



BANCA D'ITALIA  
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INTERNATIONAL TECHNICAL COOPERATION  
**NEWSLETTER**



**T**his newsletter is a twice-yearly publication intended to inform readers regularly about international technical cooperation at Banca d'Italia, especially seminars and workshops.

**B**anca d'Italia is engaged in technical cooperation activities (i.e. seminars and workshops, bilateral staff training and institution building) to strengthen the institutional capabilities of the beneficiaries. The beneficiary institutions are generally in new EU member states that have not yet adopted the euro, EU candidate and potential candidate countries, Mediterranean countries, Eastern European and Caucasian countries within the European Neighbourhood Policy area, BRICS and other emerging countries.

**T**he areas of cooperation relate to the Bank's institutional functions (central banking including market operations, payment systems and treasury services, economic research and statistics, banking and financial supervision, and currency circulation) and some support activities (IT, internal auditing, controls).

Further details on <https://www.bancaditalia.it/compiti/ricerca-economica/cooperazione-tecnica-internazionale/index.html>

**2018 (1<sup>st</sup> Semester) Highlights**

**O**ur activities for the first half of the year encompassed three workshops, two seminars, seven study visits in Rome (one of which financed by the European Commission through TAIEX funds), five videoconferences, one internship and eight written consultations. In total, 127 experts from National Central Banks from all over the world joined us in Rome to take part in our activities. More detailed information on the activities carried out in the first semester of 2018 is available inside.

## Seminars & Workshops

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### **Workshop on 'Integrating the key variables in a changing organization: approaches and tools'**

**(Rome, 15-16 February 2018)**

***Participants: 17***

Central banks may differ significantly – in the scope and nature of their functions, in their history and in the political and economic conditions in which they operate, and in the challenges they face – but they are all complex organizations which are subject to severe public scrutiny. They can influence the external environment, making change happen, but they also have to respond rapidly to changes in it: regulatory changes, stakeholders' growing expectations in terms of accountability and transparency, the need to be more productive and efficient, and the evolution of technology. Their staff demographics are evolving, and so are their employees' expectations and needs.

[\[Read more on page 8\]](#)

### **Workshop on 'Banknote circulation, the cash cycle and Banca d'Italia's monitoring of professional cash handlers'**

**(Rome, 1-2 March 2018)**

***Participants: 19***

The main objective of the workshop was to highlight developments in the Italian cash cycle, provide participants with the most recent updates on the cash handlers' regulation, and describe the lessons learnt through an experience in the monitoring activity that has been lasting for six years. The programme was rich and varied.

The workshop was opened by the Director General for Currency Circulation and Accounting, who recalled the main features of the Italian cash cycle, such as the major role played by professional cash handlers (banks and CITs) in cash recirculation, the progress achieved by Banca d'Italia over time, and the challenges ahead.

[\[Read more on page 8\]](#)

### **Workshop on 'Supervisory activities: IT tools for data management'**

**(Rome, 12-13 April 2018)**

***Participants: 17***

As the newcomer of the year, this workshop focused on some key data management topics for supervisory authorities. In recent years, the data managed by these authorities have grown dramatically; as a consequence, supervisors face different, but nevertheless challenging, issues compared with the past. This workshop clearly showed that finding the right methodologies and processes (as well as the IT tools) to turn these data into usable information becomes ever more crucial. The workshop provided information about the different data management solutions implemented by Banca d'Italia and the other participating institutions. These include the data warehouse as well as reporting and document management tools.

