

EUROPEAN COMMISSION DIRECTORATE-GENERAL FOR COMMUNICATIONS NETWORKS, CONTENT AND TECHNOLOGY

CNECT.F – Digital Single Market
F.3 – Digital Innovation and Blockchain

GENERAL PROJECT REVIEW CONSOLIDATED REPORT

Grant agreement (GA) number:	825215			
Project ¹ Acronym:	FIN-TECH			
Project title:	A FINancial supervision and TECHnology compliance training programme			
Type of action:	CSA			
Start date of the project:	01/01/2019			
Duration of the project:	24			
Name of primary coordinator contact and organisation:	paolo GIUDICI (UNIPV)			
Period covered by the report:	from 01/01/2019 to 30/06/2020			
Periodic report/Reporting period number:	1			
Date of first submission of the periodic report (if applicable):	07/08/2020			
Amendments (latest AMD concerning description of the action) ²	13/06/2019 (AMD-825215-13)			
Date of meeting with consortium (if applicable):	11/09/2020			
Name of project officer:	Rapolas LAKAVICIUS			
Name(s) of monitors:	 Galia Ivanova Kondova University of Applied Sciences and Arts Northwestern Switzerland University of Hohenheim THE WORLD BANK GROUP Vilma Misiukoniene Ukrainian Ministry of Justice/ UA Euro-Integration Office CEO Organisation Digital IQ Leonard Moritz STRUBE ISiCO Datenschutz GmbH Frankfurt School of Finance and Management Crisp Research AG 			

¹ 'Project' means the same thing as 'action'.

² Only amendments to the description of the action (DoA; AT21) are relevant for general project reviews since they always have to be carried out against the latest version of the DoA

1. Overall assessment

1. Overall assessment

Project has achieved most of its objectives and milestones for the period with relatively minor deviations.

2. Significant results linked to dissemination, exploitation and impact potential

Project will likely provide results with significant immediate or potential impact in the next reporting period (even if not all objectives mentioned in the Annex 1 to the GA were achieved).

The expected impact is described in the document "FinTech DoA Grant Agreement" (p. 19). Measures to maximize impact are also described in the document, including validation activities (p. 22). These measures include

- evaluation of training sessions and coding sessions
- assessment by an international supervisory board
- tests of the coding platform within the European Banking Federation, discussion of the project results with established finance experts from the European banking, insurance and investment fund sectors.

The feedback from the participants of the workshops indicates that they consider the results as relevant, therefore an immediate or potential impact in the next reporting period is to be expected. In the last report the reviewers asked to implement a more structured approach to collect and analyze feedback. Only in the review Meeting on September 11th, 2020 the reviewers learned that such a feedback process has been implemented. However, the data produced by this approach were not accessible for the reviewers. Only after insisting on getting access an access to the data was provided after the review meeting and later a quantitative analysis of the feedback.

The partners conducted most of the planned workshops and published several peer-rewiewed papers in scientific journals. On the other hand the partners neglected the social media channels and the website. The presented main measurable outputs on dissemination, exploitation and impact are the number of citations of academic papers and the number of Workshops conducted.

A positive development are the various invitations extended to the project partners for cooperations with various standardization activities.

3. General comments

The "common standards for risk management" in FIN-TECH are defined as use cases as stated at the Review Meeting on September 11, 2020. The identification of the use cases took place among the academic project partners under time pressure as stated at the Review Meeting. A quick output was prioritized in the process of use cases identification. In addition, as mentioned at the Review Meeting, the three criteria applied in the selection of the use cases were as follows:

- already published papers in good journals
- open source papers
- open source data.

It could be concluded that the identification of the "common standards for risk management" in BDA (P2P lending) and in AI in finance (robo-advice consulting in asset management) followed a predominantly top-down approach.

The validation of the use cases was mostly conducted with financial sector regulatory and supervising authorities in Europe and internationally. The private sector stakeholders are perceived as "users". There is no convincing evidence that the feedback from the industry (Nord LB, Intesa Bank, Creval and Illimity, for example) that is available on the project platform as of has been addressed in the "common standards for risk management" process so far.

At the Review Meeting on September 11, 2020, it was confirmed that the main beneficiaries of the FIN-TECH project are the financial sector supervising authorities in the project member countries. The 58 SupTech Workshops as compared to the 6 RegTech Workshops (6 Research Workshops as well) support that outcome.

Concerns about "enforcing rules" among the project partners were raised by the Project Coordinator at the Review Meeting.

Currently no time sheets reporting work hours from the project partners are required to be submitted. Work hours only need to be justified by the project partners as explained at the Review Meeting.

The main outcomes of the consultation process with the stakeholders at the various Workshops have not been documented so far as mentioned at the Review Meeting.

A positive development are the various invitations extended to the project partners for cooperations with various standardization activities.

The expenses so far are in line with planning, while the completion of efforts varies widely between the partners. Due to the Covid-19 pandemic the partners requested an amendment and to extend the project by 6 months. They also postponed workshops to the end of 2020, after the report period (month 12 - 18), due to Covid-19. One partner (B-Hive) withdrew from the project.

4. Recommendations concerning the period covered by the report

The communication strategy (WP7) seemed to address mainly publications, and less other means of dissemination, e. g. social media. ASE – which took over WP7 from Firamis from month 16 of the project - presented in the review meeting a new communication strategy to be implemented. The Reviewers reiterated the importance of the dissemination activities as one of the most important project's goals. Unfortunately, progress on that has been the poorest among all project activities so far.

The reviewers recommend in regard to the website (WP7, D7.1):

- · Intranet is well established, but extranet need to be revised (see details recommendations following). External communication should be improved, in general.
- · User interface expected to be improved. Interactive tools for communication with stakeholders considered to be introduced.
- · Discovering events in timeline and their content (presentations) should observed easily and user friendly. Events should be placed with timeline, to observe easily which ones already passed and those coming. User friendly access to the content (presentations) must be ensured.

Also, content quality (proper and clear communication language is needed) improvement leads to better interaction and Stakeholders engagement.

The critical comments and feedbacks from stakeholders like Intesa Bank, Creval and Illimity should have been addressed in WP2, WP3 (D5.1, D5.2) as well as in the Periodic Report as well as by the presentations at the Review Meeting.

Make the presentations available in open access and provide a function for readers to comment (D5.1, D5.2, D5.3 and D7.1).

