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International Seminar on New Era of Consumer Protection: Use of Digital Innovation

Bali, Indonesia
9th June 2022

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BANK INDONESIA INSTITUTE
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International Seminar on New Era of Consumer Protection: Use of Digital Innovation

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FOREWORD

In this digital era, the financial services industry has undergone a remarkable transformation with boundless potential of technology. Rapid technology advancement also has changed the way financial service providers (FSPs) operate and interact with their customers. Innovative applications and new technologies applied to financial services create many opportunities for both financial service providers and consumers, however it may also encompass new risks and challenges.

The use of technology has been rapid in many sectors in recent years, especially the finance and service industries, and one of the factors in is the COVID-19 pandemic, which has become a catalyst for the accelerated adoption of cutting-edge technology. The pandemic has demonstrated the critical importance of embracing new technology for the sustainability of businesses. The utilization of big data, artificial intelligence, blockchain, the Internet of Things, machine learning, and natural language processing has become essential for identifying, measuring, and mitigating risks. These cutting-edge technologies have enabled us to forecast, analyze, and evaluate financial systems and policies, responding to economic crises with agility and precision, underestanding the need of consumer better in regard to provide better services with easy access.

The digital transformation also affect the consumers. Consumers required to adapt to the evolving landscape of financial services and it's connectivity to digital economy ecosystem which, in turn, exposes them to new risks. It is regulator responsibility to protect consumer in the market, ensuring they can navigate in the world of digital technology without excessive disadvantage. The authority also need to establish the framework of consumer protection and market conduct supervision, including the strategy for enhancing financial literacy, the innovative ways to enhance people's digital financial literacy and raise consumers' awareness on consumer protection issues, and also the use of innovative tools in digital era to strengthening market conduct supervision and digital financial literacy.

For developing countries, the adoption of technology is a breakthrough that is needed to counter possible risk of development of digital economy. It can bridge the gap between the need for supervision and the scarcity of expert supervisors.

However, challenges remain, from cost barriers to limitations in computing power. We must strive to make these technologies accessible to all, regardless of economic status.The financial sector of Indonesia has embraced digital innovation to enhance its supervisory role. Cutting-edge technology has made financial products more sophisticated and consumer-friendly. It's not just a technological shift but a transformation of values, where innovation, consumer protection, integrity, and stability find equilibrium. This transformation is a double-edged sword, and we must be vigilant in addressing new challenges that arise.

As the response of these changes, market conduct supervisors need to be adjusted to the new paradigm adapting the way they supervise new products and new channels, and exploring ways to improve their processes by automating supervisory activities. Whilst technology and data are not new to financial oversight, their specific application to financial consumer protection and market conduct supervision is a relatively new trend. This bring the use of technology to facilitate and enhance supervisory processes from the perspective of supervisory authorities, or commonly known as Supervisory Technology (Suptech). With Suptech as the waypoint tools to guide us through the complex labyrinth of financial oversight, emphasizing the use of technology to enhance supervisory processes.

In accordance with this issue, Bank Indonesia Institute hold the International Flagship Seminar entitled "New Era for Consumer Protection: Use of Digital Innovation". As we delve into the depths of this proceeding as the documentation of the seminar, we invite you to open your minds, embrace the transformative power of technology, and join us in this remarkable journey of financial supervision in the digital age. Three objectives that will be attained by this seminar is to encourage attendees, firstly, to understand the enhancement of technology and globalization on financial services and it's impact. Secondly, the seminar will explore the role of Supervisory Technology (Suptech) implemented in other countries. Lastly, attendees will get a clear view of other nations in their pursuit of advancements in market conduct and consumer protection policies thus provide us with valuable benchmarks for shaping our future policy initiatives. The seminar explore the ways in understanding, embracing, and mastering the use of suptech tools, powered by AI, ML, blockchain, big data, and NLP, and complement it with the human judgment. The role of supervisors remains crucial in the development process, training, analysis, and decision-making. The comprehensive understanding of this issue will give the benefit to the financial systems, for the protection of consumers, and for the advancement of our global economy. Hopefully, this great collaboration would bring valuable takeaways and benefits to all parties involved. Let us embark on this insightful exploration through this proceeding.

Jakarta, December 2023

Yoga Affandi

Head of Bank Indonesia Institute

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FINANCIAL CONSUMER PROTECTION AND DATA PRIVACY IN DIGITAL ERA

June 9th, 2022

Doni Primanto Joewono

Deputy Governor of Bank Indonesia

Distinguished Speakers and Panelists Ms. Jennifer Chien, Senior Financial Sector Specialist, The World Bank, Washington DC; Mrs. Maria Lucia Leitao, Head of the Banking Conduct Supervision Department, Banco de Portugal; Mrs. Gouro Sall Diagne, Senior Director, Supervision of Deposit Institutions, AMF Canada; Mrs. Jasmina Mokhtar, Deputy Director, Financial Inclusion Department, Bank Negara Malaysia; Mr. Agus Fajri Zam, Head of Consumer Protection Department, Otoritas Jasa Keuangan. Colleagues from Bank Indonesia Mrs. Yunita Resmi Sari, Head of SMEs Development and Consumer Protection Department; Mrs. Arlyana Abubakar, Group Head of Bank Indonesia Institute. Participants of the International Flagship Seminar on New Era for Consumer Protection: Use of Digital Innovation.

Assalamu'alaikum Warahmatullahi Wabarakatuh,
Syaloom, Om Swastiastu, Namo Buddhaya, Peace be upon us

First of all, let us extend our praise and gratitude to Allah, God Almighty, since only with His blessing, we all can congregate here to attend Bank Indonesia International Flagship Seminar on "New Era for Consumer Protection: Use of Digital Innovation".

In this occasion, I would like to thank our distinguished speakers, Ms. Jennifer Chien, Mrs. Maria Lucia Leitao, Ms. Gouro Sall Diagne, Mrs. Jasmina Mokhtar, and Mr. Agus Fajri Zam. It's an honour for us to have you all here and share with us some important issues regarding the consumer protection and the implementation of supervisory technology. The International Flagship Seminar is conducting in hybrid mode due to recent condition of Covid-19 Pandemic. However, hopefully it would not restrict these essential activities in order to make discussions more collaborative and valuable enlightenment for all participants.

Distinguished Speakers, Ladies and Gentlemen. Globalization and rapid technology advancement in the midst of Covid 19 pandemic crisis has changed the way financial service providers operate and interact with the consumers, as well as underlined the need for financial system to embrace the latest technology. In this digital environment, market conduct supervisors need to be adjusted to the new paradigm adapting the way to supervise new products and new channels and improving the process by automating supervisory activities using Supervisory Technology or Suptech.

The pandemic also created a new urgency for supervision and oversight to be able to be conducted remotely and utilization of data analytics through big data and artificial intelligence in this digital era. Furthermore, the economic devastation caused by the pandemic has increased pressure on supervisors to react faster, requiring tailored policy decisions to stabilize the financial sector. On the other hand, digital transformation also pushes consumers to accelerate their learning curve to cope with the latest technology adoption which will also induce risk resulted for low literacy level of the consumers on the product risk. Consumers, as the weakest market actors, are particularly in need of protection, as they face risk of being unable to keep up with the fast pace of digital technology and business model changes.

To address this issue, we need to establish an enabling framework for consumer protection using digital innovation in this digital era. Alongside with prudential regulation, market conduct supervision and digital financial literacy are very critical to protect the consumers and preserve consumers' confident.

Distinguished speakers, Ladies and Gentlemen. The application of technology and data are not new to financial oversight, however their specific application to financial consumer protection and market conduct supervision is a newer trend in the digital era nowadays. In recent years, the application of suptech for market conduct supervisory purposes has become more widespread and sophisticated. Recent advancements, particularly in the realm of unstructured and text analysis, present opportunities for market conduct supervision where a greater reliance on qualitative assessments is required. Furthermore, the cutting-edge technology including the usage of Big Data, Artificial Intelligence (AI), Blockchain, Internet on Things (IoT), Machine Learning (ML), and Natural Language Processing (NLP) is is indispensable in identifying, measuring, and mitigating risk through signaling, forecasting, financial system analysis, and policy evaluation processes. Innovative applications and new technologies applied to financial services bring many opportunities for both financial service providers and consumers, though it may also encompass new risks and challenges.

Even though technology might be a major breakthrough and assistance to support risk-based supervision in developing countries which over year struggles with too many institutions to supervise and too little expert supervisors to do the tasks, however these technologies have remained largely out of reach in developing and low-income countries, either due to high costs or lack of computing power and supervisor's capability to comprehend and to use the technology. Market conduct supervisors also facing new challenges including arising risks and threats posed to consumers such as information asymmetries, inadequate disclosures, unfair commercial practices, consumer frauds, dispute resolutions and redresses data misused and security breaches, and also unsolicited digital profiling. Consumer must therefore be provided and educated with fair and adequate information about the benefits and risks of financial services to better mitigate the risks they faced.

Ladies and Gentlemen, implementation of suptech based on AI, ML, block chain, big data, NLP does not necessarily diminish supervisors' role, since supervisors' judgement and experience is crucial for development process, training process, preparing training data, sensing the reliability a validity of suptech process, conducting in depth analysis and decision-making process based on suptech result. Empowerment of digital mindset and culture, that is to completely embed and maximize the benefits of suptech, top management and supervision staff buy-in is also essential, as part of the implementation of rigorous risk management frameworks. It is gratifying to note that this seminar will cover some important issues related to market conduct and consumer protection, including market conduct supervision for consumer protection in digital era, the essential of data to support suptech effectiveness, policy and experiences in strengthening consumer protection, and also enhancing consumer's digital financial literacy.

I would suggest you take benefit of this seminar by actively participate in the discussion with the prominent speakers. I would also encourage you to take advantage of the event as a mean for networking and knowledge sharing since participants of this webinar came from several countries with diverse background, from policy makers to academics, and market players.

Ladies and Gentlemen, to conclude, on behalf of Bank Indonesia, I would like to convey our appreciation to all participants for taking part in this strategic seminar and sending our sincere gratitude to all speakers and panelists for sharing their expertise and valuable insights. Finally, I am delighted to announce that International Flagship Seminar on "Financial Consumer Protection and Data Privacy in Digital Era" is officially open. Thank you and have an insightful seminar.

Wassalamualaikum Warahmatullahi Wabarakatuh

WELCOMING REMARKS

DIGITALIZATION AND AUTOMATIZATION OF CURRENCY MANAGEMENT

June 9th, 2022

Arlyana Abubakar

Director of Bank Indonesia Institute

Honourable Speakers, Ms. Jennifer Chien, Senior Financial Sector Specialist, World Bank; Mrs. Maria Lucia Leitao, Head of the Banking Conduct Supervision Department, Banco de Portugal; Ms. Gouro Sall Diagne, Senior Director, Supervision of Deposit Institutions, AMF Canada; Mrs. Jasmina Mokhtar, Deputy Director, Financial Inclusion Department, Bank Negara Malaysia; Mr. Imam Cahyono, Deputy Director, Department of Consumer Protection, Indonesia Financial Services Authority; Mr. Ricky Satria, Director, Department of Small Medium Enterprises Development and Consumer Protection, Bank Indonesia; Distinguished guests and participants, Ladies and Gentlemen.

Assalamualaikum Wr. Wb.

Good morning. Let us extend gratitude to Allah SWT, God Al-mighty, that we can joining Bank Indonesia International Flagship Seminar on "New Era for Consumer Protection: Use of Digital Innovation", as part of Indonesia's G20 Presidency 2022 Side Events. It is my honor to deliver opening remarks this morning and I would like to extend a welcome to resource persons and participants that came from various countries and institutions. It is a great pleasure in this event we will have a hybrid occasion, where some of us joining physically in Bali and some joining virtually from all around Indonesia and around the globe. On behalf of Bank Indonesia, I also would like to express my sincere gratitude to all distinguished speakers that will share with us their views on the consumer protection and the implementation of supervisory technology, especially in this vast development of digital technology.

Distinguished Speakers, Ladies and Gentlemen. The global pandemic affects all sectors of our life, our shared future of prosperity, and our collective ability to create a foundation for inclusive and sustainable growth. In responding those challenges, currently Indonesia holds the G20 Presidency for 2022 and already set “Recover Together, Recover Stronger” as the main theme. The G20 agenda will focus on three main pillars, namely Global Health Architecture, Sustainable Energy Transition, and Digital Transformation. This presidency gives an opportunity to solve various global economic problems. The theme itself reflects our resolve in tackling issues in light of the pandemic and ensures a strong, sustainable, and inclusive recovery ahead. In achieving it, it will depend on our capabilities on empowering the three main pillars, which is Promoting Productivity, Increasing Resilience and Stability, dan Ensuring Sustainable and Inclusive Growth. Every country should be a part of a coordinated effort in which economic recovery are deliberately structured to be inclusive, resilient, and sustainable in order to close the gap of inequality and increase digitalization.

Distinguished Speakers, Ladies and Gentlemen. Digital technology has innovated us to create more possibilities including on financial products, services, and transactions, although it also comes with embedded likelihood that could put costumer on risk. The vast change due to globalization and rapid technology advancement push consumers to accelerate their learning curve with the latest technology adoption to do their banking, study and even their groceries activities. Furthermore, the economic devastation caused by the pandemic has increased pressure on supervisors to react faster, requiring tailored policy decisions to stabilize the financial sector and protect depositors. In this digital environment, market conduct supervisors need to be improved their supervision processes by automating supervisory activities. As part of the G20 side events, it is gratifying to note that this seminar will cover some important issues related to one of main agenda that is how to improve and accelerate digital financial inclusion and literacy level of un-deserved society in emerging countries. This will be highly related to effectiveness of market conduct and consumer protection in digital era, the essential of data to support supervisory technology effectiveness, policy and experiences in strengthening consumer protection, and also enhancing consumer’s digital financial literacy. All of those issues are highly important because we will explore how regulator’s policy and industry’s innovation could play a significant role in boosting the usage of digital services when delivered responsibly.

This seminar will also cover policy context in application of Supervisory Technology for market conduct supervisory, the value added of Supervisory Technology for market conduct supervision, Framework of consumer protection and market conduct supervision, Strategy for enhancing financial literacy, The innovative ways to enhance people’s digital financial literacy and raise consumers’ awareness on consumer protection issues. In addition, the use of innovative tools in digital era to strengthening market conduct supervision and digital financial literacy. I hope that all the issues in this seminar would cover essential aspects of financial consumer protection framework and escalate the understanding of how consumer protection policies and market conduct supervision need to be implemented to assure consumer proper protection in this digital era.

Distinguished Speakers, Ladies and Gentlemen. I wish that through this seminar we could enhance our knowledge and view on consumer protection framework, policies, and implementation. I also hope the seminar will contribute to support the G20 agenda, especially in the financial inclusion, consumer protection and market conduct area, and able to provide rich insights to all participants. Finally, with bless of God Almighty, I will conclude my remark. Wishing you delighted and fruitful discussion. Stay safe and stay healthy. Thank you very much.

Wabillahi taufiq wal hidayah. Wassalamu’alaikum Wr. Wb.

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PANEL SESSION 1

MARKET CONDUCT SUPERVISION FOR FINANCIAL CONSUMER PROTECTION IN THE DIGITAL ERA

Jennifer Chien
Senior Financial Sector Specialist, World Bank

MC

Thank you, Deputy Governor Doni Primanto Joewono. Ladies and gentlemen, now let us begin our first session and to lead the session is Mirza Yuniar. Mirza Yuniar is the Deputy Director of Digital Economy Development at Bank Indonesia Institute. She handles digital economy research and learning development. Without any further ado ladies and gentlemen, please welcome our moderator, Mirza Yuniar.

Moderator: Mirza Yuniar

Thank you, Vanya, for your generous introduction. The Honorable Deputy Governor Doni Primanto Joewono, Bambang Kusmiarso, Executive Director, Head of SME Development and Consumer Protection Department; Dr. Arlyana Abubakar, Group Head of Bank Indonesia Institute; Mr. Ricky Satria, Group Head of Consumer Protection; Distinguished Speakers; Bank Indonesia Institute faculty members; and all distinguished guests and participants. Assalamu alaikum wa rahmatullahi wa barakatuh, shalom, om swastiastu, and namo budaya. May peace, mercy, and blessings from the Almighty God always be upon you.

I would like to bid you all a very good morning from Bali and to send a warm welcome to all participants who are attending virtually or in person at the International Flagship Seminar with the very interesting and relevant topic, New Era for Consumer Protection: Use of Digital Innovation. The seminar will be held in hybrid mode from 9-10th June 2022. In this seminar, we will discuss three main issues. Firstly, we will discuss the impact of rapid advancements in technology on financial institutions, products and innovation, which increase the benefits on one side but also increase complexity and may pose consumers with new risks and threats on the other. Secondly, we will elaborate on the essence and necessity of the use of cutting-edge technology and innovation to improve financial inclusion, consumer literacy and consumer protection, especially for vulnerable target groups. Thirdly, how does the role of technology support the improvement of regulatory technology (RegTech) and supervisory technology (SupTech) support in the digital era?

Ladies and gentlemen, in this two-day seminar we will have three panel sessions. This morning, we will start the first panel with two prominent speakers from World Bank and l'Autorité des marchés financiers (AMF) of Canada, which already presented virtually. Now, I would like to welcome our first panel speaker, Jennifer Chen.

We are really grateful to have you here today to share your valuable insight. In the first session, we will discuss "Market Conduct Supervision for Financial Consumer Protection in the Digital Era". This discussion will cover the risks that consumers face in digital financial services, country experiences and policy context, as well as market conduct in SupTech applications. We will also elaborate on the legal basis and regulation, including the challenges of applying this innovation to the market conduct of SupTech.

Ladies and gentlemen, let me introduce to all of you our first distinguished speaker. As the first panelist today, Jennifer Chien is a Senior Financial Sector Specialist and part of the Financial Inclusion and Consumer Protection (FICP) Team in the Finance, Competitiveness and Innovation Global Practice at the World Bank. She also has lots of experience in various forums and institutions, as well as being an experienced lawyer who focuses on financial consumer protection, regulation and supervision, national financial inclusion strategies, microfinance regulation, and digital financial inclusion. Jennifer Chien holds a bachelor's degree in economics and political science from Stanford University and a law degree from Harvard Law School.

Ladies and gentlemen, before we get started with the first speaker, I would like to go through some housekeeping to ensure you can interact with myself and the speaker. Presentation allocation time is 45 minutes to share a presentation, followed by a second panelist presentation for 45 minutes. We will have a question-and-answer session afterwards for around 45 minutes of discussion. The first session will be concluded at 10:15 a.m. Eastern Indonesian Time or 10:15 p.m. Eastern US Time. I will give Jennifer a quick reminder 5 minutes before the first session ends. I kindly invite all online participants to put their questions in the Zoom chat room. Please also provide your name and department or institution along with the question, and please also state to which presenter you are addressing the question. I will also invite questions from our audience, present in person, physically offline today at Anvaya Bali, domestic participants both online and offline, with guest questions eligible to receive interesting merchandise from the Bank Indonesia Institute Committee.

Ladies and gentlemen, for the first session, Jennifer Chien will deliver a presentation regarding Market Conduct Supervision for Financial Consumer Protection in the Digital Era. Without further ado, let me now turn the Zoom screen and time over to Jennifer Chen.

New and Enhanced Risks to Consumers from DFS and FinTech & Emerging Regulatory Approaches
SupTech Solutions for Market Conduct Supervision

Speaker: Jennifer Chien, Senior Financial Sector Specialist, World Bank

Thank you very much for the introduction. We are very pleased to be here today and have the opportunity to share insights from the World Bank on consumer protection risks that arise from digital financial services (DFS) and FinTech. We will also discuss how different countries are starting to utilize technology to help conduct market conduct supervision and address these new and enhanced risks to consumers.

We will be breaking down my presentation into two halves. In the first part, we will provide an overview and explore some of the key risks that arise from digital financial services and FinTech, in particular drilling down on risks related to digital credit but also discussing some cross-cutting risks and issues that financial sector authorities are facing when trying to keep track of and monitor these new and enhanced risks that arise from different uses of technology. We will also touch on some implementation considerations that policymakers should take note of when trying to determine how best to adapt or update their existing regulatory frameworks to address these risks. This will be the focus of the first half of the presentation. Then, we will turn to an overview of SupTech solutions for market conduct supervision that we have seen across different countries. We will discuss some of the new and emerging approaches and uses of SupTech for different financial consumer protection and supervisory issues. Additionally, we will also cover some of the implementation considerations we are seeing across authorities on the different factors to consider to successfully, effectively and efficiently implement new SupTech solutions.

New Digital Financial Services Environment

To start with, the introductions gave a very nice overview of all these new technologies that are being introduced into the market and the whole digitalization of the financial sector. There are various trends that are useful to consider and think about how different risks arise from those trends. To begin with, the broader digitalization of the financial sector has introduced a range of new products and services, new distribution channels, particularly mobile phones, new types of providers, including non-financial firms, and new business models and technologies. At the World Bank, where our focus lies on both financial inclusion and consumer protection, it is always an interesting balance to think about all the benefits from digital financial services and FinTech in terms of financial inclusion and expanding access to finance in ways that have been transformational in many countries through new products, such as e-money, mobile wallets, and digital credit, along with bundled products like digital insurance, utilizing mobile phones to reach remote areas and rural consumers who do not have physical access to bank branches and increasingly leveraging new networks. Platform finance and new models, such as using big data and alternative data, reach consumers who could not previously be reached. These are showing the good side of digital financial services.

Financial Consumer Protection (FCP) Concerns in the New DFS Environment

It is useful to think about what the differences are in digital financial services, and how that might equate to new types of risk to consumers. In DFS, the speed of transactions is much higher and the service is remote, which impacts the behaviors of consumers and how seriously they actually consider offers that they receive over their mobile phones. There are also automated decision-making and automated scoring of consumers based on big data and big data analytics. There is the digitalization of records. More broadly, there is the involvement of more types of entities, sometimes unregulated entities, non-financial entities as well, and also increasingly, we have this whole trend of disaggregation of the value chain. Therefore, the process of delivering services and products is now broken up across a range of different institutions. Sometimes, as a consumer, one may not even know who the entities behind the product are and who might be liable if there is an issue. Related to that is the role of intermediaries more broadly and the scale and volume of transactions, the speed, the scalability of new models in terms of the number of consumers that can be reached and the speed by which they can be reached. It means that any issues that arise can affect a much broader set of consumers than before. It is even more important for regulators and supervisors, therefore, to stay on top of new and emerging trends and address them as quickly as possible, which is much easier said than done.

Related to these new characteristics that DFS introduces, they can all equate to new types of consumer production issues or different manifestations of existing consumer protection issues. For example, the remote nature of the service and transacting via mobile phones can make disclosure and transparency more challenging. In fact, disclosure is always a challenge for consumers to obtain sufficient information to choose a product or service appropriately, and it can be even more challenging when interacting with digital channels. There are issues regarding the liability of intermediaries, and we will explore all these in more detail; this is just an introduction. There are privacy and data protection issues. As the role of data becomes exponentially more important, the amount of data being analyzed becomes more important, and the different types of data being leveraged raises new issues regarding who owns data processing and data privacy.

Finally, in addition to all these new risks, there are issues that can arise from the demand side because financial literacy, or digital literacy, may be low. Awareness of these new products or services may also be low, as may understanding of the risks posed by innovative new products. All of that can make consumers more vulnerable to potential harm or simply obtaining the wrong part of the service that is not beneficial for their welfare.

FinTech Innovations are now Introducing New Benefits as well as New Risks

That was a summary of the new types of characteristics that DFS introduces and the new types of risks to consumers. We think of FinTech as an additional element, and there does not seem to be a global consensus on whether DFS and FinTech are equivalent, or if one is a subset of the other, but we tend to think of FinTech as the next phase, an advancement of DFS, and this could include a range of newer products and services and models, such as P2P lending, crowdfunding, cryptocurrency, and Big

Tech platforms providing financial services, and so on. On top of the risks that arise from DFS, there are even newer types of risks and benefits introduced by FinTech innovations as well. All this makes things very challenging for both regulators and supervisors.

Financial Consumers are Facing New and Enhanced Risks from FinTech

This is a high-level summary of some of the new risks that can arise in FinTech. Some are similar to traditional risks that arise from digital financial services (DFS), such as issues with digital transparency, digital disclosure, and the speed of contracting and marketing. With FinTech, platforms and new business models introduced by P2P and crowdfunding, there are also increased issues around the platforms themselves, such as technological vulnerability and platform unreliability. There are even more issues with novel and complex products lately, such as cryptocurrencies, which may not have been regulated clearly. Consumers may not fully understand the risks, or the risks may not have been clearly disclosed. All of this introduces more potential harms and vulnerabilities, and it adds another layer of new types of risk that need to be considered.

Risk and Gaps can have Significant Impacts

Some of the issues that have already arisen from these new technologies being introduced are relatively well known. For example, when we talk about digital credit, there are well-known examples in different regions. For instance, there are studies in Tanzania and Kenya that found over 50% of borrowers of digital credit were late in their repayments. Similarly, in Kenya, which stands out as a unique example, there was the broadest uptake of digital microcredit products. Shockingly, statistics show that 70 to 80% of these borrowers developed negative credit histories due to these very small loans that were not being repaid. Oftentimes, consumers did not take those loans seriously, perhaps because they were small and taken without a particular purpose. Unfortunately, most consumers do not understand the broader repercussions and negative impact on their credit history. Therefore, there are issues with digital credit that we have observed, leading to harm and financial hardship and poor credit histories. There are examples of harsh debt collection practices, notably in Indonesia, by unregulated digital lenders who have engaged in such practices, making it a particularly hard issue to address. We will discuss the issue of regulatory perimeters later. There are other examples in the FinTech space with peer-to-peer lending and the explosion of that market. For instance, in China, approximately 5-7 years ago, the regulatory approach was more of a wait-and-see approach. A proliferation of P2P lenders occurred, some of whom were simply fraudulent pyramid schemes, and the scale of the number of consumers who were swindled in this sector was significant because everything is larger in China. There are already instances of loss to consumers by fraud due to FinTech, and there have been instances of harm due to cybersecurity and data breaches. The most recent and well-known example is a large-scale e-money hack in Uganda, which affected a large number of consumers. These are merely some examples of the real-world impacts that some of these risks are materializing, and there is a need for us as a regulator and as a financial sector authority to actively monitor these risks closely and address them proactively.