[\[Read more on page 9\]](#)

### **Seminar on 'Cybersecurity challenges for central banks'**

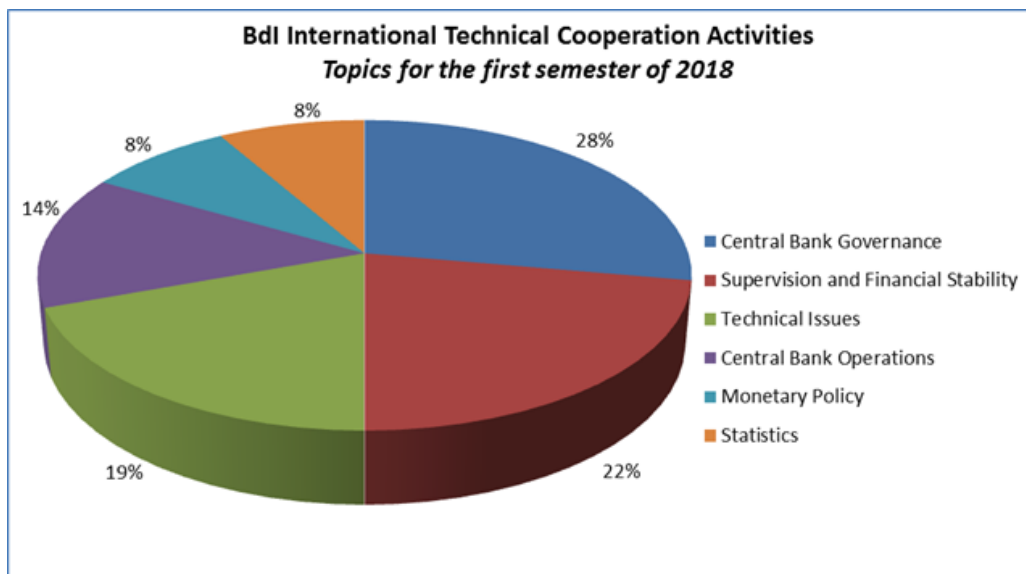
**(Rome, 16-18 May 2018)**

***Participants: 27***

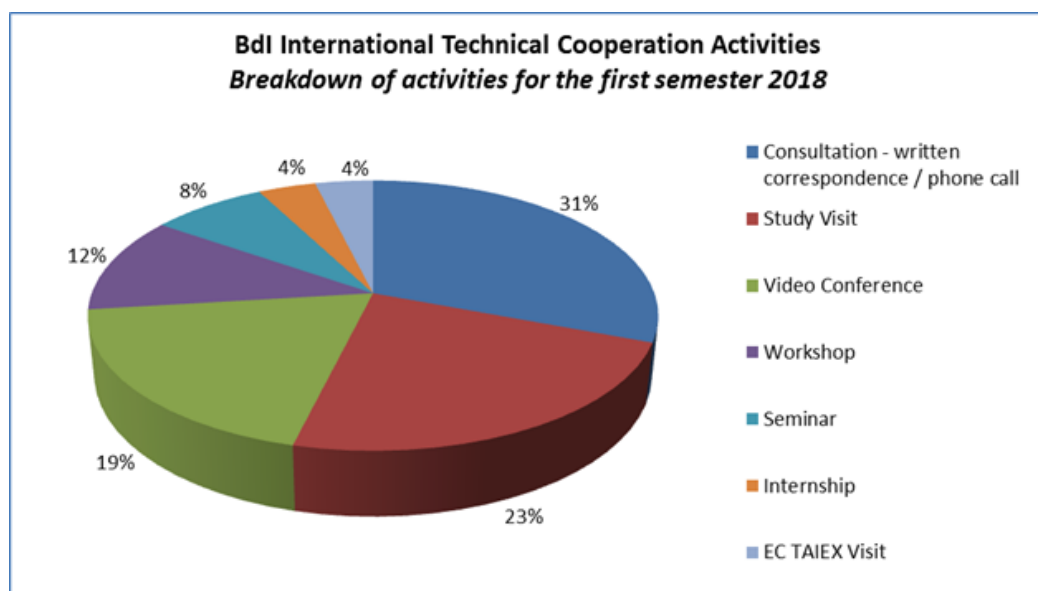
In the past few years, cybersecurity has morphed from a little-known specialist subject to a global priority. Advanced and emerging economies alike are increasingly dependent on digital data and the networks that carry them; connected devices, from mobile phones to remotely controlled temperature sensors, have become ubiquitous and essential to many production and consumption activities. A variety of actors, including but not limited to nation-states, criminals, and activist groups, are constantly scanning cyberspace in search of vulnerabilities that can be exploited for political or economic gain. Government institutions and private companies need to develop the ability to stop such attempts and, in case of failure, at least contain the adverse effects.

