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# ФИНАНСИЈСКА ТРЖИШТА

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**Rainer KULMS, Priv.-Doz., Dr. iur., LL.M.**

**Senior Research Fellow, Max Planck Institute for Comparative and International Private Law, Hamburg, Germany**

## **CROWDLENDING – AN ALTERNATIVE TO BANKING**

### **Summary**

*Online platforms have come to be used as alternative channels for raising funds. Projects are presented on internet platforms to attract investors who seek a return without the involvement of an intermediary. Peer-to-peer finance has its origins in lending clubs where borrowers arranged a loan at lower cost. Peer-to-peer lending, loan-based crowdfunding or crowdlending has evolved into complicated financing models whereby smaller and medium-sized companies, including start-ups benefit from a secondary market for securities and loans. This paper will survey the law and economics of crowdlending scenarios. It will then assess current private contracting concepts before it portrays regulatory patterns on crowdlending in the EU, the UK, Germany, France and the US. A section on auto-bidding and the potential of blockchain technology for online lending without intermediaries concludes.*

**Key words:** *online platforms, crowdlending, FinTech, auto-bidding and blockchain technology.*

### **I Traditional Banking – An Endangered Species?**

#### **1. New Financing Techniques after the Financial Crisis**

The financial crisis has left its mark on traditional banking. Small and medium-sized enterprises have come to find it increasingly difficult to obtain

loans for investment projects from traditional credit institutions.<sup>1</sup> Instead, on-line platforms are used as alternative channels for raising funds. Fund-seekers present their projects via internet platforms in order to attract investors who seek a return without the involvement of an intermediary.<sup>2</sup> The United Kingdom (UK) Financial Conduct Authority (FCA) distinguishes crowdfunding for equity investments from loan-based crowdfunding, but has decided to adopt a unitary regulatory approach.<sup>3</sup> The European Commission traces “crowdfunding ... [back] to an open call to the public to raise funds for a specific project”. In its original form, crowdlending or peer-to-peer lending refers to loan agreements concluded between people who have ‘met’ on an internet platform.<sup>4</sup>

Peer-to-peer finance has its origins in lending clubs in the UK and the USA where borrowers bypassed banks in order to arrange a loan at lower cost.<sup>5</sup> The purest form of peer-to-peer-transactions can still be found in unsecured consumer loan. Pledges are made and collected with the help of the platform. A 2016 study by the European Commission on the pre-Brexit crowdfunding market locates the majority of live platforms in the UK, followed by France and Germany.<sup>6</sup> 30% of the platforms assessed by the Commission study focused on reward-based crowdfunding, 23% on equity crowdfun-

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1 See European Commission, Commission Staff Working Document, Crowdfunding in the EU Capital Markets Union (SWD(2016) 154 final (Brussels 3 May 2016, available at <http://ec.europa.eu/transparency/regdoc/rep/10102/2016/EN/10102-2016-154-EN-F1-1.PDF>).

2 For an introductory survey see M. M. Gierczak *et al.*, in: D. Brüntje, O. Gajda (eds.), *Crowdfunding in Europe – State of the Art in Theory and Practice*, Springer International Publishing Zurich 2016, 7 et seq.

3 Financial Conduct Authority (FCA), A review of the regulatory regime for crowdfunding and the promotion of non-readily realisable securities by other media (London February 2015, available at <https://www.fca.org.uk/publication/thematic-reviews/crowdfunding-review.pdf>); see also the assessment of crowdfunding models by the European Banking Authority (EBA), Opinion of the European Banking Authority on lending-based crowdfunding (EBA/Op/2015/03, 26 February 2015, available at <https://www.eba.europa.eu/-/eba-recommends-convergence-of-lending-based-crowdfunding-regulation-across-the-eu>).

4 When reviewing its policy, the FCA focused on peer-to-peer lending (individuals) or peer-to-business lending, or a combination thereof: FCA, Policy Statement PS14/4, The FCA’s regulatory approach to crowdfunding over the internet and the promotion of non-readily realisable securities by other media – Feedback to CP 13/13 and final rules (London March 2014, available at <https://www.fca.org.uk/publication/policy/ps14-04.pdf>), at p.11.

5 A. Milne, P. Parboteeah, “The Business Models and Economics of Peer-to-Peer Lending”, European Credit Research Institute, Research Report No. 17 (May 2016, available at [https://www.ceps.eu/system/files/ECRI\\_RR17\\_P2P\\_Lending.pdf](https://www.ceps.eu/system/files/ECRI_RR17_P2P_Lending.pdf)), at p. 3 et seq.

6 European Commission, Crowdfunding in the EU Capital Markets, *supra* sub FN 1.

ding and 21% on loan-based crowdfunding.<sup>7</sup> The UK came first on the market for equity crowdfunding (89m € raised), followed by France (19m € raised) and Germany (18m € raised).<sup>8</sup> On the market for loans for crowdfunding projects the UK occupied the top position with 1.6bn € raised.<sup>9</sup> Much smaller volumes were raised in Estonia with 17m € and France with 12m €.<sup>10</sup>

Over the past years, peer-to-peer lending has evolved into complicated financing models whereby smaller and medium-sized companies, including start-ups, benefit from a secondary market for securities and loans.<sup>11</sup> Crowdfunding platforms adopt a more active role by devising securitisation schemes through an intermediate vehicle which might also operate to bridge a mismatch of maturities.<sup>12</sup> Alternatively, the platform chooses to invest itself in the project which is offered online.<sup>13</sup> These developments have caught the attention of securities and banking regulators.<sup>14</sup> Current regulatory concepts do not facilitate cross-border crowdfunding.<sup>15</sup> However, regulation might be overtaken by reality<sup>16</sup> as crowdfunding is on the brink of becoming automatic. Some platforms are already applying auto-bidding or auto-allocation processes<sup>17</sup> whereby ‘smart contracts’, i.e. algorithms organise matching processes

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7 *Ibid.*

8 *Ibid.*

9 *Ibid.*

10 *Ibid.*

11 See *infra* sub II.1.

12 *Ibid.*

13 *Ibid.*

14 See S. N. Hooghiemstra, K. de Buysere, in: Brüntje, Gajda (eds.), 135 et seq. on the European regulators assessing “the perfect regulation of crowdfunding”; C. Busch, V. Mak, “Peer-to-peer lending in the European Union”, *EuCML* 2016, 181 et seq.; J. Veith, “Crowdlending – Anforderungen an die rechtskonforme Umsetzung der darlehensweisen Schwarmfinanzierung”, *BKR* 2016, 184 et seq.