Challenge for Policymakers

It is challenging to address all the risks around the world. In the work we do at the World Bank, we will introduce a new publication on consumer risk and FinTech. The purpose of this publication was to gather new and emerging regulatory approaches to the ever-increasing range of risks. There are some approaches, which are not necessarily widespread yet, so this area is still evolving. It is always difficult to keep up with innovations in the sector. However, we will share emerging regulatory approaches from around the world to address these issues.

WB Publication Focuses on New Manifestations

Our most recent publication, released last year, examines consumer risks in FinTech. It explores the new manifestations of risks and emerging approaches to address them. The publication focuses on four key FinTech products: digital microcredit, peer-to-peer lending, investment-based crowdfunding, and e-money. We chose these products because each introduces new and specific types of risk to consumers. Some risks in DFS and FinTech are cross-cutting, while others are product-specific. It is important to note and emphasize that each innovative product and approach requires careful consideration and research to determine their specific risks. Some risks may apply across products, but not all. Unfortunately, we cannot cover things like cryptocurrency, robo-advice, or InsurTech. However, there are a range of other products that also need to be considered.

Digital Microcredit: Definition for Publication

In the interest of time, we will focus on digital microcredit specifically, while covering the other three products: peer-to-peer (P2P), crowdfunding, and electronic money in the publication available. Digital microcredit is a useful product to explore because it is arguably the most widespread product (excluding e-money) and has the potential to cause a lot of harm to consumers. For the purpose of this research, we define digital microcredit as short-term (one week to a few months) small loans of very low value. These loans are typically accessed via mobile phones and often use automated credit scoring or fast approval. Additionally, these product features contribute to various risks.

Digital Microcredit: Consumer Risks and Regulatory Approaches

The main risks we identified with respect to digital microcredit are poor disclosure and transparency (cross-cutting), aggressive marketing practices, unfair lending, discrimination due to algorithmic scoring (cross-cutting), and gaps in the regulatory perimeter (cross-cutting). Among these five types of risks, three are cross-cutting. Thus, the disclosure-related issues apply to any digital financial services accessed via mobile phones or the internet. Similarly, discrimination from algorithmic scoring applies to any use of algorithms or algorithmic scoring in the financial sector. Moreover, issues related to gaps in the regulatory perimeter apply to different types of digital financial services (DFS) and FinTech. From our experience working in different countries, addressing these gaps is one of the most challenging issues, as there are no simple solutions.

Digital Microcredit: Poor Disclosure and Transparency

On the next slide, we will move quickly through each of these topics to allow enough time for discussing FinTech. When it comes to disclosure and transparency, it poses a practical issue for those who are engaged in consumer protection. Consumers need sufficient information about a product or service, ideally presented in a user-friendly format. Consumers need to receive this information early enough in their decision-making process to assess a potential product, determine whether it fits their needs, and select an appropriate product for themselves. Even in the physical world, understanding a complete loan agreement, for instance, can be challenging. Conveying more complex financial information via mobile phones presents new challenges. Specifically, for digital microcredit, there are numerous instances where pricing information is incomplete or lacks transparency. Different pricing methods, such as flat fees, percentages, or a combination of different fees, contribute to the lack of transparency. Conveying comprehensive terms and conditions, especially for feature phones or smartphones, is also difficult. Obtaining complete information becomes more challenging and viewing it on a mobile phone further compounds the issue. Consequently, poor disclosure formatting often results in ineffective disclosure and transparency. In digital microcredit, there are also examples of information being provided too late in a mobile transaction, and this applies to e-money and e-wallets as well. Instances have occurred where people conduct a payment transaction or use a digital microcredit product without discovering the associated fees and charges until after completing the transaction. This illustrates that information is not being provided in a timely manner. Difficulties in navigating the user interface on mobile phones are also present, which partly relate to disclosure issues but can also increase the likelihood of mistaken transactions. Research has shown that instances of poor transparency in countries with large digital microcredit products are correlated with higher rates of late repayment and default. Additionally, in lab testing, when different and more optimal approaches to disclosure were used, a clear correlation emerged between consumers' ability to choose a more suitable product and their ability to determine the actual price. They were also able to select products with lower prices when disclosure and transparency were provided in a more user-friendly manner.

There is a range of emerging approaches being used to try to address some of these challenges in digital disclosure. In disclosure, in general, more standardization of the common information disclosed is better for consumers and their familiarity with pricing and terms and conditions. That is one approach that different countries are taking. A lot of the focus and disclosure to date has been on documents and designing a key fact statement or a summary sheet, which is more suitable for a full-page document. One can employ equivalent approaches to try to ensure that information conveyed to a mobile phone is also presented in a way that is very user-friendly, as well as packaging information, having clear layers, or having a clear interface moving from phase to phase in a transaction where information is grouped in a very logical manner, for example. Another approach being used is to require Financial Service Providers (FSPs) [1]to provide access to other channels to answer

1 any type of institution providing financial services to retail customers (deposits, credit, money transfers, etc.) and under the supervision of their country's Financial Services Authority

any questions one might have outside of the digital channel. This is one example that has been used in Portugal, where financial service providers have to assist their consumers in obtaining further information via a live interaction to supplement information provided via digital channels.

Digital Microcredit: Aggressive Marketing Practices

In digital microcredit, there are many examples of aggressive marketing. For example, push marketing is where unsolicited offers are pushed to consumers. One of the enhanced vulnerabilities for consumers is that they get pushed onto their mobile phones. Oftentimes, they can be targeted late at night or on weekends, when consumers are more vulnerable to unsolicited offers. One very enlightening study in Kenya showed that many first-time users of a popular digital microcredit product indicated that they tried it for no reason at all. The consumers took out this microcredit product for no reason. Many of these practices specifically exploit behavioral biases, encouraging consumers to borrow the maximum possible or trivializing loans. And all of this can obviously lead to issues of over-indebtedness and harm to consumer welfare.

A range of approaches are being utilized to try to address these aggressive marketing practices. A lot of them arise from new approaches being employed with respect to short-term, high-cost credit more generally, not necessarily just digital credit. A lot of these approaches can be applied to digital microcredit as well, such as banning overly aggressive sales practices, requiring explicit warnings about short-term high-cost credit, namely that it can be very expensive, and other alternative approaches. That is one example that was used in Australia. There are examples of slowing down the mobile transaction process, specifically including a phase where, at the end, right before the transaction is finalized, there is a requirement, for example, that a consumer must review the information and confirm one more time that they want to conduct that transaction.

Digital Microcredit: Unfair Lending

There are also examples of unfair lending in digital microcredit. One of the most well-known is that the annual percentage rates for some digital microcredits can range from 300 to 600%. One of the other well-known issues is this blind-lending approach, where offers are sent to consumers without any assessment of their ability to repay. It is a lend-to-learn model in digital microcredit, and there are instances where default rates are as high as 40 to 50% for these blind offer types of models.

There are some emerging practices to try to address these issues. One is obviously to put in responsible finance-type rules and product suitability-type rules, where the financial service providers are required to assess the capacity to repay. Currently, there is some debate about digital microcredit models that are premised on lend-to-learn models that lend to any consumer without understanding their situation in very small amounts to learn about that consumer. If the authority would like to still allow that model, one adaptive approach is to require enhanced monitoring of portfolios, particularly where automated credit scoring is used. There were new rules issued by the European Banking Authority to try to address automated models in credit decision-making, requiring enhanced monitoring of portfolios if such automated models are used.

Digital Microcredit: Risk of Discrimination due to Algorithmic Scoring

In digital microcredit and also in other forms of digital financial services, there is increasing use of big data and algorithmic scoring, and it is one of the innovative approaches that can be beneficial for financial inclusion because it can expand access to financial services to consumers who may not have a formal credit history and might have a thin credit file. There are different types of data that can now be leveraged and different proxies that can be developed to assess potential borrowers. There are, however, potential risks related to biased outcomes from algorithms due to poor algorithm design or poor data that is used to design or test the algorithm. There is a risk of discrimination based on proxies that are used that reflect sensitive attributes, such as gender or race. Oftentimes, consumers are unaware that they are being subjected to algorithmic scoring, and for regulators, it is challenging to address this issue because they are not in a position to actually oversee the design of the algorithm itself, let alone the fact that many of them are black boxes and confidential.

This issue cuts across different financial products and is also broader than the financial sector, which is in some ways a good thing because there are a range of emerging approaches around algorithmic accountability that can be applied to algorithmic scoring in the financial sector. Generally speaking, there are some increasing trends to require algorithmic governance and to ensure that algorithms are developed, tested and deployed in a way that manages risks related to bias and discrimination. In fact, there are some countries that are starting to put in place rules around this to ensure that algorithmic results are not discriminatory and that if a financial service provider is using algorithms for scoring, they have to put in place the necessary safeguards and risk management to try to ensure that there is no bias or discrimination built into the system.

Digital Microcredit: Regulatory Perimeter

The last point we wanted to get to was around the regulatory perimeter. This issue is much broader than just digital microcredit. It applies to a lot of digital financial services and FinTech, and it is broader than any one topic. Basically, the issue is that there are many types of new providers and new models for providing financial services that do not fall squarely under the existing regulatory perimeter of the Financial Sector Authority. This obviously results in gaps. Even when a more enhanced consumer protection framework can be developed, there are still gaps and the framework is unable to cover the full range of providers that are offering these services. One of the more common examples is app-based lenders, where it may be difficult to cover these entities under the existing regulatory framework, as well as new types of FinTech, innovations and providers, where the regulatory framework may not be up-to-date enough to cover these new types of providers. There are new types, for example, of big tech providing financial services that may not be fully regulated. There are also new forms of quasi-credit products, like 'buy now, pay later' products. There are always new types of products and services being developed that may not fall squarely under their regulatory perimeter, and this is one of the key challenges for financial sector authorities, where there is no easy answer. Ideally, one would follow an activity-based approach, but there is increasing recognition that this is much easier said than done. There are a couple practical examples that are useful if existing financial sector authority and power do not extend to some new entities. For example, the Competition Authority in Kenya has broader jurisdiction over the market and has put in place targeted rules around disclosure for e-wallets and e-wallet products, ensuring that information about a transaction is provided earlier in the transaction process rather than after the transaction is completed. Another example is in the Philippines, where the Data Privacy Authority has put out rules around digital microcredit providers. They were using social media contacts for debt collection to name and shame borrowers. Ultimately, the Data Privacy Authority took action in that case. In fact, Indonesia works with some of the platforms, like Google Play, to try to address some of the bad actors in terms of digital apps. Those are some of the practical solutions that are being utilized.

Why SupTech? The Case for SupTech for Market Conduct Supervision

Next, we will introduce SupTech because, in this seminar, we have the privilege of hearing from the authorities themselves that have been implementing it. We will focus more on the broader context and some implementation considerations. Why SupTech? And why is there a need for SupTech? It is clear from the previous slides that there are a range of new risks that consumers face. With digital financial services (DFS) and FinTech, there have been many new benefits and millions of new users are entering the financial sector, which is beneficial. For a financial consumer production authority, however, DFS and FinTech raise a number of new challenges. It is already challenging to oversee the range of financial service providers that are potentially relevant from the perspective of financial consumer protection and it is even harder with these new types of actors, new types of risks to consumers, and the perennial constraints that supervisors face.

Recent WB Publication on SupTech Solutions for MCS

For this reason, SupTech solutions are very beneficial to really try to increase the efficiency and effectiveness of market conduct supervision. We have a recent publication from last year from our World Bank team on the next wave of SupTech innovation, where we categorized four different groups of SupTech solutions. We looked at eighteen different SupTech solutions across four different categories and tried to see what emerging trends were in these solutions, what lessons could be learned from them, what benefits they had, and how they were implemented.

Motivations for SupTech Adoption

The two main reasons that we heard from the fourteen different authorities we spoke with were that SupTech solutions were being used for market conduct supervision to increase operational efficiency and enhance supervisory effectiveness. The first motivation, increasing operational efficiency, was oftentimes the main one because the scope of the market to cover, monitor, and analyze financial consumer protection purposes is very broad. Automating certain processes in terms of the collection and analysis of information is critical to trying to leverage the limited supervisory capacity resources on hand. The one thing we would emphasize, though, is that the countries that have been implementing SupTech solutions already have, for the most part, existing market conduct supervision processes and fundamentals in place. They also emphasize that, in leveraging the opportunity of SupTech, it was really about embedding modern technology into existing processes and processes that were already laid out. It was an ongoing effort to identify where SupTech solutions would be beneficial and to build up solutions in an incremental manner.

Four Categories of SupTech Solutions for Market Conduct

The four categories of SupTech solutions that we saw for market conduct supervision were around regulatory reporting, collection and processing of complaints data, non-traditional market monitoring, as well as document and business analysis. The examples of solutions in regulatory reporting are relatively straightforward. Regulatory reporting, the collection of data and information from supervised entities, is obviously one of the core supervisory activities. It can also be very time-consuming if it is manual, and oftentimes it still is in many countries. There are examples of solutions being utilized to try to automate this process, standardize it in different ways, and build systems that collect data from a range of sources and allow for analysis. The three examples that we saw across different countries are supervision information systems, which we believe the Canadians will hopefully be explaining because they are one of the very good examples of that, followed by automated data submission via APIs and, lastly, web portal data uploaded to a central database. One of the things we want to emphasize is that the examples we found of SupTech are more common in developed countries for a reason, and it is one that really should be considered, because SupTech solutions, for the most part, can be quite expensive and difficult to implement, require an existing data analysis skillset, and require information and communication technology (ICT) infrastructure. Moreover, there are a limited number of vendors out there who specialize in SupTech conduct supervision. That said, among the eighteen solutions we described in this publication and in our research, there *are* examples of solutions that have been implemented in more emerging markets and developing economies. Across these four categories, there are a range of different solutions. For example, in regulatory reporting, web portals are less costly and have a simpler, more implementable approach than, for example, a supervision information system. In the case study of the Central Bank of

Nepal we have in our publication, they started with a web portal, which provided a number of the benefits of trying to make regulatory reporting more efficient. It allowed for obtaining information directly from some financial service providers in a much more standardized and efficient manner. After that, either this year or last year, they are moving to a more automated data submission approach. There are different types of SupTech solutions with different levels of sophistication. That is good to keep in mind because there are solutions that can be utilized for a range of different projects.

The second category is complaints data., addressing complaints from consumers is obviously beneficial for consumers directly, but it is also a critical source of data for market conduct supervision, and there are an increasing number of examples of SupTech solutions being employed to partly automate but make more efficient a range of different functions around complaints data management, whether that is the intake of complaints from consumers. There can be SupTech solutions to try to develop new channels, such as SMS, chat bots, or different channels for consumers that can or cannot use automation, chat bots for example, to try to make the process more efficient and less labor-intensive. There are solutions that are being used to create a central interface to intake complaints in a more standardized manner, which makes the complaints data itself less error-prone and much more useful for supervisory purposes. There are also different SupTech solutions being used to analyze complaints data to try to track new and emerging risks to consumers.

The last two categories are somewhat related. There is non-traditional market monitoring, as well as document and business analysis. Market monitoring is a critical component of market conduct supervision, partly because we cover such a broad range of products, services and providers. One of the main differences with prudential supervision is that we cannot rely on on-site examinations because we will never be able to cover the market effectively. Therefore, market monitoring in general plays an enhanced role in market conduct supervision. Using SupTech solutions for non-traditional market monitoring is an additional source of information that can feed into the information that is gathered from a market conduct supervisor's market monitoring process. All of these examples rely on web scraping for social media monitoring. Web scraping gathers data from different social media sources and then analyzes this data using natural language processing to be able to identify trends or topics from this publicly available data. All this can be another useful source of information to feed into market conduct supervision. Similarly, using natural language processing to analyze unstructured data can also be applied to a range of different documents, whether that is regular reporting from financial service providers for a range of different purposes, monitoring for compliance with certain issues, or similarly, looking for trends, topics, or other issues within documents that would be very inefficient, if not impossible, to analyze otherwise individually by staff. One thing we would point out with these is that while these solutions are not necessarily expensive, they do take supervisory judgment to utilize them, test them, and really interpret the results. Therefore, one of the things to keep in mind with SupTech solutions is that they do not work in isolation, and a supervisor needs to identify what the purpose is and have the capacity to be able to leverage them efficiently.

Key Enablers of SupTech Implementation

We will jump to slide 45 since the other speakers will be going into some of the SupTech solutions in more detail. We will touch on some broader issues to consider when implementing SupTech solutions. One of the main things to consider is that the SupTech implementation is more than just the solution itself. Oftentimes, thinking about how to embed modern technology into the supervisory process and how to become more of a data-driven supervisor is what we heard from the different authorities that we spoke with for the purpose of this research, which was quite consistent across different authorities. Three of the common enablers they highlighted as important for implementing any SupTech solution were people, namely the talent, mindset and skills of employees because it was quite a shift to these data-driven approaches, and more practically, it requires a different skillset -it requires a tech skillset and a data skillset- and oftentimes increasing investment in data scientists and data analysts to really ensure that a SupTech solution is implemented correctly and fully leveraged.

The second main enabler that was highlighted was the process of implementing a SupTech solution within a financial sector authority. Many of the authorities we spoke with said that it was quite a process from start to finish and that a champion was necessary, whether that was the innovation office, the IT department, or a specific business. There needs to be a champion that is driving the SupTech solution from the start and also buy-in from top management on the use of and the benefits of SupTech. Lastly, one obvious one is around IT infrastructure and whether the existing infrastructure is suitable for implementing SupTech solutions, whether it needs to be replaced or upgraded. Moreover, considering the existing legacy systems is an important piece of the puzzle to consider when thinking about what SupTech solutions can be implemented in the financial sector authority. The other component of IT infrastructure is related to the users or market, and there is a good example in Rwanda where they implemented an electronic data warehouse. Initially, when that was being developed, the launch was delayed because it was overly complex and the less sophisticated financial service providers did not have an easy way to interact with this data warehouse; thus, it needed to be designed to have different capabilities to be able to link to less sophisticated users.

Implementation Considerations

Lastly, additional implementation considerations were mentioned by different countries. One consideration was to think clearly about the business case for SupTech adoption before starting, which meant having a clear rationale for the business case for understanding where the SupTech solution will be applied and what the readiness is for that. One additional element to consider is that this presentation focused on SupTech solutions for market conduct supervision, which is the way the categories were broken down, but there is the technology itself, which can be used for multiple solutions, whether it is AML/CFT issues or prudential issues. Many authorities are employing institution-wide SupTech strategies because it can be a big investment to consider a solution that can be applied to multiple objectives. Some of the other considerations are deciding between in-house development and third-party development, which is a very practical one around capacity and what exists in the market. Having an adaptive approach to SupTech is useful because it allows us to start out smaller. Many authorities are starting out with TechSprints or pilots, allowing them to start small and build from there. One can also start with less intensive SupTech solutions and build up from there. The last point is thinking the opposite of starting small. There are countries that are also looking institution-wide and developing broader SupTech or data strategies. The presentation will stop here, but the slides will be shared that include more information on each of the categories that were seen and the different examples and case studies. There is more detail on them in the publication itself, **SupTech Solutions for Market Conduct Supervision**. Thank you very much.

Moderator: Mirza Yuniar

Thank you for a comprehensive and excellent presentation. To conclude, some key takeaways from this session include the introduction of a range of new risks related to digital finance services, such as over-indebtedness in digital credit, complex impact products, crowdfunding, cybersecurity, and data breaches. One way to consider these new risks is to think of digital finance services as a combination of a new type of product distribution channel, but there is also a dilemma between the benefits of financial inclusion and financial accessibility on one side and consumer protection on the other. Secondly, elements of financial consumer protection principles, including legal regulatory frameworks, are essential. Additionally, effective institutional and supervisory arrangements, disclosure and transparency, fair treatment, and business conduct, as well as effective dispute resolution, are also important. Thirdly, data and technology have received more support than practice in financial services and SupTech. This includes regulatory reports, the collection of complaints data, non-traditional market monitoring, document analysis to improve consumer protection, and enhance supervisory effectiveness. However, we also need to bear in mind key enablers, namely the people, processes, and IT infrastructure readiness.

THE ESSENTIAL OF DATA AND ROLE OF DATA DRIVEN SUPERVISORS TO SUPPORT SUPTECH EFFECTIVENESS

Gouro Sall Diagne
Senior Director of Deposit Institutions,
Autorité des Marchés Financiers

Moderator: Mirza Yuniar

Ladies and gentlemen, we will continue to the next session on the Essentials of Data and the Role of Data-Driven Supervisors to Support SupTech Effectiveness by Gouro Sall Diagne. We will discuss strategies for building reliable data infrastructure, the usage of SupTech results for data analytics and policy recommendations. L'Autorité des marchés financiers (AMF) of Canada has practical experience in developing tools for natural language programming, including key topic modeling and systems for electronic document analysis. These tools aim to extract and organize by importance topics addressed in large volumes of data, primarily sourced from complaints, news and social media.

Ladies and gentlemen, let me introduce to all of you our distinguished speaker for the second session today. Gouro Sall Diagne is Senior Director of Supervision of Deposit Institutions at the Autorité des marchés financiers (AMF) of Canada. She is a graduate of the Ecole Superieure de Commerce in Rouen, France. Gouro Sall Diagne completed her academic training in Canada with an MBA and holds several professional titles to her credit. She has more than 30 years of experience in the banking sector in Europe, Africa and Canada. Currently, she is also involved in the Digital Transformation Unit, set up by l'Autorité, to monitor the development of new technologies in the financial industry. In addition, she works alongside senior management on issues of diversity, equity and inclusion. Gouro Sall Diagne works actively with the Association of Quebec Women in Finance, both within committees supporting the permanence of the association (the Committee of Digital Strategy and Business Intelligence) and at the board level as a member of the Executive Committee responsible for the Audit and Risk Management Committee. The second session will be concluded at 10:00 a.m. Eastern Japan Time, or 11:00 p.m. Canadian time, and we will give Gouro a reminder 5 minutes before the second session time limit. Without further ado, let me now turn the Zoom screen and time over to Gouro.

The Essentials of Data and the Role of Data-Driven Supervisors to Support SupTech Effectiveness

Speaker: Gouro Sall Diagne, Senior Director of Deposit Institutions, Autorité des Marchés Financiers (AMF), Canada

Thank you very much for the warm welcoming words that were expressed both by the Head of the Bank Indonesia Institute and the Deputy Governor. We also want to thank everyone at the Bank Indonesia Institute for inviting us today to discuss this topic. We are also grateful for the technology that allows us to have this session virtually and in-house, especially being 12 hours behind Indonesia. As mentioned in my bio, data and SupTech are my passions, and as a supervisor, I have the great opportunity to do this as my day job at Autorité des marchés financiers (AMF). We will try to make the most of this 45-minute session because Jennifer set the tone for this presentation by highlighting all the risks that we face as supervisors and how to deal with them. Remember what the Deputy Governor said in his opening remarks: we are supervisors and keeping that in mind will help us understand what we are about to discuss later.

Agenda

The agenda, which we will present today, is again part of the sharing initiative that we have within AMF, and we are pleased to hear that Maria Lúcia Leitão will be the next session because this seminar is where we can share a lot of initiatives, and this is one of them. Today, we will briefly discuss how AMF approaches all this technology. We will also talk about FinTech and how we organize AMF's data flow, which technologies we are using, which strategy we are using, why strategy is key in this, and how we leverage every case study we will be using. Hopefully, there will be some beneficial takeaways for all participants.

Background: AMF & FinTech, Dataflow and Technologies

In her remarks, Jennifer was talking about the risks and everything that is being done. All these automatic decisions need to be supervised. We need to come in and see if these models, for example, are biased or will treat consumers fairly, if data privacy is well protected, and if the products that will be sold to consumers are suitable. It was funny that we were talking about digital microcredit in emerging markets, considering that in many developing countries, we now have the buy-now, pay-later model, which emerged during the pandemic era. We are facing the same challenge here; however, we hope today's shared experiences will help to at least leverage it and try to move the level at some point.

AMF's FinTechs

The AMF is an integrated body, and Jennifer was referring to this regulatory authority, which has a full spectrum of duties. We oversee securities and all financial aspects at the provincial level in Quebec. Our expertise lies in providing services related to securities, intermediaries, product distribution, prudential oversight, market conduct, education, financial literacy, and other areas. In the emerging FinTech era, rather than establishing a new department to tackle these advancements, we at AMF made a decision to deepen our understanding of emerging technologies like FinTech. We responded by forming a working group to address these issues. Currently, we engage in discussions about cryptocurrency. We are a security regulator. Is it an asset or a currency, and how should it be treated? These are all the challenges we are seeing on the blockchain, namely how should we treat them? How will we be using it as a contract, among other things? Of course, we talk about SupTech, but what financial institutions have done is develop RegTech, and they perform their regulatory duties using these tools. Therefore, we need to understand what is going on behind the scenes in order to ensure proper supervision. We also have a FinTech lab because expertise is key. We will keep saying this during the presentation, and it is not very common within the regulatory body to find this expertise all the time. But we have something very unique. We know how to supervise, and this is key to the process. FinTech is a collaborative environment. When we invite training from the university, we can also form partnerships with the university to develop all kinds of work. One of the examples that we have done lately is the aftermath of what we call the Montreal Accord on the use of artificial intelligence. We work with a university in

Quebec, where we came up with some recommendations to the supervisor and to the financial institution on how to use ethically, for example, artificial intelligence.

We also have a sandbox. The sandbox initially was for securities purposes because we needed to understand how to bring this new model or treat the crypto and how to give them the license. We started with them, and now we have expanded to others, like InsurTech. We have finished with the advisory, which is very helpful because it is a body that is mainly industry, legislators, regulators, ourselves, and universities coming together to tackle issues. Whenever there is any problem, we put it on the table, discuss it, and have a collective view of the industry. This is how we target FinTech, how we embrace the emerging era, and how we move forward.

AMF's FinTechs – Hub and Spokes

We recently reorganized. This is very new; it has been less than a year since we put in place what we call a hub-and-spoke model. The hub is a small group of maybe 10 at the most, with a chief data officer who heads the lab due to its success. We also have data scientists and experts who mainly work on data governance, as well as standardizing and coordinating the work within the business line. There are several teams within the Deposit Institutions Department at AMF, and one of them is a business unit that is only dedicated to the data and how to leverage the data to support our decisions. The purpose of the hub is to ensure AMF's data governance objective is setting a standard across the organization, and we will see later an example of a tool we developed to know that *this* thing is being done for *this* purpose and could be replicated in another department. This is the organization, and in all the business lines, we have what we call the spokes, with the hub responsible for coordination.