[\[Read more on page 10\]](#)

## 2018 Activities – Snippets of Information ...

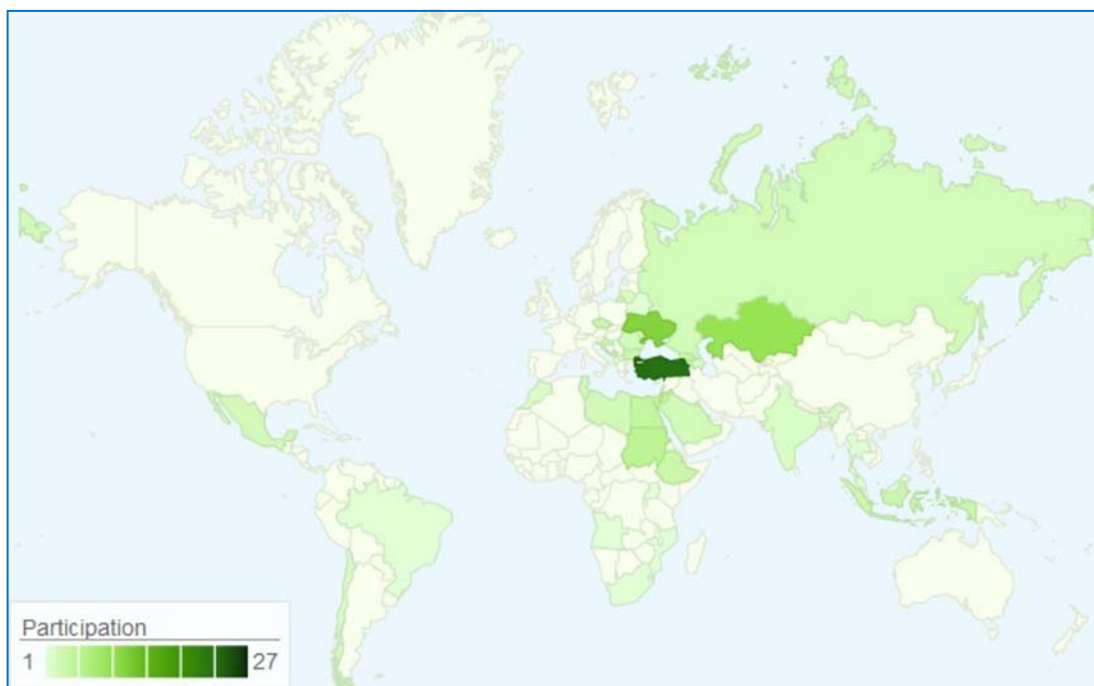


The main focus was put on Central Bank Governance (in particular, Organization and Functions, Human Resources Management, and Accounting) and on Supervision and Financial Stability. Technical Issues, especially Information Technology, also accounted for a significant part of the activities.