15 Cf. S. N. Hooghiemstra, K. de Buysere, in: Brüntje, Gajda (eds.), 164, the European Commission on the key challenges for crowdfunding in the EU in: European Commission, Communication from the Commission, Unleashing the potential of Crowdfunding in the European Union (COM(2014) 172 final, Brussels 27 March 2014, available at [http://ec.europa.eu/internal\\_market/finances/docs/crowdfunding/140327-co](http://ec.europa.eu/internal_market/finances/docs/crowdfunding/140327-co); BBVA Research, Digital Economy Watch, Crowdfunding in 360°: alternative financing for the digital erammunication\_en.pdf), and the survey over regulatory activities with respect to crowdfunding by Banco Bilbao Vizcaya Argentaria (30 January 2015, available at [https://www.bbva-research.com/wp-content/uploads/2015/02/Crowdfunding\\_Watch.pdf](https://www.bbva-research.com/wp-content/uploads/2015/02/Crowdfunding_Watch.pdf)).

16 See on the developments in the market for crowdfunding platforms: S. Appleton, “Funding Crowds Move into the Financial Mainstream”, 69 No.5 IBA Global Insight 16 (19 et seq.) (October/November 2015).

17 See Financial Times online 9 December 2016, “FCA proposes tougher rules for peer-to-peer lending” (available at <https://www.ft.com/content/ae38b8c9-a44f-3bff-8c26-ee15940705e4>); Lendin-

between lenders' bids and borrowers without any human intervention.<sup>18</sup> It requires little imagination to envisage digitised crowdfunding scenarios in an environment without borders.<sup>19</sup>

## 2. Outline of the Paper

This paper will first introduce a typology of crowdlending scenarios and the underlying economics. It will then assess to what extent legal concepts on internet platforms and intermediaries are applicable to the crowdfunding context where online contracting problems overlap with the need for transparency on the market for financial instruments. Within the framework of this paper it is only intended to introduce a survey over regulatory patterns in some jurisdictions. Ultimately, regulators will have to ascertain whether mandatory law should focus on the consumer-investor or the sophisticated investor less in need of disclosure and non-optional rules for contracting. A section on auto-bidding and the (revolutionary) potential of blockchain technology for peer-to-peer lending without intermediaries concludes.

## II The Law and Economics of Crowdlending

### 1. The Economic Incentives

Compared to the volumes of traditional finance peer-to-peer lending still occupies a niche on the market for loans.<sup>20</sup> But peer-to-peer and peer-to-business lending has experienced exceptional growth rates so that both, regulators and consumer organisations are beginning to take a closer look.<sup>21</sup> Borrowing via online platforms is a viable alternative for small and medium-sized enterprises and for start-ups which have been denied a loan by their bank.<sup>22</sup>

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gCrowd, Automated Investments with Autobid (Blog 12 June 2015, available at <https://www.lendingcrowd.com/blog/automated-investments-autobid/>), and infra sub III.3.

18 See Press Release by ThinCats, a UK peer-to-business lending platform, of 19 November 2013 "Auto-lending introduction" (available at <https://www.thincats.com/wp-content/uploads/2015/10/auto-lending.pdf>), and infra, sub III.3.

19 See M. Ulieru, in: P. Tasca et al. (eds.), *Banking Beyond Banks and Money – A Guide to Banking Services in the Twenty-First Century*, Springer International Publishing, Zurich 2016, 297 (299 et seq.) on the potential of blockchain technology for peer-to-peer platforms.

20 C. Savarese, "Crowdfunding and P2P lending: which opportunities for Microfinance?", *European Microfinance Magazine*, May 2015, 1 (5 et seq.) (available at <http://www.european-microfinance.org/index.php?rub=publications&pg=emn-magazines&spg=emn-magazine-crowdfunding-may-2015>).

21 See infra sub III.

22 C. Savarese, "Crowdfunding and P2P lending", supra sub FN 20.

Moreover, changes in societal behaviour have generated fundraising campaigns via online platforms for community projects and social networks.<sup>23</sup> Football clubs approach their members to lend via an online platform to address financial problems of ‘their’ club.<sup>24</sup>

Peer-to-peer lending builds on positive externalities for fundraisers, lender-investors and the markets for alternative finance.<sup>25</sup> Efficient crowdfunding mechanisms imply low transaction costs, attractive interest rates and a level of information on the investment project which addresses risk concerns by potential lenders.<sup>26</sup> Ultimately, the success of loan-based crowdfunding depends on competitive markets which generate transparent pricing processes.<sup>27</sup> Agrawal et al. mention crowdfunding designs which allow for pre-selling schemes so that a quality signal would ultimately determine the decision to sign up for a contribution to the crowdfunding project.<sup>28</sup> For the project-owner, such a mechanism has the advantage of producing an early feedback,<sup>29</sup> but it also hinges critically on the size of the platform and the competitive scenario under which a platform operates. Prosper.com, a US-based platform, operates a rudimentary credit-rating system whereby a credit grade is assigned to reflect the borrower’s charac-

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- 23 See S. Freedman, G. Zhe Jin, “Do Social Networks Solve Information Problems for Peer-to-Peer Lending? Evidence from Prosper.com”, NETInstitute www.NETinst.org Working Paper No. 08-43 (November 2008, available at <http://www.fas.nus.edu.sg/ecs/events/seminar/seminar-papers/12Mar09.pdf>); Milne, Parboteeah, “Peer-to-Peer Lending”, supra sub FN 5, at p. 5 et seq., and infra sub II.
- 24 Welt 24 online 1 April 2016, “Wie man in neun Minuten eine Million Euro bekommt” (available at <https://www.welt.de/finanzen/article153877718/Wie-man-in-neun-Minuten-eine-Million-Euro-bekommt.html?wtrid=socialmedia.email.sharebutton>).
- 25 P. Belleflamme, N. Omrani, M. Peitz, *The Economics of Crowdfunding Platforms*, Centre for Operations Research and Econometrics, Université catholique de Louvain, Discussion Paper 2015/15 (March 2015), at 16 et seq. (available at [https://www.uclouvain.be/cps/ucl/doc/core/documents/coredp2015\\_15web.pdf](https://www.uclouvain.be/cps/ucl/doc/core/documents/coredp2015_15web.pdf)).
- 26 See C. Savarese, “Crowdfunding and P2P lending”, supra sub FN 20, at p. 8 et seq.
- 27 See Z. Wei, M. Lin, “Market Mechanisms in Online Peer-to-Peer Lending”, *Management Science* 2017 (forthcoming) (available at [https://cdn.questromworld.bu.edu/platformstrategy/files/2015/06/platform2015\\_submission\\_20.pdf](https://cdn.questromworld.bu.edu/platformstrategy/files/2015/06/platform2015_submission_20.pdf)).
- 28 A. Agrawal, C. Catalini, A. Goldfarb, “Some Simple Economics of Crowdfunding”, National Bureau of Economic Research Working Paper Series, Working Paper 19133 (June 2013) (available at <http://www.nber.org/papers/w19133>).
- 29 Cf. J. Viotto da Cruz, “Beyond financing: crowdfunding as an informational mechanism” (April 2016, available at <http://unice.fr/laboratoires/greddeg/contenus-riches/documents-telechargeables/evenements-1/papiers-3en/jordana-viotto.pdf>).

