The rapid development of e-commerce, in particular banking online services requires strong authentication tools to verify the parties to the transaction. Physical presence of the parties to the agreement and/or transaction is no longer needed. That is why the client's digital authentication is a crucial process for user’s identity and authorisation confirmation. Using typical password, PIN or token seems to be not efficient tool in particular for high value transactions. Biometric data allow a person to be verified and/or identified and authenticated based on a set of unique data that are specific to each individual person. Based on the physical and/or behavioral individual characteristics the biometric template is created that can be used as a reference for future measurement of people’s data. The template may be stored in central database and/or a smart card, e.g. payment card. Biometrics are used in the process of comparing data being the person's characteristics to that person's biometric “template” in order to determine resemblance.

The subject matter of the doctoral dissertation “Legal aspects of biometrics in banking sector” concerns the analysis of the law applicable to usage of biometric data in banking sector. After introduction, the thesis is divided into four chapters, i.e. (i) Description of banking biometric; (ii) Legal nature of biometric data; (iii) Axiological basis for using biometric data by the bank; (iv) Evolution of limits for the use of biometric data.

The aim of the work is to answer the question whether Polish law regulates biometric banking in a manner adequate to the development of biometric systems in the banks. The dissertation covers the scientific discussion in the light of current regulations regarding legitimate usage biometric data by banks. There are specified legal conditions, risks and evaluation criteria for the authentication of the client's bank’s employee identity as well as the authorization of banking operations.
The legal analysis is focused on the following regulations: (i) The Constitution of the Republic of Poland (ii) The General Data Protection Regulation; (iii) The Payment Services Directive II (iv) Polish Banking Law (v) The Labour Code. Apart from the statutory provisions of the law, the thesis relates to applicable “soft law” regulations applicable to the banking sector, as well as rules resulting from the Court's case-law, needed for the purpose of assessing evolution of the barriers for the development of the biometric solutions.

The conducted research allows you to state that the Polish law under the influence of changes resulting from the provisions of EU law has been supplemented by regulations that are more and more able to keep up with the current needs and the state of biometric banking development. Despite the proper direction of changes in legal norms, the regulations concerning biometrics in banking are not comprehensive.

In addition, the analysis carried out in the dissertation proved that due to the fact that the bank is a public trust entity pursuing an important public interest in ensuring the security of the funds entrusted to it, the effectiveness of authentication methods has a significant impact on the security of deposits, therefore in this sector there is a strong axiological and systemic justification for the use of biometric data.