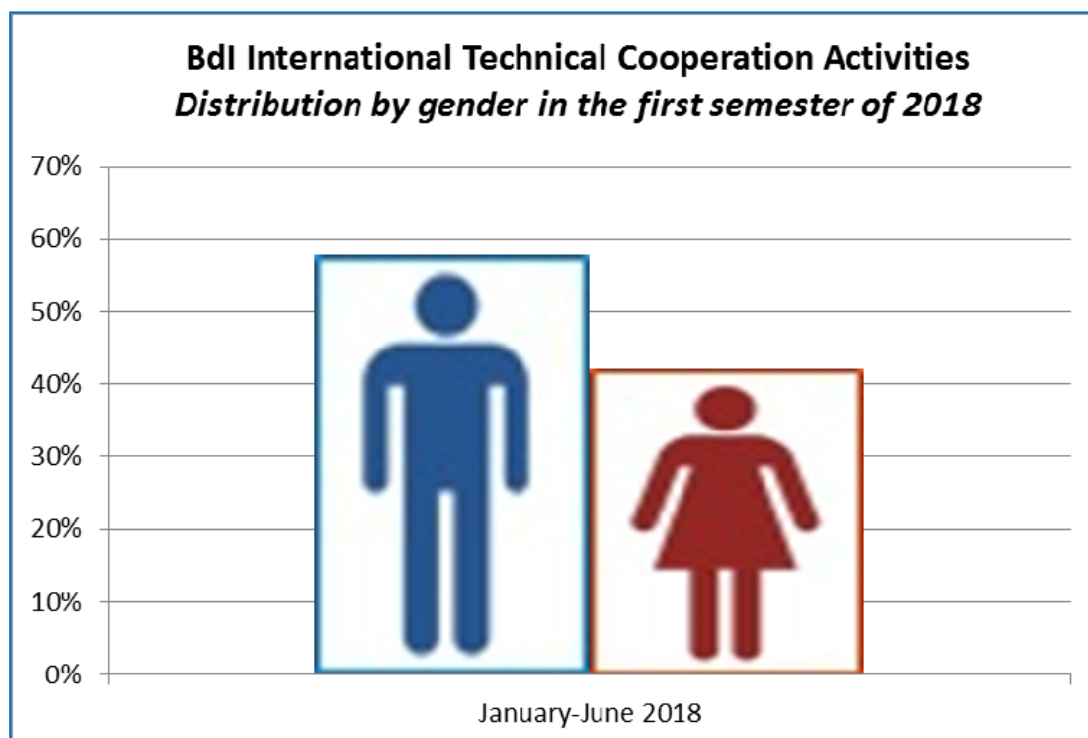


Mainly as part of the follow-up to seminars and workshops, Banca d'Italia answered a large number of written requests for information. Study visits in Rome also represented a significant share of the activities. In addition, videoconferences continue to be highly appreciated, both by attendees and Banca d'Italia; they can effectively replace study visits in some circumstances.

## ... 2018 Activities – Snippets of Information ...



Most of the participants came from Turkey, Ukraine and Kazakhstan.



In contrast to recent developments, male participation was higher than female participation.

2018

## Forthcoming Seminars & Workshop

### **Workshop on 'Sample surveys in central banking'**

**(Rome, 8-9 October 2018)**

Central banks conduct periodical sample surveys on households, businesses and selected intermediaries to 1) compile aggregate statistics and 2) periodically collect cross-sectional information which allows them to examine economic agents' heterogeneity and the distributional effects of shocks, policies and institutional changes. Although national statistical institutes are in charge of data collection and sample surveys, the need for timely and specific information to be used for monetary policy purposes calls for surveys directly managed by central banks. The workshop reviews Banca d'Italia's long experience with sample surveys and highlights the critical issues arising in practice: questionnaire design, sample selection and weighting, treatment of non-responses, data imputation, analysis and publication.

### **Seminar on 'The post-trading phase of monetary policy and investment operations'**

**(Rome, 12-14 November 2018)**

The seminar focuses on a broad range of activities related to the back-office function and aims at sharing best practices in the post-trading phase of central bank monetary policy operations and investment transactions. The settlement process for different financial instruments is thoroughly examined, as well as issues related to accounting and to the relationship with custodians. Specific sessions are dedicated to securities lending and collateral management and to the treatment of futures and interest rate swaps, as well as the related clearing issues. Finally, a specific session is devoted to IT platforms supporting the front-, middle- and back-office functions. The importance of a

proper management of operational risk throughout the entire lifecycle of central banks' financial transactions is a pivotal theme of the whole seminar.

### **Seminar on 'Payment systems and market infrastructures in the EU; policy, operation, oversight. Banca d'Italia's experience'**

**(Rome, 12-14 December 2018)**

The seminar aims to deepen participants' knowledge of EU payment systems and market infrastructures from a policy, operational, technical and oversight point of view; Banca d'Italia's experience from these different perspectives is presented.