teristics and the totality of successful designs.<sup>30</sup> The credit grade awarded by Prosper.com translates into the fees charged from lenders. Prosper accepts lenders to establish groups headed by a group leader who may offer advice and recommendations on specific project campaigns.<sup>31</sup>

Funders, i.e. potential lender-investors, have more heterogeneous motives in committing their contributions to a project originating from a platform.<sup>32</sup> After capital market law has lifted restrictions for non-sophisticated investors to purchase equity via online platforms, this group is beginning to explore investment facilities within new product developments. Apart from community-motivated commitment buyer-lenders invest via platforms in order to get early access to new products and to new ideas.<sup>33</sup> It is as yet unclear whether platforms and their offers for crowdlending live up to investors' expectations for a return higher than what current interest rates at banks can offer. Empirical evidence from the USA and the UK suggests that platforms rely on institutional investors to maintain growth rates.<sup>34</sup>

Most crowdfunding platforms operate for profit.<sup>35</sup> They charge a fee for successful projects so that there is an incentive to attract a maximum of projects.<sup>36</sup> Media coverage of successful projects generates network effects, attracting new activities for platforms.<sup>37</sup> In this context, platforms have established internal control mechanisms in order to maximise the volume of transactions while accommodating users' in fair dealing. Although platforms do not undertake due diligence of the project proposal themselves,<sup>38</sup> mechanisms for signalling quality are in effect.<sup>39</sup> Apart from fraud detection, this includes data

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30 See Z. Wei, M. Lin, "Market Mechanisms", supra sub 27; P. Belleflamme, N. Omrani, M. Peitz, supra sub 25.

31 *Ibid.*

32 A. Agrawal, C. Catalini, A. Goldfarb, supra sub FN 28.

33 Cf. *ibid.*

34 Milne, Parboteeah, "Peer-to-Peer Lending", supra sub FN 5, at p. 20.

35 A. Agrawal, C. Catalini, A. Goldfarb, supra sub FN 28.

36 On the price structure of crowdfunding platforms see P. Belleflamme, N. Omrani, M. Peitz, supra sub FN 25.

37 A. Agrawal, C. Catalini, A. Goldfarb, supra sub FN 28; P. Belleflamme, N. Omrani, M. Peitz, supra sub FN 25.

38 Bundesverband crowdfunding, Press Release 24 May 2016, Bundesverband Crowdfunding äußert sich zum Thema Due Diligence bei Reward-Based Crowdfunding (<http://www.bundesverband-crowdfunding.de/2016/05/bundesverband-crowdfunding-aeussert-sich-zum-thema-due-diligence-bei-reward-based-crowdfunding/>).

39 E. Mollick, "The dynamics of crowdfunding : An exploratory study", *Journal of Business Venturing* 29 (2014), 1 (p. 4 et seq.).

on past performance, the management team of the borrower and detailed information on the project.<sup>40</sup> Members of the crowd contribute to reputation mechanisms by putting negative information on the web.<sup>41</sup> A sequence of incoming investments will furnish information if early investors screened the investment project extensively.<sup>42</sup> Under intensive competition, information about platforms with lower long-term performance will become available. Nonetheless, it is difficult to ascertain under what circumstances the negative effects of herding behaviour can be offset.<sup>43</sup> In the real world of Prosper.com scenarios of potential underfunding were addressed with a change of the pricing mechanism. The traditional auction-model for unsecured loans was replaced by posted prices for a bid.<sup>44</sup> As a corollary, there is evidence about Prosper.com platform lenders complaining about unsatisfactory returns due to a considerable number of loan defaults.<sup>45</sup>

## 2. Private Contracting for Crowdlending

Both, the Board of International Organization of Securities Commissions (IOSCO)<sup>46</sup> and the European and Securities and Markets Authority (ESMA)<sup>47</sup> take a cautious approach towards crowdfunding and loan origination by funds. Within the context of this paper the diversity of national regulation on crowdfunding and loans allows only for a survey over regulatory patterns. But in view of current industry practice it is obvious that a combina-

40 E. Mollick, *Journal of Business Venturing* 29 (2014), 1 (p. 7 et seq.); cf. P. Belleflamme, N. Omrani, M. Peitz, supra sub FN 25.

41 See generally on reputation signalling in a crowdfunding context A. Agrawal, C. Catalini, A. Goldfarb, supra sub FN 28.

42 Cf. P. Belleflamme, N. Omrani, M. Peitz, supra sub FN 25.

43 See generally on herding and crowdfunding: P. Belleflamme, N. Omrani, M. Peitz, supra sub FN 25; J. Zhang, "The Wisdom of Crowdfunding", Federal Reserve Bank of Boston, Communities and Banking, Winter 2013, 30 (31) (available at [http://jjzhang.scripts.mit.edu/docs/Wisdom\\_of\\_Crowdfunding.pdf](http://jjzhang.scripts.mit.edu/docs/Wisdom_of_Crowdfunding.pdf)).

44 M. Ling, Z. Wei, "Smart Money" in Online Crowdfunding (available at [https://editorialexpress.com/cgi-bin/conference/download.cgi?db\\_name=IIOC2015&paper\\_id=328](https://editorialexpress.com/cgi-bin/conference/download.cgi?db_name=IIOC2015&paper_id=328)).

45 M. Klafft, "Online Peer-to-Peer Lending: A Lender's Perspective" (2008, available at [http://www.veecus.com/photo\\_presse/press\\_peertopeer.pdf](http://www.veecus.com/photo_presse/press_peertopeer.pdf)).

46 Cf. The Board of the International Organization of Securities Commissions (IOSCO), Crowdfunding – 2015 Survey Responses Report (December 2015/FR29/2015, available at <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD520.pdf>), at p. 2 et seq.

47 Cf. European Securities and Markets Authority (ESMA), Opinion – Key Principles for a European Framework on loan origination by funds (11 April 2016/ESMA/2016/596, available at [https://www.esma.europa.eu/sites/default/files/library/2016-596\\_opinion\\_on\\_loan\\_origination.pdf](https://www.esma.europa.eu/sites/default/files/library/2016-596_opinion_on_loan_origination.pdf)), at p. 3 et seq.

tion of private contracting and mandatory regulation is intended to reduce risk, information asymmetry and avert platform failure. Regulators will have to decide whether they assert an active role in shaping the market for loan-based crowdfunding by imposing mandatory contract terms.