The Blockchain use cases should have been selected to represent current trends such as CBDCs, STOs, IDOs (WP4, D4.1).

On international level more efforts to establish the interlinking and collaboration with relevant EU networks, at national and EU associated bodies, like

- European AI Forum
- EU Blockchain Partnership Forum
- INATBA, European Blockchain association
- ECB and 3 European supervisory authorities (ESAs), namely:
- European Banking Authority (EBA)
- European Securities and Markets Authority (ESMA)
- European Insurance and Occupational Pensions Authority (EIOPA) should be emphasized (WP 2, WP 3, WP 4)

Within the Covid-19 context, the objectives of the project could have been addressed in light of a major global economic shock. Due to the large economic impact of Covid-19 automatization of compliance of Fintech companies to increase the efficiency of supervisory activities is probably even more important than before. Therefore the reviewers expected to see more discussion of the impact of Covid-19 on the objectives of the project, but found only one publication addressing the issues directly, namely Agosto, Giudici. (2020): "A predictive model for COVID-19 dynamics"

5. Recommendations concerning future work, if applicable

Better Fintech community engagement, mutual dialog, event coordination and dissemination at national level is expected.

Any future "common standards for fintech risk management" would benefit from a wider consultation with all relevant stakeholders and this process should be well-documented and streamlined.

Address all the issues outlined in the feedbacks by updating the use cases and the training activities.

Pursue (if deemed appropriate by the project partners) a bottom-up and more inclusive approach in identifying appropriate use cases in Blockchain.

Access to all relevant materials on the project platform should be available to all partners and reviewers at all times.

Address the impact of Covid-19 on the project, its objective and its risks in the current report.

Summarize the data so that the achievement of the objectives can be assessed from a stakeholder perspective. This summary should also allow to assess the relevance of the proposed use cases from the stakeholders point of view and if they plan to implement these in their organization.

2. Objectives and workplan

1. Is the progress reported in line with objectives and work plan as specified in the DoA? If there are significant deviations, please comment.

Partially

WP 1 - Management

UNIPV, UNIVERSITA DEGLI STUDI di PAVIA who is project Coordinator is leading WP1. WP1 leadership and management in general is valued as sufficient. More open approach and collaborative nature with partners is expected. For WP1 in total 55 personal months are allocated, 37.45 pm expenses occur already reported. From those UNIPV, WP1 leader itself reported 23.5 PMs used (from his WP1 32 in total) during this M1-M18 period.

Deliverable D1.1: Network Establishment: Establishment of the FIN-TECH network (see reviewers recommendations on Network strengthening) and of the Advisory Board is delivered, however stronger Advisory Board (AB) role and contribution to the project is expected:

- Current membership in the AB is drawn from universities, regulatory bodies, fintech hubs and financial institutions outside the EU to ensure global inclusiveness of the project. It is adviced AB to consist not only from international experts and Authorities, but also European associated Fintech, Security, Blockchain, AI associated bodies.
- AB presented online at website could bring more credibility to the project itself.
- AB could be benchmarking the project with happening also at the worldwide level, through the project promo and participation at international conferences and events which is missing.

Milestones MS2 Completion of the technical plan and MS3 Completion of the financial plan has been achieved, but MS33 (due M 12) Intermediate technical output (Technical output: integration of research paper repositories, slides and use cases for suptech and regtech Workshops) while delivered, but quality expected to be improved.

WP 2 – Big Data Analytics Research (WP lead: UBER)

WP leader UBER reported in detail about the work done in this work package in the review workshop:

- Report on UBER's project activities and activities with other project partners.
- Summary on the BDA and AI SupTech workshops held in Frankfurt with selected feedback by Bundesbank
- Discussion of the relevance of the objectives of WP2.
- Report on UBER's activities as WP leader.
- UBER produced 7 papers (pre-prints), 22 publications and pre-prints in WP2 by all partners.
- Presentation of BDA use cases.
- Report on 1st Validation and Research Workshop on Big Data and Risk Management

For WP1 in total 50 personal months are allocated, this budget is depleted by 78% (39 PM).

No deliverables and no milestones are due in the reporting period (M13 – M18). The use cases were assessed in detail in the consolidated review report for months 1 - 12.

WP 3 – Artificial Intelligence Research (UCL)

No deliverables are due in the reporting period. Two milestones are due in the reporting period:

- · MS 49 (Completion of mid-term workshop), due date: month 12
- · MS 78 (Completion of Research workshop on AI model validation): month 17

All due milestones (MS 4 and MS 77) were completed in the review period.

The use cases were assessed in detail in the consolidated review report for months 1-12.

Tomaso Aste from the WP leader UCL reported in detail about the work done in this work package.

WP 4 – Blockchain Research

WP 4 leadership changed from UP1 to ZHAW.

No deliverables are due in the reporting period. Three Milestones are due in the reporting period:

MS 55 (Conclusion of RegTech WorkshopBC Part 1), due date: month 21

MS 56 (Completion of Training Hubs Activity for Blockchain): month 21

MS 59 (Dataset Blockchain): month 21

All three milestones were not completed. An Amendment request has been submitted.

It is recommended that a bottom-up approach is pursued in completing the work under WP 4. The Blockchain use cases should represent current trends such as CBDCs, STOs, IDOs.

WP 5 – SupTech Workshops

With 58 completed SupTech Workshops (Milestones 27 and 50), the WP 5 highlights the focus of the FIN-Tech Project.

However, at the Review Meeting the Project Coordinator himself acknowledged deficiencies in the documentation of the consultation outputs.

The deliverables D 5.1 (Repository of use cases and slides in big data analytics) and D 5.2 (Repository of use cases and slides in artificial intelligence) are in place.

The deliverable D7.6 was re-submitted containing the quantitative analysis of the SupTech workshop participants.

WP 6 – RegTech workshops

Deliverable D6.1 (Research and development environment) due to month 3 delivered.

