

Activity Report of the Innovation Hub of Národná banka Slovenska

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Abbreviations

AI	Artificial intelligence
AML	Anti money laundering
AMLD5	Directive (EU) 2018/843 of the European Parliament and of the Council of 30 May 2018 amending Directive (EU) 2015/849 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing, and amending Directives 2009/138/EC and 2013/36/EU
API	Application Programming Interface
CFI	Centre for Financial Innovations of the Ministry of Finance SR
DLT	Distributed Ledger Technology
EBA	European Banking Authority
EFIF	European Forum for Innovation Facilitators
EIOPA	The European Insurance and Occupational Pensions Authority
E&Y	Ernst & Young, s. r. o.
ESAs	European Supervisory Authorities (EBA, ESMA and EIOPA)
ESMA	European Securities and Markets Authority
FEI STU	Faculty of Electrical Engineering and Information Technology of the Slovak University of Technology in Bratislava
IH	Innovation hub
ICO	Initial Coin Offering
INOLab	Innovation laboratory
KYC	Know your customer
MF SR	Ministry of Finance SR
NFC	Near Field Communication
NBS	National Bank of Slovakia
NBS IH	Národná banka Slovenska Innovation Hub
PSD 2	Directive (EU) 2015/2366 of the European Parliament and of 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
RegTech	Application for FinTech for the regulatory and compliance requirements and reporting of the regulated financial institutions
SBA	Slovak Banking Association
SFA	Slovak FinTech Association
SupTech	Usage of technologic innovations by the supervisory institutions
SWOT	A method to evaluate strengths, weaknesses, opportunities and threats

Introduction

As innovation accelerates in the financial sector, supervisory authorities around the world are supporting it with one-stop points of contact known as innovation hubs. This Activity Report summarizes the work of the innovation hub run by Národná banka Slovenska, the central bank of the Slovak Republic, for the period from its launch on 1 April 2019 to 31 March 2020.

The Národná banka Slovenska Innovation Hub (NBS IH) was primarily established as a contact point for innovative start-ups as well as supervised entities. It is intended to help to clarify issues related to regulation, supervision and the legal framework applicable to their business models and services. The NBS IH pursues two objectives: firstly, to guide the market with regards to the application of existing regulation to innovative processes, and secondly, to maintain a close contact with the market and thus contribute to the improvement of the rules of its safe and healthy operation as new technologies are introduced. The scope of FinTech topics addressed by the NBS has been specified by a new FinTech section on the NBS website.

Dozens of submissions relating to financial innovations came to various NBS departments every year before the launch of the NBS IH. They were analysed separately, in isolation and with limited attention. Thanks to the establishment of the NBS IH, a system of interdepartmental cooperation has been set up to deal with submissions concerning market innovations, which will aid not only in responding to them but also in drafting regulations and performing supervision.

During the first year of operation of the NBS IH, a total of 38 cases were handled, which concerned e.g. payment services, robo-advice, but also cryptoassets and Initial Coin Offerings. Communication took place via emails as well as via personal meetings at NBS. NBS IH was contacted by an average of three companies per month. These included supervised and unsupervised entities. The gateway to get in touch with NBS for FinTech was the online form published on the NBS website, the main purpose of which was to ensure that the submission was clear, complete and structured. The speed of the processing of submissions reflected and depended on their complexity, but in none of the cases did the processing take longer than 90 days.

NBS IH cooperated with the Centre for Financial Innovations (CFI) established by the Ministry of Finance of the Slovak Republic. The main objective of the CFI is to create a platform for relevant public authorities, market participants and interest groups to enable the regular exchange of information and experience. The cooperation between NBS IH and CFI consisted mainly in the exchange of knowledge from the activities of NBS IH at events organized by CFI.

Furthermore, the NBS forwarded to the CFI those submissions which pointed to the need to adjust a regulation in the competence of the MFSR.

The financial market in Slovakia is currently exposed to the challenges posed by the measures necessary to mitigate the spread of COVID-19. Nevertheless, the interactions via the NBS IH demonstrate that the market has the potential to offer innovative modern products and services to clients in various segments, in both the retail and wholesale sectors. The offer is diversified, which points to the natural development of an innovative financial ecosystem. The NBS IH has the ambition to accelerate this development.