AMF's Dataflow – Data Collection

We will go over the next slide very briefly and come back to it later on in the presentation when we present the dataflow and how we receive the institutions' data at the far left of the screen. During Jennifer's presentation, this is what she called the supervising system. How we receive it, and then how it flows through our system, into our CRM, into our data warehouse, and how we use it and leverage it either for a dashboard or for anything else.

In the first phase of the data journey is data collection, and here we talk about disclosure. Within AMF, we have three main sources of data. We also have the disclosure form, which is defined by our disclosure law, and the web design structure, but they can be unstructured in a certain way. When talking about unstructured data, the level of granularity can vary. It can range from a summarized overview to a highly detailed and granular level. This allows us to accurately reproduce the form provided by the financial institutions. This is a way to validate the data given to us.

The second part is the data we can collect from the internal systems we have. We are an integrated body, and we have what we call the Information Center, which is where any consumer can call if they need information or want to complain. Whenever they do not know how to deal with something, the call center will address them. Furthermore, all this information is gathered, and it is really helpful to have this data. Additionally, we can fulfil data requests and we can receive data. The third one is all the external systems with APIs. Here, we were thinking about the Bank of Canada, where we can go and get some data on the economy or things like that. This is the spectrum of AMF's data collection.

AMF's Dataflow – Data Warehouses

We receive three kinds of data, which flows into our data warehouse, and here we have two sets of data warehouses. We have the Enterprise Data Warehouse (EDEN), where we keep all the clean data. It is very important to understand that when the data flows to EDEN, it is clean and valid. The sandbox is a tool we can use to test the data to see if it is accurate, if there are any abnormalities, and whether we have to extract or change anything. Or maybe because we never stored that data in the past and it is not in the system, we take it to the sandbox to clean it and reorganize it, making it accurate or in an adequate format before flowing it to EDEN. After the data warehouse, one can imagine how huge the data could be, with tons and tons of documentation that we receive from institutions, qualitative data, APIs and more.

AMF's Dataflow – Data Marts

We take the information and share it in what we call data marts. Think of it as a cabinet where data is pre-matched and organized in a coherent manner. From the data warehouse, we develop sets of data that respond to certain criteria, which is key and defined by analysts. They say exactly what they want; for example, it could be by risk, financial institution, portfolio, transactions, and so on. Furthermore, data marts are built based on a star scheme, which means that we build them in a way that we can always find the relation, making sure that wherever we go through them, we will always be able to trace the data. Here, granularity is key because no supervisor wants to sum up all the information. As supervisors, we must address the root cause, which necessitates delving into the transaction level at times before looking at the bigger picture. This approach ensures that when discussing topics, such as bias or similar matters, we thoroughly examine all aspects. In addition, these data marts are very useful for sharing data across the organization. For example, if someone is working on credit risk and another is working on credit practice, they can merge their data, making their job better.

AMF's Dataflow – Visualization

Here we can visualize the data on this next slide, which looks simple. We will be sharing very quickly some of the lessons that we have learned from all the things that we went through. The salient points here are to drill down as well as slice and dice, manipulating the prebuilt/scheduled report, including alerts for monitoring depending on the level of expertise of the user (senior management). We also use Power BI[2]. Given the level of confidentiality, for some parts of the information, we use the power BI on the premises and not on an online basis in order to maintain the confidentiality of the information.

AMF's Technologies

The next slide captures and summarizes all the technology that we are using and how it flows. We can see here the data source, it can be all kinds of data, such as e-commerce, devices and sensors, social media, spatial data, images and videos, smartphones, SaaS systems, corporate data as well as partner and third-party data. The slide also illustrates the data storage and processing, advanced analytics and business intelligence. In terms of analytics, we utilize Air, Python, the API, the prebuild, machine learning, and more. The business intelligence part is the initial aspect that all regulators require, as it is where we can build up our dashboard in general.

2 Power BI is a unified, scalable platform for self-service and enterprise business intelligence (BI). Connect to and visualize any data, and seamlessly infuse the visuals into the apps that being used every day.

Strategy for Building a Reliable Structure

Why is a Strategy Essential?

Jennifer emphasized the need for having a strategy to create a reliable data and SupTech initiative. The International Financial Consumer Protection Organization (FinCoNet) conducted a comprehensive study aimed at identifying the positions of different regulators within the strategy for building a reliable structure. The study revealed that 62% had a well-designed SupTech strategy in place, while 30% lacked a formal one but were in the implementation process. Only 5% did not have a strategy at all. A strategic approach certainly enables the alignment of all efforts with the strategic objectives of each regulator, thereby mitigating implementation challenges, such as the capacity we collectively possess. We all recognize that the results are limited, and the job we have to undertake is unlimited, requiring the skills necessary to perform it. This culture of supervision impacts the quality and availability of data. Having a strategy in place accelerates this phase of developing the new technology.

A Clear SupTech Strategy

Regarding AMF's strategy, the benefits we are seeing include a gain in maturity for SupTech and RegTech as well. The environment is evolving rapidly beyond our ability to keep up. We certainly need to leverage new tools, but having a clear strategy will facilitate progress, which touches on Jennifer's point earlier. We need to have some phases that allow for a maturity trend as well as a better understanding of what we need to do and solid in-house expertise. There are very few vendors that will develop SupTech. All the SupTech that we have done at the AMF has been done in-house with very few additions from vendors because the market is way too narrow. For AMF, our strategy is grounded in three pillars: proactivity, proximity and agility. The essence of agility lies in our ability to stop pursuing approaches that prove ineffective or persist in attempting to make them work, only to realize their futility in the end. We tend to do it slowly at a low pace, but at least the thing that will be released will work. Somehow, it will give some kind of benefit to the supervisor. We have put in place a formal process in order to determine the needs that we have and identify which project we will be focusing on to allocate our resources.

SupTech Tool Design

The identification of the needs is key because whenever we talk about technology, everybody jumps in, saying, yes, I need to do this, and I need to do that. We need a committee across several levels, therefore, including the management level and the expert level, to ensure we understand what we need to achieve and that we centralize the requirements. Sometimes, what happens is that the business unit can develop some tools, but if they do not talk to their colleagues, maybe they will have overlapping needs, perhaps with a slight adjustment. We must ensure we put in place all the necessary needs and discuss with them to help us allocate our resources. Once this is done, we need to advance it. Earlier, Jennifer mentioned an example of a country that introduced a tool but the institutions were unable to utilize it. AMF filters this kind of thing out. We ask if it is unrealistic. If unrealistic, we park it and think of an alternative approach that works. Is it efficient? The purpose of building this tool is to enhance efficiency, but if it falls short, we decline it. Is it costly? If it proves exorbitantly expensive, this is something we need to reassess. Not that we would abandon all these initiatives, but we must reconsider. That is why we advocate starting small and adopting an agile approach. At least we attempt something. Each time we deliver, it is useful for the experts, thus mobilizing resources and facilitating the allocation of expertise and even the budget within this initiative.

Leveraging Data to Support AMF Supervision
Challenges Related to Data

In the next slide, we will be sharing our own data case in three parts. The first one is offsite supervision. As regulators of prudential market conduct, all of us perform onsite and offsite supervision, receive data, perform desk reviews, and so on. However, there are challenges related to data that we all recognize, namely quality, standardization, availability and representativeness. The first one is quality. We receive a lot of disclosures, but sometimes Financial Institution A does not interpret it in the same way as Financial Institution B. This refers to both structured and unstructured information. The way that we collect the information at the information center can also change from one person to another. The way different people explain a complaint is not the same, especially when emotions are involved. These things will affect the quality of data. Data is crucial, therefore. One of the challenges we face is receiving a lot of data. Sometimes we receive the same data several times, but not in the same format. Perhaps it has been summarized, or something is more granular, which is something we need to understand. Knowing the data is key, as is the quality of our data.

This brings us to the second point of standardization. This is one of the most difficult things because in order to consume information, particularly nowadays with digitalization, the issue lies not in the form filled out by the institution but rather in the abundance of additional data available that contributes to a wealth of knowledge, such as social media and similar sources. How do we make this information consumable so we can integrate it into our decision-making? Again, this is where data governance becomes a key component, and we need to have the same understanding of the structure of the data that we have. We can be agile, but we need to have some guidelines because that is the only way to replicate the tools we will be developing.

Then there is availability, and when talking about machine learning, we need large amounts of data, which is not always there and with no time to access it. Large amounts of data are not necessarily available when implementing SupTech tools, such as for machine learning. Sometimes it is very expensive or too expensive to access certain kinds of data that some suppliers have. Another salient challenge that we face is representativeness. To make sure our new models are mathematically valid, we need to ensure that the sample is representative of the whole population, or we just take the whole population. These are challenges that we face in our journey when developing our supervision system.

Offsite Supervision Case

The need and a key point is setting the objective of what we are trying to achieve, developing risk profiles and early warning indicators. What is the purpose of what we are doing since we are supervisors and not a tech business? We need to really understand things to know what we are trying to achieve. This is where supervisors become key. In this day and age, it means that we are changing the landscape or the profile of our supervisor. Having a supervisor that is tech-savvy enough to know if they cannot develop something, they can at least explain what needs to be developed. It is important to be able to address the objective. For instance, our offsite supervision case involved the creation of a risk profile and early warning indicators, which was its main purpose. However, the challenge we encountered was the receipt of the disclosures along with numerous other pertinent reports from different committees.

These reports contained valuable data and information necessary to understand this matter and identify early warning indicators. This is where we arrived at the solution of implementing a system to enhance efficiency and soundness.

On the left-hand side of the slide is the institution that will be sending all the reports through either a secure online service or an automated transfer service that we have in place. Before the data flows into our system and is assimilated, a check is performed to ensure error-free transmission, validate cross-references, and verify validation points. If inaccurate, we return the data to the financial institution to redo the job before it enters the sandbox. Additionally, all the other unstructured reports we receive from various committees are also placed in the sandbox, where we extract the information before it flows into the data mart. The data mart consolidates the disclosure information along with all the relevant data. Additionally, our data scientists utilize R code or Power BI to generate the dashboard, which is examined by the data consumer, or supervisor. Based on the results received, the supervisor can prioritize and conduct a detailed analysis of problematic areas.

Lessons Learned

Dashboards ease interactions with upper management by ensuring productivity and effective communication of the strategic measures. After the entire process is complete, they engage in a discussion with our team, which is expedited and less time-consuming. We can quickly comprehend the current situation with the shared dashboard on the portal, eliminating the need for sending it as an Excel file, as was done in the past. This not only saves time when receiving the information but also enhances the depth of analysis today. In fact, today the complete disclosure is available, and the data is accessible two days later for supervisors to commence their analysis. As supervisors, we can contact the institution, ask about any concerns, delve deeper if necessary if there are any symptoms for onsite supervision, and whatever else. Automation enhances efficiency. The reduction in time to produce the data means that now the time is used mainly to explain what is going on, making sure there is an understanding, making sure that they can benchmark, know trends, or use analytics to at least know what the trend should be and what is really happening. If there is any discrepancy, the discussion is at a novel level. Experimentation is a key factor of success. We started with the pilot using liquidity because it is the most sensitive on the prudential side of things. Now, we will be moving forward in commercial practices and market conduct to develop the same set of disclosure forms that will flow in the same process to set up a dashboard. Development can be time-consuming, but the benefits are worth it. The gain that we have by doing this has been tremendous.

Analysis of a Large Volume of Qualitative Data Case

The second case, which is the analysis of qualitative data from a market conduct perspective, is more valuable. We use topic modeling. As we have all experienced, when a supervisor asks for something, they do a data dump or give everything they have, checking to see if it is related or not, and so on. The data is requested, the data is received, and the supervisor spends a lot of time sorting through all of the documentation received, determining what is pertinent and what is not pertinent, before deciding what to do with it. We treat AMF complaints using topic modeling and natural language processing (NLP) through our Complaints Department. Topic modeling can also be applied to minutes from the board of directors, committees, and executive committees to extract and identify key topics discussed in those meetings. Valuable information is produced at board meetings, but no one can read all the documentation. Topic modeling is also used to know what is going on in the news, on social media, and where new financial products are being launched. We cannot keep up with everything that is happening, but these are the tools we use to capture which kind of product is being discussed and assess whether it is being added in a positive or negative tone or if it is being exaggerated. These tools can also detect whether this is driven by a person because now robots are often used to drive likes and so on.

This slide shows the entire process of what we are doing, and the purpose is not to give a mathematical model but to show how we use the data, what kind of data we use for all the complaints, and where they are coming from. These are minutes, texts, voice messages or a combination of all, and they are not used in a normal manner. Sometimes people take notes, and it is very quick, and natural language processing (NLP) allows us to clean the data. We remove all the symbols and all the repetitive words and group them, giving sense to the word. We also use the open-source R package to estimate the trends we see in order to produce a report. This does not mean that the job is finished, it simply implies that a supervisor must review the results and analyze them.

AMF's Compliant Case

When we look at the data example in the next slide, we will see the result of analyzing the complaints. This is the algorithm from the model, it shows there was a strike at a financial institution and we received a lot of complaints that day. When we see it and become aware of the complaint, we move forward. For example, it could be talking about products in the least sensitive case, but it could also be talking about something else.

Misleading Information Case (SEDAR)

We are, in fact, security regulators, and issuers sometimes give misleading information, promising a lot of things that they never deliver. As a regulator, we need to give our blessing to the whole process since our objective is to identify any potential misleading information that could arise. Again, we are presenting these cases because they are less confidential, but this technology can also be applied to detect pushy, sales-oriented, or unethical practices, for instance. Analysts within the AMF have a lot of documentation to read, but by leveraging AI, they can automate the process. We gathered the information, which was key for this one because a more trained supervisor will be able to tell you what kind of word association we need to see in order for this to be successful.

Lessons Learned

We have to know our data. This is what it is all about. We can use all the technologies that are here, but we need to know our data and our job. We are not replacing supervisors. Supervisors are very important because the more they know their job, the more they can help. Nowadays, with the rapid evolution of technology, it is quite impossible to do our job without leveraging technology. This involves leveraging technology either through machine learning, which necessitates abundant data, or utilizing NLP algorithms to identify certain aspects that may not be apparent. It is another way of validating what we have. This approach is transparent and significantly speeds up work processes. Open-source software is very efficient, like R, the open-source programming that we use, and all the code that we use. Iterative development is paramount. We need to do it, test it, and redo it. We work on the analysis, and it is a never-ending process. It is better used for one set of things, and when it really works, after seeing the gain with the complaint, we apply it to the misleading information. This is another way to accelerate the same technology that we use for both of them.

Key Takeaways

How Can Supervisors Support SupTech effectiveness?

By sharing our experiences through our slides, everyone can learn from it and apply it, which was done on purpose. What we learn and the challenges we face doing it are important for everyone, depending on where we work, to learn from, leverage from, and accelerate our processes. We must support collaboration and sharing initiatives. Within certain organizations, including FinCoNet and at the World Bank, Jennifer was explaining the work that they are doing. This allows everyone to capitalize on others' experiences and failures, which will be helpful in discerning something that does not work. Maybe it is not that nobody is using it, but rather understanding why it failed to leverage it in a different way and accelerate ongoing efforts.

When it comes to success, one person's success may not be successful for others, but at least having open communication and sharing will help those on a similar journey. Again, every initiative developed for SupTech could be a never-ending process of continuous learning, and all the technology we presented today is in the process of going into phases two, three, and so on before being integrated into the whole process. When it comes to sharing our work approach, we have a common goal, and there are few schools of supervision, or perhaps none. The only thing that we have is organizing these kinds of conferences where we can share and gain more and more experience. In addition, we have standards in place to ensure greater efficiency, and digitalization is already here, which the pandemic has accelerated. It is time to just face it and move forward.

Moderator: Mirza Yuniar

Thank you, Gouro, for your incredibly inspiring presentation. Some key takeaways from this session, if I may conclude, are that, firstly, the success and effectiveness of market conduct SupTech will primarily depend on institutional readiness regarding the strategies, structure, resources and skills necessary, as well as the culture, prioritization of projects with consideration of cost and benefits, data quality and governance, and the availability of unstructured data and representativeness, which are all crucial factors to consider. The SupTech strategy at the AMF is based on three pillars:

proactivity, proximity and agility. Secondly, data is the backbone of the supervisory process, whether offline supported by dashboard data process automation methods to analyze big quantitative data, such as like NLP based on consumer complaints, minutes of meetings, news and social media, and also AMF utilizes AI and machine learning for case analysis related to misleading information. Thirdly, collaboration, lessons learned and experience sharing between jurisdictions and supervisors will improve market conduct SupTech with various tools, methods and protection in the future. These efforts aim to improve consumer protection, financial system stability and the overall quality of financial inclusion.

Q&A SESSION

Moderator: Mirza Yuniar

Ladies and gentlemen, we will now begin answering questions submitted by our participants. As a reminder to all online participants, kindly post your questions in the Zoom chat box. Rest assured that the committee will select the most intriguing questions, and participants who ask these questions will have the opportunity to receive interesting merchandise. We would also like to invite the in-person participants to ask questions as well. When posing your questions, please remember to mention your name, department and institution. Additionally, kindly specify which presenter your question is directed to.

Question: Muhammad Nurjihadi, University of Technology Sumbawa (UTS)

It is interesting today that we are discussing customer risk and data management in the context of financial technology. However, out there, many people, particularly young customers, strongly believe that their data should remain inaccessible to anyone, including the government or other powerful agencies. They firmly believe that their data is safer when it remains inaccessible to others. This is why cryptocurrencies have gained popularity because they provide anonymity, promising the people that their data will not be accessed by anyone else. Today, we are discussing data management, how the government should control the data, and its supervision within the financial technology sector of any country. My question is: How do we respond to this phenomenon? Many people are against their data being accessed, analyzed or used in any way. How do you address and acknowledge their concerns?

Question: Arista, Consumer Protection Group, Bank Indonesia

It was shown in Gouro's presentation that the implementation of SupTech in AMF Canada involved both internal and external readiness, particularly within the industry. Our current focus involves the utilization of RegTech and SupTech for data collection. Could you elaborate on the strategy employed to engage with small financial institutions that lack advanced digital capabilities? These institutions often face challenges when it comes to submitting reports or data using RegTech. What solutions were provided for these entities?

Question: Sari, Consumer Protection Group, Bank Indonesia

If I understood correctly, you do not want to use a external vendors for the provision of tools. What factors led to this decision? Using external vendors is the most practical approach for Bank Indonesia to pilot something quickly. Additionally, I am aware that, like AMF, Bank Indonesia also conducts prudential and market conduct supervision. Do you employ the same or similar system or type of tools for these purposes?

Moderator: Mirza Yuniar

I will direct the first question to Jennifer, and perhaps I will direct the second and third questions to Gouro from AMF. Jennifer, could you please address the question regarding the government's role in data management? Nowadays, millennials often show resistance to being controlled and governed when it comes to their data.

Response: Jennifer Chien

Thank you for the question. I hope I am understanding it correctly. I think the question was around personal data, and that is the key difference. I mean, when we are talking about data and SupTech, we are not really talking about personal data, but the question is a very good one. First of all, the SupTech solutions that were being discussed are not really related to personal data, but if we were to discuss the broader question around new approaches to personal data, I do think that is a major issue related to digital financial services and FinTech. I did not get to touch on it that much in the first part of my presentation, but there clearly needs to be new approaches to data privacy and protection. This is a big issue in many countries, and the risks around data privacy and protection are enhanced within DFS and FinTech models because they rely so heavily on the use of data collection at an exponentially higher rate.

There is also an increasingly blurry line between what is personal data when you get into alternative data and big data, if it could be attributed to an individual. A lot of the traditional data privacy frameworks do not effectively cover a lot of these new issues around different types of data, different types of data analysis, and the bigger role that data now plays in a lot of financial service providers. I do think it is an issue. It is not as much a SupTech issue or use of data by the government, but it is an issue that regulators need to consider on how to update data privacy and protection frameworks appropriately, and there are emerging approaches to doing this. The general data protection and regulation in the EU is a good example, but there are other countries that have new approaches to data privacy.

Traditional frameworks for data privacy revolved around consumer consent, but new approaches consider whether there should be more limitations on what is considered legitimate use. Whether there should be principles in place on data minimization so the financial service providers or whatever institution that is collecting personal data can try to minimize the collection of that data. There are emerging approaches on how to treat big data and alternative data and their relation to personal data protections. Lastly, I would point out that it is not all bad. There are new approaches to open banking and new tools that are being used to give individuals more control over their data for beneficial purposes to access more financial products and services. As a consumer protection person, I am a little concerned about open banking and whether consumers are really ready for it, but there are new approaches being quite aggressively pursued to try to put in place open banking approaches and give individuals more control over their financial data for their own benefit. It is a very interesting and rapidly evolving area.

Moderator: Mirza Yuniar

Next, I would like to invite Gouro to respond to the second and third questions.

Speaker: Gouro Sall Diagne

Before I proceed, I would like to briefly comment on the first question. It is important to acknowledge that the data that young millennials try to keep hidden is already accessible. Although I did not have the opportunity to present this information, we already have a network that can identify individuals based on data shared on social media without requiring their personal information.

Moving on to the second question, which is a good one. We do encounter small institutions alongside larger, systemically important ones within our spectrum. To address this, we have developed a strategy where we categorize them accordingly. We have institutions that pose a risk to the system, which are the larger ones with higher standards. For smaller institutions, we provide assistance and develop a framework tailored to their needs. Instead of having a system in place, they manually fill out a form that can be found on our website. This approach allows them to submit the required information without adding an unnecessary burden. We try to minimize the information we ask for and utilize the data we already have on them. In some cases, we may request additional data. It is important to note that the form differs tailored to the size and complexity of the institution. We consider factors such as the nature of their business, whether it is highly complex or localized, or if they have no presence in our province. If the institution is small, we are more involved and provide step-by-step explanations. We also engage in pilot programs with them and encourage them to give their best effort. At the initial phase, we assess the existing information they have and provide guidance on refining it to improve the quality of the data. This is the process we follow for smaller institutions. I hope this addresses the second question before we proceed to the third one.

Regarding the vendor issue, let me clarify something. We utilize a tool provided by Microsoft as a vendor. We discussed Power BI and other related tools. We do use and combine these tools and various technologies in the development of SupTech. In order to achieve what we have accomplished, we developed our own in-house solutions to enhance our capabilities but it is fine to use external vendors. It is worth noting that the market for these solutions is not extensive, and each regulator has its own set of rules, principles or approaches. Therefore, despite the limited market, there is no one-size-fits-all solution. This is precisely why, at AMF, we decided to develop the necessary tools and solutions internally, utilizing the expertise of our well-trained data scientists, because the specific tools we require are not available on the market.

We indeed perform both prudential and market conduct supervision. We use the same system and approach for both aspects. In my presentation, I emphasized the importance of developing solutions that are agile and adaptable. In this particular case, we were able to utilize the existing framework for prudential supervision and create a form specifically for commercial practices. One of my colleagues was involved in this process, and we explored available options globally. Unfortunately, there were not many predefined forms available, so we constructed a form based on the same framework as the one used for prudential supervision. Additionally, we used the exact same flow and data warehouse to create a consistent dashboard.

Response: Jennifer Chien

I just wanted to add to that last question because it is a good one about vendors versus in-house. In the examples that we saw, speaking with the Australian authorities and in Rwanda, they did use vendors, and for the reason that we would expect, namely the lower cost. I think if you have lower capacity, it is an easier solution. I fully agree that there are limited options. I do think that it partly depends on the type of SupTech solution that is being implemented. In some of the examples on non-traditional market monitoring, there is more software available that you can leverage. Some of the bigger, more complex SupTech solutions we are talking about will probably require going in-house. Therefore, it really depends on the solution we are talking about, the context and if there is capacity to do it in-house. This was one of the bigger questions that we came across when talking to different countries. It was a big consideration, and not every country has the option to go in-house. I do not know how you feel about your resources Gouro, but I think a lot of countries feel like they do not have the resources.

The last thing I would point out is that, for those who may not know, there is the RegTech for Regulators Accelerator (R2A). They previously had a list of vendors for SupTech solutions for market conduct supervision specifically, and I hope I am not sharing confidential information, but they are expanding on this list. There is a new SupTech lab at the Cambridge Center for Alternative Finance, and because this is an issue—the lack of vendors—they are specifically working to try to expand the tracking of available vendors and share this information publicly. Hopefully, this will be a useful resource for all the supervisors trying to figure out what their options are. I believe it will be up sometime this year.

Participant: Akni Lupi Haryana, Payment System Management Department

What are the biggest challenges and critical issues to increasing digital financial literacy in emerging market countries, particularly in rural areas? What is the best strategy to solve these issues?

Second question: A few years ago, Central Bank Digital Currency (CBDC) became one of the most trending topics among central banks worldwide. What is your opinion regarding CBDC and the new risks that arise from the level of digital financial services? Will CBDC increase or address the risks?

Response: Jennifer Chien

The first point is a tough question. I mean, financial literacy and digital literacy are always challenging topics. They are two separate but related topics. There is a recognition that it is a complex topic, and you need a multi-pronged approach to address it. Whether it is financial literacy or digital literacy, there is more recognition now of the need for a combination of approaches. Financial curriculum is one, but you need a range of different approaches to really be effective, whether that is leveraging multiple channels to try to reach target consumers. In your case, you said rural consumers and lower-literacy consumers in remote areas, which is a challenge in Indonesia. There is a very good example of one of the main strategies that countries employ, which is to leverage government-to-person payment programs and integrate financial literacy messages into those. I think those kinds of channels can be used for financial literacy messages as well as digital literacy messages. Incorporating more behavioral insights into how you design messages in a targeted manner at the right time is critical. Though digital literacy is a challenge, you can also leverage digital channels. It is a benefit to leverage them to design short messages to consumers to try to convey a specific message. There are several examples out there of different service providers that are designing short messages using mobile phones timed to certain transactions that a consumer is undertaking to try to impart a message on them. For example, when receiving a transfer or remittance, 'consider placing this in a savings account'. Or if a consumer has a credit card balance, giving them some advice on whether to pay a certain amount back and what the impact on them will be. There are ways that digital channels can actually be leveraged to try to make financial literacy approaches to address financial capability more effective. In general, it remains a very complex issue that requires leveraging many different approaches.