Four of five milestones are due in the reporting period:

- · MS26 (Conclusion of RegTech workshop BDA 1), due to month 3: achieved
- · MS28 (Conclusion of RegTech workshop BDA 2), due to month 6: achieve
- · MS32 (Conclusion of RegTech workshop AI 1), due to month 9: achieved
- · MS 51 (Conclusion of RegTech workshop AI part 2), due to month 15: achieved
- · MS55 (Conclusion of RegTech workshop BC part 1), due to month 18: not achieved

WP 7 – Dissemination

Significant work of WP7 consists from content creation (research, articles, events, etc.) and dissemination - website and Social media make interactive. Most important - make this content visible, Stakeholders to be engaged and their feedback received. It's not only for Stakeholders attending the workshops, but also for external stakeholders, such as banks, insurance companies and investment funds, fintech's, regulators, supervisors and research centers, that are not part of the project network but may reflect on scientific findings and recommendations, also take and put valuable outputs into the practice.

WP7 leadership with 40 personal months was allocated originally to FIRAMIS. 28,85 PM actual costs were reported (72% from all), with biggest spending (12,5 pm) by Firamis and (6 PM) by Coordinator UNIPV.

The first stage evaluation M1-M12 stressed clear gaps. In order to increase the impact of the dissemination framework, consortium decided to separate WP7 leadership from the platform management (WP6). Thus, from M16, WP7 leadership was moved from Firamis to ASE Bucuresti with remaining tasks and budget (37.5% of the original amount).

Apparently, the work has not been very much improved yet. A new WP7 leader ASE Bucuresti honestly stated only 18 h of spending over the reporting period. However, communication strategy and efforts on measures to be taken to increase the usability and UX are reported. This brings a believes supported by additional budget allocation for new WP leader. Evaluators want to believe that he with new add of 18,1 pm to his work (amendment), will be able to improve current SQ of dissemination activities in general.

According to the workplan only deliverable D5.2 has to be delivered in the reporting period. The repository of use cases and slides in artificial intelligence was created, but the reviewers consider deliverable D5.2 (Repository of use cases and slides in artificial intelligence) due to month 17 not delivered.

The last review report informed the consortium to re-submit the deliverable D7.6 "Intermediate Evaluation report" and add more extensive information on the outcome of the workshops/presentations: who are the parties participating, their roles and their responsibilities, how will they stay involved, what is their feedback on the use cases presented, are the selected use cases in the end the ones that meet the expectations and requirements at most.

For milestone achievement see annex "Milestone Assessment" for details. The team has postponed SupTech and RegTech

workshops planned for the review period month 1 - 18 to the period after. See Technical_report_M1-M18_Part_B for details (search for "Covid" and "Corona").

Due to Covid-19 the team plans to extend the project by 6 months (till June 2021) and submitted an amendment, see update of document "Annex 1 – Description Of Action (part B)".

The progress reported is in general in line with objectives and work plan as specified in the DoA, deviations result from COVID-19 and the required postponement of workshop.

The progress reported is in general in line with objectives and work plan as specified in the DoA, deviations result from COVID-19 and the required postponement of workshop.

2. Are the objectives of the project still scientifically and /or technologically relevant?

Yes

The objectives are still relevant. In regard to the economic impact of Covid-19 the compliance in risk management is as important as before. Due to the large economic impact automatization of compliance of Fintech companies to increase the efficiency of supervisory activities is probably even more important than before.

3. Are the critical implementation risks and mitigation actions described in the DoA still relevant?

Yes

The risk plan described in DoA is still relevant for the project.

The risks and mitigation actions mainly address withdrawal of partners, regulators, fintechs or people from the projects, besides the risk of delay. In fact, a partner (B-Hive) left the project. And another partner (Firamis) announced that the "COVID 19 pandemy has excessively worsened the liquidity situation of Firamis GmbH which led to the necessity of properly liquidating the company. Additionally, I would like to inform you that Firamis will be able to stay in the project and fulfill the remaining obligations subject to the condition that the currently pending amendment will be accepted." This doesn't have an impact on the current review, but may have in the period M19-30. On the other hand, in the amendment Firamis will have less ambitious role, thus this risk is well controlled.

Due to Covid-19 workshops were less well attended and have been postponed. The partners plan to extend the project by six months. This shows that the risks are not only relevant, but they have materialized.

The online periodic reporting contains a section "Critical Risks / Unforseen risks". Here the partners could enter the Covid-19 pandemic as a unforeseen risk.

4. Have the pilots/case studies started to showcase innovative results as described in the DoA?

Yes

The evaluation of the use cases and the methods to approach by regulators, supervisors, external evaluators, external international advisors and consortium partners suggests, that the results are considered to be innovative and relevant. The quantitative analysis of the workshop participant's feedback confirms this. The workshops and use cases are rated with mean values ranging from 3.7 to 4 (on a scale from 1=low to 5=high). In general, fintech startups and banks rated the utility higher than regulators and supervisors.

approved?

Not applicable

From Annex 1 - Description of Action (part B).pdf, p. 162:

"We have not entered any ethics issues in the ethical issue table in the administrative proposal form, so this section does not apply."

6. Have the comments and recommendations from previous project reviews been taken into account?

5. Have the ethics deliverables due for the current period been adequately addressed and

Partially

The project team addressed the feedback provided in the last review report, see Technical report M1-M18 Part B (p. 4).

Our comments regarding the communication and dissemination of the research results are addressed. The communication strategy is under revision, but there seem to be no concrete results yet. The project partners seem to focus on the publication of the results in journals, while still neglecting the website, social media and other communication channels. ASE – which took over WP7 from Firamis from month 16 of the project - presented in the review meeting a new communication strategy. However, the plan is not yet implemented.

Our comments regarding the feedback from workshop participants are addressed. However, the feedback provided by the partners before the review meeting was only qualitative and selective, similar to the feedback already provided before. This does not allow to assess the impact of the workshops and research results on regulators, supervisors, external evaluators and external international advisors. But for an assessment of the impact of the work quantitative and representative data is required. Only at the review meeting the reviewers learned that this feedback data is actually available on the project website, but access to this data was only granted after the reviewers insisted on having access to the data. And also only after insisting a structured analysis of the feedback was provided in the re-submitted technical report (deliverable D7.6, which was rejected after the last review, because of the lack of the analysis).

Although the evaluators requested a resubmission of the interim report, the consortium did not submit it.

Our comments on the research results are discussed in detail. We doubt the scientific achievements in the selected applications to be significant. There is still disagreement about what qualifies as an AI application in regard to the funding objectives and the relevance of the results. The project team measures the quality of the results based on the number of publications in peer-reviewed scientific journals, but we consider the extent of the adoption of the results by the stakeholders according to the objectives of the project as the more relevant measure. However, the feedback provided by the workshop participants shows, that these consider the workshops and the use cases as useful.