The following topics are covered: the role of the ESCB in payment and securities settlement systems; the TARGET2 large-value payment system and the T2S (business and IT) securities clearing and settlement system; central banks' collateral management and the mobilization of marketable collateral in Eurosystem credit operations (the Eurosystem Collateral Management System, ECMS); the post-SEPA (Single Euro Payments Area) landscape – interoperability and reachability in European retail payments and in Banca d'Italia's retail payment services; new Eurosystem services in the field of instant payments, TIPS (business and IT); business relationships with the national banking community; services offered to non-EU central banks and international institutions; recent developments in the regulatory framework, at EU and international level; and Banca d'Italia's role in the oversight of systemically important payment systems as well as retail systems and services.

Presentations are complemented by a visit to the Service Desk of the TARGET2 and T2S Eurosystem Market Infrastructures, which is jointly operated by Banca d'Italia and Deutsche Bundesbank.

**2019**

## Seminar & Workshop Catalogue Preview

The definitive 2019 seminar and workshop catalogue and more detailed information will be published soon on Banca d'Italia's website

**Workshop on 'Euro banknote production at Banca d'Italia - outstanding features'**

**(Rome, 18-19 February 2019)**

**Seminar on 'Audit activities in a central bank'**

**(Rome, April 2019, *date to be decided*)**

**Seminar on 'Central banks communication'**

**(Rome, 9-11 September 2019)**

**Seminar on 'Portfolio management in a central bank'**

**(Rome, 2-4 October, 2019)**

**Workshop on 'Customer protection in the banking sector - the role of Banca d'Italia'**

**(Rome, 4-5 November 2019)**

**Workshop on 'Reconciling financial intermediaries' reporting burden and regulators' information needs: PUMA2 - the Italian cooperative approach'**

**(Rome, 9-10 December 2019)**



## General Information

Participation in the seminars and workshops is by invitation.

Requests from institutions other than the regular beneficiaries are considered on a case-by-case basis.

The working language is English. Participation is free of charge.

In some cases hotel accommodation is provided by Banca d'Italia.

Travel expenses to and from Rome are not reimbursed.

Seminars usually last 3 days; workshops last 2 days at the most.

Lunches are provided for the duration of the seminar/workshop. A courtesy dinner is also offered.

We usually accept only one representative from each institution.

Our seminars and workshops are as interactive as possible. Occasionally, selected participants are invited to deliver short presentations in order to stimulate discussion and debate.

## Contacts

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*Banca d'Italia's conference centre 'Carlo Azeglio Ciampi'*

## Seminars & Workshops (...continued)

**(Workshop on 'Integrating the key variables in a changing organization: approaches and tools', continued from page 2)** The workshop tried to provide some possible answers to the question of how to build synergies between functions such as Human Resources, Organization and Information Technology in order to accomplish the ambitious and demanding task of helping central banks to make the leap and guarantee organizational effectiveness in pursuing their objectives. In a day and a half dense with presentations and team work, 35 among participants and speakers engaged in lively debate.

Experiences and challenges were shared on topics such as: how to design, assess and improve an organization and its strategy, the action taken for process improvement, the development of a management dashboard, rulemaking, and the use of technology as a pillar to support smarter working. The evolving role of the HR function as part of the radical change taking place in all management systems was also discussed. The broader concept of organizational well-being provided a framework for topics such as work-related stress and changes in culture, behaviour, and the role of managers.

Banca d'Italia shared its own methodologies and tools and presented the progress made and the challenges ahead. Participants were called upon to take part in a case study on how to strike an effective balance between the enabling functions and the business functions, a task with no single answer, but rather many possible scenarios.

In a dedicated session, the participant from the National Bank of Ethiopia spoke about how changes are introduced and managed in his organization.

During the workshop many questions arose: what are the main pitfalls of strategic planning? How to set the size limit of an organizational unit? How to motivate and develop human resources? Is the overall performance of a central bank checked by external stakeholders? How to stimulate staff mobility? What information should a management dashboard contain? How to combine swift communication and security?