I am not a big expert on Central Bank Digital Currency. In general, they are definitely a hot trend, but I am on the fence about whether I think they are really beneficial for financial inclusion. A few of the risks we can see are around data privacy and cybersecurity issues. It is a good point to tie back to the first question raised by one of the audience members around CBDCs, which create a digital record of transactions that can be leveraged by whoever is covering those transactions. There will also be the question of being able to track transactions using CBDC, what you can do with that data, and whether that deserves some level of protection. But it is quite early to really know what the risks of CBDC are as well as the benefits.

Response: Gouro Sall Diagne

I am also not an expert, but I will first touch base on the question of literacy. Canada is a land of immigrants, meaning we receive many people from emerging countries. At AMF, we are implementing exactly what you mentioned: using digital channels, including TikTok, to advertise the danger with crypto to young people, for example. For immigrants who have just arrived, we have developed a comprehensive literacy curriculum. We explain everything they need to know, such as credit scores, because in some countries they do not have a credit score system like we do in Canada. They may also be unfamiliar with the purpose of a credit card. Here, a credit card is a loan, but they may not understand that and end up in debt. We also provide this education in schools at the lower levels, ensuring that we share information with immigrants and help them gain access to financial literacy and digital literacy using simple language.

Regarding central bank digital currency, I will definitely say the same. We do not face the same financial inclusion challenges as emerging countries do. While they may explore using CBDC as an alternative, Canada's central bank is discussing this issue and considering its potential benefits, but we would not be the first to implement it. Currently, we are observing such cases in some emerging countries, but I do not think this is something we will see in the immediate future. Regarding Jennifer's point, we cannot definitively say that it will increase or address risks. However, we are certain that mishandling data privacy when utilizing new technologies could pose a risk to the entire financial system. Some central bankers even believe that it could pose a greater risk to a country's financial stability than resolving an existing risk.

Question: Adelia, Bank Indonesia Institute

Thank you, Jennifer. I am curious about one thing regarding the non-traditional market monitoring category of SupTech solutions, specifically dark web monitoring. Can you please provide more details on what dark web monitoring entails, who oversees it, and shed some light on its complexity and implementation costs?

Response: Jennifer Chien

Sure, I can share what we came across when we were speaking at different authorities, but I think Gouro has direct insights to share as well. As far as I understand, it is similar to the other types of non-traditional market monitoring that we talked about, like social media monitoring, despite the fact that it is on the dark web. There are services and software out there that you can purchase to perform dark web monitoring, and it is similar to what Gouro said and what we highlight in our publication as well. These tools are all similar in the sense that they are available, but they require supervised judgment and skill to determine which topics to track in order to utilize the results from the tools. The dark web is just another source. It is another source of potential information that you can draw from to try to draw insights that you interpret for market conduct supervision purposes. That is what we came across when speaking with different financial sector authorities. I cannot say definitively which of those non-traditional market monitoring tool sources are the most common, but I feel like people talk about social media monitoring the most. The dark web was just one of the examples, not necessarily the most common one.

The one other thing I would mention is that, though the services exist to perform dark web monitoring, we were told that they are more commercially available and are more geared towards consumers and financial service providers and less so for specific use by financial sector authorities. That is one of the bigger issues when we get to what the options are out there in the market. There are many more RegTech solutions than there are SupTech solutions, and that is, I think, one of the frustrating challenges. I always wonder whether the RegTech solutions can be altered in some way to be a SupTech solution, but I do not know. I would like to ask one of the RegTech providers about that, whether they can adjust what they are working on. But that is one of the drawbacks of the dark web monitoring services, they are not specifically geared towards financial sector authorities.

Response: Gouro Sall Diagne

AMF does not monitor the dark web. The only reports we receive are provided by financial institutions for dark web surveillance, and they are definitely geared towards financial institutions. We have not come across anything related to SupTech or anything of that nature. What we are currently observing are data reports received from our financial institutions. Yes, we utilize the data and include the reports as they are in our supervisory process to identify any patterns but everything we have seen thus far is primarily driven by the needs of financial institutions rather than SupTech.

I have the same question as Jennifer concerning RegTech attempting to fulfill SupTech requirements because the concept is the same. They strive to comply with our regulations, but I believe we lack sufficient funding compared to financial institutions. Hopefully, one day we will witness more SupTech advancements, and some RegTech companies may consider developing such tools.

For dark web monitoring, we do not have any SupTech solutions in place. We monitor social media, perform market surveillance and network monitoring, but not on the dark web, which can be intimidating for those unfamiliar with it. Therefore, the challenges we face, as highlighted in the presentation, such as people, processes and IT, come with significant cyber risk when implementing them, especially if we lack expertise in these areas, which is the case for us as we tend to be distant from them.

Question: Yudi Agung Nugroho, Financial System Surveillance Department

From your experience, what is the most challenging aspect of data collection, both internally and externally? Secondly, what kinds of APIs has AMF developed for collecting external data?

Response: Gouro Sall Diagne

The biggest challenge we face is the availability of data. We often start using a certain data source that is publicly accessible, but after a day or two, it becomes unavailable. These instances pertain to external data; we simply rely on publicly available sources for benchmarking and using this type of data, and it suddenly becomes unavailable. Regarding internal processes, when an analyst receives a complaint, they write it down and take notes differently. Even if we attempt to standardize it, the initial writing is done by people, making it difficult to consistently ask them to follow the same format every time. Another issue relates to voice data. We receive numerous complaints over the phone, and when trying to convert voice into data, there is a risk of losing certain information. It is simply not feasible; therefore, we need to handle these situations carefully and ensure that data is not lost. The more experience we gain with various accents, handwriting, spoken language, and note-taking, the more data we accumulate and learn from. This is where machine learning can assist in understanding associations and suggesting interpretations. For instance, it can analyze specific words or consider alternative words that convey a similar meaning. Grouping words together is another approach we employ to grasp the intended sense. These are the primary challenges we encounter both internally and externally. Additionally, we are not responsible for building the API. Some of the sources we rely on already have APIs. The Bank of Canada provides an API and vendors like Bloomberg also provide APIs that enable us to incorporate their information and insights into our tools.

Question: Yanto, Bank Indonesia Representative Office, Cirebon

Gouro, you mentioned experiences in several countries, especially in developing countries. Gathering external data is often associated with difficulties, such as dealing with asymmetric information on data that requires analysis to recommend policies. Based on your professional knowledge, what is the best way for developing countries to face this asymmetric information problem and mitigate the resulting risk of implementing false policies?

Response: Gouro Sall Diagne

I mainly talked about developed countries. I did not touch very much on emerging countries or asymmetric information. I am not sure that I really understand the point here because I am trying to link it to my presentation, but I cannot.

Moderator: Mirza Yuniar

In terms of data management or governance, when facing issues such as poor data quality or unexpected policies and recommendations, how do you mitigate these challenges? We are experiencing difficulties in this regard.

Response: Gouro Sall Diagne

Okay, I believe the confusion lies in the distinction between developing countries and other types of countries. The same issue arises whether it is an emerging country or a developed country. When collecting data from financial institutions, we collect information to address supervisory requests. However, some financial institutions may misunderstand the purpose behind the inquiries. There can be errors or intentionally misleading information, since we have all kinds of financial institutions out there. While over 80% adhere to the rules, some attempt to present information in a certain way. The problem with data collection is ensuring we cross-reference data from multiple sources to establish reliability. This is a big advantage of having SupTech, as it allows us to centralize and expedite cross-referencing and examination of the data, highlighting any anomalies and determining their implications on increasing or decreasing trends, and so on. Identifying topics and collecting data sets are key. Therefore, it is vital to have supervisors who possess a deep understanding of the institutions they oversee and the interactions between variables. Discrepancies may arise between the figures and the qualitative data received. For instance, a bank may claim an increase in market share, but we observe a decline. Thus, before drawing conclusions or making decisions, it is essential to ensure no misleading information. In our process, the first step after collecting the data involves an automated cross-check that evaluates historical and expected data. We expect to identify trends, and if anything unexpected arises, we can return the disclosure and request clarification, potentially due to an error. If resubmission is required, the person must explain to the supervisor why, with supporting data. This serves as another form of data supervision. We must exercise great caution regarding data quality, which should be built up over several runs. It is not a matter of selecting and collecting data in a single year and relying on it entirely. Instead, it involves ensuring the availability of historical data sets and understanding how the data behaves within the economic environment. Such insights help supervisors understand the present and future behavior of the data.

Moderator: Mirza Yuniar

Thank you, Gouro, for your responses. Ladies and gentlemen, our discussion has stretched wide and deep, from foreign policy and regulation topics to market conduct SupTech data. Unfortunately, due to time constraints, we have to end this panel session. We would like to give the opportunity to Mrs. Jennifer and Mrs. Gouro to deliver their closing statements.

Closing Statements:
Speaker: Jennifer Chien

Thank you. I just want to express again my appreciation for inviting me here. It has been a very interesting discussion. I think it is exciting to see the increased focus on SupTech, especially for those of us who work in financial consumer protection. It is obviously a critical tool to start considering how to leverage with all the caveats in mind around building up in an iterative fashion and considering all the underlying implementation considerations that we need in place to really be thoughtful about implementing SupTech and rolling it out in a targeted manner. I wish everyone well in their SupTech journey, and I hope that the information in this session was useful to everyone.

Speaker: Gouro Sall Diagne

Thank you very much for this opportunity. It is truly invaluable for supervisors like us to have a place where we can share our initiatives and knowledge. Now, more than ever, collaboration is crucial as we navigate the challenges of operating within new regulations and ensuring that the insights gained from our data-driven journey are beneficial. I want to emphasize that I sincerely hope the lessons we shared today will help you as you embark on your own journey. It is a unique experience, and while some may fall into traps along the way, others will undoubtedly achieve success. Our aspiration is that the information we shared today will benefit everyone present. Thank you.

Moderator: Mirza Yuniar

Thank you again, Jennifer Chan and Gouro Sall Diagne, for a great presentation and for your comprehensive responses to all inquiries from our participants. It is a pleasure to have you with us today. Let us give applause to our participants and to all of us. Ladies and gentlemen, this is the end of the first panel session today. I would like to hand over to our MC for further announcements about the next session. Stay tuned, because the winner of the best question will be announced tomorrow.

PANEL SESSION 2

STRENGTHENING CONSUMER PROTECTION IN THE DIGITAL ERA: BANK INDONESIA POLICY AND EXPERIENCE

Ricky Satria
Director of SMEs Development and Consumer Protection, Bank Indonesia

MC

Good afternoon, everyone, and welcome back to the Bank Indonesia Institute International Seminar, New Era for Consumer Protection: Use of Digital Innovation. Thank you for staying with us, and we believe you all feel refreshed after the break. Now, let us begin our second panel, and our moderator for this session is Jasmina Mokhtar, Deputy Director of the Financial Capability and Inclusion Department in Bank Negara Malaysia. Let me invite our moderator, Jasmina Mokhtar, to join us on stage. Ladies and gentlemen, please give her a round of applause.

Moderator: Jasmina Mohd Mokhtar

Thank you, Vanya. Assalamualaikum wa rahmatullahi wa barakatuhu, and a very good afternoon to everyone present today, both physically and virtually. Ladies and gentlemen, from this morning's session, we could see that technological innovation is a powerful force capable of swiftly and skillfully disrupting existing structures. The financial sector, too, is no stranger to this. In fact, the growth of digital financial services has taken center stage in the financial inclusion initiatives of numerous countries. It serves as evidence that financial inclusion models incorporating mobile phones and digital financial services can support overall economic growth and help achieve other sustainable development goals (SDGs). Moreover, the role of data, technology, and innovation has never been more important. Therefore, conducive regulatory environments and supervisory practices are important to enable significant innovation to an entire digital financial services ecosystem. We can see that many regulators are continuously strengthening their consumer protection, and many have turned towards SupTech tools and solutions to improve their surveillance and enforcement capabilities. For panel two, we are very fortunate to have two highly distinguished speakers, who will provide further insight in this area. We have Ricky Satria, the Director of the Consumer Protection Group at SME's Development and Consumer Protection, Bank Indonesia, and Maria Lúcia Leitão, the Head of the Banking Conduct Supervision Department at Banco de Portugal.

Let me first introduce the first speaker of this panel, Ricky Satria. Prior to his current assignment, Ricky has been involved in various areas related to the microprudential sector, internal management, transformation sector, microprudential financial inclusion, and finally the Payment System Department at Bank Indonesia. Since 2016, Ricky has been working on issues regarding risk-based Special Purpose Vehicle (SPV), agent banking, non-cash Government-to-Person (G2P), the Financial Action Task Force (FATF) Regional review action, Quick Response Code Indonesian Standard (QRIS), and the digitalization of G2P. He holds an MBA in Global Banking from Birmingham University in the United Kingdom. In this session, we are very excited to hear Ricky's presentation on strengthening consumer protection in the digital era with BI policy and experience. The presentation will cover the framework of consumer protection and market conduct supervision, as well as the payment system blueprint, including QR code and mobile banking.

Before I invite Ricky to the stage, I would like to give a brief message on housekeeping. The presentation and speaker allocation will last approximately 45 minutes, followed by a Q&A session and discussion after the second speaker, which is Maria's session. Additionally, the overall session for Panel 2 will conclude around 5:00 PM Bali time. Without any further delay, let us warmly welcome Ricky to the stage.

Strengthening Consumer Protection in the Digital Era: Bank Indonesia Policy and Experience

Speaker: Ricky Satria, Director of SMEs Development and Consumer Protection (DUPK), Bank Indonesia

Thank you, Jasmine, and good afternoon, audience. This is a very challenging time after having a delightful lunch in Bali. I hope you still have a brief moment to concentrate on what we have planned for the afternoon session. We will begin the session with what Jasmina previously communicated regarding the world of innovation. This is related to the widespread digitalization and transformation that has become common over the past five years. This is also related to our current situation in Indonesia regarding financial inclusion. At that time, five years ago, we were below the global average. Once Covid hit, our banks started a global survey regarding financial inclusion. However, our colleagues from Financial Service Authority (FSA) informed us that the current situation is slightly similar to or above the global average. We also have a directive from our President to achieve 90% financial inclusion in 2024. No wonder Google and Temasek predicted that our digital economy, driven by digitalization, digitization, and transformation, could reach $133 billion in 2025. This projection makes sense when first considering our demographic situation and population. More than half of our population consists of Millennials and Gen Z, which represent unique cultural segments. We noticed that they need entertaining and personalization. The way we provide the service to this market is solely through innovation, with one aspect being data and the other digitalization. They want seamless integration of their financial activities with their daily activities. The second observation we made is that all economic players, including Bank Indonesia, the Government, and foreign entities, focus on SMEs in the micro and small segments, mostly through cash payments. We have counted over 60 million individuals in this segment, representing a significant untapped market. If they continue to experience financial exclusion, it will hinder our ability to achieve the economic growth necessary to fulfill our goal of becoming a digital economy and trying to narrow the imbalance between the rich and the poor.

Opportunity: Big Market

In reality, Millennials and Gen Z accept the cash but they need a change in the cash. When asking for a loan, they used to ask family or friends but now it is done in a digital way through loan sharks. In the last year, we found many illegal P2P lenders because, for the formal financial sector, it is difficult to reach Millennials and Gen Z through the conventional approach. Therefore, digital innovation can facilitate that.

Opportunity: Digital Population

Regarding the digital behavior in our population, there are more mobile connections than our population. Sometimes we have one, two, or three smartphones. Indonesia is the first country where the population changes their mobile phone three or four times a year. It is the highest in the world. When the Apple iPhone 13 launched in California, Indonesia had it the following week. That is our culture. Our internet users spend over 8 hours playing online, including social media. A lot of data is available now, including data that people do not wish to share, such as their date of birth. However, if someone posts Happy Birthday on their Instagram, everybody will know it. Something we are quite happy about is that more people are making digital payments, especially since Covid, which is the main actor that pushed us into digital payments. It is now the more productive age where Millennials and the Generation Z perform digital payments. Finally, crypto assets. In less than three years, there are already 11 million additional individual customers, with an average age mostly belonging to the Generation Z and Millennials.

Opportunity: Smartphone as a Game Changer

This new phenomenon also brings new threats, with faster banking transactions from our financial sector, eventually culminating in anonymous crypto transactions. However, the recent situation in the cryptocurrency market likely influenced customer perspectives, especially regarding anonymity. The downfall of Luna crypto, a stable coin, had an impact on the crypto asset situation in our country. Recent trends are primarily due to increased smartphone usage. This has been a game changer. The formal financial sector does not require customers to invest in profiles or devices to interact and carry out their daily financial activities. Previously, banks used to invest in cards and electronic data capture (EDC) devices and provide SIM cards, but now there is no longer any need for such investments. With mobile phones, we can now connect daily for non-financial activities and access information easily. We have also launched digital payments in the last two years, such as BI-FAST and QRIS. Now, people can easily make transactions anywhere and anytime, with BI-FAST allowing transactions of up to a maximum of Rp250 million and QRIS allowing transactions of up to Rp10 million.

Opportunity: Indonesia Payment System Vision 2025

In 2020, the Bank Indonesia Board of Governors introduced the Blueprint for the Payment System. We needed to reinforce the integration of the national digital economy and finance, foster digital transformation within the banking industry, and ensure interlinkages between FinTech and the banking industry. We still encourage banks to be the first player and the rest to connect to the banks because we have to trust businesses, and banks have the DNA of trusting our business. In these innovations, we need to balance innovation and risk, customer protection, integrity, as well as financial stability. Above all, we need to increase our national interest through digitalization, digitization, and financial transformation.

Five Initiatives of the Payment System Blueprint

There are five pillar initiatives in the Payment System Blueprint, but we mostly focus on retail, such as QRIS, BI-FAST, and open banking through the Application Programming Interface (API). The API is expected to experience substantial growth in the next couple of years, introducing new concepts like embedded finance rather than open banking. Banks can now provide support services behind to support the front end, while non-bank financial companies can offer financial services to customers, thanks to the API. We will see these changes in the next one or two years, and afterward, we will strive to improve our monitoring of the situation, including customer protection. It is essential to establish data for analysis and projection of future events.

Opportunity: Rapid Growth in Digital Transactions

After reviewing what transpired in the last 2.5 years, we can see a significant outcome concerning digital banking and e-commerce. People can now conveniently make payments using electronic money and QRIS, which makes Bank Indonesia happy. Additionally, we anticipate enhanced interconnectedness between the real sector and the financial sector, promoting the growth of the digital economy. We also aim to realize what Google projects for our digital economy in 2025.

Big Risk: New Threat is Growing

Notwithstanding, alongside the various positive outcomes, innovation also introduces certain risks. Since we moved to digital payment and digital financial services, we map the situation, and everything within the non-financial and financial sectors connected to the smartphone, which is the telco-owned infrastructure in the telco sector and not regulated by the financial sector. We have over 60 mobile banking and internet banking services, more than 35 SMS banking providers, over 75 QRIS players, more than 25 BI-FAST players, and more than 2.4 million agent banks. We have the largest agent banks in the world and are connected to over 100 million customers through our current data center. We have more than 150 million connected digital payments, including G2P recipients and SMEs. That is why the collaboration between the two sectors needs to focus on the new threats emerging.

Challenges: Cross-Cutting Authority with Telco

When we see that a digital payment customer is a telco customer, we utilize the mobile number identifier and the proxy account. We employ the OSMS data package to deliver financial services. We share a common threat; therefore, we need to collaborate. In fact, many others may have had similar experiences. For example, purchasing a mobile number without a national ID or registering for GoPay using a mobile number without an ID. However, this creates additional issues if something goes wrong.

Big Risk: Fraud and Cyber Threats

Why are there new threats? Mostly because we concentrate on digital finance and services, leaving us vulnerable to social engineering attacks. While traditional attacks typically target ATMs and cards, the new ones focus more on PC malware, phishing and mobile attacks. This is the new threat we will face in the next couple of years, therefore we need to prepare. We cannot rely solely on the same defense strategy that most of the country, including Bank Indonesia, uses. Do this, do not do that, then educate. The fraudsters have the knowledge, skills, and money to invest, and they are smart people. If they were not smart, we would not be sitting here discussing new threats. The more detailed the regulations, the easier they become obsolete as the fraudsters can simply read about them. One thing we have discovered about this new threat is the presence of both fraud and scams in social engineering.

Big Risk: Social Engineering Methods

The method of fraud is SMS or WhatsApp spam, which begins with a message from an unidentified number, stating that a prize has been won with a link. Everybody loves a surprise, right? And victims become very surprised when they receive a lottery from a specific institution for Rp100 million. Alternatively, someone might receive a call informing them that someone they know has been injured in the hospital or that there has been a change in the administration cost at the facility. This can involve fake websites or fake applications that offer accounts to gather data, take over one-time passwords (OTP), placing viruses on mobile phones, and so on. Now, there is a lot of fraud with fake websites, fake call centers, fake mobile banking applications, fake modified receipts of the transactions, fake information, fake social media, and fake lottery. Consequently, we notify our department that we must prioritize this one for the upcoming year.

Big Risk: Facilities for Fraud are Open

Here are some examples we found and are currently discussing with the industry.

Big Risk: Case of Social Engineering

This next slide presents an example of fake information using WhatsApp and SMS, which always come from unknown numbers, including a link asking users to click on it. Last week, we discovered a link at the bottom of the screen that informed us of the change in charges for monthly financial activities. Asking users whether they want to be charged per transaction or per month for transactions. Somehow convincing users to choose an option before they are prompted to provide a username and password. It happens and originates from an unknown number.

Phishing through web/link scams is recently one of the fastest growing social engineering cases. Here are call center examples of phishing, which is a real fraud case from Bank Central Asia (BCA), where fraudsters were able to modify a Google search. When someone searched for the nearest branch of the bank, a fake link or number popped up, sending them to a call center to phish for information.

Big Risk: Facilities for Fraud are Open

Here is an example of a botnet, another fraud found last month. A botnet is a number of internet-connected devices, each of which runs one or more bots. Botnets can be used to perform distributed denial of service (DDoS) attacks, steal data, send spam and allow the attacker to access the device and its connection. The owner can control the botnet using command and control software. There is a facility on the internet for free SMS. Through this, they can send a virus, steal someone's data, send spam, and allow an attack to access information from applications. All the threats here are still low; however, we still want to tackle this together with the industry thoroughly and strategically.

Impact of Digital Risk for Providers

What is the impact of increased digital financial services and threats? The risk of fraud from rapid digitalization not only impacts and harms consumers but also the service providers. The Forrester Consulting Survey revealed that the most common issues were account switching and identity theft. Other threats included false account registration and data manipulation. When visiting a specific institution, especially in Indonesia, individuals are required to provide identification. In this case, people often surrender their national ID. Can we ensure that whoever asks for the ID does not capture the photo, alter it, and use it to open an account with facial recognition? FinTech uses national ID cards to open accounts. Consequently, the industry faces various impacts, affecting both our people and brand reputation. This includes increased overhead costs and a decline in customer satisfaction. Our aim is to increase financial inclusion and the digital economy, which is why we must concentrate on addressing these threats and finding solutions for them.

Challenges: Lack of Financial Capabilities
Challenge: Literacy Levels and Consumer Empowerment

When exploring our limited financial capabilities, several institutions, including Bank Indonesia, the Indonesia Financial Services Authority (*Otoritas Jasa Keuangan*), and the Ministry of Trade, have already conducted consumer literacy surveys. We are in the middle, and we need to increase the capability to understand how to use financial products and services in the digital era.

Challenges: Financial Literacy and Fraud

During Covid, we saw a significant increase in complaints concerning the utilization of E-wallet and E-money. The threats escalated due to more individuals staying at home, relying on the internet and their devices for various activities. One of the most prominent observations from the Grab Defense online survey was the widespread adoption of digital payments for purchasing products.

Consumer Protection Strategy
BI Role in Consumer Protection

We currently have in Bank Indonesia central bank regulators with the authority to protect our industry and our people. We focus on trying to reduce the asymmetric information and power imbalance between financial providers and customers initially, while also facing new threats. We need to find a strategy on how to do it. Regarding the customers, we need to educate them properly. Concerning the providers, we have issued guidelines on how to implement minimum customer protection, and we will conduct regular checks.

Strategy Actions in Consumer Protection

Currently, we have at least four factors in our customer protection approach. Regulation is there, which we update regularly based on the current situation. Education is challenging with over 190 million out of 250 million people requiring education. This job is not only for Bank Indonesia, other banks, or FinTech, but also for the customers themselves. We also provide complaint handling, as well as financial services and market conduct. This is the topic we are discussing today, namely how to modernize these services? This is highly relevant to our country due to the large number of players, products, and customers we have.

Action I: Strengthened Regulatory Framework

This is our type of regulation, covering the scope of financial services and providers. Customers adhere to international principles and are entitled to complaint handling. There is reporting and supervision. We provide guidelines to our internal supervisors, the industry, and guidelines for education.

Action II: Financial Literacy and Education

We are striving to modernize education alongside our conventional, traditional approach to reach the target audience. We are asking all the national brands, focusing on relative topics. We measure the understanding of the people. We invite and collaborate with the industry and relevant government ministries. Now, we are trying to move the digital channel, especially focusing on the Millennials and Generation Z.

Action III: Effective Complaint Handling

Regarding complaint handling, we also have our chatbot Lisa, but we really need to upgrade it because the data is quite limited. We also need to enhance its natural language capabilities. We plan to enable the chatbot for customers to send documents, visit one of our office branches, access the website, send emails, and mail letters. Until now, we have been handling customer complaints manually, and we have received numerous complaint letters.

Action IV: Market Conduct Supervision

Finally, market conduct SupTech. We try to eliminate or reduce fraud, abuse and misconduct by monitoring the intelligence. Bank Indonesia performs risk-based market conduct supervision to ensure financial service providers' compliance to consumer protection principles. That is why we perform web scraping to conduct thematic reviews of trends within specific timeframes. Additionally, we deploy mystery shoppers, and implement provider inspections, analysis of on-site data, and consumer research. However, our department currently lacks the necessary resources.

Action V: Collaboration

We also collaborate with other industries, both domestically and internationally, including relevant ministries, such as the telco association, law enforcement, FinTech associations, and other regulators.

Progress in Market Conduct Supervision
Market Conduct Supervision: Current State

Regarding our achievements to date, we have conducted supervision like our previous methods, covering banking and payment supervision, while incorporating thematic reviews. Previously, we focused on the terms of reference, particularly in e-money, to see whether it was enough or not. The outcomes thus far have been quite satisfactory. We have also increased the frequency of our mystery shopping activities, and we will continue to do so in the coming years.