Platforms have assumed the role of a gate-keeper<sup>48</sup> who controls *de facto* the access of start-ups and other owners of a project. The more projects a platform successfully brokers, the more customers will familiarise themselves with the contractual mechanisms employed by the platform or brokered by the platform. This does not imply, however, that the platform will be automatically liable for any misinformation passed via its online marketplace.<sup>49</sup> For crowdlending scenarios, practitioners combine standard contracts with the operator of the platform with fine-tuned stipulations for the deal at hand.<sup>50</sup> Potential investor-lenders register with an (internet) platform whereby the platform undertakes to facilitate the use of information stored in the platform's databases.<sup>51</sup> This is essentially a brokering relationship under which the investor-lender is under a duty to supply truthful information. Depending on the structure of the specific crowdfunding project the investor will eventually conclude a loan agreement with the borrower, a bank cooperating with the platform or an intermediary organisation, typically an SPV.<sup>52</sup> Conversely, the platform enters into a contractual relationship with the owner of the project, frequently start-up companies.<sup>53</sup> The contract between the platform and the owner of the project guarantees access to the platform, provided that the project owner passes a test of creditworth-

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48 See Bundesverband crowdfunding, *Stellungnahme des Bundesverbandes für Crowdfunding e.V. zum Kleinanlegerschutzgesetz* (8. September 2016, available at [http://www.bundesverband-crowdfunding.de/wp-content/uploads/2016/09/20160908\\_Bundesverband\\_Crowdfunding\\_KASG\\_Evaluation.pdf](http://www.bundesverband-crowdfunding.de/wp-content/uploads/2016/09/20160908_Bundesverband_Crowdfunding_KASG_Evaluation.pdf)); German Crowdfunding Network (CGN), *Öffentliche Anhörung zu dem Gesetzentwurf der Bundesregierung zu dem Entwurf eines Kleinanlegerschutzgesetzes*, Bundestagsdrucksache 18/3994 – Schriftliche Stellungnahme (12 March 2016, available at [https://www.bundestag.de/blob/365132/67770fd1ff66fa5ac2c114a4f132bd11/riethmueller--ra-dr--tobias--c\\_o-gsk-stoc-kmann---kollegen-data.pdf](https://www.bundestag.de/blob/365132/67770fd1ff66fa5ac2c114a4f132bd11/riethmueller--ra-dr--tobias--c_o-gsk-stoc-kmann---kollegen-data.pdf)).

49 See generally on disclosure duties of internet intermediaries and the potential for liability of the platform's operator: J. Riordan, *The Liability of Internet Intermediaries* (Oxford University Press Oxford 2016), at No. 4.65 et seq.

50 For an analysis from the perspective of German law: T. Polke, *Crowdlending oder Disintermediation in der Fremdkapitalvergabe – Eine Analyse der finanzmarktaufsichts- und gewerberechtigten Regulierung in Deutschland* (Duncker & Humblot Berlin 2017), p. 42 et seq. (commenting on the basic contractual structure of a crowdlending transaction).

51 Polke, supra sub FN 50, at p. 42 et seq.

52 Polke, supra sub FN 50, at p. 45 et seq.

53 Polke, supra sub FN 50, at p. 46 et seq.

hiness.<sup>54</sup> If a bank pays out the credit to the owner of the project, the platform undertakes to use its good efforts to bring about the loan agreement.<sup>55</sup> At this stage, the contractual structure varies from jurisdiction to jurisdiction. If national banking or capital market laws authorise direct crowdlending platforms, lenders and borrowers will sign the loan agreement directly.<sup>56</sup> Alternatively, investors may establish a trust instrument or a mandate, empowering the platform to grant the loan on their behalf and collect payments from the borrower afterwards.<sup>57</sup> If national law classifies crowdlending platforms as banks, a more complicated structure is chosen,<sup>58</sup> contracting happens in the shadow of banking law: A fully licensed bank assumes the functions of an SPV which has a direct contractual relationship, *inter alia*, with the investors.<sup>59</sup> Thus, investors feed their funds into the bank which would then conclude a loan agreement with the project-owner. The bank assigns its claims for the repayment of the loan to the investors who never enter into a direct loan agreement with the debtor, i.e. the project owner or the start-up company.<sup>60</sup> There are more sophisticated versions of this model on the market whereby the bank securitises its repayment claim to the investors who will then receive the project-owner's repayment as interest on their investment into a securitisation scheme,<sup>61</sup> originally offered via an online platform.

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54 Polke, supra sub FN 50, at p. 49 et seq.

55 For a detailed analysis of the structure of the contractual relationship between the operator of the platform and the cooperating bank: Polke, supra sub FN 50, at p. 53 et seq.

56 BBVA Research, Crowdfunding, supra FN 15, at p. 26 et seq.

57 *Ibid.*

58 See BaFin (Federal Financial Supervisory Authority), Crowdlending – Supervisory Information (available at [https://www.bafin.de/DE/Aufsicht/FinTech/Crowdfunding/Crowdlending/crowdlending\\_node.html](https://www.bafin.de/DE/Aufsicht/FinTech/Crowdfunding/Crowdlending/crowdlending_node.html)); BaFin, Interpretative Note on Crowdlending (Auslegungsschreiben zum Crowdlending) (Berlin 9 October 2015, available at [https://www.bafin.de/SharedDocs/Veroeffentlichungen/DE/Auslegungsentscheidung/WA/ae\\_151009\\_crowdlending.html](https://www.bafin.de/SharedDocs/Veroeffentlichungen/DE/Auslegungsentscheidung/WA/ae_151009_crowdlending.html)) (on German law); CrowdfundingHub, European Expertise Centre for Alternative and Community Finance, Current State on Crowdfunding in Europe (Amsterdam 2016, available at [http://www.sbs.ox.ac.uk/sites/default/files/Entrepreneurship\\_Centre/Docs/OxEPR2/current-state-crowdfunding-europe-2016.pdf](http://www.sbs.ox.ac.uk/sites/default/files/Entrepreneurship_Centre/Docs/OxEPR2/current-state-crowdfunding-europe-2016.pdf)), at p. 61 et seq. (on Swiss law).

59 See Deutsche Bundesbank, Financial Stability Review 2016, at p 60 et seq. (Frankfurt/Main 2016, available at [https://www.bundesbank.de/Redaktion/EN/Downloads/Publications/Financial\\_Stability\\_Review/2016\\_financial\\_stability\\_review.pdf?\\_\\_blob=publicationFile](https://www.bundesbank.de/Redaktion/EN/Downloads/Publications/Financial_Stability_Review/2016_financial_stability_review.pdf?__blob=publicationFile)).

60 *Ibid.*, at p. 61; Polke, supra sub FN 50, at p. 63 et seq.