The classic key organizational variables were addressed, highlighting the importance of synergies between them and also exploring the combined role they play in the development of new concepts

and trends, such as smart working and organizational well-being.

The new work environment is characterized by flexibility and technological developments that make it possible to overcome the time and space barriers of the traditional work models: tasks can be carried out both within and outside the office walls. Company cultures have to change accordingly.

Strategy, responsibility, flexibility, collaboration, re-engineering, performance-management, well-being, and trust are some of the many inspiring words that were spoken.

Several topics and many cultures were mixed in the event, but the willingness to share practices and challenges for central banks was a unifying thread. To drive change the enabling functions will need all the competence, energy and spirit that emerged during the workshop.



**(Workshop on 'Banknote circulation, the cash cycle and Banca d'Italia's monitoring of professional cash handlers', continued from page 2)**

Compared with the workshop on the same topic held in 2015, some innovations were introduced in the programme. Time was allotted for a discussion on recent trends in banknote circulation and on the estimation of banknote requirements. The main focus of the workshop, however, was the monitoring of cash handlers, complemented with information on the responsibilities of Banca d'Italia in the field of anti-money laundering. Some National Central Banks (NCBs) shared their experience with other participating

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NCBs through presentations on the monitoring of banknote handling machines of commercial banks (Central Bank of Russia), the quality control of banknotes and coins (Bulgarian National Bank), the fight against counterfeiting, and banknote issuance (Central Bank of Republic of Turkey). The programme was integrated with a visit to the National Analysis Centre set up at Banca d'Italia to provide participants with practical knowledge on how suspect banknotes are treated.

The main conclusions of the workshop are that the policies and actions of Central Banks are converging. Even though the use of cash is expected to decline, cash circulation implies an obligation for central banks, which are responsible for the banknote issuance function, to protect the public's trust in the currency as the legal tender payment instrument and to guarantee its wide acceptance. Therefore, Central Banks have to guarantee the production and supply of sufficient volumes of banknotes as well as the quality of those in circulation, the smooth functioning of the cash cycle through an effective monitoring of cash handlers, and stronger action against counterfeiting, including through the issuance of new banknote series. Among the main aspects highlighted during the workshop were the importance of promptly detecting market trends and developments by analysing cash circulation, the use of a risk analysis-based monitoring, and a commitment by Central Banks to enhance the efficiency of cash processes. The debate was lively and interesting. Information was shared on the scope of the monitoring (limited to checking banks' machinery, as in the case of Russia, or extended to the organizational model, as in the case of Italy), on the requirements for cash handlers, and on the procedures adopted to impose sanctions. Banca d'Italia explained its

monitoring activity, which was adapted to take into account recent developments in banknote recirculation. As a result, the number of inspections on bank branches increased, notwithstanding the still relevant role played by cash in transit companies (CITs) in the cash cycle. In addition, the debate highlighted the positive results reached through the monitoring of cash handlers and long-standing cooperation with them. Inspections carried out in 2017 in most cases brought about positive results. A merger process in the CIT sector is under way as shown by the decreasing number of CITs, which decreased from around 70 in 2012 to approximately 30 in 2017.

### **(Workshop on 'Supervisory activities: IT tools for data management', continued from page 2)**

The first session was dedicated to the illustration of the different steps necessary to set up an efficient and reliable data warehouse for storing and sharing data among analysts. The presentation focused on the main features of Banca d'Italia's data warehouse system: the different sources and contents of the data collected by the supervised institutions, the structure of the data warehouse and the overall flow of information from collection to dissemination. A specific focus was put on a user-friendly application developed by Banca d'Italia to query data with no need for metadata knowledge.