1 Overview of activities and lessons learnt

1.1 Handling of cases by the innovation hub

The remit of the NBS IH is defined by the topics published on the **FinTech section of the NBS website**. As of 1 April 2019, it contained a description of six business models (alternative payment methods, crowdfunding, robo-advice, cryptoassets and ICOs, Insurtech and algorithmic trading). At the end of November 2019, it was supplemented by six technological areas (smart contracts, biometric authentication, big data and machine learning, blockchain, mobile wallet with NFC, cloud computing). The website contains links to reports of international and European standard-setting bodies in the field of financial market regulation, such as the Financial Stability Board, the Basel Committee on Banking Supervision and the European Supervisory Authorities (ESAs). The objective of the FinTech section of the NBS website is to minimize the information asymmetry between the NBS and those interested in financial innovations.

During the period, between April 1st, 2019 and March 31st, 2020, the FinTech section was accessed 17,626 times. The most views were recorded in April 2019 (2,527) and in November 2019 (2,849). As many as 89% of all website visits to the FinTech web section come from Slovakia, the remaining 11% come from almost 30 other countries. Among the presented business models, public interest focused mainly on information on alternative payment methods. The model that attracted least interest was robo-advice. Among the technological areas, it was artificial intelligence that dominated, along with big data. At the other end of the scale, the subpage dedicated to smart contracts had the least number of views.

If a person interested in financial innovations did not find the answer to his/her question on the FinTech section website or elsewhere on the NBS website,

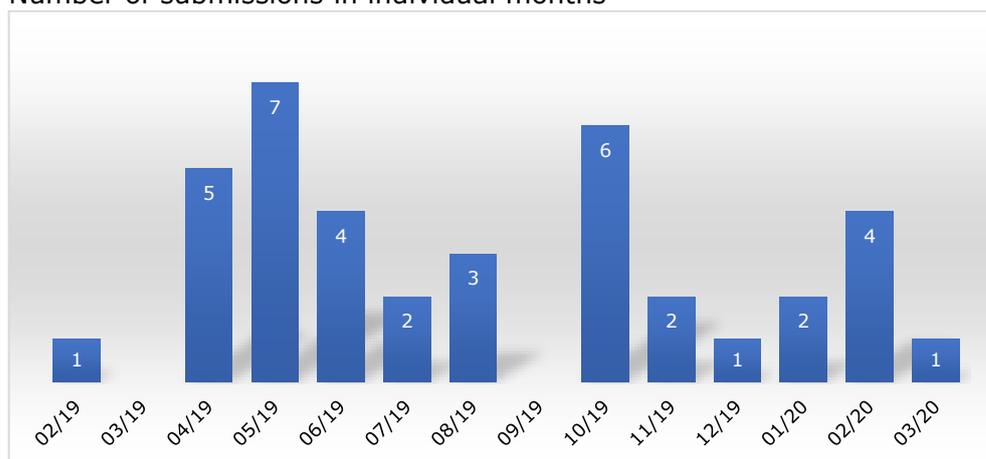
he/she could contact the NBS IH via a **structured online form**. NBS communicates through the NBS IH with parties interested in financial innovations without the need for the applicant to contact a specific department. A key role in this process is performed by the NBS IH coordinator, who, after receiving a submission, contacts experts from the NBS departments with expertise relevant to the FinTech topic. In 2019 and in the first two months of 2020, the role of the coordinator was performed by the heads of the regulatory sections in the NBS regulation department. On 1 March 2020, the Financial Technology and Innovations Department was established as a new unit and it took over the coordination of the NBS IH.

During the period from 1 April 2019 to 31 March 2020, a total of 38 entities submitted queries to the NBS IH using the online form. Indeed, the interest in it exceeded NBS's initial expectations. After a factual assessment, the filled-in form was forwarded to the relevant expert. Before experts start perusing the submission, the coordinator ensures that the submission meets pre-defined criteria, in particular, whether the company's business model is innovative and whether the applicant is aware of the rules applicable to the proposed business model. In addition, consideration is given to the question of whether the business model offers a real benefit for the consumer or for the financial market, and whether the entity has clearly formulated the issues it wants to consult with the supervisor.

The outcomes of the meetings with entities within the NBS IH took various forms: Some of them were recommended to apply to NBS for a licence, while others received guidance on how to solve their specific problem, and the rest were referred to another competent authority or legal advisers when their issues did not fall within the competence of the NBS.

Graph 1

Number of submissions in individual months



Note: In February 2019, the IH dealt with one submission during trial operation.