61 See G. Dorfleitner, L. Hornuf, “FinTech-Markt in Deutschland – Abschlussbericht” (17 October 2016, available at [http://www.bundesfinanzministerium.de/Content/DE/Standardartikel/Themen/Internationales\\_Finanzmarkt/2016-11-21-Gutachten-Langfassung.pdf?\\_\\_blob=publicationFile&v=1](http://www.bundesfinanzministerium.de/Content/DE/Standardartikel/Themen/Internationales_Finanzmarkt/2016-11-21-Gutachten-Langfassung.pdf?__blob=publicationFile&v=1)); at p. 72

German practice has found a way of bypassing the banking law approach to platforms. Since participations in silent partnerships do not qualify as securities, many platform-related contracts are structured as silent partnerships subject to the law of obligations.<sup>62</sup> There is a trend that silent partnership arrangements will be overtaken by subordinated participating loans.<sup>63</sup>

### III Regulating the Market for Crowdfunding

#### 1. European Law Applicable to Crowdfunding

Online platforms for crowdfunding operate at the intersection between the EU's policy for the single digital market agenda and the Commission's programme for a capital markets union.<sup>64</sup> The Commission classifies crowdfunding as a challenge for its capital markets policy, but acknowledges the potential of FinTech and its technological innovations for intermediaries and its users.<sup>65</sup> In fleshing out its regulatory strategy on crowdfunding the Commission pursues a risk-informed approach.<sup>66</sup> Adequate information for investors,<sup>67</sup> the insolvency of platform operators, conflicts of interest and the security of data are crucial challenges for regulators.<sup>68</sup> This goes along with general concerns for fraudulent activities to the detriment of both investors and the project owners.<sup>69</sup> As crowdfunding moves into more complicated structures risk insurance issues and the questions of marketability of repayment claims become more pressing.<sup>70</sup>

In the EU, cross-border crowdfunding is insignificant due to regulatory fragmentation between the Member States. As EU capital market law is only pertinent to some extent, there is no general European passport for crowdfunding instruments. A coherent approach by the Member States is greatly

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62 BaFin, J. Begner, "Crowdfunding im Licht des Aufsichtsrecht" (5 September 2012, available at [https://www.bafin.de/SharedDocs/Veroeffentlichungen/DE/Fachartikel/2012/fa\\_bj\\_2012\\_09\\_crowdfunding.htm](https://www.bafin.de/SharedDocs/Veroeffentlichungen/DE/Fachartikel/2012/fa_bj_2012_09_crowdfunding.htm)); see also for Austrian law: E. Brandl, R. Toman, in: G. Saria, F. Stocker (eds.), *Unternehmensanleihen und Crowdfunding* (Wien Manz 2015), 146 (148).

63 S. Herr, U. Bantleon, "Crowdinvesting als alternative Unternehmensfinanzierung – Grundlagen und Marktdaten in Deutschland", *DSiR* 2015, 532 (533).

64 For a survey over the regulatory challenges at the EU level: I. A. Boitan, "Crowdfunding and Financial Inclusion – Evidence from EU Countries Economic Alternatives" (4) (2016), 418 (425 et seq.).

65 European Commission, *Crowdfunding in the EU Capital Markets*, supra sub FN 1, at p. 3 et seq.

66 *Ibid.*, at p. 16 et seq.

67 *Ibid.*, at p. 21 et seq.

68 *Ibid.*, at p. 25 et seq.

69 *Ibid.*, at p. 15 et seq.

70 *Ibid.*, at p. 16.

frustrated by different interpretations of European law, but also by a considerable amount of derogations which encourage national solutions.<sup>71</sup> Many Member States have specific regimes on crowdfunding requiring authorisations before operating an online platform.<sup>72</sup> If loan-based crowdfunding instruments can be classified as securities, they are subject to MiFID<sup>73</sup> and qualify for passport status. But many loan-based crowdfunding schemes escape the scope of MiFID. Instead, Member States apply authorisation requirements for non-MiFID platforms.<sup>74</sup> Likewise, the Prospectus Directive is theoretically applicable to crowdfunding structures. But the Prospectus Directive<sup>75</sup> provides for an exemption if a public offering remains under a threshold of 5m €. <sup>76</sup> Member States may exercise their discretion to require a prospectus for offerings between 100,000 € and 5m €. <sup>77</sup> Member States have introduced a variety of regulatory approaches towards loan-based crowdfunding oscillating between encouragement without a prospectus,<sup>78</sup> caution by caps on the maximum amount of investments<sup>79</sup> or restrictions on the group of investors.<sup>80</sup>

71 See S. N. Hooghiemstra, K. de Buysere, in: Brüntje, Gajda (eds.), supra sub FN 2, 148 et seq.

72 See S. N. Hooghiemstra, K. de Buysere, in: Brüntje, Gajda (eds.), supra sub FN 2, 150 et seq., and Annex II to European Commission, Crowdfunding in the EU Capital Markets, supra sub FN 2.

73 Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU, O.J. L 173/349 of 15 May 2014.

74 See e.g. on the French regulatory regime: Banque de France (ACPR)/Autorité des Marchés Financiers (AMF), S'informer sur le nouveau cadre applicable au financement participatif (crowdfunding), Le cadre réglementaire (Paris 30 September 2014, update from 26 August 2016, available at [https://acpr.banque-france.fr/fileadmin/user\\_upload/acp/Communication/Communiqués\\_de\\_presse/20140930-Sinformer\\_sur\\_le\\_nouveau\\_cadre\\_applicable\\_au\\_financement\\_participatif.pdf](https://acpr.banque-france.fr/fileadmin/user_upload/acp/Communication/Communiqués_de_presse/20140930-Sinformer_sur_le_nouveau_cadre_applicable_au_financement_participatif.pdf)); and Annex II to European Commission, Crowdfunding in the EU Capital Markets, supra sub FN 1.

75 Directive 2003/71/EC 4 November 2003 on the prospectus to be published when securities are offered to the public or admitted to trading and amending Directive 2001/34/EC, O.J. L 345/64 of 31 December 2003, as amended.

76 Directive 2003/71/EC of the European Parliament and of the Council of 4 November 2003 on the prospectus to be published when securities are offered to the public or admitted to trading and amending Directive 2001/34/EC, O.J. L 345/64 of 31 December 2003.

77 See artt. 1 (2) (h), 5 (1) (e) of the Prospectus Directive, as amended.

78 Poland e.g. does not practise any supervisory regime at all: J. Rupa, "Peer-to-peer lending in Poland", *EuCML* 2016, 226 (227). Germany exempts the normal crowdlending scenario from prospectus duties: C. Heisterhagen, C. Conreder, "Die Regulierung des grauen Kapitalmarktes durch das Kleinanlegerschutzgesetz – Ein Überblick", *DStrR* 2015, 1929 et seq.