3. Impact

1. Does the work carried out contribute to the expected impacts detailed in the DoA?

Yes

The project claims to identify "best practice business models" (DoA, p. 11) but this has been hardly addressed in the work and the reporting. The project also claims "delivering uniform procedures for fintech compliance in risk management" (DoA, p.11). At the same time the actions/deliverables mostly address credit risk in P2P lending (BDA) and client risk profile matching in robo-advisory (AI). The research on fraudulent ICOs and crypto assets demonstrates is not comprehensive (WP 4). The additional risks outlined in the DoA (p.11) such as "identify and prioritize cyber risks and IT operational risks" and "identify and quantify illegal activities and money laundering in crypto asset allocation" are hardly addressed.

Moreover, it is worth noting that the selection of the studied fintech innovations like P2P lending, robo-advisors and ICOs have been identified in other research to be of much smaller magnitude in the EU financial markets as compared to countries like US, China, UK, Switzerland Singapore (see FSB on Non-Bank Financial Intermediation (2019) and Kondova & Bandyopadhyay (2019) on Non-Bank Lending and Bank Efficiency of European Banks. Moreover, the expected outplacement of ICOs by STOs questions the focus on ICOs (see Kondova & Simonella (2019) on Blockchain in Start-up Financing and Kondova & Shanmuganathan (2019) on KYC and Raising up Capital through ICOs). Similarly, the discussed introduction of stablecoins and CBDCs by central bankers (see Kondova & Bolliger & Thammavongsa (2020) on Stablecoins: Types and Applications) highlights these topics. The concern on the limitation of the focus on P2P is stressed out also in the feedback of Nord LB: "Why is the scope restricted only to P2P?"

There is insufficient evidence of an established "knowledge exchange" and inputs from the fintech business communities. In general there is a very low feedback rate of about 26 % of participants in 52 Workshops in the period January-November 2019. Feedbacks are mostly from scientists, banks, financial asset managers, or regulators. This low rate poses a challenge on the evaluation of the impact of the project. Moreover, some feedbacks question the quality of the credit risk use cases. For example, Intesa Bank on Shapley values: "poor evidence that proposed methodology actually reaches an improvement over the non-networks scoring models", Creval and Illimity on the P2P credit scoring model.

The additional risks to be tackled under DoA (p.11) such as "identify and prioritize cyber risks and IT operational risks" and "identify and quantify illegal activities and money laundering in crypto asset allocation" were hardly addressed. And also the project claims to identify "best practice business models" (DoA, p. 11) but concrete outputs are hardly evident.

The feedback provided by regulators, supervisors, external evaluators, external international advisors and consortium partners (see document Technical_report_M1-M18_Part_B) indicate that the work carried out contribute to the expected impacts detailed in the DoA.

2. Does the work carried out follow the plan detailed in the DoA to enhance innovation capacity, create new markets opportunities, strengthen competitiveness and growth of companies, address issues related to climate change or the environment, address industrial and/or societal needs at regional level or bring other important benefits for society? Give information on the relevant innovation activities carried out (prototypes, testing activities, standards, clinical trials) and/or new product, service, reference materials, process or method (to be) launched to the market, if any.

Yes

The appropriateness of the credit risk scoring models applied to P2P lending and the AI models for robo-advisors were questioned by the industry partners such as Intesa Bank, Creval and Illimity. For example, the feedback from Intesa Bank on the Shapley values of the project use case says: "poor evidence that proposed methodology actually reaches an improvement over the non-networks scoring models. However, the feedback provided by the workshop participants shows, that these consider the workshops and the use cases as useful.

3. Does the work carried out contribute towards European policy objectives and strategies and have an impact on policy making?

Yes

Yes, within EU's Fin-Tech Development efforts. European policy objectives and strategies are addressed explicitly in the document "FinTech DoA Grant Agreement" as the following statements show:

"This point has been precisely framed by the current European Commissioner for the Euro and Social Dialogue and Vice- President of the European Commission, Valdis Dombrovskis: "Across the board, we are working to strike the right balance between risks and opportunities; so that Europe can benefit fully from new technologies in the financial services sector". (p. 4)

In the light of the recent EU Action plan (European Commission, 2018), the project can be considered a pilot action, complementary to the EU Fintech Lab, focused on risk management and on the related compliance side." (p. 5)

"The project can also be considered a pilot action that can support the EU Blockchain Observatory and Forum (European Commission, 2017), in monitoring trends and developments in risk management compliance associated with Initial Coin Offerings and crypto assets. We finally remark that the project contains a specific focus on the measurement of cyber risks, a specific area of attention in the EU Action Plan." (p. 6)

4. Does (or will) the work carried out have an impact on SMEs?

Yes

Fintech startups can be considered as SMEs. The consortium addresses the advantages for fintech companies explicitly in the document "FinTech DoA Grant Agreement" (p. 4). Therefore, if the objectives are achieved and disseminated effectively the work carried out could have an impact on SMEs. The quantitative analysis of the workshop participant's feedback indicates this. In general, fintech startups and banks rated the utility higher than regulators and supervisors.

5. Have the beneficiaries reached gender balance at all levels of personnel assigned to the action? If not, have the reasons been explained in the periodic report?

Partially

Disproportionate involvement of the different genders. According to online periodic reporting two thirds of the total workforce of the project is male (15 female, 30 male). According to the document "Annex 1 – Description Of Action (part B)" even three quarter of the key personal of the beneficiaries is male. Only in exceptional cases the gender balanced is reached for a beneficiary.

4. Implementation

1. Has the project been efficiently and effectively managed?

Yes

According to the online Financial statements summary only $1,635,996 \in$ of the total budget $(2,500,000 \in)$ are spent. This is in line even when considering the requested amendment and extension of the project after 18 of 24 or possibly even 30 months if the expenses are stretched accordingly.

The members of the consortium provided their services and requested funds to a very different extent. This is reflected in documents Technical report M1-M18 Part B (p.13) and Financial Statement Summary – Project 825215 – Period 1.

Not all due milestones are achieved, few hours of SupTech workshops are missing and some workshops had been postponed (due to Covid-19) the publication of the research results and the incurred costs indicate an effective and efficient management of the project.