Another presentation was dedicated to SIGMA, a business intelligence tool developed in-house by Banca d'Italia. SIGMA supports all off-site and on-site supervisory activities regarding all supervisory entities. It produces several reports presenting information about the financial intermediaries' status and assigning an automatic score for each risk profile. Furthermore, it ensures a uniform approach in the assessments conducted by different units and permits an evaluation of transparency and traceability. Great attention was given to reporting activities. During the workshop the experiences of Banca d'Italia and Banco de México were illustrated. For Italy, a presentation was given on the 'SMART' project, a risk dashboard to be used by both senior management and analysts to monitor supervised entities by conducting analytical and aggregate studies. Furthermore, a specific feature of the SMART supporting the early inter-



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vention decision-making process was illustrated. The application allows analysts to monitor several financial indicators that are used to raise financial red flags to signal the need for further investigation on the phenomenon and, if deemed necessary, to propose supervisory measures. Banco de México illustrated the IT tool that allows it to standardize and collect data from different sources, transforming the information coming from very large databases in a very quick way and also producing timely financial indicators.

The second day many participants showed great interest in Banca d'Italia's approach to document management. During the two sessions the two main applications used to manage and exchange documents and information inside and outside Banca d'Italia were illustrated, describing their advantages in terms of more efficient business processes, lower costs, more and better services for citizens and – we hope – the transformation of Banca d'Italia in a paperless institution in the near future.

Finally, the workshop benefited from the presentation of the participant from the Czech National Bank, who focused on the issues relating to the exchange of information between different authorities.

The audience participated pro-actively by asking questions and contributing to a lively debate. The live demos were hugely successful as they made the presentations of the IT tools truly interactive.

**(Seminar on 'Cybersecurity challenges for central banks', continued from page 2)** The global financial system is a prime target for hackers. It appeals to the profit-oriented among them, but also to those who want to disrupt the orderly

functioning of one or more economies for other reasons. Given the intensive adoption of information and communication technology (ICT) in the sector, the exposed surface is large. Cyber-attacks can impart significant damage; besides causing monetary and competitiveness losses for the immediate victims, beyond a certain scale they may have the capacity to undermine trust.

Mindful of this threat, and building on decades of experience in ensuring operational continuity of large ICT-enabled infrastructure (e.g. payment systems), central banks worldwide were among the first civilian authorities to give serious thought to cyber-resilience. A sustained effort of international cooperation, also involving governments and/or other sectoral authorities, has recently led to the publication of key reference documents such as the BIS/IOSCO Guidance on Cyber Resilience for Financial Market Infrastructures (2016) and the G7 Fundamental Elements for Effective Assessment of Cybersecurity in the Financial Sector (2017).

Banca d'Italia has adopted a multidisciplinary approach to cybersecurity. A high-level cybersecurity coordination group, chaired by the Senior Deputy Governor, brings together experts from IT, banking supervision, payment system oversight, economic research, and organization in order to develop a strategic vision on the subject. During the seminar, time was allotted for each of these points of view, emphasizing how they relate to each other.

The first day started with a session intended to place cyber risk in context as an emerging attribute of the digital economy and to provide a few baseline statistics on the economic impact of cyber-attacks in Italy. This was followed by an illustration of the international and European regu-



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latory and supervisory framework for cyber risk in the financial sector. The second day was centred on IT profiles, both from a technical and an organizational perspective, with a focus on the Bank's newly overhauled cybersecurity services,

including the internal Computer Emergency Response Team (CERT-BI). The last day was devoted to a very significant challenge: cybersecurity auditing, or verifying compliance in the ever-changing world of IT systems, whose degree of vulnerability varies based on factors that range from developments in the external threat landscape to the way new applications are installed. Colleagues from the central banks of Armenia, India, and Libya enriched the seminar by presenting their countries' experiences in information sharing with law enforcement, the supervision of cyber risk in the banking system, and cybersecurity training, respectively. The audience, which was highly diverse in terms of professional background, engaged in lively, constructive debate with the speakers.

*'...I benefited a lot from every session and presentation as they were structured perfectly. The knowledge and information shared in these three days of the seminar would help our central bank a lot. In addition, I would like to thank you for the opportunity that this seminar offered to connect and exchange experiences with all the participants...'*

*The participant from  
Central Bank of the Republic of Kosovo  
in the seminar on  
'Cybersecurity challenges for central Banks'*



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