79 See S. N. Hooghiemstra, K. de Buysere, in: Brüntje, Gajda (eds.), supra sub FN 2, 151 et seq.; M. Williams, "Peer-to-peer lending in the Netherlands", *EuCML* 2016, 188 (189).

80 S. N. Hooghiemstra, K. de Buysere, in: Brüntje, Gajda (eds.), supra sub FN 2, 154.

Although transaction-based crowdlending platforms essentially function as flow-through entities channelling funds into start-ups or the business entities of project owners, they normally have to comply with seeking authorisations under the Capital Requirements Directive<sup>81</sup> or the E-money Directive,<sup>82</sup> if funds are stored. Compliance with these authorisation requirements would drive up the costs of crowdlending. Consequently, platforms outsource the 'storage' of funds to licensed service providers, thus adding to the contractual complexity of a crowdlending scheme, and to risk.<sup>83</sup>

## 2. Regulatory Patterns

### *a) United Kingdom*

Although the United Kingdom is edging towards Brexit, regulatory the country's experiences with peer-to-peer lending still hold an important message. Under s. 19 (1) of the Financial Services and Markets Act 2000 (FSMA)<sup>84</sup> it is illegal to carry out a regulated activity unless permission has been granted by the FCA. In order to qualify for permission a peer-to-peer platform must satisfy threshold conditions (s. 41 (1) FSMA) which include adequate resources and suitability of the business project for undertaking platform services.<sup>85</sup> In 2016, the UK Government had decided to afford favourable tax treatment to peer-to-peer lending platforms which are fully authorised by the Financial Conduct Authority.<sup>86</sup> At that time, only eight firms out of 86 peer-to-peer lending platforms had obtained permission to become fully operative.<sup>87</sup> After authorisation through the FCA investors, investors could accede to peer-to-peer

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81 Directive 2013/36/EU of 26 June 2013 on access to the activity and the prudential supervision of credit institutions and investment firm, amending Directives 2002/87/EC and repealing Directives 2006/48/EC and 2006/ 49/EC, *O.J.* L 176/338 of 27 June 2013.

82 Directive 2009/110/ of 16 September 2009 on the taking up, pursuit and prudential supervision of the business of electronic money institutions amending Directives 2005/60/EC and 2006/48/EC and repealing Directive 2000/46/EC, *O.J.* L 267/7 of 10 October 2009.

83 Investitionsbank Berlin (Thomas Hüttich), *Crowdfinance – Digitalisierung und Demokratisierung des Finanzmarktes* (September 2015, available at [https://www.ibb.de/.../crowdfinance\\_digitalisierung\\_und\\_demokratisierung\\_des\\_finanzmarktes.pdf](https://www.ibb.de/.../crowdfinance_digitalisierung_und_demokratisierung_des_finanzmarktes.pdf)), at p. 8; cf. Polke, *supra* sub FN 50, at p. 30 et seq.

84 Available at <http://www.legislation.gov.uk/ukpga/2000/8/contents?view=plain>.

85 See schedule 6 of FSMA.

86 HM Revenue & Customs *Guidance on Peer to peer lending (Tax ion savings and investments)* (6 April 2016, available at <https://www.gov.uk/guidance/peer-to-peer-lending>).

87 *Financial Times Adviser* online 31 March 2016, "Only 9% of P2P platforms fully regulated" (available at <https://www.ftadviser.com/2016/03/31/investments/savings-and-isas/only-of-p-p-platforms-fully-regulated-0XXOm36Fl0WI4ywmZ5cyQK/article.html>).

lending schemes via their wealth management platforms, thus coordinating their investments in one (digital) place.<sup>88</sup>

Recently, the FCA announced it would toughen its stance on peer-to-peer lending platforms.<sup>89</sup> The FCA is critical of an increased pooling of credit risk for investors, initiating a transition from loan-based crowdfunding to asset management.<sup>90</sup> This criticism comes at a time where the oldest peer-to-peer lending platform in the UK is envisaging an application for a banking licence in order to broaden its business.<sup>91</sup> Moreover, there is evidence that maturity transformation is insufficient so that platforms are arbitraging on a lighter regulatory environment compared to banking.<sup>92</sup> This coincides with preferential treatment for institutional investors who apparently have better access to special loans, information and opt-out models.<sup>93</sup> The FCA insists on better information for customers with respect to the risks and returns (including offerings via the social media) and the need to manage better complex structures and potential conflicts of interest.<sup>94</sup> Firms will be required to improve their plans for a wind-down in the event of business failure.<sup>95</sup>

In the day-to-day business of UK loan-based crowdfunding codes of conduct operate to supplement FCA enforcement policies. The Peer-to-Peer Finance Association requests its members to subscribe high-level principles which impose a duty of honest and fair, professional dealing in accordance with transparent and high standards of business practice.<sup>96</sup> Moreover, specific operating principles have been drawn up to enable the customer to make an

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88 Cf. Financial Times online 17 August 2015, "P2P lending: Peer-to-peer lenders widen access for investors" (available at <https://www.ft.com/content/ac6e47f0-41b1-11e5-9abe-5b335da3a90e>).

89 FCA, Feedback Statement (FS16/13), "Interim feedback to the call for input to the post-implementation review of the FCA's crowdfunding rules" (London December 2016, available at <https://www.fca.org.uk/publications/feedback-statements/fs16-13-interim-feedback-post-implementation-review-crowdfunding-rules>), at p. 9; Financial Times online 9 December 2016, "P2P lending: Some P2P lenders 'mask' loan performance", says FCA (available at <https://www.ft.com/content/7280970c-be09-11e6-8b45-b8b81dd5d080>).

90 FCA, Feedback Statement (FS16/13), supra sub FN 89, at p. 10.

91 Financial Times online 16 November 2016, "Zopa: Peer-to-peer lending pioneer seeks banking licence" (available at <https://www.ft.com/content/53aa3dec-ac07-11e6-9cb3-bb8207902122>).

92 FCA, Feedback Statement (FS16/13), supra sub FN 89, at p. 10.

93 *Ibid.*, at p. 11 et seq.

94 *Ibid.*, at p. 9 et seq., 21.

95 *Ibid.*, at p. 9.

