

## **1. Project objective**

The payment services market is currently under the influence of two rapidly changing processes which affect it strongly. The first one is the extremely dynamic development of information technologies. The general category of FinTech describes their application in financial services, while the more specific category of PayTech defines their use in payment services. The other process comprises regulations, created by EU legislature and supervisory bodies, which are dramatically changing the terms on which payment services are provided and relations between the payment system participants. Therefore:

*The main objective of the project is to carry out a comprehensive study of the impact of FinTech development and legal regulations on the introduction of innovations in the payment services market in the European Union, taking into account consumer needs and the strategies of the financial sector.*

## **2. Description of studies conducted in the project**

The studies planned in the project will comprehensively cover both European consumers using payment services, and banks and non-bank institutions that provide them. The project will involve developing new theoretical concepts, conducting empirical studies and verifying a number of research hypotheses. It is interdisciplinary because it will employ research methods used in economic, legal, and social sciences. The fundamental part of the project consist in extensive empirical studies on a European scale covering both consumers and the financial sector.

### **a) Survey study of European Union consumers**

The research team will perform a large-scale survey study of consumers in the 19 most important countries in the European Union, including Poland. Almost 5000 persons are expected to provide answers to a Computer Aided Web Interview, which will help the research team learn their needs related to using payment services and digital technologies, as well as interest in PayTech solutions.

### **b) Survey study of banks and non-bank payment services providers**

A questionnaire prepared in the form of a spreadsheet will gather the official standing of institutions providing payment services in the European Union market, as well as opinions of experts employed in these institutions. The results obtained will allow the research team to learn the strategies and plans of banks and non-bank payment services providers regarding the introduction of PayTech innovations, and the assessment of the impact exerted on the functioning of that market by changes in EU legal and standardisation regulations.

### **c) Case studies regarding the introduction of PayTech solutions into the market**

Case studies will be performed in order to conduct an in-depth analysis of the implementation of selected PayTech innovations by banks and non-bank payment services providers in the European Union.

### **d) Quantitative methods applied**

The research team will use data gathered in survey studies to perform statistical and econometric analyses. Econometric modelling will be applied in order to discern the factors determining consumer interest in PayTech innovations, using a new version of the Technology Acceptance Model adjusted to the characteristics of payment innovations.

## **3. Reasons for addressing the research problem**

The economy nowadays requires fast and effective methods of making payments, including cross-border ones. Due to technological advances and the digitisation of services, completely new needs emerge in the scope of servicing transactions and settlements, including micro-payments. Traditional payment instruments are not able to meet those needs. These processes result in a dynamic development of a number of innovative PayTech solutions, including: instant payments, open API, biometric authentication, blockchain and DLT, Near Filed Communication, card wallets and mobile payments, i.e. Apple Pay, Android Pay or BLIK. Payment innovations have become an area where banks compete with other payment services providers, the latter having a large IT potential at their disposal. At the same time, EU legal regulations, including the second Payment Services Directive, open the market wider to competition from non-bank payment services providers.

Despite such great importance of payment innovations, this area is insufficiently researched and the state of knowledge in scientific literature vividly lacking. The studies proposed in this project are a response to that need as they will allow the research team to gain fully comprehensive knowledge of the conditions for the development of payment innovations. The project will be the first one to analyse such a large number of leading PayTech innovations, from many EU countries, on the basis of data provided simultaneously by consumers and payment services providers. Therefore, the results obtained will be comparable between countries and payment innovations. Undertaking the research proposed in the project will allow the research team to join a very topical and promising research trend and publish the results in renowned international scientific journals.