Minimum scoring criteria is tailored to the Indian market	In order for the score to be most accurate and robust, the model requires a certain amount of sufficient and current credit information in order to return a score. PERFORM MFI scores a high percentage of Indian individual files, reducing the number of files that require manual review and increasing the number of prospects.

## Fact check from CRIF MFI India

1. One out of 8 MFI customers take consumer loan
2. These consumer loans are mainly small ticket loans – can also be two wheeler loans
3. The behaviour of customers in a group loan can be very different as they take individual loans – that is what the Indian industry is realizing
4. The MFI companies have also geared up to provide individual personal loans and business loans.



Thanks for your  
attention !