96 Peer-to-Peer Finance Association Operating Principles (June 2015, available at <http://p2pfa.info/wp-content/uploads/2015/09/Operating-Principals-vfinal.pdf>).

informed decision.<sup>97</sup> In devising their website platforms should publish information on bad rates, returns performance and make the loanbook available to the public. Risk management practices are to mirror FCA standards, including protection against data theft from IT systems.<sup>98</sup>

### b) Germany

Unlike the UK, the German legislator has decided for a regulatory scenario which takes a banking law approach. Loan-based crowdfunding schemes are exempt from prospectus duties under capital market law.<sup>99</sup> But both, operators of the platform and investors may be required to seek an authorisation under Banking Law (*Gesetz über das Kreditwesen (KWG)*<sup>100</sup>). German Banking law draws a fine line between online platforms performing a mere brokerage service and more complex business models where a bank or another credit institution acts as a major intermediary. In a pure brokerage scheme, no authorisation for banking is required.<sup>101</sup> If the operator of a loan brokerage platform accepts funds as deposits or repayable funds from the public, an authorisation under the German Banking Act is necessary unless the repayment claim is securitised.<sup>102</sup> On the other hand, a banking authorisation is prerequisite if the owner of the platform collects the funds before the specific loan contracts are concluded.<sup>103</sup> As a corollary, logging in as a user of the platform for transmitting money prior to concluding the relevant contracts amounts to making a deposit under Banking Law. On the other hand, if the platform transfers the money directly to a bank which will then hold such funds as a deposit before the specific contracts are concluded does not constitute a credit business under Banking Law.<sup>104</sup> Conversely, if the platform brokers the

97 *Ibid.*, sub 3.

98 *Ibid.*, sub 4 et seq.

99 See § 2a (1) Vermögensanlagegesetz (BGBl. 2015 I 1114); Heisterhagen, Conreder, supra sub FN 78, *DStR* 2015, p. 1929 et seq.; J. Veith, "Crowdlending – Anforderungen an die rechtskonforme Umsetzung der darlehensweisen Schwarmfinanzierung", *BKR* 2016, 184 (190).

100 BGBl. 1998 I 2776, as amended (current version available at [https://www.bundesbank.de/Redaktion/DE/Downloads/Aufgaben/Bankenaufsicht/Gesetze\\_Verordnungen\\_Richtlinien/gesetz\\_ueber\\_das\\_kreditwesen\\_kwg.pdf?\\_\\_blob=publicationFile](https://www.bundesbank.de/Redaktion/DE/Downloads/Aufgaben/Bankenaufsicht/Gesetze_Verordnungen_Richtlinien/gesetz_ueber_das_kreditwesen_kwg.pdf?__blob=publicationFile); English version available at [https://www.bafin.de/SharedDocs/Downloads/EN/Aufsichtsrecht/dl\\_kwg\\_en.html](https://www.bafin.de/SharedDocs/Downloads/EN/Aufsichtsrecht/dl_kwg_en.html)). For a comprehensive survey see Polke, supra FN 50, at p. 82 et seq.; Veith, supra sub FN 99, *BKR* 2016, 184 (185 et seq.).

101 BaFin on Crowdlending, supra sub 58, Interpretative Note on Crowdlending (Auslegungsschreiben zum Crowdlending), supra sub 58.

102 *Ibid.*

103 *Ibid.*

104 *Ibid.*

contract as a proxy for and on behalf of others, they will be required to apply for an authorisation under the Banking Act with corresponding duties for minimum capital and risk provision strategies.<sup>105</sup>

### c) France

For loan-based crowdfunding French law requires a registration of the platform as a financial intermediary, who is subject to supervision by the banking authorities with respect, *inter alia*, to compliance with prudential requirements.<sup>106</sup> French law qualifies the acceptance of funds on behalf of a third party by the platform as a service which falls under the Payment Services Directive<sup>107</sup> and the national laws for its transposition.<sup>108</sup> This will also require the platform to provide for minimum funds before it becomes operative, thus raising the transaction costs of loan-based crowdfunding.<sup>109</sup> French law does not dispense with prospectus duties. Instead, in order to provide potential investor-lenders with an adequate amount of information a light-prospectus has to be drawn up. This online prospectus has to include information on the crowdlending business and project, the degree of the issuer's financial involvement in the project, liquidity of securities issued as part of the project, details on the relevant contractual stipulations and risk.<sup>110</sup>

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105 *Ibid.*

106 See Autorité des Marchés Financiers, Plateformes de financement participative (18 September 2016, available at <http://www.amf-france.org/Acteurs-et-produits/Prestataires-financiers/Financement-participatif--crowdfunding/Cadre-reglementaire.html>); ACPR/Banque de France, Cadre du financement participatif: Les nouveaux statuts, Revue de l'ACPR n° 20 (November/December 2014, available at <https://acpr.banque-france.fr/publications/revue-de-lacpr/revue-de-lacpr-n20-sommaire/supervision-bancaire/cadre-du-financement-participatif-les-nouveaux-statuts.html>).

107 See Directive (EU) 2015/2366 of the European Parliament and the Council of 25 November 2015 on payment services in the internal market, amending Directives 2002/65/EC, 2009/110/EC and 2013/36/EU and Regulation (EU) No 1093/2010, and repealing Directive 2007/64/EC, O.J. L 337/35 of 23 December 2015.

108 See Ordonnance n° 2014-559 du 30 mai 2014 relative au financement participatif, JORF n° 0125 du 31 mai 2014, p. 9075, texte n° 14 (available at <https://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000029008408&categorieLien=id>).

109 See art. D 522-1-2 of the Code monétaire et financier, as modified by the Ordonnance n° 2014-559 (FN 108).

110 See art. R 548-6 of the Code monétaire et financier, as amended by the Décret n° 2014-1053 du 16 septembre relative au financement participative, JORF n° 0215 du 17 septembre 2014, p. 15228, texte n° 11 (available at <https://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000029463569&categorieLien=id>).

*d) Excursus: US Law*

Peer-to-peer lending for start-ups and small businesses in the US started in 2005.<sup>111</sup> Since then, the outstanding portfolio balance of online lenders has doubled every year although the business volume does not present more than a fraction of the US market for loans.<sup>112</sup> The CROWDFUND Act of 2012 introduced additional exemptions from the Securities Act 1933 which prescribes the registration of securities to be offered for sale. Under s. 302 of the CROWDFUND Act securities can be sold without registration if the aggregate amount does not exceed 1m US \$ during a twelve-month period. The statute introduces specific requirements with respect to investors. If the investor's annual income is less than 100,000 US \$ the maximum investment is the greater of 2,000 US \$ or 5% of the annual income. If the investor's annual income is 100,000 US \$ or more, then the investment shall go beyond a threshold of 10% of the annual income. In any event, the total amount of securities sold to one investor through all crowdfunding offerings may not exceed 100,000 US \$. Brokers or funding portals acting as intermediaries shall register as intermediaries with the US Securities and Exchange Commission (SEC). The intermediary shall make disclosures to ensure that the investor understands the risk of each investment, including the risk of loss of the entire investment, and reduce the risk of fraud. Issuers are required to file with the SEC information on officers, directors and owners with substantial holdings, the pricing method, related-party transactions, and the issuer's financial condition.