Concerns about "enforcing rules" among the project partners were raised by the Project Coordinator at the Review Meeting.

Currently no time sheets reporting work hours from the project partners are required to be submitted. Work hours only need to be justified by the project partners as explained at the Review Meeting.

The transparency of all project outputs became an issue during the review meeting. Cause was the provision of access to the feedback data from the workshops for the evaluators which was only granted after insistence of the reviewers after the review meeting. This revealed a warning sign from reviewers on efficiency and transparency within project management.

2. Is the management of the project in line with the obligations of beneficiaries (including ethics and security requirements, risk and innovation management if applicable)?

Not applicable

The documents don't mention such obligations of the beneficiaries.

3. Is the contribution of each beneficiary in line with the work committed in the DoA? (applicable only to multibeneficiary projects)

Yes

According to Technical_report_M1-M18_Part_B (p.13) the effort completion varies considerably between the project partners. Nine partners achieved an effort completion of more than 80% after 18 months, nine achieved only 50% or less. We expect to see approx. 75% effort completion after 18 months.

UNIVERSITÀ DEGLI STUDI DI PAVIA (UNIPV) has published 17 papers and 2 preprints in the field and contributed actively in the production of the three use cases for WP 2. It did publish research results in 17 publications and 2 preprints and presented WP1 and WP5 in the review meeting. UNIPV has the role of project coordinator (PC) and is the leader of the following work packages: Management (WP1) and SupTech workshops (WP5) with 75,3% effort completed. UNIVP is local coordinator of the project in Italy and carried out all BDA and AI SupTech workshops.

HUMBOLDT-UNIVERSITAET ZU BERLIN (UBER) published 2 papers and 15 preprints and presented WP2 in the review meeting. It is the leader of the following work packages: WP2 (and WP 4 according to amendment) and contributed to WP 1, WP 2, WP 3, WP 5 and WP 6 with 40,3% effort completed. UBER is local coordinator of the project in Germany and carried out all BDA and AI SupTech workshops. UBER is in charge to organize the research workshop. This task was transferred from Firamis (according to amendment).

ZURCHER HOCHSCHULE FUR ANGEWANDTE WISSENSCHAFTEN (ZHAW) published 6 papers and presented WP4 in the review meeting. It is the leader of the WP 4 and contributed to all other WPs with 34,8% effort completed. ZAHW is contributing to the WP5 and WP6 through organization of SupTech /RegTech events in Hungary and Switzerland and use case II. ZHAW delivered at least 16h BDA and 16h AI SupTech workshops.

UNIVERSITY COLLEGE LONDON (UCL) published 5 papers and 2 preprints and presented WP3 in the review meeting. It is the leader of the work package WP3 and contributed to all work packages except WP6 with 50% effort completed. UCL carried out all AI SupTech workshops, delivered only 6 of 16 hours for BDA SupTech workshops.

ACADEMIA DE STUDII ECONOMICE DIN BUCURESTI (ASE Bucuresti) published two preprints and will take over responsibility for WP7 (Dissemination) from Firamis from month 16 (according to the amendment) and presented results and plans for WP7 together with Firamis in the review meeting. It is the leader of the work package WP7 and contributed to all work packages except WP6 with 54,5% effort completed. ASE carried out all AI SupTech workshops and delivered at least 16h BDA and 16h AI SupTech workshops.

MODEFINANCE SRL (MODEFINANCE SRL) contributed to all work packages except WP5 with 72% effort completed. No BDA and AI SupTech workshops (no regulators).

FIRAMIS GMBH i. L. published one paper and one preprint and presented WP6 and WP7 in the review meeting. It is the leader of the work package WP6 and will hand over leadership for WP7 from month 16 to ASE (according to the amendment). Firamis contributed to all work with 100% effort completed. Firamis organized one research workshop, one RegTech event and carried out all AI SupTech workshops, but delivered only 14.5/16 hours for BDA and 14/16 hours for AI SupTech workshops. Firamis announced the liquidation of the company: "With the beginning of 2021 (January 2021) the legal status of Firamis GmbH will change to Firamis GmbH i.L.. The company will remain open for running projects to ensure that there are not any implications on our running business relationship, meaning both, the fulfillment of the remaining project duties and the payments to Firamis."

PANTEIO PANEPISTIMIO KOINONIKON KAIPOLITIKON EPISTIMON (PANTEION) published one paper and contributed to WP 1, WP 2, WP 3, WP 4 and WP 5 with 85,5% effort completion. PANTEION delivered at least 16h BDA and 16h AI SupTech workshops.

INESC TEC - INSTITUTO DE ENGENHARIA DE SISTEMAS E COMPUTADORES, TECNOLOGIA E CIENCIA (INESC TEC organized SupTech Workshops (WP 5) and contributed to WP 1, WP 2 and WP 4. Delivered 16 hours for BDA and 16 hours for AI. In terms of publications, INESC TEC reports the publication of one paper in the area of BDA. Effort Completion: 37.9%

UNIVERSITE PARIS I PANTHEON-SORBONNE (UP1) othree workshops - one Research, one RegTech and one SupTech Workshop. Contributed to WP 1, WP 2, WP 3, WP 4. However, reports no paper publications. Delivered 11.5 hours for BDA and 9.6 hours for AI. Effort Completion: 62.3%

POLITECNICO DI MILANO (POLIMI) organized one SupTech Workshop (WP 5) and contributed to WP 1, WP 2, WP 3. Delivered 20 hours for BDA and 20 hours for AI. Reports the completion of two pre-prints. Effort completion: 141.3%.

UNIVERSITY COLLEGE DUBLIN, NATIONAL UNIVERSITY OF IRELAND, DUBLIN (NUID UCD) organized one SupTech Workshop (WP 5) and contributed to WP 1, WP 2, WP 3, WP 4. Delivered 19 hours for BDA and 9 hours for AI. Reports the publication of one paper. Effort Completion: 50%.

UNIVERSITE DU LUXEMBOURG (UL) organized one SupTech Workshop (WP 5) and contributed to WP 1, WP 2 and WP 3. Delivered 16 hours for BDA and 17 hours for AI. No publications are reported. Effort Completion: 93.8%.

INSTITUT JOZEF STEFAN (JSI) organized one SupTech Workshop (WP 5). Contributed to WP 1, WP 2, WP 3 and WP 4. Delivered 25 hours for BDA and 7 hours for AI. No publications are reported. Effort Completion: 38.8%.