Market Conduct Supervision: On Progress

We are currently working on modernizing our supervisory technology, including data collection, data analytics, data storage and management, as well as data visualization. We are also focusing on the task management regimen and time resource allocation. Moreover, during our research and discussions with other industry stakeholders, we concluded that SupTech is not an IT operation; it is a business operation. We can build and expand it without interfering with IT, core banking, or the institution because we are working on the front end—putting the tools through automation. If not, it takes time for us to build the technology needed for supervision.

SupTech Development: Framework

In general, this is our framework for regular reporting from the banks, electronic players, fund transfers, money exchanges, and payment gateways—we have it. However, the way we analyze is still manual. The way we currently access and pull the data from the data warehouse is also manual, but it will become automated. When we receive a letter of complaint in PDF format that is sent to Bank Indonesia, our staff must read each one individually, which takes time. Afterwards, it goes to incident reporting. We also receive emails and calls to our call center. For the new components we introduced (we are window shopping now), such as social media scraping, the letters and the emails we receive must be converted into a standard format. In this case, there is no need for a human interface. It is resource-only to monitor and ensure they are the same. This technology, called Optical Character Recognition (OCR), has emerged in the market within the past five years. With OCR, data can be inputted directly without the need for a data warehouse. We have the option to either generate our own data or store it in the cloud. Once the data is available, we utilize various tools, including Natural Language Processing (NLP) and machine learning, to create a risk matrix visualization based on expert input received early in the morning. We can have a great visualization as a tool for the development of risk-based market conduct. Within this framework, it is important to determine whether we should focus on the product or identity aspect. Which of these areas should we focus on based on the framework?

Here is the flow of our framework. We have market monitoring, timely market-level insight, and more effective supervision through SupTech. We anticipate a slight shift in PSP behavior, as well as increasing data requirements due to digitalization.

However, it is important to consider the associated costs for the industry. Meanwhile, the market demands personalization and entertainment. Many individuals aspire to develop their super apps on the same platform to create more sophisticated and personalized products for their customers. They can serve any stakeholder requesting the data, which is why we encourage accelerating the RegTech industry. Ultimately, we aim to change consumer outcomes, enhance their capabilities, and protect them from any potential threats.

Future Initiatives
Challenge: Regulation Alone is Not Enough

Overall, we have a new function and a new group at Bank Indonesia, and there are many things we need to put in place when it comes to risk. We believe that regulation alone is not enough because the more detail we include in regulation, the easier it becomes for a fraudster to read it and find a loophole. Fraudsters can find loopholes in all countries, including Indonesia, because we are a rule-based country and everything is incorporated into the rules and regulations, which can quickly become obsolete.

Future Initiatives: More Active Role

This slide shows the initiatives we believe we can take to protect our industry and our customers, first by trying to minimize the fraudster zone. There are at least seven initiatives. First, to synchronize smartphone numbers within the financial services industry and the telecommunications sector. Second, we aim to create a framework and platform that facilitates the sharing of fraudsters' numbers with all financial services. We can freeze the number, hold funds, and return them to the customer. If fraud is committed against a specific bank, they can alert all other banks, institutions, and financial service providers to prevent further fraud. We also want to communicate through our mobile phones and via Apple and Google. When institutions upload their applications to the PlayStore, the industry must ask to see the regulator's letter of approval. We want to standardize the call center number, be it a landline or mobile number. This is to ensure that people can easily be notified through the call center. We also want to standardize the mechanism for changing mobile numbers. Sometimes we need to change our mobile number for various reasons, and there should be a standard mechanism to change the mobile number between the telco sector and financial services. Additionally, we aim to reformulate virtual accounts, changing the rules of the game regarding virtual accounts because the bank is unaware of the sub-account behind the virtual account. If there is fraud on a virtual account, we can easily resolve it. Furthermore, we encourage the industry to implement RegTech when developing personalized super apps for their customers. We also need to modernize data privacy. We already have a draft Data Privacy Act in financial services but we can do more while awaiting approval by Parliament. As we move towards a more digital economy, we need to have a digital identification system for the payment system.

In terms of education, we are trying to modernize the way we deliver education through various online media platforms, such as TikTok, accompanied by targeted offline segments in collaboration with the industry and a national campaign that can empower over 180 million people. We have also upgraded the chatbot to enhance complaint handling and our dispute resolution platform for the industry's digital payment platforms. For the banks, e-money, e-commerce, and Bank Indonesia's crypto exchange, we have not reached an agreement to exchange with the financial services. We should have the platform.

I would like to conclude with this: it takes months to find a customer and seconds to lose one. Your most dissatisfied customers are your greatest source of learning. Customer service is not a department; it is everyone's job. Not just one department or industry, but all of us here at this seminar too. Thank you.

Moderator: Jasmina Mohd Mokhtar

Thank you, Mr. Ricky, for the excellent presentation. We look forward to seeing what is coming with the Indonesian Blueprint and its potential. With the current demography being mostly Millennials and Generation Z, we can see that digital financial services (DFS) would be the way to go within Indonesia, given that they need a balance between risk and reward. This will be the generation that utilizes digital financial services, but we see the big risks, especially with social engineering. Interestingly, when we look at the sample of cases, it is similar to what is happening in Malaysia. One of the interesting facts is that Bank Indonesia is also moving towards SupTech, and this is an area we would like to see more of.

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MARKET CONDUCT SUPERVISION AND THE ROLE OF SUPTECH FOR FINANCIAL CONSUMER PROTECTION: FRAMEWORK AND IMPLEMENTATION ROADMAP

Maria Lúcia Leitão
Head of Banking Conduct Supervision Department, Banco de Portugal

Moderator: Jasmina Mohd Mokhtar

We are now in the second session of Panel 2. Maria Lúcia Leitão, we will be listening to your insight on the market conduct supervision of Banco de Portugal and the role of SupTech. It will cover the approach to market conduct supervision, including digitalization initiatives, the consumer protection framework, SupTech, and financial literacy. As an introduction, Maria Lúcia Leitão is the head of the Banking Conduct Supervision Department at Banco de Portugal. She is also the chair of the International Financial Consumer Protection Organization (FinCoNet) as well as the chair of the Steering Committee of the Portuguese National Strategy for Financial Education. Maria is also a member of the Advisory Board and vice chair of the International Network on Financial Education (Organization for Economic Co-operation and Development's (OECD) International Network on Financial Education (INFE)[3]). She received her postgraduate degree in European economics from the Católica Lisbon School of Business and a bachelor's degree from the Lisbon School of Economics and Management. Without further ado, Maria, the floor is yours. You have 45 minutes to present, and we will then start the Q&A session.

3 INFE is part of OECD project to promotes and facilitates international co-operation between policy makers and other stakeholders on financial education issues worldwide. The OECD INFE also established to provide a platform for governments, policymakers, and other stakeholders to share knowledge, best practices, and research on financial education.

Market Conduct Supervision and the Role of SupTech for Financial Consumer Protection: Framework and Implementation Roadmap

Speaker: Maria Lúcia Leitão, Head of Banking Conduct Supervision. Department, Central Bank of Portugal (Banco de Portugal)

Thank you very much, ladies and gentlemen. Good morning from Lisbon. Let me start by extending a special greeting to Doni Primanto Joewono, Deputy Governor of Bank Indonesia, Yoga Affandi, Head of Bank Indonesia Institute, and Ariana Abubakar head of Bank Indonesia Institute Academy Development Group. Hopefully, I pronounced everyone's name correctly. It is a great honor to participate in this relevant and timely seminar and to have the opportunity to share the Bank of Portugal's experience on market conduct supervision, focusing on our approach to the digitalization of financial services, and, of course, on SupTech. Additionally, we will be highlighting the main aspects of the Bank of Portugal's financial literacy strategy, and then we will discuss FinCoNet and SupTech.

Market Conduct Super(Tech)Vision

It is a great pleasure to draw everyone's attention to the Bank of Portugal's approach to market conduct supervision. Firstly, we would like to begin by explaining our strategy and how we implement market conduct supervision, as SupTech is not only about technology, but mainly about supervision. Furthermore, SupTech should be driven by its supervision requirements and options. We have prepared the presentation through which we want to address and remind everyone because it is crucial to always take into consideration that market conduct supervision is more important than ever, as we all know.

We also would like to explain the Bank of Portugal's approach to market conduct supervision. We have been implementing a long-term strategy, which started in 2008 and we have already done a lot of important work. We had to consider all this around 15 years ago and have addressed different challenges along the way. One that is important is the digitalization of financial services. The Bank of Portugal has also had to adopt its strategy to incorporate the challenges brought by digitalization. One of those challenges is to incorporate the need to improve digital financial literacy of the Portuguese population within our national strategy on financial education. The Bank of Portugal has also adopted SupTech projects. We will refer to important projects already being implemented and used by our department, as well as those working on SupTech at FinCoNet.

Why Market Conduct Supervision is Important

Market conduct supervision is important for several reasons. We all share the perspective that there exists an unbalanced relationship between institutions and consumers, as well as an asymmetry of information between them. Now that market conduct supervision has started, it is pulling the tension to improve disclosure information. In our perspective, disclosure information should consider the advertisements for financial products. Also, pre-contractual information regarding the individuals involved in the contract is included to protect consumers and provide them with knowledge about the commitments undertaken by both the institution and consumers. Additionally, information about the duration and lifetime of the contract is provided. But we now also include the disclosure information, and this is something that we have been understanding very well during the last couple of years. Disclosure information is not enough, and it is very important that institutions are aware and committed to complying with a set of conduct duties. At the same time, we also know that in order to balance this relationship between consumers and institutions, there is a need to have and develop a comprehensive legal and regulatory framework to assign rights to consumers, which means imposing duties on financial institutions.

Market Conduct Supervision: A Comprehensive Approach

However, mainly influenced and driven by digitalization, market conduct supervision has to adopt a broader and more inclusive market conduct approach. We all know that besides regulations concerning disclosure of safe practices, there is a need to regulate responsible lending practices and ensure institutions offer support in fulfilling the sale of financial products. Also important is product oversight and governance, which means institutions need to consider the target group when selling a specific product and assess if that product is the most suitable and adequate to that group of consumers. We also need to have an inclusive approach to sales incentives in order to protect consumers. All these topics, which are very important in the regulation of market conduct supervision, have to be adapted an implemented when financial products are sold through digital channels. There is also a need to take further legal and regulatory initiatives to guarantee consumers have the right to safe access to services when they are sold through digital channels. This implies the necessity for a more inclusive market approach.

The Banco de Portugal's Approach to Market Conduct Supervision

To explain our approach, we must first mention the mandate that Bank of Portugal received in 2008. This mandate is very comprehensive, granting the Bank of Portugal a set of powers over markets, deposits, payment services, and credit. Additionally, the implementation of this mandate has been carried out through the Banking Conduct Supervision Department. It is important to note that the Bank of Portugal has been entrusted with the power to enforce banking conduct supervision, encompassing the regulatory authority. This means that the Bank of Portugal can issue regulations on specific matters, such as the disclosure of information, for instance. But it also assigned to the Bank of Portugal oversight power to conduct, for instance, inspections, mystery shopping, or other initiatives to oversee whether institutions are compliant or not with rules and regulations applied to that specific sector of the retail banking market. The powers assigned to the Bank of Portugal also include enforcement power. From our perspective, the enforcement power is very important because it assigns the Bank of Portugal the power to act against an institution and to also fine the institution if the rules broken are considered to be important, with a negative impact on consumers through the issuance of administrative proceedings.

Market Conduct Supervision: Also Acting on Demand

The Bank of Portugal has also decided that apart from its regulation, oversight, and enforcement on financial institutions, it was important to promote financial inclusion and financial literacy to empower consumers. Since the inception of the implementation of our mandate on market conduct supervision, we have been implementing a strategy to promote financial literacy of the Portuguese population. In a nutshell, our approach considers three main pillars: regulation, supervision, which includes not only oversight but also enforcement, and then financial literacy.

Market Conduct Supervision Goes Digital

As mentioned before, the Bank of Portugal market conduct supervision faces challenges brought by digitalization, and in order to address those challenges, we had to define a strategy. First, that strategy took into consideration that market conduct supervision has to ensure institutional compliance with the applicable legal and regulatory framework, *regardless* of what channels are used for the delivery of financial products and services. Since 2020, Covid-19 has increased the pace of digitalization dramatically of financial services, payment services and credit services. Furthermore, market conduct supervisors shall be ready to overcome the challenges brought by digitalization of financial services. We started addressing and anticipating those challenges 10 years ago with a strategy that considered several lines of action.

Tracking Technology Developments

One line of action we decided to implement, which requires a significant amount of our time, is to maintain close dialogue with the industry. Dialogue with the industry aims to understand the various options available and the different choices that institutions need to consider. We also decided that this strategy should involve active participation in international forums. For example, we are actively engaged in the work of FinCoNet, which focuses on market conduct supervision. We have decided it was important to prepare our staff and to have our colleagues motivated and able to learn because tracking technological developments also means being ready to learn, learn and learn every day. We need to follow the market, understand different technological options, and try to compare those options with the legal and regulatory framework applicable. In 2017, the Banking Conduct Supervision Department decided to create a specific unit dedicated to monitor its provision of products and services through digital channels, while also establishing different agile teams to create interaction and information between the different divisions of the Banking Conduct Supervision Department.

Monitoring Provision of Products and Services

The next line of action established, there was a need to monitor the effective provisions of products and services by financial institutions in order to have a close understanding of what all institutions in the retail banking markets were providing to the consumers. We also launched dedicated surveys in 2016 and 2018. Since we were at the start of implementing digitalization for selling banking products, we conducted a survey to ask about the provision of services that institutions were offering to customers through digital channels. Moreover, an important decision we made was regarding the levels of consumer adoption and effective use of different digital channels. We also had to inquire about the growth prospects and understand the limitations and obstacles that institutions were considering. It was important to gather feedback from consumers regarding their adoption of the digital channels available from institutions. Those were some of the questions that were of great importance to us. We have not launched another survey since 2018 because we now have other options to assess banking products for digital channels.

Removing Barriers

It was also important for us to take the initiative to assess which barriers were preventing the commercialization of financial services through digital channels. One important barrier was the opening of current accounts through digital channels. Prior to 2017, the Bank of Portugal did not permit the use of digital channels to open credit accounts, which also limited access to credit products and payment services, marking the beginning of everything. However, in 2017, through close collaboration with the industry, we recognized the need to change the regulatory framework governing the opening of credit accounts. Consequently, we decided to make amendments that allowed, for instance, the use of assisted video conferences. Presently, the Bank of Portugal, in close cooperation with the institutions, regularly evaluates innovative solutions to verify if there is a need to change and amend the applicable regulatory framework, allowing institutions to offer all banking products through digital channels.

Ensuring Technological Neutrality

Another line of action was to guarantee to monitor the way institutions were providing services for the digital channels in order to assess if the principle of 'same business, same risk, and same rules' were also compliant with the legal and regulatory framework because for same business, same risk, and same rules, the same supervision has to apply. The principle of technological authority is very important. A consumer needs to have the guarantee of the same rights when they buy products through digital channels as they would through traditional over-the-counter channels. Then, in 2017, the Bank of Portugal issued a circular letter requiring institutions to report to the Banking Supervision Department on the provision of consumer credit via digital channels. There is then a reporting obligation from all financial institutions when they grant credit, and we focus our attention on credit products. In advance of launching credit products through digital channels, the financial institution must send it to our team with all the features of the product and show us they are compliant with the legal and regulatory framework applicable. We assess that, followed by bilateral meetings with institutions to confirm that all the different rules applicable are being implemented adequately.

In 2020, based on the work we conducted from 2017 onwards and backed by the experience gained from 2017 until 2020, we published a set of best practices that institutions need to adopt when selling products through digital channels. They need to adopt those practices, which are very important in terms of explaining what the Bank of Portugal considers compliant with disclosure information when a product is being sold through digital channels. In Portugal, for example, when a consumer opens a current account or enters into a credit agreement, the financial institution has to provide the customer with a standardized information sheet with all the information related to that current account or loan. The standardized information sheet explains the features and risks, and when they are related to credit, it explains the costs related to the loan. But disclosure of information through digital channels has to consider that the standardized information sheet has to be given in a very effortful way. We have been working with institutions to let them know how they have to disclose and provide that standardized information sheet through their mobile phones or the Internet. Furthermore, we have implemented a mandatory requirement to ensure that consumers can easily access and scroll down though all the necessary information. We are also assessing the right way to assist institutions provide OTC to consumers that information in accordance with the set principles for regulatory assistance through digital channels. Also, this circular letter containing best practices established an important set of principles and incorporates valuable insight from behavioral economics.

Promoting Digital Financial Literacy

We have to take into consideration the need to promote digital financial literacy, and the Bank of Portugal has included this in its strategic plan for 2021-25 to get consumers more access to digital channels and to prevent financial exclusion related to the not well understood use of digital channels.

Bank of Portugal's Financial Literacy Strategy

Currently, we at the Bank of Portugal are implementing a financial literacy strategy, for which we take a comprehensive approach. Since 2011, we have worked with other financial supervisors from capital markets, insurance, and pension funds. We work together as leaders of our national strategy on financial education. The Bank of Portugal has also been developing financial literacy initiatives on its own. Our national strategy started in 2011, and every five years we revise the strategy, assessing whether it has to be adjusted to new goals and how it has to take external developments, the needs of financial literacy, and the needs of the different target groups into consideration. This is a long-term commitment from the financial supervisors as leaders of the national strategy, but we do not work alone. We have a large number of strategic stakeholders with whom we establish protocols. We have protocols with the Ministry of Education (MoE), for instance, and we have accomplished a very important goal, namely the introduction of financial literacy in schools in 2018 as a mandatory subject. From our perspective, that decision from the Ministry of Education (MoE) was also one of the outcomes of our collaborative efforts. When choosing strategic stakeholders, we consider the specific target group we need to reach. We sign a protocol with that stakeholder, which serves as a formal commitment to collaborate and work together. Anytime we sign a protocol for a specific target group, we define the competency framework to address the financial literacy needs of that specific group. Then we train the trainers because we need to have intermediates. We need to have messengers working with different target groups in order to give us scale when reaching the different segments of the Portuguese population. We have to prepare specific materials because when addressing financial literacy topics, we have to know what kind of needs, specificities, and features each target group has, and the materials have to be adjusted accordingly. For instance, in the materials we have prepared for financial literacy in schools, we have prepared specific workbooks for the different grades of elementary school, middle school, and high school, taking into consideration that the needs are different according to ages in schools. All in all, we also have to monitor and evaluate. This is an example of how we have been establishing the strategy to introduce financial literacy in schools. We have other protocols that also follow more or less the same approach. An important decision from the national strategy was to create a website back in 2012 and to have it open for everyone to have access to information on financial literacy topics and also to explain the daily activity at the national strategy, not only from the initiatives of the financial supervisors as leaders of strategy but also from the different stakeholders.

It is important to mention that we also revised our strategy in 2021 and have a new set of goals until 2025. The National Plan for Financial Education in 2021–2025 is closely linked to the impact of Covid-19. Our strategic dimensions are very close to the needs that were acknowledged by the impact of Covid-19. That is why we are strengthening financial resilience of the Portuguese population, which is one of the goals, while fostering digital financial literacy, and also contributing to sustainable finance. Moreover, we aim to achieve that at scale by strengthening partnerships and going more and more digital.

Lines of Action

We have different lines of action to reach schools, the workplace, local authorities, the employed and unemployed, as well as micro, small, and medium enterprises (MSMEs), which are also a very important target group in our national strategy. We also work with institutions that support citizens, mainly those who are over-indebted or are at risk of being over-indebted. We also need to use awareness-raising campaigns through social media and rely on traditional media.

Cybersecurity Campaigns

The Bank of Portugal has decided to take a very prominent role in financial literacy, mainly in the promotion of digital financial literacy. The Bank of Portugal has been implementing regular sets of awareness-raising campaigns to call attention to cybersecurity risks. We use different channels, and one is our dedicated bank customer website. The Bank of Portugal uses its website as a channel to interact with the population, including consumers and the industry. We also take, for instance, a more active role in the promotion of prevention of cybersecurity risks.

Strong Customer Authentication

Another example is the initiative that we are taking regularly concerning the need for consumers to be aware and adopt stronger customer authentication procedures. In Portugal, we apply stronger customer authentication, meaning that institutions need to offer consumers two-factor authentication. The consumers also need to understand those procedures and be ready to adopt them, which requires working on promoting stronger customer authentication procedures.

Young People

Targeting young people, we launched our #toptip campaign in 2018, which remains ongoing. It is our campaign topic for staying safe online, with tips to cover the safe use of digital channels and getting young people to adopt convenient procedures and not take too many risks when going digital.

Migrants

Another initiative using digital delivery channels was a recent initiative we took to promote financial inclusion among Ukrainian migrants coming to Portugal during the war through digital and virtual sessions. We launched virtual training sessions for migrant organizations with the support of the Portuguese High Commission for Migrants, and that initiative was complemented by the production of leaflets. Those leaflets were also distributed throughout the country with the support of these stakeholders.

Strategy on Digital Financial Literacy

The Bank of Portugal is also working on the promotion of digital financial literacy. Promoting that strategy, in addition to launching different initiatives, we adopted a comprehensive approach. As usual, we want to have those initiatives included in our strategy. The Bank of Portugal received support last year from the European Commission and the Organization for Economic Co-operation and Development (OECD) to design a medium-term strategy to implement digital financial literacy in Portugal. We started in October last year, with the support of the OECD/INFE and the European Commission, working on the diagnosis of needs. Moreover, we plan to initiate a dedicated survey targeting the Portuguese population to assess their level of digitalization. The survey aims to gather insight on the products and channels utilized, as well as public understanding of the needs, risks, and potential risks when engaging in digital activities. This is a very important decision, and we are getting closer to launch in Portugal. From October this year, we will start with the OECD/INFE and the European Commission designing the recommendations, and those recommendations will guide our actions. We will also implement the Strategy on Digital Financial Literacy from 2023 onwards and evaluating the implementation of those recommendations on a regular basis.

SupTech Projects

New Challenges Require Innovative Solutions

When speaking about digital, we must take into consideration that technological innovation has made it possible for institutions to provide services through digital channels. It has also introduced new challenges for consumers because they need to be prepared and aware of the best ways to use these digital channels. We all know that technology, with its innovative algorithms and functionalities, is very convenient, but also carries risks. We would like to emphasize, however, that technology offers numerous possibilities for market conduct supervisory authorities. Digitalization also means that market conduct supervisory authorities can also track in a timelier way, act quickly, and work upstream. Furthermore, financial and technological innovation also presents challenges but enables new approaches for market conduct supervisory authorities. Innovation brings a set of challenges that we need to try to mitigate by adopting a set of solutions. When using digital channels, we face a set of new risks that we need to mitigate by knowing those risks very well and adopting the most effective procedures. We want to emphasize that some of the challenges are not only related to cybersecurity risks but also to disclosure inconsistencies and the complexity of products because, with digitalization, we have new products, new providers, and new channels. There is very often a lack of digital financial literacy, and a lack, first of all, of digital literacy. At the same time, as market conduct supervisory authorities, we need to address the challenges also posed by cross-border transactions, which are facilitated by the growing digitalization of financial products. We also need to enhance our skills and adopt supervisory tools. Specifically, the adoption of new oversight tools, known as SupTech tools.

Why is SupTech Important?

SupTech tools are important because they enable market conduct supervisors to act in a more effective and timely manner. SupTech brings value-added to our complex and difficult work, considering the vast number of customers, contracts, and data we handle, especially in countries like Indonesia with such massive dimensions. Protecting consumers requires us to consider each individual consumer, not just as a collective group. This is where SupTech becomes indispensable. However, it is important to emphasize that SupTech must be used in conjunction with supervision. Technology as a tool for supervisors and supervision. Before implementing or developing SupTech tools, we must identify specific supervisory needs that can be addressed by such tools as a prerequisite. Additionally, a clear strategy with defined objectives is necessary, along with the availability of skills, resources, technology, as well as the desire and will of top management, such as the Board of the Bank of Portugal, in our case.

Success Factors

We will highlight some factors that have been confirmed from our own experiences, including the need to conduct a pilot exercise. We need to identify the risks and take mitigation measures to overcome them when we implement a SupTech tool. One of the most important success factors is to have close dialogue between the supervising team, which is made up of business and IT experts. Moreover, the SupTech tools need to be evaluated on an ongoing basis. We know that we have challenges when deciding to use SupTech tools. As a result, we need to standardize the data for better quality and make it available. Machine learning and artificial intelligence (AI) that use data require quality and standardization. In addition, we need to have resources and expertise not only at the level of the IT team but also at the level of the business, which means those that are going to use the SupTech. Furthermore, there is a need to adapt the existing legacy systems and ensure seamless interoperability between these systems and the new SupTech tools. Additionally, we need to assess the outcomes we get from using the SupTech tools as well as confirm that those results are not biased. Finally, we cannot overly rely on SupTech tools.

We will look at the strategy defined by the Bank of Portugal to address the implementation of SupTech tools. First, in 2019, the Bank of Portugal set up an Innovation Lab (inov#) with a team in the IT department to catalyze an innovative mindset. As soon as that Innovative Lab was created in 2019, we joined forces with the Bank of Portugal's Banking Conduct Supervision Department and started working together. We brainstormed, trying to assess which kinds of procedures and oversight tools could be implemented through the adoption of SupTech tools.

Regarding the timeline, we started in 2019 through our Innovative Lab (inov#) as a pilot. We started developing a SupTech tool to oversee and validate draft credit agreements with the applicable legal and regulatory framework. In 2020, with our Innovation Lab, we started automating the responses to information requests through a SupTech tool. We have been implementing these pilots and we are pleased to share that both are now in production. Other initiatives are under consideration, like, for instance, monitoring advertising through digital channels, which is another line of work that would like support from the SupTech team, the Innovation Lab, and the implementation team. Everyone is working closely together to develop a SupTech tool for real-time monitoring of advertisements. This is currently under consideration and has not yet undergone testing.