**3. New Developments: Crowdfunding via Blockchains**

Current peer-to-peer lending platforms operate as an institution where consumers, companies and institutional investors 'meet' in order to arrange a loan, sometimes in very complex transactions in order to comply with (or by-pass) the requirements of capital market and banking laws. With the advent of digitisation peer-to-peer lending platforms are beginning to revolutionise transactions so that the direct matching between a borrower and a len-

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111 Ian Galloway (Federal Reserve Bank of San Francisco), "Peer-to-Peer Lending and Community Development Finance", Community Investments 21 (3), 1 et seq. (Winter 2009/10) (available at [http://www.frbsf.org/community-development/files/galloway\\_ian.pdf](http://www.frbsf.org/community-development/files/galloway_ian.pdf)).

112 United States Securities and Exchange Commission, Regulation Crowdfunding with Annotations, at p. 364 (Washington, DC, 30 October 2015, available at <https://www.sec.gov/news/pressrelease/2015-249.html>).

der is undertaken by an electronic contract.<sup>113</sup> In fact, algorithms (i.e. ‘smart contracts’) determine how the lender’s money will be spread across various bids without any human intervention.<sup>114</sup> A UK lending club practises an ‘auto-lending’ scheme whereby a lender’s portfolio of an investment of 1,000 £ will be automatically spread over at least seven loans.<sup>115</sup> Auto-bidding shall not operate as to drive the average rate below 15% and in matching the bids with loans, earlier loans shall have precedence.<sup>116</sup> Specific lending criteria have been ‘fed’ into algorithms in order to dispense with a case-by-case scrutiny.<sup>117</sup> As a corollary, auto-allocation of loans bars investors from cherry-picking.<sup>118</sup> But it also contributes to diversifying risk and balancing investors’ portfolios.<sup>119</sup> Before the UK government and the FCA changed their policies on loan-based crowdfunding, these auto-bidding platforms were unregulated.<sup>120</sup> But it would seem that with the FCA’s stricter enforcement policy towards platforms,<sup>121</sup> auto-bidding transactions will be undertaken exclusively by regulated platforms. Auto-bidding relies on blockchain technology. Blockchain technology relies on electronic ledgers which ‘store’ the sequence of transactions and attach an electronic signature to each transaction in order to verify the chronology and to distinguish fraudulent from ‘truthful’ transactions.<sup>122</sup> If combined with an appropriate structure of algorithms, blockchains can handle matching

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113 See Financial Times online 11 February 2016, “Alphaville – The curious state of UK “peer-to-peer” lending” (available at <https://ftalphaville.ft.com/2016/02/11/2152940/the-curious-state-of-uk-peer-to-peer-lending/>); The Coin Telegraph online 22 July 2016, “Latest FinTech Trend: Decentralized Blockchain Peer-to-Peer Lending” (available at <https://cointelegraph.com/news/latest-fintech-trend-decentralized-blockchain-peer-to-peer-lending>).

114 See Tech.co FinTech, “Peer-to-Peer Lending is the Hot FinTech Trend” (Blog 8 July 2016, available at <http://tech.co/peer-peer-lending-hot-fintech-trend-2016-07>).

115 See ThinCats, “Auto-lending Information” (last updated 19 November 2013, available at <https://www.thincats.com/wp-content/uploads/2015/10/auto-lending.pdf>).

116 *Ibid.*

117 *Ibid.*

118 Oxera, *The economics of peer-to-peer lending – Prepared for the Peer-to-Peer Finance Association* (Oxford September 2016) at p. 29 (available at [http://www.oxera.com/getmedia/9c0f3f09-80d9-4a82-9e3f-3f3fefe450b2/The-economics-of-P2P-lending\\_30Sep\\_.pdf.aspx?ext=.pdf](http://www.oxera.com/getmedia/9c0f3f09-80d9-4a82-9e3f-3f3fefe450b2/The-economics-of-P2P-lending_30Sep_.pdf.aspx?ext=.pdf)).

119 *Ibid.*, at p. 45.

120 ThinCats, “Auto-lending Information”, supra sub FN 115.

121 See supra sub FN 89.

122 See generally on blockchain technology: W. Mougayar, *The Business Blockchain* (Wiley Chichester 2016), 30 et seq.; P. Franco, *Understanding Bitcoin – Cryptography, Engineering and Economics* (Wiley Chichester 2015), 46 et seq., 143 et seq.; The Economist on-line 31 October 2015, “The promise of the blockchain – The trust machine” (available at <http://www.economist.com/news/leaders/21677198-technology-behind-bitcoin-could-transform-how-economy-works-trust-machine>).

processes between bids for a loan and a commitment to lend. Thus algorithms, i.e. 'smart contracts', bring about electronic (loan) contracts without any traditional offer and acceptance. Presumably, national regulatory agencies such as the FCA will appreciate the risk-spreading function of blockchain technology. Conversely regulator will have to assess whether minimum standards for loan contracts handled by digitised platforms are apposite.<sup>123</sup> Once these digitised peer-to-peer transactions operate in a cross-border scenario, it is far from clear whether conflict of law rules will be able to live up to the challenge of 'smart contracts' matching borrowers and lenders.

**Др Рајнер КУЛМС, LL.M.**

**виши научни сарадник на Макс Планк Институту за упоредно и међународно приватно право, Хамбург, Немачка**

## CROWDLENDING – АЛТЕРНАТИВА БАНКАРСТВУ

### Резиме

*Онлајн платформе су почеле да се користе као алтернативни канали прикупљања средстава. Пројекти се представљају на интернет платформама како би се привукли инвеститори који желе да остваре приход без укључивања посредника. Peer-to-peer финансирање је потекло од кредитних клубова, у којима су зајмодавци одобравали кредит уз ниже трошкове. Peer-to-peer кредитирање, crowdfunding засновано на зајму или crowdlending је еволуирало у компликоване финансијске моделе код којих мала и средња предузећа, укључујући start-up компаније уживају користи од секундарног тржишта хартија од вредности и зајмова. Овај рад приказује право и економију сценарија crowdlending-a. Потом процењује тренутне концепте приватног уговарања, пре него што представи регулаторне шеме у погледу crowdlending-a у ЕУ, Уједињеном Краљевству, Немачкој, Француској и САД. Део о аутоматском нуђењу и потенцијалима blockchain технологије за онлајн кредитирање без посредника служи уместо закључка.*

**Кључне речи:** онлајн платформе, crowdlending, FinTech, аутоматско нуђење, blockchain технологија.

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123 See generally on the regulatory challenges of blockchain technology: R. H. Weber, *CRi* 1/2017, 1 (2 et seq.).