The NBS IH **expert network** holds regular coordination meetings. Their main purpose is to share information on the submissions received, discuss current

events in the field of FinTech in the ESAs, at the European Commission and at the European Central Bank, and to share information from conferences and seminars.

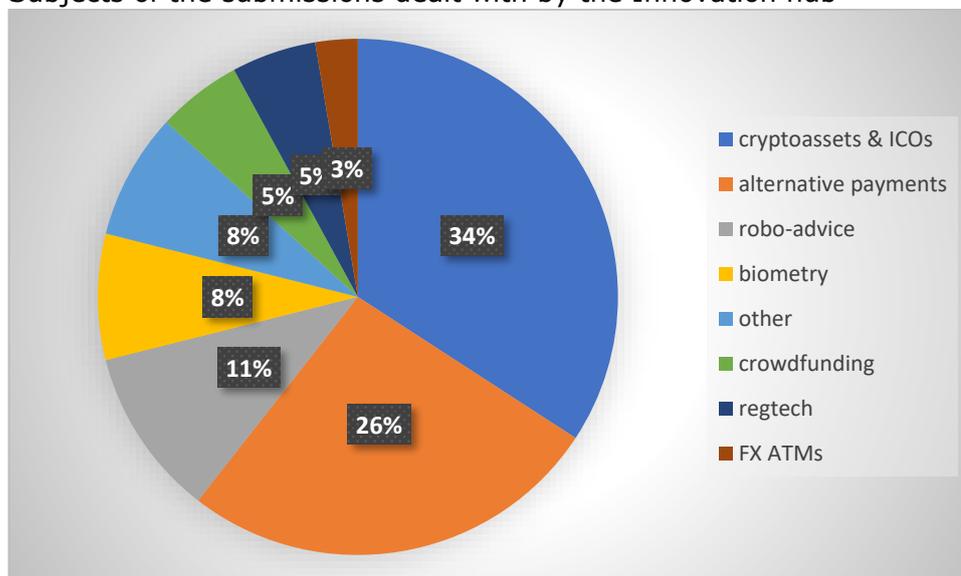
Despite the introduction of special measures in connection with the spread of the COVID-19 virus in mid-March 2020, NBS IH activities were not suspended. The physical meetings were replaced by Skype calls; indeed, four inquiries were resolved in the new format.

1.2 Lessons learnt from the operation of the hub

Most submissions to the NBS IH concerned innovative business models (such as cryptoassets, alternative payments). However, correspondents' plans often combined multiple issues (e.g. a combination of financial products intermediation with automated advice or payment services).

Graph 2

Subjects of the submissions dealt with by the Innovation hub



The topic of cryptoassets and ICOs dominated mainly due to a significant increase in the number of ICOs and their total market capitalization on a global scale in 2017 and in 2018, which also aroused interest in the topic in the Slovak Republic. Those interested in financial innovations had several questions about models for buying and selling cryptoassets through crypto-ATMs, platforms for trading cryptoassets, and about online payments with cryptoassets. The issues discussed in relation to ICOs involved the conditions of their operation, as well as the general conditions pertaining to the activities of entities whose business is related to cryptoassets. The applicants also asked questions related to the issue of prevention of money laundering (Anti money laundering and Know your customer) in connection with cryptoassets, taxation and registration under the new AMLD5 directive, the transposition of which in the Slovak Republic had not yet occurred at the time of writing this report. One can

conclude that there is now a growing demand in this sector for the legitimising of their business.

As regards alternative payment methods, the handled questions mainly concerned the requirements for the authorization of the payment initiation services and payment account information services that were recently introduced by the PSD2 Directive. Additionally, some businesses were interested in rules applicable to application programming interfaces, requirements for security certificates or details of the exchange of data.

Inquiries also focused on the provision of services in the cloud, or on specific issues related to the cross-border provision of services. Obligations for remote identification (online verification of client identification) were also a frequent topic.

Several applicants presented suggestions that required commercial, legal or economic advice. The NBS is not entitled to provide such services and expressly states this on its website. In some cases, applicants were reluctant to provide NBS with complete information, and this occurred even though NBS employees have a duty of confidentiality in official matters. Therefore, it was difficult for experts to analyse the problem and their ability to provide the most accurate guidance possible was impaired.