Draft Credit Agreements Validation

In 2019, we decided it would be important to have a SupTech tool to oversee the draft credit agreements submitted by all institutions. We receive dozens of changes to draft credit agreements each year, along with hundreds of new draft credit agreements due to the mandatory nature of the process. It is important for us to oversee these agreements to ensure compliance with the legal and regulatory framework. Prior to the introduction of the SupTech tool, this work was challenging from a human resources perspective, as it involved extensive paperwork and necessitated a risk-based weighted approach. Instead of assessing all draft credit agreements, we had to rely on a sample to evaluate compliance with the legal and regulatory requirements, given our limited human resources. We conducted a pilot with the Innovation Lab, which allowed us to confirm the convenience and effectiveness of utilizing natural language and machine learning within the SupTech tool. It is now up and running, and this is the front office where our colleagues can validate the various types of agreements within the applicable legal and regulatory framework through the SupTech tool. We conducted an exercise in May confirming that the machine is working very well. This involves continuous monitoring of the machine's outcome.

Information Requests

In another similar example, we automated the information requests, meaning the responses to the requests received from consumers. This is the same approach where we went to the Innovation Lab, which tested the AI functionality, and then human resources evaluate the outcomes. Based on a successful pilot, we can consider if it is a viable approach, and it can go into production. The advantages and challenges of the different SupTech approaches are very clear.

Advantages and Challenges

The advantages of SupTech tools include: (i) reducing human intervention, (ii) improving efficiency of the process, (iii) higher speed of analysis, (iv) enhancing analytical capabilities, (v) better data visualization and (vi) enhancing supervisors' user experience. The challenges are: (i) integration with legacy systems, (ii) interoperability, (iii) need to upgrade and train the tool (learn by doing), (iv) transposition of legal requirements into concrete programmable rules (codes) and setting parameters, and (v) adequate resources, skills and technology. The most important advantage is faster and more effective market conduct supervision.

FinCoNet Work on SupTech

The Organization for Economic Co-operation and Development (FinCoNet) has also been working on SupTech. We started at our Annual General Meeting (AGM), hosted by OJK in Jakarta in 2016. We established a New Standing Committee (SC4), which worked on two reports: one published in 2018 and the other in 2020. We are now preparing a new report on oversight challenges and the evolution in approaches for conduct supervisors in the context of Covid-19, including the use of SupTech oversite tools. Furthermore, this is to emphasize the importance of SupTech after Covid-19 because market conduct supervisory authorities should take a more proactive and preventive approach to upstream. This can be achieved through more comprehensive, data-driven, and active market monitoring. In a nutshell, market conduct supervision will undergo important transformations, and the use of new technologies like SupTech is a must. We all know about FinCoNet. Thank you very much for staying informed. We welcome any comments or feedback regarding our work. And please be aware that we are also working on market conduct supervision, new challenges, and more specifically on SupTech. Thank you very much.

Moderator: Jasmina Mohd Mokhtar

Maria, I think it was a very insightful session. I love some of the points that you highlighted earlier, such as the fact that there must be close dialogue within the industry on technological options and the importance of spending on staff capacity building in order to adapt to digital financial services. We are also looking at removing barriers without compromising security information or the rights of consumers. The one that I particularly like is the same level of consumer protection, irrespective of channel delivery. This is something that is very interesting for us to ponder.

Ladies and gentlemen, I guess digital innovation in the financial sector is here to stay and will continue to grow rapidly. At the same time, consumer choices in this digital environment are impaired by challenges relating to complexity and uncertainty, and sometimes compounded by misleading or fraudulent business practices. This we heard from Indonesia as well as Portugal. From this session, we can conclude that innovation should be implemented in tandem with appropriate consumer protection measures to build trust in the digital economy and enable everyone to participate fully in it, reaping the opportunities, while mitigating the risk. Quoting Maria, market conduct supervisors *shall* be ready to face the challenges brought by the digitalization of financial services. This is where we also see, even from the Innovation Lab samples given by Maria just now, the benefits of SupTech in analysis and supervision, and it will also help empower consumers through a more targeted strategy on digital financial literacy.

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Q&A SESSION

We are already seeing questions coming in; perhaps we can start with the first question? Please introduce your name, the question, and to whom the question is being addressed to.

Question: Hendro from Bank Jago

My first question is to Ricky regarding customer protection because, as we know, we are thankful to the regulator for providing us with a framework and policies to safeguard our customers and colleagues. The bank's framework and policies already serve the same purpose, but considering the current challenge of widespread attacks by fraudsters on our customers, perhaps the regulator can offer additional assistance or breakthroughs to ensure our customers are protected. A comprehensive customer protection campaign could be helpful, covering all aspects from end to end. It seems that the fraudsters are imitating their tactics across all customer channels, and various affiliates outside the bank are attempting to lure our customers. Is there a new breakthrough that can compel everyone involved to prioritize robust customer protection? Perhaps a TV commercial or out-of-home media campaign showcasing customers safeguarding their data from the moment they wake up until they go to bed could create awareness. Alternatively, given that everyone's data resides on the same platforms used by fraudsters, is there a possibility of introducing an antivirus solution mandated by regulators? This antivirus software could scan applications, such as WhatsApp, SMS, and others to notify end users of potential fraud on their mobile devices. This way, customers would be aware of any suspicious activities. I also have a question for Maria. Regarding the financial literacy campaign, are there any key takeaways that we can implement? Although most of our customers already use it, they lack financial literacy. It is easy for them to fall for high-return scams disguised as reliable sources of information.

Response: Ricky Satria

That is a difficult question because I had a similar question before moving to consumer protection in February to work on the development of QRIS (Quick Response Code Indonesian Standard). At that time, we were already implementing the platform within the bank to a anticipate the fraud risks associated with QRIS, both internally and externally. However, fraudsters are faster and smarter, competing among themselves when a new product is brought to market, focusing on the customer. When we first started the education, we did it together with customers on our mobile application. On our mobile banking app, we had many warnings or pop-ups advising customers not to share the PIN or one-time password (OTP), not to reply to an unknown call center, and so on. A year ago, I reminded payment system members, namely the switching companies, to be alert, especially on weekends and holidays. We incorporated the anomaly and velocity tests into our fraud detection system, not only in the bank but also in the switching payment process. We set a weekly reminder for our switching payment process to remind our members to be alert. The reminder is set every Friday afternoon, considering the substantial cash flow we receive from the industry and the customers. And because fraudsters have the technology, they attack us late in the night before morning, especially on Friday, because they know we do not work on weekends. On Eid-ul-Fitr, which was our last long holiday, we did a similar thing. We reminded all the players, especially QRIS members, because at the time it was still a new product. We did not want to jeopardize this initiative.

Besides education, we thought of ways to freeze the number because, honestly, we did not have enough data on the fraudster. This had us thinking, how can we get the data? In the industry, most players do not want to share data with the central bank. First, because financial institutions implement risk management under Basel 3, especially operational risk, they already provide a buffer against fraud, which is prepared based on historical transactions. This implies it can be covered. The way we do it is by trying to bargain with the customer, determining whether it is our fault or their fault. Until now, we only got the data if we had a close friend in the bank because we did not identify as a banking supervisor. Sometimes, we would talk to our bank supervisor colleagues, letting them know that if something happens to the bank, it is better not to jump in directly and just let them solve it first because it is new. We cannot check the regulations, including the internal standard operating procedure, because this is not covered as a new technology and a new approach. Therefore, we all need to try and solve it together and share it with industry. We currently have two problems, namely a lack of data on fraud. We need the fraud data, but we do not have it, and we need the tools, but how do we solve it? Everyone can assist at an industry level. The data is available and only the credit card associations will share it with us. This is not the case for digital payments because of the culture of bank management. To change this, we need to network and team up together. In the current framework that we created with the industry before I moved to customer protection, we wanted to get the unknown numbers of the fraudsters and share them directly with all the members because we have centralized the QRIS specification. Each bank already has the kernel, and all members assign a particular person to submit the data and receive the data for QRIS. On the same platform, we will try to share the number. There are a few cases where this has happened when the fraudster targets a particular bank and transmits and transfers the funds to many banks, including non-banks, because it is easy for them to open an account. The bank can try to track it, but it is difficult. A month ago, we tracked one that ended up on the crypto exchange. We were able to track it because I specifically asked my banking friend to monitor a suspected fraudulent number and hold the funds. If this is not done, then what happens to the general public? In fact, that approach is not suitable. It needs to be an immediate reaction. The idea was already welcomed and we created a space for what we call blacklist merchants. Sometimes merchants commit fraud or are used by a fraudster.

We checked many central banks to see if they had it, but they did not. Fortunately, we had QRIS and could utilize the platform already in place. To hold the funds, we created a mechanism to return the funds to the original customer. We worked with the Telco Association and the Ministry of Telecommunication because we want to freeze the number. In one case, a suspicious transaction occurred at a particular non-bank where the funds were held because the transaction was red flagged through the anomaly test. It spiked. The non-bank attempted to freeze the funds. What they did next was very interesting. They used enhanced due diligence because the customer complained about holding their funds. As a result, they requested a recorded video conference. Sometimes, with technology, we can use geospatial tagging to check the customers location. Fortunately, in this case, it was not fraud. They were creating a discount program for a game application and later released the funds. It was a very interesting model, therefore, we tried to find a way to minimize fraud. We reached out to the GSM Association[4], the mobile money association, and the ITU (International Telecommunication Union) to inquire about their infrastructure strategy or approach to minimizing fraudsters using social engineering techniques. That was one of our breakthroughs. We would like to realize that by creating a platform for sharing mobile numbers. Mostly, Indonesia is not prepared, right? Most people do not register their number using a formal ID. We have a system in place, but we do not know if it is effective or not. The Ministry of Telecommunication suggests limiting the maximum to three mobile numbers, which is really good to try to minimize fraud. We are still in discussion with the industry, and we encourage the banking and non-bank sectors to share their insights with us. We should focus on educating customers and running the business properly.

A long time ago, our IT people created a WhatsApp group to share these kinds of cases when they happened; however, that does not happen anymore. Now, they only share happy birthday, happy new year or something like that. No cash anymore, but we need to start doing this again to change the mindset of the banker, or engage in discussions with programmers, particularly regarding cyber-fraud, or form a working group to address the topic. I apologize if that did not answer your question. In fact, I have spoken with many individuals who are still actively working on that matter and possess extensive knowledge of the industry. We can discuss it in further detail, and you can submit any questions you have to our staff here or directly to me.

Moderator: Jasmina Mohd Mokhtar

I agree that it is a very difficult question to answer. In Malaysia, we have even seen bankers getting scammed. It is something that everyone is trying to figure out. What will be the real breakthrough? Maria, what is the key takeaway from the Bank of Portugal in terms of digital financial literacy?

Response: Maria Lúcia Leitão

Thank you for the question, as it is critical to emphasize the importance of requiring institutions to establish procedures that enable safer consumer access to digital

4 Global System for Mobile Communications or known for GSM Association, originally Groupe Spécial Mobile. GSMA is a global organization unifying the mobile ecosystem as it manages industry programs in collaboration with its members with the aim of achieving scale and interoperability for new mobile technology

channels. We are actively addressing this at the level of market conduct supervision, prevention supervision, and payment supervision. Additionally, it is important to promote digital financial literacy at the population level. For instance, within the Banking Conduct Supervision Department, we also handle complaints, and, similar to other places, we have observed a rise in complaints primarily associated with fraud, cybersecurity, and cybersecurity risks. We have been analyzing those complaints, while staying in touch with the financial institutions, but most of the time the problem was the poor adoption of safety procedures by consumers.

Recently, we saw an increase in phishing and social engineering, and consumers are not very often aware of how they should proceed, or very often they do not behave as they should in order not to enter into those frauds and scams. That is where financial literacy becomes important because the attitude or behavior of consumers is very important. Consumers need to be informed on how to deal with these new challenges and new risks. With that also comes the importance of having financial literacy. We are taking an approach that is, from our perspective, very comprehensive because we are relying on awareness-raising campaigns. We are working on the promotion of the adoption of those safety procedures through different stakeholders, through webinars, and by producing materials like those I mentioned about the campaign topics or promotional campaign efforts online. It is targeting students, but as we all know, it has very important externalities because that information also goes through students to their parents and to their family members. We are also using different strategic stakeholders in the national strategy on financial literacy to channel those topics, those materials, and those recommendations. It is important to take into consideration the national circumstances and knowing the difficulties and understanding these new channels by target group and different segments of the population.

Like the survey we conducted in 2020, we will have a specific survey on digital financial inclusion next month. It is more of a lite survey, not only addressing digital financial inclusion but also some other topics. Some of the questions we asked in the 2020 survey allowed us to understand that we have two important segments of the population that we need to care about. One is the young people (the youngsters). They are tech savvy and, therefore, overestimate their knowledge when they go digital. They lack financial literacy, however, which is why we have to prioritize that segment. Another important segment are seniors, because digitalization, I would say, took them by surprise some years ago. They are used to visiting a traditional branch, where they were treated like a friend and relied on face-to-face, bilateral contact. We need to help them get digital, and not only because they need to have access to digital channels or because institutions are closing branches, but because very often the branches themselves are also digitalized, meaning that when someone goes to a branch, very often they do not interact with a human employee but with a tablet. This is very important work, namely getting people involved in access through digital channels because it is here to stay. This is something that is going to evolve in the future, and there is no way digitalization will stop. That is not going to happen. We need to protect consumers, and it is very important to point out that, as a central bank, we have to take into consideration not only the protection of consumers but also the impact of their actions on financial stability. We need to take into consideration that when we are protecting the consumer, even when they are trying to improve financial literacy and increase their capability to empower consumers to have access to digital financial services, we are also contributing to financial stability because fraud and scams are a nightmare for society, the economy and the financial system.

We are very happy that we have the support of the Organization for Economic Co-operation and Development's (OECD) International Network on Financial Education (INFE) [5]and the European Commission to help us implement the strategy in a very comprehensive way. As always with financial literacy, digital financial literacy is going to be a medium-term strategy or a medium-term project that we need to implement. When it comes to digital financial literacy, we have the urgency of working very quickly because digitalization does not wait, and consumers need to get ready and mitigate the risks. We know that risks will always be there, but we need to mitigate them as much as we can because they are also growing. Cybersecurity risk tends to be a black industry, and we need to get people aware of that. When implementing digital financial literacy, we have tools and economic insights that we need to use more and more. Consumers often know they need to adopt safety procedures, but digital channels and digital services are so convenient. With just a touch, consumers have access to everything. It is so open that we do not stop to think if we are acting according to what we know. This has happened to all of us. We know that we should not access that email scam, but very often it seems like a normal email, and we open it quickly.

5 INFE is part of OECD project to promotes and facilitates international co-operation between policy makers and other stakeholders on financial education issues worldwide. The OECD INFE also established to provide a platform for governments, policymakers, and other stakeholders to share knowledge, best practices, and research on financial education.

We also need to take the approach that INFE is always calling on us to consider, which is not only to give information to consumers on how to act but also to try to improve attitudes and behaviors. This is a highly complex task, and it is both demanding and urgent. All of us need to perform it using diverse channels, involving different stakeholders and deploying various means. We do not need this tomorrow; we needed it yesterday. Forward thinking should have driven us to act yesterday to understand and scale up our actions. Thank you very much.

Moderator: Jasmina Mohd Mokhtar

Thank you for a very comprehensive answer. Yes, it must be targeted, and it has to be a fit for the relevant stakeholders.

Question: Camila Amalia, Legal Department, Bank Indonesia

Maria, when using SupTech tools, we often deal with personal data. Is there any specific legislation at the European or Portugal level that authorizes central banks to access personal data without asking for consumer consent? As we know, customer consent itself may be derived from a contractual basis between the industry and the consumer when the data is given. For example, when sharing the data with a provider, the consumer agrees that their data will also be shared with the regulators for supervisory purposes. We are curious whether your country has specific legislation since it has become important to increase the legal basis for the regulators in financial sectors to access consumer data without any customer consent.

Response: Maria Lúcia Leitão

Thank you very much for your question. It is quite a complex one because in SupTech, we need to deal with data. In Portugal, as a member of the European Union, we have to comply with the GDPR (General Data Protection Regulation), which is very strict regarding the use of data. Naturally, we must take that into consideration at the Bank of Portugal. However, we must obtain a waiver when acting as supervisory authorities. For example, when we handle complaints, we receive a letter. While we are aware of the customer's name who lodged the complaint, we are not allowed to use that name directly. Nevertheless, we have to interact with the institution, and the institution needs to be aware of the customer's name who is filing the complaint.

While we have the general GDPR rules in place, we have implemented strict waivers at the Bank of Portugal, and we must have permission for that. However, it is important to note that internal regulations are also stringent as GDPR compliance is essential. Additionally, it is worth mentioning that when utilizing SupTech tools, we do not necessarily require the customer's name. Data-driven work and anonymization of data are the approaches we employ. For example, when using machine learning or AI tools, access to customer names is unnecessary. Instead, what we require is the content of the request for information, allowing us to sort, classify, and link it with standard answers. There is no need to have access to a specific name because it does not matter. The information request is presented by the consumer. The consumer sends the information request to the Bank of Portugal through banks and the central bank's website, or by letter or email. Obviously, we need the name of the person because we need to reply to that person and give an answer to that person. We leveraged old information requests from quite a number of years ago to test the SupTech and assess if the functionalities based on AI would work to help us get automation, classification, and a reply to the customer. There was no need to know the name of the customer, which meant we applied GDPR. That is very important to all of us, and it is mandatory in Portugal and mandatory at the level of the bank.

There are specific and very well-defined areas where we need to know the name and we cannot close our eyes. But we cannot give the name of the customer to AI or the system where we can get information without a deadline. However, there are other SupTech tools where we do not need a name, such as draft credit agreements. The contracts that people sign, very often there are only specific areas or items that can be adjusted to the features of the customer. Most of the text in a standard credit agreement brings all the information we need to contract with the customer. Also, those standard sets of information have to comply with the rules and regulations, which in Portugal are very comprehensive. We have a lot of rules that apply to all sets of products by law, as well as principles and also the full regulation of the Bank of Portugal.

We can also go to those draft agreements to make sure that any time a customer is going to sign, they have the guarantee that all the background information is correct and adequate, taking into consideration the rights assigned to him or her, and to oversee those draft credit agreements because they are signed before the credit agreements are signed. We do not need the name, we only need to go through the draft agreement. That is what we do here. There was no need to proceed with the anonymization of the information because SupTech is very often mainly a way of helping us get traditional work that was done by our colleagues and by ourselves to be conducted by machine. This is why, very often, there is no need to have access to the name. The only time we need to have access to a name is when we need to reply to the customer, and this is very well defined in a very strict way.

Moderator: Jasmina Mohd Mokhtar

I think this is very similar to the experience in Canada with the collection of personal data, which they do not collect for the SupTech, but there is other information available to assist in terms of data analysis. We will take one question from the floor.

Participant: Satria, Bank Rakyat Indonesia (BRI)

There is a saying that the least risky job is being a bank fraudster. To illustrate that, some criminal cases will face an immediate sanctions from society or may not yet will likely be processed by the police. However, if someone tries to steal data such as username, ID, and password, the consequence is that the information will be uploaded to the media and the culprit will be socially sanctioned. Therefore, even though the act is illegal, there are differences in how the criminal act is handled. This is a concern when there is a possibility that criminals will turn to banking fraud.

In the banking sector, we are seeing a new pattern of banking fraudsters. Previously, after a criminal receive a big sum of money they would transfer money to several people or account in small amounts, now fraudsters use Virtual Accounts, such as Xendit or other payment/transaction providers or we call it payment aggregator, because of the high transaction limits and easy access. We in banking feel that there needs to be equal regulation between banking and other financial service providers, including payment providers. In addition, we believe that there needs to be a cap on the use of virtual accounts that applies across the banking sector. We also support Bank Indonesia's idea of using single data which would be very beneficial, especially in addressing the issue of indebted customers who need to settle their debts before they can conduct transactions. Finally, is there a time limit set for the "7 minimizing zones for fraudsters" program? Thank you.

Response: Ricky Satria

This question is complex. It is about minimizing fraud in the field, but the situation is different from normal fraud. Technology can help minimize traditional fraud, which is a classic challenge in business risk management. Risk always slows down a business's progress or breaks its engine, even though we want to move faster. Beyond that, there is a buffer to cover against unexpected events or risks. That is why businesses want to move faster, as there is intense competition, and players have become sharper and more rigid, especially those coming from non-bank sectors. The way we try to fight against fraud is not easy, but we are very happy that there is one program in which Bank Rakyat Indonesia (BRI) and XL Axiata have done. A while ago, a journalist filed a complaint about their account being breached on a telco site due to a SIM swap. As a result, a national mechanism was implemented. Telcos have a different code. Their standard practice is to recycle numbers every six months. In the first meeting, the industry asked for too much, and the telco defended its position excessively. That is my approach, namely finding a balance between the industry's demands and the telco's position, while taking gradual steps forward, which can lead to effective progress and resolution. What BRI and XL Axiata have accomplished will serve as a national model. We already have the platform in place, but now our focus is on conducting a pilot and creating storage for mobile numbers. Our initial objective is to expand into e-commerce and other financial services, which include investment, stock trading, and newcomers like crypto exchanges. While the platforms exist, we are still working on developing the necessary mechanisms. Additionally, we are also enhancing our efforts in law enforcement. The framework is already in place, but we have not yet showcased it. It is not that we are afraid, but we are aware that fraudsters are also monitoring this innovation seminar, and they will become aware of the new approaches being implemented. Additionally, we have specialists who are seeking growth opportunities as we enter another telco jurisdiction. We also expect the industry to voice their opinions on this matter, not just us, but also Bank Rakyat Indonesia (BRI) and medium enterprises (MSEs).

We also mentioned reformulating the rules for virtual accounts. The payment gateway assists in two ways, providing assistance on the back-end side and enabling sales on the front end for small and medium-sized businesses (SMBs). I am unsure if virtual accounts exist in Malaysia or Portugal, but they could significantly benefit the economy and businesses in those regions. They only have information about customers in the main account, but not in the sub-account. When checking to determine the owner of a sub-account, only the list of mobile numbers is available, and nobody knows the associated names. There are several ideas on how to handle the submission of sub-accounts once the customers have completed the Know Your Customer (KYC) process or if their information is already on record in the financial industry. However, discussing these ideas is still a long way off, and the pricing may also increase due to the current situation. We will revisit the topic later to delve deeper into virtual accounts and new applicants. OJK has expressed ideas for reformulating this aspect, and Bank Indonesia shares similar thoughts on changing the rules of the game regarding the APA (Account-Based Payment). We expect that the association will also voice their opinions, which would be beneficial rather than solely relying on input from the regulator. I hope this answers your question, and I look forward to discussing this further outside of the seminar.

Question: Inga Guana, Strategic Procurement Department, Bank Indonesia

From the current implementation of consumer protection policy in your country, what aspect do you need to improve to create a safer and more inclusive financial system in your country?

Response: Maria Lúcia Leitão

There is always room for improvement to have a more inclusive system and to protect more customers. Although, as I told you before, in Portugal, consumer protection has a very important weight on the financial agenda at the level of the parliament, the level of government, the level of the central bank, and the level of the different organizations and institutions in the European Union. I would say that one of the topics that we have been dealing with more recently and we could consider as being new topics, they are not new topics, but they came to the agenda of market conduct supervision as being very important, which are prudent oversite and governance. This means we need to act upstream of the selling channel when, for instance, the institution has to design the product, the institution also has to asses the features of that product, test if those features are adequate for the specific target group, define which are requisite and then perform ongoing testing during the implementation and selling if it goes on being the case. Prudent oversite and governance have also been important areas of analysis because they need to be more precise in their definitions of suitability criteria and so on. This is a complex topic because, very often, it is difficult to define specific rules. Moreover, when we need to oversee the compliance of financial institutions to those principles, when there are no specific rules, it is more complex. I would say that this is a very important topic.

Another important topic, which is also on the agenda in Portugal but at the level of the European Regulatory Authority, is the disclosure of information related to fees and charges. Institutions apply fees. Those fees, at least in Portugal, and I think everywhere, need to be linked with a very specific service. The institutions also need to explain what service it is, and there is a need to standardize the information in terms of the definition of service and the identification of the fee, and the money given to the fee is very much linked to the service. This is an important topic.

Another topic that is linked to digitalization is the provision of innovative services. These innovative services are linked to digital banking and open banking. The new services of initialization of payments and the aggregation of accounts oblige providers to step into the supervisory perimeter because they have to be registered at the Bank of Portugal, which is the same at a European level. At the Bank of Portugal, both payment institutions and electronic payment institutions have the potential to offer these new services. However, FinTech companies that were offering services like initialization of payments and aggregation of accounts were asked to register as payment institutions or electronic payment institutions. The services provided by these institutions are subject to oversight to ensure compliance with the relevant legal and regulatory framework. This oversight is crucial to empower consumers who use these services, in parallel with the mandatory compliance requirements set forth in the applicable legal and regulatory framework.

Those were examples of three very important topics, but I could emphasize others as well. One new topic that came to mind is green loans, particularly green mortgages, which differ from traditional mortgages. Although they are distinct, it is essential for all financial systems and consumers to apply the principles of the Policy and Standards Group (PSG) when striving to promote a sustainable economy through responsible financial practices. We are also seeing the developments we have in Portugal for advertisements of green mortgage loans. Market supervision will not stop tomorrow. It is more important than ever and will grow in importance and complexity. Thank you very much.

Question: Wahyu Hidayat

Dear Ricky, digital development today provides many benefits, including making transactions easier. However, in Indonesia, digital literacy seems like it still has many concerns and needs to be improved to help people obtain more advantages. What has Bank Indonesia done to improve digital literacy, and what kind of channel is considered the most effective to accelerate digital literacy?

Response: Ricky Satria

A very interesting question. What we have in financial literacy is similar to what our colleague Maria from the Bank of Portugal has done thus far. The main difference is that our population is huge, which is costly and time-consuming. I predict that we need to educate more than 118 million people. While we have a strategy in place, time is of the essence, and we cannot afford to delay. Currently, we are actively collaborating with stakeholders at various events. In my group, I have been asking if we can participate in any events organized by different departments where people are gathered to share our knowledge and also bring in industry professionals. The industry also participates in seminars with us to convince them to practice digital literacy, and the regulator is also behind them. Today on WhatsApp, we got a message asking if Bank Indonesia could attend an event on financial digital literacy. We immediately accepted. Please send a formal letter to the person responsible.

