Local Government Financial Institution and FinTech

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Abstract
The article compares the characteristics of local government financial institutions and FinTechs in order to make an attempt to answer the question whether a local government financial institution may constitute a FinTech. The study analyses a particular case of using the business model based on blockchain technology for a local government financial institution, as well as discusses the possibility to base the functioning of such institution on the DAO concept. The article is summarised with the outline of the analyses of legal barriers concerning the creation and functioning of local government financial institutions as FinTechs.

Keywords
financial institutions; local government; FinTech; blockchain; financial innovation

1 Introduction[2]

The aim of the article is to analyse the possibilities for the establishing and functioning of local government financial institutions as FinTechs. According to the research hypothesis formulated in the study, such undertaking is possible, however in order for such institutions to be truly present on the financial market, the legislator's intervention is necessary. The article relies in particular on the dogmatic and legal method, taking

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into consideration such resources as literature, the opinions of supervisory authorities as well as different sources of law.

2 Characteristics Distinguishing Local Government Financial Institutions

Local government financial institutions, or LGFIs, do not have their legal definition and so far, their doctrinal definition has not been developed either. For the purposes of the present article (and more broadly – of the research) it can be assumed that local government financial institutions are financial institutions, i.e. entities providing financial services, constituting the exclusive ownership of a local government unit (LGU) or a group of local government units, or being totally controlled by an LGU or a group of LGUs (e.g. through the majority of votes on the general meeting).

Having adopted a model-based, theoretical perspective, it is necessary to differentiate between two basic types of local government financial institutions. The first of them includes financial institutions established and functioning based on general regulations concerning a given type of financial institution. The second type includes financial institutions established based on a special separate regulation. The best example of the first type of local government financial institutions is constituted by community banks, i.e. banks established based on appropriate regulations referring to banks by LGUs or groups of LGUs. In Poland, such banks were functioning before the Second World War.[3] Admittedly, the law which is currently in force in Poland accepts the establishing of banks on such general conditions by communities, but in practice, community banks are currently absent in Poland (some exceptions may be constituted by cooperative banks, including shares held by communities).[4]

Due to historical issues, as well as the requirements of the European Union law, community banks following such model-based approach practically do not exist nowadays in Europe (this refers to banks established and functioning based exclusively on a general regulation concerning banks in a given country). There usually exists an additional, special legal regulation (Zalcewicz, 2013: 130 et seq.). The best example

3 In the interwar period, the banks in Poland were established by inter-community unions based on the Ordinance of the President of the Republic of Poland as of March 17, 1928 on the bank law (*Journal of Laws,* No. 34, item 321), which means that these banks were established according to general rules. Single local government units did not use to establish banks. There existed community banks of a regional character (Komunalny Bank Kredytowy in Poznań, Krajowy Bank Pożyczkowy for the Poznań Voivodeship), as well as a community bank of a national character – Polski Bank Komunalny with its seat in Warsaw. See more e.g. Młynarczyk, 2005: 22 et seq.

4 The establishing of banks in Poland by LGUs based on current regulations in force constitutes a complex and controversial question from the legal point of view. In general, communities have the possibility to establish banks in the form of a joint stock company with some reservations and according to complicated interpretation of law. For this reason, it is not surprising that in practice, communities in Poland do not get involved in establishing banks. However, communities hold shares in the existing cooperative banks. See more in Zalcewicz, 2013: 262–270.

here is the German Sparkasse system,[5] the Austrian Sparkasse system (BGBl. Nr. 64/1979 as amended, hereinafter: Sparkassengesetz), or the KommuneKredit in Denmark (Act No. 383 of 3 May 2006). It is, however, worth noticing that within the German Sparkasse system, there function savings banks (Sparkassen) characteristic exclusively for this system and following the organisational and legal form of a public law institution (Anstalten öffentlichen Rechts) as well as seven national banks (Landesbanken) which have the form of a joint stock company and to which the provisions of the German Bank Law apply. Poland has a rich tradition of such separate legal regulation, as before WWII, based on the Ordinance of the President of the Republic of Poland as of October 24, 1934 (*Journal of Laws,* No. 95, item 860 as amended), a well-developed system of community savings banks was functioning in Poland.