UNIWERSYTET WARSZAWSKI (UNIWARSAW) organized one SupTech Workshop (WP 5). Contributed to WP 1, WP 2, WP 3 and WP 4. Delivered 16 hours for BDA and 16 hours for AI. No publications are reported. Effort Completion: 61.1%

SVEUCILISTE U RIJECI EKONOMSKI FAKULTET (UNI RIJEKA EFRI) organized two SupTech Workshop (WP 5) and contributed to WP 1, WP 2, WP 3, WP 4 and WP 7. Delivered 26.5 hours for BDA and 19.5 hours for AI. Reports the completion of one pre-print. Effort Completion: 74.4%

UNIVERSIDAD COMPLUTENSE DE MADRID (UCM) has published two publications on AI. Dialog and partnership with national regulator was established. Concerning the events, it has organized one RegTechWorkshop (WP6) and three SupTech workshops (WP5) covering 5 cases, where at least 17 hours on BDA and 23.5 h on AI particularly has been reported. UCM contribution to WP2, WP3 and WP7 packages is also observed. Total effort completion is 80.2% which means 15.23 Pm from 19 months allocated originally.

EKONOMICKA UNIVERZITA V BRATISLAVE (EUBA) organized two SupTech workshops (WP5) and presented 3 use cases and contributed to WP2, WP7 packages with delivery of at least 24h BDA and 17 hours on AI. Total effort completion is 72.2% and covers 6.5 PM from 9 allocated originally.

KAUNO TECHNOLOGIJOS UNIVERSITETAS (KTU) has a challenging mission to cover all Baltic region countries. The relationship with Regulatory Authorities are established, but links with FinTech industry are hardly observed and some facts (parallel events running the same day -1st of Oct, 20202) show weak links/ lack of national coordination. KTU has been published one AI publication and organized 3 SupTech workshops – (one in Vilnius on BDA/AI and 2 on AI in Riga and Tallinn) analyzing 3 use cases were at least 13h on BDA and 56 h on AI are reported. It also contributed to WP 3, WP 4. However, total effort completion of 103.6% is indicated.

Masarykova univerzita (MU) prepared two papers (1-BDA, 1-AI) which are in review and made one preprint on Blockchain. MU have organized three SupTech Workshops on BDA and two SupTech Workshops on AI (WP5) where reported at least 19.5h on BDA and 20.5 h on AI. MU University has demonstrated excellent performance with effort completion of 112.9%.

B-HIVE EU (B-Hive) indicated at least 16h on BDA and 16h on A, also contributed to WP 5, W7. B-Hive established links with Fintech stakeholders and started dialog with regulators in Denmark. B-Hive decided to leave project consortium with effort completion of 30%.

IKONOMICHESKI UNIVERSITET-VARNA (UE-Varna) organized one SupTech Workshop with 3 use cases presented where at least 17h BDA and 18 h AI were reported. It also contributed to WP2, WP3, WP7. In total 48.9% of efforts are completed.

TAMPEREEN KORKEAKOULUSAATIO SR (UTA) is in charge of Finland & Sweden countries and relationship establishment with their Fintech and Regulators. It organized two SupTech I Workshops (WP5) with four use cases covered and two SupTech II Workshops on AI presenting 3 use cases, overall reporting at least 43.5h on BDA and 36 h on AI. It also contributed to WP2. Total effort completion is 39.3%.

WIRTSCHAFTSUNIVERSITAT WIEN (WU) published one publication on BDA, also made contributions to the work WP2 and WP5 related. It delivered 3 workshops of SupTech on BDA with three use cases covered in total and 4 workshops of SupTech on AI (4 use cases), also on WP6 delivered one RegTech workshop (1-4 use cases) where at least 17h on BDA and 16 h on AI are reported. Excellent performance demonstrated with 100% effort completion.

4. Have the beneficiaries disseminated project results (foreground) in scientific publications as planned in the DoA (including the deposition of publications in open access repositories)? Do they include a reference to EU funding?

Yes

Technical_report_M1-M18_Part_B (p. 14) documents the dissemination of project results in scientific publications. Several papers are published with open access. Unfortunately the website still doesn't contain a publication overview with links to the (open and closed access) publications. A small sample confirms that the (open access) publications include a reference to EU funding.

At least one publication is described as open access, but this is in fact not the case:

Giudici, P., Hadji-Misheva, B., Spelta, (2019). Network based credit risk models. Quality Engineering. (open access) https://www.tandfonline.com/doi/full/10.1080/08982112.2019.1655159?scroll=top&needAccess=true

5. Have the beneficiaries disseminated and communicated project activities and results by other means than scientific publications (social media, press-release, the project web site, video/film, etc) as planned in the DoA? Do they include a reference to EU funding?

Partially

Other means of publications have only been used sporadically:

- The website does not provide much (publicly available) information (two news posts, one from January and one from August)
- LinkedIn seems to be the most used channel, but there are only 525 followers of fintech-ho2020-euThe Twitter account has only 135 followers (and 135 tweets)
- The evaluators could not find the announced Youtube channel
- The website and the descriptions of the LinkedIn and Twitter account include a reference to EU funding (but neither logo, grant agreement number nor link).

The minimum is achieved, real interaction and impact is insufficient.

6. Has the plan for the exploitation and dissemination of the results (if required) been updated and implemented as described in the DoA, in particular as regards intellectual property rights? Is it appropriate?

Yes

All project results are planned to be available on the website. This is further detailed in section "2.2.1. Dissemination and exploitation of results" of the updated document "Annex 1 - Description Of Action (part B)" (p. 27).

The exploitation and dissemination of the results is only partially implemented:

- the reach of the social media channels is small
- there is no access by all stakeholders, including the general public, to project information and results
- the feedback from participants and peers indicate that the creation of the reputational impact through workshops, conferences and publications is the most successful dissemination activity by now

- the feedback given by the supervisors and regulators within the training hubs indicate also a successful dissemination, but as mentioned several times more concrete data is required for a final assessment
- in a planned evaluation laboratory the project results will be validated

This part of the plan has been updated to reflect our feedback regarding a more structured feedback process.

The plan was implemented as described in DoA, but there is hardly information about updates on the plan of exploitation and dissemination of the results.