Regarding the question about which kind of channel is the most effective for accelerating digital literacy? When looking at Indonesia's demography, we see that it mostly comprises Millennials and Generation Z. Up to now, we have only been using social media, and we have a plan to introduce a TikTok challenge for bank employees because they know how to create content that effectively communicates an issue. We will use their TikTok videos for all applicable events. Second, we also have a new idea in my division. We want to introduce, and find an ambassador, for customer protection. Ideally, an influencer with many followers. We have identified them, and a few banks already have them. I know BI has it, BRI has it, BNI has it, and BCA has it. Why not work together on the campaign and set it up nationally? We have also noticed that some electronic money providers are involved in the media business. While we have sufficient time to develop a strategy, the main challenge lies in deciding whether to launch a national campaign or collaborate with specific banking institutions. The concern is that a national campaign may not effectively convey the desired impression or image of the service. While this is not necessarily dangerous, it does pose certain risks. We want to avoid any negative consequences associated with a national campaign. We cannot risk the campaign backfiring on us. It is crucial for us to achieve digitalization of the financial services sector and our economy as a whole. We must find a strategy that strikes a balance between the national game plan and addressing product-related concerns, while keeping all stakeholders informed. Developing such a strategy is highly challenging, and we still have a considerable amount of work to do.

Moderator: Jasmina Mohd Mokhtar

Thank you very much, Ricky and Maria. I think this was a very insightful session. I wish we had more time, but not to worry, the rest of the questions will be emailed to your team and answered later. I guess this concludes the session today. I will pass back to the MC.

MC

Thank you, Jasmina and all speakers, for your invaluable insights. Everyone, that was the end of our last session for today. Thank you very much to all online and offline participants.

PANEL SESSION 3

ENHANCING CONSUMER'S DIGITAL FINANCIAL LITERACY: INNOVATIVE APPROACH FOR TARGETED GROUPS

Jasmina Mohd Mokhtar
Deputy Director Financial Inclusion Department, Bank Negara Malaysia

MC

Honorable host, Director of Bank Indonesia Institute, Ibu Arlyana Abubakar, and distinguished guests, speakers, all participants, ladies and gentlemen, Assalamualaikum, Om Swastiastu, Shalom, Namo Budhaya, and good morning to all of you. Welcome to our second day of the Bank Indonesia Institute International Seminar, New Era for Consumer Protection: Use of Digital Innovation, here from the Land of 100 Temples, Bali. This seminar is brought to you by the Bank Indonesia Institute in collaboration with the SME's Development and Consumer Protection Department. Now, we shall introduce today's moderator, Sari Hadiyati Binhadi, to lead us in our first presentation. She is an assistant director of the Consumer Protection Group in SMEs and the Consumer Protection Department at Bank Indonesia. Ladies and gentlemen, without any further ado, please welcome Sari Hadiyati Binhadi.

Moderator: Sari Hadiyati Binhadi

Assalamu Alaikum, honorable Ibu Arlyana Abubakar, Group Head of Bank Indonesia Institute; Ricky Satria, Group Head of Consumer Protection Department; and distinguished guests, both physical and virtual. Good morning, and welcome back to our international flagship seminar. Yesterday, we had an interesting discussion, and today we have arrived at the third panel, where we will explore another two interesting topics. First topic is, Enhancing Consumer Digital Financial Literacy: An Innovative Approach for Targeted Groups by Jasmina Moktar. Second topic is, Use of Innovative Tools for Enhancing Market Conduct Supervision and Digital Financial

Supervision by Imam Cahyono from OJK. We are delighted to have Jasmina Mokhtar as our first speaker for today's session, followed later by Imam Cahyono in the second session.

First, a brief introduction and a quick mention of Covid-19, which has caused significant economic hardship for the economy and people, particularly vulnerable groups worldwide. However, the pandemic has also accelerated the use of digital technology for a variety of economic and financial transactions, promoting financial inclusion by providing accessible digital financial products and services to vulnerable and underserved groups. Nevertheless, the digital era brings forth emerging risks, such as financial fraud, scams, cyber security threats, and data privacy concerns. Addressing these risks, the main challenge for regulators is the lack of financial literacy. Thus, it becomes crucial to pursue responsible financial inclusion in the digital era, where digital financial literacy encompasses consumer protection measures to ensure the secure and appropriate use of digital financial products and services. In order to strike an optimal balance between financial innovation and risk, two strategic actions must be undertaken: financial education and market conduct supervision. The implementation of these two strategic actions itself should take advantage of technological advancements, such as the use of digital channels and supervisory technology. Today, we are fortunate to have two distinguished speakers who will enlighten us in this area. First, we have with us today, Jasmina Mokhtar, who is the deputy director of the Financial Inclusion Department at Bank Negara Malaysia (BNM), and Imam Cahyono, deputy director of the Consumer Protection Department at OJK. We will now introduce our first speaker, Jasmina Mokhtar. She is in charge of financial capability and inclusion initiatives at BNM in collaboration with Malaysia's Financial Education Network (FEN). She also co-led the FEN Secretariat to drive strategic priorities and the effective implementation of the National Strategy for Financial Literacy from 2019 to 2023. Before the current assignment, she was involved in several areas related to financial crime and financial consumer law under the regulator's purview. Ladies and gentlemen, without further ado, we are very excited to hear the first presentation. Jasmina Mokhtar, the floor is yours.

Enhancing Consumer Digital Financial Literacy: Innovative Approach for Targeted Groups

Speaker: Jasmina Mohd Mokhtar, Deputy director Financial Inclusion Department, Bank Negara Malaysia (BNM)

Assalamualaikum and a very good morning. I am very happy to speak to everyone again. It is my pleasure to be invited to deliver this session, and let me especially thank Ibu Arlyana, Pak Ricky, and Ibu Maria for inviting me. It is not only about sharing Malaysia's experience, yesterday I gained a lot of knowledge, and there are a lot of things that I could bring back to my colleagues at home. I am very fortunate, and I think this is a very good platform for sharing among policymakers as well as industry players. First, we will give a quick overview of the financial education ecosystem in Malaysia. Then we will delve into the innovative approach and the work we have accomplished over the years, with a particular focus on the Covid-19 period.

Digital Financial Literacy (DFL)

The discussion will revolve around enhancing consumers' digital financial literacy, specifically targeted towards capital groups. In terms of advancing financial literacy, we can see that it has been on the agenda for many policymakers in many countries. However, the focus has primarily been on traditional financial education, emphasizing the basic principles of personal financial management, such as saving, budgeting, and debt management. Nevertheless, when it comes to digital financial literacy, we can see that, prior to covid-19, there was not a specific strategy in most countries. What is digital financial literacy (DFL)? In brief, DFL, is a multidimensional concept that combines financial literacy and digital literacy. The Organization for Economic Cooperation and Development (OECD) defines financial literacy as pertaining to the individuals' competencies in terms of the knowledge, behavior, and attitude required to make informed financial decisions.

While DFL may be the combination of digital literacy and financial literacy, the OECD has also defined it as the utilization of digital technology, communication tools, and networks to acquire and evaluate information. Although it is not only a combination of the two, what we see in terms of DFL is the crucial emphasis on the safe usage of digital financial services to make informed financial decisions. This is where the distinction lies compared to the mere combination of financial literacy and digital literacy.

Digital Economy Blueprint: Embracing Digitalization to Improve Quality of life and Standard of Living

During Covid-19, we saw one positive part of DFL recognized globally, which was the need to embrace digitalization, which evidentially can promote a higher standard of living and prosperity. In fact, research has shown that AI technology can increase Gross Domestic Product (GDP) by up to 26% in the next decade. Hence, for Malaysia, we also have the Digital Economy Blueprint that we launched recently. It was formulated to set the direction and outline strategies, initiatives, and targets to build the foundation to drive growth in the digital economy, including reaching those digital divides. The Malaysia Digital Economy Blueprint, which, in short, we are calling MyDigital, not only prepares Malaysia to embrace rapid digitalization, but we also aim to provide opportunities to uplift the socio-economy of the citizens. To enable the implementation of MyDigital, it requires a whole-nation approach, and this is where Bank Negara Malaysia comes in to ensure the readiness of our financial sector by 2022-2026, as per our recent launch in January 2022. Our commitment is to increase digital payment, and we can see that the Covid-19 pandemic has accelerated this transformation, changing the way businesses operate from traditional brick-and-mortar to online platforms. Furthermore, we have seen virtual platforms launched for e-commerce. While we are excited about putting in place all those digital enablers, there is one missing part. Not necessarily a missing part, but the one thing that we really need to emphasize is education. We must educate, and we have seen a lot of efforts going down from the ground, teaching them to go into online payments, but we need to ask ourselves, are we giving them the right education in utilizing this digital platform?

Covid-19 Profound Impact on Financial Resilience and Well-Being of Financial Consumers

When we look at the challenges Malaysia faced during the Covid-19 pandemic, there was a rise in unemployment. However, a notable shift also occurred from conventional employment to gig economy jobs. This is where we begin to explore other related matters that require us to change our strategy. For example, when considering gig workers, unlike conventional workers who have fixed incomes and financial management as part of their employment, gig workers, especially those working through gig tech com, like Grab or GoJek in Indonesia, lack a fixed income. This is where we always ask ourselves, are we equipping our people with the digital financial literacy to manage their money independently? Are we equipping them with self-driven financial education? That is one, and the other involves looking into bridging the gaps in financial inclusion. Due to the movement control order, we understand that individuals were restricted from going out, and online purchases became necessary. We also recognize the opportunity to bridge the gaps in financial inclusion. Once again, the question remains: Are we equipping the groups of people who were previously financially excluded with the proper knowledge of financial education and digital financial literacy? Despite the increase in digital financial transactions during Covid-19, we are certain the same trend is occurring in Indonesia, there has been a significant spike in financial scams, indicating that, despite everyone's excitement for online transactions, scams are also happening.

Digital Financial Services Unlock New Pathways for Economic Growth and Job Creation, but their Usage Must be Accompanied by Financial Education

The message is that digital financial services unlock new pathways for economic growth and job creation, but their usage must be accompanied by financial education. Moreover, when it comes to improving access to financial services via FinTech, this requires a higher level of digital financial literacy to make effective use of them and to avoid misselling, fraud (phishing and hacking attacks), and unauthorized use of data. Essentially, this involves going beyond scams. It also involves behavioral issues, such as excessive borrowing via digital platforms. It is so easy to get access now. There are no issues with geographical limitations when it comes to digital financial services (DFS). But where is the control in terms of the behavior of our financial consumers? What we can see is that digital financial literacy will be an important aspect of education for the digital age.

Emergence of Notable Signals of Change due to Technology Adoption Indicate the Increasing Need for Self-Driven Financial Management

In Malaysia, we can see that in 2020, during Covid-19, there was a great spike in scam incidents. As a result, massive awareness was raised during the year of 2020. We distributed multiple collaterals, and we used various stakeholders to talk about scams using various channels, such as social media, radio, television, posters, and via the Committee's initiatives. We saw results and in 2021, the number of scam incidents decreased, but surprisingly, the amount of losses reported increased by 63%. Incidents decreased, but the amount of losses increased. We are not too sure how these scammers work or whether they are able to actually target those with a lot of money. We are still trying to discover ways to resolve this. We have seen bankers themselves become victims of scams. This is something that we have to pay attention to. If bankers can get scammed, then we could all be victims of scams, including ordinary people. But we are not giving up, and we are continuing with our efforts. In Indonesia, *sinetron* (Indonesian television dramas) are often utilized as a medium to address and raise awareness about scams. These are some of the channels that we are using now. We are also seeing the rise of the gig economy via digital platforms. In fact, the growth of gig workers in Malaysia is even faster than that of conventional workers, and most of these workers use a digital platform. This is where we need to reach out to them because gig workers have full control over their money, even though their incomes may not be fixed. But we always assume some of these gig workers are not earning well, despite the fact that there are different types of gig workers. Some could be earning a reasonable income, but we also have those that earn a lot.

The question becomes, therefore, who is guiding them and helping them manage their money, especially in their retirement, insurance, and savings? These are the things that we need to address with the rise of digitalization. We also saw the entry of buy now, pay later (BNPL) in the market. Consumers and merchants are rapidly adopting BNPL, which is a financing option without interest. In most cases, BNPL has strategically positioned itself at the point of the consumer's buying decision. BNPL is very strategic. For example, if a young woman in her twenties saw a BNPL dress for $500.00 with a 50 ringgit a month payment, she might buy it without the proper financial education and knowledge. We are very worried about this development. However, we are not saying that BNPL is bad. BNPL has its benefits for big purchases and for certain segments of society, where they need to buy necessities during emergencies. What we are also concerned about is that the entry of BNPL is also focusing on products that are more geared towards instant gratification, like handbags, dresses, and things like that. These are the things we are seeing. Therefore, where can we come in and ensure that before our financial consumers purchase an item that uses these financing facilities, they are making the right decision? Making sure they have the capability to repay this amount before they make a purchase. We also saw an increase in digital lending and investment.

Again, another factor that we are looking at is whether consumers in digital financial services could face potential problems of overborrowing or having to use excessively high interest rate facilities without having all these loan issues.

DFL is an Increasingly Important Aspect of Education in the Digital Age

It is also very important not to create fear among our financial consumers when advising them to exercise caution with digital financial products and similar offerings. We see that digital financial services and products are an enabler of financial inclusion. Now, what we need to consider is that consumer information and education must accompany these efforts. All these developments point to the need for developing digital financial education programs to improve digital financial literacy. The program should have a particular focus on developing the skills that are likely to be critical to participate in the digital economy. What program can be used to educate consumers before using BNPL? We want to ensure that financial consumers know what to do. What are the things that she or he needs to ask themselves before using this product and before deciding to obtain financing via a digital platform? We always see promotions like, easily available, approval within 24 hours, and things like that. Therefore, how do we control this?

These are the five insights that we have identified. Number one is that we need to empower our citizens, especially gig workers, to be responsible for their own financial planning. How do we do that? How do we empower our financial consumers? Number two is that they need to protect them against the proliferation of informal and risky products on the digital platforms. There are so many products out there, and during the Covid-19 pandemic, the Chinese Government implemented policies aimed at providing financial support to the lower-income group in response to the crisis. On the same day, another FinTech platform came out in China. They are fast when it comes to keeping up with all these developments. This is another part that we need to ensure in order to protect our financial consumers. Number three is identifying programs for vulnerable groups. The challenge of financial education is that there is no one-size-fits-all approach. There are many approaches to reaching our target groups. There will be a different approach for the elderly, a different approach for the less educated, a different approach for small and medium-sized enterprises, and a different approach for startup firms. Number four is giving free access to credible financial education tools and resources. Also, access to credible financial education tools and resources on digital financial literacy for all walks of life.

Finally, the role of employers and gig platforms, because when it comes to financial education, we look at employers and now the gig platform providers as important conduits. Workers, especially those early entries such as young graduates, the moment they begin to earn income, that will be the moment they begin to make financial decisions. As a result, this is where the entry point is very important. Those were the five things based on some notable signs we saw during the rise of digitalization.

DFL Strategy – Recognizing Influences and Challenges for targeted Intervention

When it comes to designing programs, people often ask what we do. Before Covid-19, including our own national financial education strategies, we did not really address or have a specific strategy for digital financial literacy. Instead, we focused towards basic financial concepts. However, considering the latest advancements, both the OECD and our team have developed guidelines to ensure that all digital financial literacy and digital financial education materials are readily accessible online. Our team developed some of the programs using specific toolkits. Before creating a certain program, we need to gain an understanding of the influences and challenges associated with each target group. We divided our targets into four groups, namely children, youth, adults, and the elderly. For children, their influences will be learning by doing and gamification, and in Malaysia, we integrated financial education into the school curriculum from as early as preschool until Form 5, which is the final year of high school, when they are around 17 years old. However, what about the challenges?

It is important for us to recognize and address the challenges. Number one, we must ensure continuous capacity building for our teachers/educators. Additionally, it is vital to equip them with teaching tools and digital resources that can benefit both teachers and students. When it comes to youth, we emphasize social media, gamification and impact social experimentation will be some of the approaches we are looking at. We are also looking at agents of change in terms of influencing the youth segment. What are the challenges facing youth? We are very focused on the youth because they are the highest users of digital platforms. Number one is the lack of interest in financial education. How do we bring them in? Number two is lifestyle. Being young, their focus will be more on wants. There is also a lack of structured financial and social protection for gig workers. As we know, many of the youth are becoming gig workers as well as digital nomads.

For adults, on top of social media, some traditional approaches are still relevant and teachable. In the past, in complaint handling, we had almost 1,000 visitors that came to our walk-in center to print their credit report. During that time, we had our frontline staff deal with complaints or inquiries. For at least five minutes, they took the opportunity to talk to the walk-in customers about online scams. We saw that this was effective for them because we were able to engage in conversation and see their reactions regarding scam incidents. These are some of the things we did. For the elderly, we have almost the same challenges. They are also a target for online scams, so we are also utilizing traditional media and teachable moments. We also use seminars, webinars, and both WhatsApp and Telegram, which are effective.

Coordinated Efforts are Required to Broaden Outreach to Cater for Financial Consumers for All Life Stages

We are often asked to look at who our target market is, and our answer is usually from cradle to grave. That is our target market, from the beginning of life until the end of life. With the speed of digitalization in financial services, however, doubling down on our strength alone is no longer working. We need to be more coordinated. We need a whole-nation approach to broaden our outreach to all life stages.

Financial Education Network (FEN)

This is the Financial Education Network (FEN) in Malaysia, which was formed as an interagency platform comprising eight member institutions that are committed to raising the level of financial literacy nationally. Bank Negara Malaysia and the Securities Commission are the co-chairs of the High-Level Inter-Agency Steering Committee (HLSC). We are also the co-chairs of the Working Group (WG) and lead the Secretariate for the Financial Education Network. As members, we have the Ministry of Education, the Ministry of Higher Education, and the Credit Counseling and Debt Management Agency (AKPK), which focuses on debt management. We also have the Retirement Fund, which oversees the retirement fund, PIDN (Perbadanan Insurans Deposit Malaysia) providing insurance coverage for deposits, and PNB (Permodalan Nasional Berhad) as a prominent investment institution.

When it comes to FEN, we would like to focus on how we can achieve a greater impact by coming together rather than acting alone. This is especially embedded in the National Strategy for Financial Literacy from 2019 to 2023, which is a product of FEN. The National Strategy is centered around five strategic priorities that serve to anchor the initiatives by FEN members to enhance the financial capability of Malaysians, thereby encouraging alignment and treatment synergies. What are the strategic priorities? Number one is nurturing values in young people. Number two is increasing access to financial management, information, tools, and resources. Third is inculcating positive behavior among target groups, including youth, the self-employed, and those entering the workforce. Number four is boosting long-term financial and retirement planning. And fifth, building and safeguarding wealth.

Since the launch of our National Strategy in July 2019 by our Prime Minister, FEN members and more than twenty partners have been working in collaboration with the government, business community, and education sector. We have undertaken 400 education programs and initiatives covering a diverse spectrum of subject matters, and we saw almost 47 million interactions with these outreach programs. Our key achievement by financial education members was working collaboratively on the integration of financial education into all levels of the formal school curriculum, from preschool right up to the upper-secondary level. Consequently, all of our schoolchildren now have financial management as part of their school syllabus. It is not a specific subject, but it is embedded in subjects like bahasa Malayu, English, mathematics, economics, morals, business, and accounts.

Other than schools, we have also introduced electives in college programs. Another important milestone that the Financial Education Network came up with was to develop and issue a financial literacy core competency framework for Malaysian adults, which now serves as the key reference for financial education intervention. The aim is to ensure that it has an effect for lasting behavioral change. Any of our financial advocates or practitioners who wish to organize a financial education program can refer to the Financial Literacy Competency Framework (FLCC).

FEN Programmatic Roadmap

When it comes to digital financial literacy, even though we did not have a specific strategy in our National Strategy (NS), published in 2019, we embedded DLF in our FEN strategic plan, which was developed last year. It sets a roadmap in order to achieve the desired outcome of the National Strategy and the Twelfth Malaysia Plan (12MP). We are very fortunate that the Government also recognizes the importance of financial literacy, which is visible in the 12MP in terms of improving the socio-economy of Malaysia. In this programmatic roadmap, we have clearly spelled out the effort to equip Malaysians with access to financial education tools and resources in order for them to participate in the digital financial environment. The image on the right, which we published in our Financial Sector Blueprint in January this year, shows that we have, in fact, spelled it out under item 2.3.

Intensify FE in Schools, including DFL through Greater Collaboration and Pooling of Resources

As mentioned, we have embedded the financial education elements in our school curriculum. These are the action plans we have spelled out in our National Strategy, which are meant for schoolchildren. The question is, did we incorporate digital financial literacy as part of this? The answer is yes. Number one is the inclusion of financial education elements in preschool, primary, and secondary schools, and we did include this on DFL, which is e-payments and so on. There is also a thematic approach to the integration of FE elements. We further reinforce this approach through curriculum activities. We also have the cashless school program, which is done by our financial industry in collaboration with our Ministry of Education. We also embedded the same approach through our school adoption program. Therefore, whenever a financial institution is close to the school they have adopted, they are expected to also educate the schoolchildren on e-payments, or anything related to digital financial services. Additionally, we introduced capacity development and support for teachers. As mentioned earlier, other than putting things on the syllabus, we need to ensure that our teachers have the right support to teach the children. Finally, we also encourage financial education advocates among students, parental groups, and the community. This year, we launched *FEN Komuniti Kewangan* (FEN Financial Community). One of our pilot projects involves working together with an agency called Komas, which primarily sets up preschools in rural areas in addition to overseeing district offices in the community. We work together with the teachers at Komas and the community. If successful, we expect to replicate this pilot program nationwide. We are also looking for other similar agencies to work with on the same model.

Actively Support the Ministry of Education via Collaborations and Partnerships to Reinforce DFL for School Children

In terms of cashless schools, we have started with six primary schools as well as 207 secondary schools. We also have a webinar series for school principals, where 455 school principals and headmasters have been involved with the hope that these principles and headmasters will be the agents of change for the teachers and schoolchildren. Another success story for us is the e-learning platform for civil servants, as another FE program launched in 2019. This allows civil servants to learn via this program. Hitherto, approximately 40,000 teachers who completed this program, covering e-payments, scams, insurance, takaful, and basic financial management.

Signature FE Programs for Youth by FEN, with Emphasis on DFL

When it comes to approaches, we are very focused on the target group. We have schoolchildren there, who are within a controlled environment, we have the teachers, and we have the capacity to do it. But how about the youth? When it comes to youth, it is very tricky with social media and entry into the workforce. We must ensure that we are targeting the right people. One of the things that we have launched is the video competition at MyDuitStory (MDS), known in English as My Money, My Story. We opened this competition with very lucrative prizes for university students to participate in creating their own video. We have around 150 to 200 participants every time we launch. For the first time, we launched with a team for financial management. The second MDS was on insurance and takaful. We are planning to do a course on digital financial literacy this coming October. We also have partners with us, such as FWD Takaful and Arus Academy, where they have modules especially for youth when it comes to FEN materials.

We also work together with our partners to come up with signature financial education programs for youth, such as MyMoneyandMe. This program is run every year. In fact, this year, we are going to each state to reach the youth. In 2021, we had 3,841 youth participants. Another interesting initiative by our co-chair, namely the Securities Commission, is Ajen Bijak Labur Desa (ABJAD), where they use the youth in rural areas as agents of change. For the pilot, they are looking for 5,850 youths between the ages of 16 and 18 to be agents of change. These agents of change will then have to identify a key family member to transfer the knowledge. In addition to youth, we are also using 800 teachers from 14 identified schools to go through the same program.

Various Efforts Leveraging on Digital Platforms have Scaled-Up Interactions to Cater to Financial Consumers from All Life Stages

It is very important to provide access to tools and resources when it comes to financial education. Without getting into too many details, we have just launched the FEN navigation tools, with 800 free tools for financial education from 20 members and partners. We will play the video now.

Video:

It is hard to make sense of it sometimes. It is not always easy to find the right financial resources and tools for your needs. Where can you get personalized financial help that caters to not only your life stage but your needs as well? The Financial Education Network makes it easier to take control of your finances by helping you make smarter financial decisions. How? Let's get started. First, log on to www.fenetwork.my, click this button, and then select your life stage. Choose between students, youth, adults, or retirees. Then select your financial goal. These goals will differ depending on your life stage. And then look through the different resources available. A brighter financial future awaits when you learn how to make smarter financial decisions. www.fenetwork.my online provides you with the tools and resources for a financially secure future.

Speaker: Jasmina Mokhtar

We have everything in dual languages, including bahasa Malayu and English. We have various information on digital financial literacy, like three things you need to know about BNPL. We guide financial consumers before they use the BNPL, giving them what they need to know. We also have thematic materials. For example, just before the recent Eid-ul-Fitr celebration, we issued an explainer video about using BNPL to purchase Eid-ul-Fitr dress and what consumers need to know before purchase. We also have a video on cryptocurrency.

Video: Investing in Cryptocurrency

We try to keep it simple. We use simple language to make them think before they go into this. Anyway, there are a lot of materials that anyone can see from our FEN social media. Please visit the various official channels of the Financial Education

Network on Facebook, Instagram, as well as our navigational website. We are improving. We just set it up last year in October, and our strategy now is to pull as many users to this platform.

Efforts to Empower Gig Workers to Make Effective Use of FinTech for Self-Driven Financial Planning

Another effective approach that needs to be highlighted is the collaboration between gig platforms, FinTech companies, and advocates for financial education. This pilot program was initiated by one of our members, Perbadanan Insurans Deposit Malaysia (PIDM). GoGet is a platform for gig workers in Malaysia, facilitating connections between individuals offering various services, such as air conditioner repairs and part-time waiter jobs, and customers in need of those services. Through this collaboration, a digital platform has been established to enable micro-savings, specifically targeting low and moderate-income gig workers, aiming to foster regular saving habits. According to the report available online, as a result of this collaboration, 50% of surveyed gig workers were now able to manage a financial emergency of 1,000 ringgit. This is a significant improvement compared to a previous survey conducted in 2018, which found that this income group segment found it very difficult to save at least 1,000 ringgit for emergency funds. This is very interesting because this FinTech player alerts gig workers by pointing out that they have not saved enough money and are spending too much. They offer educational tools to guide gig workers on how much they should save each month and emphasize the importance of saving. These areas are the ones we believe we should focus on more in the future. Additionally, we have engaged key leaders to speak about the importance of financial literacy, and we have developed materials to assist gig workers with their retirement plans.