The definition of local government financial institutions adopted in the present article is not decisive for the portfolio of financial services provided by these institutions. In practice, local government financial institutions which prevail perform the deposit and credit activity, with limited possibility to provide other financial services than taking deposits or other repayable funds from the public and granting credits for its own account. In this way, these are usually the entities satisfying the definition of a credit institution according to the European Union law.[6] Only a few of them have been excluded from the scope of application of Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms (CRD IV) (OJ L 176, 27.06.2013: 338–436 as amended). Pursuant to Art. 2 sec. 1 of this directive, KommuneKredit from Denmark and municipal banks from the United Kingdom were excluded from its scope of application.

3 Characteristics Distinguishing FinTechs

A legal definition of FinTechs does not exist. The doctrine justifiably avoids the construction of the definitions of FinTech – what dominates it is the description of activities connected with the notion of FinTech (Szpringer, 2017: 3 et seq.). The notion is currently rather overused and some people perceive its scope very broadly.

FinTech is a new notion and is included in the notion of financial innovation.[7]

5 For example: Sparkassengesetz für Baden-Württemberg (SpG) in der Fassung der Bekanntmachung vom 19. Juli 2005 (GBI. 2005, 587, 588 as amended); Gesetz über die Berliner Sparkasse und die Umwandlung der Landesbank Berlin – Girozentrale – in eine Aktiengesellschaft (Berliner Sparkassengesetz – SpkG) Vom 28. Juni 2005 (GVBl. S. 346 as amended); Bremisches Sparkassengesetz in der Fassung der Bekanntmachung vom 12. Oktober 2005 (Brem.GBl. 2005, 555 as amended).

6 According to Art. 4.1(1) Regulation (EU) No. 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms (OJ L 176, 27.06.2013, p. 1–337) "credit institution – means an undertaking the business of which is to take deposits or other repayable funds from the public and to grant credits for its own account".

7 Cf. Avgouleas, E. who writes: "[...] *financial innovation to consist of human knowledge breakthroughs and other creative inventions, which lead to the development of: a) new financial products that enhance*

In general, it is possible to point out to the following characteristics of FinTechs:

- they are entities providing financial services;
- but they may also be the entities providing services supporting the provision of financial services;
- they use innovative solutions;
- this usually concerns technological innovations (and not social ones).

Among public entities, supervisory authorities are the most interested in the identification of FinTechs. This results from the fact that they supervise the obedience by entities conducting business activity of the restriction concerning the provision of subsequent financial services (e.g. in the EU the obligation to obtain the permission for conducting the activity of a credit institution, a payment institution or e.g. for providing brokerage services). In this way, the German supervision authority BaFin (Federal Financial Supervisory Authority) has for example prepared the list of business models qualified as conducting FinTech activity.

This refers to the following business models (Bafin.de, 2018):

- alternative payment methods;
- automated portfolio management;
- blockchain technology;
- crowdfunding (including crowdinvesting and crowdlending);
- platform for automated investment advice;
- platform for signal trading and automated order execution;
- Virtual Currency (VC);
- insurtech companies.

What is characteristic for FinTechs, it is the fact that usually they do not possess big capital and very often they are start-ups. This insufficiency of capital is to be compensated with innovative technology.

capital allocation such as stocks, bonds, derivatives, and mutual funds; b) new organizations and processes that facilitate access to capital, including the establishment of new financial institutions, trading for a, and new forms for extension of credit; new risk-management techniques utilized to handle risk originating in financial transactions and commercial deals [...] *for example, derivatives and securitizations* [...]; *d) technological innovation utilized to improve product and processes innovation and to advance the frontiers of risk management. It comprises the use of new technology in product design and trading, improved capital allocations, including information dissemination, and in the pricing and distribution of risk. Finally, it encompasses the use of new technology in the context of essential financial infrastructure services, such as payment, clearing and settlement processes* [...]" Avgouleas, 2016: 660–661.

4 Local Government Institution Considered a FinTech?

For obvious reasons, from the historical perspective, such local government financial institutions as for example community savings institutions in Poland before WWII cannot be called FinTechs. In the period when they were functioning there were no appropriate technologies. It does not seem possible to qualify local government financial institutions currently operating in the World as FinTechs either taking into account practical aspects of their functioning or legal regulations concerning them.