1.3 Benefits and challenges

NBS conducted a satisfaction survey of those who contacted NBS via the IH. A total of 21 companies were contacted to join the survey, of which 15 provided feedback. Only companies with which a personal meeting had taken place were included in the survey. The survey was conducted from 7 to 20 April 2020. Respondents were asked to fill in a form on the NBS website.

The survey showed that 93.3% of respondents consider the NBS IH to be an appropriate tool to support innovations in the Slovak Republic and the same proportion of respondents consider the consultation services of the NBS IH to be beneficial for their business plan. Cooperation with the NBS IH was evaluated as excellent or good in 53.3% and 46.7% of cases respectively, while no one assessed the cooperation as average or insufficient. Respondents stated that 93.3% of their cases were handled within a reasonable time acceptable for companies. Two subjects, i.e. 13.3% of the total declared that their cases were not answered in the required quality, which may be due to potentially unreasonable expectations or requirements in areas where NBS has no competence to give an answer. In such a case, the entities were advised to contact the competent body within the Slovak Republic or were referred to publicly available information published by the European institutions. Thirteen subjects, i.e. 86.7% of respondents were satisfied with the quality of answers to

their questions provided by NBS IH. An overview of the answers to all the questions is included in the annex to this report.

Respondents' recommendations for the modification or expansion of NBS IH activities can be summarized as follows:

- establishment of a dedicated innovation team at NBS to make an analysis of submitted cases uncoloured by background and experience from the supervisory process,
- clarification of the requirements for granting of the relevant authorization to carry out an activity,
- enabling video meetings,
- addition of a FAQ to the FinTech section on the NBS website,
- introduction of possibility to become a member of NBS IH, which would give credit to member FinTech companies, as the general public has difficulty recognizing which FinTechs are of good quality,
- providing IH participants with written appraisal of their business plan,
- clearer guidance also in the areas of the market that are not directly supervised by NBS (e.g. cryptoassets),
- providing more space and more events where companies could present their implemented projects,
- setting up a sandbox,
- manual of rules for communication of cooperation with NBS IH for marketing use by IH participants.

NBS will carefully consider all the recommendations. Feedback on several of them is presented in the third chapter of this report.

The creation of the IH is a signal of NBS's openness towards innovations. It contributes to NBS's positive image and prestige as well as its good reputation at home and abroad.

NBS also considers the NBS IH to be an opportunity to learn from market participants regarding the functioning of innovative technologies in practice and the limits of the current legal framework. Thanks to the activities of the NBS IH, NBS experts became better acquainted with several entities operating in FinTech. Thanks to the activities of the IH, NBS acquired valuable market intelligence that can be complemented by cooperation with interest groups representing financial market entities, such as the SBA or the SFA. Deeper knowledge of the local market will positively facilitate the active participation of NBS experts in international working groups.

On the other hand, we also identified the following challenges for the operation of the NBS IH:

- some entities requested assistance in clarifying issues that should be handled by law firms or business consulting firms.

- several interested parties did not have a stable business plan or were not willing to disclose all the information that NBS would need to formulate guidance from NBS IH experts.
- there was an effort by a subject to misuse its communication with the NBS IH for the purpose of marketing activities addressed to current and potential clients, or to make false statements on its website.

The main challenge therefore remains the need to constantly improve the functioning of the NBS IH, in particular to formulate more clearly its material and personal scope, expectations about the quality of incentives and the scope of data that needs to be shared with NBS in order to provide qualified guidance. Participation in the NBS IH is not intended to be a marketing aid for businesses. In this context, it is also possible to consider the explicit addition of an innovation hub to the mandate of the NBS in the relevant legislation. The allocation of enough staff capacity for FinTech-related issues as well as training in this area are also challenging.

Table 1 SWOT analysis of NBS IH operation	
Strengths	Weaknesses
<ul style="list-style-type: none"> • NBS acquires know-how directly from market participants. • Support of innovation in the financial sector. 	<ul style="list-style-type: none"> • Need for a better definition of the functioning framework of the NBS IH. • Need to intensify exchange of information from the meetings and to train experts in a coordinated way.
<ul style="list-style-type: none"> • Practical approach to regulation (identification of unregulated activities and their possible interference with regulated activities), solution oriented. • Strengthening of cooperation and existing information sharing within the internal structures of NBS. • Good reputation of NBS in the Slovak republic and abroad. 	<ul style="list-style-type: none"> • Communication of tasks of the NBS IH, readiness of subjects for communication with NBS.
Opportunities	Threats
<ul style="list-style-type: none"> • Positive representation and sharing of know-how within international working groups. • Need for training of experts. • Follow up on the activities of the NBS IH by creating an NBS regulatory sandbox. • Possibility of fast remote communication via video, i.e. conference calls. 	<ul style="list-style-type: none"> • Misuse of NBS's name for marketing purposes, creating the incorrect impression that an entity is regulated. • Focusing part of the NBS's IH capacities on business plans that are insufficiently thought out.

