The transition from conventional tools in Banking to R ...

UseR! 2019, Toulouse – France, July, 2019

Peter Balazi

- Choice of programming language

Main points of this talk…

- Current tools and objectives in risk modeling (commercial Banks case)

Main points of this talk…

- Trends emerging behind interests of end-users (calling for change…)

Main points of this talk…

- Future (envisioned) widespread usage of R in risk modeling and its application

Choice of programming language

Starting off with questions:

Your first encounter with programming language, open-source or commercial?

Your reason for choosing programing language/s?

- *Required at work* (conditional on obtaining job, started learning at work)

- *Natural-free choice* (curiosity, … choice due to: availability of information/materials, cost perspective, community, friends etc.)

Current tools and objectives in risk modeling

Requirements in risk management (Banking industry):

- *Adequate tools*; *tailored* to the particular needs (task, objectives…)
- *Flexibility and usability*, reviewing, modifying, prototyping
- *Accessibility and understanding* of the inner-settings is crucial for detailed results (regulation, full disclosure for auditing etc.)
- *Increasing regulatory requirements* (improvements using new approaches, availability of learning materials, willingness to explore beyond standardized approaches…)

Current tools and objectives in risk modeling

Historically and still widely used commercial programming languages, SAS and alike in place …

- *Commercial approach* (selling bundles no one uses, needs…., packages offered has no or limited access rights, many services optional and costly. etc…)

- *Still in-use because* (decisions at the very top, legacy software – in use for many years, etc.)

Current tools and objectives in risk modeling

Disadvantages

- Many (i.e. limited knowledge sharing, practically non-existent community, no transparency of implementation, increasing lower candidates willing to engage in this type of languages etc.)

Advantages (in case you ask):

- None ☺ (certainly, everything can be implemented in alternative (i.e. SAS) programming languages but what is the real cost? i.e. implementation time.

Trends emerging behind interests of end-users

- *End-users as main driver for a change:* In the past end-users unlikely to be listened about the comparative advantages of using other widely used open-source (community driven) programming software, this has changed rapidly.

- *Increasing know-how sharing channels:* large number of resources available and community driven knowledge sharing sparked additional willingness to experiment and implement solutions that have increasing tangible benefits in daily risk management area.

Trends emerging behind interests of end-users

- *Job-market increasingly favors alternatives:* It is much harder today than in the past to recruit talents that are willing to engage in (opaque) commercial languages that do not offer interesting background.

- *Trend:* Main drivers from *management perspective* are end-users demand and job-market (availability) behind the choice of programming language. Management is taking active steps (investments) to enforce the change.

Why and where will usage of R dominate:

Why:

- *Existing* end-users demands and *new prospective* candidates dominate and prevail in shaping the future of programming language usage.

Future usage of R in (commercial Banking) risk modeling

Where:

- *Prototyping:* Fast implementation, improved first versioning using R compared to i.e. SAS. This supported by availability of r packages and other sources that allow testing of modeling ideas at the fraction of times using commercial tools where mostly not available.

- *Modeling:* Improving and broadening statistical/modeling knowledge by the vast availability of resources from books, articles, r packages and community blogs, etc.

Thank you...

- *Questions?*

Feel free to approach me in person to discuss risk modeling or any other interesting topic around R.