7. Has the data management plan (DMP) (if required) been updated and implemented? Is it appropriate?

Not applicable

Data management plan (DMP) is not required. No reference to a DMP in the document "FinTech DoA Grant Agreement", "Annex 1 - Description Of Action (part A)" or "Annex 1 - Description Of Action (part B)"

8. Have the proposed institutional changes been appropriately promoted?

Not applicable

To our knowledge no institutional changes have been promoted in the document "FinTech DoA Grant Agreement", "Annex 1 - Description Of Action (part A)" or "Annex 1 - Description Of Action (part B)"

5. Resources

1. Were the resources used as described in the DoA and were they necessary to achieve its objectives? If there are deviations from planned budget, have they been satisfactorily explained? Have they been used in a manner consistent with the principle of sound financial management (in particular economy, efficiency and effectiveness)?

Partially

The resources were used as described in the DoA and necessary to achieve the objectives. There is no deviation visible in the planned budget $(1.6m \in \text{spent}, \text{budget } 2.5m \in)$. In regard to the effort completion, which varies largely between 30% and 100% the resource usage varies largely between the partners. It is therefore to be expected that the budget will have to be redistributed between the beneficiaries or/and that some beneficiaries will have to complete their efforts without covering the costs from the project. Due to the fact that most beneficiaries requested more budget then required for their reported completed efforts the reviewers consider the financial management not as efficient.

UNIVERSITÀ DEGLI STUDI DI PAVIA (UNIPV) The total budget $(400,000 \ \ \ \)$ is depleted by 85,1% (requested contribution: 340,564.49) with 75,3% effort completed. It is not clear if the budget allows completion of planned effort. HUMBOLDT-UNIVERSITAET ZU BERLIN (UBER) The total budget $(100,000 \ \ \ \)$ is depleted by 86,5% (requested contribution: 86,448.36 $\ \ \)$ with only 40,3% effort completed. It is not clear if the budget allows completion of planned effort.

ZURCHER HOCHSCHULE FUR ANGEWANDTE WISSENSCHAFTEN (ZHAW) The total budget (150,000 €) is depleted by 69% (requested contribution: 104,141.50 €) with only 34,8% effort completed. It is not clear if the budget allows completion of planned effort.

UNIVERSITY COLLEGE LONDON (UCL) The total budget (100,000 €) is depleted by 77,6% (requested contribution: 77,570.84 €) with only 50% effort completed. It is not clear if the budget allows completion of planned effort.

ACADEMIA DE STUDII ECONOMICE DIN BUCURESTI (ASE Bucuresti) The total budget (100,000 €) is depleted by 46% (requested contribution: 46,010.11 €) with 54,5% effort completed. It is to be expected that the budget allows completion of planned effort.

MODEFINANCE SRL (MODEFINANCE SRL) The total budget $(50,000 \, €)$ is depleted by 94% (requested contribution: $47,014.46 \, €)$ with only 72.2% effort completed. It is not clear if the budget allows completion of planned effort. Firamis GmbH i. L. Firamis contributed to all work with 100% effort completed. The total budget $(300,000 \, €)$ is depleted by 68% (requested contribution: 204,499.98). From M16, the remaining activities and budget of WP7 will move from FIRAMIS to ASE Bucuresti.

PANTEIO PANEPISTIMIO KOINONIKON KAIPOLITIKON EPISTIMON (PANTEION) The total budget (100,000 €) is depleted by 18,5% (requested contribution: 18,500.538 €) with 85.5% effort completed. It is to be expected that the budget allows completion of planned effort.

INESC TEC - INSTITUTO DE ENGENHARIA DE SISTEMAS E COMPUTADORES, TECNOLOGIA E CIENCIA (INESC TEC) requested contribution of $25,586.25 \in$ out of the total budget of $50,000 \in$, resulting in a budget depletion of 51% with only 37.9% effort completed. It is not to be expected that the budget allows completion of planned effort.

UNIVERSITE PARIS I PANTHEON-SORBONNE (UP1) requested contribution of $142,787.51 \\\in$ out of the total partner budget of $150,000\\\in$, resulting in a budget depletion of 95% with only 62.3% effort completed. It is not clear if the budget allows completion of planned effort.

POLITECNICO DI MILANO (POLIMI) requested contribution of 50,140.39 € out of the total partner budget of 50,000 €, resulting in a 100% budget depletion and 141.3% effort completion.

UNIVERSITY COLLEGE DUBLIN, NATIONAL UNIVERSITY OF IRELAND, DUBLIN (NUID UCD) requested contribution of $1,311.64 \in \text{out}$ of the total partner budget of $50,000 \in \text{monoid}$, resulting in a budget depletion of 2.6% with 50% effort completion. It is to be expected that the budget allows completion of planned effort.

UNIVERSITE DU LUXEMBOURG (UL) requested contribution of $58,633.55 \in$ out of the total partner budget of $50,000 \in$, resulting in budget expenses of 117% with only 93.8% effort completed.

INSTITUT JOZEF STEFAN (JSI) requested contribution of 22,042.84 € out of the total partner budget of 50,000 €, resulting in a budget depletion of 44% with 38.8% effort completed. It is not clear if the budget allows completion of planned effort.

UNIWERSYTET WARSZAWSKI (UNIWARSAW) requested contribution of 14,303.46 € out of the total partner budget of 50,000 €, resulting in a budget depletion of 29% with 61.1% effort completion. It is to be expected that the budget allows completion of planned effort.

SVEUCILISTE U RIJECI EKONOMSKI FAKULTET (UNI RIJEKA EFRI) requested contribution of 39,053.78 € out of the total partner budget of 50,000 €, resulting in a budget depletion of 78% with 74.4% effort completed. It is not clear if the budget allows completion of most of the planned effort.

UNIVERSIDAD COMPLUTENSE DE MADRID (UCM) requested contribution of $53.251,49 \in$ out of the total partner budget of $100.0000 \in$, resulting in a budget depletion of 53% with 80.2% effort completion. It is to be expected that the budget allows completion of most of the planned effort.

EKONOMICKA UNIVERZITA V BRATISLAVE (EUBA) The total budget of EUB is 50,000 €, with requested contribution 35,690 € therefore depleted by 71.38% with 72.2% effort completed. It is to be expected that the budget allows completion of most of the planned effort.