2 Public activities of the NBS IH

After its establishment, the NBS IH conducted a substantial part of its communication with the public through the NBS website, where it presented

basic information on the above-mentioned business models and FinTech areas, lists of related legislative documents and a systematic glossary. During the first year of operation, the activities of the NBS IH also included the active participation of NBS experts in conferences and working groups.

2.1 Promotion of the NBS IH in Slovakia

In March 2019, shortly before the launch of the NBS IH, a presentation of the NBS IH concept took place at a **CFI meeting** at the University of Economics in Bratislava attended by representatives of the FinTech ecosystem in the Slovak Republic. The main pillars of the NBS IH were presented at the meeting - to communicate, to understand, to innovate. The NBS representative explained the motivations for launching the hub, its main goals and its structure. He explained the forms through which it would communicate with market subjects (via personal meetings and in writing) and introduced the basic elements of the FinTech web section, i.e. the individual innovative areas, FAQ, glossary and document library. In November 2019, at the next CFI meeting, the activities of the NBS IH were evaluated, and the benefits and findings from its operation were presented.

In May 2019, representatives of E&Y, and the CFI held their first meeting on **the project of the Ministry of Finance of the Slovak Republic to map the barriers to the introduction of financial innovations in the Slovak financial market**. E&Y was selected by the European Commission to prepare a report on the support of the innovation environment in the Slovak Republic in both regulated and unregulated areas. NBS representatives actively participated in the project and provided information on the functioning of the NBS IH. The second meeting on the E&Y project occurred at the beginning of August 2019 at NBS's offices, at which E&Y's steps carried out so far were analysed and presented following completion of the first phase of their project. NBS representatives responded to questions concerning licensing procedures when submitting applications for payment services and provided comments on E&Y's outputs. In February 2020, representatives of the NBS IH were invited to another E&Y workshop, at which information was presented on key findings and accepted recommendations in the area of FinTech.

In September 2019, the third **FinTech Summit 2019** was held in Bratislava. Its topics were acceleration of digital transformation, risk management in the digital age, technological progress in the field of investment and insurance of the future. NBS actively participated in the event, where its representative also presented the activities of the NBS IH in a panel discussion.

At the beginning of the year 2020, 3 **SFA workshops** on financial technologies were organized in Bratislava. At one of the workshops, an NBS representative presented the NBS IH and the latest developments in payment services

licensing. The lectures were also attended by experts from the NBS IH, who actively participated in the discussion.

2.2 Promotion of the NBS IH abroad

In February 2020, the conference **Digital Transformation in Financial Services** was held in Prague. The main topics that dominated the event focused on innovation and technology in financial services: namely digital transformation, open and agile banking, payment transactions in the transition period, the future of distribution channels and much more. A representative of the NBS also participated actively in the conference, presenting information on the activities of the NBS IH and the issue of digital identity.

In 2019, the European Forum for Innovation Facilitators (EFIF) was created at the European level. It is part of the structure of the ESAs' Joint Committee and was based on their report on regulatory sandboxes and IH, which was published in January 2019.

The EFIF is intended to facilitate cooperation between FinTech innovation facilitators within the EU via the exchange of views and experiences. The EFIF discusses the functioning of these individual innovation facilitators, as well as several specific topics related to the use of new technologies in the financial sector, such as tokenization and DLT, open banking, artificial intelligence (AI), big data, RegTech and others. Innovative commercial companies operating on the financial market are also invited to EFIF meetings to present on these topics. Representatives of the NBS IH regularly participate in the work of EFIF. Thanks to participation in the EFIF, NBS representatives can monitor developments within the EU, cooperate with innovation facilitators and leverage the experience gained in working at the NBS IH.

3 Outlook for the future

The activities of the NBS IH since 1 April 2019 have clearly demonstrated that there is a demand for such a form of interaction with the market, as it contributes to reducing uncertainty in the areas where regulation is absent, insufficient or unclear.

How will the NBS IH develop in future?

