AUTORITÉ DES MARCHÉS FINANCIERS

15 July 2019

On Apr 5th 2019, the AMF's Scientific Advisory Board dedicated its meeting to market finance

Boris Vallée (Harvard Business School) presented a working paper on the optimal design of crowdfunding platforms. The authors of the research aimed at understanding why LendingClub suddenly decided to reduce the quantity of information on borrowers that it made available to investors. Following B.Vallée's presentation, Patrice Poncet (Essec Business School) presented a capital asset pricing model (CAPM) accounting for a political risk factor.

Industrial organization for crowdfunding platforms

Crowdfunding platforms collect standardized information about borrowers, in order to assess their credit risk via algorithms, and decided eventually to propose the projects to potential investors. As a second step, they provided investors with detailed information on each pre-selected project. Final investors then chose to fund the project and bear the full risk of their investment. Their choices are in themselves a useful source of information for the platform.

In November 2014, LendingClub, the first lending platform of its kind, suddenly cut the quantity of information on borrowers that it made available to investors by half. Boris Vallée and his co-author Yao Zheng (University of Washington) set about identifying the platform's incentives, by building a model with two types of investors differing in their degree of sophistication. The heterogeneity in the investors' level of sophistication in the crowdlending

market creates an adverse selection issue, which can have an impact on the platform's overall activity. Indeed, sophisticated investors are more able to identify profitable projects and to invest in them, thereby leaving less well-informed investors with lower quality projects. In order to accept to invest, they will require a higher interest rate or a lower amount for the loans, thus reducing the activity of the platform, which will react by adapting its preselection criteria and reducing the quantity of information provided to investors.

Thus, due to the high cost of elaborating an efficient preselection system from scratch, a newly created platform will initially opt for a broad diffusion of information to investors. In this set-up, only will sophisticated investors be able to discriminate efficiently between projects, and they will thus crowd-out uninformed investors. In a second phase, once well establised, the platform will be better-off investing in project pre-selection since it will attract less sophisticated investors, which represent a larger pool. In order to avoid adverse selection, it will thus reduce the quantity of information made available, thereby limiting the competitive advantage of sophisticated investors.

The theoretical model is then tested on data from LendingClub and Prosper, two American platforms. This data is pooled with information on lenders' characteristics obtained from LendingRobot, a robo-advisor, from which the degree of sophistication can be proxied. The results show that indeed investment choices vary according to investors' sophistication as more sophisticated investors choose more profitable loans. This outperformance is nonetheless reduced when the platform decreases the quantity of information made available to investors. This analysis allows to better understand the incentives of the platform to maximize its revenues, yet it does not adress the issue of social welfare nor does it touch upon the optimal information policy to support the efficient financing of the real economy.

The Scientific Advisory Board members highlighted the originality of both the database and the analysis, and stressed the potential usefulness of such research for the regulator. This then prompted a discussion on the notion of sophisticated investor, and it was suggested to resort to logit/probit models to capture the investment decision. It also prompted reflexion on how the platform algorithms might interact with those of the robo-advisor. This analysis sheds light on the fundamental issue of the value of information and its use (abuse) by high frequency algorithms.

Accounting for political risk in CAPM

Patrice Poncet, Giovanni Pagliardi (Norwegian Business School) and Stavros Zenios (University of Cyprus & University of Pennsylvania) introduce, in classical capital asset pricing models, an original variable combining the political stability and confidence in economic policy dimensions, which they call P-factor. These two dimensions (which exhibit

low correlation and appear to be complementary) are extracted from the World Economic Survey (WES) of the Ifo Institute in Munich, which consists in a quarterly opinion survey of national experts. Three different monthly P-factors are computed on three distinct country universes (either 22 developed countries, or 20 emerging countries, or the whole pool of 42 countries).

The authors show that by adding the P-factor to the most commonly used factor models in the literature, this substantially increases their explanatory power (a relative improvement of the R^2 between 8 and 42 %). The risk premia on the P-factor are statistically significant, robust to the various specifications, and of an order of magnitude comparable to the main factors identified in the litereature (and notably the market factor). The researchers nevertheless point out a change in the sign of the political risk premium between emerging (positive) and developed (negative) countries, in line with the documented phenomenon labelled « political sign paradox » : the estimated premium is in fact the result of the superposition of a long term (a larger risk increases the expected future returns) and a short term relationship (a higher risk reduces contemporary returns). Emerging countries are more severely affected by political shocks and their impacts on markets are more instantaneous than for developed markets.

Eventually, the authors build a new capital asset pricing model in reduced form with three factors : the market factor (out-performance of the global markets versus the risk-free asset), the dollar factor (out-performance on the foreign exchange market), and the P-factor. This model, which they call the P-CAPM, yields better results than standard models (Cahart, Fama-French with either 3 or 5 factors, World CAPM, etc.). Lastly they show that the P-factor contains useful information on political risk, and that it is not spanned by the other factors.

The Board members praised the clarity of the presentation. Observations were made on whether the lower sensitivity of the national stock indices to domestic political shocks was not to be attributed to the fact that the companies that compose the indices are themselves multinationals. Given the performance of the model, the members discussed its practical implementation by market participants. They also interpreted the P-factor in terms of barriers to capital mobility.

Read more

- Marketplace Lending - Presentation Boris Vallée-Yao Zeng
- Marketplace Lending - Article Boris Vallée-Yao Zeng

- Marketplace Lending - Discussion S. Darolles
- A political capital asset pricing model - Presentation P. Poncet-G. Pagliardi-S. Zenios
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