Financial Literacy Month (FLM) Sets New Benchmarks as a National Flagship Event and Large-Scale FE Virtual Event

Another important part is placing visibility on financial education. In 2020, we started a Financial Literacy Month (FLM), which has become our flagship celebration held every October. Last year, we had 2.7 million users engaging with our programs, with nearly 90,000 resources downloaded during the event. Getting support from prominent leaders is very important. The event was launched by our Minister of Finance, closed by the Deputy Finance Minister, and featured speeches from leaders from the Human Resource Agency, highlighting the importance of financial literacy. Additionally, the CEO of Malaysia Digital Economy (MDEC) spoke about the reasons and ways in which financial literacy is supported. We also had platform players and gig workers from Grab and GoGet speak on the importance of financial literacy.

Innovative Ways to Address Financial Barriers, particularly for the Unserved and Underserved Communities via Digital Financial Inclusion

Other than reaching rural areas, we also have mobile bank initiatives. Other than providing access to cash withdrawals and deposits, one of the requirements that we have informed our banks to meet is the need to also get them onboard with the digital platform as well as give them the right financial education in using digital data.

Guiding Principles to Measure the Digital Financial Literacy Initiatives to Ensure Impactful Outcomes

Finally, whatever we do, we need to measure it. We are doing a lot of things, but what we need to focus on this year is measuring our efforts and our interventions. We have been using financial literacy initiatives as one of our parameters. It is every three years. This year we have given our commitment to do it annually, focusing mostly on attitude and behavior, but we are also doing a thematic survey on digital financial literacy. In fact, we have some preliminary findings, which we cannot share yet, but it gives us more sense of how to approach this matter and where our financial consumers are in terms of digital financial literacy.

Moderator: Sari Hadiyati Binhadi

Thank you very much, Jasmina. It was a very impressive presentation. The wide variety of educational programs is quite impressive. Coordination is important, and it should reach all walks of life, targeted, from cradle to grave. Additionally, it is not only about knowledge but also behavior and attitude.

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USE OF INNOVATIVE TOOLS FOR ENHANCING MARKET CONDUCT SUPERVISION AND DIGITAL FINANCIAL LITERACY

Imam Cahyono
Deputy Director of Market Conduct Policy Development, Consumer Protection Department, Financial Service Authority (OJK)

Moderator: Sari Hadiyati Binhadi

With that, we come to the second session, and it is my pleasure to invite Imam Cahyono from Financial Services Authority (OJK). Imam will speak on the use of innovative tools for enhancing market conduct supervision and financial digital literacy. Allow me to provide a brief background of Imam Cahyono. He is the deputy director of Market Conduct Policy Development in the Consumer Protection Department of Indonesia's Financial Services Authority OJK. Prior to that, Imam was part of the Capital Market Supervisory Agency in the Ministry of Finance. He holds an MBA from the University of Queensland, and he actively participates in professional training or courses in various areas, including fraud, capital market violations, and more. Without further ado, Imam, the floor is yours.

Use of Innovative Tools for Enhancing Market Conduct Supervision and Digital Financial Literacy by OJK

Speaker: Imam Cahyono, Deputy Director of Market Conduct Policy Development, Consumer Protection Department, Financial Service Authority (OJK)

Good morning, ladies and gentlemen. We are discussing the use of innovative tools for enhancing market conduct supervision and digital financial literacy, but we have more or less already covered the many educational programs today that are also conducted by OJK. If we have time, maybe we will go over them again later. Today, our agenda includes discussing the legal basis of consumer protection conducted by OJK, the consumer protection strategy implemented by OJK, and various approaches

OJK can employ to achieve this program. If time permits, we will also discuss digital financial literacy. However, our primary focus will be market conduct supervision and the use of digital technology.

Legal Basis

First, we will provide a brief explanation that, when discussing market conduct in the financial sector, we are specifically addressing consumer protection. It is important to note that market conduct supervision is widely used in the context of consumer protection, where the OJK's role encompasses not only overseeing the soundness of Financial Service Providers (FSPs) but also protecting consumers. This objective is clearly stipulated in Article 4 of the OJK Act, which emphasizes the importance of protecting consumers and the public interest within the financial services sector. OJK exercises comprehensive oversight and supervision over three sectors: the capital market, banking industry, and non-bank financial institutions, which collectively fall under its regulatory purview. This extensive coverage demonstrates the significant scope of OJK's responsibilities.

Moving forward, our discussion will focus on consumer protection and the interests of consumers. Article 10 of the OJK Act outlines the composition of the Board of Commissioners, consisting of nine members, contributing to the achievement of this objective. A specific board member is in charge of consumer protection and education. This kind of authority is given by law that we have to then elaborate how to use this kind of authority and also use the strategy to deliver consumer protection.

Regulatory Tools

These are the specific paragraphs of the OJK Act regarding consumer and public protection. They are stipulated in detail in Article 28 under the OJK Act (No. 21) of 2011. OJK is authorized to take the necessary actions to protect consumers and the general public from losses, such as providing information and education on the characteristics of the financial services sector and its services and products to the public, savings, shares, mutual funds, and more. This way, consumers know the characteristics of each product, the methods, the cost, the risks, the terms and conditions, and so on. We give them the education they need to achieve a high level of literacy. OJK also has the authority to stop potential losses to the public and take action where necessary in accordance with the provisions of laws and regulations in the financial service sectors. But we are talking about market conduct supervision, which will be explained soon.

Literacy and Inclusion Index

We will now look at the 2019 national survey results on the level of financial literacy and inclusion in the financial sector in Indonesia. It was based on surveys performed in 2013, 2016 and 2019, and the level of the Financial Inclusion Index was always higher than the Financial Literacy Index. This means that consumers have already used financial products or services, perhaps without prior knowledge of the product itself, or whether it impairs consumer protection as well.

Consumer Protection Risk

Accordingly, consumer protection risk can arise from various factors, including the actions of consumers themselves, FSPs, and the environment in which both consumers and FSPs operate and establish their relationships. We will talk later about digital finance, where many things can be found in capital markets, such as securities, crowd funding, peer-2-peer lending, and so on. On the consumer side, perhaps their behavior tends to be biased, implying everything passes as long as their needs are fulfilled. This is a problem. On the other hand, from the FSP side, they focus on how to sell their products and services. They may not fully disclose the information, which results in asymmetric information and a negative outcome for the consumer. In the capital market, we also see insider trading because of asymmetric information. When there is an environment where the FSP is running its business, how they interact with the consumer, such as through a digital platform, also results in security risks for the consumer. As we know, a loan is still da loan until it is repaid. However, the manner in which the consumer utilizes the credit or utilizes a preapproved lending credit through the platform can also introduce additional risks, such as the security and confidentiality of personal data being vulnerable to fraudsters, as well as other potential risks that consumers may be exposed to.

Consumer Protection Strategy

When it comes to consumer protection strategies, we divide them into two categories: preventive action and curative/remedial action. Setting up regulation and financial education for consumers and society is one of the preventive actions, while if curative or remedial action is not taken when a certain case has occurred, and it needs to be taken seriously. We have a form available for curative or remedial actions, specifically internal dispute resolution, which focuses on handling complaints directly with the FSP. Additionally, we utilize an alternative dispute resolution body for dispute resolution purposes. We also engage in market conduct enforcement, which involves conducting investigations and, if necessary, filing administrative sanctions for violations of laws and regulations. By employing such a strategy, we aim to effectively protect the interests of consumers and society in the financial sector and achieve optimal outcomes.

Market Conduct Definition

At OJK, we are trying to distinguish the scope of market conduct supervision from prudential supervision. OJK has two kinds of supervision: prudential supervision, which focuses on the soundness of the FSPs, and market conduct supervision, which focuses especially on the education and consumer protection sides. We are focusing more on how FSPs behave in designing, formulating, and delivering information, offering and making agreements for products and services, handling complaints, and resolving disputes that may arise.

Scope of Market Conduct Supervision

When it comes to the scope of market conduct supervision, we are trying to focus on the product life cycle from the (re)design of the product to product launch, product marketing, after-sales services, and dispute resolution. At each stage of the product life cycle, we know that some activities are involved. For example, in terms of design, FSPs must consider the suitability of the product for the needs and capabilities of the consumer. In the next stage of product launch, there is a process of providing an information summary of the products or services for the financial services sector, which details the benefits, risks and costs of the products or services, along with the rights, obligations, and terms and conditions of using the products or services. The next stage of product marketing involves how FSPs will provide well-trained selling agents. Responsible advertisements contain accurate, truthful, clear and non-misleading information. This also entails formulating standardized contracts that are in accordance with prevailing laws and regulations. Additionally, it involves securing consumer assets and data and information and providing a reliable system.

In the course of using products or services, consumers have the right to access up-to-date and easily accessible information or get proof of product ownership, maybe through periodic reporting to consumers. Finally, when consumers are not satisfied with a product, they are able to lodge a complaint. It might end up with internal or external dispute resolution, depending on the agreement between the consumer and the FSP. This is the scope of market conduct supervision, and its focus differs significantly from prudential supervision. While prudential supervision primarily concentrates on ensuring the soundness of the FSP, market conduct supervision has a distinct focus. The financial rescue process is primarily concerned with addressing financial distress and ensuring the stability of the FSP. It involves addressing specific issues and requests from the governance of the FSP, often requiring skills, such as analytical and mathematical abilities, to assess the financial situation and develop rescue measures. In contrast, market conduct supervision focuses on the behavior and conduct of FSPs. It is a qualitative aspect of supervision that we must see.

OJK Law Enforcement in Protecting Consumers

According to OJK law enforcement efforts aimed at protecting consumers, a wide range of enforcement approaches are employed. These enforcement measures involve administrative proceedings that result in various forms of administrative sanctions. These sanctions can include written reprimands, fines, product restrictions, or revoking the license. We also have civil proceedings in which OJK can file a lawsuit to recover the property owned by the injured party or consumer who suffers losses. The purpose of this proceeding is to seek compensation for the losses suffered by the consumer as a result of privacy breaches. The result of this final proceeding is compensation to injured parties or investors who suffered from the loss. In the capital market, we also have OJK regulations concerning the disbursement. All the compensation is distributed to the injured parties or the investors who suffered from the loss.

The final step are criminal proceedings, which serve as the last resort. If the previous stages of the proceedings fail to resolve the issue concerning the investors, OJK or the criminal investigators within OJK will initiate a criminal proceeding. Subsequently, the process follows the criminal court of law, where the investigator transfers the case to the competent authorities, leading to a trial. If approved, the repercussions resulting from financial wrongdoing can occasionally lead to penalties, such as imprisonment for the perpetrator or fines, typically depending on the severity of the offense or the amount of the tax involved.

Market Conduct Supervisory Tools

In relation to market conduct supervision tools, we have decided to differentiate two categories of activities: offsite supervision and on-site supervision. This type of supervision combines on-site and off-site supervision to produce a more optimal result. On-site supervision is mostly conducted on a non-system because we have to go to the premises of the FSP, but offsite supervision is mostly conducted by system. For example, on the right side of the offsite supervision, we have a complaint handling system, namely *Aplikasi Portal Perlindungan Konsumen* (APPK), which is our consumer protection portal application, covering all information services to OJK in the form of receiving information, if a consumer informs OJK about unlicensed parties or also as a way for OJK to find information, like when consumers ask whether the parties already have a license or whether the product is registered within OJK. This way, OJK can keep or provide this kind of information. The other kind of information stored in the APPK is complaints, which are quite interesting because complaints can be seen as an indicator of the increasing number of problems that arise between consumers and FSPs. However, we have also observed a growing level of public awareness and an increase in the reporting of valuable information to OJK. Based on the information obtained from APPK, we categorize the complaints received to our call centers by sector. This enables us to identify the sectors that receive the highest number of complaints, such as the capital market, banking industry or non-bank financial institutions. By analyzing this data in detail, we can determine which specific areas within the banking sector and which products receive the most complaints from consumers. There are capital market products, which we divided individually by product, namely savings, credit cards, loans, and securities, whether mutual funds, insurance, and so on. Depending on where the complaint is lodged or the domicile of the consumers, which is also important because, based on the location, this information can be used for the next step, either for education or market conduct supervision. By identifying and understanding the root cause of the complaint and mapping the products with the consumer and their location, we can customize our educational efforts to increase financial literacy and reduce the risks associated with consumer protection. This also allows us to better focus on addressing complaints based on consumer location.

We are also currently in the process of redeveloping OJK's system to accommodate the monitoring of complaints by an FSB, ensuring that the resolution provided by the FSP is in compliance with prevailing law. This includes assessing whether they meet the service level agreement (SLA) and whether the complaint, whether verbal or written, is handled proficiently and within a reasonable timeframe. If the complaint handling is not in accordance with the law, we will take the necessary action against the FSB. Additionally, we are exploring the use of LAPS or Alternative Dispute Resolution Institutions (LAPS) and external resolution monitoring as a means to monitor dispute resolution. We hope that APPK, in the way we utilize supervisory technology, can serve multiple purposes, including complaint handling and monitoring how FSPs address and resolve complaints. We can monitor dispute resolution between our FSP and consumers.

Based on the product life cycle, we also utilize our system for monitoring advertisements. We call it SPIKE, or the Financial Advertising Monitoring System, and it covers all advertisement media, such as electronic media and social media. It works by setting certain keywords to detect the contents of an advertisement, and then the system will indicate whether the information is categorized as unclear, inaccurate, or misleading. We also define the parameters, such as unclear, to determine whether the product or service adheres to terms and conditions but is not included in the advertisement. The scope is wide and open, with numerous terms and conditions. However, regrettably, there is no specific link accessible to consumers for obtaining information. Inaccurate advertising implies that certain claims do not have a reasonable basis. For instance, if an FSB makes claims such as we are the best, we are at the top, or we have the cheapest interest rate, it is necessary for an independent body to provide confirmation or evidence supporting such claims.

Misleading information misrepresents the truth about the product or service. It is considered the most serious violation, and we must address the issue quickly as it can result in consumer losses. We have achieved amazing results using this monitoring system for financial advertisements. In the first quarter of 2019, we observed a violation rate for advertisements of 64%, which significantly declined to 6% in the fourth quarter of 2021. With our monitoring system, we have the ability to gather various data, including statistics on corrective actions and warning letters issued by OJK to FSPs. This enables us to assess whether OJK needs to take further action, such as implementing administrative sanctions, to ensure the FSPs adhere to regulations and resume compliant activities. We believe this is a valuable supervisory technology for monitoring financial advertisements, including those related to DFS as well.

In addition, our reporting system - SIPEDULI (*Sistem Aplikasi Pelaporan Edukasi dan Perlindungan Konsumen*), or the Consumer Protection and Education Reporting System, covers various aspects, including submitting reports by FSP, as well as reports on education activities, complaint handling, and dispute resolution. It serves as a means for financial service providers (FSPs) to submit reports related to these areas. SIPEDULI facilitates the reporting process and ensures that FSPs can provide updates on their education initiatives, handle complaints, and resolve disputes effectively. Also, we conduct a self-assessment to evaluate the implementation of policies regarding consumer protection. This assessment covers several aspects, such as how an FSP provides marketing information, whether they have standardized contracts or agreements, how they handle personal data security, and their approach to dispute resolution. It is quite useful, especially when combined with self-assessment videos. Based on our report review, the system identifies the score for each assessment aspect of an FSP.

Although the assessment may be biased because it is conducted and prepared by the FSB assessing itself, we can still make use of the follow-up activities to extrapolate the score. In order to assess the self-assessment for an FSP, we perform thematic surveillance for market intelligence, as depicted on the left-hand side of the slide, under onsite supervision. To ensure a comprehensive evaluation of the self-assessment conducted by the FSB, we implement at least two types of activities aimed at reevaluating and reassessing the self-assessment. The self-assessment system serves as a toolkit, referred to as a preliminary review by OJK, to identify the consumer protection aspect of the FSB. This process has become an obligation since the passing of OJK Regulation Number 6 of 2022 concerning Public and Consumer Protection in the Financial Services Sector. Previously, self-assessments were voluntary for FSBs, but have now become mandatory as of April 2022. Our system combines all data, including complaint handling, advertisement monitoring, educational reporting, and self-assessment, which we use to determine the specific theme for thematic surveillance in relation to onsite supervision or the direct action of initiating a formal investigation.

In cases where there were many complaints regarding the marketing process for insurance programs or the discovery of marketing materials containing misleading information used in advertisements, certain FSPs have to make adjustments based on the self-assessment to address their marketing aspects, allowing us to concentrate on product marketing and related issues within a specific industry. While facilitating the rest of the complaints, we can also conduct formal investigations and act on violations of the consumer protection regulation. If the bulk of complaints focus on one FSP or its agent or representatives, the FSB must take responsibility to recover the consumer loss. This kind of combination of information from the system requires another action. Currently, with respect to thematic surveillance or investigation and also market conduct supervision, we have not reported the findings or results, mostly from the onsite supervision.

Additionally, the findings from thematic surveillance have not been entered into our database. For example, although the combination may have been performed by OJK, the monitoring process still relies on a manual review of evidence submitted by FSPs. We review the evidence and decided whether it was adequate to close the recommendation or if further action was required, keeping it open. We recognize the potential advantages of integrating systems like APPK, SPIKE, or SIPEDULI into our current framework. Our goal is to develop a more robust database in the future, which would allow us to establish comprehensive risk profiles for each FSP. With our limited resources and leveraging our capabilities, we can provide support for market conduct supervision conducted by OJK through SupTech.

Additionally, we have implemented sentiment analysis to gather extensive information from online sources and social media platforms related to FSPs. This analysis involves tracking trending topics and evaluating the sentiment expressed towards FSPs, categorizing it as positive, neutral, or negative tone. Currently, we are piloting this approach with FSPs, and we aim to utilize it not only for market conduct supervision but also for other work units within OJK, such as those focusing on prudential matters.

Digital Financial Literacy

Regarding financial literacy, we are focused on two issues that have become OJK's slogan: legal and logic. We know that technology can make it easier for consumers to deal with the FSP, but on the other hand, it is exposed to greater risks. Many illegal investments have been reported to OJK, and it is OJK's mandate to address such cases through its Investment Watchdog. OJK is focused on ensuring that only authorized entities operate in the market, thereby minimizing the occurrence of illegal investments. We have to check whether FSPs are already licensed by OJK or with any competent authorities. Logically, if someone offers an abnormal investment opportunity in the financial market, it is likely too good to be true. Furthermore, based on the investigation conducted by the task force, it has been found that all of these schemes follow the same fraudulent pattern, commonly known as a Ponzi scheme. In a Ponzi scheme, the fraudster typically promises high returns on investments in a short period of time, often using false or unsustainable business models.

Digital financial literacy enables access to various digital financial services, such as digital banking, securities crowdfunding, and peer-to-peer lending. In 2021, the majority of complaints in the peer-to-peer lending sector were related to fraudulent activities, improper behavior by debt collectors, issues with debt restructuring, discrepancies in payment records, additional charges, and misuse of personal data. These recurring issues indicate that the main source of the problem lies in the mishandling or misuse of personal data by external parties, as financial service providers are unable to thoroughly scrutinize potential consumers during the application process.

Creating a Well-Literate Indonesia

OJK also has a literacy strategy, where we promote more education and literacy in society, and we have also developed a learning management system (LMS). It is an independent and interpretive learning and training system. Everyone can launch into and access the learning management system. It is a massive open online course that can be accessed from anywhere by anybody to increase the level of financial literacy and inclusion for targeted groups, including students, youth, women, and the elderly. OJK has also built a strategic alliance with the Ministry of Religious Affairs, Ministry of Home Affairs, and Ministry of Education. Furthermore, it is crucial to incorporate financial literacy into the syllabus or curriculum, starting from early childhood education up to tertiary education. This should be done strategically, aligning with the overarching objectives of regional and district governments in terms of financial education. Additionally, establishing a strategic alliance with FSPs can be instrumental in achieving these goals. By working collaboratively, governments and FSPs can design and implement effective financial literacy programs that equip individuals with the necessary knowledge and skills to make informed financial decisions throughout their lives. In addition, OJK actively promotes financial inclusion, and they organize initiatives dedicated to this cause, including events and activities held every October.

Moderator: Sari Hadiyati Binhadi

Thank you, Imam, for your presentation. The key takeaway is that our consumer protection strategy involves both prevention and curative measures. This is where technology for supervision is needed end-to-end in the supervisory process. Of course, technology is needed for digital financial literacy, using it in an innovative and collaborative way.

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Q&A SESSION

Question: Human Resource Department, Central Bank of Indonesia

My question is for Jasmina. I am interested about the Financial Education Network (FEN) in Malaysia. In terms of crypto assets, I understand that crypto providers typically offer services like wallets, similar to e-wallets. I would like to know if the owners of cryptocurrency assets are also protected by Bank Negara Malaysia or by Malaysian consumer protection. In your presentation, on page 21, you mentioned guiding principle measures and the importance of understanding crypto assets as part of digital financial knowledge. Can you please clarify this information?

Response: Jasmina Mokhtar

To answer that quickly, the Financial Education Network in Malaysia was set up to address the different authorities responsible for different areas. In the context of cryptocurrencies, they fall under the purview of the Securities and Exchange Commission. We work together with the Securities Commission to develop financial education materials for raising awareness through our various platforms. Although cryptocurrencies are not directly regulated by Bank Negara, they do fall under the jurisdiction of the Securities Commission. When it comes to education, it is not solely issued by the Securities Commission but also issued under the Financial Education Network as well.

Question: Human Resource Department, Central Bank of Indonesia

But what about consumer protection?

Response: Jasmina Mokhtar

It would be under the Securities Commission, not Bank Negara. But when it comes to education, we do it together under the Financial Education Network.

Question: Subian from Bank Indonesia

Considering the increasing availability of BNPL (buy now, pay later) options and the expansion of alternative investment products, it is important to develop an effective digital financial literacy strategy for individuals in rural areas or senior citizens who may have limited access to social media and internet-based platforms for education. How would you suggest implementing such a strategy?

Response: Imam Cahyono

Yes, this is a challenge for OJK given the geographical condition of Indonesia. We have more than 70,000 islands and over 250,000,000 people in Indonesia. Covid-19 was a blessing in disguise as it accelerated the adoption of technology for education across the many rural areas of Indonesia. But there are still problems with digital literacy. For example, with Zoom, we do not know whether people have already paid attention from the beginning to the end of the session. We also have a program to educate people from disadvantaged, frontier and outermost regions because we know this cannot be reached by our normal education channel. We must go to them and work with people in the army and families in remote areas. We also focus on people who do not have access to any kind of educational channel. We have a learning management system (LMS), but maybe it cannot be accessed because they have no internet connection. But we still find a way to educate people who come one-by-one to the premises, which is very helpful not only to them but for us too. We give direct education to people who come to the premises, so we can see how they interact by answering questions. Seeing is believing, and by knowing what the root of the problem is, we can figure out what the best solution is for giving information about financial literacy. People in rural areas do not need to learn everything about financial literacy, but they should know the products they use and what can be helpful to them. If they are in a rural area, maybe they only need to learn basic savings products, not more complicated ones like those in the capital market. We need to consider the rural areas in the market and devise a strategy that combines different channels to educate the people effectively. This includes utilizing electronic media, such as Zoom, for remote education as well as directly visiting the premises when consumers and potential customers are available onsite.

Question: Bank Indonesia Institute

Dear Jasmina, the fifth slide states that digital financial services pave the way for economic growth and job creation, but it is crucial to accompany them with financial education. I am curious about the current level of digital financial literacy in Malaysia. Has the program had a significant impact on the digital financial literacy of the surrounding community?

Speaker: Jasmina Mokhtar

We do not have specific measurements for the Digital Financial Literacy program in Malaysia yet. Currently, our measurements are based on the previous OECD standard, and we have incorporated some indicators from the World Bank. However, we are in the process of measuring digital financial literacy this year rather than the previous focus of digital financial inclusion. The measurement process has already begun with the FCI (Financial Capability Index) survey conducted late last year. This survey will provide valuable insights into the digital financial literacy landscape in Malaysia and help evaluate the impact of the program on enhancing digital financial literacy among the population. We are focusing on the program Digital Financial Literacy Malaysia, and we had some booster surveys for the level of digital financial literacy. We are also targeting certain areas where we have come up with a pilot program for a cashless project where the community's success in terms of financial education is high, with the majority of them going cashless already. But now we would like to measure it in terms of other parts of digital financial literacy. Yes, we managed to put them onboard a digital platform, but are they using it safely? Do they know how to use it safely? That is something we are currently looking at and cannot answer now. But perhaps once we have it, maybe next year or something, we will be able to share it with Indonesia.

We perform the Financial Capability and Inclusion Survey every three years, and we started in 2015, with the most recent one in late 2021. We are still analyzing the results, and we are doing some booster surveys. We were also doing focus group discussions (FGD), while trying to close the gap with the OECD average. We are improving from what we can see. But what we are realizing is that we cannot do this after only three years. In our Financial Sector Blueprint, we have stated our commitment to come up with an annual measurement. This year, we have given a commitment. The annual measurement is number one, and number two is that we are also coming up with a framework where, for any financial education program, there will be a standard in terms of measuring knowledge, behavior and attitude. This is some more work that is coming up in the pipeline.

Moderator:

Therefore, education should include comprehensive planning as well as encouragement for improvement. Due to the short time, we are very sorry that we have to close the session. But first, some key takeaways. It is our goal to create a smarter and more financially inclusive society in this era but we need a more comprehensive education program. It is important to conduct it in four ways: targeted, creative, innovative, and collaborative. Furthermore, technology is needed not only for education but also for supervision. Consumer protection involves some strategic actions, including education and supervision, and those need technologies.

Closing Remarks
Speaker: Jasmina Mokhtar

Financial education is a marathon, not a sprint, and therefore we need to be really flexible. We need to look at the situation, the circumstances in the end, and the development. But from yesterday's discussion, I think SupTech would definitely help to have better financial education. Currently, what we are looking at is mostly complaints, social media observations and things like that, but if we have more data and do more analysis, more targeted intervention can be done.

Speaker: Imam Cahyono

First, logic and legal is the simple slogan for the first necessary step to educate consumers to protect their interests in any kind of investment scheme. Do not use shortcuts to make more money. Please be aware, keep your personal data concerning your financial assets private, and do not share it. Likewise, after obtaining the consumer's personal data, the FSP also has to be responsible for securing the data. We must strike an optimal balance between the business development of FSPs and consumer protection.

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