The NBS IH engages in intensive and detailed interaction with businesses that enables it to give them clear guidance on the permits that they need from NBS or refer them to another relevant public administration body. Experience has shown us that discussions with some subjects are mutually enriching and require more space for an in-depth analysis. For this reason, NBS, in cooperation with the Ministry of Finance of the Slovak Republic, is preparing

material for consultation on the potential form and content of a regulatory sandbox. At present, there are approximately ten regulatory sandboxes in the EU with different regulatory frameworks. The consultation is scheduled for the second quarter of 2020.

Most of the suggestions addressed by the NBS IH concerned the issue of cryptoassets and were aimed at creating a regulatory framework for this business domain. On the one hand, there are several countries that are trying to replace non-existent uniform European regulation in the field of cryptoasset activities at the national level (e.g. France, Germany or Malta). On the other hand, there are countries that refrain from regulating this sector while waiting for a European solution that would enable scalability of such business. At the end of December 2019, the European Commission launched a public consultation on a framework for cryptoassets in which NBS also participated. NBS plans to devote the time before the drafting of European legislation to dialogue with crypto ecosystem actors operating in the Slovak Republic.

The regulated domain mentioned most often in consultations with the NBS IH, is that of payment services. Based on the experience of the NBS IH, this area was given priority in terms of the creation of a separate unit in NBS focussing on licensing, supervisory as well as methodological aspects of payment services. NBS's priority will be to streamline the licensing process in this area by publishing as much relevant information as possible in a structured format on the NBS website.

Soon, NBS plans to expand the content of the FinTech section of its website to other domains such as RegTech, SupTech and APIs, as these are the domains that are frequently discussed in various domestic and foreign forums. Discussions within the NBS IH would also certainly enrich these issues. However, any further development depends on the capacities that will be allocated to FinTech activities.

The establishment of the Centre for Innovation and Cyber Security (InoLab), is an activity that is partly linked to NBS IH. Inolab is a joint project of NBS and the Faculty of Electrical Engineering and Informatics of the Slovak University of Technology. Its aim will be to support the implementation of applied research by the experts from the faculty in the domains within the competence of NBS. Subjects to be explored by the joint project include analysis of publicly available information of financial institutions, identification of unauthorized activities, secure software development, etc.

Conclusion

The first year of functioning of the NBS IH proved to be a successful one. Indeed, the interest from the market exceeded expectations. Dozens of entities that

searched for answers received guidance that helped them to move forward with conveying innovations to the Slovak financial market. Several entities with which NBS representatives communicated via the NBS IH brought up topics that need further discussion. The survey of service users showed a high level of satisfaction with cooperation via the NBS IH. Nevertheless, there is still room for improvement, both for NBS and for market participants.

The operation of the IH NBS gradually progressed. A considerable amount of time is required for a thorough analysis of each individual submission. Each subject needs to be addressed individually. Fast and high-quality solution of issues requires adequate capacity.

Also, market participants had an insufficient understanding of the role of the NBS IH at the very beginning. Some participating entities expected that the NBS IH would comprehensively replace the services of a law firm or business consultant, while other cases were identified in which entities misused the cooperation of the NBS IH for misleading marketing towards the public.

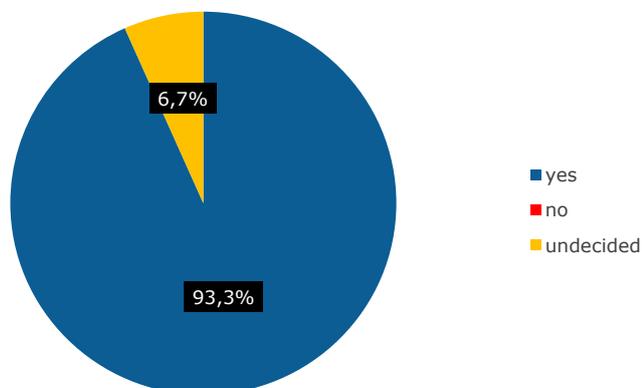
These deficiencies are a natural consequence of the fact that the NBS IH is a completely new platform that both the market and NBS representatives have had to get used to. However, the establishment of the NBS IH sent a clear signal that NBS is interested in supporting financial innovations and is open to new forms of communication.