Local government units as public entities have to follow the legality principle, i.e. they need to possess a legal basis for the activities undertaken by them. The lack of appropriate regulations makes their appropriate functioning difficult or even impossible. For this reason, LGUs may establish local government financial institutions or participate in them only when it is possible according to the provisions of law. FinTechs, in turn, develop according to the basic free market rule: everything which is not forbidden is allowed. This principle does not apply to such public entities as LGUs, which are not allowed, without an appropriate legal regulation, to establish FinTechs. We thus have kind of a stalemate – due to their essence, local government financial institutions and FinTechs do not seem to have anything in common and it is necessary for the legislator to act, create appropriate provisions for a local government institution to constitute a FinTech at the same time. This is undoubtedly an artificial solution, forcing the process which in the case of FinTechs occurs spontaneously, only as a result of market forces. In these countries where local government financial institutions are already active (e.g. Germany), such activities would seem pointless. However, in the countries where such institutions do not exist, e.g. in Poland, making it possible to establish local government financial institutions which could function as FinTechs seems justified. The reason is the same as when it comes to the rationality of establishing FinTechs – the opportunity to come into being on the financial market with relatively low capital committed. Deliberations whether LGUs should be active on the financial market through local government financial institutions go beyond the subject of the present article, but the historical example of community savings institutions or the success of Sparkasse in Germany demonstrate that this question should be considered. So why not take a step further and, following the latest trends, make it possible for local government units in Poland to establish local government financial institutions which could use in their activity, apart from traditional business models, also business models characteristic for FinTechs?

5 Blockchain and Local Government Financial Institutions

Among different models based on which FinTechs function, the model based on blockchain technology (more broadly – distributed ledger technology – DLT) currently prevails. However, as it has already been pointed out, it is in general difficult to find common elements of FinTechs and local government financial institutions, but one common characteristic may be found for the blockchain technology and local government financial institutions: this is the presence, in both cases, of the so called community. What is more, both for the local government as well as blockchain, the existence of a "community" is a sine qua non, necessary condition. Nevertheless, some difference can be found – it is usually characteristic for blockchain that the community is of global character, while for the local government, and thus also local government financial institution, the presence of local community would rather be typical. Blockchain technology is, however, so versatile that it can be applied also in organic systems for a specific group of people, and in this way also territorially. Using blockchain technology may bring a local government financial institution a number of benefits, connected in particular with the possibility to decentralise decision making and the democratisation ensured by DAO (decentralised autonomous organisation), the possibility to use so called tokens and in particular to apply innovative financial technologies based on blockchain. This refers not only to payments based on crypto currencies, but in particular to the possibility to use smart contracts for providing financial services.

It seems, at least in the context of the current state of development of the doctrine and legal practice connected with the blockchain technology (distributed ledger), that smart contracts should not be treated in the same way as civil law contracts. A smart contract is only some sort of a software, usually functioning within the programming environment based on blockchain.[8] In this way, the software such as a smart contract should always be accompanied by a contract concluded between the parties.

[8] Nick Szabo, the first author referring to smart contracts, wrote that "a smart contract is a set of promises, specified in digital form, including protocols within which the parties perform on these promises". He also wrote: "New institutions, and new ways to formalize the relationships that make up these institutions, are now made possible by the digital revolution. I call these new contracts "smart", because they are far more functional than their inanimate paper-based ancestors. No use of artificial intelligence is implied. A smart contract is a set of promises, specified in digital form, including protocols within which the parties perform on these promises" (Szabo, 1996). In the Solidity language, in turn, smart contract is characterised as follows: "A contract in the sense of Solidity is a collection of code (its functions) and data (its state) that resides at a specific address on the Ethereum blockchain" – see Solidity.readthedocs.io, 2018.

DAO, the most advanced form of smart contract, apart from constituting the smart contract itself, is characterised by the following features:

- collectivity/network of contracts;[9]
- decentralisation (with the possibility of its gradation);[10]
- democracy (with the possibility of gradation of this feature).

Obviously, the application of blockchain technology results in a number of problems, such as for example the unreliability of this technology, legal risks resulting in particular from the lack of appropriate regulation, supervision difficulties (in decentralised networks). For the purposes of local government financial institutions, some crucial characteristics of the blockchain technology are also superfluous and these are its global character or very high anonymity of the users.