KAUNO TECHNOLOGIJOS UNIVERSITETAS (KTU) The budget requested for 99,370 € from 150,000 € total which means 66.24%, of which is depleted. Total effort completion of 103.6% is indicated.

Masarykova univerzita (MU) requested 32,580 € from 50,000 € allocated originally which indicates 65.16% of budget depletion. MU University has demonstrated excellent performance with effort completion of 112.9%.

B-HIVE EU (B-Hive) requested 70,000 € from 100,000 € which means 70% original budget depletion. B-Hive decided to leave project consortium with effort completion of 30%.

IKONOMICHESKI UNIVERSITET-VARNA (UE-Varna) requested 33,380 € from the total budget of 50,000 € allocated which means depletion of 66.76% of total. In total 48.9% of efforts are completed. It is not to be expected that the budget allows completion of most of the planned effort.

TAMPEREEN KORKEAKOULUSAATIO SR (UTA) requested 65,100 € from 100,000 € allocated which means 65.10% of the original budget. Total effort completion is 39.3%. It is not to be expected that the budget allows completion of most of the planned effort.

WIRTSCHAFTSUNIVERSITAT WIEN (WU) university requested 41,850 € from total budget of 100,000 € which depletion means 41.85%. Excellent performance demonstrated with 100% effort completion.

Expert opinion on deliverables

Deliverable number	Deliverable name	Status	Comments
D1.1	Network Establishment	Accepted	Network established that includes participants from international institutions. More involvement of the network is needed. (Technical only review M1-M12)
D5.1	Repository of use cases and slides in big data analytics	Accepted	Add the requested analysis for the BDA SupTech workshops to the repository. (Technical only review M1-M12)
D5.2	Repository of use cases and slides in artificial intelligence	Accepted	Add the requested analysis for the AI SupTech workshops to the repository.
D6.1	Research and development environment	Accepted	(Technical only review M1-M12)
D7.1	Establishment of website and social media channels.	Accepted	Website and social media channels are established, however communication strategy should be improved. (Technical only review M1-M12)
D7.6	Intermediate Evaluation report	Accepted	(REJECTED in Technical only review M1-M12: "Deliverable needs to be re-submitted with additional information about outcomes of the workshops")
			The consortium resubmitted the intermediate report as requested in the last review report – but only after the review meeting and renewed request from the reviewers.

Expert opinion on milestones

Milestone number	Milestone name	Achieved	Comments
MS2	Completion of the technical plan	Yes	Technical only review M1-M12: Technical plan was presented during onsite meeting in Vienna.
MS3	Completion of the financial plan	Yes	Technical only review M1-M12: Financial plan was presented during onsite meeting in Vienna
MS4	Completion of initial workshop	Yes	Technical only review M1-M12: Kick-off Workshop, 1st of February 2019, Pavia (IT), official launching event of the project: the Management Board meeting was held on January 31st, 2019.
MS26	Conclusion of RegTech workshop BDA	Yes	All Regtech for BDA and AI completed, by: Modefinance, Firamis, ZHAW, WU
			Technical only review M1-M12: 1st RegTech Workshop BDA Italy, Milan, 2019-03-29 see also D7.6 Intermediate Evaluation
MS27	Completion of SupTech activities for BDA	Yes	All SupTech workshops for BDA for 29 countries completed, as reported in the partner's review presentation.
			Technical only review M1-M12: See WP5, D5.1 in document Annex 1 - Description of the action (part A) see document D5.1_D13_UNIPV
MS28	Conclusion of RegTech workshop BDA 2	Yes	All Regtech for BDA and AI completed, by: Modefinance, Firamis, ZHAW, WU
			Technical only review M1-M12: 2nd RegTech Workshop BDA Germany, Frankfurt, 2019-06-28 see also D7.6 Intermediate Evaluation
MS32	Conclusion of RegTech workshop AI 1	Yes	All Regtech for BDA and AI completed, by: Modefinance, Firamis, ZHAW, WU
			Technical only review M1-M12: 3rd RegTech Workshop AI in Finance Switzerland, Winterthur, 2019-09-04 see also D7.6 Intermediate Evaluation
MS33	Intermediate technical output	Yes	Intermediate technical output is described in Intermediate Evaluation report.
			Technical only review M1-M12: Was presented during onsite meeting
MS34	Intermediate financial output	Yes	Intermediate financial output is described in Intermediate Evaluation report.
			Technical only review M1-M12: Was presented during onsite meeting
MS49	Completion of mid-term workshop	Yes	Technical only review M1-M12: Mid-term Workshop of the FINTECH-HO2020 Project, Bucharest, 2019-11-15

Milestone number	Milestone name	Achieved	Comments
			see also D7.6 Intermediate Evaluation
MS50	Completion of SupTech activities for AI	Yes	All 29 national AI SupTech workshops were conducted, as reported by WP5 leader UNIPV in the review meeting.
			Technical only review M1-M12: Missing information to evaluate completion of SupTech activities for AI. First reporting period were for year 2019 and Periodic Report didn't provide an information about completion of this milestone. (NOT ACHIEVED)
MS51	Conclusion of RegTech workshop AI part 2	Yes	All Regtech for BDA and AI completed. • 1st RegTech BDA (modeFinance) (MS 26) • 2nd RegTech BDA (Firamis) (MS 28) • 3rd RegTech AI (ZHAW) (MS 32) • 4th RegTech AI (WU) (MS 51)
			5th RegTech workshop, BlockChain in Finance, Madrid, is postponed to 23 October 2020 (MS 55).
			6th RegTech workshop is not scheduled in review period.
			Technical only review M1-M12:Missing information to evaluate Conclusion of RegTech activities for AI. First reporting period were for year 2019 and Periodic Report didn't provide an information about completion of this milestone. (NOT ACHIEVED)
MS55	Conclusion of RegTech workshop BC part 1	No	The RegTech Workshop V, BlockChain in Finance, Madrid, is postponed to 23 October 2020.
MS77	Completion of Research workshop on BDA model validation	Yes	Technical only review M1-M12: Missing information to evaluate Conclusion of RegTech activities for AI. First reporting period were for year 2019 and Periodic Report didn't provide an information about completion of this milestone.
MS78	Completion of Research workshop on AI model validation	Yes	The Research workshop on AI model validation was held online on 19th May 2020 in London.