To conclude, NBS will follow up on the success from the first year of the functioning of the NBS IH by adding coverage for new functional domains such as RegTech and SupTech in the NBS IH. Experience has shown that in other Member States, the next step in supporting the development of the FinTech environment after the creation of an IH is the establishment of a regulatory sandbox. NBS is therefore currently preparing a consultation on this topic, which should be launched during the second quarter of 2020.

Annex – Outcome of the survey of satisfaction with the NBS IH

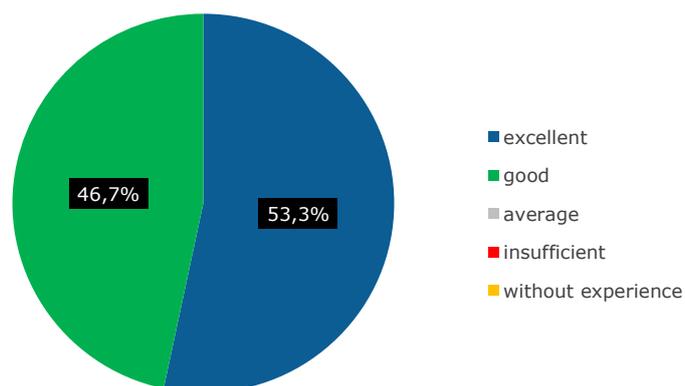
Graph 3

In your opinion, is the Innovation hub (IH) an adequate tool for the support of innovations by Národná banka Slovenska? (15 responses)



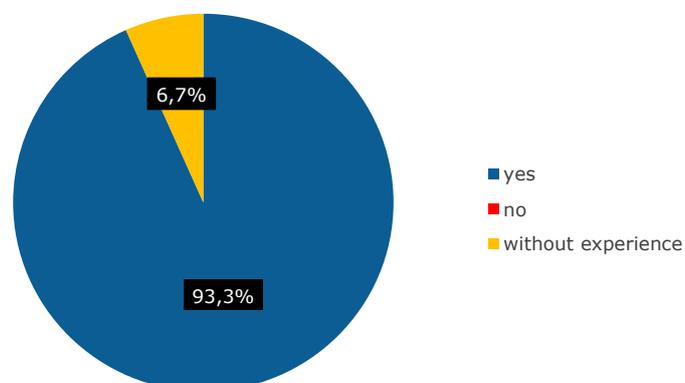
Graph 4

How do you evaluate your cooperation with the IH? (15 responses)

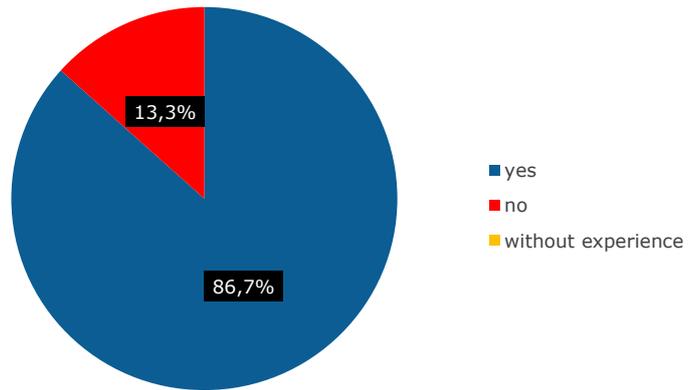


Graph 5

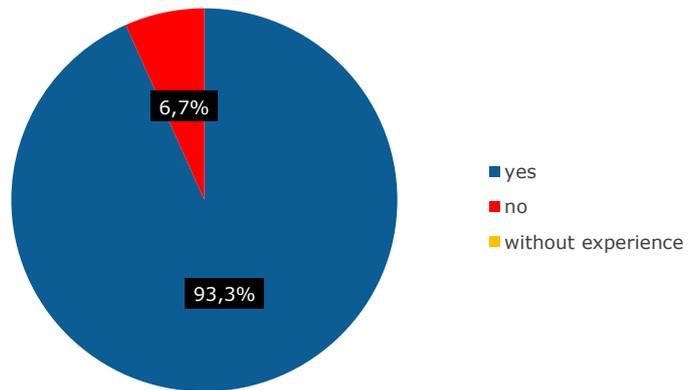
Did the IH respond to your questions within a reasonable time period? (15 responses)



Graph 6
 Did the IH respond to your questions in adequate quality? (15 responses)



Graph 7
 Was your consultation with the IH useful for your business plans? (15 responses)



Graph 8
 Do you plan to contact the NBS IH in the near future? (15 responses)