6 Local Government Financial Institution as DAO in the FinTech Model

Applying the idea of DAO, i.e. decentralised autonomous organisation, for organising the functioning of a local government financial institution undoubtedly seems very tempting due to the already mentioned common element of the blockchain technology and LGU, which is the presence of a community. An advanced smart contract, which DAO in fact is, makes it possible to involve the local community in the organisational issues of a local government financial institution and this is based on the principles of direct democracy.[11] In this way, blockchain technology as an advanced technology may constitute the starting point for social innovation consisting in higher participation of the local community in the functioning of entities established by LGUs.

7 The Outline of Legal Barriers Connected with the Establishing and Functioning of Local Government Financial Institutions in the FinTech Business Model

The first barrier consists in the already mentioned legality principle. Local government units thus need an appropriate legal regulation in order to be able to effectively

9 This refers to the fact that complex contracts (as programs) often consist of a few less complex contracts (programs). What is more, contracts may participate in crowdsales, or even be voting members of other contracts.

10 DAO, as any other intelligent contract, is decentralised i.e. DAO as a program uses the blockchain system (e.g. the Ethereum system).

11 In principle, DAO has a central manager who decides who can be a DAO member, as well as what the voting rules are. However, this can be modified and DAO may function without a central manager.

establish FinTechs, fulfilling the conditions of a local government financial institution. However, in business trading there already exist (or it is potentially possible for them to be established) FinTechs or financial institutions with the same scope of the services provided. In this way, local government units will, as owners, compete with other private entities and in the course of this competition they will be using public capital. This may result in the violation of the principle of competition and a number of EU regulations concerning public aid. This concerns in particular Art. 18 and Arts. 101–109 of the Treaty on the Functioning of the European Union referred to in Art. 106 sec. 1 of this Treaty. Therefore, it is necessary to perform the assessment of the opportunities to apply these regulations taking into account specific legal solutions, and following the model-based approach, this for sure constitutes an important director of further in-depth study. Such assessment should be based on the extensive case law of the Court of Justice of the European Union, as well as European Commission communications. What is more, it will be necessary to consider the possibility of applying Commission Directive 2006/111/EC of 16 November 2006 on the transparency of financial relations between Member States and public undertakings, as well as on financial transparency within certain undertakings (OJ L 318, 17.11.2006: 17–25). Applying the FinTech model in the functioning of local government financial institutions will for sure make it possible to avoid the accusation of using public aid, in spite of an LGU maintaining control over such institution.

These limitations are consequently linked with the limitations resulting from public-private partnership in the case when local government financial institutions are established with the participation of private entities (in Poland this concerns the application of the Act as of 19 December 2008 on public-private partnership) (*Journal of Laws,* 2017, item 1834 as amended).

Different but equally important barriers are connected with the functioning of FinTechs in general, in particular within the public law as well as such areas as financial supervision and tax law, or the areas where public regulation overlaps with a civil one (consumer protection). If local government units were to engage public funds in FinTechs, then in the mentioned sectors there would have to exist legal regulations providing LGUs with the certainty that the operations of entities controlled by them are legal and compliant with the regulations. The current state of FinTech regulations in Poland does not provide such a guarantee. In general, in the entire European Union the level of certainty is insufficient to give such guarantees, and thus conducting the activity according to the FinTech model is connected with a high legal risk. FinTech regulations are certainly the most developed in the USA, as well as in Singapore or Japan. However, legal systems of these states differ to a large extent from the continental legal system, which prevails in the European Union.

8 Conclusion

Financial innovations, which are nowadays present most frequently under the form of so called FinTechs, constitute a chance to come into being on the financial market for those entities which are completely or partially owned by LGUs or controlled by them. Nevertheless, benefiting from such chance strictly depends on the legislators' activities as it is necessary for them to establish an appropriate legal framework. Whether to use a legal framework formed in this way is the matter of an independent decision of LGUs (as they are autonomous within the scope specified by law). Such regulation may also create an additional impulse for the broader regulation of the functioning of FinTechs, in particular in the context of state supervision, taxes and consumer protection.

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